



Agenda Report

2725 Judge Fran Jamieson
Way
Viera, FL 32940

Public Hearing

H.2.

2/8/2022

Subject:

Utility Services Rate Resolution for the following: (1) County encompassing South Beaches, Merritt Island, North Brevard, Port St. John and the South-Central Mainland Service Area; and (2) San Sebastian encompassing the San Sebastian Woods Water System.

Fiscal Impact:

The following summarizes the requested rate adjustments:

As proposed, the County water and sewer user rates will be adjusted beginning March 2022 and subsequent years beginning January 1 from 2023 thru 2026 as follows: 2022 - 6.5%, 2023 - 8.5%, 2024 - 8.5%, 2025 - 8.5%, 2026 - 7.5%. Beginning January 1, 2027 and January 1st of subsequent years the water and sewer user rates shall be indexed automatically annually.

As proposed, the San Sebastian water rates shall be indexed automatically beginning March 2022 and will be indexed automatically beginning January 1 of subsequent years.

In addition to the proposed rate adjustments, the rate resolution has been modified to include an Exhibit A and B. Exhibit A contains rates, fees and charges where the cost has been adjusted but will remain fixed thereafter with no annual index adjustment. Exhibit B contains rates, fees, and charges where the costs have been adjusted and the costs will thereafter be indexed annually.

All rates, fees and charges per Exhibit B shall be indexed annually pursuant to the U.S. Bureau of Labor Statistics Seasonally Adjusted U.S. City Average Consumer Price Index for All Urban Consumers Water and Sewerage Maintenance Series Id CUSR0000SEHG01 (W S M I)(U).

Dept/Office:

Utility Services Department

Requested Action:

Approval of the Rate Resolution for the Utility Services Countywide system and the San Sebastian system to be implemented March 2022.

Summary Explanation and Background:

The Utility Services Department has conducted a review of its water and sewer capacity, the conditions of existing assets, and the impacts of recent State Environmental Laws have to this Department. With the assistance of our utility rate consultant, Raftelis, Inc., much detail was invested to develop a financial model of this Department and to review the revenue versus future expenditures of this Department.

Through this level of due diligence, we propose the rate adjustments, as specified under Fiscal Impact, that will provide the funds necessary in order: (1) to provide infrastructure investments to comply with Section 403.064 and 403.086 Florida Statute, (2) to replace treatment plant facilities that are beyond their useful life and increase capacity for future development in Mims, Port St John and South Brevard, and (3) to contribute funding for future septic-to-sewer projects and (4) to increase the operations and maintenance efforts in order to continue reliability throughout the District's utility system.

In addition, the rate resolutions for the Countywide and San Sebastian includes an Exhibit A & B, as mentioned under Fiscal Impact. Exhibit A contains rates, fees and charges where the cost has been adjusted but will remain fixed thereafter with no annual index adjustment. Exhibit B contains rates, fees, and charges where the costs have been adjusted and the costs will thereafter be indexed annually. It has been over 20 years since any of the fixed fees have been adjusted.

In depth information related to this agenda report will be referenced in the additional attachments provided. A summary of some key information and its attachments is provided below:

1. Attachment A - Additional Information Memorandum
This memorandum provides further in-depth information as to why the rate adjustment is needed, how the additional revenue will be allocated, and how the recent ARPA allocation provided a reduction in the proposed rate increase.
2. Attachment B - Countywide Rate Resolution and Exhibit A & B
3. Attachment C - San Sebastian Rate Resolution and Exhibit A & B
4. Attachment D - F.S. 403.064 - Reuse of Reclaim Water
This State Statute is referenced through the addenda report and supporting documents as one of the drivers for the needed rate adjustment. Highlighted sections are provided for relevance to the County Utility Services Department.
5. Attachment E - F.S. 403.086 - Sewage Disposal Facilities
This State Statute is referenced through the addenda report and supporting documents as one of the drivers for the needed rate adjustment. Highlighted sections are provided for relevance to the County Utility Services Department.
6. Attachment F - Utility Services customer location maps
The five (5) maps provided are maps of each of the Commissioner's District boundary and showing areas within those boundaries of Utility Services customer locations.
7. Attachment G- County & San Sebastian Sewer and Water / Sewer User Rate Comparison
The two graphs provided show a comparison with our rate increase over a 2-year span compared to other water and sewer utilities within Brevard County.
8. Attachment H - Report to FDEP for South Beaches Discharge Elimination Plan
This report is what was submitted to the FDEP regarding our plan to comply with F.S. 403.064. This

plan was approved by the Board at the October 12, 2021 Board meeting.

9. Attachment I - Report to FDEP for South Central Discharge Elimination Plan
This report is what was submitted to the FDEP regarding our plan to comply with F.S. 403.064. This plan was approved by the Board at the October 12, 2021 Board meeting.
10. Attachment J - Brevard County Utility Services Population Projection Report
This report was used as a tool by this Department to approximate future growth within the Utility Services water and sewer service area.
11. Attachment K - Capital Improvement Projection Report
Per the future growth analysis conducted per Attachment J, this report provides a conceptual level of future CIPs to accommodate future water and sewer customers.
12. Attachment L - Proof of Public Hearing Advertisement

Clerk to the Board Instructions:

Please scan and e-mail clerk memo to rose.lyons@brevardfl.gov <<mailto:rose.lyons@brevardfl.gov>> Mail originals to the Utility Services Department.



Kimberly Powell, Clerk to the Board, 400 South Street • P.O. Box 999, Titusville, Florida 32781-0999

Telephone: (321) 637-2001
Fax: (321) 264-6972
Kimberly.Powell@brevardclerk.us

February 9, 2022

MEMORANDUM

TO: Edward Fontanin, Utility Services Director

RE: Item H.2., Utility Services Rate Resolutions for the County Encompassing South Beaches, Merritt Island, North Brevard, Port St. John, and the South-Central Mianland Service Area; and San Sabastian Encompassing the San Sabastian Woods Water System

The Board of County Commissioners, in regular session on February 8, 2022, executed and adopted Resolution Nos. 22-008 and 22-009, increasing the schedule of rates, fees, and charges for water, sewer, and reclaimed water for the Countywide Utility System and increasing the rates, fees, and charges for the San Sabastian Woods Water System to be implemented March 2022. Enclosed are two fully-executed Resolutions.

Your continued cooperation is always appreciated.

Sincerely,

BOARD OF COUNTY COMMISSIONERS
RACHEL M. SADOFF, CLERK

Kimberly Powell, Clerk to the Board

Encls. (2)

RESOLUTION NO. -22-008

RESOLUTION OF THE BOARD OF COUNTY COMMISSIONERS OF BREVARD COUNTY FLORIDA, AMENDING RESOLUTION NO. 13-229 INCREASING THE SCHEDULE OF RATES, FEES AND CHARGES FOR WATER, SEWER AND RECLAIMED WATER, INCLUDING SYSTEMS LOCATED IN THE SOUTH BEACHES, MERRITT ISLAND, NORTH BREVARD, PORT ST. JOHN AND THE SOUTH CENTRAL MAINLAND SERVICE AREA; INCREASING WATER RATES FOR THE NORTH BREVARD WATER SYSTEM, INCREASING SEWER RATES FOR ALL OF THE ABOVE; AND PROVIDING FOR INDEXING OF THE RATES PURSUANT TO THE CONSUMER PRICE INDEX SEWER AND WATER MAINTENANCE INDEX (SWMI)(U); AND ESTABLISHING AN EFFECTIVE DATE.

WHEREAS, Section 180.136 Florida Statutes, and Chapter 67-1145, Laws of Florida prescribe the procedure for the fixing of a schedule of rates, fees and charges for the use of the services provided by the water, sewer, septage and reclaimed water system of Brevard County and for revising said schedule of rates, fees and charges; and

WHEREAS, on December 17, 2013, the Brevard County Board of County Commissioners adopted, in regular session, Resolution No. 13-229; and

WHEREAS, on May 18, 2021, the Brevard County Board of County Commissioners adopted Resolution No. 21-072 amending Resolution No. 13-229; and

WHEREAS, the Brevard County Board of County Commissioners now desires to further amend the schedule of rates, fees and charges for the use of the services provided by water, sewer, septic and reclaimed water system, as contained in this Resolution and in the attached Exhibits A and B; and

WHEREAS, on November 9, 2021, the Board directed that notice be published setting forth the proposed rates, fees and charges and such notice was published on January 13, 2022, in the FLORIDA TODAY Newspaper, published in Brevard County, Florida; and

WHEREAS, a public hearing was held on February 8, 2022 at the Government Center Board Meeting Room, 2725 Judge Fran Jamieson Way, Melbourne, Florida, for the purpose of amending the schedule of rates, fees, and charges;

NOW, THEREFORE, BE IT RESOLVED, BY THE BOARD OF COUNTY COMMISSIONERS OF BREVARD COUNTY, FLORIDA, as follows:

1. Resolution No. 13-229 is hereby amended as provided herein and as contained in the schedule attached as Exhibit "A" and Exhibit "B" hereto, and is hereby adopted as the schedule of rates, fees, and charges for the water, sewer, septage and reclaimed water systems maintained by Brevard County, including said systems located in the South Beaches, Merritt Island, North Brevard, Port St. John, and the South Central Mainland Service Area of Brevard County.
2. Said schedule of rates, fees, and charges shall be established for said water, sewer, septage and reclaimed water systems and any additional water, sewer and reclaimed water systems acquired by Brevard County and any future additions or extensions of any water, sewer and reclaimed water systems owned by Brevard County.
3. The rates, fees and charges in Exhibit A shall remain unchanged.

4. The rates, fees and charges in Exhibit B shall be indexed and shall change annually as follows:

a. The water and sewer user rates will be indexed as follows effective each year:

2022 – 6.5%

2023 – 8.5%

2024 – 8.5%

2025 – 8.5%

2026 – 7.5%

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).

b. Effective and in subsequent years all fees and charges, excluding the water and sewer user rates, shall be indexed automatically based on the actual change in 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).

c. If in any year the any of the rates Described in Exhibit B are indexed utilizing the Consumer Price Index Sewer and Water Maintenance Index (S W M I)(U) and such the annual rate increase exceeds 3.4%, the proposed

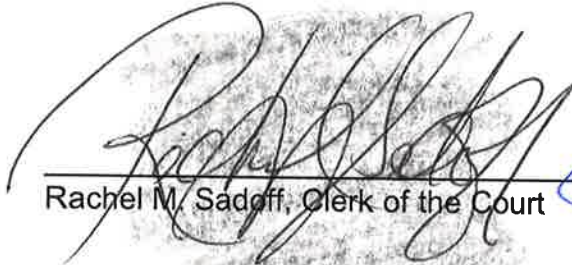
increase shall be brought before the Board of County Commissioners at the next available meeting for discussion.

5. A copy of said schedule of rates, fees, and charges shall be kept on file in the Office of the Clerk to the Board and shall be open for public inspection.

DONE, ORDERED AND ADOPTED, in regular session, this 8th day of February 2022.

ATTEST:

BOARD OF COUNTY COMMISSIONERS OF
BREVARD COUNTY, FLORIDA



Rachel M. Sadoff, Clerk of the Court



BY: Kristine Zonka, Chair

As Approved by the Board on 2/8/22

EXHIBIT A:
Brevard County Water & Sewer
Water and Sewer Rate Schedule
Countywide System

Definitions:

- a. Account Set-Up Charge: A charge levied for service initiation at a location where service did not exist previously, or for transfer of service to a new customer account at a previously served location.
- b. After Hours Service Activation Charge: A charge levied to activate water service outside of normal business hours (8 a.m.–5:00 p.m., Monday– Friday).
- c. Equivalent Residential Unit (E R C) is the assumed consumption for a single-family dwelling unit. Consumption is calculated per day or per month.
- d. Monthly Base Charge: A monthly charge that covers a building unit's portion of the operation and maintenance of the treatment plant. Base Charges are calculated based on the number of E R Cs stated for the building, using a single-family dwelling unit as the basis of comparison.
- e. Capacity Reservation Charge: A charge to reserve wastewater treatment plant capacity for future building units. The charge is calculated at twelve months of base charges for the estimated E R Cs for the building unit. The reservation can be continued into future years by payment of an annual charge each year. The payment of this Charge prevents another building unit from using this portion of the remaining plant capacity.
- f. Re-Activation Charge: A charge for re-activation of service, after de-activation at the customer's request.
- g. Delinquent Charge: A charge levied after water and/or sewer account becomes delinquent.
- h. Hydrant Meter Charge: A charge for the use of a portable hydrant meter for special circumstances, for use on a short-term limited basis at a specific location. A deposit and a one-time charge are collected when the meter is issued. Water usage is billed monthly at the commercial rate.
- i. Meter Replacement Charge: A charge levied upon the replacement of a meter at the customer's request.

Connection Charges for Sanitary Sewer:

Residential:

Single family, condominium, apartment, mobile home, for each unit with:

1 to 3 Bedrooms	\$2,257.00
4 Bedrooms	\$2,610.00
5 Bedrooms	\$2,962.00

Commercial:

Travel Trailer Park (per space)	\$374.00
Motel and Hotel (per room)	\$747.00
Restaurants (per seat)	\$148.00
Cocktail Lounge (per seat)	\$58.00
Laundry Facilities (per washing machine)	\$747.00

Other commercial to be determined by dividing the actual or estimated daily flows by the established daily flows by the established residential equivalent of 200 gallons per day to determine the number of equivalents to the nearest tenths. Equivalent and fraction thereof will be multiplied by the residential rate for a one to three-bedroom unit. The Utility Services Department shall estimate the gallons per day for commercial units not otherwise specified above.

1. Payment of wastewater connection charges made for existing structures in the Residential "A" Class may be made in twelve (12) equal installments during the first year of service with an interest rate to be determined by the Utility Services Department not to exceed fourteen percent (14%).
2. The Board of County Commissioners may waive the specified connection fee for any parcel of land against which a special assessment is levied to pay a portion of the acquisition cost of a sanitary sewer treatment plant and appurtenant facilities under the terms and conditions of a written acquisition agreement.
3. Connection charges shall be payable in full prior to the issuance of a Certificate of Occupancy. Credit shall be applied for any unused paid sewer capacity reservation charge pursuant to Section 110-141(b) of the Brevard County Code of Ordinances, as may be amended.

Sanitary Sewer Rates:

Deposit for Sewer Service:

Residential:

Per Unit	\$100.00
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Commercial:

Meter size	Deposit
¾ inch or 1 inch	\$100.00
1½ inch	\$230.00
2 inch	\$350.00
3 inch	\$870.00
4 inch	\$1450.00
5 inch	\$3,500.00
6 inch	\$4,500.00
8 inch	\$5,800.00

North Brevard Sewer Customers:

Refund of deposits – After a residential customer has had continuous service for a period of 12 months, the Brevard County Utilities Services Department shall refund the customer's deposit provided the customer has not in the preceding 12 months: 1) made more than one late payment, 2) paid with a check refused by a bank, 3) been disconnected for non-payment, or 4) tampered with the meter or used service in a fraudulent or unauthorized manner.

If a customer is disconnected for non-payment, the outstanding balance, delinquent charge, and a new deposit must be paid prior to service re-activation.

For customers receiving sewer billing services through the cities of Melbourne and Cocoa, the procedures for deposits adopted by those cities shall be used for county sewer accounts.

Connection Charges for Water Service:

An initial connection fee shall be charged as indicated below:

Single Family Residential	\$1,903.00
Condominium Unit (each)	\$1,589.00
Apartment Unit (each)	\$1,589.00
Mobile Home (each)	\$1,589.00
Travel Trailer Park (per space)	\$476.00
Motel/Hotel (per room)	\$952.00
Restaurants (per seat)	\$190.00
Cocktail Lounges (per seat)	\$76.00
Laundry Facilities (per washing machine)	\$638.00

Other commercial to be determined by dividing the actual or estimated daily flow by the established residential equivalent of 200 gallons per day to determine the number of equivalents to the nearest tenths. Equivalent and fraction thereof will be multiplied by the single-family residential rate. The Utility Services Department shall estimate the gallons per day for commercial units not otherwise specified above.

Connection charges shall be payable prior to the initiation of service or at such other time as established by the Board of County Commissioners of Brevard County by ordinance.

Payment of water connection charges made for existing residential structures may be made in twelve (12) equal installments during the first year of service with an interest rate to be determined by the Utility Services Department, not to exceed fourteen percent (14%).

Water Service Rates:

Deposit for Water Service:

Meter Size	Deposit
¾ inch	\$50.00
1 inch	\$80.00
1 – ½ inch	\$165.00
2 inch	\$260.00
3 inch	\$500.00
4 inch	\$835.00
6 inch	\$1,670.00
8 inch	\$2,500.00

Refund of Deposits: After a residential customer has had continuous service for a period of 12 months, the Brevard County Utilities Services Department shall refund the customer's deposit, provided the customer has not in the preceding 12 months: 1) made more than one late payment, 2) paid with a check refused by a bank, 3) been disconnected for non-payment, or 4) tampered with the meter or used service in a fraudulent or unauthorized manner.

If a customer is disconnected for non-payment, the outstanding balance, delinquent charge and a new deposit must be paid prior to service re-activation.

Meter Installation Charges:

An initial meter installation fee shall be charged, based upon meter size as indicated below. The actual cost of the meter will be the responsibility of the applicant for service.

Meter Size	Meter Installation Fee
¾ inch	\$200.00
1 inch	\$250.00

The meter installation fee for meters larger than one inch will be determined by the Brevard County Utility Services Department based upon the cost incurred in such meter installation.

Miscellaneous Charges for Water:

Account Set-up Charge	\$15.00
After Hours Service Activation Charge	\$50.00
Re-Activation Charge	\$15.00
Delinquent Charge	\$30.00
Hydrant Meter Charge	\$75.00 plus \$750 deposit
Meter Replacement Charge	\$300.00 (if the change is made at the customer's request. Obsolete or defective meters are replaced at no charge to the customer)

Installation Charge for Reclaimed Water Service:

An initial service installation fee of \$200.00 shall be charged to provide reclaimed water service to the property.

**EXHIBIT B:
Brevard County Water & Sewer
Indexed Fees, Charges and Rates
Countywide System**

Definitions:

- a. Account Set-Up Charge: A charge levied for service initiation at a location where service did not exist previously, or for transfer of service to a new customer account at a previously served location.
- b. After Hours Service Activation Charge: A charge levied to activate water service outside of normal business hours (8 a.m.–5:00 p.m., Monday– Friday).
- c. Equivalent Residential Unit (E R C) is the assumed consumption for a single-family dwelling unit. Consumption is calculated per day or per month.
- d. Monthly Base Charge: A monthly charge that covers a building unit's portion of the operation and maintenance of the treatment plant. Base Charges are calculated based on the number of E R Cs stated for the building, using a single-family dwelling unit as the basis of comparison.
- e. Capacity Reservation Charge: A charge to reserve wastewater treatment plant capacity for future building units. The charge is calculated at twelve months of base charges for the estimated E R Cs for the building unit. The reservation can be continued into future years by payment of an annual charge each year. The payment of this Charge prevents another building unit from using this portion of the remaining plant capacity.
- f. Re-Activation Charge: A charge for re-activation of service, after de-activation at the customer's request.
- g. Delinquent Charge: A charge levied after water and/or sewer account becomes delinquent.
- h. Hydrant Meter Charge: A charge for the use of a portable hydrant meter for special circumstances, for use on a short-term limited basis at a specific location. A deposit and a one-time charge are collected when the meter is issued. Water usage is billed monthly at the commercial rate.
- i. Meter Replacement Charge: A charge levied upon the replacement of a meter at the customer's request.

The following rates will be increased each January by the November to November annualized change of the Consumer Price Index Sewer and Water Maintenance Index (S W M I)(U).

Annual Charges for Sewer Capacity Reservation:

The annual charge for a Sewer Capacity Reservation is 12 times the monthly base charge for a like unit as defined below. The annual charge will be updated each year that the reservation is requested.

Residential A:

Residential single-family dwelling units including mobile homes and duplexes:

Annual Charge	\$150.00 per unit
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Residential B:

Multi-family residential units (Excluding duplexes):

Annual Charge	\$129.00 per unit
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Residential C:

Multi-family residential units (exclusive of duplexes) with individual water meters for each unit

Annual Charge	\$129.00 per unit
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Commercial:

All other users of the sewer system not classified as Residential A or Residential B:

Annual Charge	\$150.00 per Equivalent Residential Connection
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1. The initial annual charge shall be payable at the time application for sewer service is made. Subsequent charges shall be payable annually from the date of the initial payment, for as long as sewer capacity is to be reserved, as provided in applicable Brevard County regulations.

2. A one-time application fee of \$100.00 is payable at the time application for sewer service is made.

Miscellaneous Water Service Charges:

Fire Line Rates:

An annual charge for each fire line is determined by the size of the meter. No monthly base charge applies. Charges are increased each January based on the actual change in the Consumer Price Index Sewer and Water Maintenance Index (S W M I)(U).

METER SIZE	ANNUAL CHARGES
2-4 inch	\$80.00
6inch	\$100.00
8 inch	\$150.00
10 inch	\$300.00
12 inch	\$400.00

Charges for water usage will be metered through by-pass meter at rate of \$4.00 per 1,000 gallons. Water used in firefighting is exempt from charges.

Rate Schedule for Treatment of Septage and Other Truck Delivered Waste:

Charges are increased each January based on the actual change in the Consumer Price Index Sewer and Water Maintenance Index (S W M I)(U). The acceptance of the following waste types are dependent on the plant and applicable state and federal regulations.

Septage disposed of and treated at the county's Grease and Septage treatment facilities:

\$69.96 per 1000 gallons

Portable toilet waste disposed of and treated at the county's treatment facilities:

\$33.00 per 1000 gallons

Wastewater Treatment Plant sludge disposed of and treated at the county's treatment facilities:

\$79.50 per 1000 gallons

Monthly Reclaimed Water Rates:

Charges are increased each January based on the actual change in the Consumer Price Index Sewer and Water Maintenance Index (S W M I)(U).

Single Family and Duplex units are charged a monthly flat rate.

Multi-Family units are charged monthly based on the square footage of the irrigated area that will not be less than the Single-Family charge.

Small Users (1 Acre Maximum):

Single-Family	\$6.00/Month
Duplex	\$6.00/Month/Potable Water Meter
Multi-Family	\$1.20 Per 1000 Sq. Ft. Irrigated Area (\$6/Month Minimum)

Medium Users (Greater than 1 Acre, Non-"Major Users"):

Multi Family, Commercial, Recreational, Landscape, Agricultural, and other uses. \$20 Per Acre, \$10.00 Per Additional 1/2 Acre.

"Major User" Per 17-610 III, F.A.C. (Greater than 100,000 GPD):

All major users of Brevard County Reclaimed Water shall be Governed by Individual Reclaimed Water Agreements.

BREVARD COUNTY UTILITY SERVICES 2021 SEWER BILLING RATES

Monthly Charges for Sanitary Sewer Service:

2021 RATE

Residential A:

Residential single-family dwelling units, including mobile homes and duplexes, for each family living unit:

MONTHLY BASE CHARGES:	\$22.42	
COMMODITY CHARGE	\$4.74	PER 1,000 GALLONS TO MAX OF 12,000 GAL
MAXIMUM BILLING	\$79.30	

Residential B:

Multi-family residential dwelling units (exclusive of duplexes) and mobile home parks with common water meter for all units

MONTHLY BASE CHARGES:	\$19.26	PER UNIT
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COMMODITY CHARGE: \$4.74 PER 1,000 GALLONS
NO MAXIMUM BILLING

Residential C:

Multi-family residential dwelling units (exclusive of duplexes) with individual water meters for each unit:

MONTHLY BASE CHARGES: \$19.26
COMMODITY CHARGE \$4.74 PER 1,000 GALLONS TO
MAX OF 12,000 GAL
MAXIMUM BILLING \$76.14

Commercial:

All other users of the sewer system which are not classified as Residential A, Residential B or Residential C, shall be classified as commercial users.

MONTHLY BASE CHARGES: \$22.42
COMMODITY CHARGE: \$4.74 PER 1,000 GALLONS
NO MAXIMUM BILLING

RATES FOR CUSTOMERS NOT ON WATER SERVICE:

SINGLE FAMILY \$50.88
DUPLEX \$101.78

Melbourne:

Seascape Motel - Bill for Sewer \$274.75
Only - 13 units

All other commercial or residential users not presently served from an approved metered water unit shall be billed at the applicable rate based upon the following flow estimated for each unit. The total flow for the commercial or residential user shall be the following estimated flow for each unit times the total number of units of such user:

Multi-family Units 4,000 gallons per unit
Trailer Parks 5,000 gallons per unit
Motel Units 2,500 gallons per unit

Motel Apartment Units 3,750 gallons per unit

All other commercial or residential users not presently served from an approved metered water unit shall be billed at the applicable rate based upon the following flow estimated for each unit. The total flow for the commercial or residential user shall be the following estimated flow for each unit times the total number of units of such user.

Surcharge for Strong Wastes:

To the above rates and charges there shall be added a surcharge of 0.1% for each ppm of suspended solids in excess of 300 ppm and 0.125% for each ppm of five-day, 20 degrees Centigrade, BOD in excess of 250 ppm, all as determined by the County from samples and tests made of the customer's sewage. The County may require such customers discharging strong wastes into the system to construct control manholes to facilitate observation and sampling. Customers discharging large quantities of sewage may be required to construct special holding tanks so as to release the quantity at an even rate over a twenty-four hour holding period.

NORTH BREVARD UTILITY SERVICES 2021 WATER BILLING RATE

MONTHLY CHARGES FOR WATER SERVICE:

Each water customer shall pay a Base Charge as indicated in the following Table. Water used in excess of the Maximum Gallons in Base Charge shall be charged at the usage rate indicated for each usage range tier.

2021 North Brevard Water Usage Rate per 1,000 Gallons per Month

Usage Tiers, Thousand Gallons per Month

Meter Size Inches	Base Charge	Maximum Gallons in Base Charge	Tier 1 \$5.44	Tier 2 \$7.90	Tier 3 \$11.46	Tier 4 \$15.44
3/4	\$17.40	3,000	3-8	8-16	16-24	>24
1	\$29.00	5,000	5-12	12-18	18-24	>24
1 1/2	\$69.61	12,000	12-32	32-64	64-96	>96
2	\$121.80	21,000	21-42	42-84	84-168	>168
3	\$278.45	48,000	48-96	96-182	182-364	>364
4	\$493.07	85,000	85-170	170-340	340-680	>680
6	\$1,113.709	192,000	192-384	384-768	768-1536	>1536
8	\$1,989.77	340,000	340-680	680-1300	1300-2200	>2200

Mims 2021 Contracted Rates:

Kingswood	\$5.19
Oakwood	\$5.19
Fire Meters Water \$ per 1,000	\$5.64

The minimum monthly charge for a meter larger than eight (8) inches shall be determined by the Utility Services Department prior to connection, based upon a consideration of a minimum equivalent rate.

An additional monthly fee of \$1.00 per residential unit shall be charged for fire hydrant rental. The monthly fire hydrant rental for commercial units shall be \$1.00 per Equivalent Residential Connection (ERC) based on monthly water usage (1 ERC = 7,600 gallons per month).

RESOLUTION NO. 22-009

RESOLUTION OF THE BOARD OF COUNTY COMMISSIONERS OF BREVARD COUNTY FLORIDA, AMENDING RESOLUTION NO. 10-249, INCREASING THE SCHEDULE OF RATES, FEES AND CHARGES FOR WATER SERVICE AT THE SAN SEBASTIAN WOODS WATER SYSTEM; PROVIDING FOR INDEXING OF THE RATES PURSUANT TO THE CONSUMER PRICE INDEX SEWER AND WATER MAINTENANCE INDEX (SWMI)(U); AND ESTABLISHING AN EFFECTIVE DATE.

WHEREAS, Section 180.136 Florida Statutes, and Chapter 67-1145, Laws of Florida prescribe the procedure for the fixing of a schedule of rates, fees and charges for the use of the services provided by the water system of Brevard County and for revising said schedule of rates, fees and charges; and

WHEREAS, on November 10, 2010 the Brevard County Board of County Commissioners, as Receiver in Case No. 05-2010-CA-038775-XXXX-XX, adopted Resolution 10-249 providing for an increase in water rates for the San Sebastian Water, LLC Water System; and

WHEREAS, on October 30, 2015, Brevard County, a political subdivision of the State of Florida, acquired the San Sebastian Woods Water System by Quit Claim Deed pursuant to the Court's Order in Case No. 05-2010-CA-038775-XXXX-XX; and

WHEREAS, the Brevard County Board of County Commissioners now desires to further amend the schedule of rates, fees and charges for water service at the San Sebastian Water Woods Water System, as contained in this Resolution and in the attached Exhibits A and B; and

WHEREAS, on November 9, 2021, the Board directed that notice be published setting forth the proposed rates, fees and charges and such notice was published on January 13, 2022, in the FLORIDA TODAY Newspaper, published in Brevard County, Florida; and

WHEREAS, a public hearing was held on February 8, 2022 at the Government Center Board Meeting Room, 2725 Judge Fran Jamieson Way, Melbourne, Florida, for the purpose of amending the schedule of rates, fees, and charges.

NOW, THEREFORE, BE IT RESOLVED, BY THE BOARD OF COUNTY COMMISSIONERS OF BREVARD COUNTY, FLORIDA, as follows:

1. Resolution No. 10-249 is hereby amended as provided herein and as contained in the schedule attached as Exhibit "A" and Exhibit "B" hereto, and is hereby

adopted as the schedule of rates, fees, and charges for the San Sebastian Woods Water System maintained by Brevard County.

2. Said schedule of rates, fees, and charges shall be established for said water system and any future additions or extensions to the San Sebastian Woods Water System of any water system owned by Brevard County.
3. The rates, fees and charges in Exhibit A shall remain unchanged.
4. The rates, fees and charges in Exhibit B shall be indexed and shall change annually as follows:

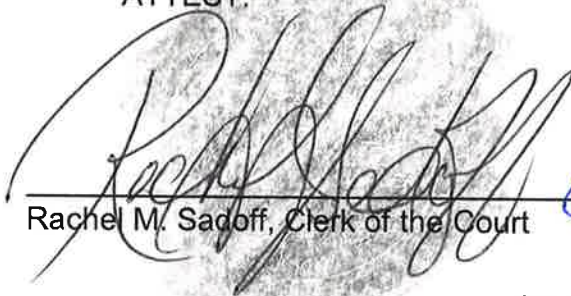
Effective and in subsequent years all fees and charges, excluding the water and sewer user rates, shall be indexed automatically based on the actual change in Consumer Price Index Sewer and Water Maintenance Index (S W M I)(U) based on the average of the index from the previous 12 months (November to November).

If in any year the any of the rates Described in Exhibit B are indexed utilizing the Consumer Price Index Sewer and Water Maintenance Index (S W M I)(U) and such the annual rate increase exceeds 3.4%, the proposed increase shall be brought before the Board of County Commissioners at the next available meeting for discussion.

5. A copy of said schedule of rates, fees, and charges shall be kept on file in the Office of the Clerk to the Board and shall be open for public inspection.

DONE, ORDERED AND ADOPTED, in regular session, this 8th day of February 8, 2022.

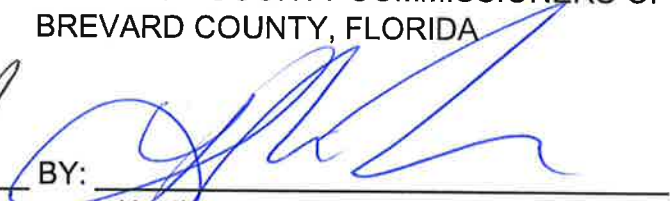
ATTEST:



Rachel M. Sadoff, Clerk of the Court

BOARD OF COUNTY COMMISSIONERS OF
BREVARD COUNTY, FLORIDA

BY:



Kristine Zonka, Chair

As Approved by the Board on 2/8/22

**EXHIBIT A:
Brevard County San Sebastian Woods
Water Rate Schedule**

Definitions:

- a. Account Set-Up Charge: A charge levied for service initiation at a location where service did not exist previously, or for transfer of service to a new customer account at a previously served location.
- b. After Hours Service Activation Charge: A charge levied to activate water service outside of normal business hours (8:00 a.m.-5:00 p.m., Monday – Friday).
- c. Re-Activation Charge: A charge for re-activation of service, after de-activation, at the customer's request.
- d. Delinquent Charge: A charge levied after a water account becomes delinquent.
- e. Hydrant Meter Charge: A charge for the use of a portable hydrant meter for special circumstances, for use on a short-term limited basis at a specific location. A deposit and a one-time charge are collected when the meter is issued. Water usage is billed monthly at the commercial rate.
- f. Meter Replacement/Test Charge: A charge levied upon the replacement of a meter at the customer's request.
- g. Reconnection of Service for the Same Customer: Service will be discontinued at the customer's request. Where service is to be restored at the same premises to the same customer, the customer will pay to the utility a sum equal to 100% of the minimum bill for each billing period during which service was discontinued, plus a \$15.00 re-activation charge. All prior indebtedness must be paid before service will be restored.

Water Service Rate Schedule

Initial application for water service for new units being constructed must be made through the Brevard County building permitting process. All capacity charges and connection fees shall be collected in advance of service, or prior to issue of C.O.

Connection Charges for Water Service:

Single Family Residential \$1,100.00

All others \$4.40 per gallon per day at a minimum of 250 GPD

All new applications for service at a new location shall pay, in advance, a plant capacity charge of \$1,100 per single family residential customer. All other customers shall pay \$4.40 per gallon per day, based upon the customer's average daily water usage of the highest three (3) consecutive months of the year, or some other acceptable standard, but not less than \$1,100.

To determine the estimated daily flow for non-residential customers, the utility will use historical flow data of like establishments. In the absence of historical information, the utility shall use the amount provided by FAC Chapter 64E-6.

Unless otherwise determined by the utility, historical flow data shall be used in lieu of estimated flow data.

Meter Installation Charge

An initial meter installation fee shall be charged, based upon meter size as indicated below. The actual cost of the meter will be the responsibility of the applicant for service.

METER SIZE	METER INSTALLATION FEE
¾ inch	\$200.00
1 inch	\$250.00

The meter installation fee for meters larger than one inch will be determined by the Utility Services Department based upon the cost incurred in such meter installation.

Deposit for Water Service:

METER SIZE	DEPOSIT
¾ inch	\$50.00
1 inch	\$80.00
1 ½ inch	\$165.00
2 inch	\$260.00
3 inch	\$500.00
4 inch	\$835.00
6 inch	\$1,670.00
8 inch	\$2,500.00

Refund of deposits – After a residential customer has had continuous service for a period of 12 months, the County shall refund the customer's deposit provided the customer has not in the preceding 12 months:

- (a) made more than one late payment,
- (b) paid with a check refused by a bank,
- (c) been disconnected for non-payment, or
- (d) tampered with the meter or used service in a fraudulent or unauthorized manner.

If a customer does not provide payment by the delinquent date, the outstanding balance, delinquent charge, and a new deposit will be required.

Terms of Payment

Bills are due and payable when rendered and become past due if not paid before the next billing cycle. Service may be discontinued when the bill becomes delinquent.

Miscellaneous Service Charges

Account Set-Up Charge	\$15.00
After Hours Service Activation Charge	\$50.00
Re-Activation Charge	\$15.00

Delinquent Charge	\$30.00
Meter Replacement Charge	If requested by the customer: \$300.00 If meter is obsolete or defective: NO CHARGE
Hydrant Meter Charge	\$750 Deposit PLUS \$75.00

Fire Line Rates:

Meter Size	Annual Charges
2-4 inch	\$80.00
6 inch	\$100.00
8 inch	\$150.00
10 inch	\$300.00
12 inch	\$400.00

Charges for water usage will be metered through by-pass meter at rate of \$4.00 per 1,000 gallons. Water used in firefighting is exempt from charges.

If a customer is disconnected for non-payment, the outstanding balance, delinquent charge, and a new deposit must be paid prior to service re-activation.

EXHIBIT B:
Brevard County San Sebastian Woods
Indexed Fees, Charges and Rates

Definitions:

- a. Account Set-Up Charge: A charge levied for service initiation at a location where service did not exist previously, or for transfer of service to a new customer account at a previously served location.
- b. After Hours Service Activation Charge: A charge levied to activate water service outside of normal business hours (8:00 a.m.-5:00 p.m., Monday – Friday).
- c. Re-Activation Charge: A charge for re-activation of service, after de-activation, at the customer's request.
- d. Delinquent Charge: A charge levied after a water account becomes delinquent.
- e. Hydrant Meter Charge: A charge for the use of a portable hydrant meter for special circumstances, for use on a short-term limited basis at a specific location. A deposit and a one-time charge are collected when the meter is issued. Water usage is billed monthly at the commercial rate.
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- g. Reconnection of Service for the Same Customer: Service will be discontinued at the customer's request. Where service is to be restored at the same premises to the same customer, the customer will pay to the utility a sum equal to 100% of the minimum bill for each billing period during which service was discontinued, plus a \$15.00 re-activation charge. All prior indebtedness must be paid before service will be restored.

The following rates will be increased each January by the November to November annualized change of the Consumer Price Index Sewer and Water Maintenance Index (S W M I) (U).

Monthly Charges for Water Service:

Charges are increased each January based on the actual change in the Consumer Price Index Sewer and Water Maintenance Index (S W M I)(U).

Residential Service:

Availability - Water service in accordance with this rate schedule is available throughout the San Sebastian Woods service area in Brevard County, Florida.

Applicability - This rate schedule is applicable to individual family residences. Water service is also available under this schedule to multiple-family structures, state-licensed mobile home parks and mobile home subdivisions where a separate service connection and meter is installed for each family unit supplied with water service. Each such family will be separately billed.

Each Residential water customer shall pay a Base Facility Charge each month based on the size of the meter. Water usage shall be charged monthly at the current usage rate.

Water Service	2021 RATE
Meter Size	Base Facility Charge
¾ inch	\$33.82
1 inch	\$56.36
1 ½ inch	\$112.70
2 inch	\$180.32
3 inch	\$360.64
4 inch	\$563.50
6 inch	\$1,127.00
Usage Rate per 1000 Gallons	\$5.96

EXHIBIT B:
Brevard County San Sebastian Woods
Indexed Fees, Charges and Rates

Definitions:

- a. Account Set-Up Charge: A charge levied for service initiation at a location where service did not exist previously, or for transfer of service to a new customer account at a previously served location.
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The 2021 Florida Statutes

[Title XXIX](#)
PUBLIC HEALTH

[Chapter 403](#)
ENVIRONMENTAL CONTROL

[View Entire Chapter](#)

403.064 Reuse of reclaimed water.—

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

(2) All applicants for permits to construct or operate a domestic wastewater treatment facility located within, serving a population located within, or discharging within a water resource caution area shall prepare a reuse feasibility study as part of their application for the permit. Reuse feasibility studies shall be prepared in accordance with department guidelines adopted by rule and shall include, but are not limited to:

- (a) Evaluation of monetary costs and benefits for several levels and types of reuse.
- (b) Evaluation of water savings if reuse is implemented.
- (c) Evaluation of rates and fees necessary to implement reuse.
- (d) Evaluation of environmental and water resource benefits associated with reuse.
- (e) Evaluation of economic, environmental, and technical constraints.
- (f) A schedule for implementation of reuse. The schedule shall consider phased implementation.

(3) The permit applicant shall prepare a plan of study for the reuse feasibility study consistent with the reuse feasibility study guidelines adopted by department rule. The plan of study shall include detailed descriptions of applicable treatment and water supply alternatives to be evaluated and the methods of analysis to be used. The plan of study shall be submitted to the department for review and approval.

(4) The study required under subsection (2) shall be performed by the applicant, and, if the study shows that the reuse is feasible, the applicant must give significant consideration to its implementation if the study complies with the requirements of subsections (2) and (3).

(5) A reuse feasibility study is not required if:

(a) The domestic wastewater treatment facility has an existing or proposed permitted or design capacity less than 0.1 million gallons per day; or

(b) The permitted reuse capacity equals or exceeds the total permitted capacity of the domestic wastewater treatment facility.

(6) A reuse feasibility study prepared under subsection (2) satisfies a water management district requirement to conduct a reuse feasibility study imposed on a local government or utility that has responsibility for wastewater management. The data included in the study and the conclusions of the study must be given significant consideration by the applicant and the appropriate water management district in an analysis of the economic, environmental, and technical feasibility of providing reclaimed water for reuse under part II of chapter 373 and must be presumed relevant to the determination of feasibility. A water management district may not require a separate study when a reuse feasibility study has been completed under subsection (2).

(7) Local governments may allow the use of reclaimed water for inside activities, including, but not limited to, toilet flushing, fire protection, and decorative water features, as well as for outdoor uses, provided the reclaimed water is from domestic wastewater treatment facilities which are permitted, constructed, and operated in accordance with department rules.

(8) Permits issued by the department for domestic wastewater treatment facilities shall be consistent with requirements for reuse included in applicable consumptive use permits issued by the water management district, if such requirements are consistent with department rules governing reuse of reclaimed water. This subsection applies only to domestic wastewater treatment facilities which are located within, or serve a population located within, or discharge within water resource caution areas and are owned, operated, or controlled by a local government or utility which has responsibility for water supply and wastewater management.

(9) Local governments may and are encouraged to implement programs for the reuse of reclaimed water. Nothing in this chapter shall be construed to prohibit or preempt such local reuse programs.

(10) A local government that implements a reuse program under this section shall be allowed to allocate the costs in a reasonable manner.

(11) Pursuant to chapter 367, the Florida Public Service Commission shall allow entities under its jurisdiction which conduct studies or implement reuse projects, including, but not limited to, any study required by subsection (2) or facilities used for reliability purposes for a reclaimed water reuse system, to recover the full, prudently incurred cost of such studies and facilities through their rate structure.

(12) In issuing consumptive use permits, the permitting agency shall consider the local reuse program.

(13) A local government shall require a developer, as a condition for obtaining a development order, to comply with the local reuse program.

(14) After conducting a feasibility study under subsection (2), domestic wastewater treatment facilities that dispose of effluent by Class I deep well injection, as defined in 40 C.F.R. s. 144.6(a), must implement reuse to the degree that reuse is feasible, based upon the applicant's reuse feasibility study. Applicable permits issued by the department shall be consistent with the requirements of this subsection.

(a) This subsection does not limit the use of a Class I deep well injection facility as backup for a reclaimed water reuse system.

(b) This subsection applies only to domestic wastewater treatment facilities located within, serving a population located within, or discharging within a water resource caution area.

(15) After conducting a feasibility study under subsection (2), domestic wastewater treatment facilities that dispose of effluent by surface water discharges or by land application methods must implement reuse to the degree that reuse is feasible, based upon the applicant's reuse feasibility study. This subsection does not apply to surface water discharges or land application systems which are currently categorized as reuse under department rules. Applicable permits issued by the department shall be consistent with the requirements of this subsection.

(a) This subsection does not limit the use of a surface water discharge or land application facility as backup for a reclaimed water reuse system.

(b) This subsection applies only to domestic wastewater treatment facilities located within, serving a population located within, or discharging within a water resource caution area.

(16) Utilities implementing reuse projects are encouraged, except in the case of use by electric utilities as defined in s. 366.02(2), to meter use of reclaimed water by all end users and to charge for the use of reclaimed water based on the actual volume used when such metering and charges can be shown to encourage water conservation. Metering and the use of volume-based rates are effective water management tools for the following reuse activities: residential irrigation, agricultural irrigation, industrial uses, landscape irrigation, irrigation of other public access areas, commercial and institutional uses such as toilet flushing, and transfers to other reclaimed water utilities. Each domestic wastewater utility that provides reclaimed water for the reuse activities listed in this section shall include a summary of its metering and rate structure as part of its annual reuse report to the department.

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

nonbeneficial surface water discharge by January 1, 2032, subject to the requirements of this section. The plan must include the average gallons per day of effluent, reclaimed water, or reuse water that will no longer be discharged into surface waters and the date of such elimination, the average gallons per day of surface water discharge which will continue in accordance with the alternatives provided for in subparagraphs (a)2. and 3., and the level of treatment that the effluent, reclaimed water, or reuse water will receive before being discharged into a surface water by each alternative.

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

1. The plan will result in eliminating the surface water discharge.
2. The plan will result in meeting the requirements of s. 403.086(10).
3. The plan does not provide for a complete elimination of the surface water discharge but does provide an affirmative demonstration that any of the following conditions apply to the remaining discharge:
 - a. The discharge is associated with an indirect potable reuse project;
 - b. The discharge is a wet weather discharge that occurs in accordance with an applicable department permit;
 - c. The discharge is into a stormwater management system and is subsequently withdrawn by a user for irrigation purposes;
 - d. The utility operates domestic wastewater treatment facilities with reuse systems that reuse a minimum of 90 percent of a facility's annual average flow, as determined by the department using monitoring data for the prior 5 consecutive years, for reuse purposes authorized by the department; or
 - e. The discharge provides direct ecological or public water supply benefits, such as rehydrating wetlands or implementing the requirements of minimum flows and minimum water levels or recovery or prevention strategies for a water body.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(c) The department may convene and lead one or more technical advisory groups to coordinate the rulemaking and review of rules for potable reuse as required under this section. The technical advisory group, which shall assist in the development of such rules, must be composed of knowledgeable representatives of a broad group of interested stakeholders, including, but not limited to, representatives from the water management districts, the wastewater utility industry, the water utility industry, the environmental community, the business community, the public health community, the agricultural community, and the consumers.

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

(e) The department and the water management districts shall develop and execute, by December 31, 2023, a memorandum of agreement providing for the procedural requirements of a coordinated review of all permits associated with the construction and operation of an indirect potable reuse project. The memorandum of agreement must provide that the coordinated review will occur only if requested by a permittee. The purpose of the coordinated review is to share information, avoid the redundancy of information requested from the permittee, and ensure consistency in the permit for the protection of the public health and the environment.

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

1. Beginning January 1, 2026, eligible for expedited permitting under s. [403.973](#).

2. Consistent with s. [373.707](#), eligible for priority funding in the same manner as other alternative water supply projects from the Drinking Water State Revolving Fund, under the Water Protection and Sustainability Program, and for water management district cooperative funding.

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

History.—s. 7, ch. 89-324; s. 3, ch. 94-243; s. 8, ch. 95-323; s. 37, ch. 2002-296; s. 13, ch. 2004-381; s. 48, ch. 2018-110; s. 12, ch. 2020-150; s. 1, ch. 2021-168.

The 2021 Florida Statutes

Title XXIX
PUBLIC HEALTH

Chapter 403
ENVIRONMENTAL CONTROL

[View Entire Chapter](#)

403.086 Sewage disposal facilities; advanced and secondary waste treatment.—

(1)(a) The Department of Health or any other state agency, county, special district, or municipality may not approve construction of any sewage disposal facilities which do not provide for secondary waste treatment and advanced waste treatment as deemed necessary and ordered by the department.

(b) Sewage disposal facilities constructed after June 14, 1978, may not dispose of any wastes by deep well injection without providing for secondary waste treatment and advanced waste treatment deemed necessary by the department to protect adequately the beneficial use of the receiving waters.

(c) **Notwithstanding this chapter or chapter 373, sewage disposal facilities may not dispose of any wastes into Old Tampa Bay, Tampa Bay, Hillsborough Bay, Boca Ciega Bay, St. Joseph Sound, Clearwater Bay, Sarasota Bay, Little Sarasota Bay, Roberts Bay, Lemon Bay, Charlotte Harbor Bay, Biscayne Bay, or, beginning July 1, 2025, Indian River Lagoon, or into any river, stream, channel, canal, bay, bayou, sound, or other water tributary thereto, without providing advanced waste treatment, as defined in subsection (4), approved by the department. This paragraph does not apply to facilities which were permitted by February 1, 1987, and which discharge secondary treated effluent, followed by water hyacinth treatment, to tributaries of tributaries of the named waters; or to facilities permitted to discharge to the nontidally influenced portions of the Peace River.**

(d) By December 31, 2020, the department, in consultation with the water management districts and sewage disposal facilities, shall submit to the Governor, the President of the Senate, and the Speaker of the House of Representatives a progress report on the status of upgrades made by each facility to meet the advanced waste treatment requirements under paragraph (c). The report must include a list of sewage disposal facilities required to upgrade to advanced waste treatment, the preliminary cost estimates for the upgrades, and a projected timeline of the dates by which the upgrades will begin and be completed and the date by which operations of the upgraded facility will begin.

(2) All sewage disposal facilities shall provide for secondary waste treatment, a power outage contingency plan that mitigates the impacts of power outages on the utility's collection system and pump stations, and advanced waste treatment as deemed necessary and ordered by the Department of Environmental Protection. **Failure to conform is punishable by a civil penalty of \$750 for each 24-hour day or fraction thereof that such failure is allowed to continue thereafter.**

(3) This section shall not be construed to prohibit or regulate septic tanks or other means of individual waste disposal which are otherwise subject to state regulation.

(4) For purposes of this section, the term "advanced waste treatment" means that treatment which will provide a reclaimed water product that:

(a) Contains not more, on a permitted annual average basis, than the following concentrations:

1. Biochemical Oxygen Demand (CBOD5). 5mg/l
2. Suspended Solids. 5mg/l
3. Total Nitrogen, expressed as N. 3mg/l
4. Total Phosphorus, expressed as P. 1mg/l

(b) Has received high level disinfection, as defined by rule of the department.

In those waters where the concentrations of phosphorus have been shown not to be a limiting nutrient or a contaminant, the department may waive or alter the compliance levels for phosphorus until there is a demonstration that phosphorus is a limiting nutrient or a contaminant.

(5)(a) Notwithstanding any other provisions of this chapter or chapter 373, when a reclaimed water product has been established to be in compliance with the standards set forth in subsection (4), that water shall be presumed to be allowable, and its discharge shall be permitted in the waters described in paragraph (1)(c) at a reasonably accessible point where such discharge results in minimal negative impact. This presumption may be overcome only by a demonstration that one or more of the following would occur:

1. That the discharge of reclaimed water that meets the standards set forth in subsection (4) will be, by itself, a cause of considerable degradation to an Outstanding Florida Water or to other waters and is not clearly in the public interest.

2. That the reclaimed water discharge will have a substantial negative impact on an approved shellfish harvesting area or a water used as a public domestic water supply.

3. That the increased volume of fresh water contributed by the reclaimed water product will seriously alter the natural fresh-salt water balance of the receiving water after reasonable opportunity for mixing.

(b) If one or more of the conditions described in subparagraphs (a)1.-3. have been demonstrated, remedies may include, but are not limited to, the following:

1. Require more stringent effluent limitations;

2. Order the point or method of discharge changed;

3. Limit the duration or volume of the discharge; or

4. Prohibit the discharge only if no other alternative is in the public interest.

(6) Any facility covered in paragraph (1)(c) shall be permitted to discharge if it meets the standards set forth in subsections (4) and (5). All of the facilities covered in paragraph (1)(c) shall be required to meet the standards set forth in subsections (4) and (5).

(7) All sewage disposal facilities under subsection (2) which control a collection or transmission system of pipes and pumps to collect and transmit wastewater from domestic or industrial sources to the facility shall take steps to prevent sanitary sewer overflows or underground pipe leaks and ensure that collected wastewater reaches the facility for appropriate treatment. Facilities must use inflow and infiltration studies and leakage surveys to develop pipe assessment, repair, and replacement action plans with a 5-year planning horizon that comply with department rule to limit, reduce, and eliminate leaks, seepages, or inputs into wastewater treatment systems' underground pipes. The pipe assessment, repair, and replacement action plans must be reported to the department. The facility action plans must include information regarding the annual expenditures dedicated to the inflow and infiltration studies and the required replacement action plans; expenditures that are dedicated to pipe assessment, repair, and replacement; and expenditures designed to limit the presence of fats, roots, oils, and grease in the facility's collection system. The department shall adopt rules regarding the implementation of inflow and infiltration studies and leakage surveys; however, such rules may not fix or revise utility rates or budgets. A utility or an operating entity subject to this subsection and s. 403.061(14) may submit one report to comply with both requirements.

Substantial compliance with this subsection is evidence in mitigation for the purposes of assessing penalties pursuant to ss. 403.121 and 403.141.

(8)(a) The department shall allow backup discharges pursuant to permit only. The backup discharge shall be limited to 30 percent of the permitted reuse capacity on an annual basis. For purposes of this subsection, a "backup discharge" is a surface water discharge that occurs as part of a functioning reuse system which has been permitted under department rules and which provides reclaimed water for irrigation of public access areas, residential properties, or edible food crops, or for industrial cooling or other acceptable reuse purposes. Backup discharges may occur during periods of reduced demand for reclaimed water in the reuse system.

(b) Notwithstanding any other provisions of this chapter or chapter 373, backup discharges of reclaimed water meeting the standards as set forth in subsection (4) shall be presumed to be allowable and shall be permitted in all waters in the state at a reasonably accessible point where such discharge results in minimal negative impact. Wet weather discharges as provided in s. 2(3)(c), chapter 90-262, Laws of Florida, shall include backup discharges as

provided in this section. The presumption of the allowability of a backup discharge may be overcome only by a demonstration that one or more of the following conditions is present:

1. The discharge will be to an Outstanding Florida Water, except as provided in chapter 90-262, Laws of Florida;
 2. The discharge will be to Class I or Class II waters;
 3. The increased volume of fresh water contributed by a backup discharge will seriously alter the natural freshwater to saltwater balance of receiving waters after reasonable opportunity for mixing;
 4. The discharge will be to a water body having a pollutant load reduction goal established by a water management district or the department, and the discharge will cause or contribute to a violation of the established goal;
 5. The discharge fails to meet the requirements of the antidegradation policy contained in department rules;
- or
6. The discharge will be to waters that the department determines require more stringent nutrient limits than those set forth in subsection (4).

(c) Any backup discharge shall be subject to the provisions of the antidegradation policy contained in department rules.

(d) If one or more of the conditions described in paragraph (b) have been demonstrated, a backup discharge may still be allowed in conjunction with one or more of the remedies provided in paragraph (5)(b) or other suitable measures.

(e) The department shall allow lower levels of treatment of reclaimed water if the applicant affirmatively demonstrates that water quality standards will be met during periods of backup discharge and if all other requirements of this subsection are met.

(9) The department may require backflow prevention devices on potable water lines within reclaimed water service areas to protect public health and safety. The department shall establish rules that determine when backflow prevention devices on potable water lines are necessary and when such devices are not necessary.

(10) The Legislature finds that the discharge of domestic wastewater through ocean outfalls wastes valuable water supplies that should be reclaimed for beneficial purposes to meet public and natural systems demands. The Legislature also finds that discharge of domestic wastewater through ocean outfalls compromises the coastal environment, quality of life, and local economies that depend on those resources. The Legislature declares that more stringent treatment and management requirements for such domestic wastewater and the subsequent, timely elimination of ocean outfalls as a primary means of domestic wastewater discharge are in the public interest.

(a) The construction of new ocean outfalls for domestic wastewater discharge and the expansion of existing ocean outfalls for this purpose, along with associated pumping and piping systems, are prohibited. Each domestic wastewater ocean outfall shall be limited to the discharge capacity specified in the department permit authorizing the outfall in effect on July 1, 2008, which discharge capacity shall not be increased. Maintenance of existing, department-authorized domestic wastewater ocean outfalls and associated pumping and piping systems is allowed, subject to the requirements of this section. The department is directed to work with the United States Environmental Protection Agency to ensure that the requirements of this subsection are implemented consistently for all domestic wastewater facilities in the state which discharge through ocean outfalls.

(b) The discharge of domestic wastewater through ocean outfalls must meet advanced wastewater treatment and management requirements by December 31, 2018. For purposes of this subsection, the term "advanced wastewater treatment and management requirements" means the advanced waste treatment requirements set forth in subsection (4), a reduction in outfall baseline loadings of total nitrogen and total phosphorus which is equivalent to that which would be achieved by the advanced waste treatment requirements in subsection (4), or a reduction in cumulative outfall loadings of total nitrogen and total phosphorus occurring between December 31, 2008, and December 31, 2025, which is equivalent to that which would be achieved if the advanced waste treatment requirements in subsection (4) were fully implemented beginning December 31, 2018, and continued through December 31, 2025. The department shall establish the average baseline loadings of total nitrogen and total phosphorus for each outfall using monitoring data available for calendar years 2003 through 2007 and

establish required loading reductions based on this baseline. The baseline loadings and required loading reductions of total nitrogen and total phosphorus shall be expressed as an average annual daily loading value. The advanced wastewater treatment and management requirements of this paragraph are deemed met for any domestic wastewater facility discharging through an ocean outfall on July 1, 2008, which has installed by December 31, 2018, a fully operational reuse system comprising 100 percent of the facility's baseline flow on an annual basis for reuse activities authorized by the department.

(c)1. Each utility that had a permit for a domestic wastewater facility that discharged through an ocean outfall on July 1, 2008, must install, or cause to be installed, a functioning reuse system within the utility's service area or, by contract with another utility, within Miami-Dade County, Broward County, or Palm Beach County by December 31, 2025. For purposes of this subsection, a "functioning reuse system" means an environmentally, economically, and technically feasible system that provides a minimum of 60 percent of a facility's baseline flow on an annual basis for irrigation of public access areas, residential properties, or agricultural crops; aquifer recharge; groundwater recharge; industrial cooling; or other acceptable reuse purposes authorized by the department. For purposes of this subsection, the term "baseline flow" means the annual average flow of domestic wastewater discharging through the facility's ocean outfall, as determined by the department, using monitoring data available for calendar years 2003 through 2007.

2. Flows diverted from facilities to other facilities that provide 100-percent reuse of the diverted flows before December 31, 2025, are considered to contribute to meeting the reuse requirement. For utilities operating more than one outfall, the reuse requirement may be apportioned between the facilities served by the outfalls, including flows diverted to other facilities for 100-percent reuse before December 31, 2025. Utilities that shared a common ocean outfall for the discharge of domestic wastewater on July 1, 2008, regardless of which utility operates the ocean outfall, are individually responsible for meeting the reuse requirement and may enter into binding agreements to share or transfer such responsibility among the utilities. If treatment in addition to the advanced wastewater treatment and management requirements described in paragraph (b) is needed to support a functioning reuse system, the treatment must be fully operational by December 31, 2025.

3. If a facility that discharges through an ocean outfall contracts with another utility to install a functioning reuse system, the department must approve any apportionment of the reuse generated from the new or expanded reuse system that is intended to satisfy all or a portion of the reuse requirements pursuant to subparagraph 1. If a contract is between two utilities that have reuse requirements pursuant to subparagraph 1., the reuse apportioned to each utility's requirement may not exceed the total reuse generated by the new or expanded reuse system. A utility shall provide the department a copy of any contract with another utility that reflects an agreement between the utilities which is subject to the requirements of this subparagraph.

(d) **The discharge of domestic wastewater through ocean outfalls is prohibited after December 31, 2025,** except as a backup discharge that is part of a functioning reuse system or other wastewater management system authorized by the department. Except as otherwise provided in this subsection, a backup discharge may occur only during periods of reduced demand for reclaimed water in the reuse system, such as periods of wet weather, or as the result of peak flows from other wastewater management systems, and must comply with the advanced wastewater treatment and management requirements of paragraph (b). Peak flow backup discharges from other wastewater management systems may not cumulatively exceed 5 percent of a facility's baseline flow, measured as a 5-year rolling average, and are subject to applicable secondary waste treatment and water-quality-based effluent limitations specified in department rules. If peak flow backup discharges are in compliance with the effluent limitations, the discharges are deemed to meet the advanced wastewater treatment and management requirements of this subsection.

(e) The holder of a department permit authorizing the discharge of domestic wastewater through an ocean outfall as of July 1, 2008, shall submit the following to the secretary of the department:

1. A detailed plan to meet the requirements of this subsection, including the identification of the technical, environmental, and economic feasibility of various reuse options; the identification of each land acquisition and facility necessary to provide for reuse of the domestic wastewater; an analysis of the costs to meet the requirements, including the level of treatment necessary to satisfy state water quality requirements and local

water quality considerations and a cost comparison of reuse using flows from ocean outfalls and flows from other domestic wastewater sources; and a financing plan for meeting the requirements, including identifying any actions necessary to implement the financing plan, such as bond issuance or other borrowing, assessments, rate increases, fees, other charges, or other financing mechanisms. The plan must evaluate reuse demand in the context of future regional water supply demands, the availability of traditional water supplies, the need for development of alternative water supplies, the degree to which various reuse options offset potable water supplies, and other factors considered in the Lower East Coast Regional Water Supply Plan of the South Florida Water Management District. The plan must include a detailed schedule for the completion of all necessary actions and be accompanied by supporting data and other documentation. The plan must be submitted by July 1, 2013.

2. By July 1, 2016, an update of the plan required in subparagraph 1. documenting any refinements or changes in the costs, actions, or financing necessary to eliminate the ocean outfall discharge in accordance with this subsection or a written statement that the plan is current and accurate.

(f) By December 31, 2009, and by December 31 every 5 years thereafter, the holder of a department permit authorizing the discharge of domestic wastewater through an ocean outfall shall submit to the secretary of the department a report summarizing the actions accomplished to date and the actions remaining and proposed to meet the requirements of this subsection, including progress toward meeting the specific deadlines set forth in paragraphs (b) through (e). The report shall include the detailed schedule for and status of the evaluation of reuse and disposal options, preparation of preliminary design reports, preparation and submittal of permit applications, construction initiation, construction progress milestones, construction completion, initiation of operation, and continuing operation and maintenance.

(g) By July 1, 2010, and by July 1 every 5 years thereafter, the department shall submit a report to the Governor, the President of the Senate, and the Speaker of the House of Representatives on the implementation of this subsection. In the report, the department shall summarize progress to date, including the increased amount of reclaimed water provided and potable water offsets achieved, and identify any obstacles to continued progress, including all instances of substantial noncompliance.

(h) The renewal of each permit that authorizes the discharge of domestic wastewater through an ocean outfall as of July 1, 2008, must be accompanied by an order in accordance with s. 403.088(2)(e) and (f) which establishes an enforceable compliance schedule consistent with the requirements of this subsection.

(i) An entity that diverts wastewater flow from a receiving facility that discharges domestic wastewater through an ocean outfall must meet the reuse requirement of paragraph (c). Reuse by the diverting entity of the diverted flows shall be credited to the diverting entity. The diverted flow shall also be correspondingly deducted from the receiving facility's baseline flow from which the required reuse is calculated pursuant to paragraph (c), and the receiving facility's reuse requirement shall be recalculated accordingly.

The department, the South Florida Water Management District, and the affected utilities must consider the information in the detailed plan in paragraph (e) for the purpose of adjusting, as necessary, the reuse requirements of this subsection. The department shall submit a report to the Legislature by February 15, 2015, containing recommendations for any changes necessary to the requirements of this subsection.

(11) The Legislature finds that the discharge of inadequately treated and managed domestic wastewater from dozens of small wastewater facilities and thousands of septic tanks and other onsite systems in the Florida Keys compromises the quality of the coastal environment, including nearshore and offshore waters, and threatens the quality of life and local economies that depend on those resources. The Legislature also finds that the only practical and cost-effective way to fundamentally improve wastewater management in the Florida Keys is for the local governments in Monroe County, including those special districts established for the purpose of collection, transmission, treatment, or disposal of sewage, to timely complete the wastewater or sewage treatment and disposal facilities initiated under the work program of Administration Commission rule 28-20, Florida Administrative Code, and the Monroe County Sanitary Master Wastewater Plan, dated June 2000. The Legislature therefore declares that the construction and operation of comprehensive central wastewater systems in accordance with this subsection is in the public interest. To give effect to those findings, the requirements of this

subsection apply to all domestic wastewater facilities in Monroe County, including privately owned facilities, unless otherwise provided under this subsection.

(a) The discharge of domestic wastewater into surface waters is prohibited.

(b) Monroe County, each municipality, and those special districts established for the purpose of collection, transmission, treatment, or disposal of sewage in Monroe County shall complete the wastewater collection, treatment, and disposal facilities within its jurisdiction designated as hot spots in the Monroe County Sanitary Master Wastewater Plan, dated June 2000, specifically listed in Exhibits 6-1 through 6-3 of Chapter 6 of the plan and mapped in Exhibit F-1 of Appendix F of the plan. The required facilities and connections, and any additional facilities or other adjustments required by rules adopted by the Administration Commission under s. 380.0552, must be completed by December 31, 2015, pursuant to specific schedules established by the commission. Domestic wastewater facilities located outside local government and special district service areas must meet the treatment and disposal requirements of this subsection by December 31, 2015.

(c) After December 31, 2015, all new or expanded domestic wastewater discharges must comply with the treatment and disposal requirements of this subsection and department rules.

(d) Wastewater treatment facilities having design capacities:

1. Greater than or equal to 100,000 gallons per day must provide basic disinfection as defined by department rule and the level of treatment which, on a permitted annual average basis, produces an effluent that contains no more than the following concentrations:

- a. Biochemical Oxygen Demand (CBOD5) of 5 mg/l.
- b. Suspended Solids of 5 mg/l.
- c. Total Nitrogen, expressed as N, of 3 mg/l.
- d. Total Phosphorus, expressed as P, of 1 mg/l.

2. Less than 100,000 gallons per day must provide basic disinfection as defined by department rule and the level of treatment which, on a permitted annual average basis, produces an effluent that contains no more than the following concentrations:

- a. Biochemical Oxygen Demand (CBOD5) of 10 mg/l.
- b. Suspended Solids of 10 mg/l.
- c. Total Nitrogen, expressed as N, of 10 mg/l.
- d. Total Phosphorus, expressed as P, of 1 mg/l.

(e) Class V injection wells, as defined by department or Department of Health rule, must meet the following requirements and otherwise comply with department or Department of Health rules, as applicable:

1. If the design capacity of the facility is less than 1 million gallons per day, the injection well must be at least 90 feet deep and cased to a minimum depth of 60 feet or to such greater cased depth and total well depth as may be required by department rule.

2. Except as provided in subparagraph 3. for backup wells, if the design capacity of the facility is equal to or greater than 1 million gallons per day, each primary injection well must be cased to a minimum depth of 2,000 feet or to such greater depth as may be required by department rule.

3. If an injection well is used as a backup to a primary injection well, the following conditions apply:

a. The backup well may be used only when the primary injection well is out of service because of equipment failure, power failure, or the need for mechanical integrity testing or repair;

b. The backup well may not be used for more than a total of 500 hours during any 5-year period unless specifically authorized in writing by the department;

c. The backup well must be at least 90 feet deep and cased to a minimum depth of 60 feet, or to such greater cased depth and total well depth as may be required by department rule; and

d. Fluid injected into the backup well must meet the requirements of paragraph (d).

(f) The requirements of paragraphs (d) and (e) do not apply to:

1. Class I injection wells as defined by department rule, including any authorized mechanical integrity tests;

2. Authorized mechanical integrity tests associated with Class V wells as defined by department rule; or

3. The following types of reuse systems authorized by department rule:

- a. Slow-rate land application systems;
- b. Industrial uses of reclaimed water; and
- c. Use of reclaimed water for toilet flushing, fire protection, vehicle washing, construction dust control, and decorative water features.

However, disposal systems serving as backups to reuse systems must comply with the other provisions of this subsection.

(g) For wastewater treatment facilities in operation as of July 1, 2010, which are located within areas to be served by Monroe County, municipalities in Monroe County, or those special districts established for the purpose of collection, transmission, treatment, or disposal of sewage but which are owned by other entities, the requirements of paragraphs (d) and (e) do not apply until January 1, 2016. Wastewater operating permits issued pursuant to this chapter and in effect for these facilities as of June 30, 2010, are extended until December 31, 2015, or until the facility is connected to a local government central wastewater system, whichever occurs first. Wastewater treatment facilities in operation after December 31, 2015, must comply with the treatment and disposal requirements of this subsection and department rules.

(h) If it is demonstrated that a discharge, even if the discharge is otherwise in compliance with this subsection, will cause or contribute to a violation of state water quality standards, the department shall:

1. Require more stringent effluent limitations;
2. Order the point or method of discharge changed;
3. Limit the duration or volume of the discharge; or
4. Prohibit the discharge.

(i) All sewage treatment facilities must monitor effluent for total nitrogen and total phosphorus concentration as required by department rule.

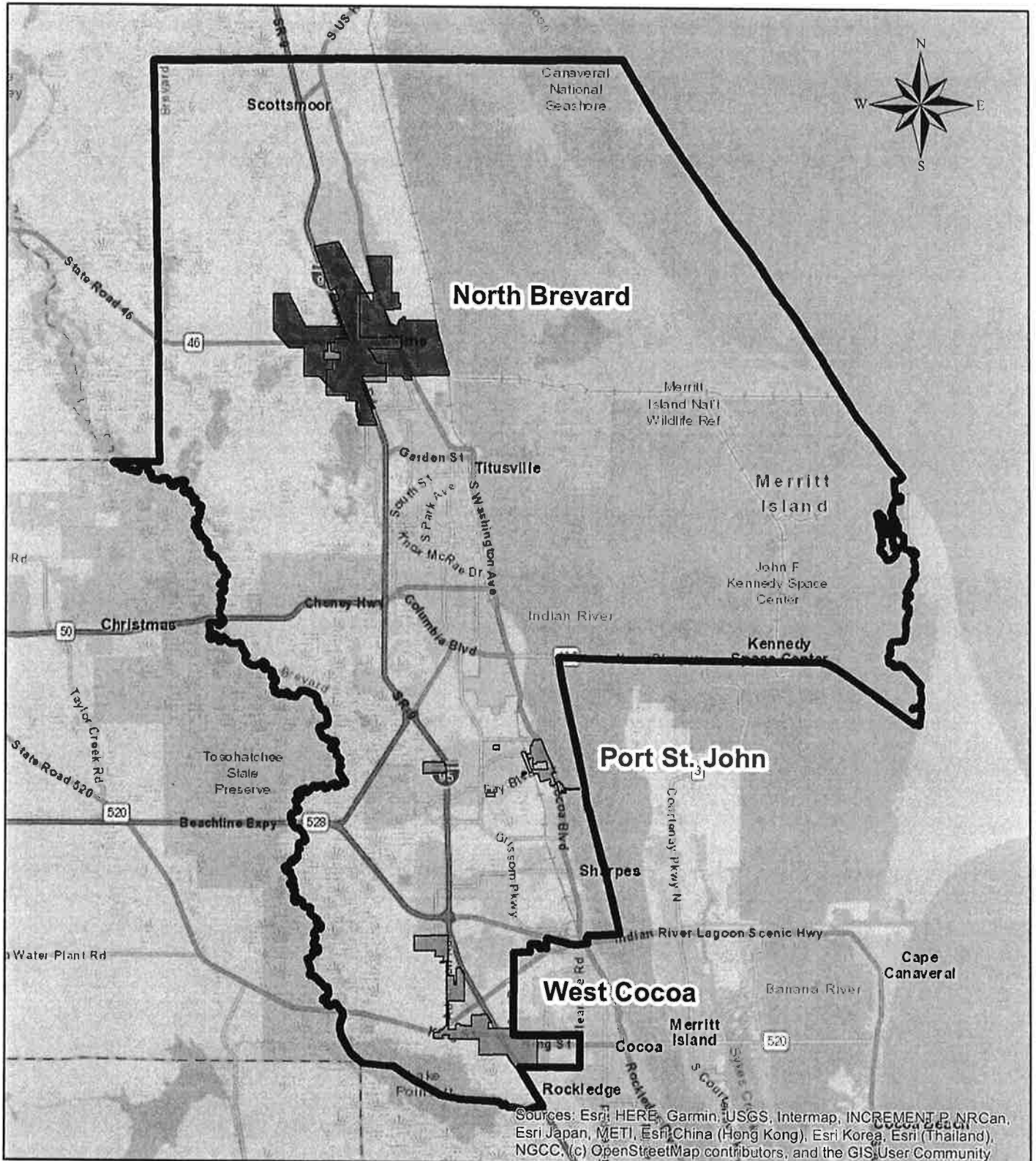
(j) The department shall require the levels of operator certification and staffing necessary to ensure proper operation and maintenance of sewage facilities.

(k) The department may adopt rules necessary to carry out this subsection.

(l) The authority of a local government, including a special district, to mandate connection of a wastewater facility, as defined by department rule, is governed by s. 4, chapter 99-395, Laws of Florida.

History.—ss. 1, 2, 3, ch. 71-259; s. 2, ch. 71-137; s. 1, ch. 72-58; s. 271, ch. 77-147; s. 1, ch. 78-206; s. 75, ch. 79-65; s. 1, ch. 80-371; s. 1, ch. 81-246; s. 262, ch. 81-259; s. 2, ch. 86-173; s. 1, ch. 87-303; s. 71, ch. 93-213; s. 2, ch. 94-153; s. 361, ch. 94-356; s. 158, ch. 99-8; s. 25, ch. 2000-153; s. 12, ch. 2000-211; s. 6, ch. 2008-232; s. 38, ch. 2010-205; s. 73, ch. 2013-15; s. 1, ch. 2013-31; s. 17, ch. 2020-150; s. 16, ch. 2020-158; s. 2, ch. 2021-47.

Brevard County Utility Service Department Water and Sewer Customers DISTRICT 1



Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

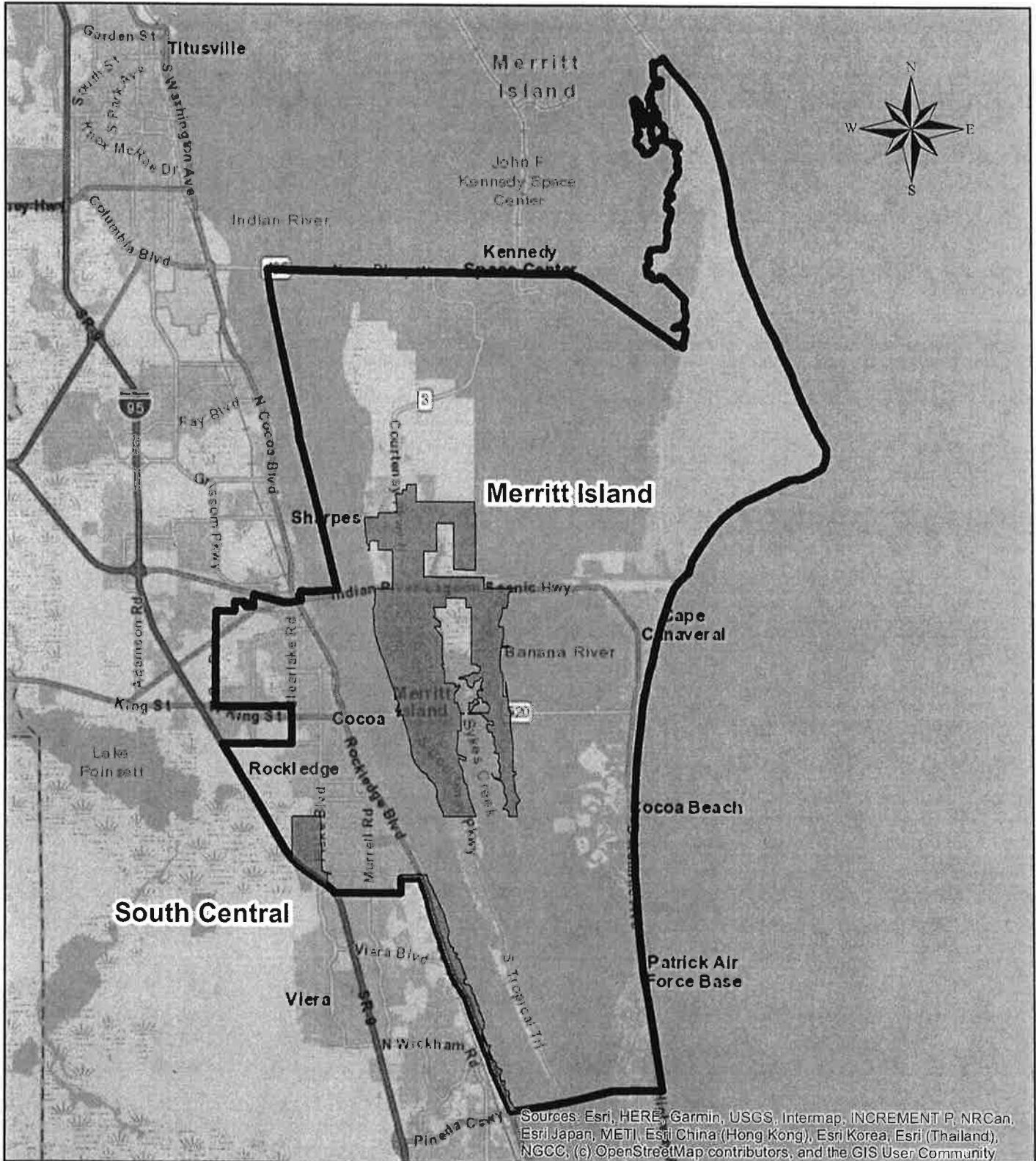
- Sewer and Water Service Customers
- Sewer Service Customers
- Water Service Customers
- District Border

The Brevard County Infrastructure depicted here has not been verified, was compiled from recorded documents, and does not reflect an actual survey. Brevard County Utility Services does not assume responsibilities for errors contained hereon.



Date: 1/7/2022

Brevard County Utility Service Department Water and Sewer Customers DISTRICT 2



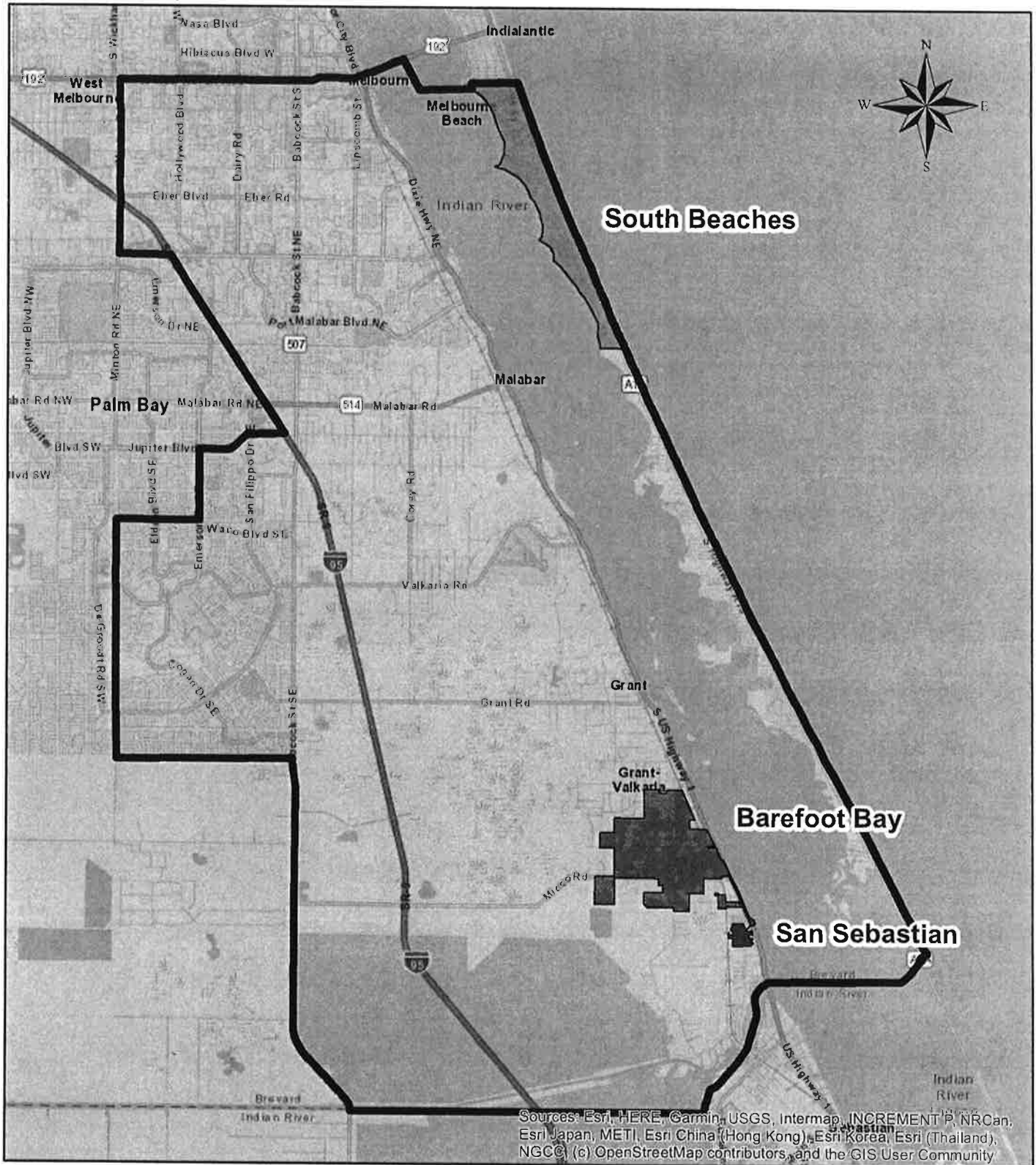
Date: 1/7/2022

- Sewer Service Customers
- District Border

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Brevard County Utility Service Department Water and Sewer Customers DISTRICT 3



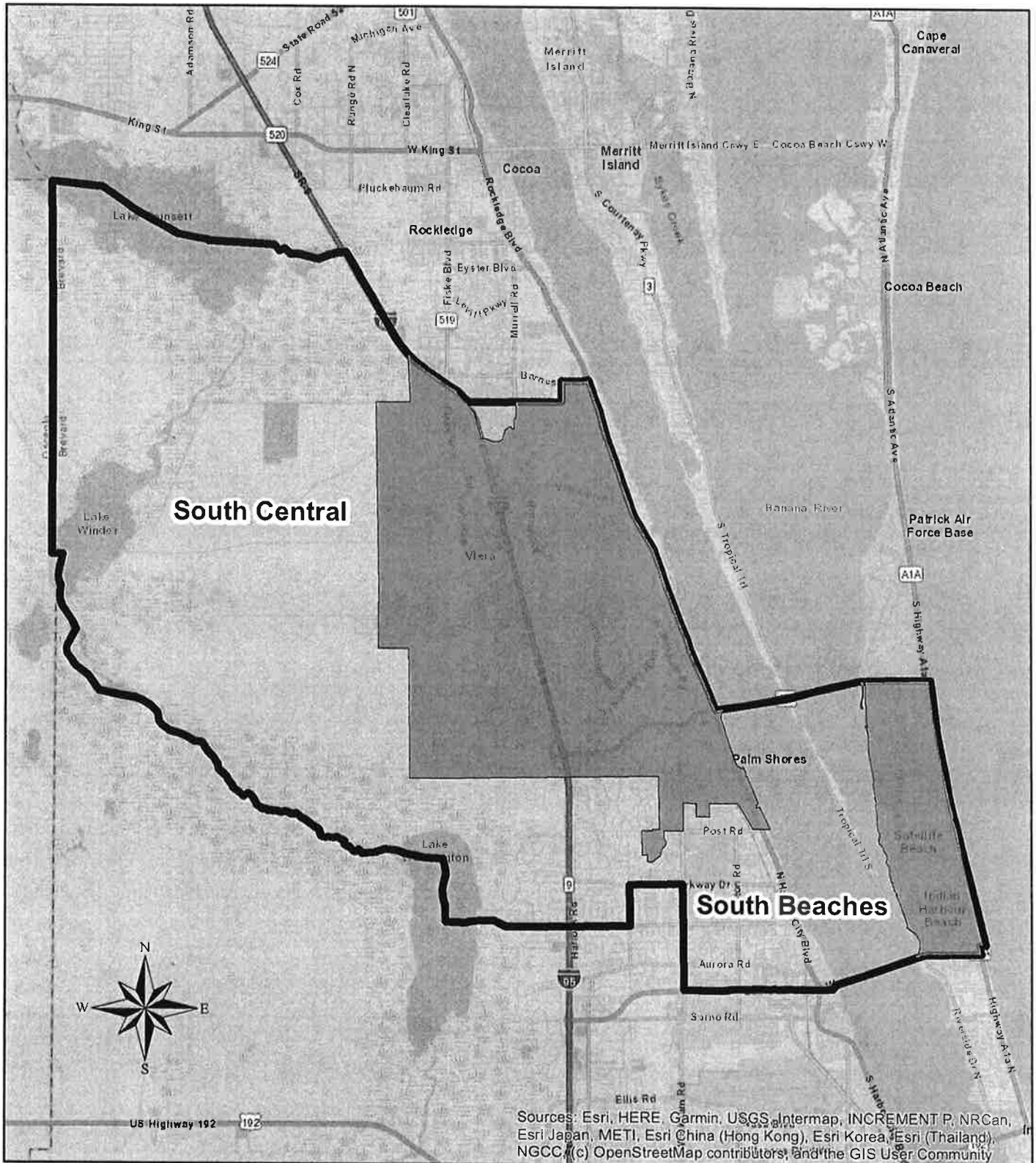
Date: 1/7/2022

- Sewer and Water Service Customers
- Sewer Service Customers
- Water Service Customers
- District Border

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Brevard County Utility Service Department Water and Sewer Customers DISTRICT 4



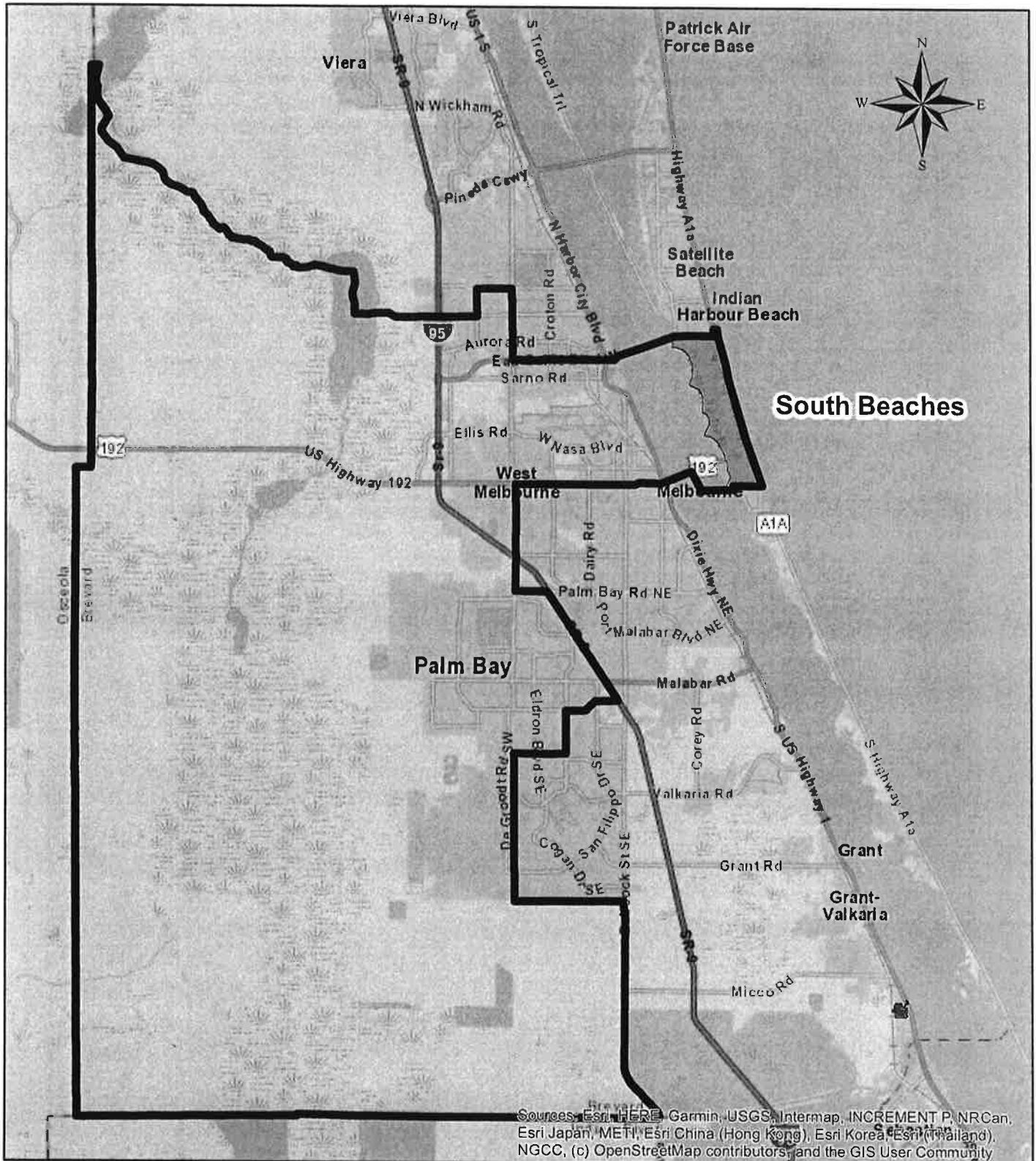
Date: 1/7/2022

- Sewer Service Customers
- District Border

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Brevard County Utility Service Department Water and Sewer Customers DISTRICT 5



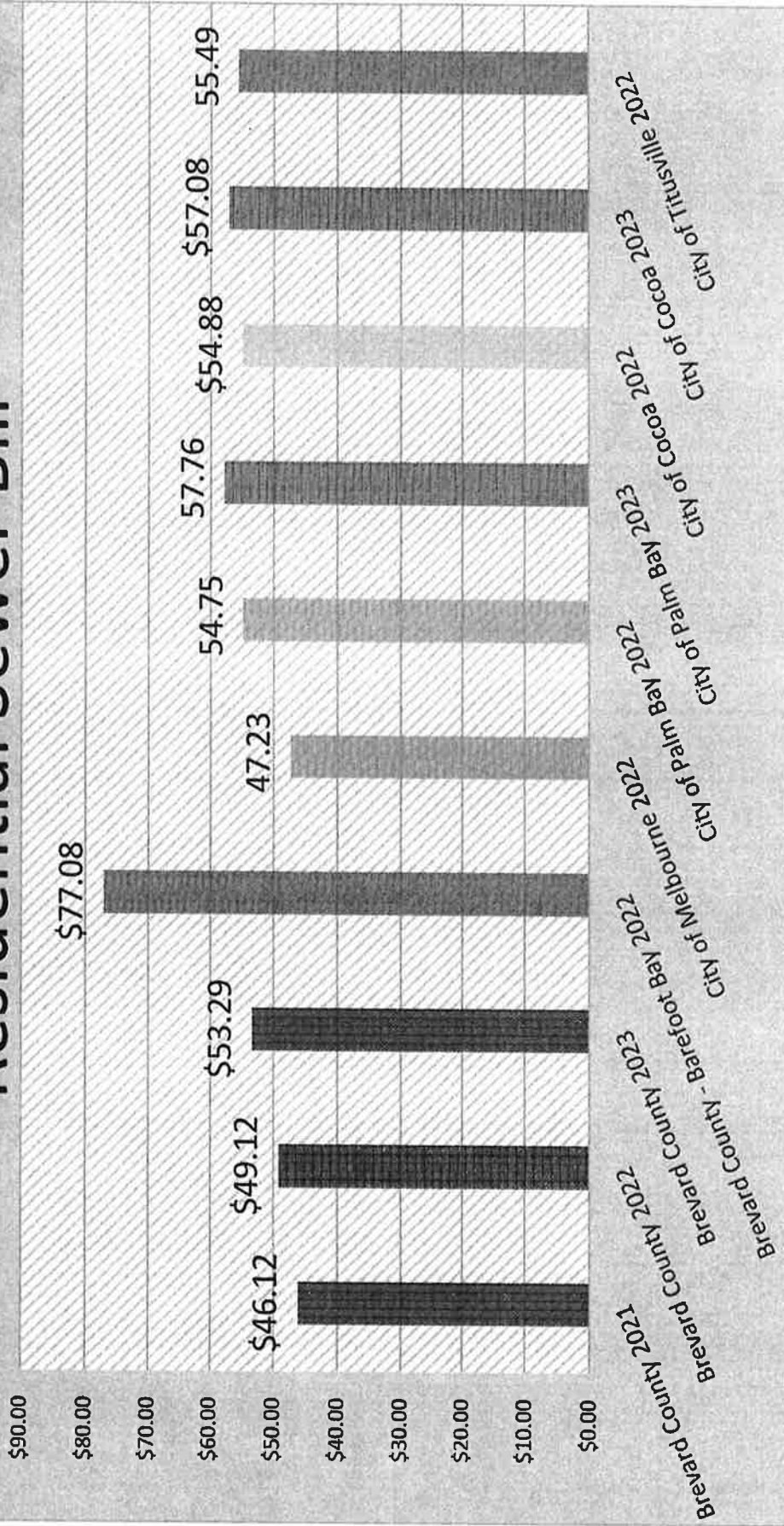
Date: 1/7/2022

- Sewer Service Customers
- District Border

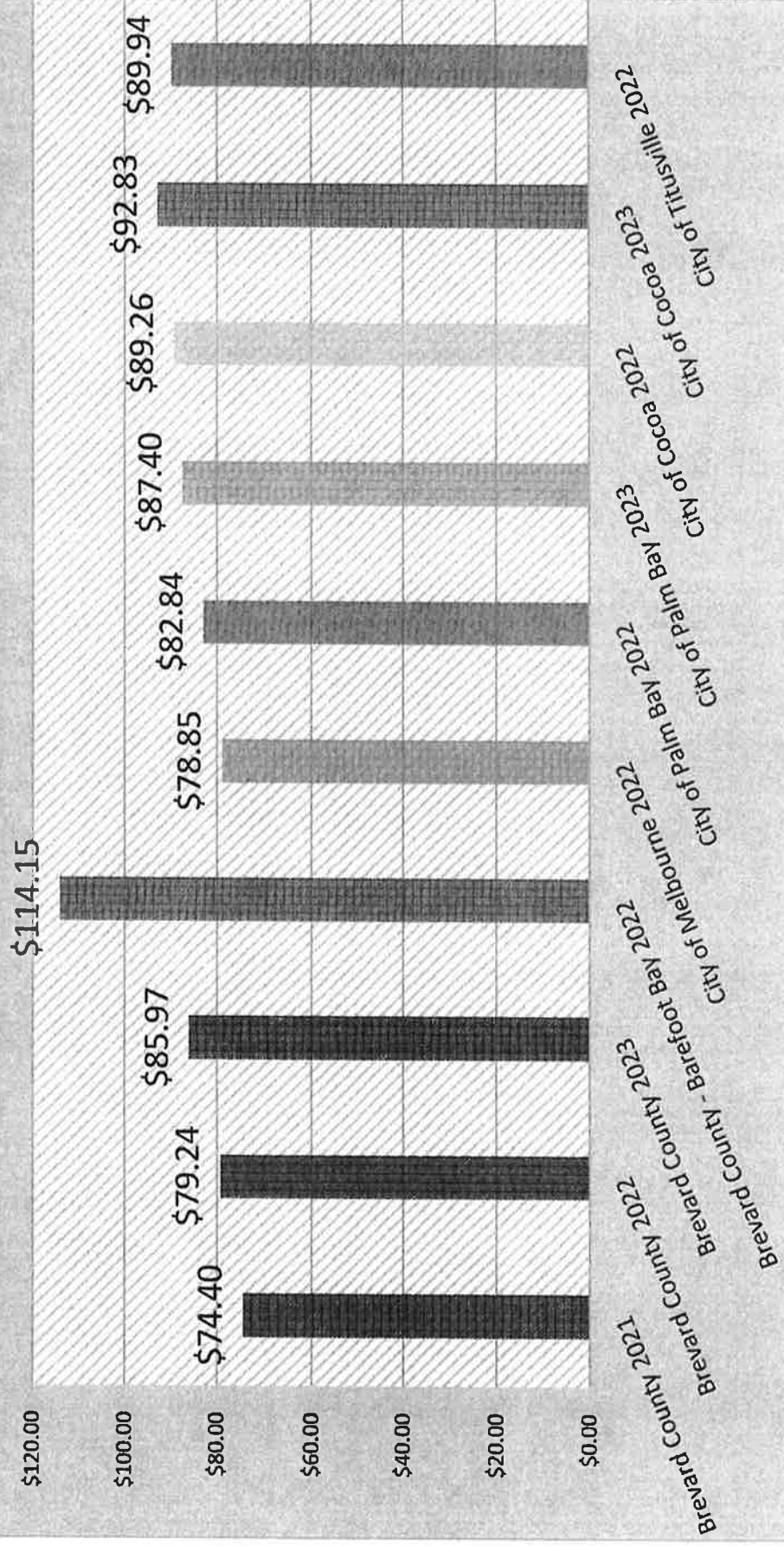
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Residential Sewer Bill



Residential Water and Sewer Bill





Florida Fly Fishing Association

PO Box 542345
Merritt Island FL
32954

February 4, 2022

Brevard County Board of County Commissioners:

Dear Commissioners:

On behalf of the 45 members of the Florida Flyfishing Association, I assure you that we are in favor of the proposed water/sewer rate increase. More than half of our members are customers of the Brevard County utility system. As Flyfishers and conservationists, we feel these increases will help accomplish the ultimate goal of restoring the Indian River Lagoon therefore, we urge the Commission to approve this increase.

The Indian River Lagoon Estuary system is polluted, which has devastated the marine life. Sea grass, the lifeblood of the Lagoon, is virtually gone because of human caused pollution. As you are aware some of the primary causes of this pollution are:

- Septic tanks which discharge untreated nutrients into ground water that seeps into the Lagoon. These need to be upgraded or replaced and/or be connected to a central treatment system.
- Old sewage infrastructures (sewer lines, force mains, pump stations, treatment plants, etc.) which cause large discharge of untreated nutrient rich effluent into the Lagoon.
- Runoff from storm water with nutrients from over fertilization of landscaped lawns.

The funds from this utility increase will provide necessary monies for improvements to the County sewage infrastructure. These improvements along with those being completed from the "Save Our Lagoon Plan" will greatly help with the restoration of the lagoon.

We, as fly fishermen are on the Lagoon daily and have seen the bad conditions. These proposed improvements will help reduce the annual algae blooms which cause fish kills. The proposed improvements will also help prevent the continued loss of sea grass which provides the habitat for sea life and a food source for our distressed manatees.

Thank you for your service to Brevard County. We urge you to please give careful consideration to these rate increase proposals. We hope you will vote in favor to provide more funding for our Lagoon.

Sincerely,


Don Killingsworth, President

Florida Fly Fishing Association



BOARD OF COUNTY COMMISSIONERS

Utility Services Department
2725 Judge Fran Jamieson Way
Building A, Room 213
Viera, Florida 32940

Inter-Office Memo

TO: Frank Abbate, County Manager

THRU: John Denninghoff, Assistant County Manager

FROM: Edward Fontanin, Utility Services Director

DATE: January 12, 2022

SUBJECT: Utility Services – Rate Resolution for the Countywide and San Sebastian
Additional Information Referenced in Agenda Report

The information contained in this memo is also referenced in the agenda report under section “Summary Explanation and Background”. This memo provides more in-depth analysis of the rationale and requirements mentioned in the Agenda Report on the need of the water and sewer rate adjustment.

As mentioned in the Agenda Report, the proposed rate adjustment will provide the funds necessary in order: (1) to provide investments to comply with Sections 403.064 and 403.086, Florida Statutes, (2) to replace treatment plant facilities that are beyond their useful life and increase capacity for future development in Mims, Port St John and South Brevard, (3) to contribute funding for future septic-to-sewer projects, and (4) to increase the operations and maintenance effort to continue reliability throughout the County’s utility system.

Provided below is the rationale of the needs for the rate adjustments along with this Department’s approach to achieving the objectives and estimated cost to do so:

(1) to provide investments to comply with Sections 403.064 and 403.086, Florida Statutes

In 2021, the State of Florida passed Section 403.064, Florida Statutes – Reuse of Reclaimed Water. The purpose of the legislation is for “wastewater treatment plants permitted and operated under an approved reuse program by the Florida Department of Environmental Protection (FDEP), the reclaimed water shall be considered environmentally acceptable and not a threat to the public health and safety.”

Section 17 of the Statute states “by November 1, 2021, domestic wastewater utilities that dispose of effluent, reclaimed water, or reuse water by surface water discharge shall submit to the department for review and approval a plan for eliminating nonbeneficial surface water discharge by January 1,

2032, subject to the requirements of this section. The plan must include the average gallons per day of effluent, reclaimed water, or reuse water that will no longer be discharged into surface waters and the date of such elimination, the average gallons per day of surface water discharge which will continue in accordance with the alternatives provided for in subparagraphs (a)2. and 3., and the level of treatment that the effluent, reclaimed water, or reuse water will receive before being discharged into a surface water by each alternative.”

The FDEP has identified the South Central Water Reclamation Facility and the South Beaches Facility within the Countywide utility system as needing to meet the requirements of this law. This Department, through the support of our engineering consultant, has submitted a plan prior to the November 1st deadline. Permission to submit the plan was approved by the Board at the October 12, 2021 Board of County Commissioners meeting.

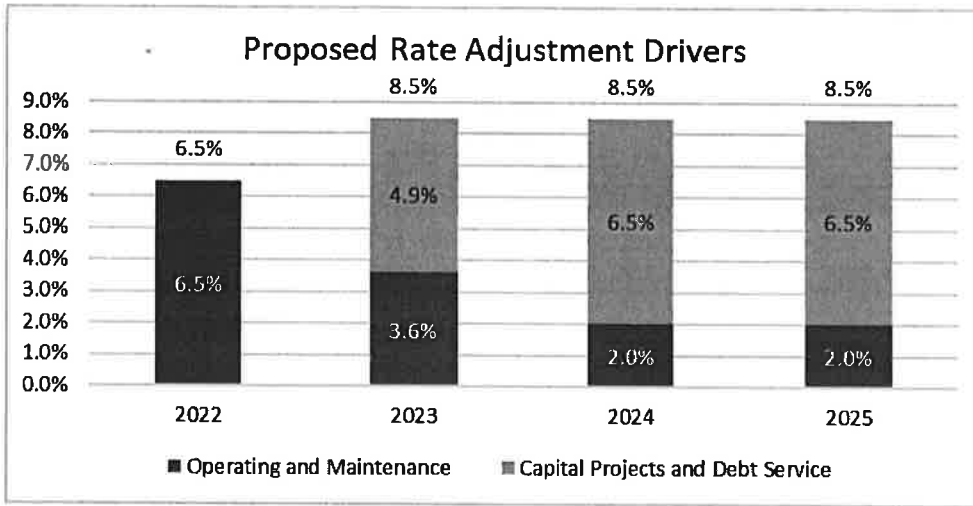
Per the two plans submitted to the FDEP for the Countywide system as follows: (1) South Central Water Reclamation Facility includes improvements to the water quality aspect of the wetlands and improvements to the treatment process. Estimated project cost is \$5M. (2) South Beaches Water Reclamation Facility includes either converting the 6 MGD treatment process to Advanced Wastewater Treatment requirements or the installation of a second deep injection well. Either project is estimated to cost approximately \$16M.

In 2021, the State of Florida passed Section 403.086, Florida Statutes – Sewage Disposal facilities; advanced and secondary treatment. The purpose of this law is that beginning July 1, 2025 “... sewage disposal facilities may not dispose of any wastes into the... Indian River Lagoon, or into any river, stream, channel, canal, bay, bayou, sound, or other water tributary thereto, without providing advanced wastewater treatment...”.

To avoid the situation of discharges, the following effort needs to be increased in comparison from previous years:

- Assessment of all sanitary sewers, force mains, sewer laterals and manholes to determine if leaks are present
- Increase in the amount of sewer repair and lining
- Rehabilitation of leaking sanitary manholes
- Repair of leaking sanitary laterals in the road right-of-way
- Increase maintenance to the sanitary lift stations
- Increase maintenance to the existing Wastewater Treatment Plants (WWTP)

The graph below shows how the additional rates would be implemented for the County system:



In addition to the budgeted effort described above, we have programmed 23 additional positions for the Countywide service area to be added over the next 7 years in order to implement the statutory requirements. 23 additional employees equate to approximately \$2.5M in additional expenses including salary, benefits and additional expenditures.

Both Sections 403.064 and 403.086, Florida Statutes, include language that violations are subject to administrative and civil penalties pursuant to Sections 403.121, 403.131 and 403.141, Florida Statute. Investment in the County infrastructure today allows the County to be in compliance with State law and avoid future fines and penalties imposed by the State.

(2) to replace treatment plant facilities that are beyond their useful life and increase capacity for future development in Mims, Port St John and South Brevard

Mims Water and Wastewater Treatment Facilities

Mims has both a water and wastewater treatment plant constructed in the 1960s. In our assessment of the facilities, both need further capital investment to address age and to update treatment processes and technology to assure reliability and compliance for our utility customers.

A population projection study was concluded on March 2020 for this Department using a tool to determine if current treatment capacity can adequately accommodate future treatment demands. For both the Mims water and wastewater treatment facilities, it was determined that additional treatment capacity is necessary to accommodate the future development demands in the area. There is adequate land at both treatment plant locations for future expansion.

The expansion efforts related to the Mims water and wastewater treatment facilities is programmed at \$42.3M.

Port St John Wastewater Treatment Facility

The Port St John Wastewater Treatment Plant was constructed in the 1960s. In our assessment of this facility, this plant has exceeded its useful life. Efforts to modify and provide redundant treatment process is difficult due to the facility being located in a Florida Power and Light easement thus restricting us from expanding the facility footprint. The footprint of the facility is critical because any improvements needed, whether it's replacement of existing or installing redundant process for reliability, requires a footprint for the improvement to be done while keeping the current treatment process active. The Port St John facility's current footprint restricts us for that level of improvements.

A population projection study was concluded on March 2020 for this Department using a tool to determine if current treatment capacity can adequately accommodate future treatment demands. It was determined that the Port St John Wastewater Treatment Facility requires additional treatment capacity in order to accommodate the future development demands in the area.

Programmed costs associated with the expansion of the sewer treatment capacity is \$31.4M.

South Brevard Water & Wastewater Treatment Facility

Currently not a part of the County Water and Wastewater System, the Barefoot Bay Water and Wastewater Treatment plants were constructed in the 1970s by a private developer. When the County took over the facilities in early 2002 the condition of the facilities was unsatisfactory in terms of overall condition and in its ability to maintain reliable and continuous treatment process. Over the years, the County has made investments to upgrade the condition of the existing facilities, however that effort has been limited since the Barefoot Bay facilities are part of a Special District and not the Utility Services Countywide system. That is, the availability of funds in the District are limited due to what the District as a stand-alone can provide.

The County is obligated by Section 403.064, Florida Statute, to relocate the Barefoot Bay Wastewater Treatment Facility. The plan, submitted to the FDEP, per the Board approval at the October 12, 2021 Board meeting, involves relocating the wastewater facility outside of the Barefoot Bay Water & Sewer District. Doing so will allow this Department to create the new South Brevard Water & Wastewater Treatment Facilities. This approach is advantageous for the following reasons: (1) relocation of the treatment facilities outside of the District will allow properties outside of the District to have access to water and sewer service without having to annex into the District boundaries, (2) since the District does not have adequate funding sources or debt service capacity to fund new treatment facilities within the District, this approach will assist in providing adequate funding going forward, (3) the new facility will address the possibility of any future accidental discharge due to deteriorating equipment,

and (4) location of the treatment plants outside of the District will allow the project to be funded by the Countywide system. To ensure that the Barefoot Bay Water & Sewer District will pay their portion of the project, an agreement will be established between the County and Water & Sewer District in which the District will pay the County the debt service portion related to the water and wastewater treatment capacity needed to serve the District.

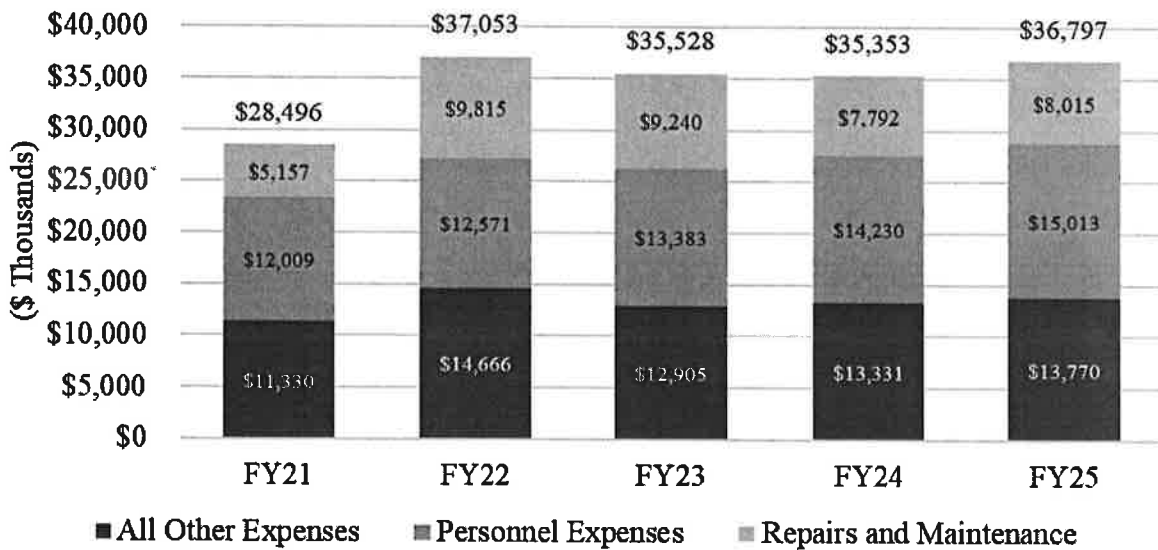
(3) contribute funding for future septic-to-sewer projects

Currently, there are 21 septic-to-sewer projects that are either in design phase or are awaiting design. The SOIRL program has allocated \$89M per their formula of cost per nitrogen reduction. Department estimation to fully fund the 21 mentioned septic-to-sewer projects is approximately \$131M. As part of the rate adjustment, the Department is including \$40M in additional debt service to fully fund the septic-to-sewer projects.

(4) to increase the operations and maintenance effort to continue reliability throughout the Countywide utility system.

Along with the additional operations and maintenance efforts required by Section 403.086, Florida Statutes – Sewage Disposal facilities, additional efforts are needed for the water and reuse distribution assets. The County utility assets are approximately 60 years old. At this age, water mains and any apparatuses require maintenance and replacement. Performing this effort will improve water quality, reliability and functionality. Since Mims water service customers have no other water utility in the area for an emergency connect, it is critical to maintain the water assets. Failure at the treatment plant, pump stations or distribution lines cause a concern for fire prevention and public access to water.

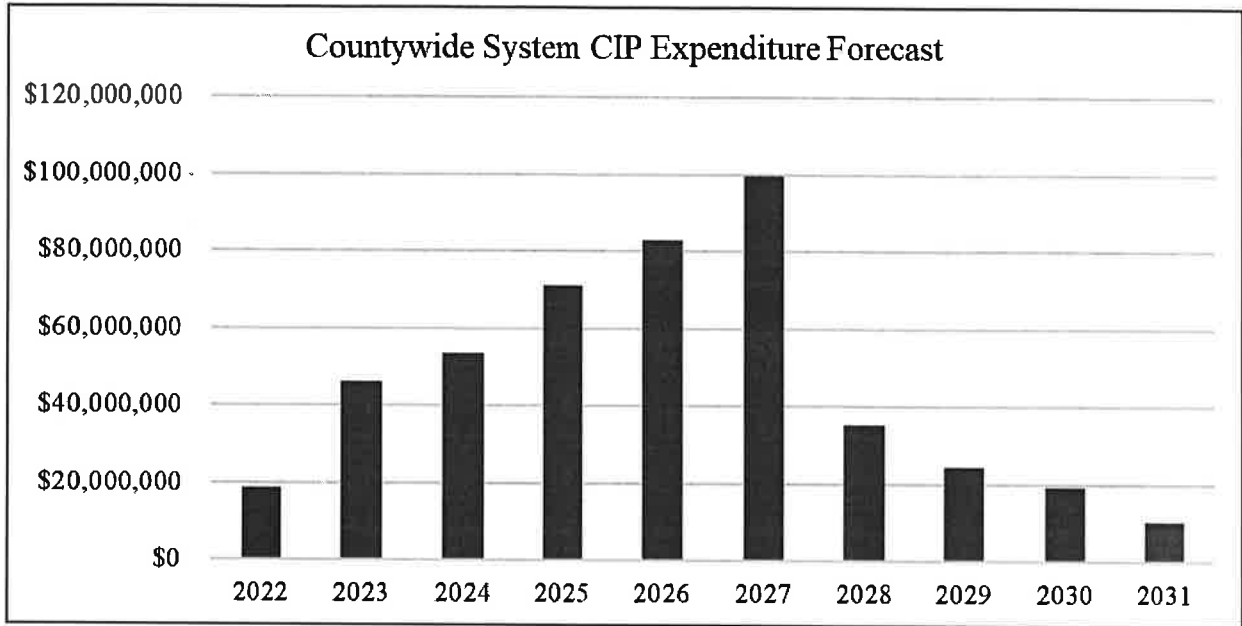
Countywide Utility System Operating and Maintenance Expense Forecast



As part of the proposed rate increase, we propose to increase the operations and maintenance budget for water by 30%. Please note, all other expenses include: FP&L, treatment chemicals, indirect cost allocation.

10-Year Capital Improvement Projects (CIP)

As a result of additional rates needed plus this Department's current 5-year CIP, the proposed 10-year CIP program for this Department is scheduled to be approximately \$460M. This includes the needs of the new treatment facilities along with all of the other described efforts.



Proposed Rate Adjustment

The above provides some further detail on the justification and specifics of the need of the rate adjustment and how the additional revenue would be implemented.

San Sebastian Water System

As proposed, the San Sebastian water rates shall be indexed automatically annually beginning January 1 of each year. San Sebastian Water System was acquired by Brevard County as a court appointed receiver per a Bankruptcy Court ruling and approved by the Board in 2010. Thus, this system is part of the Countywide system but per agreement this system pays a different water rate from what the Mims water customers pay. In comparison, the San Sebastian water customers pay 47% more than the Barefoot Bay water customers.

Countywide System

It is important to understand that although the Board approved on August 2021 the use of the CPI's Water and Sewerage Maintenance Index for annual increases, the annual index will not be added to the below rate recommendations from FY 22 thru 26. The proposed rate adjustment includes the index that was already approved. The rate index that would have been implemented would be 3.0%. Therefore, the rate increases proposed are: 2022 – 6.5%, 2023 – 8.5%, 2024 – 8.5%, 2025 – 8.5%, 2026 – 7.5%, the true additional increase this Department is seeking is 2022 – 3.5%, 2023 – 5.5%, 2024 – 5.5%, 2025 – 5.5%, 2026 – 4.5%, assuming the index each year from 2023 to 2026 is 3.0%.

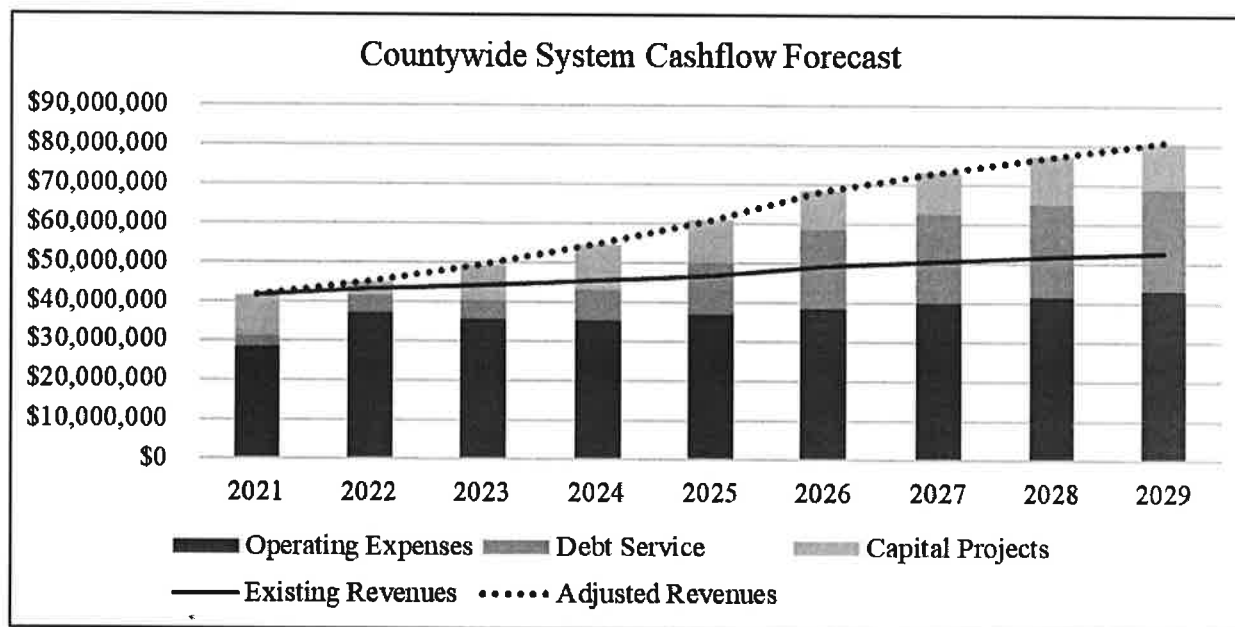
Recommended Revenue Adjustments & Bill Impacts													
Year	Rate Revenue Adjustments	Water Bill ⁽¹⁾	Total Increase	Index Increase	Rate Increase	Sewer Bill ⁽¹⁾	Total Increase	Index Increase	Rate Increase	Water & Sewer	Total Sewer & Water Increase	Total Index	Total Rate Increase
2022	6.50%	\$30.12	\$1.84	\$0.85	\$0.99	\$49.12	\$2.99	\$1.38	\$1.61	\$79.24	\$4.83	\$2.23	\$2.60
2023	8.50%	\$32.68	\$2.56	\$0.90	\$1.66	\$53.29	\$4.17	\$1.47	\$2.70	\$85.97	\$6.73	\$2.38	\$4.36
2024	8.50%	\$35.46	\$2.78	\$0.98	\$1.80	\$57.82	\$4.53	\$1.60	\$2.93	\$93.28	\$7.31	\$2.58	\$4.73
2025	8.50%	\$38.47	\$3.01	\$1.06	\$1.95	\$62.74	\$4.91	\$1.73	\$3.18	\$101.21	\$7.93	\$2.80	\$5.13
2026	7.50%	\$41.35	\$2.88	\$1.15	\$1.73	\$67.44	\$4.70	\$1.88	\$2.82	\$108.80	\$7.58	\$3.04	\$4.55
2027	3.00%	\$42.60	\$1.24	\$1.24	\$0.00	\$69.47	\$2.02	\$2.02	\$0.00	\$112.06	\$3.26	\$3.26	\$0.00
2028	3.00%	\$43.87	\$1.28	\$1.28	\$0.00	\$71.55	\$2.08	\$2.08	\$0.00	\$115.42	\$3.36	\$3.36	\$0.00
2029	3.00%	\$45.19	\$1.32	\$1.32	\$0.00	\$73.70	\$2.15	\$2.15	\$0.00	\$118.89	\$3.46	\$3.46	\$0.00

[1] Bill Amounts Based on 5,000 Gallons and 2021 Rates

As it related to the Countywide system, the water & sewer rate adjustment would only apply to the Mims service customers since they are the only customers in the Brevard County Service Area that have both water & sewer. The sewer only rate increase would only apply toward Port St John, Sykes Creek (Merritt Island), South Central, and South Beaches. Barefoot Bay service customers also have water & sewer services, but they are under their own separate rate resolution.

Metric Review of the Proposed Rate Adjustments

The graph below shows how the proposed rate increase will provide this Department with sufficient funds to accomplish the goals and expectations described above.



Impact by American Relief Protection Act (ARPA)

On May 2021, the Board of County Commissioners approved projects within each of their District's utilizing ARPA funds. These projects ranged for the benefit of stormwater improvements, water and

sewer, and roadway. The County Commissioners approved a total of \$28M toward water and sewer projects throughout the County. See list below of the projects, cost allocation and District located:

The aid of the ARPA funded water and sewer utility projects enabled the rates to be reduced by 3% for the first year of the proposed rate adjustment. Therefore, the proposed rate adjustment is 6.5% instead of the originally proposed 9.5% for FY 22.

The following are Board approved ARPA funded water and sewer utility projects along with the funding amount:

Mims: Water Main Replacement of Asbestos Cement Pipe Phase 3	\$1,752,000
Mims: Water Main Replacement of Asbestos Cement Pipe Phase 4	\$1,800,000
South Beaches: Lift Stations	
S27	\$720,000
S19	\$1,548,000
S26	\$ 854,000
B03	\$500,000
South Beaches: Sewer and Manhole Lining Installation	\$2,500,000
South Brevard: Construct New WWTP - Land	\$2,000,000
South Brevard: Construct New WTP - Land	\$1,000,000
South Central: Suntree Booster Station Rehabilitation	\$2,028,000
South Central: Viera Wetlands Improvements	\$2,000,000
Sykes: Sykes Creek Parkway Force Main Replacement	\$2,292,000
Sykes: Lift Stations	
V03	\$1,551,000
M16	\$2,124,000
Total for C08,09 and10	\$3,429,000
F04	\$966,000
F01	\$1,355,000



H.2.

Sandra Sullivan <s2sully@gmail.com>

SOIRL Plan: Pollution Testing

7 messages

Sandra Sullivan <s2sully@gmail.com>

Mon, Feb 7, 2022 at 11:44 AM

To: "Commissioner, D1" <D1.Commissioner@brevardfl.gov>, "Commissioner, D2" <D2.Commissioner@brevardfl.gov>, "Commissioner, D3" <D3.Commissioner@brevardfl.gov>, "Commissioner, D4" <D4.Commissioner@brevardfl.gov>, "Commissioner, D5" <D5.Commissioner@brevardfl.gov>, "Lober, Bryan" <Bryan.Lober@brevardfl.gov>, "Waymer, Jim" <jwaymer@floridatoday.com>, Duane De Freese <ddefreese@irlcouncil.org>, William Klein <klein_william_r@hotmail.com>, "Barker, Virginia H" <Virginia.Barker@brevardfl.gov>, beth <bfalls@teamorca.org>

Bcc: Vinnie Taranto <vinnie.taranto@gmail.com>, David Sherrer <dsherrer2@gmail.com>, "Cc: Charlie Venuto" <charlie.venuto@gmail.com>, David Lane <Davidvlane@hotmail.com>, Terry Casto <terry.l.casto@gmail.com>, Laurilee Thompson <laurileethompson@aol.com>, Todd Swingle <todd@swinglefamily.com>, Lorraine Koss <lkoss@cocoafi.org>, John Windsor <jwindsor@fit.edu>, Stephany Eley <stephanyeley@gmail.com>, ecoearthfriends@gmail.com, Susan Hodggers <susanhammerling@gmail.com>

Dear Commissioners et al,

Seagrass loss is a worldwide issue not just the IRL and there is a lot of research done and being done - research which I feel the County is not leveraging. Very simply seagrass is the indicator species of the health of the lagoon and we have lost 80% in the Indian River Lagoon. At the last SOIRL meeting, 3 board members made comments - one before I spoke (pesticides) and 2 after regarding pollutants (pesticides and copper) - yet staff made no attempt to consider their input into the Lagoon Plan. In fact, Ms. Barker even redirected the board member's comments to planting seagrass not pesticides. Heard but no action by staff.

The pollutants, pesticides, herbicides, and copper are all pollutant of concern in the lagoon which are not addressed in the save the lagoon plan. **FDEP identified in 2011 that there was more than nutrient loading killing sea grass the lagoon.** (see attached report) but still as of 2022 the lagoon plan fails to address the elephant in the room. Section 3 of the lagoon plan fails to identify any pollutants other than nutrient loading. Save The Manatee organization told me there was **glyphosate testing in Grand Canal that was high**; and the **Grand Canal dredging test data found copper over the clean up target**. We also know **PFAS is an issue** - impacting sea turtles and other animals in the lagoon. But pollution remains unaddressed in the lagoon plan.

A few years ago, ORCA made a presentation to SOIRL at a meeting I attended regarding services for doing pollution testing in the IRL. I urge you, the time is now to make this happen in SOIRL either with ORCA or another entity.

This new article addresses ORCA testing and finding concerning levels of herbicides and copper in St. Lucie River and highlights in an easy to read format why we need it in the Lagoon Plan.

<https://www.tcpalm.com/story/news/local/indian-river-lagoon/2022/02/04/orca-maps-st-lucie-river-pollution-muck-copper-glyphosate-nutrients-nitrogen-phosphorus-palm-city/9243129002/>

The highest glyphosate level was nearly 1.3 parts per billion in a Stuart canal surrounded by waterfront homes, according to data ORCA provided TCPalm, which then cross-referenced the hotspot's coordinates with Google Earth.

In 2019, Martin County banned county employees and contractors working on county projects from using glyphosate, but the ban doesn't apply to residents or businesses.

"Copper is highly toxic to aquatic ecosystems, including some fish and invertebrates such as oysters and sea urchins.

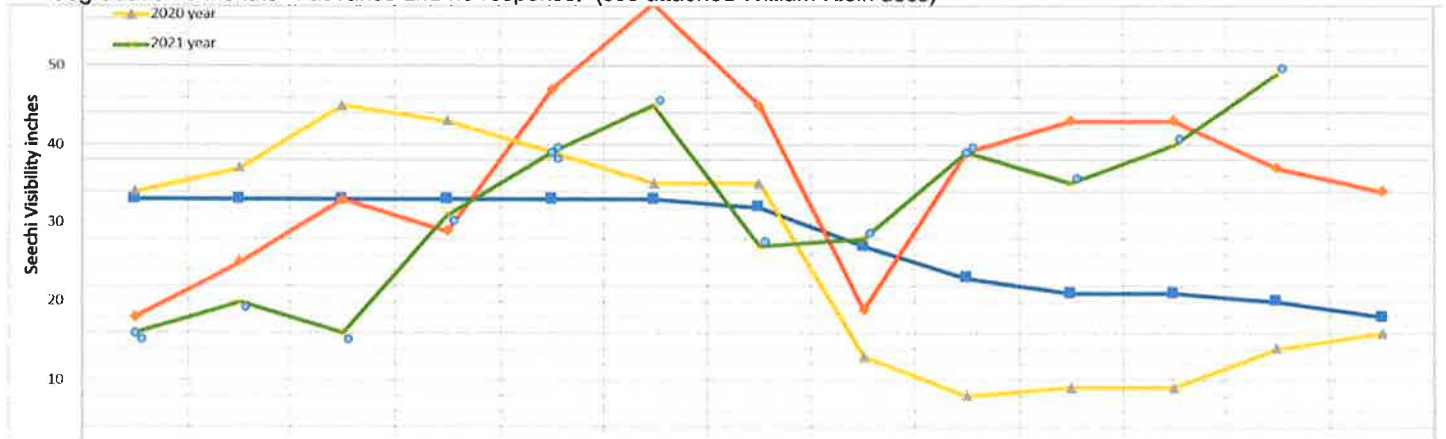
A copper mixture used to paint boat bottoms could be contributing to legacy pollution in the river, but the metal also is found in herbicides, fungicides and retention ponds, Falls said. Copper sulfate, for instance, is often used to manage vegetation in ponds. "

Please do not approve the Save the Lagoon Plan as it is.

It is now urgent to address pollutant testing in the lagoon to figure out what is killing the sea grass beyond the nutrient loading. It is imperative that the muck removal next to PSFB also be removed from the Lagoon Plan as is premature with no communication with the Base - and the plan for 2022 only address testing and intergovernmental coordination. The lagoon plan should also address testing of the mosquito impoundment areas before USACE is allowed to remove any further dikes, given concern by board member of potential connection to brown algae conditions that followed. .

Last year as commissioners passed the Lagoon Plan with 3 votes saying you had not given staff direction before BOCC meeting regarding proactively address discharges. The concerns remain unaddressed as of 2022. This issue while addressed by the County in unincorporated areas (with Red Zone contract with robotic camera down pipes) remains unaddressed in municipalities with the most problems.

In response to degradation of visibility there still is not trigger also for testing to determine why and potential point source - Sand Point area had degradation 8 months in advance and no response. (see attached William Klein docs)



This time I have communicated to all of the Commissioners before BOCC and am told there is no process for Commissioner to direct staff without it coming to the BOCC. The SOIRL process is therefore flawed. It should be possible for a commissioner to give input into the SOIRL plan.

In conclusion, at this time, I am requesting action now by BOCC given the critical nature of continued decline of the lagoon as is evidenced by loss of seagrass and UME for Manatees.

The Manatees dying is just the visual part of that process you are seeing. Remember, the seagrass is foundation species to much of the life in the lagoon up the food chain.

Like Martin County, perhaps Brevard County should also consider a County ban on glyphosate? Recently Brevard County approved a 2.5 times increase in budget in herbicides.

I believe we have reached a critical juncture for the lagoon and need an urgent stepped up effort including growth management (including more robust LID) and protection of all wetlands near the lagoon, testing estuary outfalls to river, pollution testing and so on. I also think we need at least one scientist on staff. The 2018 report lacked scientific references - 6 references with 4 20-30 years old. There is a huge amount of research worldwide, including that PSII herbicides are linked to seagrass loss. I would also recommend Brevard County to hire a scientist as a dedicated role in the lagoon plan.

Sincerely and Respectfully,
Sandra Sullivan
954.224.8624

3 attachments

 **Report IRL Final_FDEP.pdf**
1226K

 **IRL Visibility Graphs 2018-Dec2021 to submit Final r.ods**
69K

 **Manatee Deaths 4 Aug 2021 Meeting (2).odt**
944K

Sandra Sullivan <s2sully@gmail.com>
To: robklmkowski2022@gmail.com

Mon, Feb 7, 2022 at 12:18 PM

[Quoted text hidden]

3 attachments

 **Report IRL Final_FDEP.pdf**
1226K **IRL Visibility Graphs 2018-Dec2021 to submit Final r.ods**
69K **Manatee Deaths 4 Aug 2021 Meeting (2).odt**
944K

Terry Casto <terry.l.cast@gmail.com>
To: Sandra Sullivan <s2sully@gmail.com>

Mon, Feb 7, 2022 at 12:35 PM

I share your concern re pollutants but it is not within the SOIRL charter to address. The charter, as approved by the voters, is narrowly defined and I believe any substantive changes would need voter reapproval.

I'm interested to hear how the commissioners respond.

Terry Casto
Sent from my iPhone
321-266-2502

On Feb 7, 2022, at 11:44 AM, Sandra Sullivan <s2sully@gmail.com> wrote:

[Quoted text hidden]

This time I have communicated to all of the Commissioners before BOCC and am told there is no process for Commissioner to direct staff without it coming to the BOCC. The SOIRL process is therefore flawed. It should be possible for a commissioner to give input into the SOIRL plan.

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4 attachments



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69K

Manatee Deaths 4 Aug 2021 Meeting (2).odt
944K

Sandra Sullivan <s2sully@gmail.com>
To: Terry Casto <terry.l.casto@gmail.com>

Mon, Feb 7, 2022 at 12:54 PM

This is what we voted for - which includes reducing pollutants.

Brevard County	
Save Our Indian River Lagoon ½ Cent Sales Tax Referendum	To restore the Indian River Lagoon through financing, planning, constructing, maintaining, and operating capital improvements and capital maintenance projects and programs designed to improve water quality, fish, wildlife and marine habitat, remove muck and reduce pollution, shall an ordinance be approved levying a ½ cent sales tax for ten years and requiring deposit of all revenue to a Save Our Lagoon Trust Fund solely for such projects, with citizen committee oversight and annual independent audits?

[Quoted text hidden]
[Quoted text hidden]

[Quoted text hidden]

Terry Casto <terry.l.casto@gmail.com>
To: Sandra Sullivan <s2sully@gmail.com>

Mon, Feb 7, 2022 at 1:06 PM

You'll have to fight it out with the lawyers. There's lots of testing not being done. And the monitoring that is included is directed toward the two approved measures of performance, N and P removal.

On Mon, Feb 7, 2022 at 12:54 PM Sandra Sullivan <s2sully@gmail.com> wrote:
This is what we voted for - which includes reducing pollutants.

Brevard County	
<p><i>Save Our Indian River Lagoon ½ Cent Sales Tax Referendum</i></p>	<p>To restore the Indian River Lagoon through financing, planning, constructing, maintaining, and operating capital improvements and capital maintenance projects and programs designed to improve water quality, fish, wildlife and marine habitat, remove muck and reduce pollution, shall an ordinance be approved levying a ½ cent sales tax for ten years and requiring deposit of all revenue to a Save Our Lagoon Trust Fund solely for such projects, with citizen committee oversight and annual independent audits?</p>

Terry Casto
(321) 266-2502

Sandra Sullivan <s2sully@gmail.com>
To: Leesa Souto <leesa@mrcirl.org>

Mon, Feb 7, 2022 at 1:32 PM




FYI

----- Forwarded message -----

From: Sandra Sullivan <s2sully@gmail.com>
 Date: Mon, Feb 7, 2022 at 11:44 AM
 Subject: SOIRL Plan: Pollution Testing
 To: Commissioner, D1 <D1.Commissioner@brevardfl.gov>, Commissioner, D2 <D2.Commissioner@brevardfl.gov>, Commissioner, D3 <D3.Commissioner@brevardfl.gov>, Commissioner, D4 <D4.Commissioner@brevardfl.gov>, Commissioner, D5 <D5.Commissioner@brevardfl.gov>, Lober, Bryan <Bryan.Lober@brevardfl.gov>, Waymer, Jim <jwaymer@floridatoday.com>, Duane De Freese <ddefreese@irlcouncil.org>, William Klein <klein_william_r@hotmail.com>, Barker, Virginia H <Virginia.Barker@brevardfl.gov>, beth <bfalls@teamorca.org>

[Quoted text hidden]

3 attachments

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1226K
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69K
-  **Manatee Deaths 4 Aug 2021 Meeting (2).odt**
944K

Sandra Sullivan <s2sully@gmail.com>
To: William Klein <klein_william_r@hotmail.com>

Tue, Feb 8, 2022 at 12:05 PM

FYI

----- Forwarded message -----

From: Sandra Sullivan <s2sully@gmail.com>
 Date: Mon, Feb 7, 2022 at 11:44 AM
 Subject: SOIRL Plan: Pollution Testing
 To: Commissioner, D1 <D1.Commissioner@brevardfl.gov>, Commissioner, D2 <D2.Commissioner@brevardfl.gov>, Commissioner, D3 <D3.Commissioner@brevardfl.gov>, Commissioner, D4 <D4.Commissioner@brevardfl.gov>, Commissioner, D5 <D5.Commissioner@brevardfl.gov>, Lober, Bryan <Bryan.Lober@brevardfl.gov>, Waymer, Jim <jwaymer@floridatoday.com>, Duane De

2/8/22, 4:05 PM

Gmail - SOIRL Plan: Pollution Testing

Freese <ddefreese@irlcouncil.org>, William Klein <klein_william_r@hotmail.com>, Barker, Virginia H <Virginia.Barker@brevardfl.gov>, beth <bfalls@teamorca.org>

[Quoted text hidden]

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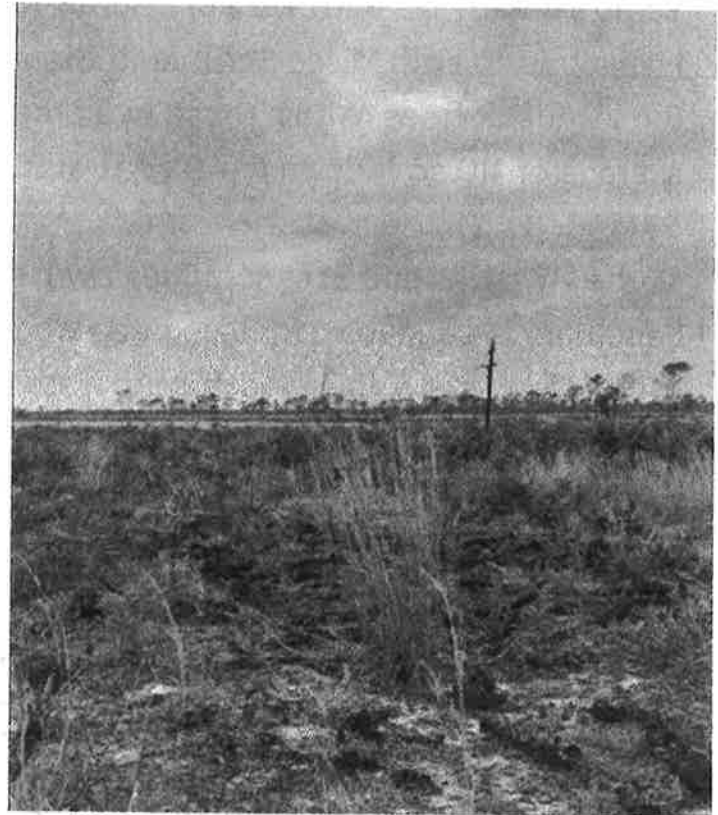
At 2,500 signatures, this petition is more likely to get picked up by local news!



ers like you.

H.2

What's new Petition details Comments Updates Discover



Stop the "Restoration" of Malabar Scrub Sanctuary

1,549 have signed. Let's get to 2,500!



At 2,500 signatures, this petition is more likely to get picked up by local news!



Ginger Twigg signed this petition



Joshua Karp signed 6 minutes ago



Ernest Hein signed 2 hours ago



Healing Thru Nature started this petition to Brevard County Endangered Lands Program (EELs) and 2 others

Take the next step!



At 2,500 signatures, this petition is more likely to get picked up by **local news!**

rogram
state in
ands of

trees will be removed from the area - leaving only 1-2 trees per acre.

This project actually spans multiple sanctuaries that EELs manages including Jordan Scrub (already cleared), Malabar Scrub, Micco Scrub, Valkaria Scrub and Grant Flatwoods. In both Micco Scrub and Grant Flatwoods, they'll remove hundreds of thousands of trees. Within these two properties alone, they plan to lumber from an average of 110 sq ft down to 40 sq ft of trees per acre.

Of the 117 parks and 21 sanctuaries owned by Brevard County, only Malabar Scrub Sanctuary is conducive for true deep woods recreation. Once Malabar Scrub is "restored" to its former state, this type of pure Nature immersion will be essentially lost to the surrounding community.

Last year, Malabar Scrub was visited by 30,000 end users who enjoyed its natural beauty for mountain biking, hiking & horseback riding. Since COVID began over two years ago, the area has also experienced a considerable increase in use by local/regional residents seeking peaceful relaxation during these troubled times.

Malabar Scrub has a thriving diverse ecosystem which could be lost forever as a result of BCC's hubris towards aggressively "restoring" the area for scrub-jays. This is a special place which should remain protected for its natural beauty & public accessibility.

Please join us in solidarity by signing our petition to help stop any further plans to negatively alter Malabar Scrub Sanctuary and protect its sacred landscape for all to enjoy - we thank you for your support!



Start a petition of your own

This petition starter stood up and took action. Will you do the same?

Take the next step!

Name	City	State	Postal Cc	Country	Signed On
John C Winchell				US	1/22/22
Rob Lape	Palm Bay	FL	32907	US	1/22/22
Dale Nelson	Satellite Beach	FL	32949	US	1/22/22
Oscar Loya	Melbourne	FL	32935	US	1/22/22
Ryan Chonka	Melbourne	B FL	32951	US	1/22/22
Murray Hann	Palm Bay	FL	32905	US	1/22/22
Larry McIntyre	Palm Bay	FL	32909	US	1/22/22
Monica Light	Palm Bay	FL	32905	US	1/22/22
DeWayne Barbee	Palm Bay	FL	32907	US	1/22/22
Mark Stephens	Palm Bay	FL	32907	US	1/22/22
Danny Timothy	Melbourne	FL	32904	US	1/22/22
Amy Chen	San gabriel		91503	US	1/22/22
Jennifer Hubbard	Malabar	FL	32950	US	1/23/22
Jeremy Mullin	Palm Bay	FL	32910	US	1/23/22
Lenn Hann	Valparaiso	IN	46383	US	1/23/22
Julie Hann	Chesterton	IN	46304	US	1/23/22
Damon Wood	Palm Bay	FL	32905	US	1/23/22
Daniel Hubbard	Malabar	FL	32950	US	1/23/22
Leslie Pownall	Malabar	FL	32950	US	1/23/22
gerald craven	Melbourne	FL	32904	US	1/23/22
Robert Lomenick	Colorado Spr	CO	80918	US	1/23/22
Gianella Baldoxeda	Chicago		60070	US	1/23/22
Franco Carlo		NY		US	1/23/22
Eric Thiele	Naperville	IL	60563	US	1/23/22
Ray Woosley	Palm Bay	FL	32905	US	1/23/22
yolanda schultes	Wittenbach		9300	India	1/23/22
jocelyne lapointe	Terrebonne	CA	j6w0b5	US	1/23/22
Cuisenaire Martine	Heer		5543	Belgium	1/23/22
velouria loya	Melbourne	FL	32940	US	1/23/22
Graham edward Ingledow	San Roque	cadiz	11360	Spain	1/23/22
Djamila grouci	Paris		75011	France	1/23/22
Liliana Fiorini	Cordoba		5000	Argentina	1/23/22
Christopher Evans	Shobdon		HR6	UK	1/23/22
Petra Achtzehnter	Kaiserslautern		67663	Germany	1/23/22
Consuelo Velasco	Strambino	Fr Cerone	10019	Italy	1/23/22
cathala corine	Pierrelatte		26700	France	1/23/22
Sue Cone	Hull	ENG	HU13 9D	UK	1/23/22
Susana Muñoz	Madrid		28019	Spain	1/23/22
David Bills	Indialantic	FL	32951	US	1/23/22
Maria Van Geel	Zdroisko			Poland	1/23/22
Jennifer Perez Underwood	Melbourne	FL	32904	US	1/23/22
alison williams	Aberystwyth	ENG	sy231qg	UK	1/23/22

Gerard Goulette	Montréal		H1e3e9 Canada	1/23/22
Brandon Bird	Palm Bay	FL	32907 US	1/23/22
Anne Montarou	Plaisir		78370 France	1/23/22
Dominique LANG	Vaison-la-romaine		84110 France	1/23/22
Joyce Alexander	Edinburgh	SCT	eh15 1le UK	1/23/22
Niina Anttinen	Espoo		Finland	1/23/22
Greg McClendon	Melbourne	FL	32901 US	1/23/22
Eva Hiwan Abraha	Southampton	ENG	So17 2hr UK	1/23/22
brigitte vanbekbergen	bruxelles		1060 Belgium	1/23/22
A. Otto	Auerbach		8209 Germany	1/23/22
Maria Greenwell	Titusville	FL	32796 US	1/23/22
Kari Anita Fjeldvær	Gol		3550 Norway	1/23/22
Jenna Overfelt	Titusville	FL	32796 US	1/23/22
Stephanie Jackson	Palm Bay	FL	32905 US	1/23/22
katherine Sampson	Devon	ENG	Ex363bl UK	1/23/22
Sandy Wimmer	Macedonia	OH	44056 US	1/23/22
Christeen Anderson	Crestview	FL	32539 US	1/23/22
Bambi Mayr			Austria	1/23/22
Georgia Raven	North Ridgev	OH	44039 US	1/23/22
John Raven	North Ridgev	OH	44039 US	1/23/22
David Lopez	Palm Bay	FL	32905 US	1/23/22
Julie Steele	Orlando	FL	32803 US	1/23/22
Kristine Davis	Rockledge	FL	32955 US	1/23/22
Carol Saloga	Palm Bay	FL	32907 US	1/23/22
Nelly PRESTAT	Mouroux		77120 France	1/23/22
Ann C	Palm Bay	FL	32905 US	1/23/22
Tiziana Dordoni	via xx settembre 11	Corsi	20094 Italy	1/23/22
Marga Gili	Palma		7003 Spain	1/23/22
Falcon Knight	Brooklyn	NY	11226 US	1/23/22
marylen kincer	49316	MI	48316 US	1/23/22
Michelle Pownall	Malabar	FL	32950 US	1/23/22
Amanda Christie	Newcastle upon Tyne		NE3 UK	1/23/22
Margo Marshall	Palm Bay	FL	32905 US	1/23/22
Adele Page	Grant	FL	32904 US	1/23/22
Bill Cobban	Melbourne B	FL	32951 US	1/23/22
Jan Gielkens	Weert		6005RV Netherlands	1/23/22
Jamie Roberts-Kaiman	Palm Bay	FL	28202 US	1/23/22
Elizabeth Amendolaro	Malabar	FL	32950 US	1/23/22
brandon baxter	Miami	FL	33181 US	1/23/22
luis aynat	Melbourne	FL	32901 US	1/23/22
Susan Turner	Paim Bay	FL	32905 US	1/23/22
Heidi Baxter	Palm Bay	FL	32901 US	1/23/22
kristina hrovat	novo mesto		80687 Germany	1/23/22

Tiffany Vanvuren	Port Saint Jol	FL	32927 US	1/23/22
Wendy King	Palm Bay	FL	32905 US	1/23/22
Francisco Iturio	Elgin		60123 US	1/23/22
Mary Jane Russell	Orlando	FL	32801 US	1/23/22
Verena Schäuble			45739 Germany	1/23/22
Deborah Ross	Malabar	FL	32950 US	1/23/22
Martina Behla	Berlin		12163 Germany	1/23/22
Phyllis Jeffery	Mobile	AL	36606 US	1/23/22
Roxana Moya	Santiago		Chile	1/23/22
Daniel Waite	Palm Bay	FL	32909 US	1/23/22
Jim Burns	Malabar	FL	32950 US	1/23/22
Diane Prophett	Malabar	FL	32905 US	1/23/22
Darrell Crum	Apopka	FL	32712 US	1/23/22
Daniel Waite	Miami	FL	33143 US	1/23/22
Chardonnens Sonja	Mannens		1564 Switzerland	1/23/22
Susan Paradise	Palm Bay	FL	32909 US	1/23/22
Shayna Tyler	Vallentigny		10500 France	1/23/22
diana bryant	ambleston	WLS	sa625qy UK	1/23/22
Barbara Lynne Schoolfield	Palm Bay	FL	32905 US	1/23/22
stacy crutchley	Malabar	FL	32950 US	1/23/22
Mike Schoolfield	Palm Bay	FL	32905 US	1/23/22
Karen Sisson	Titusville	FL	32780 US	1/23/22
Courtney Noble			US	1/23/22
Susan Grella	Grant	FL	32949 US	1/23/22
Julie oakes	Palm Bay	FL	32909 US	1/23/22
David Stambaugh	Washington	IL	61571 US	1/23/22
Mary Morton	Palm Bay	FL	32909 US	1/23/22
Anneke Andries	Raamsdonksveer		4941JT Netherlands	1/23/22
Julia Cesary	Melbourne	FL	32934 US	1/23/22
Simone Jackson	Macedonia	OH	44056 US	1/23/22
John White	Melbourne	FL	32934 US	1/23/22
Sandra Snelders	Lowell	MA	1854 US	1/23/22
Ana Gruber	Wolfratshausen		82515 Germany	1/23/22
Christna Frutuoso	Esch		4069 Luxembourg	1/23/22
Margot Austin	Indianola	OK	74442 US	1/23/22
Matthew Press	Dallas	TX	75254 US	1/23/22
Hanneke Mol	Poortvliet	NE	4693EG US	1/23/22
Beverly Marker	Micco	FL	32976 US	1/23/22
Chris Arutt	Melbourne B	FL	32951 US	1/23/22
Marsha Waters Fisher	Palm Bay	FL	32951 US	1/23/22
Eve McQueen-Allinger	Columbia	SC	29209 US	1/23/22
Babs Jansen	Rotterdam		4693 Netherlands	1/23/22
hannah martin	Tallahassee	FL	32301 US	1/23/22

Lori Bryant	Pendleton	OR	97801 US	1/23/22
Sylvia DRIOULE	Lige		Belgium	1/23/22
Andrea Divelbliss	Palm Bay	FL	32909 US	1/23/22
Ann Scally	Malabar	FL	32950 US	1/23/22
Carlos Jackson	Palm Bay	FL	32907 US	1/23/22
Pam Winegar	Palm Bay	FL	32907 US	1/23/22
Dawn Gregor	Melbourne B	FL	32951 US	1/23/22
Lin Herz	Palm Bay	FL	32905 US	1/23/22
Scott Hambel	Melbourne	FL	32934 US	1/23/22
Phillipe Marquis	Palm Bay	FL	32905 US	1/23/22
Maria Schulz			300424 Romania	1/23/22
Astrid V.d. Geest	Stadskanaal		9502 Netherlands	1/23/22
Pamela Keck	Melbourne B	FL	32951 US	1/23/22
Shannon Garnier	Palm Bay	FL	32950 US	1/23/22
Nidia Nunez	Palm Bay	FL	32909 US	1/23/22
Jennifer Doyle	Malabar	FL	32950 US	1/23/22
Pamela Heman	Palm Bay	FL	32909 US	1/23/22
robert morris	Palm Bay	FL	32905 US	1/23/22
Jerri Knight	Malabar	FL	32950 US	1/23/22
Jon Clock	Palm Bay	FL	32909 US	1/23/22
Terry Caldwell	Palm Bay	FL	32905 US	1/23/22
John Gregor	Melbourne B	FL	32951 US	1/23/22
Pam Miller	Tolar	TX	76046 US	1/24/22
Laura Meyer	Malabar	FL	32950 US	1/24/22
Lisa Mazzola	Tampa	FL	33612 US	1/24/22
Michael Meyer	Malabar	FL	32950 US	1/24/22
Derrick McQuillen	Melbourne	FL	32935 US	1/24/22
Christine Hall	Fellsmere	FL	32948 US	1/24/22
jade ALF	Blois		41000 France	1/24/22
Jennifer Renshaw Duncan	Melbourne B	FL	32951 US	1/24/22
Jonathan Vallee	Palm Bay	FL	32907 US	1/24/22
Marilyn Roberts	Malabar	FL	32950 US	1/24/22
Josh Broline	Malabar	FL	32950 US	1/24/22
Erin Broline	Malabar	FL	32950 US	1/24/22
Debbie Kelly	Palm Bay	FL	32905 US	1/24/22
Jessica Maruzzella	Grant	FL	32949 US	1/24/22
Linda Lamontagne	Palm Bay	FL	32907 US	1/24/22
Marlys Seek	Palm Bay	FL	32907 US	1/24/22
Fortunato Sanchez	Palm Bay	FL	32905 US	1/24/22
cameron casey	Palm Bay	FL	32905 US	1/24/22
Coleen Fraick	Palm Bay	FL	32907 US	1/24/22
Elisabeth Sangle	Orlando	FL	32803 US	1/24/22
John Parks	Palm Bay	FL	32909 US	1/24/22

John Matchett	valkaria	FL	32950 US	1/24/22
Susan Clarcq	Grant-Valkar	FL	32950 US	1/24/22
Kim Budd	Satellite Bear	FL	32937 US	1/24/22
Gemma Matchett	Palm Bay	FL	32905 US	1/24/22
Anne Kaminski	Indialantic	FL	32903 US	1/24/22
Barbara Fredell	Melbourne B	FL	32951 US	1/24/22
melissa brown	Malabar	FL	32950 US	1/24/22
Charlene Regan	Palm Bay	FL	32905 US	1/24/22
Charles Ryan	Palm Bay	FL	32905 US	1/24/22
peter Yednorowicz	Palm Bay	FL	32905 US	1/24/22
Barry Grass	Palm Bay	FL	32905 US	1/24/22
Sharon Evans	Apopka	FL	32712 US	1/24/22
Douglas Bailey	MELBOURNE	FL	32901 US	1/24/22
LUCILLA ALVAREZ	Palm Bay	FL	32909 US	1/24/22
Mirjana Neskovich	Perth		6021 Australia	1/24/22
Kimberly Ruiz	Palm Bay	FL	32909 US	1/24/22
Andrew Vallender	Ventnor	ENG	PO38 1B UK	1/24/22
Karen Schafer	Grant	FL	32949 US	1/24/22
jojo cook	Charlotte		28202 US	1/24/22
Ruth Taylor	Satellite Bear	FL	32937 US	1/24/22
Mike Cas	Playa del Rey		90293 US	1/24/22
Mary Hill	Sebastian	FL	32958 US	1/24/22
Sabine Möhler	Esselbach		97839 Germany	1/24/22
Claudia Neuhalfen	Bonn		53117 Germany	1/24/22
Debbie Doswell	Melbourne B	FL	32951 US	1/24/22
Thomas Fotiathis	Springfield	MA	1109 US	1/24/22
Linda DeVivo	Palm Bay	FL	32905 US	1/24/22
Jim Rhudy	Palm Bay	FL	32905 US	1/24/22
Brandon Anderson	Bayboro	NC	28515 US	1/24/22
Rosi Zang	Aschaffenburg		63743 Germany	1/24/22
Debbie Noveritsky	Palm Bay	FL	32909 US	1/24/22
tonja broud	Palm Bay	FL	32907 US	1/24/22
Ulbrich Christiane	Moyeuivre-grande		57250 France	1/24/22
Kenneth Neville	Melbourne B	FL	32951 US	1/24/22
Amber Joy	Palm Bay	FL	32905 US	1/24/22
Bridget Hughen	Malabar	FL	32950 US	1/24/22
Caroline Sévilla	Paris		75001 France	1/24/22
Eva Maria Genovese	Muttentz		Switzerland	1/24/22
R. Schmeling	Euskirchen		53879 Germany	1/24/22
Linda Lancaster	Palm Bay	FL	32907 US	1/24/22
Linda Gowen	Sebastian	FL	32976 US	1/24/22
Amy Lacy	Melbourne	FL	32904 US	1/24/22
Mary Crutchley	Tampa	FL	33616 US	1/24/22

Janet Tew	Palm Bay	FL	32905	US	1/24/22
Barbara Begin	Palm Bay	FL	32905	US	1/24/22
Peter Leigh	Melbourne	FL	32904	US	1/24/22
Ginamarie Meoni	Cocoa Beach	FL	32931	US	1/24/22
David Eldredge	Malabar	FL	32950	US	1/24/22
John Hughen	Malabar	FL	32905	US	1/24/22
Patricia Biagi	Melbourne b	FL	31951	US	1/24/22
Ronni Moore	Palm Bay	FL	32907	US	1/24/22
Faith Riccilli	Melbourne B	FL	32951	US	1/24/22
Michael Panvini	Palm Bay	FL	32905	US	1/24/22
Anthony Ruiz	Palm Bay	FL	32909	US	1/24/22
Angela Nrewer	Palm Bay	FL	32905	US	1/24/22
Lisa Young	Palm Bay	FL	32909	US	1/24/22
Karen Oswald	Ft. Pierce	FL	34946	US	1/24/22
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Lisa & Shawn Leeper	Grant	FL	32909	US	1/24/22
Brittany Cessar	Thornton	CO	80602	US	1/24/22
Jodie Rose	Windermere	FL	34786	US	1/24/22
John Spinelli	Verø Beach	FL	32963	US	1/24/22
Lauren Armstrong	Palm Bay	FL	32905	US	1/24/22
Stephanie Keyser	Melbourne	FL	32904	US	1/24/22
Sharon Fox	Palm Bay	FL	32905	US	1/24/22
Jane Pelletier	Palm Bay	FL	32907	US	1/24/22
Maggie Tatem	Palm Bay	FL	32905	US	1/24/22
Gina DeSalvo-Green	Palm Bay	FL	32908	US	1/24/22
Lesley King	Malabar	FL	32950	US	1/24/22
William Sullins	Satellite Bear	FL	32937	US	1/24/22
Kate Kenner	Guilford	VT	5301	US	1/24/22
Rorie Anderson	Melbourne B	FL	32951	US	1/24/22
Elizabeth McLachlan	Melbourne	FL	5672	US	1/24/22
Martin Jacobson	Palm Bay	FL	32905	US	1/24/22
Tammy Pierson	Palm Bay	FL	32905	US	1/24/22
Stanley Marold	Palm Bay	FL	32905	US	1/24/22
William Kirwin	Melbourne	FL	32904	US	1/24/22
Susan Peck	Palm Bay	FL	32905	US	1/24/22
Hemming Stephen	Palm Bay	FL	32909	US	1/24/22
Robert Nowak				Poland	1/24/22
Tina Breeden	Malabar	FL	32950	US	1/24/22
Lenny Dunlap	Melbourne B	FL	32951	US	1/24/22
Nancy Clarke	Orlando	FL	32803	US	1/24/22
Elianne Sorel	Palm Bay	FL	32905	US	1/24/22
Jarred Hodge	Paim Bay	FL	32907	US	1/24/22
Laurie Waddell	Palm Bay	FL	32905	US	1/24/22
Jill Ferreira	Palm Bay	FL	32907	US	1/24/22

Karen Jones		US	1/24/22
Carolyn Morris	Melbourne FL	32903 US	1/24/22
Sandras Francine	Annoeullin	59112 France	1/24/22
Kathleen Cavalcante	Palm Bay FL	32909 US	1/24/22
MK Lantz	Vero Beach FL	32960 US	1/24/22
Joseph Paradise	Palm Bay FL	32905 US	1/24/22
Alyssa McGarry	Palm Bay FL	32905 US	1/24/22
Nina Nichelson	Vernon FL	32462 US	1/24/22
Timothy Jackson	Palm bay FL	32905 US	1/24/22
Martina Gauthier	Palm Bay FL	32909 US	1/24/22
Michael Lipsky	Satellite Beach FL	32937 US	1/24/22
Hanna Zamudio	Palm Bay FL	32909 US	1/24/22
James Bress	Melbourne FL	32935 US	1/24/22
michael devito	Palm Bay FL	32905 US	1/24/22
r Band	Palm Bay FL	32905 US	1/24/22
Lisa Petrillo	Palm Bay FL	32905 US	1/24/22
Zsofia Remenyi	palm bay	32909 Hungary	1/24/22
Kathryn Duck	Palm Bay FL	32909 US	1/24/22
ursula schilg	Mayen	56727 Germany	1/24/22
Marcel Alexandrovich	DKI Jakarta	12240 Indonesia	1/24/22
sadie al	South Jakarta	12514 Indonesia	1/24/22
Michele Terry	Melbourne FL	32904 US	1/24/22
Karl Hosnedl	Palm Bay FL	32909 US	1/24/22
Anna Chonka	Melbourne B FL	32951 US	1/24/22
Betsy Larson	Satellite Beach FL	32937 US	1/24/22
Lois Wolfe	Fellsmere FL	32948 US	1/24/22
Dolly Faup	Lakewood OH	44107 US	1/24/22
Robert Ashenoff	Malabar FL	32950 US	1/24/22
Bobbie Ashenoff	Melbourne FL	32904 US	1/24/22
Trish Talbert	Fort Lauderdale FL	33313 US	1/24/22
Jeannette Koroela	Minneapolis MN	55416 US	1/24/22
Julie Port	Slough	SL1 UK	1/24/22
Mike Gordon	Melbourne FL	32904 US	1/24/22
Sue Fisher	Palm Bay FL	32905 US	1/24/22
Anne Carberry	Palm Bay FL	32907 US	1/24/22
Frédéric Jaubert	Pont de Chérufy	38230 France	1/24/22
Michelle Johnson	Merritt Island FL	32953 US	1/24/22
sara sang	los angeles CA	91601 US	1/24/22
LuRae Boscarino	Orlando FL	32824 US	1/24/22
Dale Nimmo	Merritt Island FL	32953 US	1/24/22
DALE JOSEPH	Palm Bay FL	32909 US	1/24/22
Fiona Pearce	Malabar FL	32950 US	1/24/22
pilar blas	san sebastian	20009 Spain	1/24/22

Maryann Staron	Hometown	IL	60456-10	US	1/24/22
Steve Hansen	Melbourne	FL	32904	US	1/24/22
Alexander Orman	Hastings	ENG	TN38	UK	1/24/22
Jane Jackson	Palm Bay	FL	32907	US	1/24/22
Denise Brook	Dublin		D02	Ireland	1/24/22
Nova Star	Fairfax		22042	US	1/24/22
Angelie Villafañe	Caguas			US	1/24/22
Mark Britt	Palm Bay	FL	32905	US	1/24/22
Tina Hackett	Quinton	VA	23141	US	1/24/22
John Romesberg	Satellite Beach	FL	32937	US	1/24/22
Sandra Carchidi	Capaccio Paestum		84047	Italy	1/24/22
Candy Absher	Melbourne B	FL	32951	US	1/24/22
Barbara Thompson	Palm Bay	FL	32905	US	1/24/22
Donna Panvini	Malabar	FL	32950	US	1/24/22
Kevin Latonick	West Melbourne	FL	32904	US	1/24/22
Shaun Mirza	Cocoa beach	FL	32931	US	1/24/22
Elisabeth Bechmann	Polten		3100	Austria	1/24/22
Thomas Justis	Hardyville	VA	23070	US	1/24/22
Jessica Slingsby	Grant	FL	32949	US	1/24/22
RICK RUTKOWSKI	Palm Bay	FL	32907	US	1/24/22
Linda Yednorowicz	Palm Bay	FL	32905	US	1/24/22
Brian Merrell	Palm Bay	FL	32949	US	1/24/22
Jamie Freese	Tampa	FL	32950	US	1/24/22
Steven Rivet	Malabar	FL	32950	US	1/24/22
Jesse Rijos	Palm Bay	FL	32909	US	1/24/22
Michele Yates	Palm Bay	FL	32909	US	1/24/22
Deanna Stimus	Satellite Beach	FL	32937	US	1/24/22
Looney Michele	Palm Bay	FL	32905	US	1/24/22
Wendy Lovett	Orlando	FL	32811	US	1/24/22
Mandie Bricker	Palm Bay	FL	32909	US	1/24/22
Patricia Lindstrom	Palm Bay	FL	32905	US	1/24/22
Theresa Haynes	Lehigh Acres		33936	US	1/24/22
Christine Thörnwall	Norrköping		602 22	Sweden	1/24/22
L Saunders	Masterton			New Zealand	1/24/22
Mariyan Hristov	Palm Bay	FL	32905	US	1/24/22
Nikole Wilber	Malabar	FL	32950	US	1/24/22
JudyAnn Normandin	Fitchburg	MA	1420	US	1/24/22
Heather Weeks	Sebastian	FL	32958	US	1/24/22
Iain Brown	Palm Bay	FL	32905	US	1/25/22
Carla McMahan	Palm Bay	FL	32907	US	1/25/22
Elisabeth Joseph	Palm Bay	FL	32909	US	1/25/22
Katharina Poerschke	Miami	FL	33173	US	1/25/22
Sonya Myers	Grant Valkari	FL	32950	US	1/25/22

Denise Dovell	Satellite Bear FL	32937 US	1/25/22
Deborah Diaz	Palm Bay FL	32909 US	1/25/22
Civannah Pierson	Malabar FL	32950 US	1/25/22
Gabrielle Weiting	Palm Bay FL	32909 US	1/25/22
James Puccio	Palm Bay FL	32907 US	1/25/22
Bell DeBerardis	Naples	34117 US	1/25/22
Deanne Campbell	Palm Bay FL	32907 US	1/25/22
Joseph Freeland	Edwardsburg MI	49112 US	1/25/22
Linda Roth	Palm Bay FL	32905 US	1/25/22
Jelana Griffith	Palm Bay FL	32908 US	1/25/22
Shelby Hefler	Grant-Valkar FL	32950 US	1/25/22
Deborah Lynch	Fellsmere FL	32948 US	1/25/22
Joy Wren	Palm Bay FL	32905 US	1/25/22
Marion Schiffers	Brussels	4720 Belgium	1/25/22
Dale Ruehman	Sebastian FL	32958 US	1/25/22
Rosa Cabrerizo	Hospitalet de Llobregat	8906 Spain	1/25/22
Jerri Anderson	Vero Beach FL	32968 US	1/25/22
Katelyn Nelson	Grant FL	32949 US	1/25/22
Tonya Crowe	Palm Bay FL	32905 US	1/25/22
Nicholas Kneapler	Palm Bay FL	32905 US	1/25/22
Bob Talbert	Palm Bay FL	32905 US	1/25/22
Marilyn Graziano	Morpeth ENG	NE61 2FI UK	1/25/22
Lexi Gist	Loretto	38469 US	1/25/22
Стас Аксёнов	Tyumen	625000 Russia	1/25/22
Jan Garen	Abercraf WLS	SA91UD UK	1/25/22
Dale Daut	Palm Bay FL	32909 US	1/25/22
Vern Romesberg	Edgewood NM	87015 US	1/25/22
Christine Filiberto	Gainesville FL	32606 US	1/25/22
Mary Duffy	North Olmsted OH	44035 US	1/25/22
Eric Duron	Melbourne B FL	32951 US	1/25/22
Lisa Frazier	Malabar FL	32950 US	1/25/22
Matthew Flores	Palm Bay FL	32905 US	1/25/22
John Contoupe	Malabar FL	32950 US	1/25/22
Kristina Sedic	Zagreb	10000 Croatia	1/25/22
Dorinda Walker	Vero Beach FL	33960 US	1/25/22
Tammy Mays	Glen Allen VA	23060 US	1/25/22
Marianne Molchan	Vero Beach FL	32967 US	1/25/22
Виктория Логинова		Russia	1/25/22
Ehren Ullein	Palm Bay FL	32905 US	1/25/22
Kevin Boodoosingh	Melbourne FL	32904 US	1/25/22
Marlanne Farris	Palm Bay FL	32909 US	1/25/22
Kimberly Reinman Barker	Palm Bay FL	32907 US	1/25/22
Kyle Noble	Indian Harbo FL	32937 US	1/25/22

Michael Gibbs	London	OK	28748	US	1/25/22
Dianne Raunick	Tarpon Springs		34689	US	1/25/22
John Chonka	Melbourne B	FL	32951	US	1/25/22
Gillis Judy	Charlotte	NC	28202	US	1/25/22
Tanya Jaquays	Satellite Bear	FL	32937	US	1/25/22
M Sowd	Melbourne	FL	32935	US	1/25/22
саша кузьмин	Orenburg			Russia	1/25/22
dean grice	Rugeley	ENG	ws152dd	UK	1/25/22
Ellie Rudolph	Satellite Bear	FL	32937	US	1/25/22
Sean Gilpatric	Canaan	CT	6018	US	1/25/22
Sharon Cyr	Melbourne	FL	32901	US	1/25/22
Deanna Spain	Palm Bay	FL	32905	US	1/25/22
CATHERINE LEMEE	Grant Valkari	FL	32949	US	1/25/22
Sherrie Gohn	Malabar	FL	32950	US	1/25/22
Michal Tankersley	Malabar	FL	32950	US	1/25/22
Elizabeth Lucky	Orlando	FL	32905	US	1/25/22
Patricia Sponsler	Rockledge	FL	32955	US	1/25/22
Chana Newport	Palm Bay	FL	32905	US	1/25/22
Elizabeth Zurn	Rockledge	FL	32955	US	1/25/22
Tina Withrow	Palm Bay	FL	32907	US	1/25/22
Pamela Davis	Melbourne	FL	32934	US	1/25/22
Stefano Fuschetto	Gallarate		21013	Italy	1/25/22
Lee Anne Bell	Palm Bay	FL	32950	US	1/25/22
Luke Frisbee	Palm Bay	FL	32907	US	1/25/22
Robin Macmillan	leesburg	FL	34788	US	1/25/22
Patricia Hakanson	Melbourne	FL	32904	US	1/25/22
John Arnold	Palm Bay	FL	32905	US	1/25/22
Anthony Yantz	Palm Bay	FL	32905	US	1/25/22
Tiffany Ruehman	Melbourne	FL	32935	US	1/25/22
Laura Chonka	Melbourne B	FL	32953	US	1/25/22
James Rogers	Pensacola	FL	32503	US	1/25/22
KELLEY REYNOLDS	Rockledge	FL	32955	US	1/25/22
Pat Lorraine	Melbourne	FL	32934	US	1/25/22
Ariana Rodriguez	Palm bay	FL	32909	US	1/25/22
Jeannette cichanowicz-funke	palm bay	FL	32909	US	1/25/22
Batchellor Jennifer	Melbourne	FL	32940	US	1/25/22
David Heath	palm bay	FL	32908	US	1/25/22
Gallagher Leslie	Palm Bay	FL	32907	US	1/25/22
Monica Riedler	Washington	DC	20015	US	1/25/22
Elizabeth M Donaldson	Palm Bay	FL	32905	US	1/25/22
Thomas Stokes	Meibourne	FL	32935	US	1/25/22
Judith Ireland	Venice	FL	34293	US	1/25/22
Jacqueline Raniero	Palm Bay	FL	32905	US	1/25/22

Karen Monahan	Melbourne	FL	32935	US	1/25/22
Jamie Hunt	Orlando	FL	32825	US	1/25/22
Tara Veasey	Malabar	FL	32950	US	1/25/22
Shawn Gross	Palm Bay	FL	32907	US	1/25/22
Shannon Roseman	Palm Bay	FL	32950	US	1/25/22
Jonathan Hernandez	Oviedo	FL	32765	US	1/25/22
Jill Helsel	Palm Bay	FL	32905	US	1/25/22
Allen Roseman	Palm Bay	FL	32905	US	1/25/22
Laurance Davis	Malabar	FL	32950	US	1/25/22
Debra Stokes	Melbourne	FL	32934	US	1/25/22
Tyler King	Malabar	FL	32950	US	1/25/22
Lee Derick	Humble	TX	77346	US	1/25/22
Bree Husband	Melbourne	FL	32935	US	1/25/22
Ann Harr	Palm Bay	FL	32905	US	1/25/22
shabree hunter	Lake Worth		33463	US	1/25/22
Britney Dudley	Juneau	AK	99801	US	1/25/22
Galia Clavijo	Orange Park		32073	US	1/25/22
Mary Foley	Cork		d15	Ireland	1/25/22
Alden Gillespy				US	1/25/22
Hahna Latonick	Melbourne	FL	32904	US	1/25/22
Pam Barnes	Palm Bay	FL	32909	US	1/26/22
NISSA MICHOCKI	Melbourne	FL	32935	US	1/26/22
Rachel Kelly	Palm Bay	FL	32909	US	1/26/22
David Hahn	Melbourne	FL	32935	US	1/26/22
Colleen Taylor	Daytona Bea	FL	32119	US	1/26/22
Sarah Yntema	Palm Bay	FL	32905	US	1/26/22
Annie Caza	Melbourne B	FL	32951	US	1/26/22
Jean Adrian	Palm Bay	FL	32909	US	1/26/22
Gail Dixon	Coconut Cree	FL	33073	US	1/26/22
Ronald Duritsch	Palm Bay	FL	32909	US	1/26/22
Jackson Timothy	Orlando	FL	32801	US	1/26/22
Cynthia Kenens	Grant	FL	32949	US	1/26/22
Barry Conn	Palm Bay	FL	32905	US	1/26/22
Kristine Henry	Indialantic	FL	32903	US	1/26/22
Yaretzi Cruz	Dallas		75231	US	1/26/22
Jonathan Harris	Palm Bay	FL	32907	US	1/26/22
Janine Velez	Palm Bay	FL	32909	US	1/26/22
Robert Barnes	Palm Bay	FL	32905	US	1/26/22
Michele Hobbs	Satellite Bea	FL	32937	US	1/26/22
Claire Chidsey	Atlanta	GA	30317	US	1/26/22
William Pittman	Satellite Bea	FL	32937	US	1/26/22
Tracy Oxley	Melbourne	FL	32940	US	1/26/22
Yaxuney Villares	Largo		33771	US	1/26/22

Renee Clary	Melbourne	FL	32904	US	1/26/22
Jake Facciobene	Palm Bay	FL	32905	US	1/26/22
Lane Desantis	Melbourne	FL	32904	US	1/26/22
Jeff Carver	Thomas	WV	26292	US	1/26/22
Paiton Walker	Palm Bay	FL	32909	US	1/26/22
Roger Kulp	Albuquerque	NM	87112	US	1/26/22
Jeff Burr	Palm Bay	FL	32905	US	1/26/22
Yashira Rodriguez	Leesburg	FL	34748	US	1/26/22
Melissa Hardy	Palm Bay	FL	32909	US	1/26/22
Lindsay Patterson	London	FL	32901	US	1/26/22
Micheal Suominen	Melbourne	FL	32904	US	1/26/22
michael lake	Palm Bay	FL	32907	US	1/26/22
Angelica Bravo	Baton Rouge		70815	US	1/26/22
Sophie Ash	Los Angeles		90077	US	1/26/22
Bren Ca	Dallas	TX	75206	US	1/26/22
Dillon Schneider	Ghent		12079	US	1/26/22
Nancy Espinoza	Laveen		85339	US	1/26/22
Ashley Antero	Dallas		75254	US	1/26/22
Josue Montes	Oceanside		92054	US	1/26/22
Wendy Forster	Newcastle	ENG	NE11 0E	UK	1/26/22
Bill Santore	Palm Bay	FL	32909	US	1/26/22
Carlene Gentles	Melbourne	FL	32934	US	1/26/22
Zachary Green	Satellite Beach	FL	32937	US	1/26/22
Jonathan Howse	Melbourne	FL	32904	US	1/26/22
Thomas Ribnicky Jr Ribnicky	Palm Bay	FL	32907	US	1/26/22
Digna Yarbrough	Palm Bay	FL	32904	US	1/26/22
Gary Cameron	Grant		32949	US	1/26/22
Tom Catron	Palm Bay	FL	32905	US	1/26/22
Robin Moran	Melbourne	FL	32934	US	1/26/22
Janet Erlacher	Melbourne	FL	32935	US	1/26/22
Lance Albers	Melbourne	FL	32901	US	1/26/22
Philip Barone	Indialantic	FL	32903	US	1/26/22
Krystie Jezierski	Melbourne	FL	32904	US	1/26/22
Katelyn Apotsos	Melbourne B	FL	32951	US	1/26/22
Kevin Frank	Melbourne	FL	32904	US	1/26/22
Joshua Phillips	Palm Bay	FL	32909	US	1/26/22
Amelia Minto	Melbourne B	FL	32951	US	1/26/22
Ron Bowen	Melbourne	FL	32904	US	1/26/22
carly grey	Melbourne	FL	32904	US	1/26/22
Kailyn Myers	Newark	NJ	7103	US	1/26/22
Aubrey Orcutt	Paim Bay	FL	32905	US	1/26/22
Conway Bolt	Grant-Valkar	FL	32909	US	1/26/22
Devin Snyder	Palm Bay	FL	32907	US	1/26/22

Jack Apotsos	Melbourne B FL	32951 US	1/26/22
Kristin Apotsos	Melbourne B FL	32951 US	1/26/22
Alysha Snyder	Orlando FL	32801 US	1/26/22
Thad Gornto	Palm Bay FL	32907 US	1/26/22
Greg Apotsos	Palm Bay FL	32907 US	1/26/22
Kyle Ryan	Melbourne FL	32904 US	1/26/22
Becky Moody	Melbourne B FL	32951 US	1/26/22
Tricia Rydson	Melbourne B FL	32951 US	1/26/22
Summer Oxley	Melbourne FL	32907 US	1/26/22
Cheryl Baduini Zaricki	Melbourne B FL	32951 US	1/26/22
Georgie Rydson	Miami FL	33147 US	1/26/22
Linda McGarry	Palm Bay FL	32905 US	1/26/22
Trenton Riley	Melbourne FL	32904 US	1/26/22
Andrea Falk	Melbourne FL	32901 US	1/26/22
Joli Bartczak	Melbourne B FL	32951 US	1/26/22
Nicole Coster	Palm Bay FL	32909 US	1/26/22
Jackson Wangensteen	Satellite Beach FL	32937 US	1/26/22
Sonja Wangensteen	Satellite Beach FL	32937 US	1/26/22
Laura Wangensteen	Satellite Beach FL	32937 US	1/26/22
Ron Heise	Melbourne FL	32904 US	1/26/22
Ethan Heise	Miami FL	33147 US	1/26/22
max grainger	Waukesha WI	53186 US	1/26/22
Jennifer Deal	Melbourne B FL	32951 US	1/26/22
Debora Bistarkey	Micco FL	32976 US	1/26/22
Stephen Barber	Grant FL	32949 US	1/26/22
Tom Carson	Melbourne FL	32935 US	1/26/22
Nicole Mullican	Palm Bay FL	32905 US	1/26/22
Russell Derrick	Micco FL	32976 US	1/26/22
Samantha Frank	Orlando FL	32808 US	1/26/22
Jaynor Neiva	Saint Augustine FL	32084 US	1/26/22
Debbe Craven Windham	Palm Bay FL	32905 US	1/26/22
Neal Driscoll	Melbourne FL	32904 US	1/26/22
Heidi Crook	Melbourne FL	32934 US	1/26/22
Jennifer Bixby	Melbourne FL	32935 US	1/26/22
Joseph Mancini	Palm Bay FL	32905 US	1/26/22
Christie Nadratowski	New York NY	10038 US	1/26/22
Jill Martin	Ringwood NJ	7456 US	1/26/22
Sharon Armul	Palm Bay FL	32909 US	1/26/22
Donald LaFontaine	Palm Bay FL	32905 US	1/26/22
James Dean	Palm Bay FL	32905 US	1/26/22
Danny Marshall	Orlando FL	32814 US	1/26/22
Beckie Stenson	Melbourne FL	32904 US	1/26/22
Stacy Rogers	Palm Bay FL	32907 US	1/26/22

Shelly G	Melbourne FL	32935 US	1/26/22
Elaine Needham	Kokomo IN	46901 US	1/26/22
Avery Bowman	Palm Bay FL	32905 US	1/26/22
Tracey-Ann McGee	Palm Bay FL	32905 US	1/26/22
Kendall Cash	Port Saint Lucie	34953 US	1/26/22
Jane Hoover	Melbourne FL	32904 US	1/26/22
Ashley Ferrara	Palm Bay FL	32909 US	1/26/22
Jeannie Martingano	Hollywood FL	32903 US	1/26/22
Enguels Morales	Palm Bay FL	32909 US	1/26/22
Jessica Hossain	Palm Bay FL	32909 US	1/26/22
M. Rust	Melbourne B FL	32951 US	1/26/22
Karen Barrett	Palm Bay FL	32907 US	1/26/22
Darin Dicks	Port Saint Lu FL	34953 US	1/26/22
stephanie hayes	Palm Bay FL	32907 US	1/26/22
Bruce Bonnough	Palm Bay FL	32905 US	1/26/22
Landy Little	Kissimmee FL	34741 US	1/26/22
Erin Schuck	Indian Harbo FL	32937 US	1/26/22
Michael Vorhees	Grand Rapids MI	49503 US	1/26/22
Blake Cathcart	Vero beach FL	32966 US	1/26/22
Roger Winer	Port Saint Lu FL	34983 US	1/26/22
Carrie Petzy	Melbourne B FL	32951 US	1/26/22
Larry Gonzalez	Tampa FL	34983 US	1/26/22
Paul Bosse	Melbourne FL	32904 US	1/26/22
Robyn Pringle	Melbourne FL	32940 US	1/26/22
Greg Bacigalupo	Grant FL	32949 US	1/26/22
Jimmy Rich	Palm Bay FL	32905 US	1/26/22
Ian Poirier	Melbourne FL	32904 US	1/26/22
Meryl Morales	Palm Bay FL	32909 US	1/26/22
Brenda Tolar	Cedar Spring MI	49319 US	1/26/22
Derek Mroczek	Melbourne FL	32901 US	1/26/22
Ron Roff	Palm Bay FL	32905 US	1/26/22
Monica Perez	Melbourne FL	32934 US	1/26/22
Rosa Bennett	Melbourne FL	32904 US	1/26/22
Breit Garner	Palm Bay FL	32907 US	1/26/22
Allison Hoffman	Satellite Bear FL	32937 US	1/26/22
Timothy Breuer	Melbourne FL	32935 US	1/26/22
Maria Ricci	Melbourne FL	32935 US	1/26/22
Samantha Aljets	Phoenix AZ	85045 US	1/26/22
Pete Osman	Melbourne FL	32934 US	1/26/22
Nicolette Romo	Salinas	93905 US	1/26/22
Jay Cherland	Paim Bay FL	32907 US	1/26/22
Justin LaFountain	Melbourne FL	32901 US	1/26/22
Brandon Lott	Melbourne FL	32935 US	1/26/22

Vickie Youngblood	Raleigh NC	27606 US	1/26/22
Melinda Harris	West Melbourne FL	32904 US	1/26/22
Lacey Mawby	Palm Bay FL	32907 US	1/26/22
Richard Langdon	Palm Bay FL	32907 US	1/26/22
Quenna Moore	Rochester	48307 US	1/26/22
Tim Nicholas	Melbourne FL	32904 US	1/26/22
Thomas Derrick	Melbourne FL	32904 US	1/26/22
Katie Boucher	Melbourne FL	32940 US	1/26/22
Rachel Y Parker	Satellite Beach FL	32937 US	1/26/22
Jordan Boucher	Palm Bay FL	32907 US	1/26/22
Jeff Hoffman	Satellite Beach FL	32937 US	1/26/22
Richard Nink	Melbourne FL	32934 US	1/26/22
Nadia Jomaa	Palm Bay FL	32907 US	1/26/22
Sharon Stewart	Melbourne B FL	32951 US	1/26/22
Rene Morris	Apopka FL	32712 US	1/26/22
Lea Anne Richard	Melbourne FL	32934 US	1/26/22
Audrey Garner	Palm Bay FL	32909 US	1/26/22
Crystal Malko	Palm Bay FL	32909 US	1/26/22
Scott Lauterbach	Malabar FL	32950 US	1/26/22
Tibbitts Robin	Grant FL	32949 US	1/26/22
Mary Lu Williams	Tampa FL	33604 US	1/26/22
Tammy Garner	Palm Bay FL	32907 US	1/26/22
Jeanne Doyle	Valkaria FL	33950 US	1/26/22
Alexander Dicks	Port Saint Lucie FL	34953 US	1/26/22
Ashley Delacruz	Passaic	7055 US	1/26/22
Adam Yunis	Deltona	32725 US	1/26/22
David Burgess	Merritt Island FL	32952 US	1/26/22
Batick Teresa	Palm Bay FL	32905 US	1/26/22
Alexi Defolsom	Orlando FL	32814 US	1/26/22
Sydney Brito	Orlando FL	32801 US	1/26/22
Abby Fallis	Melbourne FL	32901 US	1/26/22
John Nickle	Satellite Beach FL	32937 US	1/26/22
Mat D	Boca Raton FL	33431 US	1/26/22
Brooke Casey	Miami FL	33147 US	1/26/22
Sulai Baddour	Palm Bay FL	32909 US	1/26/22
Robert Clark	Malabar FL	32950 US	1/26/22
Paola Ramos	Grant FL	32949 US	1/26/22
Jada Brown	Tallahassee FL	32304 US	1/26/22
Theresa Clary	Palm Bay FL	32909 US	1/26/22
Alex Kieu	Melbourne FL	32934 US	1/26/22
morgan shaw	Palm Bay FL	32905 US	1/26/22
riley crovo	Satellite Beach FL	32937 US	1/26/22
Davinia Hernández Gómez		38730 Spain	1/26/22

alison hayes	Miami	FL	33147 US	1/26/22
Mansa Walston	Palm Bay	FL	32907 US	1/26/22
Sarah Hamilton	Melbourne	FL	32934 US	1/26/22
Tatiana Gent	Orlando	FL	32814 US	1/26/22
Kim Pomerleau	Palm Bay	FL	32909 US	1/26/22
Pam Worsham	Satellite Bear	FL	32937 US	1/26/22
Ben Cantrell	Sebastian	FL	32958 US	1/26/22
Lisa Chicken	Palm Bay	FL	32907 US	1/26/22
Marcos Hacker	Satellite Bear	FL	32937 US	1/26/22
eila Wheatley	Oriando	FL	32801 US	1/26/22
Christi Krupinski	Melbourne	FL	32904 US	1/26/22
Morgan Boucher	Orlando	FL	32801 US	1/26/22
courtney lawson	Satellite Bear	FL	32937 US	1/26/22
Reese McCart	Miami	FL	33147 US	1/26/22
Amy Wright	Palm Bay	FL	32909 US	1/26/22
Paula Rojas	West Melbou	FL	32904 US	1/26/22
Abbey Lestrangle	Tampa	FL	33606 US	1/26/22
Rebecca Cicchetti	Port orange	FL	32128 US	1/26/22
Donald Strickland	Palm Bay	FL	32909 US	1/26/22
Jaime Stafford	Melbourne	FL	32935 US	1/26/22
Jane LePouttre	Micco	FL	32976 US	1/26/22
Sophia Arteaga	Palm Bay	FL	32905 US	1/26/22
Melissa Wilson	Palm Bay	FL	32907 US	1/26/22
Sienna Walden	west melbou	FL	32904 US	1/26/22
Kate Walsh	Indialantic		32903 US	1/26/22
Eric Zacher	Rockledge	FL	32955 US	1/26/22
Cheyenne Lightner	Palm Bay	FL	32909 US	1/26/22
Delaney Irvin	Malabar	FL	32950 US	1/26/22
Maria Russell	Malabar	FL	32950 US	1/26/22
sydney borboroglu	Satellite Bear	FL	32937 US	1/26/22
sophia Bastida	Satellite Bear	FL	32937 US	1/26/22
Shervin Farrell	Miami	FL	33147 US	1/26/22
Hunter Conway	Fort Myers	FL	33908 US	1/26/22
Matthew Rice	Tampa	FL	33615 US	1/26/22
Katrina Neill	Sacramento	CA	95826 US	1/26/22
Sandi Nicosia	Palm bay	FL	32909 US	1/26/22
Scott Vanderspool	Melbourne	FL	32934 US	1/26/22
MaryJoy Nolan	North Abingt	PA	18414 US	1/26/22
olivia Johnson	Melbourne B	FL	32951 US	1/26/22
Charles Moorhead	Palm Bay	FL	32907 US	1/26/22
Skylar Maiesic	Harrisburg	PA	17110 US	1/26/22
Tera Franklin	Melbourne	FL	32904 US	1/26/22
Cathrine Hollifield	Cape Coral	FL	33909 US	1/26/22

Michael Okeefe	Yorktown	FL	32935	US	1/26/22
Tina Kercheval	Gainesville	FL	32608	US	1/26/22
Beb Sebastian	Palm Bay	FL	32907	US	1/26/22
Star Thurmond	Palm Bay	FL	32909	US	1/26/22
Nicolas Scott	Tallahassee	FL	32306	US	1/26/22
Jodi Igard	Studio City	CA	91607	US	1/26/22
Paty Wright	Kissimmee	FL	34744	US	1/26/22
Bobby Boucher	Palm Bay	FL	32907	US	1/26/22
Jason White	Tallahassee	FL	32313	US	1/26/22
sugey castillo				US	1/26/22
Rachel Deal	Gainesville	FL	32612	US	1/26/22
Noah Lebron	Palm Bay	FL	32909	US	1/26/22
Eva Shneyder	Tallahassee	FL	32313	US	1/26/22
Dillon Elliott	Jacksonville	FL	32224	US	1/26/22
Glen Dunnam	Palm Bay	FL	32907	US	1/26/22
Daniel Li	Melbourne	FL	32934	US	1/26/22
Zoey Hogeland	Melbourne	FL	32904	US	1/26/22
Sayla wagner	Satellite Beach		32937	US	1/26/22
Josie Smith	Palm Bay	FL	32905	US	1/26/22
bella venanzi	Auburn	AL	36830	US	1/26/22
Kevin Platt	Melbourne	FL	32934	US	1/26/22
Paul Otero	Orlando	FL	32810	US	1/26/22
Delanie Fraser	Melbourne B	FL	32951	US	1/26/22
mia lovett	Leesburg	FL	34788	US	1/26/22
milani wetjen	Satellite Beach	FL	32937	US	1/26/22
Sequoya Backus	Cocoa Beach	FL	32931	US	1/26/22
Dj Tineo	Cocoa Beach	FL	32931	US	1/26/22
Eloisa Coronado	Waco		76707	US	1/26/22
Rafael Alvarez	Rockledge	FL	32955	US	1/26/22
Thomas Downey	Melbourne	FL	32904	US	1/26/22
Michael McMorrow	Melbourne	FL	43940	US	1/26/22
Logan May	Satellite Beach	FL	32937	US	1/26/22
hayley tumey	Orlando	FL	32814	US	1/26/22
Juergen Wittig	Orlando	FL	32825	US	1/26/22
David Phinney	Alachua	FL	32615	US	1/26/22
jessica marzano	Melbourne Beach		32951	US	1/26/22
Jalyn Moore	Indian Harbo	FL	32937	US	1/26/22
Ashley Melgar	Melbourne	FL	32935	US	1/26/22
Jen Evans	Palm Bay	FL	32905	US	1/26/22
Sharon Poirier	Indialantic	FL	32903	US	1/26/22
Gavin Rowell	Orlando	FL	32814	US	1/26/22
Brianna Staerk	melbourne	FL	32940	US	1/26/22
Byron Goforth	Gainesville	FL	32601	US	1/26/22

Lily C	St Louis	MO	63122 US	1/26/22
Ian Deseve	Merritt Island	FL	32952 US	1/26/22
Avrey Carroll	Cocoa Beach	FL	32931 US	1/26/22
Jacob Cirilo	Rockledge	FL	32955 US	1/26/22
Mitch O'Rear	Orlando	FL	32810 US	1/26/22
John Nienajadlo	Gainesville	FL	32601 US	1/26/22
Marlowe Spencer	West Melbourne	FL	32904 US	1/26/22
Henry Morel	Merritt Island	FL	32953 US	1/26/22
Marlene Paez	Miami	FL	33132 US	1/26/22
Tracy Longobardi	Nashville	TN	37209 US	1/26/22
Susan Heinzen	Palm Bay	FL	32909 US	1/26/22
Katie Petrock	Melbourne	FL	32935 US	1/26/22
Tom Gourlay	Orlando	FL	32832 US	1/26/22
Patrick Heinzen	Orlando	FL	32804 US	1/26/22
Nicholas Heinzen	Palm Bay	FL	32907 US	1/26/22
Margaret Billips	Glen Daniel		25844 US	1/26/22
Barbara Bodtke	Palm Bay	FL	32907 US	1/26/22
Lori Rattay	Palm Bay	FL	32907 US	1/26/22
Ana Morales	Satellite Beach	FL	32937 US	1/26/22
Daniela Contreras	San Antonio		33576 US	1/26/22
Chris Chancey	Palm Bay	FL	32907 US	1/26/22
Susan McTiernan-Coppola	Dunedin		34698 US	1/26/22
Stevie Brito	Orlando	FL	32826 US	1/26/22
Carys Platt	Grant-Valkenburg	FL	32909 US	1/26/22
Jeremy Goslant	Melbourne	FL	32901 US	1/26/22
Joshua Grady	Melbourne	FL	32901 US	1/26/22
Gary Roff	Gilbert	AZ	85295 US	1/26/22
Dean Moyer	Palm Bay	FL	32909 US	1/26/22
Adan Alfaro	Miami	FL	33175 US	1/26/22
sarika arora	Alpharetta	GA	30022 US	1/26/22
Mark Hoffman	Melbourne	FL	32934 US	1/26/22
Kaylee Strooband	Palm Bay	FL	32909 US	1/26/22
Riley Gibbs	Palm Bay	FL	32905 US	1/26/22
Alec David	Palm Bay	FL	32905 US	1/26/22
Christina Russell	Melbourne	FL	32940 US	1/26/22
Ellie Bonenberger	Satellite Beach	FL	32937 US	1/27/22
casey tharp	Tallahassee	FL	32310 US	1/27/22
darlene lepre	Saint Cloud	MN	56303 US	1/27/22
Melissa Smith	Melbourne	FL	32904 US	1/27/22
Frank Fieldson	Melbourne	FL	32935 US	1/27/22
Joel Casillas	Palm Bay	FL	32907 US	1/27/22
Denise Cruz	Malabon	Philippines		1/27/22
deb joyce	Titusville	FL	32780 US	1/27/22

Lynette Hindle	Palm Bay	FL	32909 US	1/27/22
Jennifer Wallace	Palm Bay	FL	32907 US	1/27/22
Reese Hanna	Palm Bay	FL	32908 US	1/27/22
John Tidwell	Molino		32577 US	1/27/22
Maryanne Nader	Naples	FL	34113 US	1/27/22
Omar Awkal	Palm Bay	FL	32905 US	1/27/22
brooke Easley	rockledge	FL	32955 US	1/27/22
Christopher Schoff			Guatemala	1/27/22
James McClure	Nashville	TN	37211 US	1/27/22
Kadee Norviel	Grove City	OH	43123 US	1/27/22
Linda Spicer	Palm Bay	FL	32909 US	1/27/22
Ricky Valentine	Athens	OH	45701 US	1/27/22
Renee Simmons	Palm Bay	FL	32909 US	1/27/22
Jessi Grillo	Tampa		33618 US	1/27/22
maddalyn alary	Palm Bay	FL	32907 US	1/27/22
Cara Knoblock	West Melbot	FL	32904 US	1/27/22
Grace Sullivan	Melbourne B	FL	32951 US	1/27/22
breanna phillips	Palm Bay	FL	32909 US	1/27/22
ben tatarko	Melbourne	FL	32935 US	1/27/22
April Zimmer	Melbourne	FL	32904 US	1/27/22
Ilse Berube	Melbourne	FL	32940 US	1/27/22
Jessica Barber	Melbourne	FL	32904 US	1/27/22
Matt Barber	Melbourne	FL	32904 US	1/27/22
Glenn Hawks	Indian Harbo	FL	32937 US	1/27/22
ava black	Santa Rosa Beach		32459 US	1/27/22
James Rutledge	Cocoa	FL	32927 US	1/27/22
Mary Gibbs	Cantonment	FL	32533 US	1/27/22
Renata LaMay	Jenison		49428 US	1/27/22
Patrick Bryk	West Melbot	FL	32904 US	1/27/22
Jonathan Estrada Gallegos	Genoa City		53128 US	1/27/22
Michael Dunlevy	Melbourne	FL	32903 US	1/27/22
Terra Good	Orlando	FL	32801 US	1/27/22
Lynn Jaime	London	FL	US	1/27/22
Nicole Martinez	Palm Harbor		34684 US	1/27/22
Dan Hunger	Palm Bay	FL	32907 US	1/27/22
Melanie Clark	Palm Bay	FL	32950 US	1/27/22
John Rose	Roanoke	VA	24015 US	1/27/22
Justin Dale	Palm Bay	FL	32907 US	1/27/22
Grace Hanks	Merritt island	FL	32953 US	1/27/22
Lori Matthews	Melbourne	FL	32904 US	1/27/22
rowan chapman	Melbourne B	FL	32951 US	1/27/22
Mia Zavala	Torrance		90503 US	1/27/22
Sophia Warden	Melbourne B	FL	32951 US	1/27/22

mia ruiz	Satellite Beach	FL	32937 US	1/27/22
Laurie Levy	Malabar	FL	32950 US	1/27/22
Gregory Massey	Palm Bay	FL	32905 US	1/27/22
Kati Forgot	Satellite Beach	FL	32937 US	1/27/22
Deanna Knowles	Orlando	FL	32801 US	1/27/22
Jessica Francois	Tampa		33604 US	1/27/22
Christine Young	Melbourne	FL	32940 US	1/27/22
Natasha Allen	Seminole		33777 US	1/27/22
Brooke Ziade	Henderson	NV	89052 US	1/27/22
Vincent Camarata	Orlando	FL	32817 US	1/27/22
Conor Chapman	Melbourne B	FL	32951 US	1/27/22
Elly Bachman	Palm Bay	FL	32905 US	1/27/22
Eleanor Reid	Malabar	FL	32950 US	1/27/22
Herbert Staniek	Vienna		1200 Austria	1/27/22
Colton Reid	Malabar	FL	32905 US	1/27/22
kristin white	Malabar	FL	32950 US	1/27/22
Joseph Ogborn	Palm Bay	FL	32905 US	1/27/22
Shannon Schrope	Palm Bay	FL	32909 US	1/27/22
James Potter	Orlando	FL	32801 US	1/27/22
Shawn Trezevant	Malabar	FL	32950 US	1/27/22
Claudio Rivera Martinez	Fort Lauderdale		33325 US	1/27/22
Jimmy Karp	Palm Bay	FL	32905 US	1/27/22
Fritz Braun	Malabar	FL	32950 US	1/27/22
Sean Fogarty	Malabar	FL	32950 US	1/27/22
Rob Meehan	Melbourne	FL	32934 US	1/27/22
Barry Culp	Palm Bay	FL	32907 US	1/27/22
Heather Savage	Palm Bay	FL	32907 US	1/27/22
Charlene Eberly	Orlando	FL	32822 US	1/27/22
Theresa McEvoy	Palm Bay	FL	32907 US	1/27/22
Christina H	Sebastian	FL	32958 US	1/27/22
Nicole Dej	Seminole	FL	33776 US	1/27/22
Rob Parrish	Melbourne	FL	32935 US	1/27/22
Deryk Conover	Palm Bay	FL	32907 US	1/27/22
Lee Smith	Melbourne B	FL	32951 US	1/27/22
Tracy Trombley	Palm Bay	FL	32909 US	1/27/22
Damion Trombley	Palm Bay	FL	32907 US	1/27/22
pablo bobbe			1013 Argentina	1/27/22
Eileen Mogensen	Orlando	FL	32814 US	1/27/22
Amaya Fernández	Brooklyn	NY	11203 US	1/27/22
Brooke Klein	Palm Bay	FL	32905 US	1/27/22
Wendy White	Palm Bay	FL	32907 US	1/27/22
Yesi Ortega	Palm Bay	FL	32909 US	1/27/22
sandra beaudry	malabar	FL	32950 US	1/27/22

Sara McDaniel	Palm bay	FL	32909 US	1/27/22
Tom Camp	Palm Bay	FL	32909 US	1/27/22
Lindsey Leet	Palm Bay	FL	32909 US	1/27/22
Jacob Nichols	Malabar	FL	32950 US	1/27/22
Amanda Stables	Palm Bay	FL	32908 US	1/27/22
Susie Kendall	Palm Bay	FL	32905 US	1/27/22
Michael Bramhall	Port Saint Lu	FL	34983 US	1/27/22
Jill Afonso	Palm Bay	FL	32907 US	1/27/22
Scotty Boucher	PalmBay	FL	32908 US	1/27/22
DONALD EASTMAN JR	Melbourne B	FL	32951 US	1/27/22
Sandra Stafford	Melbourne	FL	32904 US	1/27/22
Pati Blaha	Palm Bay	FL	32907 US	1/27/22
Tracy Wenz	Melbourne	FL	32934 US	1/27/22
David S	Palm Bay	FL	32909 US	1/27/22
Darren Hill	orlando	FL	32814 US	1/27/22
Joan Harbaugh	Melbourne	FL	32935 US	1/27/22
Dawn L	Pottsville	PA	17901 US	1/27/22
Wesley Trowell	Palm bay	FL	32907 US	1/27/22
Stephanie Jones	Palm Bay	FL	32908 US	1/27/22
Monica Bishop	Plant City	FL	33566 US	1/27/22
Carl Jenkins	Palm bay	FL	32905 US	1/27/22
Brady Gaughan	Melbourne	FL	32901 US	1/27/22
Howard Pepper	Palm Coast	FL	32137 US	1/27/22
leighton johnson	Palm Bay	FL	32907 US	1/27/22
Janet Schmidt	Coral Springs	FL	33076 US	1/27/22
Delaney Goins	Tallahassee	FL	32313 US	1/27/22
Mike Stallings	West Melbot	FL	32904 US	1/27/22
William Marriott	Indialantic	FL	32903 US	1/27/22
Donna Hanna	Malabar	FL	32950 US	1/27/22
bobbi oakley	palm bay	FL	32909 US	1/27/22
Dorothy Harrington	Cocoa	FL	32927 US	1/27/22
Betty Duvall	Grant	FL	32949 US	1/27/22
Pamela Otto-Magill	Palm Bay	FL	32907 US	1/27/22
Anthony Gaitor	Palm Bay	FL	30339 US	1/27/22
Morgan McGuire	Melbourne	FL	32904 US	1/27/22
Mary Gainey	Merritt Island	FL	32952 US	1/27/22
Kevin Keough	Melbourne	FL	32904 US	1/27/22
Chris Newlin	Palm Bay	FL	32907 US	1/27/22
Guven Yay	Palm Bay	FL	32907 US	1/27/22
Kimberly Appelmann	DÃ¼sseldorf		40231 Germany	1/27/22
Cheryl Green	Rockledge	FL	32955 US	1/27/22
Eric Miller	Melbourne	FL	32904 US	1/27/22
Elaine Bonnough	Palm Bay	FL	32905 US	1/27/22

Scott Bowman	Palm Beach (FL	33418 US	1/27/22
Sharon Bowman	Palm City FL	34990 US	1/27/22
Hosvaldo Colato	Clewiston	33440 US	1/27/22
David Rhinesmith	Palm Beach (FL	33418 US	1/27/22
Rebeca Madrid	Spruce Pine NC	28777 US	1/27/22
tanner sheehan	Melbourne FL	32904 US	1/27/22
Ana Rocha	Melbourne FL	32904 US	1/27/22
Joseph Watson	Jupiter FL	33458 US	1/27/22
Morgan Parsons	palm city FL	34990 US	1/27/22
AMY Shepard	Melbourne FL	32904 US	1/27/22
David Hoover	Melbourne FL	32904 US	1/27/22
Victoria Hickenbottom	Palm Bay FL	32908 US	1/27/22
Carlos Vargas	Palm Bay FL	32905 US	1/27/22
Joline Fried	Palm Bay FL	32909 US	1/27/22
Theresa Stefanski	Rincon GA	31326 US	1/27/22
Jodi Welner	Melbourne FL	32940 US	1/27/22
Sandy Armstrong	Malabar Fl. 3 FL	32905 US	1/27/22
Mary Mormon	Miami	33142 US	1/27/22
Amanda Behlok	Palm Bay FL	32909 US	1/27/22
RUTH LUCCHESI	Kissimmee FL	34741 US	1/27/22
magaly rivera	Baldwin Park	91744 US	1/27/22
Niomi Moreno	West Covina	91792 US	1/27/22
Sherry Zacher	Coaresgold CA	93614 US	1/27/22
Nancy Allen	Palm Bay FL	32909 US	1/27/22
Anne Jaenicke	Melbourne FL	32937 US	1/27/22
Elizabeth Trepanier	Melbourne FL	32904 US	1/27/22
Cruz Lettau	Rockledge FL	32955 US	1/27/22
Christian Cole	Belleville MI	48111 US	1/27/22
Ryan Larson	Colorado Spr CO	80916 US	1/27/22
Tom Pownall	Miami FL	33147 US	1/27/22
Kaden Barrial	Orlando FL	32810 US	1/27/22
Miranda Galaviz	Denver	80238 US	1/27/22
Leanne C	Palm Bay FL	32907 US	1/27/22
Sherrri Haakenson	Janesville WI	53546 US	1/27/22
Jackie Santullo	Alexandria	22309 US	1/27/22
Elmer Hale	Palm Bay FL	32907 US	1/27/22
Greg Schmidt	Melbourne B FL	32951 US	1/27/22
Cody Lafferty	Melbourne FL	32904 US	1/27/22
Bobbi Jo Michels	West Melbot FL	32904 US	1/27/22
Ivan Garcia	Palm Bay FL	32909 US	1/27/22
enorina moreno	Alameda	94501 US	1/27/22
Makenzie Kline	Merritt Islan FL	32953 US	1/27/22
Bogges Nicole	Orlando FL	32822 US	1/27/22

Marina Ris	zagreb		Croatia	1/27/22
Geraldine Minogue	palm bay	FL	32907 US	1/27/22
sylvie auger	Trois-Rivières		G8Y 6S9 Canada	1/27/22
Michael Rowland	Melbourne	FL	32934 US	1/27/22
Esther wolthuis	Almelo		7607NJ Netherlands	1/27/22
Felicia Bergstrom	West Melbou	FL	32904 US	1/27/22
Lisa Conner	Melbourne	FL	32934 US	1/27/22
Rachel Clary	Orlando	FL	32828 US	1/27/22
Tara Goodwin	Melbourne	FL	32904 US	1/27/22
Debi Logan	Palm Bay	FL	32905 US	1/27/22
thomas taylor	melbourne	FL	32901 US	1/27/22
Debra Fillingim	Bainbridge	GA	39819 US	1/27/22
Amy Dutra	Hialeah	FL	33014 US	1/27/22
No Name	Satellite Bea	FL	32937 US	1/27/22
Audrey Prouty	Palm Bay	FL	32909 US	1/27/22
Kayla Bernal	Independence		64055 US	1/27/22
Laurie Britt	Pico Rivera	CA	90660 US	1/27/22
Angela Urbistondo	Melbourne	FL	32905 US	1/27/22
Sarinya Thaiwee	Palm Bay	FL	32909 US	1/27/22
John W Finnegan	Melbourne	FL	32940 US	1/27/22
Suzanne Codrington	Palm Bay	FL	32907 US	1/27/22
kayla rossignol	Merritt Islan	FL	32952 US	1/27/22
nancy quintero	west melbou	FL	32904 US	1/27/22
Peter Findlay	Pompano Be	FL	33062 US	1/27/22
Evelyn Butson	Melbourne	FL	32934 US	1/27/22
Kjeld Schou	Aabenraa		Denmark	1/27/22
Polly Delange	Cleveland	OH	44130 US	1/27/22
Roxanne Lowery-King	Lakeland	FL	33810 US	1/27/22
Jessica Wright	Geneva	FL	US	1/27/22
Thomas Clarke	Merritt Islan	FL	32953 US	1/27/22
Kristi Whitton	Sebastian	FL	32976 US	1/27/22
rodney vanderjagt	Palm Bay	FL	32905 US	1/27/22
Patrick Magill	Palm Bay	FL	32907 US	1/27/22
Nesha Patton	Palm Bay	FL	32907 US	1/27/22
Tracy Strange	Malabar	FL	32950 US	1/27/22
Devin Lanier	Melbourne	FL	32935 US	1/27/22
Vicki Mcclelland	Palm bay	FL	32907 US	1/27/22
Kathy Orcutt	Orlando	FL	32818 US	1/27/22
Jerrica Smith	Palm Bay	FL	32907 US	1/28/22
Joan Klatt	Oakville		L6j4v7 Canada	1/28/22
Morgan Lott	Melbourne	FL	32901 US	1/28/22
Tracey Woodard	Palm Bay	FL	32950 US	1/28/22
Marie Thomas	Rockledge	FL	32955 US	1/28/22

Rye Myers	Melbourne	FL	32904 US	1/28/22
madison w	Fairmont		26554 US	1/28/22
Krista Gambala	Jax		32801 US	1/28/22
Britt Witter	Aubrey	TX	76227 US	1/28/22
Jerry Mulanax	Richland		39218 US	1/28/22
Kathy Cohen	Palm Bay	FL	32907 US	1/28/22
Kimberly Richardson	Richardson	TX	75080 US	1/28/22
Debbie Clark	Houston	TX	77082 US	1/28/22
Kiara Cossio	Irvine		92612 US	1/28/22
Jennifer Batten	Jenison	MI	49428 US	1/28/22
Chrissy Culp	Palm Bay	FL	32909 US	1/28/22
T B	Palm Bay	FL	32909 US	1/28/22
Frank Pasik	Palm Bay	FL	32907 US	1/28/22
Beatriz Agosto	Clermont		34714 US	1/28/22
Lori Miller	Melbourne	FL	32935 US	1/28/22
Tim Strange	Palm Bay	FL	32905 US	1/28/22
Chris Jay	Melbourne	FL	32935 US	1/28/22
Patricia Smith	Melbourne	FL	32935 US	1/28/22
Diann Hainsel	Melbourne v	FL	32904 US	1/28/22
Jazmine Trombley	Palm Bay	FL	32907 US	1/28/22
Karen Campbell	PALM BAY	FL	32905 US	1/28/22
Adrienne Meyer-Arendt	Palm Bay	FL	32909 US	1/28/22
Remi Czely	Satellite Bear	FL	32937 US	1/28/22
Tristan Dickey	Austin		77073 US	1/28/22
Rafiq Shaheen	Tampa	FL	33613 US	1/28/22
Kelly Brown	Melbourne	FL	32935 US	1/28/22
Melissa Ramirez	Immokalee		34142 US	1/28/22
Matthew Martinez	Mercedes		78570 US	1/28/22
Brittany Miller	Pompano Be	FL	33060 US	1/28/22
John-Mark Lancaster	Palm Bay	FL	32909 US	1/28/22
Kelly Guadalupe	Palm Bay	FL	32905 US	1/28/22
Bret Bergstrom	Melbourne	FL	32904 US	1/28/22
curt digma	dinalupihan	Bataan	Philippines	1/28/22
Jasmine Brown	San Antonio		78218 US	1/28/22
Meika Steinke	Ogilvie		56358 US	1/28/22
Donna Rutherford			US	1/28/22
Gloria Russell	Palm Bay	FL	32907 US	1/28/22
Audrey Adams	Ocala		34473 US	1/28/22
Christine Carter			4170 Australia	1/28/22
Maria Gallegos	San Jose		95112 US	1/28/22
Ria Amparado	Las Piñas		Philippines	1/28/22
Mike Strange	Malabar	FL	32950 US	1/28/22
Erin Clinton	Indialantic	FL	32903 US	1/28/22

Urvashi .	Bhopal	462021 India	1/28/22
Madhur Kulkarni	Pune	411001 India	1/28/22
Kathleen Borys	Toms River NJ	8757 US	1/28/22
Danna Murphy	Melbourne FL	32934 US	1/28/22
Nazworth Karen	Tallahassee	32309 US	1/28/22
Tena Kamidoi	Tamarac	33319 US	1/28/22
Nicole Grove	Altamonte Sp FL	32701 US	1/28/22
Geoff Synco	Little Rock	72211 US	1/28/22
Peter Mattiace	Melbourne FL	32935 US	1/28/22
Amber Chambers	Tampa FL	33615 US	1/28/22
Matthew Gendron	Orlando FL	32822 US	1/28/22
Everald Cummings	Melbourne FL	32904 US	1/28/22
Cathy Munroe	Palm Bay FL	32905 US	1/28/22
Alice Valliere	Melbourne FL	32901-14 US	1/28/22
C Measel	Fort Lauderdale FL	33308 US	1/28/22
Evie Pekich	Melbourne FL	32935 US	1/28/22
Erica Miller	Merritt Island FL	32952 US	1/28/22
Philip Novokhatnii	Thornhill	L4J Canada	1/28/22
Ma. Luisa Sabiniano	Lingayen	Philippines	1/28/22
Ryan Malcolm	Malabar FL	32950 US	1/28/22
Frances Mackiewicz	Beachwood NJ	8722 US	1/28/22
Rebecca Ciserano	Palm Bay FL	32907 US	1/28/22
Jennifer Gangle	Orlando FL	32808 US	1/28/22
Margaret Cooper	Satellite Beach FL	32937 US	1/28/22
Kimora Webb		US	1/28/22
Karen Greb	Sebastian FL	32958 US	1/28/22
Mark Tipaldo	Manahawkin	8050 US	1/28/22
Steve McElwee	Malabar FL	32950 US	1/28/22
Karen Fontana	Chilliwack	V2R Canada	1/28/22
Mary Dumas	Byron GA	31008 US	1/28/22
Jennifer Jones	Vero Beach FL	32960 US	1/28/22
Tabitha Chiravalle	Melbourne FL	32935 US	1/28/22
Rev. A. Regina Cates	Titusville FL	32780 US	1/28/22
Kelly Rightmire	Palm Bay FL	32907 US	1/28/22
Christina Maurer	Cocoa FL	32927 US	1/28/22
Marsha Michael	Orlando FL	32801 US	1/28/22
Mary Axelrod	Huntsville AL	35803 US	1/28/22
Quin Llamido	Hayward	94541 US	1/28/22
Devita Emory	Wilmington DE	19802 US	1/28/22
Kate Buckhurst	New York	10025 US	1/28/22
William G. Sullivan	Palm Bay FL	32907 US	1/28/22
Andre Ferro	Helmond	5707RN Netherlands	1/28/22
Cathie Keller	Sebastian FL	32958 US	1/28/22

Chris Gamble	Apopka		32703 US	1/28/22
Karine Moro			France	1/28/22
Michael Boruch	DeLand		32724 US	1/28/22
Lindsay Tucker	Sebastian	FL	32958 US	1/28/22
Shannon Roff	Palm Bay	FL	32905 US	1/28/22
Eliz Russell	Palm Bay	FL	32905 US	1/28/22
emina Cavalic	Dallas		75243 US	1/28/22
Ravern M	Philadelphia		19140 US	1/28/22
Laurel Huggler	New York	CT	6111 US	1/28/22
kat hernandez	Huntington Park		90255 US	1/28/22
Samantha Sibaja	San Diego		92154 US	1/28/22
Marilyn Rackard	Nashville		37215 US	1/28/22
victoria droptiny	Pinconning		48650 US	1/28/22
Veronica Salcedo	Eustis		32736 US	1/29/22
Gary Headley	Palm Bay	FL	32905 US	1/29/22
Michele Munroe	Melbourne	FL	32901 US	1/29/22
Michael Fechtmann	Los Angeles		90044 US	1/29/22
DeeAnn Hart	Apopka		32712 US	1/29/22
Malinda Hiller	Melbourne	FL	32904 US	1/29/22
Briana Rivas	French Camp		39745 US	1/29/22
Dianne Hall	Swansea	SC	29160 US	1/29/22
Rachelle Camacho	Cape Coral	FL	33990 US	1/29/22
Leslie Rosales	Tulsa		74114 US	1/29/22
Rachel Kaiser	Des Moines		50311 US	1/29/22
Laura Meneses	Miami		33193 US	1/29/22
Jamie Durbin	Chula Vista		91911 US	1/29/22
Nafis Delacruz	St. Petersburg		33702 US	1/29/22
Hannah Abunda	Makati		1605 Philippines	1/29/22
Christopher Gellene	Indialantic	FL	32903-34 US	1/29/22
Lois Bisnar	Hagatna		96932 Guam	1/29/22
Fabian Cardenas	Chicago		60618 US	1/29/22
Mateo Arevalo	Orlando		34756 US	1/29/22
Becca Huy	Gainesville	FL	32608 US	1/29/22
Vanessa Valles	San Ysidro		92173 US	1/29/22
Emelie Ortega	Riverview		33579 US	1/29/22
Jean Pizzulo	Palm Bay	FL	32905 US	1/29/22
Geoffrey Whitton	Palm Bay	FL	32909 US	1/29/22
Richards Sandy	Melbourne	FL	32904 US	1/29/22
Debra Fuller	Palm Bay	FL	32905 US	1/29/22
Sharon Moore	Clover	SC	29710 US	1/29/22
Miles Payne	Ooitewah		37363 US	1/29/22
William Haywood	Orlando		32818 US	1/29/22
Pauls Stradins			Latvia	1/29/22

Kenzie Rogers	Branson		63348 US	1/29/22
Lewis Kim	Pensacola		32526 US	1/29/22
Patricia Mangat	Palm Bay	FL	32905 US	1/29/22
naomy maldonado	Allentown		18103 US	1/29/22
Bobby Richards	Tampa		33619 US	1/29/22
Andrew Pappas	Malabar	FL	32950 US	1/29/22
Claire Reinhard	Baltimore		21202 US	1/29/22
Inverta Deliu			Albania	1/29/22
Luigi DePari	Houston		77346 US	1/29/22
kylie ryan	Orlando		32832 US	1/29/22
Tiffany Ho	Portland		4103 US	1/29/22
Odalys Gomez	Berwyn		60402 US	1/29/22
IAN HARDOS	West Point	UT	84015 US	1/29/22
Harshavardhan Baskaran	Frisco		75035 US	1/29/22
Tiago Sequeira			Portugal	1/29/22
Ginger Davis	Key West		33040 US	1/29/22
J F			US	1/29/22
arlette simon			57560 France	1/29/22
Deborah Babcock	Palm Bay	FL	32905 US	1/29/22
Eden Woods	Birmingham		35243 US	1/29/22
Gokul K r	Tiruppur		641602 India	1/29/22
Lillian Vega	Palm Bay	FL	32909 US	1/29/22
Ethan Leaf	Sterling Heights		48312 US	1/29/22
Melanie Cordova	Clovis		88101 US	1/29/22
Michael Waddell	Nashville		85215 US	1/29/22
Leticia Castaneda	Atlanta		30328 US	1/29/22
brooke snyder	Indianapolis		46203 US	1/29/22
Adam Kaluba	Burleson		76028 US	1/29/22
Matthew McAteer	Palm Bay	FL	32905 US	1/29/22
Mary Joy Galvez	Pacoima		91331 US	1/29/22
john johnny	Adelaide		5000 Australia	1/29/22
Ginger Twigg	Palm Bay	FL	32905 US	1/29/22
Lindsey Gagnon	Exeter		6883 US	1/29/22
Lacey Levitt	San Diego	CA	92120 US	1/29/22
Catharine McDaniel			US	1/29/22
Jess Jacquart	Elk Grove Village		60007 US	1/29/22
moises sanchez	St. Cloud		34772 US	1/29/22
Michelle Battaglia	St. Petersburg		33702 US	1/29/22
Christopher Williams	Sanford		27330 US	1/29/22
Diane Mason	Merritt Island	FL	32953 US	1/29/22
Raquel Rojas	Jacksonville		33713 US	1/29/22
Casey Dorsch	Orlando	FL	32824 US	1/29/22
Megan Kicker	Melbourne	FL	32935 US	1/29/22

Valerie Leonard	monroe	8831 US	1/29/22
Armina Grewell	New Smyrna FL	32168 US	1/30/22
Jeremy Wenninghoff	Palm Harbor FL	34683 US	1/30/22
Wendy Bobbitt	Melbourne B FL	32951 US	1/30/22
Gordon Abele	Melbourne B FL	32951 US	1/30/22
Loni Serven	Melbourne B FL	32951 US	1/30/22
Kylene Lamb	Palm Bay FL	32909 US	1/30/22
Christine Shea	Grant FL	32949 US	1/30/22
Brittany Stanley	North Little Rock	72117 US	1/30/22
Zakeldra Oliver	Crosscity	32628 US	1/30/22
Mary-Ann Levy	Palm Bay FL	32907 US	1/30/22
trisha harris	Palm Bay FL	32905 US	1/30/22
Rachel Moree	Vero Beach FL	32967 US	1/30/22
Amber Hulse	Lake Jackson	77566 US	1/30/22
Kim Reed	Palm Bay FL	32905 US	1/30/22
Maryellen McCullagh	Palm Bay FL	32909 US	1/30/22
Lachlan Wallis		New Zealand	1/30/22
Samantha Garcia	Chicago	60629 US	1/30/22
Megan Webb	Clearwater	US	1/30/22
carl kevin medalle	City of Muntinglupa	Philippines	1/30/22
Dax Miller	Chicago	60659 US	1/30/22
Jim Chrulski	Ft. Pierce FL	34949 US	1/30/22
Anna Huron	Weston	33327 US	1/30/22
Sarah Pen	Miami	33142 US	1/30/22
Juliana Fertil	Homestead	33033 US	1/30/22
Daniela Bernal	Tallahassee	32309 US	1/30/22
Zoraida Vazquez	Houston	77022 US	1/30/22
Demka101 .		Albania	1/30/22
Matthew Higgins	Encinitas	92024 US	1/30/22
jannie ros		2514 KH Netherlands	1/30/22
Rei Marata		Botswana	1/30/22
Henry Dabbs	Grevenbroich	41515 Germany	1/30/22
Lenore Black	Markham	L3R Canada	1/30/22
Anna Laidler	East Stroudsburg	18301 US	1/30/22
Amelia Vanderlaan	London	N6J Canada	1/30/22
Benjamin Parlasek		Austria	1/30/22
Bianca Frattini	London	SE85EZ UK	1/30/22
Miroslav Bandas		Czech Republic	1/30/22
Haylee Stottlemire	Lathrop	64465 US	1/30/22
Caitlin Mulligan	Harwich	CO16 UK	1/30/22
Erica Marsh	Amesbury	1913 US	1/30/22
Mariam Hammad	Amman	Jordan	1/30/22
Ruth Garcia	Miami	33180 US	1/30/22

Amanda Eggleston	Saint Johnsville	13452 US	1/30/22
Zee B		Ireland	1/30/22
Briar Baker	Manchester	40962 US	1/30/22
Marios Karalekas		Greece	1/30/22
James Patterson	Palm Bay FL	32907 US	1/30/22
Emily Rivera	Catasauqua	18032 US	1/30/22
Freya Harris	Atlanta GA	30342 US	1/30/22
Lisa Riker	Palm Bay FL	32909 US	1/30/22
Szandra Pazdera	Antwerp	Belgium	1/30/22
Lilliana Curtis	Rochester	14606 US	1/30/22
Lindsay DesRoche	Hamilton	L8J 1K3 Canada	1/30/22
Earl Bradley	Satellite Beach FL	32937 US	1/30/22
Lina H	Indiana	47129 US	1/30/22
Bb levin	Murrysville	15668 US	1/30/22
Stephanie B	Cranston	2910 US	1/30/22
Mollie Wilson	Pensacola	32507 US	1/30/22
Kristin Factor	Las Vegas	89145 US	1/30/22
Nandi Grant	Euclid	44123 US	1/30/22
Kara Edwards	Woodway	76712 US	1/30/22
Marina NW	Toronto	M9N 1J8 Canada	1/30/22
Austin Sigman	Palm Bay FL	32909 US	1/30/22
Emma Wahwasuck	Gardner	66030 US	1/30/22
Abhishek Desai	Austin	78759 US	1/30/22
Jenette Davidson	Boynton Beach	33435 US	1/30/22
Avery Peltier	Cypress	77433 US	1/30/22
Bojan Maneski		US	1/30/22
Emily Schafer	DeWitt	48820 US	1/30/22
Kim Mellace	Palm Bay FL	32908 US	1/30/22
McKenna Morrissey	Altamonte Springs	32714 US	1/30/22
Anmarie Cowden	Orlando FL	32801 US	1/30/22
Erika Ortega	Brampton	L6t3a7 Canada	1/30/22
Colton Strange	Malabar FL	32950 US	1/30/22
Aries Caballero	Las Cruces	88011 US	1/30/22
Cvetana Zafirovska		Macedonia (FY)	1/30/22
Maria Mammona		Greece	1/30/22
Madelyn Fillers	Adams	37010 US	1/30/22
Robin Rohbock	Colorado City	86021 US	1/30/22
Victoria White	Mesquite	75150 US	1/30/22
Simela Lleshi		Albania	1/30/22
Sara Levinson	Marion	52302 US	1/30/22
Lovely Caldei	Dumaguete City	6267 Philippines	1/30/22
maggie druett	Blenheim	New Zealand	1/30/22
Shana Pottinger	Shetland Islands	ZE1 UK	1/30/22

Jas Wilkinson			New Zealand	1/30/22
sophie felici	Salt Lake City	84116	US	1/30/22
sue sch.	Florida FL	89077	US	1/30/22
Cameron Cowper z	Johannesburg		South Africa	1/30/22
Damien Gouws	Pretoria		South Africa	1/30/22
paul martinez	Kissimmee	34741	US	1/30/22
Katrina McKay	Palm Bay FL	32907	US	1/30/22
Heather Cavaliere	Palm Bay FL	32905	US	1/30/22
Patricia Cannon	Satellite Bear FL	32937	US	1/30/22
Quiella Mesina	Malolos		Philippines	1/30/22
Taylor Bennett	Phoenix	63489	US	1/31/22
Timothy Robson	Melbourne FL	32904	US	1/31/22
Sophie Davie	Auckland		New Zealand	1/31/22
Linnea White	Penticton	V2A	Canada	1/31/22
Christie Waclawski	Melbourne B FL	32951	US	1/31/22
Ali Stanley	New Berlin	53151	US	1/31/22
Raelyn Gibson	Decatur	30032	US	1/31/22
Jennifer Mendoza	Orlando	32822	US	1/31/22
Anna catalan	Fort myers	33916	US	1/31/22
Marijane Diaz	San Jose	95135	US	1/31/22
Morgan Weber	Richmond Hill	31324	US	1/31/22
Lily Gibb	Oviedo	32765	US	1/31/22
Emmanuel Reyes	Quezon City		Philippines	1/31/22
Tiffany Coulter	Palm Harbor FL	34683	US	1/31/22
Hope Warner	Paris	40361	US	1/31/22
Robert Le	Chapel Hill	27514	US	1/31/22
Evie Lee			South Korea	1/31/22
Edwin Flores	Bradenton	34205	US	1/31/22
billy braxton	Cottondale	32431	US	1/31/22
Candace Neal	Rockledge FL	32955	US	1/31/22
Raleigh koritz	Saint Paul MN	55114	US	1/31/22
Justin Lightner	Portland OR	97201	US	1/31/22
Kerryann Banks	Manchester	M23	UK	1/31/22
Luksa Draštata	Zagreb		Croatia	1/31/22
Chantei Cortez			Qatar	1/31/22
Lyllian Pinson	Saint George	66535	US	1/31/22
Luris Althea N. Arcedera	San Pablo City		Philippines	1/31/22
Celina Walker	Saint Johns	32259	US	1/31/22
Deimilė Pivoriūnaitė			Lithuania	1/31/22
Blank Blank	Kaufman	75142	US	1/31/22
Mathew Gunter	Paim Bay FL	32905	US	1/31/22
Nate Robinson	Chicago	60638	US	1/31/22
ally burman	Raleigh	27610	US	1/31/22

Yuuki Horton	Ogden		84414 US	1/31/22
Sara Graziosa	Canaan	CT	6018 US	1/31/22
Darren Solomon	Baltimore	MD	21227 US	1/31/22
Shannon Busch	Estero		33928 US	1/31/22
Kirk RRhoads	Mountain Hc	AR	72653 US	1/31/22
Mark Davies	Green Hamr	ENG	YO26 UK	1/31/22
Amber Clawson	Lewis		67552 US	1/31/22
Jaime Lopez-Sabando	Malabar	FL	32950 US	1/31/22
Ezekiel Huxley	Shah Alam		Malaysia	1/31/22
Natalia Lozano	Yuma		85364 US	1/31/22
Sven Buyse	Roeselare		8800 Belgium	1/31/22
Elizabeth Story	Dernancourt		5075 Australia	1/31/22
Ethon Thomas	Miami		33142 US	1/31/22
Eric perdue	Orlando		32822 US	1/31/22
Ur Mom	Orlando		32801 US	1/31/22
Anna Saulter	Crawfordville		32327 US	1/31/22
Jamie Parkin	Crestview	FL	32536 US	1/31/22
Amy Aldridge	Palm Bay	FL	32907 US	1/31/22
Kamali Taylor	Palm Bay	FL	32905 US	1/31/22
Elsa Correia	Pinhal Novo		2955-08 Portugal	1/31/22
Alex Wilson	Englewood		80150 US	1/31/22
Thomas Lopez-Hayes	Palm Bay	FL	32905 US	1/31/22
Terrie Williams	Vidor	TX	77662 US	1/31/22
Lizbeth Alvarez	Marysville		95901 US	1/31/22
Liberty May	Gauley Bridge		25085 US	1/31/22
Eugene Benefield	Jonesboro	IL	62952 US	1/31/22
Dave White	Palm Bay	FL	32907 US	1/31/22
Joey White	Palm Bay	FL	32907 US	1/31/22
Michael Aldridge	Palm Bay	FL	32910 US	1/31/22
Hoyt Hicks	Palm Bay	FL	32905 US	1/31/22
Jason White	Charlotte	NC	28226 US	1/31/22
Aaron Peirce	Salt Lake City	UT	84115 US	1/31/22
Theresa Hoszowski	Indialantic	FL	32903 US	1/31/22
Joshua Bleich	Norfolk	NE	68701 US	1/31/22
Rob Van Stronder	Tampa	FL	33615 US	1/31/22
Will Dixon	Forney	TX	75126 US	1/31/22
Chris Lopez	Tampa	FL	33625 US	1/31/22
Carmen Gil	Oviedo		33700 Spain	1/31/22
Alain Neven	Seraing		Belgium	1/31/22
Isaiah Bennett	Gardena		90247 US	1/31/22
Nicole powell	Lancaster		75134 US	1/31/22
Dave Chambers	Valrico	FL	33594 US	1/31/22
Mirko Starchek	Palm Bay	FL	32907 US	1/31/22

Timothy Rester	Pensacola	32526 US	1/31/22
Bianca Hankins	Mackenzie	Canada	1/31/22
Chad Abbott	Orlando FL	32806 US	1/31/22
Jacob Neidlinger	Seattle WA	98103 US	1/31/22
Chris Cross	Essex Junction	5452 US	1/31/22
cathy wade	Pensacola	32514 US	1/31/22
Dusty Phillips	Boston MA	2127 US	1/31/22
Mary Patterson	Pensacola	32526 US	1/31/22
Rebecca Mills	Milton	32571 US	1/31/22
Ashley Wang	Bronx	10458 US	1/31/22
Madison Garza	Dickinson	77539 US	1/31/22
Lily Limpert	St Louis	63130 US	1/31/22
Holden Smith	Altamonte Springs	32714 US	1/31/22
Lux'iolani Batacan	Olympia	98516 US	1/31/22
Hope Riley	Binghamton	13902 US	1/31/22
Chloe Turner	Jacksonville	32218 US	1/31/22
yosi gil	Orlando	34947 US	1/31/22
Jonah Henderson	Orange Park	32065 US	1/31/22
Gabriela Garcia	Miami	33180 US	2/1/22
I'm not using my real Name	New York	10036 US	2/1/22
Camila are you OkBud	Hollywood	33025 US	2/1/22
Kandy Maite	Apizaco	90300 Mexico	2/1/22
LJ Roo	Malabar FL	32950 US	2/1/22
Leyla Dagly-Bass	London FL	55105 US	2/1/22
Ava Campbell	Alexandria	22308 US	2/1/22
Abigail Nastasi	Canfield	44406 US	2/1/22
Jeremy Jordan	Fort Lauderdale	33311 US	2/1/22
Yliana La Cross	Chula Vista	91913 US	2/1/22
Joan Wood	Port Orange FL	32127 US	2/1/22
Tyler Edstrom	Saint Petersburg	33710 US	2/1/22
Kevin Swanson	Seattle WA	98166 US	2/1/22
Kerby Bryan B. Garcia	San Pablo City	Philippines	2/1/22
Ted Heman	Palm Coast FL	32164 US	2/1/22
Jasper Ataylor	Cateel Davao Oriental	Philippines	2/1/22
Mike Kerr	Jamaica Plain	2130 US	2/1/22
Kaitlin Johnson	Fort Lauderdale	33351 US	2/1/22
Susan Novotny	Naples	34110 US	2/1/22
Cheryl Antonio	Manila	Philippines	2/1/22
Britton Davis	Marietta GA	30062 US	2/1/22
Aienne Pinoy	Bayombong	Philippines	2/1/22
Khin Su Han	London	Myanmar	2/1/22
Maddy Abegglen	indiatlantic	32937 US	2/1/22
Gwyn Leiann Putungan	Laguna	Philippines	2/1/22

Nia Juliano	Quezon City		Philippines	2/1/22
Lanie Moraga	Brooksville	34602	US	2/1/22
Florenting Comendo Jr	Lahug		Philippines	2/1/22
Sylvie Lemaire	Féternes	74500	US	2/1/22
Zin Wai Yan Tun			Myanmar	2/1/22
Vasilos Cako	Clermont-ferrand	63000	France	2/1/22
Abdullaev Abushervon	Seoul		South Korea	2/1/22
Florence Treboutte			France	2/1/22
Dejan Ilievski	Skopje		Macedonia (FY	2/1/22
Keira Strecker	Singapore		Singapore	2/1/22
Edrienne Joy Dela Cruz	Angeles City		Philippines	2/1/22
Michael Cairo	PEMBROKE PINES	33025	US	2/1/22
Devin Giles	Pomona	91766	US	2/1/22
Holden Yuskewich	Milford	45150	US	2/1/22
Raphaël PONCE	TOULOUSE	31140	France	2/1/22
James Westhafer	Palm Bay FL	32905	US	2/1/22
Chantel davies	Middlesbrough	ts3 7ej	UK	2/1/22
April Licata	Whitewater	67154	US	2/1/22
Cousin Hodge	Miami	33102	US	2/1/22
M. Browning	Chandler	85224	US	2/1/22
Adele W	Kragerø		Norway	2/1/22
Isabella Santacruz	Fresno	93722	US	2/1/22
Maira Esquivel	Conroe	77303	US	2/1/22
Nick Marshall	Jupiter	33478	US	2/1/22
Sam Viskocil	North Ridgeville	44039	US	2/1/22
Lisa Presley	Ashburn	20149	US	2/1/22
Vanja Premcheska	Terobo		Macedonia (FY	2/1/22
Walther Solinger	Philadelphia	19104	US	2/1/22
Victor Cepeda	Palm Bay FL	32909	US	2/1/22
Stevv Caccio	Boston	2266	US	2/1/22
Jansen Limer	Moyock	27958	US	2/1/22
Ethan DeBoer	Westland	48185	US	2/1/22
Samantha Sierra	Miami	33186	US	2/1/22
Marissa Av	Wilmington	19808	US	2/2/22
gabriel joannou	Fort Lauderdale	33305	US	2/2/22
Bondan Septianto	Bandung	40292	Indonesia	2/2/22
August Miller	Winter Park	32789	US	2/2/22
Andi Agus Priyanto		63490	Indonesia	2/2/22
Lylah Schaefer	Atlanta	30318	US	2/2/22
Mary Pelaez	Port Saint Lucie	34983	US	2/2/22
Elizabeth Betancourt	Zephyrhills	33541	US	2/2/22
Abi Trinidad	San Pablo City		Philippines	2/2/22
Jason Wilkerson	The Bronx	10475	US	2/2/22

Jelica Roland	Zagreb	10360	Croatia	2/2/22
Jenrette Coffy			Netherlands	2/2/22
Jan Arnosa	Lapu-lapu City		Philippines	2/2/22
Michelle Wofford	Fairburn	30213	US	2/2/22
Princess Elijah Nicole Danay	Quezon City	1105	Philippines	2/2/22
Kai Ko	Isulan		Philippines	2/2/22
Jason Lemmings	Auckland	1010	New Zealand	2/2/22
Nick Dillinger	Merritt Island	32952	US	2/2/22
Andrei Castillo	San Pablo City		Philippines	2/2/22
Nancy Rivers	Jackson Springs	27281	US	2/2/22
ileana rendon	Pensacola	32514	US	2/2/22
wanda fontanez	West palm Beach	33417	US	2/2/22
santana askins	Greensboro	27409	US	2/2/22
Alette Geffrard	Miami	33162	US	2/2/22
LeeAnn Mastrocola	Jacksonville	32256	US	2/2/22
Melanie Porras	Tavernier	33070	US	2/2/22
Dunia Marin	Miami	33168	US	2/2/22
Mia Peace	Sarasota	34237	US	2/2/22
Medini Persaud	Brampton	L7A	Canada	2/2/22
Denise Hunter	Boynton Beach	33435	US	2/2/22
Valynda Rankin	Hudson	34669	US	2/2/22
Marvieni Sommer	Willemstad		Curaçao	2/2/22
Rene Hoetjes	Willemstad		Curaçao	2/2/22
John Sluder	Melbourne FL	32935	US	2/2/22
Ari Gonzalez	Santa Ana	92704	US	2/2/22
Tyla Givens	Peachtree Corners	30092	US	2/2/22
Latanza Simmons	Gretna	70056	US	2/2/22
Michael Bartholomew	Portland	97223	US	2/2/22
Jordan Welton	Madison	44057	US	2/2/22
Danny van Huizen	Geldrop	5665PT	Netherlands	2/2/22
Linda Riley	Acton	1720	US	2/2/22
RON RINCONES	GRANT VALK FL	32950	US	2/2/22
Joe Mama	Marrero	70072	US	2/2/22
Jaxen Gay	Brookville	47012	US	2/2/22
Leo B	Los Angeles	90089	US	2/3/22
Lily Brecheisen	Baldwin City	66006	US	2/3/22
Nissie Cadette	Pompano Beach	33065	US	2/3/22
Breuer Aimee	Melbourne FL	32935	US	2/3/22
Jimmy Milfort	Miami	33137	US	2/3/22
Tiffany Zahi	Kissimmee	34748	US	2/3/22
Zach Shelley	Melbourne FL	32901	US	2/3/22
Mikayla Janitor	Orlando	32810	US	2/3/22
Addison Farber	Centerville	84014	US	2/3/22

Ava Pallante	Akron	44321 US	2/3/22
Claire .	Kernersville	27284 US	2/3/22
Malia Nortelus	Miami	33142 US	2/3/22
Denis Koksai-Rivet	Chicago IL	60640 US	2/3/22
Cody Chester	Palm Bay FL	32905 US	2/3/22
Ashley Vinson	Fort Walton Beach	32547 US	2/3/22
Andrew Morris	Palm Coast	32137 US	2/3/22
Mojo Maxwell		US	2/3/22
ERic Kreofsky	Boring	97009 US	2/3/22
Chuuya dazai	Kuwait	Kuwait	2/3/22
Evelyn Yao	Cerritos	90703 US	2/3/22
Christopher Chen	Cerritos	90703 US	2/3/22
Mohammad Akram		Qatar	2/3/22
Añana Khian Miguel		Philippines	2/3/22
Eat Corbin	Alpharetta	30004 US	2/3/22
Heujin Blas	Marikina	1805 Philippines	2/3/22
Cassandra E		Finland	2/3/22
Omar Zambrana	West Melboi FL	32904 US	2/3/22
Erick Caraballo	Melbourne FL	32935 US	2/3/22
Mike Dombrowski	Ormond Beach	32174 US	2/3/22
Christian Gellert	Tampa	33602 US	2/3/22
Gom Tom		US	2/3/22
Israel Guerrero	Margate	33063 US	2/3/22
Phil Smith	Melbourne FL	32935 US	2/3/22
David Sickles	Willoughby	44094 US	2/3/22
Ohad Lederer		Israel	2/3/22
Trisha Paytas	Atlanta	30311 US	2/3/22
Allen Saad	Melbourne FL	32935 US	2/3/22
Splendoure Cadiz	Navotas	Philippines	2/3/22
Alanis Garcia	North Providence	2904 US	2/3/22
Robert Fowler	Palm bay FL	32907 US	2/3/22
Dave Hershey	Panama City	32404 US	2/3/22
Kristine Torres	Lakewood	90715 US	2/3/22
Katherine Douville	Saint Petersburg	33711 US	2/3/22
Maribel Marulanda	New York	11106 US	2/3/22
ur mom	Tampa	33634 US	2/4/22
Cayden McNair	Braxton Ms	39114 US	2/4/22
Marian Gomez	Cerritos	90703 US	2/4/22
Thai Gonzalez	La Quinta	92253 US	2/4/22
Tiffany Park	San Diego	92123 US	2/4/22
Lily Timmel	St. Petersburg	33713 US	2/4/22
Robert Evans	Erie PA	16507 US	2/4/22
Edward Fluman	Palm Bay FL	32905 US	2/4/22

Angela White	Palm Bay FL	32909 US	2/4/22
Barbara Fluman	Palm Bay FL	32905 US	2/4/22
Umut Sevinc	Palm Bay FL	32905 US	2/4/22
Jared Buchanon	Melbourne FL	32935 US	2/5/22
Lindsay McGinnis	North Adams	1247 US	2/5/22
Jeff Wieand	Melbourne B FL	32951 US	2/5/22
Jan Capodiferro	Palm Bay FL	32909 US	2/5/22
Hunter Dupuis	Lafayette	70501 US	2/5/22
Raven Clark	Cordele	31015 US	2/5/22
Robert Good	Orlando FL	32804 US	2/6/22
Ramon Cancel	West Melbot FL	32904 US	2/6/22
Jaisean Murphy	West Palm Beach	33401 US	2/6/22
Danielle Culp	Palm Bay FL	32909 US	2/6/22
Taylor Nickson	Williamsport PA	17701 US	2/6/22
Stacie Halperin	Orlando	32839 US	2/6/22
Joe Conner	Palm Bay FL	32909 US	2/6/22
Skyler Neilson	Trenton	32693 US	2/6/22
James Yu	Fullerton	92831 US	2/7/22
Marsha Tinker	Palm Bay FL	32905 US	2/7/22
Rich Mason	Palm Bay FL	32909 US	2/7/22
Sarah Walling	Castleton On NY	12033 US	2/7/22
Lance Glaab	Vero Beach FL	32963 US	2/7/22
Bert Ross	Indialantic FL	32903 US	2/7/22
Matthew Heacock	Melbourne FL	32940 US	2/7/22
Richard Caliar	Malabar FL	32950 US	2/7/22
Garrett Galland	Thornton CO	80241 US	2/7/22
Noah Engle	palm bay	32907 Bahamas	2/7/22
Art FUOCO	Palm Bay FL	32905 US	2/7/22
Zed Hawk	Brooklyn NY	US	2/7/22
Sabel Roché		US	2/7/22
Ron Reeves	Melbourne FL	32904 US	2/7/22
jonathan rodriguez	Pensacola	32505 US	2/7/22
Elle Masters	Daytona Beach	32119 US	2/8/22
Justin Hitchens	Palm Bay FL	32908 US	2/8/22
Kimber E	Melbourne FL	32904 US	2/8/22

SOUTH BEACHES WASTEWATER TREATMENT FACILITY



NON-BENEFICIAL SURFACE WATER DISCHARGE ELIMINATION PLAN

OCTOBER 2021



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Cover Sheet for Plan Submittal

Facility Name BCUD - South Beaches WWTF

Facility ID FL0040622

Contact Person Name, Title, Phone, Email Edward Fontanin, P.E., Utility Services Director

Brevard County Utility Services Department, (321) 633-2093; edward.fontanin@brevardfl.gov

If the requirement for a plan does not apply to the facility, please mark which exemption applies (attach documentation demonstrating that the facility meets the exemption) **Not Applicable**

Check One	Exemption
	Facility is in a fiscally constrained county as described in section 218.67(1), F.S.
	Facility is in a municipality that is entirely within a rural area of opportunity as designated pursuant to section 288.0656, F.S.
	Facility is in a municipality that has less than \$10 million in total revenue, as determined by the municipality's most recent annual financial report submitted to the Department of Financial Services in accordance with section 218.32, F.S.
	Facility is operated by an operator of a mobile home park as defined in section 723.003, F.S., and has a permitted capacity of less than 300,000 gallons per day.

Indicate which plan(s) category under which the facility will comply

Check One	Plan Category
	The plan eliminates the discharge.
	The plan meets section 403.086(10), F.S.
	The plan does not eliminate the discharge – The discharge is associated with an indirect potable reuse project;
X*	The plan does not eliminate the discharge – The discharge is a wet weather discharge that occurs in accordance with an applicable department permit;
	The plan does not eliminate the discharge – The discharge is into a stormwater management system and is subsequently withdrawn by a user for irrigation purposes;
	The plan does not eliminate the discharge – The utility operates the domestic wastewater treatment facilities with reuse systems that reuse a minimum of 90 percent of a facility's annual average flow, as determined by the department using monitoring data for the prior 5 consecutive years, for reuse purposes authorized by the department; or
	The plan does not eliminate the discharge – The discharge provides direct ecological or public water supply benefits, such as rehydrating wetlands or implementing the requirements of minimum flows and minimum water levels or recovery or prevention strategies for a waterbody.

* The plan does not eliminate the discharge. The discharge is an existing 0.11 MGD AADF surface water discharge to the Indian River Lagoon during Mechanical Integrity Testing (MIT) of the single Deep Injection Well at the South Beaches WWTF. No category for this in the table.

Please enter the information on discharges eliminated Not Applicable

Discharge Type (effluent, reclaimed water, or reuse water)	Average Gallons Per Day	Date the discharge will be eliminated

Please enter information on any continuing discharges to surface waters after January 1, 2032.

Discharge Allowance Category	Discharge Type (effluent, reclaimed water, or reuse water)	Average Gallons Per Day	Treatment Level Provided (e.g. BOD limit = 5mg/L, TSS = 5 mg/L, TN = 3mg/L, TP = 1mg/L and high-level disinfection)
Meets section 403.086(10), F.S.			
Associated with an indirect potable reuse project.			
Wet weather discharge in accordance with an applicable department permit.	Reclaimed Water during MIT testing of DIW	Up to 0.11 MGD AADF per Permit	AWT and high-level disinfection are provided at the SBWWTF
Discharge into a stormwater management system that is subsequently withdrawn by a user for irrigation purposes.			
Reuse system reuses a minimum of 90 percent of a facility's annual average flow.			
Discharge provides direct ecological or public water supply benefits.			

* The plan does not eliminate the discharge. The discharge is an existing 0.11 MGD AADF surface water discharge to the Indian River Lagoon during Mechanical Integrity Testing (MIT) of the single Deep Injection Well at the South Beaches WWTF. No category for this in the table.

Certification Statement

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Authorized Signatory Representative
Name *and Official Title* (type or
print) [Rule 62-620.305, F.A.C.]

**Edward Fontanin, P.E., Utility Services Director
Brevard County Utility Services Department**

Authorized Signatory Representative Signature

Date Signed

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SOUTH BEACHES

WASTEWATER TREATMENT FACILITY

NON-BENEFICIAL SURFACE WATER ELIMINATION PLAN



OCTOBER 2021

CPH, Inc.
500 West Fulton Street
Sanford, Florida 32771
CPH Project No. B19507

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TABLE OF CONTENTS

1. Executive Summary	1-1
1.1 Introduction	1-1
1.2 Regulatory Framework for Non-Beneficial Surface Water Discharge Elimination ..	1-2
1.3 Existing Facility Conditions	1-2
1.4 Non-Beneficial Surface Water Discharge Elimination Plan	1-4
1.5 Potential Treatment Facility Improvements	1-6
2. Regulatory Framework for Non-Beneficial Surface Water Discharge Elimination ..	2-1
2.1 Introduction	2-1
2.2 Non-Beneficial Surface Water Discharge Elimination Law/Requirements	2-1
2.3 South Beaches WWTF - Current Disposal Practices	2-4
3. Existing Facility Conditions	3-1
3.1 Wastewater Management System Service Area	3-1
3.2 South Beaches Wastewater Treatment Facility (SBWWTF)	3-1
3.2.1 Primary Treatment System	3-9
3.2.2 Secondary Treatment System - Carrousel Oxidation Ditch System	3-10
3.2.3 Secondary Treatment System - Conventional Activated Sludge System ..	3-10
3.2.4 Tertiary Treatment System	3-11
3.2.5 Disinfection System	3-12
3.2.6 Transfer Pump Station	3-13
3.2.7 Reclaimed Water/Effluent Disposal System	3-13
3.2.8 Sludge Management System	3-16
3.3 Permitted Capacity	3-16
3.4 Historical Wastewater Flows	3-19
3.5 Facility Effluent Flows	3-27
3.6 Facility Effluent Quality	3-37
3.6.1 CBOD ₅ Treatment (Removal) Efficiency	3-37
3.6.2 TSS Treatment (Removal) Efficiency	3-40
3.6.3 TN Treatment (Removal) Efficiency	3-41
3.6.4 TP Treatment (Removal) Efficiency	3-41

TABLE OF CONTENTS

4. Non-Beneficial Surface Water Discharge Elimination Plan.....	4-1
4.1 The South Beaches WWTF Discharge Elimination Plan.....	4-1
4.2 Capacity and Efficiency of the South Beaches WWTF.....	4-4
4.3 Ability of the South Beaches WWTF to Meet “Current” and “Future” Nutrient Limits.....	454

Appendices

- A South Beaches WWTF: “Existing” FDEP Operations Permit

TABLE OF CONTENTS

List of Tables

Table 3.2-1	South Beaches WWTF Design and Current Wastewater Flows	3-8
Table 3.2-2	South Beaches WWTF - Influent and Effluent Design Criteria	3-8
Table 3.4-1	South Beaches WWTF - Historical Wastewater Flows	3-20
Table 3.5-1	South Beaches WWTF - Effluent Disposal (2016 - 2020)	3-28
Table 3.6-1	South Beaches WWTF - Reclaimed Water Quality (2016 - 2020)	3-38

List of Figures

Figure 3.1-1	South Beaches Wastewater Management System Service Area	3-2
Figure 3.2-1	South Beaches WWTF - Aerial View	3-4
Figure 3.2-2	South Beaches WWTF: Schematic Flow Diagram.	3-5
Figure 3.2-3	South Beaches WWTF: Facility Site Plan	3-6
Figure 3.2-4	South Beaches Reclaimed Water Service Area	3-7
Figure 3.3-1	South Beaches Reclaimed Water Service Area - Major Users	3-18
Figure 3.4-1	South Beaches WWTF: Historical Wastewater Flows (ADF)	3-23
Figure 3.4-2	South Beaches WWTF: Historical Wastewater Flows (3-Month ADF)	3-24
Figure 3.4-3	South Beaches WWTF: Historical Wastewater Flows (AADF)	3-25
Figure 3.4-4	South Beaches WWTF: Annual Variations in Flow	3-26
Figure 3.5-1	South Beaches WWTF: Deep Injection Well (U-001) - Historical Effluent Monthly ADF.	3-31
Figure 3.5-2	South Beaches WWTF: Deep Injection Well (U-001) - Historical Effluent AADF	3-32
Figure 3.5-3	South Beaches WWTF: Reclaimed Water System (R-001) - Historical Effluent Monthly ADF.	3-33
Figure 3.5-4	South Beaches WWTF: Reclaimed Water System (R-001) - Historical Effluent AADF	3-34
Figure 3.5-5	South Beaches WWTF: Surface Water Discharge (D-001) To The Indian River Lagoon (IRL) - Historical Effluent Monthly ADF	3-35
Figure 3.5-6	South Beaches WWTF: Surface Water Discharge System (D-001) To The Indian River Lagoon (IRL) - Historical Effluent AADF	3-36



TABLE OF CONTENTS

List of Abbreviations

AADF	Annual Average Daily Flow
AC	Acres
ASP	Activated Sludge Process
AWET	Acute Whole Effluent Toxicity
ADF	Average Daily Flow
BCUD	Brevard County Utilities Department
BFP	Belt Filter Press
BMP	Best Management Practices
BNR	Biological Nutrient Removal
BOD	Biochemical Oxygen Demand
CAR	Capacity Analysis Report
CBOD ₅	Carbonaceous Biochemical Oxygen Demand - 5-Day
CCC	Chlorine Contact Chamber
CFR	Code of Federal Regulations
CIP	Capital Improvements Plan
COD	Chemical Oxygen Demand
DIW	Deep Injection Well
DMR	Discharge Monitoring Report
DO	Dissolved Oxygen
EPA	Environmental Protection Agency
FAC	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
F/M	Food-to-Microorganism Ratio
FSS	Fixed Suspended Solids
GPCD	Gallons per Capita-Day
HDT	Hydraulic Detention Time
HP	Horsepower
hr	Hour
HRT	Hydraulic Retention Time
IR	Internal Recycle
lb	Pounds
lb/day	Pounds per day
MCRT	Mean Cell Residence Time
MDF	Maximum Daily Flow
mg	Milligram
mg/L	Milligrams per Liter
MG	Million Gallons
MGD	Million Gallons per Day

TABLE OF CONTENTS

List of Abbreviations

Min	Minutes
MLSS	Mixed Liquor Suspended Solids
MLVSS	Mixed Liquor Volatile Suspended Solids
MOP	Monitoring and Operating Protocol
NaOCl	Sodium Hypochlorite
NH ₃ -N	Ammonia-Nitrogen
O&M	Operations and Maintenance
ORP	Oxidation Reduction Potential
PAR	Public Access Reuse
PD	Positive Displacement
PHF	Peak Hourly Flow
PVC	Polyvinyl Chloride
RAS	Return Activated Sludge
RCP	Reinforced Concrete Pipe
RPM	Revolutions per Minute
SBWWTF	South Beaches Wastewater Treatment Facility
SCADA	Supervisory Control and Data Acquisition
SLR	Solids Loading Rate
SNdN	Simultaneous Nitrification-Denitrification
SOR	Surface Overflow Rate
SRF	State Revolving Fund
SRT	Solids Retention Time
SU	Standard Unit
TDH	Total Dynamic Head
TKN	Total Kjeldahl Nitrogen (Organic-N + NH ₃ -N)
TMDL	Total Maximum Daily Load
TN	Total Nitrogen
TP	Total Phosphorus
TRC	Total Residual Chlorine
TS	Total Solids
TSS	Total Suspended Solids
VFD	Variable Frequency Drive
VS	Volatile Solids
VSS	Volatile Suspended Solids
WAS	Waste Activated Sludge
WLR	Weir Loading Rate
WOR	Weir Overflow Rate
WRF	Water Reclamation Facility

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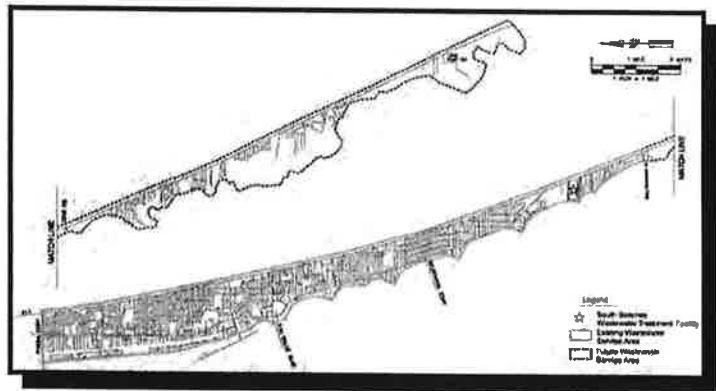
SECTION 1

EXECUTIVE SUMMARY

1.1 INTRODUCTION

The promotion of water conservation and reuse of reclaimed water are State goals/objectives and are considered to be in the public interest. The State also finds that the reuse of reclaimed water is a critical component of meeting the State's existing and future water supply needs while sustaining natural systems. To enhance the quality of surface waters throughout the Florida, the State is looking to reduce/eliminate non-beneficial surface water discharges by wastewater treatment facility's through a new law and modifications to Section 403.064, "Reuse of Reclaimed Water", of the Florida Statutes. The new law requires utilities with wastewater treatment plants that discharge to surface waters to submit a Non-Beneficial Surface Water Discharge Elimination Plan to the FDEP to review by November 1, 2021 with full implementation of any proposed improvements completed by January 1, 2032.

Brevard County owns and operates the South Beaches WWTF (SBWWTF) to process all of the wastewater generated within its permitted service area. The treatment facility serves the residential subdivisions and commercial development in this portion of Brevard County. The County has invested million of dollars into this facility and all of its ancillary components over the last twenty (20) years as well as reclaimed water distribution/transmission and effluent disposal infrastructure.



South Beaches Wastewater Management System Service Area

The current regulatory environment, including the State's attempt to eliminate non-beneficial surface water discharges, requires Brevard County to evaluate the SBWWRF's surface water discharge and its potential impacts to Indian River Lagoon and potential infrastructure improvements required at the South Beaches WWTF in accordance with the requirements of Section 403.064, "Reuse of Reclaimed Water", and Section 403.086, "Sewage Disposal Facilities; Advanced and Secondary Waste Treatment", of the Florida Statutes.

This Non-Beneficial Surface Water Discharge Elimination Plan for the South Beaches WWTF includes the evaluation of the current FDEP-permitted surface water discharge to the Indian River Lagoon (only during MIT of the deep injection well), the amount of effluent discharged to the Deep Injection Well (DIW) System, the amount of reclaimed water utilized throughout the service area, and the capability of the facility to meet Advanced Wastewater Treatment (AWT) Standards on a consistent basis to ensure protection of the environment. This Surface Water Discharge Elimination Plan is comprised of the following Sections:

- Section 2: Regulatory Framework for Non-Beneficial Surface Water Discharge Elimination
- Section 3: Existing Facility Conditions
- Section 4: Non-Beneficial Surface Water Discharge Elimination Plan

1.2 REGULATORY FRAMEWORK FOR NON-BENEFICIAL SURFACE WATER DISCHARGE ELIMINATION

The State of Florida Legislature developed and passed House Bill 263 and Senate Bill 64, and the Governor signed the legislation into law on June 29, 2021, requiring domestic wastewater utilities to submit a Plan to the FDEP for eliminating non-beneficial surface water discharges (e.g., treated effluent, reclaimed water or reuse water).

The new law creates a timeline and Plan to eliminate non-beneficial surface water discharge by January 1, 2032, subject to the requirements of the law. It contains a series of conditions authorizing discharges that are being beneficially used or otherwise regulated, and for specified hardships. The law requires domestic wastewater utilities that dispose of effluent, reclaimed water, or reuse water by surface water discharge to submit a Plan to eliminate non-beneficial surface water discharge to the Florida Department of Environmental Protection (FDEP) by November 1, 2021 and fully implemented at the treatment facility by January 1, 2032.

1.3 EXISTING FACILITY CONDITIONS

The South Beaches WWTF is classified as an 8.0 MGD AADF *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, meets all Class II Reliability criteria and is currently operating under FDEP Permit No. FL0102679. The unit operations and processes currently employed are as follows:

Treatment Elements	Description
Primary Treatment	An automatic, continuous, self-cleaning, mechanical barscreen with a screenings compacting/dewatering screw system; a manual barscreen (back-up); and an odor control system. The grit removal system is currently out of service.
Secondary Treatment	<p>Carrousel Oxidation Ditch Treatment System (6.0 MGD AADF) The "primary" biological treatment process at the SBWWTF. This system provides biological oxidation of the organic wastes in a dual-train oxidation ditch system operating in the extended aeration mode. Following treatment, the MLSS is conveyed to a pair of 102.5-foot diameter (12-foot sidewater depth) secondary clarifiers that are utilized for sedimentation of the solids.</p> <p>Conventional Activated Sludge Process System (2.0 MGD AADF) The "secondary" biological treatment process at the SBWWTF. This system provides biological oxidation of the organic wastes utilizing a single conventional activated sludge process (5-pass configuration) with aerobic and anoxic zones. Following treatment, flow is conveyed to a single 65-foot diameter (10-foot sidewater depth) secondary clarifier for sedimentation of the solids.</p>
Tertiary Treatment	Tertiary filtration via three (3) dual-media filters (sand and anthracite). Each tertiary filter is rated at 1.0 MGD AADF. Only effluent that is being sent to the public access reuse system is filtered.
Disinfection	High-level disinfection of the effluent sent to the public access reuse and surface water discharge systems is accomplished through the use of bulk liquid NaOCl (chemical feed/storage systems) and a system of chlorine contact chambers.
Dechlorination	Dechlorination of the effluent that this discharged to the surface water disposal system, on an intermittent basis (during mechanical integrity testing of the deep injection well), is accomplished through the use of liquid sodium bisulfite.
Sludge Treatment	Sludge treatment consisting of a sludge holding tank; air compression system with coarse bubble diffusers; sludge pumping system; and a sludge dewatering system (2 belt filter presses). Dewatered sludge is transported to the local Class I Solid Waste Landfill for final disposal.

A high-quality effluent is produced at the facility and is used throughout the South Beaches WWTF Service area in accordance with the following disposal systems:

Disposal System	FDEP Designation	AADF Capacity (MGD)	Disposal System Description
Land Application (Reuse)	R-001	3.00	An existing slow-rate public access system. R-001 is a reuse system which consists of a reclaimed water transmission/distribution system for public access spray irrigation within the Reclaimed Water Service Area. Reclaimed water is also stored in an existing stormwater retention pond system located at the Spessard Holland Golf Course that has a combined storage capacity of 4.31 MG (seven interconnected ponds). The pond system has an intermittent discharge from Pond 6 to adjacent drainage features, which ultimately discharge to the Indian River Lagoon.

Disposal System	FDEP Designation	AADF Capacity (MGD)	Disposal System Description
Underground Injection System	U-001	9.00	An existing 9.00 MGD AADF permitted capacity Deep Injection Well (DIW) system consisting of one (1) Class I underground injection well (2,227 foot deep) permitted under Department Permit No. 0185898-004 discharging to a Class G-IV ground water.
Surface Water Discharge	D-001	0.11	An existing 0.110 MGD AADF discharge to the Indian River Lagoon, Class III Marine waters, (WBID# 2963A1). The 0.110 MGD discharge is authorized at discharge location D-001 for a period not to exceed five (5) days during the Mechanical Integrity Testing (MIT) of the facility's Deep Injection Well. The permitted discharge of 8.00 MGD over 5 days equates to an Annual Average Daily Flow of 0.11 MGD.

Surface water discharges from the South Beaches WWTF to the Indian River Lagoon occur during Mechanical Integrity Testing (MIT) of the Deep Injection Well and during intense rainfall events associated with tropical systems (Hurricane Matthew, Hurricane Irma, etc.) and severe localized thunderstorms (excessive infiltration/inflow leading to raw wastewater flows in excess of the permitted capacity of the facility).

The South Beaches WWTF is efficient in treating the raw wastewater from the service area and is in compliance with all FDEP Operations Permit requirements/limitations.

1.4 NON-BENEFICIAL SURFACE WATER DISCHARGE ELIMINATION PLAN

The detailed evaluation of South Beaches WWTF monthly operating data indicates the following:

- Only 22.5% of the annual average effluent flow was reused within the South Beaches Reclaimed Water Service area via the existing slow-rate public access reuse system (R-001). This is unlikely to vary significantly in the future as there are very few additional opportunities for expansion of the reuse system as the service area is almost completely built-out.
- Approximately 0.8% of the annual average effluent flow was been disposed of through the surface water discharge system (D-001) to the Indian River Lagoon. The main discharge events were due to MIT testing of the Deep Injection Well (DIW) and the large volumes of infiltration and inflow (I/I) received at the South Beaches WWTF in 2016 and 2017 due to Hurricanes Matthew and Irma. However, it should be noted that there has not been a surface water discharge from the facility to the Indian River Lagoon since October 2017.

- The majority of the effluent disposal, approximately 76.7% of the annual average effluent flow was disposed of through the Deep Injection Well system (U-001) at the South Beaches WWTF. This is due to the built-out condition within the barrier island service area and limited potential for public access reuse.

Therefore, the South Beaches WWTF Non-Beneficial Surface Water Elimination Plan, to be implemented in accordance with Section 403.064, F.S., and the need to meet the AWT regulatory requirements of Section 403.086, F.S., will require the County to implement one of the following infrastructure improvements alternatives based on a detailed engineering evaluation of each alternative and project capital and operating costs:

State of Florida Regulatory Requirements		
Potential SBWWTF Improvements Alternative No.	Discharges to the Indian River Lagoon (IRL) must meet AWT Criteria	Non-Beneficial Surface Water Discharge Elimination Plan
	Section 403.086, F.S.	Section 403.064, F.S.
	Implementation by July 1, 2025	Implementation by January 1, 2032
1	<p>Phase I: Conversion of the 2.0 MGD Conventional Activated Sludge WWTF to a 4-Stage BNR treatment system capable of producing an effluent that meets the AWT Criteria. All reclaimed water utilized in the service area would have a low nutrient concentration (TN, TP). The surface water discharge (D-001; 0.11 MGD AADF) would be kept in place due to the MIT associated with the single existing DIW. However, after commissioning of the second DIW as part of the Phase II improvements, the surface water discharge would be reclassified as a "wet weather" discharge to be used during periods intense rainfall from tropical events and localized storms.</p>	<p>Phase II: Installation of a second Deep Injection Well (DIW) on the South Beaches WWTF site with a capacity of 9.0 MGD AADF. The second DIW would provides the County with the following advantages:</p> <ul style="list-style-type: none"> ■ Provides Class I Reliability ■ Eliminates the need for surface water discharge of the effluent associated with MIT testing of a single DIW ■ Allows alternating operation of the DIW's <p>As previously states, the surface water discharge would be reclassified as a wet "weather discharge" upon commissioning of the new DIW.</p>
2	<p>Phase I: Conversion of the 2.0 MGD Conventional Activated Sludge WWTF to a 4-Stage BNR treatment system capable of producing an effluent that meets the AWT Criteria. All reclaimed water utilized in the service area would have a low nutrient concentration (TN, TP). The surface water discharge (D-001 - 0.11 MGD AADF) would be kept in place due to the MIT associated with the single existing DIW.</p>	<p>Phase II: Conversion of the 6.0 MGD Carrousel Oxidation Ditch WWTF to a 4-Stage or 5-Stage BNR treatment system capable of producing an effluent that meets the AWT Criteria. Upon completion of the Phase II project all disposal methods (reuse, surface water discharge, DIW) would occur with an effluent having a low nutrient concentration (TN, TP).</p>

1.5 POTENTIAL TREATMENT FACILITY IMPROVEMENTS

The reclaimed water quality produced by the South Central Regional WRF during the last five-year period (2016 - 2020) and the ability to meet AWT Criteria is presented below:

Parameter	AWT Effluent Limits (mg/L)	Effluent Concentration (mg/L)*	"Current" Facility Effluent Meets AWT Criteria
BOD ₅	5	1.5	Yes
TSS	5	0.7	Yes
Total Nitrogen (TN)	3	7.8	No
Total Phosphorus (TP)	1	1.8	No
pH	6.0 - 8.5	7.28	Yes

* Concentrations of reclaimed water constituents from Jan 2016 - Dec 2020

** Values in "red" exceed the AWT Criteria

To meet the surface water discharge regulatory requirements mandated in 403.086, F.S., on a continual basis, conversion of the 2.0 MGD Conventional Activated Sludge Process to a 4-Stage BNR treatment system, at a minimum, is required as outlined in Section 4.1 of this document. The new BNR treatment system will be capable of generating a high-quality effluent that meets all AWT Criteria. Thus, water being delivered to the public access reuse system and the Spessard Holland Golf Course pond system (potential intermittent discharge to the Indian River Lagoon) would be very low in nutrients, meet AWT criteria and meet the regulatory requirements mandated in Section 403.086, F.S.

A thorough engineering evaluation of the potential improvements required at the South Beaches WWTF to meet the regulatory requirements mandated in 403.086, F.S. and 403.064, F.S., discussed in Section 4.1, will be conducted to determine the most reliable, energy-efficient, and cost-effective modifications to the treatment facility. The identified improvements will then be included in the County's Utility Capital Improvements Program (CIP) and a project schedule generated to ensure that design, construction, optimization and commissioning of said improvements are completed prior to the regulatory deadlines.

SECTION 2

REGULATORY FRAMEWORK FOR NON-BENEFICIAL SURFACE WATER DISCHARGE ELIMINATION

2.1 INTRODUCTION

This Section of the Non-Beneficial Surface Water Discharge Elimination Plan (NBSWDEP) presents the regulatory framework for the potential surface water elimination/reduction options for Brevard County's South Beaches WWTF. The regulations regarding the surface water discharge elimination program have been promulgated by the State of Florida under 403.064, "Reuse of Reclaimed Water" (June 2021). The new law requires Brevard County to submit to the Florida Department of Environmental Protection (FDEP), by November 1, 2021, a Plan for eliminating non-beneficial treatment facility effluent discharges to surface waters.

The Florida Department of Environmental Protection (FDEP) regulates surface waters and watersheds within the State and the approach for restoring and protecting State waters and addressing TMDL Program requirements (1972 Federal Clean Water Act and the 1999 Florida Watershed Restoration Act (FWRA)).

2.2 NON-BENEFICIAL SURFACE WATER ELIMINATION LAW/REQUIREMENTS

The State of Florida Legislature, during the past session, developed and passed House Bill 263 and Senate Bill 64 requiring domestic wastewater utilities to submit a Plan to the FDEP for eliminating non-beneficial surface water discharges (e.g., treated effluent, reclaimed water or reuse water). Governor DeSantis signed the legislation into law on June 29, 2021. The law added new regulatory requirements to 403.064, "Reuse of Reclaimed Water" of the Florida Statutes which will be discussed herein.

The new law creates a timeline and Plan to eliminate non-beneficial surface water discharge by January 1, 2032, subject to the requirements of the law. It contains a series

of conditions authorizing discharges that are being beneficially used or otherwise regulated, and for specified hardships. The law requires domestic wastewater utilities that dispose of effluent, reclaimed water, or reuse water by surface water discharge to submit a Plan to eliminate non-beneficial surface water discharge to the Florida Department of Environmental Protection (FDEP). The Plan must be submitted to FDEP by November 1, 2021 and implemented by January 1, 2032.

The Non-Beneficial Surface Water Discharge Elimination Plan must include the following:

- The average flow (MGD) of effluent, reclaimed water, or reuse water that will no longer be discharged into surface waters and the date of such elimination;
- The average flow (MGD) of surface water discharge that will continue in accordance with the requirements for the elimination of ocean outfalls, one of the discharge conditions specified in the legislation or one of the hardship conditions; and
- The level of treatment which the effluent, reclaimed water, or reuse water will receive before being discharged into a surface water by each alternative.

To be approved by the FDEP, the Non-Beneficial Surface Water Discharge Elimination Plan must:

- Result in eliminating the surface water discharge;
- Result in meeting the statutory requirements (Section 403.086(10)) regarding the discharge of domestic wastewater through an ocean outfall; or
- Provide an affirmative demonstration that any of the following discharge conditions applies to the remaining discharge if the Plan does not provide for the complete elimination of surface water discharge:

Discharge Conditions

The discharge is associated with an indirect potable reuse project.

The discharge is a wet weather discharge that occurs in accordance with an applicable FDEP permit.

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

The utility operates domestic wastewater treatment facilities with reuse systems that reuse a minimum of ninety percent (90%) of a facility's annual average flow, as determined by the FDEP using monitoring data for the prior five (5) consecutive years, for reuse purposes authorized by the FDEP.

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

The new law requires the FDEP to approve or deny a Non-Beneficial Surface Water Discharge Elimination Plan within nine (9) months after receiving the Plan. Brevard County may modify the South Beaches WWTF Plan by submitting the proposed modification(s) to the FDEP for review. However, the Plan may not be modified such that the requirements of the new law are not met and the FDEP may not extend the time within which a Plan will be implemented. The approval of the Plan or a modification by the FDEP does not constitute final agency action.

If the Non-Beneficial Surface Water Discharge Elimination Plan is not submitted in a timely manner by the County, or approved by the FDEP, the South Beaches WWTF may not dispose of effluent, reclaimed water, or reuse water by surface discharge after January 1, 2028. In addition, a violation subjects Brevard County to administrative and civil penalties pursuant to ss. 403.121, 403.131, and 403.141.

A domestic wastewater utility applying for a permit for a new or expanded surface water discharge is now required to prepare a Plan in accordance with 403.064, F.S. as part of that permit application. The FDEP may not approve a permit for a new or expanded surface water discharge unless the Plan meets one or more of the conditions provided in the new law.

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

This new law does not apply to any of the following:

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

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

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

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

Therefore, as the South Beaches WWTF has a permitted "intermittent" surface water discharge to the Indian River Lagoon (for a period of five days during Mechanical Integrity Testing of the facility's underground injection control well) and does not meet one of the Plan exemptions, as identified above, a Non-Beneficial Surface Water Discharge Elimination Plan must be submitted to FDEP by the November 1, 2021 deadline.

2.3 SOUTH BEACHES WWTF - CURRENT DISPOSAL PRACTICES

Brevard County owns and operates the South Beaches Wastewater Treatment Facility (SBWWTF) which is classified as a *Secondary Treatment plus Filtration Facility* (Category I, Class A) utilizing two (2) parallel treatment plants and meets all Class II Reliability Criteria. The treatment plants include a 6.0 MGD AADF Carrousel Oxidation Ditch System (dual train) and a 2.0 MGD AADF Conventional Activated Sludge Process (aerobic/anoxic). The treatment facility consists of a mechanical influent screening systems, three (3) treatment trains with chemical feed facilities, secondary clarification, tertiary filtration, high-level disinfection, pumping systems, reclaimed water storage and a deep injection well.



Reclaimed water is produced at the facility and meet all FDEP requirements. The current permitted treatment capacity of the facility is 8.00 MGD AADF and the SBWWTF is operating under FDEP Operations Permit No. FL0040622 (a copy is provided in Appendix A). Biosolids are partially digested, dewatered, and then transported to a Class I solid waste landfill for final disposal.

Reuse/effluent disposal is achieved by a combination of the following FDEP-permitted disposal systems:

Disposal System	FDEP Designation	AADF Capacity (MGD)	Disposal System Description
Land Application (Reuse)	R-001	3.00	An existing slow-rate public access system. R-001 is a reuse system which consists of a reclaimed water transmission/distribution system for public access spray irrigation within the Reclaimed Water Service Area. Reclaimed water is also stored in an existing stormwater retention pond system located at the Spessard Holland Golf Course that has a combined storage capacity of 4.31 MG. The 4.31 MG stormwater retention pond system consists of seven (7) ponds that are interconnected with underground culvert pipes at the golf course. The pond system has an intermittent discharge from Pond 6 to adjacent drainage features, which ultimately discharge to the Indian River Lagoon.
Underground Injection System	U-001	9.00	An existing Deep Injection Well (DIW) system consisting of one (1) Class I underground injection well (2,227 foot deep) permitted under Department Permit No. 0185898-004 discharging to a Class G-IV ground water.
Surface Water Discharge	D-001	0.11	An existing discharge to the Indian River Lagoon, Class III Marine waters, (WBID# 2963A1). The 0.110 MGD discharge is authorized at discharge location D-001 for a period not to exceed five (5) days during the Mechanical Integrity Testing (MIT) of the facility's Deep Injection Well (DIW). The permitted discharge of 8.00 MGD over five (5) days equates to an Annual Average Daily Flow of 0.11 MGD.

During Mechanical Integrity Testing (MIT) of the Deep Injection Well, a portion of the effluent is diverted to an on-site Effluent Holding Pond. The Effluent Holding Pond, constructed with internal berms to provide plug flow and eliminate short-circuiting, is used to provide temporary effluent storage prior to any potential discharge to the Indian River Lagoon (D-001) via an overflow structure.

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SECTION 3

EXISTING FACILITY CONDITIONS

3.1 WASTEWATER MANAGEMENT SYSTEM SERVICE AREA

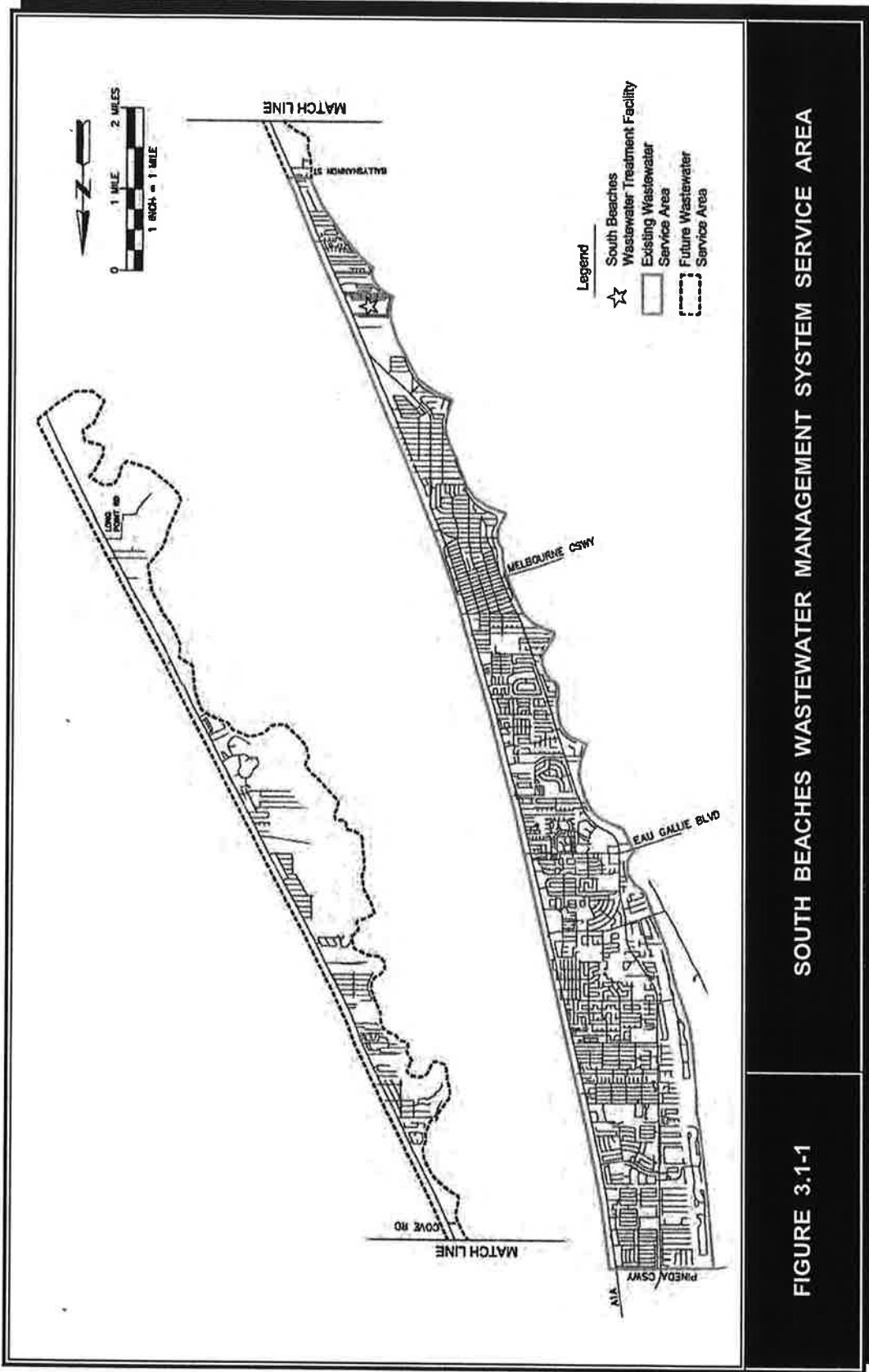
The South Beaches WWTF serves the area bounded by the Atlantic Ocean to the east, the Indian River Lagoon to the west, Patrick Air Force Base to the north and the south line of Section 28, Township 28 S, Range 28 E on the south as presented in Figure 3.1-1. The south boundary of the service area is also the north line of a barrier island included in the Coastal Barrier Resources Act (CBRA). Although depicted as a *future wastewater service area*, extension of wastewater service into the CBRA area is not likely due to the prohibition on the use of federal funds for development. The County does not currently plan to extend wastewater service south of the current limits of the service area. The City of Cocoa Beach currently serves Patrick Air Force Base and the base housing area in Satellite Beach.

The South Beaches Wastewater Management System Service Area 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. 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 confine the South Beaches Wastewater Management System Service Area.

The wastewater is collected and conveyed by a network of County-owned lift stations, private lift stations and forcemains to the South Beaches WWTF 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 disposed of via both slow-rate public access spray irrigation (R-001) and via a Deep Injection Well (U-001).

3.2 SOUTH BEACHES WASTEWATER TREATMENT FACILITY (SBWWTF)

The South Beaches WWTF 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 and meets all Class II Reliability criteria. The treatment plants include a 6.0 MGD AADF Carrousel Oxidation Ditch System (dual train) and a 2.0 MGD AADF Conventional Activated Sludge Process (aerobic/anoxic).



The oxidation ditch and conventional activated sludge process treatment systems are currently *on-line* and processing the incoming raw wastewater from the Service Area and are generating an effluent meeting all FDEP requirements. The South Beaches Wastewater Management System, Reclaimed Water System Service Areas and the South Beaches WWTF are currently permitted under FDEP Operations Permit No. FL0040622. A copy of the current FDEP Operations Permit is provided in Appendix A. An aerial view, schematic flow diagram and site plan of the South Beaches WWTF are presented in Figures 3.2-1 through 3.2-3, respectively.

The South Beaches WWTF Reclaimed Water Service Area is bounded by the Melbourne Causeway and the commercial area south of MacFarlane Street/Glengarry Avenue. The service area is 80 - 90% built-out with residential land use occupying approximately 70% of the total area. Reclaimed water is distributed to several small subdivisions to the south of the South Beaches WWTF and the Spessard Holland Golf Course. An aerial view of the South Beaches Reclaimed Water Service Area is presented in Figure 3.2-4. Effluent flow in excess of the reclaimed water demand is discharged to the Deep Injection Well (DIW) system.

The unit operations and processes currently employed at the South Beaches WWTF (2021) are divided into the following elements/categories:

Treatment Elements	Description
Primary Treatment	An automatic, continuous, self-cleaning, mechanical barscreen with a screenings compacting/dewatering screw system; a manual barscreen (back-up); and an odor control system. The grit removal system is currently out of service.
Secondary Treatment	<p><u>Carrousel Oxidation Ditch Treatment System (6.0 MGD AADF)</u> This system was constructed in 1991 and is the "primary" biological treatment process at the SBWWTF. Biological oxidation of the organic wastes occurs in the dual-train oxidation ditch system operating in the extended aeration mode. The system utilizes mechanical surface aerators to provide oxygenation and mixing of the MLSS. Following treatment, the MLSS is conveyed to a pair of 102.5-foot diameter (12-foot sidewater depth) secondary clarifiers that are utilized for sedimentation of the solids. A dedicated RAS/WAS pumping station is provided.</p> <p><u>Conventional Activated Sludge Process System (2.0 MGD AADF)</u> This system was constructed in 1968 and is the "secondary" biological treatment process at the SBWWTF. Biological oxidation of the organic wastes occurs utilizing a single conventional activated sludge process (5-pass plug flow configuration) with aerobic and anoxic zones. The system utilizes centrifugal blowers and coarse bubble diffusers to provide oxygenation and mixing of the MLSS. Following treatment, flow is conveyed to a single 65-foot diameter (10-foot sidewater depth) secondary clarifier for sedimentation of the solids. Dedicated RAS and WAS pumping stations are provided.</p>
Tertiary Treatment	Tertiary filtration via three (3) dual-media filters (sand and anthracite). Each tertiary filter is rated at 1.0 MGD AADF. Only effluent that is being sent to the public access reuse system is filtered.

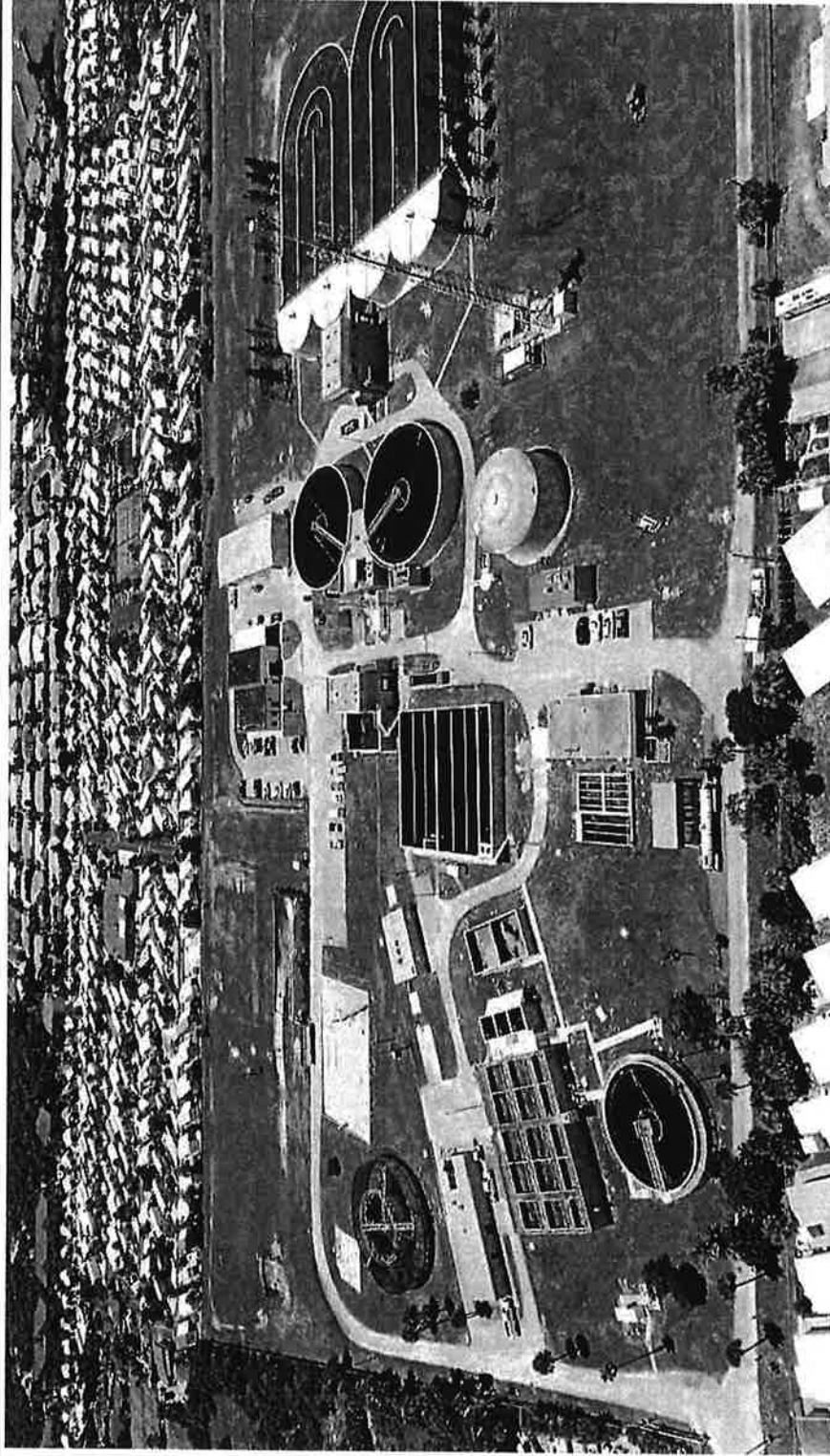


FIGURE 3.2-1

SOUTH BEACHES WWTF - AERIAL VIEW

South Beaches WWTF: Non-Beneficial Surface Water Discharge Elimination Plan

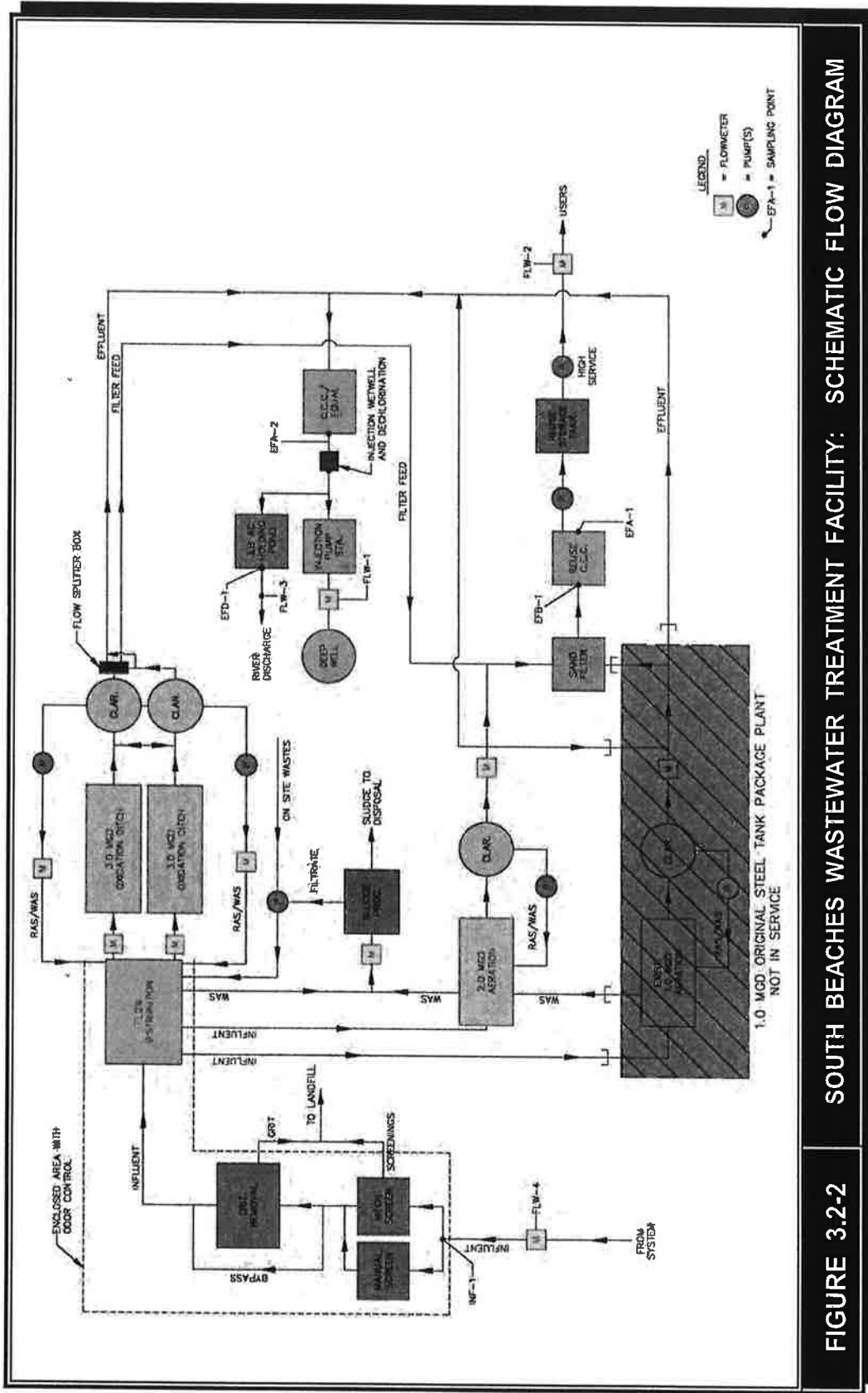
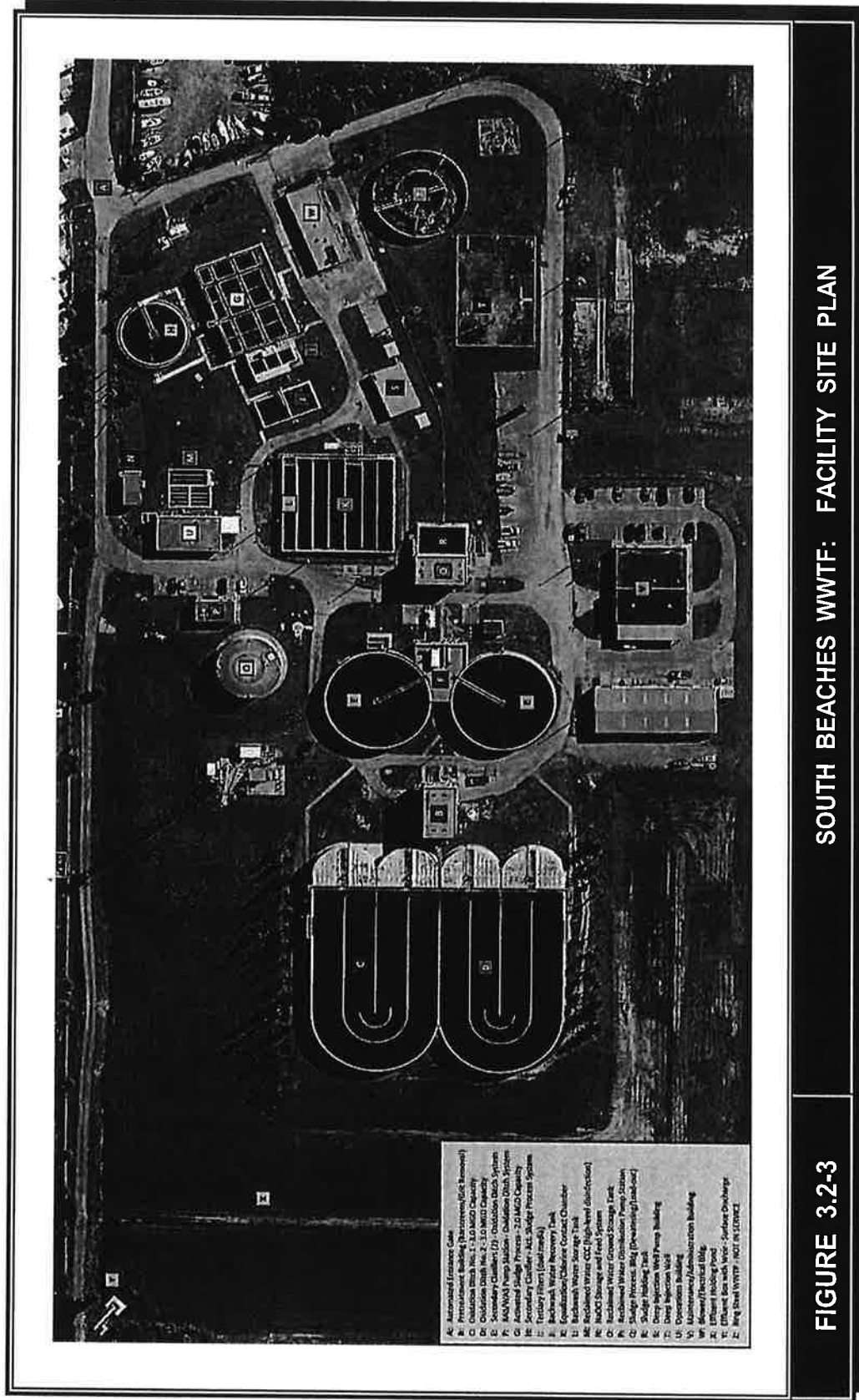


FIGURE 3.2-2

SOUTH BEACHES WASTEWATER TREATMENT FACILITY: SCHEMATIC FLOW DIAGRAM





- A: Aeration/Eliminate Cells
- B: Pretreatment Building (Bar screens, Grit Removal)
- C: Oxidation Ditch No. 1 - 1.0 MGD Capacity
- D: Oxidation Ditch No. 2 - 1.0 MGD Capacity
- E: Secondary Clarifier (D) - Oxidation Ditch System
- F: BOD/SS Pump Station - Oxidation Ditch System
- G: Oxidation Ditch No. 1 - 1.0 MGD Capacity
- H: Oxidation Ditch No. 2 - 1.0 MGD Capacity
- I: Primary Filter (Solid Residue)
- J: Backwash Water Recovery Tank
- K: Equalization/Chemical Contact Chamber
- L: Backwash Water Storage Tank
- M: Influent Water CCI (High-Level disinfection)
- N: BOD/SS Storage and Feed System
- O: Backwash Water Recovery Tank
- P: Backwash Water Distribution Pump Station
- Q: Sludge Inerted, Blg (Dewatering/landfill)
- R: Sludge Handling Tank
- S: Sludge Injection With Pump Building
- T: Operations Building
- U: Maintenance Building
- V: Motor/Electrical Bldg
- W: Effluent Holding Pond
- X: Effluent Box with Valve - Surface Discharge
- Y: Inlet Street WWTP - NOT IN SERVICE
- Z:



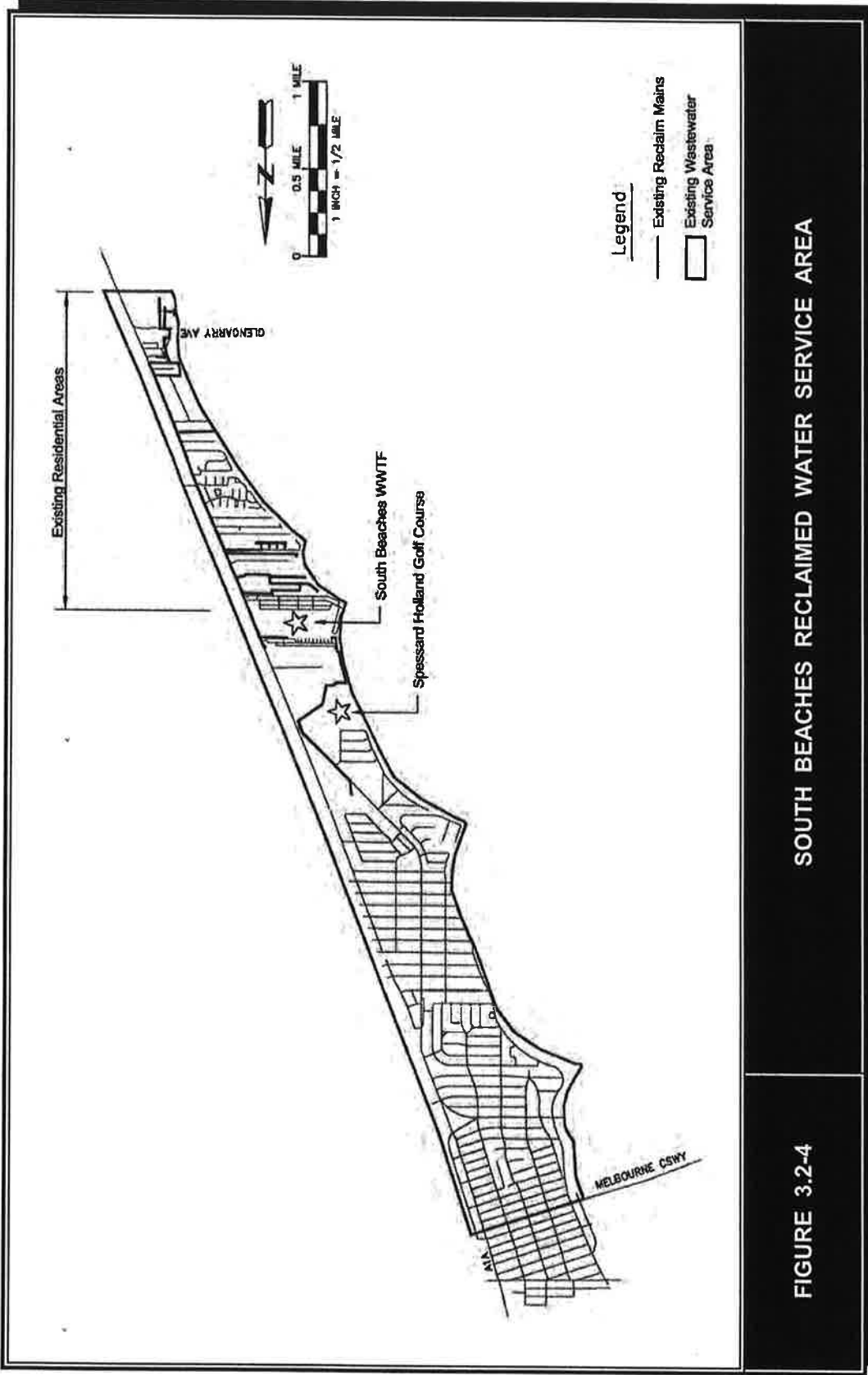


FIGURE 3.2-4

SOUTH BEACHES RECLAIMED WATER SERVICE AREA



Treatment Elements	Description
Disinfection	High-level disinfection of the effluent sent to the public access reuse and surface water discharge systems is accomplished through the use of bulk liquid NaOCl (chemical feed/storage systems) and a system of chlorine contact chambers.
Dechlorination	Dechlorination of the effluent that this discharged to the surface water disposal system, on an intermittent basis (during mechanical integrity testing of the deep injection well), is accomplished through the use of liquid sodium bisulfite (NaHSO ₃).
Sludge Treatment	Sludge treatment consisting of a sludge holding tank; air compression system with coarse bubble diffusers; sludge pumping system; and a sludge dewatering system (2 belt filter presses). Dewatered sludge is transported to the local Class I Solid Waste Landfill for final disposal.

Design and current wastewater flows at the South Beaches WWTF are as follows:

Table 3.2-1: South Beaches WWTF Design and Current Wastewater Flows

Flow Condition	Wastewater Flow Rate (MGD)	
	Design*	Actual Operation**
Annual Average Daily Flow (AADF)	8.00	6.256
Maximum Daily Flow (MDF)	12.00	10.460
Peak Hourly Flow (PHF)	18.00	

* Total Capacity of the combined systems (Carrousel and conventional ASP)

** Actual flow conditions from Calendar Year 2020.

Influent and effluent design criteria for the South Beaches WWTF are presented below.

Table 3.2-2: South Beaches WWTF - Influent and Effluent Design Criteria

Parameter	Units	Influent	Tertiary Effluent
CBOD ₅	mg/L	200	< 20
TSS	mg/L	200	< 5*
TKN**	mg/L	50	
TN	mg/L		< 10
TP**	mg/L	8	< 4
pH	S.U.	6.0 - 8.5	6.0 - 8.5

* For Public Access Reuse only

** Assumed influent concentrations as influent sampling not required

3.2.1 Primary Treatment System

Raw wastewater flows from the South Beaches Wastewater Management System Service Area enter the Pretreatment Building through a 30-inch DIP. The two-story Pretreatment Building consists of a cast-in-place concrete structure consisting of the following unit operations:

- Fine screening
- Grit Removal System (*not currently operational*)



Pretreatment Building

Raw wastewater flows entering the Pretreatment Building are conveyed into a box with two sluice gates. One sluice gate allows raw wastewater to be conveyed to the mechanical barscreen (step screen); the other allows wastewater to flow into a bypass channel with a manual barscreen. The screenings are collected and discharged into a dewatering screw conveyor to reduce the moisture content and volume of screenings material. Screenings are discharged into a discharge chute and deposited into a municipal dumpster at grade (landfill disposal).



Mechanical Barscreen

The two raw wastewater influent channels converge, following the barscreens, and the screened wastewater is conveyed to the Grit Removal System (sluice gates at the ends of both channels). A single vortex-type (centrifugal) grit separator unit is used to remove grit (heavy inorganic mineral matter) from the screened wastewater stream prior to conveyance to the secondary treatment systems. The grit removal system removes the grit particles and concentrates them in a sump at the bottom of the unit. The grit is then conveyed to a grit classifier, at grade, and the dewatered grit is discharged into a municipal dumpster (landfill disposal).



Grit Removal System

Screened and degritted wastewater is conveyed, in a covered channel, to the west side of the Pretreatment Building. Adjustable weirs are then used to divert the flow to each biological treatment system (Carrousel oxidation ditches and/or conventional activated sludge process) before being mixed with RAS.

Malodorous compounds generated within the Pretreatment Building are conveyed, via an induced draft, to an odor control system for processing.

3.2.2 Secondary Treatment System - Carrousel Oxidation Ditch System

Secondary treatment of raw, degritted wastewater, up to 6.00 MGD AADF, can be processed through the Carrousel Oxidation Ditch Treatment System (extended aeration mode). The dual oxidation ditches contain heterotrophic bacteria (suspended growth) and provide the detention time and oxygen transfer required for oxidation of the influent organic compounds, nitrification, and phosphorus uptake. Oxygenation and mixing are provided by a pair of mechanical surface aerators (100 hp) in each oxidation ditch. A portion of the flow, equal to the influent wastewater flow plus RAS, is discharged over an effluent weir structure and flows to the secondary clarifiers.



Carrousel Dual Oxidation Ditch System

Secondary clarification of the biologically treated wastewater is provided to remove MLSS, flocculated suspended solids and chemical precipitates, and to meet the effluent criteria mandated by FDEP, EPA and Class II Reliability. Secondary clarification is provided by two (2) identical 102.5-foot diameter, 12-foot sidewater depth, cast-in-place concrete clarifiers with full-surface skimmers. The settled MLSS are removed in the secondary clarifier underflow and either returned to the Flow Distribution Box as RAS or wasted to the Sludge Holding Tank as WAS.



Secondary Clarifiers - Ox. Ditch System

3.2.3 Secondary Treatment System - Conventional Activated Sludge System

Secondary treatment of raw, degritted wastewater, up to 2.00 MGD AADF, can be processed through the Conventional Activated Sludge Process Treatment System. The five-pass treatment process (aerobic/anoxic zones) contains heterotrophic bacteria (suspended growth) and provides the detention time and oxygen transfer required for oxidation of the influent



Conv. Activated Sludge Process System

organic compounds, nitrification, and phosphorus uptake. Oxygenation and mixing are provided by a system of centrifugal blowers and coarse bubble diffusers. The flow is discharged from the end of the Activated Sludge Process, through a 24-inch pipe in the wall, and flows to the secondary clarifier.

Secondary clarification of the biologically treated wastewater is provided to remove MLSS, flocculated suspended solids and chemical precipitates, and to meet the effluent criteria mandated by FDEP, EPA and Class II Reliability. Secondary clarification is provided by a single 65-foot diameter, 10-foot sidewater depth, cast-in-place concrete clarifier with full-surface skimmers. The settled MLSS are removed in the secondary clarifier underflow and either returned to the first pass in the conventional ASP system as RAS or wasted to the Sludge Holding Tank as WAS.

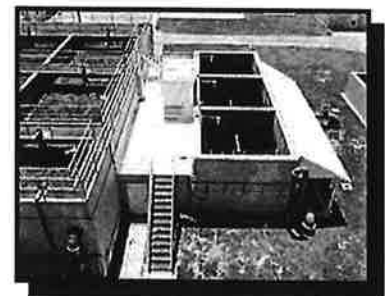


Secondary Clarifier - Conv. ASP System

3.2.4 Tertiary Treatment System

Tertiary filtration of the treated secondary effluent is required to ensure protection of public health and enhance the disinfection process for the effluent that is being conveyed to the reclaimed water distribution system. Effluent that is to be sent to the Deep Injection Well (DIW) does not require filtration.

Secondary effluent from the Carrousel Oxidation Ditch System can be conveyed to either the tertiary filters or the secondary effluent CCC/Equalization Tank through the clarifier flow splitter box. The splitter box has two (2) adjustable weirs that control the effluent flow. Likewise, secondary effluent from the conventional activated sludge process can also be routed to either the tertiary filters or the secondary effluent CCC/Equalization Tank.



Tertiary Filters

Tertiary filtration is accomplished through the use of three (3) dual media (sand and anthracite) filtration units each with a surface area of 14 feet x 14 feet and treatment capacity of 1.0 MGD AADF. The tertiary filters can be backwashed using one of the following methods:



Secondary Effluent CCC/Equalization Tank

- Automatically based on the amount of time that the tertiary filters are in service (programmable)
- Manually
- Through the use of high-level floats in the filtration system

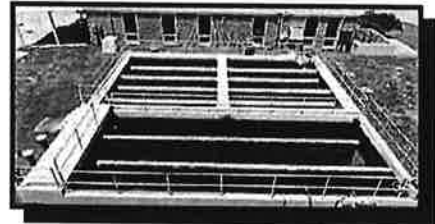
Backwashing operations and equipment (valves, blowers and pumps) are controlled from the control panel located within the control console in the Tertiary Filter Room and/or from the SCADA console in the Operations Building. Backwash water is stored in the Backwash Water Storage Tank and is filled with reclaimed water from the Reclaimed Water Ground Storage Tank, as needed. Two (2) submersible pumps located in the Backwash Water Storage Tank supply the water for filter backwashing operations.

Flows discharged from the Tertiary Filtration System are conveyed as follows:

Conveyed To	Purpose	Description
Backwash Water Recovery Tank	For Further Treatment	Backwash water from the tertiary filter backwashing operations is conveyed to this tank for temporary storage and equalization. The water is then conveyed, by gravity, to the In-Plant Lift Station for conveyance to the Pretreatment Building for further treatment.
Chlorine Contact Chamber (CCC)	Reclaimed Water Production	Effluent is conveyed to the Chlorine Contact Chamber (CCC) for high-level disinfection and conveyance to the Reclaimed Water Ground Storage Tank.

3.2.5 Disinfection System

From the tertiary filters, the treated effluent that is to be conveyed to the public access reuse system flows, by gravity, to cast-in-place concrete Chlorine Contact Chambers (CCCs). The CCCs provide high-level disinfection of the effluent through the application of liquid sodium hypochlorite (NaOCl) via a flow-paced system. The Chlorine Contact Chambers are designed to meet Class I Reliability Criteria. The CCC System is designed to provide a minimum of fifteen (15) minutes of contact time at PHF and thirty (30) minutes at AADF. Sodium hypochlorite is metered and mixed into the tertiary effluent and the CCC provides the contact time for the inactivation of fecal coliforms, pathogens and other microbial organisms.



Chlorine Contact Chambers (CCCs)

3.2.6 Transfer Pump Station

After high-level disinfection, the tertiary filter effluent flows to the Transfer Pump Station. The pumps convey the reclaimed water to the Reclaimed Water Ground Storage Tank (0.6 MG) for eventual conveyance to the distribution system.

Turbidity, pH and Total Residual Chlorine (TRC) are analyzed continuously and automatically at the South Beaches WWTF in accordance with the existing FDEP Operations Permit conditions and as presented below:

FDEP - Reclaimed Water Compliance Monitoring Locations	
Compliance Parameter	Carrousel BNR System
Turbidity	EFB-1 (After Filtration, prior to disinfection)
Total Residual Chlorine	EFA-1 (Following disinfection)
pH	EFA-1 (Following disinfection)

3.2.7 Reclaimed Water/Effluent Disposal System

The South Beaches WWTF effluent disposal systems, permitted by FDEP, are briefly described below:

Effluent Disposal Method	Description
Land Application System (R-001)	An existing 3.00 MGD AADF permitted capacity slow-rate public access system. R-001 is a reuse system which consists of a reclaimed water transmission/distribution system for public access spray irrigation within the Reclaimed Water Service Area. Reclaimed water is also stored in an existing stormwater retention pond system located at the Spessard Holland Golf Course that has a combined storage capacity of 4.31 MG. The 4.31 MG stormwater retention pond system consists of seven (7) ponds that are interconnected with underground culvert pipes at the golf course. The pond system has an intermittent discharge from Pond 6 to adjacent drainage features, which ultimately discharge to the Indian River Lagoon.
Underground Injection System (U-001)	An existing 9.00 MGD AADF permitted capacity Deep Injection Well (DIW) system consisting of one (1) Class I underground injection well (2,227 foot deep) permitted under Department Permit No. 0185898-004 discharging to a Class G-IV ground water.
Surface Water Discharge (D-001)	An existing 0.110 MGD AADF discharge to the Indian River Lagoon, Class III Marine waters, (WBID# 2963A1). The 0.110 MGD discharge is authorized at discharge location D-001 for a period not to exceed five (5) days during the Mechanical Integrity Testing (MIT) of the facility's Deep Injection Well (DIW). The permitted discharge of 8.00 MGD over five (5) days equates to an Annual Average Daily Flow of 0.11 MGD.

A. Public Access Reuse/Land Application System (R-001)

Reclaimed water meeting the Public Access Criteria is pumped from the Transfer Pump Station to the Reclaimed Water Ground Storage Tank (0.60 MG). The pre-stressed concrete storage tank is an *in-line equalization facility* that offers an effluent water quality buffer before it is pumped to the reclaimed water distribution system.



Reclaimed Water Ground Storage Tank

The Reclaimed Water Distribution Pump Station conveys reclaimed water from the Reclaimed Water Ground Storage Tank to the distribution system for final disposal at the following locations:

- Spessard Holland Golf Course
- A1A Condo Park
- Residential areas south of the treatment facility along SR A1A



Reclaimed (Reuse) Water Pump Station

All excess reclaimed water produced that is not pumped to the Reclaimed Water Ground Storage Tank overflows a weir and is conveyed to the Deep Injection Well (DIW) pump station for disposal.

B. Deep Injection Well System (U-001)

Treated effluent from the secondary clarifiers can be directed to the Equalization Basin/Chlorine Contact Chamber (EQB/CCC) and then to the Deep Injection Well (DIW) pump station. The EQB/CCC is designed to both enable adequate disinfection of the secondary effluent, if necessary, and also to equalize flow to the Deep Injection Well (DIW).

In addition, any reclaimed water that does not meet permit specifications will automatically shut-down the Transfer Pump Station Pumps causing the unacceptable/substandard water to be diverted to the Deep Injection Well (DIW) pump station. An alarm will sound in the Operations Building control room in the event of this substandard condition. The transfer pumps will not restart until such time that the reuse water is of acceptable quality and an Operator resets the alarm.

When the Deep Injection Well (DIW) is offline, such as for periodic Mechanical Integrity Testing (MIT), the EQB/CCC can be used to discharge treated effluent the Effluent Holding Pond and then to the Indian River Lagoon. The surface water discharge requires disinfection and dechlorination of the effluent. Sodium bisulfite can be injected into the effluent from the CCC/EQB for dechlorination purposes.

C. Surface Water Discharge (D-001)

As mentioned above, during Mechanical Integrity Testing (MIT) of the Deep Injection Well, a portion of the effluent is diverted to an on-site Effluent Holding Pond. The Effluent Holding Pond, constructed with internal berms to provide plug flow and eliminate short-circuiting, is used to provide temporary effluent storage prior to any potential discharge to the Indian River Lagoon (D-001). Sampling for analysis of Acute Whole Effluent Toxicity (AWET) must be conducted within thirty (30) days of the planned MIT.

During surface water discharges, monitoring of the following parameters is required:

- Flow Rate
- CBOD₅
- TSS
- pH
- Fecal Coliform Bacteria
- Enterococci
- Total Residual Chlorine (for disinfection and dechlorination)
- Total Nitrogen
- Total Phosphorous
- Dissolved Oxygen
- Acute Whole Effluent Toxicity (AWET)

As previously indicated, surface water discharges require disinfection (NaOCl) and dechlorination (NaHSO₃) of the effluent.

In case an emergency discharge to the Indian River Lagoon is necessary, due to the failure of the Deep Injection Well (DIW) pumps, the same operating procedures and monitoring used for the MIT are required. Discharge to the Indian River Lagoon is automatic in the event of a failure of the Deep Injection Well (DIW) and/or reuse pumps; hydraulic head in the DIW wet well increases to a point where it spills over a weir into the on-site Effluent Holding Pond. Once the Effluent Holding Pond stages up, it discharges to the Indian River Lagoon through FDEP discharge/monitoring point D-001.

3.2.8 Sludge Management System

The sludge management system at the South Beaches WWTF consists of the following infrastructure components/elements:

- Sludge Processing Building
- Sludge Holding Tank
- Sludge Holding Tank aeration and air diffusion system
- Sludge pumping system
- Belt Filter Press (BFP) sludge dewatering system
- Sludge loadout system



Sludge Processing Bldg/Sludge Holding Tank

Waste Activated Sludge (WAS) from the Carrousel Oxidation Ditch and Conventional Activated Sludge Process Treatment Systems is conveyed to the aerated Sludge Holding Tank. The Sludge Holding Tank is used to store and partially treat sludge until it can be pumped to the belt filter presses for dewatering.

Sludge feed pumps are used to convey partially stabilized sludge from the Sludge Holding Tank to the belt filter presses. Two (2) belt filter presses are utilized to dewater the sludge prior to shipment to a local Class I Solid Waste Landfill for final disposal. Dewatering reduces the volume and makes the handling and disposal of sludge easier.



Belt Filter Press

3.3 PERMITTED CAPACITY

The South Beaches WWTF (*Secondary Treatment plus Filtration*) is an 8.0 MGD AADF facility serving the County's residential and commercial areas along the barrier island as previously discussed in Article 3.1. The treatment facility removes contaminants in the raw wastewater that exert an oxygen demand (BOD₅ and nutrients) and produces a high quality reclaimed water utilized throughout the South Beaches Reclaimed Water Service Area.

The design capacity of the South Beaches WWTF is as follows:

TREATMENT FACILITY	PERMITTED FLOW CONDITION (MGD)		
	AADF	MDF*	PHF
South Beaches WWTF	8.00	12.00	18.00

The County accomplishes effluent disposal through the following FDEP-approved reuse/effluent disposal methods outlined in Operations Permit No. FL0040622: (1) Slow-rate Public Access Reuse system (R-001); (2) Surface water discharge system (D-001) to the Indian River Lagoon; and (3) Deep Injection Well (U-001)

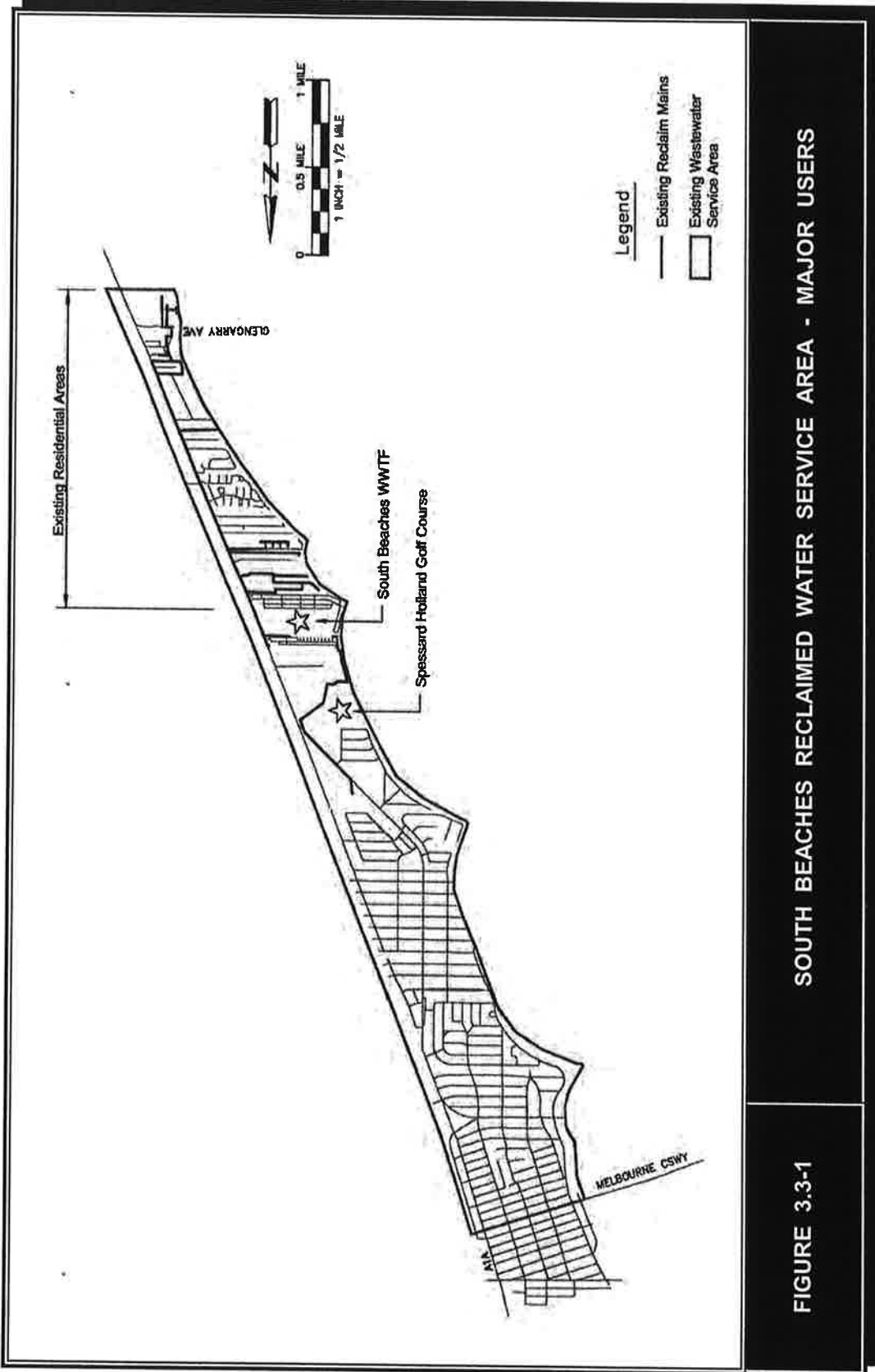
The County has, as previously described, implemented a system for the beneficial reuse of the reclaimed water produced from the South Beaches WWTF. The County began sending reclaimed water to the Spessard Holland Golf Course for public access spray irrigation in the 1980's. The reclaimed water system was expanded in the 1990's to include public access spray irrigation/land application of local residential neighborhoods. New reclaimed water sites may be added as the reclaimed water service area expands in the future. The major users of reclaimed water (using more than 0.1 MGD) in the South Beaches Reclaimed Water Service Area are identified in the table below and presented graphically in Figure 3.3-1.

Site No.	User Name	User Type	Capacity (MGD)	Area (ac)
PAA-001	Residential Areas	Residential	0.300	35.9
PAA-002	Spessard Holland Golf Course	Golf Courses	0.993	80
Total:			1.293	115.9

Reclaimed water storage is located throughout the County's South Beaches Wastewater Management Service Area as indicated in the table below.

Reclaimed Water Storage Location	No. of Units	Total Storage Volume (MG)
South Beaches WWTF Ground Storage Tank	1	0.60
Spessard Holland Golf Course Storage Ponds	7	4.31
Total Reclaimed Water Storage Capacity:	8	4.91

The current effluent disposal capacity of the South Beaches Wastewater Management System is as follows:



South Beaches WWTF Effluent Disposal System	ID	Effluent Disposal Capacity (MGD)
Slow-Rate Public Access System	R-001	3.00
Deep Injection Well (DIW) System	U-001	9.00
Surface Water Discharge (during MIT of the DIW)*	D-001	0.11
South Beaches WWTF - Total Effluent Disposal Capacity:		12.00

* Disposal Method only used when the DIW System is out of service for Mechanical Integrity Testing (not included in overall disposal capacity)

3.4 HISTORICAL WASTEWATER FLOWS

Historical wastewater flows, including monthly ADF flows, three-month ADF flows and annual ADF flows, for the South Beaches WWTF for Calendar Years 2015 - 2020) are presented in Table 3.4-1 and are plotted as a function of time in Figures 3.4-1 through 3.4-3, respectively. Historical annual variations in wastewater flow (Calendar Years 2016 - 2020) are presented below in tabular form and graphically in Figure 3.4-4.

Calendar Year	AADF (MGD)	Max Month Flow (MGD)	Maximum 3-Month ADF		Maximum 3-Month ADF to AADF Ratio	Maximum Month Peaking Factor
			Month	Flow (MGD)		
2016	6.997	9.030	November	7.705	1.101	1.291
2017*	7.048	11.884	November	9.937	1.410	1.686
2018	5.907	6.711	January	7.002	1.185	1.136
2019	6.402	7.317	December	6.922	1.081	1.143
2020	6.256	7.626	November	7.101	1.135	1.219
Five-Year Average Flow Ratios/Factors:					1.183	1.295
Max Flow Ratios Adjusted to Exclude Hurricane Irma Effects					1.126	1.197

The ratio of the maximum 3-month ADF to AADF averaged 1.183 and was found to vary over the five-year period (1.081 - 1.410). Likewise, the maximum month peaking factor averaged 1.295 and was also found to vary over the five-year period (1.136 - 1.686). The high ratios in 2017 were due to the effects of Hurricane Irma. Excluding the effects of Hurricane Irma, the adjusted Maximum 3-Month ADF to AADF and Maximum Month Peaking Factors are 1.126 and 1.197.

Table 3.4-1: South Beaches WWTF - Historical Wastewater Flows

Month	Year	Monthly ADF (MGD)	3-Month ADF (MGD)	AADF (MGD)
JANUARY	2015	6.529	6.431	6.776
FEBRUARY	2015	6.876	6.559	6.746
MARCH	2015	6.196	6.534	6.728
APRIL	2015	6.417	6.496	6.746
MAY	2015	6.443	6.352	6.728
JUNE	2015	6.593	6.484	6.755
JULY	2015	7.241	6.759	6.779
AUGUST	2015	7.629	7.154	6.860
SEPTEMBER	2015	8.202	7.690	6.925
OCTOBER	2015	7.261	7.697	6.846
NOVEMBER	2015	6.534	7.332	6.850
DECEMBER	2015	6.698	6.831	6.885
2016				
JANUARY	2016	7.105	6.779	6.933
FEBRUARY	2016	7.250	7.018	6.964
MARCH	2016	6.561	6.972	6.994
APRIL	2016	6.418	6.743	6.995
MAY	2016	7.194	6.724	7.057
JUNE	2016	7.516	7.043	7.134
JULY	2016	6.705	7.138	7.089
AUGUST	2016	6.178	6.800	6.968
SEPTEMBER	2016	7.773	6.885	6.933
OCTOBER	2016	9.150	7.700	7.090
NOVEMBER	2016	6.312	7.745	7.072
DECEMBER	2016	5.989	7.150	7.013

Table 3.4-1: South Beaches WWTF - Historical Wastewater Flows (Cont'd)

Month	Year	Monthly ADF (MGD)	3-Month ADF (MGD)	AADF (MGD)
JANUARY	2017	5.482	5.928	6.877
FEBRUARY	2017	5.755	5.742	6.753
MARCH	2017	5.507	5.581	6.665
APRIL	2017	5.580	5.614	6.595
MAY	2017	5.524	5.537	6.456
JUNE	2017	6.563	5.889	6.377
JULY	2017	6.923	6.337	6.395
AUGUST	2017	6.944	6.810	6.459
SEPTEMBER	2017	9.835	7.901	6.630
OCTOBER	2017	11.884	9.554	6.858
NOVEMBER	2017	8.091	9.937	7.006
DECEMBER	2017	6.421	8.799	7.042
JANUARY	2018	6.494	7.002	7.127
FEBRUARY	2018	5.850	6.255	7.135
MARCH	2018	5.656	6.000	7.147
APRIL	2018	5.676	5.727	7.155
MAY	2018	6.594	5.975	7.244
JUNE	2018	6.521	6.264	7.241
JULY	2018	6.711	6.609	7.223
AUGUST	2018	6.063	6.432	7.150
SEPTEMBER	2018	5.456	6.077	6.785
OCTOBER	2018	5.366	5.629	6.242
NOVEMBER	2018	5.173	5.332	5.998
DECEMBER	2018	5.306	5.282	5.906

Table 3.4-1: South Beaches WWTF - Historical Wastewater Flows (Cont'd)

Month	Year	Monthly ADF (MGD)	3-Month ADF (MGD)	AADF (MGD)
JANUARY	2019	5.490	5.323	5.822
FEBRUARY	2019	6.771	5.856	5.899
MARCH	2019	6.351	6.204	5.957
APRIL	2019	5.910	6.344	5.976
MAY	2019	6.406	6.223	5.960
JUNE	2019	6.127	6.148	5.928
JULY	2019	5.447	5.993	5.822
AUGUST	2019	7.023	6.199	5.902
SEPTEMBER	2019	6.555	6.342	5.994
OCTOBER	2019	7.317	6.965	6.156
NOVEMBER	2019	6.706	6.859	6.284
DECEMBER	2019	6.742	6.922	6.404
JANUARY	2020	5.940	6.463	6.441
FEBRUARY	2020	5.694	6.125	6.352
MARCH	2020	5.264	5.632	6.261
APRIL	2020	5.642	5.533	6.239
MAY	2020	5.819	5.575	6.190
JUNE	2020	6.735	6.065	6.240
JULY	2020	6.741	6.432	6.348
AUGUST	2020	5.963	6.480	6.260
SEPTEMBER	2020	6.480	6.395	6.254
OCTOBER	2020	7.196	6.547	6.243
NOVEMBER	2020	7.626	7.101	6.320
DECEMBER	2020	5.967	6.930	6.256

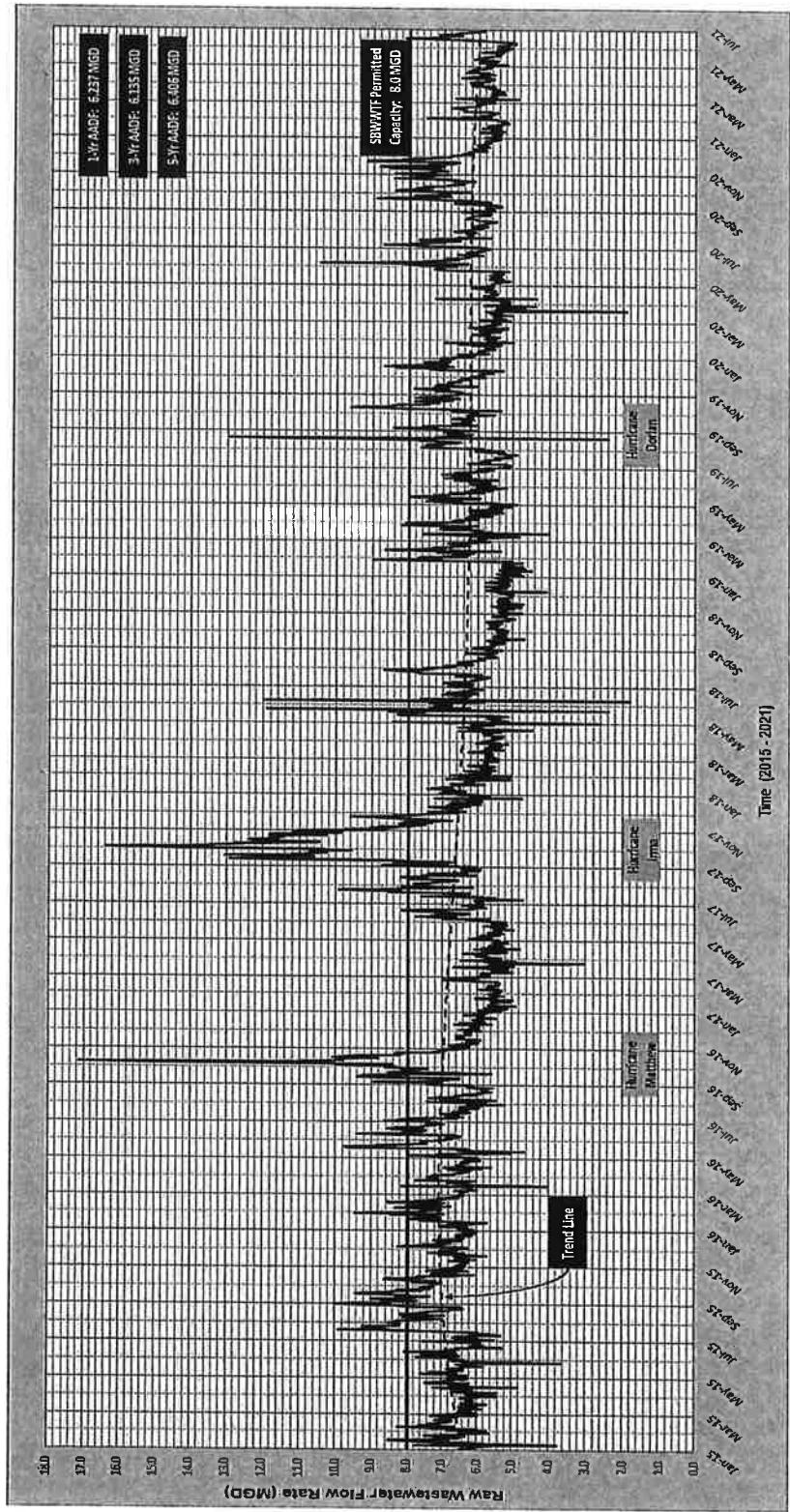


FIGURE 3.4-1 SOUTH BEACHES WWTF: HISTORICAL WASTEWATER FLOWS (ADF)



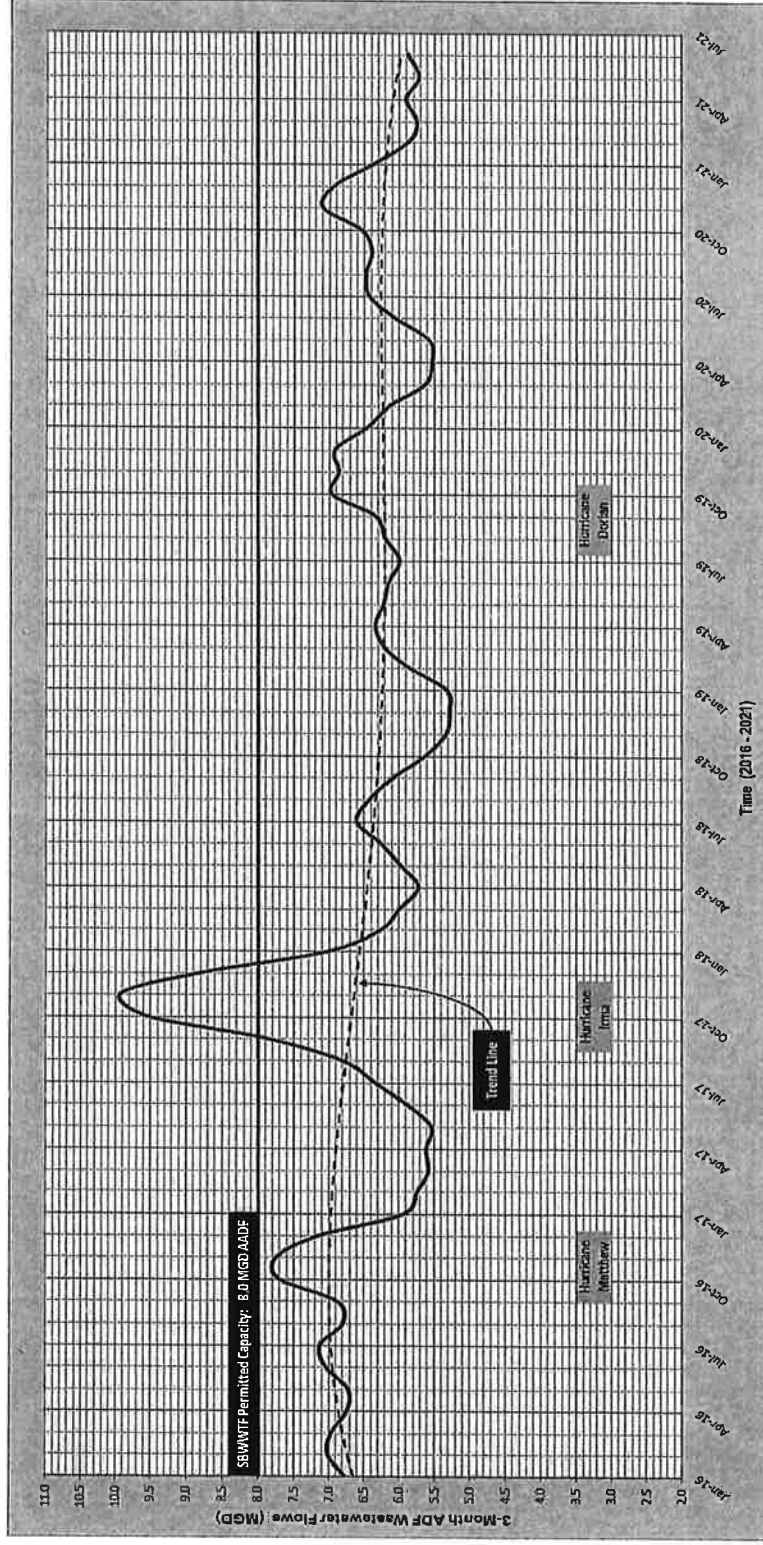


FIGURE 3.4-2 SOUTH BEACHES WWTF: HISTORICAL WASTEWATER FLOWS (3-MONTH ADF)



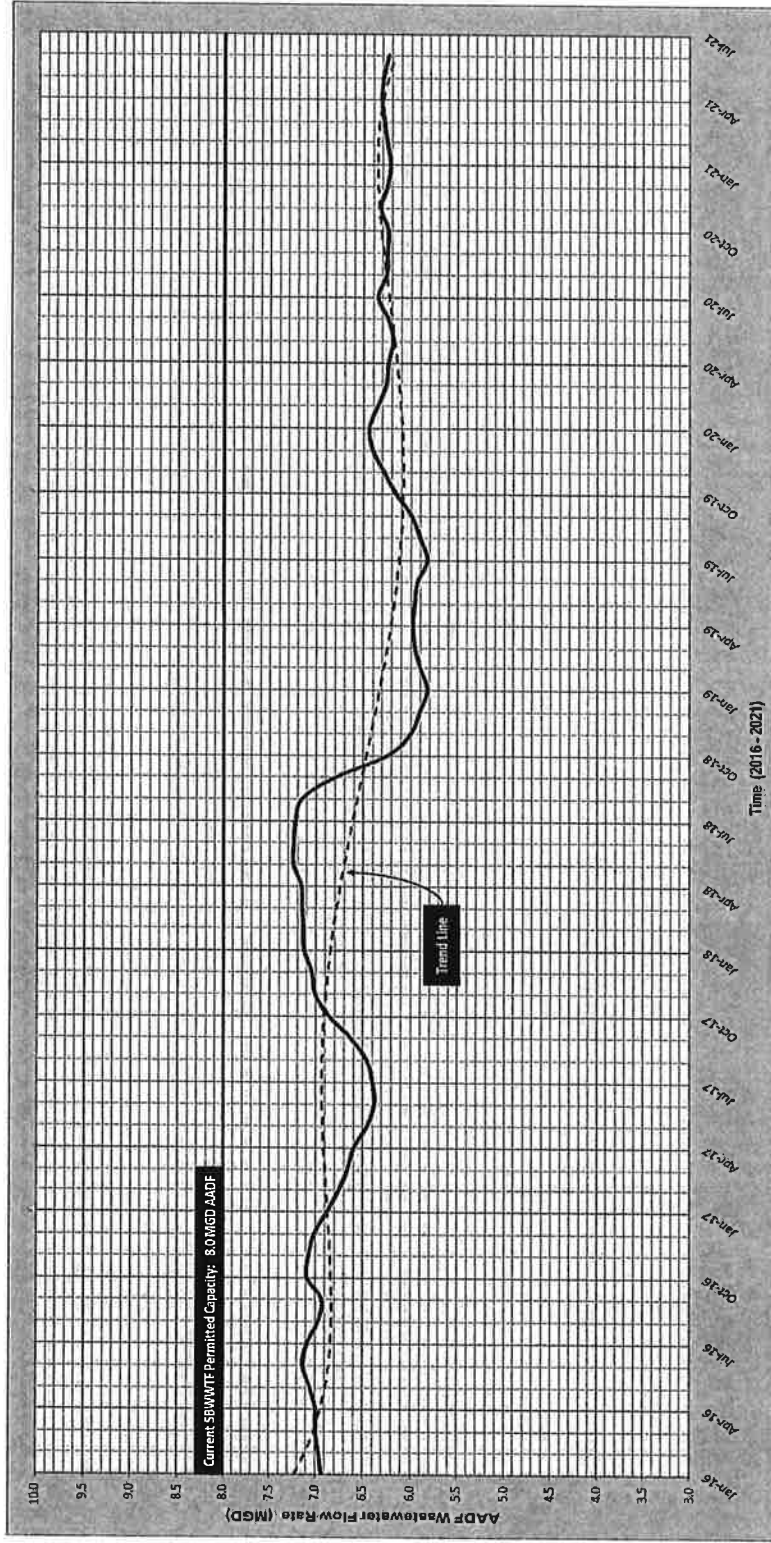


FIGURE 3.4-3

SOUTH BEACHES WWTF: HISTORICAL WASTEWATER FLOWS (AADF)

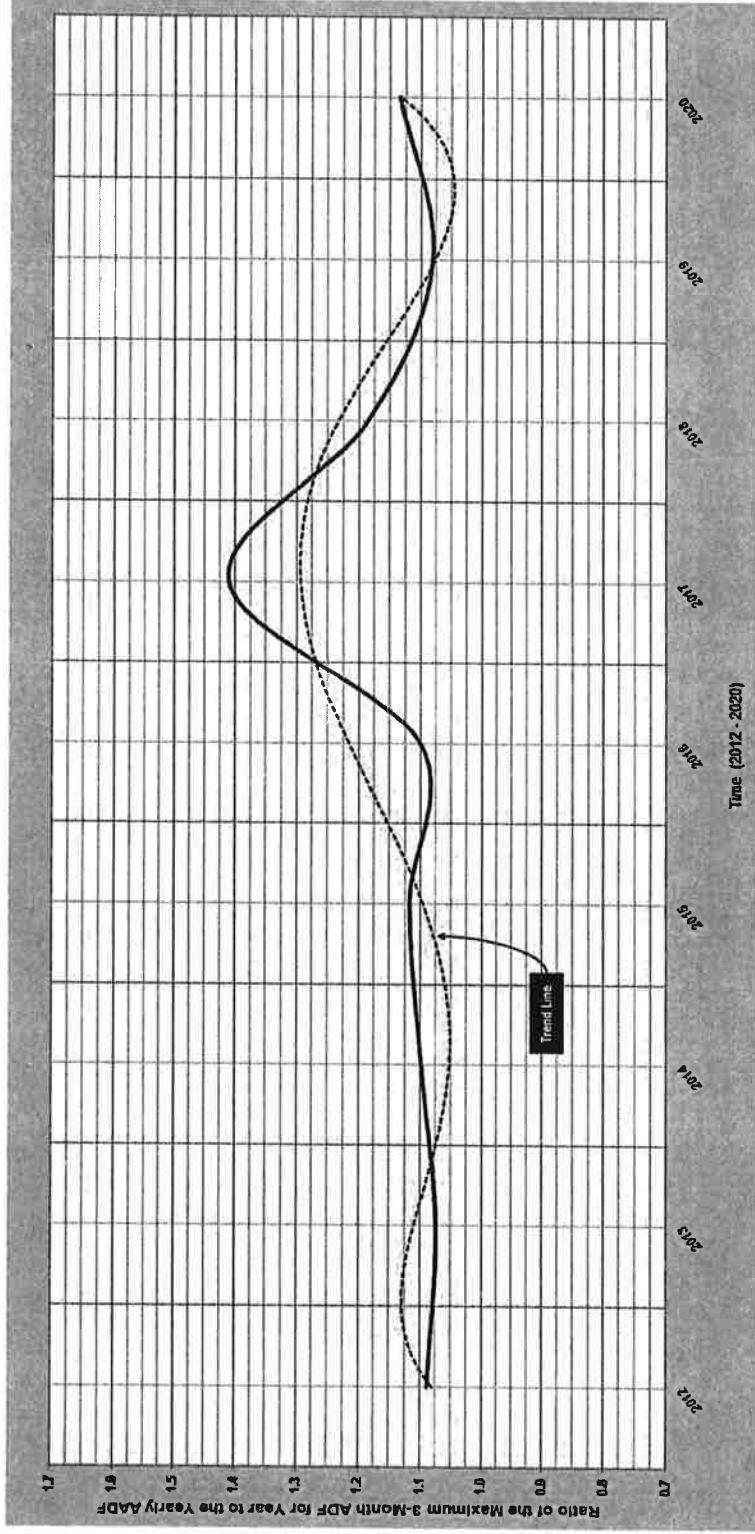


FIGURE 3.4-4

SOUTH BEACHES WWTF: ANNUAL VARIATIONS IN FLOW

A review of the historical raw wastewater flows to the South Beaches WWTF, during the past five (5) years and in the last twelve (12) months, are synopsized in the table below.

Raw Wastewater Flow Condition	South Beaches WWTF Raw Wastewater Flow (MGD)	
	Jan 2016 - Dec 2020	Calendar Year 2020
Average Daily Flow	6.525	6.256
Maximum Day Flow	17.130	10.460
Minimum Day Flow	1.820	1.920
Monthly ADF Range	5.173 - 11.884	5.264 - 7.626
3-Month ADF Range	5.282 - 9.937	5.533 - 7.101
AADF Range (monthly rolling average)	5.821 - 7.244	6.190 - 6.441
% of Permitted Facility Capacity (ADF)	81.6	78.2

The South Beaches WWTF raw wastewater flows, during the last 5-Year period, were approximately 81.6% of the permitted capacity of the facility. The raw wastewater flow treated at the facility during Calendar Year 2020 was approximately 78.2% of the permitted capacity of the facility. Thus, flow rates are below the facility's permitted capacity (8.0 MGD AADF) and the South Beaches WWTF is capable of handling the raw wastewater hydraulic loadings anticipated over the 20-year planning horizon.

3.5 FACILITY EFFLUENT FLOWS

As previously indicated in Section 3.2.7, treated effluent from the South Beaches WWTF can be discharged to any of the three (3) FDEP-permitted disposal systems:

Effluent Disposal System	Effluent Disposal Capacity (MGD AADF)
Land Application System (R-001)	3.00
Underground Injection System (U-001)	9.00
Surface Water Discharge (D-001)	0.11

The South Beaches WWTF effluent flows, by disposal system (R-001, U-001 and D-001), on a monthly and annual basis, for the period from Jan 2016 - Dec 2020 are presented in Table 3.5-1 and graphically (ADF and AADF) in Figures 3.5-1 through 3.5-6, respectively.

Table 3.5-1: South Beaches WWTF - Effluent Disposal (2016 - 2020)			
Month/Year	Public Access Reuse System Flow - R-001 (MGD)	Deep Injection Well (DIW) - U-001 (MGD)	Surface Water Discharge Flow to the IRL - D-001 (MGD)
Jan 2016	1.221	5.240	0.000
Feb 2016	1.240	5.095	0.000
Mar 2016	1.140	4.671	0.000
Apr 2016	1.388	4.365	0.000
May 2016	1.609	4.892	0.000
Jun 2016	1.619	5.136	0.000
Jul 2016	1.707	4.297	0.000
Aug 2016	1.527	3.914	0.000
Sep 2016	1.261	5.731	0.000
Oct 2016*	1.076	6.750	0.034
Nov 2016	1.406	4.478	0.000
Dec 2016	1.358	3.875	0.000
2016 Average	1.379	4.870	0.003
Jan 2017	1.271	3.795	0.000
Feb 2017	1.333	3.973	0.000
Mar 2017	1.507	3.523	0.083
Apr 2017	1.618	3.314	0.000
May 2017	1.657	3.349	0.000
Jun 2017	1.531	4.655	0.000
Jul 2017	1.539	5.054	0.000
Aug 2017	1.505	5.205	0.000
Sep 2017	0.989	6.852	1.023
Oct 2017**	0.426	8.129	2.091
Nov 2017	1.080	6.251	0.000
Dec 2017	1.049	4.780	0.000
2017 Average	1.292	4.907	0.266

Table 3.5-1: South Beaches WWTF - Effluent Disposal (2016 - 2020)			
Month/Year	Public Access Reuse System Flow - R-001 (MGD)	Deep Injection Well (DIW) - U-001 (MGD)	Surface Water Discharge Flow to the IRL - D-001 (MGD)
Jan 2018	1.102	4.724	0.000
Feb 2018	1.227	4.070	0.000
Mar 2018	1.330	3.778	0.000
Apr 2018	1.232	3.917	0.000
May 2018	1.158	4.951	0.000
Jun 2018	1.252	4.874	0.000
Jul 2018	1.292	5.035	0.000
Aug 2018	1.515	4.917	0.000
Sep 2018	1.560	3.532	0.000
Oct 2018	1.521	3.427	0.000
Nov 2018	1.478	3.412	0.000
Dec 2018	1.341	3.627	0.000
2018 Average	1.334	4.189	0.000
Jan 2019	1.304	3.712	0.000
Feb 2019	1.110	5.079	0.000
Mar 2019	1.197	4.495	0.000
Apr 2019	1.226	4.268	0.000
May 2019	1.192	4.846	0.000
Jun 2019	1.250	4.277	0.000
Jul 2019	1.343	4.105	0.000
Aug 2019	1.079	5.398	0.000
Sep 2019	1.066	4.820	0.000
Oct 2019	1.288	5.203	0.000
Nov 2019	1.148	4.850	0.000
Dec 2019	0.935	5.043	0.000
2019 Average	1.178	4.675	0.000

Table 3.5-1: South Beaches WWTF - Effluent Disposal (2016 - 2020)

Month/Year	Public Access Reuse System Flow - R-001 (MGD)	Deep Injection Well (DIW) - U-001 (MGD)	Surface Water Discharge Flow to the IRL - D-001 (MGD)
Jan 2020	1.164	4.029	0.000
Feb 2020	1.203	3.848	0.000
Mar 2020	1.542	3.229	0.000
Apr 2020	1.380	3.746	0.000
May 2020	1.372	3.910	0.000
Jun 2020	1.259	4.860	0.000
Jul 2020	1.257	4.987	0.000
Aug 2020	1.410	4.135	0.000
Sep 2020	1.527	4.699	0.000
Oct 2020	1.834	5.483	0.000
Nov 2020	2.138	5.998	0.000
Dec 2020	2.662	4.074	0.000
2020 Average	1.562	4.417	0.000

Effluent Disposal Percentage by Disposal System (2016 - 2020)

Calendar Year	Effluent Disposal System Flow (MGD AADF)			Overall Effluent Disposal (%)		
	Public Access Reuse System - PAR (R-001)	Deep Injection Well (U-001)	Surface Water Discharge (D-001)	PAR (R-001)	DIW (U-001)	SW Discharge (D-001)
2016*	1.379	4.870	0.003	22.1%	77.9%	0.0%
2017**	1.292	4.907	0.266	20.0%	75.9%	4.1%
2018	1.334	4.189	0.000	24.2%	75.8%	0.0%
2019	1.178	4.675	0.000	20.1%	79.9%	0.0%
2020	1.562	4.417	0.000	26.1%	73.9%	0.0%
5-Yr Avg.	1.349	4.612	0.054	22.5%	76.7%	0.8%

* Surface Water Discharge due to Hurricane Matthew

** Surface Water Discharge due to Hurricane Irma

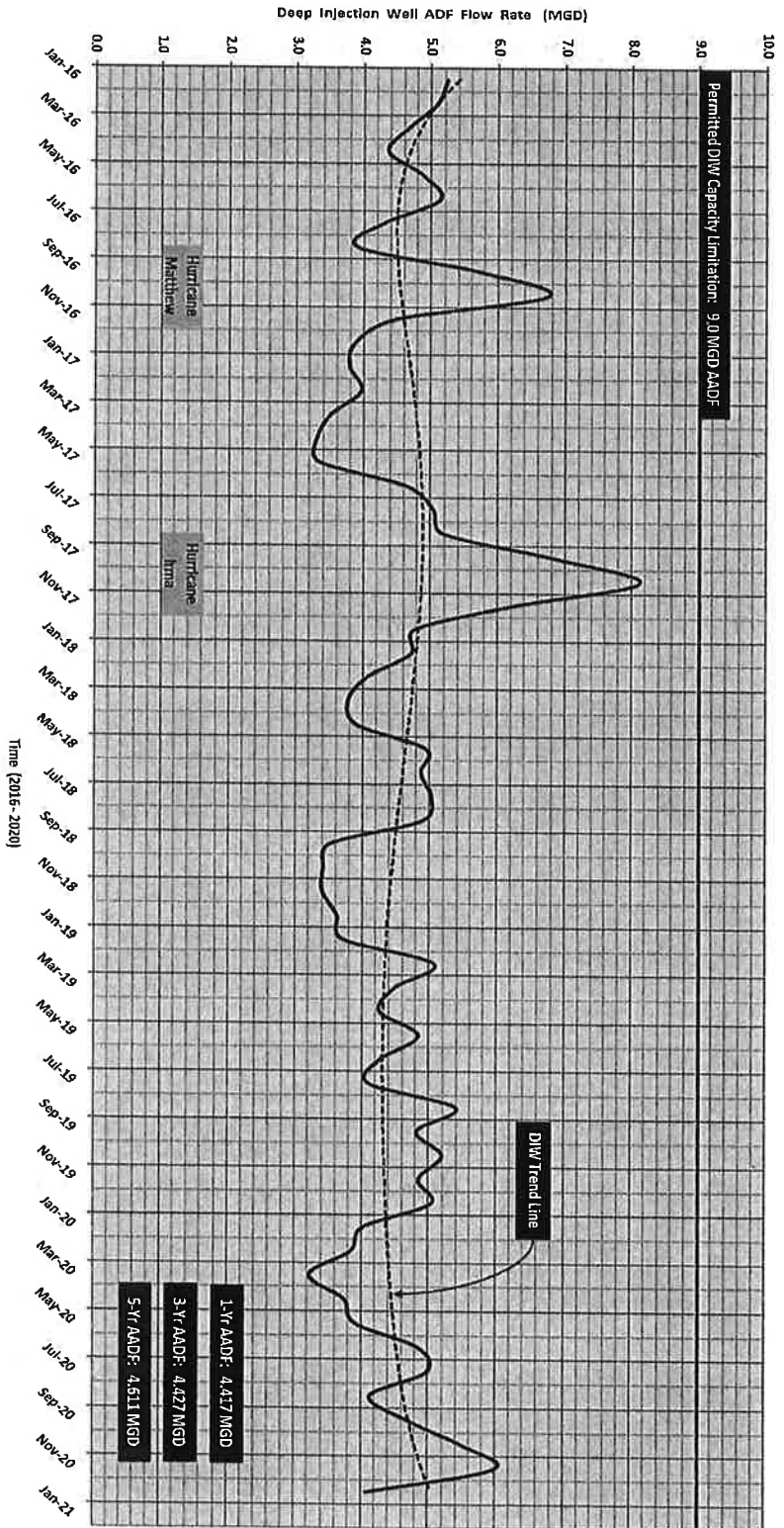


FIGURE 3.5-1

SOUTH BEACHES WWTF: DEEP INJECTION WELL (U-001) - HISTORICAL EFFLUENT MONTHLY ADF

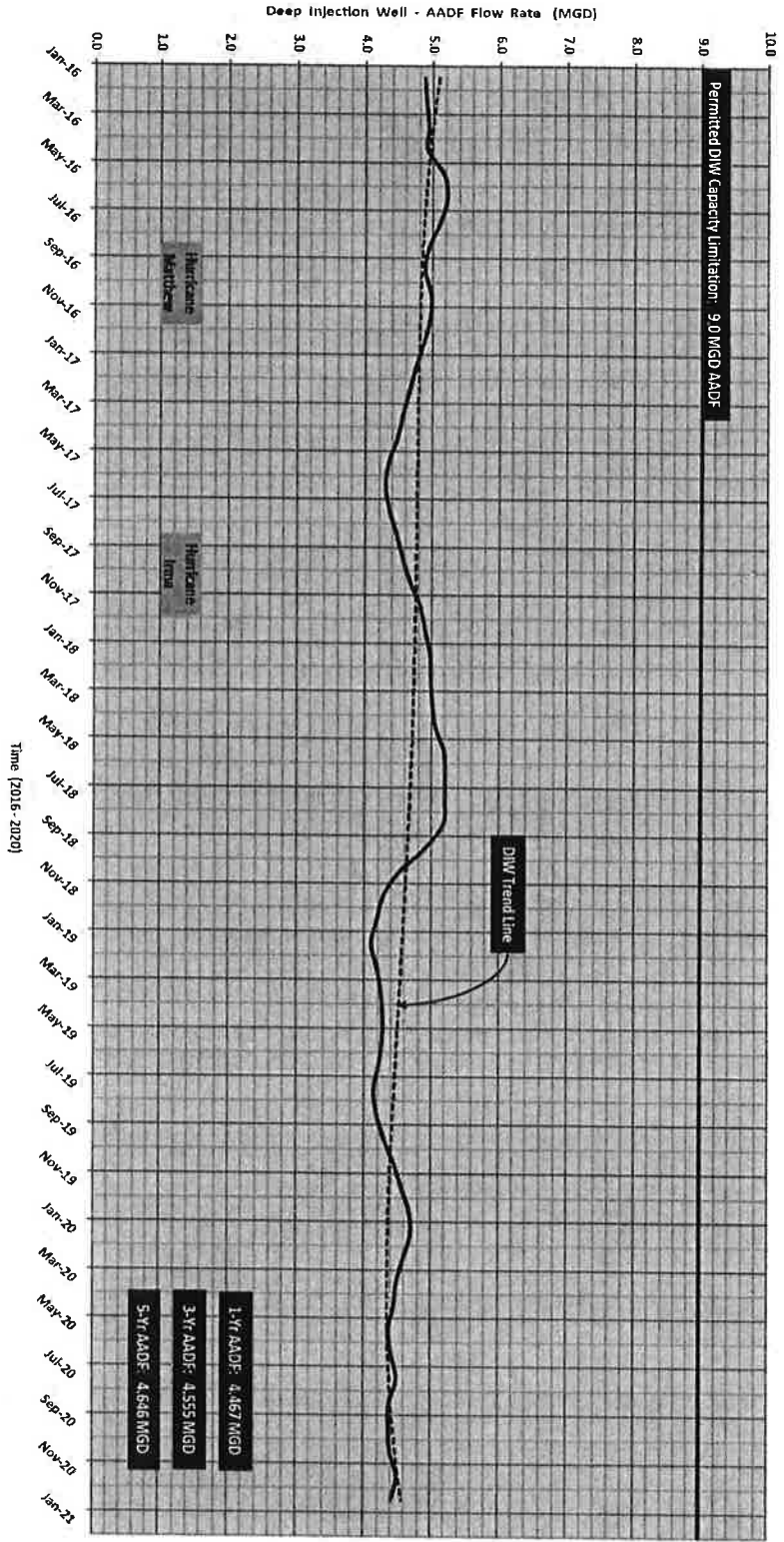


FIGURE 3.5-2

SOUTH BEACHES WWTF: DEEP INJECTION WELL (U-001) - HISTORICAL EFFLUENT AADF

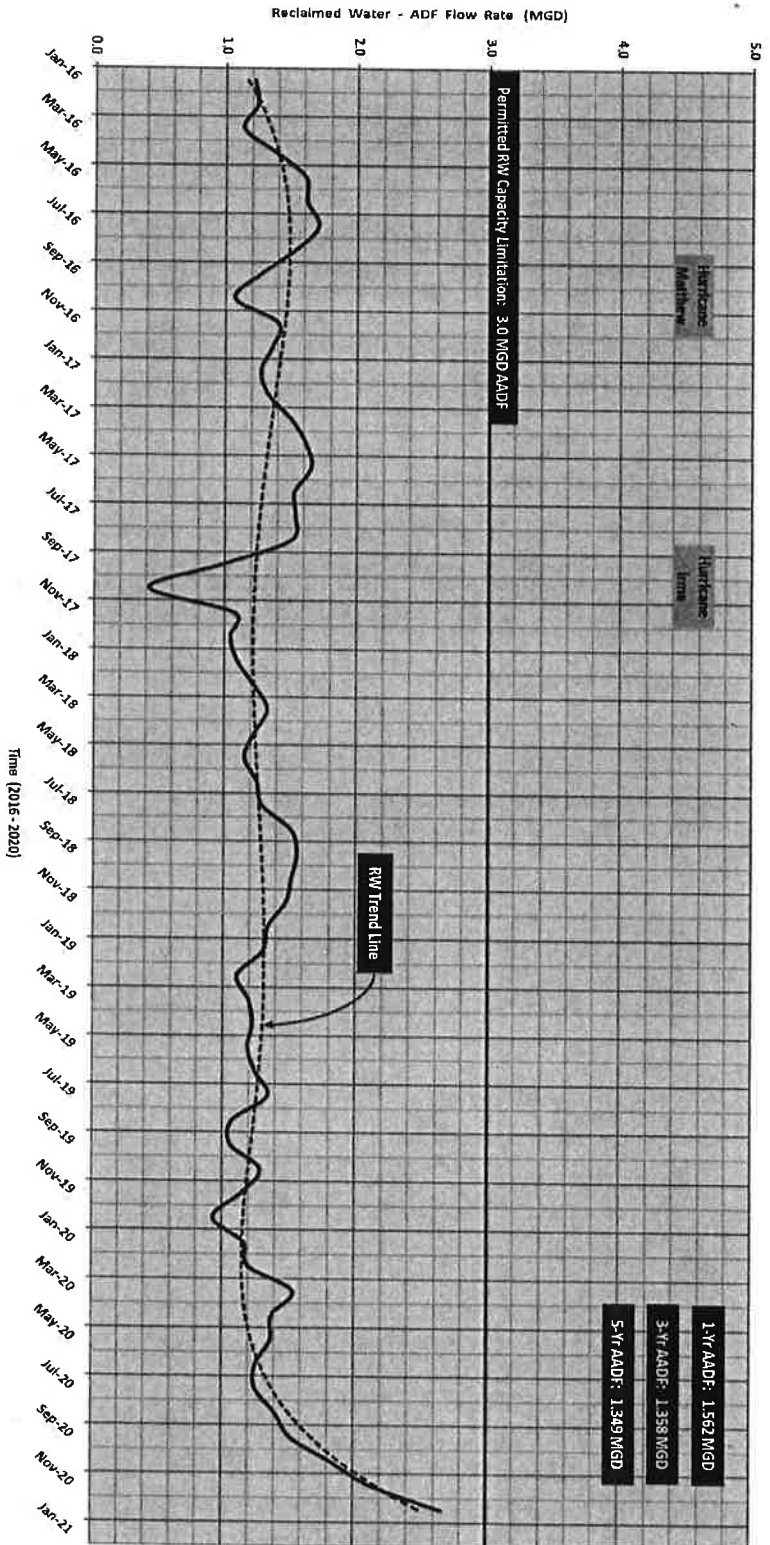


FIGURE 3.5-3

SOUTH BEACHES WWTF: RECLAIMED WATER SYSTEM (R-001) - HISTORICAL EFFLUENT MONTHLY ADF

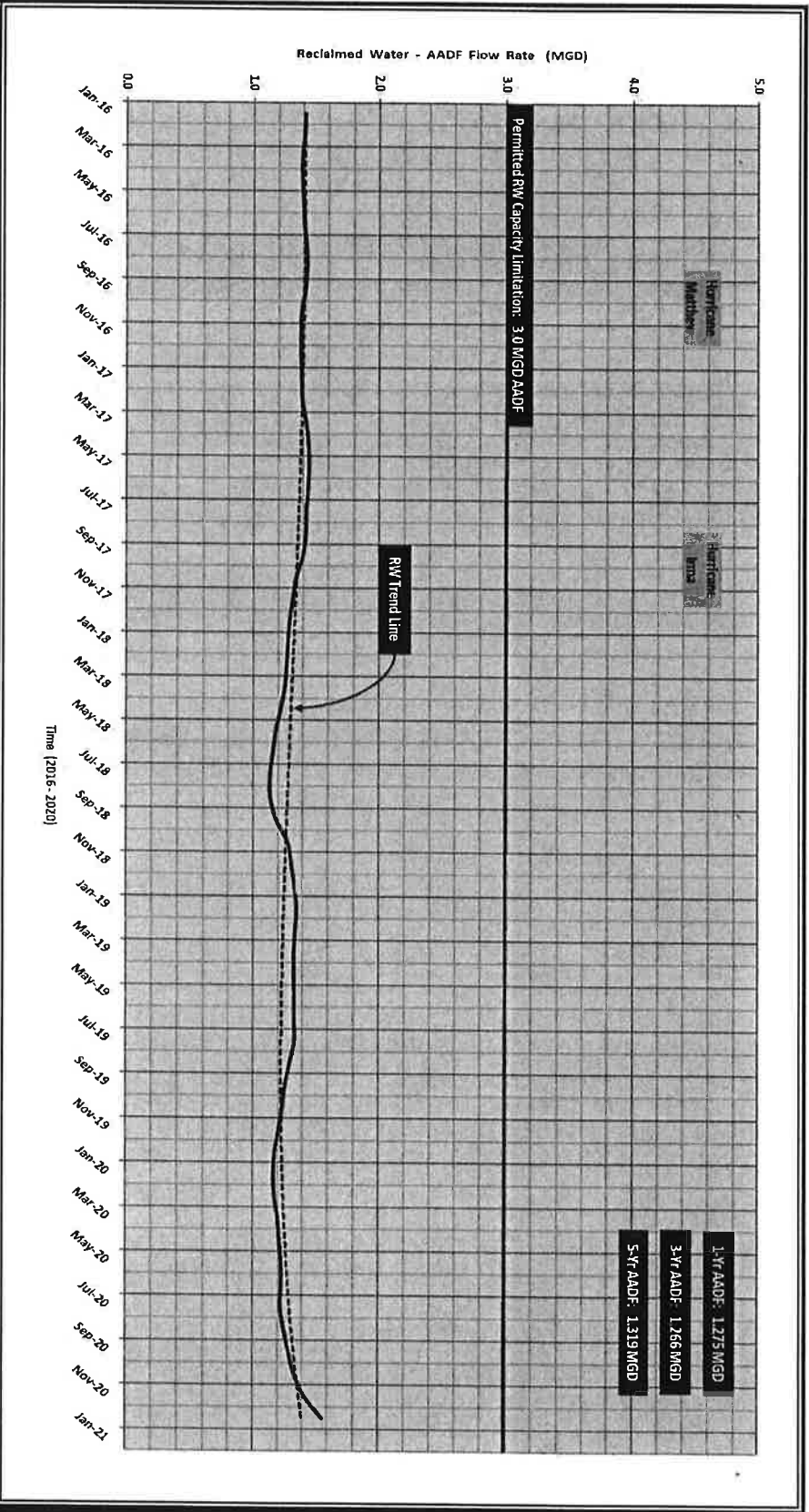


FIGURE 3.5-4

SOUTH BEACHES WWTF: RECLAIMED WATER SYSTEM (R-001) - HISTORICAL EFFLUENT AADF



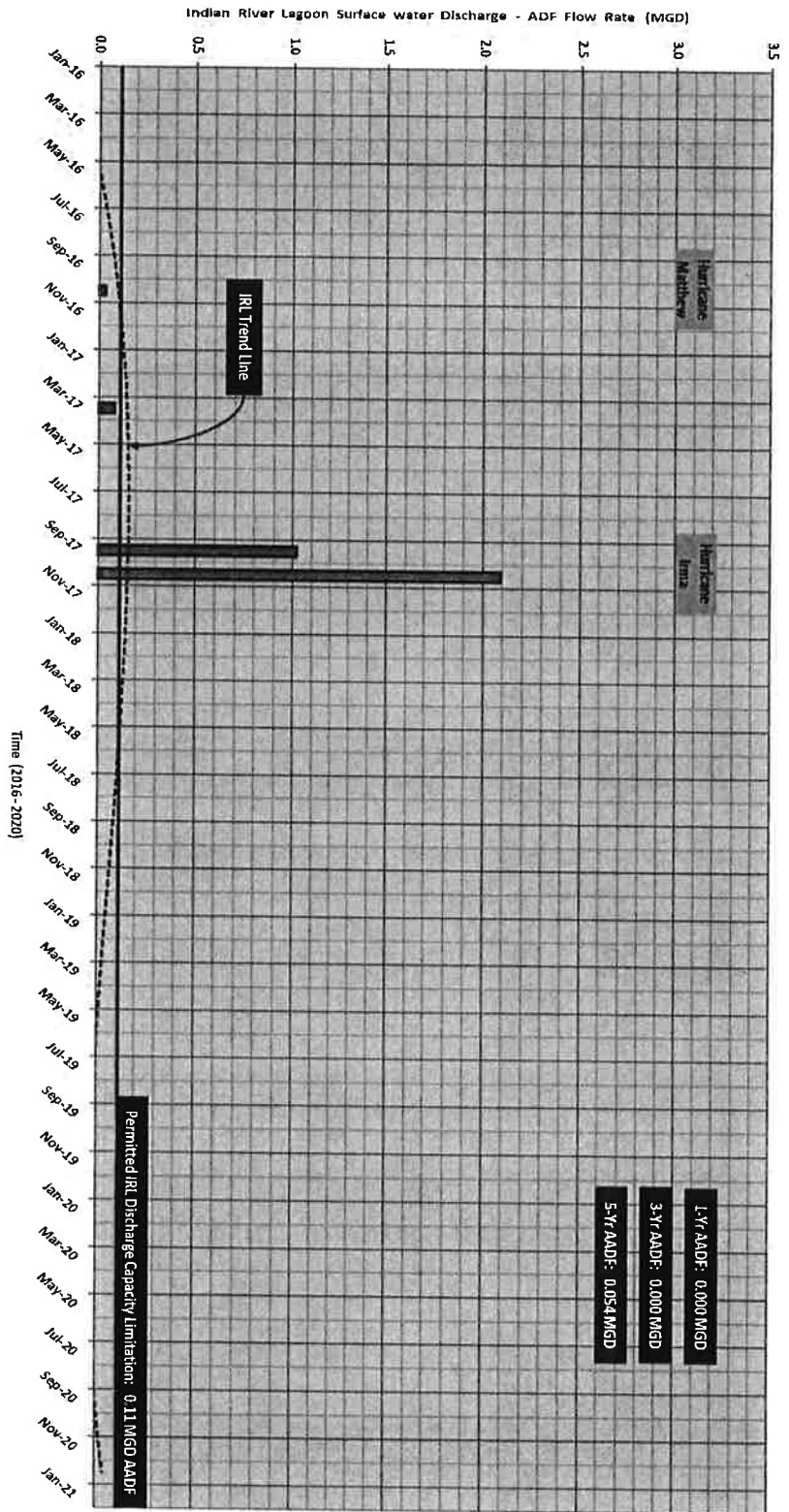


FIGURE 3.5.5

SOUTH BEACHES WWTF: SURFACE WATER DISCHARGE (D-001) TO THE INDIAN RIVER LAGOON (IRL) - HISTORICAL EFFLUENT MONTHLY ADF



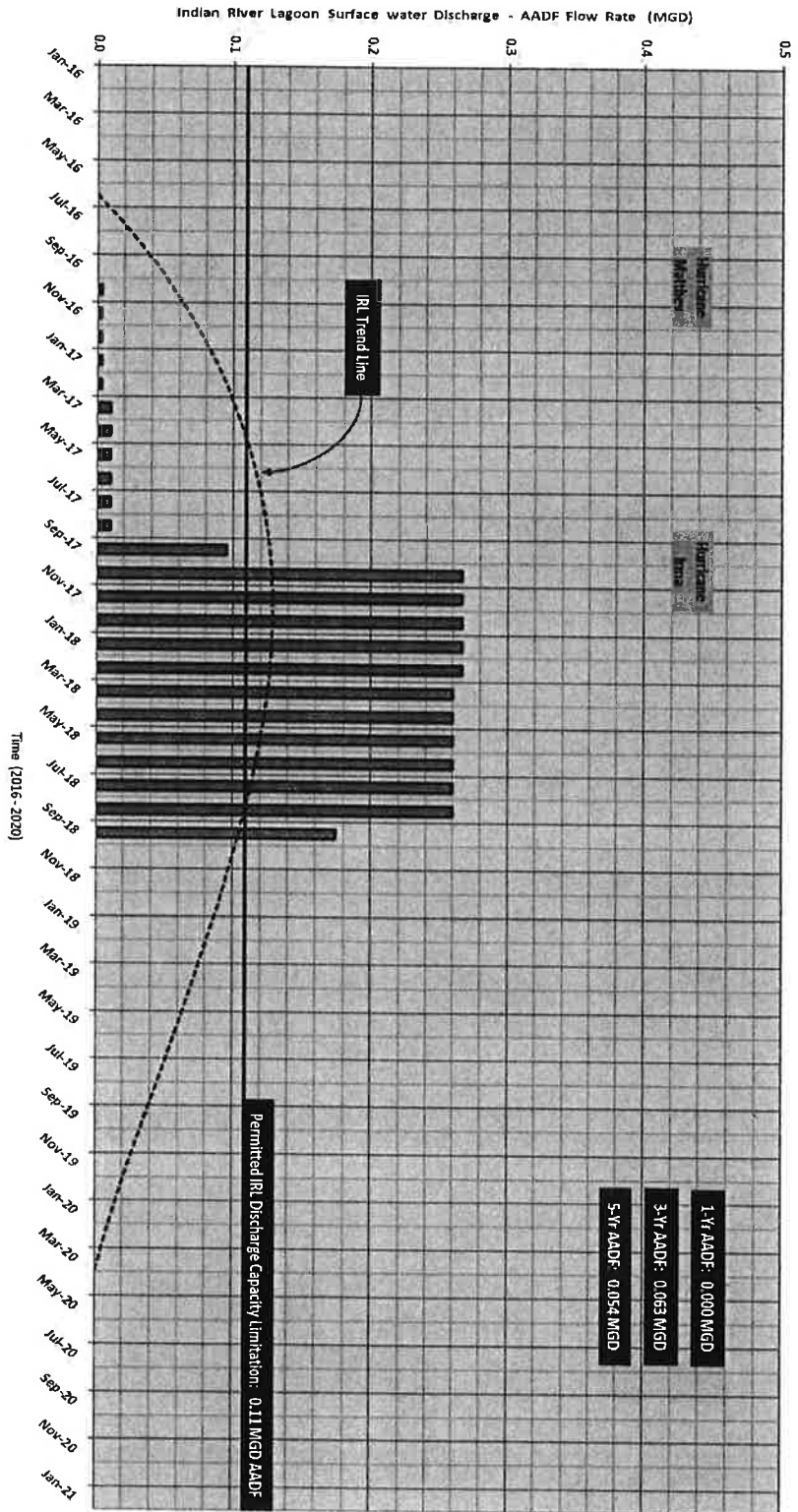


FIGURE 3.5-6

SOUTH BEACHES WWTF: SURFACE WATER DISCHARGE (D-001) TO THE INDIAN RIVER LAGOON (IRL) - HISTORICAL EFFLUENT AADF

The South Beaches WWTF has only reused approximately 22.5% of the facility's annual average effluent flow over the five-year period from 2016 - 2020. Approximately 0.8% of the effluent flow over this five year period were surface water discharges from the treatment facility to the Indian River Lagoon; these mainly due to discharges occurring from the intense rainfall events associated with tropical events (Hurricanes Matthew and Irma) and mechanical integrity testing of the Deep Injection Well (DIW). The majority of the South Beaches WWTF effluent (76.7%) was conveyed to the Deep Injection Well (DIW) for ultimate disposal.

3.6 FACILITY EFFLUENT QUALITY

Reclaimed water quality (CBOD₅, TSS, TN, TP, pH and Fecal Coliform) generated by the South Beaches WWTF, for the last five calendar years (2016 - 2020), is presented in Table 3.6-1. The South Beaches WWTF treatment system efficiencies, for the same five-year period are presented below:

South Beaches WWTF - Treatment System Efficiency (2016 - 2020)*							
Parameter	Influent Conc. (mg/L)	Influent Loading (lb/day)	Effluent Conc. (mg/L)	Effluent Load (lb/day)	Parameter Removal (lb/day)	Percent Removal	
						Design	Actual
CBOD ₅	39	2,111	1.5	83	2,029	90%	96.1%
TSS	19	1,012	0.7	35	977	90%	96.5%
TN**	50	2,721	7.8	422	2,299	80%	84.5%
TP**	8	435	1.8	99	336	70%	77.3%

* AADF (2016 - 2020): 6.525 MGD

** Assumed Influent Concentration (testing not required by permit)

3.6.1 CBOD₅ Treatment (Removal) Efficiency

Over the last five-year period (Calendar Years 2016 - 2020), actual influent CBOD₅ concentrations have been significantly below the values used in the design of the facility (200 mg/L). The South Beaches WWTF has the ability to operate efficiently between 50 mg/L and 400 mg/L by adjusting process operations.

The effluent CBOD₅ concentrations are below the design values used for the facility, typical AWT standards (< 5 mg/L), and meet the limitations identified in the current FDEP Operations Permit.

Table 3.6-1: South Beaches WWTF - Reclaimed Water Quality (2016 - 2020)						
Month/Year	CBOD₅ (mg/L)	TSS (mg/L)	TN (mg/L)	TP (mg/L)	pH (S.U.)	Fecal (#/100 mL)
Permit Limit	20	5	---	---	6.0 - 8.5	25
Jan 2016	2.0	0.6	4.4	1.3	7.30	< 1
Feb 2016	1.5	0.8	0.8	1.3	7.21	< 1
Mar 2016	1.9	0.9	10.8	3.2	7.05	< 1
Apr 2016	1.7	0.8	10.5	1.5	7.01	< 1
May 2016	2.0	0.7	6.0	1.0	7.18	< 1
Jun 2016	1.9	0.5	4.9	1.7	7.39	< 1
Jul 2016	1.4	0.5	6.4	2.0	7.43	< 1
Aug 2016	1.7	0.5	2.7	2.0	7.42	< 1
Sep 2016	1.3	0.5	8.8	1.9	7.25	< 1
Oct 2016	1.6	0.5	5.2	1.4	7.26	< 1
Nov 2016	1.4	0.5	8.1	1.9	7.21	< 1
Dec 2016	1.4	0.6	13.8	2.3	7.21	< 1
2016 Avg.	1.6	0.6	6.9	1.8	7.24	< 1
Jan 2017	1.7	0.5	8.3	2.5	7.17	< 1
Feb 2017	2.1	0.5	4.3	2.5	7.37	< 1
Mar 2017	2.2	0.6	17.5	2.7	7.24	< 1
Apr 2017	1.7	0.7	5.8	2.4	7.22	< 1
May 2017	1.8	0.6	10.6	2.6	7.17	< 1
Jun 2017	2.1	0.5	12.2	2.2	7.35	< 1
Jul 2017	4.6	0.5	2.1	1.3	7.33	< 1
Aug 2017	2.7	0.6	4.9	1.5	7.30	< 1
Sep 2017	1.3	0.5	4.0	0.7	7.47	< 1
Oct 2017	1.0	0.5	3.6	0.2	7.51	< 1
Nov 2017	1.1	0.5	5.2	2.5	7.33	< 1
Dec 2017	1.1	0.5	8.4	1.7	7.35	< 1
2017 Avg.	1.9	0.6	7.2	1.9	7.32	< 1

Table 3.6-1: South Beaches WWTF - Reclaimed Water Quality (2016 - 2020)

Month/Year	CBOD ₅ (mg/L)	TSS (mg/L)	TN (mg/L)	TP (mg/L)	pH (S.U.)	Fecal (#/100 mL)
Permit Limit	20	5	---	---	6.0 - 8.5	25
Jan 2018	1.2	0.7	7.3	1.9	7.31	< 1
Feb 2018	1.1	0.5	8.8	2.2	7.11	< 1
Mar 2018	1.5	0.5	7.8	2.3	7.08	< 1
Apr 2018	1.2	0.5	9.3	2.2	7.14	< 1
May 2018	1.5	0.6	6.0	2.1	7.41	< 1
Jun 2018	1.4	0.5	6.5	1.4	7.31	< 1
Jul 2018	1.9	0.5	5.0	1.6	7.34	< 1
Aug 2018	1.5	0.5	7.7	1.5	7.35	< 1
Sep 2018	1.5	0.5	4.8	1.9	7.25	< 1
Oct 2018	1.0	0.5	6.4	2.0	7.33	< 1
Nov 2018	1.5	0.5	5.3	2.0	7.32	< 1
Dec 2018	1.8	0.6	9.8	2.0	7.13	< 1
2018 Avg.	1.4	0.5	7.1	1.9	7.26	< 1
Jan 2019	1.5	0.5	10.1	2.0	7.14	< 1
Feb 2019	1.8	0.7	6.9	1.8	7.06	< 1
Mar 2019	1.5	1.0	9.8	1.9	7.14	< 1
Apr 2019	1.9	1.2	6.1	2.0	7.05	< 1
May 2019	1.2	0.8	8.1	0.9	6.87	< 1
Jun 2019	1.5	0.6	8.2	1.3	7.08	< 1
Jul 2019	1.3	3.4	9.9	1.2	7.15	< 1
Aug 2019	1.1	1.2	7.1	1.2	7.38	< 1
Sep 2019	1.1	0.5	9.1	1.6	7.41	< 1
Oct 2019	1.3	0.5	9.6	2.0	7.55	< 1
Nov 2019	1.3	0.6	8.6	1.5	7.38	< 1
Dec 2019	2.1	0.6	9.6	2.1	7.31	< 1
2019 Avg.	1.5	1.0	8.6	1.6	7.21	< 1

Table 3.6-1: South Beaches WWTF - Reclaimed Water Quality (2016 - 2020)

Month/Year	CBOD ₅ (mg/L)	TSS (mg/L)	TN (mg/L)	TP (mg/L)	pH (S.U.)	Fecal (#/100 mL)
Permit Limit	20	5	---	---	6.0 - 8.5	25
Jan 2020	1.3	0.5	9.3	1.9	7.23	< 1
Feb 2020	1.0	0.5	14.0	2.3	7.31	< 1
Mar 2020	1.1	0.6	1.2	2.5	7.32	< 1
Apr 2020	1.0	0.6	12.4	2.4	7.34	< 1
May 2020	1.0	0.5	12.0	2.0	7.34	< 1
Jun 2020	1.0	0.5	11.3	1.8	7.38	< 1
Jul 2020	1.2	0.5	7.6	1.0	7.43	< 1
Aug 2020	1.1	0.5	10.1	2.0	7.38	< 1
Sep 2020	1.2	0.7	7.9	1.8	7.37	< 1
Oct 2020	1.1	0.5	9.1	1.3	7.46	< 1
Nov 2020	1.3	0.7	7.2	1.5	7.36	< 1
Dec 2020	1.0	0.5	6.2	1.8	7.31	< 1
2020 Avg.	1.1	0.6	9.0	1.9	7.35	< 1
5-Year Avg.	1.5	0.7	7.8	1.8	7.28	< 1
5-Yr % Removal	96.1%	96.5%	84.5%	77.3%	---	---

The 5-Year CBOD₅ treatment (removal) efficiency averaged approximately 96.1%; which is greater than the design treatment efficiency of 90% and the minimum FDEP requirement of 85%. The CBOD₅ treatment (removal) efficiency in Calendar Year 2020 averaged 97.3% and the effluent CBOD₅ concentration from the facility has been significantly below the design value of 5 mg/L. **Thus, the South Beaches WWTF is highly effective in removing organic wastes from the raw wastewater.**

3.6.2 TSS Treatment (Removal) Efficiency

Over the last five-year period (Calendar Years 2016 - 2020), actual influent TSS concentrations have been below the values used in the design of the facility (200 mg/L); although the facility has the ability to operate efficiently between 40 mg/L and 500 mg/L by adjusting process operations.

The effluent TSS concentrations are below the design values used for the facility, typical AWT standards (< 5 mg/L) and meet the limitations identified in the current FDEP Operations Permit.

The 5-Year TSS treatment (removal) efficiency averaged approximately 96.5%; which is greater than the design treatment efficiency of 90% and the minimum FDEP requirement of 85%. The TSS treatment (removal) efficiency in Calendar Year 2020 averaged 98.4% and the effluent TSS concentration from the facility has been significantly below the design value of 5 mg/L. ***Thus, the South Beaches WWTF is highly effective in removing suspended solids from the raw wastewater as well as those generated in the treatment process.***

3.6.3 TN Treatment (Removal) Efficiency

Over the last five-year period (Calendar Years 2016 - 2020), actual influent TKN concentrations have been in the range of values used in the design of the facility. The facility has the ability to operate efficiently between 20 mg/L and 60 mg/L by adjusting process operations.

The 5-Year TN treatment (removal) efficiency averaged approximately 84.5%; which is greater than the design treatment efficiency of 80%. More recently, the TN treatment (removal) efficiency in Calendar Year 2020 averaged 81.9% with an average effluent TN concentration of 9.0 mg/L.

However, to meet the requirements of Section 403.086(1)(c), Florida Statutes, significant infrastructure improvements and upgrades will be required at the South Beaches WWTF to meet AWT Criteria. The infrastructure improvements must be operational by July 1, 2025 and designed to reduce the effluent TN concentration below 3.0 mg/L, on a consistent basis. To meet this regulatory deadline, design of the treatment facility improvements must begin within the next twelve (12) months.

3.6.4 TP Treatment (Removal) Efficiency

Over the last five-year period (Calendar Years 2016 - 2020), actual influent TP concentrations have been in the range of values used in the design of the facility. The facility has the ability to operate efficiently between 2 mg/L and 12 mg/L by adjusting process operations and/or adding alum/polymer to the treatment system effluent (enhancing TP removal via chemical precipitation).

The 5-Year TP treatment (removal) efficiency averaged approximately 77.3%; which is greater than the design treatment efficiency of 70%. More recently, the TP treatment (removal) efficiency in Calendar Year 2020 averaged 76.8% with an average effluent TP concentration of 1.9 mg/L.

However, to meet the requirements of Section 403.086(1)(c), Florida Statutes, significant infrastructure improvements and upgrades will be required at the South Beaches WWTF to meet AWT Criteria. The infrastructure improvements must be operational by July 1, 2025 and designed to reduce the effluent TP concentration below 1.0 mg/L, on a consistent basis. To meet this regulatory deadline, design of the treatment facility improvements must begin within the next twelve (12) months.

SECTION 4

NON-BENEFICIAL SURFACE WATER DISCHARGE ELIMINATION PLAN

4.1 THE SOUTH BEACHES WWTF DISCHARGE ELIMINATION PLAN

The South Beaches Wastewater Treatment Facility (SBWWTF), located at 2800 South Highway A1A, Melbourne Beach, FL, 32951 is an *Secondary Wastewater plus Filtration* Facility (Category I, Class A), utilizing two (2) parallel wastewater treatment plants to treat the incoming raw wastewater from the service area and meets all Class II Reliability criteria. The facility consists of primary, secondary and tertiary treatment systems to treat the raw wastewater from the South Beaches Wastewater Collection and Transmission System. Reclaimed water storage is located throughout the service area (4.91 MG, total) including a 0.6 MG ground storage tank at the SBWWTF and 4.31 MG of storage in the Spessard Holland Golf Course stormwater pond system.

Biosolids management at the SBWWTF consists of partial aerobic digestion of the waste activated sludge (WAS) followed by dewatering of the solids through the use of a system of belt filter presses. The dewatered sludge is conveyed to a Class I solid waste landfill for ultimate disposal.

The treatment facility discharges highly treated effluent to any of three FDEP-permitted disposal systems:

- Public Access Reuse System, R-001 (3.00 MGD AADF capacity)
- Deep Injection (DIW) Well System, U-001 (9.00 MGD AADF capacity)
- Surface Water Discharge System to the Indian River Lagoon, D-001 (0.11 MGD AADF capacity). This discharge is for a period not to exceed five (5) days during the Mechanical Integrity Testing (MIT) of the facility's deep injection well.

As previously presented in Section 3.5 of this document, an analysis of facility effluent flows by disposal system, over the last five Calendar Years (2016 - 2020), was conducted with the following results:

Effluent Disposal Percentage by Disposal System (2016 - 2020)						
Calendar Year	Effluent Disposal System Flow (MGD AADF)			Overall Effluent Disposal (%)		
	Public Access Reuse System - PAR (R-001)	Deep Injection Well (U-001)	Surface Water Discharge (D-001)	PAR (R-001)	DIW (U-001)	SW Discharge (D-001)
2016*	1.379	4.870	0.003	22.06%	77.90%	0.05%
2017**	1.292	4.907	0.266	19.98%	75.90%	4.11%
2018	1.334	4.189	0.000	24.15%	75.85%	0.00%
2019	1.178	4.675	0.000	20.13%	79.87%	0.00%
2020	1.562	4.417	0.000	26.12%	73.88%	0.00%
5-Yr Avg.	1.349	4.612	0.054	22.49%	76.68%	0.83%

* Surface Water Discharges due to Hurricane Matthew

** Significant Surface Water Discharges due to Hurricane Irma

The effluent disposal analysis, over the last five calendar year period (2016 - 2020), indicates the following:

- Only 22.5% of the annual average effluent flow was reused within the South Beaches Reclaimed Water Service area via the existing slow-rate public access reuse system (R-001). This is unlikely to vary significantly in the future as there are very few additional opportunities for expansion of the reuse system as the service area is almost completely built-out.
- Approximately 0.8% of the annual average effluent flow was been disposed of through the surface water discharge system (D-001) to the Indian River Lagoon. The main discharge events were due to MIT testing of the Deep Injection Well (DIW) and the large volumes of infiltration and inflow (I/I) received at the South Beaches WWTF in 2016 and 2017 due to Hurricanes Matthew and Irma. However, it should be noted that there has not been a surface water discharge from the facility to the Indian River Lagoon since October 2017.
- The majority of the effluent disposal, approximately 76.7% of the annual average effluent flow was disposed of through the Deep Injection Well system (U-001) at the South Beaches WWTF. This is due to the built-out condition within the barrier island service area and limited potential for public access reuse.

Therefore, the South Beaches WWTF Non-Beneficial Surface Water Elimination Plan, to be implemented in accordance with Section 403.064, F.S., and the need to meet the AWT regulatory requirements of Section 403.086, F.S., will require the County to implement one of the following infrastructure improvements alternatives based on a detailed engineering evaluation of each alternative and project capital and operating costs:

State of Florida Regulatory Requirements		
Potential SBWWTF Improvements Alternative No.	Discharges to the Indian River Lagoon (IRL) must meet AWT Criteria	Non-Beneficial Surface Water Discharge Elimination Plan
	Section 403.086, F.S.	Section 403.064, F.S.
	Implementation by July 1, 2025	Implementation by January 1, 2032
1	<p>Phase I: Conversion of the 2.0 MGD Conventional Activated Sludge WWTF to a 4-Stage BNR treatment system capable of producing an effluent that meets the AWT Criteria. All reclaimed water utilized in the service area would have a low nutrient concentration (TN, TP). The surface water discharge (D-001; 0.11 MGD AADF) would be kept in place due to the MIT associated with the single existing DIW. However, after commissioning of the second DIW as part of the Phase II improvements, the surface water discharge would be reclassified as a "wet weather" discharge to be used during periods intense rainfall from tropical events and localized storms.</p>	<p>Phase II: Installation of a second Deep Injection Well (DIW) on the South Beaches WWTF site with a capacity of 9.0 MGD AADF. The second DIW would provide the County with the following advantages:</p> <ul style="list-style-type: none"> ■ Provides Class I Reliability ■ Eliminates the need for surface water discharge of the effluent associated with MIT testing of a single DIW ■ Allows alternating operation of the DIW's <p>As previously states, the surface water discharge would be reclassified as a wet "weather discharge" upon commissioning of the new DIW.</p>
2	<p>Phase I: Conversion of the 2.0 MGD Conventional Activated Sludge WWTF to a 4-Stage BNR treatment system capable of producing an effluent that meets the AWT Criteria. All reclaimed water utilized in the service area would have a low nutrient concentration (TN, TP). The surface water discharge (D-001 - 0.11 MGD AADF) would be kept in place due to the MIT associated with the single existing DIW.</p>	<p>Phase II: Conversion of the 6.0 MGD Carrousel Oxidation Ditch WWTF to a 4-Stage or 5-Stage BNR treatment system capable of producing an effluent that meets the AWT Criteria. Upon completion of the Phase II project all disposal methods (reuse, surface water discharge, DIW) would occur with an effluent having a low nutrient concentration (TN, TP).</p>

In accordance with 403.064(17), Florida Statutes, Brevard County is also required to provide the following information as part of the Surface Water Discharge Elimination Plan:

Plan Information to Be Provided	Value	Explanation
The average flow (MGD) of effluent, reclaimed water, or reuse water that will no longer be discharged into surface waters and the date of such elimination	0.0 MGD AADF	Both alternatives identified in the table above will require the existing surface water discharge to remain as either a disposal option during MIT of the DIW or as a "wet weather discharge" due to intense storm events from tropical systems or localized storms.

Plan Information to Be Provided	Value	Explanation
The average flow (MGD) of surface water discharge that will continue in accordance with the requirements for the elimination of ocean outfalls, one of the discharge conditions specified in the legislation or one of the hardship conditions;	0.11 MGD AADF (maximum)	This is the permitted surface water discharge capacity in the current facility FDEP Operations Permit and will be used during MIT of the DIW or as a "wet weather discharge" depending upon the SBWWTF improvements alternative selected. Over the last 5 calendar years, the surface water discharge averaged 0.054 MGD and was mainly due to Hurricanes Matthew and Irma.
The level of treatment which the effluent, reclaimed water, or reuse water will receive before being discharged into a surface water by each alternative	AWT Levels* (5, 5, 3, 1)	Dependent upon the SBWWTF improvements alternative selected (Alternative No. 1 or Alternative No. 2), either one or both of the existing treatment systems (6.0 MGD Carrousel System; 2.0 MGD Conventional Activated Sludge Process System) will be converted to a BNR Treatment System(s) capable of generating an effluent/reclaimed water meeting AWT standards/levels

* Modifications to the South Beaches WWTF Biological Treatment System(s) will be required to meet AWT Criteria/Standards (BOD₅ < 5 mg/L; TSS < 5 mg/L; TN < 3 mg/L; and TP, 1 mg/L).

4.2 CAPACITY AND EFFICIENCY OF THE SOUTH BEACHES WWTF

A detailed evaluation of the historical wastewater flows to the South Beaches WWTF was conducted in Section 3.4 of this document. The raw wastewater flow rate received at the treatment facility, over the last five (5) Calendar Years (2016 - 2020), averaged 6.525 MGD, or 81.6% of the facility's treatment capacity. Therefore, the South Beaches WWTF has the hydraulic capacity and infrastructure to treat the raw wastewater flows over the 20-year planning horizon.

Likewise, a detailed evaluation of the facility effluent quality, over the last five (5) Calendar Years (2016 - 2020), was conducted in Section 3.6 of this document. The reclaimed water quality produced and treatment efficiencies are as follows:

Parameter	Influent Conc. (mg/L)	Effluent Conc. (mg/L)	Parameter Removal
CBOD ₅	39	1.5	96.1%
TSS	19	0.7	96.5%
TN	50	7.8	84.5%
TP	8	1.8	77.3%

Therefore, the unit operations and processes at the South Beaches WWTF are capable of treating the incoming raw wastewater and generating an effluent/reclaimed water product that is in compliance with the current FDEP Operations Permit.

4.3 ABILITY OF THE SOUTH BEACHES WWTF TO MEET “CURRENT” AND “FUTURE” NUTRIENT LIMITS

The wastewater treatment processes at the South Beaches WWTF consist of primary treatment unit operations, two distinct treatment trains each with their own secondary clarification system, and tertiary treatment unit operations to remove contaminants inherent in the raw wastewater influent and meet the Federal and State regulatory standards.

The reclaimed water quality produced by the South Central Regional WRF during the last five-year period (2016 - 2020) and the ability to meet AWT Criteria is presented below:

Parameter	AWT Effluent Limits (mg/L)	Effluent Concentration (mg/L)*	“Current” Facility Effluent Meets AWT Criteria
BOD ₅	5	1.5	Yes
TSS	5	0.7	Yes
Total Nitrogen (TN)	3	7.8	No
Total Phosphorus (TP)	1	1.8	No
pH	6.0 - 8.5	7.28	Yes

* Concentrations of reclaimed water constituents from Jan 2016 - Dec 2020

** Values in “red” exceed the AWT Criteria

To meet the surface water discharge regulatory requirements mandated in 403.086, F.S., on a continual basis, conversion of the 2.0 MGD Conventional Activated Sludge Process to a 4-Stage BNR treatment system, at a minimum, is required as outlined in Section 4.1 of this document. The new BNR treatment system will be capable of generating a high-quality effluent that meets all AWT Criteria. Thus, water being delivered to the public access reuse system and the Spessard Holland Golf Course pond system (potential intermittent discharge to the Indian River Lagoon) would be very low in nutrients, meet AWT criteria and meet the regulatory requirements mandated in Section 403.086, F.S.

A thorough engineering evaluation of the potential improvements required at the South Beaches WWTF to meet the regulatory requirements mandated in 403.086, F.S. and 403.064, F.S., as outlined in Section 4.1, will be conducted to determine the most energy-efficient, cost-effective and reliable modifications to the treatment facility. The identified improvements will then be included in the County’s Utility Capital Improvements Program (CIP) and a project schedule generated to ensure that design, construction, optimization and commissioning of said improvements are completed prior to the regulatory deadlines.

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APPENDIX A

**SOUTH BEACHES WWTF:
“EXISTING” FDEP OPERATIONS PERMIT**



OCTOBER 2021



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FLORIDA DEPARTMENT OF Environmental Protection

Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Noah Valenstein
Secretary

NOTICE OF PERMIT ISSUANCE

Edward Fontanin, PE, Director
2725 Judge Fran Jamieson Way, Bldg A-213
Melbourne, FL 32940-6605
edward.fontanin@brevardfl.gov

Brevard County - DW
BCUD South Beaches WWTF

Enclosed is Permit Number FL0040622 to operate a domestic wastewater facility issued under Sections 403.087 and 403.0885 of the Florida Statutes.

Monitoring requirements under this permit are effective on May 1, 2019. Until such time, the permittee shall continue to monitor and report in accordance with previously effective permit requirements.

This action is final and effective on the date filed with the Clerk of the Department unless a petition for an administrative hearing is timely filed under Sections 120.569 and 120.57, F.S., before the deadline for filing a petition. On the filing of a timely and sufficient petition, this action will not be final and effective until further order of the Department. Because the administrative hearing process is designed to formulate final agency action, the hearing process may result in a modification of the agency action or even denial of the application.

Petition for Administrative Hearing

A person whose substantial interests are affected by the Department's action may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S. Pursuant to Rules 28-106.201 and 28-106.301, F.A.C., a petition for an administrative hearing must contain the following information:

- (a) The name and address of each agency affected and each agency's file or identification number, if known;
- (b) The name, address, and telephone number of the petitioner; the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests are or will be affected by the agency determination;
- (c) A statement of when and how the petitioner received notice of the agency decision;
- (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;
- (e) A concise statement of the ultimate facts alleged, including the specific facts that the petitioner contends warrant reversal or modification of the agency's proposed action;

- (f) A statement of the specific rules or statutes that the petitioner contends require reversal or modification of the agency's proposed action, including an explanation of how the alleged facts relate to the specific rules or statutes; and
- (g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wishes the agency to take with respect to the agency's proposed action.

The petition must be filed (received by the Clerk) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000, or via electronic correspondence at Agency_Clerk@dep.state.fl.us. Also, a copy of the petition shall be mailed to the applicant at the address indicated above at the time of filing.

Time Period for Filing a Petition

In accordance with Rule 62-110.106(3), F.A.C., petitions for an administrative hearing by the applicant and persons entitled to written notice under Section 120.60(3), F.S., must be filed within 14 days of receipt of this written notice. Petitions filed by any persons other than the applicant, and other than those entitled to written notice under Section 120.60(3), F.S., must be filed within 14 days of publication of the notice or within 14 days of receipt of the written notice, whichever occurs first. The failure to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the discretion of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

Extension of Time

Under Rule 62-110.106(4), F.A.C., a person whose substantial interests are affected by the Department's action may also request an extension of time to file a petition for an administrative hearing. The Department may, for good cause shown, grant the request for an extension of time. Requests for extension of time must be filed with the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000, or via electronic correspondence at Agency_Clerk@dep.state.fl.us, before the deadline for filing a petition for an administrative hearing. A timely request for extension of time shall toll the running of the time period for filing a petition until the request is acted upon.

Mediation

Mediation is not available in this proceeding.

Judicial Review

Once this decision becomes final, any party to this action has the right to seek judicial review pursuant to Section 120.68, F.S., by filing a Notice of Appeal pursuant to Florida Rules of Appellate Procedure 9.110 and 9.190 with the Clerk of the Department in the Office of General Counsel (Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000) and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate district court of appeal. The notice must be filed within 30 days from the date this action is filed with the Clerk of the Department.

BCUD South Beaches WWTF
Permit Renewal FL0040622-012

Executed in Orlando, Florida.

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION



Lu Burson,
Environmental Administrator
Permitting and Waste Clean Up Section

LB/crl

Enclosures: Permit, DMR and SOB

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this document and all attachments were sent on the filing date below to the following listed persons:

David Smicherko, DEP, david.smicherko@dep.state.fl.us
Mary Ann Kraus, DEP, mary.kraus@dep.state.fl.us
Kevin Lee, Mead Hunt, kevin.lee@meadhunt.com
Shelley Locklear, BCUD, shelley.locklear@brevardfl.gov
Mark Reagan, BCUD, mark.reagan@brevardfl.gov
Cassandra Cissell, Mead Hunt, Cassandra.Cissell@meadhunt.com
Megan Warr, DEP, megan.warr@dep.state.fl.us
Jason Seyfert, DEP, Jason.Seyfert@dep.state.fl.us

FILING AND ACKNOWLEDGMENT

FILED, on this date, pursuant to Section 120.52, F. S., with the designated Department Clerk, receipt of which is hereby acknowledged.


Clerk

March 27, 2019
Date



FLORIDA DEPARTMENT OF Environmental Protection

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Noah Valenstein
Secretary

Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

STATE OF FLORIDA DOMESTIC WASTEWATER FACILITY PERMIT

PERMITTEE:
Brevard County Utility Services Department

RESPONSIBLE OFFICIAL:
Edward Fontanin, Director
2725 Judge Fran Jamieson Way
BLDG. A-213
Melbourne, Florida 32940-6605
(321) 633-2091

PERMIT NUMBER: FL0040622 (Minor)
FILE NUMBER: FL0040622-012-DW1P/NR
EFFECTIVE DATE: March 27, 2019
EXPIRATION DATE: March 26, 2024

FACILITY:

BCUD/South Beaches WWTF
2800 S Highway A1A
Melbourne Beach, FL 32951-2811
Brevard County
Latitude: 28°2' 29.62" N Longitude: 80°32' 52.4" W

This permit is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and applicable rules of the Florida Administrative Code (F.A.C.) and constitutes authorization to discharge to waters of the state under the National Pollutant Discharge Elimination System. This permit does not constitute authorization to discharge wastewater other than as expressly stated in this permit. The above-named permittee is hereby authorized to operate the facilities in accordance with the documents attached hereto and specifically described as follows:

WASTEWATER TREATMENT:

The facility is an existing 8.0 MGD annual average daily flow (AADF) activated sludge domestic wastewater treatment facility consisting of two (2) contiguous wastewater treatment plants (a 6.0 MGD dual train carousel oxidation ditch and a 2.0 MGD activated sludge plant), connected in parallel with mechanical influent screening, grit removal, aeration, clarification, chemical feed facilities, disinfection by chlorination, tertiary filtration, dechlorination, and dewatering of biosolids.

PERMIT HISTORY:

The current wastewater permit for this facility FL0040622-007-DW1P was issued on March 13, 2014 and expires on March 12, 2019. Permit revision FL0040622-008 was issued on October 16, 2016 and required the facility to follow new electronic submittal requirements. Permit revision FL0040622-009 was issued on March 9, 2017 to level the onsite outfall storage pond and to construct a baffle berm to prevent premature discharge. Permit revision FL0040622-010 was issued on April 26, 2017 and allowed modifications to the clarifiers pumping systems and the chlorine feed systems. Permit revision FL0040622-011 was issued on August 8, 2017 to allow upgrading of the three reclaimed water high service pumps.

PERMITTEE: Brevard County Utility Services Department
FACILITY: BCUD/South Beaches WWTF

PERMIT NUMBER: FL0040622 (Minor)
EXPIRATION DATE: March 26, 2024

REUSE OR DISPOSAL:

Surface Water Discharge D-001: D-001 is an existing 0.11 MGD annual average daily flow discharge to Indian River Lagoon, Class III Marine waters, (WBID# 2963A1). This segment of the Indian River is designated as Water Body Identification (WBID) # 2963A1, which is identified for assessment purposes as Class II waters since the majority of the WBID is Class II waters to the *south* of the discharge point, but the point of discharge is not in Class II waters. The 0.110 MGD discharge is authorized at Discharge location D-001 for a period not to exceed five (5) days during the Mechanical Integrity Testing of the facility's underground injection control well, in accordance with Conditions I.A.9 through I.A.12 of this permit. The permitted discharge of 8.0 MGD over five (5) days equates to an Annual Average Daily Flow of 0.11 MGD. The point of discharge is located approximately at latitude 28°2' 31" N, longitude 80°33' 1" W.

Underground Injection U-001: U-001 is an existing 8.0 MGD annual average daily flow permitted capacity underground injection well system consisting of one (1) Class I underground injection well permitted under Department permit number(s) 0185898-004 discharging to Class G-IV ground water. The capacity of the well is being rerated in this permit to 9.0 MGD annual average daily flow permitted capacity to match the permit for the well. Underground Injection Well System U-001 is located approximately at latitude 28°2' 27" N, longitude 80°32' 49" W.

Land Application R-001: An existing 3.0 MGD annual average daily flow permitted capacity slow-rate public access 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, as shown on the attached map. Reclaimed water is stored in an existing stormwater retention pond system located at the Spessard Holland Golf Course that has a combined storage capacity of 4.31 mg. The 4.31 MG stormwater retention pond system consists of seven ponds that are interconnected with underground culvert pipes at the golf course. The pond system has an intermittent discharge from Pond 6 to adjacent drainage features, which ultimately discharges to the Indian River Lagoon. Discharge of reclaimed water to this stormwater retention pond system shall be in accordance with Condition IV.16. of this permit.

IN ACCORDANCE WITH: The limitations, monitoring requirements, and other conditions set forth in this cover sheet and Part I through Part IX on pages 1 through 25 of this permit.

PERMITTEE: Brevard County Utility Services Department
 FACILITY: BCUD/South Beaches WWTF

PERMIT NUMBER: FL0040622 (Minor)
 EXPIRATION DATE: March 26, 2024

I. RECLAIMED WATER AND EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

A. Surface Water Discharges

- During the period beginning on the effective date and lasting through the expiration date of this permit, the permittee is authorized to discharge effluent from Outfall D-001 to Indian River Lagoon. Such discharge shall be limited and monitored by the permittee as specified below and reported in accordance with Permit Condition I.D.8.:

Parameter	Units	Max/Min	Limit	Effluent Limitations		Monitoring Requirements			Notes
				Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number		
Flow (to D-001)	MGD	Max Max	0.11 Report	Annual Average Monthly Average	Continuous	Recording Flow Meter with Totalizer	FLW-3	See I.A.4	
BOD, Carbonaceous 5 day, 20C	mg/L	Max	20	Single Sample	Daily; 24 hours	24-hr FPC	EFD-1	See I.A.6	
Solids, Total Suspended	mg/L	Max	20	Single Sample	Daily; 24 hours	24-hr FPC	EFD-1	See I.A.6	
Coliform, Fecal	#/100mL	Max Max Max	14 14 86	Annual Average Monthly Median Single Sample	5 Days/Week	Grab	EFA-2	See I.A.5	
Enterococci	#/100mL	Max Max	35 130	Monthly Geometric Mean 90th Percentile	5 Days/Week	Grab	EFA-2	See I.A.8 and I.A.9	
pH	s.u.	Max Min	8.5 6.5	Single Sample Single Sample	Continuous	Meter	EFA-2	See I.A.3	
Chlorine, Total Residual (For Disinfection)	mg/L	Min	1.0	Single Sample	Continuous	Meter	EFA-2	See I.A.3 and I.A.7	
Chlorine, Total Residual (For Dechlorination)	mg/L	Max	0.01	Single Sample	Daily; 24 hours	Grab	EFD-1		
Nitrogen, Total	mg/L	Max	12.0	Single Sample	Daily; 24 hours	24-hr FPC	EFD-1		
Phosphorus, Total (as P)	mg/L	Max	4.0	Single Sample	Daily; 24 hours	24-hr FPC	EFD-1		
Oxygen, Dissolved (DO)	mg/L	Min	5.0	Single Sample	Daily; 24 hours	Grab	EFD-2		
Acute Whole Effluent Toxicity, 96 Hour LC50 (Ceriodaphnia dubia)	percent	Min	100	Single Sample	Once during discharge	Grab	EFD-1	See I.A.10	
Acute Whole Effluent Toxicity, 96 Hour LC50 (Cyrinella leedsii)	percent	Min	100	Single Sample	Once during discharge	Grab	EFD-1	See I.A.10	
Phosphorus, Total (as P)	lb/yr	Max Max	36.0 Report	Annual Total Monthly Total	Monthly	Calculated	EFD-1	See Note 1	
Nitrogen, Total	lb/yr	Max Max	173.0 Report	Annual Total Monthly Total	Monthly	Calculated	EFD-1	See Note 1	

Note 1: The annual average mass loadings given are based on the final DEP TMDL from Outfall D-001 to the Indian River Lagoon and are based on the calendar year (January through December).

PERMITTEE: Brevard County Utility Services Department
 FACILITY: BCUD/South Beaches WWTF

PERMIT NUMBER: FL0040622 (Minor)
 EXPIRATION DATE: March 26, 2024

2. Effluent samples shall be taken at the monitoring site locations listed in Permit Condition I.A.1. and as described below:

Monitoring Site Number	Description of Monitoring Site
FLW-3	Flow meter for discharge to river during mechanical integrity testing
EFD-1	Sampling point at the holding pond discharge control structure
EFD-2	Sampling point following the holding pond discharge control structure
EFA-2	Sampling point at chlorine contact chamber/equalization basin

3. Hourly measurement of pH and total residual chlorine for disinfection during the period of required operator attendance may be substituted for continuous measurement. [62-600.660(1)]
4. A recording flow meter with totalizer shall be utilized to measure flow and calibrated at least once every 12 months. [62-600.200(25)]
5. The effluent limitation for the monthly median for fecal coliform is only applicable if 10 or more values are reported. If fewer than 10 values are reported, the monthly median shall be calculated and reported on the Discharge Monitoring Report to be used to calculate the annual average. [62-600.440(7)(b)]
6. In accordance with subsections 62-600.420(1) and (2), F.A.C., the monthly average effluent CBOD₅ and TSS concentrations shall not exceed 15% of their respective influent values (i.e., 85% removal). [62-600.420(1) and (2)]
7. Total residual chlorine must be maintained for a minimum contact time of 15 minutes based on peak hourly flow. [62-600.440(5)(c), (6)(b), and (7)(c)]
8. The effluent limitation for the monthly geometric mean for enterococci is only applicable if 10 or more values are reported. [62-302.530(6)(c)]
9. To report the "90th percentile,"
- Place the bacteria results in ascending order (from lowest to highest value) and assign each sample a number, 1 for the lowest value.
 - Multiply the total number of samples by 0.9 to determine the 90th percentile level.
 - Report the value of the sample that corresponds to the 90th percentile level (e.g., 10 samples x 0.9 = 9, report the value of the 9th sample). If the 90th percentile level is not a whole number, rounding or interpolation should be used to determine the 90th percentile. When rounding, round down to the nearest whole number if the decimal is 0.4 or lower and round up to the nearest whole number if the decimal is 0.5 or higher (e.g., 12 samples x 0.9 = 10.8, report the value of the 11th sample if rounding). [62-302.530(6)(c)]
10. The permittee shall comply with the following requirements to evaluate acute whole effluent toxicity of the discharge from outfall D-001.
- Effluent Limitation**
 - In any routine or additional follow-up test for acute whole effluent toxicity, the 96-hour LC50 shall not be less than 100% effluent. [62-302.200(1), 62-302.500(1)(a)4., 62-4.244(3)(a), and 62-4.241, F.A.C.]
 - Monitoring Frequency**
 - Routine toxicity tests shall be conducted once when there is a discharge from D-001. The test shall be collected the first time there is a discharge during the permit cycle.
 - Sampling Requirements**
 - All tests shall be conducted on a single grab sample of final effluent.
 - Test Requirements**

PERMITTEE: Brevard County Utility Services Department
FACILITY: BCUD/South Beaches WWTF

PERMIT NUMBER: FL0040622 (Minor)
EXPIRATION DATE: March 26, 2024

- (1) Routine Tests: All routine tests shall be conducted using a control (0% effluent) and a minimum of five dilutions: 100%, 75%, 50%, 25%, and 12.5% effluent.
 - (2) The permittee shall conduct 96-hour acute static renewal multi-concentration toxicity tests using the daphnid, *Ceriodaphnia dubia*, and the bannerfin shiner, *Cyprinella leedsi*, concurrently.
 - (3) All test species, procedures and quality assurance criteria used shall be in accordance with Methods for Measuring Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, 5th Edition, EPA-821-R-02-012. Any deviation of the bioassay procedures outlined herein shall be submitted in writing to the Department for review and approval prior to use. In the event the above method is revised, the permittee shall conduct acute toxicity testing in accordance with the revised method.
 - (4) The control water and dilution water shall be moderately hard water as described in EPA-821-R-02-012, Table 7.
- e. Quality Assurance Requirements
- (1) A standard reference toxicant (SRT) quality assurance (QA) acute toxicity test shall be conducted with each species used in the required toxicity tests either concurrently or initiated no more than 30 days before the date of each routine or additional follow-up test conducted. Additionally, the SRT test must be conducted concurrently if the test organisms are obtained from outside the test laboratory unless the test organism supplier provides control chart data from at least the last five monthly acute toxicity tests using the same reference toxicant and test conditions. If the organism supplier provides the required SRT data, the organism supplier's SRT data and the test laboratory's monthly SRT-QA data shall be included in the reports for each companion routine or additional follow-up test required.
 - (2) If the mortality in the control (0% effluent) exceeds 10% for either species in any test, the test for that species (including the control) shall be invalidated and the test repeated. The repeat test shall begin within 14 days after the last day of the invalid test.
 - (3) If 100% mortality occurs in all effluent concentrations for either species prior to the end of any test and the control mortality is less than 10% at that time, the test (including the control) for that species shall be terminated with the conclusion that the test fails and constitutes non-compliance.
 - (4) Routine and additional follow-up tests shall be evaluated for acceptability based on the concentration-response relationship, as required by EPA-821-R-02-012, Section 12.2.6.2., and included with the bioassay laboratory reports.
- f. Reporting Requirements
- (1) Results from all required tests shall be reported on the Discharge Monitoring Report (DMR) as follows:
 - (a) Routine Test Results: If an LC50 >100% effluent occurs in the test for the test species, ">100%" shall be entered on the DMR for that test species. If an LC50 <100% effluent occurs, the calculated LC50 effluent concentration shall be entered on the DMR for that test species.
 - (b) Additional Follow-up Test Results: For each additional test required, the calculated LC50 value shall be entered on the DMR for that test species.
 - (2) A bioassay laboratory report for the routine test shall be prepared according to EPA-821-R-02-012, Section 12, Report Preparation and Test Review, and mailed to the Department at the address below within 30 days after the last day of the test.
 - (3) For additional follow-up tests, a single bioassay laboratory report shall be prepared according to EPA-821-R-02-012, Section 12, and mailed within 30 days after the last day of the second valid additional follow-up test.
 - (4) Data for invalid tests shall be included in the bioassay laboratory report for the repeat test.
 - (5) The same bioassay data shall not be reported as the results of more than one test.
 - (6) All bioassay laboratory reports shall be sent to:
Florida Department of Environmental Protection
Central District Office
3319 Maguire Blvd, Suite 232
Orlando, Florida 32803-3767
- g. Test Failures
- (1) A test fails when the test results do not meet the limits in 10.a.(1).
 - (2) Additional Follow-up Tests:

PERMITTEE: Brevard County Utility Services Department
FACILITY: BCUD/South Beaches WWTF

PERMIT NUMBER: FL0040622 (Minor)
EXPIRATION DATE: March 26, 2024

- (a) If a routine test does not meet the acute toxicity limitation in 10.a.(1) above, the permittee shall notify the Department at the address above within 21 days after the last day of the failed routine test and conduct two additional follow-up tests on each species that failed the test in accordance with 10.d.
- (b) The first test shall be initiated within 28 days after the last day of the failed routine test. The remaining additional follow-up tests shall be conducted weekly thereafter until a total of two valid additional follow-up tests are completed.
- (c) The first additional follow-up test shall be conducted using a control (0% effluent) and a minimum of five dilutions: 100%, 75%, 50%, 25%, and 12.5% effluent. The permittee may modify the dilution series in the second additional follow-up test to more accurately bracket the toxicity such that at least two dilutions above and two dilutions below the target concentration and a control (0% effluent) are run. All test results shall be statistically analyzed according to the procedures in EPA-821-R-02-012.
- (3) In the event of three valid test failures (whether routine or additional follow-up tests) within a 12-month period, the permittee shall notify the Department within 21 days after the last day of the third test failure.
 - (a) The permittee shall submit a plan for correction of the effluent toxicity within 60 days after the last day of the third test failure.
 - (b) The Department shall review and approve the plan before initiation.
 - (c) The plan shall be initiated within 30 days following the Department's written approval of the plan.
 - (d) Progress reports shall be submitted quarterly to the Department at the address above.
 - (e) During the implementation of the plan, the permittee shall conduct quarterly routine whole effluent toxicity tests in accordance with 10.d. Additional follow-up tests are not required while the plan is in progress. Following completion or termination of the plan, the frequency of monitoring for routine and additional follow-up tests shall return to the schedule established in 10.b.(1). If a routine test is invalid according to the acceptance criteria in EPA-821-R-02-012, a repeat test shall be initiated within 14 days after the last day of the invalid routine test.
 - (f) Upon completion of four consecutive quarterly valid routine tests that demonstrate compliance with the effluent limitation in 10.a.(1) above, the permittee may submit a written request to the Department to terminate the plan. The plan shall be terminated upon written verification by the Department that the facility has passed at least four consecutive quarterly valid routine whole effluent toxicity tests. If a test within the sequence of the four is deemed invalid but is replaced by a repeat valid test initiated within 14 days after the last day of the invalid test, the invalid test will not be counted against the requirement for four consecutive quarterly valid routine tests for the purpose of terminating the plan.
- (4) The additional follow-up testing and the plan do not preclude the Department taking enforcement action for whole effluent toxicity failures. [62-4.241, 62-620.620(3)]
11. The permittee shall submit written notification to the Department, thirty (30) days prior to a scheduled underground injection well mechanical integrity test (MIT). Such notification must include the proposed date(s) for the test and indicate whether or not a discharge is expected due to the test. The performance of the MIT shall be contingent upon passing the toxicity tests required in Condition I.A.8. of this permit. [62-4-070(3)]
12. The surface water discharge can be continued after mechanical integrity testing has been performed, if the Department concurs in the prohibition of further injection well use due to technical problems identified during the test. If the discharge is continued beyond the period required for mechanical integrity testing, this permit may be modified to include more stringent effluent limitations as necessary to protect the water quality of the receiving water body and/or to include a compliance schedule for eliminating the surface water discharge. [62-4-070(3)]
13. The Total Maximum Daily Load (TMDL) for the Indian River Lagoon was finalized by DEP in March 2009. The TMDL includes a waste load allocation of:
 - 173 lb/year for Total Nitrogen
 - 36 lb/year for Total Phosphorus

If an alternate TMDL for this water body is established and adopted by rule, the Department may revise this permit to incorporate the final TMDL, pursuant to Rule 62-620.325, Florida Administrative Code.

PERMITTEE: Brevard County Utility Services Department
 FACILITY: BCUUD/South Beaches WWTF

PERMIT NUMBER: FL0040622 (Minor)
 EXPIRATION DATE: March 26, 2024

B. Underground Injection Control Systems

1. During the period beginning on the effective date and lasting through the expiration date of this permit, the permittee is authorized to discharge effluent to Underground Injection Well System U-001 located approximately at latitude 28°22'27", longitude 80°32'49". Such discharge shall be limited and monitored by the permittee as specified below and reported in accordance with Permit Condition I.D.8.:

Parameter	Units	Max/Min	Limit	Reclaimed Water Limitations		Monitoring Requirements			Notes
				Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number		
Flow (to U-001)	MGD	Max Max	9.0 Report	Annual Average Monthly Average	Continuous	Recording Flow Meter with Totalizer	FLW-1	See I.B.4	
BOD, Carbonaceous 5 day, 20C	mg/L	Max Max Max Max	20.0 30.0 45.0 60.0	Annual Average Monthly Average Weekly Average Single Sample	5 Days/Week	24-hr FPC	EFA-2		
Solids, Total Suspended	mg/L	Max Max Max	20.0 30.0 45.0 60.0	Annual Average Monthly Average Weekly Average Single Sample	5 Days/Week	24-hr FPC	EFA-2		
pH	s.u.	Min Max	6.0 8.5	Single Sample Single Sample	Daily	Grab	EFA-2	See I.B.3	

PERMITTEE: Brevard County Utility Services Department
FACILITY: BCUD/South Beaches WWTF

PERMIT NUMBER: FL0040622 (Minor)
EXPIRATION DATE: March 26, 2024

2. Effluent samples shall be taken at the monitoring site locations listed in Permit Condition I.B.1. and as described below:

Monitoring Site Number	Description of Monitoring Site
FLW-1	Flow meter for the injection well
EFA-2	Sampling point at chlorine contact chamber/equalization basin

3. Hourly measurement of pH during the period of required operator attendance may be substituted for continuous measurement. *[62-600.660(1)]*
4. A recording flow meter with totalizer shall be utilized to measure flow and calibrated at least once every 12 months. *[62-600.200(25)]*
5. Disinfection is not required for discharge to Class G-IV waters using Class I wells. However, the permittee must maintain the capability for disinfection at a level that is consistent with the alternate disposal mechanism approved for this facility pursuant to Rule 62-600.540(5), F.A.C. *[62-600.540(1)]*

PERMITTEE: Brevard County Utility Services Department
 FACILITY: BCUD/South Beaches WWTF

PERMIT NUMBER: FL0040622 (Minor)
 EXPIRATION DATE: March 26, 2024

C. Reuse and Land Application Systems

1. During the period beginning on the effective date and lasting through the expiration date of this permit, the permittee is authorized to direct reclaimed water to Reuse System R-001. Such reclaimed water shall be limited and monitored by the permittee as specified below and reported in accordance with Permit Condition I.D.8.:

Parameter	Units	Max/Min	Limit	Reclaimed Water Limitations			Monitoring Requirements			Notes
				Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number			
Flow (To Reuse)	MGD	Max Max	3.0 Report	Annual Average Monthly Average	Continuous	Recording Flow Meter with Totalizer	FL W-2	See I.C.4		
BOD, Carbonaceous 5 day, 20C	mg/L	Max Max Max Max	20.0 30.0 45.0 60.0	Annual Average Monthly Average Weekly Average Single Sample	5 Days/Week	24-hr FPC	EFA-1			
Solids, Total Suspended	mg/L	Max	5.0	Single Sample	4 Days/Week	Grab	EFA-1			
Coliform, Fecal	#/100mL	Max	25	Single Sample	4 Days/Week	Grab	EFA-1			
Coliform, Fecal, % less than detection	percent	Min	75	Monthly Total	4 Days/Week	Calculated	EFA-1	See I.C.5		
pH	s.u.	Min Max	6.0 8.5	Single Sample Single Sample	Continuous	Meter	EFA-1	See I.C.3		
Chlorine, Total Residual (For Disinfection)	mg/L	Min	1.0	Single Sample	Continuous	Meter	EFA-1	See I.C.6 and I.C.9		
Turbidity	NTU	Max	Report	Single Sample	Continuous	Meter	EFA-1	See I.C.7 and I.C.9		
Nitrogen, Total	mg/L	Max Max	Report Report	Annual Average Monthly Average	Monthly	Grab	EFA-1	See I.C.11		
Phosphorus, Total (as P)	mg/L	Max Max	Report Report	Annual Average Monthly Average	Monthly	Grab	EFA-1	See I.C.11		
Giardia	cysts/100L	Max	Report	Single Sample	Bi-annually; every 2 years	Grab	EFA-1	See I.C.10		
Cryptosporidium	oocysts/100L	Max	Report	Single Sample	Bi-annually; every 2 years	Grab	EFA-1	See I.C.10		

PERMITTEE: Brevard County Utility Services Department
 FACILITY: BCUD/South Beaches WWTF

PERMIT NUMBER: FL0040622 (Minor)
 EXPIRATION DATE: March 26, 2024

- Reclaimed water samples shall be taken at the monitoring site locations listed in Permit Condition I.C.1. and as described below:

Monitoring Site Number	Description of Monitoring Site
FLW-2	Flow meter for the reuse system and golf course irrigation
EFA-1	Sampling point at discharge of chlorine contact chamber
EFB-1	Sampling point after filtration and prior to disinfection

- Hourly measurement of pH during the period of required operator attendance may be substituted for continuous measurement. *[62-600.660(1)]*
- A recording flow meter with totalizer shall be utilized to measure flow and calibrated at least once every 12 months. *[62-600.200(25)]*
- To report the "% less than detection," count the number of fecal coliform observations that were less than detection, divide by the total number of fecal coliform observations in the month, and multiply by 100% (round to the nearest integer). *[62-600.440(6)(a)]*
- The minimum total chlorine residual shall be limited as described in the approved operating protocol, such that the permit limitation for fecal coliform bacteria will be achieved. In no case shall the total chlorine residual be less than 1.0 mg/L. *[62-600.440(6)(b)][62-610.460(2)][62-610.463(2)]*
- The maximum turbidity shall be limited as described in the approved operating protocol, such that the permit limitations for total suspended solids and fecal coliforms will be achieved. *[62-610.463(2)]*
- The treatment facilities shall be operated in accordance with all approved operating protocols. Only reclaimed water that meets the criteria established in the approved operating protocol(s) may be released to system storage or to the reuse system. Reclaimed water that fails to meet the criteria in the approved operating protocol(s) shall be directed to the following permitted alternate discharge system: underground injection well system U-001. *[62-610.320(6) and 62-610.463(2)]*
- Instruments for continuous on-line monitoring of total residual chlorine and turbidity shall be equipped with an automated data logging or recording device. *[62-610.463(2)]*
- Intervals between sampling for Giardia and Cryptosporidium shall not exceed two years. *[62-610.463(4)]*
- Monitoring for total nitrogen (TN) and total phosphorus (TP) are required as allowed by Rule 62-600.650(3), FAC, to evaluate impacts of reclaimed water to ground and surface waters in an impaired water basin. *[62-600.650(3)]*

PERMITTEE: Brevard County Utility Services Department
 FACILITY: BCUD/South Beaches WWTF

PERMIT NUMBER: FL0040622 (Minor)
 EXPIRATION DATE: March 26, 2024

D. Other Limitations and Monitoring and Reporting Requirements

1. During the period beginning on the effective date and lasting through the expiration date of this permit, the treatment facility shall be limited and monitored by the permittee as specified below and reported in accordance with condition I.D.8.:

Parameter	Units	Max/Min	Limit	Limitations		Monitoring Requirements			Notes
				Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number		
Flow (Total through facility)	MGD	Max Max Max	8.0 Report Report	Annual Average Monthly Average Quarterly Average	Continuous	Recording Flow Meter with Totalizer	FLW-4	See I.D.4	
Percent Capacity, (TMADE/Permitted Capacity) x 100	percent	Max	Report	Monthly Average	Monthly	Calculated	FLW-4		
BOD, Carbonaceous 5 day, 20C (Influent)	mg/L	Max	Report	Single Sample	5 Days/Week	24-hr FPC	INF-1	See I.D.3	
Solids, Total Suspended (Influent)	mg/L	Max	Report	Single Sample	5 Days/Week	24-hr FPC	INF-1	See I.D.3	

PERMITTEE: Brevard County Utility Services Department
 FACILITY: BCUD/South Beaches WWTF

PERMIT NUMBER: FL0040622 (Minor)
 EXPIRATION DATE: March 26, 2024

2. Samples shall be taken at the monitoring site locations listed in Permit Condition I.D.1. and as described below:

Monitoring Site Number	Description of Monitoring Site
FLW-4	Influent flow meter at headworks
INF-1	Automatic sampler upstream of return activated sludge (RAS) line

3. Influent samples shall be collected so that they do not contain digester supernatant or return activated sludge, or any other plant process recycled waters. [62-600.660(4)(a)]
4. A recording flow meter with totalizer shall be utilized to measure flow and calibrated at least once every 12 months. [62-600.200(25)]
5. Sampling results for giardia and cryptosporidium shall be reported on DEP Form 62-610.300(4)(a)4, Pathogen Monitoring, which is attached to this permit. This form shall be submitted to the Department's Central District Office and to DEP's Reuse Coordinator in Tallahassee. [62-610.300(4)(a)]
6. The sample collection, analytical test methods, and method detection limits (MDLs) applicable to this permit shall be conducted using a sufficiently sensitive method to ensure compliance with applicable water quality standards and effluent limitations and shall be in accordance with Rule 62-4.246, Chapters 62-160 and 62-600, F.A.C., and 40 CFR 136, as appropriate. The list of Department established analytical methods, and corresponding MDLs (method detection limits) and PQLs (practical quantitation limits), which is titled "FAC 62-4 MDL/PQL Table (April 26, 2006)" is available at <https://floridadep.gov/dear/quality-assurance/content/quality-assurance-resources>. The MDLs and PQLs as described in this list shall constitute the minimum acceptable MDL/PQL values and the Department shall not accept results for which the laboratory's MDLs or PQLs are greater than those described above unless alternate MDLs and/or PQLs have been specifically approved by the Department for this permit. Any method included in the list may be used for reporting as long as it meets the following requirements:
- The laboratory's reported MDL and PQL values for the particular method must be equal or less than the corresponding method values specified in the Department's approved MDL and PQL list;
 - The laboratory reported MDL for the specific parameter is less than or equal to the permit limit or the applicable water quality criteria, if any, stated in Chapter 62-302, F.A.C. Parameters that are listed as "report only" in the permit shall use methods that provide an MDL, which is equal to or less than the applicable water quality criteria stated in 62-302, F.A.C.; and
 - If the MDLs for all methods available in the approved list are above the stated permit limit or applicable water quality criteria for that parameter, then the method with the lowest stated MDL shall be used.

When the analytical results are below method detection or practical quantitation limits, the permittee shall report the actual laboratory MDL and/or PQL values for the analyses that were performed following the instructions on the applicable discharge monitoring report.

Where necessary, the permittee may request approval of alternate methods or for alternative MDLs or PQLs for any approved analytical method. Approval of alternate laboratory MDLs or PQLs are not necessary if the laboratory reported MDLs and PQLs are less than or equal to the permit limit or the applicable water quality criteria, if any, stated in Chapter 62-302, F.A.C. Approval of an analytical method not included in the above-referenced list is not necessary if the analytical method is approved in accordance with 40 CFR 136 or deemed acceptable by the Department. [62-4.246, 62-160]

7. The permittee shall provide safe access points for obtaining representative samples which are required by this permit. [62-600.650(2)]
8. **Monitoring requirements under this permit are effective on May 1, 2019.** Until such time, the permittee shall continue to monitor and report in accordance with previously effective permit requirements, if any. During

PERMITTEE: Brevard County Utility Services Department
 FACILITY: BCUD/South Beaches WWTF

PERMIT NUMBER: FL0040622 (Minor)
 EXPIRATION DATE: March 26, 2024

the period of operation authorized by this permit, the permittee shall complete and submit to the Department Discharge Monitoring Reports (DMRs) in accordance with the frequencies specified by the REPORT type (i.e. monthly, quarterly, semiannual, annual, etc.) indicated on the DMR forms attached to this permit. Unless specified otherwise in this permit, monitoring results for each monitoring period shall be submitted in accordance with the associated DMR due dates below. DMRs shall be submitted for each required monitoring period including periods of no discharge.

REPORT Type on DMR	Monitoring Period	Submit by
Monthly	first day of month - last day of month	28 th day of following month
Quarterly	January 1 - March 31 April 1 - June 30 July 1 - September 30 October 1 - December 31	April 28 July 28 October 28 January 28
Semiannual	January 1 - June 30 July 1 - December 31	July 28 January 28
Annual	January 1 - December 31	January 28

The permittee shall use the electronic DMR system approved by the Department (EzDMR) and shall electronically submit the completed DMR forms using the DEP Business Portal at <http://www.fldepportal.com/go/>, unless the permittee has a waiver from the Department in accordance with 40 CFR 127.15. Reports shall be submitted to the Department by the twenty-eighth (28th) of the month following the month of operation. [62-620.610(18)] [62-600.680(1)]

9. During the period of operation authorized by this permit, reclaimed water or effluent shall be monitored annually for the primary and secondary drinking water standards contained in Chapter 62-550, F.A.C., (except for asbestos, total coliform, color, odor, and residual disinfectants). These monitoring results shall be reported to the Department annually on the DMR. During years when a permit is not renewed, a certification stating that no new non-domestic wastewater dischargers have been added to the collection system since the last reclaimed water or effluent analysis was conducted may be submitted with the signed DMR in lieu of performing the analysis. When such a certification is submitted with the DMR, monitoring not required this period should be noted on the DMR. The annual reclaimed water or effluent analysis report, and certification if applicable, shall be completed and submitted in a timely manner so as to be received by the Department at the address identified on the DMR by January 28 of each year. Approved analytical methods identified in Rule 62-620.100(3)(j), F.A.C., shall be used for the analysis. If no method is included for a parameter, methods specified in Chapter 62-550, F.A.C., shall be used. [62-600.660(2) and (3)(d)] [62-600.680(2)] [62-610.300(4)]
10. The permittee shall submit an Annual Reuse Report using DEP Form 62-610.300(4)(a)2. on or before January 1 of each year. [62-610.870(3)]
11. Operating protocol(s) shall be reviewed and updated periodically to ensure continuous compliance with the minimum treatment and disinfection requirements. Updated operating protocols shall be submitted to the Department's Central District Office for review and approval upon revision of the operating protocol(s) and with each permit application. [62-610.320(6)] [62-610.463(2)]
12. The permittee shall maintain an inventory of storage systems. The inventory shall be submitted to the Department's Central District Office at least 30 days before reclaimed water will be introduced into any new storage system. The inventory of storage systems shall be attached to the annual submittal of the Annual Reuse Report. [62-610.464(5)]
13. The permittee shall use the electronic DMR system approved by the Department (EzDMR) and shall electronically submit the completed DMR forms using the DEP Business Portal at <http://www.fldepportal.com/go/> unless the permittee has a waiver from the Department in accordance with 40 CFR 127.15. Reports shall be submitted to the Department by the twenty-eighth (28th) of the month following the month of operation. [62-620.610(18)] [62-600.680(1)]
14. All reports and other information shall be signed in accordance with the requirements of Rule 62-620.305, F.A.C. [62-620.305]

II. BIOSOLIDS MANAGEMENT REQUIREMENTS

A. Basic Requirements

1. Biosolids generated by this facility may be disposed of in a Class I solid waste landfill. [62-620.320(6), 62-640.880(1)]
2. The permittee shall monitor and keep records of the quantities of biosolids generated, received from source facilities, treated, distributed and marketed, land applied, used as a biofuel or for bioenergy, transferred to another facility, or landfilled. These records shall be kept for a minimum of five years. [62-640.650(4)(a)]

Biosolids quantities shall be monitored by the permittee as specified below. Results shall be reported on the permittee's Discharge Monitoring Report for Monitoring Group RMP-Q in accordance with Condition I.D.8. [62-640.650(5)(a)1]

Parameter	Units	Max/ Min	Biosolids Limitations		Monitoring Requirements		
			Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number
Biosolids Quantity (Landfilled)	dry tons	Max	Report	Monthly Total	Monthly	Calculated	RMP-1

3. Biosolids quantities shall be calculated as listed in Permit Condition II.3 and as described below:

Monitoring Site Number	Description of Monitoring Site Calculations
RMP-1	Calculated (based on volume and percent solids). Reported in dry tons.

4. The treatment, management, transportation, use, land application, or disposal of biosolids shall not cause a violation of the odor prohibition in subsection 62-296.320(2), F.A.C. [62-640.400(6)]
5. Storage of biosolids or other solids at this facility shall be in accordance with the Facility Biosolids Storage Plan. [62-640.300(4)]
6. Biosolids shall not be spilled from or tracked off the treatment facility site by the hauling vehicle. [62-640.400(9)]

B. Disposal

7. Disposal of biosolids, septage, and "other solids" in a solid waste disposal facility, or disposal by placement on land for purposes other than soil conditioning or fertilization, such as at a monofill, surface impoundment, waste pile, or dedicated site, shall be in accordance with Chapter 62-701, F.A.C. [62-640.100(6)(b) & (c)]

C. Receipt

8. If the permittee intends to accept biosolids from other facilities, a permit revision is required pursuant to paragraph 62-640.880(2)(d), F.A.C. [62-640.880(2)(d)]

III. GROUND WATER REQUIREMENTS

1. The permittee shall give at least 72-hours' notice to the Department's Central District Office, prior to the installation of any monitoring wells. [62-520.600(6)(h)]
2. Before construction of new ground water monitoring wells, a soil boring shall be made at each new monitoring well location to properly determine monitoring well specifications such as well depth, screen interval, screen slot, and filter pack. [62-520.600(6)(g)]

PERMITTEE: Brevard County Utility Services Department
 FACILITY: BCUD/South Beaches WWTF

PERMIT NUMBER: FL0040622 (Minor)
 EXPIRATION DATE: March 26, 2024

3. Within 30 days after installation of a monitoring well, the permittee shall submit to the Department's Central District Office well completion reports and soil boring/lithologic logs on the attached DEP Form(s) 62-520.900(3), Monitoring Well Completion Report. [62-520.600(6)(j) and .900(3)]
4. All piezometers and monitoring wells not part of the approved ground water monitoring plan shall be plugged and abandoned in accordance with Rule 62-532.500(5), F.A.C., unless future use is intended. [62-532.500(5)]
5. For the Part III Public Access system, all ground water quality criteria specified in Chapter 62-520, F.A.C., shall be met at the edge of the zone of discharge. The zone of discharge shall extend horizontally 100 feet from the application site(s) or to the property boundaries, whichever is less, and vertically to the base of the surficial aquifer. [62-520.200(27)] [62-520.465]
6. The ground water minimum criteria specified in Rule 62-520.400 F.A.C., shall be met within the zone of discharge. [62-520.400 and 62-520.420(4)]
7. If the concentration for any constituent listed in Permit Condition III.10. in the natural background quality of the ground water is greater than the stated maximum, or in the case of pH is also less than the minimum, the representative background quality shall be the prevailing standard. [62-520.420(2)]
8. During the period of operation authorized by this permit, the permittee shall continue to sample ground water at the monitoring wells identified in Permit Condition III.9., below in accordance with this permit and the approved ground water monitoring plan prepared in accordance with Rule 62-520.600, F.A.C. [62-520.600] [62-610.463]
9. The following monitoring wells shall be sampled for Reuse System R-001. [62-520.600] [62-610.463]

Monitoring Well ID	Alternate Well Name and/or Description of Monitoring Location	Latitude	Longitude	Depth (Feet)	Aquifer Monitored	Well Type	New or Existing
MWB-4	West Well at WWTP	28°33' 30"	80°33' 30"	20	Surficial	Background	Existing
MWC-1	North Well at WWTP	28°33' 30"	80°33' 30"	20	Surficial	Compliance	Existing
MWC-2	East Well at WWTP	28°33' 30"	80°33' 30"	20	Surficial	Compliance	Existing
MWC-3SP	MWC-3 Spessard Holland Golf Course	28°32' 29"	80°32' 40"	28	Surficial	Compliance	Existing
MWC-4SP	MWC-4 Spessard Holland Golf Course	28°32' 29"	80°32' 40"	14	Surficial	Compliance	Existing
MWI-3	South Well at WWTP	28°33' 30"	80°33' 30"	20	Surficial	Intermediate	Existing

10. The following parameters shall be analyzed for each monitoring well identified in Permit Condition III.9. [62-520.600(11)(b)] [62-600.670] [62-600.650(3)] [62-520.310(5)]

Parameter	Compliance Well Limit	Units	Sample Type	Monitoring Frequency
Water Level Relative to NGVD	Report	ft	In Situ	Quarterly
Nitrogen, Nitrate, Total (as N)	10	mg/L	Grab	Quarterly
Solids, Total Dissolved (TDS)	500	mg/L	Grab	Quarterly
Chloride (as Cl)	250	mg/L	Grab	Quarterly
Coliform, Fecal	4	#/100mL	Grab	Quarterly
pH	6.5-8.5	s.u.	Grab	Quarterly
Turbidity	Report	NTU	Grab	Quarterly
Sodium, Total Recoverable	160	mg/L	Grab	Quarterly

11. Water levels shall be recorded before evacuating each well for sample collection. Elevation references shall include the top of the well casing and land surface at each well site (NAVD allowable) at a precision of plus or minus 0.01 foot. [62-520.600(11)(c)] [62-610.463(3)(a)]

PERMITTEE: Brevard County Utility Services Department
 FACILITY: BCUD/South Beaches WWTF

PERMIT NUMBER: FL0040622 (Minor)
 EXPIRATION DATE: March 26, 2024

12. Ground water monitoring wells shall be purged prior to sampling to obtain representative samples. [62-160.210] [62-600.670(3)]
13. Analyses shall be conducted on unfiltered samples, unless filtered samples have been approved by the Department's Central District Office as being more representative of ground water conditions. [62-520.310(5)]
14. Ground water monitoring test results shall be submitted on Part D of Form 62-620.910(10) in accordance with Permit Condition I.D.8. [62-520.600(11)(b)] [62-600.670] [62-600.680(1)] [62-620.610(18)]
15. If any monitoring well becomes inoperable or damaged to the extent that sampling or well integrity may be affected, the permittee shall notify the Department's Central District Office within two business days from discovery, and a detailed written report shall follow within ten days after notification to the Department. The written report shall detail what problem has occurred and remedial measures that have been taken to prevent recurrence or request approval for replacement of the monitoring well. All monitoring well design and replacement shall be approved by the Department's Central District Office before installation. [62-520.600(6)(l)]
16. The permittee shall sample the following monitoring well(s): MWC-1 for the primary and secondary drinking water parameters included in Rules 62-550.310 and 62-550.320, F.A.C., (except for asbestos and all parameters in Table 5 of Chapter 62-550, F.A.C., other than Di(2-ethylhexyl) adipate and Di(2-ethylhexyl) phthalate). Results of this sampling shall be submitted to the Department's Central District Office with the application for permit renewal. Sampling shall occur no sooner than 180 days before submittal of the renewal application. [62-520.600(5)(b)]

IV. ADDITIONAL REUSE AND LAND APPLICATION REQUIREMENTS

A. Part III Public Access System(s)

1. This reuse system includes the following major user(s) of reclaimed water (i.e., using 0.1 MGD or more) and general service area(s):

Site Number	User Name	User Type	Capacity (MGD)	Acreage
PAA-001	Residential Areas	Residential Developments	0.3	35.9
PAA-002	Spessard Holland Golf Course	Golf Courses	0.993	80
Total			1.3	115.9

[62-610.800(5)] [62-620.630(10)(b)]

2. Cross-connections to the potable water system are prohibited. [62-610.469(7)]
3. A cross-connection control program shall be implemented and/or remain in effect within the areas where reclaimed water will be provided for use and shall be in compliance with the Rule 62-555.360, F.A.C. [62-610.469(7)]
4. The permittee shall conduct inspections within the reclaimed water service area to verify proper connections, to minimize illegal cross-connections, and to verify both the proper use of reclaimed water and that the proper backflow prevention assemblies or devices have been installed and tested. Inspections are required when a customer first connects to the reuse distribution system. Subsequent inspections are required as specified in the cross-connection control and inspection program. [62-610.469(7)(h)]
5. If an actual or potential (e.g. no dual check device on residential connections served by a reuse system) cross-connection between the potable and reclaimed water systems is discovered, the permittee shall:

PERMITTEE: Brevard County Utility Services Department
FACILITY: BCUD/South Beaches WWTF

PERMIT NUMBER: FL0040622 (Minor)
EXPIRATION DATE: **March 26, 2024**

- a. Immediately discontinue potable water and/or reclaimed water service to the affected area if an actual cross-connection is discovered.
 - b. If the potable water system is contaminated, clear the potable water lines.
 - c. Eliminate the cross-connection and install a backflow prevention device as required by the Rule 62-555.360 F.A.C.
 - d. Test the affected area for other possible cross-connections.
 - e. Within 24 hours, notify the Department's Central District Office's domestic wastewater and drinking water programs.
 - f. Within 5 days of discovery of an actual or potential cross-connection, submit a written report to the Department's Central District Office detailing: a description of the cross-connection, how the cross-connection was discovered, the exact date and time of discovery, approximate time that the cross-connection existed, the location, the cause, steps taken to eliminate the cross-connection, whether reclaimed water was consumed, and reports of possible illness, whether the drinking water system was contaminated and the steps taken to clear the drinking water system, when the cross-connection was eliminated, plan of action for testing for other possible cross-connections in the area, and an evaluation of the cross-connection control and inspection program to ensure that future cross-connections do not occur. *[62-555.350(3) and 62-555.360][62-620.610(20)]*
6. Maximum obtainable separation of reclaimed water lines and potable water lines shall be provided and the minimum separation distances specified in Rule 62-610.469(7), F.A.C., shall be provided. Reuse facilities shall be color coded or marked. Underground piping which is not manufactured of metal or concrete shall be color coded using Pantone Purple 522C using light stable colorants. Underground metal and concrete pipe shall be color coded or marked using purple as the predominant color. *[62-610.469(7)]*
 7. In constructing reclaimed water distribution piping, the permittee shall maintain a 75-foot setback distance from a reclaimed water transmission facility to public water supply wells. No setback distances are required to other potable water supply wells or to any nonpotable water supply wells. *[62-610.471(3)]*
 8. A setback distance of 75 feet shall be maintained between the edge of the wetted area and potable water supply wells, unless the utility adopts and enforces an ordinance prohibiting potable water supply wells within the reuse service area. No setback distances are required to any nonpotable water supply well, to any surface water, to any developed areas, or to any private swimming pools, hot tubs, spas, saunas, picnic tables, barbecue pits, or barbecue grills. *[62-610.471(1), (2), (5), and (7)]*
 9. Reclaimed water shall not be used to fill swimming pools, hot tubs, or wading pools. *[62-610.469(4)]*
 10. Low trajectory nozzles, or other means to minimize aerosol formation shall be used within 100 feet from outdoor public eating, drinking, or bathing facilities. *[62-610.471(6)]*
 11. A setback distance of 100 feet shall be maintained from indoor aesthetic features using reclaimed water to adjacent indoor public eating and drinking facilities. *[62-610.471(8)]*
 12. The public shall be notified of the use of reclaimed water. This shall be accomplished by posting of advisory signs in areas where reuse is practiced, notes on scorecards, or other methods. *[62-610.468(2)]*
 13. All new advisory signs and labels on vaults, service boxes, or compartments that house hose bibbs along with all labels on hose bibbs, valves, and outlets shall bear the words "do not drink" and "no beber" along with the equivalent standard international symbol. In addition to the words "do not drink" and "no beber," advisory signs posted at storage ponds and decorative water features shall also bear the words "do not swim" and "no nadar" along with the equivalent standard international symbols. Existing advisory signs and labels shall be retrofitted, modified, or replaced in order to comply with the revised wording requirements. For existing advisory signs and labels this retrofit, modification, or replacement shall occur within 365 days after the date of this permit. For labels on existing vaults, service boxes, or compartments housing hose bibbs this retrofit, modification, or replacement shall occur within 730 days after the date of this permit. *[62-610.468, 62-610.469]*

PERMITTEE: Brevard County Utility Services Department
FACILITY: BCUD/South Beaches WWTF

PERMIT NUMBER: FL0040622 (Minor)
EXPIRATION DATE: March 26, 2024

14. The permittee shall ensure that users of reclaimed water are informed about the origin, nature, and characteristics of reclaimed water; the manner in which reclaimed water can be safely used; and limitations on the use of reclaimed water. Notification is required at the time of initial connection to the reclaimed water distribution system and annually after the reuse system is placed into operation. A description of on-going public notification activities shall be included in the Annual Reuse Report. *[62-610.468(6)]*
15. Routine aquatic weed control and regular maintenance of storage pond embankments and access areas are required. *[62-610.414(8)]*
16. Overflows from emergency discharge facilities on storage ponds shall be reported as abnormal events in accordance with Permit Condition IX.20. *[62-610.800(9)]*

V. OPERATION AND MAINTENANCE REQUIREMENTS

A. Staffing Requirements

1. During the period of operation authorized by this permit, the wastewater facilities shall be operated under the supervision of one or more operators certified in accordance with Chapter 62-602, F.A.C. In accordance with Chapter 62-699, F.A.C., this facility is a Category I, Class A facility and, at a minimum, operators with appropriate certification must be on the site as follows:

A Class C or higher operator 24 hours/day for 7 days/week. The lead/chief operator must be a Class A operator. *[62-620.630(3)][62-699.310] [62-610.462]*

2. The lead/chief operator shall be employed at the plant full time. "Full time" shall mean at least 4 days per week, working a minimum of 35 hours per week, including leave time. A licensed operator shall be on-site and in charge of each required shift for periods of required staffing time when the lead/chief operator is not on-site. An operator meeting the lead/chief operator class for the treatment plant shall be available during all periods of plant operation. "Available" means able to be contacted as needed to initiate the appropriate action in a timely manner. *[62-699.311(10), (6) and (1)]*

B. Capacity Analysis Report and Operation and Maintenance Performance Report Requirements

1. An updated capacity analysis report shall be submitted to the Department annually by December 1 of each year. The updated capacity analysis report shall be prepared in accordance with Rule 62-600.405, F.A.C. *[62-600.405(5)]*
2. The application to renew this permit shall include a detailed operation and maintenance performance report prepared in accordance with Rule 62-600.735, F.A.C. *[62-600.735(1)]*

C. Recordkeeping Requirements

1. The permittee shall maintain the following records and make them available for inspection on the site of the permitted facility.
 - a. Records of all compliance monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, including, if applicable, a copy of the laboratory certification showing the certification number of the laboratory, for at least three years from the date the sample or measurement was taken;
 - b. Copies of all reports required by the permit for at least three years from the date the report was prepared;
 - c. Records of all data, including reports and documents, used to complete the application for the permit for at least three years from the date the application was filed;
 - d. Monitoring information, including a copy of the laboratory certification showing the laboratory certification number, related to the residuals use and disposal activities for the time period set forth in Chapter 62-640, F.A.C., for at least three years from the date of sampling or measurement;

PERMITTEE: Brevard County Utility Services Department
FACILITY: BCUD/South Beaches WWTF

PERMIT NUMBER: FL0040622 (Minor)
EXPIRATION DATE: March 26, 2024

- e. A copy of the current permit;
- f. A copy of the current operation and maintenance manual as required by Chapter 62-600, F.A.C.;
- g. A copy of any required record drawings;
- h. Copies of the licenses of the current certified operators;
- i. Copies of the logs and schedules showing plant operations and equipment maintenance for three years from the date of the logs or schedules. The logs shall, at a minimum, include identification of the plant; the signature and license number of the operator(s) and the signature of the person(s) making any entries; date and time in and out; specific operation and maintenance activities, including any preventive maintenance or repairs made or requested; results of tests performed and samples taken, unless documented on a laboratory sheet; and notation of any notification or reporting completed in accordance with Rule 62-602.650(3), F.A.C. The logs shall be maintained on-site in a location accessible to 24-hour inspection, protected from weather damage, and current to the last operation and maintenance performed; and
- j. Records of biosolids quantities, treatment, monitoring, and hauling for at least five years. [62-620.350, 62-602.650, 62-640.650(4)]

VI. SCHEDULES

1. The permittee is not authorized to discharge to waters of the state after the expiration date of this permit, unless:
 - a. The permittee has applied for renewal of this permit at least 180 days before the expiration date of this permit using the appropriate forms listed in Rule 62-620.910, F.A.C., and in the manner established in the Department of Environmental Protection Guide to Permitting Wastewater Facilities or Activities Under Chapter 62-620, F.A.C., including submittal of the appropriate processing fee set forth in Rule 62-4.050, F.A.C.; or
 - b. The permittee has made complete the application for renewal of this permit before the permit expiration date.

VII. INDUSTRIAL PRETREATMENT PROGRAM REQUIREMENTS

1. This facility is not required to have a pretreatment program at this time. [62-625.500]

VIII. OTHER SPECIFIC CONDITIONS

1. The permittee shall comply with all conditions and requirements for reuse contained in their consumptive use permit issued by the Water Management District, if such requirements are consistent with Department rules. [62-610.800(10)]
2. In the event that the treatment facilities or equipment no longer function as intended, are no longer safe in terms of public health and safety, or odor, noise, aerosol drift, or lighting adversely affects neighboring developed areas at the levels prohibited by Rule 62-600.400(2)(a), F.A.C., corrective action (which may include additional maintenance or modifications of the permitted facilities) shall be taken by the permittee. Other corrective action may be required to ensure compliance with rules of the Department. Additionally, the treatment, management, use or land application of residuals shall not cause a violation of the odor prohibition in Rule 62-296.320(2), F.A.C. [62-600.410(5) and 62-640.400(6)]
3. The deliberate introduction of stormwater in any amount into collection/transmission systems designed solely for the introduction (and conveyance) of domestic/industrial wastewater; or the deliberate introduction of stormwater into collection/transmission systems designed for the introduction or conveyance of combinations of storm and domestic/industrial wastewater in amounts which may reduce the efficiency of pollutant removal by the treatment plant is prohibited, except as provided by Rule 62-610.472, F.A.C. [62-604.130(3)]

PERMITTEE: Brevard County Utility Services Department
FACILITY: BCUD/South Beaches WWTF

PERMIT NUMBER: FL0040622 (Minor)
EXPIRATION DATE: March 26, 2024

4. Collection/transmission system overflows shall be reported to the Department in accordance with Permit Condition IX. 20. [62-604.550] [62-620.610(20)]
5. The operating authority of a collection/transmission system and the permittee of a treatment plant are prohibited from accepting connections of wastewater discharges which have not received necessary pretreatment or which contain materials or pollutants (other than normal domestic wastewater constituents):
 - a. Which may cause fire or explosion hazards; or
 - b. Which may cause excessive corrosion or other deterioration of wastewater facilities due to chemical action or pH levels; or
 - c. Which are solid or viscous and obstruct flow or otherwise interfere with wastewater facility operations or treatment; or
 - d. Which result in the wastewater temperature at the introduction of the treatment plant exceeding 40°C or otherwise inhibiting treatment; or
 - e. Which result in the presence of toxic gases, vapors, or fumes that may cause worker health and safety problems. [62-604.130(5)]
6. The treatment facility, storage ponds for Part II systems, rapid infiltration basins, and/or infiltration trenches shall be enclosed with a fence or otherwise provided with features to discourage the entry of animals and unauthorized persons. [62-600.400(2)(b)]
7. Screenings and grit removed from the wastewater facilities shall be collected in suitable containers and hauled to a Department approved Class I landfill or to a landfill approved by the Department for receipt/disposal of screenings and grit. [62-701.300(1)(a)]
8. Where required by Chapter 471 or Chapter 492, F.S., applicable portions of reports that must be submitted under this permit shall be signed and sealed by a professional engineer or a professional geologist, as appropriate. [62-620.310(4)]
9. The permittee shall provide verbal notice to the Department's Central District Office as soon as practical after discovery of a sinkhole or other karst feature within an area for the management or application of wastewater, wastewater residuals (sludges), or reclaimed water. The permittee shall immediately implement measures appropriate to control the entry of contaminants, and shall detail these measures to the Department's Central District Office in a written report within 7 days of the sinkhole discovery. [62-620.320(6)]
10. The permittee shall provide notice to the Department of the following:
 - a. Any new introduction of pollutants into the facility from an industrial discharger which would be subject to Chapter 403, F.S., and the requirements of Chapter 62-620, F.A.C., if it were directly discharging those pollutants; and
 - b. Any substantial change in the volume or character of pollutants being introduced into that facility by a source which was identified in the permit application and known to be discharging at the time the permit was issued.

Notice shall include information on the quality and quantity of effluent introduced into the facility and any anticipated impact of the change on the quantity or quality of effluent or reclaimed water to be discharged from the facility. [62-620.625(2)]

IX. GENERAL CONDITIONS

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are binding and enforceable pursuant to Chapter 403, Florida Statutes. Any permit noncompliance constitutes a violation of Chapter 403, Florida Statutes, and is grounds for enforcement action, permit termination, permit revocation and reissuance, or permit revision. [62-620.610(1)]

PERMITTEE: Brevard County Utility Services Department
FACILITY: - BCUD/South Beaches WWTF

PERMIT NUMBER: FL0040622 (Minor)
EXPIRATION DATE: **March 26, 2024**

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviations from the approved drawings, exhibits, specifications, or conditions of this permit constitutes grounds for revocation and enforcement action by the Department. *[62-620.610(2)]*
3. As provided in subsection 403.087(7), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor authorize any infringement of federal, state, or local laws or regulations. This permit is not a waiver of or approval of any other Department permit or authorization that may be required for other aspects of the total project which are not addressed in this permit. *[62-620.610(3)]*
4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title. *[62-620.610(4)]*
5. This permit does not relieve the permittee from liability and penalties for harm or injury to human health or welfare, animal or plant life, or property caused by the construction or operation of this permitted source; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department. The permittee shall take all reasonable steps to minimize or prevent any discharge, reuse of reclaimed water, or residuals use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. *[62-620.610(5)]*
6. If the permittee wishes to continue an activity regulated by this permit after its expiration date, the permittee shall apply for and obtain a new permit. *[62-620.610(6)]*
7. The permittee shall at all times properly operate and maintain the facility and systems of treatment and control, and related appurtenances, that are installed and used by the permittee to achieve compliance with the conditions of this permit. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to maintain or achieve compliance with the conditions of the permit. *[62-620.610(7)]*
8. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit revision, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition. *[62-620.610(8)]*
9. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, including an authorized representative of the Department and authorized EPA personnel, when applicable, upon presentation of credentials or other documents as may be required by law, and at reasonable times, depending upon the nature of the concern being investigated, to:
 - a. Enter upon the permittee's premises where a regulated facility, system, or activity is located or conducted, or where records shall be kept under the conditions of this permit;
 - b. Have access to and copy any records that shall be kept under the conditions of this permit;
 - c. Inspect the facilities, equipment, practices, or operations regulated or required under this permit; and
 - d. Sample or monitor any substances or parameters at any location necessary to assure compliance with this permit or Department rules. *[62-620.610(9)]*
10. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data, and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except as such use is proscribed by Section 403.111, F.S., or Rule 62-620.302, F.A.C. Such evidence shall only be used to the extent that it is consistent with the Florida Rules of Civil Procedure and applicable evidentiary rules. *[62-620.610(10)]*

PERMITTEE: Brevard County Utility Services Department
FACILITY: BCUD/South Beaches WWTF

PERMIT NUMBER: FL0040622 (Minor)
EXPIRATION DATE: **March 26, 2024**

11. When requested by the Department, the permittee shall within a reasonable time provide any information required by law which is needed to determine whether there is cause for revising, revoking and reissuing, or terminating this permit, or to determine compliance with the permit. The permittee shall also provide to the Department upon request copies of records required by this permit to be kept. If the permittee becomes aware of relevant facts that were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be promptly submitted or corrections promptly reported to the Department. *[62-620.610(11)]*
12. Unless specifically stated otherwise in Department rules, the permittee, in accepting this permit, agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance; provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules. A reasonable time for compliance with a new or amended surface water quality standard, other than those standards addressed in Rule 62-302.500, F.A.C., shall include a reasonable time to obtain or be denied a mixing zone for the new or amended standard. *[62-620.610(12)]*
13. The permittee, in accepting this permit, agrees to pay the applicable regulatory program and surveillance fee in accordance with Rule 62-4.052, F.A.C. *[62-620.610(13)]*
14. This permit is transferable only upon Department approval in accordance with Rule 62-620.340, F.A.C. The permittee shall be liable for any noncompliance of the permitted activity until the transfer is approved by the Department. *[62-620.610(14)]*
15. The permittee shall give the Department written notice at least 60 days before inactivation or abandonment of a wastewater facility or activity and shall specify what steps will be taken to safeguard public health and safety during and following inactivation or abandonment. *[62-620.610(15)]*
16. The permittee shall apply for a revision to the Department permit in accordance with Rules 62-620.300, F.A.C., and the Department of Environmental Protection Guide to Permitting Wastewater Facilities or Activities Under Chapter 62-620, F.A.C., at least 90 days before construction of any planned substantial modifications to the permitted facility is to commence or with Rule 62-620.325(2), F.A.C., for minor modifications to the permitted facility. A revised permit shall be obtained before construction begins except as provided in Rule 62-620.300, F.A.C. *[62-620.610(16)]*
17. The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. The permittee shall be responsible for any and all damages which may result from the changes and may be subject to enforcement action by the Department for penalties or revocation of this permit. The notice shall include the following information:
 - a. A description of the anticipated noncompliance;
 - b. The period of the anticipated noncompliance, including dates and times; and
 - c. Steps being taken to prevent future occurrence of the noncompliance. *[62-620.610(17)]*
18. Sampling and monitoring data shall be collected and analyzed in accordance with Rule 62-4.246 and Chapters 62-160, 62-600, and 62-610, F.A.C., and 40 CFR 136, as appropriate.
 - a. Monitoring results shall be reported at the intervals specified elsewhere in this permit and shall be reported on a Discharge Monitoring Report (DMR), DEP Form 62-620.910(10), or as specified elsewhere in the permit.
 - b. If the permittee monitors any contaminant more frequently than required by the permit, using Department approved test procedures, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR.
 - c. Calculations for all limitations which require averaging of measurements shall use an arithmetic mean unless otherwise specified in this permit.
 - d. Except as specifically provided in Rule 62-160.300, F.A.C., any laboratory test required by this permit shall be performed by a laboratory that has been certified by the Department of Health Environmental

PERMITTEE: Brevard County Utility Services Department
FACILITY: BCUD/South Beaches WWTF

PERMIT NUMBER: FL0040622 (Minor)
EXPIRATION DATE: March 26, 2024

Laboratory Certification Program (DOH ELCP). Such certification shall be for the matrix, test method and analyte(s) being measured to comply with this permit. For domestic wastewater facilities, testing for parameters listed in Rule 62-160.300(4), F.A.C., shall be conducted under the direction of a certified operator.

- e. Field activities including on-site tests and sample collection shall follow the applicable standard operating procedures described in DEP-SOP-001/01 adopted by reference in Chapter 62-160, F.A.C.
 - f. Alternate field procedures and laboratory methods may be used where they have been approved in accordance with Rules 62-160.220, and 62-160.330, F.A.C. [62-620.610(18)]
19. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule detailed elsewhere in this permit shall be submitted no later than 14 days following each schedule date. [62-620.610(19)]
20. The permittee shall report to the Department's Central District Office any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within five days of the time the permittee becomes aware of the circumstances. The written submission shall contain: a description of the noncompliance and its cause; the period of noncompliance including exact dates and time, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.
- a. The following shall be included as information which must be reported within 24 hours under this condition:
 - (1) Any unanticipated bypass which causes any reclaimed water or effluent to exceed any permit limitation or results in an unpermitted discharge,
 - (2) Any upset which causes any reclaimed water or the effluent to exceed any limitation in the permit,
 - (3) Violation of a maximum daily discharge limitation for any of the pollutants specifically listed in the permit for such notice, and
 - (4) Any unauthorized discharge to surface or ground waters.
 - b. Oral reports as required by this subsection shall be provided as follows:
 - (1) For unauthorized releases or spills of treated or untreated wastewater reported pursuant to subparagraph (a)4. that are in excess of 1,000 gallons per incident, or where information indicates that public health or the environment will be endangered, oral reports shall be provided to the STATE WATCH OFFICE TOLL FREE NUMBER (800) 320-0519, as soon as practical, but no later than 24 hours from the time the permittee becomes aware of the discharge. The permittee, to the extent known, shall provide the following information to the State Watch Office:
 - (a) Name, address, and telephone number of person reporting;
 - (b) Name, address, and telephone number of permittee or responsible person for the discharge;
 - (c) Date and time of the discharge and status of discharge (ongoing or ceased);
 - (d) Characteristics of the wastewater spilled or released (untreated or treated, industrial or domestic wastewater);
 - (e) Estimated amount of the discharge;
 - (f) Location or address of the discharge;
 - (g) Source and cause of the discharge;
 - (h) Whether the discharge was contained on-site, and cleanup actions taken to date;
 - (i) Description of area affected by the discharge, including name of water body affected, if any; and
 - (j) Other persons or agencies contacted.
 - (2) Oral reports, not otherwise required to be provided pursuant to subparagraph b.1 above, shall be provided to the Department's Central District Office within 24 hours from the time the permittee becomes aware of the circumstances.
 - c. If the oral report has been received within 24 hours, the noncompliance has been corrected, and the noncompliance did not endanger health or the environment, the Department's Central District Office shall waive the written report. [62-620.610(20)]

PERMITTEE: Brevard County Utility Services Department
FACILITY: BCUD/South Beaches WWTF

PERMIT NUMBER: FL0040622 (Minor)
EXPIRATION DATE: **March 26, 2024**

21. The permittee shall report all instances of noncompliance not reported under Permit Conditions IX.17., IX.18., or IX.19. of this permit at the time monitoring reports are submitted. This report shall contain the same information required by Permit Condition IX.20. of this permit. [62-620.610(21)]
22. Bypass Provisions.
- a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment works.
 - b. Bypass is prohibited, and the Department may take enforcement action against a permittee for bypass, unless the permittee affirmatively demonstrates that:
 - (1) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; and
 - (2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
 - (3) The permittee submitted notices as required under Permit Condition IX.22.c. of this permit.
 - c. If the permittee knows in advance of the need for a bypass, it shall submit prior notice to the Department, if possible at least 10 days before the date of the bypass. The permittee shall submit notice of an unanticipated bypass within 24 hours of learning about the bypass as required in Permit Condition IX.20. of this permit. A notice shall include a description of the bypass and its cause; the period of the bypass, including exact dates and times; if the bypass has not been corrected, the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent recurrence of the bypass.
 - d. The Department shall approve an anticipated bypass, after considering its adverse effect, if the permittee demonstrates that it will meet the three conditions listed in Permit Condition IX.22.b.(1) through (3) of this permit.
 - e. A permittee may allow any bypass to occur which does not cause reclaimed water or effluent limitations to be exceeded if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Permit Condition IX.22.b. through d. of this permit. [62-620.610(22)]
23. Upset Provisions.
- a. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based effluent limitations because of factors beyond the reasonable control of the permittee.
 - (1) An upset does not include noncompliance caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, careless or improper operation.
 - (2) An upset constitutes an affirmative defense to an action brought for noncompliance with technology based permit effluent limitations if the requirements of upset provisions of Rule 62-620.610, F.A.C., are met.
 - b. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed contemporaneous operating logs, or other relevant evidence that:
 - (1) An upset occurred and that the permittee can identify the cause(s) of the upset;
 - (2) The permitted facility was at the time being properly operated;
 - (3) The permittee submitted notice of the upset as required in Permit Condition IX.20. of this permit; and
 - (4) The permittee complied with any remedial measures required under Permit Condition IX.5. of this permit.
 - c. In any enforcement proceeding, the burden of proof for establishing the occurrence of an upset rests with the permittee.
 - d. Before an enforcement proceeding is instituted, no representation made during the Department review of a claim that noncompliance was caused by an upset is final agency action subject to judicial review. [62-620.610(23)]

PERMITTEE: Brevard County Utility Services Department
FACILITY: BCUD/South Beaches WWTF

PERMIT NUMBER: FL0040622 (Minor)
EXPIRATION DATE: **March 26, 2024**

Executed in Orlando, Florida.

STATE OF FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION



Lu Burson,
Environmental Administrator
Permitting and Waste Clean Up Program

PERMIT ISSUANCE DATE: March 27, 2019

Attachment(s):
Discharge Monitoring Report
"Pathogen Monitoring" Form

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

When Completed submit this report to: <http://www.fdepportal.com/go/>

PERMITTEE NAME: Brevard County Utility Services Department
 MAILING ADDRESS: 2725 Judge Fran Jamieson Way
 BLDG. A-213

FACILITY: Melbourne, Florida 32940-6605
 LOCATION: BCUD/South Beaches WWTF
 2800 S Highway A1A
 Melbourne Beach, FL 32951-2811

COUNTY: Brevard
 OFFICE: Central District

PERMIT NUMBER: FL0040622-012-DW1P

LIMIT: Final
 CLASS SIZE: MI
 MONITORING GROUP NUMBER: D-001
 MONITORING GROUP DESCRIPTION: Class III Marine

RE-SUBMITTED DMR:
 NO DISCHARGE FROM SITE:
 MONITORING PERIOD From: _____ To: _____

Expiration Date

REPORT FREQUENCY: Monthly
 PROGRAM: Domestic

Parameter	Quantity or Loading	Units	Quality or Concentration	Units	No. Ex.	Frequency of Analysis	Sample Type
Flow (to D-001)	Sample Measurement						
PARM Code 50050 Y Mon. Site No. FLW-3	Permit Requirement	MGD	0.11 (An.Avg.)			Continuous	Flow Totalizer
Flow (to D-001)	Sample Measurement						
PARM Code 50050 I Mon. Site No. FLW-3	Permit Requirement	MGD	Report (Mo.Avg.)			Continuous	Flow Totalizer
BOD, Carbonaceous 5 day, 20C	Sample Measurement						
PARM Code 80082 I Mon. Site No. EFD-1	Permit Requirement					Daily; 24 hours	24-hr FPC
Solids, Total Suspended	Sample Measurement						
PARM Code 00530 I Mon. Site No. EFD-1	Permit Requirement					Daily; 24 hours	24-hr FPC
Coliform, Fecal	Sample Measurement						
PARM Code 74055 Y Mon. Site No. EFA-2	Permit Requirement		14 (An.Avg.)			5 Days/Week	Grab
Coliform, Fecal	Sample Measurement						
PARM Code 74055 A Mon. Site No. EFA-2	Permit Requirement		14 (Mo.Med.)	86 (Max.)		5 Days/Week	Grab

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

NAME/TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE NO	DATE (mm/dd/yyyy)

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here):

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: BCUJ/South Beaches WWTF

MONITORING GROUP NUMBER: D-001
 MONITORING PERIOD From: _____ To: _____

PERMIT NUMBER: FL0040622-012-DW1P

Parameter	Quantity or Loading	Units	Quality or Concentration	Units	No. Ex.	Frequency of Analysis	Sample Type
Enterococci	Sample Measurement						
PARM Code 31639 A Mon. Site No. EFA-2	Permit Requirement		35 (Mo. Geo. Mn.)			5 Days/Week	Grab
pH	Sample Measurement						
PARM Code 00400 A Mon. Site No. EFA-2	Permit Requirement		6.5 (Min.)			Continuous	Meter
Chlorine, Total Residual (For Disinfection)	Sample Measurement						
PARM Code 50060 A Mon. Site No. EFA-2	Permit Requirement		1.0 (Min.)			Continuous	Meter
Chlorine, Total Residual (For Dechlorination)	Sample Measurement						
PARM Code 50060 I Mon. Site No. EFD-1	Permit Requirement		0.01 (Max.)			Daily; 24 hours	Grab
Nitrogen, Total	Sample Measurement						
PARM Code 00600 I Mon. Site No. EFD-1	Permit Requirement		12.0 (Max.)			Daily; 24 hours	24-hr FPC
Phosphorus, Total (as P)	Sample Measurement						
PARM Code 00665 I Mon. Site No. EFD-1	Permit Requirement		4.0 (Max.)			Daily; 24 hours	24-hr FPC
Oxygen, Dissolved (DO)	Sample Measurement						
PARM Code 00300 I Mon. Site No. EFD-2	Permit Requirement		5.0 (Min.)			Daily; 24 hours	Grab
LC50 STATRE 96HOUR ACUTE Ceriodaphnia dubia (Routine)	Sample Measurement						
PARM Code TAN3B P Mon. Site No. EFD-1	Permit Requirement		100 (Min.)			Once during discharge	Grab
LC50 STATRE 96HOUR ACUTE Ceriodaphnia dubia (Additional)	Sample Measurement						
PARM Code TAN3B Q Mon. Site No. EFD-1	Permit Requirement		100 (Min.)			As needed	As required by the permit
LC50 STATRE 96HOUR ACUTE Ceriodaphnia dubia (Additional)	Sample Measurement						
PARM Code TAN3B R Mon. Site No. EFD-1	Permit Requirement		100 (Min.)			As needed	As required by the permit

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: BCUD/South Beaches WWTF

MONITORING GROUP D-001
 NUMBER:
 MONITORING PERIOD From: _____ To: _____

PERMIT NUMBER: FL0040622-012-DW1P

Parameter	Quantity or Loading	Units	Quality or Concentration	Units	No. Ex.	Frequency of Analysis	Sample Type
LC50 STAIRE 96HOUR ACUTE Cyrpinella leedsii (Routine)	Sample Measurement						
PARM Code TANGH P Mon. Site No. EFD-1	Permit Requirement		100 (Min.)	percent		Once during discharge	Grab
LC50 STAIRE 96HOUR ACUTE Cyrpinella leedsii (Additional)	Sample Measurement						
PARM Code TANGH Q Mon. Site No. EFD-1	Permit Requirement		100 (Min.)	percent		As needed	As required by the permit
LC50 STAIRE 96HOUR ACUTE Cyrpinella leedsii (Additional)	Sample Measurement						
PARM Code TANGH R Mon. Site No. EFD-1	Permit Requirement		100 (Min.)	percent		As needed	As required by the permit
Phosphorus, Total (as P)	Sample Measurement						
PARM Code 00665 P Mon. Site No. EFD-1	Report (Mo. Total)	36.0 (An. Total)		lb/yr		Monthly	Calculated
Nitrogen, Total	Sample Measurement						
PARM Code 00600 P Mon. Site No. EFD-1	Report (Mo. Total)	173.0 (An. Total)		lb/yr		Monthly	Calculated

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

When Completed submit this report to: <http://www.fldepportal.com/go/>

PERMITTEE NAME: Brevard County Utility Services Department
 MAILING ADDRESS: 2725 Judge Fran Jamieson Way
 BLDG. A-213
 Melbourne, Florida 32940-6605
 BCUD/South Beaches WWTF
 2800 S Highway A1A
 Melbourne Beach, FL 32951-2811

COUNTY: Brevard
 OFFICE: Central District

PERMIT NUMBER: FL0040622-012-DW1P
 Final MI R-001
 CLASS SIZE: Public Access Reuse System, with Influent
 MONITORING GROUP NUMBER:
 MONITORING GROUP DESCRIPTION:
 RE-SUBMITTED DMR:
 NO DISCHARGE FROM SITE:
 MONITORING PERIOD From: _____ To: _____

PERMIT NUMBER: _____
 Final MI R-001
 CLASS SIZE: _____
 MONITORING GROUP NUMBER: _____
 MONITORING GROUP DESCRIPTION: _____
 RE-SUBMITTED DMR: _____
 NO DISCHARGE FROM SITE: _____
 MONITORING PERIOD From: _____ To: _____

Expiration Date: March 26, 2024

REPORT FREQUENCY: Monthly
 PROGRAM: Domestic

Parameter	Quantity or Loading	Units	Quality or Concentration	Units	No. Ex.	Frequency of Analysis	Sample Type
Flow (To Reuse)	Sample Measurement						
PARM Code 50050 Y Mon. Site No. FLW-2	3.0 (An.Avg.)	MGD				Continuous	Flow Totalizer
Flow (To Reuse)	Sample Measurement						
PARM Code 50050 I Mon. Site No. FLW-2	Report (Mo.Avg.)	MGD				Continuous	Flow Totalizer
BOD, Carbonaceous 5 day, 20C	Sample Measurement						
PARM Code 80082 Y Mon. Site No. EFA-1			20.0 (An.Avg.)	mg/L		5 Days/Week	24-hr FPC
BOD, Carbonaceous 5 day, 20C	Sample Measurement						
PARM Code 80082 A Mon. Site No. EFA-1			60.0 (Max.)	45.0 (Max. Wk.Avg.)	30.0 (Mo.Avg.)	5 Days/Week	24-hr FPC
Solids, Total Suspended	Sample Measurement						
PARM Code 00530 B Mon. Site No. EFB-1			5.0 (Max.)	mg/L		4 Days/Week	Grab
Coliform, Fecal	Sample Measurement						
PARM Code 74055 A Mon. Site No. EFA-1			25 (Max.)	#/100mL		4 Days/Week	Grab

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

NAME/TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE NO	DATE (mm/dd/yyyy)

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here):

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: BCUJ/South Beaches WWTF

MONITORING GROUP R-001
 NUMBER:
 MONITORING PERIOD From: _____ To: _____

PERMIT NUMBER: FL0040622-012-DW1P

Parameter	Quantity or Loading	Units	Quality or Concentration	Units	No. Ex.	Frequency of Analysis	Sample Type
Coliform, Fecal, % less than detection	Sample Measurement						
PARM Code 51005 A Mon. Site No. EFA-1	Permit Requirement		75 (Min. Mo. Total)			4 Days/Week	Calculated
pH	Sample Measurement						
PARM Code 00400 A Mon. Site No. EFA-1	Permit Requirement		6.0 (Min.)			Continuous	Meter
Chlorine, Total Residual (For Disinfection)	Sample Measurement						
PARM Code 50060 A Mon. Site No. EFA-1	Permit Requirement		1.0 (Min.)			Continuous	Meter
Turbidity	Sample Measurement						
PARM Code 00070 B Mon. Site No. EFB-1	Permit Requirement					Continuous	Meter
Nitrogen, Total	Sample Measurement						
PARM Code 00600 Y Mon. Site No. EFA-1	Permit Requirement					Monthly	Grab
Nitrogen, Total	Sample Measurement						
PARM Code 00600 A Mon. Site No. EFA-1	Permit Requirement					Monthly	Grab
Phosphorus, Total (as P)	Sample Measurement						
PARM Code 00665 Y Mon. Site No. EFA-1	Permit Requirement					Monthly	Grab
Phosphorus, Total (as P)	Sample Measurement						
PARM Code 00665 A Mon. Site No. EFA-1	Permit Requirement					Monthly	Grab
Flow (Total through facility)	Sample Measurement						
PARM Code 50050 P Mon. Site No. FLW-4	Permit Requirement	8.0 (An. Avg.)		MGD		Continuous	Flow Totalizer
Flow (Total through facility)	Sample Measurement						
PARM Code 50050 Q Mon. Site No. FLW-4	Permit Requirement	Report (Qt. Avg.)		MGD		Continuous	Flow Totalizer

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: BCUD/South Beaches WWTF

MONITORING GROUP R-001

PERMIT NUMBER: FL0040622-012-DW1P

NUMBER:

MONITORING PERIOD From: _____ To: _____

Parameter	Sample Measurement	Quantity or Loading	Units	Quality or Concentration	Units	No. Ex.	Frequency of Analysis	Sample Type
Percent Capacity, (TMADP/Permitted Capacity) x 100	Sample Measurement							
PARM Code 00180 I Mon. Site No. FLW-4	Permit Requirement			Report (Mo. Avg.)	percent		Monthly	Calculated
BOD, Carbonaceous 5 day, 20C (Influent)	Sample Measurement							
PARM Code 80082 G Mon. Site No. INF-1	Permit Requirement			Report (Max.)	mg/L		5 Days/Week	24-hr FPC
Solids, Total Suspended (Influent)	Sample Measurement							
PARM Code 00530 G Mon. Site No. INF-1	Permit Requirement			Report (Max.)	mg/L		5 Days/Week	24-hr FPC

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

When Completed submit this report to: <http://www.fldesktop.com/go/>

PERMITTEE NAME: Brevard County Utility Services Department
 MAILING ADDRESS: 2725 Judge Fran Jamieson Way
 BLDG. A-213

FACILITY: Melbourne, Florida 32940-6605
 LOCATION: BCD/South Beaches WWTF
 2800 S Highway A1A
 Melbourne Beach, FL 32951-2811

PERMIT NUMBER: FL0040622-012-DW1P

LIMIT: Final
 CLASS SIZE: MI
 MONITORING GROUP NUMBER: U-001
 MONITORING GROUP DESCRIPTION: underground injection well
 RE-SUBMITTED DMR:
 NO DISCHARGE FROM SITE:
 MONITORING PERIOD From: _____ To: _____

Expiration Date: March 26, 2024

REPORT FREQUENCY: Monthly
 PROGRAM: Domestic

Parameter	Quantity or Loading	Units	Quality or Concentration	Units	No. Ex.	Frequency of Analysis	Sample Type
Flow (to U-001)	Sample Measurement						
PARM Code 50050 Y Mon. Site No. FLW-1	9.0 (An.Avg.)	MGD				Continuous	Flow Totalizer
Flow (to U-001)	Sample Measurement						
PARM Code 50050 I Mon. Site No. FLW-1	Report (Mo.Avg.)	MGD				Continuous	Flow Totalizer
BOD, Carbonaceous 5 day, 20C	Sample Measurement						
PARM Code 80082 Y Mon. Site No. EFA-2			20.0 (An.Avg.)	mg/L		5 Days/Week	24-hr FPC
BOD, Carbonaceous 5 day, 20C	Sample Measurement						
PARM Code 80082 A Mon. Site No. EFA-2	60.0 (Max.)		45.0 (Max. Wk.Avg.)	mg/L		5 Days/Week	24-hr FPC
Solids, Total Suspended	Sample Measurement						
PARM Code 00530 Y Mon. Site No. EFA-2			20.0 (An.Avg.)	mg/L		5 Days/Week	24-hr FPC
Solids, Total Suspended	Sample Measurement						
PARM Code 00530 A Mon. Site No. EFA-2	60.0 (Max.)		45.0 (Max. Wk.Avg.)	mg/L		5 Days/Week	24-hr FPC

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

NAME/TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE NO	DATE (mm/dd/yyyy)

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here):

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

When Completed submit this report to: <http://www.fldepportal.com/go/>

PERMITTEE NAME:	Brevard County Utility Services Department	PERMIT NUMBER:	FL0040622-012-DW1P
MAILING ADDRESS:	2725 Judge Fran Jamieson Way BLDG. A-213 Melbourne, Florida 32940-6605	LIMIT:	Final
FACILITY:	BCUD/South Beaches WWTF	CLASS SIZE:	MI
LOCATION:	2800 S Highway A1A Melbourne Beach, FL 32951-2811	MONITORING GROUP NUMBER:	RMP-Q
COUNTY:	Brevard	MONITORING GROUP DESCRIPTION:	Biosolids Quantity
OFFICE:	Central District	RE-SUBMITTED DMR:	<input type="checkbox"/>
		NO DISCHARGE FROM SITE:	<input type="checkbox"/>
		MONITORING PERIOD	From: _____ To: _____

REPORT FREQUENCY:
PROGRAM:

Monthly
Domestic

Parameter	Quantity or Loading		Units	Quality or Concentration		Units	No. Ex.	Frequency of Analysis	Sample Type
	Sample Measurement	Report (Mo. Total)							
Biosolids Quantity (Landfilled)									
PARM Code B0008 + Mon. Site No. RMP-1			dry tons					Monthly	Calculated

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

NAME/TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE NO	DATE (mm/dd/yyyy)
COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here):			

DAILY SAMPLE RESULTS - PART B

Permit Number:
Monitoring Period

FL0040622-012-DW1P
From: _____ To: _____

Facility: BCUD/South Beaches WWTF

Code	BOD, Carbonaceous 5 day, 20C mg/L	Chlorine, Total Residual (For Disinfection) mg/L	Coliform, Fecal #/100mL	Nitrogen, Total mg/L	Phosphorus, Total (as P) mg/L	pH s.u.	BOD, Carbonaceous 5 day, 20C mg/L	Chlorine, Total Residual (For Disinfection) mg/L	Coliform, Fecal #/100mL	Enterococci #/100mL	Solids, Total Suspended mg/L
Mon. Site	80082 EFA-1	50060 EFA-1	74055 EFA-1	00600 EFA-1	00665 EFA-1	00400 EFA-1	80082 EFA-2	50060 EFA-2	74055 EFA-2	31639 EFA-2	00530 EFA-2
1											
2											
3											
4											
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26											
27											
28											
29											
30											
31											
Total											
Mo. Avg.											

PLANT STAFFING:

Day Shift Operator Class: _____ Certificate No: _____ Name: _____

Evening Shift Operator Class: _____ Certificate No: _____ Name: _____

Night Shift Operator Class: _____ Certificate No: _____ Name: _____

Lead Operator Class: _____ Certificate No: _____ Name: _____

DAILY SAMPLE RESULTS - PART B

Permit Number:
Monitoring Period

FL0040622-012-DW1P

From: _____ To: _____

Facility: BCUD/South Beaches WWTF

	pH s.u. Min	pH s.u. Max	Solids, Total Suspended mg/L	Turbidity NTU	BOD, Carbonaceou s 5 day, 20C mg/L	Chlorine, Total Residual (For Dechlorinatio n) mg/L	Nitrogen, Total mg/L	Oxygen, Dissolved (DO) mg/L	Phosphorus, Total (as P) mg/L	Solids, Total Suspended mg/L	Flow (to U- 001) MGD
Code	00400	00400	00530	00070	80082	50060	00600	00300	00665	00530	50050
Mon. Site	EFA-2	EFA-2	EFB-1	EFB-1	EFD-1	EFD-1	EFD-1	EFD-2	EFD-1	EFD-1	FLW-1
1											
2											
3											
4											
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28											
29											
30											
31											
Total											
Mo. Avg.											

PLANT STAFFING:

Day Shift Operator Class: _____ Certificate No: _____ Name: _____

Evening Shift Operator Class: _____ Certificate No: _____ Name: _____

Night Shift Operator Class: _____ Certificate No: _____ Name: _____

Lead Operator Class: _____ Certificate No: _____ Name: _____

DAILY SAMPLE RESULTS - PART B

Permit Number:
Monitoring Period

FL0040622-012-DW1P
From: _____

To: _____

Facility: BCUD/South Beaches WWTF

	Flow (To Reuse) MGD	Flow (to D-001) MGD	BOD, Carbonaceous 5 day, 20C (Influent) mg/L	Solids, Total Suspended (Influent) mg/L	Flow (Total through facility) MGD					
Code	50050	50050	80082	00530	50050					
Mon. Site	FLW-2	FLW-3	INF-1	INF-1	FLW-4					
1										
2										
3										
4										
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29										
30										
31										
Total										
Mo. Avg.										

PLANT STAFFING:

Day Shift Operator Class: _____ Certificate No: _____ Name: _____

Evening Shift Operator Class: _____ Certificate No: _____ Name: _____

Night Shift Operator Class: _____ Certificate No: _____ Name: _____

Lead Operator Class: _____ Certificate No: _____ Name: _____

GROUNDWATER MONITORING REPORT - PART D

Facility Name: BCU/D/South Beaches WWTF
 Permit Number: FL0040622-012-DW1/P
 County: Brevard
 Office: Central District

Monitoring Well ID: MWB-4
 Well Type: Background
 Description: West Well at WWTP
 Re-submitted DMR:

Report Frequency: Quarterly
 Program: Domestic

Monitoring Period: From: _____ To: _____
 Was the well purged before sampling? ___ Yes ___ No

Date Sample Obtained: _____
 Time Sample Obtained: _____

Parameter	PARAM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Frequency of Analysis	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level Relative to NGVD	82545		Report	ft	In Situ	Quarterly				
Nitrogen, Nitrate, Total (as N)	00620		Report	mg/L	Grab	Quarterly				
Solids, Total Dissolved (TDS)	70295		Report	mg/L	Grab	Quarterly				
Chloride (as Cl)	00940		Report	mg/L	Grab	Quarterly				
Coliform, Fecal	74055		Report	#/100mL	Grab	Quarterly				
pH	00400		Report	s.u.	Grab	Quarterly				
Turbidity	00070		Report	NTU	Grab	Quarterly				
Sodium, Total Recoverable	00923		Report	mg/L	Grab	Quarterly				

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

NAME/TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE NO	DATE (mm/dd/yyyy)
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COMMENTS AND EXPLANATION (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: BCU/D/South Beaches WWTF
Permit Number: FL0040622-012-DWIP
County: Brevard
Office: Central District

Monitoring Well ID: MWC-1
Well Type: Compliance
Description: North Well at WWTP
Re-submitted DMNR:

Report Frequency: Quarterly
Program: Domestic

Monitoring Period From: _____ To: _____
 Was the well purged before sampling? Yes ___ No ___
Date Sample Obtained: _____
Time Sample Obtained: _____

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Frequency of Analysis	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level Relative to NGVD	82545		Report	ft	In Situ	Quarterly				
Nitrogen, Nitrate, Total (as N)	00620		10	mg/L	Grab	Quarterly				
Solids, Total Dissolved (TDS)	70295		500	mg/L	Grab	Quarterly				
Chloride (as Cl)	00940		250	mg/L	Grab	Quarterly				
Coliform, Fecal	74055		4	#/100mL	Grab	Quarterly				
pH	00400		6.5-8.5	s.u.	Grab	Quarterly				
Turbidity	00070		Report	NTU	Grab	Quarterly				
Sodium, Total Recoverable	00923		160	mg/L	Grab	Quarterly				

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

NAME/TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT
TELEPHONE NO	DATE (mm/dd/yyyy)

COMMENTS AND EXPLANATION (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: BCCUD/South Beaches WWTF
 Permit Number: FL0040622-012-DW1P
 County: Brevard
 Office: Central District

Monitoring Well ID: MWC-2
 Well Type: Compliance
 Description: East Well at WWTP
 Re-submitted DMR:

Report Frequency: Quarterly
 Program: Domestic

Monitoring Period

From: _____ To: _____

Date Sample Obtained: _____

Time Sample Obtained: _____

Was the well purged before sampling? Yes ___ No ___

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Frequency of Analysis	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level Relative to NGVD	82545		Report	ft	In Situ	Quarterly				
Nitrogen, Nitrate, Total (as N)	00620		10	mg/L	Grab	Quarterly				
Solids, Total Dissolved (TDS)	70295		500	mg/L	Grab	Quarterly				
Chloride (as Cl)	00940		250	mg/L	Grab	Quarterly				
Coliform, Fecal	74055		4	#/100ml	Grab	Quarterly				
pH	00400		6.5-8.5	s.u.	Grab	Quarterly				
Turbidity	00070		Report	NTU	Grab	Quarterly				
Sodium, Total Recoverable	00923		160	mg/L	Grab	Quarterly				

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NAME/TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT
TELEPHONE NO	DATE (mm/dd/yyyy)

COMMENTS AND EXPLANATION (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: BCU/D/South Beaches WWTF
 Permit Number: FL0040622-012-DW1P
 County: Brevard

Office: Central District

Monitoring Period

From: _____ To: _____

Date Sample Obtained: _____
 Time Sample Obtained: _____

Monitoring Well ID: MWC-3SP
 Well Type: Compliance
 Description: MWC-3 Spessard
 Holland Golf Course

Report Frequency: Quarterly
 Program: Domestic

Re-submitted DMR:

Was the well purged before sampling? Yes No

Parameter	PARAM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Frequency of Analysis	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level Relative to NGVD	82545		Report	ft	In Situ	Quarterly				
Nitrogen, Nitrate, Total (as N)	00620		10	mg/L	Grab	Quarterly				
Solids, Total Dissolved (TDS)	70295		500	mg/L	Grab	Quarterly				
Chloride (as Cl)	00940		250	mg/L	Grab	Quarterly				
Coliform, Fecal	74055		4	#/100mL	Grab	Quarterly				
pH	00400		6.5-8.5	s.u.	Grab	Quarterly				
Turbidity	00070		Report	NTU	Grab	Quarterly				
Sodium, Total Recoverable	00923		160	mg/L	Grab	Quarterly				

I certify, under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

NAME/TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT _____ SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT _____ TELEPHONE NO _____ DATE (mm/dd/yyyy) _____

COMMENTS AND EXPLANATION (Reference all attachments here):

GROUNDWATER MONITORING REPORT - PART D

Facility Name: BCUD/South Beaches WWTF
Permit Number: FL0040622-012-DW1P
County: Brevard
Office: Central District

Monitoring Well ID: MW1-3
Well Type: Intermediate
Description: South Well at WWTF
Re-submitted DMR:

Report Frequency: Quarterly
Program: Domestic

Monitoring Period

From: _____

To: _____

Date Sample Obtained: _____
Time Sample Obtained: _____

Was the well purged before sampling? Yes No

Parameter	PARM Code	Sample Measurement	Permit Requirement	Units	Sample Type	Frequency of Analysis	Detection Limits	Analysis Method	Sampling Equipment Used	Samples Filtered (L/F/N)
Water Level Relative to NGVD	82545		Report	ft	In Situ	Quarterly				
Nitrogen, Nitrate, Total (as N)	00620		Report	mg/L	Grab	Quarterly				
Solids, Total Dissolved (TDS)	70295		Report	mg/L	Grab	Quarterly				
Chloride (as Cl)	00940		Report	mg/L	Grab	Quarterly				
Coliform, Fecal	74055		Report	#/100mL	Grab	Quarterly				
pH	00400		Report	s. u.	Grab	Quarterly				
Turbidity	00070		Report	NTU	Grab	Quarterly				
Sodium, Total Recoverable	00923		Report	mg/L	Grab	Quarterly				

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

NAME/TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT
TELEPHONE NO	DATE (mm/dd/yyyy)

COMMENTS AND EXPLANATION (Reference all attachments here):

INSTRUCTIONS FOR COMPLETING THE WASTEWATER DISCHARGE MONITORING REPORT

Read these instructions before completing the DMR. Hard copies and/or electronic copies of the required parts of the DMR were provided with the permit. All required information shall be completed in full and typed or printed in ink. A signed, original DMR shall be mailed to the address printed on the DMR by the 28th of the month following the monitoring period. Facilities who submit their DMR(s) electronically through eDMR do not need to submit a hardcopy DMR. The DMR shall not be submitted before the end of the monitoring period.

The DMR consists of three parts--A, B, and D--all of which may or may not be applicable to every facility. Facilities may have one or more Part A's for reporting effluent or reclaimed water data. All domestic wastewater facilities will have a Part B for reporting daily sample results. Part D is used for reporting ground water monitoring well data.

When results are not available, the following codes should be used on parts A and D of the DMR and an explanation provided where appropriate. Note: Codes used on Part B for raw data are different.

CODE	DESCRIPTION/INSTRUCTIONS	CODE	DESCRIPTION/INSTRUCTIONS
ANC	Analysis not conducted.	NOD	No discharge from/to site.
DRY	Dry Well	OPS	Operations were shutdown so no sample could be taken.
FLD	Flood disaster.	OTH	Other. Please enter an explanation of why monitoring data were not available.
IFS	Insufficient flow for sampling.	SEF	Sampling equipment failure.
LS	Lost sample.		
MNR	Monitoring not required this period.		

When reporting analytical results that fall below a laboratory's reported method detection limits or practical quantification limits, the following instructions should be used, unless indicated otherwise in the permit or on the DMR:

1. Results greater than or equal to the PQL shall be reported as the measured quantity.
2. Results less than the PQL and greater than or equal to the MDL shall be reported as the laboratory's MDL value. These values shall be deemed equal to the MDL when necessary to calculate an average for that parameter and when determining compliance with permit limits.
3. Results less than the MDL shall be reported by entering a less than sign (" $<$ ") followed by the laboratory's MDL value, e.g. < 0.001 . A value of one-half the MDL or one-half the effluent limit, whichever is lower, shall be used for that sample when necessary to calculate an average for that parameter. Values less than the MDL are considered to demonstrate compliance with an effluent limitation.

PART A -DISCHARGE MONITORING REPORT (DMR)

Part A of the DMR is comprised of one or more sections, each having its own header information. Facility information is preprinted in the header as well as the monitoring group number, whether the limits and monitoring requirements are interim or final, and the required submittal frequency (e.g. monthly, annually, quarterly, etc.). Submit Part A based on the required reporting frequency in the header and the instructions shown in the permit. The following should be completed by the permittee or authorized representative:

Resubmitted DMR: Check this box if this DMR is being re-submitted because there was information missing from or information that needed correction on a previously submitted DMR. The information that is being revised should be clearly noted on the re-submitted DMR (e.g. highlight, circle, etc.)

No Discharge From Site: Check this box if no discharge occurs and, as a result, there are no data or codes to be entered for all of the parameters on the DMR for the entire monitoring group number; however, if the monitoring group includes other monitoring locations (e.g., influent sampling), the "NOD" code should be used to individually denote those parameters for which there was no discharge.

Monitoring Period: Enter the month, day, and year for the first and last day of the monitoring period (i.e. the month, the quarter, the year, etc.) during which the data on this report were collected and analyzed.

Sample Measurement: Before filling in sample measurements in the table, check to see that the data collected correspond to the limit indicated on the DMR (i.e. interim or final) and that the data correspond to the monitoring group number in the header. Enter the data or calculated results for each parameter on this row in the non-shaded area above the limit. Be sure the result being entered corresponds to the appropriate statistical base code (e.g. annual average, monthly average, single sample maximum, etc.) and units. Data qualifier codes are not to be reported on Part A.

No. Ex.: Enter the number of sample measurements during the monitoring period that exceeded the permit limit for each parameter in the non-shaded area. If none, enter zero.

Frequency of Analysis: The shaded areas in this column contain the minimum number of times the measurement is required to be made according to the permit. Enter the actual number of times the measurement was made in the space above the shaded area.

Sample Type: The shaded areas in this column contain the type of sample (e.g. grab, composite, continuous) required by the permit. Enter the actual sample type that was taken in the space above the shaded area.

Signature: This report must be signed in accordance with Rule 62-620.305, F.A.C. Type or print the name and title of the signing official. Include the telephone number where the official may be reached in the event there are questions concerning this report. Enter the date when the report is signed.

Comment and Explanation of Any Violations: Use this area to explain any exceedances, any upset or by-pass events, or other items which require explanation. If more space is needed, reference all attachments in this area.

PART B - DAILY SAMPLE RESULTS

Monitoring Period: Enter the month, day, and year for the first and last day of the monitoring period (i.e. the month, the quarter, the year, etc.) during which the data on this report were collected and analyzed.
Daily Monitoring Results: Transfer all analytical data from your facility's laboratory or a contract laboratory's data sheets for all day(s) that samples were collected. Record the data in the units indicated. Table 1 in Chapter 62-160, F.A.C., contains a complete list of all the data qualifier codes that your laboratory may use when reporting analytical results. However, when transferring numerical results onto Part B of the DMR, only the following data qualifier codes should be used and an explanation provided where appropriate.

CODE	DESCRIPTION/INSTRUCTIONS
<	The compound was analyzed for but not detected.
A	Value reported is the mean (average) of two or more determinations.
J	Estimated value, value not accurate.
Q	Sample held beyond the actual holding time.
Y	Laboratory analysis was from an unpreserved or improperly preserved sample.

To calculate the monthly average, add each reported value to get a total. For flow, divide this total by the number of days in the month. For all other parameters, divide the total by the number of observations.
Plant Staffing: List the name, certificate number, and class of all state certified operators operating the facility during the monitoring period. Use additional sheets as necessary.

PART D - GROUND WATER MONITORING REPORT

Monitoring Period: Enter the month, day, and year for the first and last day of the monitoring period (i.e. the month, the quarter, the year, etc.) during which the data on this report were collected and analyzed.
Date Sample Obtained: Enter the date the sample was taken. Also, check whether or not the well was purged before sampling.
Time Sample Obtained: Enter the time the sample was taken.
Sample Measurement: Record the results of the analysis. If the result was below the minimum detection limit, indicate that. Data qualifier codes are not to be reported on Part D.
Detection Limits: Record the detection limits of the analytical methods used.
Analysis Method: Indicate the analytical method used. Record the method number from Chapter 62-160 or Chapter 62-601, F.A.C., or from other sources.
Sampling Equipment Used: Indicate the procedure used to collect the sample (e.g. airlift, bucket/bailer, centrifugal pump, etc.)
Samples Filtered: Indicate whether the sample obtained was filtered by laboratory (L), filtered in field (F), or unfiltered (N).
Signature: This report must be signed in accordance with Rule 62-620.305, F.A.C. Type or print the name and title of the signing official. Include the telephone number where the official may be reached in the event there are questions concerning this report. Enter the date when the report is signed.
Comments and Explanation: Use this space to make any comments on or explanations of results that are unexpected. If more space is needed, reference all attachments in this area.

SPECIAL INSTRUCTIONS FOR LIMITED WET WEATHER DISCHARGES

Flow (Limited Wet Weather Discharge): Enter the measured average flow rate during the period of discharge or divide gallons discharged by duration of discharge (converted into days). Record in million gallons per day (MGD).
Flow (Upstream): Enter the average flow rate in the receiving stream upstream from the point of discharge for the period of discharge. The average flow rate can be calculated based on two measurements; one made at the start and one made at the end of the discharge period. Measurements are to be made at the upstream gauging station described in the permit.
Actual Stream Dilution Ratio: To calculate the Actual Stream Dilution Ratio, divide the average upstream flow rate by the average discharge flow rate. Enter the Actual Stream Dilution Ratio accurate to the nearest 0.1.
No. of Days the SDF > Stream Dilution Ratio: For each day of discharge, compare the minimum Stream Dilution Factor (SDF) from the permit to the calculated Stream Dilution Ratio. On Part B of the DMR, enter an asterisk (*) if the SDF is greater than the Stream Dilution Ratio on any day of discharge. On Part A of the DMR, add up the days with an "*" and record the total number of days the Stream Dilution Factor was greater than the Stream Dilution Ratio.
CBOD₅: Enter the average CBOD₅ of the reclaimed water discharged during the period shown in duration of discharge.
TKN: Enter the average TKN of the reclaimed water discharged during the period shown in duration of discharge.
Actual Rainfall: Enter the actual rainfall for each day on Part B. Enter the actual cumulative rainfall to date for this calendar year and the actual total monthly rainfall on Part A. The cumulative rainfall to date for this calendar year is the total amount of rain, in inches, that has been recorded since January 1 of the current year through the month for which this DMR contains data.
Rainfall During Average Rainfall Year: On Part A, enter the total monthly rainfall during the average rainfall year and the cumulative rainfall for the average rainfall year. The cumulative rainfall for the average rainfall year is the amount of rain, in inches, which fell during the average rainfall year from January through the month for which this DMR contains data.
No. of Days LWWD Activated During Calendar Year: Enter the cumulative number of days that the limited wet weather discharge was activated since January 1 of the current year.
Reason for Discharge: Attach to the DMR a brief explanation of the factors contributing to the need to activate the limited wet weather discharge.

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

When Completed submit this report to: <http://www.fdeportal.com/go/>

PERMITTEE NAME: Brevard County Util Serv Department
MAILING ADDRESS: 2725 Judge Fran Jamieson Way
 BLDG. A-213
 Melbourne, Florida 32940-6605
FACILITY: BCUD/South Beaches WWTF
LOCATION: 2800 S Highway A1A
 Melbourne Beach, FL 32951-2811

COUNTY: Brevard
OFFICE: Central District

PERMIT NUMBER: FL0040622-012-DW1P
CLASS SIZE: Final
MONITORING GROUP NUMBER: MI
MONITORING GROUP DESCRIPTION: RWS-A
RE-SUBMITTED DMR: Annual Reclaimed Water or Effluent Analysis
NO DISCHARGE FROM SITE:
MONITORING NOT REQUIRED:*
MONITORING PERIOD From: _____ To: _____

Parameter	Sample Measurement	Quantity or Loading	Units	Quality or Concentration	Units	No. Ex.	Frequency of Analysis	Sample Type
Antimony, Total Recoverable (GWS = 6)**	Sample Measurement							
PARM Code 01268 P Mon. Site No. RWS-A	Permit Requirement			Report (Max.)	ug/L		Annually	24-hr FPC
Arsenic, Total Recoverable (GWS = 10)	Sample Measurement							
PARM Code 00978 P Mon. Site No. RWS-A	Permit Requirement			Report (Max.)	ug/L		Annually	24-hr FPC
Barium, Total Recoverable (GWS = 2,000)	Sample Measurement							
PARM Code 01009 P Mon. Site No. RWS-A	Permit Requirement			Report (Max.)	ug/L		Annually	24-hr FPC
Beryllium, Total Recoverable (GWS = 4)	Sample Measurement							
PARM Code 00998 P Mon. Site No. RWS-A	Permit Requirement			Report (Max.)	ug/L		Annually	24-hr FPC
Cadmium, Total Recoverable (GWS = 5)	Sample Measurement							
PARM Code 01113 P Mon. Site No. RWS-A	Permit Requirement			Report (Max.)	ug/L		Annually	24-hr FPC
Chromium, Total Recoverable (GWS = 100)	Sample Measurement							
PARM Code 01118 P Mon. Site No. RWS-A	Permit Requirement			Report (Max.)	ug/L		Annually	24-hr FPC

*THE "MONITORING NOT REQUIRED" CHECKBOX SHOULD BE SELECTED WHEN A CERTIFICATION STATEMENT IN ACCORDANCE WITH SUBSECTION 62-600.680(2), F.A.C., IS SUBMITTED WITH THIS DMR. SEE CERTIFICATION STATEMENT IN COMMENTS SECTION BELOW.
 **GROUND WATER STANDARD (GWS) FOR REFERENCE AND REVIEW ONLY.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

NAME/TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE NO	DATE (mm/dd/yyyy)

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here):
 NO NEW NON-DOMESTIC WASTEWATER DISCHARGERS HAVE BEEN ADDED TO THE COLLECTION SYSTEM SINCE THE LAST RECLAIMED WATER OR EFFLUENT ANALYSIS WAS CONDUCTED.
 SIGN AND DATE:

FACILITY: BCU/D/South Beaches WWTf

DISCHARGE MONITORING REPORT - PART A (Continued)

PERMIT NUMBER: FL0040622-012-DW1P

MONITORING GROUP NUMBER:
MONITORING PERIOD

RWS-A
From: _____

To: _____

Parameter	Sample	Quantity or Loading	Units	Quality or Concentration	Units	No. Ex.	Frequency of Analysis	Sample Type
Cyanide, Free (amen. to chlorination)(GWS = 200) PARM Code 00722 P Mon. Site No. RWS-A	Sample Measurement			Report (Max.)	ug/L		Annually	Grab
Fluoride, Total (as F) (GWS = 4.0/2.0) PARM Code 00951 P Mon. Site No. RWS-A	Sample Measurement			Report (Max.)	mg/L		Annually	24-hr FPC
Lead, Total Recoverable (GWS = 15) PARM Code 01114 P Mon. Site No. RWS-A	Sample Measurement			Report (Max.)	ug/L		Annually	24-hr FPC
Mercury, Total Recoverable (GWS = 2) PARM Code 71901 P Mon. Site No. RWS-A	Sample Measurement			Report (Max.)	ug/L		Annually	24-hr FPC
Nickel, Total Recoverable (GWS = 100) PARM Code 01074 P Mon. Site No. RWS-A	Sample Measurement			Report (Max.)	ug/L		Annually	24-hr FPC
Nitrogen, Nitrate, Total (as N) (GWS = 10) PARM Code 00620 P Mon. Site No. RWS-A	Sample Measurement			Report (Max.)	mg/L		Annually	24-hr FPC
Nitrogen, Nitrite, Total (as N) (GWS = 1) PARM Code 00615 P Mon. Site No. RWS-A	Sample Measurement			Report (Max.)	mg/L		Annually	24-hr FPC
Nitrite plus Nitrate, Total I det. (as N)(GWS = 10) PARM Code 00630 P Mon. Site No. RWS-A	Sample Measurement			Report (Max.)	mg/L		Annually	24-hr FPC
Selenium, Total Recoverable (GWS = 50) PARM Code 00981 P Mon. Site No. RWS-A	Sample Measurement			Report (Max.)	ug/L		Annually	24-hr FPC
Sodium, Total Recoverable (GWS = 160) PARM Code 00923 P Mon. Site No. RWS-A	Sample Measurement			Report (Max.)	mg/L		Annually	24-hr FPC

ISSUANCE/REISSUANCE DATE: March 27, 2019
DMR EFFECTIVE DATE: 1st day of the 2nd month following effective date of permit - Permit expiration

FACILITY: BCU/D/South Beaches WWTF

DISCHARGE MONITORING REPORT - PART A (Continued)

MONITORING GROUP RWS-A

PERMIT NUMBER: F10040622-012-DW1P

MONITORING PERIOD

From: _____

To: _____

Parameter	Sample Measurement	Quantity or Loading	Units	Quality or Concentration	Units	No. Ex.	Frequency of Analysis	Sample Type
Thallium, Total Recoverable (GWS = 2)	Sample Measurement							
PARM Code 00982 P Mon. Site No. RWS-A	Permit Requirement			Report (Max.)	ug/L		Annually	24-hr FPC
1,1-dichloroethylene (GWS = 7)	Sample Measurement							
PARM Code 34501 P Mon. Site No. RWS-A	Permit Requirement			Report (Max.)	ug/L		Annually	Grab
1,1,1-trichloroethane (GWS = 200)	Sample Measurement							
PARM Code 34506 P Mon. Site No. RWS-A	Permit Requirement			Report (Max.)	ug/L		Annually	Grab
1,1,2-trichloroethane (GWS = 5)	Sample Measurement							
PARM Code 34511 P Mon. Site No. RWS-A	Permit Requirement			Report (Max.)	ug/L		Annually	Grab
1,2-dichloroethane (GWS = 3)	Sample Measurement							
PARM Code 32103 P Mon. Site No. RWS-A	Permit Requirement			Report (Max.)	ug/L		Annually	Grab
1,2-dichloropropane (GWS = 5)	Sample Measurement							
PARM Code 34541 P Mon. Site No. RWS-A	Permit Requirement			Report (Max.)	ug/L		Annually	Grab
1,2,4-trichlorobenzene (GWS = 70)	Sample Measurement							
PARM Code 34551 P Mon. Site No. RWS-A	Permit Requirement			Report (Max.)	ug/L		Annually	24-hr FPC
Benzene (GWS = 1)	Sample Measurement							
PARM Code 34030 P Mon. Site No. RWS-A	Permit Requirement			Report (Max.)	ug/L		Annually	Grab
Carbon tetrachloride (GWS = 3)	Sample Measurement							
PARM Code 32102 P Mon. Site No. RWS-A	Permit Requirement			Report (Max.)	ug/L		Annually	Grab
Cis-1,2-dichloroethane (GWS = 70)	Sample Measurement							
PARM Code 81686 P Mon. Site No. RWS-A	Permit Requirement			Report (Max.)	ug/L		Annually	Grab

ISSUANCE/REISSUANCE DATE: March 27, 2019
 DMR EFFECTIVE DATE: 1st day of the 2nd month following effective date of permit - Permit expiration

DEP Form 62-620.910(10), Effective Nov. 29, 1994

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: BCUD/South Beaches WWTF

MONITORING GROUP NUMBER:

RWS-A

PERMIT NUMBER: FL0040622-012-DW1P

MONITORING PERIOD

From:

To:

Parameter	Sample Measurement	Quantity or Loading	Units	Quality or Concentration	Units	No. Ex.	Frequency of Analysis	Sample Type
Dichloromethane (methylene chloride)(GWS = 5)	Sample Measurement							
PARM Code 03821 P Mon. Site No. RWS-A	Permit Requirement			Report (Max.)	ug/L		Annually	Grab
Ethylbenzene (GWS = 700)	Sample Measurement							
PARM Code 34371 P Mon. Site No. RWS-A	Permit Requirement			Report (Max.)	ug/L		Annually	Grab
Monochlorobenzene (GWS = 100)	Sample Measurement							
PARM Code 34031 P Mon. Site No. RWS-A	Permit Requirement			Report (Max.)	ug/L		Annually	Grab
1,2-dichlorobenzene (GWS = 600)	Sample Measurement							
PARM Code 34536 P Mon. Site No. RWS-A	Permit Requirement			Report (Max.)	ug/L		Annually	Grab
1,4-dichlorobenzene (GWS = 75)	Sample Measurement							
PARM Code 34571 P Mon. Site No. RWS-A	Permit Requirement			Report (Max.)	ug/L		Annually	Grab
Styrene, Total (GWS = 100)	Sample Measurement							
PARM Code 77128 P Mon. Site No. RWS-A	Permit Requirement			Report (Max.)	ug/L		Annually	Grab
Tetrachloroethylene (GWS = 3)	Sample Measurement							
PARM Code 34475 P Mon. Site No. RWS-A	Permit Requirement			Report (Max.)	ug/L		Annually	Grab
Toluene (GWS = 1,000)	Sample Measurement							
PARM Code 34010 P Mon. Site No. RWS-A	Permit Requirement			Report (Max.)	ug/L		Annually	Grab
1,2-trans-dichloroethylene (GWS = 100)	Sample Measurement							
PARM Code 34546 P Mon. Site No. RWS-A	Permit Requirement			Report (Max.)	ug/L		Annually	Grab
Trichloroethylene (GWS = 3)	Sample Measurement							
PARM Code 39180 P Mon. Site No. RWS-A	Permit Requirement			Report (Max.)	ug/L		Annually	Grab

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: BCUD/South Beaches WWTF

MONITORING GROUP NUMBER: RWS-A
MONITORING PERIOD From: To:

PERMIT NUMBER: FL0040622-012-DWIP

Parameter	Quantity or Loading	Units	Quality or Concentration	Units	No. Ex.	Frequency of Analysis	Sample Type
Vinyl chloride (GWS = 1)	Sample Measurement						
PARM Code 39175 P Mon. Site No. RWS-A	Permit Requirement		Report (Max.)	ug/L		Annually	Grab
Xylenes (GWS = 10,000)	Sample Measurement						
PARM Code 81551 P Mon. Site No. RWS-A	Permit Requirement		Report (Max.)	ug/L		Annually	Grab
2,3,7,8-tetrachlorodibenzo-p-dioxin (GWS = 3x10^-5)	Sample Measurement						
PARM Code 34675 P Mon. Site No. RWS-A	Permit Requirement		Report (Max.)	ug/L		Annually	24-hr FPC
2,4-dichlorophenoxyacetic acid (GWS = 70)	Sample Measurement						
PARM Code 39730 P Mon. Site No. RWS-A	Permit Requirement		Report (Max.)	ug/L		Annually	24-hr FPC
Silvex (GWS = 50)	Sample Measurement						
PARM Code 39760 P Mon. Site No. RWS-A	Permit Requirement		Report (Max.)	ug/L		Annually	24-hr FPC
Alachlor (GWS = 2)	Sample Measurement						
PARM Code 39161 P Mon. Site No. RWS-A	Permit Requirement		Report (Max.)	ug/L		Annually	24-hr FPC
Atrazine (GWS = 3)	Sample Measurement						
PARM Code 39033 P Mon. Site No. RWS-A	Permit Requirement		Report (Max.)	ug/L		Annually	24-hr FPC
Benzo(a)pyrene (GWS = 0.2)	Sample Measurement						
PARM Code 34247 P Mon. Site No. RWS-A	Permit Requirement		Report (Max.)	ug/L		Annually	24-hr FPC
Carbofuran (GWS = 40)	Sample Measurement						
PARM Code 81405 P Mon. Site No. RWS-A	Permit Requirement		Report (Max.)	ug/L		Annually	24-hr FPC
Chlordane (tech mix. and metabolites) (GWS = 2)	Sample Measurement						
PARM Code 39350 P Mon. Site No. RWS-A	Permit Requirement		Report (Max.)	ug/L		Annually	24-hr FPC

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: BCUD/South Beaches WWTF

MONITORING GROUP: RWS-A
 NUMBER: _____
 MONITORING PERIOD: _____

PERMIT NUMBER: FL0040622-012-DW1P

From: _____ To: _____

Parameter	Quantity or Loading	Units	Quality or Concentration		Units	No. Ex.	Frequency of Analysis	Sample Type
Dalapon (GWS = 200) PARM Code 38432 P Mon. Site No. RWS-A	Sample Measurement Permit Requirement							
Bis(2-ethylhexyl)adipate (GWS = 400) PARM Code 77903 P Mon. Site No. RWS-A	Sample Measurement Permit Requirement			Report (Max.)	ug/L		Annually	24-hr FPC
Bis (2-ethylhexyl) phthalate (GWS = 6) PARM Code 39100 P Mon. Site No. RWS-A	Sample Measurement Permit Requirement			Report (Max.)	ug/L		Annually	24-hr FPC
Dibromochloropropane (DBCP) (GWS = 0.2) PARM Code 82625 P Mon. Site No. RWS-A	Sample Measurement Permit Requirement			Report (Max.)	ug/L		Annually	24-hr FPC
Dinoseb (GWS = 7) PARM Code 30191 P Mon. Site No. RWS-A	Sample Measurement Permit Requirement			Report (Max.)	ug/L		Annually	Grab
Diquat (GWS = 20) PARM Code 04443 P Mon. Site No. RWS-A	Sample Measurement Permit Requirement			Report (Max.)	ug/L		Annually	24-hr FPC
Endothall (GWS = 100) PARM Code 38926 P Mon. Site No. RWS-A	Sample Measurement Permit Requirement			Report (Max.)	ug/L		Annually	24-hr FPC
Endrin (GWS = 2) PARM Code 39390 P Mon. Site No. RWS-A	Sample Measurement Permit Requirement			Report (Max.)	ug/L		Annually	24-hr FPC
Ethylene dibromide (1,2-dibromoethane)(GWS = 0.02) PARM Code 77651 P Mon. Site No. RWS-A	Sample Measurement Permit Requirement			Report (Max.)	ug/L		Annually	Grab
Glyphosate (GWS = 0.7) PARM Code 79743 P Mon. Site No. RWS-A	Sample Measurement Permit Requirement			Report (Max.)	mg/L		Annually	24-hr FPC

FACILITY: BCUD/South Beaches WWTF

DISCHARGE MONITORING REPORT - PART A (Continued)

PERMIT NUMBER: FL0040622-012-DW1P

MONITORING GROUP NUMBER:
MONITORING PERIOD

RWS-A

From: _____ To: _____

Parameter	Sample	Quantity or Loading	Units	Quality or Concentration	Units	No. Ex.	Frequency of Analysis	Sample Type
Hepachlor (GWS = 0.4)	Sample Measurement							
PARM Code 39410 P Mon. Site No. RWS-A	Permit Requirement			Report (Max.)	ug/L		Annually	24-hr FPC
Hepachlor epoxide (GWS = 0.2)	Sample Measurement							
PARM Code 39420 P Mon. Site No. RWS-A	Permit Requirement			Report (Max.)	ug/L		Annually	24-hr FPC
Hexachlorobenzene (GWS = 1)	Sample Measurement							
PARM Code 39700 P Mon. Site No. RWS-A	Permit Requirement			Report (Max.)	ug/L		Annually	24-hr FPC
Hexachlorocyclopentadiene (GWS = 50)	Sample Measurement							
PARM Code 34386 P Mon. Site No. RWS-A	Permit Requirement			Report (Max.)	ug/L		Annually	24-hr FPC
Gamma BHC (Lindane) (GWS = 0.2)	Sample Measurement							
PARM Code 39782 P Mon. Site No. RWS-A	Permit Requirement			Report (Max.)	ug/L		Annually	24-hr FPC
Methoxychlor (GWS = 40)	Sample Measurement							
PARM Code 39480 P Mon. Site No. RWS-A	Permit Requirement			Report (Max.)	ug/L		Annually	24-hr FPC
Oxamyl (vydate) (GWS = 200)	Sample Measurement							
PARM Code 38865 P Mon. Site No. RWS-A	Permit Requirement			Report (Max.)	ug/L		Annually	24-hr FPC
Pentachlorophenol (GWS = 1)	Sample Measurement							
PARM Code 39032 P Mon. Site No. RWS-A	Permit Requirement			Report (Max.)	ug/L		Annually	24-hr FPC
Picloram (GWS = 500)	Sample Measurement							
PARM Code 39720 P Mon. Site No. RWS-A	Permit Requirement			Report (Max.)	ug/L		Annually	24-hr FPC
Polychlorinated Biphenyls (PCBs)(GWS = 0.5)	Sample Measurement							
PARM Code 39516 P Mon. Site No. RWS-A	Permit Requirement			Report (Max.)	ug/L		Annually	24-hr FPC

FACILITY: BCUD/South Beaches WWTF

DISCHARGE MONITORING REPORT - PART A (Continued)

PERMIT NUMBER: FL0040622-012-DW1P

MONITORING GROUP: RWS-A
 NUMBER:
 MONITORING PERIOD

From: _____ To: _____

Parameter	Sample	Quantity or Loading	Units	Quality or Concentration	Units	No. Ex.	Frequency of Analysis	Sample Type
Simazine (GWS = 4) PARM Code 39055 P Mon. Site No. RWS-A	Sample Measurement Permit Requirement				ug/L		Annually	24-hr FPC
Toxaphene (GWS = 3) PARM Code 39400 P Mon. Site No. RWS-A	Sample Measurement Permit Requirement				ug/L		Annually	24-hr FPC
Trihalomethane, Total by summation(GWS = 0.080) PARM Code 82080 P Mon. Site No. RWS-A	Sample Measurement Permit Requirement				mg/L		Annually	Grab
Radium 226 + Radium 228, Total (GWS = 5) PARM Code 11503 P Mon. Site No. RWS-A	Sample Measurement Permit Requirement				pCi/L		Annually	24-hr FPC
Alpha, Gross Particle Activity (GWS = 15) PARM Code 80045 P Mon. Site No. RWS-A	Sample Measurement Permit Requirement				pCi/L		Annually	24-hr FPC
Aluminum, Total Recoverable (GWS = 0.2) PARM Code 01104 P Mon. Site No. RWS-A	Sample Measurement Permit Requirement				mg/L		Annually	24-hr FPC
Chloride (as Cl) (GWS = 250) PARM Code 00940 P Mon. Site No. RWS-A	Sample Measurement Permit Requirement				mg/L		Annually	24-hr FPC
Iron, Total Recoverable (GWS = 0.3) PARM Code 00980 P Mon. Site No. RWS-A	Sample Measurement Permit Requirement				mg/L		Annually	24-hr FPC
Copper, Total Recoverable (GWS = 1,000) PARM Code 01119 P Mon. Site No. RWS-A	Sample Measurement Permit Requirement				ug/L		Annually	24-hr FPC
Manganese, Total Recoverable (GWS = 50) PARM Code 11123 P Mon. Site No. RWS-A	Sample Measurement Permit Requirement				ug/L		Annually	24-hr FPC

ISSUANCE/REISSUANCE DATE: March 27, 2019
 DMR EFFECTIVE DATE: 1st day of the 2nd month following effective date of permit - Permit expiration

DEP Form 62-620.910(10), Effective Nov. 29, 1994

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: BCUD/South Beaches WWTF

RWS-A

PERMIT NUMBER: FL0040622-012-DW1P

MONITORING GROUP NUMBER:
MONITORING PERIOD

From: _____

To: _____

Parameter	Sample Measurement	Quantity or Loading	Units	Quality or Concentration	Report (Max.)	Units	No. Ex.	Frequency of Analysis	Sample Type
Silver, Total Recoverable (GWS = 100)	Sample Measurement				Report (Max.)	ug/L		Annually	24-hr FPC
PARM Code 01079 P Mon. Site No. RWS-A	Permit Requirement								
Sulfate, Total (GWS = 250)	Sample Measurement								
PARM Code 00945 P Mon. Site No. RWS-A	Permit Requirement				Report (Max.)	mg/L		Annually	24-hr FPC
Zinc, Total Recoverable (GWS = 5,000)	Sample Measurement								
PARM Code 01094 P Mon. Site No. RWS-A	Permit Requirement				Report (Max.)	ug/L		Annually	24-hr FPC
pH (GWS = 6.5-8.5)	Sample Measurement								
PARM Code 00400 P Mon. Site No. RWS-A	Permit Requirement				Report (Max.)	s.u.		Annually	Grab
Solids, Total Dissolved (TDS) (GWS = 500)	Sample Measurement								
PARM Code 70295 P Mon. Site No. RWS-A	Permit Requirement				Report (Max.)	mg/L		Annually	24-hr FPC
Foaming Agents (GWS = 0.5)	Sample Measurement								
PARM Code 01238 P Mon. Site No. RWS-A	Permit Requirement				Report (Max.)	mg/L		Annually	24-hr FPC

ISSUANCE/REISSUANCE DATE: March 27, 2019
DMR EFFECTIVE DATE: 1st day of the 2nd month following effective date of permit - Permit expiration

DEP Form 62-620.910(10), Effective Nov. 29, 1994

INSTRUCTIONS FOR COMPLETING THE WASTEWATER DISCHARGE MONITORING REPORT

Read these instructions before completing the DMR. Hard copies and/or electronic copies of the required parts of the DMR were provided with the permit. All required information shall be completed in full and typed or printed in ink. A signed, original DMR shall be mailed to the address printed on the DMR by the 28th of the month following the monitoring period. Facilities who submit their DMR(s) electronically through eDMR do not need to submit a hardcopy DMR. The DMR shall not be submitted before the end of the monitoring period.

The DMR consists of three parts--A, B, and D--all of which may or may not be applicable to every facility. Facilities may have one or more Part A's for reporting effluent or reclaimed water data. All domestic wastewater facilities will have a Part B for reporting daily sample results. Part D is used for reporting ground water monitoring well data.

When results are not available, the following codes should be used on parts A and D of the DMR and an explanation provided where appropriate. Note: Codes used on Part B for raw data are different.

CODE	DESCRIPTION/INSTRUCTIONS
ANC	Analysis not conducted.
DRY	Dry Well
FLD	Flood disaster.
IFS	Insufficient flow for sampling.
LS	Lost sample.
MNR	Monitoring not required this period.

CODE	DESCRIPTION/INSTRUCTIONS
NOD	No discharge from/to site.
OPS	Operations were shutdown so no sample could be taken.
OTH	Other. Please enter an explanation of why monitoring data were not available.
SEF	Sampling equipment failure.

When reporting analytical results that fall below a laboratory's reported method detection limits or practical quantification limits, the following instructions should be used, unless indicated otherwise in the permit or on the DMR:

1. Results greater than or equal to the PQL shall be reported as the measured quantity.
2. Results less than the PQL and greater than or equal to the MDL shall be reported as the laboratory's MDL value. These values shall be deemed equal to the MDL when necessary to calculate an average for that parameter and when determining compliance with permit limits.
3. Results less than the MDL shall be reported by entering a less than sign (" $<$ ") followed by the laboratory's MDL value, e.g. < 0.001 . A value of one-half the MDL or one-half the effluent limit, whichever is lower, shall be used for that sample when necessary to calculate an average for that parameter. Values less than the MDL are considered to demonstrate compliance with an effluent limitation.

PART A -DISCHARGE MONITORING REPORT (DMR)

Part A of the DMR is comprised of one or more sections, each having its own header information. Facility information is preprinted in the header as well as the monitoring group number, whether the limits and monitoring requirements are interim or final, and the required substantial Frequency (e.g. monthly, annually, quarterly, etc.). Submit Part A based on the required reporting Frequency in the header and the instructions shown in the permit. The following should be completed by the permittee or authorized representative:

Resubmitted DMR: Check this box if this DMR is being re-submitted because there was information missing from or information that needed correction on a previously submitted DMR. The information that is being revised should be clearly noted on the re-submitted DMR (e.g. highlight, circle, etc.)

No Discharge From Site: Check this box if no discharge occurs and, as a result, there are no data or codes to be entered for all of the parameters on the DMR for the entire monitoring group number; however, if the monitoring group includes other monitoring locations (e.g., influent sampling), the "NOD" code should be used to individually denote those parameters for which there was no discharge.

Monitoring Period: Enter the month, day, and year for the first and last day of the monitoring period (i.e. the month, the quarter, the year, etc.) during which the data on this report were collected and analyzed.

Sample Measurement: Before filling in sample measurements in the table, check to see that the data collected correspond to the limit indicated on the DMR (i.e. interim or final) and that the data correspond to the monitoring group number in the header. Enter the data or calculated results for each parameter on this row in the non-shaded area above the limit. Be sure the result being entered corresponds to the appropriate statistical base code (e.g. annual average, monthly average, single sample maximum, etc.) and units. Data qualifier codes are not to be reported on Part A.

No. Ex.: Enter the number of sample measurements during the monitoring period that exceeded the permit limit for each parameter in the non-shaded area. If none, enter zero.

Frequency of Analysis: The shaded areas in this column contain the minimum number of times the measurement is required to be made according to the permit. Enter the actual number of times the measurement was made in the space above the shaded area.

Sample Type: The shaded areas in this column contain the type of sample (e.g. grab, composite, continuous) required by the permit. Enter the actual sample type that was taken in the space above the shaded area.

Signature: This report must be signed in accordance with Rule 62-620.305, F.A.C. Type or print the name and title of the signing official. Include the telephone number where the official may be reached in the event there are questions concerning this report. Enter the date when the report is signed.

Comment and Explanation of Any Violations: Use this area to explain any exceedances, any upset or by-pass events, or other items which require explanation. If more space is needed, reference all attachments in this area.

PART B - DAILY SAMPLE RESULTS

Monitoring Period: Enter the month, day, and year for the first and last day of the monitoring period (i.e. the month, the quarter, the year, etc.) during which the data on this report were collected and analyzed.

Daily Monitoring Results: Transfer all analytical data from your facility's laboratory or a contract laboratory's data sheets for all day(s) that samples were collected. Record the data in the units indicated. Table 1 in Chapter 62-160, F.A.C., contains a complete list of all the data qualifier codes that your laboratory may use when reporting analytical results. However, when transferring numerical results onto Part B of the DMR, only the following data qualifier codes should be used and an explanation provided where appropriate.

CODE	DESCRIPTION/INSTRUCTIONS
<	The compound was analyzed for but not detected.
A	Value reported is the mean (average) of two or more determinations.
J	Estimated value, value not accurate.
Q	Sample held beyond the actual holding time.
Y	Laboratory analysis was from an unpreserved or improperly preserved sample.

To calculate the monthly average, add each reported value to get a total. For flow, divide this total by the number of days in the month. For all other parameters, divide the total by the number of observations.

Plant Staffing: List the name, certificate number, and class of all state certified operators operating the facility during the monitoring period. Use additional sheets as necessary.

PART D - GROUND WATER MONITORING REPORT

Monitoring Period: Enter the month, day, and year for the first and last day of the monitoring period (i.e. the month, the quarter, the year, etc.) during which the data on this report were collected and analyzed.

Date Sample Obtained: Enter the date the sample was taken. Also, check whether or not the well was purged before sampling.

Time Sample Obtained: Enter the time the sample was taken.

Sample Measurement: Record the results of the analysis. If the result was below the minimum detection limit, indicate that. Data qualifier codes are not to be reported on Part D.

Detection Limits: Record the detection limits of the analytical methods used.

Analysis Method: Indicate the analytical method used. Record the method number from Chapter 62-160 or Chapter 62-601, F.A.C., or from other sources.

Sampling Equipment Used: Indicate the procedure used to collect the sample (e.g. airlift, bucket/bailer, centrifugal pump, etc.)

Samples Filtered: Indicate whether the sample obtained was filtered by laboratory (L), filtered in field (F), or unfiltered (N).

Signature: This report must be signed in accordance with Rule 62-620.305, F.A.C. Type or print the name and title of the signing official. Include the telephone number where the official may be reached in the event there are questions concerning this report. Enter the date when the report is signed.

Comments and Explanation: Use this space to make any comments on or explanations of results that are unexpected. If more space is needed, reference all attachments in this area.

SPECIAL INSTRUCTIONS FOR LIMITED WET WEATHER DISCHARGES

Flow (Limited Wet Weather Discharge): Enter the measured average flow rate during the period of discharge or divide gallons discharged by duration of discharge (converted into days). Record in million gallons per day (MGD).

Flow (Upstream): Enter the average flow rate in the receiving stream upstream from the point of discharge for the period of discharge. The average flow rate can be calculated based on two measurements; one made at the start and one made at the end of the discharge period. Measurements are to be made at the upstream gauging station described in the permit.

Actual Stream Dilution Ratio: To calculate the Actual Stream Dilution Ratio, divide the average upstream flow rate by the average discharge flow rate. Enter the Actual Stream Dilution Ratio accurate to the nearest 0.1.

No. of Days the SDF > Stream Dilution Ratio: For each day of discharge, compare the minimum Stream Dilution Factor (SDF) from the permit to the calculated Stream Dilution Ratio. On Part B of the DMR, enter an asterisk (*) if the SDF is greater than the Stream Dilution Ratio on any day of discharge. On Part A of the DMR, add up the days with an "*" and record the total number of days the Stream Dilution Factor was greater than the Stream Dilution Ratio.

CBOD₅: Enter the average CBOD₅ of the reclaimed water discharged during the period shown in duration of discharge.

TKN: Enter the average TKN of the reclaimed water discharged during the period shown in duration of discharge.

Actual Rainfall: Enter the actual rainfall for each day on Part B. Enter the actual cumulative rainfall to date for this calendar year and the actual total monthly rainfall on Part A. The cumulative rainfall to date for this calendar year is the total amount of rain, in inches, that has been recorded since January 1 of the current year through the month for which this DMR contains data.

Rainfall During Average Rainfall Year: On Part A, enter the total monthly rainfall during the average rainfall year and the cumulative rainfall for the average rainfall year. The cumulative rainfall for the average rainfall year is the amount of rain, in inches, which fell during the average rainfall year from January through the month for which this DMR contains data.

No. of Days LWWD Activated During Calendar Year: Enter the cumulative number of days that the limited wet weather discharge was activated since January 1 of the current year.

Reason for Discharge: Attach to the DMR a brief explanation of the factors contributing to the need to activate the limited wet weather discharge.



FLORIDA DEPARTMENT OF Environmental Protection

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Noah Valenstein
Secretary

Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

PATHOGEN MONITORING Part I - Instructions

1. Completion of this report is required by Rules 62-610.463(4), 62-610.472(3)(d), 62-610.525(13), 62-610.568(11), 62-610.568(12), and 62-610.652(6)(c), F.A.C., for all domestic wastewater facilities that provide reclaimed water to certain types of reuse activities. The schedule for sampling and reporting shall be in accordance with the permit for the facility. If a schedule for sampling or re-sampling is not included in the permit, the following schedule shall apply:
 - a. Routine Sampling:

If sampling is required once every two years, this report shall be submitted on or before November 28 of each even numbered year (2006, 2008, 2010, etc.).

If sampling is required once every five years, this report shall be submitted with the application for permit renewal.

If sampling is required quarterly, this report shall be submitted on or before February 28, May 28, August 28, and November 28 of each year.
 - b. Subsequent Re-Sampling:

If subsequent re-sampling is required by Item 9 in Part I of this form, this form shall be submitted for the subsequent re-sampling(s) in accordance with the schedule established in Item 9 in Part I of this form.
2. Submit one copy of this form and a copy of the laboratory's final report for the analysis of *Giardia* and *Cryptosporidium* to each of the following two addresses:
 - a. Emailed to the DEP Central District Office (attention Domestic Wastewater Program) at dep_cd@dep.state.fl.us.
 - b. DEP Water Reuse Coordinator
Mail Station 3540
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
3. Please type or print legibly.
4. In Part II, Items 7 through 12 need to be completed only if this is the first submittal of this report, if the information in Items 7 through 12 has changed since the last submittal, or if the information in any of these questions has not been previously provided.
5. Part III is to be used when sampling for *Giardia* and *Cryptosporidium* at the treatment plant. Part III is also to be used when sampling for *Giardia* and *Cryptosporidium* in a supplemental water supply (see Rule 62-610.472, F.A.C.).

6. For each sample, record the sample volume obtained in liters.
7. For *Giardia*, record the concentrations in cysts per 100 liters. For *Cryptosporidium*, record the concentrations in oocysts per 100 liters. Sufficient sample volumes shall be collected and processed such that the detection limit is no greater than 5 cysts or oocysts per 100 liters. Detection levels on the order of 1 cyst or oocyst per 100 liters are recommended. If an observation is less than the detection limit, make an entry in the form "<2" (where 2 per 100 liters is the detection limit in this example). The actual detection limit will be dictated by the volumes of sample obtained, filtered, and processed. Do NOT record nondetectable values as zero.
8. EPA Method 1623 or other approved methods for reclaimed water or nonpotable waters, adjusted appropriately to accommodate the detection limit requirements, shall be used. Methods previously allowed for EPA's Information Collection Rule (ICR) shall not be used. The full requirements of the approved method, including quality assurance and quality control, are to be met. Quality assurance and sampling requirements in Chapter 62-160, F.A.C., shall apply.

Two concentrations of *Giardia* and *Cryptosporidium* shall be recorded on Part III of this form:

- a. Total cysts and oocysts shall be enumerated using EPA Method 1623 or other approved methods.
 - b. Potentially viable cysts and oocysts shall be enumerated using the DAPI staining technique contained in EPA Method 1623 or similar enumeration techniques included in other approved methods. Cysts and oocysts that are stained DAPI positive or show internal structure by D.I.C. shall be considered as being potentially viable. If the laboratory reports separate values for DAPI positive and for cysts or oocysts having internal structure, the larger of the two concentrations will be reported as being potentially viable.
9. If the number of potentially viable cysts of *Giardia* reported exceeds 5 per 100 liters, a subsequent sample shall be taken and analyzed using EPA Method 1623 or other approved methods and reported using this form. If the number of potentially viable oocysts of *Cryptosporidium* reported exceeds 22 per 100 liters, a subsequent sample shall be taken and analyzed using EPA Method 1623 or other approved methods and reported using this form. This subsequent sample shall be collected within 90 days of the date the initial sample was taken, analyzed for both *Giardia* and *Cryptosporidium*, and the results of the subsequent analysis shall be submitted to DEP using this form within 60 days of sample collection.
 10. Rule 62-160.300, F.A.C., requires that all laboratories generating environmental data for submission to the DEP shall hold certification from the Department of Health's (DOH) Environmental Laboratory Certification Program (ELCP). Certification by the ELCP for analysis of *Giardia* and *Cryptosporidium* using EPA Method 1623 for non-potable waters is required. If other approved methods are used, certification by the ELCP is required for the specific method and for the test matrix. Lists of certified laboratories can be found at www.dep.state.fl.us/labs/cgi-bin/aams/index.asp
 11. Samples shall be collected during peak flow periods (normally between the hours of 8:00 a.m. and 6:00 p.m.).
 12. Recognizing that concentrations of these pathogens generally increase during the late summer through fall period, it is recommended that utilities sample during the August through October time period.
 13. If the wastewater treatment facility uses chlorination for disinfection, samples obtained for analysis of *Giardia* and *Cryptosporidium* shall be dechlorinated.

14. When sampling at the treatment facility, obtain a grab sample for total suspended solids (TSS) that is representative of the water leaving the filters at the treatment facility during the period when pathogen samples are being obtained. In addition, record the highest turbidity and the lowest total chlorine residual observed during the period when pathogen samples are being obtained.
15. When sampling a supplemental water supply, obtain a grab sample for total suspended solids (TSS) that is representative of the surface water or treated stormwater as it is added to the reclaimed water system. This TSS sample shall be taken during the period when pathogen samples are being obtained. In addition, record the lowest total chlorine residual observed during the period when pathogen samples are being obtained.

Part II - General Information

1. DEP wastewater facility identification number: **FL0040622**

Wastewater facility name: BCUD/South Beaches

Permittee name: Brevard County Util Serv Department

2. Person completing this form:

Name: _____

Telephone: (_____) _____

Email address: _____

3. Sampling and analysis:

Date samples were taken: _____

Organization collecting the samples: _____

Was the sample dechlorinated in the field? Yes No

Was the sample refrigerated or kept on ice during shipment to the laboratory? Yes No

Date samples delivered to laboratory: _____

Date analytical work was done: _____

Laboratory doing the analysis: _____

Laboratory's DOH Identification Number: _____

Approved method used:

EPA Method 1623

Other approved method: _____

Contact person at the laboratory: _____

Email address of the lab contact person: _____

4. Is this the first time that this form has been submitted for the facility?

Yes [Please complete Questions 7 through 16.]

No [Proceed to Question 5.]

5. Is this a report of "subsequent re-sampling" required by Item 9 in Part I of this form based on concentrations of potentially viable cysts or oocysts in a previous sampling?

No [Proceed to Question 6.]

Yes [Attach a description of any facility or operational changes made to the treatment facilities since the time of the previous sampling and proceed to Question 6.]

6. Has the information requested in Questions 7 through 12 (below) changed since the last submittal of this form?

Yes [Please complete Questions 7 through 16.]

No [Proceed to Questions 13 through 16 of Part II of this form. You do not need to complete Questions 7 through 12.]

7. Type of secondary treatment system:

Conventional activated sludge

Extended aeration

Contact stabilization

Biological nutrient removal (such as Bardenpho)

Other: _____

8. Does this treatment facility nitrify (convert ammonia nitrogen to nitrate)? Yes No

9. Filter type:

Deep bed, single media

Deep bed, multiple media

Shallow bed, automatic backwash

Upflow (including Dynasand)

Slow rate sand filter

Diatomaceous earth filter

Fabric filter

Cartridge filter

Membranes (microfiltration, ultrafiltration, membrane bioreactor, reverse osmosis)

Other: _____

10. Filter Media (complete for each type of media provided):

Top layer of media: Media type: _____

Effective size: _____ mm

Uniformity coefficient: _____

Bed depth: _____ inches

Middle layer of media: Media type: _____
Effective size: _____ mm
Uniformity coefficient: _____
Bed depth: _____ inches

Bottom layer of media: Media type: _____
Effective size: _____ mm
Uniformity coefficient: _____
Bed depth: _____ inches

11. Filter backwash water:

- Backwash water is returned to the headworks of the treatment plant.
- Backwash water is returned to the aeration basin.
- Other. Please describe: _____

12. Disinfection system:

- Chlorination, gas
- Hypochlorite
- Chlorine dioxide
- Chlorination, other _____
- Ultraviolet
- Ozone
- Other: _____

13. Is chlorine added before the filters? No Yes Dose: _____ mg/L

14. During the period that samples were taken, did you add a coagulant, coagulant aid, polyelectrolyte, or other chemical to enhance filtration?

- No
- Yes. Please list the chemicals being added and their dose.

Chemical 1 - Name: _____ Dose: _____ mg/L

Chemical 2 - Name: _____ Dose: _____ mg/L

Chemical 3 - Name: _____ Dose: _____ mg/L

15. Wastewater treatment plant permitted capacity: _____ MGD

16. Wastewater flow being treated at the time samples were collected: _____ MGD

PART III - PATHOGEN MONITORING REPORT

FACILITY ID: FL0040622

FACILITY NAME: BCUD/South Beaches

FACILITY ADDRESS: 2800 S Highway A1A, Melbourne Beach, FL 32951-2811

PERMITTEE NAME: Brevard County Util Serv Department

MAILING ADDRESS: 2725 Judge Fran Jamieson Way, BLDG. A-213, Melbourne, Florida 32940-6605

DATE OF SAMPLING: _____

Parameter	Quantity or Loading		Quality or Concentration	
	Sample Measurement	Units	Sample Measurement	Units
Treatment Plant: After Filter Monitoring Site No.				
Turbidity PARM Code 00070				NTU
TSS PARM Code 00530				mg/L
Treatment Plant: After Disinfection Monitoring Site No.				
Total Chlorine Residual PARM Code 50060				mg/L
Volume Collected PARM Code 71994		Liters		
<i>Giardia</i> , total count * PARM Code GIARD				total cysts/100 L
<i>Giardia</i> , potentially viable cysts * PARM Code VGIAR				potentially viable cysts/100 L
<i>Cryptosporidium</i> , total count * PARM Code CRYPT				total oocysts/100 L
<i>Cryptosporidium</i> , potentially viable oocysts * PARM Code VCRYP				potentially viable oocysts/100 L
Supplemental Water Supply (surface water or stormwater): After Treatment & Disinfection Monitoring Site No.				
TSS PARM Code 00530				mg/L
Total Chlorine Residual PARM Code 50060				mg/L
Volume Collected PARM Code 71994		Liters		
<i>Giardia</i> (total count) * PARM Code GIARD				total cysts/100 L
<i>Giardia</i> , potentially viable cysts * PARM Code VGIAR				potentially viable cysts/100 L
<i>Cryptosporidium</i> , total count * PARM Code CRYPT				total oocysts/100 L
<i>Cryptosporidium</i> , potentially viable oocysts * PARM Code VCRYP				potentially viable oocysts/100 L

* Data entries must be made for both total and potentially viable cysts and oocysts.

PART IV - CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based upon my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Name/Title of Principle Executive Officer or Authorized Agent (Type or Print)	Signature of Principle Executive Officer or Authorized Agent	Telephone No.	Date (YY/MM/DD)
Email Address			

**FACT SHEET
FOR
STATE OF FLORIDA DOMESTIC WASTEWATER FACILITY PERMIT**

PERMIT NUMBER: FL0040622-012 (Minor)
FACILITY NAME: BCUD/South Beaches
FACILITY LOCATION: 2800 S Highway A1A, Melbourne Beach, FL 32951-2811
Brevard County
NAME OF PERMITTEE: Brevard County Utility Services Department
PERMIT WRITER: Charles LeGros

1. SUMMARY OF APPLICATION

a. Chronology of Application

Application Number: FL0040622-012-DW1P
Application Submittal Date: September 7, 2018 and additional information December 5, 2018

b. Type of Facility

Domestic Wastewater Treatment Plant

Ownership Type: County

SIC Code: 4952

c. Facility Capacity

Existing Permitted Capacity:	8.0 MGD Annual Average Daily Flow
Proposed Increase in Permitted Capacity:	0 MGD Annual Average Daily Flow
Proposed Total Permitted Capacity:	8.0 MGD Annual Average Daily Flow

d. Description of Wastewater Treatment

An existing 8.0 MGD annual average daily flow (AADF) activated sludge domestic wastewater treatment facility consisting of two (2) contiguous wastewater treatment plants (a 6.0 MGD dual train carousel oxidation ditch and a 2.0 MGD activated sludge plant), connected in parallel with mechanical influent screening, grit removal, aeration, clarification, chemical feed facilities, disinfection by chlorination, tertiary filtration, dechlorination, and dewatering of biosolids.

e. Description of Effluent Disposal and Land Application Sites (as reported by applicant)

Surface Water Discharge D-001: An existing 0.110 MGD AADF permitted capacity discharge to Indian River Lagoon, Class III Marine waters. This segment of the Indian River is designated as Water Body Identification (WBID) # 2963A1, which is identified for assessment purposes as Class II waters since the majority of the WBID is Class II waters to the *south* of the discharge point, but the point of discharge is not in Class II waters. The 0.110

MGD discharge is authorized at Discharge location D-001 for a period not to exceed five (5) days during the Mechanical Integrity Testing of the facility's underground injection control well, in accordance with Conditions I.A.9 through I.A.12 of this permit. The permitted discharge of 8.0 MGD over five (5) days equates to an Annual Average Daily Flow of 0.11 MGD. The point of discharge is located approximately at latitude 28°2' 31" N, longitude 80°33' 1" W.

Underground Injection U-001: An existing 8.0 MGD AADF permitted capacity underground injection well system consisting of one (1) Class I underground injection well permitted under Department permit number 05-0185898-004 discharging to Class G-IV ground water. The capacity of the well is being rerated in this permit to 9.0 MGD annual average daily flow permitted capacity to match the permit for the well. Underground Injection Well System U-001 is located approximately at latitude 28°2' 27" N, longitude 80°32' 49" W.

Land Application R-001: An existing 3.0 MGD AADF permitted capacity slow-rate public access 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, as shown on the attached map. The existing reuse capacity is 1.293 MGD AADF, with a total anticipated reuse capacity of 3.0 MGD AADF, as listed in Condition IV.A.1. of this permit. Reclaimed water is stored in an existing stormwater retention pond system located at the Spessard Holland Golf Course that has a combined storage capacity of 4.31 mg. The 4.31 MG stormwater retention pond system consists of seven ponds that are interconnected with underground culvert pipes at the golf course. The pond system has an intermittent discharge from Pond 6 to adjacent drainage features, which ultimately discharges to the Indian River Lagoon. Discharge of reclaimed water to this stormwater retention pond system shall be in accordance with Condition IV.16. of this permit.

2. SUMMARY OF SURFACE WATER DISCHARGE

This facility does not have a new or expanded discharge to surface waters.

The Department does not anticipate adverse impacts on threatened or endangered species as a result of permit issuance.

Pollutants which are present in significant quantities or which are subject to permit limitations are as follows:

Parameters	Reported Data from discharge Sept 2017 – October 2017*		
	Ann. Avg.	Lowest Monthly Avg.	Highest Monthly Avg.
Flow (River Discharge), MGD	0.268		2.091
CBOD ₅ (effluent), mg/L – single sample maximum	NA		20.8
Total Suspended Solids (effluent), mg/L – single sample maximum	NA	<1.0	11.9
Fecal Coli. Bacteria, #/100 ml	0.4	0.7	8.1
Enterococci, #/100 ml	NA	3.1	5.3
TRC, (after dechlorination), mg/L - single sample maximum	NA		0.06
pH (single sample)	NA	7.2	7.6
Total Nitrogen, mg/L – single sample maximum	NA	5.8	7.7

Parameters	Reported Data from discharge Sept 2017 – October 2017*		
	NA	0.8	1.4
Total Phosphorus, mg/L	NA	0.8	1.4
Dissolved Oxygen, mg/L (single sample)	NA	3.3**	5.0

* The facility has had three discharge events. The March 2017 discharge event was associated with the Mechanical Integrity Testing of the Deep Injection Well. The discharge events in October 2016 and September through October 2017 were associated with two (2) Hurricanes and unseasonably high rainfall amounts. The surface water discharge that occurred October 8, 2016, to October 12, 2016, was associated with Hurricane Matthew. Influent flows to the WWTF ranged from 9.8 MGD to 11 MGD during this time. These flows exceed the capacity of the deep injection well and required surface water discharge. A surface water discharge occurred from September 11, 2017, to October 31, 2017, not associated with mechanical integrity testing of the deep injection well. This surface water discharge was associated with the high rainfall that occurred during and after Hurricane Irma. Elevated inflow, above 8.0 MGD AADF, persisted from September 10, 2017, through November 8, 2017. These high inflows can be assumed to be the result of Infiltration and Inflow in the collection system. The flow exceeded the capacity of the deep injection well (9.0 MGD) for 50 consecutive days, necessitating a surface water discharge event. The permitted limits on TRC (for disinfection) CBODs, TRC (for dechlorination), and Dissolved Oxygen were exceeded during Hurricane Irma when the total flow fluctuated from 8.4 MGD to 16.38 MGD. The suddenness of the flow increase and the day-to-day variation in flow made the operation of the biological and disinfection/dechlorination system difficult.

The county has implemented an intensive program to reduce inflow and infiltration and in their collection system and are under previously issued Consent Orders (issued during the last permit cycle) as noted in #9 below. The county is leveling the onsite outfall storage pond and constructing a baffle berm to be able to retain more water on site and prevent premature discharge. Longer detention in the pond during non-emergency conditions should also aid in lowering dechlorination levels.

**The facility has moved the dissolved oxygen (DO) sampling point to below the outfall weir which should result in higher DO and more adequately demonstrate the quality of water being discharged from D-001.

The Department does not anticipate adverse impacts on threatened or endangered species as a result of permit issuance.

3. BASIS FOR PERMIT LIMITATIONS AND MONITORING REQUIREMENTS

This facility is authorized to discharge effluent from Outfall D-001 to Indian River Lagoon based on the following:

Parameter	Units	Max/ Min	Limit	Statistical Basis	Rationale
Flow (to D-001)	MGD	Max	0.11	Annual Average	62-600.700(2)(b) FAC
		Max	Report	Monthly Average	62-600.700(2)(b) FAC
BOD, Carbonaceous 5 day, 20C	mg/L	Max	20	Single Sample	90-262, Laws of FL 403.086(4)(a) FS BPJ,
Solids, Total Suspended	mg/L	Max	20	Single Sample	90-262, Laws of FL 403.086(4)(a) FS BPJ,
Coliform, Fecal	#/100mL	Max	14	Annual Average	62-600.440(7)(a)1. FAC
		Max	14	Monthly Median	62-600.440(7)(a)2. FAC
		Max	86	Single Sample	62-600.440(6)(c)2. FAC
Enterococci	#/100mL	Max	35	Monthly Geometric Mean	62-600.520(5) FAC
		Max	130	90th Percentile	62-600.520(5) FAC

Parameter	Units	Max/Min	Limit	Statistical Basis	Rationale
pH	s.u.	Max	8.5	Single Sample	62-600.430, 62-302.530(52) & 62-650 FAC
		Min	6.5	Single Sample	62-600.430, 62-302.530(52) & 62-650 FAC
Chlorine, Total Residual (For Disinfection)	mg/L	Min	1.0	Single Sample	62-600.440(7)(c) FAC
Chlorine, Total Residual (For Dechlorination)	mg/L	Max	0.01	Single Sample	62-600.440(2) & 62-302.530(19) FAC
Nitrogen, Total	mg/L	Max	12.0	Single Sample	62-600.740(1)(b)2.b. FAC
Phosphorus, Total (as P)	mg/L	Max	4.0	Single Sample	62-600.740(1)(b)2.b. FAC
Oxygen, Dissolved (DO)	mg/L	Min	5.0	Single Sample	62-302.530(31) FAC
Acute Whole Effluent Toxicity, 96 Hour LC50 (Ceriodaphnia dubia)	percent	Min	100	Single Sample	62-302.200(1), 62-302.500(1)(a)4 & 62-4.241(1)(a) FAC
Acute Whole Effluent Toxicity, 96 Hour LC50 (Cyprinella leedsi)	percent	Min	100	Single Sample	62-302.200(1), 62-302.500(1)(a)4 & 62-4.241(1)(a) FAC
Phosphorus, Total (as P)	lb/yr	Max	36.0	Annual Total	62-304.520 FAC
		Max	Report	Monthly Total	62-304.520 FAC
Nitrogen, Total	lb/yr	Max	173.0	Annual Total	62-304.520 FAC
		Max	Report	Monthly Total	62-304.520 FAC

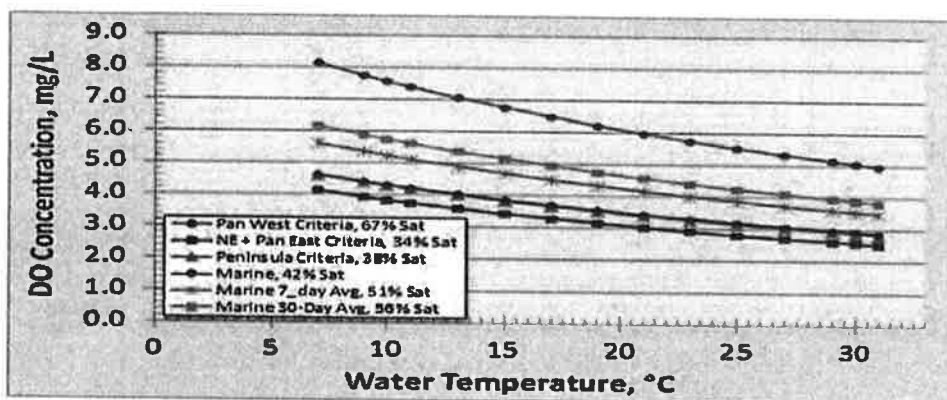
The proposed effluent limitations for Part I.A.1 will apply during the period when the Mechanical Integrity Test (MIT) for the injection well is performed. The discharge is limited to no more than five (5) days per five-year permit period, during the Mechanical Integrity Testing of the UIC well, if necessary.

In addition to the specified limits, the monthly average effluent concentration for total suspended solids shall not exceed 15% of the respective influent value (i.e., 85% removal). [62-600.420(1) and (2)] Because of the limited number of days for discharging, the sampling frequency for CBOD₅, TSS, fecal coliform, TN and TP is required to be daily (during discharge).

Enterococci Bacteria: New water quality criteria in Rule 62-302.530, F.A.C. has been revised and adopted to include Enterococci Bacteria. The facility previously had a monthly geometric mean limit. The new permit includes a new 90th percentile limit. The new 90th percentile limit 130 #/100mL in the rule will apply to the facility. The rule requires a minimum of 10 samples to calculate the value or the limit will not apply.

Because there is no established relationship between fecal coliform and enterococci bacteria, limitations based on both the disinfection requirements for fecal coliform from Rule 62-600.440, F.A.C., and based on the bacteriological water quality standards for enterococci for discharges to Class III predominately marine waters under Rule 62-302.530, F.A.C., have been included in the permit.

Dissolved Oxygen: The single sample dissolved oxygen (DO) minimum remains 5.0 in accordance with the new FDEP dissolved oxygen criteria (effective August 2013 and accepted by EPA September 2013) which is based on saturation. The single sample limit of 5.0 is as stringent as or more stringent than the new criteria. As seen in the attached graph, the state peninsula (area) criteria at 38% saturation and marine criteria at 42% are always below a DO of 5.0 independent of the temperature.



Total Ammonia Nitrogen (TAN):

The new TAN effluent limit was not included in this permit since the facility did not previously have an ammonia limit and there is no new or expanded discharge.

Nutrient TMDL March 2009

The Total Maximum Daily Load (TMDL) for the Indian River Lagoon was adopted by DEP in March 2009 and finalized by EPA in April 2009. The TMDL includes a wasteload allocation of:

- 173 lb/year for Total Nitrogen
- 36 lb/year for Total Phosphorus

The BCUD South Beaches WWTF and the associated TMDL is listed in the January 2013 Indian River Lagoon Basin Central Indian River Lagoon Basin Action Management Plan (BMAP).

The WBID2963A1 - bacteria (shellfish harvesting classification). This waterbody is listed as impaired because the shellfish harvesting classification is not fully approved by the Shellfish Environmental Assessment Section (SEAS) of the Department of Agriculture. This parameter is being added to the 303(d) list.

The WBID2963A1 - fecal coliform. This parameter is being added to the verified list and the department is requesting addition to the 303(d) list.

Pollutants of concern were identified for WQBEL development based on an evaluation of all available information, including a characterization of the pollutants that may be discharged, fifth year inspection data, the sources of pollutants, existing controls on pollutants, available dilution, background pollutant levels in the receiving waters, and the toxicity of pollutants.

Unless otherwise noted, effluent limitations were developed by applying water quality criteria at the end of pipe.

This facility has provided reasonable assurance that the discharge will not adversely affect the designated use of the receiving water. Fifth year inspection data, as well as all other available data, have been evaluated in accordance with the Department's reasonable assurance procedures to ensure that no limits other than those included in this permit are needed to maintain Florida water quality standards.

This facility is authorized to discharge reclaimed water to Underground Injection Well System U-001 which consists of 1 Class I injection wells discharging to Class G-IV ground water based on the following:

Parameter	Units	Max/Min	Limit	Statistical Basis	Rationale
Flow (to U-001)*	MGD	Max	9.0	Annual Average	62-600.700(2)(b) FAC
		Max	Report	Monthly Average	62-600.700(2)(b) FAC
BOD, Carbonaceous 5 day, 20C	mg/L	Max	20.0	Annual Average	62-600.540(1) & 62-600.420(3)(a)1. FAC
		Max	30.0	Monthly Average	62-600.420(3)(a)2. FAC
		Max	45.0	Weekly Average	62-600.420(3)(a)3. FAC
		Max	60.0	Single Sample	62-600.420(3)(a)4. FAC
Solids, Total Suspended	mg/L	Max	20.0	Annual Average	62-600.540(1) & 62-600.420(3)(b)1. FAC
		Max	30.0	Monthly Average	62-600.420(3)(b)2. FAC
		Max	45.0	Weekly Average	62-600.420(3)(b)3. FAC
		Max	60.0	Single Sample	62-600.420(3)(b)4. FAC
pH	s.u.	Min	6.0	Single Sample	62-600.445 FAC
		Max	8.5	Single Sample	62-600.445 FAC

*The capacity of the injection well was increased from 8.0 to 9.0 MGD AADF to match the FDEP Underground Injection Control (UIC) Program permit.

This facility is authorized to direct reclaimed water to Reuse System R-001, a slow-rate public access system, based on the following:

Parameter	Units	Max/Min	Limit	Statistical Basis	Rationale
Flow (To Reuse)	MGD	Max	3.0	Annual Average	62-600.700(2)(b) & 62-610.810(5) FAC
		Max	Report	Monthly Average	62-600.700(2)(b) & 62-610.810(5) FAC
BOD, Carbonaceous 5 day, 20C	mg/L	Max	20.0	Annual Average	62-610.460 & 62-600.420(3)(a)1. FAC
		Max	30.0	Monthly Average	62-610.460 & 62-600.420(3)(a)2. FAC
		Max	45.0	Weekly Average	62-610.460 & 62-600.420(3)(a)3. FAC
		Max	60.0	Single Sample	62-610.460 & 62-600.420(3)(a)4. FAC
Solids, Total Suspended	mg/L	Max	5.0	Single Sample	62-610.460(1) & 62-600.440(6)(a)3. FAC
Coliform, Fecal	#/100mL	Max	25	Single Sample	62-610.460 & 62-600.440(6)(a)2. FAC
Coliform, Fecal, % less than detection	percent	Min	75	Monthly Total	62-610.460 & 62-600.440(6)(a)1. FAC
pH	s.u.	Min	6.0	Single Sample	62-600.445 FAC
		Max	8.5	Single Sample	62-600.445 FAC
Chlorine, Total Residual (For Disinfection)	mg/L	Min	1.0	Single Sample	62-600.440(6)(b), 62-610.460(2), & 62-610.463(2) FAC
Turbidity	NTU	Max	Report	Single Sample	62-610.463(2) FAC
Nitrogen, Total	mg/L	Max	Report	Annual Average	62-600.650(3) FAC
		Max	Report	Monthly Average	62-600.650(3) FAC
Phosphorus, Total (as P)	mg/L	Max	Report	Annual Average	62-600.650(3) FAC
		Max	Report	Monthly Average	62-600.650(3) FAC

Parameter	Units	Max/Min	Limit	Statistical Basis	Rationale
Giardia	cysts/100L	Max	Report	Single Sample	62-610.463(4) FAC
Cryptosporidium	oocysts/100L	Max	Report	Single Sample	62-610.463(4) FAC

Other Limitations and Monitoring Requirements:

Parameter	Units	Max/Min	Limit	Statistical Basis	Rationale
Flow (Total through facility)	MGD	Max	8.0	Annual Average	62-600.700(2)(b) FAC
		Max	Report	Monthly Average	62-600.700(2)(b) FAC
		Max	Report	Quarterly Average	62-600.700(2)(b) FAC
Percent Capacity, (TMADF/Permitted Capacity) x 100	percent	Max	Report	Monthly Average	62-600.405(4) FAC
BOD, Carbonaceous 5 day, 20C (Influent)	mg/L	Max	Report	Single Sample	62-600.660(1) FAC
Solids, Total Suspended (Influent)	mg/L	Max	Report	Single Sample	62-600.660(1) FAC
Monitoring Frequencies and Sample Types	-	-	-	All Parameters	62-600 FAC & 62-699 FAC and/or BPJ of permit writer
Sampling Locations	-	-	-	All Parameters	62-600, 62-610.412, 62-610.463(1), 62-610.568, 62-610.613 FAC and/or BPJ of permit writer

4. DISCUSSION OF CHANGES TO PERMIT LIMITATIONS

The current wastewater permit for this facility FL0040622-007-DW1P was issued on March 13, 2014 and expires on March 12, 2019. Permit revision FL0040622-008 was issued on October 16, 2016 and required the facility to follow new electronic submittal requirements. Permit revision FL0040622-009 was issued on March 9, 2017 was issued to level the onsite outfall storage pond and to construct a baffle berm to prevent premature discharge. Permit revision FL0040622-010 was issued on April 26, 2017 and allowed modifications to the clarifiers pumping systems and the chlorine feed systems. Permit revision FL0040622-011 was issued on August 8, 2017 to allow upgrading of the three reclaimed water high service pumps.

Historical:

Subsection 2(3)(a) of Chapter 90-262 Laws of Florida., Indian River Lagoon Protection Act (ACT), allows discharge to the Indian River Lagoon if the facility provides at least advanced waste treatment (AWT). According to 403.086(4)(a) FS, the annual averages for CBOD5, TSS, TN and TP for an AWT facility are 5 mg/L, 5 mg/L, 3 mg/L and 1 mg/L, respectively. The proposed daily maximum limits for CBOD5, TSS, TN and TP are 20 mg/L, 20 mg/L, 12 mg/L and 4 mg/L, respectively and are derived from 25% (91 days /365 days) of a normal year discharge allowance for an AWT facility for a limited wet weather discharge period lasting 91 days. The proposed discharge period for this facility is for 5 days only during the mechanical integrity test (MIT) for the injection well. The proposed one-time single sample effluent limitations for CBOD5, TSS, TN and TP are equivalent to AWT multipliers. Since this permit authorizes only a 5 days discharge to the Indian River, the discharge loading allocation is more stringent than an AWT equivalent level. The proposed limits for CBOD5, TSS, TN and TP were previously allowed for the discharge from the

last MIT for this facility. It is the permit writer's Best Professional Judgment that the proposed limits are therefore consistent with the requirements of the ACT and with previous Department permitting policy and guidelines. These concentrations are still appropriate in conjunction with the loading limits described below.

The Total Maximum Daily Load (TMDL) for the Indian River Lagoon was finalized by EPA in April 2007 and adopted by DEP in March 2009. The TMDL includes a wasteload allocation of:

173 lb/year for Total Nitrogen
36 lb/year for Total Phosphorus

The point of discharge is clearly located in Class III marine waters, WBID 2963A1 (previously assessed as WBID 2963A). Although the WBID was revised to Class II waters during the Cycle 2 assessment, to better represent the watershed, the discharge point is located north of the Outstanding Florida Waters segment of the "Indian River – Malabar to Vero Beach Aquatic Preserve" and is north of Class II designated waters. However, the whole WBID is identified as Class II because of the large portion of the WBID within the Class II waters.

5. BIOSOLIDS MANAGEMENT REQUIREMENTS

Biosolids generated by this facility may be disposed of in a Class I solid waste landfill.

See the table below for the rationale for the biosolids quantities monitoring requirements.

Parameter	Units	Max/ Min	Limit	Statistical Basis	Rationale
Biosolids Quantity (Landfilled)	dry tons	Max	Report	Monthly Total	62-640.650(5)(a)1. FAC
Monitoring Frequency			All Parameters		62-640.650(5)(a) FAC

6. GROUND WATER MONITORING REQUIREMENTS

Ground water monitoring requirements have been established in accordance with Chapters 62-520, 532, 600, 610, and 620, F.A.C.

Parameters Arsenic, Cadmium, Chromium, Sulfate and Lead are currently not included in the Ground Water Monitoring Plan (GWMP) because they are not believed to be present in the effluent. However, if the Department has any reasons in the future to believe that these metals are present in the effluent, they will be added to the Ground Water Monitoring Plan sampling list.

Total Trihalomethanes (TTHMs) were recorded in the Effluent Analysis Report at a concentration of 0.15 mg/l, which is above the MCL of 0.080 mg/l. TTHMs have been monitored in the groundwater monitoring wells in a past permit cycle and no exceedances have been recorded. Therefore, this parameter will not be added to the GWMP.

The permittee shall sample the following monitoring well(s): MWC-1 for the primary and secondary drinking water parameters included in Rules 62-550.310 and 62-550.320, F.A.C., (except for asbestos and all parameters in Table 5 of Chapter 62-550, F.A.C., other than Di(2-ethylhexyl) adipate and Di(2-ethylhexyl) phthalate). Results of this sampling shall be submitted to the Department's Central District Office with the application for permit renewal. Sampling shall occur no sooner than 180 days before submittal of the renewal application. [62-520.600(5)(b)]

Please note that total dissolved solids, chloride, and sodium concentrations in the groundwater from the monitoring wells and in the effluent from the reclaimed water analysis continue to exceed their MCL concentrations even in the background well. Please continue to address the inflow and infiltration issues and reduce the total dissolved solids, chloride and sodium concentrations in the effluent as much as possible.

This location is a barrier island, which may cause the TDS, chloride and sodium in the groundwater to be above the groundwater standards.

7. PERMIT SCHEDULES

This permit does not include schedules.

8. INDUSTRIAL PRETREATMENT REQUIREMENTS

At this time, the facility is not required to develop an approved industrial pretreatment program. However, the Department reserves the right to require an approved program if future conditions warrant.

9. ADMINISTRATIVE ORDERS (AO) AND CONSENT ORDERS (CO)

This permit is not accompanied by an AO or CO. The permittee has entered into two COs with the Department during the last permit cycle. CO 18-0068 was executed on February 27, 2018 and was related to waste water spills in the collection system. CO 16-1352 was executed on November 18, 2016 and was also related to a large spill in the collection system.

The county has implemented a significant program to reduce inflow and infiltration and in their collection system.

10. REQUESTED VARIANCES OR ALTERNATIVES TO REQUIRED STANDARDS

No variances were requested for this facility.

11. THE ADMINISTRATIVE RECORD

The administrative record including application, draft permit, fact sheet, public notice (after release), comments received, and additional information is available for public inspection at:

[https://depdms.dep.state.fl.us:443/Oculus/servlet/shell?command=hitlist&\[freeText=\]&\[folderName=\]&\[profile=Permitting_Authorization\]&\[creator=\]&\[entityType=any\]&\[createdDateTo=\]&\[catalog=38\]&\[searchBy=Profile\]&\[sortBy=Document+Date\]&\[createdDate=\]&{County= EQ_BREVARD}&{District= EQ_CD}&{Facility-Site+ID= EQ_FL0040622}&{Received+Date= RG_\(09-01-2018,01-23-2019\)}&{Permit+Type= EQ_DW+-+DOMESTIC+WASTEWATER+FACILITY}&{Facility+Type= LK_DOMESTIC+WASTEWATER}](https://depdms.dep.state.fl.us:443/Oculus/servlet/shell?command=hitlist&[freeText=]&[folderName=]&[profile=Permitting_Authorization]&[creator=]&[entityType=any]&[createdDateTo=]&[catalog=38]&[searchBy=Profile]&[sortBy=Document+Date]&[createdDate=]&{County= EQ_BREVARD}&{District= EQ_CD}&{Facility-Site+ID= EQ_FL0040622}&{Received+Date= RG_(09-01-2018,01-23-2019)}&{Permit+Type= EQ_DW+-+DOMESTIC+WASTEWATER+FACILITY}&{Facility+Type= LK_DOMESTIC+WASTEWATER})

12. PROPOSED SCHEDULE FOR PERMIT ISSUANCE

Draft Permit and Public Notice to Applicant and EPA	January 24, 2019
Public Comment Period	Beginning: February 1, 2019 Ending: March 2, 2019
Proposed Permit to EPA	January 24, 2019
Notice of Intent to Issue	March 5, 2019

Notice of Permit Issuance

March 27, 2019

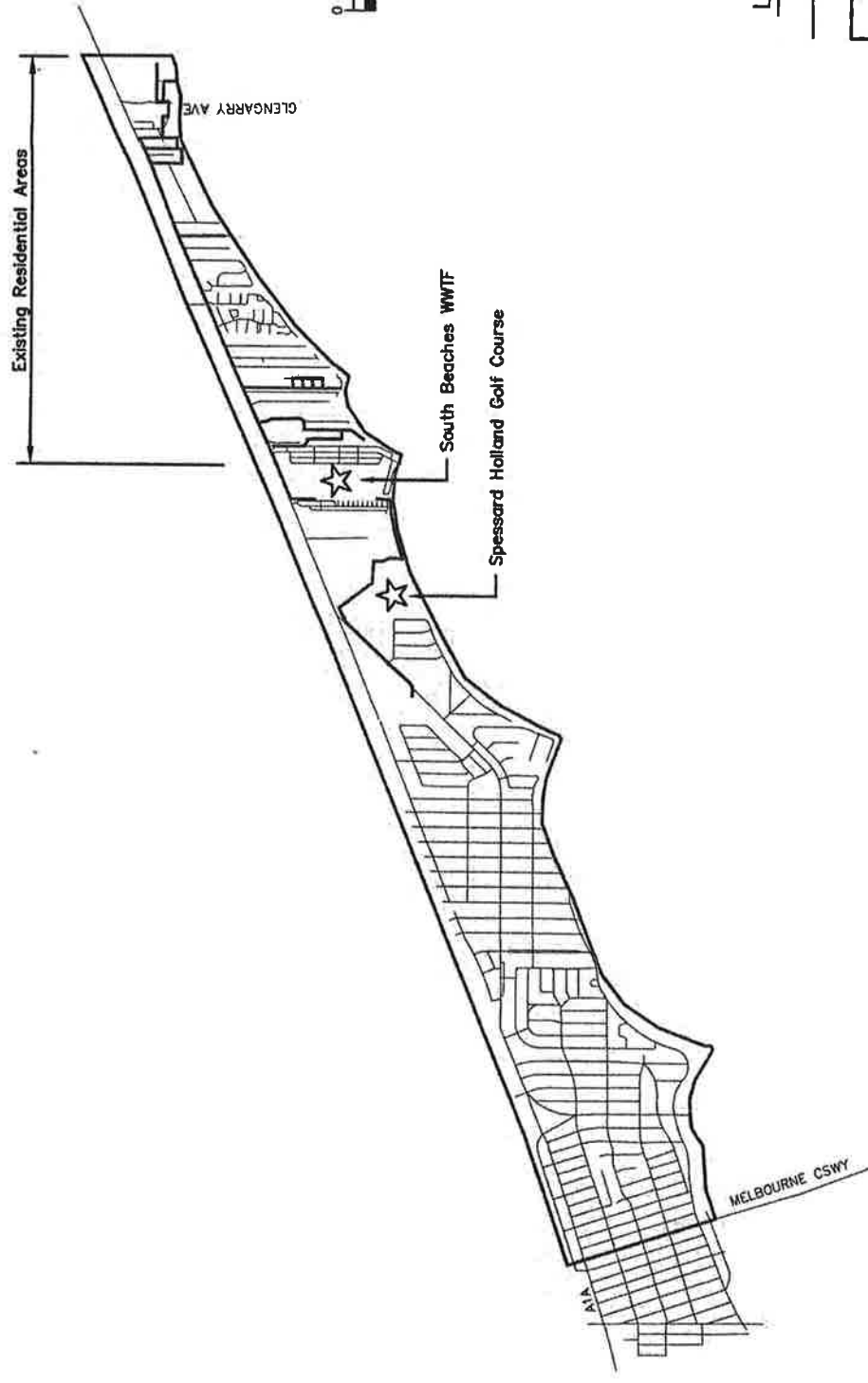
13. DEP CONTACT

Additional information concerning the permit and proposed schedule for permit issuance may be obtained during normal business hours from:

Charles LeGros
Environmental Consultant
Central District Office
Charles.legros@dep.state.fl.us

3319 Maguire Blvd
Suite 232
Orlando, FL 32803-3767

Telephone No.: (407) 897-4158



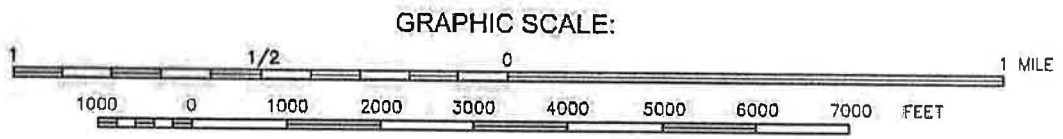
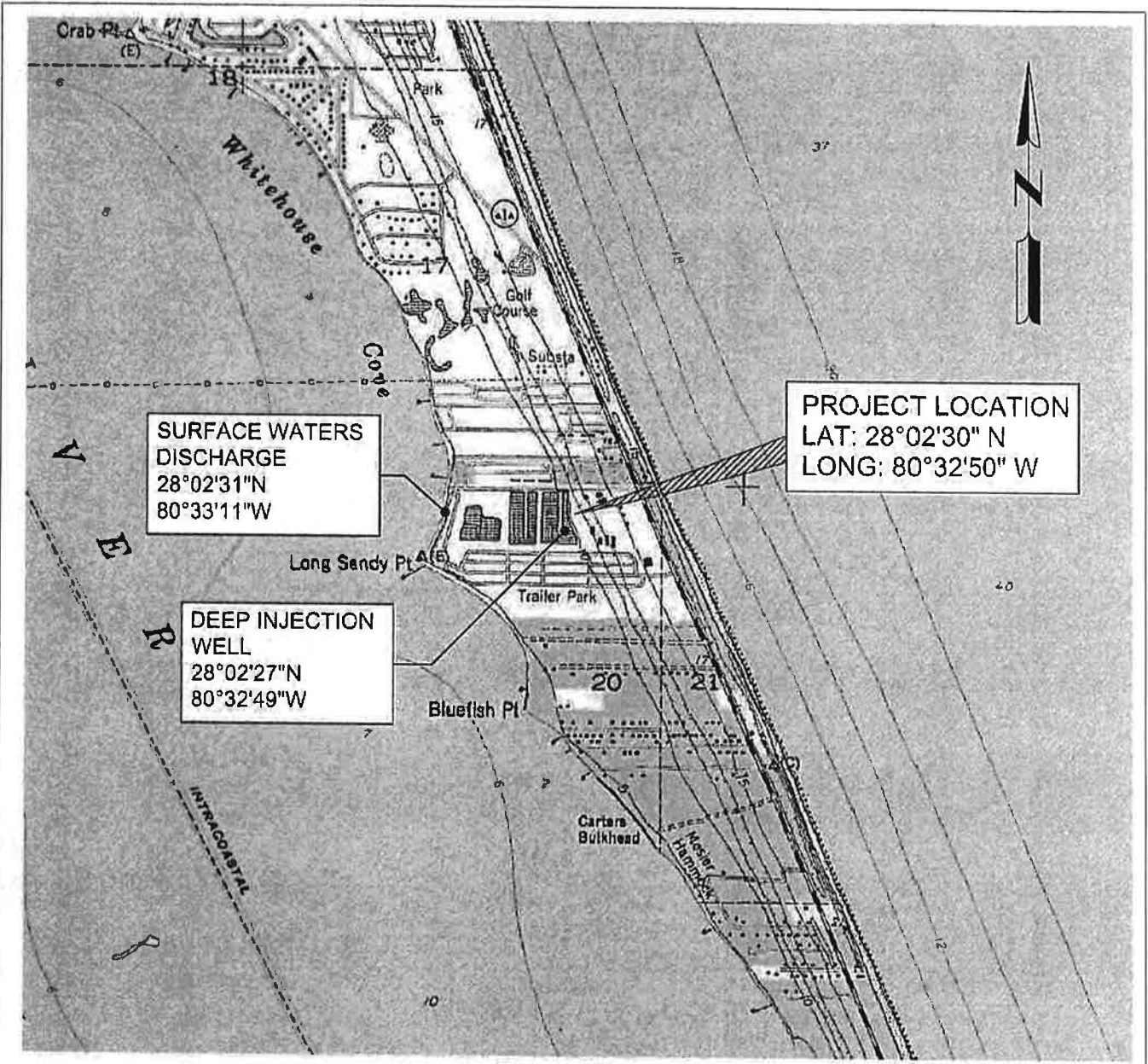
Legend

- Existing Reclaim Mains
- ▭ Existing Wastewater Service Area

FIGURE 2
CAPACITY ANALYSIS REPORT

SOUTH BEACHES RECLAIMED WATER
SERVICE AREAS

QUENTIN L. HAMPTON ASSOCIATES, INC. CONSULTING ENGINEERS
P.O. DRAWER 290247 PORT ORANGE, FLORIDA 32129-0247 (386)761-6810 07/2013



LOCATION MAP

SECTION 20
TOWNSHIP 28S
RANGE 38E

MELBOURNE EAST, FLA.
U S C & G QUADRANGLE

I:\CADD\MEADHUNT\2018\181022\01\TECH\FIGURES\1-2_X.DWG
 7/20/2018 5:13:21 PM



BREVARD COUNTY, FLORIDA
SOUTH BEACHES WASTEWATER
TREATMENT FACILITY
 PROJECT #
 1000701-181022.01
 07/2018

Mead & Hunt
 FIGURE #1

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**SOUTH CENTRAL
REGIONAL WATER
RECLAMATION FACILITY**



**NON-BENEFICIAL
SURFACE WATER DISCHARGE
ELIMINATION PLAN**



OCTOBER 2021

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Cover Sheet for Plan Submittal

Facility Name BCUD - South Central Regional WRF

Facility ID FL0102679

Contact Person Name, Title, Phone, Email Edward Fontanin, P.E., Utility Services Director
Brevard County Utility Services Department, (321) 633-2093; edward.fontanin@brevardfl.gov

If the requirement for a plan does not apply to the facility, please mark which exemption applies (attach documentation demonstrating that the facility meets the exemption) Not Applicable

Check One	Exemption
<input type="checkbox"/>	Facility is in a fiscally constrained county as described in section 218.67(1), F.S.
<input type="checkbox"/>	Facility is in a municipality that is entirely with a rural area of opportunity as designated pursuant to section 288.0656, F.S.
<input type="checkbox"/>	Facility is in a municipality that has less than \$10 million in total revenue, as determined by the municipality's most recent annual financial report submitted to the Department of Financial Services in accordance with section 218.32, F.S.
<input type="checkbox"/>	Facility is operated by an operator of a mobile home park as defined in section 723.003, F.S., and has a permitted capacity of less than 300,000 gallons per day.

Indicate which plan(s) category under which the facility will comply

Check One	Plan Category
<input type="checkbox"/>	The plan eliminates the discharge.
<input type="checkbox"/>	The plan meets section 403.086(10), F.S.
<input type="checkbox"/>	The plan does not eliminate the discharge – The discharge is associated with an indirect potable reuse project;
<input type="checkbox"/>	The plan does not eliminate the discharge – The discharge is a wet weather discharge that occurs in accordance with an applicable department permit;
<input type="checkbox"/>	The plan does not eliminate the discharge – The discharge is into a stormwater management system and is subsequently withdrawn by a user for irrigation purposes;
<input checked="" type="checkbox"/>	The plan does not eliminate the discharge – The utility operates the domestic wastewater treatment facilities with reuse systems that reuse a minimum of 90 percent of a facility's annual average flow, as determined by the department using monitoring data for the prior 5 consecutive years, for reuse purposes authorized by the department; or
<input type="checkbox"/>	The plan does not eliminate the discharge – The discharge provides direct ecological or public water supply benefits, such as rehydrating wetlands or implementing the requirements of minimum flows and minimum water levels or recovery or prevention strategies for a waterbody.

Please enter the information on discharges eliminated Not Applicable

Discharge Type (effluent, reclaimed water, or reuse water)	Average Gallons Per Day	Date the discharge will be eliminated

Please enter information on any continuing discharges to surface waters after January 1, 2032.

Discharge Allowance Category	Discharge Type (effluent, reclaimed water, or reuse water)	Average Gallons Per Day	Treatment Level Provided (e.g. BOD limit = 5mg/L, TSS = 5 mg/L, TN = 3mg/L, TP = 1mg/L and high-level disinfection)
Meets section 403.086(10), F.S.			
Associated with an indirect potable reuse project.			
Wet weather discharge in accordance with an applicable department permit.			
Discharge into a stormwater management system that is subsequently withdrawn by a user for irrigation purposes.			
Reuse system reuses a minimum of 90 percent of a facility's annual average flow.	Reclaimed Water	Up to 0.99 MGD AADF per Permit	AWT and high-level disinfection are provided at the SCRWF
Discharge provides direct ecological or public water supply benefits.			

Certification Statement

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Authorized Signatory Representative
Name *and Official Title* (type or
print) [Rule 62-620.305, F.A.C.]

**Edward Fontanin, P.E., Utility Services Director
Brevard County Utility Services Department**

Authorized Signatory Representative Signature

Date Signed

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**SOUTH CENTRAL REGIONAL
WATER RECLAMATION FACILITY**

NON-BENEFICIAL SURFACE WATER ELIMINATION PLAN



OCTOBER 2021

**CPH, Inc.
500 West Fulton Street
Sanford, Florida 32771
CPH Project No. B19507**

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TABLE OF CONTENTS

1. Executive Summary	1-1
1.1 Introduction	1-1
1.2 Regulatory Framework for Non-Beneficial Surface Water Discharge Elimination ..	1-2
1.3 Existing Facility Conditions	1-2
1.4 Non-Beneficial Surface Water Discharge Elimination Plan	1-4
1.5 Potential Treatment Facility Improvements	1-4
2. Regulatory Framework for Non-Beneficial Surface Water Discharge Elimination ..	2-1
2.1 Introduction	2-1
2.2 Non-Beneficial Surface Water Discharge Elimination Law/Requirements	2-1
2.3 South Central Regional WRF - Current Disposal Practices	2-4
3. Existing Facility Conditions	3-1
3.1 Wastewater Management System Service Area	3-1
3.2 South Central Regional Water Reclamation Facility (SCRWRF)	3-1
3.2.1 Primary Treatment System	3-9
3.2.2 Secondary Treatment System - Carrousel BNR Treatment System	3-10
3.2.3 Secondary Treatment System - IFAS BNR Treatment System	3-12
3.2.4 Tertiary Treatment System - Carrousel BNR Treatment System	3-15
3.2.5 Tertiary Treatment System - IFAS BNR Treatment System	3-16
3.2.6 Disinfection System - Carrousel BNR Treatment System	3-16
3.2.7 Disinfection System - IFAS BNR Treatment System	3-16
3.2.8 Transfer Pump Stations	3-17
3.2.9 Reclaimed Water/Effluent Disposal System	3-18
3.2.10 Sludge Management System	3-20
3.3 Permitted Capacity	3-21
3.4 Historical Wastewater Flows	3-23
3.5 Facility Effluent Flows	3-31
3.6 Facility Effluent Quality	3-41
3.6.1 CBOD ₅ Treatment (Removal) Efficiency	3-41
3.6.2 TSS Treatment (Removal) Efficiency	3-44
3.6.3 TN Treatment (Removal) Efficiency	3-45
3.6.4 TP Treatment (Removal) Efficiency	3-47



TABLE OF CONTENTS

4. Non-Beneficial Surface Water Discharge Elimination Plan.....	4-1
4.1 The South Central Regional WRF Discharge Elimination Plan.....	4-1
4.2 Capacity and Efficiency of the South Central Regional WRF	4-3
4.3 Ability of the South Central Regional WRF to Meet "Current" and "Future" Nutrient Limits	4-4

Appendices

- A South Beaches WWTF: "Existing" FDEP Operations Permit

TABLE OF CONTENTS

List of Tables

Table 3.2-1	South Central Regional WRF Design and Current Wastewater Flows	3-8
Table 3.2-2	South Central Regional WRF - Influent and Effluent Design Criteria	3-8
Table 3.4-1	South Central Regional WRF - Historical Wastewater Flows	3-24
Table 3.5-1	South Central Regional WRF - Effluent Disposal	3-32
Table 3.6-1	South Central Regional WRF - Reclaimed Water Quality (2016 - 2020)	3-42

List of Figures

Figure 3.1-1	South Central Regional Wastewater Management System Service Area	3-2
Figure 3.2-1	South Central Regional WRF - Aerial View	3-4
Figure 3.2-2	South Central Regional WRF: Schematic Flow Diagram	3-5
Figure 3.2-3	South Central Regional WRF: Facility Site Plan	3-6
Figure 3.2-4	South Central Regional Reclaimed Water Service Area	3-7
Figure 3.3-1	South Central Regional Reclaimed Water Service Area - Major Users	3-22
Figure 3.4-1	South Central Regional WRF: Historical Wastewater Flows (ADF)	3-27
Figure 3.4-2	South Central Regional WRF: Historical Wastewater Flows (3-Month ADF)	3-28
Figure 3.4-3	South Central Regional WRF: Historical Wastewater Flows (AADF)	3-29
Figure 3.4-4	South Central Regional WRF: Annual Variations in Flow	3-30
Figure 3.5-1	South Central Regional WRF: Public Access Reuse System (R-001) - Historical Effluent Monthly ADF	3-35
Figure 3.5-2	South Central Regional WRF: Public Access Reuse System (R-001) - Historical Effluent 12-Month Rolling AADF	3-36
Figure 3.5-3	South Central Regional WRF: Reclaimed Water Flow to the Wetlands (R-002) - Historical Effluent Monthly ADF	3-37
Figure 3.5-4	South Central Regional WRF: Reclaimed Water Flow to the Wetlands (R-002) - Historical Effluent 12-Month Rolling AADF	3-38
Figure 3.5-5	South Central Regional WRF: Surface Water Discharge (D-001) To The 4-Mile Canal - Historical Effluent Monthly ADF	3-39
Figure 3.5-6	South Central Regional WRF: Surface Water Discharge (D-001) To The 4-Mile Canal - Historical Effluent 12-Month Rolling AADF	3-40

TABLE OF CONTENTS

List of Abbreviations

AADF	Annual Average Daily Flow
AC	Acres
ASP	Activated Sludge Process
AWET	Acute Whole Effluent Toxicity
ADF	Average Daily Flow
BCUD	Brevard County Utilities Department
BFP	Belt Filter Press
BMP	Best Management Practices
BNR	Biological Nutrient Removal
BOD	Biochemical Oxygen Demand
CAR	Capacity Analysis Report
CBOD ₅	Carbonaceous Biochemical Oxygen Demand - 5-Day
CCC	Chlorine Contact Chamber
CFR	Code of Federal Regulations
CIP	Capital Improvements Plan
COD	Chemical Oxygen Demand
DIW	Deep Injection Well
DMR	Discharge Monitoring Report
DO	Dissolved Oxygen
EPA	Environmental Protection Agency
FAC	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
F/M	Food-to-Microorganism Ratio
FSS	Fixed Suspended Solids
GPCD	Gallons per Capita-Day
HDT	Hydraulic Detention Time
HP	Horsepower
hr	Hour
HRT	Hydraulic Retention Time
IR	Internal Recycle
lb	Pounds
lb/day	Pounds per day
MCRT	Mean Cell Residence Time
MDF	Maximum Daily Flow
mg	Milligram
mg/L	Milligrams per Liter
MG	Million Gallons
MGD	Million Gallons per Day

TABLE OF CONTENTS

List of Abbreviations

Min	Minutes
MLSS	Mixed Liquor Suspended Solids
MLVSS	Mixed Liquor Volatile Suspended Solids
MOP	Monitoring and Operating Protocol
NaOCl	Sodium Hypochlorite
NH ₃ -N	Ammonia-Nitrogen
O&M	Operations and Maintenance
ORP	Oxidation Reduction Potential
PAR	Public Access Reuse
PD	Positive Displacement
PHF	Peak Hourly Flow
PVC	Polyvinyl Chloride
RAS	Return Activated Sludge
RCP	Reinforced Concrete Pipe
RPM	Revolutions per Minute
SCADA	Supervisory Control and Data Acquisition
SCRWRF	South Central Regional Water Reclamation Facility
SLR	Solids Loading Rate
SNdN	Simultaneous Nitrification-Denitrification
SOR	Surface Overflow Rate
SRF	State Revolving Fund
SRT	Solids Retention Time
SU	Standard Unit
TDH	Total Dynamic Head
TKN	Total Kjeldahl Nitrogen (Organic-N + NH ₃ -N)
TMDL	Total Maximum Daily Load
TN	Total Nitrogen
TP	Total Phosphorus
TRC	Total Residual Chlorine
TS	Total Solids
TSS	Total Suspended Solids
VFD	Variable Frequency Drive
VS	Volatile Solids
VSS	Volatile Suspended Solids
WAS	Waste Activated Sludge
WLR	Weir Loading Rate
WOR	Weir Overflow Rate
WRF	Water Reclamation Facility

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SECTION 1

EXECUTIVE SUMMARY

1.1 INTRODUCTION

The promotion of water conservation and reuse of reclaimed water are State goals/objectives and are considered to be in the public interest. The State also finds that the reuse of reclaimed water is a critical component of meeting the State's existing and future water supply needs while sustaining natural systems. To enhance the quality of surface waters throughout the Florida, the State is looking to reduce/eliminate non-beneficial surface water discharges by wastewater treatment facility's through a new law and modifications to Section 403.064, "*Reuse of Reclaimed Water*", of the Florida Statutes. The new law requires utilities with wastewater treatment plants that discharge to surface waters to submit a Non-beneficial Surface Water Discharge Elimination Plan to the FDEP to review by November 1, 2021 with full implementation of any proposed improvements completed by January 1, 2032.

Brevard County owns and operates the South Central Regional WRF (SCRWRF) to process all of the wastewater generated within its permitted service area. The treatment facility serves the residential, commercial, agricultural and rural areas in this portion of Brevard County. The County has invested million of dollars into this facility and all of its ancillary components over the last twenty (20) years as well as reclaimed water distribution/transmission and effluent disposal infrastructure.

The current regulatory environment, including the State's attempt to eliminate non-beneficial surface water discharges, requires Brevard County to evaluate the SCRWRF's surface water discharge and its potential impacts to surrounding surface waters in accordance with the requirements of Section 403.064, "*Reuse of Reclaimed Water*", of the Florida Statutes.



South Central Regional WRF Wastewater Management System Service Area

This Non-Beneficial Surface Water Discharge Elimination Plan for the South Central Regional WRF includes the evaluation of the current FDEP-permitted surface water discharge from the South Central Regional WRF to the 4-Mile Canal and thence the St. Johns River, the amount of effluent discharged to the surface water system, the amount of reclaimed water utilized throughout the service area, the reclaimed water quality generated by the treatment facility and the capability of the facility to meet Advanced Wastewater Treatment (AWT) Standards on a consistent basis to ensure protection of the environment. This Surface Water Discharge Elimination Plan is comprised of the following Sections:

- Section 2: Regulatory Framework for Non-Beneficial Surface Water Discharge Elimination
- Section 3: Existing Facility Conditions
- Section 4: Non-Beneficial Surface Water Discharge Elimination Plan

1.2 REGULATORY FRAMEWORK FOR NON-BENEFICIAL SURFACE WATER DISCHARGE ELIMINATION

The State of Florida Legislature developed and passed House Bill 263 and Senate Bill 64, and the Governor signed the legislation into law on June 29, 2021, requiring domestic wastewater utilities to submit a Plan to the FDEP for eliminating non-beneficial surface water discharges (e.g., treated effluent, reclaimed water or reuse water).

The new law creates a timeline and Plan to eliminate non-beneficial surface water discharge by January 1, 2032, subject to the requirements of the law. It contains a series of conditions authorizing discharges that are being beneficially used or otherwise regulated, and for specified hardships. The law requires domestic wastewater utilities that dispose of effluent, reclaimed water, or reuse water by surface water discharge to submit a Plan to eliminate non-beneficial surface water discharge to the Florida Department of Environmental Protection (FDEP) by November 1, 2021 and fully implemented at the treatment facility by January 1, 2032.

1.3 EXISTING FACILITY CONDITIONS

The South Central Regional WRF is classified as a 12.0 MGD AADF *Advanced Wastewater Treatment plus Filtration* Facility (Category I, Class A), utilizing two (2) parallel BNR wastewater treatment plants to treat the incoming raw wastewater from the service area and is currently operating under FDEP Permit No. FL0102679. The unit operations and processes currently employed are as follows:

Treatment Elements	Description
Primary Treatment	Two (2) automatic, continuous, self-cleaning, mechanical barscreens (3 mm) each with a screenings compacting/dewatering screw system; two (2) centrifugal grit separators, each with washing units and dewatering screws; two (2) automatic, continuous, self-cleaning drum screens (1 mm) each with washing units and dewatering screws; and an odor control system.
Secondary Treatment	<p>Carrousel BNR Treatment System (Trains No. 1 and 2) Biological oxidation of the organic wastes utilizing an external anaerobic basin followed by a dual-train Carrousel Oxidation Ditch system consisting of primary anoxic, aerobic, secondary anoxic and re-aeration basins. A flow splitter box directs the MLSS to four secondary clarifiers that are utilized for sedimentation of solids. A dedicated RAS/WAS pumping station is provided for each set of clarifiers (No. 1 and No. 2; No. 3 and No. 4).</p> <p>IFAS BNR Treatment System (Trains No. 3 and 4) Biological oxidation of the organic wastes utilizing dual-train IFAS BNR Treatment System (5-Stage). Each treatment train includes anaerobic, primary anoxic, aerobic, secondary anoxic and re-aeration basins and has an Internal Mixed Liquor Recycle (IMLR) pumping system. The MLSS from the IFAS treatment trains are directed to two (2) 90-foot diameter secondary clarifiers for sedimentation of solids. A dedicated RAS/WAS pumping station is provided for the secondary clarifiers (No. 5 and No. 6).</p>
Tertiary Treatment	Tertiary filtration via automatically operating, disc filtration units installed as follows: <ul style="list-style-type: none"> ■ Carrousel BNR Trains 1 and 2 - four (4) disc filtration units rated at 1.5 MGD each. ■ IFAS BNR Trains 3 and 4 - three (3) disc filtration units rated at 2.0 MGD each.
Disinfection	High-level disinfection is accomplished through the use of bulk liquid NaOCl (chemical feed and storage systems) and a system of chlorine contact chambers as follows: <ul style="list-style-type: none"> ■ Carrousel BNR Trains 1 and 2 - Dual compartment Chlorine Contact Chamber. ■ IFAS BNR Trains 3 and 4 - Dual compartment Chlorine Contact Chamber.
Sludge Treatment	Sludge treatment consisting of two (2) sludge holding tanks with submersible hyperboloid mixers and aeration devices, PD blowers, a sludge pumping system, a dewatering system (belt filter presses) and a system of dewatered sludge conveyors.

A high-quality reclaimed water is produced at the facility and is used throughout the South Central Regional WRF Service area in accordance with the following disposal systems:

Disposal System	FDEP Designation	AADF Capacity (MGD)	Disposal System Description
Land Application (Reuse)	R-001	8.20	An existing slow-rate Public Access Reuse (PAR) system consisting of on-site irrigation at the SCRWRF and within the approved Reuse System Service Area.
	R-002	2.50	An existing slow-rate Restricted Public Access system consisting of the 200+ acre Ritch Grissom Memorial Wetlands (163+ total wetted acres) with four (4) wetland cells and an interior lake. The detention time through this created wetland system is approximately 53 days, and is located at latitude 28°13' 47" N, longitude 80°46' 18" W.
Surface Water Discharge	D-001	0.99	An existing discharge to 4-Mile Canal, Class III Fresh Waters, (WBID# 2893N) which is approximately 128 feet in length and discharges at a depth of approximately 0 feet. The outfall pipe is a 60" diameter concrete culvert that discharges to the 4-Mile Canal then to the St. Johns River. The point of discharge is located at latitude 28°13' 48" N, longitude 80°46' 14" W.

Surface water discharges from the Wetlands lake to the 4-Mile Canal and thence the St. Johns River (D-001) occur due to intense rainfall events associated with tropical systems (Hurricane Matthew, Hurricane Irma, etc.) and severe localized thunderstorms within the South Central Regional WRF Wastewater Management System Service Area.

The South Central Regional WRF is highly efficient in treating the raw wastewater from the service area and is in compliance with all FDEP Operations Permit requirements/limitations.

1.4 NON-BENEFICIAL SURFACE WATER DISCHARGE ELIMINATION PLAN

The detailed evaluation of monthly operating data indicates that the South Central Regional WRF has reused approximately 96.6% of the facility's annual average effluent flow over the past five-calendar year period (2016 - 2020). The remaining 3.4% of the effluent flow, over this same period, were surface water discharges from the Ritch Grissom Memorial Wetlands to the 4-Mile Canal. The surface water discharges were due to intense rainfall events associated with Hurricane Matthew, Hurricane Irma and severe localized thunderstorms within the SCRWRF service area.

Therefore, in accordance with the requirements of the 403.064(17)(a)(3)(d), Florida Statutes, the Surface Water Discharge Elimination Plan for the South Central Regional WRF does not provide for a complete elimination of the FDEP-permitted surface water discharge to the 4-Mile Canal and thence to the St. Johns River. However, Brevard County is providing the FDEP with an affirmation demonstration (as provided for in the law), based on the analyses and evaluations conducted in Section 3 of this document, that the SCRWRF is reusing a minimum of 90% of its annual average effluent flow as determined using the daily monitoring data from the previous five (5) Calendar Years (2016 - 2020) of operating data. In accordance with the regulatory requirements of 403.064, F.S., the County will therefore continue to utilize the FDEP-permitted discharge from the Ritch Grissom Memorial Wetlands to 4-Mile Canal and will not exceed the 0.990 MGD AADF flow limitation. It is anticipated that as growth occurs within the South Central Regional Wastewater Management System Service Area, new reclaimed water sites and additional storage will be developed thereby reducing the need to discharge to the 4-Mile Canal, with the exception of wet weather discharges during extreme weather and high groundwater table events.

1.5 POTENTIAL TREATMENT FACILITY IMPROVEMENTS

To meet the surface water discharge requirements, on a continual basis, when water is conveyed from the Wetlands lake to the 4-Mile Canal, it is imperative that the reclaimed water/effluent from the treatment facility meet AWT standards. The effluent TN concentration is the only effluent parameter that is not currently meeting AWT standards.

However, the two distinct BNR treatment systems produce differing effluent TN concentrations as shown in the table below:

BNR System	Time Period	Effluent Nutrient Concentrations (mg/L)	
		TN*	TP**
Carrousel	January 2016 - April 2019	7.8	0.8
IFAS	May 2019 - December 2020	3.7	0.2

* AWT Total Nitrogen Standard: ≤ 3 mg/L

** AWT Total Phosphorus Standard: ≤ 1 mg/L

Therefore, to meet the AWT TN Standard, on a consistent basis, and ensure that the treatment facility meets the required FDEP Operational limits for nutrients, improvements, modifications and adjustments within the BNR Systems will be required at the South Central Regional WRF:

BNR System	Required Improvements to Meet the AWT TN Standard*
IFAS	Minor operational modifications and adjustments
Carrousel	Moderate to significant operational, process and infrastructure improvements, modifications and adjustments

* A listing of proposed treatment facility improvements will be generated upon completion of a detailed evaluation of each BNR system, process design information, design criteria, facility operational data and standard operating procedures.

The required facility improvements to the BNR Treatment Systems at the South Central Regional WRF, to consistently meet the AWT TN Standard, will be included in the County's Utility Capital Improvements Program (CIP). As this is not a currently funded CIP project, the County will evaluate their utility capital resources during upcoming annual budget cycle meetings and include this project in its list of potential prioritized utility projects.

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SECTION 2

REGULATORY FRAMEWORK FOR NON-BENEFICIAL SURFACE WATER DISCHARGE ELIMINATION

2.1 INTRODUCTION

This Section of the Non-Beneficial Surface Water Discharge Elimination Plan (NBSWDEP) presents the regulatory framework for the potential surface water elimination/reduction options for Brevard County's South Central Regional WRF. The regulations regarding the surface water discharge elimination program have been promulgated by the State of Florida under 403.064, "*Reuse of Reclaimed Water*" (June 2021). The new law requires Brevard County to submit to the Florida Department of Environmental Protection (FDEP), by November 1, 2021, a Plan for eliminating non-beneficial treatment facility effluent discharges to surface waters.

The Florida Department of Environmental Protection (FDEP) regulates surface waters and watersheds within the State and the approach for restoring and protecting State waters and addressing TMDL Program requirements (1972 Federal Clean Water Act and the 1999 Florida Watershed Restoration Act (FWRA)).

2.2 NON-BENEFICIAL SURFACE WATER ELIMINATION LAW/REQUIREMENTS

The State of Florida Legislature, during the past session, developed and passed House Bill 263 and Senate Bill 64 requiring domestic wastewater utilities to submit a Plan to the FDEP for eliminating non-beneficial surface water discharges (e.g., treated effluent, reclaimed water or reuse water). Governor DeSantis signed the legislation into law on June 29, 2021. The law added new regulatory requirements to 403.064, "*Reuse of Reclaimed Water*" of the Florida Statutes which will be discussed herein.

The new law creates a timeline and Plan to eliminate non-beneficial surface water discharge by January 1, 2032, subject to the requirements of the law. It contains a series

of conditions authorizing discharges that are being beneficially used or otherwise regulated, and for specified hardships. The law requires domestic wastewater utilities that dispose of effluent, reclaimed water, or reuse water by surface water discharge to submit a Plan to eliminate non-beneficial surface water discharge to the Florida Department of Environmental Protection (FDEP). The Plan must be submitted to FDEP by November 1, 2021 and implemented by January 1, 2032.

The Non-Beneficial Surface Water Discharge Elimination Plan must include the following:

- The average flow (MGD) of effluent, reclaimed water, or reuse water that will no longer be discharged into surface waters and the date of such elimination;
- The average flow (MGD) of surface water discharge that will continue in accordance with the requirements for the elimination of ocean outfalls, one of the discharge conditions specified in the legislation or one of the hardship conditions; and
- The level of treatment which the effluent, reclaimed water, or reuse water will receive before being discharged into a surface water by each alternative.

To be approved by the FDEP, the Non-Beneficial Surface Water Discharge Elimination Plan must:

- Result in eliminating the surface water discharge;
- Result in meeting the statutory requirements (Section 403.086(10)) regarding the discharge of domestic wastewater through an ocean outfall; or
- Provide an affirmative demonstration that any of the following discharge conditions applies to the remaining discharge if the Plan does not provide for the complete elimination of surface water discharge:

Discharge Conditions

The discharge is associated with an indirect potable reuse project.

The discharge is a wet weather discharge that occurs in accordance with an applicable FDEP permit.

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

The utility operates domestic wastewater treatment facilities with reuse systems that reuse a minimum of ninety percent (90%) of a facility's annual average flow, as determined by the FDEP using monitoring data for the prior five (5) consecutive years, for reuse purposes authorized by the FDEP.

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

The new law requires the FDEP to approve or deny a Non-Beneficial Surface Water Discharge Elimination Plan within nine (9) months after receiving the Plan. Brevard County may modify its Plan(s) by submitting the proposed modification(s) to the FDEP for review. However, the Plan(s) may not be modified such that the requirements of the new law are not met and the FDEP may not extend the time within which a Plan will be implemented. The approval of the Plan or a modification by the FDEP does not constitute final agency action.

If the Non-Beneficial Surface Water Discharge Elimination Plan is not submitted in a timely manner by the County, or approved by the FDEP, the South Central Regional WRF may not dispose of effluent, reclaimed water, or reuse water by surface discharge after January 1, 2028. In addition, a violation subjects Brevard County to administrative and civil penalties pursuant to ss. 403.121, 403.131, and 403.141.

A domestic wastewater utility applying for a permit for a new or expanded surface water discharge is now required to prepare a Plan in accordance with 403.064, F.S. as part of that permit application. The FDEP may not approve a permit for a new or expanded surface water discharge unless the Plan meets one or more of the conditions provided in the new law.

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

This new law does not apply to any of the following:

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

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

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

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

Therefore, as the South Central Regional WRF has a permitted "intermittent" surface water discharge from the Wetlands lake to the 4-Mile Canal and thence the St. Johns River, and does not meet one of the Plan exemptions, as identified above, a Non-Beneficial Surface Water Discharge Elimination Plan must be submitted to FDEP by the November 1, 2021 deadline.

2.3 SOUTH CENTRAL REGIONAL WRF - CURRENT DISPOSAL PRACTICES

Brevard County owns and operates the South Central Regional Water Reclamation Facility (SCRWRF) which is classified as an "Advanced Wastewater Treatment plus Filtration Facility" (Category I, Class A) utilizing the following two (2) parallel BNR wastewater treatment systems (Carrousel and IFAS Biological Nutrient Removal (BNR) Systems) and meets all Class I Reliability Criteria. The treatment facility consists of dual mechanical influent screening systems, grit removal, four (4) BNR treatment trains (anaerobic, primary anoxic, aerobic, deoxygenation, secondary anoxic and reaeration basins) with chemical feed facilities, secondary clarification, tertiary filtration, high-level disinfection, pumping systems and reclaimed water storage.



A "high-quality" reclaimed water is produced at the facility that is low in TN and TP. The "current" permitted treatment capacity of the facility is 12.00 MGD AADF and the SCRWRF is operating under FDEP Operations Permit No. FL0102679 (a copy is provided in Appendix A). Biosolids are partially digested, dewatered, and then transported to a Class I landfill for final disposal.

Reuse/effluent disposal is achieved by a combination of the following FDEP permitted disposal systems:

Disposal System	FDEP Designation	AADF Capacity (MGD)	Disposal System Description
Land Application (Reuse)	R-001	8.20	An existing slow-rate Public Access Reuse (PAR) system consisting of on-site irrigation at the SCRWRF and within the approved Reuse System Service Area.
	R-002	2.50	An existing slow-rate Restricted Public Access system consisting of the 200+ acre Ritch Grissom Memorial Wetlands (163+ total wetted acres) with four (4) wetland cells and an interior lake. The detention time through this created wetland system is approximately 53 days, and is located at latitude 28°13' 47" N, longitude 80°46' 18" W.
Surface Water Discharge	D-001	0.99	An existing discharge to 4-Mile Canal, Class III Fresh Waters, (WBID# 2893N) which is approximately 128 feet in length and discharges at a depth of approximately 0 feet. The outfall pipe is a 60" diameter concrete culvert that discharges to the 4-Mile Canal then to the St. Johns River. The point of discharge is located at latitude 28°13' 48" N, longitude 80°46' 14" W.

Surface water discharges from the Wetlands lake to the 4-Mile Canal and thence the St. Johns River (D-001) occur due to intense rainfall events associated with tropical systems (Hurricane Matthew, Hurricane Irma, etc.) and severe localized thunderstorms within the South Central Regional WRF Wastewater Management System Service Area.

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SECTION 3

EXISTING FACILITY CONDITIONS

3.1 WASTEWATER MANAGEMENT SYSTEM SERVICE AREA

The South Central Regional Wastewater Management System Service Area includes land within unincorporated portions of Brevard County as presented in Figure 3.1-1. The southern portion of the service area is generally bordered by Green Road on the north, Post Road on the south, I-95 on the east, and Pineda Boulevard on the west. The northern portion of the service area is generally bordered by Coconut Avenue on the north, Pluckebaum Road on the south, I-95 on the east, and Adamson Road on the west.

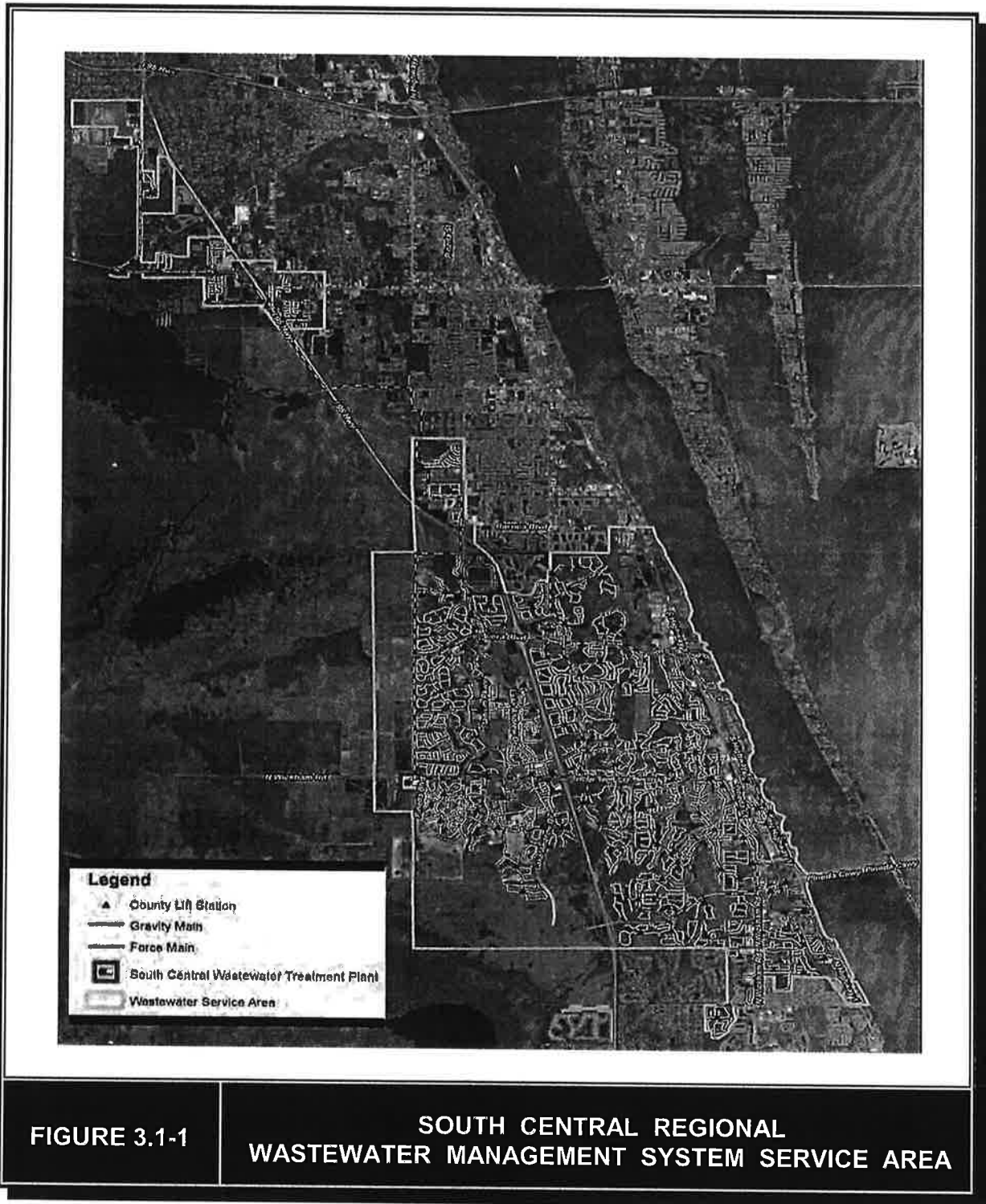
The South Central Regional Wastewater Management System serves the County's residential, commercial, agricultural, and rural areas. Population and corresponding raw wastewater flow projections are based on this service area. The raw wastewater is collected and conveyed via gravity sewers, lift stations and forcemains to the South Central Regional Water Reclamation Facility (SCRWRF) located at 10001 North Wickham Road, Melbourne, FL 32940, for advanced treatment and water reclamation.

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 confine the South Central Regional Wastewater Management System Service Area.

3.2 SOUTH CENTRAL REGIONAL WATER RECLAMATION FACILITY (SCRWRF)

The South Central Regional WRF is classified as an *Advanced Wastewater Treatment plus Filtration* Facility (Category I, Class A), utilizing two (2) parallel BNR wastewater treatment plants to treat the incoming raw wastewater from the service area and meets all Class I Reliability criteria. The two (2) parallel BNR treatment trains are briefly described below:

- A 6.0 MGD AADF treatment system consisting of an independent anaerobic reactor and a dual-train, 4-Stage Carrousel BNR Treatment System with primary anoxic, aerobic, secondary anoxic and reaeration basins. The Carrousel BNR Treatment System utilizes mechanical surface aerators and hyperboloid mixers to provide oxygenation and mixing of the Mixed Liquor Suspended Solids (MLSS).



- A 6.0 MGD AADF dual-train IFAS BNR Treatment System designed and operated as a 5-Stage process consisting of anaerobic, primary anoxic, aerobic, secondary anoxic and reaeration basins. The IFAS system utilizes turboblowers, medium bubble diffusers and hyperboloid mixers to provide oxygenation and mixing of the Mixed Liquor Suspended Solids (MLSS).

The Carrousel BNR treatment trains are currently *on-line* and processing the incoming raw wastewater from the Service Area and are generating an effluent meeting all FDEP requirements. The IFAS BNR Treatment System trains are currently *off-line* as the raw wastewater flows being received at the facility are below the 6.00 MGD capacity of Carrousel BNR System. The South Central Regional Wastewater Management System, Reclaimed Water System Service Area and the South Central Regional WRF are operating under FDEP Operations Permit No. FL0102679. A copy of the current FDEP Operations Permit is provided in Appendix A. An aerial view, schematic flow diagram and site plan of the South Central Regional WRF are presented in Figures 3.2-1 through 3.2-3, respectively.

The reclaimed water produced at the South Central Regional WRF is used throughout the service area for slow-rate irrigation and land application of *public* and *restricted public* access sites. An aerial view of the South Central Regional Reclaimed Water Service Area is presented in Figure 3.2-4. Effluent flow in excess of the reclaimed water demand can be discharged to the Ritch Grissom Memorial Wetlands (200[±] acres; four cells and an interior lake) or the Reuse/Reject Water Storage Ponds (100 MG capacity).

The unit operations and processes currently employed at the South Central Regional WRF (2020) are divided into the following elements/categories:

Treatment Elements	Description
Primary Treatment	Two (2) automatic, continuous, self-cleaning, mechanical barscreens (3 mm) each with a screenings compacting/dewatering screw system; two (2) centrifugal grit separators, each with washing units and dewatering screws; two (2) automatic, continuous, self-cleaning mechanical drum screens (1 mm) each with washing units and dewatering screws; and an odor control system.
Secondary Treatment	<p>Carrousel BNR Treatment System (Trains No. 1 and 2) Biological oxidation of the organic wastes utilizing an external anaerobic basin followed by a dual-train Carrousel Oxidation Ditch system consisting of primary anoxic, aerobic, secondary anoxic and reaeration basins. A flow splitter box directs the MLSS to four secondary clarifiers that are utilized for sedimentation of solids. A dedicated RAS/WAS pumping station is provided for each set of clarifiers (No. 1 and No. 2; No. 3 and No. 4).</p> <p>IFAS BNR Treatment System (Trains No. 3 and 4) Biological oxidation of the organic wastes utilizing dual-train IFAS BNR Treatment System (5-Stage). Each treatment train includes anaerobic, primary anoxic, aerobic, secondary anoxic and reaeration basins and has an Internal Mixed Liquor Recycle (IMLR) pumping system. The MLSS from the IFAS treatment trains are directed to two (2) 90-foot diameter secondary clarifiers for sedimentation of solids. A dedicated RAS/WAS pumping station is provided for the secondary clarifiers (No. 5 and No. 6).</p>
Tertiary Treatment	Tertiary filtration via automatically operating, disc filtration units installed as follows: <ul style="list-style-type: none"> ■ Carrousel BNR Trains 1 and 2 - four (4) disc filtration units rated at 1.5 MGD each. ■ IFAS BNR Trains 3 and 4 - three (3) disc filtration units rated at 2.0 MGD each.

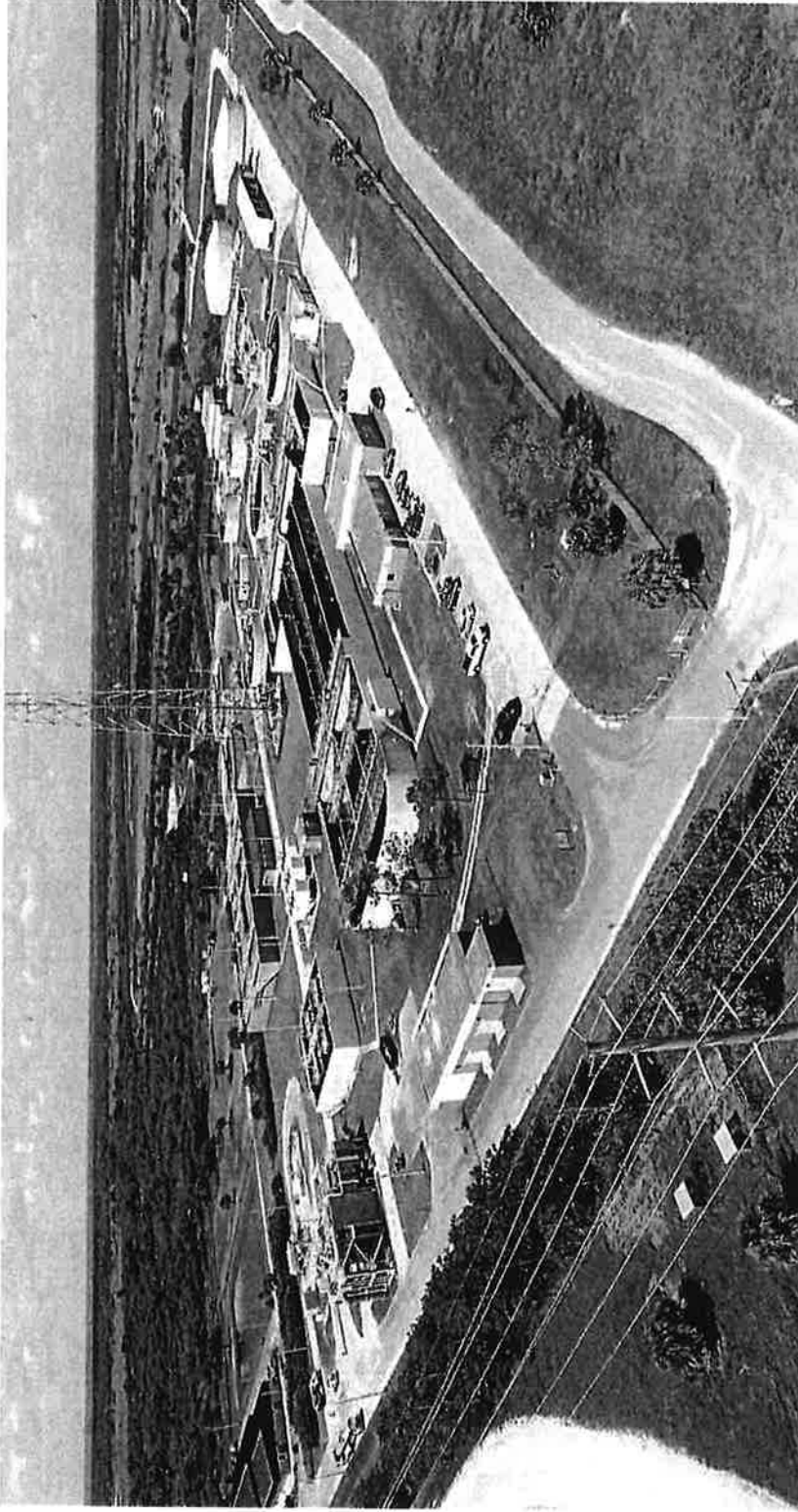


FIGURE 3.2-1

SOUTH CENTRAL REGIONAL WRF - AERIAL VIEW

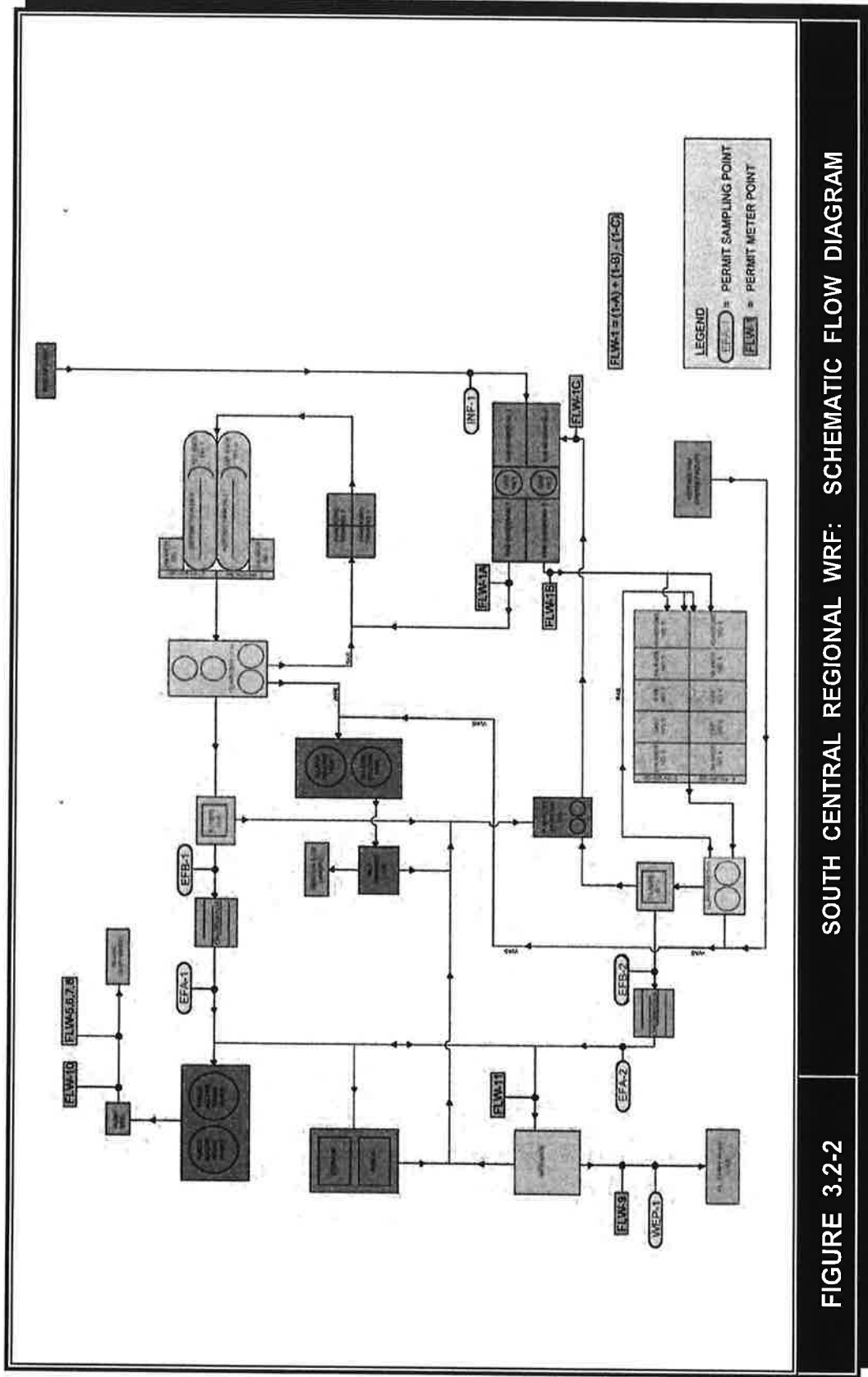
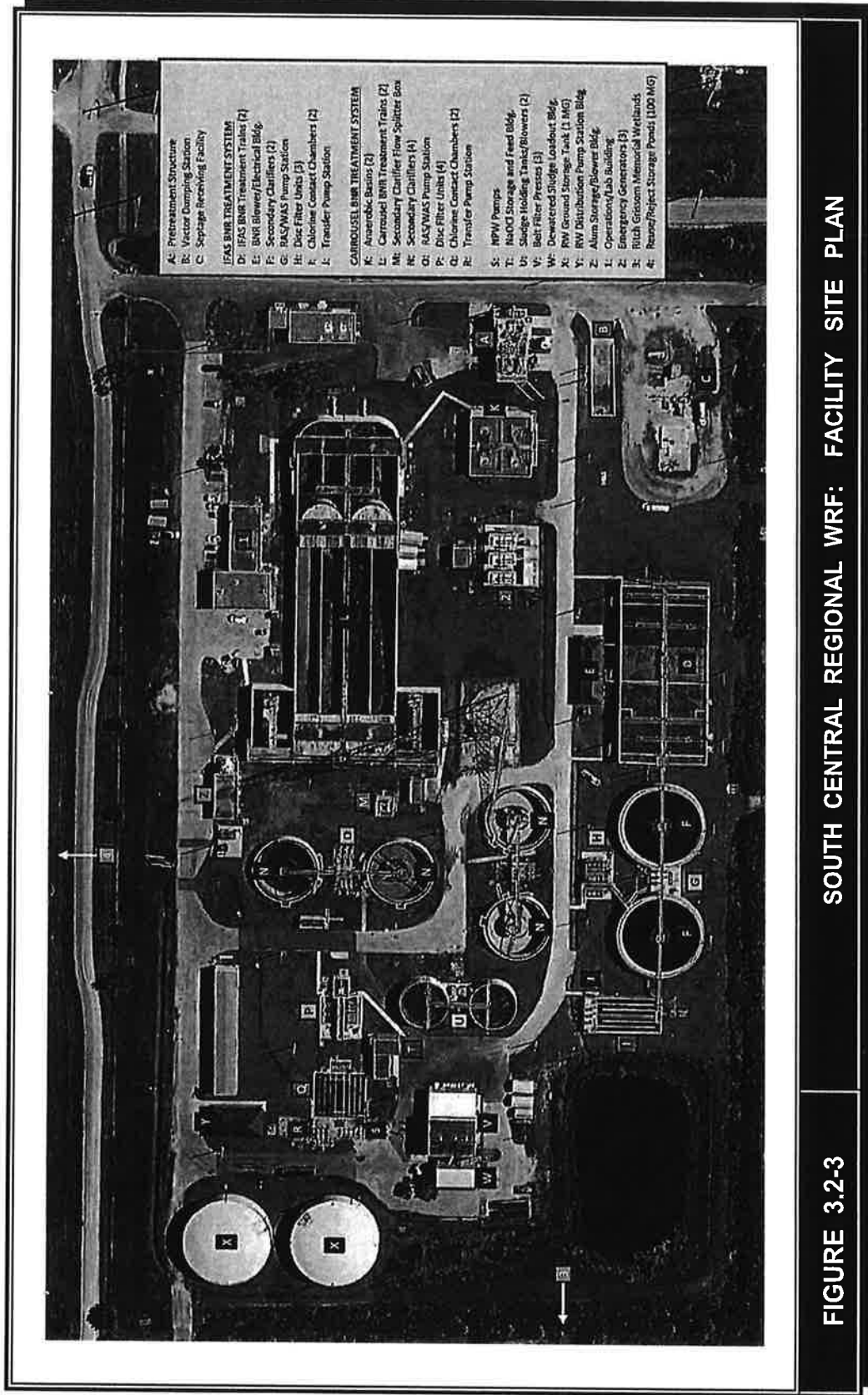


FIGURE 3.2-2

SOUTH CENTRAL REGIONAL WRF: SCHEMATIC FLOW DIAGRAM







Treatment Elements	Description
Disinfection	High-level disinfection is accomplished through the use of bulk liquid NaOCl (chemical feed and storage systems) and a system of chlorine contact chambers as follows: <ul style="list-style-type: none"> ■ Carousel BNR Trains 1 and 2 - Dual compartment Chlorine Contact Chamber. ■ IFAS BNR Trains 3 and 4 - Dual compartment Chlorine Contact Chamber.
Sludge Treatment	Sludge treatment consisting of two (2) sludge holding tanks with submersible hyperboloid mixers and aeration devices, PD blowers, a sludge pumping system, a dewatering system (belt filter presses) and a system of dewatered sludge conveyors. Dewatered sludge is transported to the local Class I solids waste landfill for final disposal.

Design and current wastewater flows at the South Central Regional WRF are as follows:

Table 3.2-1: South Central Regional WRF Design and Current Wastewater Flows

Flow Condition	Wastewater Flow Rate (MGD)	
	Design*	Actual Operation**
Annual Average Daily Flow (AADF)	12.00	4.872
Maximum Daily Flow (MDF)	18.00	7.140
Peak Hourly Flow (PHF)	24.00	

* Designed for 50% of flow through each treatment system (Carousel and IFAS) ** Actual flow conditions from Calendar Year 2020.

Influent and effluent design criteria for the South Central Regional WRF are presented below.

Table 3.2-2: South Central Regional WRF - Influent and Effluent Design Criteria

Parameter	Units	Influent	Tertiary Effluent
CBOD ₅	mg/L	300*	< 5
TSS	mg/L	300*	< 5**
TKN	mg/L	50	
NH ₃ -N	mg/L	38	< 1
TN	mg/L		< 3***
TP	mg/L	8	≤ 1****
pH	S.U.	6.0 - 8.5	6.0 - 8.5

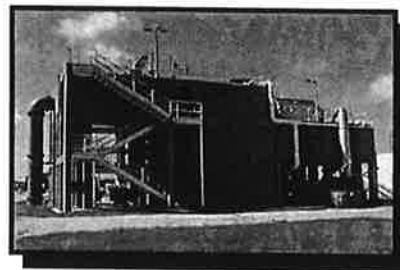
* Data from Rating Study and IFAS design
 *** Supplemental carbon may be required.

** After Tertiary Filtration
 **** A coagulant may be required

3.2.1 Primary Treatment System

Raw wastewater flows from the South Central Regional Wastewater Management System Service Area enter the Pretreatment Structure, located on the east side of the facility, through a 36-inch DIP. The Pretreatment Structure consists of a dual-level, cast-in-place concrete structure consisting of the following unit operations:

- Fine screening (3 mm) - Step Screens
- Grit Removal System - Head[®] Cell Units
- Fine screening (1 mm) - Drum Screens



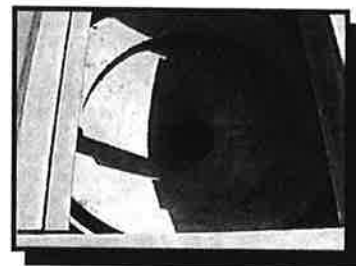
Pretreatment Structure

Raw wastewater flows entering the Pretreatment Structure are conveyed into dual channels (3.5 foot width, each). Each channel contains an automatic, continuous, self-cleaning mechanical barscreen (3 mm openings) and can be isolated using sluice gates. The screenings are collected and discharged into washing/dewatering presses (one per barscreen) to reduce the organic content, moisture content and volume of screenings material. Screenings are then conveyed to a discharge chute and deposited into municipal dumpsters at grade (landfill disposal).



Mechanical Barscreens (3 mm)

The two raw wastewater influent channels converge, following the mechanical barscreens, and the screened wastewater is conveyed to the Grit Removal System. Two (2) centrifugal grit separator units (Eutek HeadCell[®]), located in the central section of the Pretreatment Structure, are used to remove grit (heavy inorganic mineral matter) from the screened wastewater stream prior to final fine screening (drum screens).



Grit Separator Unit (HeadCell)

Accessory equipment associated with each grit collector unit includes the following:

- GritCup[®] grit washing/classification units
- SpiraSnail[®] grit dewatering units

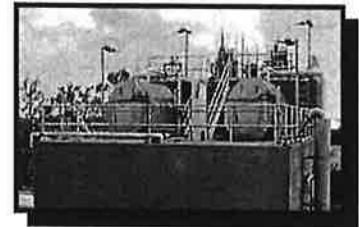
The Eutek HeadCell® units remove the grit particles and concentrate them in a sump at the bottom of the units. The GritCup® units receive the collected grit and discharge a concentrated grit slurry into the SpiraSnail® units below (at grade). These units are then used to wash, dewater and discharge the grit into municipal dumpsters (landfill disposal).



Grit Washing/Dewatering Unit

Degritted raw wastewater is conveyed to the second-stage screening system where additional inorganic material is removed by the fine mesh within the units. The two (2) units are internally-fed rotating drum screens that perform two functions:

- Screening of the liquid/solid slurry
- Conveying of the captured solids



Mech. Drum Screens (1 mm)

Washing press systems, one per drum screen, are used to convey, wash and dewater various solid materials/screenings. The dewatered screenings are then discharged into chutes and fall into municipal dumpsters (landfill disposal).

Solid covers are installed over all channels within the Pretreatment Structure and odor control collection piping is installed throughout. Malodorous compounds generated within the Pretreatment Structure are conveyed, via an induced draft, to an odor control system for processing. Downstream of the Pretreatment Structure odors are not a concern as RAS is mixed with the screened and degritted wastewater in the anaerobic basins of all process trains.

Pretreatment Structure
Odor Control System

Screened and degritted wastewater is then conveyed to an integral flow splitter box, at the west end of the Pretreatment Structure, that directs the flow to the BNR Treatment Systems (IFAS and/or Carrousel BNR Treatment Systems). The flow to each BNR Treatment System is metered separately.

3.2.2 Secondary Treatment System - Carrousel BNR Treatment System

Secondary treatment of raw, degritted wastewater, up to 6.0 MGD AADF, can be processed through the Carrousel BNR Treatment System. The Carrousel BNR Treatment System consists of the following treatment elements:

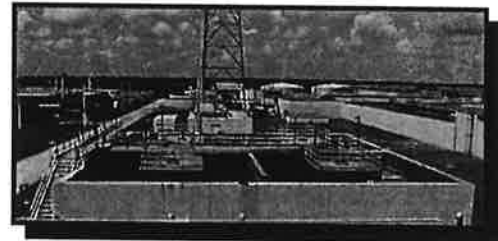
- An external anaerobic basin
- A dual-train, 4-Stage oxidation ditch BNR treatment system, each with the following: a primary anoxic basin, aerobic basin, secondary anoxic basin and reaeration basin.

The Carrousel BNR Treatment system (oxidation ditches) is designed to utilize the metabolic reactions of microorganisms to produce an acceptable effluent water quality by removing oxygen demanding constituents (CBOD₅) and nutrients (nitrogen and phosphorus).



Carrousel BNR Treatment System

Screened and dewatered wastewater is mixed with RAS and enters the external two-train anaerobic basin. Under anaerobic conditions, the heterotrophs break the high-energy bonds in internally accumulated polyphosphate, resulting in the release of phosphate (PO_4^{-3}) and the consumption of organic matter in the form of Volatile Fatty Acids (VFAs) or other easily biodegraded organic compounds. When the heterotrophs are then put under aerobic conditions, they take up phosphate, forming internal polyphosphate molecules. This *luxury uptake* results in more phosphate being incorporated in the microbial cells than was released in the anaerobic zone, thereby reducing the total phosphate concentration in solution.



Carrousel BNR Treatment System:
Anaerobic Basins

The mixed liquor suspended solids (MLSS) flow by gravity from the anaerobic basins to the primary anoxic basin in each Carrousel BNR Treatment Train. Internal Recycle (IR) from the end of the aerobic zone is also conveyed, by gravity through the use of an Eliminat/IR[®] gate, to the primary anoxic basin in each Carrousel BNR treatment system. The primary anoxic basin functions as the main denitrification zone. The RAS and IR streams bring nitrate (NO_3^-) from the aerobic basin into contact with the influent organic matter (BOD₅). Heterotrophic bacteria convert the nitrate to nitrogen gas and consume a portion of the influent BOD₅ in the process.

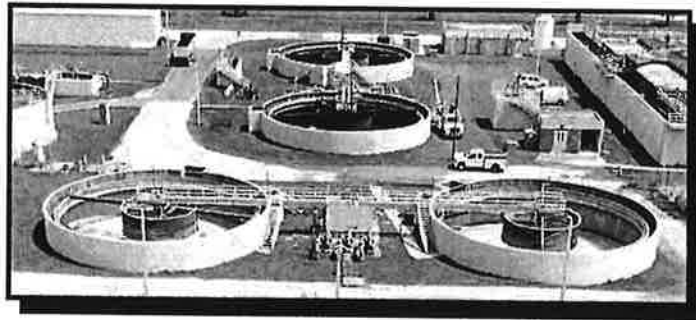
The MLSS from the primary anoxic basin flows by gravity to a distribution channel and enter the aerobic basin of the Carrousel BNR Treatment System. The aerobic basins contain heterotrophic bacteria (suspended growth) and provide the detention

time and oxygen transfer required for oxidation of the influent organic compounds, nitrification, and phosphorus uptake. Oxygen and mixing are provided by a pair of Excell surface aerators provided in each treatment train (at opposite ends of the aerobic zone).

MLSS is discharged from the aerobic basin, by gravity, into the secondary anoxic basin which provides removal of nitrogen species via the denitrification process. A pair of submersible hyperboloid mixers is utilized in each basin to keep the contents mixed without adding any additional dissolved oxygen.

Following the secondary anoxic basin, the MLSS is aerated in the reaeration basin (one per treatment basin, 2 total). This is the final step in the Carrousel BNR Treatment System where nitrogen micro-bubbles attached to the floc (from the secondary anoxic basin) are stripped from the mixed liquor, any residual soluble BOD remaining from the supplemental carbon addition is oxidized (if added), and the mixed liquor is oxygenated.

Secondary clarification of the biologically treated wastewater is provided to remove MLSS, flocculated suspended solids and chemical precipitates and to meet the effluent criteria mandated by FDEP, EPA and Class I Reliability. Secondary clarification is provided by four (4) identical 70-foot diameter, 12.5-foot sidewater depth, cast-in-place concrete clarifiers with full-surface skimmers. The settled MLSS are removed in the secondary clarifier underflow and either returned to the Carrousel BNR Treatment System as RAS or wasted to the Sludge Holding Tank(s) as WAS.



Carrousel BNR Treatment System: Sec. Clarifiers

3.2.3 Secondary Treatment System - IFAS BNR Treatment System

Secondary treatment of raw, degrittied wastewater, up to 6.0 MGD AADF, can be processed through the IFAS BNR Treatment System. The dual-train IFAS BNR Treatment System consists of the following treatment elements:

- Anaerobic basin
- Primary anoxic basin
- Aerobic basin
- Secondary anoxic basin
- Reaeration basin



IFAS BNR Treatment System

The IFAS BNR treatment system is designed to utilize the metabolic reactions of microorganisms to produce an acceptable effluent water quality by removing oxygen demanding constituents (CBOD₅) and nutrients (nitrogen and phosphorus).

Screened and degrittied wastewater is mixed with RAS and enters the anaerobic basins of the dual-train IFAS BNR Treatment System. Under anaerobic conditions, the heterotrophs break the high-energy bonds in internally accumulated polyphosphate, resulting in the release of phosphate (PO₄⁻³) and the consumption of organic matter in the form of Volatile Fatty Acids (VFAs) or other easily biodegraded organic compounds. When the heterotrophs are then put under aerobic conditions, they take up phosphate, forming internal polyphosphate molecules. This *luxury uptake* results in more phosphate being incorporated in the microbial cells than was released in the anaerobic zone, thereby reducing the total phosphate concentration in solution.



IFAS BNR System: Anaerobic Basins

The MLSS exit the anaerobic basin through slots in the wall and enter the primary anoxic basin. Internal Mixed Liquor Recycle (IMLR) from the aerobic activated sludge basin (no elements/media) is also conveyed, by IMLR wall pumps, through a pipe on the basin floor to the primary anoxic basin. The primary anoxic basin functions as the main denitrification zone. The RAS and IMLR streams bring nitrate (NO₃⁻) from the aerobic activated sludge basin into contact with the influent organic matter (BOD₅). Heterotrophic bacteria convert the nitrate to nitrogen gas and consume a portion of the influent BOD₅ in the process.



IFAS BNR System: Primary Anoxic Basins

The Mixed Liquor Suspended Solids (MLSS) from the primary anoxic basin flow over a full length wall weir and enter the aerobic IFAS basin within the IFAS Treatment System. The IFAS aerobic basins contain carrier elements/media (AnoxKaldnes Type K5) upon which bacterial growth occurs. The aerobic IFAS basins contain heterotrophic bacteria (suspended growth) and autotrophic bacteria (attached growth on carrier elements/media) and provide the detention time and oxygen transfer required for oxidation of the influent organic compounds, nitrification, and phosphorus uptake.



Aerobic IFAS Basin

In the IFAS BNR Process, the autotrophic bacteria convert the influent ammonia (NH_3) to nitrate (NO_3^-), and heterotrophic bacteria oxidize the organic matter (BOD_5). The MLSS from the aerobic IFAS basin flow through wall mounted media retention screens (30 total) into the aerobic activated sludge basin within each IFAS BNR treatment train. The screens ensure that the carrier elements/media are retained within the aerobic IFAS basin. This basin is a second aerobic basin, containing no IFAS System carrier elements/media, and provides additional time for the aerobic decomposition of organic matter (BOD_5) by heterotrophic bacteria. Aeration of the aerobic IFAS and activated sludge basins are provided by three turboblowers housed in the Blower Building located immediately adjacent (north) of the IFAS BNR Treatment System. Dual IMLR submersible wall pumps are installed at the end of each aerobic activated sludge basin to recycle MLSS to the primary anoxic basin to enhance denitrification.



IFAS System - Aerobic AS Basin

The aerobic activated sludge basin flow is conveyed, by gravity through slots in the wall, into the secondary anoxic basin of each IFAS BNR Treatment Train. The secondary anoxic basins provide removal of nitrogen species via the denitrification process. A submersible hyperboloid mixer is utilized in each secondary anoxic basin to keep the contents mixed without adding any additional dissolved oxygen.



IFAS Secondary Anoxic Basin

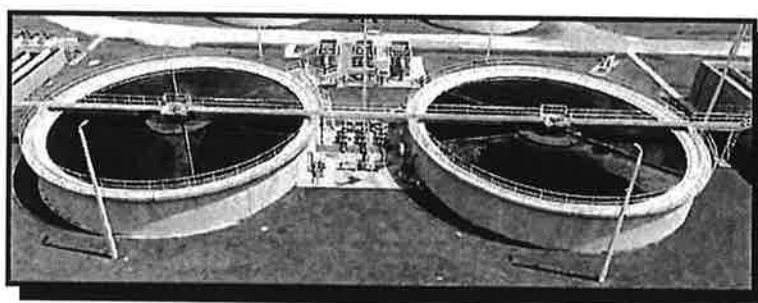
Following the secondary anoxic basin, the MLSS are aerated in the reaeration basin (one per IFAS treatment basin, 2 total). This is the final step in the IFAS BNR Treatment System where nitrogen micro-bubbles attached to the floc (from the

secondary anoxic basin) are stripped from the mixed liquor, any residual soluble BOD remaining from the supplemental carbon addition is oxidized (if added), and the mixed liquor is oxygenated. Alum can be added in the treatment process to assist in the chemical precipitation/removal of phosphorus from the final effluent, as necessary, to meet the regulatory effluent requirements.



Reaeration Basin

Secondary clarification of the biologically treated wastewater is provided to remove MLSS, flocculated suspended solids and chemical precipitates and to meet the effluent criteria mandated by FDEP, EPA and Class I Reliability. Secondary clarification is provided by two (2) identical 90-foot diameter, 12.5-foot sidewater depth, cast-in-place concrete clarifiers with full-surface skimmers. The settled MLSS are removed in the secondary clarifier underflow and either returned to the IFAS BNR Treatment System as RAS or wasted to the Sludge Holding Tank(s) as WAS.



Secondary Clarifiers - IFAS BNR Treatment System

3.2.4 Tertiary Treatment System - Carrousel BNR Treatment System

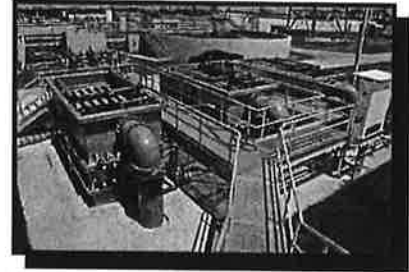
Tertiary filtration of the treated effluent from the Carrousel BNR Treatment System is required to ensure protection of public health and enhance the disinfection process. A chemical dosage (alum) may be introduced, as necessary, in the Reaeration Basins of the BNR Treatment System to enhance phosphorus removal, via chemical precipitation, and TSS/Turbidity removal should the effluent be approaching the FDEP mandated maximum concentration/limit. Tertiary filtration is accomplished through the use of four (4) disc filtration units, using cloth media and a dynamic/linear backwash system, installed in a concrete basin. Self priming centrifugal backwash pumps are used to clean the cloth media and remove the captured solids.



Tertiary (Disc) Filters

3.2.5 Tertiary Treatment System - IFAS BNR Treatment System

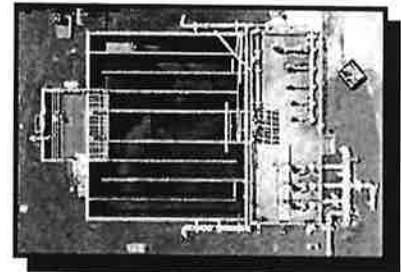
Tertiary filtration of the treated effluent from the IFAS BNR Treatment System is required to ensure protection of public health and enhance the disinfection process. A chemical dosage (alum) may be introduced, as necessary, in the Reaeration Basins of the BNR Treatment System to enhance phosphorus removal, via chemical precipitation, and TSS/Turbidity removal should the effluent be approaching the FDEP mandated maximum concentration/limit. Tertiary filtration is accomplished through the use of three (3) disc filtration units, using cloth media and a dynamic/linear backwash system, installed in a concrete basin. Self priming centrifugal backwash pumps are used to clean the cloth media and remove the captured solids.



Tertiary (Disc) Filters - IFAS System

3.2.6 Disinfection System - Carrousel BNR Treatment System

From the Carrousel BNR Treatment System tertiary filters, the treated effluent flows, by gravity, to a cast-in-place concrete Chlorine Contact Chamber (CCC). The CCC provides high level disinfection of the effluent through the application of liquid sodium hypochlorite (NaOCl) via a flow-paced system. The Chlorine Contact Chamber is divided into two distinct compartments and is designed to meet Class I Reliability Criteria. The CCC System is designed to provide a minimum of fifteen (15) minutes of contact time at PHF and thirty (30) minutes at AADF. Sodium hypochlorite is metered and mixed into the tertiary effluent and the CCC provides the contact time for the inactivation of fecal coliforms, pathogens and other microbial organisms.



Carrousel BNR System - CCC

3.2.7 Disinfection System - IFAS BNR Treatment System

From the IFAS BNR Treatment System tertiary filters, the treated effluent flows, by gravity, to a cast-in-place concrete Chlorine Contact Chamber (CCC). The CCC provides high level disinfection of the effluent through the application of liquid sodium hypochlorite (NaOCl) via a flow-paced system. The Chlorine Contact Chamber is divided into two (2) distinct compartments, each sized for fifty percent

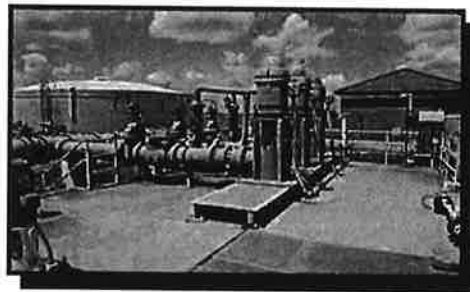
(50%) of the total flow in accordance with Class I Reliability Criteria. The CCC System is designed to provide a minimum of fifteen (15) minutes of contact time at PHF and thirty (30) minutes at AADF. Sodium hypochlorite is metered and mixed into the tertiary effluent and the CCC provides the contact time for the inactivation of fecal coliforms, pathogens and other microbial organisms.



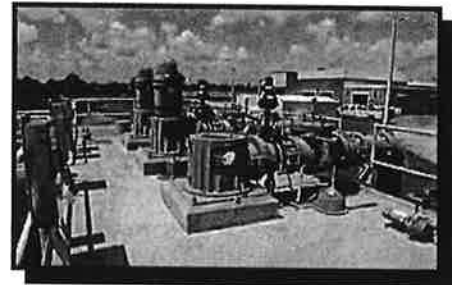
IFAS BNR System - CCC

3.2.8 Transfer Pump Stations

After high level disinfection, the effluent flows over a weir at the end of each BNR Treatment System's CCC, and into their integral Transfer Pump Station. Each Transfer Pump Station consists of a cast-in-place concrete wetwell and three pumps.



Carrousel System - Transfer Pump Station



IFAS System - Transfer Pump Station

The Carrousel and IFAS Treatment Train Transfer Pump Stations have the ability to convey the CCC effluent to one of the following locations depending upon water quality (turbidity and total residual chlorine) and whether the reclaimed water ground storage tanks are full:

- Reclaimed Water Ground Storage Tanks (2 MG capacity, total)
- Ritch Grissom Memorial Wetlands (163± wetted acres, 2.5 MGD capacity)
- Reuse/Reject Water Storage Ponds (100 MG capacity, total)

Turbidity, pH and Total Residual Chlorine (TRC) are analyzed continuously and automatically at the South Central Regional WRF in accordance with the existing FDEP Operations Permit conditions and as presented below:

South Central Regional WRF - FDEP Compliance Monitoring Locations		
Compliance Parameter	Carrousel BNR System	IFAS BNR System
Turbidity	EFB-1 (After Filtration, prior to disinfection)	EFB-2 (After Filtration, prior to disinfection)
Total Residual Chlorine, pH	EFA-1 (Following disinfection)	EFA-2 (Following disinfection)

3.2.9 Reclaimed Water/Effluent Disposal System

The South Central Regional WRF effluent disposal systems, permitted by FDEP, are briefly described below:

Effluent Disposal System	Description
Surface Water Discharge (D-001)	An existing 0.990 MGD annual average daily flow discharge to 4-Mile Canal, Class III Fresh Waters, (WBID# 2893N) which is approximately 128 feet in length and discharges at a depth of approximately 0 feet. The outfall pipe is a 60-inch diameter concrete culvert that discharges to the 4-Mile Canal. The point of discharge is located approximately at latitude 28°13' 48" N, longitude 80°46' 14" W.
Land Application System (R-001)	An existing 8.2 MGD annual average daily flow permitted capacity slow-rate public access system. R-001 is a reuse system which consists of on-site irrigation and within the approved Reuse Service Area. Reclaimed water can be discharged into stormwater storage lake system(s) D-002 located at the Indian River Colony Club Golf Course. The reclaimed water is stored in an existing stormwater retention pond with a storage capacity of 4.5 MG, which has an intermittent discharge to adjacent drainage features (6-Mile Canal), which ultimately discharges to the St. Johns River.
Land Application System (R-002)	An existing 2.5 MGD annual average daily flow permitted capacity slow-rate restricted public access system. R-002 is a reuse system which consists of the Ritch Grissom Memorial Wetlands with 200+ acres (163+ total wetted acres) comprising four (4) cells and an interior lake. The detention time through this created wetland system is approximately 53 days, and is located approximately at latitude 28°13' 47" N, longitude 80°46' 18" W.

Reclaimed water meeting the Public Access Criteria is pumped from the Transfer Pump Stations to a pair of Reclaimed Water Ground Storage Tanks (1.0 MG capacity each). The pre-stressed concrete storage tanks are *in-line equalization facilities* that also offer an effluent water quality buffer before it is pumped to the reclaimed water distribution system.



Reclaimed Water Ground Storage Tanks

The Reclaimed Water Distribution Pump Station conveys reclaimed water from the reclaimed water ground storage tanks to the distribution system for final disposal. The pump station consists of three (3) split-case centrifugal pumps and is designed to deliver approximately 9.072 MGD to the reclaimed water distribution system with the largest pump out of service. The pumps are equipped with variable frequency drives (VFD's) that assist in maintaining system pressures, efficiently, when the demand for reclaimed water in the service area is low.



RW Distribution Pump Station Bldg

If the reclaimed water ground storage tanks are full, reclaimed water can be directed to either the Ritch Grissom Memorial Wetlands or the Reuse/Reject Water Storage Ponds.

Any reclaimed water that does not meet the Public Access Criteria (low chlorine residual or high turbidity) will not be pumped to the Reclaimed Water Ground Storage Tanks. The effluent will be conveyed to either the Ritch Grissom Memorial Wetlands or the Reuse/Reject Water Storage Ponds. The water from the storage ponds can be pumped back to the either the headworks, tertiary filter, or the chlorine contact chambers for re-treatment, during periods of low flow.



South Central Regional WRF, Wetlands and Storage Ponds

The South Central Regional Wastewater Management Plan is a program of water reuse. Following the reclamation process at the South Central Regional WRF, highly treated wastewater effluent, *reclaimed water*, is distributed throughout the regional planning area. Spray irrigation and land application are currently practiced in areas open to public access, including:

South Central Regional Reclaimed Water Irrigation/Disposal Sites (General)		
Residential Neighborhoods	Parks	School Properties
Athletic Complexes	County-Owned Properties	Golf Courses
Playgrounds	Nurseries	Agricultural Facilities/Farms
Ritch Grissom Memorial Wetlands	Other Municipal Sites	Commercial Establishments

As mentioned above, during discharges from the Ritch Grissom Memorial Wetlands to the 4-Mile Canal, monitoring of the following parameters is required:

- Flow Rate
- CBOD₅
- TSS
- Total Kjeldahl Nitrogen
- Nitrate + Nitrite
- Ammonia Nitrogen
- Sulfate
- Total and Ortho-Phosphorous
- pH
- Fecal Coliform Bacteria
- Total Nitrogen
- Chloride
- Specific Conductance
- Dissolved Oxygen
- Temperature
- Alkalinity

3.2.10 Sludge Management System

The sludge management system at the South Central Regional WRF consists of the following infrastructure components/elements: (1) a sludge holding tank system; (2) a belt filter press dewatering system, and (3) a system of sludge conveyors.



Sludge Holding Tanks

Waste Activated Sludge (WAS) is pumped from the Carousel and IFAS Treatment System secondary clarifier(s) to the Sludge Holding Tank(s). Two (2) sludge holding tanks (0.169 MG, each) are used to store and partially treat sludge until it can be pumped to the belt filter presses for dewatering. The sludge is mixed and aerated using a hyperboloid mixing/aeration system.

Sludge feed pumps are used to convey partially stabilized sludge from the sludge holding tanks to the belt filter presses. Three (3) belt filter presses are utilized to dewater the sludge prior to shipment to a local Class I solids waste landfill for final disposal. Dewatering reduces the volume and makes the handling and disposal of sludge easier.



Belt Filter Presses

3.3 PERMITTED CAPACITY

The South Central Regional WRF (*Advanced Wastewater Treatment plus Filtration*) serves the County's residential, commercial, agricultural and rural areas. The treatment facility removes contaminants in the raw wastewater that exert an oxygen demand (BOD₅ and nutrients) and produces a high quality reclaimed water utilized throughout the South Central Regional Reclaimed Water Service Area.

The design capacity of the South Central Regional WRF is as follows:

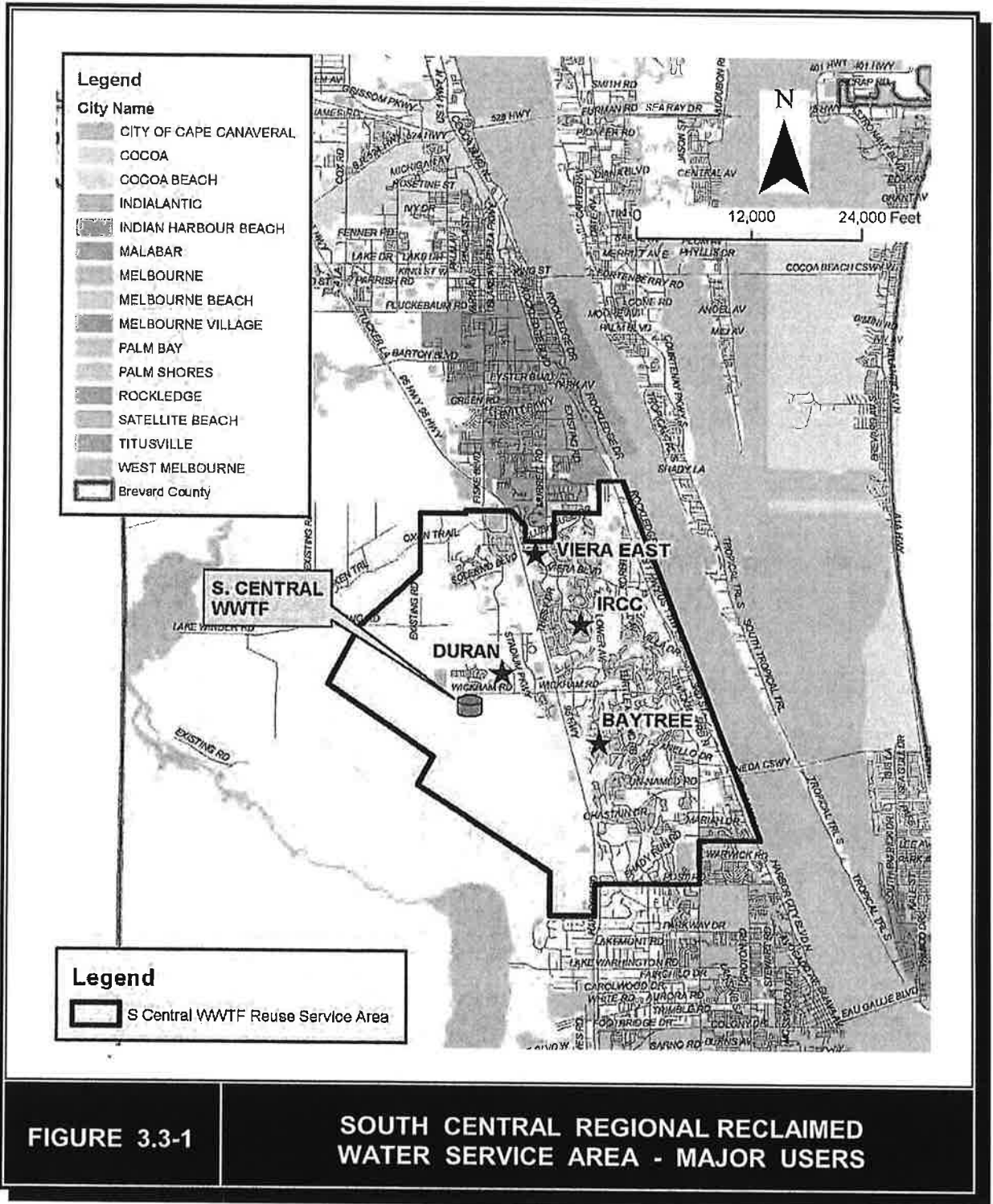
TREATMENT FACILITY	PERMITTED FLOW CONDITION (MGD)		
	AADF	MDF	PHF
South Central Regional WRF	12.00	18.00	24.00

The County accomplishes effluent disposal through the following FDEP reuse/effluent disposal methods outlined in Operations Permit No. FL0102679: (1) Slow-Rate Public Access Reuse, System (R-001); (2) Slow-Rate restricted Public Access Reuse System (R-002); (3) Surface water discharge system (D-001) - Ritch Grissom Memorial Wetlands; and (4) Stormwater storage lake system(s) (D-002) - Stormwater Storage Lake System

The County has, as previously described, implemented a large-scale system for the beneficial reuse of the reclaimed water produced from the South Central Regional WRF. The County began large-scale reclaimed water irrigation of public access sites in 1990 and restricted public access (Ritch Grissom Memorial Wetlands) in 2000. New reclaimed water sites may be added as the reclaimed water service area expands in the future. The major users of reclaimed water (using more than 0.1 MGD) in the South Central Regional Reclaimed Water Service Area are identified in the table below and presented graphically in Figure 3.3-1.

Site No.	User Name	User Type	Capacity (MGD)	Area (ac)
PAA-001A	Baytree Golf Course	Golf Courses	0.410	103
PAA-001B	Indian River Colony Club Golf Course	Golf Courses	0.730	220
PAA-001C	Duran Golf Course	Golf Courses	0.380	136
PAA-001E	Viera East Golf Course	Golf Courses	0.290	100
Total:			1.810	559

Reclaimed water storage is located throughout the County's South Central Regional Wastewater Management Service Area as indicated in the table below.



Reclaimed Water Storage Location	No. of Units	Total Storage Volume (MG)
South Central Regional WRF Ground Storage Tanks	2	2.0
Reuse/Reject Water Storage Ponds (Off-Site)	2	100.0
Golf Course Storage Ponds (Baytree, Viera, Indian River Colony Club, and Duran)	4	11.9
Ground Storage Tank near the Suntree CC	1	2.0
Total Reclaimed Water Storage Capacity:	9	115.9

The current effluent disposal capacity of the South Central Regional Reclaimed Water Distribution System is as follows:

South Central Regional Effluent Disposal System	ID	Effluent Disposal Capacity (MGD)
Slow-Rate Public Access System	R-001	8.20
Slow-Rate Restricted Public Access System (Wetlands)	R-002	2.50
Surface Water Discharge	D-001	0.99
SCRWRF - Total Effluent Disposal Capacity:		11.69

3.4 HISTORICAL WASTEWATER FLOWS

Historical wastewater flows, including monthly ADF flows, three-month ADF flows and annual ADF flows, for the South Central Regional WRF for the Calendar Years 2015 - 2020 are presented in Table 3.4-1 and are plotted as a function of time in Figures 3.4-1 through 3.4-3, respectively. Historical annual variations in raw wastewater flow (Calendar Years 2016 - 2020) are presented below in tabular form and graphically in Figure 3.4-4.

Calendar - Year	AADF (MGD)	Max Month Flow (MGD)	Maximum 3-Month ADF		Maximum 3-Month ADF to AADF	Maximum Month Peaking Factor
			Month	Flow (MGD)		
2016	4.777	5.300	April	5.204	1.089	1.109
2017	5.031	5.552	November	5.320	1.057	1.104
2018	5.088	5.803	August	5.436	1.068	1.141
2019	4.380	5.045	January	4.911	1.121	1.152
2020	4.872	5.385	August	5.285	1.085	1.105
Five Year Average Flow Ratios/Factors:					1.084	1.122

Table 3.4-1: South Central Regional WRF - Historical Wastewater Flows

Month	Year	Monthly ADF (MGD)	3-Month ADF (MGD)	AAFD (MGD)
JANUARY	2015	4.703	4.929	4.622
FEBRUARY	2015	4.743	4.846	4.658
MARCH	2015	5.217	4.888	4.733
APRIL	2015	4.552	4.837	4.758
MAY	2015	4.482	4.750	4.786
JUNE	2015	4.432	4.489	4.819
JULY	2015	4.708	4.541	4.844
AUGUST	2015	5.306	4.815	4.864
SEPTEMBER	2015	5.035	5.016	4.861
OCTOBER	2015	4.803	5.048	4.838
NOVEMBER	2015	4.831	4.890	4.825
DECEMBER	2015	4.759	4.798	4.798
JANUARY	2016	5.137	4.909	4.834
FEBRUARY	2016	5.157	5.018	4.868
MARCH	2016	5.155	5.150	4.863
APRIL	2016	5.300	5.204	4.925
MAY	2016	3.691	4.715	4.860
JUNE	2016	4.807	4.599	4.891
JULY	2016	3.848	4.115	4.819
AUGUST	2016	4.635	4.430	4.763
SEPTEMBER	2016	5.100	4.528	4.769
OCTOBER	2016	5.065	4.933	4.790
NOVEMBER	2016	4.617	4.927	4.773
DECEMBER	2016	4.806	4.829	4.777

Table 3.4-1: South Central Regional WRF - Historical Wastewater Flows (Cont'd)

Month	Year	Monthly ADF (MGD)	3-Month ADF (MGD)	AADF (MGD)
JANUARY	2017	4.979	4.801	4.763
FEBRUARY	2017	5.011	4.932	4.751
MARCH	2017	4.787	4.926	4.721
APRIL	2017	4.982	4.927	4.694
MAY	2017	4.816	4.862	4.788
JUNE	2017	4.986	4.928	4.803
JULY	2017	4.843	4.882	4.886
AUGUST	2017	4.799	4.876	4.899
SEPTEMBER	2017	5.342	4.995	4.919
OCTOBER	2017	5.552	5.231	4.960
NOVEMBER	2017	5.066	5.320	4.997
DECEMBER	2017	5.214	5.277	5.031
JANUARY	2018	4.791	5.024	5.016
FEBRUARY	2018	4.896	4.967	5.006
MARCH	2018	4.960	4.882	5.021
APRIL	2018	4.911	4.922	5.015
MAY	2018	5.199	5.023	5.047
JUNE	2018	5.803	5.304	5.115
JULY	2018	5.182	5.395	5.143
AUGUST	2018	5.322	5.436	5.187
SEPTEMBER	2018	5.344	5.283	5.187
OCTOBER	2018	4.866	5.177	5.130
NOVEMBER	2018	4.879	5.030	5.114
DECEMBER	2018	4.897	4.881	5.088

Table 3.4-1: South Central Regional WRF - Historical Wastewater Flows (Cont'd)

Month	Year	Monthly ADF (MGD)	3-Month ADF (MGD)	AADF (MGD)
JANUARY	2019	4.955	4.910	5.101
FEBRUARY	2019	4.743	4.865	5.088
MARCH	2019	4.108	4.602	5.017
APRIL	2019	4.069	4.307	4.947
MAY	2019	4.162	4.113	4.861
JUNE	2019	4.126	4.119	4.721
JULY	2019	4.095	4.128	4.631
AUGUST	2019	5.045	4.422	4.607
SEPTEMBER	2019	4.229	4.456	4.515
OCTOBER	2019	4.285	4.520	4.466
NOVEMBER	2019	4.1915	4.235	4.409
DECEMBER	2019	4.551	4.342	4.380
JANUARY 2020				
JANUARY	2020	4.362	4.368	4.331
FEBRUARY	2020	4.336	4.416	4.297
MARCH	2020	4.519	4.406	4.331
APRIL	2020	4.975	4.610	4.406
MAY	2020	4.926	4.807	4.470
JUNE	2020	5.385	5.095	4.575
JULY	2020	5.283	5.198	4.674
AUGUST	2020	5.189	5.285	4.686
SEPTEMBER	2020	5.030	5.167	4.753
OCTOBER	2020	4.886	5.035	4.803
NOVEMBER	2020	4.960	4.959	4.867
DECEMBER	2020	4.610	4.818	4.872

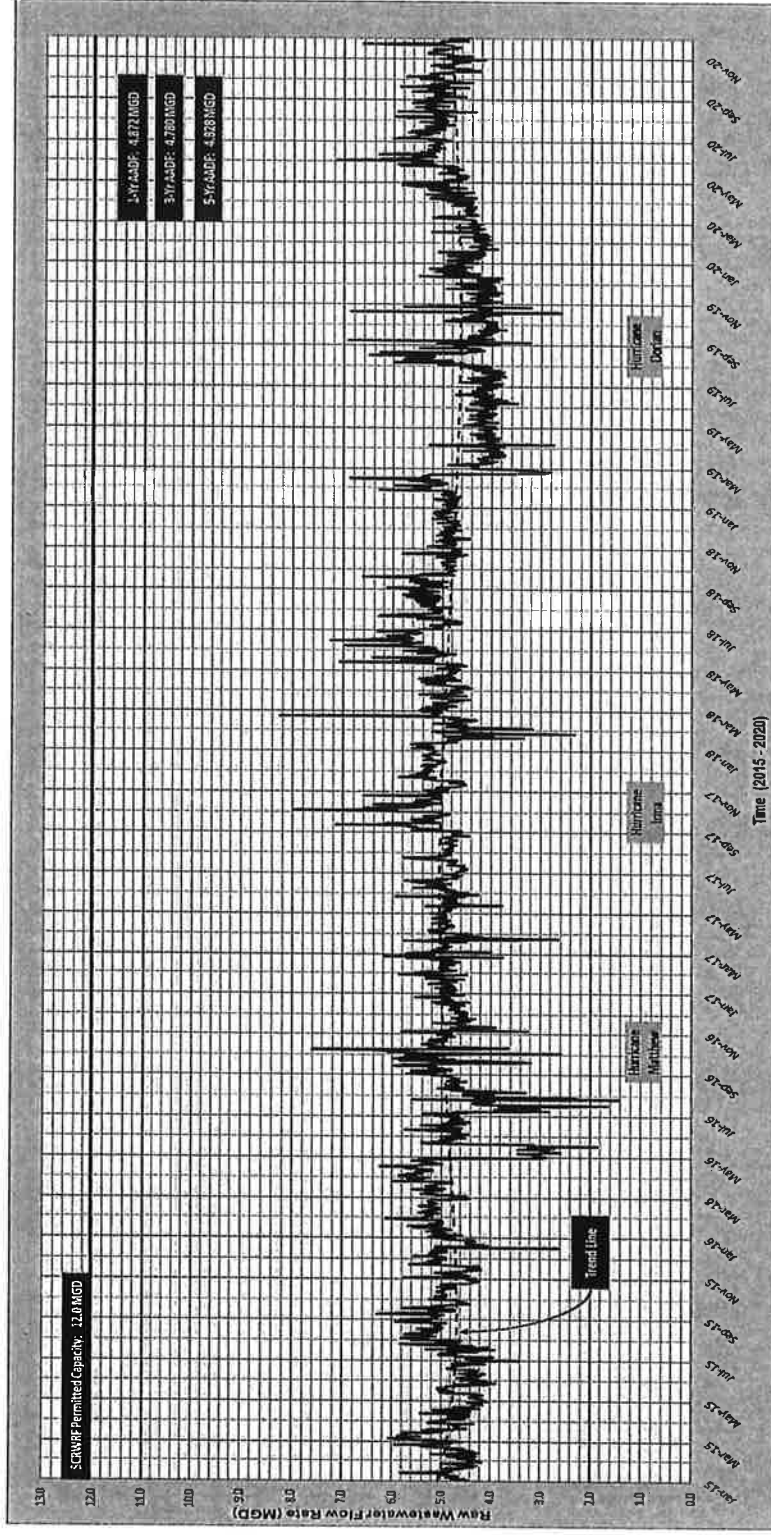


FIGURE 3.4-1

SOUTH CENTRAL REGIONAL WRF: HISTORICAL WASTEWATER FLOWS (ADF)

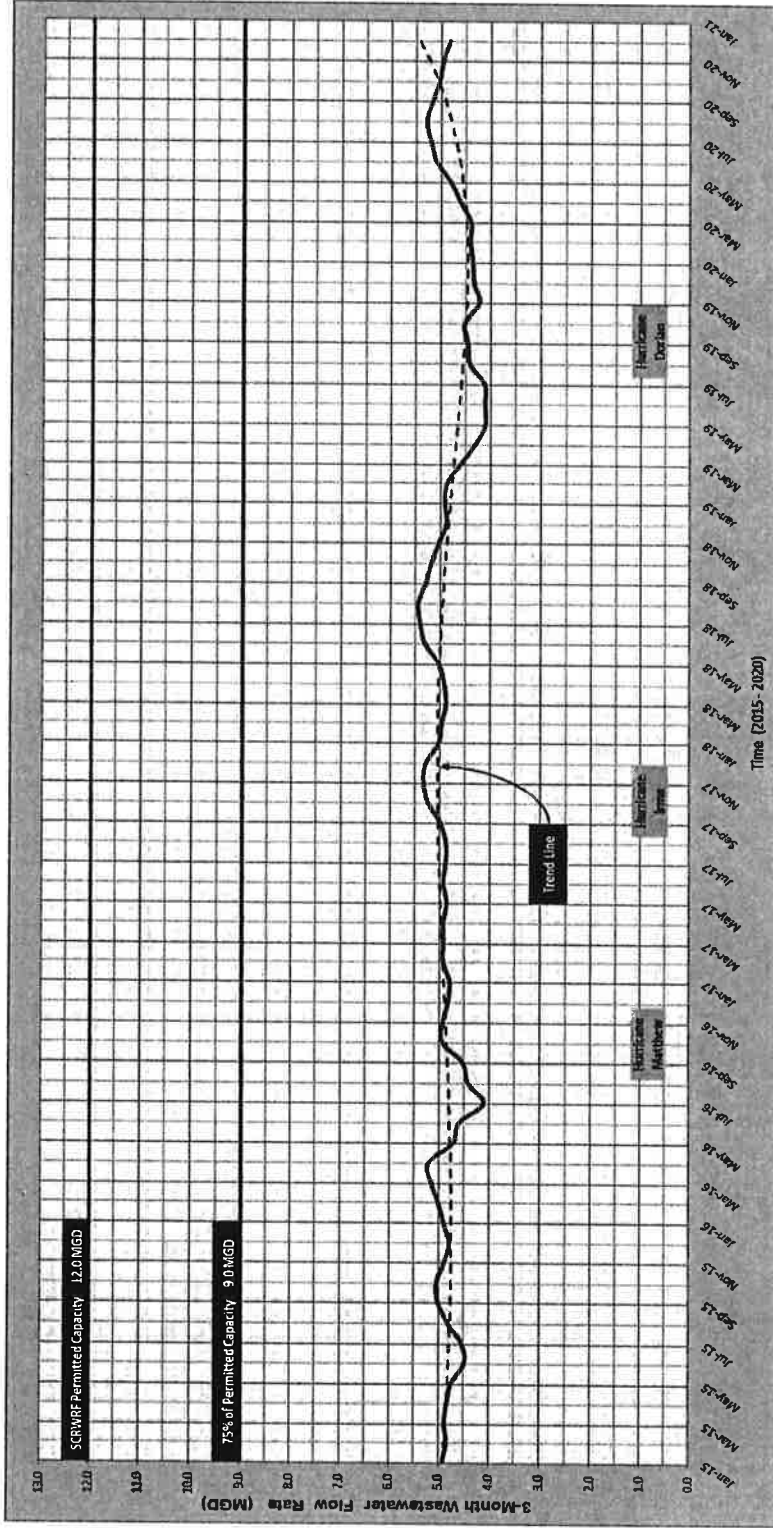


FIGURE 3.4-2 SOUTH CENTRAL REGIONAL WRF: HISTORICAL WASTEWATER FLOWS (3-MONTH ADF)



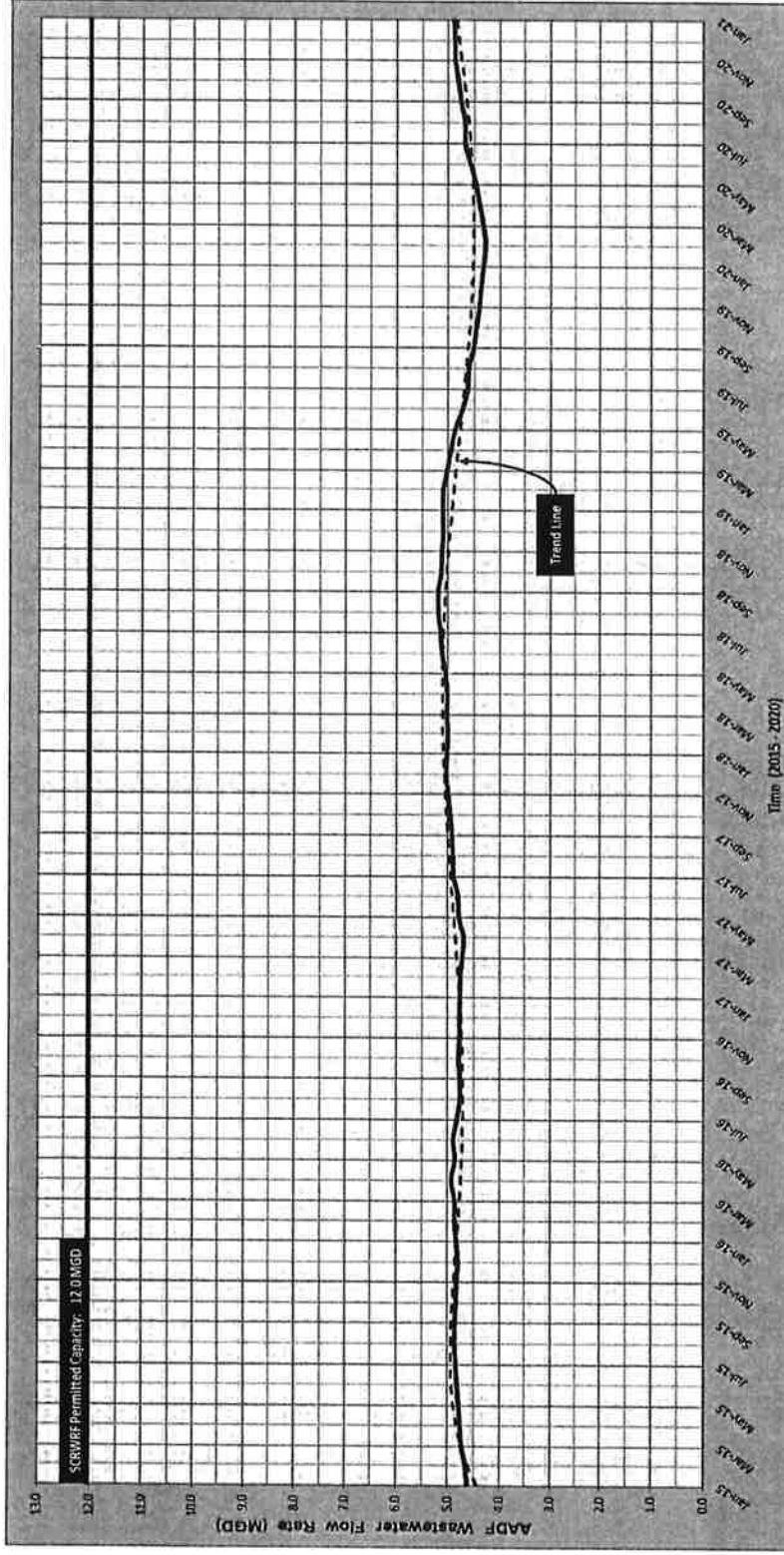


FIGURE 3.4-3 SOUTH CENTRAL REGIONAL WRF: HISTORICAL WASTEWATER FLOWS (AADF)



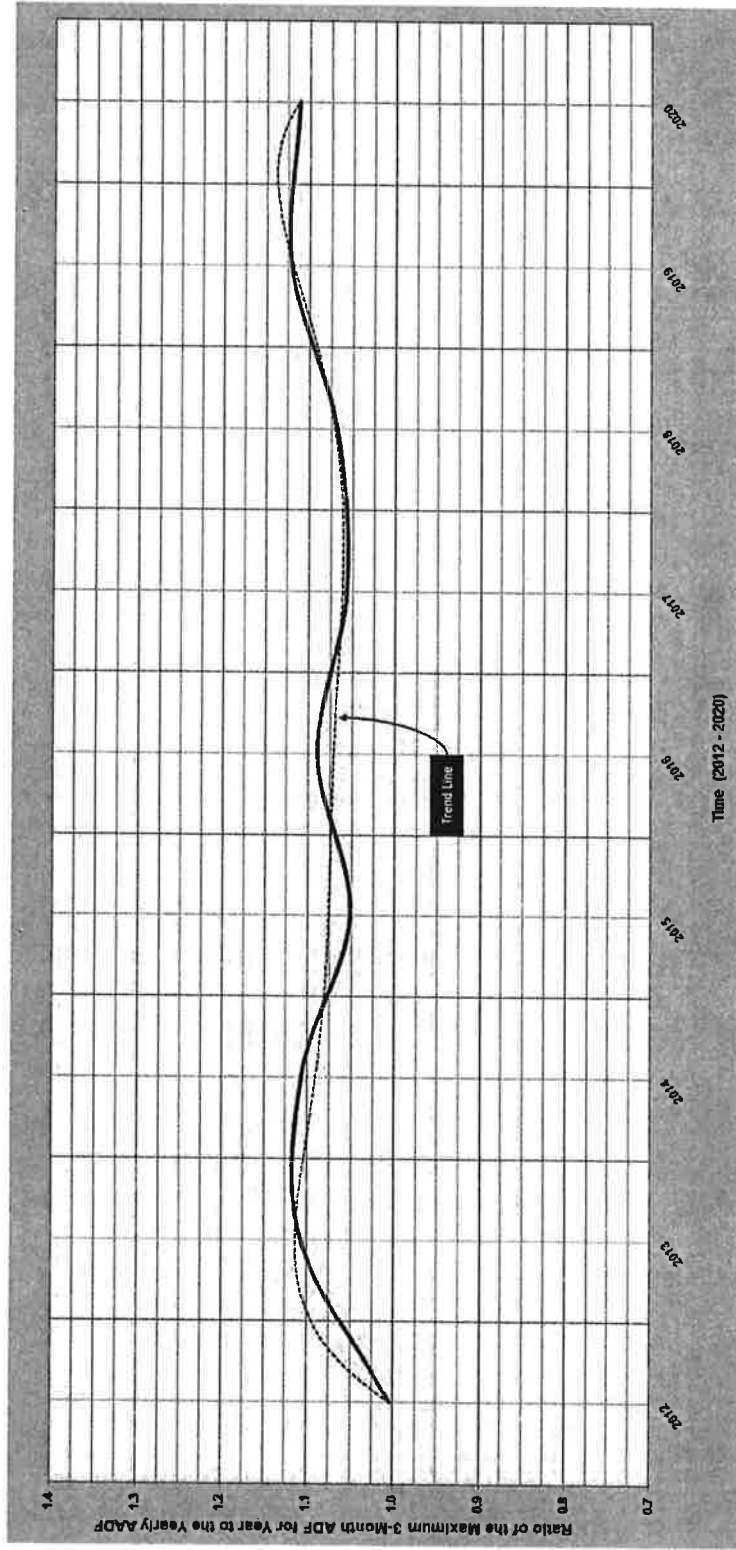


FIGURE 3.4-4

SOUTH CENTRAL REGIONAL WRF: ANNUAL VARIATIONS IN FLOW

A review of the historical raw wastewater flows to the South Central Regional WRF, during the past five (5) years and in the last twelve (12) months, are synopsized in the table below.

Raw Wastewater Flow Condition	South Central Regional WRF Raw Wastewater Flow (MGD)	
	Jan 2016 - Dec 2020	Calendar Year 2020
Average Daily Flow	4.828	4.872
Maximum Day Flow	8,240	7,140
Minimum Day Flow	1,430	3,890
Monthly ADF Range	3.691 - 5.803	4.336 - 5.385
3-Month ADF Range	4.113 - 5.436	4.368 - 5.285
AADF Range (monthly rolling average)	4.297 - 5.187	4.297 - 4.872
% of Permitted Facility Capacity (ADF)	40.2	40.6

The South Central Regional WRF raw wastewater flows, during the last 5-Year period, were approximately 40.2% of the permitted capacity of the facility. The raw wastewater flow treated at the facility during Calendar Year 2020 was approximately 40.6% of the permitted capacity of the facility. Thus, flow rates are below the facility’s permitted capacity (12.0 MGD AADF) and the South Central Regional WRF is capable of handling the raw wastewater hydraulic loadings anticipated over the 20-year planning horizon.

3.5 FACILITY EFFLUENT FLOWS

As previously indicated in Section 3.2.9, treated effluent from the South Central Regional WRF can be discharged to any of the three (3) FDEP-permitted disposal systems:

Effluent Disposal System	Disposal Capacity (MGD AADF)
Land Application System - Public Access Reuse (R-001)	8.20
Land Application System - Reclaimed Water Flow to Wetlands (R-002)	2.50
Surface Water Discharge to the 4-Mile Canal (D-001)	0.99

The South Central Regional WRF effluent flows, by disposal system (R-001, R-002 and D-001), on a monthly and annual basis, for the period from 2016 - 2020 are presented in Table 3.5-1 and graphically (ADF and AADF) in Figures 3.5-1 through 3.5-6, respectively.

Table 3.5-1: South Central Regional WRF - Effluent Disposal (2016 - 2020)			
Month/Year	Public Access Reuse System Flow - R-001 (MGD)	Reclaimed Water Flow to the Wetlands - R-002 (MGD)	Surface Water Discharge Flow to 4-Mile Canal - D-001 (MGD)
Jan 2016	2.883	0.002	0.000
Feb 2016	2.802	0.170	0.000
Mar 2016	4.190	0.051	0.000
Apr 2016	4.265	0.014	0.000
May 2016	4.364	0.220	0.000
Jun 2016	3.810	0.527	0.000
Jul 2016	3.636	0.095	0.000
Aug 2016	3.823	0.599	0.000
Sep 2016	3.140	0.944	0.000
Oct 2016*	3.074	1.385	1.537
Nov 2016	3.610	0.455	0.129
Dec 2016	3.311	0.062	0.000
2016 Average	3.576	0.377	0.139
Jan 2017	3.510	0.186	0.000
Feb 2017	3.837	0.138	0.000
Mar 2017	3.789	0.372	0.000
Apr 2017	3.052	0.028	0.000
May 2017	2.413	0.153	0.000
Jun 2017	3.377	0.123	0.000
Jul 2017	2.440	1.047	0.000
Aug 2017	2.626	1.301	0.000
Sep 2017	2.879	0.493	0.691
Oct 2017**	2.765	1.504	2.242
Nov 2017	3.181	0.871	0.844
Dec 2017	3.412	0.791	0.046
2017 Average	3.107	0.584	0.319

Table 3.5-1: South Central Regional WRF - Effluent Disposal (2016 - 2020)			
Month/Year	Public Access Reuse System Flow - R-001 (MGD)	Reclaimed Water Flow to the Wetlands - R-002 (MGD)	Surface Water Discharge Flow to 4-Mile Canal - D-001 (MGD)
Jan 2018	3.286	0.832	0.553
Feb 2018	3.785	0.248	0.000
Mar 2018	3.830	0.056	0.000
Apr 2018	3.504	0.000	0.000
May 2018	2.785	0.000	0.000
Jun 2018	3.780	0.640	0.000
Jul 2018	3.627	0.253	0.984
Aug 2018	2.759	0.000	0.000
Sep 2018	4.246	0.000	0.000
Oct 2018	4.493	0.000	0.000
Nov 2018	3.709	0.000	0.000
Dec 2018	3.700	0.000	0.000
2018 Average	3.625	0.169	0.128
Jan 2019	3.714	0.000	0.000
Feb 2019	2.649	0.000	0.000
Mar 2019	3.780	0.000	0.000
Apr 2019	3.955	0.000	0.000
May 2019	3.569	0.000	0.000
Jun 2019	4.033	0.000	0.000
Jul 2019	4.143	0.000	0.000
Aug 2019	5.113	0.000	0.000
Sep 2019	5.281	0.000	0.000
Oct 2019	3.926	0.000	0.000
Nov 2019	3.770	0.000	0.000
Dec 2019	3.105	0.548	0.000
2019 Average	3.920	0.046	0.000

Table 3.5-1: South Central Regional WRF - Effluent Disposal (2016 - 2020)

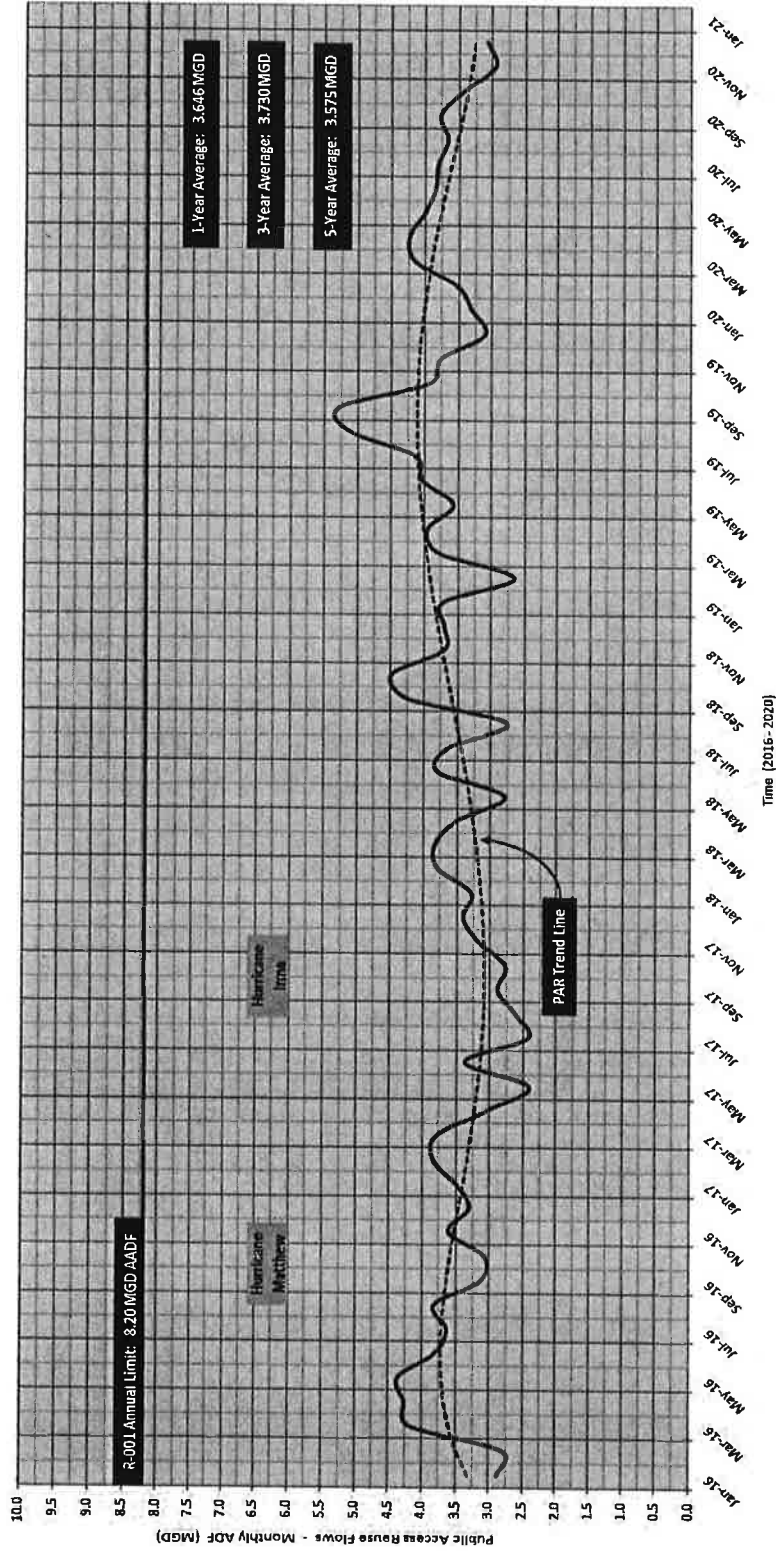
Month/Year	Public Access Reuse System Flow - R-001 (MGD)	Reclaimed Water Flow to the Wetlands - R-002 (MGD)	Surface Water Discharge Flow to 4-Mile Canal - D-001 (MGD)
Jan 2020	3.307	1.186	0.000
Feb 2020	3.531	0.602	0.000
Mar 2020	4.157	0.000	0.000
Apr 2020	4.241	0.000	0.000
May 2020	4.006	0.000	0.000
Jun 2020	3.844	0.000	0.000
Jul 2020	3.805	0.000	0.710
Aug 2020	3.658	0.000	0.000
Sep 2020	3.763	0.000	0.000
Oct 2020	3.421	0.000	0.308
Nov 2020	2.945	0.000	0.000
Dec 2020	3.070	0.000	0.000
2020 Average	3.646	0.149	0.085

Effluent Disposal Percentage by Disposal System (2016 - 2020)

Calendar Year	Effluent Disposal System Flow (MGD AADF)			Overall Effluent Disposal (%)		
	Reclaimed Water System - PAR (R-001)	Reclaimed Water to Wetland (R-002)	Surface Water Discharge (D-001)	Reclaimed System (R-001)	Reclaimed System (R-002)	SW Discharge (D-001)
2016	3.576	0.377	0.139	87.4%	9.2%	3.4%
2017	3.107	0.584	0.319	77.5%	14.6%	8.0%
2018	3.625	0.169	0.128	92.4%	4.3%	3.3%
2019	3.920	0.046	0.000	98.8%	1.2%	0.0%
2020	3.646	0.149	0.085	94.0%	3.8%	2.2%
5-Yr Avg.	3.575	0.265	0.134	90.0%	6.6%	3.4%
Overall 5-Year SCRWRF Effluent Disposal by System:				Reclaimed Water (R-001 + R-002)		Surface Water Discharge (D-001)
				96.6%		3.4%

* Surface Water Discharge due to Hurricane Matthew

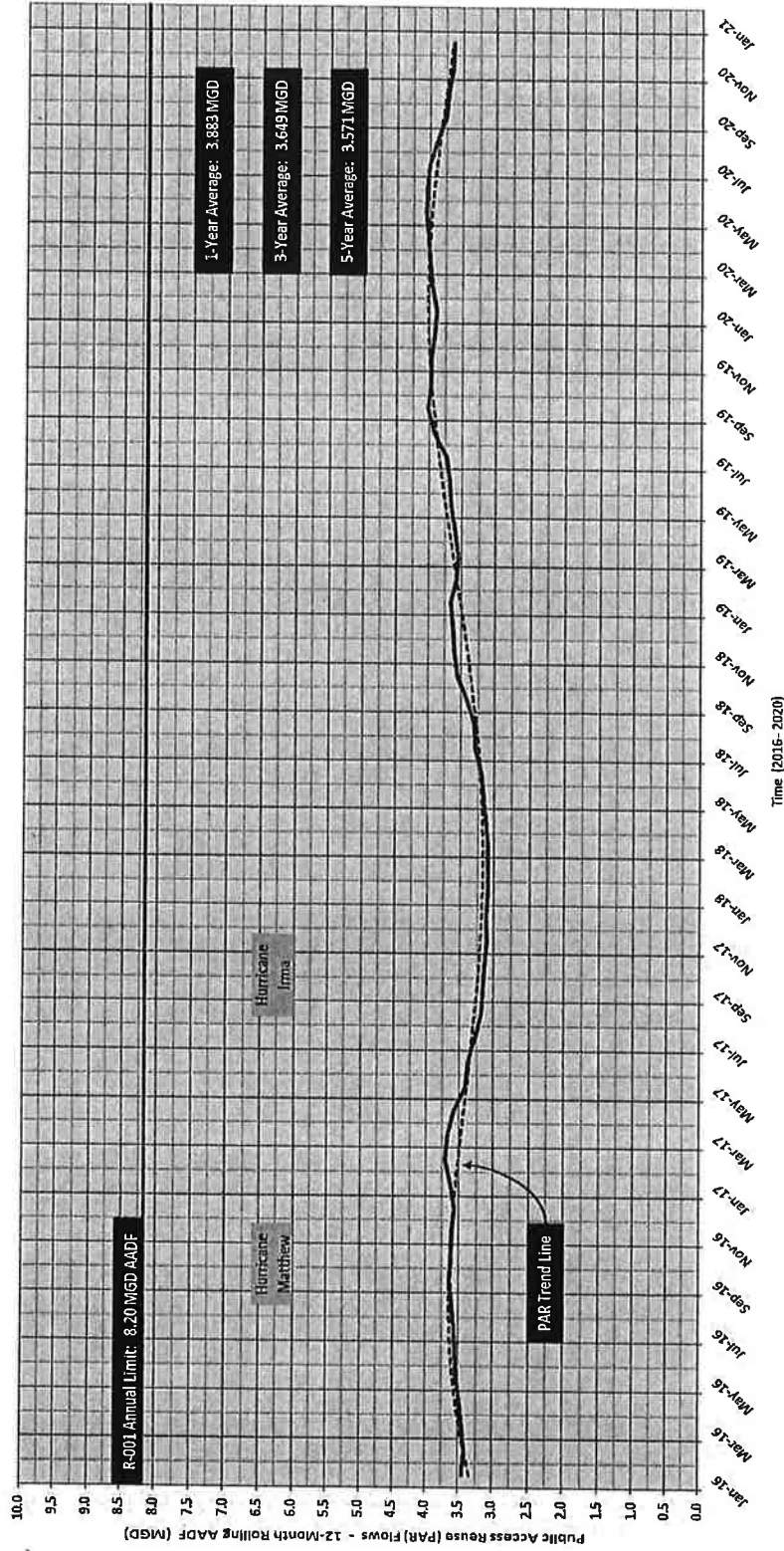
** Surface Water Discharge due to Hurricane Irma



SOUTH CENTRAL REGIONAL WRF: PUBLIC ACCESS REUSE SYSTEM (R-001) - HISTORICAL EFFLUENT MONTHLY ADF

FIGURE 3.5-1

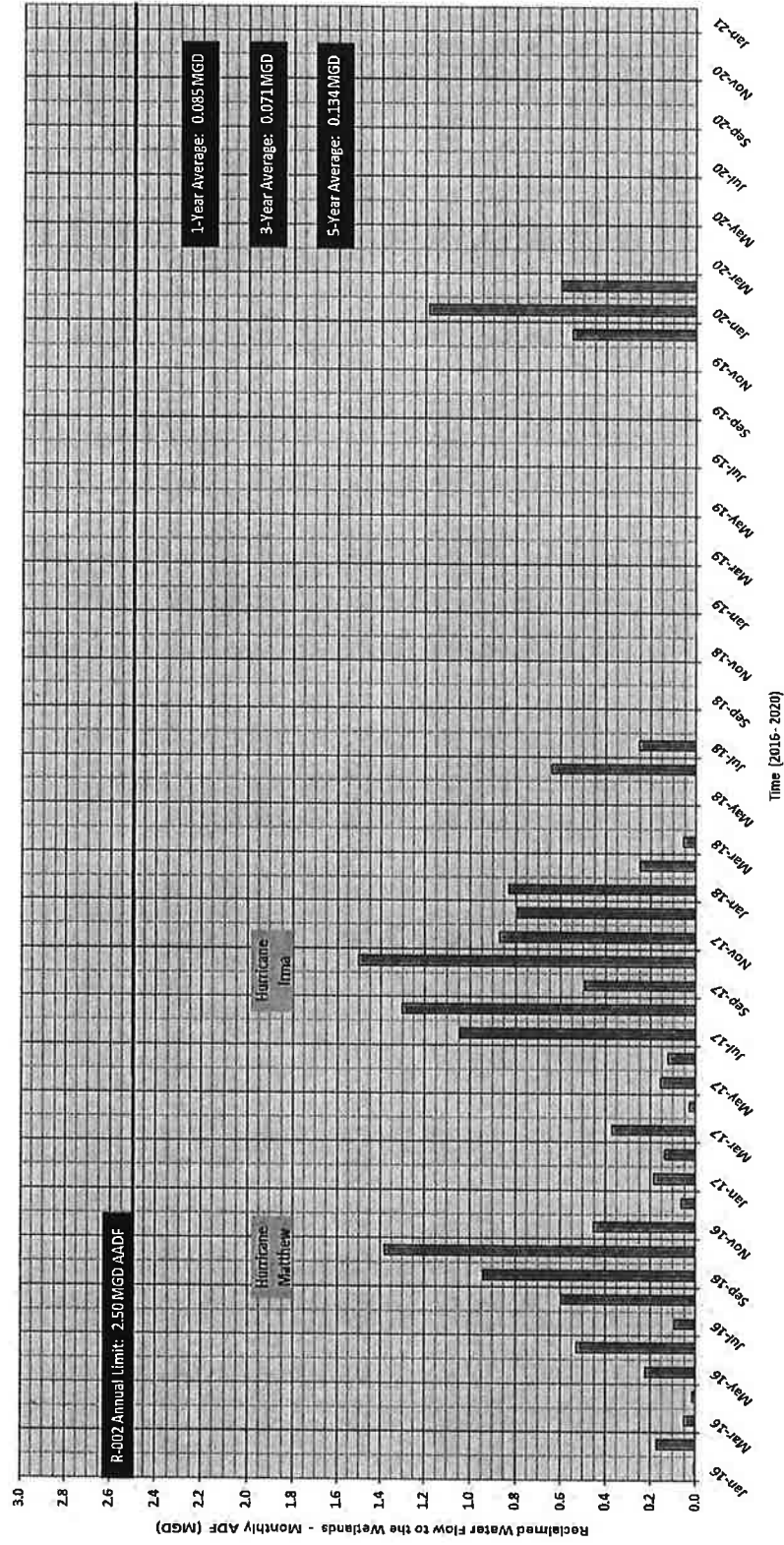




SOUTH CENTRAL REGIONAL WRF: PUBLIC ACCESS REUSE SYSTEM (R-001) - HISTORICAL EFFLUENT 12-MONTH ROLLING AADF

FIGURE 3.5-2





SOUTH CENTRAL REGIONAL WRF: RECLAIMED WATER FLOW TO THE WETLANDS (R-002) - HISTORICAL EFFLUENT MONTHLY ADF

FIGURE 3.5-3



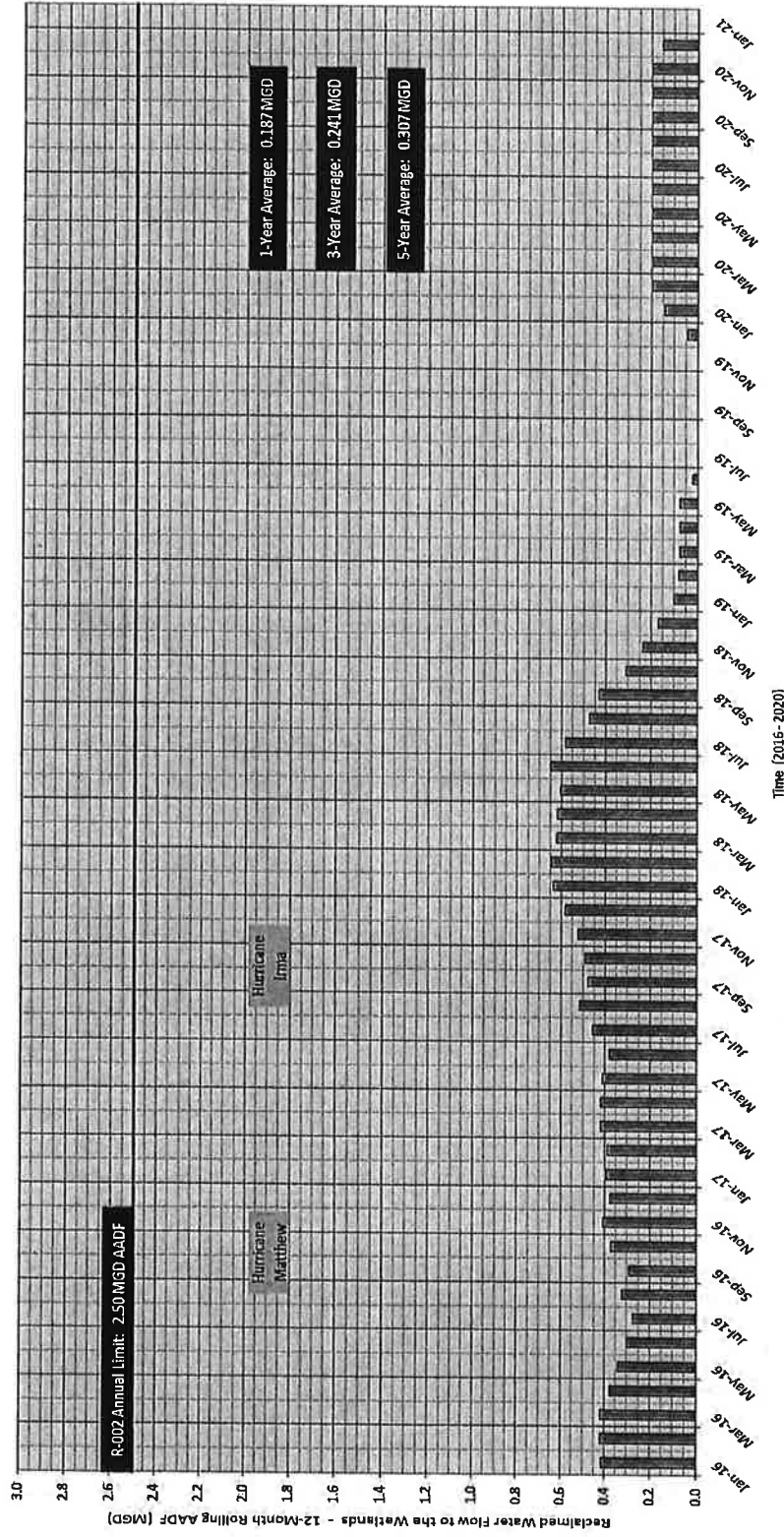
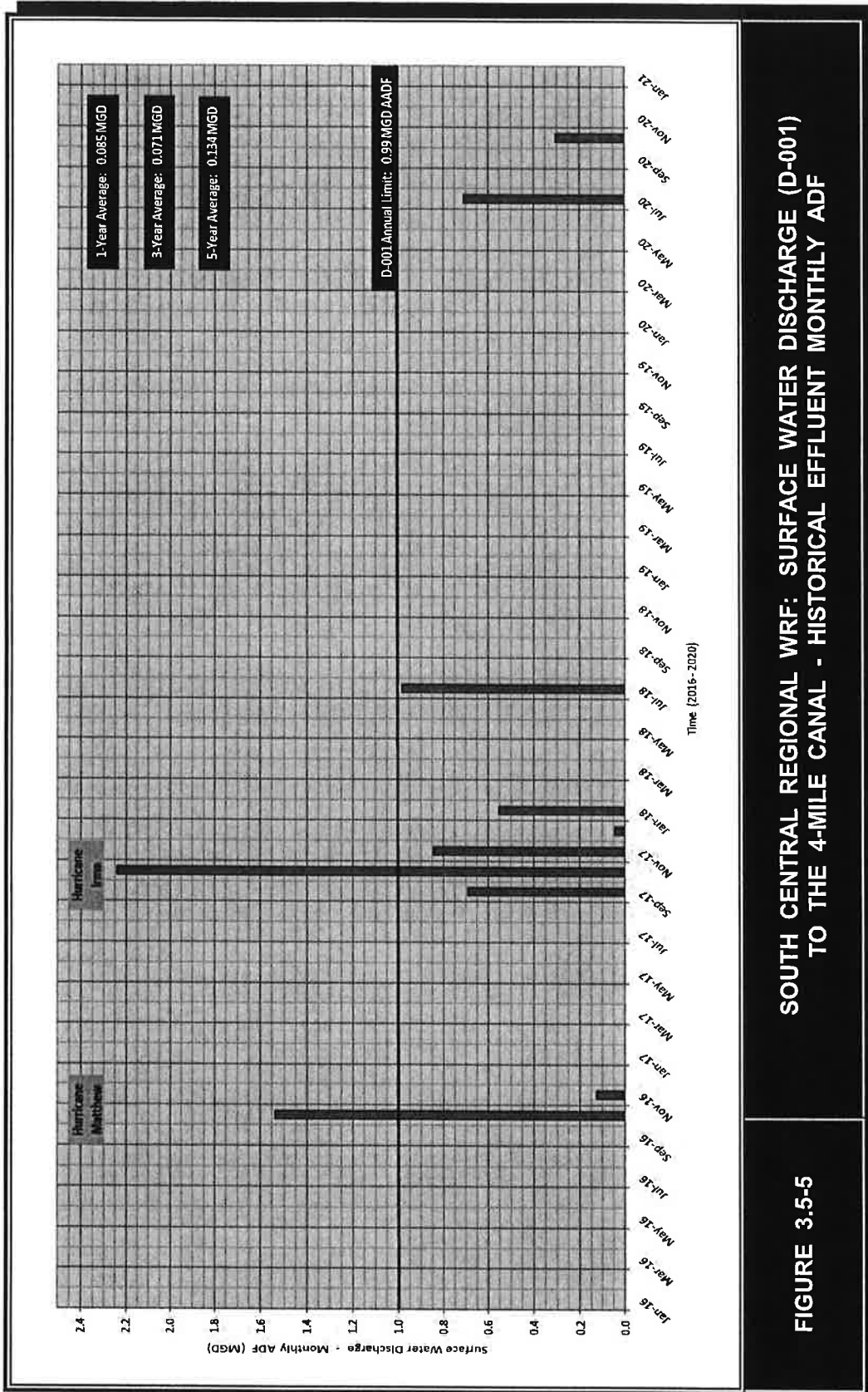


FIGURE 3.5-4 SOUTH CENTRAL REGIONAL WRF: RECLAIMED WATER FLOW TO THE WETLANDS (R-002) - HISTORICAL EFFLUENT 12-MONTH ROLLING AADF

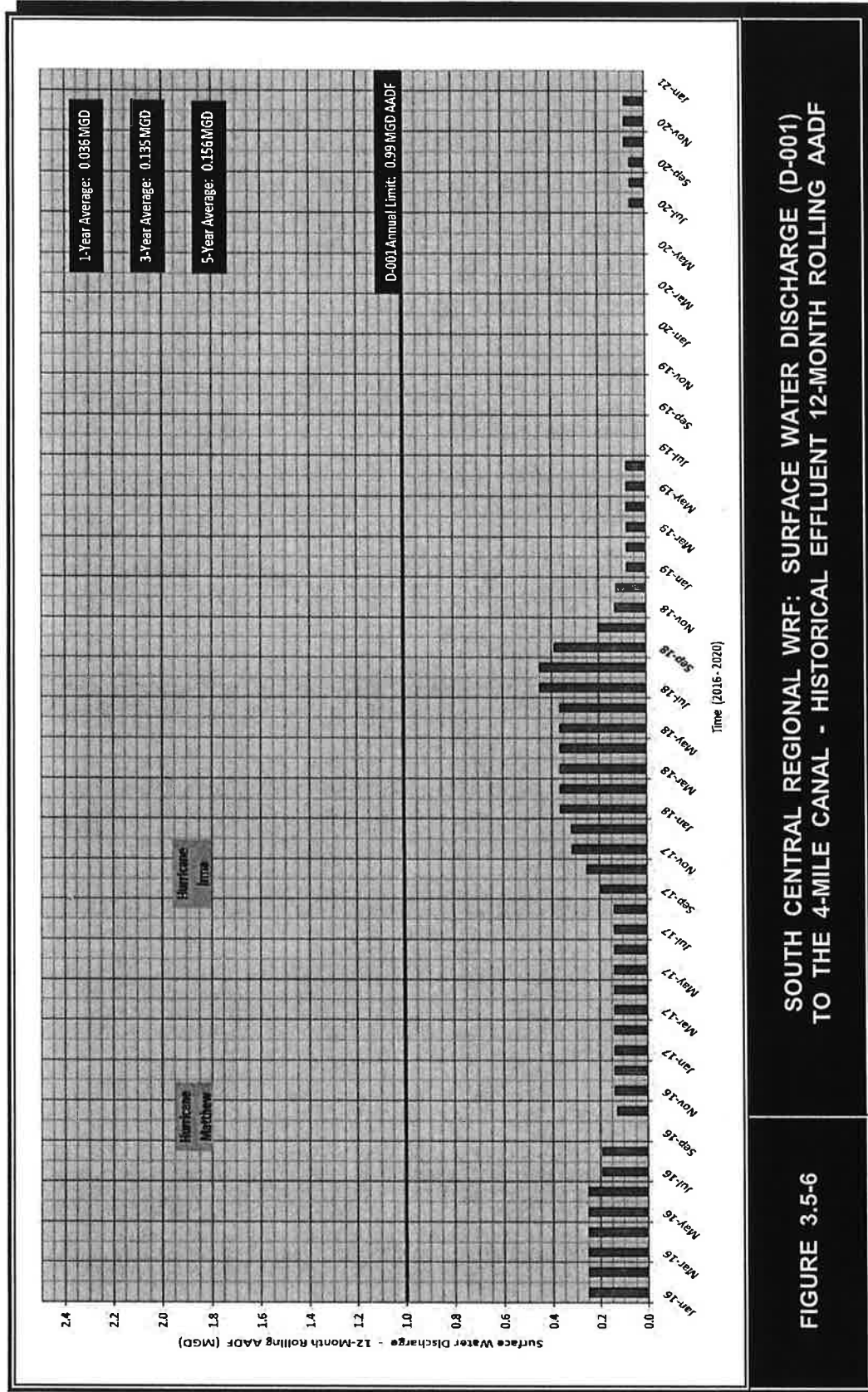




SOUTH CENTRAL REGIONAL WRF: SURFACE WATER DISCHARGE (D-001) TO THE 4-MILE CANAL - HISTORICAL EFFLUENT MONTHLY ADF

FIGURE 3.5-5





SOUTH CENTRAL REGIONAL WRF: SURFACE WATER DISCHARGE (D-001) TO THE 4-MILE CANAL - HISTORICAL EFFLUENT 12-MONTH ROLLING AADF

FIGURE 3.5-6



The South Central Regional WRF has reused approximately 96.6% of the facility's annual average effluent flow over the five-year period from 2016 - 2020. Only 3.4% of the effluent flow over this five year period were surface water discharges from the Ritch Grissom Memorial Wetlands to the 4-Mile Canal; these mainly due to discharges occurring from the intense rainfall events associated with Hurricane Matthew (October 2016) and Hurricane Irma (October 2017). **Therefore, the South Central Regional WRF meets the requirements of 403.064(17)(a)(3)(d) in that it has reused a minimum of 90% of the facility's effluent AADF over the past five (5) calendar years (2016 - 2020).**

3.6 FACILITY EFFLUENT QUALITY

Reclaimed water quality (CBOD₅, TSS, TN, TP, pH and Fecal Coliform) generated by the South Central Regional WRF, for the last five calendar years (2016 - 2020), is presented in Table 3.6-1. The South Central Regional WRF treatment system efficiencies, for the same five-year period are presented below:

South Central Regional WRF - Treatment System Efficiency (2016 - 2020)*							
Parameter	Influent Conc. (mg/L)	Influent Loading (lb/day)	Effluent Conc. (mg/L)	Effluent Load (lb/day)	Parameter Removal (lb/day)	Percent Removal	
						Design	Actual
CBOD ₅	191	7,695	2.2	113	9,566	90%	98.8%
TSS	231	9,305	1.0	52	11,653	90%	99.6%
TN**	50	2,013	6.4	324	2,208	80%	87.2%
TP**	8	322	0.6	31	374	70%	92.4%

* AADF (2016 - 2020): 4.828 MGD

** Assumed Influent Concentration (testing not required by permit)

3.6.1 CBOD₅ Treatment (Removal) Efficiency

Over the last five-year period (Calendar Years 2016 - 2020), actual influent CBOD₅ concentrations have been below the values used in the design of the facility (300 mg/L). The South Central Regional WRF has the ability to operate efficiently between 50 mg/L and 400 mg/L by adjusting process operations.

The effluent CBOD₅ concentrations are below the design values used for the facility, typical AWT standards (< 5 mg/L), and meet the limitations identified in the current FDEP Operations Permit.

Table 3.6-1: South Central Regional WRF - Reclaimed Water Quality (2016 - 2020)

Month/Year	CBOD ₅ (mg/L)	TSS (mg/L)	TN (mg/L)	TP (mg/L)	pH (S.U.)	Fecal (#/100 mL)
Permit Limit	20	5	---	---	6.0 - 8.5	25
Jan 2016	1.1	0.7	8.1	0.8	7.44	< 1
Feb 2016	1.3	0.6	7.0	0.4	7.39	< 1
Mar 2016	1.3	0.7	7.4	1.5	7.34	< 1
Apr 2016	1.1	1.1	5.7	4.0	7.37	< 1
May 2016	1.4	1.3	8.5	1.9	7.19	< 1
Jun 2016	2.4	1.3	10.0	1.2	7.25	< 1
Jul 2016	1.7	1.4	7.0	0.8	7.26	< 1
Aug 2016	1.8	1.0	7.3	0.4	7.30	< 1
Sep 2016	1.9	0.7	8.8	0.1	7.28	< 1
Oct 2016	1.9	0.5	8.9	0.1	7.35	< 1
Nov 2016	2.1	1.0	8.1	0.3	7.36	< 1
Dec 2016	1.2	1.3	7.9	0.6	7.37	< 1
2016 Avg.	1.6	1.0	7.9	1.0	7.33	< 1
Jan 2017	1.8	1.3	8.3	0.8	7.43	< 1
Feb 2017	1.4	1.5	8.6	0.5	7.38	< 1
Mar 2017	2.7	1.3	7.4	0.3	7.34	< 1
Apr 2017	1.4	1.4	7.4	0.6	7.32	< 1
May 2017	5.5	0.5	6.3	0.2	7.42	< 1
Jun 2017	1.2	0.8	6.2	1.7	7.43	< 1
Jul 2017	1.9	0.6	6.6	0.7	7.43	< 1
Aug 2017	1.0	0.6	7.7	2.8	7.41	< 1
Sep 2017	1.3	1.8	4.9	0.3	7.40	< 1
Oct 2017	2.6	2.6	8.0	0.7	7.30	< 1
Nov 2017	1.2	1.1	7.3	0.8	7.28	< 1
Dec 2017	1.4	1.1	7.4	0.2	7.30	< 1
2017 Avg.	2.0	1.2	7.2	0.8	7.37	< 1

Table 3.6-1: South Central Regional WRF - Reclaimed Water Quality (2016 - 2020)

Month/Year	CBOD ₅ (mg/L)	TSS (mg/L)	TN (mg/L)	TP (mg/L)	pH (S.U.)	Fecal (#/100 mL)
Permit Limit	20	5	---	---	6.0 - 8.5	25
Jan 2018	1.3	1.4	2.5	0.1	7.33	< 1
Feb 2018	2.1	1.5	8.4	0.2	7.31	< 1
Mar 2018	1.4	1.1	9.3	0.2	7.12	< 1
Apr 2018	1.4	1.6	7.5	0.5	7.12	< 1
May 2018	1.6	1.1	10.0	1.7	7.21	< 1
Jun 2018	1.1	0.7	6.5	0.1	7.39	< 1
Jul 2018	1.7	0.6	8.3	0.1	7.38	< 1
Aug 2018	1.5	1.0	7.8	1.8	7.22	< 1
Sep 2018	1.2	0.8	9.6	0.3	7.14	< 1
Oct 2018	1.0	1.0	9.7	0.7	7.11	< 1
Nov 2018	1.8	1.4	7.9	0.8	7.12	< 1
Dec 2018	2.0	1.9	8.1	0.4	6.94	< 1
2018 Avg.	1.5	1.2	8.0	0.6	7.20	< 1
Jan 2019	2.0	1.6	9.3	0.2	6.89	< 1
Feb 2019	2.0	1.7	8.2	0.1	6.83	< 1
Mar 2019	1.6	2.0	8.5	1.3	6.98	< 1
Apr 2019	1.3	1.5	8.5	1.7	7.27	< 1
May 2019	2.7	0.6	4.7	0.2	7.25	< 1
Jun 2019	2.7	0.8	7.5	0.5	7.19	< 1
Jul 2019	2.0	1.4	6.0	0.2	7.37	< 1
Aug 2019	2.2	0.9	2.2	0.3	7.38	< 1
Sep 2019	2.8	1.1	2.8	0.6	7.39	< 1
Oct 2019	2.5	0.6	3.3	0.5	7.26	< 1
Nov 2019	2.6	0.6	3.6	0.3	7.26	< 1
Dec 2019	3.5	0.6	3.1	0.4	7.31	< 1
2019 Avg.	2.3	1.1	5.6	0.5	7.20	< 1

Month/Year	CBOD ₅ (mg/L)	TSS (mg/L)	TN (mg/L)	TP (mg/L)	pH (S.U.)	Fecal (#/100 mL)
Permit Limit	20	5	---	---	6.0 - 8.5	25
Jan 2020	1.8	0.6	2.9	0.3	7.30	< 1
Feb 2020	3.4	0.7	3.2	0.2	7.08	< 1
Mar 2020	4.8	0.6	3.4	0.2	7.16	< 1
Apr 2020	4.1	0.6	3.0	0.1	7.23	< 1
May 2020	5.1	0.6	4.0	0.4	7.25	< 1
Jun 2020	4.3	0.6	2.9	0.1	7.29	< 1
Jul 2020	4.6	0.6	4.6	0.1	7.20	< 1
Aug 2020	5.2	0.6	3.2	0.1	7.04	< 1
Sep 2020	4.9	0.6	3.6	0.1	7.07	< 1
Oct 2020	4.4	0.6	3.0	0.1	7.06	< 1
Nov 2020	2.1	1.4	3.0	0.1	7.45	< 1
Dec 2020	1.1	0.7	3.5	0.2	7.07	< 1
2020 Avg.	3.8	0.6	3.4	0.2	7.18	< 1
5-Year Avg.	2.2	1.0	6.4	0.6	7.26	< 1
5-Yr % Removal	98.8%	99.6%	87.2%	92.4%	---	---

The 5-Year CBOD₅ treatment (removal) efficiency averaged approximately 98.8%; which is greater than the design treatment efficiency of 90% and the minimum FDEP requirement of 85%. The CBOD₅ treatment (removal) efficiency has averaged 97.3% since the IFAS BNR improvements have been completed. The effluent CBOD₅ concentration from the facility has been significantly below the design value of 5 mg/L. **Thus, the South Central Regional WRF is highly effective in removing organic wastes from the raw wastewater.**

3.6.2 TSS Treatment (Removal) Efficiency

Over the last five-year period (Calendar Years 2016 - 2020), actual influent TSS concentrations have been below the values used in the design of the facility (300 mg/L); although the facility has the ability to operate efficiently between 40 mg/L and 500 mg/L by adjusting process operations.

The effluent TSS concentrations are below the design values used for the facility, typical AWT standards (< 5 mg/L) and meet the limitations identified in the current FDEP Operations Permit.

The 5-Year TSS treatment (removal) efficiency averaged approximately 99.6%; which is greater than the design treatment efficiency of 90% and the minimum FDEP requirement of 85%. The TSS treatment (removal) efficiency has averaged 99.6% since the IFAS BNR improvements have been completed. The effluent TSS concentration has been significantly below the design value of 5 mg/L. **Thus, the South Central Regional WRF is highly effective in removing suspended solids from the raw wastewater as well as those generated in the treatment process.**

3.6.3 TN Treatment (Removal) Efficiency

Over the last five-year period (Calendar Years 2016 - 2020), actual influent TKN concentrations have been in the range of values used in the design of the facility (50 mg/L). The facility has the ability to operate efficiently between 20 mg/L and 60 mg/L by adjusting process operations.

The 5-Year TN treatment (removal) efficiency averaged approximately 87.2%. However, the TN treatment (removal) efficiency has averaged 92.6% since the IFAS BNR Treatment System became operational (2019) with an average effluent TN concentration of 3.4 mg/L in Calendar Year 2020. The new IFAS BNR System has significantly reduced the facility effluent TN concentration and, with minor operational modifications and control strategies, is capable of meeting AWT standards.

In contrast, during the period from January 2016 - April 2019 when the Carrousel BNR System was the only treatment technology operating at the SCRWRF (the IFAS BNR System had not been constructed), the effluent TN concentration averaged 7.90 mg/L. **Therefore, if the Carrousel BNR System is to be utilized to treat wastewater at the SCRWRF in the future, significant operational, process and infrastructure improvements will be required in order to meet the AWT standard for TN (< 3 mg/L) and ensure that the facility is in compliance with the effluent TN limitations mandated in its FDEP Operations Permit. It is recommended that a process engineering evaluation/study be conducted to address the elevated effluent TN concentrations and provide both short-term and long-term recommendations and solutions to resolve this issue.** Items to be evaluated and assessed in the evaluation/study include, but are not limited to, the following:

- Hydraulic and aeration issues in the anaerobic treatment basins and their impact on the BNR system performance.

- Assessment of how the facility operators are/were running the Carrousel BNR Treatment System (operational parameters, MLSS concentration, SRT's, recycle rates, etc.).
- Evaluation of the hydraulic detention and solids residence times within the BNR system basins and their impact of efficient nitrogen removal.
- Evaluation of the potential conversion of the Carrousel BNR System to a fine bubble aeration system with energy efficient blowers in lieu of the existing treatment system turbines (for aeration of the mixed liquor only).
- Assessment associated with creating a plug-flow regime within the Carrousel oxidation ditches (more efficient in the treatment of the wastewater) through the addition of internal walls throughout the reactor rather than the continued use of the complete-mix flow regime that exists in the biological reactor today.
- Evaluation of the advantages and impacts associated with replacement of the existing Carrousel EliminatIR[®] Gates with an Internal Recycle (IR) pumping system to provide better operational control of the recycling of nitrate rich effluent from the aerobic basins to the primary anoxic basins thereby enhancing TN removal. The existing EliminatIR[®] gates are in poor condition and very difficult to control; thereby reducing the efficiency of the denitrification process and TN removal.
- Evaluation of the potential to include swing zones within the Carrousel BNR System that can be switched between anoxic and aerobic operation providing the facility operators with real-time control of the available reactor volume and biomass inventory for efficient nitrification and denitrification performance.
- Providing real-time instrumentation and automation to effectively identify the performance of the nitrification and denitrification processes within the biological reactor basins and allowing the SCADA system to make modifications to enhance the removal of nitrogen from the wastewater.
- Evaluation of a more efficient primary and secondary anoxic mixing system and their impacts on the overall TN removal and energy consumption within the Carrousel BNR System.
- Assessment of the impact of converting the Carrousel BNR System into a more efficient, multi-staged biological treatment system with respect to nutrient removal.

- Evaluation of process configuration modifications within the Carrousel BNR System.
- Evaluation of the InDense Gravimetric Selection Technology® on the operations of the Carrousel BNR System. The InDense system encourages aerobic granular sludge formation, allows a higher concentration of MLSS to be retained in the biological reactor, improves reactor operations, enhances nitrogen and phosphorus removal, promotes denser sludge selection (enhances MLSS settling in the clarifiers) and can potentially increase the treatment capacity of the BNR system without adding additional tankage.

3.6.4 TP Treatment (Removal) Efficiency

Over the last five-year period (Calendar Years 2016 - 2020), actual influent TP concentrations have been in the range of values used in the design of the SCRWRF. The facility has the ability to operate efficiently between 2 mg/L and 12 mg/L by adjusting process operations and/or adding alum/polymer to the BNR Treatment System reaeration basins (enhancing TP removal via chemical precipitation).

The 5-Year TP treatment (removal) efficiency averaged approximately 92.4%. However, the TP treatment (removal) efficiency has averaged 97.5% since the optimization of the IFAS BNR Treatment System has been completed (alum/polymer addition). **Thus, the South Central Regional WRF is providing highly efficient treatment and removal of TP.**

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SECTION 4

NON-BENEFICIAL SURFACE WATER DISCHARGE ELIMINATION PLAN

4.1 THE SOUTH CENTRAL REGIONAL WRF DISCHARGE ELIMINATION PLAN

The South Central Regional WRF, located at 10001 North Wickham Road, Melbourne, FL, 32940 is an *Advanced Wastewater Treatment plus Filtration* Facility (Category I, Class A), utilizing two (2) parallel BNR wastewater treatment plants to treat the raw wastewater from the service area and meets all Class I Reliability criteria. The facility consists of primary, secondary and tertiary treatment systems to treat the raw wastewater from the South Central Regional Wastewater Collection and Transmission System. Reclaimed water storage is found throughout the service area (115.9 MG, total) including ground storage tanks, reclaimed water storage ponds adjacent to the SCRWRF, stormwater ponds, golf course stormwater lake systems, and the Ritch Grissom Memorial Wetlands.

Biosolids management at the SCRWRF consists of aerobic digestion of the waste activated sludge followed by dewatering of the solids through the use of a system of belt filter presses. The dewatered sludge can be transferred to an FDEP approved Biosolids Treatment Facility (BTF) or disposed of in a Class I solid waste landfill.

The treatment facility discharges highly treated reclaimed water to three FDEP-permitted disposal systems:

- Public Access Reuse System, R-001 (8.20 MGD AADF)
- Ritch Grissom Memorial Wetlands - Restricted Public Access Reuse System, R-002 (2.50 MGD AADF)
- Surface Water Discharge System, from the Wetlands Lake to the 4-Mile Canal then to the St. Johns River, D-001 (0.99 MGD AADF)

As previously presented in Section 3.5 of this document, an analysis of facility effluent flows by disposal system, over the last five (5) Calendar Years, was conducted with the following results:

Calendar Year	Effluent Disposal System Flow (MGD AADF)			Overall Effluent Disposal (%)		
	Reclaimed Water System - PAR (R-001)	Reclaimed Water to Wetland (R-002)	Surface Water Discharge (D-001)	Reclaimed System (R-001)	Reclaimed System (R-002)	SW Discharge (D-001)
2016	3.576	0.377	0.139	87.4%	9.2%	3.4%
2017	3.107	0.584	0.319	77.5%	14.6%	8.0%
2018	3.625	0.169	0.128	92.4%	4.3%	3.3%
2019	3.920	0.046	0.000	98.8%	1.2%	0.0%
2020	3.646	0.149	0.085	94.0%	3.8%	2.2%
5-Yr Avg.	3.575	0.265	0.134	90.0%	6.6%	3.4%
Overall 5-Year SCRWRF Effluent Disposal by System:				Reclaimed Water (R-001 + R-002)	Surface Water Discharge (D-001)	
				96.6%	3.4%	

The data indicates that the South Central Regional WRF has reused approximately 96.6% of the facility's annual average effluent flow over the past five-year period (2016 - 2020). The remaining 3.4% of the effluent flow, over this five-year period, were surface water discharges from the Ritch Grissom Memorial Wetlands to the 4-Mile Canal. The surface water discharges were due to intense rainfall events associated with Hurricane Matthew, Hurricane Irma and severe localized thunderstorms within the SCRWRF service area. The annual surface water discharge, from January 2016 - December 2020, averaged 0.134 MGD and occurred in only 9 months during this period (170 discharge days in the 5-year period total of 1,827 days, or 9.3% of the time due to heavy rainfall events).

Therefore, in accordance with the requirements of the 403.064(17)(a)(3)(d), Florida Statutes, the Surface Water Discharge Elimination Plan for the South Central Regional WRF does not provide for a complete elimination of the FDEP-permitted surface water discharge to the 4-Mile Canal and thence to the St. Johns River. However, Brevard County is providing the FDEP with an affirmation demonstration (as provided for in the law), based on the analyses and evaluations conducted in Section 3 of this document, that the SCRWRF is reusing a minimum of 90% of its annual average effluent flow as determined using the daily monitoring data from the previous five (5) Calendar Years (2016 - 2020) of operating data. In accordance with the regulatory requirements of 403.064, F.S., the County will therefore continue to utilize the FDEP-permitted discharge from the Ritch Grissom Memorial Wetlands to 4-Mile Canal and will not exceed the 0.990 MGD AADF flow limitation. It is anticipated that as growth occurs within the South Central Regional Wastewater Management System Service Area, new reclaimed water sites and additional storage will be developed thereby reducing the need to discharge to the 4-Mile Canal, with the exception of wet weather discharges during extreme weather and high groundwater table events.

In accordance with 403.064(17), Florida Statutes, Brevard County is also required to provide the following information as part of the Surface Water Discharge Elimination Plan:

Plan Information to Be Provided	Value	Explanation
The average flow (MGD) of effluent, reclaimed water, or reuse water that will no longer be discharged into surface waters and the date of such elimination	0.0 MGD AADF	Facility reuses more than 90% of its annual effluent flow based on the last 5 calendar years of operational data
The average flow (MGD) of surface water discharge that will continue in accordance with the requirements for the elimination of ocean outfalls, one of the discharge conditions specified in the legislation or one of the hardship conditions;	0.99 MGD AADF (maximum)	This is the permitted surface water discharge capacity in the current facility FDEP Operations Permit. In addition, over the last 5 calendar years, the surface water discharge averaged 0.134 MGD (13.5% of permitted capacity)
The level of treatment which the effluent, reclaimed water, or reuse water will receive before being discharged into a surface water by each alternative	AWT Levels* (5, 5, 3, 1)	The SCRWRF consists of two BNR treatment trains capable of potentially generating reclaimed water meeting AWT standards/levels

* Modifications to the IFAS and Carrousel BNR Treatment Systems will be required to meet AWT Standards (BOD₅ < 5 mg/L; TSS < 5 mg/L; TN < 3 mg/L; and TP, 1 mg/L). This is further discussed in Section 4.3 of this document.

4.2 CAPACITY AND EFFICIENCY OF THE SOUTH CENTRAL REGIONAL WRF

A detailed evaluation of the historical wastewater flows to the South Central Regional WRF was conducted in Section 3.4 of this document. The raw wastewater flow rate received at the treatment facility, over the last five (5) Calendar Years (2016 - 2020), averaged 4.828 MGD, or 40.2% of the facility's treatment capacity. Therefore, the South Central Regional WRF has the hydraulic capacity to treat the raw wastewater flows over the 20-year planning horizon.

Likewise, a detailed evaluation of the facility effluent quality, over the last five (5) Calendar Years (2016 - 2020), was conducted in Section 3.6 of this document. The reclaimed water quality produced and treatment efficiencies are as follows:

Parameter	Influent Conc. (mg/L)	Effluent Conc. (mg/L)	Parameter Removal
CBOD ₅	191	2.2	98.8%
TSS	231	1.0	99.6%
TN	50	6.4	87.2%
TP	8	0.6	92.4%

Therefore, the South Central Regional WRF is capable of treating the incoming raw wastewater and generating a reclaimed water product that is in compliance with the current FDEP Operations Permit using the existing unit operations and processes at the facility.

4.3 ABILITY OF THE SOUTH CENTRAL REGIONAL WRF TO MEET “CURRENT” AND “FUTURE” NUTRIENT LIMITS

The wastewater treatment processes at the South Central Regional WRF consist of primary treatment unit operations and two distinct treatment trains each with their own secondary and tertiary treatment unit operations and processes to remove contaminants inherent in the raw wastewater influent and meet the Federal and State regulatory standards.

The reclaimed water quality produced by the South Central Regional WRF during the last five-year period (2016 - 2020) and the ability to meet AWT Criteria is presented below:

Parameter	AWT Effluent Limits (mg/L)	Effluent Concentration (mg/L)*	“Current” Facility Effluent Meets AWT Criteria
BOD ₅	5	2.2	Yes
TSS	5	1.0	Yes
Total Nitrogen (TN)	3	6.4	No
Total Phosphorus (TP)	1	0.6	Yes
pH	6.0 - 8.5	7.26	Yes

* Concentrations of reclaimed water constituents from Jan 2016 - Dec 2020

** Values in “red” exceed the AWT Criteria

To meet the surface water discharge requirements, on a continual basis, when water is conveyed from the Wetlands lake to the 4-Mile Canal, it is imperative that the reclaimed water/effluent from the treatment facility meet AWT standards. The effluent TN concentration is the only effluent parameter that is not currently meeting AWT standards. However, the two distinct BNR treatment systems produce differing effluent TN concentrations as shown in the table below:

BNR System	Effluent Analysis Timeframe	Effluent Nutrient Concentrations (mg/L)**	
		TN*	TP**
Carrousel	January 2016 - April 2019	7.9	0.8
IFAS	May 2019 - December 2020	3.7	0.2

* AWT Total Nitrogen Standard: ≤ 3 mg/L

** AWT Total Phosphorus Standard: ≤ 1 mg/L

** Values in “red” exceed the AWT Std

Therefore, to meet the AWT TN Standard, on a consistent basis, and ensure that the treatment facility meets the effluent TN limitations mandated in its FDEP Operations Permit, improvements, modifications and adjustments within the two BNR Systems will be required at the South Central Regional WRF as outlined below:

BNR Treatment System	Required Improvements to Meet the AWT TN Standard
IFAS	Minor operational modifications and control strategy adjustments
Carrousel	Significant operational, process and infrastructure improvements will be required'

* See Section 3.6.3 of this document for further discussion of this topic.

The required facility improvements to the BNR Treatment Systems at the South Central Regional WRF, to consistently meet the AWT TN Standard, will be included in the County's Utility Capital Improvements Program (CIP). As this is not a currently funded CIP project, the County will evaluate their utility capital resources during upcoming annual budget cycle meetings and include this project in its list of potential prioritized utility projects.

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APPENDIX A

SOUTH CENTRAL REGIONAL WRF: "EXISTING" FDEP OPERATIONS PERMIT



OCTOBER 2021



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FLORIDA DEPARTMENT OF Environmental Protection

Central District Office
3319 Maguire Blvd., Suite 232
Orlando, Florida 32803

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Shawn Hamilton
Interim Secretary

In the Matter of an
Application for Permit by:

Edward Fontanin, PE, Director
Brevard County Utility Services
2725 Judge Fran Jamieson Way, A-213
Melbourne, FL 32940-6605
Edward.fontanin@brevardfl.gov

File Number FL0102679-018-DW1P
Brevard County
BCUD South Central WWTF

NOTICE OF PERMIT ISSUANCE

Enclosed is Permit Number FL0102679 to operate the BCUD South Central Wastewater Facility (WWTF), issued under Chapter 403, Florida Statutes.

Monitoring requirements under this permit are effective on September 1, 2021.

Until such time, the permittee shall continue to monitor and report in accordance with previously effective permit requirements.

NOTICE OF RIGHTS

This action is final and effective on the date filed with the Clerk of the Department unless a petition for an administrative hearing is timely filed under Sections 120.569 and 120.57, F.S., before the deadline for filing a petition. On the filing of a timely and sufficient petition, this action will not be final and effective until further order of the Department. Because the administrative hearing process is designed to formulate final agency action, the hearing process may result in a modification of the agency action or even denial of the application.

Petition for Administrative Hearing

A person whose substantial interests are affected by the Department's action may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S. Pursuant to Rules 28-106.201 and 28-106.301, F.A.C., a petition for an administrative hearing must contain the following information:

- (a) The name and address of each agency affected and each agency's file or identification number, if known;
- (b) The name, address, any e-mail address, any facsimile number, and telephone number of the petitioner, if the petitioner is not represented by an attorney or a qualified representative; the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes

- during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination;
- (c) A statement of when and how the petitioner received notice of the agency decision;
 - (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;
 - (e) A concise statement of the ultimate facts alleged, including the specific facts that the petitioner contends warrant reversal or modification of the agency's proposed action;
 - (f) A statement of the specific rules or statutes that the petitioner contends require reversal or modification of the agency's proposed action, including an explanation of how the alleged facts relate to the specific rules or statutes; and
 - (g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wishes the agency to take with respect to the agency's proposed action.

The petition must be filed (received by the Clerk) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000, or via electronic correspondence at Agency_Clerk@dep.state.fl.us. Also, a copy of the petition shall be mailed to the applicant at the address indicated above at the time of filing.

Time Period for Filing a Petition

In accordance with Rule 62-110.106(3), F.A.C., petitions for an administrative hearing by the applicant and persons entitled to written notice under Section 120.60(3), F.S., must be filed within 14 days of receipt of this written notice. Petitions filed by any persons other than the applicant, and other than those entitled to written notice under Section 120.60(3), F.S., must be filed within 14 days of publication of the notice or within 14 days of receipt of the written notice, whichever occurs first. You cannot justifiably rely on the finality of this decision unless notice of this decision and the right of substantially affected persons to challenge this decision has been duly published or otherwise provided to all persons substantially affected by the decision. While you are not required to publish notice of this action, you may elect to do so pursuant Rule 62-110.106(10)(a), F.A.C.

The failure to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the discretion of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C. If you do not publish notice of this action, this waiver may not apply to persons who have not received a clear point-of-entry.

Extension of Time

Under Rule 62-110.106(4), F.A.C., a person whose substantial interests are affected by the Department's action may also request an extension of time to file a petition for an administrative hearing. The Department may, for good cause shown, grant the request for

an extension of time. Requests for extension of time must be filed with the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000, or via electronic correspondence at Agency_Clerk@dep.state.fl.us, before the deadline for filing a petition for an administrative hearing. A timely request for extension of time shall toll the running of the time period for filing a petition until the request is acted upon.

Mediation

Mediation is not available in this proceeding.

Judicial Review

Once this decision becomes final, any party to this action has the right to seek judicial review pursuant to Section 120.68, F.S., by filing a Notice of Appeal pursuant to Florida Rules of Appellate Procedure 9.110 and 9.190 with the Clerk of the Department in the Office of General Counsel (Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000) and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate district court of appeal. The notice must be filed within 30 days from the date this action is filed with the Clerk of the Department.

EXECUTION AND CLERKING

Executed in Orlando, Florida.

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION



Reggie Phillips
Program Administrator
Permitting and Waste Cleanup Program

Attachment(s):

Permit, DMR, and Statement of Basis

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this document and all attachments were sent on the filing date below to the following listed persons:

DEP: David Smicherko, Cindy Stafford, Charles LeGros
David A. Gierach, PE, CPH, dgierach@cphcorp.com
Benjamin M. Fries, PE, Vice President, CPH, bfries@cphcorp.com

BCUD South Central WWTF
FL0102679
Page 4 of 4

FILING AND ACKNOWLEDGMENT

FILED, on this date, pursuant to Section 120.52, F. S., with the designated Department Clerk, receipt of which is hereby acknowledged.



Clerk

July 12, 2021
Date



FLORIDA DEPARTMENT OF Environmental Protection

Central District Office
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STATE OF FLORIDA DOMESTIC WASTEWATER FACILITY PERMIT

PERMITTEE:
Brevard County Utility Services Department

RESPONSIBLE OFFICIAL:
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PERMIT NUMBER: FL0102679 MI
FILE NUMBER: FL0102679-018-DW1P
ISSUANCE DATE: July 12, 2021
EFFECTIVE DATE: July 12, 2021
EXPIRATION DATE: July 11, 2026

FACILITY:
BCUD/South Central Regional
10001 N Wickham Rd
Melbourne, FL 32940-6604
Brevard County
Latitude: 28°13' 44.98" N Longitude: 80°45' 26.37" W

This permit is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and applicable rules of the Florida Administrative Code (F.A.C.) and constitutes authorization to discharge to waters of the state under the National Pollutant Discharge Elimination System. This permit does not constitute authorization to discharge wastewater other than as expressly stated in this permit. The above-named permittee is hereby authorized to operate the facilities in accordance with the documents attached hereto and specifically described as follows:

WASTEWATER TREATMENT:

An existing 12.0 million gallon per day (MGD) annual average daily flow (AADF) permitted capacity activated sludge advanced wastewater treatment (AWT) plant utilizing the IFAS BNR and Carrousel BNR Treatment Process. The plant consists of a mechanical bar screen and de-gritter assembly, 5-stage IFAS BNR and 4-stage Carrousel BNR Process (anaerobic tanks, first anoxic tanks, extended oxidation ditches, second anoxic tanks, re-aeration tanks), clarifiers, chemical feed facilities, filters and chlorination, with aerobic digestion and belt-thickening of biosolids. The facility utilizes electronic sensors and automatic diversion valves, two (2) 1.0 million gallon on-site reclaimed water covered ground storage tanks and associated high service pump stations, and a standby power generator.

The facility includes a Septage and Grease receiving station with flow metering, mechanical screening, and a holding tank with a submersible mixer.

The facility may supplement the reclaimed water production with storm water introduced into the collection system of the facility.

REUSE OR DISPOSAL:

Surface Water Discharge D-001: An existing 0.990 MGD annual average daily flow discharge to 4-Mile Canal, Class III Fresh Waters, (WBID# 2893N) which is approximately 128 feet in length and discharges at a depth of approximately 0 feet. The outfall pipe is a 60" diameter concrete culvert that discharges to the 4-Mile Canal. The point of discharge is located approximately at latitude 28°13' 48" N, longitude 80°46' 14" W.

PERMITTEE: Brevard County Utility Services Department
FACILITY: BCUD/South Central Regional

PERMIT NUMBER: FL0102679
EXPIRATION DATE: July 11, 2026

Land Application R-001: An existing 8.2 MGD annual average daily flow permitted capacity slow-rate public access system. R-001 is a reuse system which consists of on-site irrigation at the plant, and within the approved Reuse Service Area, as shown on the attached map, and identified in Section IV of this permit

Reclaimed water is discharged into stormwater storage lake system(s) D-002 located at the Indian River Colony Club Golf Course. The reclaimed water is stored in an existing stormwater retention pond with a storage capacity of 4.5 million gallons, which has an intermittent discharge to adjacent drainage features (6-Mile Canal), which ultimately discharges to the St. Johns River. Discharge of reclaimed water to this stormwater retention pond shall be in accordance with Condition I.B. 12 of this permit.

Stormwater from the following sources may be introduced into the sanitary sewerage system to augment the supply of reclaimed water: The facility may introduce storm water from a retention pond into the collection system at the wet well of Lift Station W-09 (Silver Pines Subdivision).

Land Application R-002: An existing 2.5 MGD annual average daily flow permitted capacity slow-rate restricted public access system. R-002 is a reuse system which consists of Created Wetlands with 200± acres (163± total wetted acres) comprising four (4) cells and an interior lake. The detention time through this created wetland system is approximately 53 days, and is located approximately at latitude 28°13' 47" N, longitude 80°46' 18" W.

IN ACCORDANCE WITH: The limitations, monitoring requirements, and other conditions set forth in this cover sheet and Part I through Part IX on pages 1 through 29 of this permit.

PERMITTEE: Brevard County Utility Services Department
 FACILITY: BCUD/South Central Regional

PERMIT NUMBER: FL0102679
 EXPIRATION DATE: July 11, 2026

I. RECLAIMED WATER AND EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

A. Surface Water Discharges

1. During the period beginning on the effective date and lasting through the expiration date of this permit, the permittee is authorized to discharge effluent from Outfall D-001 to 4-Mile Canal. Such discharge shall be limited and monitored by the permittee as specified below and reported in accordance with Permit Condition I.C.8.:

Parameter	Units	Max. /Min	Effluent Limitations		Monitoring Requirements			Notes
			Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	
Flow (Outfall D-001)	MGD	Max Max Max	0.990 Report Report	Annual Average Daily Maximum Monthly Average	Continuous	Recording Flow Meter with Totalizer	FLW-9	See I.A.4
BOD, Carbonaceous 5 day, 20C	mg/L	Max Max Max Max	3.0 3.75 4.5 6.0	Annual Average Monthly Average Weekly Average Single Sample	5 Days/Week	24-hr FPC	WEP-1	See I.A.6
BOD, Carbonaceous 5 day, 20C	lb/yr	Max	2000	Single Sample	Annually	Calculated	WEP-1	See Note 1
BOD, Carbonaceous 5 day, 20C	lb/mth	Max	Report	Monthly Total	Monthly	Calculated	WEP-1	
Solids, Total Suspended	mg/L	Max Max Max Max	3.0 3.75 4.5 6.0	Annual Average Monthly Average Weekly Average Single Sample	5 Days/Week	Grab	WEP-1	See I.A.6
Coliform, Fecal	#/100mL	Max	Report	Weekly Average	5 Days/Week	Grab	WEP-1	
pH	s.u.	Min Max	6.5 8.0	Single Sample Single Sample	Continuous	Meter	WEP-1	See I.A.3
Nitrogen, Total	mg/L	Max Max Max	2.0 2.4 3.2	Monthly Average Weekly Average Single Sample	Weekly	24-hr FPC	WEP-1	
Nitrogen, Kjeldahl, Total (as N)	mg/L	Max	Report	Monthly Average	Weekly	24-hr FPC	WEP-1	
Nitrite plus Nitrate, Total 1 det. (as N)	mg/L	Max	Report	Monthly Average	Weekly	24-hr FPC	WEP-1	
Nitrogen, Ammonia, Total (as N) (Effluent)	mg/L	Max	Report	Monthly Average	Weekly	24-hr FPC	WEP-1	See I.A.8, I.A.9, and I.A.10
Nitrogen, Ammonia, Total (as N) (calculated limit)	mg/L	Max	Report	Monthly Average	Weekly	Calculated	WEP-1	See I.A.8, I.A.9, and I.A.10
Nitrogen, Ammonia, Total (as N) (Effluent minus calculated limit)	mg/L	Max	0.00	Monthly Average	Weekly	Calculated	WEP-1	See I.A.8, I.A.9, and I.A.10

Parameter	Units	Max. /Min	Effluent Limitations		Monitoring Requirements			Notes
			Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	
Nitrogen, Ammonia, Total (as N) (Effluent)	mg/L	Max	2.5	Single Sample	Monthly	Calculated	WEP-1	See I.A.8, I.A.9, and I.A.10
Phosphorus, Total (as P)	mg/L	Max Max Max	0.2 0.24 0.32	Monthly Average Weekly Average Single Sample	Weekly	24-hr FPC	WEP-1	
Phosphorus, Total (as P)	lb/yr	Max	46	Single Sample	Annually	Calculated	WEP-1	See Note 1 ok
Phosphorus, Total (as P)	lb/mth	Max	Report	Monthly Total	Monthly	Calculated	WEP-1	
Phosphate, Ortho (as P)	mg/L	Max	Report	Monthly Average	Weekly	24-hr FPC	WEP-1	
Sulfate, Total	mg/L	Max	Report	Monthly Average	Weekly	24-hr FPC	WEP-1	
Chloride (as Cl)	mg/L	Max	Report	Monthly Average	Weekly	24-hr FPC	WEP-1	
Alkalinity, Total (as CaCO ₃)	mg/L	Max	Report	Monthly Average	Weekly	24-hr FPC	WEP-1	
Specific Conductance	umhos/cm	Max	Report	Monthly Average	Weekly	Grab	WEP-1	
Temperature (C), Water	Deg C	Max	Report	Monthly Average	Monthly	Meter	WEP-1	
Oxygen, dissolved (DO)	mg/L	Max	Report	Monthly Average	Monthly	Grab	WEP-1	
Water Level at sample collection time	ft	Max	Report	Monthly Average	Monthly	Meter	WEP-1	

Note 1: The Total Maximum Daily Load (TMDL) for the St. John's River has been finalized by the Department. As stated in the TMDL documentation, "The TMDL includes a waste load allocation (WLA) of 1.0 ton BOD/year and 0.023 tons/year for Total Phosphorus (TP). The discharge shall not exceed the following limitations:

<u>Parameter</u>	<u>Maximum Mass Loading (pounds/year)</u>
CBOD ₅	2000.0
Total Phosphorus	46.0

2. Effluent samples shall be taken at the monitoring site locations listed in Permit Condition I.A.1. and as described below:

Monitoring Site Number	Description of Monitoring Site
FLW-9	Flow to St. Johns River
WEP-1	Outfall structure 9 from wetland cell #3 and cell #4

3. Hourly measurement of pH during the period of required operator attendance may be substituted for continuous measurement. [62-600.660(1)]
4. A recording flow meter with totalizer shall be utilized to measure flow and calibrated at least once every 12 months. [62-600.200(25)]

PERMITTEE: Brevard County Utility Services Department
 FACILITY: BCUD/South Central Regional

PERMIT NUMBER: FL0102679
 EXPIRATION DATE: July 11, 2026

5. The discharge shall not contain components that, alone or in combination with other substances or in combination with other components of the discharge:
 - a. Settle to form putrescent deposits or otherwise create a nuisance; or
 - b. Float as debris, scum, oil, or other matter in such amounts as to form nuisances; or
 - c. Produce color, odor, taste, turbidity, or other conditions in such degree as to create a nuisance; or
 - d. Are acutely toxic; or
 - e. Are present in concentrations which are carcinogenic, mutagenic, or teratogenic to human beings or to significant, locally occurring, wildlife or aquatic species, unless specific standards are established for such components in subsection 62-302.500(2) or Rule 62-302.530, F.A.C.; or
 - f. Pose a serious danger to the public health, safety, or welfare.

[62-302.500(1)(a)]

6. In accordance with subsections 62-600.420(1) and (2), F.A.C., the monthly average effluent CBOD5 and TSS concentrations shall not exceed 15% of their respective influent values (i.e., 85% removal). [62-600.420(1) and (2)]
7. Sampling of surface water quality in the 4-Mile Canal and the wetlands interior lake shall be conducted at the sites shown on the attached map for the parameters listed in the Table below. An annual summary report of all surface water sampling/monitoring data shall be submitted to the Department by January 1st of each year. [62-611.700]

Parameter	Interior Station 2 Frequency	Downstream Station 4 Frequency
Temperature	Q (DD)	---
Dissolved Oxygen	Q (DD)	Q
pH	Q	Q
CL ₂ (TRC)	---	---
Conductivity	Q	Q
Color	Q	---
CBOD ₅	Q	---
TSS	Q	---
TP (as P)	Q	Q
OP (as P)	Q	---
TN	Q	Q
TKN (as N)	Q	---
NH ₃ (as N)	Q	---
NO ₃ (as N)	Q	---
NO ₂ (as N)	Q	---
SO ₄ (as S)	Q	---
Fecal Coliforms	Q	---
Chlorophyll a	Q	---
M = Monthly DD = 48 hr. dawn-dusk, max of 4 hr. intervals Q = Quarterly (Sample type shall be in accordance with Condition I.A.1.)		A = Annually SA = Semi-Annually

8. Effluent shall be monitored for pH and temperature at the same time and location as total ammonia nitrogen (TAN). The monthly average TAN value shall not exceed the average of the values calculated from the following equation, with no single value exceeding 2.5 times the value from the equation:

PERMITTEE: Brevard County Utility Services Department
FACILITY: BCUD/South Central Regional

PERMIT NUMBER: FL0102679
EXPIRATION DATE: July 11, 2026

$$\text{Calculated TAN Criterion Value for a Collected Sample} = 0.8876 \left(\frac{0.0278}{1 + 10^{7.688 - \text{pH}}} + \frac{1.1994}{1 + 10^{\text{pH} - 7.688}} \right) \times (2.126 \times 10^{0.028(20 - T)})$$

Where:

- T and pH are the paired temperature (in degrees Celsius) and pH associated with the effluent TAN sample, i.e., measured at the same time and location as the effluent TAN sample is collected.
- For purposes of TAN criterion calculations, pH is subject to the range of 6.5 to 9.0. In the TAN criterion equation, the pH shall be set to 6.5 if the measured pH is less than 6.5 and set to 9.0 if the measured pH is greater than 9.0.
- The value of T shall be set to 7 if the measured temperature is less than 7°C.

For convenience, a calculator that may be used to determine monthly average and single sample TAN criterion values is located at: <https://floridadep.gov/dear/water-quality-standards-program/documents/total-ammonia-nitrogen-calculator%C2%A0>

- a. Determine compliance with the monthly average TAN criterion as follows:
 - (1) Calculate the TAN criterion value using pH and temperature measurements associated with each total ammonia sample. Then calculate the average of the resulting TAN criterion values (i.e. add together all the values calculated with the equation and divide by the total number of samples).
 - (2) Calculate the average of all effluent total ammonia concentrations measured.
 - (3) Effluent is in compliance if the average effluent total ammonia concentration is less than or equal to the calculated average TAN criterion.
- b. Determine compliance with the single sample maximum TAN criterion as follows:
 - (1) Calculate the TAN criterion value using pH and temperature measurements associated with each total ammonia sample. Multiply each resulting TAN criterion value by 2.5.
 - (2) Effluent is in compliance with the single sample TAN criterion if all effluent total ammonia concentrations are less than or equal to 2.5 times their corresponding calculated TAN criterion.

[62-302.530]

9. The total ammonia nitrogen (TAN) monthly average effluent value shall be recorded on the DMR in the parameter row for "(effluent)." The calculated effluent limit shall be recorded on the DMR in the parameter row for "(calculated limit)." Compliance with the effluent limitation is determined by calculating the difference between the measured effluent value and the calculated. The compliance value shall be recorded on the DMR in the parameter row for "(effluent minus calculated limit)." The compliance value shall not exceed 0.00. [62-302.530]
10. To determine compliance with the total ammonia nitrogen (TAN) single sample effluent limitation, divide each TAN effluent sample value by the calculated TAN criterion value for that sample (calculated using the equation in permit condition I.A.8.) and compare to 2.5. On the DMR, report the greatest ratio of effluent sample value to TAN criterion value calculated for that sample. The compliance value shall not exceed 2.5. [62-302.530]
11. Senate Bill (SB) 64 was signed on June 29, 2021, and may affect the discharge related to this facility. The SB includes a requirement to submit information relating to the discharge with (1) your plan to eliminate the discharge or (2) your documentation demonstrating that no plan is required via email to DEP's Wastewater Management Program at: NPDESDischargePlan2021@FloridaDEP.gov to the Department by November 1, 2021. [SB 64] A link to the bill can be found at: <https://www.flsenate.gov/Session/Bill/2021/64>

PERMITTEE: Brevard County Utility Services Department
 FACILITY: BCUD/South Central Regional

PERMIT NUMBER: FL0102679
 EXPIRATION DATE: July 11, 2026

B. Reuse and Land Application Systems

1. During the period beginning on the effective date and lasting through the expiration date of this permit, the permittee is authorized to supplement reclaimed water with Stormwater discharged into the sewerage system and direct reclaimed water to Reuse System R-001. Such reclaimed water shall be limited and monitored by the permittee as specified below and reported in accordance with Permit Condition I.C.8.:

Parameter	Units	Max. /Min	Reclaimed Water Limitations		Monitoring Requirements			Notes
			Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	
Flow (Public access reuse)	MGD	Max Max	Report Report	Annual Average Monthly Average	Continuous	Recording Flow Meter with Totalizer	FLW-10	See I.B.4
BOD, Carbonaceous 5 day, 20C	mg/L	Max Max Max Max	20.0 30.0 45.0 60.0	Annual Average Monthly Average Weekly Average Single Sample	5 Days/ Week	24-hr FPC	EFA-1	
BOD, Carbonaceous 5 day, 20C	mg/L	Max Max Max Max	20.0 30.0 45.0 60.0	Annual Average Monthly Average Weekly Average Single Sample	5 Days/ Week	24-hr FPC	EFA-2	
Solids, Total Suspended	mg/L	Max	5.0	Single Sample	4 Days/ Week	Grab	EFB-1	
Solids, Total Suspended	mg/L	Max	5.0	Single Sample	4 Days/ Week	Grab	EFB-2	
Coliform, Fecal	#/100mL	Max	25	Single Sample	4 Days/ Week	Grab	EFA-1	
Coliform, Fecal	#/100mL	Max	25	Single Sample	4 Days/ Week	Grab	EFA-2	
Coliform, Fecal, % less than detection	percent	Min	75	Monthly Total	4 Days/ Week	Calculated	EFA-1	See I.B.5
Coliform, Fecal, % less than detection	percent	Min	75	Monthly Total	4 Days/ Week	Calculated	EFA-2	See I.B.5
pH	s.u.	Min Max	6.0 8.5	Single Sample Single Sample	Continuous	Meter	EFA-1	See I.B.3
pH	s.u.	Min Max	6.0 8.5	Single Sample Single Sample	Continuous	Meter	EFA-2	See I.B.3
Chlorine, Total Residual (For Disinfection)	mg/L	Min	1.0	Single Sample	Continuous	Meter	EFA-1	See I.B.6 and I.B.9
Chlorine, Total Residual (For Disinfection)	mg/L	Min	1.0	Single Sample	Continuous	Meter	EFA-2	See I.B.6 and I.B.9
Turbidity	NTU	Max	Report	Single Sample	Continuous	Meter	EFB-1	See I.B.7 and I.B.9
Turbidity	NTU	Max	Report	Single Sample	Continuous	Meter	EFB-2	See I.B.7 and I.B.9
Giardia	cysts/100 L	Max	Report	Single Sample	Bi-annually; every 2 years	Grab	EFA-1	See I.B.10

PERMITTEE: Brevard County Utility Services Department
 FACILITY: BCUD/South Central Regional

PERMIT NUMBER: FL0102679
 EXPIRATION DATE: July 11, 2026

Parameter	Units	Max. /Min	Reclaimed Water Limitations		Monitoring Requirements			Notes
			Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	
Giardia	cysts/100 L	Max	Report	Single Sample	Bi-annually; every 2 years	Grab	EFA-2	See I.B.10
Cryptosporidium	oocysts/100L	Max	Report	Single Sample	Bi-annually; every 2 years	Grab	EFA-1	See I.B.10
Cryptosporidium	oocysts/100L	Max	Report	Single Sample	Bi-annually; every 2 years	Grab	EFA-2	See I.B.10
Nitrogen, Total	mg/L	Max Max	10.0 Report	Annual Average Monthly Average	Weekly	24-hr FPC	EFA-1	See I.B.12
Nitrogen, Total	mg/L	Max Max	10.0 Report	Annual Average Monthly Average	Weekly	24-hr FPC	EFA-2	See I.B.12
Phosphorus, Total (as P)	mg/L	Max Max	6.0 Report	Annual Average Monthly Average	Weekly	24-hr FPC	EFA-1	See I.B.12
Phosphorus, Total (as P)	mg/L	Max Max	6.0 Report	Annual Average Monthly Average	Weekly	24-hr FPC	EFA-2	See I.B.12
Flow (Baytree Golf Course Pond)	MGD	Max Max	Report Report	Annual Average Monthly Average	Continuous	Recording Flow Meter with Totalizer	FLW-5	
Flow (Viera Golf Course Pond)	MGD	Max Max	Report Report	Annual Average Monthly Average	Continuous	Recording Flow Meter with Totalizer	FLW-6	
Flow (Indian River Colony Club)	MGD	Max Max	Report Report	Annual Average Monthly Average	Continuous	Recording Flow Meter with Totalizer	FLW-7	
Flow (Duran Golf Course)	MGD	Max Max	Report Report	Annual Average Monthly Average	Continuous	Recording Flow Meter with Totalizer	FLW-8	

2. Reclaimed water samples shall be taken at the monitoring site locations listed in Permit Condition I.B.1. and as described below:

Monitoring Site Number	Description of Monitoring Site
FLW-10	Total flow to Reuse Service Area
EFA-1	Effluent from the Caroussel Process CCC
EFA-2	Final effluent from the IFAs Process CCC
EFB-1	After filtration, prior to chlorination in the Caroussel Process
EFB-2	After filtration, prior to chlorination in the IFAS Process
FLW-5	Flow Meter in line to Baytree Golf Course Storage Pond
FLW-6	Flow meter in line to Viera Golf Course Storage Pond
FLW-7	Sum of the flow meters associated with Indian River Colony Golf Course Storage Pond and residential irrigation
FLW-8	Flow to Duran Golf Course

3. Hourly measurement of pH during the period of required operator attendance may be substituted for continuous measurement. [62-600.660(1)]

PERMITTEE: Brevard County Utility Services Department
 FACILITY: BCUD/South Central Regional

PERMIT NUMBER: FL0102679
 EXPIRATION DATE: July 11, 2026

4. A recording flow meter with totalizer shall be utilized to measure flow and calibrated at least once every 12 months. [62-600.200(25)]
5. To report the "% less than detection," count the number of fecal coliform observations that were less than detection, divide by the total number of fecal coliform observations in the month, and multiply by 100% (round to the nearest integer). [62-600.440(6)(a)]
6. The minimum total chlorine residual shall be limited as described in the approved operating protocol, such that the permit limitation for fecal coliform bacteria will be achieved. In no case shall the total chlorine residual be less than 1.0 mg/L. [62-600.440(6)(b)][62-610.460(2)][62-610.463(2)]
7. The maximum turbidity shall be limited as described in the approved operating protocol, such that the permit limitations for total suspended solids and fecal coliforms will be achieved. [62-610.463(2)]
8. The treatment facilities shall be operated in accordance with all approved operating protocols. Only reclaimed water that meets the criteria established in the approved operating protocol(s) may be released to system storage or to the reuse system. Reclaimed water that fails to meet the criteria in the approved operating protocol(s) shall be directed to the following permitted alternate discharge system: Reject pond for re-treatment or to R-002, Created Wetland system. [62-610.320(6) and 62-610.463(2)]
9. Instruments for continuous on-line monitoring of total residual chlorine and turbidity shall be equipped with an automated data logging or recording device. [62-610.463(2)]
10. Intervals between sampling for Giardia and Cryptosporidium shall not exceed two years. [62-610.472(3)(d)]
11. Discharge of reclaimed water to the lakes listed in the table below at Golf Course/Stormwater Outfall stormwater storage lake system D-002 shall only occur when the elevation of the water in each lake is less than the corresponding control elevation listed in the table below. A list of all days during a month on which discharges from each lake to the receiving water body occurred shall be attached to the DMR form. For each day on which discharge occurred, the approximate number of hours of discharge shall be noted. [62-610.830(1) and (4)]

Monitoring Site Number	Name of Storage Lake/Description of Monitoring Location	Control Elevation (ft. M.S.L.)	Receiving Water Body
STM-1	Golf Course/Stormwater Outfall	24.5	St. Johns River

12. The Department adopted a Basin Management Action Plan (BMAP) for the Indian River North BMAP on February 17, 2021. This permit has been revised to include an annual average limit of 10.0 mg/l of Total Nitrogen and 6.0 mg/l of Total Phosphorus in the reclaimed water. [FDEP Final Order 21-0082]
13. During the period beginning on the effective date and lasting through the expiration date of this permit, the permittee is authorized to direct reclaimed water to Reuse System R-002. Such reclaimed water shall be limited and monitored by the permittee as specified below and reported in accordance with Permit Condition I.C.8.:

Parameter	Units	Max. /Min	Reclaimed Water Limitations		Monitoring Requirements			Notes
			Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	
Flow (wetlands from WRF)	MGD	Max Max	2.5 Report	Annual Average Monthly Average	Continuous	Recording Flow Meter with Totalizer	FLW-11	See I.B.16

PERMITTEE: Brevard County Utility Services Department
 FACILITY: BCUD/South Central Regional

PERMIT NUMBER: FL0102679
 EXPIRATION DATE: July 11, 2026

Parameter	Units	Max. /Min	Reclaimed Water Limitations		Monitoring Requirements			Notes
			Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	
BOD, Carbonaceous 5 day, 20C	mg/L	Max Max Max Max	5.0 6.25 7.5 10.0	Annual Average Monthly Average Weekly Average Single Sample	5 Days/Week	24-hr FPC	EFA-1	
BOD, Carbonaceous 5 day, 20C	mg/L	Max Max Max Max	5.0 6.25 7.5 10.0	Annual Average Monthly Average Weekly Average Single Sample	5 Days/Week	24-hr FPC	EFA-2	
Solids, Total Suspended	mg/L	Max Max Max Max	5.0 6.25 7.5 10.0	Annual Average Monthly Average Weekly Average Single Sample	5 Days/Week	24-hr FPC	EFA-1	
Solids, Total Suspended	mg/L	Max Max Max Max	5.0 6.25 7.5 10.0	Single Sample Annual Average Monthly Average Weekly Average Single Sample	5 Days/Week	24-hr FPC	EFA-2	
Coliform, Fecal	#/100mL	Max Max Max	200 200 800	Annual Average Monthly Geometric Mean Single Sample	5 Days/Week	Grab	EFA-1	See I.B.17
Coliform, Fecal	#/100mL	Max Max Max	200 200 800	Annual Average Monthly Geometric Mean Single Sample	5 Days/Week	Grab	EFA-2	See I.B.17
pH	s.u.	Min Max	6.0 8.5	Single Sample Single Sample	Continuous	Meter	EFA-1	See I.B.15
pH	s.u.	Min Max	6.0 8.5	Single Sample Single Sample	Continuous	Meter	EFA-2	See I.B.15
Chlorine, Total Residual (For Disinfection)	mg/L	Min	0.5	Single Sample	Continuous	Meter	EFA-1	See I.B.18 and I.B.15
Chlorine, Total Residual (For Disinfection)	mg/L	Min	0.5	Single Sample	Continuous	Meter	EFA-2	See I.B.18 and I.B.15
Nitrogen, Total	mg/L	Max Max Max Max	6.0 7.5 9.0 12.0	Annual Average Monthly Average Weekly Average Single Sample	Weekly	24-hr FPC	EFA-1	
Nitrogen, Total	mg/L	Max Max Max Max	6.0 7.5 9.0 12.0	Annual Average Monthly Average Weekly Average Single Sample	Weekly	24-hr FPC	EFA-2	
Phosphorus, Total (as P)	mg/L	Max Max Max Max	0.75 0.94 1.125 1.5	Annual Average Monthly Average Weekly Average Single Sample	Weekly	24-hr FPC	EFA-1	
Phosphorus, Total (as P)	mg/L	Max Max Max Max	0.75 0.94 1.125 1.5	Annual Average Monthly Average Weekly Average Single Sample	Weekly	24-hr FPC	EFA-2	
Flow (from storage ponds to wetlands)	MGD	Max Max	Report Report	Annual Average Monthly Average	Continuous	Recording Flow Meter with Totalizer	FLW-12	See IV.A.4

PERMITTEE: Brevard County Utility Services Department
 FACILITY: BCUD/South Central Regional

PERMIT NUMBER: FL0102679
 EXPIRATION DATE: July 11, 2026

Parameter	Units	Max. /Min	Reclaimed Water Limitations		Monitoring Requirements			Notes
			Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	
Flow (from wetlands to storage ponds)	MGD	Max Max	Report Report	Annual Average Monthly Average	Continuous	Recording Flow Meter with Totalizer	FLW-13	See IV.A.4

14. Reclaimed water samples shall be taken at the monitoring site locations listed in Permit Condition I.B.13. and as described below:

Monitoring Site Number	Description of Monitoring Site
FLW-11	Total flow to wetlands
EFA-1	Effluent from the Caroussel Process CCC
EFA-2	Final effluent from the IFAs Process CCC
FLW-12	Total flow from storage ponds to wetlands
FLW-13	Total flow from wetlands to storage ponds

15. Hourly measurement of pH and total residual chlorine for disinfection during the period of required operator attendance may be substituted for continuous measurement. [62-600.660(1)]
16. A recording flow meter with totalizer shall be utilized to measure flow and calibrated at least once every 12 months. [62-600.200(25)]
17. The effluent limitation for the monthly geometric mean for fecal coliform is only applicable if 10 or more values are reported. If fewer than 10 values are reported, the monthly geometric mean shall be calculated and reported on the Discharge Monitoring Report to be used to calculate the annual average. All other fecal coliform effluent limitations included in permit condition I.B.13 apply regardless of the number of values reported. [62-600.440(5)(b)]
18. Total residual chlorine must be maintained for a minimum contact time of 15 minutes based on peak hourly flow. [62-610.410][62-600.440(5)(c) and (6)(b)]

C. Other Limitations and Monitoring and Reporting Requirements

1. During the period beginning on the effective date and lasting through the expiration date of this permit, the treatment facility shall be limited and monitored by the permittee as specified below and reported in accordance with condition I.C.8.:

Parameter	Units	Max. /Min	Limitations		Monitoring Requirements			Notes
			Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	
Flow (Total Through Plant)	MGD	Max Max Max	12.0 Report Report	Annual Average 3-Month Rolling Average Monthly Average	Continuous	Recording Flow Meter with Totalizer	FLW-1	See I.C.4
Percent Capacity, (TMADF/Permitted Capacity) x 100	percent	Max	Report	Monthly Average	Monthly	Calculated	CAL-1	
BOD, Carbonaceous 5 day, 20C (Influent)	mg/L	Max	Report	Single Sample	5 Days/Week	24-hr FPC	INF-1	See I.C.3

PERMITTEE: Brevard County Utility Services Department
 FACILITY: BCUD/South Central Regional

PERMIT NUMBER: FL0102679
 EXPIRATION DATE: July 11, 2026

Parameter	Units	Max. /Min	Limitations		Monitoring Requirements			Notes
			Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	
Solids, Total Suspended (Influent)	mg/L	Max	Report	Single Sample	5 Days/Week	24-hr FPC	INF-1	See I.C.3
Rainfall	in	Max	Report	Single Sample	Daily; 24 hours	Meter	OTH-1	

2. Samples shall be taken at the monitoring site locations listed in Permit Condition I.C.1. and as described below:

Monitoring Site Number	Description of Monitoring Site
FLW-1	Total flow through plant
CAL-1	Calculated from FLW-1
INF-1	Influent to headworks mechanical bar screen
OTH-1	Rain Gauge

3. Influent samples shall be collected so that they do not contain digester supernatant or return activated sludge, or any other plant process recycled waters. [62-600.660(4)(a)]
4. A recording flow meter with totalizer shall be utilized to measure flow and calibrated at least once every 12 months. [62-600.200(25)]
5. Sampling results for giardia and cryptosporidium shall be reported on DEP Form 62-610.300(4)(a)4, Pathogen Monitoring, which is attached to this permit. This form shall be submitted to the Department's Central District Office and to DEP's Wastewater Management Program in Tallahassee. [62-610.300(4)(a)]
6. The sample collection, analytical test methods, and method detection limits (MDLs) applicable to this permit shall be conducted using a sufficiently sensitive method to ensure compliance with applicable water quality standards and effluent limitations and shall be in accordance with Rule 62-4.246, Chapters 62-160 and 62-600, F.A.C., and 40 CFR 136, as appropriate. The list of Department established analytical methods, and corresponding MDLs (method detection limits) and PQLs (practical quantitation limits), which is titled "FAC 62-4 MDL/PQL Table (November 10, 2020)" is available at <https://floridadep.gov/dear/quality-assurance/content/quality-assurance-resources>. The MDLs and PQLs as described in this list shall constitute the minimum acceptable MDL/PQL values and the Department shall not accept results for which the laboratory's MDLs or PQLs are greater than those described above unless alternate MDLs and/or PQLs have been specifically approved by the Department for this permit. Any method included in the list may be used for reporting as long as it meets the following requirements:
 - a. The laboratory's reported MDL and PQL values for the particular method must be equal or less than the corresponding method values specified in the Department's approved MDL and PQL list;
 - b. The laboratory reported MDL for the specific parameter is less than or equal to the permit limit or the applicable water quality criteria, if any, stated in Chapter 62-302, F.A.C. Parameters that are listed as "report only" in the permit shall use methods that provide an MDL, which is equal to or less than the applicable water quality criteria stated in 62-302, F.A.C.; and
 - c. If the MDLs for all methods available in the approved list are above the stated permit limit or applicable water quality criteria for that parameter, then the method with the lowest stated MDL shall be used.

When the analytical results are below method detection or practical quantitation limits, the permittee shall report the actual laboratory MDL and/or PQL values for the analyses that were performed following the instructions on the applicable discharge monitoring report.

Where necessary, the permittee may request approval of alternate methods or for alternative MDLs or PQLs for any approved analytical method. Approval of alternate laboratory MDLs or PQLs are not necessary if the

PERMITTEE: Brevard County Utility Services Department
 FACILITY: BCUD/South Central Regional

PERMIT NUMBER: FL0102679
 EXPIRATION DATE: July 11, 2026

laboratory reported MDLs and PQLs are less than or equal to the permit limit or the applicable water quality criteria, if any, stated in Chapter 62-302, F.A.C. Approval of an analytical method not included in the above-referenced list is not necessary if the analytical method is approved in accordance with 40 CFR 136 or deemed acceptable by the Department. [62-4.246, 62-160]

7. The permittee shall provide safe access points for obtaining representative samples which are required by this permit. [62-600.650(2)]
8. **Monitoring requirements under this permit are effective on September 1, 2021.** Until such time, the permittee shall continue to monitor and report in accordance with previously effective permit requirements, if any. During the period of operation authorized by this permit, the permittee shall complete and submit to the Department Discharge Monitoring Reports (DMRs) in accordance with the frequencies specified by the REPORT type (i.e. monthly, quarterly, semiannual, annual, etc.) indicated on the DMR forms attached to this permit. Unless specified otherwise in this permit, monitoring results for each monitoring period shall be submitted in accordance with the associated DMR due dates below. DMRs shall be submitted for each required monitoring period including periods of no discharge.

REPORT Type on DMR	Monitoring Period	Submit by
Monthly	first day of month - last day of month	28 th day of following month
Once Every Two Months	January 1 - February 28/29 March 1 - April 30 May 1 - June 30 July 1 - August 31 September 1 - October 31 November 1 - December 31	March 28 May 28 July 28 September 28 November 28 January 28
Quarterly	January 1 - March 31 April 1 - June 30 July 1 - September 30 October 1 - December 31	April 28 July 28 October 28 January 28
Semiannual	January 1 - June 30 July 1 - December 31	July 28 January 28
Annual	January 1 - December 31	January 28

The permittee shall use the electronic DMR system approved by the Department (EzDMR) and shall electronically submit the completed DMR forms using the DEP Business Portal at <https://www.fldepportal.com/go/>, unless the permittee has a waiver from the Department in accordance with 40 CFR 127.15. Reports shall be submitted to the Department by the twenty-eighth (28th) of the month following the month of operation.

[62-620.610(18)][62-600.680(1)]

9. During the period of operation authorized by this permit, reclaimed water or effluent shall be monitored annually for the primary and secondary drinking water standards contained in Chapter 62-550, F.A.C., (except for asbestos, total coliform, color, odor, and residual disinfectants). These monitoring results shall be reported to the Department annually on the DMR. During years when a permit is not renewed, a certification stating that no new non-domestic wastewater dischargers have been added to the collection system since the last reclaimed water or effluent analysis was conducted may be submitted with the signed DMR in lieu of performing the analysis. When such a certification is submitted with the DMR, monitoring not required this period should be noted on the DMR. The annual reclaimed water or effluent analysis report, and certification if applicable, shall be completed and submitted in a timely manner so as to be received by the Department at the address identified on the DMR by January 28 of each year. Approved analytical methods identified in Rule 62-620.100(3)(j), F.A.C., shall be used for the analysis. If no method is included for a parameter, methods specified in Chapter 62-550, F.A.C., shall be used. [62-600.660(2) and (3)(d)][62-600.680(2)][62-610.300(4)]
10. The permittee shall submit an Annual Reuse Report using DEP Form 62-610.300(4)(a)2. on or before January 1 of each year. [62-610.870(3)]

PERMITTEE: Brevard County Utility Services Department
 FACILITY: BCUD/South Central Regional

PERMIT NUMBER: FL0102679
 EXPIRATION DATE: July 11, 2026

11. Operating protocol(s) shall be reviewed and updated periodically to ensure continuous compliance with the minimum treatment and disinfection requirements. Updated operating protocols shall be submitted to the Department's Central District Office for review and approval upon revision of the operating protocol(s) and with each permit application. [62-610.320(6)][62-610.463(2)]
12. The permittee shall maintain an inventory of storage systems. The inventory shall be submitted to the Department's Central District Office at least 30 days before reclaimed water will be introduced into any new storage system. The inventory of storage systems shall be attached to the annual submittal of the Annual Reuse Report. [62-610.464(5)]
13. Unless specified otherwise in this permit, all reports and other information required by this permit, including 24-hour notifications, shall be submitted to or reported to, as appropriate, the Department's Central District Office at the address specified below:

Electronic submittal is preferred, by sending to DEP_CD@dep.state.fl.us.

Florida Department of Environmental Protection
 Central District
 3319 Maguire Blvd
 Suite 232
 Orlando, Florida 32803-3767

Phone Number - (407) 897-4100

[62-620.305]

14. All reports and other information shall be signed in accordance with the requirements of Rule 62-620.305, F.A.C. [62-620.305]

II. BIOSOLIDS MANAGEMENT REQUIREMENTS

A. Basic Requirements

1. Biosolids generated by this facility may be transferred to DEP approved Biosolids Treatment Facility or disposed of in a Class I solid waste landfill. Transferring biosolids to an alternative biosolids treatment facility does not require a permit modification. However, use of an alternative biosolids treatment facility requires submittal of a copy of the agreement pursuant to Rule 62-640.880(1)(c), F.A.C., along with a written notification to the Department at least 30 days before transport of the biosolids. [62-620.320(6), 62-640.880(1)]
2. The permittee shall monitor and keep records of the quantities of biosolids generated, received from source facilities, treated, distributed and marketed, land applied, used as a biofuel or for bioenergy, transferred to another facility, or landfilled. These records shall be kept for a minimum of five years. [62-640.650(4)(a)]
3. Biosolids quantities shall be monitored by the permittee as specified below. Results shall be reported on the permittee's Discharge Monitoring Report for Monitoring Group RMP-Q in accordance with Condition I.C.8.

Parameter	Units	Max. /Min	Biosolids Limitation		Monitoring Requirements			Notes
			Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	
Biosolids Quantity (Landfilled)	dry tons	Max	Report	Monthly Total	Monthly	Calculated	RMP-1	
Biosolids Quantity (Received)	dry tons	Max	Report	Monthly Total	Monthly	Calculated	RMP-1	

PERMITTEE: Brevard County Utility Services Department
 FACILITY: BCUD/South Central Regional

PERMIT NUMBER: FL0102679
 EXPIRATION DATE: July 11, 2026

Parameter	Units	Max. /Min	Biosolids Limitation		Monitoring Requirements			Notes
			Limit	Statistical Basis	Frequency of Analysis	Sample Type	Monitoring Site Number	
Biosolids Quantity (Transferred)	dry tons	Max	Report	Monthly Total	Monthly	Calculated	RMP-1	

[62-640.650(5)(a)1]

4. Biosolids quantities shall be calculated as listed in Permit Condition II.3 and as described below:

Monitoring Site Number	Description of Monitoring Site Calculations
RMP-1	Biosolids leaving the facility based on estimated percent solids and volume or actual truck weight. Calculated and reported in dry tons.

5. The treatment, management, transportation, use, land application, or disposal of biosolids shall not cause a violation of the odor prohibition in subsection 62-296.320(2), F.A.C. [62-640.400(6)]
6. Storage of biosolids or other solids at this facility shall be in accordance with the Facility Biosolids Storage Plan. [62-640.300(4)]
7. Biosolids shall not be spilled from or tracked off the treatment facility site by the hauling vehicle. [62-640.400(9)]

B. Disposal

1. Disposal of biosolids, septage, and "other solids" in a solid waste disposal facility, or disposal by placement on land for purposes other than soil conditioning or fertilization, such as at a monofill, surface impoundment, waste pile, or dedicated site, shall be in accordance with Chapter 62-701, F.A.C. [62-640.100(6)(b) & (c)]

C. Transfer

1. The permittee shall not be held responsible for treatment and management violations that occur after its biosolids have been accepted by a permitted biosolids treatment facility with which the source facility has an agreement in accordance with subsection 62-640.880(1)(c), F.A.C., for further treatment, management, or disposal. [62-640.880(1)(b)]
2. The permittee shall keep hauling records to track the transport of biosolids between the facilities. The hauling records shall contain the following information:

Source Facility	Biosolids Treatment Facility or Treatment Facility
1. Date and time shipped	1. Date and time received
2. Amount of biosolids shipped	2. Amount of biosolids received
3. Degree of treatment (if applicable)	3. Name and ID number of source facility
4. Name and ID Number of treatment facility	4. Signature of hauler
5. Signature of responsible party at source facility	5. Signature of responsible party at treatment facility
6. Signature of hauler and name of hauling firm	

A copy of the source facility hauling records for each shipment shall be provided upon delivery of the biosolids to the biosolids treatment facility or treatment facility. The treatment facility permittee shall report to the Department within 24 hours of discovery any discrepancy in the quantity of biosolids leaving the source facility and arriving at the biosolids treatment facility or treatment facility.

PERMITTEE: Brevard County Utility Services Department
FACILITY: BCUD/South Central Regional

PERMIT NUMBER: FL0102679
EXPIRATION DATE: July 11, 2026

[62-640.880(4)]

D. Receipt

1. The permittee shall be responsible for proper treatment, management, and disposition of biosolids accepted from source facilities. [62-640.880(1)(a)]
2. The permittee shall enter into a written agreement with each source facility that it intends to receive biosolids from. The agreement shall address the quality and quantity of the biosolids accepted by the permittee. The agreement shall include a statement, signed by the permittee, as to the availability of sufficient permitted capacity to receive the biosolids from the source facility, and indicating that the permittee will continue to operate in compliance with the requirements of its permit. The agreement shall also address responsibility during transport of biosolids between the facilities. The permittee shall submit a copy of this agreement to the Department's Central District Office at least 30 days before transporting biosolids from the source facility to the permittee. [62-640.880(1)(c)]

III. GROUND WATER REQUIREMENTS

A. Construction Requirements

1. The permittee shall give at least 72-hour notice to the Department's Central District Office, prior to the installation of any monitoring wells. [62-520.600(6)(h)]
2. Before construction of new ground water monitoring wells, a soil boring shall be made at each new monitoring well location to properly determine monitoring well specifications such as well depth, screen interval, screen slot, and filter pack. [62-520.600(6)(g)]
3. Within 30 days after installation of a monitoring well, the permittee shall submit to the Department's Central District Office well completion reports and soil boring/lithologic logs on the attached DEP Form(s) 62-520.900(3), Monitoring Well Completion Report. [62-520.600(6)(j) and .900(3)]
4. All piezometers and monitoring wells not part of the approved ground water monitoring plan shall be plugged and abandoned in accordance with Rule 62-532.500(5), F.A.C., unless future use is intended. [62-532.500(5)]

B. Operational Requirements

1. For the Part II land application system(s), all ground water quality criteria specified in Chapter 62-520, F.A.C., shall be met at the edge of the zone of discharge. The zone of discharge for Land Application Site R-002 shall extend horizontally 100 feet from the application site and vertically to the base of the surficial aquifer. [62-520.200(27)] [62-520.465]
2. For the Part III Public Access system, all ground water quality criteria specified in Chapter 62-520, F.A.C., shall be met at the edge of the zone of discharge. The zone of discharge shall extend horizontally 100 feet from the application site(s) or to the property boundaries, whichever is less, and vertically to the base of the surficial aquifer. [62-520.200(27)] [62-520.465]
3. The ground water minimum criteria specified in Rule 62-520.400 F.A.C., shall be met within the zone of discharge. [62-520.400 and 62-520.420(4)]
4. If the concentration for any constituent listed in Permit Condition III.7. and III.9. in the natural background quality of the ground water is greater than the stated maximum, or in the case of pH is also less than the minimum, the representative background quality shall be the prevailing standard. [62-520.420(2)]
5. During the period of operation authorized by this permit, the permittee shall continue to sample ground water at the monitoring wells identified in Permit Conditions III.6. and III.8., below in accordance with this permit and

PERMITTEE: Brevard County Utility Services Department
 FACILITY: BCUD/South Central Regional

PERMIT NUMBER: FL0102679
 EXPIRATION DATE: July 11, 2026

the approved ground water monitoring plan prepared in accordance with Rule 62-520.600, F.A.C. [62-520.600] [62-610.412] [62-610.463]

6. The following monitoring wells shall be sampled for Reuse System R-001.

Monitoring Well ID	Alternate Well Name and/or Description of Monitoring Location	Latitude	Longitude	Depth (Feet)	Aquifer Monitored	Well Type	New or Existing
MWB-1	Background well @ Duran Golf Course	28°14' 14"	80°44' 5"	24	Surficial	Background	Existing
MWC-1	Compliance well @ Duran Golf Course site	28°14' 22"	80°43' 57"	17	Surficial	Compliance	Existing
MWC-2	Compliance well @ Duran Golf Course Site	28°14' 11"	80°44' 26"	23	Surficial	Compliance	Existing
MWC-3	Compliance well @ Duran Golf Course Site	28°14' 51"	80°44' 34"	23	Surficial	Compliance	Existing
MWC-5-SOD	GW-5 COMPLIANCE	28°14' 3"	80°45' 33"	16	Surficial	Compliance	Existing
MWC-6-SOD	GW-6 COMPLIANCE	28°14' 2"	80°45' 18"	16	Surficial	Compliance	Existing

[62-520.600] [62-610.463]

7. The following parameters shall be analyzed for each monitoring well identified in Permit Condition III.6.:

Parameter	Compliance Well Limit	Units	Sample Type	Monitoring Frequency
Water Level Relative to NGVD	Report	ft	In Situ	Quarterly
Nitrogen, Nitrate, Total (as N)	10	mg/L	Grab	Quarterly
Solids, Total Dissolved (TDS)	500	mg/L	Grab	Quarterly
Chloride (as Cl)	250	mg/L	Grab	Quarterly
Coliform, Fecal	4	#/100mL	Grab	Quarterly
pH	6.5-8.5	s.u.	Grab	Quarterly
Turbidity	Report	NTU	Grab	Quarterly

[62-520.600(11)(b)] [62-600.670] [62-600.650(3)] [62-520.310(5)]

8. The following monitoring wells shall be sampled for Reuse System R-002 located at Land Application Site RAA-001.

Monitoring Well ID	Alternate Well Name and/or Description of Monitoring Location	Latitude	Longitude	Depth (Feet)	Aquifer Monitored	Well Type	New or Existing
MWB-1-WET	BCUD South Central Wetlands MW-1 Upgradient	28°13' 18"	80°45' 40"	12	Surficial	Background	Existing
MWC-2-WET	Wetlands MW-2 Compliance	28°13' 46"	80°46' 12"	14	Surficial	Compliance	Existing

[62-520.600] [62-610.412]

9. The following parameters shall be analyzed for each monitoring well identified in Permit Condition III.8.:

Parameter	Compliance Well Limit	Units	Sample Type	Monitoring Frequency
Water Level Relative to NGVD	Report	ft	In Situ	Quarterly
Nitrogen, Nitrate, Total (as N)	10	mg/L	Grab	Quarterly

PERMITTEE: Brevard County Utility Services Department
 FACILITY: BCUD/South Central Regional

PERMIT NUMBER: FL0102679
 EXPIRATION DATE: July 11, 2026

Parameter	Compliance Well Limit	Units	Sample Type	Monitoring Frequency
Solids, Total Dissolved (TDS)	500	mg/L	Grab	Quarterly
Chloride (as Cl)	250	mg/L	Grab	Quarterly
Coliform, Fecal	4	#/100mL	Grab	Quarterly
pH	6.5-8.5	s.u.	Grab	Quarterly
Turbidity	Report	NTU	Grab	Quarterly

[62-520.600(11)(b)] [62-600.670] [62-600.650(3)] [62-520.310(5)]

10. Water levels shall be recorded before evacuating each well for sample collection. Elevation references shall include the top of the well casing and land surface at each well site (NAVD allowable) at a precision of plus or minus 0.01 foot. [62-520.600(11)(c)] [62-610.412(2)(c)] [62-610.463(3)(a)]
11. Ground water monitoring wells shall be purged prior to sampling to obtain representative samples. [62-160.210] [62-600.670(3)]
12. Analyses shall be conducted on unfiltered samples, unless filtered samples have been approved by the Department's Central District Office as being more representative of ground water conditions. [62-520.310(5)]
13. Ground water monitoring test results shall be submitted on Part D of Form 62-620.910(10) in accordance with Permit Condition I.C.8. [62-520.600(11)(b)] [62-600.670] [62-600.680(1)] [62-620.610(18)]
14. If any monitoring well becomes inoperable or damaged to the extent that sampling or well integrity may be affected, the permittee shall notify the Department's Central District Office within two business days from discovery, and a detailed written report shall follow within ten days after notification to the Department. The written report shall detail what problem has occurred and remedial measures that have been taken to prevent recurrence or request approval for replacement of the monitoring well. All monitoring well design and replacement shall be approved by the Department's Central District Office before installation. [62-520.600(6)(l)]
15. The permittee shall sample the following monitoring well(s): MW-5-SOD for the primary and secondary drinking water parameters included in Rules 62-550.310 and 62-550.320, F.A.C., (except for asbestos and all parameters in Table 5 of Chapter 62-550, F.A.C., other than Di(2-ethylhexyl) adipate and Di(2-ethylhexyl) phthalate). Results of this sampling shall be submitted to the Department's Central District Office with the application for permit renewal. Sampling shall occur no sooner than 180 days before submittal of the renewal application. [62-520.600(5)(b)]

IV. ADDITIONAL REUSE AND LAND APPLICATION REQUIREMENTS

A. Part II Slow-Rate/Restricted Access System(s) – Created Wetlands (D-002)

1. The permittee shall ensure restricted public access control to the created wetlands area and ensure that those persons who enter the area are informed of the nature of the system. Advisory signs shall be posted around the site boundaries to designate the nature of the project area. [62-600.440(5)(g)2] [62-611.600(6)]
2. For this created, managed wetlands treatment/reuse system, persons knowledgeable in these disciplines are needed to make technical management decisions from theory and actual experience. [62-4.070(3)]
3. The created wetlands may be augmented with groundwater during periods of insufficient reclaimed water supply (high public access reuse demand) to keep the wetlands hydrated and plants viable, contingent upon receipt of appropriate permit(s) from the St. John's River Water Management District for use of groundwater in the wetlands. [62-4.070(3)]
4. The created wetlands may be augmented with water from the 100 million gallon storage ponds during periods of insufficient reclaimed water supply (high public access reuse demand) to keep the wetlands hydrated and plants viable, contingent upon maintaining compliance with the reclaimed water and effluent limitations

PERMITTEE: Brevard County Utility Services Department
 FACILITY: BCUD/South Central Regional

PERMIT NUMBER: FL0102679
 EXPIRATION DATE: July 11, 2026

contained in Part I.A.1. of this permit, or water from the wetland may be sent to the storage pond as an alternative to discharging to surface waters.

B. Part III Public Access System(s) – R-001

1. Use of reclaimed water is authorized within the general service area identified in the attached map. The following uses of reclaimed water are authorized within this general service area:

Residential Developments
 Golf Courses
 Athletic Complexes and Parks
 Other Landscape Irrigation

[62-620.630(10)(a)]

2. This reuse system includes the following major user(s) of reclaimed water (i.e., using 0.1 MGD or more) and general service area(s):

Site Number	User Name	User Type	Capacity (MGD)	Acreage
PAA-001A	R-001 site Baytree G.C.	Golf Courses	0.410	103
PAA-001B	R-001 site Indian River Colony Club G.C.	Golf Courses	0.730	220
PAA-001C	R-001 site Duran Golf Courses	Golf Courses	0.380	136
PAA-001E	Viera East Golf Course	Golf Courses	0.290	100
Total			1.81	559

[62-610.800(5)][62-620.630(10)(b)]

3. New major users of reclaimed water (i.e., using 0.1 MGD or more) may be added to the reuse system using the general permit described in Rule 62-610.890, F.A.C., if the requirements in this rule are complied with. Application for use of this general permit shall be made using Form 62-610.300(4)(a)1. *[62-610.890]*
4. Cross-connections to the potable water system are prohibited. *[62-610.469(7)]*
5. A cross-connection control program shall be implemented and/or remain in effect within the areas where reclaimed water will be provided for use and shall be in compliance with the Rule 62-555.360, F.A.C. *[62-610.469(7)]*
6. The permittee shall conduct inspections within the reclaimed water service area to verify proper connections, to minimize illegal cross-connections, and to verify both the proper use of reclaimed water and that the proper backflow prevention assemblies or devices have been installed and tested. Inspections are required when a customer first connects to the reuse distribution system. Subsequent inspections are required as specified in the cross-connection control and inspection program. *[62-610.469(7)(h)]*
7. If an actual or potential (e.g. no dual check device on residential connections served by a reuse system) cross-connection between the potable and reclaimed water systems is discovered, the permittee shall:
 - a. Immediately discontinue potable water and/or reclaimed water service to the affected area if an actual cross-connection is discovered.
 - b. If the potable water system is contaminated, clear the potable water lines.
 - c. Eliminate the cross-connection and install a backflow prevention device as required by the Rule 62-555.360.F.A.C.

PERMITTEE: Brevard County Utility Services Department
FACILITY: BCUD/South Central Regional

PERMIT NUMBER: FL0102679
EXPIRATION DATE: July 11, 2026

- d. Test the affected area for other possible cross-connections.
- e. Within 24 hours, notify the Department's Central District Office's domestic wastewater and drinking water programs.
- f. Within 5 days of discovery of an actual or potential cross-connection, submit a written report to the Department's Central District Office detailing: a description of the cross-connection, how the cross-connection was discovered, the exact date and time of discovery, approximate time that the cross-connection existed, the location, the cause, steps taken to eliminate the cross-connection, whether reclaimed water was consumed, and reports of possible illness, whether the drinking water system was contaminated and the steps taken to clear the drinking water system, when the cross-connection was eliminated, plan of action for testing for other possible cross-connections in the area, and an evaluation of the cross-connection control and inspection program to ensure that future cross-connections do not occur.

[62-555.360][62-620.610(20)]

8. Maximum obtainable separation of reclaimed water lines and potable water lines shall be provided and the minimum separation distances specified in Rule 62-610.469(7), F.A.C., shall be provided. Reuse facilities shall be color coded or marked. Underground piping which is not manufactured of metal or concrete shall be color coded using Pantone Purple 522C using light stable colorants. Underground metal and concrete pipe shall be color coded or marked using purple as the predominant color. *[62-610.469(7)]*
9. In constructing reclaimed water distribution piping, the permittee shall maintain a 75-foot setback distance from a reclaimed water transmission facility to public water supply wells. No setback distances are required to other potable water supply wells or to any nonpotable water supply wells. *[62-610.471(3)]*
10. A setback distance of 75 feet shall be maintained between the edge of the wetted area and potable water supply wells, unless the utility adopts and enforces an ordinance prohibiting potable water supply wells within the reuse service area. No setback distances are required to any nonpotable water supply well, to any surface water, to any developed areas, or to any private swimming pools, hot tubs, spas, saunas, picnic tables, barbecue pits, or barbecue grills. *[62-610.471(1), (2), (5), and (7)]*
11. Reclaimed water shall not be used to fill swimming pools, hot tubs, or wading pools. *[62-610.469(4)]*
12. Low trajectory nozzles, or other means to minimize aerosol formation shall be used within 100 feet from outdoor public eating, drinking, or bathing facilities. *[62-610.471(6)]*
13. A setback distance of 100 feet shall be maintained from indoor aesthetic features using reclaimed water to adjacent indoor public eating and drinking facilities. *[62-610.471(8)]*
14. The public shall be notified of the use of reclaimed water. This shall be accomplished by posting of advisory signs in areas where reuse is practiced, notes on scorecards, or other methods. *[62-610.468(2)]*
15. All new advisory signs and labels on vaults, service boxes, or compartments that house hose bibbs along with all labels on hose bibbs, valves, and outlets shall bear the words "do not drink" and "no beber" along with the equivalent standard international symbol. In addition to the words "do not drink" and "no beber," advisory signs posted at storage ponds and decorative water features shall also bear the words "do not swim" and "no nadár" along with the equivalent standard international symbols. Existing advisory signs and labels shall be retrofitted, modified, or replaced in order to comply with the revised wording requirements. For existing advisory signs and labels this retrofit, modification, or replacement shall occur within 365 days after the date of this permit. For labels on existing vaults, service boxes, or compartments housing hose bibbs this retrofit, modification, or replacement shall occur within 730 days after the date of this permit. *[62-610.468, 62-610.469]*
16. The permittee shall ensure that users of reclaimed water are informed about the origin, nature, and characteristics of reclaimed water; the manner in which reclaimed water can be safely used; and limitations on the use of reclaimed water. Notification is required at the time of initial connection to the reclaimed water

PERMITTEE: Brevard County Utility Services Department
FACILITY: BCUD/South Central Regional

PERMIT NUMBER: FL0102679
EXPIRATION DATE: July 11, 2026

distribution system and annually after the reuse system is placed into operation. A description of on-going public notification activities shall be included in the Annual Reuse Report. [62-610.468(6)]

17. Routine aquatic weed control and regular maintenance of storage pond embankments and access areas are required. [62-610.414(8)]
18. Overflows from emergency discharge facilities on storage ponds shall be reported as abnormal events in accordance with Permit Condition IX.20. [62-610.800(9)]

Supplemental Water Supplies - Discharge of Stormwater into the Sewerage System

19. Introduction of stormwater into the sewerage system shall be limited to dry-weather, low-flow conditions in the sanitary sewerage system. [62-610.472(3)(c)]

V. OPERATION AND MAINTENANCE REQUIREMENTS

A. Staffing Requirements

1. During the period of operation authorized by this permit, the wastewater facilities shall be operated under the supervision of one or more operators certified in accordance with Chapter 62-602, F.A.C. In accordance with Chapter 62-699, F.A.C., this facility is a Category I, Class A facility and, at a minimum, operators with appropriate certification must be on the site as follows:

A Class C or higher operator 6 hours/day for 7 days/week. The lead/chief operator must be a Class A operator, or higher.

[62-620.630(3)][62-699.310] [62-610.462]

2. The lead/chief operator shall be employed at the plant full time. "Full time" shall mean at least 4 days per week, working a minimum of 35 hours per week, including leave time. A licensed operator shall be on-site and in charge of each required shift for periods of required staffing time when the lead/chief operator is not on-site. An operator meeting the lead/chief operator class for the treatment plant shall be available during all periods of plant operation. "Available" means able to be contacted as needed to initiate the appropriate action in a timely manner. [62-699.311(10), (6) and (1)]
3. An operator meeting the lead/chief operator class for the plant shall be available during all periods of plant operation. "Available" means able to be contacted as needed to initiate the appropriate action in a timely manner. [62-699.311(1)]

B. Capacity Analysis Report and Operation and Maintenance Performance Report Requirements

1. The application to renew this permit shall include an updated capacity analysis report prepared in accordance with Rule 62-600.405, F.A.C. [62-600.405(5)]
2. The application to renew this permit shall include a detailed operation and maintenance performance report prepared in accordance with Rule 62-600.735, F.A.C. [62-600.735(1)]

C. Recordkeeping Requirements

1. The permittee shall maintain the following records and make them available for inspection at the following address: on the site of the permitted facility.
 - a. Records of all compliance monitoring information, including all calibration and maintenance records and all original strip chart recordings or electronic monitoring and recording for continuous monitoring

PERMITTEE: Brevard County Utility Services Department
FACILITY: BCUD/South Central Regional

PERMIT NUMBER: FL0102679
EXPIRATION DATE: July 11, 2026

- instrumentation, including, if applicable, a copy of the laboratory certification showing the certification number of the laboratory, for at least three years from the date the sample or measurement was taken;
- b. Copies of all reports required by this permit for at least three years from the date the report was prepared;
 - c. Records of all data, including reports and documents, used to complete the application for this permit for at least three years from the date the application was filed;
 - d. Monitoring information, including a copy of the laboratory certification showing the laboratory certification number, related to the residuals use and disposal activities for the time period set forth in Chapter 62-640, F.A.C., for at least three years from the date of sampling or measurement;
 - e. A copy of the current wastewater facility permit;
 - f. Copies of the current operation and maintenance manuals for the wastewater facility and the collection/transmission systems owned or operated by the wastewater facility permittee as required by Chapters 62-600 and 62-604, F.A.C.;
 - g. A copy of any required record drawings for the wastewater facility and the collection/transmission systems owned or operated by the wastewater facility permittee;
 - h. Copies of the licenses of the current certified operators;
 - i. Copies of the logs and schedules showing plant operations and equipment maintenance for three years from the date of the logs or schedules. The logs shall, at a minimum, include identification of the plant; the signature and license number of the operator(s) and the signature of the person(s) making any entries; date and time in and out; specific operation and maintenance activities, including any preventive maintenance or repairs made or requested; results of tests performed and samples taken, unless documented on a laboratory sheet; and notation of any notification or reporting completed in accordance with Rule 62-602.650(3), F.A.C. The logs shall be maintained on-site in a location accessible to 24-hour inspection, protected from weather damage, and current to the last operation and maintenance performed; and
 - j. Records of biosolids quantities, treatment, monitoring, and hauling for at least five years.

[62-620.350, 62-604.500, 62-602.650, 62-640.650(4)]

VI. SCHEDULES

1. In accordance with section 403.088(2)(e) and (f), Florida Statutes, a compliance schedule for this facility is contained in Consent Order OGC #21-0180, which is hereby incorporated by reference.
2. The following improvement actions shall be completed according to the following schedule:

Improvement Action	Completion Date
1. Develop a collection system operation and maintenance manual in accordance with permit condition VIII. 6	Within 8 months of permit issuance

[62-620.320(6)]

3. The permittee is not authorized to discharge to waters of the state after the expiration date of this permit, unless:
 - a. The permittee has applied for renewal of this permit at least 180 days before the expiration date of this permit using the appropriate forms listed in Rule 62-620.910, F.A.C., and in the manner established in the Department of Environmental Protection Guide to Permitting Wastewater Facilities or Activities Under Chapter 62-620, F.A.C., including submittal of the appropriate processing fee set forth in Rule 62-4.050, F.A.C.; or
 - b. The permittee has made complete the application for renewal of this permit before the permit expiration date.

PERMITTEE: Brevard County Utility Services Department
FACILITY: BCUD/South Central Regional

PERMIT NUMBER: FL0102679
EXPIRATION DATE: July 11, 2026

VII. INDUSTRIAL PRETREATMENT PROGRAM REQUIREMENTS

1. This facility is not required to have a pretreatment program at this time. *[62-625.500]*

VIII. OTHER SPECIFIC CONDITIONS

1. The permittee shall comply with all conditions and requirements for reuse contained in their consumptive use permit issued by the Water Management District, if such requirements are consistent with Department rules. *[62-610.800(10)]*
2. In the event that the wastewater facilities or equipment, including collection/transmission systems, no longer function as intended, are no longer safe in terms of public health and safety (including inactive or abandoned facilities), or odor, noise, aerosol drift, or lighting adversely affects neighboring developed areas at the levels prohibited by paragraphs 62-600.400(2)(a) and 62-604.400(2)(c), F.A.C., corrective action (which may include additional maintenance or modifications of the permitted facilities) shall be taken by the permittee. Other corrective action may be required to ensure compliance with rules of the Department. Additionally, the treatment, management, use or land application of residuals shall not cause a violation of the odor prohibition in subsection 62-296.320(2), F.A.C. *[62-600.410(5), 62-604.500(3) and 62-640.400(6)]*
3. All collection/transmission systems shall be operated and maintained so as to provide uninterrupted service. *[62-604.500(2)]*
4. The deliberate introduction of stormwater in any amount into collection/transmission systems designed solely for the introduction (and conveyance) of domestic/industrial wastewater; or the deliberate introduction of stormwater into collection/transmission systems designed for the introduction or conveyance of combinations of storm and domestic/industrial wastewater in amounts which may reduce the efficiency of pollutant removal by the treatment plant is prohibited, except as provided by Rule 62-610.472, F.A.C. *[62-604.130(4)]*
5. Cross-connection, as defined in Rule 62-550.200, F.A.C., between the wastewater facility, including the collection/transmission system, and a potable water system is prohibited. *[62-550.360][62-604.130(3)]*
6. The collection/transmission operation and maintenance manual shall be maintained and revised periodically in accordance with subsection 62-604.500(4), F.A.C., to reflect any alterations performed or to reflect experience resulting from operation. However, a new operation and maintenance manual is not required to be developed for each project if there is already an existing manual that is applicable to the facilities being constructed. *[62-604.500(4)]*
7. Collection/transmission system overflows shall be reported to the Department in accordance with Permit Condition IX. 20. *[62-604.550] [62-620.610(20)]*
8. The operating authority of a collection/transmission system and the permittee of a treatment plant are prohibited from accepting connections of wastewater discharges which have not received necessary pretreatment or which contain materials or pollutants (other than normal domestic wastewater constituents):
 - a. Which may cause fire or explosion hazards; or
 - b. Which may cause excessive corrosion or other deterioration of wastewater facilities due to chemical action or pH levels; or
 - c. Which are solid or viscous and obstruct flow or otherwise interfere with wastewater facility operations or treatment; or
 - d. Which result in the wastewater temperature at the introduction of the treatment plant exceeding 40°C or otherwise inhibiting treatment; or
 - e. Which result in the presence of toxic gases, vapors, or fumes that may cause worker health and safety problems.

PERMITTEE: Brevard County Utility Services Department
FACILITY: BCUD/South Central Regional

PERMIT NUMBER: FL0102679
EXPIRATION DATE: July 11, 2026

[62-604.130(5)]

9. The treatment facility, storage ponds for Part II systems, rapid infiltration basins, and/or infiltration trenches shall be enclosed with a fence or otherwise provided with features to discourage the entry of animals and unauthorized persons. *[62-610.418(1) and 62-600.400(2)(b)]*
10. Screenings and grit removed from the wastewater facilities shall be collected in suitable containers and hauled to a Department approved Class I landfill or to a landfill approved by the Department for receipt/disposal of screenings and grit. *[62-701.300(1)(a)]*
11. Where required by Chapter 471 or Chapter 492, F.S., applicable portions of reports that must be submitted under this permit shall be signed and sealed by a professional engineer or a professional geologist, as appropriate. *[62-620.310(4)]*
12. The permittee shall provide verbal notice to the Department's Central District Office as soon as practical after discovery of a sinkhole or other karst feature within an area for the management or application of wastewater, wastewater residuals (sludges), or reclaimed water. The permittee shall immediately implement measures appropriate to control the entry of contaminants, and shall detail these measures to the Department's Central District Office in a written report within 7 days of the sinkhole discovery. *[62-620.320(6)]*
13. The permittee shall provide notice to the Department of the following:
 - a. Any new introduction of pollutants into the facility from an industrial discharger which would be subject to Chapter 403, F.S., and the requirements of Chapter 62-620, F.A.C., if it were directly discharging those pollutants; and
 - b. Any substantial change in the volume or character of pollutants being introduced into that facility by a source which was identified in the permit application and known to be discharging at the time the permit was issued.Notice shall include information on the quality and quantity of effluent introduced into the facility and any anticipated impact of the change on the quantity or quality of effluent or reclaimed water to be discharged from the facility. If pretreatment becomes necessary, this permit may be modified to require the permittee to develop and implement a local pretreatment program in accordance with the requirements of Chapter 62-625, F.A.C.

[62-620.625(2)]

IX. GENERAL CONDITIONS

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are binding and enforceable pursuant to Chapter 403, Florida Statutes. Any permit noncompliance constitutes a violation of Chapter 403, Florida Statutes, and is grounds for enforcement action, permit termination, permit revocation and reissuance, or permit revision. *[62-620.610(1)]*
2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviations from the approved drawings, exhibits, specifications, or conditions of this permit constitutes grounds for revocation and enforcement action by the Department. *[62-620.610(2)]*
3. As provided in subsection 403.087(7), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor authorize any infringement of federal, state, or local laws or regulations. This permit is not a waiver of or approval of any other Department permit or authorization that may be required for other aspects of the total project which are not addressed in this permit. *[62-620.610(3)]*

PERMITTEE: Brevard County Utility Services Department
FACILITY: BCUD/South Central Regional

PERMIT NUMBER: FL0102679
EXPIRATION DATE: July 11, 2026

4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title. *[62-620.610(4)]*
5. This permit does not relieve the permittee from liability and penalties for harm or injury to human health or welfare, animal or plant life, or property caused by the construction or operation of this permitted source; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department. The permittee shall take all reasonable steps to minimize or prevent any discharge, reuse of reclaimed water, or residuals use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. *[62-620.610(5)]*
6. If the permittee wishes to continue an activity regulated by this permit after its expiration date, the permittee shall apply for and obtain a new permit. *[62-620.610(6)]*
7. The permittee shall at all times properly operate and maintain the facility and systems of treatment and control, and related appurtenances, that are installed and used by the permittee to achieve compliance with the conditions of this permit. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to maintain or achieve compliance with the conditions of the permit. *[62-620.610(7)]*
8. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit revision, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition. *[62-620.610(8)]*
9. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, including an authorized representative of the Department and authorized EPA personnel, when applicable, upon presentation of credentials or other documents as may be required by law, and at reasonable times, depending upon the nature of the concern being investigated, to:
 - a. Enter upon the permittee's premises where a regulated facility, system, or activity is located or conducted, or where records shall be kept under the conditions of this permit;
 - b. Have access to and copy any records that shall be kept under the conditions of this permit;
 - c. Inspect the facilities, equipment, practices, or operations regulated or required under this permit; and
 - d. Sample or monitor any substances or parameters at any location necessary to assure compliance with this permit or Department rules.

[62-620.610(9)]

10. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data, and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except as such use is proscribed by Section 403.111, F.S., or Rule 62-620.302, F.A.C. Such evidence shall only be used to the extent that it is consistent with the Florida Rules of Civil Procedure and applicable evidentiary rules. *[62-620.610(10)]*
11. When requested by the Department, the permittee shall within a reasonable time provide any information required by law which is needed to determine whether there is cause for revising, revoking and reissuing, or terminating this permit, or to determine compliance with the permit. The permittee shall also provide to the Department upon request copies of records required by this permit to be kept. If the permittee becomes aware of relevant facts that were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be promptly submitted or corrections promptly reported to the Department. *[62-620.610(11)]*

PERMITTEE: Brevard County Utility Services Department
FACILITY: BCUD/South Central Regional

PERMIT NUMBER: FL0102679
EXPIRATION DATE: July 11, 2026

12. Unless specifically stated otherwise in Department rules, the permittee, in accepting this permit, agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance; provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules. A reasonable time for compliance with a new or amended surface water quality standard, other than those standards addressed in Rule 62-302.500, F.A.C., shall include a reasonable time to obtain or be denied a mixing zone for the new or amended standard. *[62-620.610(12)]*
13. The permittee, in accepting this permit, agrees to pay the applicable regulatory program and surveillance fee in accordance with Rule 62-4.052, F.A.C. *[62-620.610(13)]*
14. This permit is transferable only upon Department approval in accordance with Rule 62-620.340, F.A.C. The permittee shall be liable for any noncompliance of the permitted activity until the transfer is approved by the Department. *[62-620.610(14)]*
15. The permittee shall give the Department written notice at least 60 days before inactivation or abandonment of a wastewater facility or activity and shall specify what steps will be taken to safeguard public health and safety during and following inactivation or abandonment. *[62-620.610(15)]*
16. The permittee shall apply for a revision to the Department permit in accordance with Rules 62-620.300, F.A.C., and the Department of Environmental Protection Guide to Permitting Wastewater Facilities or Activities Under Chapter 62-620, F.A.C., at least 90 days before construction of any planned substantial modifications to the permitted facility is to commence or with Rule 62-620.325(2), F.A.C., for minor modifications to the permitted facility. A revised permit shall be obtained before construction begins except as provided in Rule 62-620.300, F.A.C. *[62-620.610(16)]*
17. The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. The permittee shall be responsible for any and all damages which may result from the changes and may be subject to enforcement action by the Department for penalties or revocation of this permit. The notice shall include the following information:
 - a. A description of the anticipated noncompliance;
 - b. The period of the anticipated noncompliance, including dates and times; and
 - c. Steps being taken to prevent future occurrence of the noncompliance.*[62-620.610(17)]*
18. Sampling and monitoring data shall be collected and analyzed in accordance with Rule 62-4.246 and Chapters 62-160, 62-600, and 62-610, F.A.C., and 40 CFR 136, as appropriate.
 - a. Monitoring results shall be reported at the intervals specified elsewhere in this permit and shall be reported on a Discharge Monitoring Report (DMR), DEP Form 62-620.910(10), or as specified elsewhere in the permit.
 - b. If the permittee monitors any contaminant more frequently than required by the permit, using Department approved test procedures, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR.
 - c. Calculations for all limitations which require averaging of measurements shall use an arithmetic mean unless otherwise specified in this permit.
 - d. Except as specifically provided in Rule 62-160.300, F.A.C., any laboratory test required by this permit shall be performed by a laboratory that has been certified by the Department of Health Environmental Laboratory Certification Program (DOH ELCP). Such certification shall be for the matrix, test method and analyte(s) being measured to comply with this permit. For domestic wastewater facilities, testing for parameters listed in Rule 62-160.300(4), F.A.C., shall be conducted under the direction of a certified operator.

PERMITTEE: Brevard County Utility Services Department
FACILITY: BCUD/South Central Regional

PERMIT NUMBER: FL0102679
EXPIRATION DATE: July 11, 2026

- e. Field activities including on-site tests and sample collection shall follow the applicable standard operating procedures described in DEP-SOP-001/01 adopted by reference in Chapter 62-160, F.A.C.
- f. Alternate field procedures and laboratory methods may be used where they have been approved in accordance with Rules 62-160.220, and 62-160.330, F.A.C.

[62-620.610(18)]

19. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule detailed elsewhere in this permit shall be submitted no later than 14 days following each schedule date. [62-620.610(19)]
20. The permittee shall report to the Department any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within five days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance including exact dates and time, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. For noncompliance events related to sanitary sewer overflows or bypass events, these reports must include the data described above (with the exception of time of discovery) as well as the type of event (sanitary sewer overflows or bypass events), type of sewer overflow (e.g., manhole), discharge volumes by the treatment works treating domestic sewage, types of human health and environmental impacts of the sewer overflow event, and whether the noncompliance was related to wet weather. The written submission may be provided electronically using the Department's Business Portal at <http://www.fldepportal.com/go/> (via "Submit" followed by "Report" or "Registration/Notification"). Notice required under paragraph (d) may be provided together with the written submission using the Business Portal. All noncompliance events related to sanitary sewer overflows or bypass events submitted after December 21, 2020 shall be submitted electronically.
 - (a) The following shall be included as information which must be reported within 24 hours under this condition:
 1. Any unanticipated bypass which causes any reclaimed water or the effluent to exceed any permit limitation or results in an unpermitted discharge,
 2. Any upset which causes any reclaimed water or the effluent to exceed any limitation in the permit,
 3. Violation of a maximum daily discharge limitation for any of the pollutants specifically listed in the permit for such notice, and
 4. Any unauthorized discharge to surface or ground waters.
 - (b) Oral reports as required by this subsection shall be provided as follows:
 1. For unauthorized releases or spills of treated or untreated wastewater reported pursuant to subparagraph (a)4. that are in excess of 1,000 gallons per incident, or where information indicates that public health or the environment will be endangered, oral reports shall be provided to the Department by calling the STATE WATCH OFFICE TOLL FREE NUMBER (800) 320-0519, as soon as practical, but no later than 24 hours from the time the permittee becomes aware of the discharge. The permittee, to the extent known, shall provide the following information to the State Watch Office:
 - a. Name, address, and telephone number of person reporting;
 - b. Name, address, and telephone number of permittee or responsible person for the discharge;
 - c. Date and time of the discharge and status of discharge (ongoing or ceased);
 - d. Characteristics of the wastewater spilled or released (untreated or treated, industrial or domestic wastewater);
 - e. Estimated amount of the discharge;
 - f. Location or address of the discharge;
 - g. Source and cause of the discharge;
 - h. Whether the discharge was contained on-site, and cleanup actions taken to date;
 - i. Description of area affected by the discharge, including name of water body affected, if any; and
 - j. Other persons or agencies contacted.

PERMITTEE: Brevard County Utility Services Department
FACILITY: BCUD/South Central Regional

PERMIT NUMBER: FL0102679
EXPIRATION DATE: July 11, 2026

2. Oral reports, not otherwise required to be provided pursuant to subparagraph (b)1. above, shall be provided to the Department within 24 hours from the time the permittee becomes aware of the circumstances.

- (c) If the oral report has been received within 24 hours, the noncompliance has been corrected, and the noncompliance did not endanger health or the environment, the Department shall waive the written report.
- (d) In accordance with Section 403.077, F.S., unauthorized releases or spills reportable to the State Watch Office pursuant to subparagraph (b)1. above shall also be reported to the Department within 24 hours from the time the permittee becomes aware of the discharge. The permittee shall provide to the Department information reported to the State Watch Office. Notice of unauthorized releases or spills may be provided to the Department through the Department's Public Notice of Pollution web page at <https://floridadep.gov/pollutionnotice>.
1. If, after providing notice pursuant to paragraph (d) above, the permittee determines that a reportable unauthorized release or spill did not occur or that an amendment to the notice is warranted, the permittee may submit additional notice to the Department documenting such determination.
 2. If, after providing notice pursuant to paragraph (d) above, the permittee discovers that a reportable unauthorized release or spill has migrated outside the property boundaries of the installation, the permittee must provide an additional notice to the Department that the release has migrated outside the property boundaries within 24 hours after its discovery of the migration outside of the property boundaries.

[62-620.610(20)] [62-620.100(3)] [403.077, F.S.]

21. The permittee shall report all instances of noncompliance not reported under Permit Conditions IX.17., IX.18., or IX.19. of this permit at the time monitoring reports are submitted. This report shall contain the same information required by Permit Condition IX.20. of this permit. [62-620.610(21)]

22. Bypass Provisions.

- a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment works.
- b. Bypass is prohibited, and the Department may take enforcement action against a permittee for bypass, unless the permittee affirmatively demonstrates that:
 - (1) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; and
 - (2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
 - (3) The permittee submitted notices as required under Permit Condition IX.22.c. of this permit.
- c. If the permittee knows in advance of the need for a bypass, it shall submit prior notice to the Department, if possible at least 10 days before the date of the bypass. The permittee shall submit notice of an unanticipated bypass within 24 hours of learning about the bypass as required in Permit Condition IX.20. of this permit. A notice shall include a description of the bypass and its cause; the period of the bypass, including exact dates and times; if the bypass has not been corrected, the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent recurrence of the bypass.
- d. The Department shall approve an anticipated bypass, after considering its adverse effect, if the permittee demonstrates that it will meet the three conditions listed in Permit Condition IX.22.b.(1) through (3) of this permit.
- e. A permittee may allow any bypass to occur which does not cause reclaimed water or effluent limitations to be exceeded if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Permit Condition IX.22.b. through d. of this permit.

[62-620.610(22)]

PERMITTEE: Brevard County Utility Services Department
FACILITY: BCUD/South Central Regional

PERMIT NUMBER: FL0102679
EXPIRATION DATE: July 11, 2026

23. Upset Provisions.

- a. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based effluent limitations because of factors beyond the reasonable control of the permittee.
 - (1) An upset does not include noncompliance caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, careless or improper operation.
 - (2) An upset constitutes an affirmative defense to an action brought for noncompliance with technology based permit effluent limitations if the requirements of upset provisions of Rule 62-620.610, F.A.C., are met.
- b. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed contemporaneous operating logs, or other relevant evidence that:
 - (1) An upset occurred and that the permittee can identify the cause(s) of the upset;
 - (2) The permitted facility was at the time being properly operated;
 - (3) The permittee submitted notice of the upset as required in Permit Condition IX.20. of this permit; and
 - (4) The permittee complied with any remedial measures required under Permit Condition IX.5. of this permit.
- c. In any enforcement proceeding, the burden of proof for establishing the occurrence of an upset rests with the permittee.
- d. Before an enforcement proceeding is instituted, no representation made during the Department review of a claim that noncompliance was caused by an upset is final agency action subject to judicial review.

[62-620.610(23)]

Executed in Orlando, Florida.

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION



Reggie Phillips
Program Administrator
Permitting and Waste Cleanup Program

Attachment(s):
Discharge Monitoring Report
"Pathogen Monitoring" Form
Monitor Well Completion Report
Map of the General Reuse Service Area

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

When Completed submit this report to: <https://www.fideportal.com/go/>

PERMITTEE NAME: Brevard County Utility Services Department
 MAILING ADDRESS: 2725 Judge Fran Jamieson Way
 BLDG. A-213
 Melbourne, Florida 32940-6605
 FACILITY: BCUD/South Central Regional
 LOCATION: 10001 N Wickham Rd
 Melbourne, FL 32940-6604

PERMIT NUMBER: FL0102679-018-DW1P

Expiration Date: July 11, 2026

LIMIT: Final MI D-001

REPORT FREQUENCY: Monthly
 PROGRAM: Domestic

MONITORING GROUP NUMBER: Surface Discharge, including Influent

RE-SUBMITTED DMR:

NO DISCHARGE FROM SITE:

MONITORING PERIOD From: _____ To: _____

COUNTY: Brevard
 OFFICE: Central District

Parameter	Quantity or Loading	Units	Quality or Concentration	Units	No. Ex.	Frequency of Analysis	Sample Type
Flow (Outfall D-001)							
Sample Measurement							
PARM Code 50050 Y Mon. Site No. FLW-9	0.990 (An.Avg.)	MGD				Continuous	Flow Totalizer
Flow (Outfall D-001)							
Sample Measurement							
PARM Code 50050 I Mon. Site No. FLW-9	Report (Day.Max.)	MGD				Continuous	Flow Totalizer
BOD, Carbonaceous 5 day, 20C							
Sample Measurement							
PARM Code 80082 Y Mon. Site No. WEP-1	Report (Mo.Avg.)		3.0 (An.Avg.)	mg/L		5 Days/Week	24-hr FPC
BOD, Carbonaceous 5 day, 20C							
Sample Measurement							
PARM Code 80082 P Mon. Site No. WEP-1	6.0 (Max.)		4.5 (Max.Wk.Avg.)	mg/L		5 Days/Week	24-hr FPC
BOD, Carbonaceous 5 day, 20C							
Sample Measurement							
PARM Code 80082 Q Mon. Site No. WEP-1	Report (Mo.Total)	lb/mth				Monthly	Calculated
Solids, Total Suspended							
Sample Measurement							
PARM Code 00530 Y Mon. Site No. WEP-1			3.0 (An.Avg.)	mg/L		5 Days/Week	Grab

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

NAME/TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE NO	DATE (mm/dd/yyyy)

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here):

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: BCUJ/South Central Regional

MONITORING GROUP NUMBER: D-001

PERMIT NUMBER: FL0102679-018-DW1P

MONITORING PERIOD From: _____ To: _____

Parameter	Sample Measurement	Quantity or Loading	Units	Quality or Concentration	Units	No. Ex.	Frequency of Analysis	Sample Type
Solids, Total Suspended	Sample Measurement							
PARM Code 00530 P Mon. Site No. WEP-1	Permit Requirement			6.0 (Max.)			5 Days/Week	Grab
Coliform, Fecal	Sample Measurement							
PARM Code 74055 P Mon. Site No. WEP-1	Permit Requirement						5 Days/Week	Grab
pH	Sample Measurement							
PARM Code 00400 P Mon. Site No. WEP-1	Permit Requirement			6.5 (Min.)			Continuous	Meter
Nitrogen, Total	Sample Measurement							
PARM Code 00600 P Mon. Site No. WEP-1	Permit Requirement			2.4 (Max. Wk. Avg.)			Weekly	24-hr FPC
Nitrogen, Kjeldahl, Total (as N)	Sample Measurement							
PARM Code 00625 P Mon. Site No. WEP-1	Permit Requirement						Weekly	24-hr FPC
Nitrite plus Nitrate, Total I det. (as N)	Sample Measurement							
PARM Code 00630 P Mon. Site No. WEP-1	Permit Requirement						Weekly	24-hr FPC
Nitrogen, Ammonia, Total (as N) (Effluent)	Sample Measurement							
PARM Code 00610 P Mon. Site No. WEP-1	Permit Requirement						Weekly	24-hr FPC
Nitrogen, Ammonia, Total (as N) (calculated limit)	Sample Measurement							
PARM Code 00610 Q Mon. Site No. WEP-1	Permit Requirement						Weekly	Calculated
Nitrogen, Ammonia, Total (as N) (Effluent minus calculated limit)	Sample Measurement							
PARM Code 00610 R Mon. Site No. WEP-1	Permit Requirement						Weekly	Calculated
Nitrogen, Ammonia, Total (as N)	Sample Measurement							
PARM Code 00610 S Mon. Site No. WEP-1	Permit Requirement						Monthly	Calculated

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: BCUD/South Central Regional

MONITORING GROUP D-001

PERMIT NUMBER: FL0102679-018-DWIP

NUMBER:

MONITORING PERIOD From: _____ To: _____

Parameter	Quantity or Loading	Units	Quality or Concentration	Units	No. Ex.	Frequency of Analysis	Sample Type
Phosphorus, Total (as P)	Sample Measurement						
PARM Code 00665 P Mon. Site No. WEP-1	Permit Requirement		0.24 (Max. Wk. Avg.)			Weekly	24-hr FPC
Phosphorus, Total (as P)	Sample Measurement						
PARM Code 00665 Q Mon. Site No. WEP-1	Permit Requirement	lb/mth	0.32 (Max.)			Monthly	Calculated
Phosphate, Ortho (as P)	Sample Measurement						
PARM Code 70507 P Mon. Site No. WEP-1	Permit Requirement		Report (Mo. Total)			Weekly	24-hr FPC
Sulfate, Total	Sample Measurement						
PARM Code 00945 P Mon. Site No. WEP-1	Permit Requirement		Report (Mo. Avg.)	mg/L		Weekly	24-hr FPC
Chloride (as Cl)	Sample Measurement						
PARM Code 00940 P Mon. Site No. WEP-1	Permit Requirement		Report (Mo. Avg.)	mg/L		Weekly	24-hr FPC
Alkalinity, Total (as CaCO3)	Sample Measurement						
PARM Code 00410 P Mon. Site No. WEP-1	Permit Requirement		Report (Mo. Avg.)	mg/L		Weekly	24-hr FPC
Specific Conductance	Sample Measurement						
PARM Code 00095 P Mon. Site No. WEP-1	Permit Requirement		Report (Mo. Avg.)	umhos/cm		Weekly	Grab
Temperature (C), Water	Sample Measurement						
PARM Code 00010 P Mon. Site No. WEP-1	Permit Requirement		Report (Mo. Avg.)	Deg C		Monthly	Meter
Oxygen, Dissolved (DO)	Sample Measurement						
PARM Code 00300 P Mon. Site No. WEP-1	Permit Requirement		Report (Mo. Avg.)	mg/L		Monthly	Grab
Water Level at sample collection time	Sample Measurement						
PARM Code 85327 P Mon. Site No. WEP-1	Permit Requirement	ft	Report (Mo. Avg.)			Monthly	Meter

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

When Completed submit this report to: <https://www.fdepportal.com/go/>

PERMITTEE NAME: Brevard County Utility Services Department
 MAILING ADDRESS: 2725 Judge Fran Jamieson Way
 BLDG. A-213
 Melbourne, Florida 32940-6605

FACILITY: BCUD/South Central Regional
 LOCATION: 10001 N Wickham Rd
 Melbourne, FL 32940-6604

COUNTY: Brevard
 OFFICE: Central District

PERMIT NUMBER: FL0102679-018-DW1P

LIMIT: Final MI
 CLASS SIZE: R-001

MONITORING GROUP NUMBER: Public Access Reuse, with Influent
 RE-SUBMITTED DMR:
 NO DISCHARGE FROM SITE:
 MONITORING PERIOD From: _____ To: _____

Expiration Date: July 11, 2026

REPORT FREQUENCY PROGRAM: Monthly Domestic

Parameter	Quantity or Loading	Units	Quality or Concentration	Units	No. Ex.	Frequency of Analysis	Sample Type
Flow (Public access reuse)	Sample Measurement						
PARAM Code 50050 Y Mon. Site No. FLW-10	Report (An.Avg.)	MGD				Continuous	Flow Totalizer
Flow (Public access reuse)	Sample Measurement						
PARAM Code 50050 1 Mon. Site No. FLW-10	Report (Mo.Avg.)	MGD				Continuous	Flow Totalizer
BOD, Carbonaceous 5 day, 20C							
PARAM Code 80082 Y Mon. Site No. EFA-1			20.0 (An.Avg.)	mg/L		5 Days/Week	24-hr FPC
BOD, Carbonaceous 5 day, 20C							
PARAM Code 80082 A Mon. Site No. EFA-1			60.0 (Max.)	mg/L		5 Days/Week	24-hr FPC
BOD, Carbonaceous 5 day, 20C							
PARAM Code 80082 P Mon. Site No. EFA-2			20.0 (An.Avg.)	mg/L		5 Days/Week	24-hr FPC
BOD, Carbonaceous 5 day, 20C							
PARAM Code 80082 Q Mon. Site No. EFA-2			60.0 (Max.)	mg/L		5 Days/Week	24-hr FPC

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

NAME/TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE NO	DATE (mm/dd/yyyy)

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here):

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: BCUD/South Central Regional

MONITORING GROUP R-001

PERMIT NUMBER: FL0102679-018-DW1P

NUMBER:

From: _____ To: _____

MONITORING PERIOD

Parameter	Quantity or Loading	Units	Quality or Concentration	Units	No. Ex.	Frequency of Analysis	Sample Type
Solids, Total Suspended	Sample Measurement						
PARAM Code 00530 B Mon. Site No. EFB-1	Permit Requirement		5.0 (Max.)	mg/L		4 Days/Week	Grab
Solids, Total Suspended	Sample Measurement						
PARAM Code 00530 P Mon. Site No. EFB-2	Permit Requirement		5.0 (Max.)	mg/L		4 Days/Week	Grab
Coliform, Fecal	Sample Measurement						
PARAM Code 74055 A Mon. Site No. EFA-1	Permit Requirement		25 (Max.)	#/100mL		4 Days/Week	Grab
Coliform, Fecal	Sample Measurement						
PARAM Code 74055 P Mon. Site No. EFA-2	Permit Requirement		25 (Max.)	#/100mL		4 Days/Week	Grab
Coliform, Fecal, % less than detection	Sample Measurement						
PARAM Code 51005 A Mon. Site No. EFA-1	Permit Requirement	75 (Min.,Mo.Total)		percent		4 Days/Week	Calculated
Coliform, Fecal, % less than detection	Sample Measurement						
PARAM Code 51005 P Mon. Site No. EFA-2	Permit Requirement	75 (Min.,Mo.Total)		percent		4 Days/Week	Calculated
pH	Sample Measurement						
PARAM Code 00400 A Mon. Site No. EFA-1	Permit Requirement	6.0 (Min.)	8.5 (Max.)	s.u.		Continuous	Meter
pH	Sample Measurement						
PARAM Code 00400 P Mon. Site No. EFA-2	Permit Requirement	6.0 (Min.)	8.5 (Max.)	s.u.		Continuous	Meter
Chlorine, Total Residual (For Disinfection)	Sample Measurement						
PARAM Code 50060 A Mon. Site No. EFA-1	Permit Requirement	1.0 (Min.)		mg/L		Continuous	Meter
Chlorine, Total Residual (For Disinfection)	Sample Measurement						
PARAM Code 50060 P Mon. Site No. EFA-2	Permit Requirement	1.0 (Min.)		mg/L		Continuous	Meter

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: BCUD/South Central Regional

MONITORING GROUP NUMBER: R-001

PERMIT NUMBER: FL0102679-018-DWIP

MONITORING PERIOD From: _____ To: _____

Parameter	Sample Measurement	Quantity or Loading	Units	Quality or Concentration		Units	No. Ex.	Frequency of Analysis	Sample Type
Turbidity	Sample Measurement								
PARAM Code 00070 B Mon. Site No. EFB-1	Permit Requirement				Report (Max.)	NTU		Continuous	Meter
Turbidity	Sample Measurement								
PARAM Code 00070 P Mon. Site No. EFB-2	Permit Requirement				Report (Max.)	NTU		Continuous	Meter
Nitrogen, Total	Sample Measurement								
PARAM Code 00600 Y Mon. Site No. EFA-1	Permit Requirement			10.0 (An.Avg.)		mg/L		Weekly	24-hr FPC
Nitrogen, Total	Sample Measurement								
PARAM Code 00600 A Mon. Site No. EFA-1	Permit Requirement				Report (Mo.Avg.)	mg/L		Weekly	24-hr FPC
Nitrogen, Total	Sample Measurement								
PARAM Code 00600 P Mon. Site No. EFA-2	Permit Requirement			10.0 (An.Avg.)		mg/L		Weekly	24-hr FPC
Nitrogen, Total	Sample Measurement								
PARAM Code 00600 Q Mon. Site No. EFA-2	Permit Requirement				Report (Mo.Avg.)	mg/L		Weekly	24-hr FPC
Phosphorus, Total (as P)	Sample Measurement								
PARAM Code 00665 Y Mon. Site No. EFA-1	Permit Requirement			6.0 (An.Avg.)		mg/L		Weekly	24-hr FPC
Phosphorus, Total (as P)	Sample Measurement								
PARAM Code 00665 A Mon. Site No. EFA-1	Permit Requirement				Report (Mo.Avg.)	mg/L		Weekly	24-hr FPC
Phosphorus, Total (as P)	Sample Measurement								
PARAM Code 00665 P Mon. Site No. EFA-2	Permit Requirement			6.0 (An.Avg.)		mg/L		Weekly	24-hr FPC
Phosphorus, Total (as P)	Sample Measurement								
PARAM Code 00665 Q Mon. Site No. EFA-2	Permit Requirement				Report (Mo.Avg.)	mg/L		Weekly	24-hr FPC

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: BCUD/South Central Regional

MONITORING GROUP R-001

PERMIT NUMBER: FL0102679-018-DW1P

NUMBER:

MONITORING PERIOD From: _____ To: _____

Parameter	Quantity or Loading	Units	Quality or Concentration	Units	No. Ex.	Frequency of Analysis	Sample Type
Flow (Baytree Golf Course Pond)	Sample Measurement						
PARAM Code 50050 P Mon. Site No. FLW-5	Permit Requirement	MGD	Report (An.Avg.)			Continuous	Flow Totalizer
Flow (Baytree Golf Course Pond)	Sample Measurement						
PARAM Code 50050 Q Mon. Site No. FLW-5	Permit Requirement	MGD	Report (Mo.Avg.)			Continuous	Flow Totalizer
Flow (Viera Golf Course Pond)	Sample Measurement						
PARAM Code 50050 R Mon. Site No. FLW-6	Permit Requirement	MGD	Report (An.Avg.)			Continuous	Flow Totalizer
Flow (Viera Golf Course Pond)	Sample Measurement						
PARAM Code 50050 S Mon. Site No. FLW-6	Permit Requirement	MGD	Report (Mo.Avg.)			Continuous	Flow Totalizer
Flow (Indian River Colony Club)	Sample Measurement						
PARAM Code 50050 T Mon. Site No. FLW-7	Permit Requirement	MGD	Report (An.Avg.)			Continuous	Flow Totalizer
Flow (Indian River Colony Club)	Sample Measurement						
PARAM Code 50050 U Mon. Site No. FLW-7	Permit Requirement	MGD	Report (Mo.Avg.)			Continuous	Flow Totalizer
Flow (Duran Golf Course)	Sample Measurement						
PARAM Code 50050 V Mon. Site No. FLW-8	Permit Requirement	MGD	Report (An.Avg.)			Continuous	Flow Totalizer
Flow (Duran Golf Course)	Sample Measurement						
PARAM Code 50050 W Mon. Site No. FLW-8	Permit Requirement	MGD	Report (Mo.Avg.)			Continuous	Flow Totalizer
Flow (Total Through Plant)	Sample Measurement						
PARAM Code 50050 6 Mon. Site No. FLW-1	Permit Requirement	MGD	12.0 (An.Avg.)			Continuous	Flow Totalizer
Flow (Total Through Plant)	Sample Measurement						
PARAM Code 50050 5 Mon. Site No. FLW-1	Permit Requirement	MGD	Report (3Mo.Avg.)			Continuous	Flow Totalizer

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

When Completed submit this report to: <https://www.fdepportal.com/go/>

PERMITTEE NAME: Brevard County Utility Services Department
 MAILING ADDRESS: 2725 Judge Fran Jamieson Way
 BLDG. A-213
 Melbourne, Florida 32940-6605
 FACILITY: BCUD/South Central Regional
 LOCATION: 10001 N Wickham Rd
 Melbourne, FL 32940-6604

PERMIT NUMBER: FL0102679-018-DWIP
 LMDG: A-213
 CLASS SIZE: Final MI
 MONITORING GROUP NUMBER: R-002
 MONITORING GROUP DESCRIPTION: Influent to manmade wetlands
 RE-SUBMITTED DMR:
 NO DISCHARGE FROM SITE:
 MONITORING PERIOD From: To:

Expiration Date: July 11, 2026
 REPORT FREQUENCY: Monthly
 PROGRAM: Domestic

COUNTY: Brevard
 OFFICE: Central District

Parameter	Quantity or Loading	Units	Quality or Concentration	Units	No. Ex.	Frequency of Analysis	Sample Type
Flow (wetlands from WRF)	Sample Measurement						
PARAM Code 50050 Y Mon. Site No. FLW-11	2.5 (An.Avg.)	MGD				Continuous	Flow Totalizer
Flow (wetlands)	Sample Measurement						
PARAM Code 50050 I Mon. Site No. FLW-11	Report (Mo.Avg.)	MGD				Continuous	Flow Totalizer
BOD, Carbonaceous 5 day, 20C	Sample Measurement						
PARAM Code 80082 Y Mon. Site No. EFA-1	10.0 (Max.)		5.0 (An.Avg.)	mg/L		5 Days/Week	24-hr FPC
BOD, Carbonaceous 5 day, 20C	Sample Measurement						
PARAM Code 80082 A Mon. Site No. EFA-1	10.0 (Max.)		7.5 (Max. Wk.Avg.)	mg/L		5 Days/Week	24-hr FPC
BOD, Carbonaceous 5 day, 20C	Sample Measurement						
PARAM Code 80082 P Mon. Site No. EFA-2			5.0 (An.Avg.)	mg/L		5 Days/Week	24-hr FPC
BOD, Carbonaceous 5 day, 20C	Sample Measurement						
PARAM Code 80082 Q Mon. Site No. EFA-2	10.0 (Max.)		7.5 (Max. Wk.Avg.)	mg/L		5 Days/Week	24-hr FPC

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

NAME/TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE NO	DATE (mm/dd/yyyy)

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here):

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: BCUD/South Central Regional

MONITORING GROUP R-002

PERMIT NUMBER: FL0102679-018-DW1P

NUMBER:

From: _____ To: _____

MONITORING PERIOD

Parameter	Quantity or Loading	Units	Quality or Concentration	Units	No. Ex.	Frequency of Analysis	Sample Type
Solids, Total Suspended	Sample Measurement						
PARM Code 00530 Y Mon. Site No. EFA-1	Permit Requirement		5.0 (An.Avg.)	mg/L		5 Days/Week	24-hr FPC
Solids, Total Suspended	Sample Measurement						
PARM Code 00530 A Mon. Site No. EFA-1	Permit Requirement	10.0 (Max.)	7.5 (Max.Wk.Avg.)	mg/L		5 Days/Week	24-hr FPC
Solids, Total Suspended	Sample Measurement						
PARM Code 00530 P Mon. Site No. EFA-2	Permit Requirement		5.0 (An.Avg.)	mg/L		5 Days/Week	24-hr FPC
Solids, Total Suspended	Sample Measurement						
PARM Code 00530 Q Mon. Site No. EFA-2	Permit Requirement	10.0 (Max.)	7.5 (Max.Wk.Avg.)	mg/L		5 Days/Week	24-hr FPC
Coliform, Fecal	Sample Measurement						
PARM Code 74055 Y Mon. Site No. EFA-1	Permit Requirement		200 (An.Avg.)	#/100mL		5 Days/Week	Grab
Coliform, Fecal	Sample Measurement						
PARM Code 74055 A Mon. Site No. EFA-1	Permit Requirement		200 (Mo.Geo.Mn.)	#/100mL		5 Days/Week	Grab
Coliform, Fecal	Sample Measurement						
PARM Code 74055 P Mon. Site No. EFA-2	Permit Requirement		200 (An.Avg.)	#/100mL		5 Days/Week	Grab
Coliform, Fecal	Sample Measurement						
PARM Code 74055 Q Mon. Site No. EFA-2	Permit Requirement		200 (Mo.Geo.Mn.)	#/100mL		5 Days/Week	Grab
pH	Sample Measurement						
PARM Code 00400 A Mon. Site No. EFA-1	Permit Requirement	6.0 (Min.)	8.5 (Max.)	s.u.		Continuous	Meter
pH	Sample Measurement						
PARM Code 00400 P Mon. Site No. EFA-2	Permit Requirement	6.0 (Min.)	8.5 (Max.)	s.u.		Continuous	Meter

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: BCUD/South Central Regional

MONITORING GROUP R-002
 NUMBER:
 MONITORING PERIOD From: _____ To: _____

PERMIT NUMBER: FL0102679-018-DWIP

Parameter	Quantity or Loading	Units	Quality or Concentration	Units	No. Ex.	Frequency of Analysis	Sample Type
Chlorine, Total Residual (For Disinfection)	Sample Measurement						
PARM Code 50060 A Mon. Site No. EFA-1	Permit Requirement		0.5 (Min.)			Continuous	Meter
Chlorine, Total Residual (For Disinfection)	Sample Measurement						
PARM Code 50060 P Mon. Site No. EFA-2	Permit Requirement		0.5 (Min.)			Continuous	Meter
Nitrogen, Total	Sample Measurement						
PARM Code 00600 Y Mon. Site No. EFA-1	Permit Requirement		6.0 (An.Avg.)			Weekly	24-hr FPC
Nitrogen, Total	Sample Measurement						
PARM Code 00600 A Mon. Site No. EFA-1	Permit Requirement		12.0 (Max.)	9.0 (Max. Wk.Avg.)		Weekly	24-hr FPC
Nitrogen, Total	Sample Measurement						
PARM Code 00600 P Mon. Site No. EFA-2	Permit Requirement			6.0 (An.Avg.)		Weekly	24-hr FPC
Nitrogen, Total	Sample Measurement						
PARM Code 00600 Q Mon. Site No. EFA-2	Permit Requirement		12.0 (Max.)	9.0 (Max. Wk.Avg.)		Weekly	24-hr FPC
Phosphorus, Total (as P)	Sample Measurement						
PARM Code 00665 Y Mon. Site No. EFA-1	Permit Requirement			0.75 (An.Avg.)		Weekly	24-hr FPC
Phosphorus, Total (as P)	Sample Measurement						
PARM Code 00665 A Mon. Site No. EFA-1	Permit Requirement		1.5 (Max.)	1.125 (Max. Wk.Avg.)		Weekly	24-hr FPC
Phosphorus, Total (as P)	Sample Measurement						
PARM Code 00665 P Mon. Site No. EFA-2	Permit Requirement			0.75 (An.Avg.)		Weekly	24-hr FPC
Phosphorus, Total (as P)	Sample Measurement						
PARM Code 00665 Q Mon. Site No. EFA-2	Permit Requirement		1.5 (Max.)	1.125 (Max. Wk.Avg.)		Weekly	24-hr FPC

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

When Completed submit this report to: <https://www.fideportal.com/go/>

PERMITTEE NAME: Brevard County Utility Services Department
MAILING ADDRESS: 2725 Judge Fran Jamieson Way
 BLDG. A-213

FACILITY: Melbourne, Florida 32940-6605
LOCATION: BCUD/South Central Regional
 10001 N Wickham Rd
 Melbourne, FL 32940-6604

PERMIT NUMBER: FL0102679-018-DWIP

Expiration Date July 11, 2026

LIMIT: Final
CLASS SIZE: MI
MONITORING GROUP NUMBER: RMP-Q
MONITORING GROUP DESCRIPTION: Biosolids Quantity
RE-SUBMITTED DMR:
NO DISCHARGE FROM SITE:
MONITORING PERIOD From: _____ To: _____

REPORT FREQUENCY: Monthly
PROGRAM: Domestic

COUNTY: Brevard
OFFICE: Central District

Parameter	Sample Measurement	Quantity or Loading	Units	Quality or Concentration	Units	No. Ex.	Frequency of Analysis	Sample Type
Biosolids Quantity (Received)	Sample Measurement							
PARM Code B0002 + Mon. Site No. RMP-1	Permit Requirement	Report (Mo. Total)	dry tons				Monthly	Calculated
Biosolids Quantity (Landfilled)	Sample Measurement							
PARM Code B0008 + Mon. Site No. RMP-1	Permit Requirement	Report (Mo. Total)	dry tons				Monthly	Calculated
Biosolids Quantity (Transferred)	Sample Measurement							
PARM Code B0007 + Mon. Site No. RMP-1	Permit Requirement	Report (Mo. Total)	dry tons				Monthly	Calculated

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

NAME/TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE NO	DATE (mm/dd/yyyy)

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here):

DAILY SAMPLE RESULTS - PART B

Permit Number:
Monitoring Period

FL0102679-018-DW1P
From: _____ To: _____

Facility: BCUD/South Central Regional

Code	Alkalinity, Total (as CaCO ₃) mg/L	BOD, Carbonaceous 5 day, 20C mg/L	BOD, Carbonaceous 5 day, 20C mg/L	BOD, Carbonaceous 5 day, 20C (Influent) mg/L	BOD, Carbonaceous 5 day, 20C mg/L	Chloride (as Cl) mg/L	Chlorine, Total Residual (For Disinfection) mg/L	Chlorine, Total Residual (For Disinfection) mg/L	Coliform, Fecal #/100mL	Coliform, Fecal #/100mL	Coliform, Fecal #/100mL
Mon. Site	00410 WEP-1	80082 EFA-1	80082 EFA-2	80082 INF-1	80082 WEP-1	00940 WEP-1	50060 EFA-1	50060 EFA-2	74055 EFA-1	74055 EFA-2	74055 WEP-1
1											
2											
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30											
31											
Total											
Mo. Avg.											

PLANT STAFFING:

Day Shift Operator Class: _____ Certificate No: _____ Name: _____

Evening Shift Operator Class: _____ Certificate No: _____ Name: _____

Night Shift Operator Class: _____ Certificate No: _____ Name: _____

Lead Operator Class: _____ Certificate No: _____ Name: _____

ISSUANCE/REISSUANCE DATE: July 12, 2021
DMR EFFECTIVE DATE: September 1, 2021 - Permit expiration

DAILY SAMPLE RESULTS - PART B

Permit Number:
Monitoring Period

FL0102679-018-DWIP
From: _____ To: _____

Facility: BCUD/South Central Regional

	Flow (Total Through Plant) MGD	Flow (Public access reuse) MGD	Flow (wetlands) MGD	Flow (from storage pond to wetlands) MGD	Flow (from wetlands to storage pond) MGD	Flow (Baytree Golf Course Pond) MGD	Flow (Viera Golf Course Pond) MGD	Flow (Indian River Colony Club) MGD	Flow (Duran Golf Course) MGD	Flow (Outfall D-001) MGD	Nitrite plus Nitrate, Total 1 det. (as N) mg/L
Code	50050	50050	50050	50050	50050	50050	50050	50050	50050	50050	00630
Mon. Site	FLW-1	FLW-10	FLW-11	FLW-12	FLW-13	FLW-5	FLW-6	FLW-7	FLW-8	FLW-9	WEP-1
1											
2											
3											
4											
5											
6											
7											
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28											
29											
30											
31											
Total											
Mo. Avg.											

PLANT STAFFING:

Day Shift Operator Class: _____ Certificate No: _____ Name: _____

Evening Shift Operator Class: _____ Certificate No: _____ Name: _____

Night Shift Operator Class: _____ Certificate No: _____ Name: _____

Lead Operator Class: _____ Certificate No: _____ Name: _____

ISSUANCE/REISSUANCE DATE: July 12, 2021
DMR EFFECTIVE DATE: September 1, 2021 - Permit expiration

DAILY SAMPLE RESULTS - PART B

Permit Number:
Monitoring Period

FL0102679-018-DWIP
From: _____ To: _____

Facility: BCUD/South Central Regional

Code	Nitrogen, Ammonia, Total (as N) (Effluent) mg/L	Nitrogen, Kjeldahl, Total (as N) mg/L	Nitrogen, Total mg/L	Nitrogen, Total mg/L	Nitrogen, Total mg/L	Oxygen, Dissolved (DO) mg/L	Phosphate, Ortho (as P) mg/L	Phosphorus, Total (as P) mg/L	Phosphorus, Total (as P) mg/L	Phosphorus, Total (as P) mg/L	Rainfall in
Mon. Site	00610 WEP-1	00625 WEP-1	00600 EFA-1	00600 EFA-2	00600 WEP-1	00300 WEP-1	70507 WEP-1	00665 EFA-1	00665 EFA-2	00665 WEP-1	46529 OTH-1
1											
2											
3											
4											
5											
6											
7											
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30											
31											
Total											
Mo. Avg.											

PLANT STAFFING:

Day Shift Operator Class: _____ Certificate No: _____ Name: _____

Evening Shift Operator Class: _____ Certificate No: _____ Name: _____

Night Shift Operator Class: _____ Certificate No: _____ Name: _____

Lead Operator Class: _____ Certificate No: _____ Name: _____

ISSUANCE/REISSUANCE DATE: July 12, 2021
DMR EFFECTIVE DATE: September 1, 2021 - Permit expiration

DAILY SAMPLE RESULTS - PART B

Permit Number:
Monitoring Period

FL0102679-018-DW1P
From: _____ To: _____

Facility: BCUD/South Central Regional

Code	Solids, Total Suspended mg/L	Solids, Total Suspended mg/L	Solids, Total Suspended mg/L	Solids, Total Suspended mg/L	Solids, Total Suspended (Influent) mg/L	Solids, Total Suspended mg/L	Specific Conductance umhos/cm	Sulfate, Total mg/L	Temperature (C), Water Deg C	Turbidity NTU	Turbidity NTU
Mon. Site	00530 EFA-1	00530 EFA-2	00530 EFB-1	00530 EFB-2	00530 INF-1	00530 WEP-1	00095 WEP-1	00945 WEP-1	00010 WEP-1	00070 EFB-1	00070 EFB-2
1											
2											
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30											
31											
Total											
Mo. Avg.											

PLANT STAFFING:

Day Shift Operator Class: _____ Certificate No: _____ Name: _____

Evening Shift Operator Class: _____ Certificate No: _____ Name: _____

Night Shift Operator Class: _____ Certificate No: _____ Name: _____

Lead Operator Class: _____ Certificate No: _____ Name: _____

ISSUANCE/REISSUANCE DATE: July 12, 2021
DMR EFFECTIVE DATE: September 1, 2021 - Permit expiration

DAILY SAMPLE RESULTS - PART B

Permit Number:
Monitoring Period

FL0102679-018-DW1P
From: _____ To: _____

Facility: BCUD/South Central Regional

Code	Water Level at sample collection time ft	pH s.u.	pH s.u.	pH s.u.						
Mon. Site	85327	00400	00400	00400						
	WEP-1	EFA-1	EFA-2	WEP-1						
1										
2										
3										
4										
5										
6										
7										
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Total										
Mo. Avg.										

PLANT STAFFING:

Day Shift Operator Class: _____ Certificate No: _____ Name: _____

Evening Shift Operator Class: _____ Certificate No: _____ Name: _____

Night Shift Operator Class: _____ Certificate No: _____ Name: _____

Lead Operator Class: _____ Certificate No: _____ Name: _____

INSTRUCTIONS FOR COMPLETING THE WASTEWATER DISCHARGE MONITORING REPORT

Read these instructions before completing the DMR. Hard copies and/or electronic copies of the required parts of the DMR were provided with the permit. All required information shall be completed in full and typed or printed in ink. A signed, original DMR shall be mailed to the address printed on the DMR by the 28th of the month following the monitoring period. Facilities who submit their DMR(s) electronically through eDMR do not need to submit a hardcopy DMR. The DMR shall not be submitted before the end of the monitoring period.

The DMR consists of three parts—A, B, and D—all of which may or may not be applicable to every facility. Facilities may have one or more Part A's for reporting effluent or reclaimed water data. All domestic wastewater facilities will have a Part B for reporting daily sample results. Part D is used for reporting ground water monitoring well data.

When results are not available, the following codes should be used on parts A and D of the DMR and an explanation provided where appropriate. Note: Codes used on Part B for raw data are different.

CODE	DESCRIPTION/INSTRUCTIONS	CODE	DESCRIPTION/INSTRUCTIONS
ANC	Analysis not conducted.	NOD	No discharge from/to site.
DRY	Dry Well	OPS	Operations were shutdown so no sample could be taken.
FLD	Flood disaster.	OTH	Other. Please enter an explanation of why monitoring data were not available.
IFS	Insufficient flow for sampling.	SEF	Sampling equipment failure.
LS	Lost sample.		
MNR	Monitoring not required this period.		

When reporting analytical results that fall below a laboratory's reported method detection limits or practical quantification limits, the following instructions should be used, unless indicated otherwise in the permit or on the DMR:

1. Results greater than or equal to the PQL shall be reported as the measured quantity.
2. Results less than the PQL and greater than or equal to the MDL shall be reported as the laboratory's MDL value. These values shall be deemed equal to the MDL when necessary to calculate an average for that parameter and when determining compliance with permit limits.
3. Results less than the MDL shall be reported by entering a less than sign (" $<$ ") followed by the laboratory's MDL value, e.g. <0.001 . A value of one-half the MDL or one-half the effluent limit, whichever is lower, shall be used for that sample when necessary to calculate an average for that parameter. Values less than the MDL are considered to demonstrate compliance with an effluent limitation.

PART A -DISCHARGE MONITORING REPORT (DMR)

Part A of the DMR is comprised of one or more sections, each having its own header information. Facility information is preprinted in the header as well as the monitoring group number, whether the limits and monitoring requirements are interim or final, and the required submittal frequency (e.g. monthly, annually, quarterly, etc.). Submit Part A based on the required reporting frequency in the header and the instructions shown in the permit. The following should be completed by the permittee or authorized representative:

Resubmitted DMR: Check this box if this DMR is being re-submitted because there was information missing from or information that needed correction on a previously submitted DMR. The information that is being revised should be clearly noted on the re-submitted DMR (e.g. highlight, circle, etc.)

No Discharge From Site: Check this box if no discharge occurs and, as a result, there are no data or codes to be entered for all of the parameters on the DMR for the entire monitoring group number; however, if the monitoring group includes other monitoring locations (e.g., influent sampling), the "NOD" code should be used to individually denote those parameters for which there was no discharge.

Monitoring Period: Enter the month, day, and year for the first and last day of the monitoring period (i.e. the month, the quarter, the year, etc.) during which the data on this report were collected and analyzed.

Sample Measurement: Before filling in sample measurements in the table, check to see that the data collected correspond to the limit indicated on the DMR (i.e. interim or final) and that the data correspond to the monitoring group number in the header. Enter the data or calculated results for each parameter on this row in the non-shaded area above the limit. Be sure the result being entered corresponds to the appropriate statistical base code (e.g. annual average, monthly average, single sample maximum, etc.) and units. Data qualifier codes are not to be reported on Part A.

No. Ex.: Enter the number of sample measurements during the monitoring period that exceeded the permit limit for each parameter in the non-shaded area. If none, enter zero.

Frequency of Analysis: The shaded areas in this column contain the minimum number of times the measurement is required to be made according to the permit. Enter the actual number of times the measurement was made in the space above the shaded area.

Sample Type: The shaded areas in this column contain the type of sample (e.g. grab, composite, continuous) required by the permit. Enter the actual sample type that was taken in the space above the shaded area.

Signature: This report must be signed in accordance with Rule 62-620.305, F.A.C. Type or print the name and title of the signing official. Include the telephone number where the official may be reached in the event there are questions concerning this report. Enter the date when the report is signed.

Comment and Explanation of Any Violations: Use this area to explain any exceedances, any upset or by-pass events, or other items which require explanation. If more space is needed, reference all attachments in this area.

PART B - DAILY SAMPLE RESULTS

Monitoring Period: Enter the month, day, and year for the first and last day of the monitoring period (i.e. the month, the quarter, the year, etc.) during which the data on this report were collected and analyzed.
Daily Monitoring Results: Transfer all analytical data from your facility's laboratory or a contract laboratory's data sheets for all day(s) that samples were collected. Record the data in the units indicated. Table 1 in Chapter 62-160, F.A.C., contains a complete list of all the data qualifier codes that your laboratory may use when reporting analytical results. However, when transferring numerical results onto Part B of the DMR, only the following data qualifier codes should be used and an explanation provided where appropriate.

CODE	DESCRIPTION/INSTRUCTIONS
<	The compound was analyzed for but not detected.
A	Value reported is the mean (average) of two or more determinations.
J	Estimated value, value not accurate.
Q	Sample held beyond the actual holding time.
Y	Laboratory analysis was from an unpreserved or improperly preserved sample.

To calculate the monthly average, add each reported value to get a total. For flow, divide this total by the number of days in the month. For all other parameters, divide the total by the number of observations.
Plant Staffing: List the name, certificate number, and class of all state certified operators operating the facility during the monitoring period. Use additional sheets as necessary.

PART D - GROUND WATER MONITORING REPORT

Monitoring Period: Enter the month, day, and year for the first and last day of the monitoring period (i.e. the month, the quarter, the year, etc.) during which the data on this report were collected and analyzed.
Date Sample Obtained: Enter the date the sample was taken. Also, check whether or not the well was purged before sampling.
Time Sample Obtained: Enter the time the sample was taken.
Sample Measurement: Record the results of the analysis. If the result was below the minimum detection limit, indicate that. Data qualifier codes are not to be reported on Part D.
Detection Limits: Record the detection limits of the analytical methods used.
Analysis Method: Indicate the analytical method used. Record the method number from Chapter 62-160 or Chapter 62-601, F.A.C., or from other sources.
Sampling Equipment Used: Indicate the procedure used to collect the sample (e.g. airlift, bucket/bailer, centrifugal pump, etc.)
Samples Filtered: Indicate whether the sample obtained was filtered by laboratory (L), filtered in field (F), or unfiltered (N).
Signature: This report must be signed in accordance with Rule 62-620.305, F.A.C. Type or print the name and title of the signing official. Include the telephone number where the official may be reached in the event there are questions concerning this report. Enter the date when the report is signed.
Comments and Explanation: Use this space to make any comments on or explanations of results that are unexpected. If more space is needed, reference all attachments in this area.

SPECIAL INSTRUCTIONS FOR LIMITED WET WEATHER DISCHARGES

Flow (Limited Wet Weather Discharge): Enter the measured average flow rate during the period of discharge or divide gallons discharged by duration of discharge (converted into days). Record in million gallons per day (MGD).
Flow (Upstream): Enter the average flow rate in the receiving stream upstream from the point of discharge for the period of discharge. The average flow rate can be calculated based on two measurements, one made at the start and one made at the end of the discharge period. Measurements are to be made at the upstream gauging station described in the permit.
Actual Stream Dilution Ratio: To calculate the Actual Stream Dilution Ratio, divide the average upstream flow rate by the average discharge flow rate. Enter the Actual Stream Dilution Ratio accurate to the nearest 0.1.
No. of Days the SDF > Stream Dilution Ratio: For each day of discharge, compare the minimum Stream Dilution Factor (SDF) from the permit to the calculated Stream Dilution Ratio. On Part B of the DMR, enter an asterisk (*) if the SDF is greater than the Stream Dilution Ratio on any day of discharge. On Part A of the DMR, add up the days with an "*" and record the total number of days the Stream Dilution Factor was greater than the Stream Dilution Ratio.
CBOD₅: Enter the average CBOD₅ of the reclaimed water discharged during the period shown in duration of discharge.
TKN: Enter the average TKN of the reclaimed water discharged during the period shown in duration of discharge.
Actual Rainfall: Enter the actual rainfall for each day on Part B. Enter the actual cumulative rainfall to date for this calendar year and the actual total monthly rainfall to date for this calendar year is the total amount of rain, in inches, that has been recorded since January 1 of the current year through the month for which this DMR contains data.
Rainfall During Average Rainfall Year: On Part A, enter the total monthly rainfall during the average rainfall year and the cumulative rainfall for the average rainfall year is the amount of rain, in inches, which fell during the average rainfall year from January through the month for which this DMR contains data.
No. of Days LWWWD Activated During Calendar Year: Enter the cumulative number of days that the limited wet weather discharge was activated since January 1 of the current year.
Reason for Discharge: Attach to the DMR a brief explanation of the factors contributing to the need to activate the limited wet weather discharge.

DEPARTMENT OF ENVIRONMENTAL PROTECTION DISCHARGE MONITORING REPORT - PART A

When Completed submit this report to: <https://www.fldepportal.com/go/>

PERMITTEE NAME: Brevard County Utility Services Department
 MAILING ADDRESS: 2725 Judge Fran Jamieson Way
 BLDG. A-213

FACILITY: Melbourne, Florida 32940-6605
 LOCATION: BCUD/South Central Regional
 10001 N Wickham Rd
 Melbourne, FL 32940-6604

PERMIT NUMBER: FL0102679-018-DWIP

LIMIT: Final
 CLASS SIZE: MI
 MONITORING GROUP NUMBER: RWS-A
 MONITORING GROUP DESCRIPTION: Annual Reclaimed Water or Effluent Analysis
 RE-SUBMITTED DMR:
 NO DISCHARGE FROM SITE:
 MONITORING NOT REQUIRED:*
 MONITORING PERIOD From: _____ To: _____

REPORT FREQUENCY: Annually
 PROGRAM: Domestic

COUNTY: Brevard
 OFFICE: Central District

Parameter	Quantity or Loading	Units	Quality or Concentration	Units	No. Ex.	Frequency of Analysis	Sample Type
Antimony, Total Recoverable (GWS = 6)**	Sample Measurement						
PARM Code 01268 P Mon. Site No. RWS-A	Permit Requirement		Report (Max.)	ug/L		Annually	24-hr FPC
Arsenic, Total Recoverable (GWS = 10)	Sample Measurement						
PARM Code 00978 P Mon. Site No. RWS-A	Permit Requirement		Report (Max.)	ug/L		Annually	24-hr FPC
Barium, Total Recoverable (GWS = 2,000)	Sample Measurement						
PARM Code 01009 P Mon. Site No. RWS-A	Permit Requirement		Report (Max.)	ug/L		Annually	24-hr FPC
Beryllium, Total Recoverable (GWS = 4)	Sample Measurement						
PARM Code 00998 P Mon. Site No. RWS-A	Permit Requirement		Report (Max.)	ug/L		Annually	24-hr FPC
Cadmium, Total Recoverable (GWS = 5)	Sample Measurement						
PARM Code 01113 P Mon. Site No. RWS-A	Permit Requirement		Report (Max.)	ug/L		Annually	24-hr FPC
Chromium, Total Recoverable (GWS = 100)	Sample Measurement						
PARM Code 01118 P Mon. Site No. RWS-A	Permit Requirement		Report (Max.)	ug/L		Annually	24-hr FPC

*THE "MONITORING NOT REQUIRED" CHECKBOX SHOULD BE SELECTED WHEN A CERTIFICATION STATEMENT IN ACCORDANCE WITH SUBSECTION 62-600.680(2), F.A.C., IS SUBMITTED WITH THIS DMR. SEE CERTIFICATION STATEMENT IN COMMENTS SECTION BELOW.
 **GROUND WATER STANDARD (GWS) FOR REFERENCE AND REVIEW ONLY.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

NAME/TITLE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE NO	DATE (mm/dd/yyyy)

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here):

NO NEW NON-DOMESTIC WASTEWATER DISCHARGERS HAVE BEEN ADDED TO THE COLLECTION SYSTEM SINCE THE LAST RECLAIMED WATER OR EFFLUENT ANALYSIS WAS CONDUCTED. SIGN AND DATE:

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: BCUJ/South Central Regional

MONITORING GROUP RWS-A
 NUMBER: _____
 MONITORING PERIOD From: _____ To: _____

PERMIT NUMBER: FL0102679-018-DW1P

Parameter	Quantity or Loading	Units	Quality or Concentration	Units	No. Ex.	Frequency of Analysis	Sample Type
Cyanide, Free (amen. to chlorination)(GWS = 200) PARM Code 00722 P Mon. Site No. RWS-A	Sample Measurement						
Fluoride, Total (as F) (GWS = 4.0/2.0) PARM Code 00951 P Mon. Site No. RWS-A	Sample Measurement		Report (Max.)	ug/L		Annually	Grab
Lead, Total Recoverable (GWS = 15) PARM Code 01114 P Mon. Site No. RWS-A	Sample Measurement		Report (Max.)	mg/L		Annually	24-hr FPC
Mercury, Total Recoverable (GWS = 2) PARM Code 71901 P Mon. Site No. RWS-A	Sample Measurement		Report (Max.)	ug/L		Annually	24-hr FPC
Nickel, Total Recoverable (GWS = 100) PARM Code 01074 P Mon. Site No. RWS-A	Sample Measurement		Report (Max.)	ug/L		Annually	24-hr FPC
Nitrogen, Nitrate, Total (as N) (GWS = 10) PARM Code 00620 P Mon. Site No. RWS-A	Sample Measurement		Report (Max.)	ug/L		Annually	24-hr FPC
Nitrogen, Nitrite, Total (as N) (GWS = 1) PARM Code 00615 P Mon. Site No. RWS-A	Sample Measurement		Report (Max.)	mg/L		Annually	24-hr FPC
Nitrite plus Nitrate, Total 1 det. (as N)(GWS = 10) PARM Code 00630 P Mon. Site No. RWS-A	Sample Measurement		Report (Max.)	mg/L		Annually	24-hr FPC
Selenium, Total Recoverable (GWS = 50) PARM Code 00981 P Mon. Site No. RWS-A	Sample Measurement		Report (Max.)	ug/L		Annually	24-hr FPC
Sodium, Total Recoverable (GWS = 160) PARM Code 00923 P Mon. Site No. RWS-A	Sample Measurement		Report (Max.)	mg/L		Annually	24-hr FPC

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: BCU/South Central Regional

MONITORING GROUP RWS-A
 NUMBER: _____
 MONITORING PERIOD From: _____ To: _____

PERMIT NUMBER: FL0102679-018-DWIP

Parameter	Quantity or Loading	Units	Quality or Concentration		Units	No. Ex.	Frequency of Analysis	Sample Type
Thallium, Total Recoverable (GWS = 2)	Sample Measurement							
PARM Code 00982 P Mon. Site No. RWS-A	Permit Requirement			Report (Max.)	ug/L		Annually	24-hr FPC
1,1-dichloroethylene (GWS = 7)	Sample Measurement							
PARM Code 34501 P Mon. Site No. RWS-A	Permit Requirement			Report (Max.)	ug/L		Annually	Grab
1,1,1-trichloroethane (GWS = 200)	Sample Measurement							
PARM Code 34506 P Mon. Site No. RWS-A	Permit Requirement			Report (Max.)	ug/L		Annually	Grab
1,1,2-trichloroethane (GWS = 5)	Sample Measurement							
PARM Code 34511 P Mon. Site No. RWS-A	Permit Requirement			Report (Max.)	ug/L		Annually	Grab
1,2-dichloroethane (GWS = 3)	Sample Measurement							
PARM Code 32103 P Mon. Site No. RWS-A	Permit Requirement			Report (Max.)	ug/L		Annually	Grab
1,2-dichloropropane (GWS = 5)	Sample Measurement							
PARM Code 34541 P Mon. Site No. RWS-A	Permit Requirement			Report (Max.)	ug/L		Annually	Grab
1,2,4-trichlorobenzene (GWS = 70)	Sample Measurement							
PARM Code 34551 P Mon. Site No. RWS-A	Permit Requirement			Report (Max.)	ug/L		Annually	24-hr FPC
Benzene (GWS = 1)	Sample Measurement							
PARM Code 34030 P Mon. Site No. RWS-A	Permit Requirement			Report (Max.)	ug/L		Annually	Grab
Carbon tetrachloride (GWS = 3)	Sample Measurement							
PARM Code 32102 P Mon. Site No. RWS-A	Permit Requirement			Report (Max.)	ug/L		Annually	Grab
Cis-1,2-dichloroethene (GWS = 70)	Sample Measurement							
PARM Code 81686 P Mon. Site No. RWS-A	Permit Requirement			Report (Max.)	ug/L		Annually	Grab

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: BCUJ/South Central Regional

MONITORING GROUP RWS-A

PERMIT NUMBER: FL0102679-018-DW1P

NUMBER:

MONITORING PERIOD From: _____ To: _____

Parameter	Quantity or Loading	Units	Quality or Concentration	Units	No. Ex.	Frequency of Analysis	Sample Type
Dichloromethane (methylene chloride)(GWS = 5)	Sample Measurement						
PARM Code 03821 P	Permit Requirement					Annually	Grab
Mon. Site No. RWS-A	Sample Measurement		Report (Max.)	ug/L			
Ethylbenzene (GWS = 700)	Sample Measurement						
PARM Code 34371 P	Permit Requirement					Annually	Grab
Mon. Site No. RWS-A	Sample Measurement		Report (Max.)	ug/L			
Monochlorobenzene (GWS = 100)	Sample Measurement						
PARM Code 34031 P	Permit Requirement					Annually	Grab
Mon. Site No. RWS-A	Sample Measurement		Report (Max.)	ug/L			
1,2-dichlorobenzene (GWS = 600)	Sample Measurement						
PARM Code 34536 P	Permit Requirement					Annually	Grab
Mon. Site No. RWS-A	Sample Measurement		Report (Max.)	ug/L			
1,4-dichlorobenzene (GWS = 75)	Sample Measurement						
PARM Code 34571 P	Permit Requirement					Annually	Grab
Mon. Site No. RWS-A	Sample Measurement		Report (Max.)	ug/L			
Styrene, Total (GWS = 100)	Sample Measurement						
PARM Code 77128 P	Permit Requirement					Annually	Grab
Mon. Site No. RWS-A	Sample Measurement		Report (Max.)	ug/L			
Tetrachloroethylene (GWS = 3)	Sample Measurement						
PARM Code 34475 P	Permit Requirement					Annually	Grab
Mon. Site No. RWS-A	Sample Measurement		Report (Max.)	ug/L			
Toluene (GWS = 1,000)	Sample Measurement						
PARM Code 34010 P	Permit Requirement					Annually	Grab
Mon. Site No. RWS-A	Sample Measurement		Report (Max.)	ug/L			
1,2-trans-dichloroethylene (GWS = 100)	Sample Measurement						
PARM Code 34546 P	Permit Requirement					Annually	Grab
Mon. Site No. RWS-A	Sample Measurement		Report (Max.)	ug/L			
Trichloroethylene (GWS = 3)	Sample Measurement						
PARM Code 39180 P	Permit Requirement					Annually	Grab
Mon. Site No. RWS-A	Sample Measurement		Report (Max.)	ug/L			

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: BCUD/South Central Regional

MONITORING GROUP RWS-A

PERMIT NUMBER: FL0102679-018-DW1P

NUMBER:

From: _____ To: _____

MONITORING PERIOD

Parameter	Quantity or Loading	Units	Quality or Concentration	Units	No. Ex.	Frequency of Analysis	Sample Type
Vinyl chloride (GWS = 1)	Sample Measurement						
PARM Code 39175 P	Permit Requirement					Annually	Grab
Mon. Site No. RWS-A	Sample Measurement						
Xylenes (GWS = 10,000)	Permit Requirement					Annually	Grab
PARM Code 81551 P	Sample Measurement						
Mon. Site No. RWS-A	Permit Requirement					Annually	Grab
2,3,7,8-tetrachlorodibenzo-p-dioxin (GWS = 3x10 ⁻⁵)	Sample Measurement						
PARM Code 34675 P	Permit Requirement					Annually	24-hr FPC
Mon. Site No. RWS-A	Sample Measurement						
2,4-dichlorophenoxyacetic acid (GWS = 70)	Permit Requirement					Annually	24-hr FPC
PARM Code 39730 P	Sample Measurement						
Mon. Site No. RWS-A	Permit Requirement					Annually	24-hr FPC
Silvex (GWS = 50)	Sample Measurement						
PARM Code 39760 P	Permit Requirement					Annually	24-hr FPC
Mon. Site No. RWS-A	Sample Measurement						
Alachlor (GWS = 2)	Permit Requirement					Annually	24-hr FPC
PARM Code 39161 P	Sample Measurement						
Mon. Site No. RWS-A	Permit Requirement					Annually	24-hr FPC
Atrazine (GWS = 3)	Sample Measurement						
PARM Code 39033 P	Permit Requirement					Annually	24-hr FPC
Mon. Site No. RWS-A	Sample Measurement						
Benzof(a)pyrene (GWS = 0.2)	Permit Requirement					Annually	24-hr FPC
PARM Code 34247 P	Sample Measurement						
Mon. Site No. RWS-A	Permit Requirement					Annually	24-hr FPC
Carbofuran (GWS = 40)	Sample Measurement						
PARM Code 81405 P	Permit Requirement					Annually	24-hr FPC
Mon. Site No. RWS-A	Sample Measurement						
Chlordane (tech mix. and metabolites) (GWS = 2)	Permit Requirement					Annually	24-hr FPC
PARM Code 39350 P	Sample Measurement						
Mon. Site No. RWS-A	Permit Requirement					Annually	24-hr FPC

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: BCUD/South Central Regional

MONITORING GROUP NUMBER:
MONITORING PERIOD

RWS-A

PERMIT NUMBER: FL0102679-018-DW1P

From: _____ To: _____

Parameter	Quantity or Loading	Units	Quality or Concentration	Units	No. Ex.	Frequency of Analysis	Sample Type
Dalapon (GWS = 200) PARM Code 38432 P Mon. Site No. RWS-A	Sample Measurement						
Bis(2-ethylhexyl)adipate (GWS = 400) PARM Code 77903 P Mon. Site No. RWS-A	Permit Requirement		Report (Max.)	ug/L		Annually	24-hr FPC
Bis(2-ethylhexyl) phthalate (GWS = 6) PARM Code 39100 P Mon. Site No. RWS-A	Sample Measurement						
Dibromochloropropane (DBCP) (GWS = 0.2) PARM Code 82625 P Mon. Site No. RWS-A	Permit Requirement		Report (Max.)	ug/L		Annually	24-hr FPC
Dinoseb (GWS = 7) PARM Code 30191 P Mon. Site No. RWS-A	Sample Measurement						
Diquat (GWS = 20) PARM Code 04443 P Mon. Site No. RWS-A	Permit Requirement		Report (Max.)	ug/L		Annually	24-hr FPC
Endothall (GWS = 100) PARM Code 38926 P Mon. Site No. RWS-A	Sample Measurement						
Endrin (GWS = 2) PARM Code 39390 P Mon. Site No. RWS-A	Permit Requirement		Report (Max.)	ug/L		Annually	24-hr FPC
Ethylene dibromide (1,2-dibromoethane)(GWS = 0.02) PARM Code 77651 P Mon. Site No. RWS-A	Sample Measurement						
Glyphosate (GWS = 0.7) PARM Code 79743 P Mon. Site No. RWS-A	Permit Requirement		Report (Max.)	ug/L		Annually	Grab
	Sample Measurement						
	Permit Requirement		Report (Max.)	mg/L		Annually	24-hr FPC

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: BCUD/South Central Regional

MONITORING GROUP NUMBER: RWS-A
 MONITORING PERIOD From: To:

PERMIT NUMBER: FL0102679-018-DW1P

Parameter	Quantity or Loading	Units	Quality or Concentration	Units	No. Ex.	Frequency of Analysis	Sample Type
Heptachlor (GWS = 0.4)	Sample Measurement						
PARM Code 39410 P Mon. Site No. RWS-A	Permit Requirement		Report (Max.)	ug/L		Annually	24-hr FPC
Heptachlor epoxide (GWS = 0.2)	Sample Measurement						
PARM Code 39420 P Mon. Site No. RWS-A	Permit Requirement		Report (Max.)	ug/L		Annually	24-hr FPC
Hexachlorobenzene (GWS = 1)	Sample Measurement						
PARM Code 39700 P Mon. Site No. RWS-A	Permit Requirement		Report (Max.)	ug/L		Annually	24-hr FPC
Hexachlorocyclopentadiene (GWS = 50)	Sample Measurement						
PARM Code 34386 P Mon. Site No. RWS-A	Permit Requirement		Report (Max.)	ug/L		Annually	24-hr FPC
Gamma BHC (Lindane) (GWS = 0.2)	Sample Measurement						
PARM Code 39782 P Mon. Site No. RWS-A	Permit Requirement		Report (Max.)	ug/L		Annually	24-hr FPC
Methoxychlor (GWS = 40)	Sample Measurement						
PARM Code 39480 P Mon. Site No. RWS-A	Permit Requirement		Report (Max.)	ug/L		Annually	24-hr FPC
Oxamyl (vydate) (GWS = 200)	Sample Measurement						
PARM Code 38865 P Mon. Site No. RWS-A	Permit Requirement		Report (Max.)	ug/L		Annually	24-hr FPC
Pentachlorophenol (GWS = 1)	Sample Measurement						
PARM Code 39032 P Mon. Site No. RWS-A	Permit Requirement		Report (Max.)	ug/L		Annually	24-hr FPC
Picloram (GWS = 500)	Sample Measurement						
PARM Code 39720 P Mon. Site No. RWS-A	Permit Requirement		Report (Max.)	ug/L		Annually	24-hr FPC
Polychlorinated Biphenyls (PCBs)(GWS = 0.5)	Sample Measurement						
PARM Code 39516 P Mon. Site No. RWS-A	Permit Requirement		Report (Max.)	ug/L		Annually	24-hr FPC

DISCHARGE MONITORING REPORT - PART A (Continued)

FACILITY: BCU/South Central Regional

MONITORING GROUP: RWS-A
 NUMBER: _____
 MONITORING PERIOD: From: _____ To: _____

PERMIT NUMBER: FL0102679-018-DW1P

Parameter	Quantity or Loading	Units	Quality or Concentration	Units	No. Ex.	Frequency of Analysis	Sample Type
Simazine (GWS = 4)	Sample Measurement						
PARM Code 39055 P Mon. Site No. RWS-A	Permit Requirement		Report (Max.)	ug/L		Annually	24-hr FPC
Toxaphene (GWS = 3)	Sample Measurement						
PARM Code 39400 P Mon. Site No. RWS-A	Permit Requirement		Report (Max.)	ug/L		Annually	24-hr FPC
Trihalomethane, Total by summation (GWS = 0.080)	Sample Measurement						
PARM Code 82080 P Mon. Site No. RWS-A	Permit Requirement		Report (Max.)	mg/L		Annually	Grab
Radium 226 + Radium 228, Total (GWS = 5)	Sample Measurement						
PARM Code 11503 P Mon. Site No. RWS-A	Permit Requirement		Report (Max.)	pCi/L		Annually	24-hr FPC
Alpha, Gross Particle Activity (GWS = 15)	Sample Measurement						
PARM Code 80045 P Mon. Site No. RWS-A	Permit Requirement		Report (Max.)	pCi/L		Annually	24-hr FPC
Aluminum, Total Recoverable (GWS = 0.2)	Sample Measurement						
PARM Code 01104 P Mon. Site No. RWS-A	Permit Requirement		Report (Max.)	mg/L		Annually	24-hr FPC
Chloride (as Cl) (GWS = 250)	Sample Measurement						
PARM Code 00940 P Mon. Site No. RWS-A	Permit Requirement		Report (Max.)	mg/L		Annually	24-hr FPC
Iron, Total Recoverable (GWS = 0.3)	Sample Measurement						
PARM Code 00980 P Mon. Site No. RWS-A	Permit Requirement		Report (Max.)	mg/L		Annually	24-hr FPC
Copper, Total Recoverable (GWS = 1,000)	Sample Measurement						
PARM Code 01119 P Mon. Site No. RWS-A	Permit Requirement		Report (Max.)	ug/L		Annually	24-hr FPC
Manganese, Total Recoverable (GWS = 50)	Sample Measurement						
PARM Code 11123 P Mon. Site No. RWS-A	Permit Requirement		Report (Max.)	ug/L		Annually	24-hr FPC

INSTRUCTIONS FOR COMPLETING THE WASTEWATER DISCHARGE MONITORING REPORT

Read these instructions before completing the DMR. Hard copies and/or electronic copies of the required parts of the DMR were provided with the permit. All required information shall be completed in full and typed or printed in ink. A signed, original DMR shall be mailed to the address printed on the DMR by the 28th of the month following the monitoring period. Facilities who submit their DMR(s) electronically through eDMR do not need to submit a hardcopy DMR. The DMR shall not be submitted before the end of the monitoring period.

The DMR consists of three parts—A, B, and D—all of which may or may not be applicable to every facility. Facilities may have one or more Part A's for reporting effluent or reclaimed water data. All domestic wastewater facilities will have a Part B for reporting daily sample results. Part D is used for reporting ground water monitoring well data.

When results are not available, the following codes should be used on parts A and D of the DMR and an explanation provided where appropriate. Note: Codes used on Part B for raw data are different.

CODE	DESCRIPTION/INSTRUCTIONS	CODE	DESCRIPTION/INSTRUCTIONS
ANC	Analysis not conducted.	NOD	No discharge from/to site.
DRY	Dry Well	OPS	Operations were shutdown so no sample could be taken.
FLD	Flood disaster.	OTH	Other. Please enter an explanation of why monitoring data were not available.
IFS	Insufficient flow for sampling.	SEF	Sampling equipment failure.
LS	Lost sample.		
MNR	Monitoring not required this period.		

When reporting analytical results that fall below a laboratory's reported method detection limits or practical quantification limits, the following instructions should be used, unless indicated otherwise in the permit or on the DMR:

1. Results greater than or equal to the PQL shall be reported as the measured quantity.
2. Results less than the PQL and greater than or equal to the MDL shall be reported as the laboratory's MDL value. These values shall be deemed equal to the MDL when necessary to calculate an average for that parameter and when determining compliance with permit limits.
3. Results less than the MDL shall be reported by entering a less than sign (" $<$ ") followed by the laboratory's MDL value, e.g. <0.001 . A value of one-half the MDL or one-half the effluent limit, whichever is lower, shall be used for that sample when necessary to calculate an average for that parameter. Values less than the MDL are considered to demonstrate compliance with an effluent limitation.

PART A -DISCHARGE MONITORING REPORT (DMR)

Part A of the DMR is comprised of one or more sections, each having its own header information. Facility information is preprinted in the header as well as the monitoring group number, whether the limits and monitoring requirements are interim or final, and the required submittal frequency (e.g. monthly, annually, quarterly, etc.). Submit Part A based on the required reporting frequency in the header and the instructions shown in the permit. The following should be completed by the permittee or authorized representative:

Resubmitted DMR: Check this box if this DMR is being re-submitted because there was information missing from or information that needed correction on a previously submitted DMR. The information that is being revised should be clearly noted on the re-submitted DMR (e.g. highlight, circle, etc.).
No Discharge From Site: Check this box if no discharge occurs and, as a result, there are no data or codes to be entered for all of the parameters on the DMR for the entire monitoring group number; however, if the monitoring group includes other monitoring locations (e.g., influent sampling), the "NOD" code should be used to individually denote those parameters for which there was no discharge.

Monitoring Period: Enter the month, day, and year for the first and last day of the monitoring period (i.e. the month, the quarter, the year, etc.) during which the data on this report were collected and analyzed.
Sample Measurement: Before filling in sample measurements in the table, check to see that the data collected correspond to the limit indicated on the DMR (i.e. interim or final) and that the data correspond to the monitoring group number in the header. Enter the data or calculated results for each parameter on this row in the non-shaded area above the limit. Be sure the result being entered corresponds to the appropriate statistical base code (e.g. annual average, monthly average, single sample maximum, etc.) and units. Data qualifier codes are not to be reported on Part A.

No. Ex.: Enter the number of sample measurements during the monitoring period that exceeded the permit limit for each parameter in the non-shaded area. If none, enter zero.
Frequency of Analysis: The shaded areas in this column contain the minimum number of times the measurement is required to be made according to the permit. Enter the actual number of times the measurement was made in the space above the shaded area.

Sample Type: The shaded areas in this column contain the type of sample (e.g. grab, composite, continuous) required by the permit. Enter the actual sample type that was taken in the space above the shaded area.

Signature: This report must be signed in accordance with Rule 62-620.305, F.A.C. Type or print the name and title of the signing official. Include the telephone number where the official may be reached in the event there are questions concerning this report. Enter the date when the report is signed.

Comment and Explanation of Any Violations: Use this area to explain any exceedances, any upset or by-pass events, or other items which require explanation. If more space is needed, reference all attachments in this area.

PART B - DAILY SAMPLE RESULTS

Monitoring Period: Enter the month, day, and year for the first and last day of the monitoring period (i.e. the month, the quarter, the year, etc.) during which the data on this report were collected and analyzed.
Daily Monitoring Results: Transfer all analytical data from your facility's laboratory or a contract laboratory's data sheets for all day(s) that samples were collected. Record the data in the units indicated. Table 1 in Chapter 62-160, F.A.C., contains a complete list of all the data qualifier codes that your laboratory may use when reporting analytical results. However, when transferring numerical results onto Part B of the DMR, only the following data qualifier codes should be used and an explanation provided where appropriate.

CODE	DESCRIPTION/INSTRUCTIONS
<	The compound was analyzed for but not detected.
A	Value reported is the mean (average) of two or more determinations.
J	Estimated value, value not accurate.
Q	Sample held beyond the actual holding time.
Y	Laboratory analysis was from an unpreserved or improperly preserved sample.

To calculate the monthly average, add each reported value to get a total. For flow, divide this total by the number of days in the month. For all other parameters, divide the total by the number of observations.
Plant Staffing: List the name, certificate number, and class of all state certified operators operating the facility during the monitoring period. Use additional sheets as necessary.

PART D - GROUND WATER MONITORING REPORT

Monitoring Period: Enter the month, day, and year for the first and last day of the monitoring period (i.e. the month, the quarter, the year, etc.) during which the data on this report were collected and analyzed.
Date Sample Obtained: Enter the date the sample was taken. Also, check whether or not the well was purged before sampling.
Time Sample Obtained: Enter the time the sample was taken.
Sample Measurement: Record the results of the analysis. If the result was below the minimum detection limit, indicate that. Data qualifier codes are not to be reported on Part D.
Detection Limits: Record the detection limits of the analytical methods used.
Analysis Method: Indicate the analytical method used. Record the method number from Chapter 62-160 or Chapter 62-601, F.A.C., or from other sources.
Sampling Equipment Used: Indicate the procedure used to collect the sample (e.g. airlift, bucket/bailer, centrifugal pump, etc.)
Samples Filtered: Indicate whether the sample obtained was filtered by laboratory (L), filtered in field (F), or unfiltered (N).
Signature: This report must be signed in accordance with Rule 62-620.305, F.A.C. Type or print the name and title of the signing official. Include the telephone number where the official may be reached in the event there are questions concerning this report. Enter the date when the report is signed.
Comments and Explanation: Use this space to make any comments on or explanations of results that are unexpected. If more space is needed, reference all attachments in this area.

SPECIAL INSTRUCTIONS FOR LIMITED WET WEATHER DISCHARGES

Flow (Limited Wet Weather Discharge): Enter the measured average flow rate during the period of discharge or divide gallons discharged by duration of discharge (converted into days). Record in million gallons per day (MGD).
Flow (Upstream): Enter the average flow rate in the receiving stream upstream from the point of discharge for the period of discharge. The average flow rate can be calculated based on two measurements, one made at the start and one made at the end of the discharge period. Measurements are to be made at the upstream gauging station described in the permit.
Actual Stream Dilution Ratio: To calculate the Actual Stream Dilution Ratio, divide the average upstream flow rate by the average discharge flow rate. Enter the Actual Stream Dilution Ratio accurate to the nearest 0.1.
No. of Days the SDF > Stream Dilution Ratio: For each day of discharge, compare the minimum Stream Dilution Factor (SDF) from the permit to the calculated Stream Dilution Ratio. On Part B of the DMR, enter an asterisk (*) if the SDF is greater than the Stream Dilution Ratio on any day of discharge. On Part A of the DMR, add up the days with an "*" and record the total number of days the Stream Dilution Factor was greater than the Stream Dilution Ratio.
CBOD₅: Enter the average CBOD₅ of the reclaimed water discharged during the period shown in duration of discharge.
TKN: Enter the average TKN of the reclaimed water discharged during the period shown in duration of discharge.
Actual Rainfall: Enter the actual rainfall for each day on Part B. Enter the actual cumulative rainfall to date for this calendar year and the actual total monthly rainfall to date for this calendar year. The cumulative rainfall to date for this calendar year is the total amount of rain, in inches, that has been recorded since January 1 of the current year through the month for which this DMR contains data.
Rainfall During Average Rainfall Year: On Part A, enter the total monthly rainfall during the average rainfall year and the cumulative rainfall for the average rainfall year. The cumulative rainfall for the average rainfall year is the amount of rain, in inches, which fell during the average rainfall year from January through the month for which this DMR contains data.
No. of Days LWWWD Activated During Calendar Year: Enter the cumulative number of days that the limited wet weather discharge was activated since January 1 of the current year.
Reason for Discharge: Attach to the DMR a brief explanation of the factors contributing to the need to activate the limited wet weather discharge.



Florida Department of Environmental Protection
Twin Towers Office Bldg., 2600 Blair Stone Road, Tallahassee, Florida 32399-2400

PATHOGEN MONITORING

Part I - Instructions

1. Completion of this report is required by Rules 62-610.463(4), 62-610.472(3)(d), 62-610.525(13), 62-610.568(11), 62-610.568(12), and 62-610.652(6)(c), F.A.C., for all domestic wastewater facilities that provide reclaimed water to certain types of reuse activities. The schedule for sampling and reporting shall be in accordance with the permit for the facility. If a schedule for sampling or re-sampling is not included in the permit, the following schedule shall apply:
 - a. Routine Sampling:

If sampling is required once every two years, this report shall be submitted on or before November 28 of each even numbered year (2006, 2008, 2010, etc.).

If sampling is required once every five years, this report shall be submitted with the application for permit renewal.

If sampling is required quarterly, this report shall be submitted on or before February 28, May 28, August 28, and November 28 of each year.
 - b. Subsequent Re-Sampling:

If subsequent re-sampling is required by Item 9 in Part I of this form, this form shall be submitted for the subsequent re-sampling(s) in accordance with the schedule established in Item 9 in Part I of this form.
2. Submit one copy of this form and a copy of the laboratory's final report for the analysis of *Giardia* and *Cryptosporidium* to each of the following two addresses:
 - a. The appropriate DEP district office (attention Domestic Wastewater Program). Addresses for the DEP district offices are available at www.dep.state.fl.us/secretary/dist/default.htm.
 - b. DEP Water Reuse Coordinator
Mail Station 3540
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
3. Please type or print legibly.
4. In Part II, Items 7 through 12 need to be completed only if this is the first submittal of this report, if the information in Items 7 through 12 has changed since the last submittal, or if the information in any of these questions has not been previously provided.
5. Part III is to be used when sampling for *Giardia* and *Cryptosporidium* at the treatment plant. Part III is also to be used when sampling for *Giardia* and *Cryptosporidium* in a supplemental water supply (see Rule 62-610.472, F.A.C.).

6. For each sample, record the sample volume obtained in liters.
7. For *Giardia*, record the concentrations in cysts per 100 liters. For *Cryptosporidium*, record the concentrations in oocysts per 100 liters. Sufficient sample volumes shall be collected and processed such that the detection limit is no greater than 5 cysts or oocysts per 100 liters. Detection levels on the order of 1 cyst or oocyst per 100 liters are recommended. If an observation is less than the detection limit, make an entry in the form "<2" (where 2 per 100 liters is the detection limit in this example). The actual detection limit will be dictated by the volumes of sample obtained, filtered, and processed. Do NOT record nondetectable values as zero.
8. EPA Method 1623 or other approved methods for reclaimed water or nonpotable waters, adjusted appropriately to accommodate the detection limit requirements, shall be used. Methods previously allowed for EPA's Information Collection Rule (ICR) shall not be used. The full requirements of the approved method, including quality assurance and quality control, are to be met. Quality assurance and sampling requirements in Chapter 62-160, F.A.C., shall apply.

Two concentrations of *Giardia* and *Cryptosporidium* shall be recorded on Part III of this form:

- a. Total cysts and oocysts shall be enumerated using EPA Method 1623 or other approved methods.
 - b. Potentially viable cysts and oocysts shall be enumerated using the DAPI staining technique contained in EPA Method 1623 or similar enumeration techniques included in other approved methods. Cysts and oocysts that are stained DAPI positive or show internal structure by D.I.C. shall be considered as being potentially viable. If the laboratory reports separate values for DAPI positive and for cysts or oocysts having internal structure, the larger of the two concentrations will be reported as being potentially viable.
9. If the number of potentially viable cysts of *Giardia* reported exceeds 5 per 100 liters, a subsequent sample shall be taken and analyzed using EPA Method 1623 or other approved methods and reported using this form. If the number of potentially viable oocysts of *Cryptosporidium* reported exceeds 22 per 100 liters, a subsequent sample shall be taken and analyzed using EPA Method 1623 or other approved methods and reported using this form. This subsequent sample shall be collected within 90 days of the date the initial sample was taken, analyzed for both *Giardia* and *Cryptosporidium*, and the results of the subsequent analysis shall be submitted to DEP using this form within 60 days of sample collection.
 10. Rule 62-160.300, F.A.C., requires that all laboratories generating environmental data for submission to the DEP shall hold certification from the Department of Health's (DOH) Environmental Laboratory Certification Program (ELCP). Certification by the ELCP for analysis of *Giardia* and *Cryptosporidium* using EPA Method 1623 for non-potable waters is required. If other approved methods are used, certification by the ELCP is required for the specific method and for the test matrix. Lists of certified laboratories can be found at www.dep.state.fl.us/labs/cgi-bin/aams/index.asp
 11. Samples shall be collected during peak flow periods (normally between the hours of 8:00 a.m. and 6:00 p.m.).
 12. Recognizing that concentrations of these pathogens generally increase during the late summer through fall period, it is recommended that utilities sample during the August through October time period.
 13. If the wastewater treatment facility uses chlorination for disinfection, samples obtained for analysis of *Giardia* and *Cryptosporidium* shall be dechlorinated.
 14. When sampling at the treatment facility, obtain a grab sample for total suspended solids (TSS) that is representative of the water leaving the filters at the treatment facility during the period when pathogen

samples are being obtained. In addition, record the highest turbidity and the lowest total chlorine residual observed during the period when pathogen samples are being obtained.

15. When sampling a supplemental water supply, obtain a grab sample for total suspended solids (TSS) that is representative of the surface water or treated stormwater as it is added to the reclaimed water system. This TSS sample shall be taken during the period when pathogen samples are being obtained. In addition, record the lowest total chlorine residual observed during the period when pathogen samples are being obtained.

Part II - General Information

1. DEP wastewater facility identification number: **FL0102679**

Wastewater facility name: BCUD/South Central Regional

Permittee name: Brevard County Utility Services Department

2. Person completing this form:

Name: _____

Telephone: (____) _____

Email address: _____

3. Sampling and analysis:

Date samples were taken: _____

Organization collecting the samples: _____

Was the sample dechlorinated in the field? Yes No

Was the sample refrigerated or kept on ice during shipment to the laboratory? Yes No

Date samples delivered to laboratory: _____

Date analytical work was done: _____

Laboratory doing the analysis: _____

Laboratory's DOH Identification Number: _____

Approved method used:

EPA Method 1623

Other approved method: _____

Contact person at the laboratory: _____

Email address of the lab contact person: _____

4. Is this the first time that this form has been submitted for the facility?

Yes [Please complete Questions 7 through 16.]

No [Proceed to Question 5.]

5. Is this a report of "subsequent re-sampling" required by Item 9 in Part I of this form based on concentrations of potentially viable cysts or oocysts in a previous sampling?

No [Proceed to Question 6.]

Yes [Attach a description of any facility or operational changes made to the treatment facilities since the time of the previous sampling and proceed to Question 6.]

6. Has the information requested in Questions 7 through 12 (below) changed since the last submittal of this form?

Yes [Please complete Questions 7 through 16.]

No [Proceed to Questions 13 through 16 of Part II of this form. You do not need to complete Questions 7 through 12.]

7. Type of secondary treatment system:

Conventional activated sludge

Extended aeration

Contact stabilization

Biological nutrient removal (such as Bardenpho)

Other: _____

8. Does this treatment facility nitrify (convert ammonia nitrogen to nitrate)? Yes No

9. Filter type:

Deep bed, single media

Deep bed, multiple media

Shallow bed, automatic backwash

Upflow (including Dynasand)

Slow rate sand filter

Diatomaceous earth filter

Fabric filter

Cartridge filter

Membranes (microfiltration, ultrafiltration, membrane bioreactor, reverse osmosis)

Other: _____

10. Filter Media (complete for each type of media provided):

Top layer of media: Media type: _____

Effective size: _____ mm

Uniformity coefficient: _____

Bed depth: _____ inches

Middle layer of media: Media type: _____
Effective size: _____ mm
Uniformity coefficient: _____
Bed depth: _____ inches

Bottom layer of media: Media type: _____
Effective size: _____ mm
Uniformity coefficient: _____
Bed depth: _____ inches

11. Filter backwash water:

- Backwash water is returned to the headworks of the treatment plant.
- Backwash water is returned to the aeration basin.
- Other. Please describe: _____

12. Disinfection system:

- Chlorination, gas Hypochlorite
- Chlorine dioxide Chlorination, other _____
- Ultraviolet Ozone
- Other: _____

13. Is chlorine added before the filters? No Yes Dose: _____ mg/L

14. During the period that samples were taken, did you add a coagulant, coagulant aid, polyelectrolyte, or other chemical to enhance filtration?

- No
- Yes. Please list the chemicals being added and their dose.

Chemical 1 - Name: _____ Dose: _____ mg/L

Chemical 2 - Name: _____ Dose: _____ mg/L

Chemical 3 - Name: _____ Dose: _____ mg/L

15. Wastewater treatment plant permitted capacity: _____ MGD

16. Wastewater flow being treated at the time samples were collected: _____ MGD

PART III - PATHOGEN MONITORING REPORT

FACILITY ID: FL0102679

FACILITY NAME: BCUD/South Central Regional

FACILITY ADDRESS: 10001 N Wickham Rd, Melbourne, FL 32940-6604

PERMITTEE NAME: Brevard County Utility Services Department

MAILING ADDRESS: 2725 Judge Fran Jamieson Way, BLDG. A-213, Melbourne, Florida 32940- 6605

DATE OF SAMPLING: _____

Parameter	Quantity or Loading		Quality or Concentration	
	Sample Measurement	Units	Sample Measurement	Units
Treatment Plant: After Filter Monitoring Site No.				
Turbidity PARM Code 00070				NTU
TSS PARM Code 00530				mg/L
Treatment Plant: After Disinfection Monitoring Site No.				
Total Chlorine Residual PARM Code 50060				mg/L
Volume Collected PARM Code 71994		Liters		
<i>Giardia</i> , total count * PARM Code GIARD				total cysts/100 L
<i>Giardia</i> , potentially viable cysts * PARM Code VGIAR				potentially viable cysts/100 L
<i>Cryptosporidium</i> , total count * PARM Code CRYPT				total oocysts/100 L
<i>Cryptosporidium</i> , potentially viable oocysts * PARM Code VCRYP				potentially viable oocysts/100 L
Supplemental Water Supply (surface water or stormwater): After Treatment & Disinfection Monitoring Site No.				
TSS PARM Code 00530				mg/L
Total Chlorine Residual PARM Code 50060				mg/L
Volume Collected PARM Code 71994		Liters		
<i>Giardia</i> (total count) * PARM Code GIARD				total cysts/100 L
<i>Giardia</i> , potentially viable cysts * PARM Code VGIAR				potentially viable cysts/100 L
<i>Cryptosporidium</i> , total count * PARM Code CRYPT				total oocysts/100 L
<i>Cryptosporidium</i> , potentially viable oocysts * PARM Code VCRYP				potentially viable oocysts/100 L

* Data entries must be made for both total and potentially viable cysts and oocysts.

PART IV - CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based upon my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Name/Title of Principle Executive Officer or Authorized Agent (Type or Print)	Signature of Principle Executive Officer or Authorized Agent	Telephone No.	Date (YY/MM/DD)
Email Address			

**FACT SHEET
FOR
STATE OF FLORIDA DOMESTIC WASTEWATER FACILITY PERMIT**

PERMIT NUMBER: FL0102679-018 (Minor)
FACILITY NAME: BCUD/South Central Regional
FACILITY LOCATION: 10001 N Wickham Rd, Melbourne, FL 32940-6604
Brevard County
NAME OF PERMITTEE: Brevard County Utility Services Department
PERMIT WRITER: Charles R. LeGros

1. SUMMARY OF APPLICATION

a. Chronology of Application

Application Number: FL0102679-018-DW1P
Application Submittal Date: November 4, 2020 and additional information Feb 24, 2021

b. Type of Facility

Domestic Wastewater Treatment Plant
Ownership Type: Municipal
SIC Code: 4952

c. Facility Capacity

Existing Permitted Capacity: 12.0 MGD Annual Average Daily Flow
Proposed Increase in Permitted Capacity: 0 MGD Annual Average Daily Flow
Proposed Total Permitted Capacity: 12.0 MGD Annual Average Daily Flow

d. Description of Wastewater Treatment

An existing 12.0 million gallon per day (MGD) annual average daily flow (AADF) permitted capacity activated sludge advanced wastewater treatment (AWT) plant utilizing the IFAS BNR and Carrousel BNR Treatment Process. The plant consists of a mechanical bar screen and de-gritter assembly, 5-stage IFAS BNR and 4-stage Carrousel BNR Process (anaerobic tanks, first anoxic tanks, extended oxidation ditches, second anoxic tanks, re-aeration tanks), clarifiers, chemical feed facilities, filters and chlorination, with aerobic digestion and belt-thickening of biosolids. The facility utilizes electronic sensors and automatic diversion valves, two (2) 1.0 million gallon on-site reclaimed water covered ground storage tank and associated high service pump station, and a standby power generator. The facility includes a Septage and Grease receiving station with flow metering, mechanical screening, and a holding tank with a submersible mixer. The facility may supplement the reclaimed water production with storm water introduced into the collection system of the facility.

e. Description of Effluent Disposal and Land Application Sites (as reported by applicant)

Surface Water Discharge D-001: An existing 0.990 MGD annual average daily flow discharge to 4-Mile Canal, Class III Fresh Waters, (WBID# 2893N) which is approximately 128 feet in length and discharges at a depth of approximately 0 feet. The outfall pipe is a 60" diameter concrete culvert that discharges to the 4-Mile Canal. The point of discharge is located approximately at latitude 28°13' 48" N, longitude 80°46' 14" W.

Land Application R-001: An existing 8.2 MGD annual average daily flow permitted capacity slow-rate public access system. R-001 is a reuse system which consists of on-site irrigation at the plant, and within the approved Reuse Service Area, as shown on the attached map, and identified in Section IV of this permit

Reclaimed water is discharged into stormwater storage lake system(s) D-002 located at the Indian River Colony Club Golf Course. The reclaimed water is stored in an existing stormwater retention pond with a storage capacity of 4.5 million gallons, which has an intermittent discharge to adjacent drainage features (6-Mile Canal), which ultimately discharges to the St. Johns River. Discharge of reclaimed water to this stormwater retention pond shall be in accordance with Condition I.B. 12 of this permit.

Stormwater from the following sources may be introduced into the sanitary sewerage system to augment the supply of reclaimed water: The facility may introduce storm water from a retention pond into the collection system at the wet well of Lift Station W-09 (Silver Pines Subdivision).

Land Application R-002: An existing 2.5 MGD annual average daily flow permitted capacity slow-rate restricted public access system. R-002 is a reuse system which consists of Created Wetlands with 200± acres (163± total wetted acres) comprising four (4) cells and an interior lake. The detention time through this created wetland system is approximately 53 days, and is located approximately at latitude 28°13' 47" N, longitude 80°46' 18" W.

Monitoring Group D-001:

4-Mile Canal, Class III Fresh Waters

Pollutants which are present in significant quantities or which are subject to permit limitations are as follows (Data October 2018 through September 2020)(one discharge event in last two years - 19 days in 2020 due to heavy rains):

Parameter	Units	Max/Min	Reported Value	Statistical Basis
Flow	MGD	-	0.71	Annual Average
BOD, Carbonaceous 5 day, 20C	mg/L	-	5.15	Monthly Average
BOD, Carbonaceous 5 day, 20C	lb/mth	-	43	Monthly Total
Solids, Total Suspended	mg/L	-	1.58	Monthly Average
pH	s.u.	Max	7.99	Single sample
pH	s.u.	Min	6.52	Single sample
Nitrogen, Total	mg/L	-	2.1	Monthly average
Nitrogen, Kjeldahl, Total (as N)	mg/L	-	1.44	Monthly average
Nitrogen, Ammonia, Total (as N)	mg/L	-	0.19	Monthly average
Ammonia, Unionized (as NH3)	mg/L	-	0.01	Monthly average
Phosphorus, Total (as P)	mg/L	-	0.07	Monthly average
Phosphorus, Total (as P)	lb/mth	-	0.58	Monthly average
Oxygen, Dissolved (DO)	mg/L	Min	3.83	Single sample

2. SUMMARY OF SURFACE WATER DISCHARGE

This facility does not have a new or expanded discharge to surface waters.

The Department does not anticipate adverse impacts on threatened or endangered species as a result of permit issuance.

3. BASIS FOR PERMIT LIMITATIONS AND MONITORING REQUIREMENTS

This facility is authorized to discharge effluent from Outfall D-001 to 4-Mile Canal based on the following:

Parameter	Units	Max/Min	Limit	Statistical Basis	Rationale
Flow (Outfall D-001)	MGD	Max	0.990	Annual Average	62-600.700(2)(b) FAC
		Max	Report	Monthly Average	62-600.700(2)(b) FAC
		Max	Report	Daily Maximum	62-601.300(6) FAC
BOD, Carbonaceous 5 day, 20C	mg/L	Max	3.0	Annual Average	62-600.430. FAC
		Max	3.75	Monthly Average	62-600.740(1)(b) 2.b. FAC
		Max	4.5	Weekly Average	62-600.740(1)(b) 2.c. FAC
		Max	6.0	Single Sample	62-600.740(1)(b) 2.d. FAC
BOD, Carbonaceous 5 day, 20C	lb/yr	Max	2000	Single Sample	62-304.510(1)(a) FAC
BOD, Carbonaceous 5 day, 20C	lb/mth	Max	Report	Monthly Total	62-304.510(1)(a) FAC
Solids, Total Suspended	mg/L	Max	3.0	Annual Average	62-600.430. FAC
		Max	3.75	Monthly Average	62-600.740(1)(b) 2.b. FAC
		Max	4.5	Weekly Average	62-600.740(1)(b) 2.c. FAC
		Max	6.0	Single Sample	62-600.740(1)(b) 2.d. FAC
Coliform, Fecal	#/100mL	Max	Report	Weekly Average	62-611 FAC & 62-302 FAC
pH	s.u.	Min	6.5	Single Sample	62-302.530(52) FAC
		Max	8.0	Single Sample	62-302.530(52) FAC
Nitrogen, Total	mg/L	Max	2.0	Monthly Average	62-600.740(1)(b) 2.b. FAC
		Max	2.4	Weekly Average	62-600.740(1)(b) 2.c. FAC
		Max	3.2	Single Sample	62-600.740(1)(b) 2.d. FAC
Nitrogen, Kjeldahl, Total (as N)	mg/L	Max	Report	Monthly Average	62-302 FAC
Nitrite plus Nitrate, Total 1 det. (as N)	mg/L	Max	Report	Monthly Average	62-302 FAC
Nitrogen, Ammonia, Total (as N) (Effluent)	mg/L	Max	Report	Monthly Average	62-302.530(7) FAC
Nitrogen, Ammonia, Total (as N) (calculated limit)	mg/L	Max	Report	Monthly Average	62-302.530(7) FAC
Nitrogen, Ammonia, Total (as N) (effluent minus calculated limit)	mg/L	Max	0.00	Monthly Average	62-302.530(7) FAC
Nitrogen, Ammonia, Total (as N)	mg/L	Max	2.5	Single Sample	62-302.530(7) FAC
Phosphorus, Total (as P)	mg/L	Max	0.2	Monthly Average	62-600.740(1)(b) 2.b. FAC
		Max	0.24	Weekly Average	62-600.740(2)(b) 3. FAC
		Max	0.32	Single Sample	62-600.740(2)(b)4. FAC
Phosphorus, Total (as P)	lb/yr	Max	46	Single Sample	62-304.510(1)(a) FAC

Parameter	Units	Max/Min	Limit	Statistical Basis	Rationale
Phosphorus, Total (as P)	lb/mth	Max	Report	Monthly Total	62-304.510(1)(a) FAC
Phosphate, Ortho (as P)	mg/L	Max	Report	Monthly Average	62-302 FAC
Sulfate, Total	mg/L	Max	Report	Monthly Average	62-302 FAC
Chloride (as Cl)	mg/L	Max	Report	Monthly Average	62-302 FAC
Alkalinity, Total (as CaCO ₃)	mg/L	Max	Report	Monthly Average	62-302 FAC
Specific Conductance	umhos/cm	Max	Report	Monthly Average	62-302 FAC
Temperature (C), Water	Deg C	Max	Report	Monthly Average	62-302 FAC
Oxygen, Dissolved (DO)	mg/L	Max	Report	Monthly Average	62-302 FAC
Water Level at samp. collection time	ft	Max	Report	Monthly Average	62-611.700(1) FAC

Because this is a discharge from a wetland, monitoring chlorine residual is not required in the permit for D-001 as in previous permits. The previous permit required 5 day per week monitoring of fecal coliform and reporting of the weekly average. Monitoring for E. Coli was not added to the permit since this is not a direct discharge with disinfection requirements.

Toxicity testing is not required for this discharge.

This facility is authorized to direct reclaimed water to Reuse System R-001, a slow-rate public access system, based on the following:

Parameter	Units	Max/Min	Limit	Statistical Basis	Rationale
Flow (Public access reuse)	MGD	Max	8.2	Annual Average	62-600.700(2)(b) & 62-610.810(5) FAC
		Max	Report	Monthly Average	62-600.700(2)(b) & 62-610.810(5) FAC
BOD, Carbonaceous 5 day, 20C	mg/L	Max	20.0	Annual Average	62-610.460 & 62-600.420(3)(a)1. FAC
		Max	30.0	Monthly Average	62-610.460 & 62-600.420(3)(a)2. FAC
		Max	45.0	Weekly Average	62-610.460 & 62-600.420(3)(a)3. FAC
		Max	60.0	Single Sample	62-610.460 & 62-600.420(3)(a)4. FAC
		Max	20.0	Annual Average	62-610.460 & 62-600.420(3)(a)1. FAC
BOD, Carbonaceous 5 day, 20C	mg/L	Max	30.0	Monthly Average	62-610.460 & 62-600.420(3)(a)2. FAC
		Max	45.0	Weekly Average	62-610.460 & 62-600.420(3)(a)3. FAC
		Max	60.0	Single Sample	62-610.460 & 62-600.420(3)(a)4. FAC
		Max	5.0	Single Sample	62-610.460(1) & 62-600.440(6)(a)3. FAC
Solids, Total Suspended	mg/L	Max	5.0	Single Sample	62-610.460(1) & 62-600.440(6)(a)3. FAC
Solids, Total Suspended	mg/L	Max	5.0	Single Sample	62-610.460(1) & 62-600.440(6)(a)3. FAC
Coliform, Fecal	#/100mL	Max	25	Single Sample	62-610.460 & 62-600.440(6)(a)2. FAC
Coliform, Fecal	#/100mL	Max	25	Single Sample	62-610.460 & 62-600.440(6)(a)2. FAC
Coliform, Fecal, % less than detection	percent	Min	75	Minimum Total	62-610.460 & 62-600.440(6)(a)1. FAC

Parameter	Units	Max/Min	Limit	Statistical Basis	Rationale
Coliform, Fecal, % less than detection	percent	Min	75	Minimum Total	62-610.460 & 62-600.440(6)(a)1. FAC
pH	s.u.	Min	6.0	Single Sample	62-600.445 FAC
		Max	8.5	Single Sample	62-600.445 FAC
pH	s.u.	Min	6.0	Single Sample	62-600.445 FAC
		Max	8.5	Single Sample	62-600.445 FAC
Chlorine, Total Residual (For Disinfection)	mg/L	Min	1.0	Single Sample	62-600.440(6)(b), 62-610.460(2), & 62-610.463(2) FAC
Chlorine, Total Residual (For Disinfection)	mg/L	Min	1.0	Single Sample	62-600.440(6)(b), 62-610.460(2), & 62-610.463(2) FAC
Turbidity	NTU	Max	Report	Single Sample	62-610.463(2) FAC
Turbidity	NTU	Max	Report	Single Sample	62-610.463(2) FAC
Giardia	cysts/100L	Max	Report	Single Sample	62-610.463(4) FAC
Giardia	cysts/100L	Max	Report	Single Sample	62-610.463(4) FAC
Cryptosporidium	oocysts/100L	Max	Report	Single Sample	62-610.463(4) FAC
Cryptosporidium	oocysts/100L	Max	Report	Single Sample	62-610.463(4) FAC
Nitrogen, Total*	mg/L	Max	10.0	Annual Average	FDEP Final Order 21-0082
		Max	Report	Monthly Average	FDEP Final Order 21-0082
Nitrogen, Total*	mg/L	Max	10.0	Annual Average	FDEP Final Order 21-0082
		Max	Report	Monthly Average	FDEP Final Order 21-0082
Phosphorus, Total (as P) *	mg/L	Max	6.0	Annual Average	62-600.650(3) FAC
		Max	Report	Monthly Average	62-600.650(3) FAC
Phosphorus, Total (as P) *	mg/L	Max	6.0	Annual Average	62-600.650(3) FAC
		Max	Report	Monthly Average	62-600.650(3) FAC
Flow (Baytree Golf Course Pond)	MGD	Max	Report	Annual Average	62-600.400(3)(b) FAC
		Max	Report	Monthly Average	62-600.400(3)(b) FAC
Flow (Viera Golf Course Pond)	MGD	Max	Report	Annual Average	62-600.400(3)(b) FAC
		Max	Report	Monthly Average	62-600.400(3)(b) FAC
Flow (Indian River Colony Club)	MGD	Max	Report	Annual Average	62-600.400(3)(b) FAC
		Max	Report	Monthly Average	62-600.400(3)(b) FAC
Flow (Duran Golf Course)	MGD	Max	Report	Annual Average	62-600.400(3)(b) FAC
		Max	Report	Monthly Average	62-600.400(3)(b) FAC

*The Department adopted a Basin Management Action Plan (BMAP) for the Indian River North BMAP on February 17, 2021. This permit has been revised to include an annual average limit of 10.0 mg/l of Total Nitrogen and 6.0 mg/l of Total Phosphorus in the reclaimed water. [FDEP Final Order 21-0082]

This facility is authorized to direct reclaimed water to Reuse System R-002, a slow-rate/restricted public access system, based on the following:

Parameter	Units	Max/Min	Limit	Statistical Basis	Rationale
Flow (wetlands)	MGD	Max	2.5	Annual Average	62-600.700(2)(b) & 62-610.810(5) FAC

Parameter	Units	Max/Min	Limit	Statistical Basis	Rationale
BOD, Carbonaceous 5 day, 20C	mg/L	Max	Report	Monthly Average	62-600.700(2)(b) & 62-610.810(5) FAC
		Max	5.0	Annual Average	BPJ
		Max	6.25	Monthly Average	62-600.740(1)(b) 1.b. FAC
		Max	7.5	Weekly Average	62-610.410 & 62-600.420(3)(a)3. FAC
		Max	10.0	Single Sample	62-610.410 & 62-600.420(3)(a)4. FAC
BOD, Carbonaceous 5 day, 20C	mg/L	Max	5.0	Annual Average	BPJ
		Max	6.25	Monthly Average	62-600.740(1)(b) 1.b. FAC
		Max	7.5	Weekly Average	62-610.410 & 62-600.420(3)(a)3. FAC
		Max	10.0	Single Sample	62-610.410 & 62-600.420(3)(a)4. FAC
Solids, Total Suspended	mg/L	Max	5.0	Annual Average	BPJ
		Max	6.25	Monthly Average	62-610.410 & 62-600.420(3)(b)2. FAC
		Max	7.5	Weekly Average	62-610.410 & 62-600.420(3)(b)3. FAC
		Max	10.0	Single Sample	62-610.410 & 62-600.420(3)(b)4. FAC
Solids, Total Suspended	mg/L	Max	5.0	Annual Average	BPJ
		Max	6.25	Monthly Average	62-610.410 & 62-600.420(3)(b)2. FAC
		Max	7.5	Weekly Average	62-610.410 & 62-600.420(3)(b)3. FAC
		Max	10.0	Single Sample	62-610.410 & 62-600.420(3)(b)4. FAC
Coliform, Fecal	#/100mL	Max	200	Monthly Geometric Mean	62-610.410 & 62-600.440(5)(a)2. FAC
		Max	200	Annual Average	62-610.410 & 62-600.440(5)(a)1. FAC
		Max	800	Single Sample	62-610.410 & 62-600.440(5)(a)4. FAC
Coliform, Fecal	#/100mL	Max	200	Monthly Geometric Mean	62-610.410 & 62-600.440(5)(a)2. FAC
		Max	200	Annual Average	62-610.410 & 62-600.440(5)(a)1. FAC
		Max	800	Single Sample	62-610.410 & 62-600.440(5)(a)4. FAC
pH	s.u.	Min	6.0	Single Sample	62-600.445 FAC
		Max	8.5	Single Sample	62-600.445 FAC
pH	s.u.	Min	6.0	Single Sample	62-600.445 FAC
		Max	8.5	Single Sample	62-600.445 FAC
Chlorine, Total Residual (For Disinfection)	mg/L	Min	0.5	Single Sample	62-600.510 FAC
Chlorine, Total Residual (For Disinfection)	mg/L	Min	0.5	Single Sample	62-600.510 FAC
Nitrogen, Total	mg/L	Max	6.0	Annual Average	BPJ
		Max	7.5	Monthly Average	62-600.740(1)(b) 2.b. FAC
		Max	9.0	Weekly Average	62-600.740(1)(b) 2.c. FAC
		Max	12.0	Single Sample	62-600.740(1)(b) 2.d. FAC
Nitrogen, Total	mg/L	Max	6.0	Annual Average	BPJ
		Max	7.5	Monthly Average	62-600.740(1)(b) 2.b. FAC
		Max	9.0	Weekly Average	62-600.740(1)(b) 2.c. FAC
		Max	12.0	Single Sample	62-600.740(1)(b) 2.d. FAC
Phosphorus, Total (as P)	mg/L	Max	0.75	Annual Average	BPJ
		Max	0.94	Monthly Average	62-600.740(1)(b) 2.b. FAC
		Max	1.125	Weekly Average	62-600.740(1)(b) 2.c. FAC
		Max	1.5	Single Sample	62-600.740(1)(b) 2.d. FAC

Parameter	Units	Max/Min	Limit	Statistical Basis	Rationale
Phosphorus, Total (as P)	mg/L	Max	0.75	Annual Average	BPJ
		Max	0.94	Monthly Average	62-600.740(1)(b) 2.b. FAC
		Max	1.125	Weekly Average	62-600.740(1)(b) 2.c. FAC
		Max	1.5	Single Sample	62-600.740(1)(b) 2.d. FAC
Flow	MGD	Max	Report	Annual Average	62-600.700(2)(b) & 62-610.810(5) FAC
		Max	Report	Monthly Average	62-600.700(2)(b) & 62-610.810(5) FAC

Other Limitations and Monitoring Requirements:

Parameter	Units	Max/Min	Limit	Statistical Basis	Rationale
Flow (Total Through Plant)	MGD	Max	12.0	Annual Average	62-600.700(2)(b) FAC
		Max	Report	Monthly Average	62-600.700(2)(b) FAC
		Max	Report	3-Month Rolling Average	62-600.700(2)(b) FAC
Percent Capacity, (TMADF/Permitted Capacity) x 100	percent	Max	Report	Monthly Average	62-600.405(4) FAC
BOD, Carbonaceous 5 day, 20C (Influent)	mg/L	Max	Report	Single Sample	62-600.660(1) FAC
Solids, Total Suspended (Influent)	mg/L	Max	Report	Single Sample	62-600.660(1) FAC
Rainfall	in	Max	Report	Single Sample	BPJ
Monitoring Frequencies and Sample Types	-	-	-	All Parameters	62-600 FAC & 62-699 FAC and/or BPJ of permit writer
Sampling Locations	-	-	-	All Parameters	62-600, 62-610.412, 62-610.463(1), 62-610.568, 62-610.613 FAC and/or BPJ of permit writer

4. IMPAIRMENT STATUS OF RECEIVING WATERS

Under Section 303(d) of the Clean Water Act, the Department is required to submit lists of impaired waters to EPA. The direct receiving water bodies for this facility's discharge to surface waters are not listed on the 303(d) list.

5. DISCUSSION OF CHANGES TO PERMIT LIMITATIONS

The current wastewater permit for this facility FL0102679-012-DW1P issued April 08, 2016 and expires on May 4, 2021. Permit revision FL0102679-013 was to allow expansion of the treatment facility (not discharge) and rolled into the renewal FL0102679-012. Permit revision FL0102679-014 issued September 15, 2016 was to allow the introduction of supplemental stormwater into the collection system. Permit revision FL0102679-015 issued October 18, 2016 was to require electronic submittal of discharge monitoring reports through EZDMR. Permit revision FL0102679-016 issued February 7, 2018 was to modify the expansion construction schedule in the permit. Permit revision FL0102679-017 issued July 21, 2020 was to allow construction of offsite force main to tie into the influent force main. The new wastewater permit for this facility FL0102679-018-DW1P expires on July 11, 2026.

The Department adopted a Basin Management Action Plan (BMAP) for the Indian River North BMAP on February 17, 2021. This permit has been revised to include an annual average limit of 10.0 mg/l of Total Nitrogen and 6.0 mg/l of Total Phosphorus in the reclaimed water. [FDEP Final Order 21-0082]

The facility had previously requested a reduction in the existing discharge to less than 1.0 MGD AADF permitted capacity. The facility is not required to have an industrial pretreatment program and the facility has been reclassified as a minor discharger.

The limit for unionized ammonia water quality criteria has been replaced with total ammonia nitrogen (TAN) criterion for fresh water. (62-302.530(7) FAC)

For the public access reuse system (R-001), TSS and fecal coliform sampling is reduced to 4 days/week in accordance with Rule 62-600.660(1), footnote 4 FAC.

For the public access reuse system (R-001), CBOD₅ sampling is 5 days/week in accordance with the previous permit, rule 62-600.650(3) FAC, and BPJ.

Historical:

The WQBEL's for discharge to this section of the St. Johns River for CBOD₅, TSS, Total Nitrogen (TN) and Total Phosphorus (TP) (3.0, 3.0, 1.6, 0.16 mg/L, respectively), were established by the Department during the issuance of State Permit DC05-252530 for the construction of the Titusville/South/Blue Heron created wetlands system (issued on October 4, 1994). The effluent limitations for nutrients for that facility were established based on background levels observed in the Upper St. Johns River.

Since the BCUD South Central created wetland system also discharges to the Upper St. Johns River, the Titusville/South/Blue Heron created wetlands system effluent limitations referenced in the paragraph above were also appropriate for this created wetland discharge. Rule 62-620.620(2)(d)(2), FAC, required that annual, monthly, weekly and single sample concentration limits be stated in the permit, with the additional effluent limitations created using the multipliers in Rule 62-600.740(1)(b)2. (a, b, c and d), FAC., but due to the consistent reductions in discharge, revisions were made to omit the annual average limits. Color is omitted from the permit because there is no numeric criterion. The WQBEL for TP is replaced by the wasteload allocation in the Total Maximum Daily Load, *as described below*. The TN limits are retained and provide reasonable assurance that the discharge will not cause or contribute to exceedances of the Numeric Nutrient Criteria (NNC) in the receiving or downstream waters.

The Total Maximum Daily Load (TMDL) for various lakes in the Upper St. Johns River has been finalized by the Department. It recommends that this facility keep its current discharge loadings; no load reduction is required. As stated in the TMDL documentation, "The TMDL includes a waste load allocation (WLA) of 0.023 tons/year for Total Phosphorus (TP) and 1.0 ton BOD/year. These were the highest loads produced by this facility based on data from 2001 to 2004." These annual load limits are retained in this permit, along with a monthly reporting requirement. The TMDL for USJR adopted by DEP is a site specific NNC for TP under 62-302.531(2)(a), FAC, and protects downstream waters as required by 62-302.531, FAC.

Because of the limited discharge during this permit cycle, there has been only one scan of the priority pollutants listed in the "Expanded Effluent Testing" section of the permit application, Form 2A. The facility has requested a reduction in the permitted capacity of the discharge to less than 1 MGD AADF, and does not have a pretreatment program, therefore, no additional testing of the effluent shall be required.

The Water Quality Based Effluent Limitation (WQBEL) Level I Analysis was performed for this permit renewal to ensure the discharge will not adversely impact the receiving water body. The created wetland system serves as a back-up discharge mechanism for the County's extensive public access reuse system. As stated in the application package, "discharge from the wetlands will occur primarily during periods of sustained wet weather." During these periods, river flows will be high and the detention time for the riverine lakes will be low. Under these conditions, the impacts of the nutrient loadings will be at their minimum."

The reclaimed water discharged from the created wetland shall be sampled for 48-hour dissolved oxygen water level at sample collection time and temperature (at four hour intervals from dawn to dusk) on a monthly basis when there is a discharge. The new DO criteria for % DO saturation has not been incorporated because the discharge from the wetland is very intermittent and development of a limit is not needed to provide reasonable assurance to protect the receiving water.

Monitoring for total chlorine residual for dechlorination is no longer included because the effluent is naturally dechlorinated due to the long detention time (approximately 53 days) in the created wetlands system and underlying soils.

6. BIOSOLIDS MANAGEMENT REQUIREMENTS

Biosolids generated by this facility may be disposed of in a Class I solid waste landfill.

See the table below for the rationale for the biosolids quantities monitoring requirements.

Parameter	Units	Max/ Min	Limit	Statistical Basis	Rationale
Biosolids Quantity (Received)	dry tons	Max	Report	Monthly Total	62-640.650(5)(a)1. FAC
Biosolids Quantity (Landfilled)	dry tons	Max	Report	Monthly Total	62-640.650(5)(a)1. FAC
Biosolids Quantity (Transferred)	dry tons	Max	Report	Monthly Total	62-640.650(5)(a)1. FAC
Monitoring Frequency	All Parameters				62-640.650(5)(a) FAC

7. GROUND WATER MONITORING REQUIREMENTS

Ground water monitoring requirements have been established in accordance with Chapters 62-520, 532, 600, 610, and 620, F.A.C.

8. PERMIT SCHEDULES

See permit.

9. INDUSTRIAL PRETREATMENT REQUIREMENTS

At this time, the facility is not required to develop an approved industrial pretreatment program. However, the Department reserves the right to require an approved program if future conditions warrant.

10. ADMINISTRATIVE ORDERS (AO) AND CONSENT ORDERS (CO)

This permit is accompanied by CO OGC#21-0180, effective March 25, 2021, which includes a schedule of compliance. The consent order is to address issues with the effluent discharge. The CO is hereby incorporated by reference.

11. REQUESTED VARIANCES OR ALTERNATIVES TO REQUIRED STANDARDS

No variances were requested for this facility.

12. THE ADMINISTRATIVE RECORD

The administrative record including application, draft permit, fact sheet, public notice (after release), comments received and additional information is available for public inspection at this link to the Department's online document storage system:

[https://depdms.dep.state.fl.us:443/Oculus/servlet/shell?command=hitlist&\[freeText=\]&\[folderName=\]&\[profile=Permitting_Authorization\]&\[creator=\]&\[entityType=any\]&\[createdDateTo=\]&\[catalog=38\]&\[searchBy=Profile\]&\[sortBy=Document+Date\]&\[createdDate=\]&{County= EQ_BREVARD}&{District= EQ_CD}&{Facility-Site+ID= EQ_FL0102679}&{Received+Date= RG_\(11-01-2020,04-01-2022\)}&{Permit+Type= EQ_DW+-+DOMESTIC+WASTEWATER+FACILITY}&{Facility+Type= LK_DOMESTIC+WASTEWATER}](https://depdms.dep.state.fl.us:443/Oculus/servlet/shell?command=hitlist&[freeText=]&[folderName=]&[profile=Permitting_Authorization]&[creator=]&[entityType=any]&[createdDateTo=]&[catalog=38]&[searchBy=Profile]&[sortBy=Document+Date]&[createdDate=]&{County= EQ_BREVARD}&{District= EQ_CD}&{Facility-Site+ID= EQ_FL0102679}&{Received+Date= RG_(11-01-2020,04-01-2022)}&{Permit+Type= EQ_DW+-+DOMESTIC+WASTEWATER+FACILITY}&{Facility+Type= LK_DOMESTIC+WASTEWATER})

13. PROPOSED SCHEDULE FOR PERMIT ISSUANCE

Draft Permit and Public Notice to Applicant and EPA	May 14, 2021
Notice of Intent to Issue	June 22, 2021
Notice of Permit Issuance	July 12, 2021

14. DEP CONTACT

Additional information concerning the permit and proposed schedule for permit issuance may be obtained during normal business hours from:

Charles LeGros
Environmental Consultant
Charles.legros@dep.state.fl.us
Central District Office

3319 Maguire Blvd
Suite 232
Orlando, FL 32803-3767

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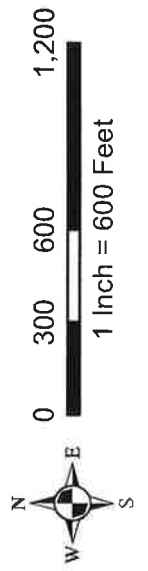


Aerial 2020



Brevard County South Central Surface Water Discharge

Date: 2/12/2021



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BREVARD COUNTY, FLORIDA 2040 POPULATIONS PROJECTIONS



Brevard
C O U N T Y

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FINAL
March 16, 2020



Table of Contents

I Introduction	4
II Brevard Comprehensive Plan and Future Land Use.....	5
Residential Densities.....	5
Residential Land Use.....	5
Agricultural Land Use.....	5
Conservation Land Use	5
Neighborhood Commercial	6
Community Commercial	6
Developments of Regional Impact (DRI)	6
Great Outdoors	6
Viera	6
Mixed Use.....	7
Farmton Tract.....	7
Vacant Lands Analysis by Future Land Use.....	8
Comprehensive Plan Future Land Use (FLU) Amendments	11
III Environmental and Land Use Constraints	12
Save Our Indian River Lagoon Project Plan (SOIRLPP).....	12
Land Use Constraints.....	14
IV Existing Infrastructure	15
County Utilities	15
Transportation	16
V Residential Building Permits and Certificates of Occupancy	17

Residential Building Permits by Zip Codes from 2015 to 2018 17

Certificates of Occupancy 18

VI Brevard County Historic Population and Socio-Economic Characteristics 19

Historic Population from 2000 to 2018 19

Income/Earnings (Individuals) 21

Historic and Projected Populations Comparison by Age from 2010 to 2040 23

VII Other Brevard County Population Projections for Comparison 26

BEBR Population Projections for Brevard County Through 2040 26

Population Projections for Cities in Brevard County 30

Population Projections for Unincorporated Brevard County – BEBR and Shimberg 32

“How Shall We Grow” – East Central Florida Regional Planning Council 33

Brevard County Traffic Analysis Zones 33

School Growth Projection 36

VIII Findings 37

Brevard County Population Projections Through 2040 37

Tables:

2.1 DRI and Mixed Use Developments 7

2.2 Vacant Lands Analysis by Future Land Use 10

4.1 County Utilities by Areas 15

4.2 Major Roadways in Brevard County 16

5.1 Single-Family and Multi-Family Unit Permits in Unincorporated Brevard County, 2015-2018 18

5.2 Single-Family and Multi Family Certificate of Occupancy in Unincorporated Brevard County, 2014-2018 18

6.1 Historic Population from 2000-2018.....	19
6.2 Historic Population of Surrounding Counties from 2000-2018.....	20
6.3 Income/Earnings (individuals).....	22
7.1 BEBR Population Projections for Brevard County Through 2040.....	27
7.2 BEBR Population Projections for Surrounding Counties Through 2040.....	29
7.3 Population Projections for Cities in Brevard County.....	31
7.4 Population Projections for Unincorporated Brevard County.....	32
7.5 Space Coast TPO Traffic Analysis Zone, Population Projections by Jurisdictions.....	34
7.6 Number of Schools with Projected Student Enrollment Growth through 2040, by Percent Change.....	36
8.1 Brevard County Population, Estimates and Interim Projections, 2000 to 2018.....	38
8.2 Brevard County Population, Future Projections, 2020 to 2040.....	38
8.3 Countywide Projections, BEBR.....	38

Charts:

6.1 Comparison of Population Projections by Age and Sex, 2010-2040.....	25
8.1 Brevard County Population, 2000-2040.....	39



I Introduction

Brevard County is undergoing significant development pressures and requires a proactive approach to planning for future infrastructure to support existing and projected development. This report synthesizes information from a wide variety of data types and sources, including Brevard County's Comprehensive Plan and Future Land Use Map, building permit trends, infrastructure plans, projected school enrollment, demographics, and population estimates and projections. Using this information, this report generates new population projections for the unincorporated areas of the county based on the geographic distribution of growth toward the year 2040.

Long-term population projections are best estimates using past and current development trend information. Long-term projections are not intended to be an exact accounting of future population but are to be used as a general guide to long term planning. Long-term population projections are subject to significant change based on unforeseen changes to the factors that drive development. Changes to the local, state, or national economy or changes to environmental conditions can have a significant impact on the projected rate of growth. Due to the uncertainty of long-term population projections, it is important to regularly review and update the projections to reflect changes in the shaping influences on future development.

This report provides an overview of the data analyzed to support the development of population projections toward the year 2040. In addition, this report provides a recommendation for population projections to be used by the County for future planning efforts. This report is organized to provide the supporting data first and followed by the recommended 2040 population projections.

II Brevard Comprehensive Plan and Future Land Use

The Brevard County Comprehensive Plan and the Future Land Use Map were reviewed to identify allowed residential density. Residential density is important to consider when looking at growth, because it allows for the identification of where growth can occur based on an area's land use designation. There are 13 land use designations that allow residential development. These are as follows:

Residential Densities¹

Residential Land Use

Residential 30 Directive	–	Max of 30 dwelling units per acre
Residential 15	–	Max of 15 dwelling units per acre
Residential 10	–	Max of 10 dwelling units per acre
Residential 6	–	Max of 6 dwelling units per acre
Residential 4	–	Max of 4 dwelling units per acre
Residential 2	–	Max of 2 dwelling units per acre
Residential 1	–	Max of 1 dwelling unit per acre
Residential 1:2.5	–	Max of 1 dwelling unit per 2.5 acres

Agricultural Land Use

Residential densities shall not exceed 1 dwelling unit per 5 acres.

Conservation Land Use

Public Conservation

Max residential density is 1 dwelling unit per 50 acres.

Private Conservation

Max residential density is 1 dwelling unit per 10 acres.

¹ Brevard County Comprehensive Plan, Adopted December 2011, Chapter 11, Future Land Use Element, p. XI-2 - XI-8 & XI-28 – XI -28

Neighborhood Commercial

Residential development is permissible in the Neighborhood Commercial land use designation at a density of up to one category higher than the closest residentially designated area on the Future Land Use Map (FLUM) which is on the same side of the street.

Community Commercial

Residential development is permissible in the Community Commercial land use designation at a density of up to one category higher than the closest residentially designated area on the Future Land Use Map (FLUM) which is on the same side of the street.

Developments of Regional Impact (DRI)²

Brevard County has two (2) DRIs that allow residential development, Great Outdoors and Viera. **Map 2.1** shows the location of the DRIs approved for residential development within Brevard County. See **Table 2.1**.

Great Outdoors

The Great Outdoors DRI has 2,000 residential units approved (1,000 cabins and 1,000 RV units). The Great Outdoors DRI is in northeast Brevard County, southeast of Titusville. According to the Future Land Use Map, approximately 1,263 acres are designated DRI 1 Development Regional Impact (Great Outdoors).

Viera

The Viera DRI has 29,945 residential units approved. The Viera DRI is in the Central Brevard County, between Rockledge and Palm Shores. According to the Future Land Use Map, approximately 19,938 acres are designated DRI 3 Development Regional Impact (Viera).

² Brevard County Comprehensive Plan, Adopted December 2011, Chapter 11, Future Land Use Element, p. XI-32 – XI-38

Mixed Use

Farnton Tract

The Farnton Tract consists of approximately 11,500 acres located in northeast Brevard County. **Map 2.1** shows the location of the Farnton Tract. The Comprehensive Plan establishes a long-range, sustainable plan for the Farnton Tract in northern Brevard County. The Comprehensive Plan requires the planning horizon to be consistent with the County's Comprehensive Plan horizon. The Comprehensive Plan also states that no increase in the number of residential units beyond what is allowed by the future land use plan is allowed. At least 75% of the total Farnton Local Plan must be maintained as Agriculture. The total buildable acres, exclusive of stormwater management facilities, is limited to 1,500 upland acres. However, the total FMU area is to not exceed 2,800 acres. Farnton is identified on the Future Land Use Map as Agriculture and Farnton Mixed Use Areas (FMU). Policies for the FMU district is provided in the Comprehensive Plan. The policies include a transfer of development rights program to transfer development densities from the agricultural areas to the mixed use areas. Once transferred, the density of Agriculture should be zero and the Farnton Mixed Use Area should have a maximum of 2,306 dwelling units and a minimum of 2,000 dwelling units.

Table 2.1 DRI and Mixed Use Developments

Project Name	Formerly Known As	Approved Use	Approved Amount of Units/Square Footage
Great Outdoors	Great Outdoors Premier RV/Golf Resort	Residential	2,000 Units (1,000 Cabins and 1,000 RV units)
Viera	Capron Trace	Residential	29,945 Units
Farnton	Farnton	Residential & Agriculture	Min 2,000 Units; Max 2,306 Units

Source: Brevard County Comprehensive Plan, Adopted December 2011, Chapter 11, Future Land Use Element, p. XI-32 – XI-38 and XI-72 – XI-75 and "Central Florida Geographical Information Systems." CFGIS, Brevard County, September 10, 2019 cfgis.org/DRI/DRI-Information.aspx

Vacant Lands Analysis by Future Land Use

An analysis of unincorporated vacant lands by future land use designation was conducted using ArcGIS software, parcel data from the Brevard County Property Appraiser, and the adopted Brevard County Comprehensive Plan and Future Land Use Map. Vacant parcels were selected by Florida Department of Revenue (DOR) use code and confirmed by “vacant” description. Once selected, the corresponding Brevard County future land use designation was determined for each vacant parcel.

In terms of land area, most of the unincorporated vacant land in Brevard County is designated as “Public Conservation” or “Agricultural”, each of which afford the least density (both less than one unit per acre). After Public Conservation and Agricultural, the Viera DRI, Farmton Mixed Use, and other low-density residential categories, cover significant vacant land area. See **Map 2.2**.

The gross acreage of each vacant parcel was also calculated. The gross acreage was then adjusted based on data provided by Brevard County Planning & Development that calculated the actual development yield of existing development projects. Based on the actual development yield analysis, it was determined that on average development projects in the county develop approximately 57.75% of the total gross development allowed by the adopted future land use classification. Based on this 57.75% development yield calculation, the gross allowed development yield from the adopted future land use classification was adjusted by 57.75%. This reduction accounts for environmental or other zoning constraints that may further limit developability. The maximum allowable density afforded by the Brevard County Comprehensive Plan and Future Land Use Map was then applied to the gross acreage (i.e., 100%) and reduced development lot yield (i.e., 57.75% of allowed gross development) of each vacant parcel to yield a maximum number of dwelling units. For the three (3) master planned developments (Viera, Great Outdoors, and the Farmton Mixed Use), the actual planned number of dwelling units was assigned to each development. This methodology resulted in an estimated potential 166,375 dwelling units based on the gross acreage of each vacant parcel and an estimated potential 110,553 dwelling units based on the reduced development yield.

According to the American Community Survey (ACS) 2013-2017 estimates, in Brevard County the average household size is estimated to be 2.47 persons. If this number is applied to the estimated potential number of dwelling units, the unincorporated vacant land toward buildout could accommodate 410,946 additional people based on gross

acreage or 273,065 additional people based on the reduced development yield . **Table 2.2** shows the land uses that allow for residential development and the potential number of dwelling units and resulting additional population.

Compared to future population projections for unincorporated Brevard County, the development potential of vacant lands far exceeds the projected population growth toward 2040. For example, the BEBR medium projection for unincorporated Brevard County is 260,757 and the TPO TAZ draft projection for unincorporated Brevard County is 303,487. While the unincorporated vacant lands are enough to accommodate projected growth, there is also a surplus of unincorporated vacant land beyond 2040.

The maximum potential population allowed under the current Comprehensive Plan densities provides a maximum limit that new 2040 population projections should not exceed. Given Comprehensive Plan densities typically provide for excessive development opportunities, the use of the potential maximum population from the densities allowed in the Comprehensive Plan as a maximum limit is reasonable.

Future Land Use Description		Density	100% Acres	% Total	DUs (Gross)	50% Acres	DUs (Net/acid)
AGRIC AGRICULTURAL	1 unit per 5 acres	0.2	79,415	28%	15,883	39,708	9,172
CC-COMMUNITY COMMERCIAL	Varies by Proximity to Residential		1,556	1%	10,400	778	6,006
DR11 DEVELOPMENT REGIONAL IMPACT (Great Outdoors)	2,000 Units Total		796	0%	0%	398	2,000
DR13 DEVELOPMENT REGIONAL IMPACT (Viera)	29,945 Units Total		15,802	6%	6%	7,901	29,945
FMU FARMTON MIXED USE	2,306 Units Total		7,508	3%	3%	3,754	2,306
NC-NEIGHBORHOOD COMMERCIAL	Varies by Proximity to Residential		953	0%	5,497	477	3,175
PRIV CONS PRIVATE CONSERVATION	1 unit per 10 acres	0.1	49	0%	5	25	3
PUB-CONS PUBLIC CONSERVATION	1 unit per 50 acres	0.02	144,367	50%	2,887	72,184	1,667
RES-10 RESIDENTIAL 10 UNITS PER ACRE	10 units per acre	10	7	0%	74	4	42
RES-12-DIR DIRECTIVE RESIDENTIAL 12 UNITS PER ACRE	12 units per acre	12	4	0%	53	2	31
RES-15 RESIDENTIAL 15 UNITS PER ACRE	15 units per acre	15	2,182	1%	32,733	1,091	18,903
RES-2-DIR DIRECTIVE RESIDENTIAL 2 UNITS PER ACRE	2 units per acre	2	7	0%	13	3	8
RES-2 RESIDENTIAL 2 UNITS PER ACRE	2 units per acre	2	7,328	3%	14,657	3,664	8,464
RES-3-DIR DIRECTIVE RESIDENTIAL 3 UNITS PER ACRE	3 units per acre	3	416	0%	1,249	208	722
RES-30-DIR DIRECTIVE RESIDENTIAL 30 UNITS PER ACRE	30 units per acre	30	2	0%	69	1	40
RES-4-DIR DIRECTIVE RESIDENTIAL 4 UNITS PER ACRE	4 units per acre	4	1	0%	6	1	3
RES-4 RESIDENTIAL 4 UNITS PER ACRE	4 units per acre	4	6,687	2%	26,749	3,344	15,448
RES-5-DIR DIRECTIVE RESIDENTIAL 5 UNITS PER ACRE	5 units per acre	5	0	0%	0	0	0
RES-6-DIR DIRECTIVE RESIDENTIAL 6 UNITS PER ACRE	6 units per acre	6	6	0%	36	3	21
RES-6 RESIDENTIAL 6 UNITS PER ACRE	6 units per acre	6	739	0%	4,432	369	2,559
RES-8-DIR DIRECTIVE RESIDENTIAL 8 UNITS PER ACRE	8 units per acre	8	124	0%	990	67	572
RES1 RESIDENTIAL 1 UNIT PER ACRE	1 unit per acre	1	13,092	5%	13,092	6,546	7,560
RES1.2-5 RESIDENTIAL 1 UNIT PER 2.5 ACRES	1 unit per 2.5 acres	0.4	8,248	3%	3,299	4,124	1,905
TOTAL			289,791	100%	166,375	144,646	110,553
ADDITIONAL POPULATION					410,946	273,065	

Source: Brevard County Property Appraiser (Parcels); Brevard County Comprehensive Plan and Future Land Use Map (Land Use and Density); U.S. Census Bureau American Community Survey (ACS) 2013-2017 Estimates (2.47 persons per household); Brevard County Planning & Development Analysis of Existing Development Yield, February 2020.

Comprehensive Plan Future Land Use (FLU) Amendments

From 2015 to June 2019, there have been 44 adopted amendments to Brevard County's Comprehensive Plan. Of the 44 amendments, there have been five (5) large-scale amendments. As of June 2019, there are six (6) pending amendments and one (1) denied amendment. **Map 2.3** shows the locations of all FLU Amendments from 2015 to June 2019. The majority of amendments occurred in central Brevard County on Merritt Island and on the mainland, south of Rockledge and north of Palm Shores and Melbourne. The location of these amendments provides some insight into the private sectors interest in opportunities for future development.

Of the 44 adopted FLU amendments, 22 have increased residential densities, six (6) have reduced residential densities, and 16 have had no change in residential densities. Of the six (6) pending FLU Amendments two (2) proposed an increase in residential densities, one (1) proposed a reduction, and two (2) propose no change to residential densities.

Amendment 16-04ESR 2.2 specifically addresses the reclassifications of some areas in the Indian River Lagoon and its tributaries from Class III waters to Class II waters. The amendment to the Comprehensive Plan addressed properties affected by the reclassification. Due to existing lot sizes, development on certain properties could be affected by the new buffer setback requirements. The proposed amendment to Policy 3.3.D was intended only for those lots legally established prior to the date of reclassification and located in reclassification areas. Avoidance and minimization of buffer impacts is required. The properties are subject to a maximum of 30% impervious area in the buffer, and stormwater management is required. The amendment also updated a map in the Conservation Element to reflect the new water classifications.

III Environmental and Land Use Constraints

Environmental and land use constraints are important considerations in the development of population projections and its allocation in the county. For this analysis, significant areas of environmental and land use constraints are related to the Save Our Indian River Lagoon Project Plan and the extensive lands owned by the Federal, State, County, and local agencies.

Save Our Indian River Lagoon Project Plan (SOIRLPP)

Brevard County's SOIRLPP initiative outlines local projects to improve water quality and the overall viability of the Indian River Lagoon. Funding for identified projects is supported through referendums to continue and implement the initiatives of the SOIRLPP. Annually, the SOIRLPP is updated to include new scientific information, technologies, and other data and analysis to help identify and administer projects under the plan.

In January 2019, a study was completed by Applied Ecology, Inc. for the Brevard County Natural Resources Management Department. That study updated the "Reduce Pollutants" section of the SOIRLPP and further narrowed down the priority areas to consider for retrofit from Onsite Sewage Treatment and Disposal System (OSTDS)/septic tanks to wastewater/sewer systems. The categories of potential retrofits were focus areas, communities (platted subdivisions), individual parcel quick connects, septic upgrades, and package plants.

The previous iteration of the SOIRLPP identified priority focus areas based on septic loading hotspots. The January 2019 study further limited the priority focus areas to areas having a nutrient loading of more than 25 lbs./year per parcel, although some parcels having more than 22 lbs./year per parcel were kept because they were already in the process of compliance with the SOIRLPP. In total, the focus-area based prioritization from the January 2019 study identified 23 priority focus areas in Brevard County for retrofit. See **Map 3.1**.

Outside of the City of Palm Bay, approximately 3,588 parcels were identified as “quick connects” located within 10-meters of a sewer gravity main line, with the North Indian River Lagoon watershed having the highest number of quick connect parcels. Nearly 50,000 parcels were identified as potential septic system upgrades (not near a sewer gravity main line), with the majority in the Central Indian River Lagoon watershed. Although several package plants were modeled as part of the January 2019 study and data presented, no specific recommendations for package plants are identified.

The January 2019 study also identified seven (7) stand-alone communities outside of the priority focus areas that are included under quick connects or septic upgrades but could be retrofitted as a whole. These communities include:

- South Banyan Isles (septic upgrades)
- James M. Hearndon (septic upgrades)
- Leewood Forest Estates (quick connects)
- Oak Hammock Estates (septic upgrades)
- Sanderling Run (septic upgrades)
- Pine Island Lakes, Unit 1 (septic upgrades)
- Pineridge Heights (septic upgrades)

Within unincorporated Brevard County, priority focus areas are concentrated at the Indian River, near US-1. For example, the “Sharpes A”, “SoCen A”, “SoCen C”, and “Micco” priority focus areas are either mostly or completely within mainland unincorporated Brevard County; however, each of these areas abuts US-1. Similarly, “Sykes M”, “Sykes N”, “Sykes T”, and “Merritt Island C” are on unincorporated Merritt Island. Of the stand-alone communities, only Pineridge Heights (near Micco on the mainland), Pine Island Lakes, Sanderling Run, and South Banyan Isles are within unincorporated Brevard County.

Land Use Constraints

To determine areas within Brevard County that restrict or prohibit opportunities for future growth, three (3) types of areas were reviewed. First, all conservation lands within Brevard County were identified. Conservation land is considered a land use constraint because development is to be minimized within conservation lands. In addition, large areas within the county are owned by either Brevard County, the Federal government (military and NASA), or State agencies (St. Johns River Water Management District conservation lands – St. Johns River). These Brevard County, Federal, and State owned lands are not available for future residential development and are excluded from future residential growth. Finally, wetlands within Brevard County were identified. Wetlands are considered a land use constraint because development cannot occur within wetlands unless properly mitigated and conservation of wetlands is highly prioritized. **Map 3.2.** shows all areas within Brevard County that are identified as Restrictive Development Areas.

IV Existing Infrastructure

The identification of the location of existing infrastructure such as County utilities and the major road network is an important part of determining the distribution of future population. In addition, the identification of existing infrastructure provides a context for the future planning of new infrastructure to meet the demand of the projected population growth.

County Utilities

Most of the existing County owned utilities are concentrated within five (5) areas of Unincorporated Brevard County. See **Map 4.1**. The unincorporated areas with County owned utilities are as follows:

1. Just north of Titusville.
2. The majority of Merritt Island. From State Road 528 south to just south of State Road 520.
3. On the mainland, south of Rockledge and north of Palm Shores and Melbourne.
4. On the barrier islands, from Pineda Causeway, just north of Satellite Beach, south to Glengarry Avenue, just south of Melbourne Beach.
5. South Brevard County, just south of Grant-Valkaria, east of Palm Bay.

Table 4.1 provides a breakdown of the types of County owned utilities available in each concentrated unincorporated area listed above.

Areas Listed	Hydrants	Water Lines	Reclaimed Water Lines	Force Main	Gravity Main
1	X	X	X	X	X
2			X	X	X
3			X	X	X
4			X	X	X
5	X	X	X	X	X

Source: Brevard County Utility Services Department, 2019.

Though some of these unincorporated areas do not have County owned utilities servicing them, utilities may still be available, but are provided by city owned utilities.

Transportation

Brevard County has approximately 18 major roadways that run North to South and approximately 14 major roadways that run East to West. **Map 4.2** shows all major roadways in Brevard County. See **Table 4.2** for a list of the major roadways in Brevard County.

Table 4.2 Major Roadways in Brevard County	
North to South Roads	East to West Roads
State Road-5/US Highway-1/Dixie Highway	State Road-46
Interstate-95	Garden Street/Amax Brewer Memorial Parkway
Hopkins Avenue	Cheney Highway/Columbia Boulevard
Washington Avenue	North Courtenay Parkway
State Road-407	State Road-528/Beachline Expressway
North Courtenay Parkway	State Road-520/King Street/Willard Street
North/South Cocoa Boulevard	Barnes Boulevard
Astronaut Boulevard	Wickham Road
Atlantic Avenue/State Road-A1	Pineda Causeway
Orlando Avenue	Eau Gallie Boulevard
Fiske Boulevard	NASA Boulevard
Rockledge Boulevard	US Highway-192/Strawbridge Avenue/Melbourne Causeway/ 5 th Avenue
Wickham Road	Palm Bay Road
Harbor City Boulevard	County Road-514/Malabar Road
Minton Road	
Babcock Street	
RJ Conlon Boulevard	
Miramar Avenue	

Source: Florida Department of Transportation (FDOT), Major Roads.

V Residential Building Permits and Certificates of Occupancy

Evaluation of existing building permitting trends provides an insight into growth pressures in the county. Building permit information for new residential units and certificate of occupancy information for unincorporated areas of the county from 2015 to 2018 were evaluated to identify trends in building permitting.

Residential Building Permits by Zip Codes from 2015 to 2018

From 2015 to 2018, there were 3,148 Single-Family and Multi-Family units permitted by Brevard County. In those four years, Zip Code 32940 had the most Single-Family and Multi-Family units permitted by Brevard County (1,845). Approximately 58.63% of all Single-Family and Multi-Family units permitted in Brevard County, from 2015 to 2018, were permitted in Zip Code 32940. The Brevard County jurisdiction accounts for approximately 88,945 acres in this Zip Code, which equates to approximately 1 permit per 48 acres.

Zip Code 32953 has the second most permitted Single-Family and Multi-Family units from 2015 to 2018 (196). The Brevard County jurisdiction accounts for approximately 21,245 acres in this Zip Code, which equates to approximately 1 permit per 108 acres.

There are 12 Zip Codes in Brevard County that had no Single-Family or Multi-Family units permitted through Brevard County. Four of the Zip Codes with no Single-Family or Multi-Family unit permits are mostly or entirely within a city's jurisdiction (32907, 32905, 32901, and 32920). Two of the Zip Codes with no Single-Family and Multi-Family unit permits are mostly or entirely within the Brevard County jurisdiction (32948 and 32925). **Table 5.1** provides a breakdown of Single-Family and Multi-Family unit permits in Brevard County from 2015 to 2018. **Map 5.1** shows the number of permits in each zip code.

Table 5.1 Single-Family and Multi-Family Unit Permits in Unincorporated Brevard County, 2015 to 2018

	2015	2016	2017	2018
	629	802	751	966

Source: Brevard County, Planning Department, New Residential Building Permit Data, 2015-2018

Certificates of Occupancy

From 2014 to 2018, 4,825 residential units where issued a Certificate of Occupancy (CO) in Unincorporated Brevard County. There was a noticeable increase in COs of residential units from 2014 to 2018. From 2014 to 2018 there was a 59% increase in COs in Unincorporated Brevard County. **Table 5.2** provides a breakdown of residential units that were issued a COs from 2014 to 2018.

Table 5.2 Single-Family and Multi-Family Certificate of Occupancy in Unincorporated Brevard County, 2014 to 2018

	2014	2015	2016	2017	2018
	528	704	1,025	1,275	1,293

Source: Brevard County School Board, 2019

VI Brevard County Historic Population and Socio-Economic Characteristics

Evaluating the historic population growth and socio-economic characteristics provides a strong basis for future population projections. The following analysis looks at population growth and socio-economic changes from 2000 to 2018. This time period is important as it encompasses the Florida housing boom of the early 2000s, the real estate crisis in 2007-2008, and the economic recovery.

Historic Population from 2000 to 2018

When looking at the change in population in Brevard County and unincorporated Brevard County, from 2000 to 2018, it is clear that population continued to increase. However, the rate of population growth slowed down. From 2000 to 2010, the population in Brevard County increased an average of 6,714 persons per year, and in unincorporated Brevard County the population increased an average of 1,741 persons per year. However, from 2010 to 2018, the population in Brevard County increased an average of 5,023 persons per year, and in unincorporated Brevard County the population increased an average of 1,446 persons per year. From 2000 to 2018, the average increase in population in Brevard County is 5,963 persons per year, and in unincorporated Brevard County the average increase in population is 1,610 persons per year. This shows that the growth that occurred between 2010 and 2018 was below the average of growth that occurred from 2000 to 2018. See **Table 6.1**.

Table 6.1 Historic Population from 2000 to 2018

	2000	Change	Average Annual Growth Rate	2010	Change	Average Annual Growth Rate	2018
Brevard County	476,230	67,146	1.33%	543,376	40,187	0.90%	583,563
Unincorporated Brevard County	188,918	17,414	0.89%	206,332	11,570	0.68%	217,902
Cities	287,312	49,732	1.61%	337,044	28,617	1.02%	365,661

Source: Bureau of Economic and Business Research (BEBR), University of Florida (2018) Florida Estimates of Population 2018.

Table 6.2 compares the historic average annual growth rate of the counties surrounding Brevard County. When comparing surrounding counties to Brevard County (1.33%), Seminole County (1.47%) and Volusia County (1.10%) had the most similar average annual growth rate from 2000 to 2010. When comparing surrounding counties to Brevard County (0.90%), St. Lucie County (1.07%), Seminole County (1.16%), Indian River County (1.20%), and Volusia County (0.89%) had the most similar average annual growth rate from 2010 to 2018.

Table 6.2 Historic Population of Surrounding Counties from 2000 to 2018					
	2000	Average Annual Growth Rate	2010	Average Annual Growth Rate	2018
Indian River County	112,947	2.02%	138,028	1.20%	151,825
Orange County	896,344	2.49%	1,145,956	2.07%	1,349,597
Osceola County	172,493	4.53%	268,685	3.45%	352,496
St. Lucie County	192,695	3.73%	277,789	1.07%	302,432
Seminole County	365,199	1.47%	422,718	1.16%	463,560
Volusia County	443,343	1.10%	494,593	0.89%	531,062

Source: Bureau of Economic and Business Research (BEBR), University of Florida (2018) Florida Estimates of Population 2018

Income/Earnings (Individuals)

The 2005-2009 American Community Survey 5-Year Estimates estimated there was approximately 218,885 households in Brevard County. The mean annual income of these households, during this time, was \$64,454. The largest percentage (19.70%) of households had an annual income of \$50,000 to \$74,999. The smallest percentage (2.80%) of households had an annual income of \$200,000 or more. In Brevard County, households with an annual income of less than \$10,000 represent 6.20% of all households. Households with an annual income of \$100,000 or more represents 17% of all households.

By the 2009-2013 American Community Survey 5-Year Estimates the number of households increased by 1,392 to 220,227 households. The mean annual household income decreased by \$339 to \$64,115. Households with an annual income of \$100,000 to \$149,999 had the largest percent increase (0.90%). Households with an annual income of \$75,000 to \$99,999 had the largest percent decrease (1.30%). Households with an annual income of \$50,000 to \$74,999 represented the largest percentage (18.70%) of households. The smallest percentage (2.90%) of households had an annual income of \$200,000 or more. By the 2009-2013 American Community Survey 5-Year Estimates, households with an annual income of less than \$10,000 increased by 0.50% to 6.70%. Households with an annual income of \$100,000 or more represents 18.4% of all households.

From the 2009-2013 American Community Survey 5-Year Estimates to the 2013-2017 American Community Survey 5-Year Estimates the number of households increased by 6,946 to 227,223 households. The mean annual household income increased by \$5,597 to \$69,712. Households with an annual income of \$200,000 or more had the largest percent increase (1.00%). Households with an annual income of \$25,000 to \$34,999 had the largest percent decrease (1.40%). Households with an annual income of \$50,000 to \$74,999 represented the largest percentage (19.60%) The smallest percentage (3.90%) of households had an annual income of \$200,000 or more. By the 2013-2017 American Community Survey 5-Year Estimates, households with an annual income of less than \$10,000 decreased by 0.70% to 6.00%. Households with an annual income of \$100,000 or more represents 20.2% of all households.

In 2017, the percent of households that have an annual income of less than \$10,000 is lower than any of the previously reviewed years. Annual household income ranges of \$10,000 to \$14,999, \$100,000 to \$149,999, \$150,000 to \$199,999, and \$200,000 or more are the only income ranges in which the percent of households increased each year.

See **Table 6.3**.

Table 6.3 Income/Earnings (Individuals)									
Subject	2005-2009 American Community Survey Brevard County, Florida			2009-2013 American Community Survey Brevard County, Florida			2013-2017 American Community Survey Brevard County, Florida		
	Households			Households			Households		
	Estimate	Margin of Error	Change Estimate	Estimate	Margin of Error	Change Estimate	Estimate	Margin of Error	Change Estimate
Total	218,885	+/-1,621	1,392	220,277	+/-1,593	6,946	227,223	+/-1,810	
Less than \$10,000	6.20%	+/-0.4	0.50%	6.70%	+/-0.4	-0.70%	6.00%	+/-0.4	
\$10,000 to \$14,999	5.20%	+/-0.3	0.20%	5.40%	+/-0.4	0.10%	5.50%	+/-0.3	
\$15,000 to \$24,999	11.70%	+/-0.6	0.00%	11.70%	+/-0.4	-0.70%	11.00%	+/-0.4	
\$25,000 to \$34,999	11.90%	+/-0.4	0.20%	12.10%	+/-0.5	-1.40%	10.70%	+/-0.4	
\$35,000 to \$49,999	16.00%	+/-0.5	0.00%	16.00%	+/-0.5	-0.80%	15.20%	+/-0.6	
\$50,000 to \$74,999	19.70%	+/-0.6	-1.00%	18.70%	+/-0.5	0.90%	19.60%	+/-0.5	
\$75,000 to \$99,999	12.40%	+/-0.4	-1.30%	11.10%	+/-0.5	0.70%	11.80%	+/-0.5	
\$100,000 to \$149,999	10.90%	+/-0.5	0.90%	11.80%	+/-0.5	0.10%	11.90%	+/-0.4	
\$150,000 to \$199,999	3.30%	+/-0.2	0.40%	3.70%	+/-0.3	0.70%	4.40%	+/-0.3	
\$200,000 or more	2.80%	+/-0.2	0.10%	2.90%	+/-0.2	1.00%	3.90%	+/-0.3	
Median income (dollars)	\$49,114	+/-658	-\$1,075	\$48,039	+/-671	\$3,497	\$51,536	+/-616	
Mean income (dollars)	\$64,454	+/-848	-\$339	\$64,115	+/-840	\$5,597	\$69,712	+/-1,005	

Source: U.S. Census Bureau; American Community Survey, 2013-2017 American Community Survey 5-Year Estimates, Table S1901

Historic and Projected Populations Comparison by Age from 2010 to 2040

Chart 6.1 is a population pyramid representing historic (2010) and projected population, through 2040, by age and sex in Brevard County. This graph shows that as the years progress, population in the 0-4-year age group seem to stay fairly consistent while slightly dropping each year. Overall, the 0-4-year age group represents the smallest percentage of the population, through 2040. The average percent of the population for the 0-4-year age group, from 2020 to 2040, is projected to be 4.80%. This is below the historic average from both 2010 (4.93%) and 2017 (4.90%).

In 2010, the census shows the 5-17-year age group at its highest percent of population in Brevard County (14.88%) out of all the reviewed years. The average percent of the population for the 5-17-year age group, from 2020 to 2040, is projected to be 13.46%. This age group population is projected to decline in the year 2020 and fluctuate within 0.08 of a percentage through 2040.

In Brevard County, the 18-24-year age group is the second smallest, on average, age group in the County. The average percent of the population for the 18-24-year age group, from 2020 to 2040, is projected to be 6.89%. The percentage of this age group population it projected to continue to slightly decline from 2017 to 2030 (6.78%), as it did from 2010 (7.87%) to 2017 (7.65%) but begin to increase from 2035 (6.79%) to 2040 (6.89%).

The 25-54-year age group is the largest age group in Brevard County. In 2010, this age group represented 38.2% of Brevard County. The average percent of the population for the 25-54-year age group, from 2020 to 2040, is projected to be 32.51%. This age group is projected to progressively decline, and by 2040 it will represent 32.26% of the population in Brevard County.

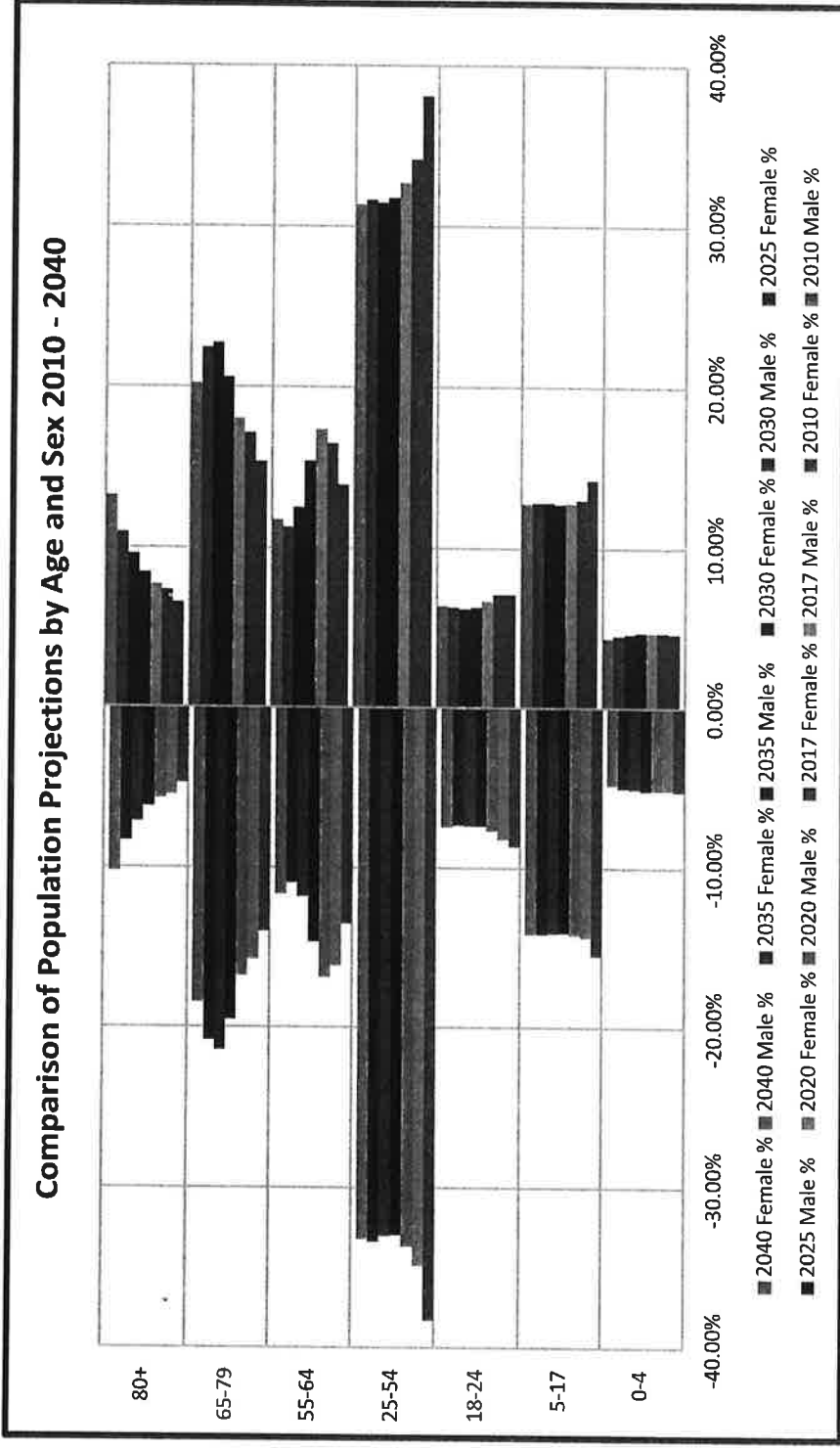
By 2020, the 55-64-year age group is projected to represent a higher percent (17.14%) of the population in Brevard County than it had in 2010 (13.74%) and 2017 (16.35%). The average percent of the population for the 55-64-year age group from 2020 to 2040, is projected to be 13.44%. By 2040, this age group is projected to steadily decline to 11.70% of the population. This age group is projected to decline in population by 5.44% from 2020 to 2040.

In Brevard County, the 65-79-year age group represents the second largest percent of the population. The average percent of the population for the 65-79-year age group, from 2020 to 2040, is projected to be 20.12%. Projections shows this age group growing to its highest percentage by 2030 (22.09%), then declining 2.73% by 2040.

The 80 years and up age group is the only age group projected to have a steady increase in population percentage in Brevard County. The average percent of the population for this age group from 2020 to 2040, is projected to be 8.77%. In 2010, this age group represented 5.67% of Brevard County's population. By 2040, this age group is projected to represent 11.77% of the population.

Generally, the County's population is getting older through 2040. This trend is consistent with the statewide trend of an ageing population. However, the largest proportionate age range remains 25-54 between 2010 and 2040, although it is less than what it was in 2010.

Chart 6.1 Comparison of Population Projections by Age and Sex 2010-2040



Source: Bureau of Economic and Business Research (BEBR), University of Florida (2018). Bulletin 181, June 2018. Florida Population Projections By Age, Sex, Race, and Hispanic Origin For Florida and Its Counties, 2020-2045, With Estimates for 2017, p. 10

VII Other Brevard County Population Projections for Comparison

In addition to evaluating past population growth trends, other population projections were reviewed and analyzed. The other population projections analyzed include projections from the University of Florida Bureau of Economic and Business Research (BEBR), the University of Florida Shimberg Center for Housing Studies, the Space Coast Transportation Planning Organization, and the Brevard County School District.

These other population projections provide a guide for the development of the long-term population projections in this report. It is important that the long-term population projections within this report have a reasonable relationship to other population projection activities. As stated in the introduction to this report, long-term population projections are not absolute and can vary widely based on unanticipated changes in factors shaping population growth. However, if other long-term projections are relatively consistent, then there is a level of confidence that the long-term projections are reasonable. In addition, these other population projections also provide insight into potential allocation of future populations not only between the unincorporated county and the cities, but also population allocation throughout the county.

BEBR Population Projections for Brevard County Through 2040

BEBR is recognized by the State of Florida as the official long-term population projections for the state and for all 67 counties. Each year BEBR prepares long-term population projections that provide for low, medium, and high growth scenarios for all 67 counties. Because BEBR provides a diverse range of projections, BEBR projections are a good resource to compare other projections and their relationship to the official BEBR projections. For example, if a calculated population projection is lower than the BEBR low or higher than the BEBR high, then there could be a significant local influence on population growth that is not accounted for by BEBR. It is important to recognize that the BEBR long-term projections are only at the total county level and do not allocate between the unincorporated and incorporated areas of the county.

Based on the BEBR low growth scenario for Brevard County, the 2018 estimated population in Brevard County is projected to increase by 16,837 persons by the year 2040. This increase in population during that 22-year period projects that the population will increase, on average, 765 persons per year. For Low growth projections, the projected average annual growth rate from 2020 to 2030 is 0.35% and from 2030 to 2040 is 0.10%. Given the building permitting data and other data analyzed in this report, the BEBR low projection is not reasonable.

Based on the BEBR medium growth scenario, the 2018 estimated population in Brevard County is projected to increase by 115,137 persons by the year 2040. This increase in population over the next 22 years projects that the population will increase, on average, 5,234 persons per year. For medium growth projections, the projected average annual growth rate from 2020 to 2030 is 0.93% and from 2030 to 2040 is 0.63%.

Based on the BEBR high growth scenario, the 2018 estimated population in Brevard County is projected to increase by 215,537 persons by the year 2040. This increase in population over the next 22 years projects that the population will increase, on average, 9,797 persons per year. For high growth projections, the projected average annual growth rate from 2020 to 2030 is 1.41% and from 2030 to 2040 is 1.11%.

Based on the historical population growth for Brevard County, the BEBR medium growth projection seems to be the closest aligned to historic growth. See **Table 7.1**.

Table 7.1 BEBR Population Projections for Brevard County Through 2040

	Estimates April 1, 2018	2020	Average Annual Growth Rate	2030	Average Annual Growth Rate	2040
BREVARD	583,563					
Low		573,800	0.35%	594,300	0.10%	600,400
Medium		598,500	0.93%	656,300	0.63%	698,700
High		621,600	1.41%	715,300	1.11%	799,100

Source: Bureau of Economic and Business Research (BEBR), University of Florida (2019). Volume 52, Bulletin 183, January 2019. Projections of Florida Population by County 2020-2045, with Estimates from 2018, p.5.

Table 7.2 compares the projected average annual growth rate of the counties surrounding Brevard County. When comparing surrounding counties to Brevard County, Indian River County, Seminole County and Volusia County have the most similar projected average annual growth rate from 2020 to 2030. When comparing surrounding counties to Brevard County, Indian River County, Seminole County and Volusia County have the most similar projected average annual growth rate from 2030 to 2040.

Table 7.2 BEBR Population Projections for Surrounding Counties Through 2040						
		2020	Average Annual Growth Rate	2030	Average Annual Growth Rate	2040
Indian River County	Low	149,600	0.67%	160,000	0.19%	163,000
	Medium	157,600	1.35%	180,200	0.80%	195,000
	High	165,400	1.96%	200,900	1.41%	231,100
Orange County	Low	1,341,400	1.12%	1,498,900	0.50%	1,575,400
	Medium	1,415,500	1.81%	1,694,000	1.11%	1,891,800
	High	1,482,700	2.31%	1,862,600	1.66%	2,195,700
Osceola County	Low	356,500	1.94%	432,200	0.98%	476,700
	Medium	380,700	2.77%	500,200	1.68%	591,000
	High	402,000	3.28%	554,900	2.31%	697,100
St. Lucie County	Low	300,000	0.83%	325,800	0.47%	341,600
	Medium	313,100	1.39%	359,500	0.95%	395,100
	High	325,000	1.89%	392,100	1.49%	454,600
Seminole County	Low	458,000	0.54%	483,200	0.22%	493,700
	Medium	477,800	1.11%	533,500	0.73%	573,700
	High	496,100	1.60%	581,600	1.23%	657,000
Volusia County	Low	527,100	0.47%	552,400	0.23%	565,000
	Medium	544,100	0.89%	594,300	0.58%	629,900
	High	559,700	1.40%	642,900	1.08%	715,800

Source: Bureau of Economic and Business Research (BEBR), University of Florida (2019). Volume 52, Bulletin 183, January 2019. Projections of Florida Population by County 2020-2045, with Estimates from 2018

Population Projections for Cities in Brevard County

Although this report develops long-term population projections for unincorporated areas of the county, it is still important to consider the growth of the cities within the county. City population growth has an impact on growth potential within unincorporated areas. It is common to see unincorporated areas that are in close proximity to growth areas of a city to have strong growth pressures for new development. In addition, as cities grow and the adjacent unincorporated areas grow, it is not unusual for a city to pursue annexation of the growing unincorporated areas. If these unincorporated areas are annexed into the city, then often the core public services such as utilities, fire, police, parks, etc. are no longer the responsibility of the county but become the responsibility of the annexing city.

The data for projected city growth in Brevard County was obtained from the University of Florida Shimberg Center for Housing Studies (Shimberg). Shimberg provides long-term population projections at the city level for use in comprehensive planning other planning purposes. See **Table 7.3**.

From 2020 to 2040, Palm Bay is projected to have the highest absolute increase in population of any city in Brevard County, with an increase of 26,142 people. West Melbourne is projected to have the second highest absolute increase in population of any city in Brevard County, with an increase of 10,825 people. Melbourne is projected to have the third highest absolute increase in population of any city in Brevard County, with an increase of 10,200 people.

West Melbourne is projected to have the highest percent increase in population of any city in Brevard County, with a 31% increase from 2020 to 2040. Palm Bay is projected to have the second highest percent increase in population of any city in Brevard County, with an 18% increase. Palm Shores is projected to have the third highest percent increase in population of any city in Brevard County, with a 17% increase.

By 2040, Cocoa Beach is projected to have the largest absolute decrease and percent decrease of any city in Brevard County, with a decrease of 1,120 people or -11%. Melbourne Beach is projected to have the second largest absolute decrease and percent decrease of any city in Brevard County, with a decrease of 282 people or -10%. Melbourne Village is projected to have the third largest absolute decrease and percent decrease of any city in Brevard County, with a decrease of 40 people or -6%.

When utilizing **Table 7.1** and **Table 7.3**, the Low, Medium, and High projected growth scenarios for the total cities population within Brevard County can be determined. Based on the low growth scenario for Brevard County, on average, cities are projected to account for 69% of the total County population from 2020 to 2040.

Based on the medium growth scenario for Brevard County, on average, cities are projected to account for 63% of the total County population from 2020 to 2040.

Based on the high growth scenario for Brevard County, on average, cities are projected to account for 58% of the total County population from 2020 to 2040.

City	2020	2025	2030	2035	2040
Cape Canaveral	10,534	10,922	11,190	11,302	11,441
Cocoa	19,671	20,613	21,446	22,213	22,900
Cocoa Beach	11,079	10,815	10,528	10,253	9,959
Grant-Valkaria	4,290	4,541	4,727	4,839	4,966
Indialantic	2,809	2,798	2,773	2,755	2,726
Indian Harbour Beach	8,562	8,681	8,758	8,819	8,849
Malabar	2,877	2,932	2,978	3,008	3,028
Melbourne	83,225	86,319	88,973	91,358	93,425
Melbourne Beach	3,028	2,959	2,888	2,820	2,746
Melbourne Village	661	653	644	631	621
Palm Bay	117,146	126,226	133,714	138,859	143,288
Palm Shores	1,036	1,099	1,154	1,208	1,249
Rockledge	27,962	29,860	31,387	32,382	33,219
Satellite Beach	10,760	11,059	11,300	11,510	11,684
Titusville	47,614	49,389	50,913	52,285	53,473
West Melbourne	23,544	26,959	29,943	32,262	34,369
Total	374,798	395,825	413,316	426,504	437,943

Source: Shimberg Center for Housing Studies' Florida Housing Data Clearinghouse, Population Projections, Permanent Residents, 2010-2040

Population Projections for Unincorporated Brevard County – BEBR and Shimberg

As previously stated, the BEBR long-term population projections only provide total county projections. To determine the low, medium, high projected population for unincorporated Brevard County to use for comparison, the total projected city population from Shimberg was subtracted from the projected total county population from BEBR. **Table 7.4** shows the low, medium, and high projected growth to occur within unincorporated Brevard County from 2020 to 2040.

Unincorporated Brevard County	2020	2025	2030	2035	2040
Low	199,002	190,975	180,984	171,896	162,457
Medium	223,702	234,475	242,984	252,196	260,757
High	246,802	274,075	301,984	331,396	361,157

Source: Bureau of Economic and Business Research (BEBR), University of Florida (2019). Volume 52, Bulletin 183, January 2019. Projections of Florida Population by County 2020-2045, with Estimates from 2018, p.5 and Shimberg Center for Housing Studies' Florida Housing Data Clearinghouse, Population Projections, Permanent Residents, 2010-2040

Based on the BEBR low growth scenario for unincorporated Brevard County, by 2040, the population is projected to decrease by 36,545 persons. Based on the BEBR low growth population projections for Unincorporated Brevard County, the population, on average, accounts for 31% of the total county population from 2020 to 2040. From 2020 to 2040, the BEBR low rate of growth for unincorporated Brevard County, on average, is projected to be -5%.

Based on the medium growth scenario for unincorporated Brevard County, by 2040, the population is projected to increase by 37,055 persons. Based on the BEBR medium growth population projections for Unincorporated Brevard County, the population, on average, accounts for 37% of the total county population from 2020 to 2040. From 2020 to 2040, the BEBR medium rate of growth for unincorporated Brevard County, on average, is projected to be 4%.

Based on the high growth scenario for unincorporated Brevard County, by 2040, the population is projected to increase by 114,355 persons. Based on the BEBR high growth population projections for Unincorporated Brevard County, the population, on average, accounts for 42% of the total county population from 2020 to 2040. From 2020 to 2040, the BEBR high rate of growth for unincorporated Brevard County, on average, is projected to be 9%.

“How Shall We Grow” – East Central Florida Regional Planning Council

In 2011, the East Central Florida Planning Council adopted “How Shall We Grow” (HSWG) a region-wide planning analysis that established concepts for a new planning paradigm within the region. The analysis included population projections for the counties in the region based on the alternative planning paradigms.

The data in “How Shall We Grow” is relatively old. It was adopted in 2011. In review of the population within HSWG, it is apparent that the projections developed then are higher than what is anticipated today. This is evidenced by the fact that the projected populations for 2010 and 2015 in HSWG were significantly higher than the actual population in those years.

However, future potential implementation of the concepts within HSWG could have significant impact on population distribution throughout Central Florida. It is important to maintain regular updates to population projections to reflect the impact of any future planning paradigm shifts.

Brevard County Traffic Analysis Zones

Preliminary Traffic Analysis Zone (TAZ) data was obtained from the Space Coast Transportation Planning Organization (TPO). The data obtained from the TPO is in draft format and is currently being analyzed by the TPO for use in the TPO’s next Long-Range Transportation Plan (LRTP). The TPO TAZ data was utilized as a benchmark for generating new population projections for unincorporated Brevard County.

For initial analysis, the “ZData1” database files containing production variables (i.e., population data, including projected population in single-family and multi-family housing units) were utilized in five-year increments between 2015 and 2040 (i.e., 2015, 2020, 2025, 2030, 2035, and 2040). The “ZData1” database files were then joined to the shapefile of Brevard County’s TAZ geographic boundaries for analysis using ArcGIS software and subsequently mapped. Because the TAZ data obtained from the TPO does not distinguish between unincorporated Brevard County and its incorporated cities, a density analysis was conducted to further allocate population based on the population density of each TAZ. For example, the population of each TAZ was first calculated in persons by area, then the TAZ data was clipped to the jurisdictional boundaries within Brevard County. Using the population density of each TAZ, the projected population within the county overall (i.e., countywide), unincorporated county, and incorporated cities was estimated.

Based on the TPO TAZ data, the overall countywide population (i.e., including incorporated and unincorporated jurisdictions) is expected to initially change by 15% between the years 2015 and 2020, increasing by 80,486 people during the first five (5) years. After the year 2020, the rate of change is anticipated to slow from 7% to 5% over the subsequent years toward the year 2040. The overall rate of population change anticipated between year 2015 and year 2040 is 45%, from a starting population of 535,578 in 2015 to an ending population of 777,027 in 2040. Countywide, the additional population projected between the years 2015 and 2040 is 241,449 people. See **Table 7.5**.

Table 7.5: Space Coast TPO Traffic Analysis Zones, Population Projections by Jurisdiction

	Based		Future Projections					Change 2015-2040
	2015	2020	2025	2030	2035	2040		
Unincorporated	214,120	243,899	258,890	273,707	288,624	303,487	89,367	
Incorporated	321,458	372,165	397,637	422,834	448,245	473,540	152,082	
Total	535,578	616,064	656,527	696,541	736,869	777,027	241,449	

Source: Space Coast Transportation Planning Organization (TPO), Long-Range Transportation Plan (LRTP) Traffic Analysis Zone (TAZ) countywide data. Note: ZData1 files were joined to TAZ geography shapefiles and density analysis was conducted to estimate the share of population within unincorporated Brevard County versus the incorporated cities.

Based on the TPO TAZ data, the unincorporated population of Brevard County is expected to initially change by 14% between the years 2015 and 2020, increasing by 29,779 people during the first five (5) years. After the year 2020, the rate of change is anticipated to slow from 6% to 5% over the subsequent years toward the year 2040. The overall rate of population change anticipated between year 2015 and year 2040 is 42%, from a starting population of 214,120 in 2015 to an ending population of 303,487 in 2040. Within unincorporated Brevard County, the additional population projected between the years 2015 and 2040 is 89,367 people. See **Table 7.5**.

Based on the TPO TAZ data, the incorporated population of the cities is expected to initially change by 16% between the years 2015 and 2020, increasing by 50,707 people during the first five (5) years. After the year 2020, the rate of change is anticipated to slow from 7% to 6% over the subsequent years toward the year 2040. The overall rate of population change anticipated between year 2015 and year 2040 is 47%, from a starting population of 321,458 in 2015 to an ending population of 473,540 in 2040. Within the incorporated cities, the additional population projected between the years 2015 and 2040 is 152,082 people. See **Table 7.5**.

In general, the rates of countywide, unincorporated, incorporated population change shown by the TPO TAZ data are similar (i.e., between 45% and 47% from 2015 to 2040); however, projected growth within the incorporated cities is slightly higher than that of unincorporated Brevard County both in the short-term (five year) and long-term (25 years) periods. While the TPO TAZ-based projected long-term growth of unincorporated Brevard County is projected to be less than 90,000 people, long-term growth within the cities is expected to exceed 150,000 people between 2015 and 2040.

In terms of geographic distribution of growth, the mainland TAZs are anticipated to experience higher percentages of growth than the barrier islands. Of the mainland areas, the area south of Wickham Road is anticipated to experience the highest percentage of growth, particularly during the first five (5) years of the planning period. By planning area, growth rates are highest in unincorporated Brevard County, where the population of the area south of Wickham Road is anticipated to more than double by the year 2040. See **Map 7.1**.

School Growth Projection

School growth projection provides an insight into short-term population growth anticipated by the Brevard County School District. The school growth projections provide some guidance to the allocation of future population and support previous analysis related to current residential permitting activities.

Out of the 83 existing schools in Brevard County, 45 schools are projected to have student membership growth by 2024. See **Map 7.2**. There is one new elementary school planned to open in 2020 (Viera). The projected membership at the new elementary school in Viera, by 2024, is 788 students. **Table 7.6** shows the projected percent change of growth of student membership from school year 2018-19 to 2023-24, in ranges, for the number of schools and type of schools that have projected membership growth.

Table 7.6 Number of Schools with Projected Student Enrollment Growth through 2024 by Percent Change					
Percent Change Range	Total Schools	Elementary School	Middle School	Jr/Sr High School	
0-0.99%	4	2	0		2
1-9.99%	16	9	3		4
10-19.99%	16	9	3		4
20-29.99%	7	2	2		3
30-48%	2	1	0		1

Brevard County School Board; Student Enrollment Projections and School Capacity Analysis (Total Factored Capacity); School Years 2018-19 to 2023-24

University Park Elementary School is projected to have the highest growth in student membership with a projected percent change of 47.03% from school year 2018-19 to 2023-24. Palm Bay High School is projected to have the second the highest growth in student membership with a projected percent change of 37.33% from school year 2018-19 to 2023-24. Edgewood Jr/Sr High School is projected to have the lowest growth in student membership with a projected percent change of 0.21% from school year 2018-19 to 2023-24.

Out of the 83 existing schools in Brevard County, 38 schools are projected to have a decline in student membership. Coquina Elementary school is projected to have the highest decline in student membership with a projected percent change of -34.2% from school year 2018-19 to 2023-24. West Melbourne Elementary is projected to have the lowest decline in student membership with a projected percent change of -0.18% from school year 2018-19 to 2023-24.

VIII Findings

Brevard County Population Projections Through 2040

In review of the population data collected from multiple data sources alongside future land use, environmental and land use constraints, and other geographic factors, population projections were developed for Brevard County. Actual population estimates for unincorporated Brevard County and the incorporated cities were sourced from the University of Florida's Bureau of Economic and Business Research (BEBR) for the years 2000 through 2018. See **Table 8.1**. Using a linear regression of these historic growth rates, unincorporated population projections were generated for unincorporated Brevard County through the year 2040. Incorporated population projections were sourced directly from the Shimberg Center for Housing Studies' Florida Housing Data Clearinghouse (Shimberg). The resulting unincorporated and incorporated population projections were then added together to generate a countywide total population.

The linear regression of historic population growth was based on population data from 2000 to 2015. The interim years of 2016 to 2018 were used to verify the appropriateness of the results of the analysis. The first year of the projected data was 2020. The 2015 actual estimated population is 561,714, and the projected 2020 population is 595,350. The actual estimated population of the interim years 2016 to 2018 align well with the projection between 2015 and 2020.

Table 8.2 shows the Brevard County population projections toward the year 2040. As shown in **Table 8.2**, the resulting projections show a countywide population of 683,808 people by the year 2040, which represents a 17% increase from the year 2018.

Table 8.1: Brevard County Population, Estimates and Interim Projections, 2000 to 2018

	Population Estimates						Interim Projections		
	2000	2005	2010	2015	2016	2017	2018		
Unincorporated	188,918	210,260	209,469	210,276	212,740	215,142	217,902		
Incorporated	287,312	321,710	333,907	351,438	356,179	360,069	365,661		
Total	476,230	531,970	543,376	561,714	568,919	575,211	583,563		

Source: Population estimates, 2000 to 2015 and 2018, from University of Florida Bureau of Economic and Business Research (BEER); unincorporated Brevard County and incorporated cities interim projections, 2016 to 2018, generated using linear regression of historic and current BEER estimates.

Table 8.2: Brevard County Population, Future Projections, 2020 to 2040

	Future Projections						Change 2018-2040
	2020	2025	2030	2035	2040		
Unincorporated	220,552	226,880	233,208	239,536	245,865	27,963	
Incorporated	374,798	395,825	413,316	426,504	437,943	72,282	
Total	595,350	622,705	646,524	666,040	683,808	100,245	

Source: Unincorporated Brevard County projections, 2020 to 2040, generated using linear regression of historic BEER estimates shown in Table 8.2; incorporated projections, 2020 to 2040, sourced from Shimberg Center for Housing Studies' Florida Housing Data Clearinghouse.

When compared to the BEBR 2040 projections, the countywide figure (683,808) generally aligns with the BEBR medium projection, which is just under 700,000 by the year 2040. See Table 8.3. In addition, the projected unincorporated county population of 245,865 generally aligns with the calculated medium projection for unincorporated county population from BEBR and Shimberg data.

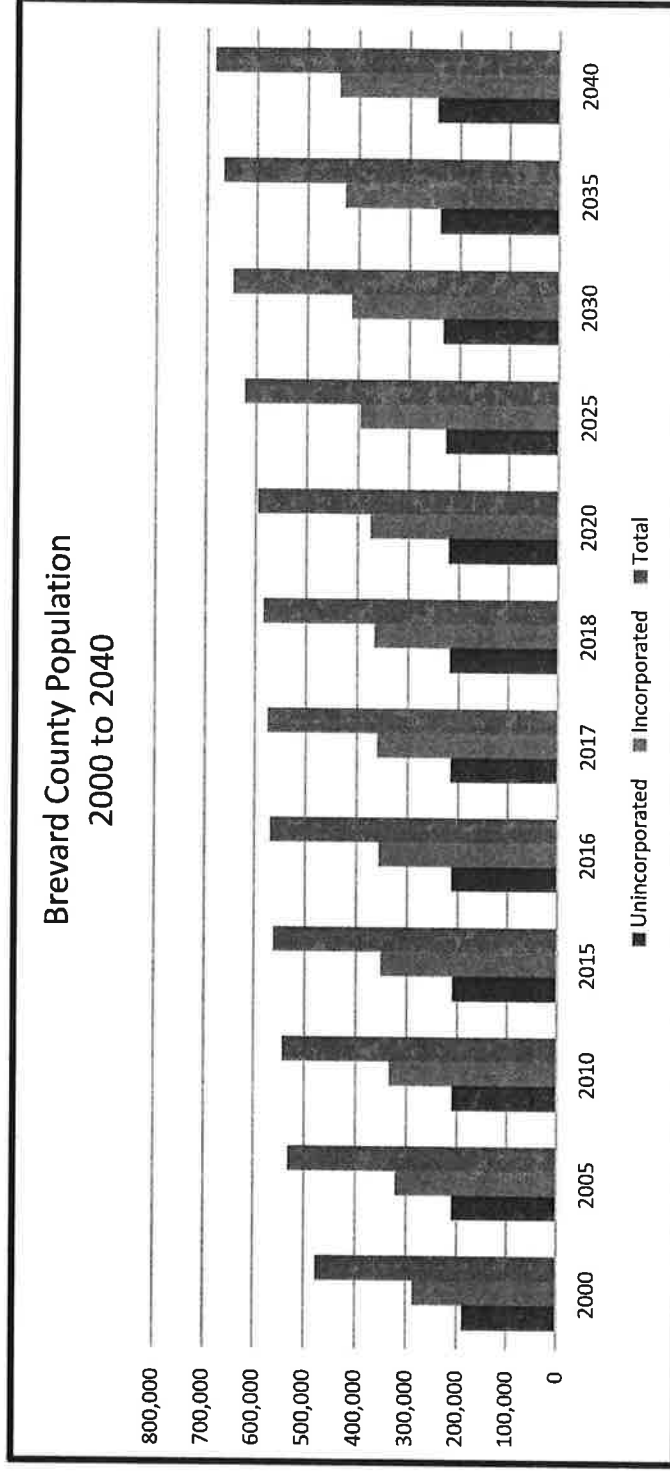
Table 8.3: Countywide Projections, BEBR

	2020	2025	2030	2035	2040
Low	573,800	586,800	594,300	598,400	600,400
Medium	598,500	630,300	656,300	678,700	698,700
High	621,600	669,900	715,300	757,900	799,100

Source: University of Florida Bureau of Economic and Business Research (BEBR), Projections of Florida Population by County, 2020-2045, with Estimates for 2018.

Of the countywide population by 2040, 245,865 people are allocated to unincorporated Brevard County and 437,943 people are allocated to the incorporated cities. This equates to 36% and 64% of the countywide population, respectively, with much of the population concentrated in cities. From the year 2018 to the year 2040, the County is expected to grow by 13%; whereas the cities are expected to grow by 20%. Similar to the draft TAZ data sourced from the Space Coast TPO, the incorporated cities are expected to experience a higher rate of growth than the unincorporated county toward the year 2040. See **Chart 8.1**.

Chart 8.1 Brevard County Population, 2000 to 2040



Source: Population estimates, 2000 to 2015 and 2018, from University of Florida Bureau of Economic and Business Research (BEBR); unincorporated Brevard County and incorporated cities interim projections, 2016 to 2018, generated using linear regression of historic and current BEBR estimates. Unincorporated Brevard County projections, 2020 to 2040, generated using linear regression of historic BEBR estimates shown in Table 8.1; incorporated projections, 2020 to 2040, sourced from Shimberg Center for Housing Studies' Florida Housing Data Clearinghouse.

In order to map the results of the 2040 population analysis, a population share was assigned to each TAZ geography based on the total countywide population expected by the year 2040. For example, each TAZ population count was divided by the countywide TAZ population (e.g. 777,027) to produce a share of the total. The share was then multiplied by the new countywide population (e.g. 683,808) resulting from the linear regression applied to BEBR estimates for the unincorporated county and the Shimberg projections for the incorporated cities.

As shown in **Map 8.1**, the majority of percentage population growth increase in unincorporated areas is anticipated to occur between the cities of Melbourne and Rockledge; unincorporated areas west of Titusville; and unincorporated areas to the west and south of the City of Palm Bay. Two of these areas correspond to existing Developments of Regional Impact (DRI); however, population growth outside of the DRIs is also anticipated as these areas become developed. Very little growth is expected on the barrier islands except for an area on Merritt Island.

When total absolute population is considered, the highest numbers of people will be located south and southwest of the City of Titusville, between the cities of Melbourne and Rockledge, and west and south of the City of Palm Bay. See **Map 8.5**. Moreover, if population density is considered, the greatest concentration of population by 2040 will be in the unincorporated areas between the cities of Melbourne and Rockledge, areas just south of Titusville, and on Merritt Island. See **Map 8.9**.

While the SOIRLPP prioritizes several focus areas, very few are within unincorporated Brevard County. Of those within unincorporated Brevard County, the majority are near US-1 on the mainland side of the Indian River. Priority focus areas are found between the cities of Melbourne and Rockledge, where population growth is projected, or south of the City of Palm Bay near Micco. Several of the priority focus areas are also located on Merritt Island where little growth is projected.

In conclusion, the recommended 2040 population projections for Brevard County of 683,808 for total county population and 245,865 for unincorporated population are relatively consistent with other population projections for Brevard County by BEBR and the Space Coast TPO. In addition, the recommended 2040 population projections do not exceed the development potential as provided in the current adopted Brevard County Comprehensive Plan. The proposed geographic allocation of the projected 2040 population is consistent with the development indicators and constraints analyzed in this report.

As previously discussed, long-term population projections are not an exact science but provide a guide for future planning efforts. Long-term population projections can be significantly impacted by unforeseen changes in economic

conditions and other regulatory or natural constraints. It is important that the County continue to monitor actual development activity and periodically update these long-term projections.

Appendix

Maps:

2.1 Developments of Regional Impact (DRI)

2.2 Vacant Lands by Future Land Use

2.3 Future Land Use Amendments

3.1 SOIRL Priority Focus Areas by Nutrient Load

3.2 Land Use Constraints Areas

4.1 County Utilities

4.2 Transportation

5.1 Residential Building Permits

7.1 2015-2040 TAZ Population Change

7.2 Projected School Growth from 2018-2024

8.1 Year 2040 Population Change

8.2 Year 2040 Population Change – Northern County

8.3 Year 2040 Population Change – Central County

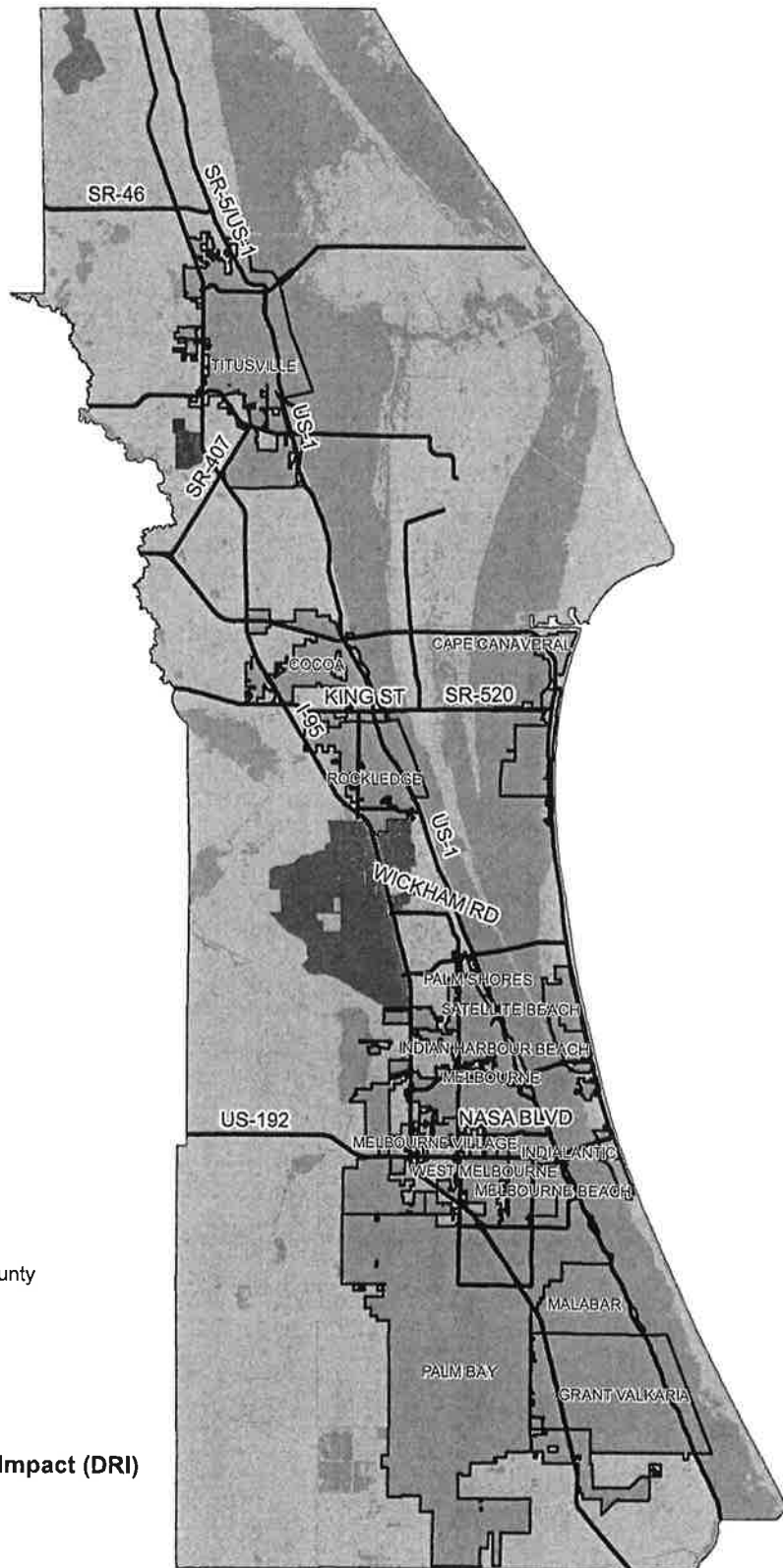
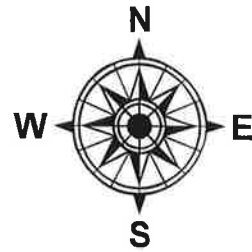
8.4 Year 2040 Population Change – Southern County

8.5 Year 2040 Total Population

8.6 Year 2040 Total Population – Northern County

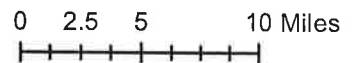
8.7 Year 2040 Total Population – Central County

- 8.8 Year 2040 Total Population – Southern County**
- 8.9 Year 2040 Persons Per Acre**
- 8.10 Year 2040 Persons Per Acre – Northern County**
- 8.11 Year 2040 Persons Per Acre – Central County**
- 8.12 Year 2040 Persons Per Acre – Southern County**



Legend

- Major Roads
- Cities
- Unincorporated Brevard County
- Water
- Swamp/Marsh
- Farmton Mixed Use
- Farmton Agricultural
- Developments of Regional Impact (DRI)**
- Great Outdoors
- Viera



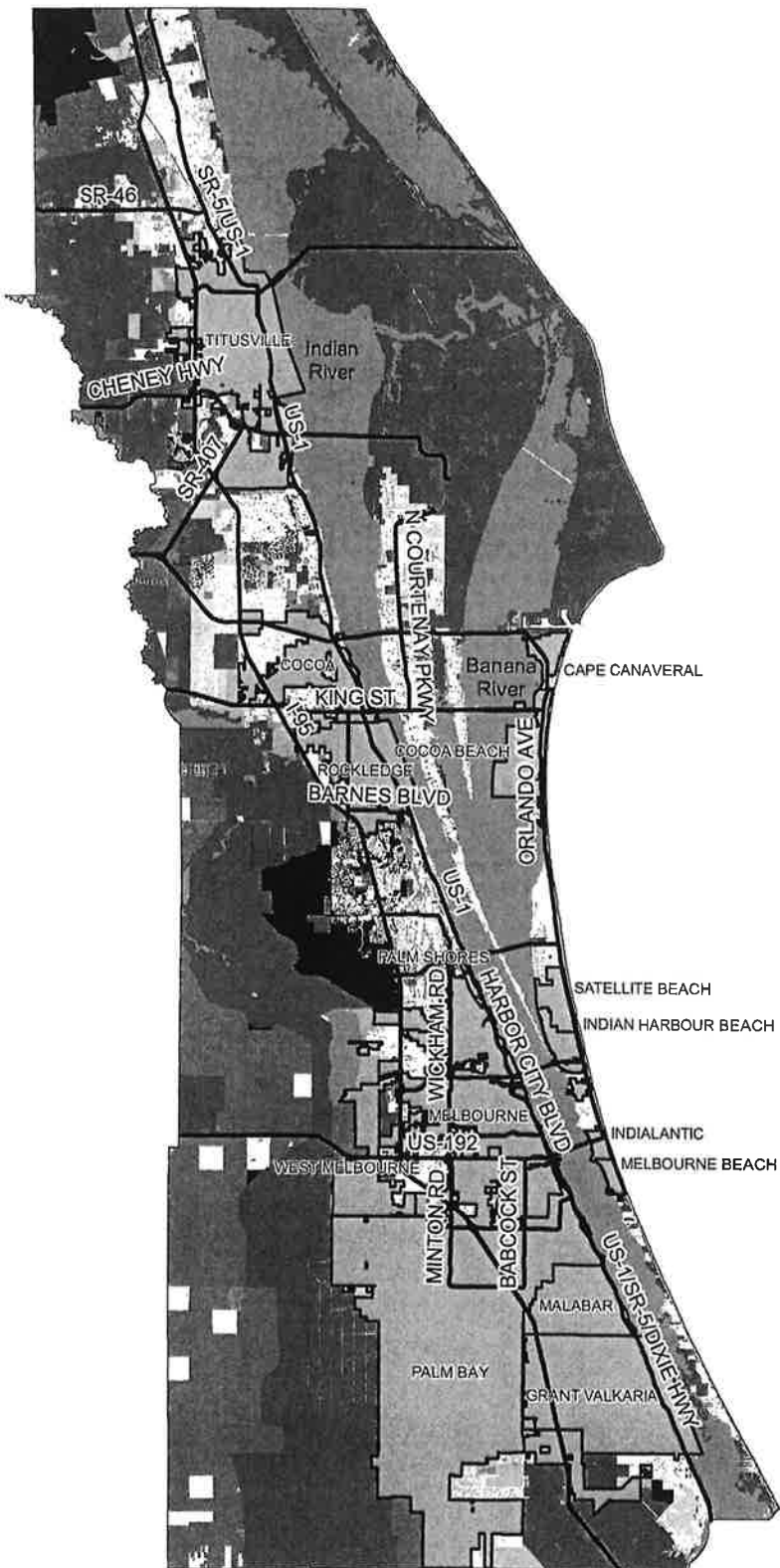
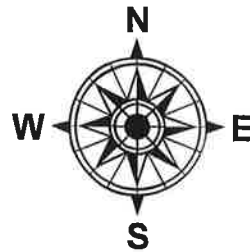
**Brevard County, Florida
2040 Population Analysis**



Data Source: Brevard County
Comprehensive Plan, 2009;
Brevard County Future Land
Use Map



**MAP 2.1
Developments of
Regional Impact
(DRIs) 778**



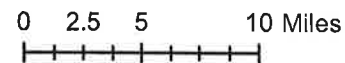
Legend

- Cities
- Major Roads
- Federal, State, and County Owned Lands
- Water
- Swamp/Marsh

Vacant Lands (Unincorporated Brevard County)

Future Land Use Description

- AGRIC AGRICULTURAL
- DRI1 DEVELOPMENT REGIONAL IMPACT (Great Outdoors)
- DRI3 DEVELOPMENT REGIONAL IMPACT (Viera)
- FMU FARMTON MIXED USE
- CC COMMUNITY COMMERCIAL
- NC NEIGHBORHOOD COMMERCIAL
- IND INDUSTRIAL
- PI PLANNED INDUSTRIAL
- PUB PUBLIC
- PRIV CONS PRIVATE CONSERVATION
- PUB-CONS PUBLIC CONSERVATION
- REC RECREATION
- RES1 RESIDENTIAL 1 UNIT PER ACRE
- RES1:2.5 RESIDENTIAL 1 UNIT PER 2.5 ACRES
- RES 2 RESIDENTIAL 2 UNITS PER ACRE
- RES 4 RESIDENTIAL 4 UNITS PER ACRE
- RES 6 RESIDENTIAL 6 UNITS PER ACRE
- RES 10 RESIDENTIAL 10 UNITS PER ACRE
- RES 15 RESIDENTIAL 15 UNITS PER ACRE
- RES 2-DIR DIRECTIVE RESIDENTIAL 2 UNITS PER ACRE
- RES 3-DIR DIRECTIVE RESIDENTIAL 3 UNITS PER ACRE
- RES 4-DIR DIRECTIVE RESIDENTIAL 4 UNITS PER ACRE
- RES 5-DIR DIRECTIVE RESIDENTIAL 5 UNITS PER ACRE
- RES 6-DIR DIRECTIVE RESIDENTIAL 6 UNITS PER ACRE
- RES 8-DIR DIRECTIVE RESIDENTIAL 8 UNITS PER ACRE
- RES 12-DIR DIRECTIVE RESIDENTIAL 12 UNITS PER ACRE
- RES 30-DIR DIRECTIVE RESIDENTIAL 30 UNITS PER ACRE



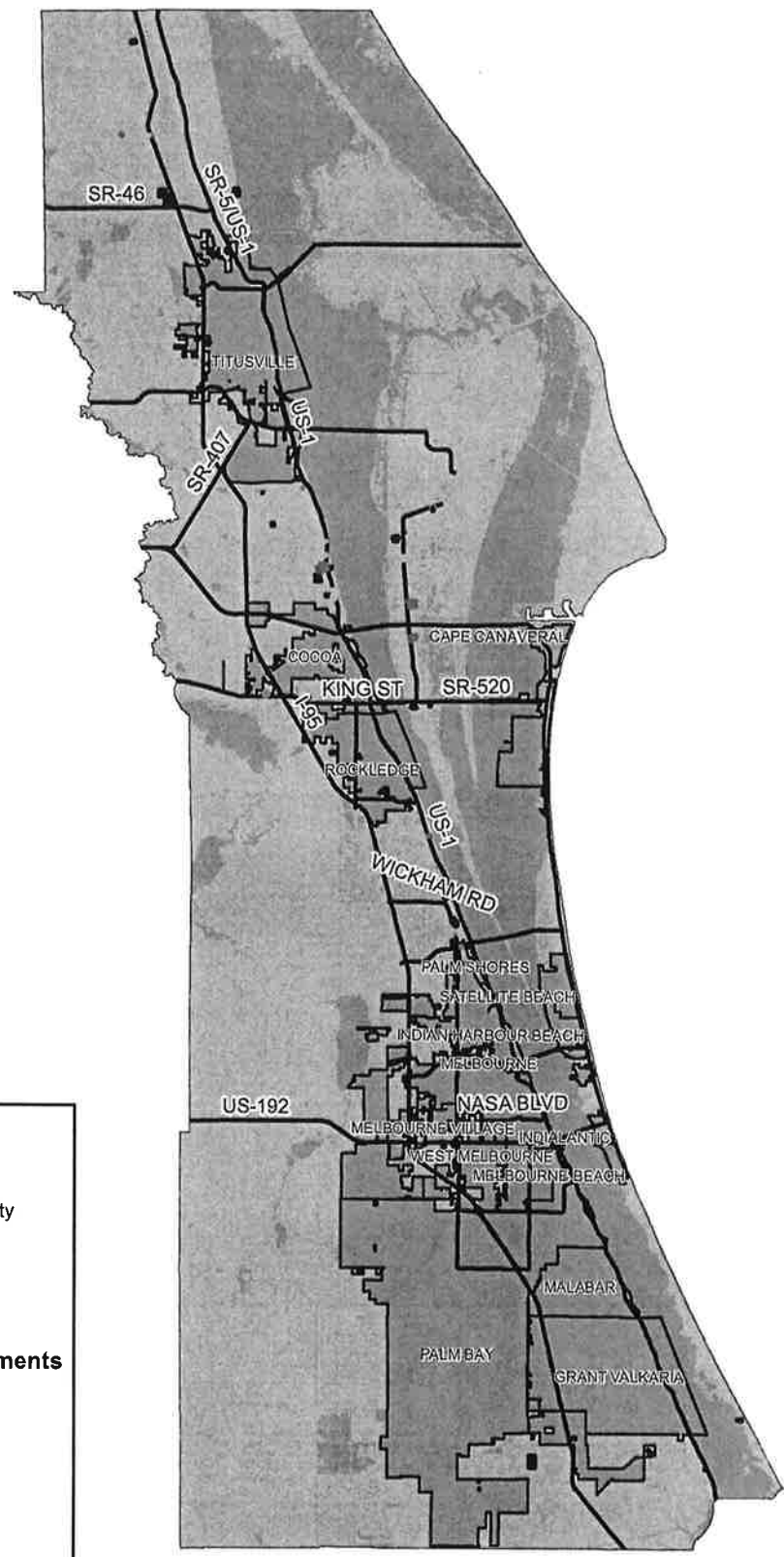
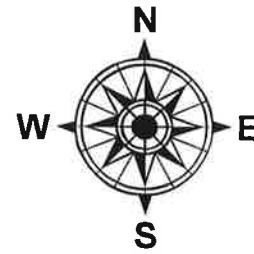
**Brevard County, Florida
2040 Population Analysis**



Data Source: Brevard County
Comprehensive Plan, 2009.



**MAP 2.2
Vacant Lands by
Future Land Use**

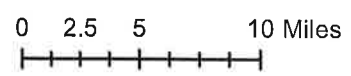


Legend

- Cities
- Unincorporated Brevard County
- Major Roads
- Water
- Swamp/Marsh

Comprehensive Plan Amendments

- 2015
- 2016
- 2017
- 2018
- 2019
- Pending Amendments



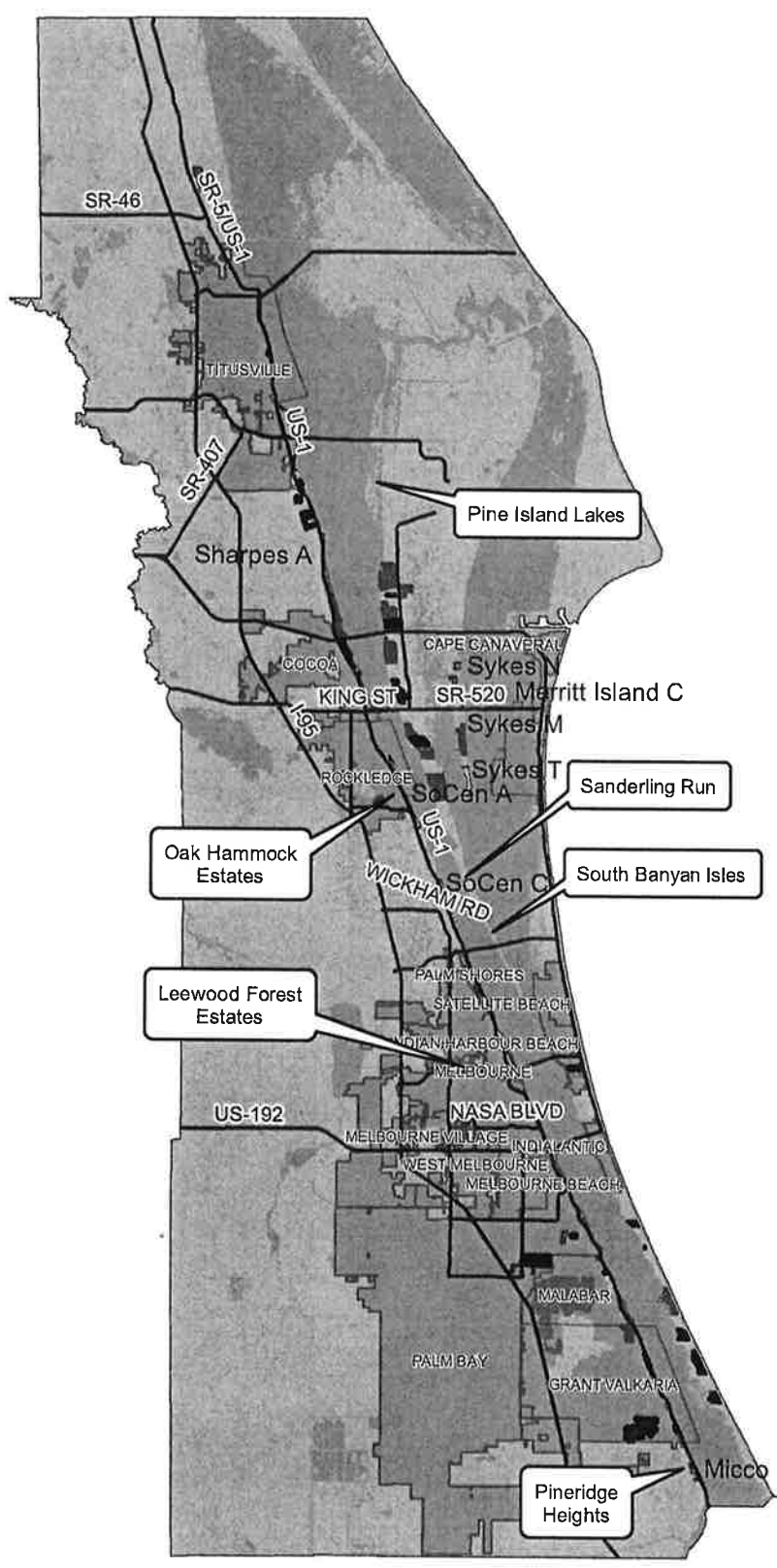
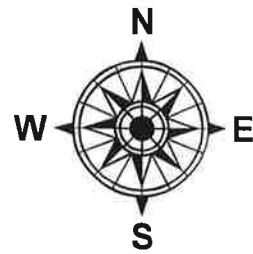
Brevard County, Florida 2040 Population Analysis



Data Source: Brevard County Planning and Development Department; Florida Department of Economic Opportunity (DEO), Florida Papers, Brevard County Comprehensive Plan Amendments, Years 2015 to 2019 (to June).



MAP 2.3 Future Land Use Amendments



Legend

- Major Roads
- Unincorporated Brevard County
- Cities
- Water
- Swamp/Marsh
- Priority Focus Areas (January 2019)

Nitrogen (lbs/year per Septic Parcel)

- 0.004 - 6.930
- 6.931 - 12.853
- 12.854 - 22.876
- 22.877 - 36.422
- 36.423 - 57.511

Priority Communities (Platted Subdivisions)

0 2.5 5 10 Miles

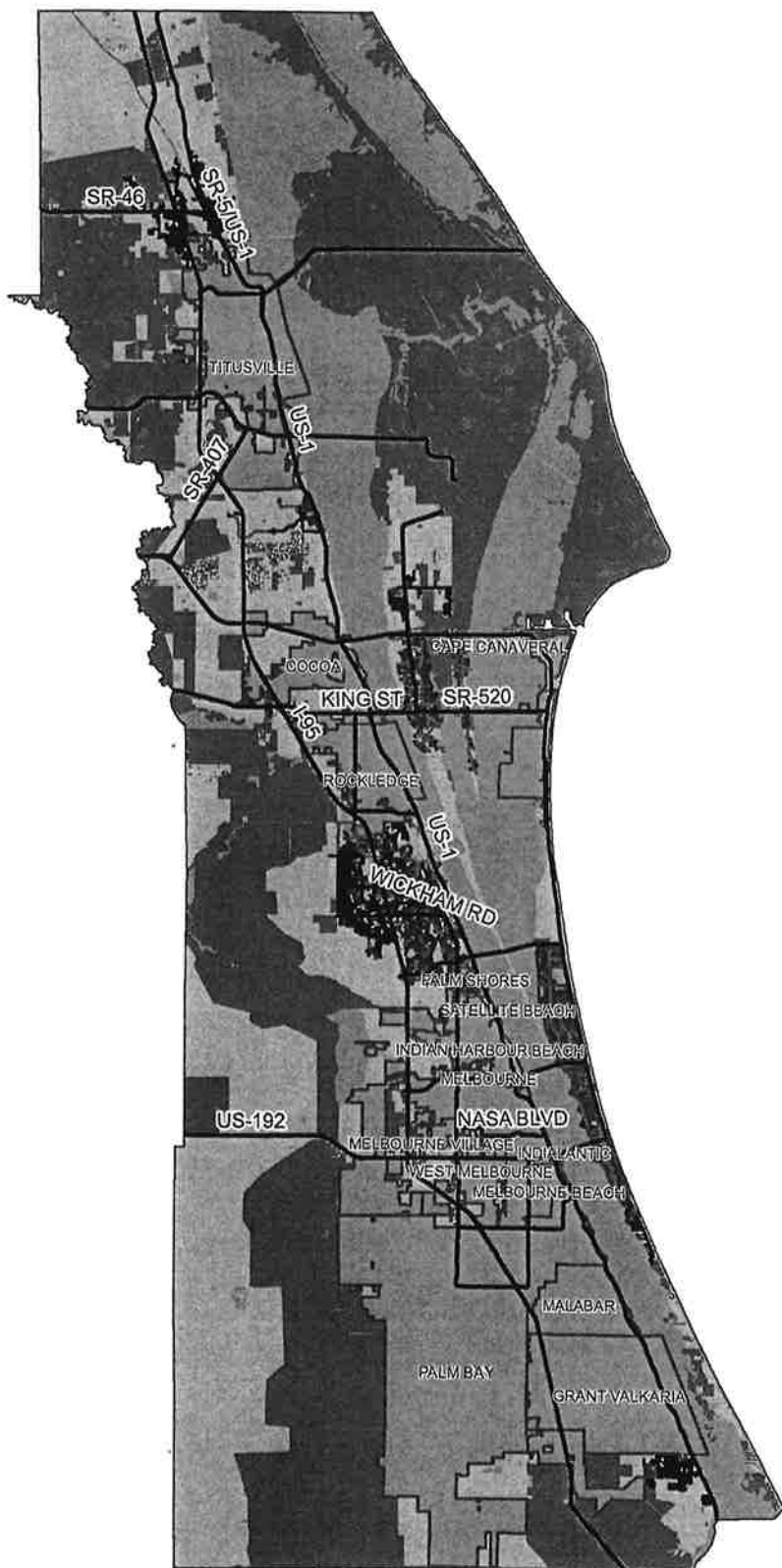
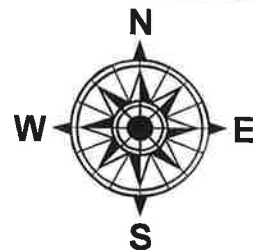
**Brevard County, Florida
2040 Population Analysis**



Data Source: Brevard County Natural Resources Management Department, "Parcel, Modified Focus Area", and Community-Based OSTDS Prioritization Analysis in Support of Updated SOIRL Septic System Conversion and/or Replacement Projects" (Applied Ecology, Inc., January 17, 2019). Report developed in support of the Save Our Indian River Lagoon Project Plan (SOIRLPP). "Focus Areas" represent septic to sewer prioritization areas based on multiple inputs. "Priority Focus Areas" (January 2019) identified for retrofit based on >25 lbs/year per septic parcel or already in process of compliance with SOIRLPP.

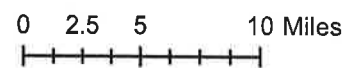


**MAP 3.1
SOIRL Priority
Focus Areas
by Nutrient Load**



Legend

- Unincorporated Brevard County
- Cities
- Major Roads
- Federal, State, and County Owned Lands
- Water
- Swamp/Marsh
- Hydrants
- Water Lines
- Reclaimed Water Lines
- Force Main
- Gravity Main



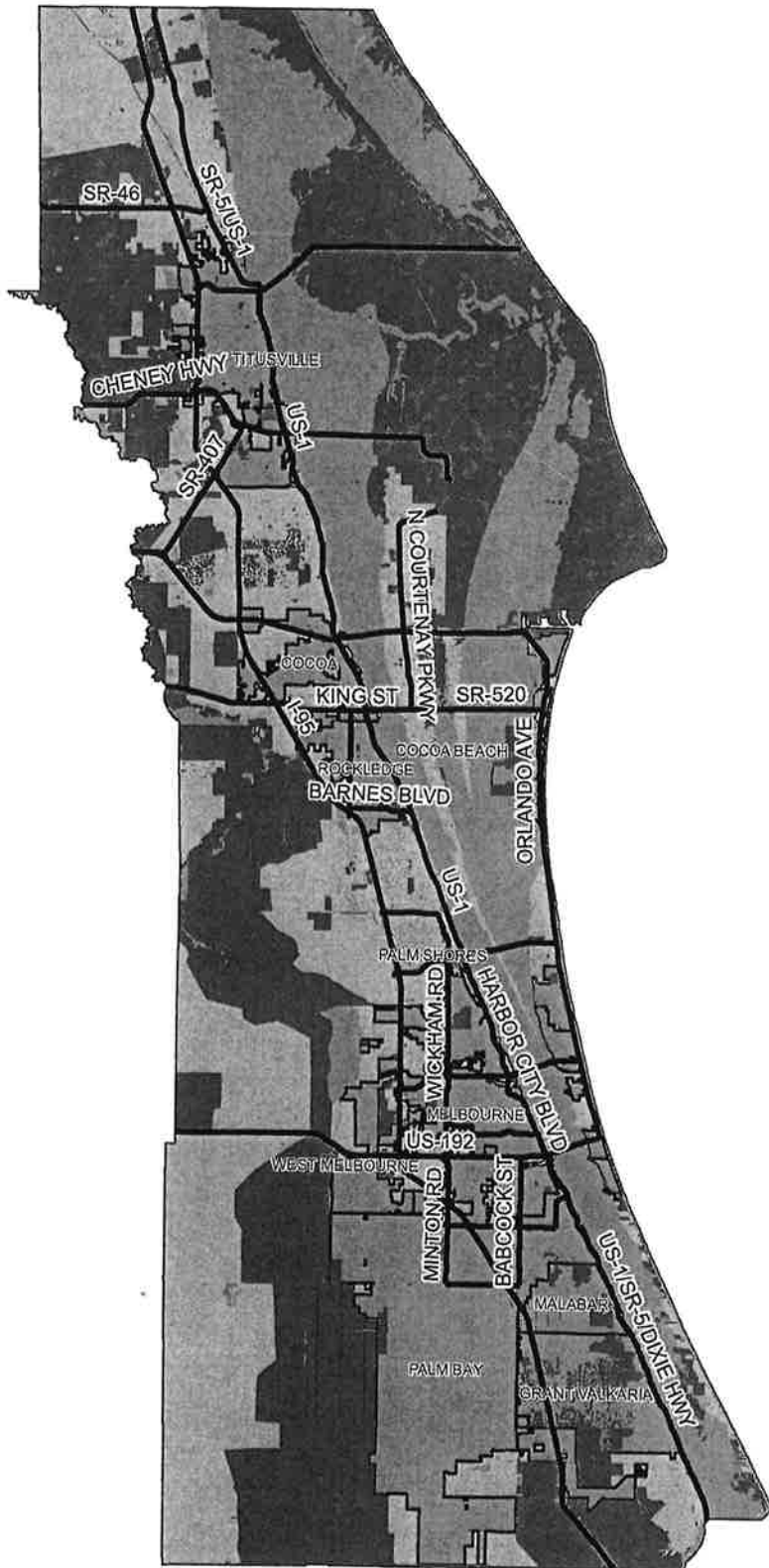
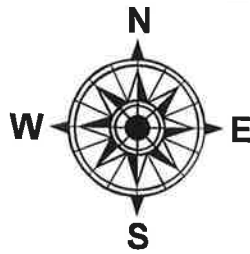
Brevard County, Florida 2040 Population Analysis



Data Source: Brevard County
Utility Services Department,
2019.

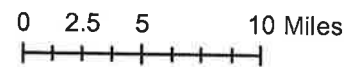


MAP 4.1 County Utilities



Legend

- Unincorporated Brevard County
- Cities
- Major Roads
- Federal, State, and County Owned Land
- Water
- Swamp/Marsh



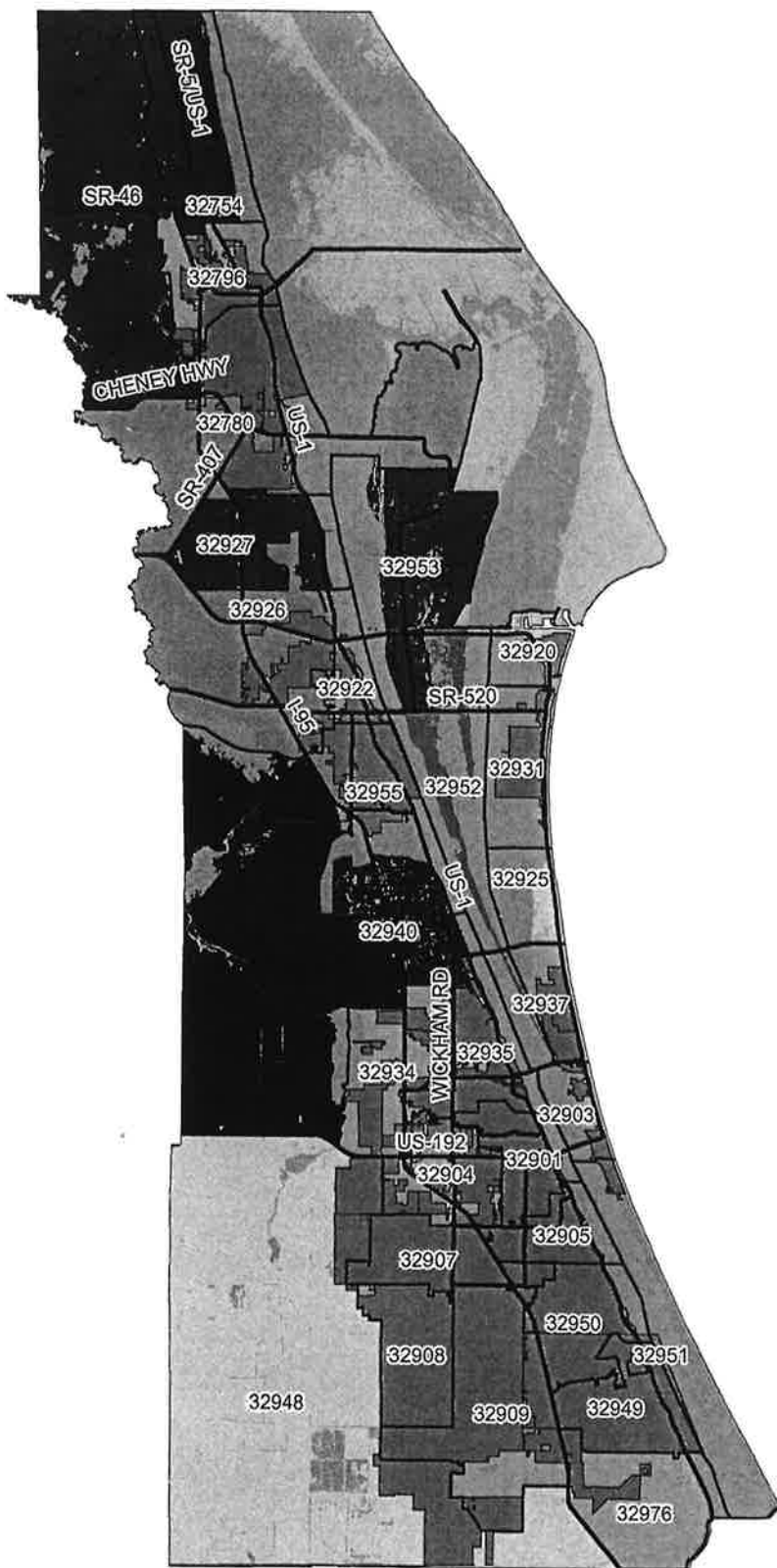
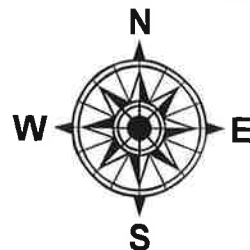
**Brevard County, Florida
2040 Population Analysis**



Data Source: Florida Department of Transportation (FDOT), Major Roads.



**MAP 4.2
Transportation**

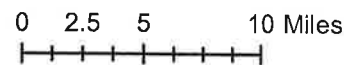


Legend

- Brevard County Zip Codes
- Cities
- Unincorporated Brevard County
- Major Roads
- Water
- Swamp/Marsh

PERMITS BY ZIP CODE

- 0
- 1 - 50
- 51 - 100
- 101 - 150
- 151 - 200
- 201 - 1,845



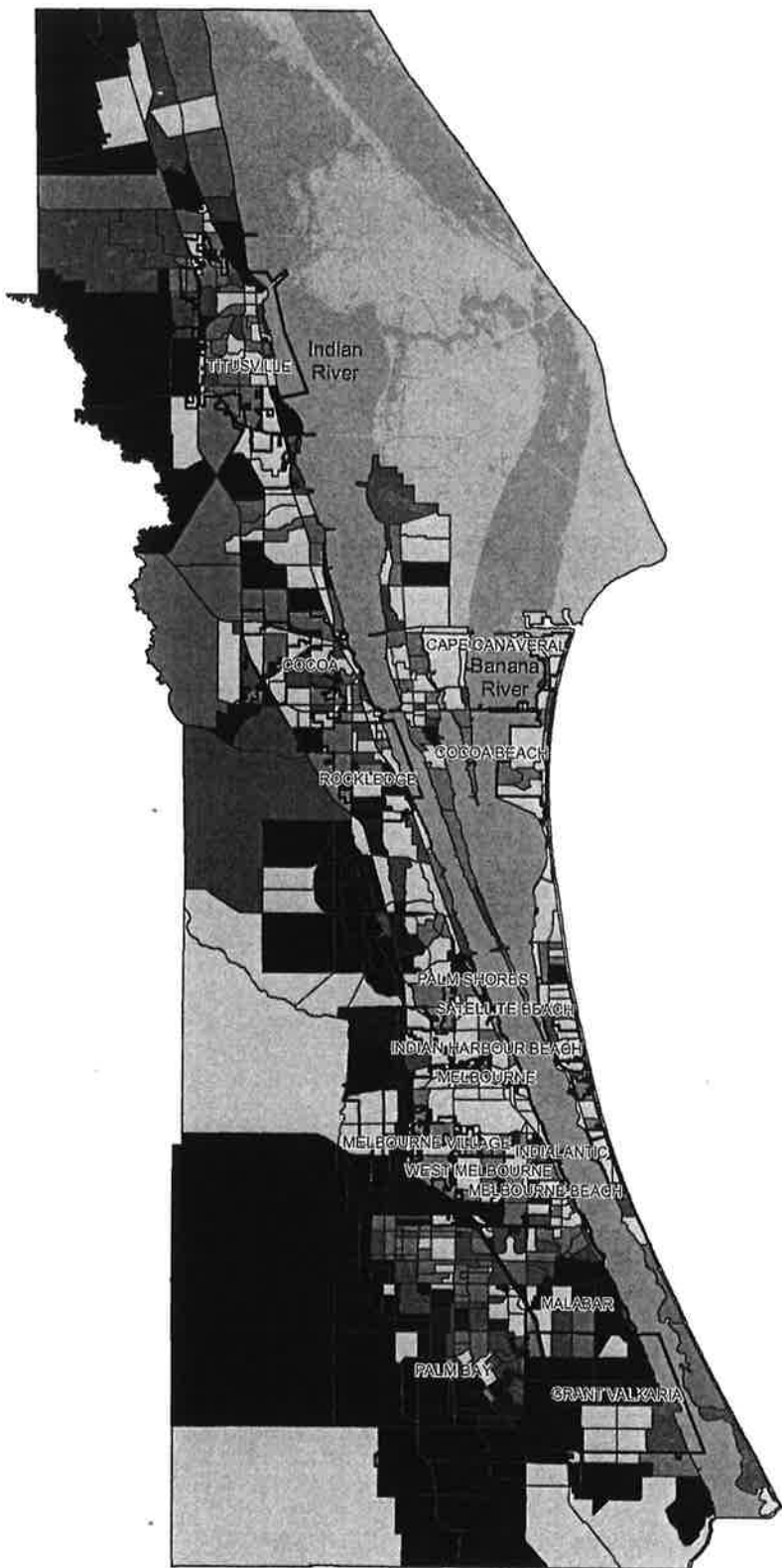
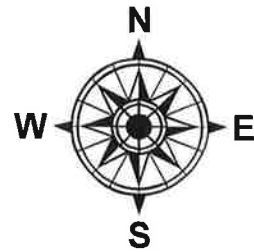
**Brevard County, Florida
2040 Population Analysis**



Data Source: Brevard County
Planning and Development Department,
New Residential Building Permit
Data, 2015-2018.



**MAP 5.1
Residential
Building
Permits**



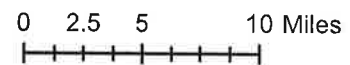
Legend

- Cities
- Unincorporated Brevard County
- Water
- Swamp/Marsh

Traffic Analysis Zones (TAZ)

Population Change, Years 2015 to 2040

- <= 10%
- 10% - 25%
- 25% - 50%
- 50% - 75%
- > 75%



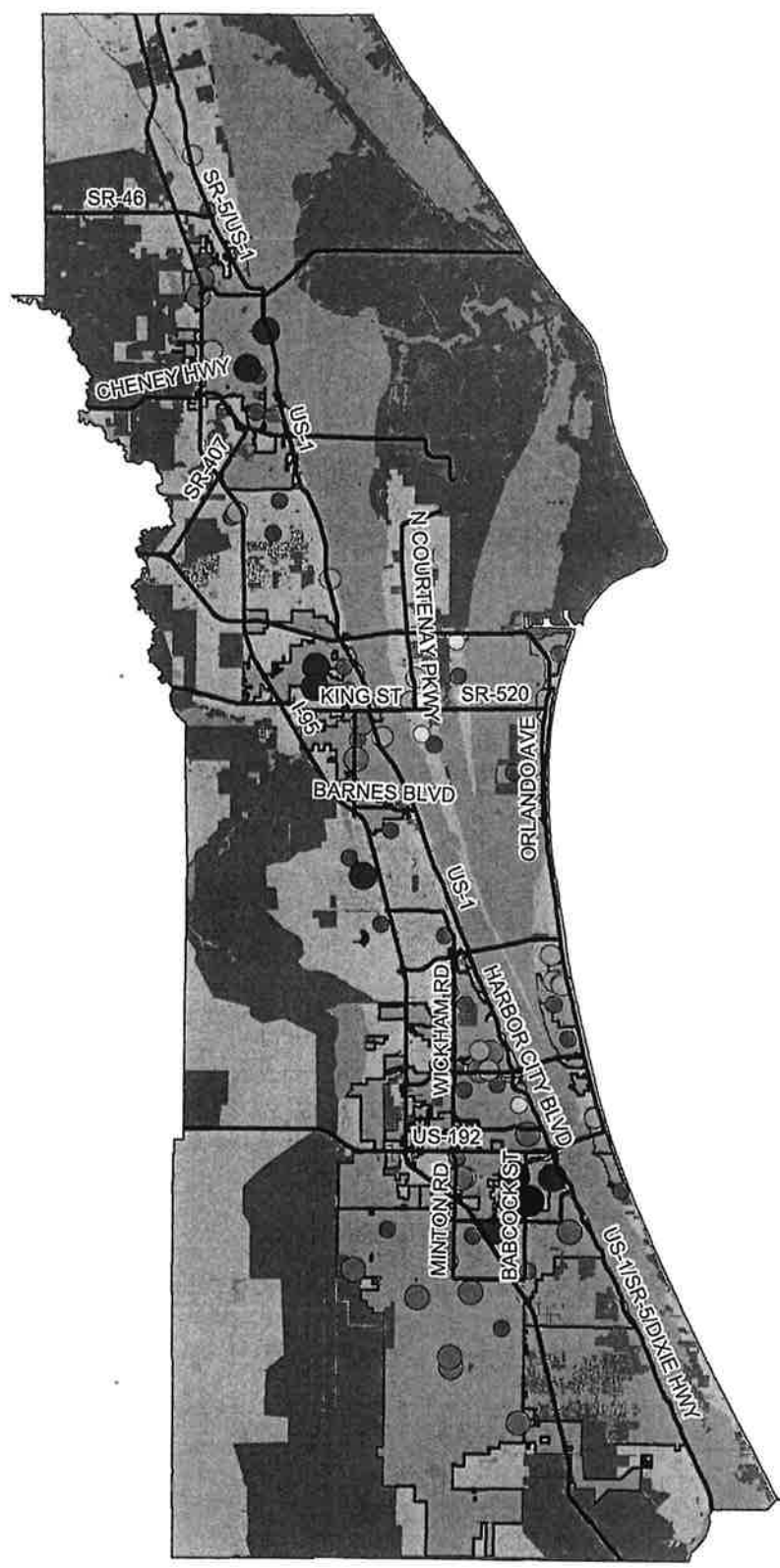
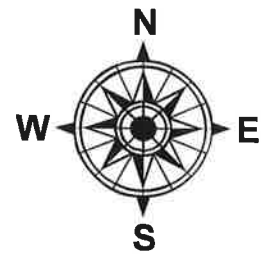
**Brevard County, Florida
2040 Population Analysis**



Data Source: Space Coast Transportation Planning Organization (SCTPO), Long-Range Transportation Plan (LRTP) Traffic Analysis Zone (TAZ) countywide data ("ZData1" files).



**MAP 7.1
2015-2040 TAZ
Population Change
786**

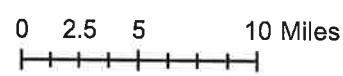


Legend

- Cities
- Unincorporated Brevard County
- Major Roads
- Federal, State, and County Owned Lands
- Water
- Swamp/Marsh

Projected Percent Growth from 2018-2024

- < 1%
- 1% - 10%
- 10% - 20%
- 20% - 30%
- > 30%
- Schools with Decline
- New Viera Elementary 2020



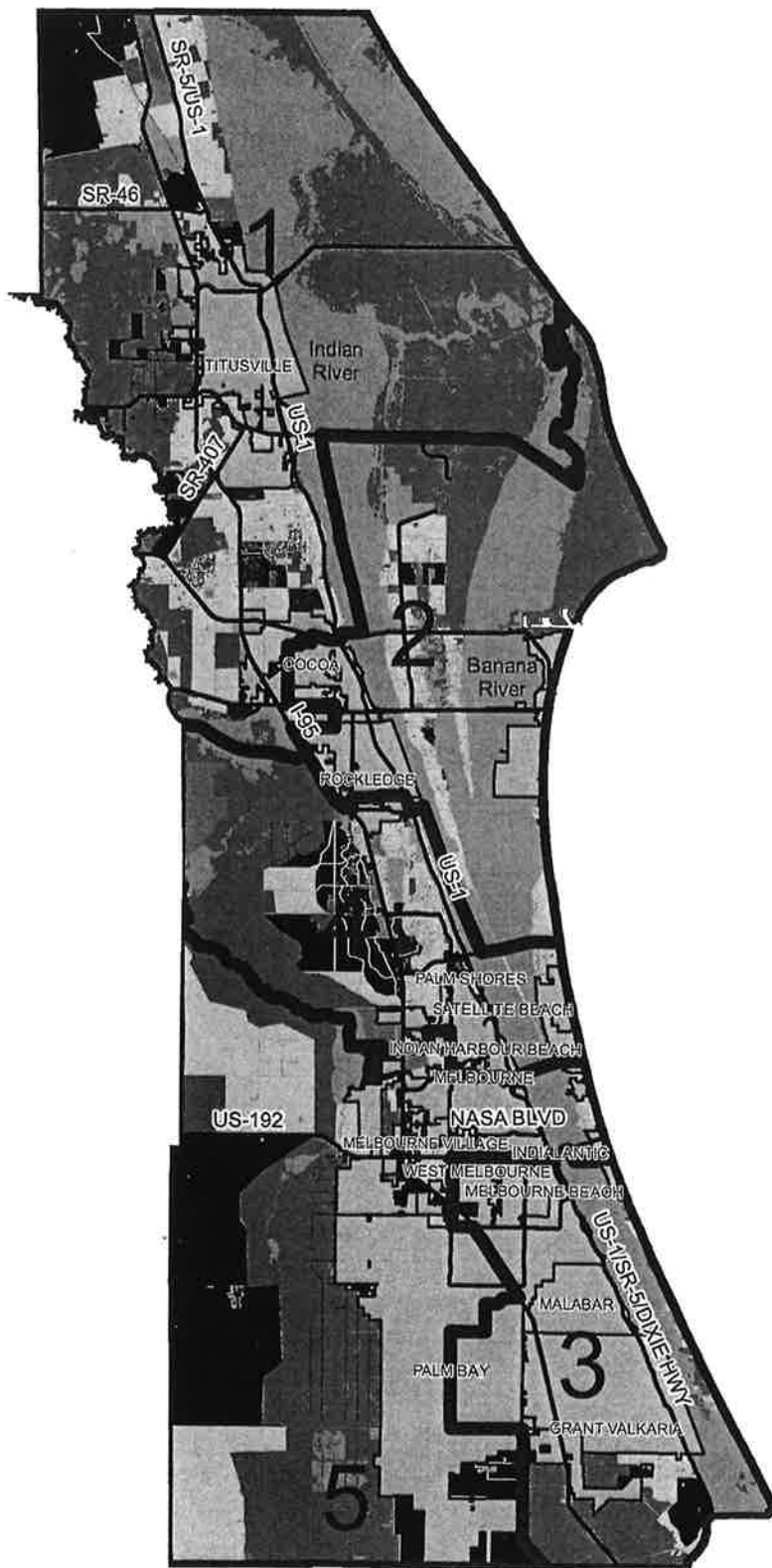
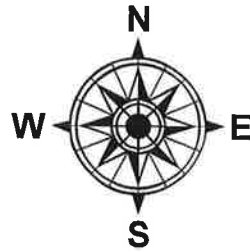
Brevard County, Florida 2040 Population Analysis



Data Source: School data obtained from Brevard Public Schools District; municipal and county boundary data obtained from Brevard County; environmental data obtained from Save Our Indian River Lagoon (SOIRL), U.S. Geological Survey (USGS) National Hydrography Dataset, and Brevard County Property Appraiser.



MAP 7.2
Projected School Growth from 2018-2024 787

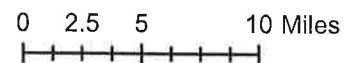


Legend

- Commissioner Districts
- Major Roads
- Cities
- Water
- Swamp/Marsh
- Federal, State, and County Owned Lands

Population Change, Years 2015 to 2040 (Adjusted)

- < 10%
- 10% - 25%
- 25% - 50%
- 50% - 75%
- > 75%



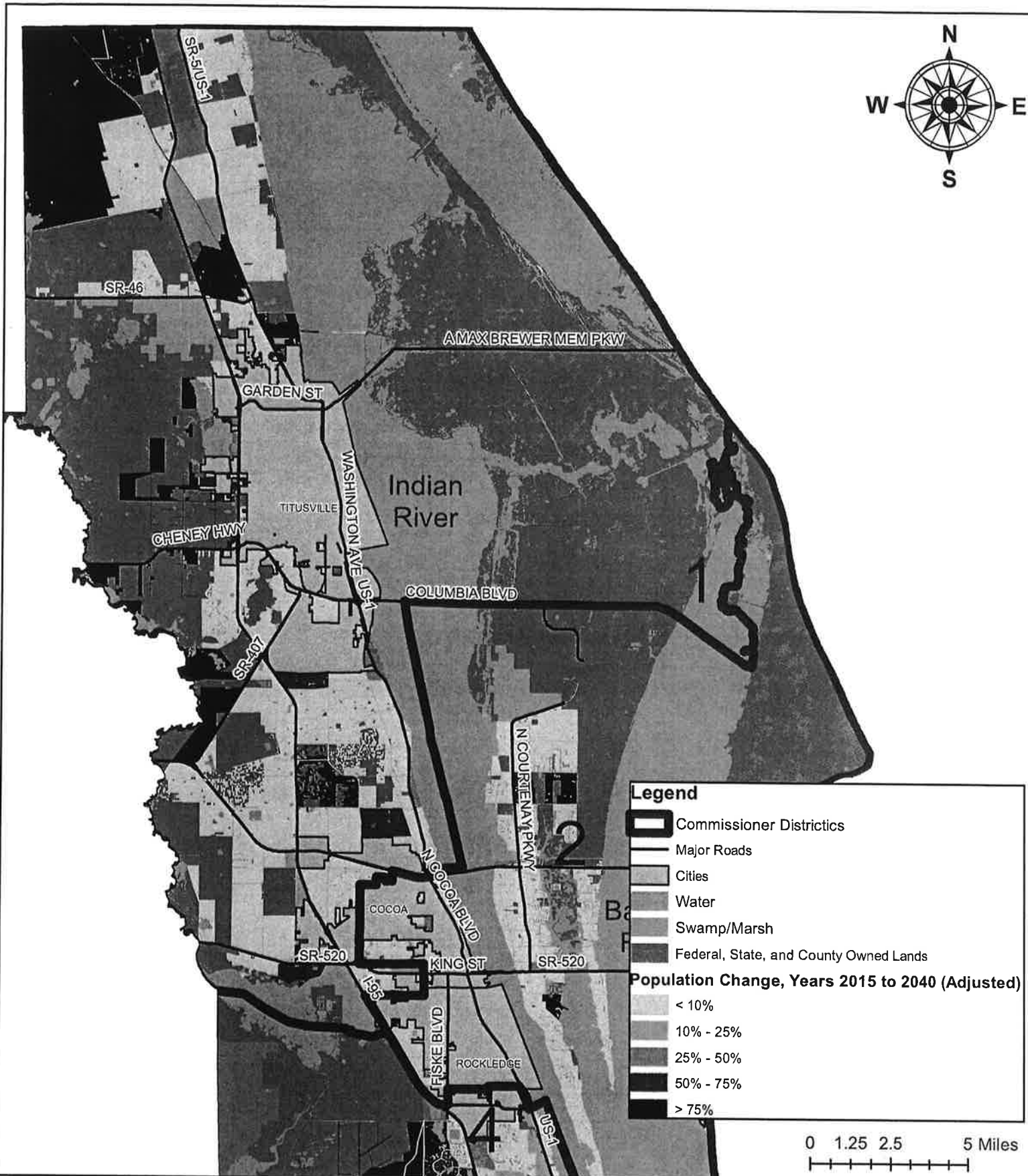
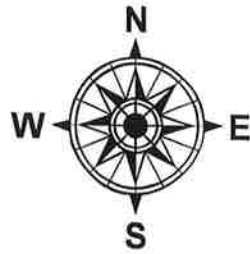
**Brevard County, Florida
2040 Population Analysis**



Data Source: Space Coast Transportation Planning Organization (SCTPO), Long-Range Transportation Plan (LRTP) Traffic Analysis Zone (TAZ) countywide data ("Zonal" flow); TAZ data adjusted by share of total countywide population taking into consideration historic growth rates and future linear progression based on population data obtained from the Bureau of Economic & Business Research (BEER) and Shimberg Center for Housing Studies, Florida Housing Data Clearinghouse.



**MAP 8.1
Year 2040
Population Change
788**

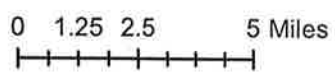


Legend

- Commissioner Districts
- Major Roads
- Cities
- Water
- Swamp/Marsh
- Federal, State, and County Owned Lands

Population Change, Years 2015 to 2040 (Adjusted)

- < 10%
- 10% - 25%
- 25% - 50%
- 50% - 75%
- > 75%



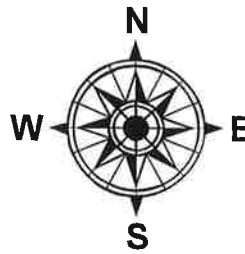
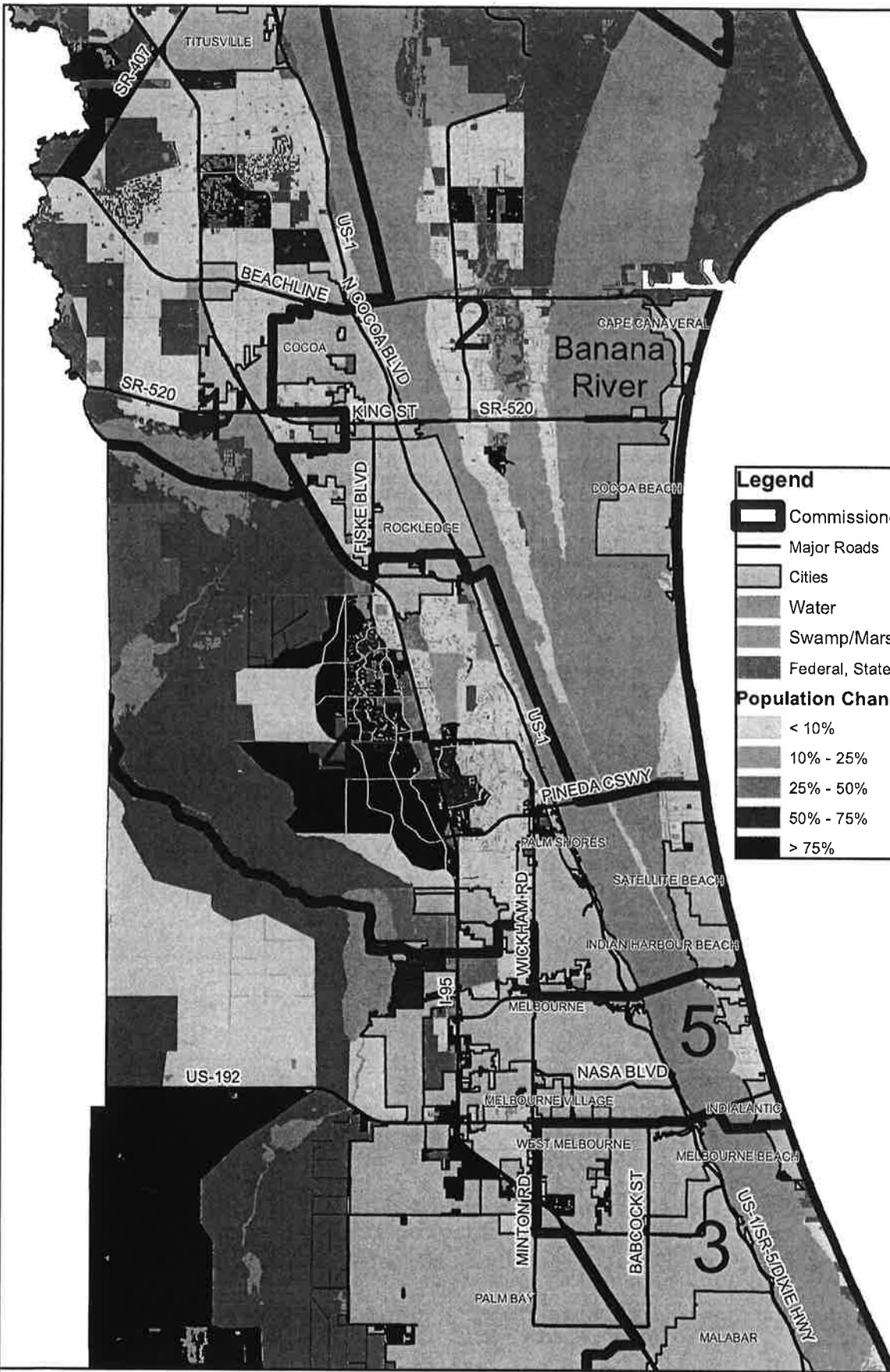
**Brevard County, Florida
2040 Population Analysis**



Data Source: Space Coast Transportation Planning Organization (SCTPO) Long-Range Transportation Plan (LRTP) Traffic Analysis Zone (TAZ) countywide data (ZData1 files). TAZ data adjusted by share of total countywide population taking into consideration historic growth rates and future linear progression based on population data obtained from the Bureau of Economic & Business Research (BEBR) and Shimberg Center for Housing Studies, Florida Housing Data Clearinghouse.



**MAP 8.2
Year 2040
Population Change
Northern Cou 789**

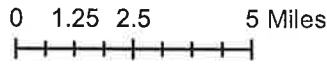


Legend

- Commissioner Districts
- Major Roads
- Cities
- Water
- Swamp/Marsh
- Federal, State, and County Owned Lands

Population Change, Years 2015 to 2040 (Adjusted)

- < 10%
- 10% - 25%
- 25% - 50%
- 50% - 75%
- > 75%



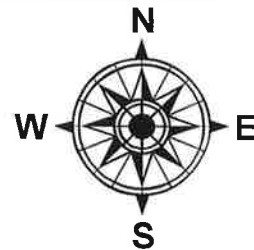
**Brevard County, Florida
2040 Population Analysis**














Data Source: Space Coast Transportation Planning Organization (SCTPO), Long-Range Transportation Plan (LRTP) Traffic Analysis Zone (TAZ) countywide data ("ZData1" files); TAZ data adjusted by share of total countywide population taking into consideration historic growth rates and future linear progression based on population data obtained from the Bureau of Economic & Business Research (BEER) and Shimbreg Center for Housing Studies, Florida Housing Data Clearinghouse.

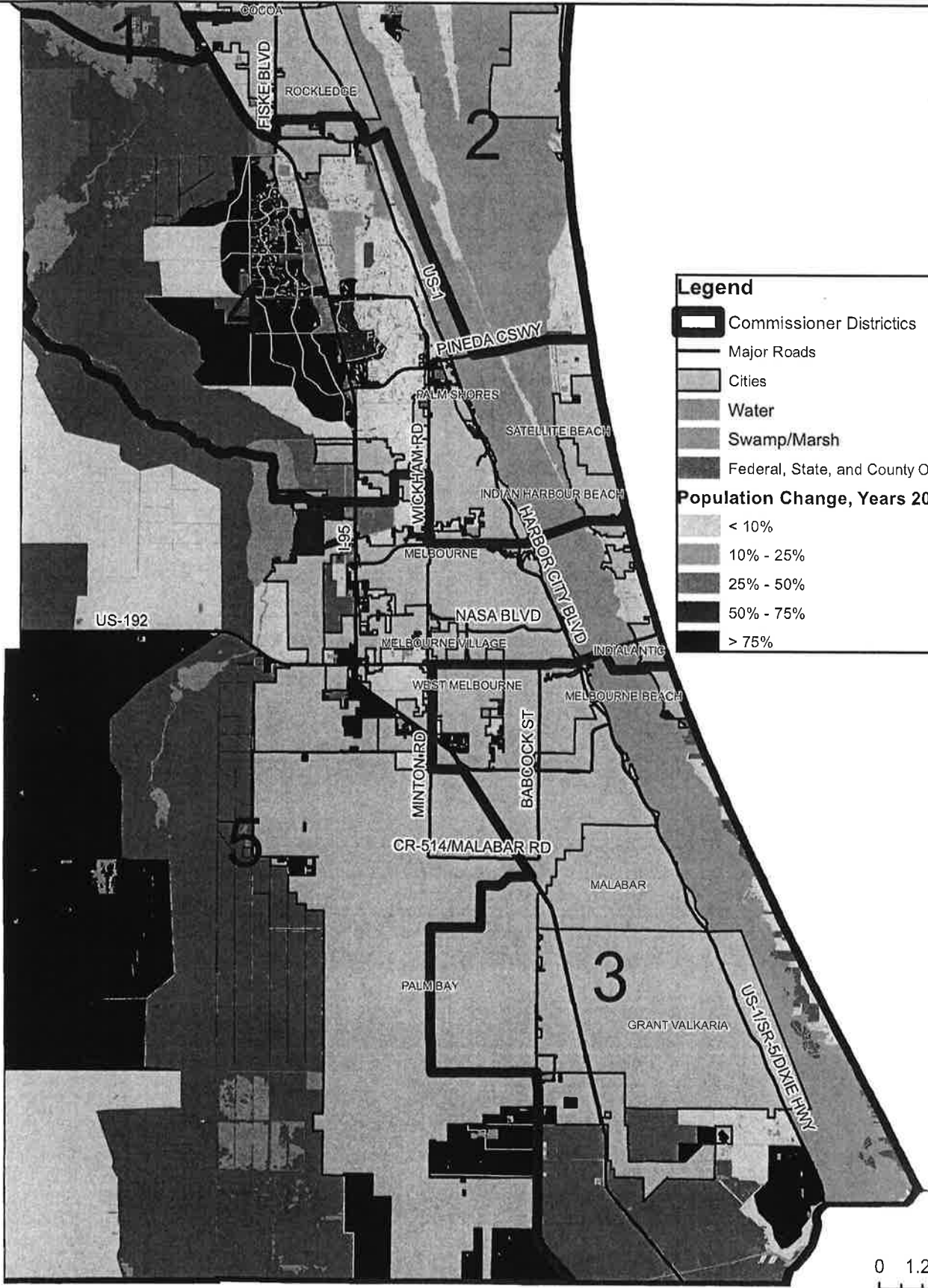


**MAP 8.3
Year 2040
Population Change
Central Coun 790**



Legend

-  Commissioner Districts
 -  Major Roads
 -  Cities
 -  Water
 -  Swamp/Marsh
 -  Federal, State, and County Owned Lands
- Population Change, Years 2015 to 2040 (Adjusted)**
-  < 10%
 -  10% - 25%
 -  25% - 50%
 -  50% - 75%
 -  > 75%



US-192


CR-514/MALABAR RD

MALABAR

PALM BAY

GRANT VALKARIA

0 1.25 2.5 5 Miles



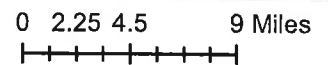
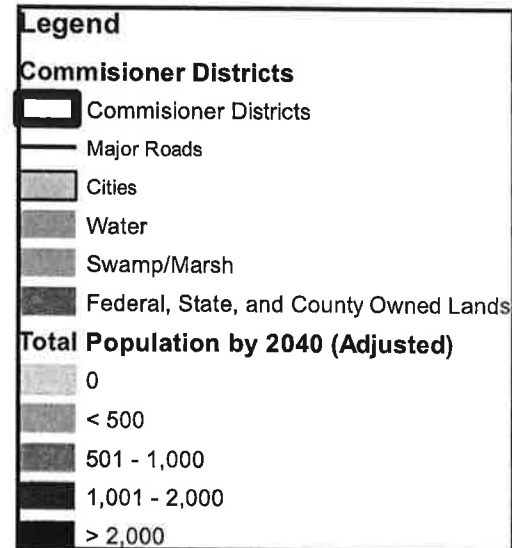
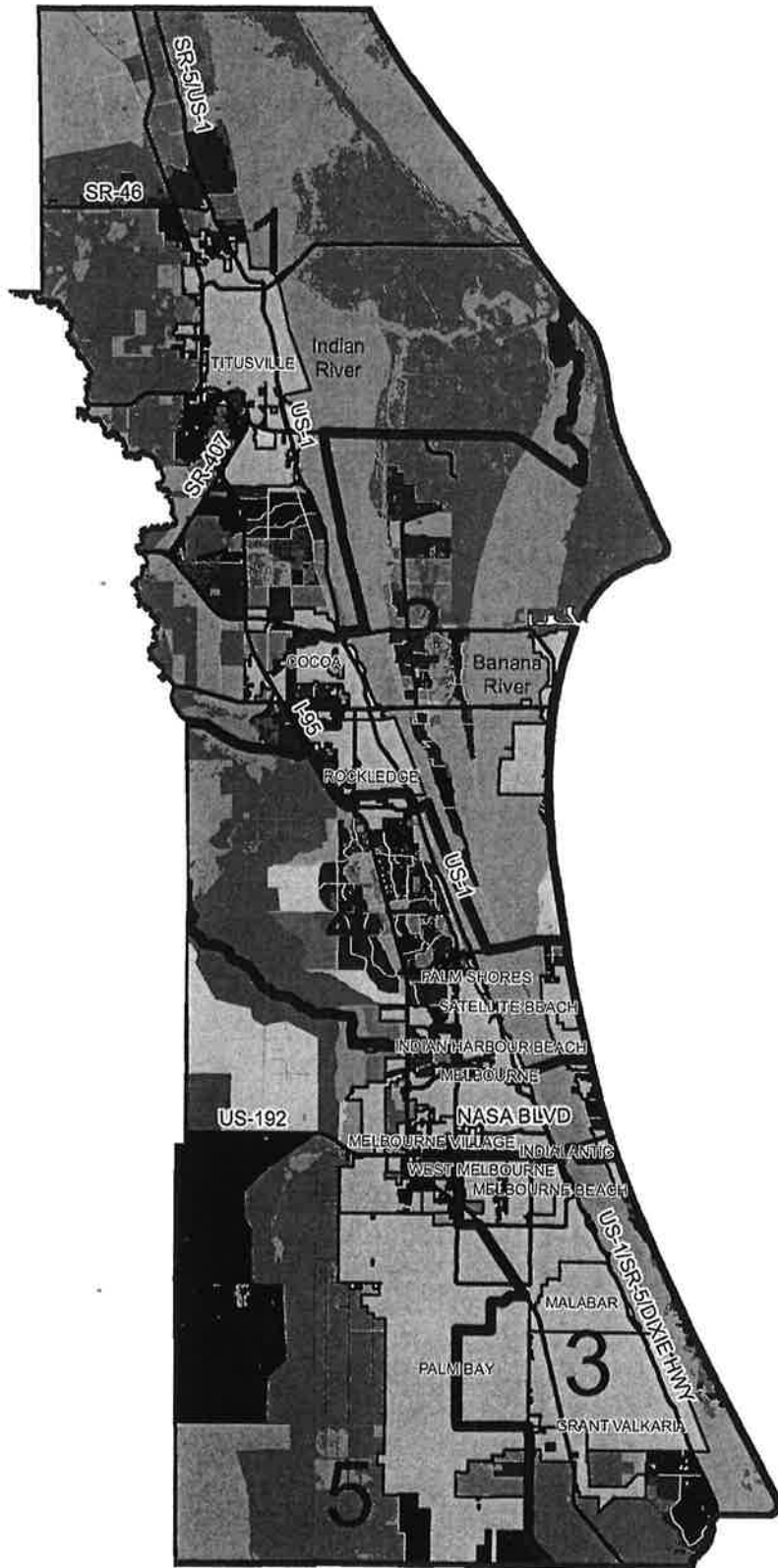
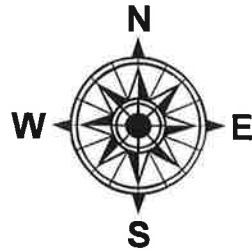
**Brevard County, Florida
2040 Population Analysis**



Data Source: Space Coast Transportation Planning Organization (SCTPO), Long-Range Transportation Plan (LRTP) Traffic Analysis Zone (TAZ) countywide data ("ZData1" file); TAZ data adjusted by share of total countywide population taking into consideration historic growth rates and future linear progression based on population data obtained from the Bureau of Economic & Business Research (BEBR) and Shimberg Center for Housing Studies, Florida Housing Data Clearinghouse.



**MAP 8.4
Year 2040
Population Change
Southern Cou 791**



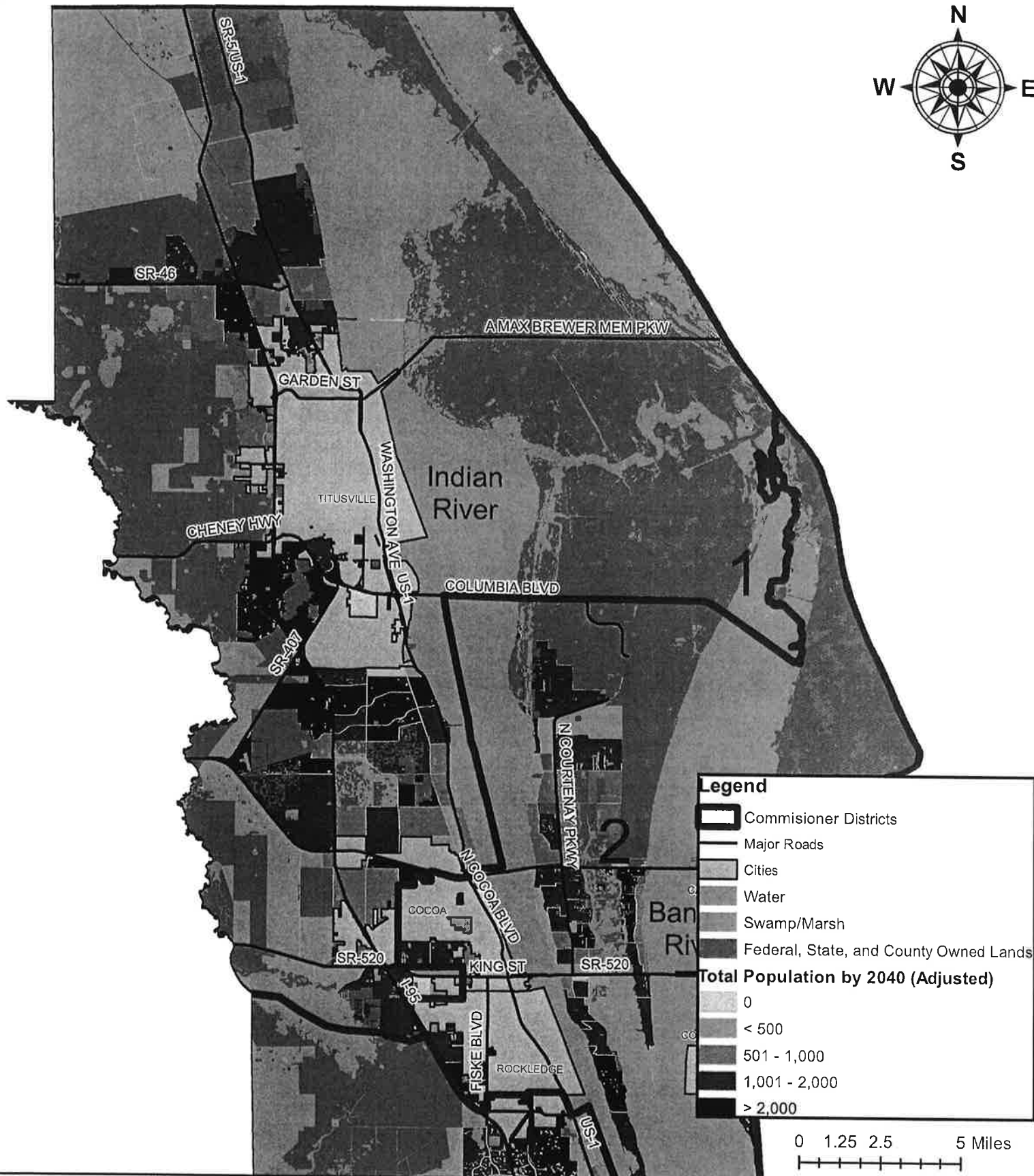
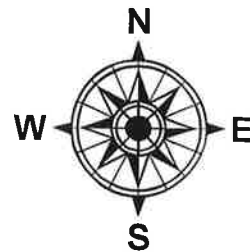
Brevard County, Florida 2040 Population Analysis



Data Source: Space Coast Transportation Planning Organization (SCTPO), Long-Range Transportation Plan (L RTP) Traffic Analysis Zone (TAZ) countywide data ("2011" file); TAZ data adjusted by share of total countywide population taking into consideration historic growth rates and future linear progression based on population data obtained from the Bureau of Economic & Business Research (BEER) and Shimberg Center for Housing Studies, Florida Housing Data Clearinghouse.



**Map 8.5
Year 2040
Total Population
792**



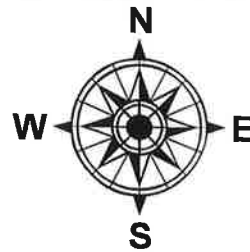
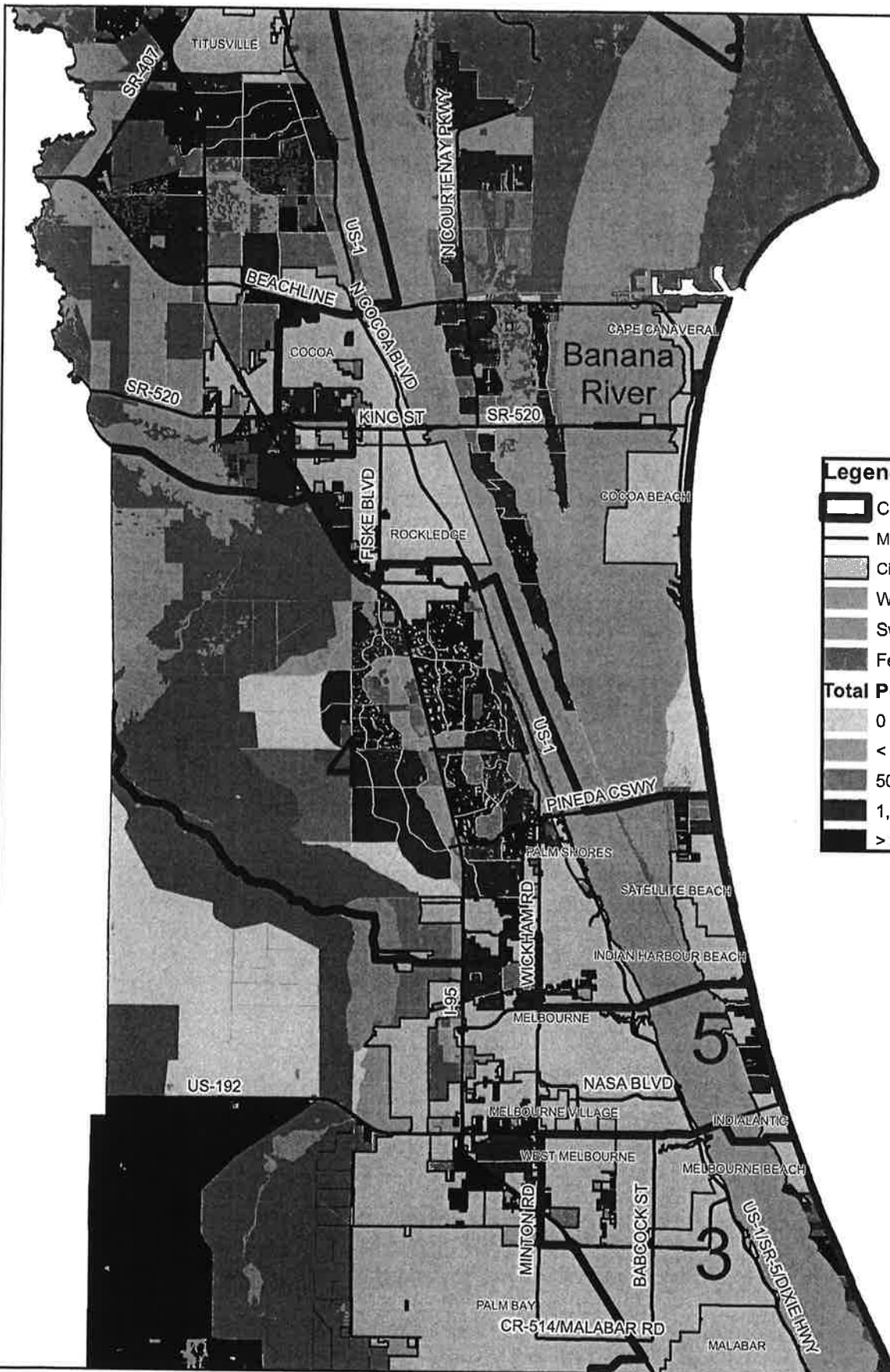
**Brevard County, Florida
2040 Population Analysis**














Data Source: Space Coast Transportation Planning Organization (SCTPO), Long-Range Transportation Plan (LRTP) Traffic Analysis Zone (TAZ) countywide data (2010s); TAZ data adjusted by share of total countywide population taking into consideration historic growth rates and future linear progression based on population data obtained from the Bureau of Economic & Business Research (BEER) and Shimberg Center for Housing Studies, Florida Housing Data Clearinghouse.

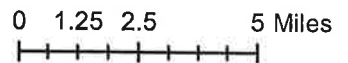


**Map 8.6
Year 2040
Total Population
Northern Cou 793**



Legend

-  Commissioner Districts
-  Major Roads
-  Cities
-  Water
-  Swamp/Marsh
-  Federal, State, and County Owned Lands
- Total Population by 2040 (Adjusted)**
-  0
-  < 500
-  501 - 1,000
-  1,001 - 2,000
-  > 2,000



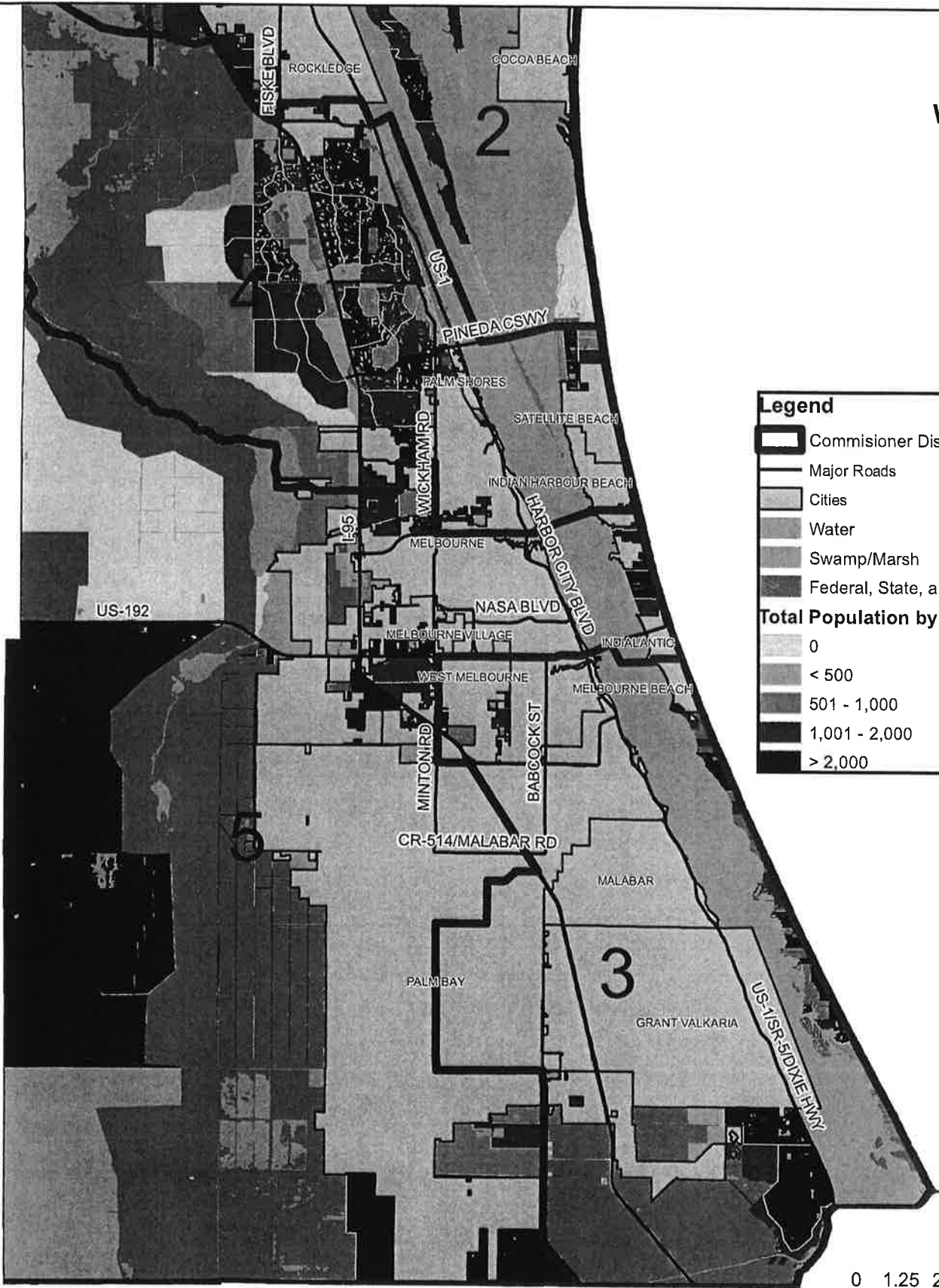
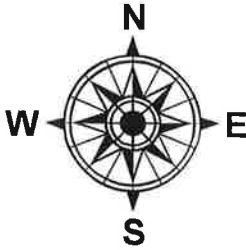
**Brevard County, Florida
2040 Population Analysis**



Data Source: Space Coast Transportation Planning Organization (SCTPO), Long-Range Transportation Plan (LRTP) Traffic Analysis Zone (TAZ) countwide data (20Data 1" files); TAZ data adjusted by share of total countwide population taking into consideration historic growth rates and future linear progression based on population data obtained from the Bureau of Economic & Business Research (BER) and Shimberg Center for Housing Studies, Florida Housing Data Clearinghouse.



**Map 8.7
Year 2040
Total Population
Central Coun794**

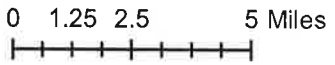


Legend

- Commissioner Districts
- Major Roads
- Cities
- Water
- Swamp/Marsh
- Federal, State, and County Owned Lands

Total Population by 2040 (Adjusted)

- 0
- < 500
- 501 - 1,000
- 1,001 - 2,000
- > 2,000



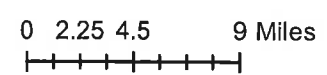
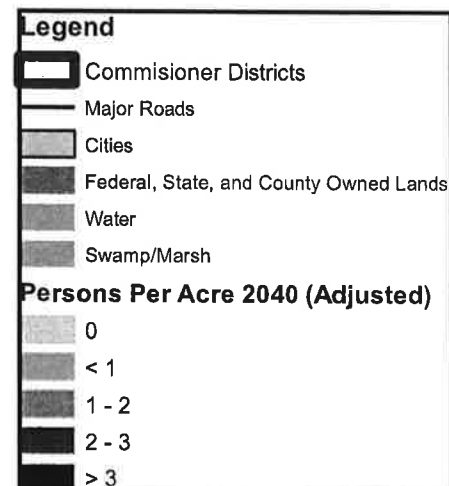
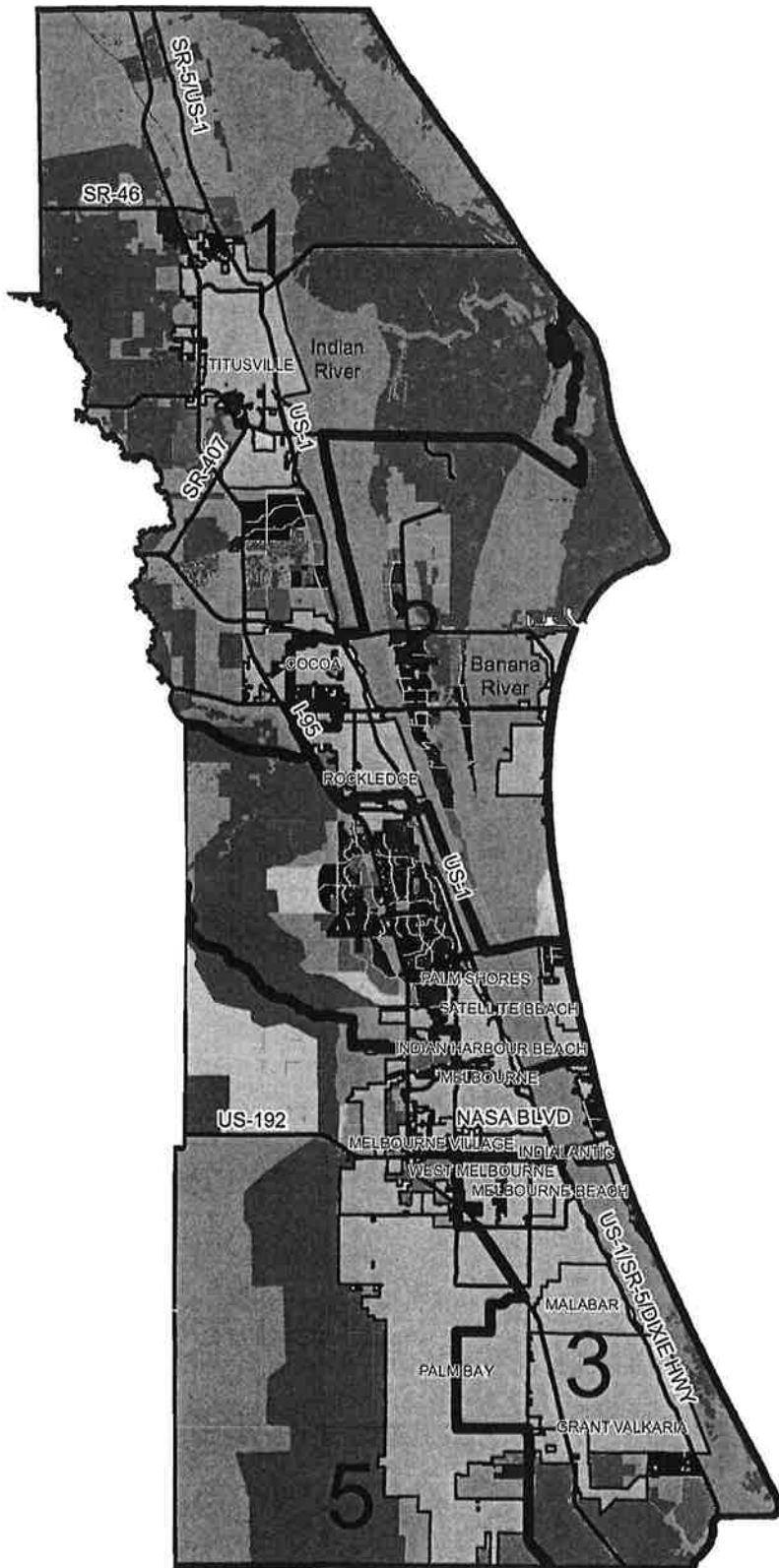
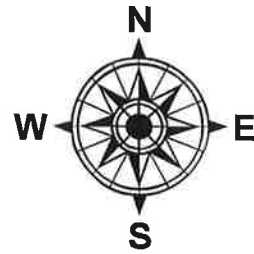
**Brevard County, Florida
2040 Population Analysis**



Data Source: Space Coast Transportation Planning Organization (SCTPO), Long-Range Transportation Plan (LRTP) Traffic Analysis Zone (TAZ) countywide data ("Data 1" file); TAZ data adjusted by share of total countywide population taking into consideration historic growth rates and future linear progression based on population data obtained from the Bureau of Economic & Business Research (BEBR) and Shimberg Center for Housing Studies, Florida Housing Data Clearinghouse.



**Map 8.8
Year 2040
Total Population
Southern Cou 795**



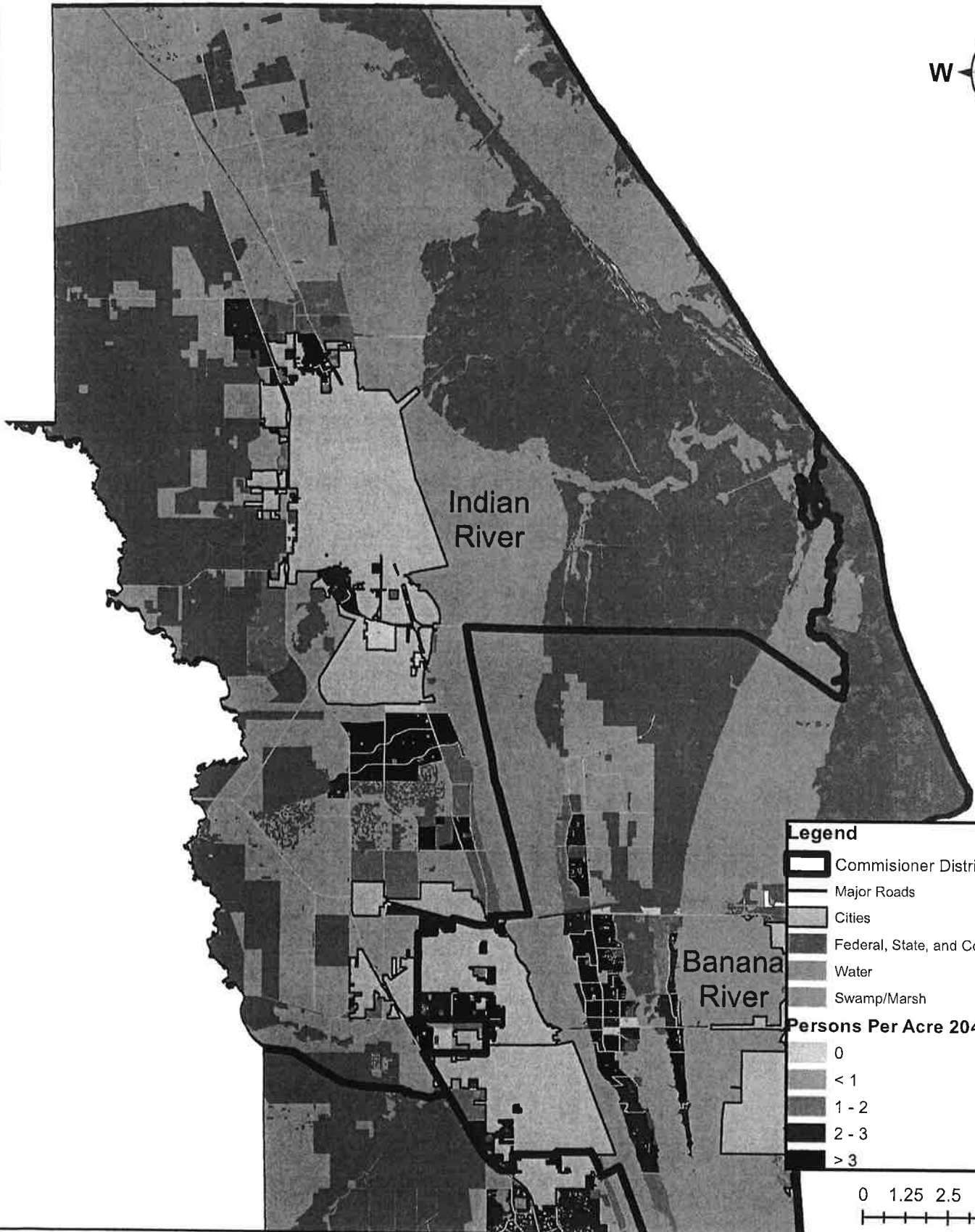
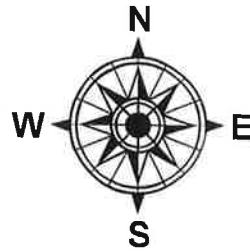
**Brevard County, Florida
2040 Population Analysis**



Data Source: Space Coast Transportation Planning Organization (SCTPO), Long-Range Transportation Plan (LRTP) Traffic Analysis Zone (TAZ) countywide data ("Zonal" files); TAZ data adjusted by share of total countywide population taking into consideration historic growth rates and future linear progression based on population data obtained from the Bureau of Economic & Business Research (BEER) and Shimborg Center for Housing Studies, Florida Housing Data Clearinghouse.



**MAP 8.9
Year 2040
Persons Per Acre
796**

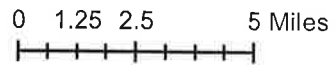


Legend

- Commissioner Districts
- Major Roads
- Cities
- Federal, State, and County Owned Lands
- Water
- Swamp/Marsh

Persons Per Acre 2040 (Adjusted)

- 0
- < 1
- 1 - 2
- 2 - 3
- > 3



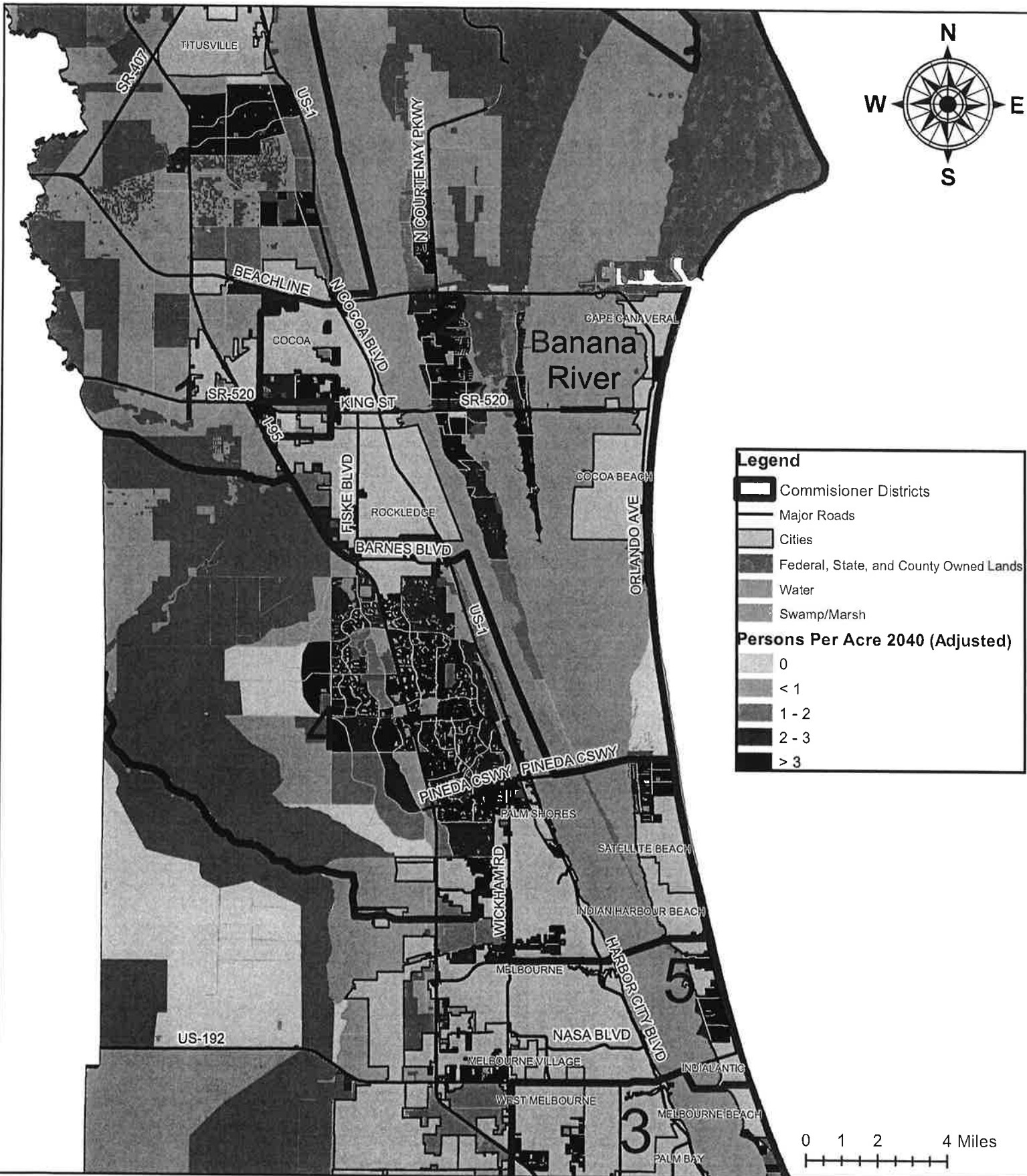
Brevard County, Florida 2040 Population Analysis



Data Source: Space Coast Transportation Planning Organization (SCTPO), Long-Range Transportation Plan (LRTP) Traffic Analysis Zone (TAZ) countywide data ("2010" files); TAZ data adjusted by share of total countywide population taking into consideration historic growth rates and future linear progression based on population data obtained from the Bureau of Economic & Business Research (BEER) and Shimberg Center for Housing Studies, Florida Housing Data Clearinghouse.



**MAP 8.10
Year 2040
Persons Per Acre
Northern Cou 797**



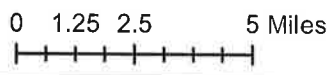
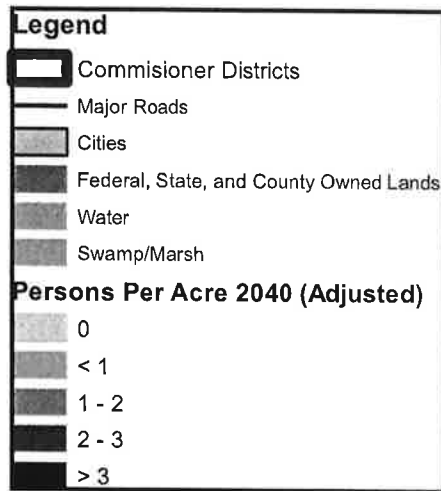
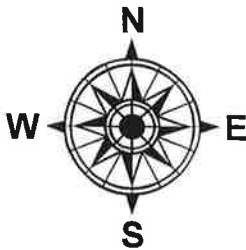
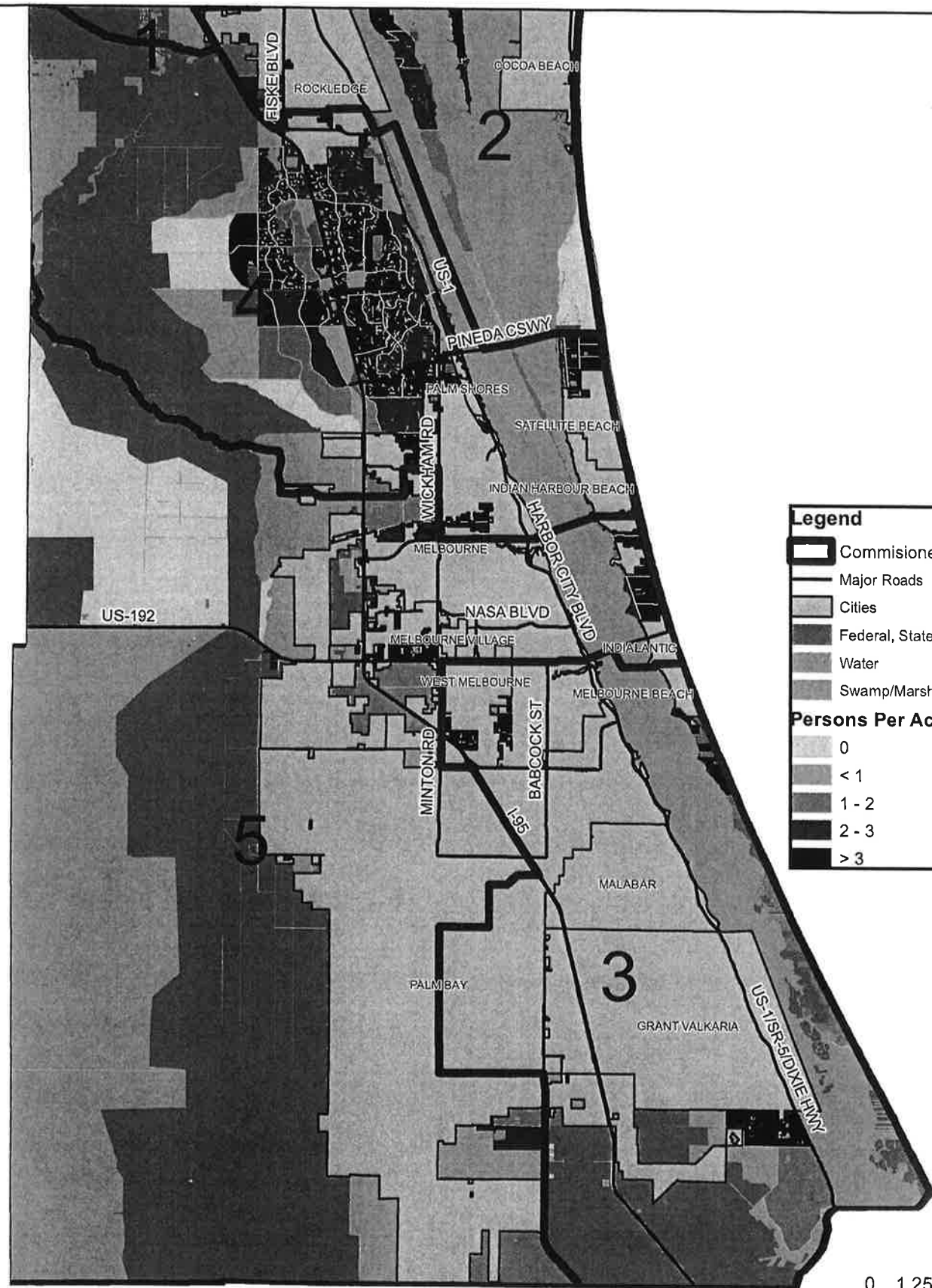
Brevard County, Florida 2040 Population Analysis



Data Source: Space Coast Transportation Planning Organization (SCTPO), Long-Range Transportation Plan (LRTP) Traffic Analysis Zone (TAZ) countywide data ("2040" file); TAZ data adjusted by share of total countywide population taking into consideration historic growth rates and future linear progression based on population data obtained from the Bureau of Economic & Business Research (BEER) and Shimberg Center for Housing Studies, Florida Housing Data Clearinghouse.



MAP 8.11
Year 2040
Persons Per Acre
Central Count 798



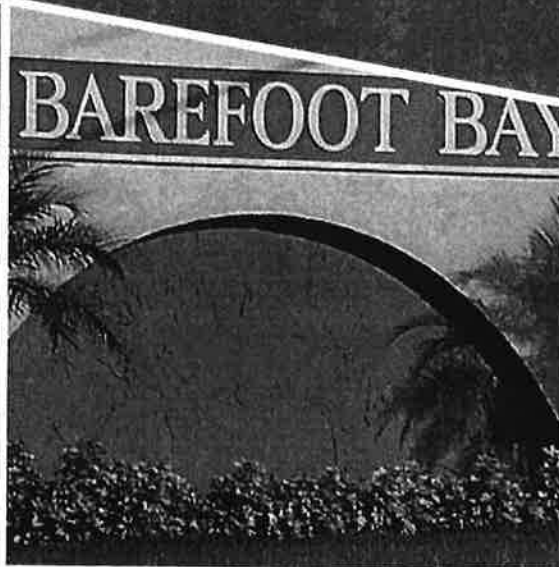
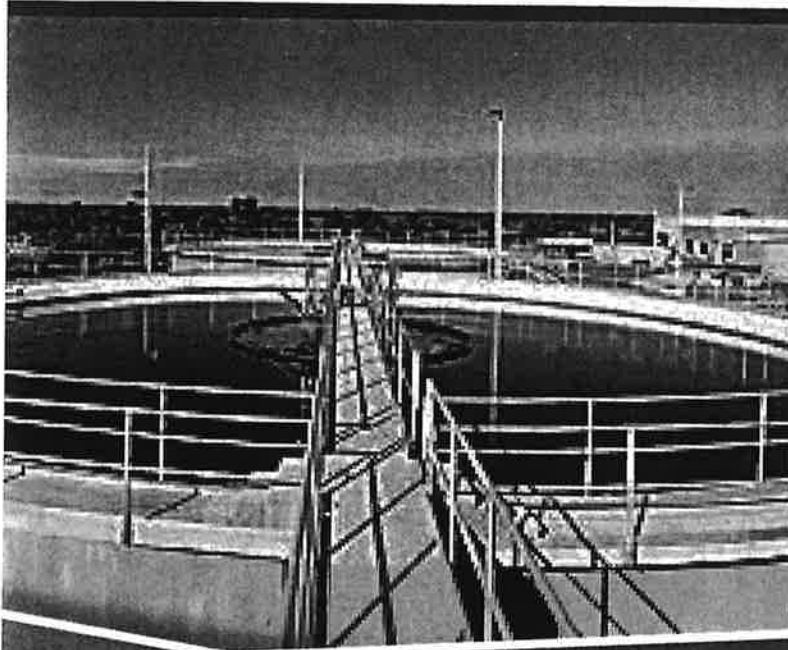
**Brevard County, Florida
2040 Population Analysis**



Data Source: Space Coast Transportation Planning Organization (SCTPO) Long-Range Transportation Plan (L RTP) Traffic Analysis Zone (TAZ) countywide data ("ZData1" files); TAZ data adjusted by share of total countywide population taking into consideration historic growth rates and future linear progression based on population data obtained from the Bureau of Economic & Business Research (BEBR) and Shimberg Center for Housing Studies, Florida Housing Data Clearinghouse.



**MAP 8.12
Year 2040
Persons Per Acre
Southern Cour 799**



Regional Utility Capital Improvement Projections

REGIONAL UTILITY CAPITAL IMPROVEMENT PROJECTIONS THROUGH YEAR 2040

Prepared For



June 2020

Prepared By



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TABLE OF CONTENTS

1.0 Background 1

1.1 Project Purpose..... 1

1.2 Expected 20 Year Population Growth Throughout Brevard County 2

2.0 Service Area Boundaries and Populations..... 4

3.0 Existing County Utility Infrastructure and Capacities..... 13

3.1 Existing Water Treatment Infrastructure 13

 3.1.1 Water Supply and Treatment Capacity 13

 3.1.2 Transmission / Distribution System 13

3.2 Existing WasteWater Infrastructure 15

 3.2.1 Collection System 15

 3.2.2 Wastewater Treatment Facilities 17

 3.2.3 Effluent Disposal..... 18

4.0 Future Water and Wastewater Treatment Demands 18

4.1 Future Water Demand and Treatment Capacity 18

4.2 Future Wastewater Demand and Treatment Capacity 19

5.0 Estimated Future Infrastructure and Cost 20

5.1 North Brevard 20

 5.1.1 Potable Water System..... 20

 5.1.2 Wastewater System 21

5.2 Port St. John 22

 5.2.1 Wastewater System 22

5.3 Sykes Creek 23

 5.3.1 Wastewater System 23

5.4 South Central 23

 5.4.1 Wastewater System 23

5.5 South Beaches..... 24

 5.5.1 Wastewater System 24

5.6 Barefoot Bay 25

 5.6.1 Potable Water System..... 25

 5.6.2 Wastewater System 25

LIST OF TABLES

Table 2-1 Existing and Future Potable Unincorporated Water Service Area Populations 4

Table 2-2 Existing and Future Unincorporated Wastewater Service Area Populations..... 4

Table 3-1 Existing Source Water and CUP Limits..... 13

Table 3-2 Existing Potable Water Mains..... 14

Table 3-3 Existing Gravity Mains..... 15

Table 3-4 Existing Lift Stations 16

Table 3-5 Existing Force Mains 16

Table 3-6 Existing Wastewater Treatment Facilities 17

Table 3-7 Existing Effluent Disposal..... 18

Table 4-1 Future Water Treatment Capacity Required 19

Table 4-2 Future Wastewater Treatment Capacity Required 19

Table 5-1 North Brevard Proposed Water Improvements 21

Table 5-2 North Brevard Proposed Wastewater Improvements..... 21

Table 5-3 Port St John Proposed Wastewater Improvements 22

Table 5-4 Port Sykes Creek Proposed Wastewater Improvements..... 23

Table 5-5 South Central Proposed Wastewater Improvements..... 24

Table 5-6 South Beaches Proposed Wastewater Improvements 24

Table 5-7 Barefoot Bay Proposed Water Improvements 25

Table 5-8 Barefoot Bay Proposed Wastewater Improvements..... 26

1.0 BACKGROUND

A population analysis prepared by Wade Trim for Brevard County in November 2019 demonstrated that the population will continue to grow through the year 2040. According to the population analysis, the total population of Brevard County (both unincorporated and incorporated areas) is projected to grow from 595,350 to 683,808 from 2020 through 2040, respectively. This corresponds to a County population increase of approximately 13%.

In preparation for the expected growth, the County is conducting long range planning of its water and wastewater utilities to proactively provide direction for future water and wastewater system expansion, and a basis for future rate study.

1.1 PROJECT PURPOSE

The purpose of this project is to provide the County with a high-level evaluation of anticipated capital improvements to their water and wastewater utility to support the anticipated growth through 2040 in its unincorporated areas. Unlike a master plan that bases its results on detailed hydraulic modeling and a comprehensive system evaluation, this report provides a general assessment of treatment facilities and major infrastructure that will possibly be needed in unincorporated Brevard County based on the areas where population growth is expected. This information will then be used to provide a conceptual cost for expansion of treatment and transmission lines; and serve as input for the County in the development of a future rate analysis.

Unincorporated Brevard County consists of six service areas for providing their customers with water and wastewater service. These service areas are:

1. North Brevard
2. Port St. John
3. Sykes Creek
4. South Central
5. South Beaches
6. Barefoot Bay

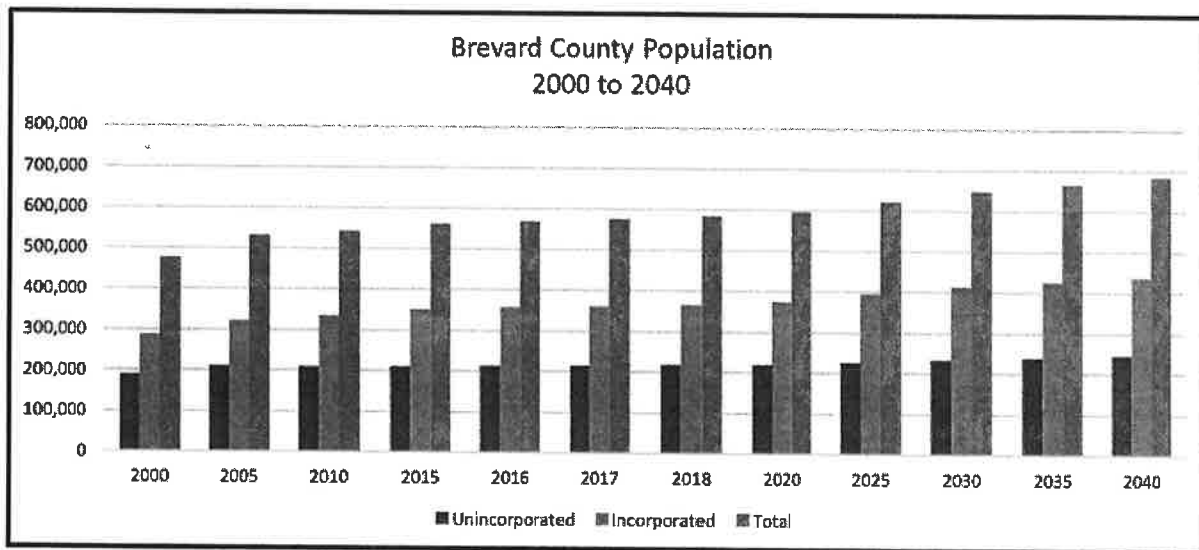
For each service area, this report will

- Approximate the population growth and recommend service area boundary modifications
- Estimate the additional water demands and anticipated wastewater flows
- Identify the capacity at each of the existing water and wastewater treatment facilities
- Recommend expansion of existing treatment facilities or construction of new facilities.
- Estimate length of major water distribution and sanitary sewer collection pipelines.
- Identify need for additional disposal structures such as deep injection wells.

- Provide conceptual cost for recommended improvements

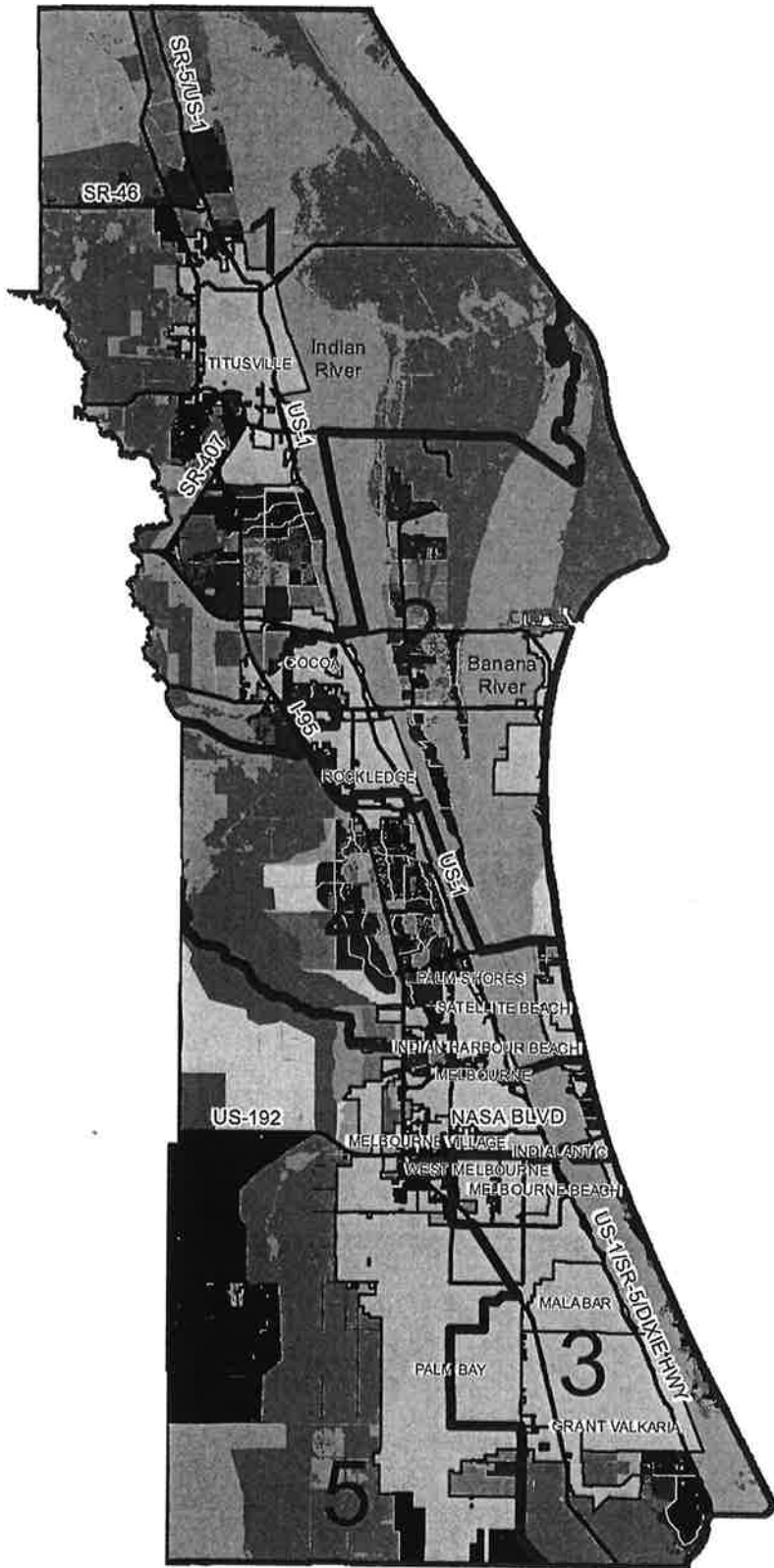
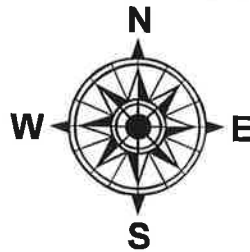
1.2 EXPECTED 20 YEAR POPULATION GROWTH THROUGHOUT BREVARD COUNTY

As was concluded in the population analysis, population growth within Brevard will occur throughout all sections of the County with most of the growth occurring within incorporated areas as shown in Figure 1-1.



Of the countywide population by 2040, approximately 245,865 people are allocated to unincorporated Brevard County and approximately 437,943 people are allocated to the incorporated cities. This equates to 36% and 64% of the countywide population, respectively, with the majority of the population concentrated in cities. From the year 2018 to the year 2040, the County is expected to grow by 13%; whereas the cities are expected to grow by 20%.

Figure 1-2 illustrates the locations where growth is anticipated by 2040 in the County's unincorporated areas. According to the population analysis, in 2040, the highest number of people will be located south and southwest of the City of Titusville, between the cities of Melbourne and Rockledge, and west and south of the City of Palm Bay.



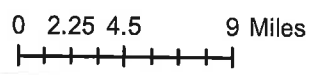
Legend

Commissioner Districts

- Commissioner Districts
- Major Roads
- Cities
- Water
- Swamp/Marsh
- Federal, State, and County Owned Lands

Total Population by 2040 (Adjusted)

- 0
- < 500
- 501 - 1,000
- 1,001 - 2,000
- > 2,000



**Brevard County, Florida
2040 Population Analysis**



Data Source: Space Coast Transportation Planning Organization (SCTPO), Long-Range Transportation Plan (LRTP) Traffic Analysis Zone (TAZ) countywide data ("ZBase" files); TAZ data adjusted by share of total countywide population taking into consideration historic growth rates and future linear progression based on population data obtained from the Bureau of Economic & Business Research (BEBR) and Shimberg Center for Housing Studies, Florida Housing Data Clearinghouse.



**FIGURE 1-2
Year 2040
Total Population
807**

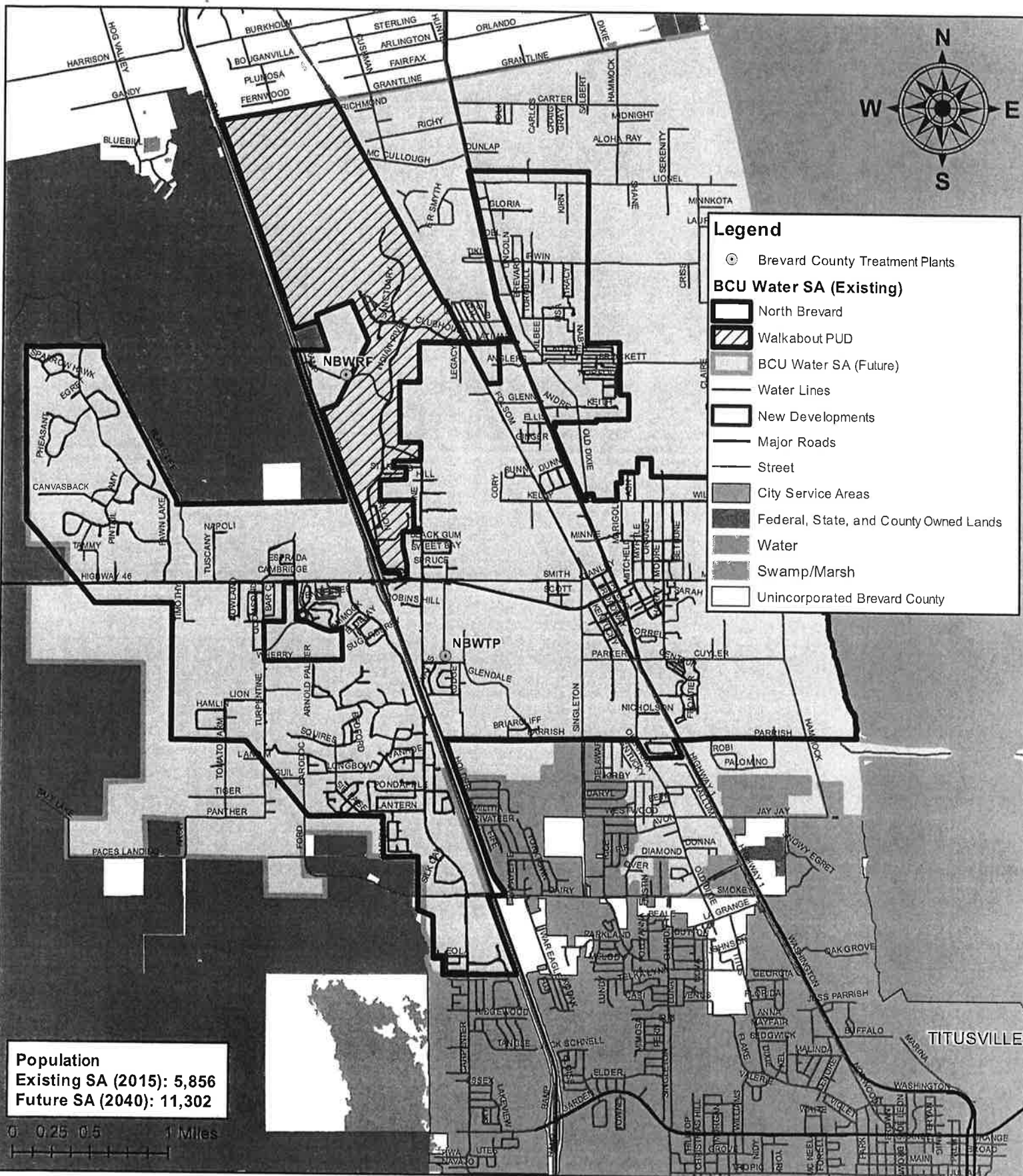
2.0 SERVICE AREA BOUNDARIES AND POPULATIONS

With the use of the County's GIS, the existing boundary for each of the County's unincorporated utility service areas was plotted as shown in Figures 2-1 through 2-8. Preliminary Traffic Analysis Zone (TAZ) data obtained from the Space Coast Transportation Planning Organization (TPO) was then used in conjunction with ArcGIS software to allocate the population within the lines of each utility service boundary.

The results of the recent population analysis were then superimposed on the maps to identify new areas of population expansion outside of the existing service boundaries. With this information, future service area boundaries were identified as shown in Figures 2-1 through 2-8. The TAZ data was used to obtain the expected population within the future expanded water and wastewater service areas. The results of this evaluation are presented in Tables 2-1 and 2-2.

Service Area	Population within Existing Water Service Area (2015)	Estimated Population within Expanded Service Boundary (2040)	Figure Reference
North Brevard	5,856	11,302	2-1
Barefoot Bay	4,924	10,372	2-2

Service Area	Population within Existing Wastewater Service Area (2015)	Estimated Population within Expanded Service Boundary (2040)	Figure Reference
North Brevard	3,866	11,874	2-3
Port St. John	2,173	19,102	2-4
South Central	51,148	82,342	2-5
Barefoot Bay	4,918	10,391	2-6
South Beaches	41,813	46,268	2-7
Sykes Creek	28,417	36,740	2-8



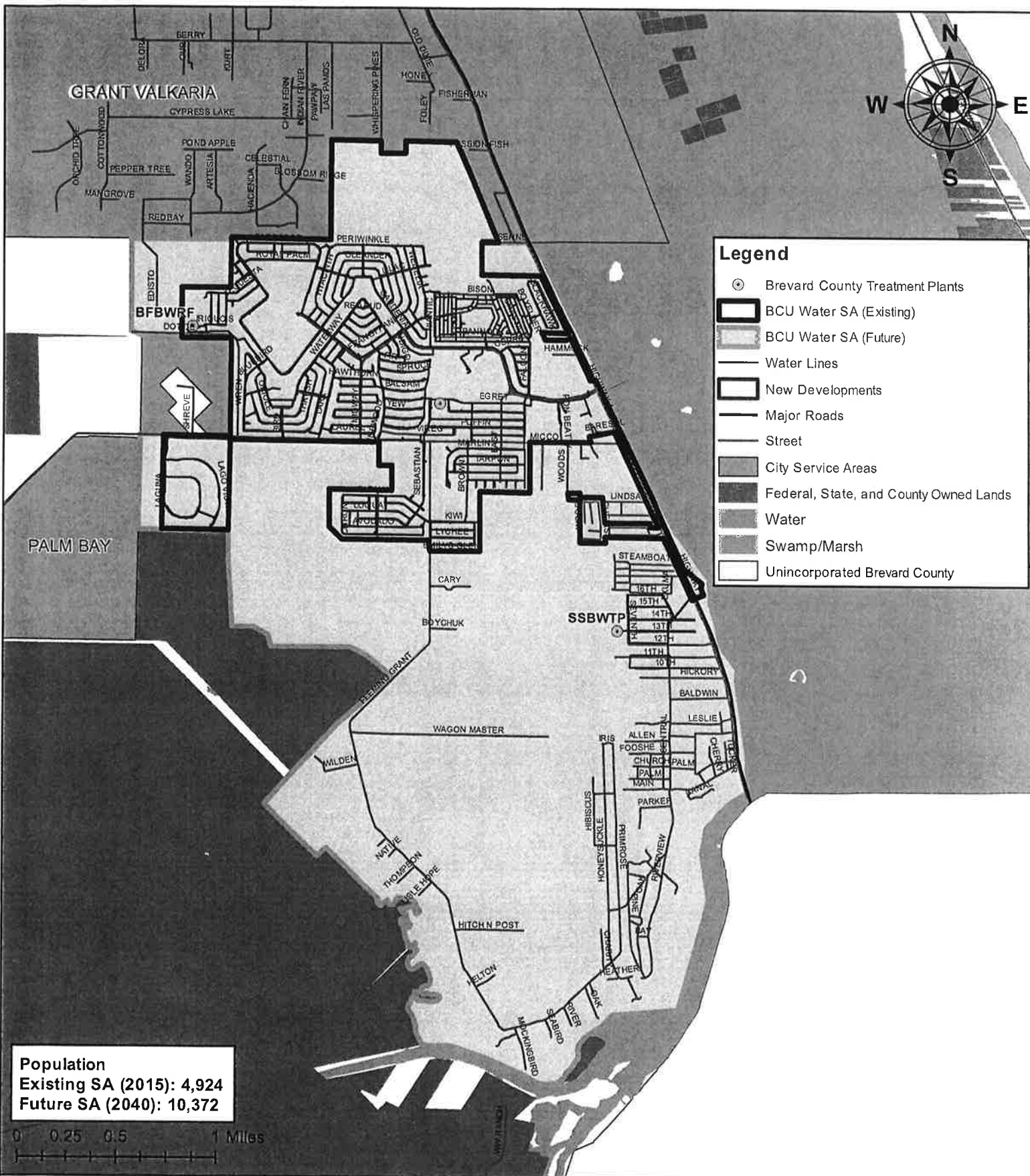
**Brevard County, Florida - CIP Projections
Water Service Area: North Brevard**



May 27, 2020
Data Source: Brevard County
Utility Services Department, 2020.



**FIGURE
2-1**



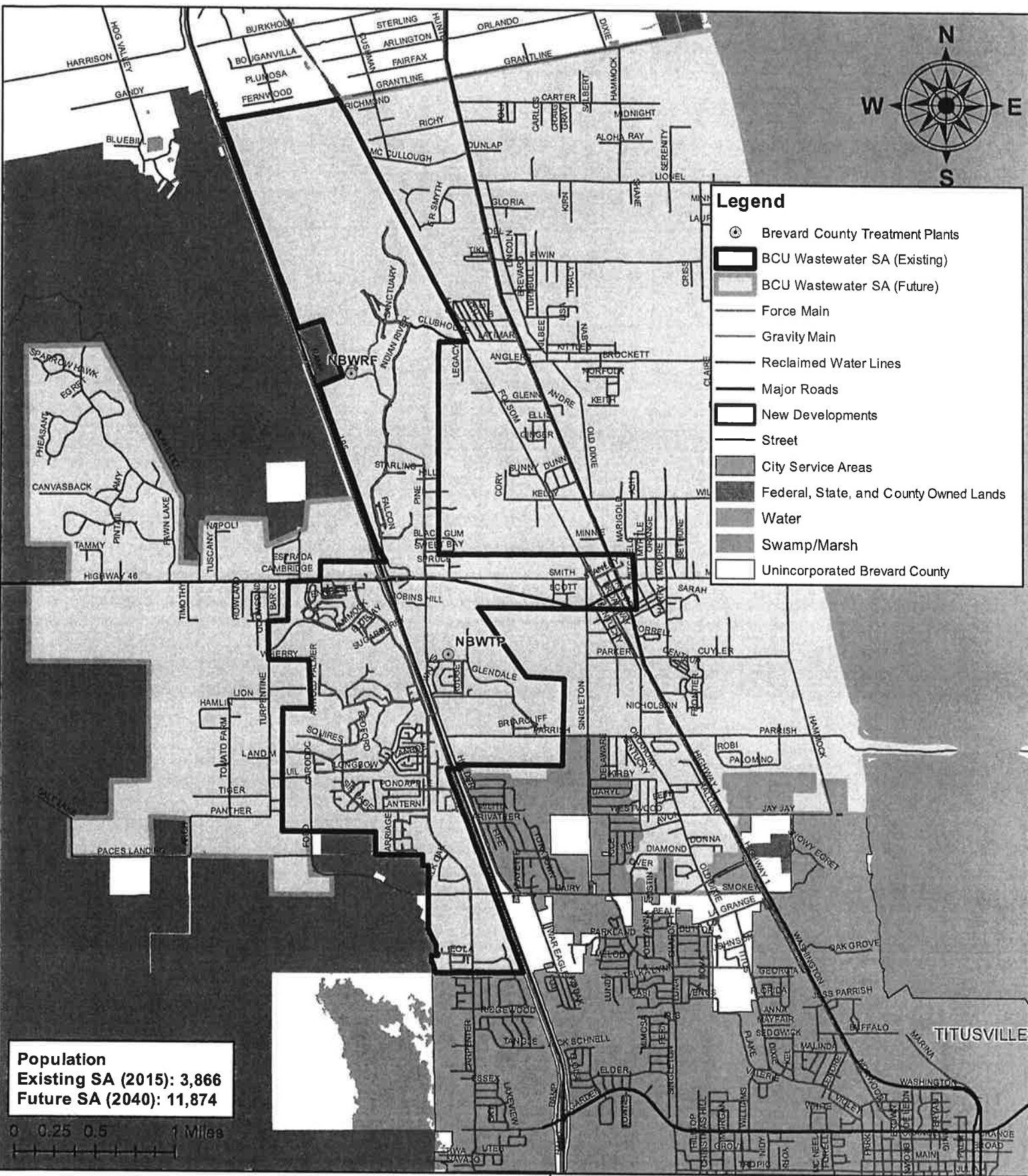
Brevard County, Florida - CIP Projections
Water Service Area: Barefoot Bay



FIGURE
2-2



March 27, 2020
 Data Source: Brevard County
 Utility Services Department, 2020.



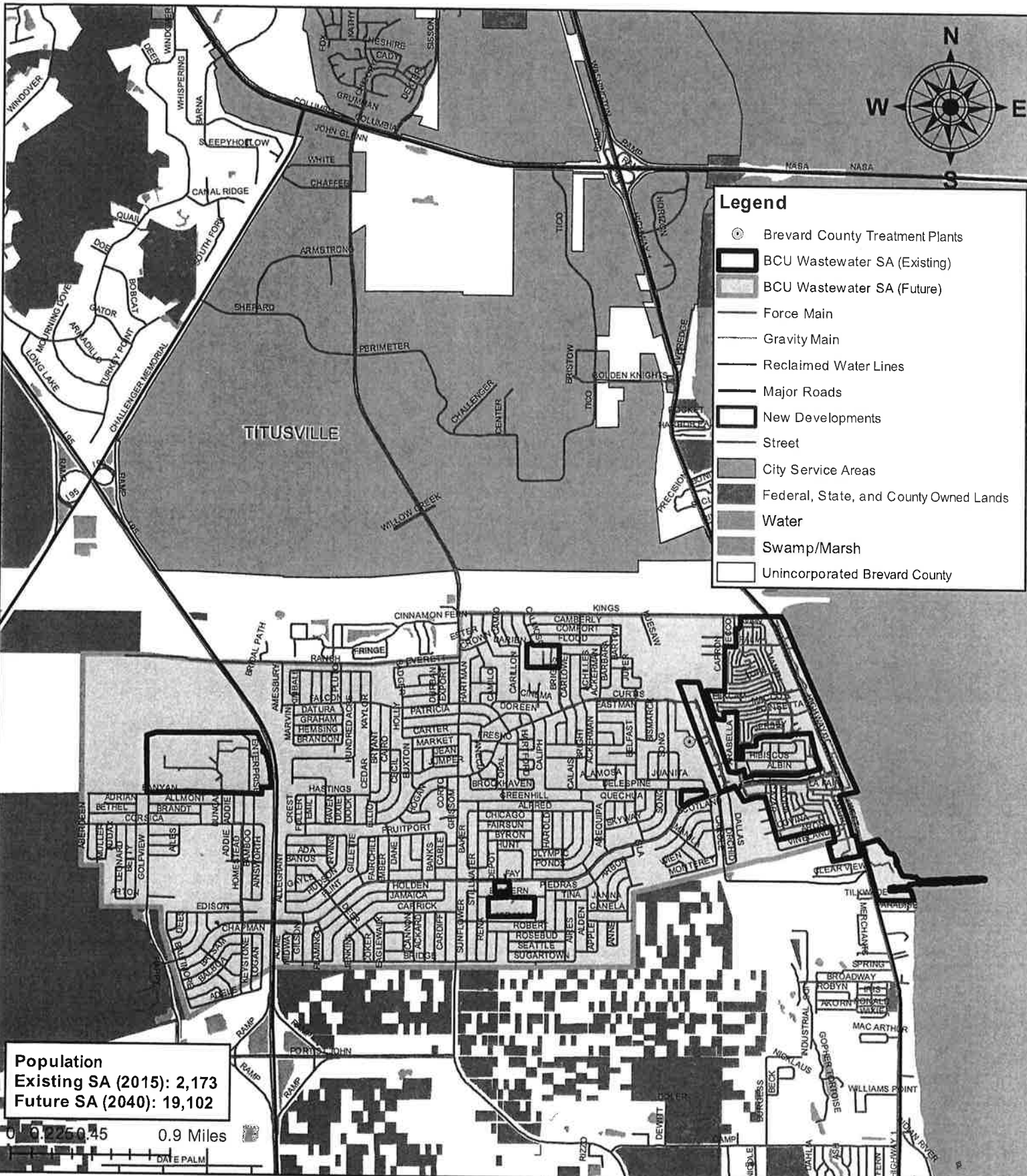
**Brevard County, Florida - CIP Projections
Wastewater Service Area: North Brevard**



May 27, 2020
Data Source: Brevard County
Utility Services Department, 2020.



**FIGURE
2-3**



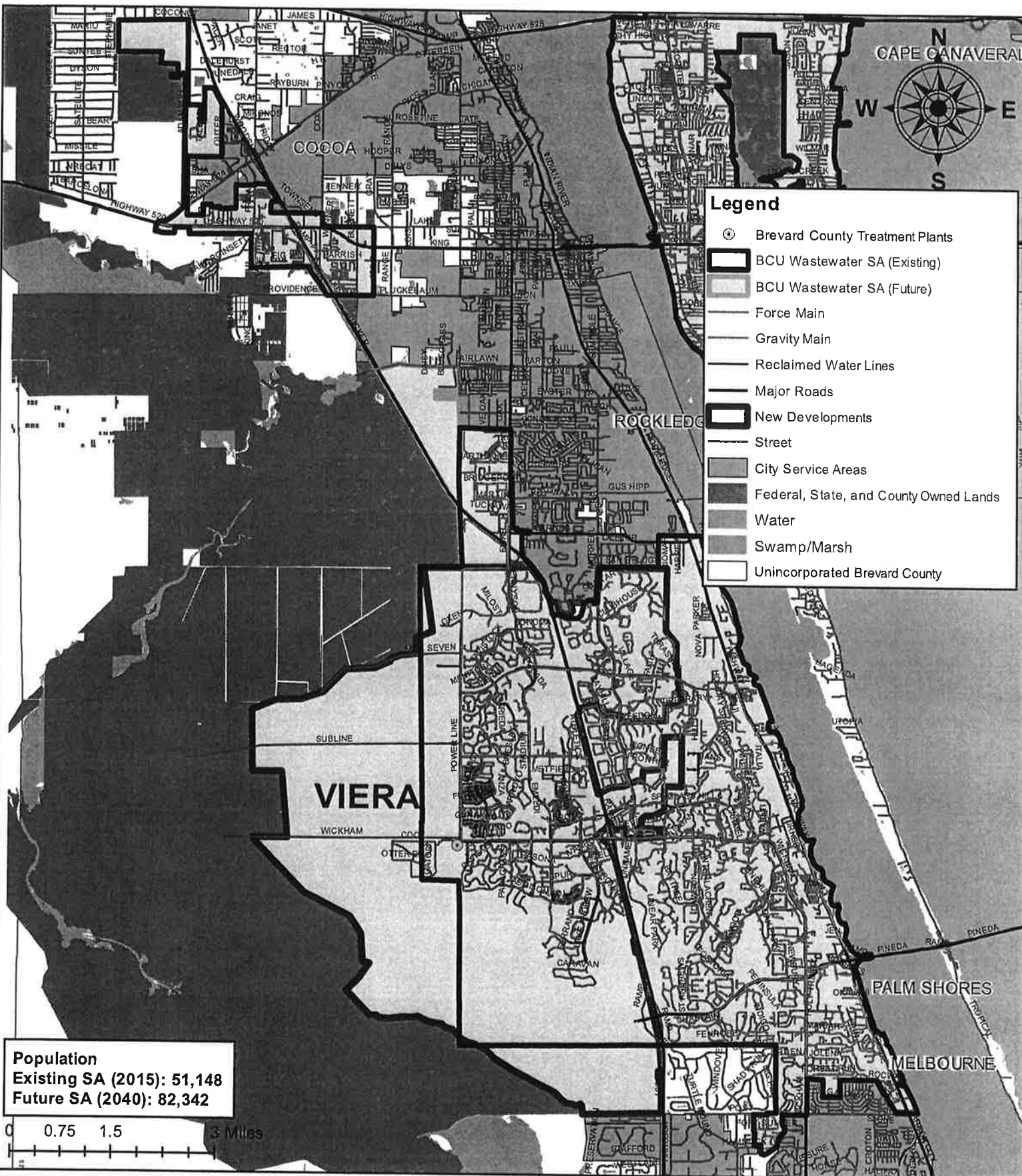
**Brevard County, Florida - CIP Projections
 Wastewater Service Area: Port St. John**



Data Source: Brevard County
 Utility Services Department,
 2020.



**FIGURE
 2-4**



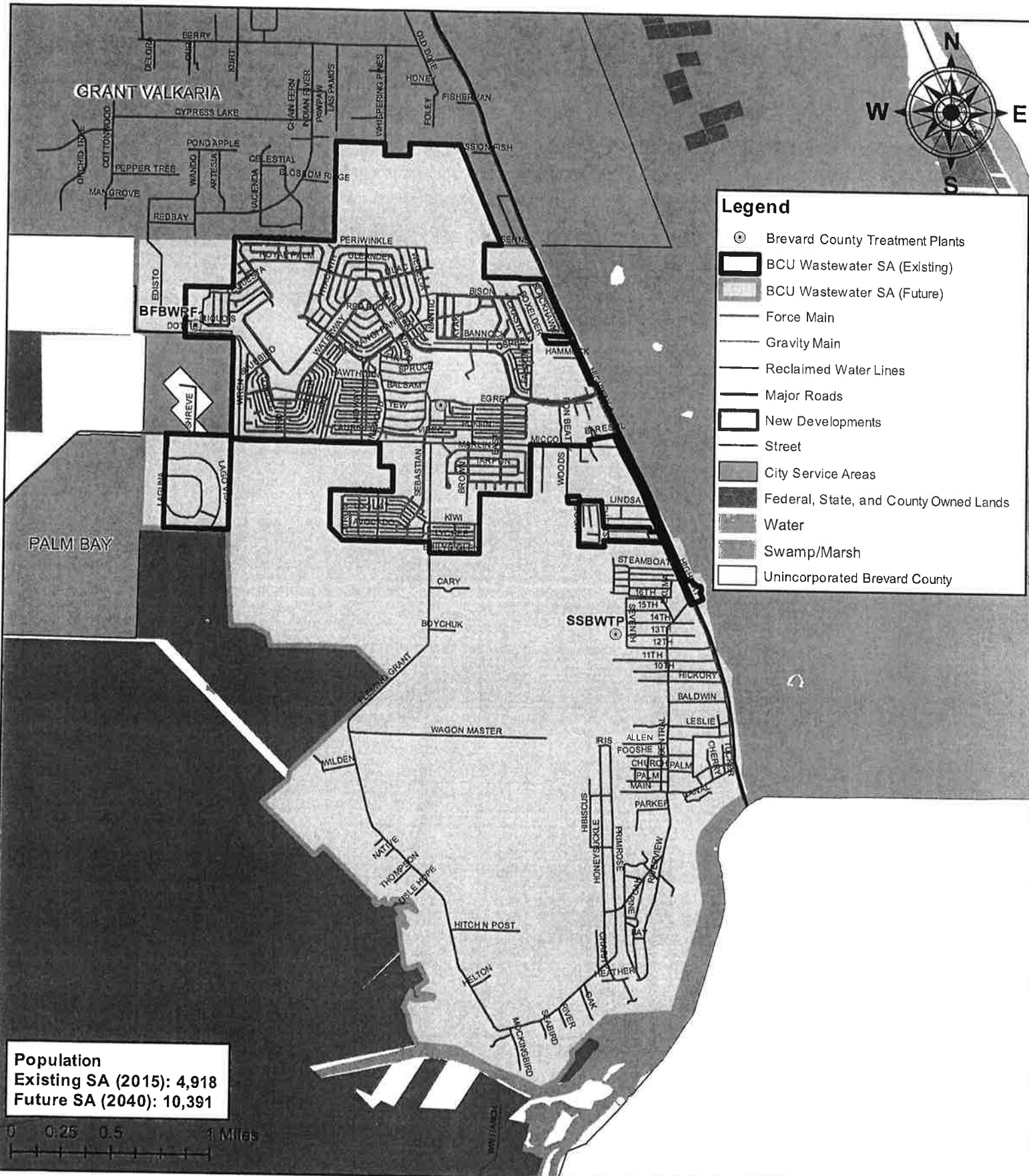
**Brevard County, Florida - CIP Projections
 Wastewater Service Area: South Central**



May 27, 2020
 Data Source: Brevard County
 Utility Services Department, 2020.



**FIGURE
 2-5**



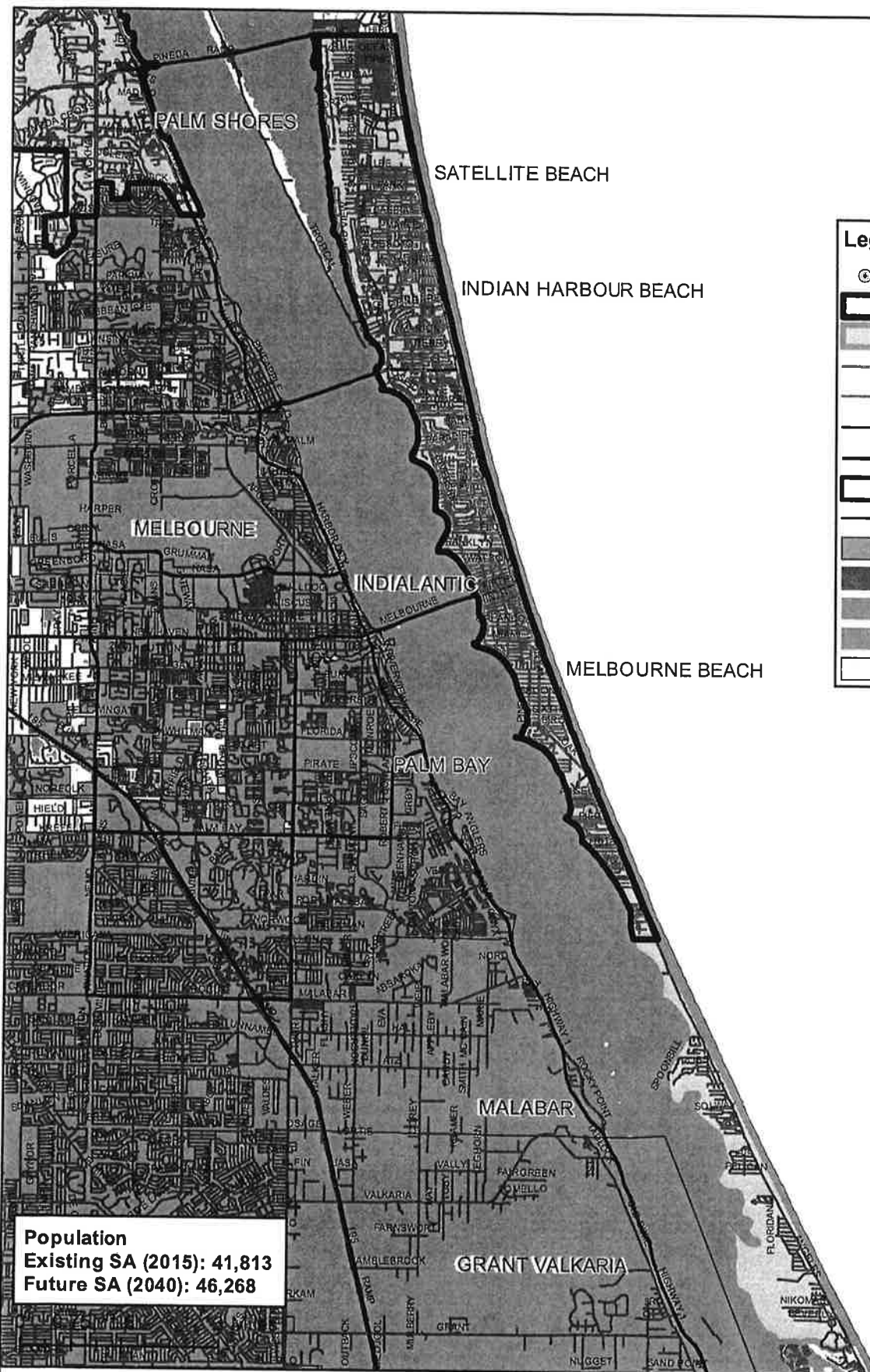
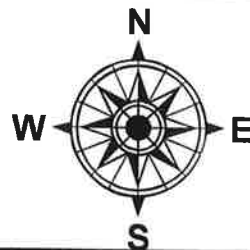
Brevard County, Florida - CIP Projections
Wastewater Service Area: Barefoot Bay



May 27, 2020
 Data Source: Brevard County
 Utility Services Department, 2020.



FIGURE
2-6



Legend

- ⊙ Brevard County Treatment Plants
- ▭ BCU Wastewater SA (Existing)
- ▭ BCU Wastewater SA (Future)
- Force Main
- Gravity Main
- Reclaimed Water Lines
- Major Roads
- ▭ New Developments
- Street
- ▭ City Service Areas
- ▭ Federal, State, and County Owned Lands
- ▭ Water
- ▭ Swamp/Marsh
- ▭ Unincorporated Brevard County

Population
 Existing SA (2015): 41,813
 Future SA (2040): 46,268

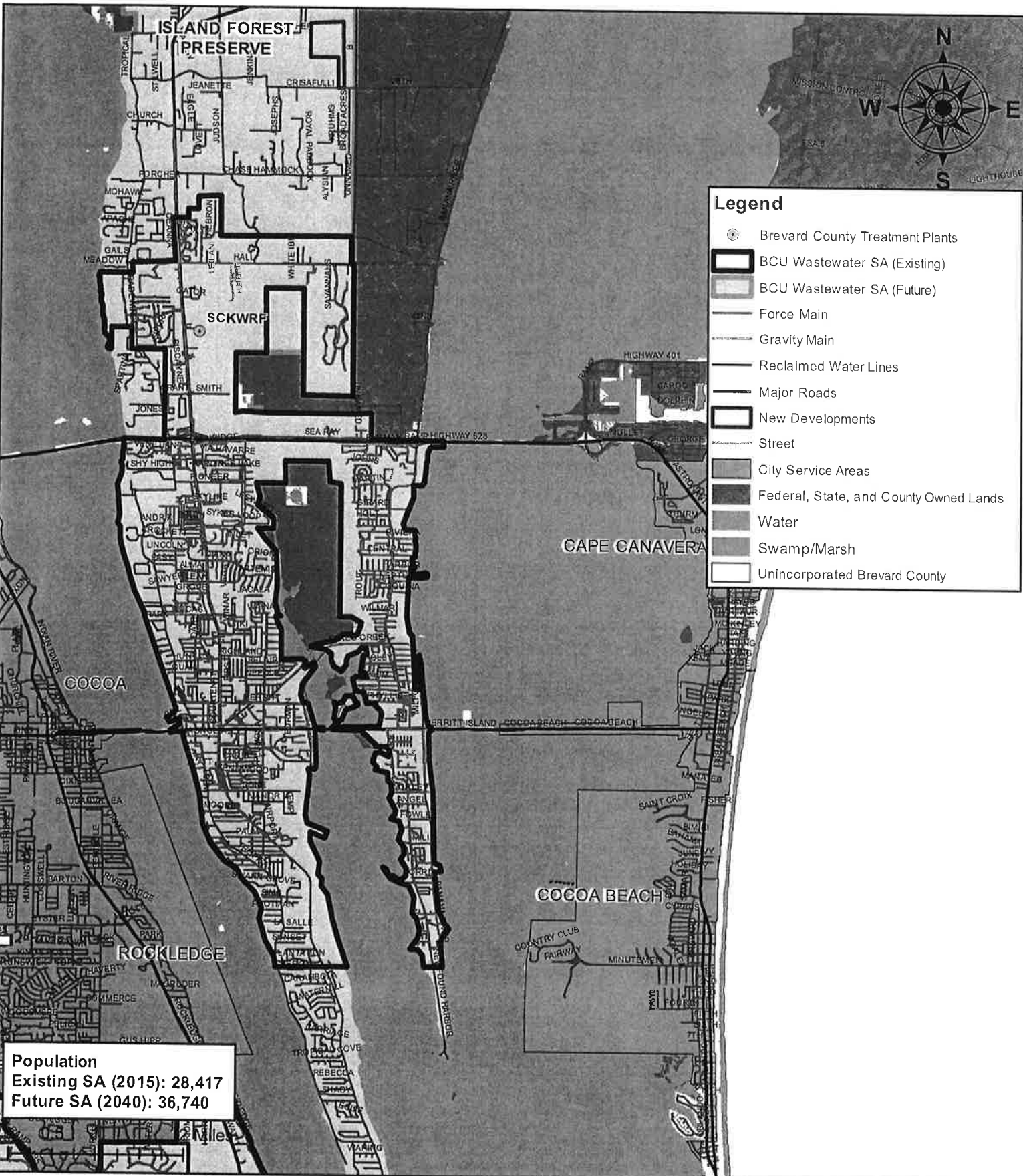
**Brevard County, Florida - CIP Projections
 Wastewater Service Area: South Beaches**



Data Source: Brevard County
 Utility Services Department,
 2020.



**FIGURE
 2-7**



**Brevard County, Florida - CIP Projections
 Wastewater Service Area: Sykes Creek**



May 27, 2020
 Data Source: Brevard County
 Utility Services Department, 2020.



**FIGURE
 2-8**

3.0 EXISTING COUNTY UTILITY INFRASTRUCTURE AND CAPACITIES

3.1 EXISTING WATER TREATMENT INFRASTRUCTURE

3.1.1 Water Supply and Treatment Capacity

Brevard County provides potable drinking water to customers in the North Brevard and Barefoot Bay service areas. Both water treatment facilities obtain their source water from the surficial aquifer via groundwater wells. Treatment at both facilities include lime softening for the removal of calcium and magnesium hardness. Table 3-1 provides the permitted capacity for each facility as authorized by the St. Johns Water Management District via their consumptive use permit (CUP).

WTP	CUP Authorization (MGY / MGD)	Water Source	Number of Wells
North Brevard	383.3 / 1.05	Groundwater from surficial aquifer	10 surficial aquifer wells (3 additional wells are proposed)
Barefoot Bay	291.72 / 0.80	Groundwater from surficial aquifer and Upper Floridan aquifers (UFA)	8 surficial aquifer wells and 2 UFA wells (Backup)

3.1.2 Transmission / Distribution System

According to the County's GIS, the existing potable water distribution system for North Brevard and Barefoot Bay consists of approximately 336,000 feet and 237,000 feet of water main, respectively. Additionally, the community of San Sabastian, located adjacent to Barefoot Bay, contains approximately 16,000 feet of water main. San Sabastian is included in this discussion as it will be included as part of the future service area boundary for Barefoot Bay.

Throughout the potable water service areas identified, the existing water mains are composed mostly of PVC pipe. However, according to GIS, there are piping segments of County owned water mains constructed of ductile iron, and HDPE. A summary of existing pipe materials, diameters, and lengths are provided in Table 3-2.

Table 3-2 Existing Potable Water Mains			
Service Area	Pipe Material	Pipe Diameter (Inches)	Pipe Length (Feet)
North Brevard	PVC	< 4	17,045
		4	5,234
		6	163,134
		8	74,978
		10	10,480
		12	36,444
		16	3,884
		24	2,703
	DIP	6	1,264
		8	671
		10	8,802
		12	11,208
		24	424
Barefoot Bay	PVC	<4	98,553
		4	3,311
		6	74,561
		8	35,866
		10	23,874
		12	547
	HDPE	6	10
		8	336
		10	465
San Sebastian	PVC	4	3,937
		6	3,514
		8	8,461
	HDPE	8	369

3.2 EXISTING WASTEWATER INFRASTRUCTURE

Brevard County collects and treats wastewater in each of its six wastewater service areas. The following tables identify the existing infrastructure for collection, treatment, and effluent disposal of the County's wastewater flows.

3.2.1 Collection System

Service Area	Pipe Material	Pipe Diameter (Inches)	Pipe Length (Feet)
North Brevard	PVC	8 to 10	32,967
	DIP	8	31
	VCP	8 to 10	52,457
Port St John	PVC	6 to 12	17,126
	DIP	8	645
	VCP	6 to 10	39,237
South Central	PVC	6 to 30	1,096,688
	DIP	8 to 30	2,143
	VCP	8 to 21	89,394
Barefoot Bay	PCV	6 to 18	48,769
	VCP	6 to 18	59,015
South Beaches	PVC	6 to 28	161,020
	DIP	8 to 24	7,331
	CIP	6 to 10	1,127
	VCP	6 to 30	733,915
Sykes Creek	ACP	10	77
	CIP	8 to 12	910
	DIP	8 to 12	2,088
	PVC	6 to 12	180,975
	VCP	6 to 15	378,126

Service Area	Number of Lift Stations
North Brevard	16
Port St John	7
South Central	121
Barefoot Bay	16
South Beaches	55
Sykes Creek	77

Service Area	Pipe Material	Pipe Diameter (Inches)	Pipe Length (Feet)
North Brevard	CIP	4 to 6	12,104
	DIP	4 to 12	1,545
	HDPE	4 to 8	1,213
	PVC	4 to 14	55,476
Port St John	DIP	4 to 10	910,809
	HDPE	4 to 6	2,316
	PVC	4 to 10	34,643
South Central	ACP	4 to 6	7,964
	DIP	4 to 30	21,324
	HDPE	4 to 10	12,239
	PVC	4 to 30	403,084
Barefoot Bay	ACP	6	12
	PVC	4	3,137
South Beaches	ACP	8	2,744
	CIP	4 to 30	16,432
	DIP	4 to 30	62,421
	HDPE	4 to 20	7,559
	PVC	4 to 24	107,532

Service Area	Pipe Material	Pipe Diameter (Inches)	Pipe Length (Feet)
Sykes Creek	ACP	4 to 8	17,326
	CIP	6	549
	DIP	4 to 24	34,362
	HDPE	4 to 6	8,755
	PCCP	24	7,638
	PVC	4 to 24	132,180

3.2.2 Wastewater Treatment Facilities

Service Area	Permitted Capacity (MGD, AADF)	Current Influent Flows (MGD, AADF) ²	Remaining Service Capacity (MGD, AADF)
North Brevard	0.99	0.28	0.71
Port St. John	0.50	0.44	0.06
South Central	12.00 ¹	4.40	7.60
Barefoot Bay	0.90	0.79	0.11
South Beaches	8.00	6.63	1.37
Sykes Creek	6.00	3.37	2.63

¹ Recently expanded plant capacity will be permitted to 12 MGD in 2021

² Current influent flow data provided by Brevard County Utilities

3.2.3 Effluent Disposal

Service Area	Disposal
North Brevard	Irrigation of golf course and residential irrigation of Indian River Preserve. Discharge to on-site RIBs during wet weather
Port St. John	RIB & Reuse
South Central	Reuse & Wetland
Barefoot Bay	Spray field of community golf course and 320-acre site spray. Infrequent discharge of Sottile Canal. Future plans to irrigate adjacent sod farm.
South Beaches	Reuse & DIW
Sykes Creek	Reuse & DIW

4.0 FUTURE WATER AND WASTEWATER TREATMENT DEMANDS

4.1 FUTURE WATER DEMAND AND TREATMENT CAPACITY

As per Article IV, Division 1, Section 62-602(d)(3) of Brevard County's municipal code, the County's estimation for the potable water demand by one single-family residential dwelling unit is 250 gallons per equivalent unit per day. One single-family residence equals one Equivalent Dwelling Unit (EDU). For the purposes of this evaluation, it is assumed that each EDU contains 1.8 people.

To determine the future daily water demand for the North Brevard and Barefoot Bay service areas, the estimated 2040 population (from Table 2-1) is divided by 1.8 people per household to obtain the number of EDUs. The EDUs are then multiplied by 250 gallons per day to obtain the overall service area water demand. As shown in Table 4-1, the water demands for each service area are provided and compared to the permitted water treatment plant capacity to determine the additional capacity required. For each potable water service area, an additional demand of 0.25 MGD was added to account for increased future fire flow. According to the rightmost column in Table 4-1, the current capacity of the existing water treatment plants would require treatment expansions to encompass the anticipated 2040 water demands.

Table 4-1 Future Water Treatment Capacity Required

Service Area	Estimated 2040 Population	Estimated EDUs	Estimated 2040 Demand (MGD)	Additional Estimate for Fire Flow (MGD)	Current CUP Permit (MGD)	Additional Treatment Capacity Needed (MGD)
North Brevard	11,302	6,279	1.57	0.25	1.05	0.77 *
Barefoot Bay	10,372	5,762	1.44	0.25	0.80	0.89 *

* For conservative budgeting purposes, the additional treatment capacity will be rounded to 1 MGD.

4.2 FUTURE WASTEWATER DEMAND AND TREATMENT CAPACITY

As per Article IV, Division 1, Section 62-602(d)(2) of Brevard County's municipal code, the County's estimation for the volume of sanitary sewer produced by one single-family residential dwelling unit is 200 gallons per day. Multiplying the future EDUs by 200 gallons per day provides the estimated 2040 annual average daily flows for each wastewater service area shown in Table 4-2. A comparison was further made with the current FDEP permitted capacity to determine if any service area required additional future treatment capacity. As shown in Table 4-2, only three service areas require additional treatment capacity based on the 2040 projections.

Table 4-2 Future Wastewater Treatment Capacity Required

Service Area	Estimated 2040 Population	Estimated EDUs	Estimated 2040 Flow (MGD, AADF)	Current Permitted Capacity (MGD, AADF)	Additional Treatment Capacity Required
North Brevard	11,874	6,597	1.32	0.99	0.33 *
Port St. John	19,102	10,612	2.12	0.50	1.62 *
South Central	82,342	45,746	9.15	12	None
Barefoot Bay	10,391	5,773	1.15	0.90	0.25 *
South Beaches	46,268	25,704	5.14	8.00	None
Sykes Creek	36,740	20,411	4.08	6.00	None

* For conservative budgetary purposes, the treatment capacity will be rounded up to the next quarter MGD.

5.0 ESTIMATED FUTURE INFRASTRUCTURE AND COST

The following section describes the water and wastewater infrastructure and conceptual budgetary cost recommended to provide service to customers within the future boundaries of the water and wastewater service areas. Assumptions made in the development of the costs are as follows:

1. All future water mains and force mains will be installed in greenspace areas within existing right of ways. No cost is included for repaving or resurfacing of roadways.
2. Rehabilitation to existing treatment facilities is not included in this evaluation. No due diligence has been conducted as part of this report to determine improvements of existing facilities. Only new treatment expansion is considered for budgetary purposes.
3. The construction cost of all future gravity sanitary sewers and applicable lift stations will be paid by the developer.
4. A contingency amount of 40% has been applied to each estimate as per recommended guidelines by AACE International Recommended Practice No. 17R-97, Cost Estimate Classification System.

5.1 NORTH BREVARD

5.1.1 Potable Water System

As presented in Table 4-1, with the expected growth in the North Brevard water service area, the additional treatment required and addition to the existing consumptive use permit is approximately 1 MGD. To supplement this volume, it is recommended that the County construct two new RO supply wells.

Based on the future service area boundary, the recommended expansion of the North Brevard potable water distribution system is principally within the area east of I-95, south of Grantline Road, and north of E Main Street. The budgetary conceptual cost for construction of the recommended future water improvements are shown in Table 5-1.

Table 5-1 North Brevard Proposed Water Improvements				
Description	Quantity	Unit of Measure	Constructed Unit Cost	Cost
6" FM	19,477	FT	\$75	\$1,460,775
8" FM	9,600	FT	\$95	\$912,000
Additional WTP Capacity	1,000,000	Gal	\$6 per gallon	\$6,000,000
RO Wells	2	EA	\$2M	\$4,000,000
Construction Subtotal				\$12,373,000
Design (10% of Construction)				\$1,238,000
CEI (8% of Construction)				\$990,000
Contingency (40%)				\$5,841,000
Project Cost				\$20,442,000

5.1.2 Wastewater System

The cost for additional force mains in the east and southwest areas of North Brevard not currently serviced are provided in Table 5-2. A new force main along Old Dixie Highway would function as a trunk line to deliver sanitary sewer from roads running east off of US-1. The budgetary cost estimate additionally includes the addition of 6 new lift stations to accommodate the expansion of the collection system.

Table 5-2 North Brevard Proposed Wastewater Improvements				
Description	Quantity	Unit of Measure	Constructed Unit Cost	Cost
8" FM	61,200	FT	\$95	\$5,816,000
Additional WWTP Capacity	500,000	Gal	\$7	\$3,500,000
New Lift Stations *	6	EA	\$1M	\$6,000,000
Construction Subtotal				\$15,316,000
Design (10% of Construction)				\$1,532,000
CEI (8% of Construction)				\$1,226,000
Contingency (40%)				\$7,230,000
Project Cost				\$25,304,000

* Unit cost includes a conservative assumption for land acquisition.

5.2 PORT ST. JOHN

5.2.1 Wastewater System

Based on the expected growth in population, it is anticipated that the Port St John wastewater service area will require an additional 1.75 MGD of treatment capacity. Since the existing Port St John WWTP is located in the east side of the City, it is recommended that the County consider construction of a new treatment facility in the north western area where future growth is expected. For effluent disposal, it is recommended that the County consider the construction of a deep injection well.

To facilitate the collection system, additional force mains on Curtis Blvd and Gibson Parkway are recommended. In addition, installation of force main on Corsica Blvd (west of I-95) would extend the collection system to the western service area boundary.

The budgetary cost for the proposed wastewater improvements in Port St John are presented in Table 5-3.

Description	Quantity	Unit of Measure	Constructed Unit Cost	Cost
6" FM	4,600	FT	\$75	\$345,000
8" FM	20,000	FT	\$95	\$1,901,000
Additional WWTP Capacity	1,750,000	Gal	\$7	\$12,250,000
New Deep Injection Well	1	EA	\$4M	\$4,000,000
Construction Subtotal				\$18,496,000
Design (10% of Construction)				\$1,850,000
CEI (8% of Construction)				\$1,480,000
Contingency (40%)				\$8,731,000
Project Cost				\$30,557,000

5.3 SYKES CREEK

5.3.1 Wastewater System

New force main in the Sykes Creek service area is recommended on the north and south of the existing wastewater service boundary. The force main would be an extension to the existing force main on Courtney Parkway. In addition, new force main is recommended on Chase Hammock Road to collect wastewater from new developments in the Northeast area. The cost for the proposed improvements are shown in Table 5-4.

Description	Quantity	Unit of Measure	Constructed Unit Cost	Cost
6" FM	16,700	FT	\$75	\$1,253,000
8" FM	20,400	FT	\$95	\$1,938,000
Construction Subtotal				\$3,191,000
Design (10% of Construction)				\$320,000
CEI (8% of Construction)				\$256,000
Contingency (40%)				\$1,507,000
Project Cost				\$5,274,000

5.4 SOUTH CENTRAL

5.4.1 Wastewater System

The South Central service area is the highly built out of all of the County's service areas with future room to expand westward in Viera. The County has proactively expanded the South Central WWTP in preparation for the anticipated future growth in this area. Force main, however, will be required in areas of future development such as the expansion of the Pineda Causeway west of I-95 and an undeveloped area west of Adamson Road in the northwest area. The cost for the proposed force mains is shown in Table 5-5.

Table 5-5 South Central Proposed Wastewater Improvements				
Description	Quantity	Unit of Measure	Constructed Unit Cost	Cost
6" FM	4,000	FT	\$75	\$300,000
8" FM	12,000	FT	\$95	\$1,140,000
New Lift Stations *	3	EA	\$1M	\$3,000,000
New Deep Injection Well	1	EA	\$4M	\$4,000,000
Construction Subtotal				\$8,440,000
Design (10% of Construction)				\$844,000
CEI (8% of Construction)				\$676,000
Contingency (40%)				\$3,984,000
Project Cost				\$13,944,000

* Unit cost includes a conservative assumption for land acquisition.

5.5 SOUTH BEACHES

5.5.1 Wastewater System

To provide wastewater collection service to customers on the south end of the South Beaches service area, an extension of the existing 8-inch force main on A1A is recommended. This extension will allow existing residents and new developments to connect to the existing system. Construction of four new sanitary sewer lift stations have been included for expansion of the collection system. The budgetary cost for this improvement is presented in Table 5-6.

Table 5-6 South Beaches Proposed Wastewater Improvements				
Description	Quantity	Unit of Measure	Constructed Unit Cost	Cost
8" FM	40,000	FT	\$95	\$3,800,000
New Lift Stations *	4	EA	\$1M	\$4,000,000
Construction Subtotal				\$7,800,000
Design (10% of Construction)				\$780,000
CEI (8% of Construction)				\$624,000
Contingency (40%)				\$3,682,000
Project Cost				\$12,886,000

* Unit cost includes a conservative assumption for land acquisition.

5.6 BAREFOOT BAY

5.6.1 Potable Water System

Improvements to the Barefoot Bay potable water service area include the addition of a new 1 MGD water treatment RO facility and two RO water supply wells. In addition, the improvements include the installation of 8-inch PVC water mains to service the San Sebastian area with potable water. Installation of the water mains is proposed on Micco Rd, Fleming Grant Rd, and Wagon Master Trail to provide connection for future developments. The cost for this project is shown in Table 5-7.

Description	Quantity	Unit of Measure	Constructed Unit Cost	Cost
8" WM	28,300	FT	\$95	\$2,689,000
Additional WTP Capacity	1,000,000	Gal	\$6	\$6,000,000
New RO Wells	2	EA	\$2M	\$4,000,000
Construction Subtotal				\$12,689,000
Design (10% of Construction)				\$1,269,000
CEI (8% of Construction)				\$1,016,000
Contingency (40%)				\$5,990,000
Project Cost				\$20,964,000

5.6.2 Wastewater System

Wastewater service for San Sebastian would be treated at the existing Barefoot Bay WWTP which would require an additional treatment capacity of 0.5 MGD based on the expected population in 2040. It is recommended that the County consider the addition of 8" force mains along Fleming Grant Road, Riverview Drive, and Central Avenue for connections to future developments in addition to three new sanitary sewer lift stations. The cost for the addition of the proposed force mains is presented in Table 5-8.

Table 5-8 Barefoot Bay Proposed Wastewater Improvements				
Description	Quantity	Unit of Measure	Constructed Unit Cost	Cost
8" FM	27,500	FT	\$95	\$2,613,000
Additional WTP Capacity	500,000	Gal	\$7	\$3,500,000
New Lift Stations *	3	EA	\$1M	\$3,000,000
Construction Subtotal				\$9,113,000
Design (10% of Construction)				\$912,000
CEI (8% of Construction)				\$730,000
Contingency (40%)				\$4,302,000
Project Cost				\$15,057,000

* Unit cost includes a conservative assumption for land acquisition.



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BREVARD COUNTY UTILITY SERVICE
2725 JUDGE FRAN JAMIESON WAY
BLDG A
MELBOURNE, FL, 32940

STATE OF WISCONSIN COUNTY OF BROWN:
Before the undersigned authority personally appeared said legal clerk, who on oath says that he or she is a Legal Advertising Representative of the FLORIDA TODAY, a daily newspaper published in Brevard County, Florida that the attached copy of advertisement, being a Legal Ad in the matter of

Legal Notices

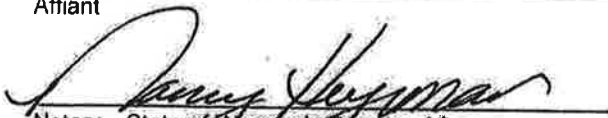
as published in FLORIDA TODAY in the issue(s) dated: or by publication on the newspaper's website, if authorized, on

01/13/2022

Affiant further says that the said FLORIDA TODAY is a newspaper in said Brevard County, Florida and that the said newspaper has heretofore been continuously published in said Brevard County, Florida each day and has been entered as periodicals matter at the post office in MELBOURNE in said Brevard County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that he or she has never paid nor promised any person, firm or coporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

Sworn to and Subscribed before me this 13th of January 2022, by legal clerk who is personally known to me

Affiant


Notary State of Wisconsin County of Brown
5.9.23

My commission expires

Publication Cost: \$185.09

Ad No: 0005056602

Customer No: BRE-6BR291

This is not an invoice

of Affidavits 1

AD#5056602 01/13/2022
NOTICE OF PUBLIC HEARING
NOTICE IS HEREBY GIVEN that the Board of County Commissioners of Brevard County, Florida, on February 8, 2022 at 5:00 p.m., in the Commission Room at 2725 Judge Fran Jamieson Way, Building C, First Floor, Viera, FL, 32940, will hold a public hearing on the following resolution:

RESOLUTION NO. 22-
REGULATION OF THE BOARD OF COUNTY COMMISSIONERS OF BREVARD COUNTY FLORIDA, AMENDING RESOLUTION NO. 13-229 INCREASING THE SCHEDULE OF RATES, FEES AND CHARGES FOR WATER, SEWER AND RECLAIMED WATER, INCLUDING SYSTEMS LOCATED IN THE SOUTH BEACHES, HERRITT ISLAND, NORTH BREVARD, PORT ST. JOHN AND THE SOUTH CENTRAL MAULAND SERVICE AREA; INCREASING WATER RATES FOR THE NORTH BREVARD WATER SYSTEM, INCREASING SEWER RATES FOR ALL OF THE ABOVE; AND PROVIDING FOR INDEXING OF THE RATES PURSUANT TO THE CONSUMER PRICE INDEX SEWER AND WATER MAINTENANCE INDEX (SWMIWI); AND ESTABLISHING AN EFFECTIVE DATE.

All persons for or against said resolution can be heard at said time and place. If a person decides to appeal any decision made by the Board with respect to such hearing or meeting, he will need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is based.

The needs of hearing or visually impaired persons shall be met if the department sponsoring the meeting hearing is contacted at least 48 hours prior to the public meeting hearing by any person wishing assistance. The sponsoring department is Utility Services Department, Telephone Number: (321) 633-2091.

A copy of the resolution may be inspected at the following location: <http://brevardfl.gov/CountyProposedRes> or the Utility Services Department Administration Office
By order of the Board of County Commissioners of Brevard County, Florida

NANCY HEYRMAN
Notary Public
State of Wisconsin

A Daily Publication By:



BREVARD COUNTY UTILITY SERVICE
2725 JUDGE FRAN JAMIESON WAY
BLDG A
MELBOURNE, FL, 32940

STATE OF WISCONSIN COUNTY OF BROWN:
Before the undersigned authority personally appeared said legal clerk, who on oath says that he or she is a Legal Advertising Representative of the FLORIDA TODAY, a daily newspaper published in Brevard County, Florida that the attached copy of advertisement, being a Legal Ad in the matter of

Legal Notices

as published in FLORIDA TODAY in the issue(s) dated: or by publication on the newspaper's website, if authorized, on

01/13/2022

Affiant further says that the said FLORIDA TODAY is a newspaper in said Brevard County, Florida and that the said newspaper has heretofore been continuously published in said Brevard County, Florida each day and has been entered as periodicals matter at the post office in MELBOURNE in said Brevard County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that he or she has never paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

Sworn to and Subscribed before me this 13th of January 2022, by legal clerk who is personally known to me

Affiant

Nancy Heyrman
Notary State of Wisconsin County of Brown
5.15.23

My commission expires

Publication Cost: \$159.96

Ad No: 0005056629

Customer No: BRE-6BR291
This is not an invoice

of Affidavits 1

AD#5056629 01/13/2022
NOTICE OF PUBLIC HEARING
NOTICE IS HEREBY GIVEN that the Board of County Commissioners of Brevard County, Florida, on February 8, 2022 at 5:00 p.m., in the Commission Room at 2725 Judge Fran Jamieson Way, Building C, First Floor, Viera, FL, 32940, will hold a public hearing on the following resolution:

RESOLUTION NO. 22-
RESOLUTION OF THE BOARD OF COUNTY COMMISSIONERS OF BREVARD COUNTY, FLORIDA, AMENDING RESOLUTION NO. 10-249, INCREASING THE SCHEDULE OF RATES, FEES AND CHARGES FOR WATER SERVICE AT THE SAN SEBASTIAN WOODS WATER SYSTEM; PROVIDING FOR INDEXING OF THE RATES PURSUANT TO THE CONSUMER PRICE INDEX SEWER AND WATER MAINTENANCE INDEX (CPI); AND ESTABLISHING AN EFFECTIVE DATE.

All persons for or against said resolution can be heard at said time and place. If a person decides to appeal any decision made by the Board with respect to such hearing or meeting, he will need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is based.

The needs of hearing or visually impaired persons shall be met if the department sponsoring the meeting hearing is contacted at least 48 hours prior to the public meeting hearing by any person wishing assistance. The sponsoring department is Utility Services Department, Telephone Number: (321) 633-2091.

A copy of the resolution may be inspected at the following location:
<http://brevardfl.gov/SSWProposedRates>
or the Utility Services Department Administration Office
By order of the Board of County Commissioners of Brevard County, Florida

NANCY HEYRMAN
Notary Public
State of Wisconsin