RESOLUTION NO. 2025-01

CITY OF POMPANO BEACH
Broward County, Florida

A RESOLUTION OF THE CITY COMMISSION OF THE CITY OF POMPANO BEACH, FLORIDA, APPROVING FORMS OF A CONSULTING ENGINEER'S REPORT AND A FINANCIAL FEASIBILITY REPORT RELATING TO THE CITY'S PROPOSED WATER AND WASTEWATER REVENUE BONDS, SERIES 2024 AND AUTHORIZING MODIFICATIONS THERETO, AS MORE FULLY DESCRIBED HEREIN; PROVIDING AN EFFECTIVE DATE.

BE IT RESOLVED BY THE CITY COMMISSION OF THE CITY OF POMPANO BEACH, FLORIDA:

SECTION 1. FINDINGS.

A. In contemplation of the issuance of the proposed Water and Wastewater Bonds, Series 2024 (the "Series 2024 Bonds") by the City of Pompano Beach, Florida (the "City") pursuant to Ordinance No. 2021-62 enacted by the City Commission of the City (the "City Commission") on June 22, 2021 (the "Master Bond Ordinance") to fund all or a portion of the costs of certain capital improvements related to the City's combined water and wastewater system, the City has requested Carollo Engineers, Inc., as consulting engineers to the City, to prepare a report relating to the System for use in connection with the Series 2024 Bonds (the "Consulting Engineer's Report") and has requested Raftelis Financial Consultants, Inc., as feasibility consultant to the City, to prepare a financial feasibility report relating to the System for use in connection with the Series 2024 Bonds (the "Financial Feasibility Report"). The authorization of the Series 2024 Bonds will be pursuant to a bond ordinance supplementing the Master Bond Ordinance, if approved by the City Commission.

B. The City now desires to approve the Consulting Engineer's Report and the Financial Feasibility Report, each in substantially the form attached as an exhibit hereto.

SECTION 2. APPROVAL OF THE FORMS OF THE CONSULTING ENGINEER'S REPORT AND THE FINANCIAL FEASIBILITY REPORT.

A. The Consulting Engineer's Report, substantially in the form attached hereto as Exhibit A, is hereby approved by the City, with such insertions, modifications and deletions as are approved by the City Manager, upon advice of the City Attorney, Bond Counsel and the Issuer's Municipal Advisor, to reflect additional changes which may be necessary to ensure that the information contained therein is accurate and complete in all material respects. The inclusion in the Preliminary Official Statement relating to the Series 2024 Bonds of the final form of the Consulting Engineer's Report shall constitute conclusive evidence of the approval of such final form of the Consulting Engineer's Report by the City.

B. The Financial Feasibility Report, substantially in the form attached hereto as Exhibit B, is hereby approved by the City, with such insertions, modifications and deletions as are approved by the City Manager, upon advice of the City Attorney, Bond Counsel and the Issuer's Municipal Advisor, to reflect additional which may be necessary to ensure that the information contained therein is accurate and complete in all material respects. The inclusion in the Preliminary Official Statement relating to the Series 2024 Bonds of the final form of the Financial Feasibility Report shall constitute conclusive evidence of the approval of such final form of the Financial Feasibility Report by the City.

[Signature Page Follows]

SECTION 3. This Resolution shall become effective upon passage.

PASSED AND ADOPTED this _____ day of _____, 2024.

REX HARDIN, MAYOR

ATTEST:

KERVIN ALFRED, CITY CLERK

EXHIBIT A

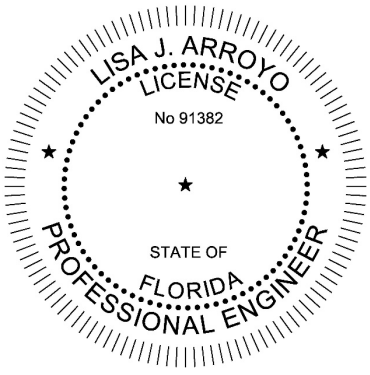
FORM OF CONSULTING ENGINEER'S REPORT

CITY OF POMPANO BEACH

Consulting Engineer's Report for Water and Wastewater Revenue Bonds, Series 2024

APPENDIX E

FINAL / September 2024



This item has been digitally signed and sealed by Lisa Arroyo on the date adjacent to the seal.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Carollo Engineers, Inc.
2728 North University Drive, Bldg. 2700
Coral Springs, Florida 33065
954-837-0030 (Ph)
954-837-0035 (Fax)

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Abbreviations

AADD	average annual daily demand
AADF	annual average daily flow
af	acre-feet
AH	Applicants Handbook for Water Use Permit Applications by SFWMD
AMI	Automated Meter Infrastructure
AWS	alternative water supply
AWWA	American Water Works Association
BC	Broward County, Florida
BCWWS	Broward County Water and Wastewater Service
BMAP	Basin Management Action Plan
C-51 Project	C-51 Reservoir Alternative Water Supply Project
Carollo	Carollo Engineers, Inc.
Census Bureau	The United States Census Bureau
CIP	capital improvement plan or capital improvement program
CIPP	cured-in-place pipe
City	City of Pompano Beach
CMA	Chen More and Associates
CWA	Federal Clean Water Act
DIW	deep injection well
EPA	Environmental Protection Agency
EOC	Emergency Operation Center
FAC	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
FY	fiscal year
House Bill	House Bill 1557
HSP	high service pump
I&I	infiltration and inflow
GIS	Geographic Information System
gpm	gallons per minute
HI	hazard index
HSP	high service pump
Lauderdale-by-the-sea	Town of Lauderdale by the Sea
LCRI	lead and copper rule improvements
LCRR	lead and copper rule revisions
LEC Utilities	Lower Eat Coast Public Supply Utilities
Lighthouse Point	City of Lighthouse Point
LU	large user agreement with Broward County for wastewater treatment

LUA	large user agreement with City of Lighthouse Point for reuse water
MCL	maximum contaminant levels
MCLG	Maximum Contaminant Level Goal
MG	million gallons
mgd	million gallons per day
MMADF	maximum month average daily flow
MMDD	maximum month daily demand
MORs	Monthly Operating Reports
MS4	Municipal Separate Storm Sewer Systems
NF	nanofiltration
NPDES	National Pollutant Discharge Elimination System
NRWWTP	Broward County North Reginal Wastewater Treatment Plant
OASIS	Our Alternative Supply Irrigation System
OOL	Ocean Outfall Legislation
P3	public-private partnership
PBA	Palm Beach Aggregates, LLC
PFAS	per- and polyfluoroalkyl substances
PFOA	perfluorooctanoic acid
PFOS	perfluorooctane sulfonate
PVC	polyvinyl chloride
RLI	Request for Letter of Interest
RO	reverse osmosis
RWA Rule	Regional Water Availability Rule
RWTF	Reuse Water Treatment Facility
SDWA	Federal Safe Drinking Water Act
Series 2024 Bonds	City of Pompano Beach, Florida Utility System Revenue Bonds, Series 2024
SFWMD	South Florida Water Management District
SWIMN	Saline Water Intrusion Monitoring Network
System	Potable Water, Wastewater, and Reuse Water Utility System
TAZ	Traffic Analysis Zone
TMDL	total maximum daily load
USEPA	United States Environmental Protection Agency
WMP	Water Master Plan
WRF	water reclamation facility
WWMP	Wastewater Master Plan
WWTP	wastewater treatment plant
WTF	water treatment facility
WTP	water treatment plant
WUP	water use permit

CHAPTER 1 INTRODUCTION

The City of Pompano Beach, Florida (referred to as City or Pompano Beach) owns and operates a Potable Water, Wastewater, and Reuse Water Utility System (System) that provides water, wastewater, and reuse water services to customers within the City and certain customers outside the boundaries of the City as described in more detail below. The City also provides stormwater services via the City's Utilities Department (Utilities Department); however, it is operated and funded separately from the System and is not considered in this report.

Certain matters reflected herein are not purely historical and are projections or forward-looking statements. All projections and forward-looking statements included herein are based on information available on the date hereof and are based on various assumptions and estimates and are inherently subject to various risks and uncertainties, including risks and uncertainties relating to the possible invalidity of the underlying assumptions and estimates and possible changes or developments in social, economic and regulatory circumstances and conditions and actions taken or omitted to be taken by third parties. Assumptions related to the foregoing involve judgments with respect to, among other things, future economic, competitive, and market conditions and future business decisions, all of which are difficult or impossible to predict accurately and many of which are beyond the control of the City. Actual results could differ materially from those in such projections and forward-looking statements and, therefore, there can be no assurance that the projections and forward-looking statements included herein will prove to be accurate.

1.1 Purpose of Report

The information contained in this report is provided by Carollo Engineers, Inc. (Carollo), to the City for inclusion as an appendix to the Preliminary Official Statement and the Official Statement relating to the City's proposed Water and Wastewater Revenue Bonds, Series 2024 (Series 2024 Bonds). We consent to the inclusion of this report as an appendix to the Preliminary Official Statement and the Official Statement relating to the Series 2024 Bonds and to the references to this report, the information contained therein and our firm in said Preliminary Official Statement and Official Statement.

The Series 2024 Bonds are being issued to obtain funds needed to fund all or a portion of various projects listed in the City's fiscal year (FY) 2025 Capital Improvements Plan (CIP) for the System.

This report contains the following:

- Description of the System that provides services within and, by agreement or other arrangements, outside the City, including facility operations, conditions, components, and ongoing capital improvement projects to increase capacity and upgrade the System.
- Status of permits and other regulatory items for the System.
- Summary of the City's System CIP.

1.2 Overview of Existing System

The City is situated in northeastern Broward County along the Atlantic Ocean, boasting approximately three miles of beachfront extending from State Road A1A and Terra Mar Drive to the Hillsboro Inlet. Encompassing an area from the Atlantic Ocean to Florida's Turnpike and from Sample Road to McNab Road, the City shares borders with several municipalities: the City of Deerfield Beach to the north, Town of Hillsboro Beach and City of Lighthouse Point (Lighthouse Point) to the northeast, Town of Lauderdale-by-the-Sea (Lauderdale-by-the-Sea) to the southeast, City of Fort Lauderdale to the south, and City of Margate and City of North Lauderdale to the west. The City encompasses approximately 25 square miles, of which 1.4 square miles are inland waters.

The City provides essential services including drinking water, wastewater, and reuse services; however, the City does not have a wastewater treatment plant. The City manages a wastewater collection system that pumps directly into the Broward County North Regional Wastewater Treatment Plant (NRWWTP) for treatment, as described in Section 3.3.2.

The City's jurisdictional boundary differs from the System utility service areas as shown in Figure 1.1. Figure 1.1 illustrates the various service areas within the City's boundary. This figure was sourced from the City's public website. See Figures 2.1 (Chapter 2) and 3.1 (Chapter 3) for maps of the City's water service area and wastewater service area, respectively.

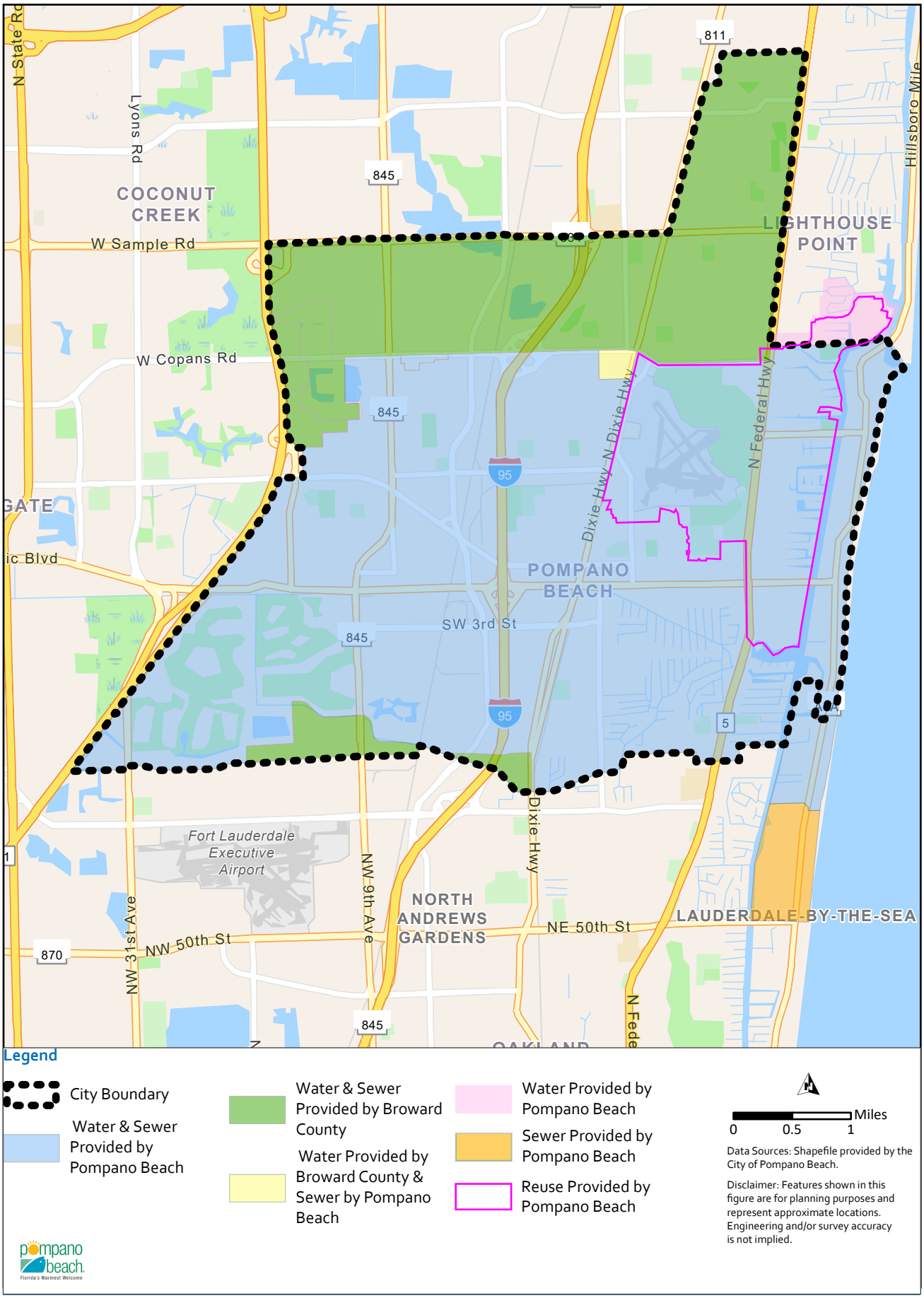


Figure 1.1 Pompano Beach Jurisdictional Area and Utility Service Area

1.2.1 Population Projections

In its Annual Comprehensive Financial Report (ACFR) for FY23 (ending September 30, 2023), the City estimated its population at approximately 113,691 residents. City population has grown by approximately 10,502 people between 2013 and 2023, according to the City's FY2013 and FY2023 ACFRs. City population is projected to grow to more than 137,000 residents by 2040, as documented in the City's Water Master Plan (WMP), updated in 2020 by Carollo (Carollo, 2020). These population assumptions are used in this report, as Carollo does not believe the assumptions have materially changed since 2020.

As illustrated in Figure 1.1 above, the City's jurisdictional boundary differs from its System service areas, and therefore, population projections within the System service areas will also differ from each other and the City's population. Table 1.1 presents the City and System service areas population for FY2023 and provides estimated population projections in 5-year increments by calendar year through 2040. Sources for the population projections are identified in the notes section below Table 1.1.

Table 1.1 Population Projections

Year	City Population Projections(1)	Water Service Area Population Projections(2)	Wastewater Service Area Population Projections(3)
2023	113,691	97,495	94,426
2025	114,701	98,817	94,976
2030	117,989	102,122	100,721
2035	121,190	105,060	102,981
2040	123,480	107,300	105,370

Notes:
(1) City population projections for 2023 are per the FY2023 ACFR. Projected City populations for 2025 through 2040 are per the population projections in the WMP (Carollo, 2020).
(2) Water service area population projections are per the WMP (Carollo, 2020), with 2023 population linearly interpolated using 2020 and 2025 populations from the WMP.
(3) Wastewater service area population projections are adjusted per the wastewater service boundary and consistent with City population projections and the WMP (Carollo, 2020) population projections.

1.2.2 Water Demand and Wastewater Flow Projections

The City updates its water demand and wastewater flow projections on a regular basis. The City updated its WMP in 2020 (Carollo, 2020) and has just started the process to issue a new update in 2025. The Wastewater Master Plan (WWMP) was last updated in 2022 (Chen Moore and Associates [CMA], 2022). As discussed in more detail in Chapter 3, the wastewater flow projections were revised based on updated population projections, to be consistent with City population projections and population projections in the WMP (Carollo, 2020).

The City's water demand and wastewater flow projections in 5-year increments (by calendar year) are provided Table 1.2.

Table 1.2 City of Pompano Beach Water Demand and Wastewater Flow Projections

Year	Projected Water Demand (mgd)(1)		Projected Wastewater Flow (mgd)(2)	
	AADD	MMDD	AADF	MMADF
2025	17.0	19.6	14.8	17.0
2030	18.6	21.4	15.7	18.0
2035	19.1	21.9	16.0	18.4
2040	19.4	22.3	16.4	18.8

Notes:
AADD – average annual daily demand; AADF – annual average daily flow; mgd – million gallons per day; MMADF – maximum month average daily flow; MMDD – maximum month daily demand
(1) Water demand projections from the 2020 Water Master Plan (Carollo, 2020).
(2) Wastewater flow projections based on the City's updated anticipated population growth and flow per person per in the 2022 Wastewater Master Plan (CMA, 2022).

1.3 Climate Impacts

Investigations and evaluations conducted at the national, regional, and local levels have reinforced the need to plan for the predicted impacts of more frequent and severe drought, increases in tidal and storm-related flooding, and rising sea levels. This section summarizes potential impacts due to climate change and more specifically potential impacts due to sea level rise, groundwater elevation, and the 100-year flood plain on the System.

1.3.1 Sea Level Rise Projections for Southeast Florida Region

The Southeast Florida Regional Climate Change Compact (Compact) is a partnership between counties to collaboratively work together to build climate resilience across the Southeast Florida region. The Compact established unified sea level rise projections for the Southeast Florida region in 2011 and has subsequently updated the projections in 2015 and 2019. The 2019 projections estimate short-term sea level rise to be 10 to 17 inches by 2040 and 21 to 54 inches by 2070, as measured from the 2000 mean sea level in Key West, Florida[1].

[1] Southeast Florica Regional Climate Change Compact Sea Level Rise Work Group (Compact). February 2020. A document prepared for the Southeast Florica Regional Climate Change Compact Climate Leadership Committee. Website: 2019 Sea Level Projections | Southeast Florida Climate Compact (southeastfloridaclimatecaompact.org)

1.3.2 Water Supply

The most relevant impact to the City's water supply system is saltwater intrusion into the aquifer and local water supply wells, as documented in the City's Water Supply Facilities Work Plan, updated by Carollo in 2020. The City currently monitors a range of parameters with respect to saltwater intrusion at its wellfields as discussed in Section 2.3.1.

1.3.3 Wastewater System

The WWMP (CMA, 2022) noted that future sea level rise will result in higher groundwater elevations and increase surface flooding. Inflow and infiltration (I/I) into the gravity system is expected to increase, which will increase wastewater flow to the treatment plant and reduce capacity in the wastewater conveyance system. Additionally, sea level rise will result in higher groundwater elevations, thus reducing soil storage capacity. The City is addressing these impacts by implementing gravity pipeline lining projects as discussed in Section 3.2 and as shown in the City's CIP in Chapter 4. Lift stations will be more vulnerable to increased flooding and impact pumping operations. Bottom elevations of lift station control panels must be set at or above the current 100-year flood elevation defined by FEMA, and critical lift stations should have control panels set even higher to prepare for future impacts of sea level rise.

1.4 Regulation of Water and Wastewater Utilities and Permits

Pursuant to Chapter 166 of the Florida Statutes and the City Charter of the City, the City Commission possesses all powers of local self-government to execute City functions and provide services for City purposes, in accordance with applicable law. This authority encompasses the provision of water, wastewater, and reuse water utility services and the acquisition, construction, renovation, equipping and improving of facilities for such services, within, and by agreement or other arrangements, outside of the City's boundaries.

The Florida Legislature enacted the Florida Safe Drinking Water Act, Section 403.850 to 403.864, Florida Statutes, and the Florida Air and Water Pollution Control Act, Section 403.021(2), Florida Statutes, to administer regulatory requirements under the Federal Safe Drinking Water Act (SDWA) and the Federal Clean Water Act (CWA). These regulations govern water and wastewater services to uphold quality standards, providing protection of public health and the environment. Oversight of these policies falls under the jurisdiction of the Florida Department of Environmental Protection (FDEP), which has been granted primacy by the United States Environmental Protection Agency (USEPA) to administer regulatory requirements under the SDWA and CWA.

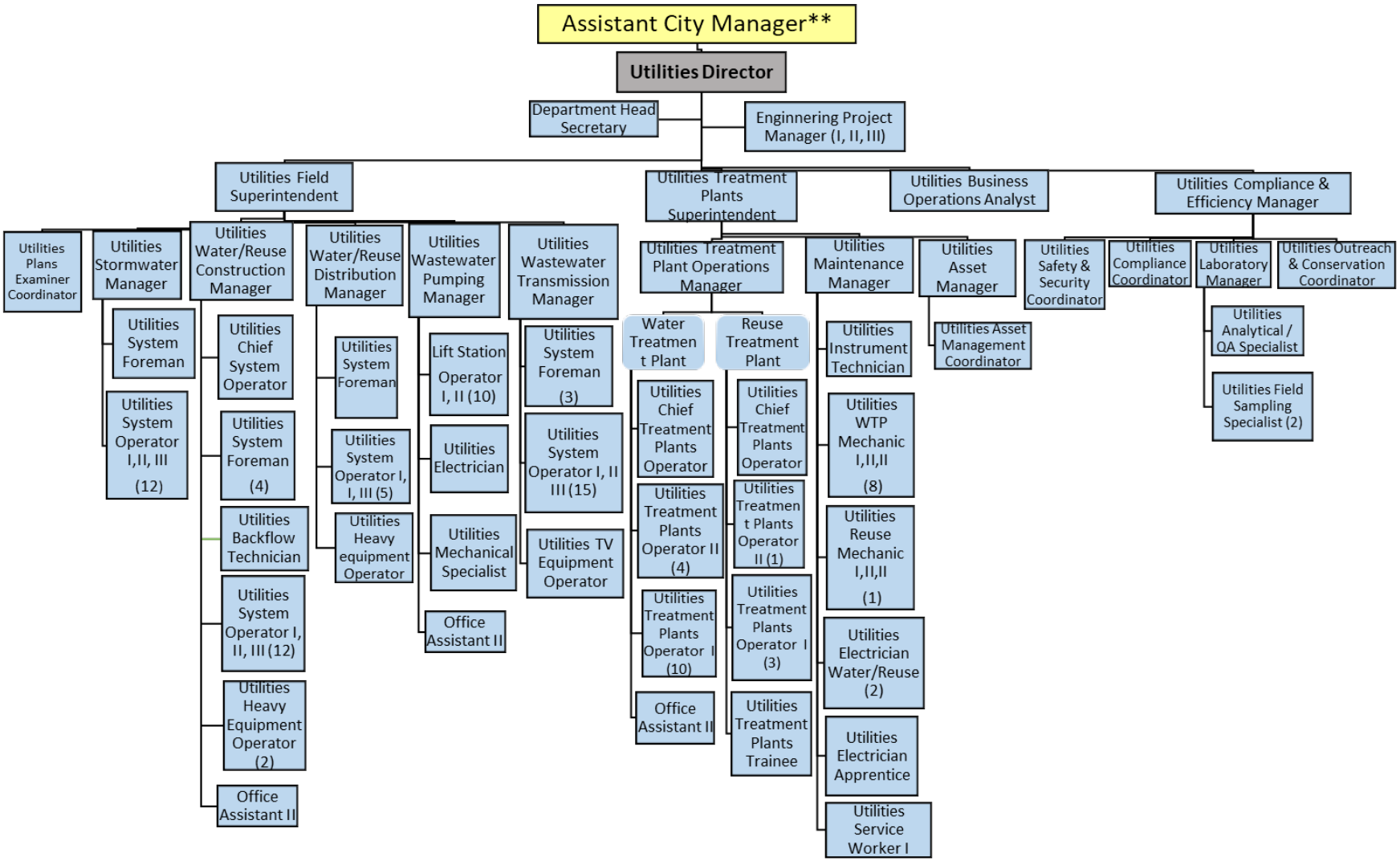
While the City's wastewater undergoes treatment at a regional wastewater treatment plant operated by Broward County Water and Wastewater Services (BCWWS), as described later herein, the City operates a reuse water treatment plant and sells the highly treated effluent water to some of its System customers, as described later herein. Chapter 62-610, Florida Administrative Code (FAC), regulates the operational parameters of the reuse treatment plant, outlining specific usage and land application requirements. Reuse water serves as an alternative water supply for outdoor irrigation, supplementing traditional sources like potable water or groundwater.

Additionally, the City complies with FAC, Chapter 62, concerning the regulation of potable water and wastewater facilities. These facilities are also subject to regulation by the South Florida Water Management District (SFWMD), one of five water management districts in the State of Florida. The SFWMD issues consumptive water use permits (WUPs) for surface and groundwater usage while safeguarding environmental resources, pursuant to Chapter 373, Florida Statutes.

Broward County regulates the Reuse Treatment Plant through Article XI of Chapter 34 of the Broward County Code of Ordinances. Broward County also regulates storage of hazardous materials, including hazardous materials above and below ground, through Chapter 27 its County Code of Ordinances.

1.5 Utility Management and Administration

The organization of the City's Utilities Department includes a Utilities Director, who reports to an Assistant City Manager of the City, and managers who report to the Utilities Director, who have experience in utility management, engineering, financing, and operations. Figure 1.2 shows the current department organization chart. It also contains additional positions that were approved with adoption of the FY2025 budget.



**Position budgeted in the City Manager's Office

Figure 1.2 Utilities Department Organizational Chart

Below are brief biographies of key personnel currently involved in managing the System and the principal responsibilities associated with each organizational function within the Utilities department:

***A. Randolph Brown**, Utilities Director*, holds a Master of Business Administration degree from William Woods University and a Bachelor of Arts degree in Business Administration from Columbia College. Mr. Brown has over 30 years of experience in local government management and leadership, specializing in regulatory compliance and public utilities operations. He has served as Utilities Director for the City since March 2004. He has led the System to multiple recognitions as a "Utility of the Future Today."

> ***Utilities Director's Responsibilities:*** Responsible for managing, coordinating, and directing the operations of the Utilities Department (Water, Wastewater, Stormwater, Reuse), staff and business activities of the System. Develops recommendations to the City Manager regarding policies, programs, budgets, rates, capital improvement, utilities systems expansions, and operations. Makes presentations to organizations, committees, and the City Commission. Participates in the Emergency Operation Center (EOC) during disasters.

***Phil Hyer**, Utilities Treatment Plant Superintendent*, has over 40 years of field maintenance and operations experience, primarily with the City for 39 years. He has served as Utilities Treatment Plant Superintendent for 13 years. Holding licenses for both drinking water and wastewater treatment plant Class "A" operator, and a Lean Six Sigma Green Belt certification, Mr. Hyer oversees all facets of operations, maintenance, safety, and regulatory compliance for the System.

> ***Utilities Treatment Plants Superintendent's Responsibilities:*** Administrative and technical work in the management of the operations of the water and reuse treatment plants. Plans, organizes, and directs the uninterrupted operation of the water treatment and reuse plants. Coordinates and supervises the activities of subordinate workers engaged in the operation and maintenance of the treatment plants. Develops and implements policies and procedures dealing with operational or maintenance matters and safety. Implements new initiatives in treatment processes and facilities improvements. Develops process improvement programs resulting in increased efficiency and effectiveness of the plants' operation workflow. Prepares and monitors the water treatment plant operating budget.

***Nathaniel J. Watson**, Utilities Field Operations Superintendent*, is pursuing a degree in Business Administration from Broward College and a Lean Six Sigma Green Belt certification from Florida Atlantic University. Holding a drinking water treatment plant Class "B" operator license with extensive experience in water, reuse treatment, distribution, wastewater transmission, and stormwater systems, Mr. Watson focuses on compliance, customer service, and operational efficiency. As the Utilities Field Operations Superintendent for the City since August 2022, he oversees the management of operation, maintenance, and construction activities for various utility systems, manages a team of employees and ensures compliance with safety regulations.

> ***Utilities Field Superintendent's Responsibilities:*** Responsible for supervisory work in planning and directing the construction and maintenance activities of water/reuse distribution, stormwater systems, and wastewater systems. Supervises field and shop operations, coordinates fieldwork of water and wastewater sections with other City departments, analyzes current operational processes and performance, recommending solutions for improvement where necessary, implements safety policies, and prepares and monitors the Utilities Department's Field Operations operating budget.

***Lawrence Teich**, Utilities Compliance and Efficiency Manager*, holds degrees in Chemistry and Biology from Florida Atlantic University, along with an MBA in Environmental Business Management. With certifications such as Certified Floodplain Manager and Project Management Professional, Mr. Teich brings over three decades of experience in environmental compliance and management to his role at the City. As Utilities Compliance and Efficiency Manager, he oversees compliance programs and supervises staff responsible for compliance-related functions, ensuring adherence to permits and regulations. Mr. Teich has served as Utilities Compliance and Efficiency Manager for approximately one year.

> **Utilities Compliance and Efficiency Manager's Responsibilities**: Manages compliance programs and functions for the Utilities Department and supervises staff responsible for compliance-related functions (safety, water conservation, efficiency initiatives, grants, reporting, sample collection, and analysis). Manages compliance evaluations and assessment activities support department permits and programs involving utility water plants, distribution and collection systems, stormwater, consumptive use permits for water allocations, efficiency programs, and conservation programs.

***Richard "Rick" Johnson**, Utilities Treatment Plants Operations Manager*, has over 30 years of comprehensive experience in public utilities management. With bachelors degrees in medical technology and biology from Florida Atlantic University, Mr. Johnson holds a Class "A" Drinking Water Treatment Plant Operator license and certifications from various emergency management institutes. In his current role at the City, he oversees the day-to-day operations and maintenance of the multiple water treatment plants and associated facilities, ensuring regulatory compliance and collaborating with stakeholders. Mr. Johnson has served as Utilities Treatment Plants Operations Manager for over 3 years.

> ***Utilities Treatment Plants Operations Manager's Responsibilities:*** Assists in the administrative and technical work in the management of the operation and maintenance of the treatment plants. Plans, repair work at both the water and reuse treatment plants. Directs and supervises the day-to-day operations of the membrane plant, lime softening plant, and reuse treatment plant. Maintains relationships with regulatory agencies and ensures permit compliance with the treatment plants and UIC (underground injection control) program. Manages and schedules personnel overtime, vacation, holiday/personal days, and work assignment schedules.

***Randy Rennekamp**, Utilities Treatment Plants Maintenance Manager*, has over 40 years of experience in industrial instrumentation and process control, maintenance and troubleshooting. He holds an Associates degree in Electronics Engineering Technology, NICET Level II Industrial Instrumentation Certification, ASCET Certified Member, UAW Journeyman Electrician License, as well as in Broward and Palm Beach County a GAQM Lean Six Sigma Green Belt Certification, Wayne State University Change Management Certification and FCC Licensed Radiotelephone Operator. In his role, Mr. Rennekamp oversees electrical, mechanical, instrumentation, and process control equipment at the Water Treatment and Reuse Treatment Facilities in the City, collaborating with Asset Management to develop preventative maintenance programs and coordinating maintenance and repair work with other plant personnel. Mr. Rennekamp has served as the Utilities Treatment Plants Maintenance Manager for almost 5 years.

> ***Utilities Maintenance Manager's Responsibilities**:* Assists in the administrative and technical work in the management of the maintenance of wells and treatment plants. Responsible for supervisory and manual work on the installation, maintenance, and repair of electrical equipment, mechanical equipment, instrumentation, and process control equipment. Works with the Utilities Asset Manager Coordinator and other team members to develop and implement preventative maintenance programs, job plans, scheduling, review, and closeout of work orders.

***Enrique Ochoa**, Utilities Laboratory Manager*, has 15 years of experience in environmental compliance and laboratory management. As Utilities Laboratory Manager, he oversees laboratory operations to ensure compliance with regulatory agencies, accurate water quality compliance reports, and adherence to permits and licenses. Mr. Ochoa has held the position of Utilities Laboratory Manager for over 2 years.

> **Utilities Laboratory Manager's Responsibilities**: Plans, organizes, directs, and participates in work for centralized laboratory operations. Supervises and directs the central sample control program to ensure that regulatory agency guidelines are followed. Maintains a computerized logging system to facilitate ready access to information on sample status, sort all samples requiring particular tests, and facilitate data manipulation in quality assurance procedures and data management. Performs and reviews all phases of chemical, physical, and biological analysis; reviews all daily analysis results; and maintains laboratory instruments and equipment. Maintains National Environmental Laboratory Accreditation Standards (NELAC standards) and Florida Department of Health regulations for compliance.

***Bobby Clayton**, Utilities Wastewater Pumping Manager*, has completed courses in Environmental Science from Florida Gateway College and has over 30 years of experience with the City, with over 14 years in his current role as Utilities Wastewater Pumping Manager. In his role, Mr. Clayton manages an operational budget of $3.9 million and a capital improvement budget of $3.4 million, overseeing the daily operations of 81 lift stations and over 59 miles of pressurized force mains.

> ***Utilities Wastewater Pumping Manager's Responsibilities**:* Technical and supervisory work in planning and coordinating the installation, repair, and maintenance activities of wastewater lift stations and infrastructure. Oversees and manages divisional adherence to established policies, procedures, rules, and regulations. Develops and implements safety programs. Prepares and monitors the annual wastewater budget.

***Steve Almyda**, Utilities Wastewater Collection Manager*, has 32 years of experience in management, field operations maintenance, and supervision. In his role as Wastewater Collection Manager, he oversees all wastewater transmission services, managing a team responsible for inspecting and cleaning the gravity sewer system. Mr. Almyda has served in his current role as Utilities Wastewater Collection Manager for over 15 years.

> ***Utilities Wastewater Collection Manager's Responsibilities**:* Provides day-to-day leadership and works with staff to ensure a high-performance, customer service-oriented work environment. Schedules, coordinates, and supervises the work of crews and underground contractors engaged in the construction, installation, repair, maintenance, inspection, and servicing of wastewater collection systems. Conducts smoke testing to reduce infiltration and inflow (I&I). Provides continuous operation of all sewer system facilities, which includes emergency repairs, 24 hours per day. Responds to emergency situations as necessary. Enforces safety policies and prepares and monitors the annual wastewater budget.

***Aaron Lyons**, Utilities Water/Reuse Construction Manager*, has been with the City for 20 years, of which he has served over 7 years in his current role as Utilities Water/Reuse Construction Manager. In his role, he oversees the efficient operation of water and reuse utilities, manages substantial operational and capital budgets, and ensures regulatory compliance. He holds various certifications and licenses.

> ***Utilities Water/Reuse Construction Manager's Responsibilities**:* Responsible for allocating and scheduling work assignments and supervising and inspecting repair work or new installations of water and reuse distribution equipment. Supervises and inspects the repair of existing and new installation of potable and reuse water mains, service lines, fire hydrants, and water meters. Maintains and operates potable water mains and reuse water mains and appurtenances and constructs water and reuse distribution systems to regulatory requirements of all pertinent State, local law, and City ordinances.

***Elvis S. Turnbull**, Utilities Water/Reuse Distribution Manager*, oversees a team of 10 employees and manages both operational and capital budgets, actively participating in the Lean Six Sigma program to enhance operational efficiencies. Mr. Turnbull has held his current position as Utilities Water/Reuse Distribution Manager for approximately 6 months. He holds various certifications and licenses.

> ***Utilities Water/Reuse Distribution Manager's Responsibilities**:* Responsible for allocating and scheduling work assignments and supervising and inspecting repair work or new installations of water and reuse distribution equipment. Supervises and inspects the repair of existing and new installation of potable and reuse water mains, service lines, fire hydrants, and water meters. Maintains and operates potable water mains and reuse water mains and appurtenances. Oversees the City's Cross Connection Control, valve exercising, and large meter testing and system flushing programs to regulatory requirements of all pertinent State, local law, and City ordinances.

***Erica Powell**, Utilities Asset Manager*, is formally credentialed in computer network systems, holds a bachelor's degree in information technology and a master's degree with a concentration in project management, and is a Certified Lean Six Sigma Green Belt and Lean Practitioner. She has over nine years of experience in asset and preventative maintenance management across various sectors, with over a year in her current position as Utilities Asset Manager. Her expertise lies in information management systems and software development, with a focus on implementing geographic information system (GIS-centric) Asset Management systems.

> ***Utilities Asset Manager's Responsibilities**:* Responsible for providing asset management and computerized maintenance management support for the Utility Department's asset management systems. Manages the database inclusive of planning, analyzing, designing, implementing, and maintaining a multi-system environment. Manages the planning, design, development, and implementation/deployment of the Utility Department's asset management systems, which include the Enterprise Asset Management, GIS-centric Asset Management, associated applications Service Request Management, and Mobile Work Order Management Systems. Directs asset management projects for Water, Reuse, Stormwater, and forthcoming Wastewater Pumping (Lift Stations), Reuse and Water Distribution, Sewer Transmission, and Production wells projects.

***Michael Taylor**, Utilities Stormwater Manager*, holds various certifications and licenses, overseeing water resources for sustainable development and implementing Lean Six Sigma principles to promote environmental stewardship. He has served in his current position as Utilities Stormwater Manager for over 9 years.

> ***Utilities Stormwater Manager's Responsibilities**:* Provides day-to-day leadership and works with staff to ensure a high-performance, customer service-oriented work environment. Schedules, coordinates, and supervises the work of crews and underground contractors engaged in the construction, installation, repair, maintenance, inspection, and servicing of stormwater drainage systems. Responds to emergency situations when necessary. Prepares and oversees division budget and assets to meet compliance requirements. Provides continuous operation of all drainage facilities, which includes emergency repairs, 24 hours per day. Provides excellent internal and external customer service skills. Ensures compliance with the National Pollutant Discharge Elimination System (NPDES) and the Municipal Separate Storm Sewer Systems (MS4) permits. Prepares and monitors the annual stormwater budget.

***Whitney C. Walsh**, Utilities Customer Service Manager*, has 41 years of experience in customer service, specializing in utility billing and supervisory roles, overseeing financial and operational activities, and ensuring timely action on accounts receivables and delinquencies. Ms. Walsh has served in her current position as Utilities Customer Service Manager for over 4 years.

> ***Utilities Customer Service Manager's Responsibilities**:* Manages the office and field activities of the customer service operations by training and monitoring the staff. Forecasts and reviews System revenues. Supplies monthly financial statements and control reports. Reviews accounts receivables and delinquencies and takes appropriate action in a timely manner. Directs the accurate and timely reading of all meters to ensure accurate billing. Supervises the accurate and timely billing of all customers. Resolves customer complaints or inquiries. Projects revenues on water and sewer. Prepares, reviews, and oversees the operating budget for the customer service and Billing division.

CHAPTER 2 WATER SYSTEM

Chapter 2 summarizes the City's existing raw water supplies, treatment facilities, finished water storage, water transmission system, and current regulatory status.

2.1 Water System Overview

As part of the System, the City owns and maintains two wellfields and one water treatment facility (WTF), with two WTPs within the same WTF site. The City also owns and maintains three ground storage tanks and three pump stations (including two located at the WTF site), and approximately 290 miles of transmission and distribution lines. These water system components are described in more detail in subsequent sections.

The City has a WUP for the 25 groundwater wells that supply raw water to the City's treatment plants. WUPs are issued by the SFWMD and regulate water withdrawals from surface and groundwater supplies for a number of uses including public water supply (drinking water).

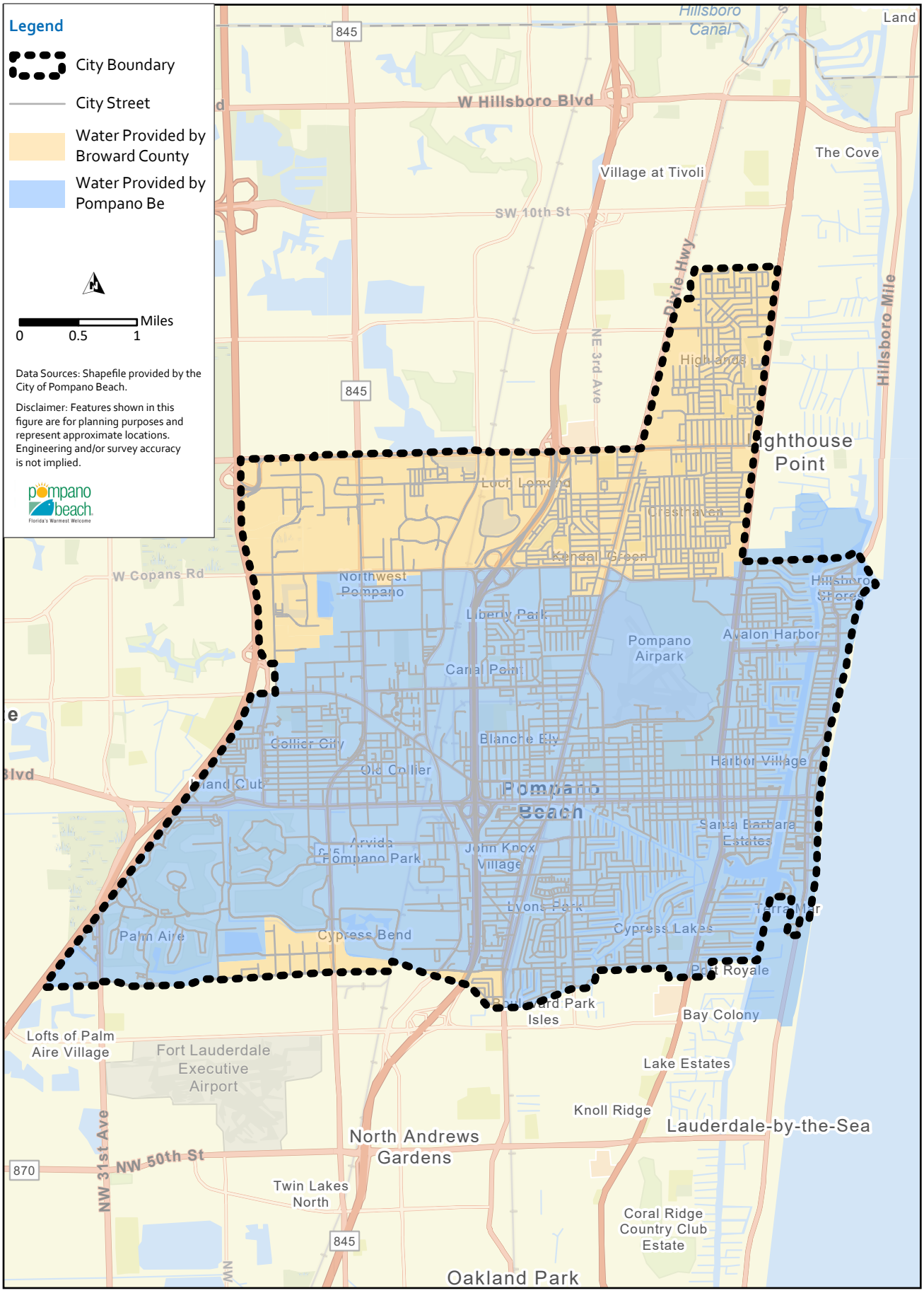
2.2 Water Service Area

The City's jurisdictional boundary differs from its water service area boundary. The City's water service area, which extends over 19 square miles, includes both customers within the City limits and a portion of those in neighboring municipalities (the northern portion of Lauderdale-by-the-Sea and the southern tip of Lighthouse Point). This area spans from the Atlantic Ocean to Florida's Turnpike, and from Copans Road to McNab Road. Areas within the City limits not covered by this service area receive water from BCWWS Districts 1 and 2, as shown in Figure 2.1.

2.2.1 Water Interlocal Agreements

In addition to serving areas within City limits, the City supplies water to areas outside the City limits consisting of parts of Lighthouse Point and Lauderdale-by-the-Sea as follows:

- The City supplies water to customers in a portion of Lighthouse Point, for which the City has been granted a franchise to serve through 2042.
- The City supplies water to customers in a portion of Lauderdale-by-the-Sea that were served by the City while such area was located in unincorporated Broward County and which have continued to be served by the City after such area was annexed into Lauderdale-by-the-Sea around the year 2000. The City has no current plans to expand its water service area. Although the Town of Hillsboro Beach's wellfield and water treatment facility are located in the City limits, they do not serve areas within Pompano Beach.



CITY OF POMPANO BEACH
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Figure 2.1 Pompano Beach Water Service Area

2.3 Water System Components

2.3.1 Raw Water Supply

The City uses the Biscayne Aquifer for its public water supply under WUP No. 06 00070 W. This permit was reissued on December 8, 2020, and will expire on December 27, 2065. It regulates the City's 25 groundwater wells that provide raw water supplies to the City's WTPs as described in more detail below.

The 25 wells are distributed between two Biscayne Aquifer wellfields: the Eastern Wellfield (Airport Wellfield) near the municipal airport and WTF, and the Western Wellfield (Palm Aire Wellfield) near the Palm Aire development. The original wellfields had a 66.5 mgd initial design capacity. The current active capacity is approximately 60.9 mgd.

2.3.1.1 Eastern Wellfield

The Eastern Wellfield is bounded by Dixie Highway, the City's Airport, Copans Road, and Atlantic Boulevard. The Eastern wells supply water to the lime softening WTP.

The wells in the Eastern Wellfield were constructed between 1950 and 1972. There are 15 wells (Nos. 2 through 16) with an initial total design capacity of approximately 36.1 mgd. Well No. 3 has been abandoned due to its proximity to a new injection well. The total design capacity is approximately 34.0 mgd. The City plans to replace Well No. 3 with a new well in the Western Wellfield as part of the CIP.

The withdrawals from the Eastern Wellfield have been volume restricted due to the potential for saline water encroachment at the wellfield. The wellfield has a Saline Water Intrusion Monitoring Network (SWIMN), which focuses on collecting data and reporting on water levels and salinity samples. SWIMN data is reported quarterly to the SFWMD and generally consists of monthly water levels, monthly chloride concentration sample results, and monthly well pumpages. SFWMD uses data collected on the east coast of Florida to evaluate the extent of seawater encroachment into aquifers along the South Florida coastline and map the saltwater interface.

2.3.1.2 Western Wellfield

The Western Wellfield, located just east of Florida's Turnpike with wells both north and south of Atlantic Boulevard, comprises 10 wells (Nos. 17 through 26) with a total design capacity of 30.4 mgd. The wells north of Atlantic Boulevard were built in 1981, while those to the south were built in 2002. These wells supply water to either the lime softening WTP or the nanofiltration (NF) membrane WTP. The wellfield has a SWIMN.

2.3.2 Consumptive Water Use Permit

The City is currently operating under WUP No. 06 00070 W, which was reissued by the SFWMD on December 8, 2020. This permit will expire on December 27, 2065. The City is required to submit routine data to the SFWMD throughout the lifetime of the permit, including items such as pumping and withdrawal quantities, apply for permits prior to construction, repair or abandonment of wells, providing calibration and re-calibration data, etc. The City is also required to submit a compliance report for review and approval by the SFWMD every 10 years.

The WUP allows a total annual allocation of 7,200 million gallons (MG) of groundwater from the Biscayne Aquifer to supply raw water for public water supply. This corresponds to a daily average of approximately 19.7 mgd. The permit has a total maximum monthly allocation of 690 MG.

A permit condition in the WUP limits the City's annual allocation from the Biscayne Aquifer to an annual base condition allocation of 6,711.90 MG (659.69 MG maximum month), which expires on December 8, 2040. Withdrawals from the Biscayne Aquifer are limited to the base condition allocation until the City receives offset water to prevent a net increase in volume or cause a change in timing on a monthly basis of surface and groundwater withdrawn from the Lower East Coast Everglades Waterbodies. The base condition allocation permit requirement has been met through the City's participation in the C-51 Reservoir Project and the City may utilize its total annual allocation of 7,200 MG of groundwater from the Biscayne Aquifer as of December 2023. See 2.3.2.1 below for a discussion on the City's participation in the C-51 Reservoir Project.

Throughout this section, as appropriate, a conversion from the annual allocation in million gallons to a daily average in million gallons per day will be provided in parenthesis as context for the reader; however, the City's water use can fluctuate on a daily basis as long as it stays within the WUP permit requirements, which are generally stated as an annual or monthly maximum volume allocation.

The WUP further restricts withdrawals from the Biscayne Aquifer by wellfield as follows:

- The Eastern Wellfield has a permitted annual allocation of 2,697 MG (approximately 7.4 mgd). Monthly withdrawals are limited to 186 MG during the dry season (November 1 to May 31). From June 1 through October 31 of each year, monthly withdrawals from the Eastern Wellfield cannot exceed 279 MG.
- The Western Wellfield has a permitted annual allocation of 4,015 MG (approximately 11 mgd) and a maximum month allocation of 394.8 MG. The Western Wellfield does not have seasonal withdrawal limitations like the Eastern Wellfield. However, the C-51 Project, discussed in detail below, only applies to withdrawals from the Western Wellfield. Permit conditions have now been met that allow the annual allocation for the Western Wellfield to be increased to 4,503.0 MG annually (approximately 12.34 mgd) and with a maximum monthly allocation of 495.3 MG.

2.3.2.1 C-51 Reservoir Project

In 2007, the SFWMD adopted the Regional Water Availability Rule (RWA Rule) which limits Lower East Coast public supply utilities' (LEC Utilities) withdrawals from the Lower East Coast Regional Water Supply System to 2006 levels to protect the Everglades and other environmentally sensitive water bodies. The RWA Rule required LEC Utilities (of which the System is one) to implement alternative water supply (AWS) sources to meet post 2006 water supply demands.

The C-51 Reservoir Alternative Water Supply Project (C-51 Project) is a public-private partnership (P3) developed by Palm Beach Aggregates, LLC (PBA), public utilities, and water supply authorities. The C-51 Project harvests stormwater that is currently lost to tide from the C-51 drainage canal. The C-51 Reservoir was constructed on PBA property and allows long-term surface water storage to be used to recharge the groundwater system. It is estimated that the C-51 Reservoir could meet future raw water demands for portions of both Palm Beach and Broward Counties for the next 50 years.

When fully implemented, the C-51 Reservoir could store up to 61,000 acre-feet (af) of raw water. The C-51 Project has two phases: Phase 1, the initial phase which is now complete, will hold approximately 16,000 af and supply 35 mgd of raw water to participating utilities. Phase 2 will add an additional 45,000 af of storage and is currently in design.

The C-51 Project is intended for use by participating utilities as an AWS source by offsetting increased wellfield withdrawals. The term "offset" is defined by the SFWMD in the Applicants Handbook for Water Use Permit Applications (AH), June 2022, (Section 3.2.1 E) as water that, "eliminates the projected increase in volume or change in timing of withdrawals from the Waterbodies over the base condition use." Evaluation of the "base condition water use" is provided in the AH and generally includes the maximum quantity of water withdrawn from permitted sources over any consecutive 12-month period during the 5 years preceding April 1, 2006, but "in no case shall exceed the withdrawal permitted to the applicant as of April 1, 2006..."

The first phase of the C-51 Project was completed in December 2023, and the City was one of eight participating utilities. The City's WUP was modified to reflect this AWS source as a means for meeting future demands. The City's base condition water use, per their WUP, was established at approximately 659.7 MG per maximum month and 6,711.9 MG annually (18.4 mgd). The base condition allocation is in effect until the City receives offset water from the C-51 Project.

For the C-51 Project, the City has a capacity allocation of 2 mgd, which is its maximum offset available on an annual basis. The City may withdraw water above its established base condition water use up to the maximum offset from locally available water and from water stored in the C-51 Reservoir until it is fully depleted. On March 20, 2024, the City received notice from the SFWMD that WUP permit conditions have been met for the C-51 Project and it may now start withdrawals from the Western Wellfield above the established base condition water use.

The City's base condition water use allocation will expire on December 8, 2040, unless it is renewed. Between December 8, 2040, and December 27, 2065, without renewal of the base condition water use allocation, withdrawals from the Biscayne Aquifer that are offset from the C-51 Project are limited to an annual allocation of 730 MG (2 mgd) and a maximum monthly allocation of approximately 71.7 MG.

2.3.2.2 WUP Renewal and New Water Demands

The City's base condition water use allocation expires in 2040 and the WUP expires in 2065. At this time, it is expected that the City will seek to retain existing groundwater allocations, and additional allocations to meet future demand will be provided through alternative water supplies (AWS), such as reuse water and potentially using water from the Floridian Aquifer and adding reverse osmosis (RO) treatment as follows:

- The City's five-year CIP, presented in Chapter 4, identifies reuse projects totaling nearly $20 million, including reuse distribution system expansion and ground storage to expand its use of reuse water, thereby reducing potable water use for irrigation.
- The City intends to construct a new NF membrane treatment plant to meet future demand and address emerging contaminants. If other measures such as conservation, offsets such as the C-51 Project, and expanded reuse are not sufficient and additional raw water allocations are needed to meet future demand, the City may need to utilize additional raw water supply from the Floridan Aquifer and pursue RO treatment as part of the emerging contaminants project. See Section 2.6.2 for additional information.

2.3.3 City Water Treatment Facility

The City's WTF is located north of NE 10th Street between NE 3rd Avenue and NE 5th Avenue in Pompano Beach. It features two parallel treatment processes: conventional lime softening and nanofiltration membrane softening. Although the City's WTF has a combined design capacity of 50 mgd, the FDEP permit capacity for the WTF is 30 mgd.

2.3.3.1 Lime Softening Water Treatment Plant

The lime softening WTP receives raw water from both the Eastern and Western Wellfields. A majority of the lime softening treatment basins and piping were constructed in the 1970s or 1980s. Over the years, upgrades to critical systems were constructed to extend the life of the treatment components. With a rated design capacity of 40 mgd, it includes a single sludge thickener basin and vacuum filters for lime sludge thickening.

Raw water enters one of two solids contact softening clarifiers, then moves to multimedia gravity filters. Carbon dioxide is used to lower the pH following softening. The filtered water flows to a blending clearwell for 4-log disinfection with chlorine and ammonia. Depending on demand, the finished water is sent to the distribution system or on-site storage tanks. Sludge produced during the process is hauled offsite for reuse by the golf course. The conventional lime softening method used achieves approximately 97 percent production efficiency.

2.3.3.2 Nanofiltration Membrane Process

The nanofiltration (NF) membrane WTP receives raw water from the Western Wellfield. It has been operational since October 2002, and has a rated design capacity of 10 mgd. It consists of prefilters, membrane units, and degasifier units, with an approximate 80 percent production efficiency. A production yield is the portion of the total raw water supply entering the process that becomes available as finished potable water for consumption. Membrane processes typically have a lower yield than conventional lime softening treatment.

This facility uses a semipermeable barrier to separate high-quality water (permeate) from dissolved and suspended solids (concentrate). The process includes cartridge filtration, nanofiltration, and degasification. The degasified permeate is post-treated with fluoride, chlorine, and ammonia. Caustic is occasionally added if pH levels drop or if the lime plant is offline.

Permeate from the membrane process is discharged to the clearwell and blended with effluent from the lime softening process to produce potable water. The non-hazardous concentrate byproduct is disposed of via a deep injection well at the WTP. Backup disposal is permitted to Broward County (BC) NRWWTP; however, it is limited to two membrane units, or trains, due to pipe size, which would temporarily reduce production to approximately 4 mgd when the backup disposal is used.

2.3.3.3 Treatment Common to Lime and Membrane Softening Processes

All disinfection occurs in a single blending clearwell/contact chamber, which provides 4-log contact time for both treatment plants. The facilities include one transfer clearwell and high service pump clearwell, as well as two 5.0 MG prestressed concrete ground storage tanks. In addition, a corrosion inhibitor is injected into each water stream prior to the clearwell.

2.3.3.4 PFAS

Per- and polyfluoroalkyl substances (PFAS) are a large group of synthetic fluorinated organic chemicals that include perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS). The unique characteristics of PFAS make them exceptional for consumer and industrial products, with thousands of these chemicals registered globally. However, these properties also make them highly soluble, mobile, and recalcitrant to chemical and biological treatment processes employed in drinking water, wastewater, and potable reuse. Accordingly, PFAS have been detected widely in drinking water and the environment.

In April 2024, the USEPA announced a final National Primary Drinking Water Regulation for six PFAS substances with compliance required five years after the rule appears in the Code of the Federal Register. The legally enforceable maximum contaminant levels (MCLs) for six PFAS in drinking water are:

- PFOA and PFOS as individual contaminants at 4 ng/L each.
- PFHxS, PFNA, and HFPO-DA (GenX) as individual contaminants at 10 ng/L.
- PFBS, PFHxS, PFNA, and HFPO-DA (GenX) as a PFAS mixture at a hazard index (HI) limit of 1.0.

The USEPA is also publishing health-based, non-enforceable Maximum Contaminant Level Goals (MCLGs) for these six PFAS. The final rules requires public water systems to:

- Monitor for these PFAS by 2027.
- Notify the public of the levels of these PFAS by 2027.
- Reduce the levels of these PFAS in drinking water if they exceed the standards by 2029.

The City is committed to delivering reliable and sustainable water services that meet the needs of its customers. The City has been proactive in the steps it has taken to address PFAS in its drinking water, including testing System facilities for some of these and other contaminants beyond the required testing to understand what steps need to be taken for current and proposed future regulations.

The City is conducting research to determine the best course of technology for removal of these chemicals, and is taking part in a lawsuit against the manufacturers of these chemicals to assist with offsetting the cost of new treatment facilities to remove PFAS.

The City is planning to both expand its existing NF membrane WTP and to construct a new NF membrane WTP to replace the existing aged conventional lime softening plant. This is the Emerging Contaminants Treatment project listed in the water system five-year CIP (Chapter 4). The City's CIP currently anticipates funding costs of this project as follows: approximately $30 million (to expand the existing NF membrane WTP) with funds from the Series 2024 Bonds, $41.5 million from the proposed future water and wastewater revenue bonds, and the remaining $1.5 million with revenues from rates and/or reserve funds. It shall be noted, however, that SFWMD has recognized but not yet considered in its regional planning efforts[2] the additional water supply that may be needed in the future by utilities due to the planned increase in the use of membrane technologies (due to their lower yield as defined in Section 2.3.3.2) to address PFAS in the future. See Section 2.6.2.

[2] Lower East Coast Water Supply Plan Stakeholder Meeting No. 3, July 12, 2024, South Florida Water Management District. Recording available third week of July from website: Lower East Coast Water Supply Plan | South Florida Water Management District (sfwmd.gov).

2.3.4 Injection Well System

The City utilizes a Class I Injection Well System (IWS) for disposal of brine waste for the nanofiltration process. The IWS at the WTP is permitted for 6.9 mgd (Permit No. 0167214-009-UO/1X). The permit was issued on October 25, 2022, and expires on October 25, 2027. The permit requires the City to demonstrate mechanical integrity of the IWS at least once every five years. The next mechanical integrity test must be completed by February 18, 2025. Alternative (backup) disposal is via the sanitary sewer to the NRWWTP.

It is anticipated that the permit will be reissued through the ordinary permitting process. The City will be required to complete a renewal application identifying historic and projected volume for the next 10-year period, waste stream characterization analysis and processes, monitoring results, and documentation of mechanical integrity tests.

2.3.5 City Water Storage Facilities and Pumping/Booster Stations

The City's WTF has two 5 MG ground storage tanks and two high service pump (HSP) stations with a total of six pumps, providing a firm capacity of 37,500 gallons per minute (gpm) or 54 mgd. Additionally, the City has a remote storage and pumping facility at Indian Mound Park in the southeast part of the distribution system. This site includes a 1 MG ground storage tank and a pump station, with two pumps, used to meet peak hour flow and fire flow requirements.

2.3.6 City Water Distribution System

The City's potable water distribution system consists of approximately 290 miles of transmission and distribution lines, with pipes ranging from 2 to 36 inches in diameter, with 6-inch pipes being the most common. A few hundred feet of 42-inch and 12-inch pipes connect the ground storage tanks to the HSP stations.

Around 22 percent of the network is made of polyvinyl chloride (PVC) or high density polyethylene (HDPE) pipes. A small percentage are asbestos cement pipes. Most of the remaining pipes are assumed to be made of cast iron, ductile iron, or universal metal.

2.4 Water Facilities Site Visits

In May 2024, Carollo Engineers (Carollo) conducted site visits to the City's WTF and the Indian Mound Storage Tank to assess the general condition of the aboveground facilities and identify any potential issues that could prevent the City from meeting permit requirements and capacity expectations. These assessments were limited to areas that could be visually inspected and were not comprehensive evaluations.

Based on the site visits and discussions with City staff, Carollo concludes that the City's water facilities are in comparable condition to other facilities of similar age and are operating as intended. The City's WTF is in good condition, and with the planned upgrades described in the CIP, it is expected to continue operating effectively to meet future demands and requirements.

2.5 Interlocal Agreements For Water System Emergency Interconnections

The City water system is connected to surrounding utility systems via six interconnections to provide potable water to each other on a temporary, as needed basis during emergencies. These connections are not part of the City's normal operations and are not needed to meet peak demand conditions. The six interconnections are as follows:

1. City of Fort Lauderdale: In February 2020, the cities of Pompano Beach and Fort Lauderdale entered into an interlocal agreement to provide potable water to each other during emergencies. There are three interconnections between the City and the City of Fort Lauderdale. These interconnections were initially not metered, so the utilities could not measure or bill for the water exchanged. In 2021, a project was initiated to upgrade these interconnects with new water meters, piping, and check valves to monitor, measure, prevent unintended flow, and enable billing for the water provided.
2. City of Margate: In May 2017, the cities of Pompano Beach and Margate established an interlocal agreement to provide potable water to each other during emergencies. Under this agreement, either city can temporarily supply potable water to the other as needed. There is one interconnect between the City and Margate, it is metered and has a check valve.
3. There are two interconnections established between Broward County and the City to supply each other with potable water during emergencies. Both of these interconnections were established with meters and check valves.

2.6 Historical and Projected Water Demands

2.6.1 Historical Water Demands and Permitted Capacity

Table 2.1 summarizes the historical raw water and finished water demands for calendar years 2019 through 2023, comparing them with the treatment permitted capacity and regulatory water allocation established in the WUP.

Table 2.1 City of Pompano Beach Historical Demand and Permitted Capacity

	Raw Water (mgd)(1)			Finished Water (mgd)(1)		
Year	AADD	MMDD	WUP Total Annual Allocation	AADD	MMDD	WTP Permitted Capacity
2019	15.5	16.8	20.3(2)	14.7	16.1	30.0
2020	15.0	16.6	20.3(2)	14.0	15.5	30.0
2021	15.3	16.6	18.4(3)	14.3	15.9	30.0
2022	15.7	16.5	18.4(3)	14.7	15.4	30.0
2023	15.5	17.1	18.4(3)	14.7	16.0	30.0

Notes:
(1) Calculated from MORs.
(2) Prior WUP total annual allocation.
(3) Current WUP base condition allocation.

Please note that the WUP was reissued by the SFWMD on December 8, 2020; therefore, WUP Total Annual Allocation values in 2019 and 2020 were per the previous WUP. The WUP Total Annual Allocation values for 2021 through 2023 are per the current WUP using the base condition allocation. As noted in Section 2.3.2, the C-51 Reservoir Project was not completed until December 2023, and therefore, there is no offset water included in Table 2.1 for the C-51 Reservoir Project.

2.6.2 Water Demand Projections

This section provides water demand projections, details regarding upcoming changes to water treatment processes to address recent PFAS regulations, and the need to update the WUP based on anticipated changes to the water treatment processes.

The City has recently finalized a Facility Plan by McCafferty Brinson Consulting, H2M and Hellers Electrical Engineering, Inc. (2024). The Facility Plan considers alternatives for water treatment improvements to the City's WTF for compliance with PFAS national primary drinking water regulations in the most cost-effective manner possible. The Facility Plan recommended a phased approach to meet both short- and long-term water demands and compliance with PFAS regulations. The short-term recommendation is to construct a 10 mgd capacity expansion at the City's existing NF membrane WTP. This would bring the NF membrane WTP capacity to 20 mgd and would allow the City to meet short-term water demands. The long-term recommendation is to replace 10 mgd of existing lime softening facility with a new NF membrane WTP and potentially reverse osmosis (RO) facility, depending on raw water availability, to meet longer-term water demands.

This shift in treatment process affects the production yield. As discussed in Section 2.3.3.2 above, membrane treatment processes, including NF, typically have a lower yield than conventional lime softening treatment. The Facility Plan anticipates there will be sufficient raw water allocation in the current WUP to implement the short-term recommendation to expand the existing NF membrane WTP by 10 mgd to approximately 20 mgd. However, implementation of the long-term recommendation, to replace the Lime Softening WTP with a new 10 mgd NF membrane WTP and possible RO treatment facility (as discussed in Section 2.3.2.2), will require a WUP modification to meet raw water supply needs due to lowering the production yield. The City plans pursue a modification of the WUP for additional raw water allocations from the Biscayne Aquifer and/or other AWS options such as additional offsets from the C-51 Project and expanding reuse water service area. If successful, the City may be able to avoid building the RO treatment facility. If the AWS option and additional allocations are insufficient, the City will need to utilize additional raw water supply from the Floridan Aquifer and RO treatment would be needed for the brackish water supplied. The Emerging Contaminants Treatment project, identified in the Water System five-year CIP (Chapter 4), is the project that will implement the Facility Plan short-term and long-term improvements.

Table 2.2 summarizes the latest water demand projections used in the renewal of the WUP (Carollo, 2021) and are consistent with the 2020 WMP updates. Table 2.2 shows the annual average and maximum monthly demands in 5-year increments (by calendar year). The existing WUP and WTP have sufficient capacity to meet the City's demand projections through 2040, based on current treatment processes. However, when the City implements the Facility Plan's long-term recommendation and replaces its conventional lime softening process with a new 10 mgd NF membrane WTP and potential RO treatment facility, and as the City continues to experience population growth, the WUP will need to be modified to address both growth and lower treatment yields due to changes in its water treatment process. As noted above, a WUP modification is required prior to the long-term improvements being implemented and the WUP base allocation will need to be renewed as it expires on December 8, 2040.

Table 2.2 City of Pompano Beach Water Demand Projections

Year	Projected Water Demand (mgd)(1)		WUP Allocations (converted to mgd)(2)		Treatment Capacity (mgd)
	AADD	MMDD	AADD	MMDD	
2025	17.0	19.6	19.7	22.3	50.0
2030	18.6	21.4	19.7(4)	22.3(4)	30.0(3)
2035	19.1	21.9	19.7(4)	22.3(4)	30.0(3)
2040	19.4	22.3	19.7(4)	22.3(4)	30.0(3)

Notes:
(1) Water demand projections from the 2020 WUP Renewal (Carollo, 2021).
(2) WUP Allocations are annual or maximum monthly (assuming 31 days in month) million gallons converted to mgd. The allocations include offset water as described in Section 2.3.2 and assumes the base condition allocations will be renewed.
(3) Treatment capacity includes planned short-term improvements consisting of 10mgd expansion of existing NF membrane WTP and long-term improvements consisting of a new 10 mgd NF/RO facility per recommendations in the Emerging Contaminants Water Treatment Plant Upgrades Facility Plan (MCCafferty Brinson, H2M, Hillers Electrical Engineering, Inc., 2024). The Lime Softening Plant will be demolished as part of the long-term improvements.
(4) Assumes the City receives an increase the WUP allocation to account for growth and lower treatment yields due to changes in its water treatment process in time for the long-term improvements to be implemented by 2030.

Table 2.2 assumes that the City seeks and receives the required WUP modification in time for that modification to permit the long-term improvements to be implemented by calendar year 2030, although there is no assurance that this will be accomplished as anticipated. Additionally, the SFWMD acknowledged at the July 12, 2024 Lower East Coast Water Supply Plan Update meeting that no consideration has yet been given to PFAS, but that it understands the need (with respect to increased WUP quantities due to changing treatment processes that lower production yield to address PFAS) and will be working with utilities to address this need in future planning and permitting activities.

The water demand projections in Table 2.2 are from the 2020 WUP Renewal (Carollo, 2021). Water service area populations shown Table 1.1 (Chapter 1), were multiplied by the City's Level of Service standard of 161 gallons of finished water per capita per day (gpcd). A large user demand, which is unrelated to population and based on the City's existing and planned non-residential or mixed-use developments that use large volumes of bulk potable water from a single water meter, was also calculated. These two components were added together to make up the City's AADD projection. A peaking factor was applied to calculate MMDD.

2.7 Water Regulatory Compliance and Permits

In 1974, Congress enacted the SDWA, mandating the USEPA to set minimum drinking water standards. These standards are categorized into primary regulations (necessary for public health) and secondary regulations (recommended for aesthetic qualities). Florida has adopted the secondary regulations as enforceable standards. The FDEP primarily regulates public water systems in Florida under Chapter 403, Part IV, Florida Statutes, and through the federal program delegated by the USEPA. FDEP has established rules within FAC Chapter 62 for regulating public water supplies, and the water utility system complies with these rules.

As required by the SDWA, the City publishes and distributes an annual Consumer Confidence Water Quality Report detailing the Utility System's adherence to USEPA's water quality standards. The City regularly allocates funds for the annual renewal and replacement improvements to its public water system facilities.

In 2019, the City detected the presence of Total Coliform at one location in the water distribution system. City staff reported the incident to FDEP. Total Coliform was detected over the course of approximately one week at this one location.

On November 30, 2023, the USEPA proposed improvements to the lead and copper rule revisions (LCRR) implemented in 2021. The lead and copper rule improvements (LCRI) relaxed many of the deadlines previously proposed in the LCRR and clarified ambiguities in the existing rule. Comments to the updated LCRI were due February 5, 2024, and rule finalization is anticipated by October 2024. The proposed rule may impact utility budgets, staffing, or the need for consultant assistance. The City has confirmed, by the date of construction or visual confirmation (via excavation), that there are no lead lines in its system. The initial inventory has been completed and will be submitted in October in a timely manner under the current LCRR rule.

Homes that have galvanized service lines and cannot be historically verified that there was never lead on the public side may need to have the galvanized services lines replaced within ten (10) years. The replacement costs on the private property will be the homeowner's responsibility. The City has a project in its 5-year CIP (Galvanized Service Line Improvements) to enhance key aspects of the USEPA's Lead and Copper Rule with a focus on transparency to inform the public. The City may incur indeterminate costs in complying with the rule. The City cannot guarantee that such rule will be finalized in its current form. However, the City does not expect the implementation of the new LCRI to materially impact the ability to pay debt service on the Series 2024 Bonds.

As noted above, on April 10, 2024, the USEPA released the national primary drinking water regulation for six PFAS substances (PFAS). The City's water sampling program has identified PFAS in its raw water supply that exceeds the MCLs for the regulated PFAS constituents. As noted above, the City has recently finalized a Facility Plan to construct improvements that will enable it to comply with the new PFAS national primary drinking water regulations in the most cost-effective manner possible. The City plans to seek an increase to its permitted WUP consumption to provide additional raw water for its WTF expansion, which is anticipated to coincide with implementation of the long-term improvements. See Section 2.6.2.

To Carollo's knowledge, the City fully complies with all federal and state water service regulations. The City operates its wellfields and water treatment facilities in accordance with permits issued by regulatory agencies and maintains an active WUP for all its wellfields.

CHAPTER 3 WASTEWATER AND REUSE WATER SYSTEMS

This section summarizes the City's wastewater system components, wastewater flow projections, reuse water system components, and current regulatory status.

3.1 Wastewater System Overview

The City's wastewater system includes collection and transmission pipelines, lift stations, and a reuse facility. The City does not own a wastewater treatment facility. All wastewater is collected and pumped to the BCWWS NRWWTP for treatment and disposal in accordance with the LU between BC and the City described below. The NRWWTP is located at 2555 West Copans Road within the City limits.

The City-owned collection and transmission facilities include 82 wastewater lift stations and approximately 259 miles of collection gravity pipelines and force mains. The reuse water facilities include a 7.5 mgd reuse plant and approximately 37 miles of reuse water main pipe, distribution pumps, and 5.5 MG of ground storage. These system components are described in more detail in subsequent sections.

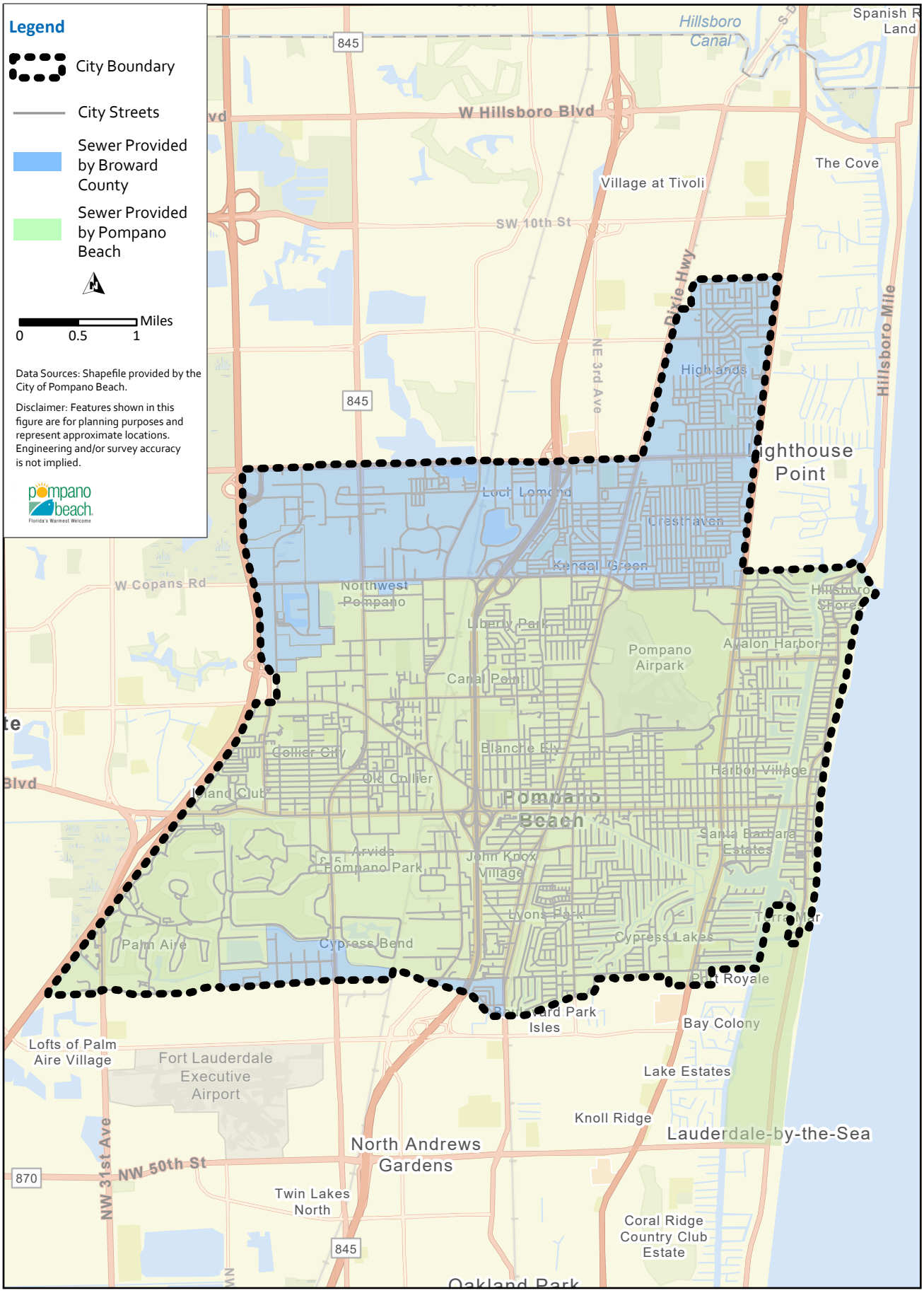
3.2 Wastewater Service Area

The City's wastewater service area differs from both its jurisdictional and its potable water service area boundaries. The wastewater service area generally spans from the Atlantic Ocean to Florida's Turnpike, and from Copans Road to McNab Road, as shown in Figure 3.1.

The City's wastewater service area covers approximately 73 percent (by land area) within the City's 25 square mile city limits. BCWWS provides wastewater collection service to the remaining 27 percent. The City's wastewater service area also includes, by agreement, customers in a portion of the Town of Lauderdale-by-the-Sea.

The City's wastewater system service area is predominately sewered with only a few pockets of non-sewered areas that are not connected to the public sewer system and instead use septic tanks. The areas are described as Unsewered Areas A, B, C, and E and are summarized as follows:

- **Unsewered Area C** is in the process of installing a new wastewater infrastructure system that can provide sewer service to parcels currently not connected to the City's wastewater system. Estimated flow projections for Unsewered Area C are included in the wastewater flow projections.
- **Unsewered Area B** has a planned redevelopment project that includes implementation of new wastewater infrastructure. Unsewered Area B is estimated to add an estimated 0.024 mgd to the sewer system once implemented. Estimated flow projections for Unsewered Area B are included in the wastewater flow projections.
- **Unsewered Areas A and E** do not currently have plans to install new wastewater infrastructure and/or to connect to the City's wastewater system. Unsewered Area A is approximately 3 acres in size with two active parcels and E is 4 acres in size, also with two parcels. Unsewered Areas A and E are estimated to add a minimal amount of sewer to the system if implemented.



CITY OF POMPANO BEACH
CONSULTING ENGINEER'S REPORT FOR WATER AND WASTEWATER REVENUE BONDS, SERIES 2024

Figure 3.1 Pompano Beach Wastewater Service Area

3.3 Wastewater System Components

3.3.1 Wastewater Collection System

The City's wastewater collection system includes collection, pumping, and transmission facilities. According to the City of Pompano Beach GIS database, the wastewater service area contains about 59 miles of force mains and approximately 200 miles of gravity pipelines, both ranging from 2 to 42 inches in diameter, along with 82 wastewater lift stations. The primary backbone force main connects directly to the City's lift stations and discharges at the NRWWTP. Additionally, there are cascading force mains that discharge from smaller lift stations into the gravity sewer for another lift station, which then repumps into the primary backbone force main.

Carollo conducted site visits to three representative wastewater lift stations in May 2024 to assess the general condition of aboveground infrastructure and to identify any circumstances that may inhibit the City from meeting permit requirements and capacity expectations. The condition assessment was limited to areas where the site could be visually inspected. Based on the site visits and discussions with City staff, Carollo believes that, overall, the wastewater system is in relatively good condition. The facilities are in comparable condition to facilities of similar age and are operating as intended.

3.3.2 Wastewater Treatment

All wastewater is collected and transferred to the BCWWS NRWWTP for treatment and disposal.

The City is part of Broward County's (BC) Large User (LU) Wastewater Agreement, currently along with 10 other users. BC's NRWWTP has been recently expanded to a permitted treatment capacity of 95 mgd, of which 87.015 has been reserved by BC and other municipalities. The City's reserved annual average treatment capacity is 17.0 mgd, which is approximately 17.9 percent of the current NRWWTP capacity.

Table 3.1 presents historical AADF and MMADF in mgd from calendar year 2019 through calendar year 2023.

Table 3.1 Historical Wastewater Flows

Year	Annual Average Daily Flow (mgd)	Maximum Month Average Daily Flow (mgd)
2019(1)	14.6	16.2
2020(1)	15.6	16.1
2021(2)	13.9	20.7
2022(2)	13.5	16.0
2023(2)	14.8	16.8

Notes:
(1) Data from 2022 Wastewater Master Plan (CMA, 2022).
(2) Data provided by City in gallons per month and converted to AADF and MMADF.

BC sets the rates for large users under the LU with annual adjustments that account for current costs for treatment and disposal of the wastewater. BC LU rates had been relatively stable with minimal increases over the years until substantial increases commenced in FY2019. BC substantially increased rates due to issuing bonds to perform required upgrades to comply with the Ocean Outfall Legislation (OOL) by 2025, and to construct a large expansion to the reuse facility and reuse distribution system.

3.4 Summary of Wastewater Flow Projections

A summary of wastewater flow projections for calendar years 2025 through 2040 in 5-year increments is provided in Table 3.2. The AADF flow projections were calculated based on wastewater service area population projection estimates presented in Table 1.1 (Chapter 1) and the average flow per person of 155.4 gallon per capita per day as documented in the City's 2022 wastewater master plan (CMA, 2022). The MMADF was calculated using a 1.15 peaking factor, which is the average peaking factor over the past 10 years cited in the 2022 Wastewater Master Plan.

Table 3.2 City of Pompano Beach Wastewater Flow Projections

Year	City of Pompano Beach Population	Wastewater Service Area Population	AADF (mgd)(1)	MMADF(2)
2025	114,701	94,976	14.8	170
2030	117,989	100,721	15.7	18.0
2035	121,190	102,981	16.0	18.4
2040	123,480	105,370	16.4	18.8

Notes:
(1) Projections from 2022 Wastewater Master Plan (CMA, 2022).
(2) Projections using a 1.15 peaking factor developed in the 2022 Wastewater Master Plan (CMA, 2022).

Based on the City's population and wastewater flow projections assumed herein, the City's 17.0 mgd average daily reserve capacity with BC is not anticipated to be surpassed before 2040. While the City is not projected to exceed its allocated treatment capacity before 2040, the City is currently working on two parallel efforts to continue to plan for managing its wastewater flows as discussed below.

First, the City's LU agreement with BC for wastewater treatment and disposal has been amended five times since it was initially executed in May 1989. The amendments were all to revise future flow projections and the City's Reserve Capacity. The fifth amendment projected 2025 AADF at 16.98 mgd, which is just below the City's reserved capacity. The City has begun discussions with BC to discuss a potential future increase in its reserve treatment capacity allocation if and when needed. The NRWWTP has approximately 8 mgd of capacity that is not allocated, and some could potentially be allocated to the City.

Second, the City has an ongoing annual program to reduce I/I, and thereby decrease wastewater flows while allowing population to continue to grow. The City's I/I abatement program focuses on rehabilitation of aging sewer pipes using cured-in-place pipe (CIPP) trenchless technology. The City's I&I program includes smoke testing, CIPP lining of gravity sewer mains and sewer laterals, along with installing new coatings on the interior of aging manholes with significant cracking. The City is increasing the CIPP lining budget from $1.0 million to $1.3 million per year.

3.4.1 Wastewater Interlocal Agreement

The City has a written agreement with Lauderdale-by-the-Sea (the "Wholesale Agreement") with an effective date of November 13, 2007, pursuant to which the Lauderdale-by-the-Sea is a wholesale wastewater customer of the City. The Wholesale Agreement had an original 15-year term and provides that the term is automatically extended for five-year terms, unless terminated by either party within 60 days of the expiration of the then-current term. The current term of the Wholesale Agreement ends in November 2027.

The Lauderdale-by-the-Sea system includes two lift stations: LS#12 (formerly #21) at 251 North Pompano Beach Boulevard, Pompano Beach, and LS#24 (formerly LBTS Master) at 4413 Seagrape Drive, Lauderdale-by-the-Sea. The agreement establishes a maximum daily capacity of 1.5 mgd for the Town.

3.5 Reuse Water Service Area

The City has two reuse systems within its jurisdictional boundaries: one operated by the City and the other operated by BCWWS. The City's reuse water distribution system consists of approximately 37 miles of reuse water main pipe ranging in size from 2 inches to 30 inches in diameter, 7 reuse pumps and 5.5 MG of ground storage capacity as described in more detail below. Figure 3.2 shows the City's reuse water service area and major components.

3.5.1 Reuse Water Treatment

The City's Reuse Water Treatment Facility (RWTF) is located at 1799 North Federal Highway in Pompano Beach. This facility treats effluent from the Broward County NRWWTP. The RWTF, branded OASIS (Our Alternative Supply Irrigation System), began production in 1989 with a capacity of 2.5 mgd. In 2002, its capacity was expanded to 7.5 mgd, with future plans to increase to 12.5 mgd.

The RWTF currently receives influent from a 54-inch diameter ocean outfall line from the BC NRWWTP, located near Powerline Road and Copans Road. The City has an agreement with BCWWS to withdrawal allocations from this outfall pipeline up to a maximum of 5 mgd AADF, with the option to increase as needed. The facility operates under FDEP Permit No. FLA013581, which was issued on September 14, 2005, and will expire on September 14, 2025. It also has a permit issued by Broward County, Permit WWTP-0000-22, issued on July 1, 2022 and will expire on June 30, 2025. Both of these permits are anticipated to be renewed in the ordinary course of business as long as permit requirements are met.

The secondary treated effluent is filtered through deep bed sand filters and undergoes high-level chlorine disinfection to meet public access reuse standards. The treated reuse water is stored in two ground storage tanks before being pumped to the City's adjacent golf course, other city customers, and residential properties.

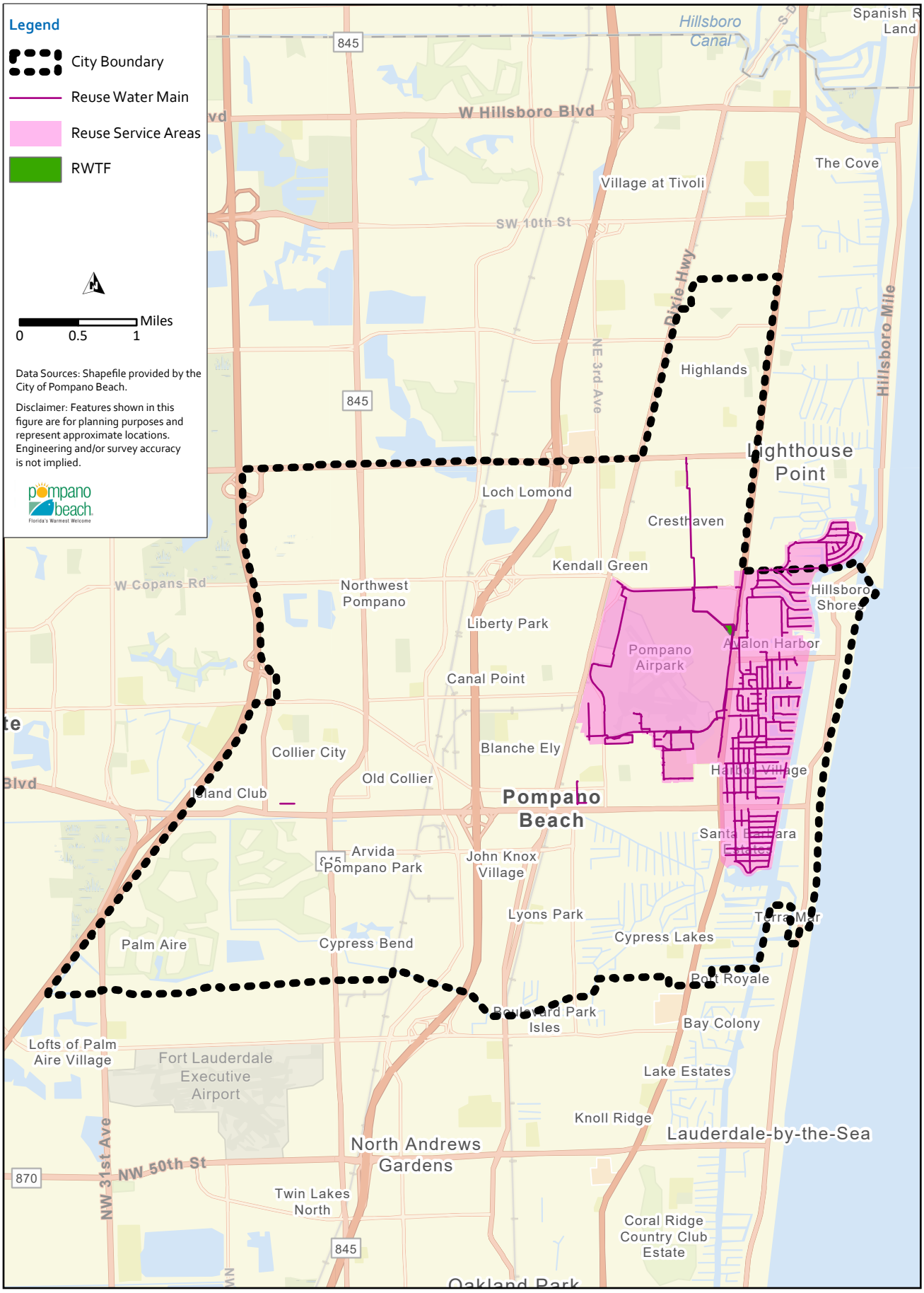


Figure 3.2 Pompano Beach Reuse Water System and Service Area

3.5.2 Reuse Water Storage

The City has two on-site reuse water storage tanks with a combined capacity of 5.5 MG. Demand for reuse water is highly concentrated at night, as most customers irrigate during this time. As noted above, the RWTF has a 7.5 mgd capacity, which is substantially more treatment capacity than historical demands shown in Table 3.3 below. With 7.5 mgd of treatment capacity and 5.5 MG of storage capacity at the RWTF, the City's treatment and storage facilities are sufficient to meet current demands.

As part of the five-year CIP, the City plans to design and construct additional reuse storage, a pump station, and a maintenance work area to support expanding residential reuse service within the City starting in FY 2028. See Section 3.5.3 below for additional information regarding reuse expansion of the transmission and distribution system.

3.5.3 Reuse Transmission and Distribution Facilities

The City's existing reuse water distribution system consists of high-pressure pipelines for the City Municipal Golf Course and low-pressure pipelines for other parts of the reuse distribution system. This system includes approximately 37 miles of pipe, ranging from 2 inches to 30 inches in diameter. Active users encompass a variety of land uses, including residential, commercial, institutional, city medians, parks, and more.

According to the latest Reuse Water System Master Plan, the number of users of the City's reused water system is steadily increasing. The City plans to continue expanding this service to more areas through expansion of the reuse distribution system. As a result, the City has listed a CIP project to allocate funds for the future expansion of the reuse distribution system. Currently, the largest users of the City's reuse water are the City's Municipal Golf Course, Pompano Community Park, landscaping along Federal Highway and Copans Road, city medians, and residential areas east of Dixie Highway. The City has a planned project, currently in design, to expand the reuse distribution system in Lighthouse Point by 2026. The City's future projects will focus on expanding the reuse distribution system within City limits. The City's reuse distribution system budget is expected to increase from approximately $425,000 in FY 2025 to approximately $3 million per year by FY 2028.

3.5.4 Reuse Water Interlocal Agreements

The City has a large user agreement (LUA) with Lighthouse Point to supply reuse water to its residents. Over the past few years, the City has actively expanded the system in this area. Additionally, the City provides reuse water to Lighthouse Point for irrigating medians along Federal Highway. This agreement has an original ten-year term that commenced in 2017, with up to four automatic five-year renewal terms, unless earlier terminated by the parties as allowed by the agreement.

The City also has an agreement with BCWWS to supply reuse water through a master meter to customers in Pompano Highlands, located within the BCWWS service area. The agreement was per City Resolution 2016-229, effective June 28, 2016, and will continue in perpetuity unless terminated by the parties as allowed by the agreement. According to the agreement, the City will provide reuse water services to BCWWS at an average rate of 1 mgd.

3.5.5 Reuse Water Historical Flows

Table 3.3 presents the historical wastewater flow processed at the City's RWTF from calendar years 2019 to 2023. The figures represent the annual average daily flows derived from the MORs supplied by the City.

Table 3.3 Reuse Water Historical AADF

Year	Filtered Influent Flow AADF (mgd)	Finished Reuse Water AADF (mgd)
2019	2.5	2.5
2020	2.8	2.4
2022	3.0	2.6
2023	2.9	2.7

In May 2024, Carollo conducted a site visit to the City's RWTF. Carollo evaluated the overall condition of the aboveground facilities to identify any potential issues that might prevent the City from meeting permit requirements and capacity expectations. These assessments were limited to visually accessible areas and were not comprehensive evaluations.

Based on the site visit and discussions with City staff, Carollo concludes that the City's reuse facility is in similar condition to other facilities of the same age and is operating as intended. The City's RWTF is in good condition and is expected to continue operating effectively to meet future demands and requirements.

3.6 Wastewater Regulatory Compliance

Wastewater regulations set forth in FAC Chapter 62 and FDEP state minimum standards and specific requirements for regulation of domestic wastewater treatment facilities. The City's reuse system complies with the applicable regulations of FAC. The City's collection system is in compliance and is monitoring further updates on rules and regulations from FDEP.

House Bill 1557 (the "House Bill") was approved by the Governor on May 10, 2024. The House Bill provides that, by July 1, 2034, within a Basin Management Action Plan ("BMAP") or Reasonable Assurance Plan ("RAP") area, any wastewater treatment facility providing reclaimed water use for irrigation or otherwise land applied must meet standards for advanced wastewater treatment, if FDEP has determined that the use of reclaimed water is causing or contributing to the nutrient impairment being addressed in the BMAP or RAP.

The reuse system is not currently located in area with an adopted BMAP, BMAP under development, or a RAP area. The reuse system is, however, adjacent to an area under a pollutant reduction plan. It is also located in the intercoastal waterway, which is slated to have a total maximum daily load (TMDL) for total phosphorus with medium priority. The NRWWTP provides advanced nutrient removal and while it is anticipated that at some future time, the House Bill could impact the City's reuse system and the City may incur indeterminate costs in complying with the House Bill, the City does not anticipate such standards related to BMAP and RAP to materially impact the ability to pay debt service on the Series 2024 Bonds.

The City reports that the System has had no violations of its permits relating to the wastewater facilities within the last five years, aside from the matters discussed below.

3.6.1 Permit Compliance and Exceedances

The City has no reported permit compliance issues and/or exceedances for the reuse water facility or distribution system in the past five years, except as described below.

3.6.2 Wastewater and Reuse Water Overflows

The City has experienced wastewater and reuse overflows (spills) from its wastewater system. Between January 1, 2019, and December 31, 2023, the City experienced 38 overflows amounting to discharges of 31,434,440 gallons of wastewater and 141,800 gallons of reuse water.

The City entered into an Agreed Final Order issued on June 24, 2019, by Broward County, for a collection system spill on January 2, 2019. Approximately 30.5 MG of raw sewage were discharged after a private contractor directionally drilled through the City's 42-inch force main. The City has complied with the Order and it was closed on July 30, 2020. This single event accounts for approximately 97 percent of the 31,434,440 gallons of wastewater spilled over the 5-year period between January 1, 2019, and December 31, 2023.

The City is completing repair projects and has an annual force main project to replace critical force mains. This approach should minimize overflows in the future.

3.6.3 Wastewater Compliance Summary

To Carollo's knowledge, aside from the aforementioned violations, the City currently is in full compliance with all federal and state regulatory requirements relating to the provisions of wastewater services and, except as discussed above, there are no violations requiring corrective actions issued by any regulatory agency relating to any component of the wastewater system. The City operates its facilities pursuant to permits issued by the requisite regulatory agencies, and the City has maintained current permits for all of its facilities.

CHAPTER 4 CAPITAL IMPROVEMENT PROGRAM

The City has developed a System CIP that includes a range of major additions, extensions, improvements, and rehabilitations of the System to address future needs driven by customer growth and to maintain its water, wastewater, and reuse water systems. This section of the report provides an overview of the City's System CIP. Section 4.1 presents the Series 2024 Project, and Section 4.2 presents the City's five-year CIP.

4.1 Series 2024 Project

This section describes the specific projects that are anticipated to be funded with proceeds from the Series 2024 revenue bonds. The projects are summarized in Table 4.1 and are described in more detail following Table 4.1. The Series 2024 Project has an estimated total cost of $85,825,334.

Many of the projects and improvements within the current CIP are designed; however, construction contracts have yet to be awarded. Therefore, the cost of the projects to be funded by the Series 2024 Bonds may vary depending on specific project scopes, changes in system needs, and economic factors.

Table 4.1 Series 2024 Project

Project Name	Estimated Cost
Water Treatment Plant Electrical System	$27,000,000
Emerging Contaminants	$30,000,000
Monitoring Well	$3,950,000
Water Meter Testing and Replacement Program	$12,200,000
Reuse Distribution System Expansion	$850,000
Force Main Replacement	$4,353,334
Lift Station Rehabilitation	$3,050,000
Wastewater Collection Lines Relining	$2,500,000
Wellfield Relocation	$1,000,000
Water Treatment Plant Storage Building	$500,000
Boom Truck	$422,000
Total	**$85,825,334**

- **Water Treatment Plant Electrical System**: This project is for the renovation of all old electrical infrastructure within the water treatment plant for reliability, efficiency and an additional 25-year life cycle. This will include all new 5KV power distribution switchgear, new 2 KW generator with synchronization switchgear with existing generators and new power distribution feeders around the plant.

- **Emerging Contaminants:** This project involves the implementation of the Facility Plan for expanding and improving processes to comply with emerging contaminants regulations. Funding is needed for constructing short- and long-term improvements to provide compliance with emerging contaminant regulations. The project will involve phased upgrades to the water treatment plant. The initial phase will focus on meeting near-term water demands by expanding the City's existing NF facility to increase its capacity from 10 mgd to a total of 20 mgd, and the addition of a new deep well for membrane concentrate disposal. The city has adequate WUP to meet this phase of the project.
- **Monitoring Well:** This project involves the replacement of the lower zone monitoring well (DZMW-1R). In 2022, a study evaluated repair or replacement alternatives. As a result of that evaluation, the City has opted to replace the dual-zone monitoring well in advance of failure.
- **Water Meter Testing and Replacement Program:** This project will update aged/obsolete meter infrastructure by replacing all meters and migrating data collection to prioritize first responder cellular services.
- **Reuse Distribution System Expansion:** This annual project continues with the installation of the reuse distribution system in Service Areas 1 through 4, as detailed in the Reuse Water Master Plan, which represents service to over 1,000 acres. The Issuer has an interlocal agreement with the City of Lighthouse Point to construct a transmission line and piping in order to provide reuse water to City of Pompano Beach water customers in the City of Lighthouse Point (about 500 connections).
- **Force Main Replacement:** This project involves comprehensive force main replacement, assessment and design.
- **Lift Station Rehabilitation:** This project allows for upgrading and rehabilitating wastewater lift stations as prioritized by the Utilities Department. A lift station rehab consists of replacement of all major components, including plumbing, mechanical, and electrical.
- **Wastewater Collection Lines Relining:** This project allows for relining sanitary sewer gravity mains throughout the City of Pompano Beach to minimize infiltration of groundwater. Wherever possible, this is accomplished through trenchless methods. However, from time to time, open cut-point repairs are appropriate.
- **Wellfield Relocation:** This project involves relocating and drilling a new well in the eastern wellfield of the city. A preliminary study has been conducted. Design, permitting, construction, and construction management services are required for each new well.
- **Water Treatment Plant Storage Building:** This project involves a storage building needed to replace an existing storage building to allow for water treatment plant expansion.
- **Boom Truck:** The purchase of the boom truck will significantly improve the efficiency, safety, and reliability of lift station maintenance operations within our utility network. The crane can lift, lower, or move pumps both horizontally and vertically, allowing for the safe and efficient removal and installation of the lift station equipment. Pompano Beach Utilities currently operates and maintains a robust network of 82 lift stations, each equipped with at least two pumps that are essential for wastewater management. Timely and effective maintenance of these lift stations is crucial to prevent environmental hazards and ensure uninterrupted service to the System's service area.

4.2 Five-Year CIP (FY2025-FY2029)

The current five-Year CIP for FY2025 through FY2029 comprises 26 projects with a total estimated cost of $175,292,000. Funding for these projects will come from capacity fees, operating revenues, proceeds from the Series 2024 Bonds, and future borrowings. Further details on the current CIP and its funding sources can be found in the Financial Feasibility Report attached to the Official Statement as Appendix F.

Many of the projects and improvements within the current CIP are still in the planning or design phases, and construction contracts have yet to be awarded. Therefore, the total cost of the CIP may vary depending on specific project scopes, changes in system needs, and economic factors.

Table 4.2 summarizes the City's CIP, including project names, project to date budget or expenditures from FY2024, and projected CIP funds for FY2025 through FY2029. Although some of the projects in the 5-year CIP may be named differently than those listed in the Series 2024 Project, the 5-year CIP includes the projects in the Series 2024 Project.

Table 4.2 Utility System CIP

Project Name	FY2024 ($)[1]	FY2025-FY2029 CIP ($)
Potable Water System Projects		
Water Treatment Plant Electrical Rehabilitation	-	$27,000,000
Emerging Contaminants Treatment	-	$73,000,000
Deep Well Monitoring Well Replacement	$100,000	$3,950,000
Water Main Replacement Program	$500,000	$10,530,000
Water Meter Testing and Replacement Program	$495,000	$12,900,000
Water Treatment Plant Storage Building	-	$500,000
Wellfield Performance and Relocation	-	$1,000,000
Membrane Element Replacement	-	$300,000
Water Treatment Plant Maintenance	$500,000	$2,500,000
Well Maintenance Program	$700,000	$950,000
Water Conservation Program	-	$100,000
Water Treatment and Reuse Storage Tank Cleaning	$115,000	$120,000
Lead Service Line Improvement	-	$80,000
Total Potable System Water 5-Year CIP		**$132,930,000**
Reuse System Projects		
Reuse Treatment Plant Maintenance	$300,000	$1,500,000
Reuse Distribution System Expansion	-	$9,850,000
Reuse Ground Storage	-	$7,750,000
Reuse Connection Services	$140,000	$725,000
Reuse Plant Emergency Power Supply / Electric Rehab Upgrade	-	$60,000
Total Reuse System 5-Year CIP		**$19,885,000**

Project Name	FY2024 ($)(1)	FY2025-FY2029 CIP ($)
Wastewater System Projects		
Force Main Replacement Assessment / Design / Repair	-	$6,530,000
Lift Station Rehabilitation	$100,000	$6,800,000
Renewal and Replacement of Small Equipment	-	422,000
Collection Re-Lining	$375,000	$6,400,000
Manhole Rehabilitation	$95,000	$475,000
Wastewater Master Plan Update	-	$350,000
Force Main Isolation Valve Replacement Assessment/Design/Repair	-	$1,000,000
Lift Station Emergency By-pass Pump Station	$100,000	$500,000
Total Wastewater 5-Year CIP		**$22,477,000**
Total Water/Reuse/Wastewater 5-Year CIP		**$175,292,000**

Notes:
(1) Project expenditures or budget, FY2024.
(2) Total project costs are estimated based on best available current information. Actual project costs could be higher or lower based on final project definition and economic factors.
(3) Project cost is based on the City's total programmed funds, which includes five-year project budget through fiscal year ending September 30, 2029.

The City reviews and updates its five-year CIP as part of each annual budget process.

Descriptions for the City's current CIP projects are provided below.

4.2.1 Water Projects

- **Water Treatment Plant Electrical Rehabilitation:** This project is for the renovation of all old electrical infrastructure within the water treatment plant for reliability, efficiency and an additional 25-year life cycle. This will include all new 5KV power distribution switchgear, new 2 KW generator with synchronization switchgear with existing generators and new power distribution feeders around the plant. These improvements were identified in the Electrical Master Plan and are currently being incorporated in the design.
- **Emerging Contaminants Treatment:** This project involves the expansion and process improvements to comply with PFAS regulations. Funding is needed for short and long-term improvement to provide compliance with emerging containment regulations. The short-term recommendation from the plan includes buildout of the existing nanofiltration facility, addition of new sand strainers, evaluation of replacement of existing underground permeate piping and the addition of a new deep well for membrane concentrate disposal. The long-term recommendation is to construct a new membrane facility to replace 10 MGD of existing lime softening treatment. Funding is needed for the design, permitting, and construction of additional membrane skids, strainers, and permeate discharge line to degasified replacement. The total cost to address emerging contaminants over the next five years is estimated at $73.0 million. The City anticipates funding this effort in stages with $30 million being funded with the Series 2024 Bonds, $41.5 million with future water and wastewater system revenue bonds, and $1.5 million with revenues from rates and/or reserve funds.
- **Deep Monitoring Well Replacement:** This project is to plug and abandon the lower MW-1 and drill new lower zone well.

- **Water Main Replacement Program:** This is an annual program that involves continuous improvements to the water distribution system by replacing or upgrading outdated infrastructure and undersized water mains, installing new fire hydrants, and replacing deteriorated galvanized service lines throughout the City's service areas.
- **Water Meter Testing and Replacement Program:** The initial Automated Meter Infrastructure (AMI) project was completed in 2012. As part of that project, Siemens replaced all meters greater than 5 years old and updated meters that were less than 5 years old by March, 2011. This project will update aged/obsolete meter infrastructure by replacing all meters and migrating data collection to prioritize first responder cellular services. A schedule will be prepared to replace meters to ensure no more than 10% of the meters are older than 10 years old at any given time. This program is needed to ensure that water sales information is accurate and that the percent of water loss for the system remains low. The American Water Works Association (AWWA) standards specify that water meters to be tested after 10 years of service.
- **Water Treatment Plant Storage Building:** This project involves a storage building needed for the water treatment plant expansion.
- **Wellfield Performance and Relocation:** This project will study access to both wellfields. Each individual well in the west wellfield will undergo evaluation for sand production, specific capacity tests, and feasibility studies for conversion to submersible pump technology. This transition aims to enhance operational efficiency and resolve regulatory compliance inspections issues. In the east wellfield, located in the Air Park property, wells will be evaluated for potential relocation, abandonment, and replacement.
- **Membrane Element Replacement:** This recurring project consists of replacing the membrane elements as needed, typically every 10 years for the City’s membrane facility. Funding will be budgeted over a multi-year period to provide for full replacement.
- **Water Treatment Plant Maintenance:** This project involves various maintenance, rehabilitation, replacement, and operational enhancements to the existing water treatment plant and membrane plant. Sub-projects include security upgrades, chemical feed system repairs, replacements and installations, and electrical switchgear maintenance, rehabilitation, and replacement.
- **Well Maintenance Program:** This is an ongoing program that includes maintenance, rehabilitation, and operational enhancements to the existing wellfields. It may involve routine maintenance and rehabilitation as needed. The project will also include wellfield assessments, telemetry enhancements, and equipment upgrades and replacements. Ongoing maintenance is required by state and federal regulations.
- **Water Conservation Program:** A Water Conservation Program is required as part of the City’s WUP. This program will include water-saving features designed to reduce the City's water consumption.
- **Water Treatment and Reuse Storage Tank Cleaning:** This project is for the regular cleaning of the finished product storage tanks at each of the potable water and the reuse water treatment plants.
- **Lead Service Line Improvement:** This project aims to reduce lead exposure through drinking water by enhancing key aspects of the USEPA's Lead and Copper Rule. It focuses on improving transparency to inform the public. The City has confirmed by date of construction or visual confirmation (via excavation) that there are no lead lines in their system.

4.2.2 Reuse Projects

- **Reuse Treatment Plant Maintenance:** This project is for maintenance, replacement, reconditioning and installation of reuse plant pumps, motors, piping, valves, electrical switch gear and equipment, chemical feed equipment and infrastructure as needed.
- **Reuse Distribution System Expansion:** This annual project continues with the installation of the reuse distribution system in Service Areas 1 through 4, as detailed in the Reuse Water Master Plan, which represents service to over 1,000 acres. The City has an inter- local agreement with Lighthouse Point to construct a transmission line and piping in order to provide reuse water to Pompano Beach water customers in their city (about 500 connections).
- **Reuse Ground Storage:** This project provides additional reuse storage, a pump station, and a maintenance work area to support the expanding residential reuse service within the City.
- **Reuse Connection Services:** This project provides reuse water connections to single-family residential properties, reducing the City's drinking water consumption.
- **Reuse Plant Emergency Power Supply/Electric Rehab Upgrades:** This project includes installing a new generator for backup power and constructing a new Motor Control Center. It will also assess the current aging electrical infrastructure and plan the necessary rehabilitation for the next 20 years.

4.2.3 Wastewater Projects

- **Force Main Replacement Assessment /Design/Repair:** The City of Pompano Beach owns and operates a 59-mile wastewater force main system of various sizes and material. These pipelines serve critical needs throughout the City conveying residential and commercial wastewater to the Broward County North Regional Wastewater Treatment Plant. A comprehensive force main replacement, assessment and design is required to provide current and future uninterrupted wastewater services. An annual design and replacement program of the critical sanitary force mains within the City's service area will follow the professional review of the condition assessment.
- **Lift Station Rehabilitation:** This project allows for upgrading and rehabilitating wastewater lift stations as prioritized by the Utilities Department. A lift station rehab consists of replacement of all major components, including plumbing, mechanical, and electrical.
- **Renewal and Replacement of Small Equipment:** This project involves the replacement of large equipment, a boom truck, which has an estimated service life of 19 years.
- **Collection Re-lining:** This project allows for relining sanitary sewer gravity mains throughout the City to minimize infiltration of groundwater. Wherever possible, this is accomplished through trenchless methods. However, from time to time, open cut point repairs are appropriate.
- **Manhole Rehabilitation:** This project involves rehabilitating deteriorated brick manholes throughout the City by covering their interior surfaces with a cementitious, non-permeable material. There are 4,400 manholes citywide.
- **Wastewater Master Plan Update:** This report identifies and plans for wastewater system upgrades and facilities required to support current and future developments. It translates anticipated future needs into estimated costs and schedules for capital expenditures.

- **Force Main Isolation Valve Replacement Assessment /Design/Repair:** This project involves evaluating the locations of existing wastewater force main valves to identify areas requiring additional valves, replacement, or repairs as needed.
- **Lift Station Emergency By-pass Pump Station:** This project involves installing an emergency bypass pump to ensure continuous wastewater services through the City's force main during power and control failures from FPL during extended weather events such as lightning strikes and hurricanes.

CHAPTER 5 CONCLUSIONS

The following conclusions were made based on the considerations, assumptions, review of prior study results, and analyses summarized in this report. It should be noted that these conclusions represent opinions based on this report as a whole and are judgements based exclusively on the presented information, and the report should be read in its entirety.

- The City should be able to retain, renew current, and add permits for the water, wastewater, and reuse water systems so long as operations, maintenance, and permit reporting continue as demonstrated in the past five-year period.
- To Carollo's knowledge, other than the violations stated in this report, the City is in full compliance with all federal and state regulatory requirements relating to the provisions of water, wastewater, and reuse services, and there are no other outstanding orders requiring corrective actions that are issued by any regulatory agency relating to any component of the currently owned System.
- Based on the current wellfield and water treatment facility capacities, planned facility improvements included in the City's CIP, assumed anticipated increases in the City's raw water supplies and WUP, and projected water demands documented in this report, the City is expected to have sufficient water supplies to meet its anticipated service needs.
- The City is taking proactive measures to add treatment processes and capacity to meet the new PFAS regulatory standards within the required timeframes.
- Based on the City's wastewater flow projections, the steps the City is currently taking to reduce I&I and thereby wastewater flow to the NRWWTP, a planned project in the CIP which will reduce wastewater flows from 8,000 to 4,000 gpm [Wastewater Collection Lines Relining], and the City's previous ability to obtain amendments to the LU agreement with BC to increase wastewater treatment capacity when needed, the City is expected to be able to continue conveying its wastewater to BC for treatment at the NRWWTP.
- Based on above ground inspection of the City facilities, discussions with City staff, analyses of historic data, and reports filed with pertinent regulatory agencies, the existing facilities appear to be in relatively good condition overall. The facilities are in comparable condition to facilities of similar age and are operating as intended. Water treatment facilities were found to be in good condition. The wastewater system was found to be in relatively good condition. The City's reuse water system was found to be in good condition.
- The System's facilities appear to be adequately operated and maintained, and the City is taking necessary steps to continue prudent utility practice as described throughout this report. Additionally, the Utilities Department has a strong asset management program for the treatment plants and field operations. Based on its demonstrated history of System management and operations, the City appears to be capable of providing sufficient and reliable water, wastewater, and reuse service to its customers through the years pertinent to the Series 2024 Bonds, which reach final maturity in 2054.

- The City's System CIP projects are necessary and adequate to meet the current regulatory requirements and to provide reliable water, wastewater, and reuse service to the City's existing customers and to provide adequate reserve capacity for the anticipated growth in System customers discussed in this report.
- The City's System CIP project cost estimates seem reasonable; however, Carollo did not conduct cost estimation evaluations of the CIP projects as part of this report. Based on the aboveground site inspections of the City's facilities, it is reasonable to assume that additional significant funds will not be required within the next five years for water, wastewater, or reuse water improvements beyond what is identified in the five-year CIP presented in this document.

CHAPTER 6 REFERENCES

Carollo. 2020. *Water Master Plan Update*, prepared for City of Pompano Beach, FL.

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City of Pompano Beach. 2023. Annual Comprehensive Financial Report, retrieved form the City of Pompano Beach Website (pompanobeachflo.gov)

City of Pompano Beach. 2013. Annual Comprehensive Financial Report, retrieved form the City of Pompano Beach Website (pompanobeachflo.gov)

Lower East Coast Water Supply Plan Stakeholder Meeting No. 3, July 12, 2024, South Florida Water Management District. Recording available third week of July from website: Lower East Coast Water Supply Plan | South Florida Water Management District (sfwmd.gov).

Southeast Florica Regional Climate Change Compact Sea Level Rise Work Group (Compact). February 2020. A document prepared for the Southeast Florica Regional Climate Change Compact Climate Leadership Committee. Website: 2019 Sea Level Projections | Southeast Florida Climate Compact (southeastfloridaclimatecaompact.org)

EXHIBIT B

FORM OF FINANCIAL FEASIBILITY REPORT

Financial Feasibility Report

City of Pompano Beach, Florida
Water and Wastewater Revenue Bonds, Series 2024

RAFTELIS

Draft Report

October [_____], 2024

Financial Feasibility Report
City of Pompano Beach, Florida
Water and Wastewater Revenue Bonds, Series 2024

We have prepared the accompanying Financial Feasibility Report (the "Report") for the City of Pompano Beach, Florida (the "City") in connection with the proposed issuance by the City of its Water and Wastewater Revenue Bonds, Series 2024 (the "Series 2024 Bonds"). We reviewed information pertaining to the City's enterprise fund (the "Utility Fund") related to its combined Water System and Wastewater System, as such terms are more fully defined herein (collectively, the "System") for the Fiscal Years from the period ending September 30, 2019 through September 30, 2023 on a historical basis and from the period ending September 30, 2024 through September 30, 2029 on a forecasted basis (the "Forecast Period"). Our evaluation was conducted in accordance with guidelines for the utility industry and included such procedures as we considered necessary to evaluate the financial outlook of the System and the Utility Fund. All capitalized terms not otherwise defined in this letter have the meanings ascribed thereto in the Report.

The issues and assumptions that we believe are most significant for the accompanying Report include:

- Historical Statement of Utility Fund Revenues, Expenses, and Debt Service Coverage;
- Funding of capital expenditures for water, reuse, and wastewater infrastructure replacement, system improvements, and meeting regulatory requirements;
- Projected future debt service on existing and anticipated new debt, including the Series 2024 Bonds;
- Projected operating costs to meet water, reuse, and wastewater demand;
- Projected operating costs for purchased wastewater treatment from Broward County;
- City Commission approved water, reuse, and wastewater rates; and
- Projected growth in customers and projected demand.

In our opinion, the Report is presented in conformity with industry guidelines for presentation of a forecast, and the underlying assumptions are reasonable based on information available as of the date of the Report. Based upon the assumptions in the Report, the projected Gross Revenues of the System provide adequate funds to pay the Cost of Operation and Maintenance of the System during the Forecast Period and the projected Net Revenues of the System provide adequate funds to (i) enable the City to meet the tests set forth in the Master Bond Ordinance that are a condition to the issuance of the Series 2024 Bonds and certain other planned Bonds as Additional Parity Obligations, (ii) permit the City to fund any reserves required by the Master Bond Ordinance, and (iii) permit the City to meet the rate covenant required by the Master Bond Ordinance, in each case, during the Forecast Period. However, there will usually be differences between the forecast and actual results, because events and circumstances frequently do not occur as expected, and those differences may be material. We have no responsibility to update the Report for events and circumstances occurring after the date of the Report. We consent to the inclusion of the Report as an appendix to the Preliminary Official Statement and final Official Statement relating to the Series 2024 Bonds and to the references to the Report, the information contained therein, and our firm in said Preliminary Official Statement and final Official Statement.

Raftelis Financial Consultants, Inc.

By: Joe Williams
Senior Manager

Elaine Conti
Executive Vice President

October [_____], 2024

DRAFT

Introduction

Raftelis Financial Consultants, Inc. ("Raftelis") is pleased to present herein a Financial Feasibility Report (this "Report") for the City of Pompano Beach, Florida (the "City" or the "Issuer") in connection with the proposed issuance by the City of its Water and Wastewater Revenue Bonds, Series 2024 (the "Series 2024 Bonds"). All capitalized terms not otherwise defined in this Report have the meanings ascribed thereto in Ordinance No. 2021-62 (the "Master Bond Ordinance") enacted by the City Commission of the City (the "City Commission") on June 22, 2021, as supplemented in connection with the Series 2024 Bonds by Ordinance No. 2025-[__] enacted by the City Commission on October [22], 2024 (the "Series Ordinance" and, together with the Master Bond Ordinance, the "Ordinance") or in the Preliminary Official Statement relating to the Series 2024 Bonds (the "Preliminary Official Statement") and the Official Statement relating to the Series 2024 Bonds (the "Official Statement") to which this Report will be attached as an appendix. The Series 2024 Bonds will be issued as Additional Parity Obligations pursuant to the Ordinance.

The City owns and operates the System, which is comprised of a combined Water System and Wastewater System. The Ordinance defines the Water System and the Wastewater System, respectively, as follows:

> "Water System" shall mean the complete water system now owned, operated and maintained by the Issuer and which the Issuer is, or shall be responsible for maintaining, together with any and all acquisitions, improvements, extensions and additions thereto, hereafter constructed or acquired, together with all lands or interests therein, including plants, buildings, machinery, franchises, pipes, mains, fixtures, equipment and all property, real or personal, tangible or intangible (including agreements for the providing of such services), now or hereafter constructed and/or owned or used in connection therewith.
>
> "Wastewater System" shall mean the complete sewer, wastewater and residential and commercial reuse system now owned, operated and maintained by the Issuer and which the Issuer is, or shall be responsible for maintaining, together with any and all acquisitions, improvements, extensions and additions thereto, hereafter constructed or acquired, together with all lands or interests therein, including plants, buildings, machinery, franchises, pipes, mains, fixtures, equipment and all property, real or personal, tangible or intangible (including agreements for the providing of such services), now or hereafter constructed and/or owned or used in connection therewith.

Pursuant to the Master Bond Ordinance, as supplemented, the City has previously issued its $10,515,000 Water and Wastewater Revenue Bond, Series 2021, of which $9,150,000 is Outstanding after the principal payment due on September 1, 2024 (the "Series 2021 Bond") and has a scheduled maturity date of March 1, 2041. The Series 2021 Bond is secured under the Master Bond Ordinance, as supplemented, by a pledge of the Net Revenues of the System on a parity with any Additional Parity Obligations issued and Outstanding under the Master Bond Ordinance. The City has also incurred certain Subordinated Debt relating to the System, as shown below:

- State of Florida Department of Environmental Protection and City of Pompano Beach, Florida Drinking Water State Revolving Fund Construction Loan Agreement DWO62450 executed in April 2019 and currently maturing on February 15, 2043, with an outstanding principal amount of $261,905 as of September 30, 2024. (The project funded by this loan is complete);

- State of Florida Department of Environmental Protection and City of Pompano Beach, Florida Drinking Water Sate Revolving Fund Construction Loan Agreement DW062480 executed October 2022 and currently maturing on February 14, 2044, with an outstanding principal amount principal amount of $9,215,999 as of September 30, 2024. (The project funded by this loan is complete); and

- Florida Water Pollution Control Financing Corporation and City of Pompano Beach, Florida Clean Water State Revolving Fund Construction Loan Agreement WW062470 executed in February 2024, with a maximum available principal amount of $2,939,760. (The project funded by this loan has not been completed as of the date of this report, but a loan up to $2,939,760 has been approved and the maximum principal and interest for this amount is included in the Forecast Period).

The City's current adopted five-year capital improvement plan (the "CIP") for the System is for the period from Fiscal Year 2025 through Fiscal Year 2029. Proceeds of the Series 2024 Bonds will be applied to finance (including through reimbursement) all or a portion of the costs of certain components of the CIP (referred to as the "Series 2024 Project") that are reasonably expected to be completed within three years following the issuance of the Series 2024 Bonds and are otherwise determined to be eligible to be funded on a tax-exempt basis, as more fully described in the City's consulting engineer's report ("Engineer's Report"). See Table 10 later herein for summary information.

We reviewed information relating to the City's enterprise fund related to the System (the "Utility Fund") for the Fiscal Years from the period ending September 30, 2019, through September 30, 2023, on a historical basis (the "Historical Period") and from the period ending September 30, 2024, through September 30, 2029, on a forecasted basis (the "Forecast Period"). We have also reviewed actual but unaudited revenues and operating expenses for FY 2024 through the period ending September 17, 2024. The preliminary estimates indicate operating expenses will be at or slightly below the FY 2024 budgeted operating expenses, and revenues (especially water sales) will be higher than the FY 2024 budgeted revenues. For purposes of this Report, the reference to "Fiscal Year" or "FY" means the period commencing on October 1 of a calendar year and ending on the following September 30. None of the financial information or data provided in this Report for the Forecast Period is audited.

The primary purposes of this Report are to: (i) summarize the financial operations of the System for the Historical Period and the financial projections of the operations of the System for the Forecast Period; and (ii) present the ability of the projected Gross Revenues of the City to pay the Cost of Operation and Maintenance of the System during the Forecast Period and the projected Net Revenues of the System to enable the City to (i) meet the tests set forth in the Master Bond Ordinance that are as a condition to the issuance thereunder of the Series 2024 Bonds and certain other planned Additional Parity Obligations, (ii) permit the City to fund any reserves required by the Master Bond Ordinance, and (iii) permit the City to meet the rate covenant required by the Master Bond Ordinance, in each case, during the Forecast Period.

As such, this Report includes, among other things, discussions of: (i) recent historical and projected sales and customer growth and usage statistics for the System; (ii) the anticipated financing plan associated with the implementation of the System's CIP, including the Series 2024 Project; (iii) the schedule of adopted water, reuse, and wastewater rates relating to the System assumed to be in effect during the Forecast Period; and (iv) the projected financial operating results of the System during the Forecast Period.

Raftelis, serving as the Qualified Independent Consultant to the City, was responsible for the compilation of historical financial and statistical information and the preparation of the projected financial results, including the projections of customer and sales revenues and other components that comprise the projected operating results of the System. Raftelis does not offer any opinion as to the general condition of the System and its assets currently in service, the compliance with regulations promulgated and imposed by various agencies upon the operation and construction of the System, the estimated cost of or need for the improvements anticipated to be funded from System operations as referenced in this report, or any other engineering aspects of the System. For information describing the System, please refer to the discussion of the System included in the Engineer's Report attached as an appendix to the Preliminary Official Statement and the Official Statement.

In the preparation of this Report and the estimates of the projected financial operating results presented herein, Raftelis relied upon financial, statistical, and operational data regarding the System that has been derived from (i) operating and financial reports and records prepared by the City's Utilities Department and City management and staff; (ii) information presented in operating and financial records and the available Annual Comprehensive Financial Reports (annual audits) of the City for the Historical Period; and (iii) other statistical and financial information provided by and discussions with the City management and staff, including in the Utilities Department. Raftelis has updated the City's information to include the City's adopted FY 2025 budget. In addition, we have been furnished information, assumptions, and projections relating to the estimated levels of the Debt Service Requirement associated with the issuance of the Series 2024 Bonds and other proposed Additional Parity Obligations during the Forecast Period by the City's Municipal Advisor, PFM Financial Advisors LLC, Orlando, Florida (the "Municipal Advisor"), and have utilized information obtained from other utility systems in Florida and other sources.

The debt-related assumptions as provided by the Municipal Advisor and relied upon by Raftelis may vary from actual results and are subject to market conditions, as well as the City's credit rating at the time of issuance of the Series 2024 Bonds and at the applicable time of issuance of the other proposed Additional Parity Obligations during the Forecast Period. All details of the Series 2024 Bonds and other Additional Parity Obligations assumed herein are preliminary and subject to change, based on the final pricing details of the Series 2024 Bonds and the applicable other Additional Parity Obligations. This Report will not be updated to reflect such final pricing details.

In using the Report, the City expressly acknowledges that Raftelis is not serving in the capacity of a "Municipal Advisor" as defined under Section 15B(e)(4)(A) of the Exchange Act as amended by the Dodd-Frank Act and thus is not providing advice with respect to municipal financial products or the issuance of municipal securities, including advice with respect to the structure, timing, terms and conditions, and other similar matters concerning financial products or issues. We believe the sources of such information, assumptions, and projections to be reasonable for the purposes of this report and we offer no assurances with respect thereto and have no reason to believe that such information is unreliable for purposes of this report. The actual results achieved during the Forecast Period reflected in this report may vary from those

projected and such variations could be material. Such projections are, therefore, subject to adjustment and we can give no assurances that the projections will be realized.

This Report summarizes the results of our studies and analyses up to the date of this Report and does not reflect a current description of any matters set forth herein as of any date subsequent to the date of this Report. In particular, this Report assumes that the agreements and other arrangements for System services between the City and the other local governments described in this Report remain in effect or are renewed, as applicable, during the Forecast Period. Changed conditions occurring or becoming known after such date could materially affect the information presented herein to the extent of such changes.

General Background

The City is located in Broward County, Florida ("Broward County"), between Palm Beach County and Miami-Dade County and is the year-round home to approximately 113,691 residents. During the peak season (September through March), this number increases to nearly 150,000. The City is governed by an elected five-member district commission and a mayor at large. The City's Utilities Department provides water, reuse, wastewater, and stormwater services inside the City's limits. The City's Utilities Department provides water service to two areas outside the City's limits which consist of the northern part of the Town of Lauderdale-by-the Sea (sometimes referred to as the "Town") and the southern tip of the City of Lighthouse Point ("Lighthouse Point"), and wastewater service to customers in a portion of the Town. Collectively, the service areas will be referred to as the "Service Area" in the remainder of this Report and maps of the Service Area are provided in Engineer's Report. As previously mentioned, the City's Utility Fund is associated with only the System. Stormwater services are the subject of a separate City enterprise fund. It is the System and the Utility Fund that are the subject of this report.

The City's Water System is comprised of a 40 million gallons per day ("MGD") rated capacity lime softening treatment plant and a 10 MGD rated capacity nanofiltration membrane softening treatment plant that is owned and operated by the City. The average daily demand of the water system ranged from 14.0 MGD to 14.7 MGD between 2019 to 2023. The City also maintains 290 miles of transmission and distribution lines, two well fields, and water storage and pumping facilities.

The City's Wastewater System is comprised of 259 miles of collection gravity pipelines and force mains, and 82 lift stations throughout the Service Area. The City collects and conveys its wastewater to Broward County for wastewater treatment, pursuant to a written agreement between the City and Broward County (the "Large User Agreement") for 17.0 MGD of reserved wastewater treatment capacity. As explained later in this Report, under the Large User Agreement, the City pays a fixed monthly fee to Broward County based on its proportion of allocated debt service of certain of Broward County's outstanding debt obligations, as well as a volumetric rate. See "Operating Expenses, Debt Service Requirement, and Capital Expenditures—Large User Agreement" later herein. The City's maximum month average daily wastewater flow has ranged between 16.0 MGD to 20.7 MGD from 2019 to 2023 and the City has implemented an inflow and infiltration abatement program to repair aging sewer pipes to reduce the flow sent to Broward County for treatment. While the City is having discussions with Broward County to secure additional reserved capacity to meet future demand, the City does not anticipate increasing its reserved capacity over the Forecast Period.

The City's Wastewater System also includes a residential and commercial reuse system that is comprised of a 7.5 MGD reuse water treatment facility that treats effluent from Broward County's wastewater treatment plant and provides reclaimed water for the City's municipal golf course, medians on certain City roadways, certain City parks and City residents. The City has an interlocal agreement with Lighthouse Point to supply reuse water to its residents. Additionally, the City provides reuse water to Lighthouse Point for irrigating medians along Federal Highway. According to the agreement, the City does not guarantee the supply of reuse water but has provided on average approximately 0.08 MGD of reuse water per year. The City also has an agreement with Broward County to supply reuse water through a master meter to customers in Pompano Highlands, located within the Broward County Water and Wastewater Services (BCWWS) service area. According to that agreement, the City will provide reuse water services at an average rate of 1 mgd. The foregoing agreements of the City with Lighthouse Point and Broward County are referred to collectively as the "Reuse Agreements."

The annual average daily flows of the reuse system have ranged from 2.4 MGD to 2.7 MGD from 2019 to 2023. In 2006, the City implemented a reuse program titled "OASIS" to promote connection to its reuse system. The City has been expanding its reuse system within a portion of Lighthouse Point and other areas in its Service Area and has been actively connecting customers to the reuse system. The City currently maintains 37 miles of reuse water pipes. In the future, the City will continue to expand its reuse distribution system inside the City's limits.

Plan of Finance for Series 2024 Bonds

The assumptions provided by the City's Municipal Advisor, PFM Financial Advisors LLC with respect to the issuance of the Series 2024 Bonds include the following:

Table 1. Sources and Uses of Funds – Series 2024 Bonds

Sources:	Total
Bond Proceeds:	
Par Amount	$80,565,000
Premium	6,069,112
Total Sources	$86,634,112
Uses:	
Project Fund Deposits:	
Project Fund	$85,825,334
Delivery Date Expenses:	
Cost of Issuance	$402,825
Underwriter's Discount	402,825
Subtotal	$732,700
Other Uses of Funds:	
Additional Proceeds	$3,128
Total Uses	$86,634,112

The approximately $85.8 million estimated to be deposited into the Series 2024 Project Account established by the Series Ordinance will fund the Series 2024 Project described in this Report. It is assumed that the Series 2024 Bonds will be issued on or about December 1, 2024 and have an all-in true interest cost per annum of 4.62%. The Series 2024 Bonds are assumed to be issued as Additional Parity Obligations pursuant to the Ordinance.

Table 2 illustrates the existing Debt Service Requirement for the Outstanding Series 2021 Bond, existing Subordinated Debt, and the proposed Debt Service Requirement for the Series 2024 Bonds over the Forecast Period.

Table 2. Existing Debt Service Requirement and Proposed Debt Service Requirement for Series 2024 Bonds – Forecast Period

Existing Bonds	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**	**FY 2029**
Series 2021 Bond	$683,636	$687,264	$685,506	$683,491	$686,220	$678,562
Subtotal: Existing Bonds	$683,636	$687,264	$685,506	$683,491	$686,220	$678,562
Series 2024 Bonds	$0	$5,048,250	$5,047,250	$5,048,750	$5,047,500	$5,053,500
Total Debt Service Requirement	**$683,636**	**$5,735,514**	**$5,732,756**	**$5,732,241**	**$5,733,720**	**$5,732,062**
Subordinated Debt						
DW062450 (Interconnect)	$17,724	$15,813	$15,813	$15,813	$15,813	$15,813
DW062480 (C-51 Reservoir)	$277,063	$554,126	$554,126	$554,126	$554,126	$554,126
WW062470 (Non-sewer)	$0	$146,988	$146,988	$146,988	$146,988	$146,988
Subtotal: Subordinated Debt	$294,787	$716,928	$716,928	$716,928	$716,928	$716,928
Total Debt Service	**$978,423**	**$6,452,442**	**$6,449,684**	**$6,449,169**	**$6,450,648**	**$6,448,990**

Historical Operating Results

The Utility Fund as an enterprise fund is required to generate Gross Revenues sufficient to annually cash fund the Cost of Operation and Maintenance (sometimes referred to herein as "O&M Expenses").

The Master Bond Ordinance defines Gross Revenues, generally, as all income or earnings, including rates, fees and charges and the Meter Installation Fees, and all other moneys received by or accrued to the Issuer from the ownership, leasing, use or operation of the System, but not including, among other items, Contributions in Aid of Construction and impact fees.

The Master Bond Ordinance defines the Cost of Operation and Maintenance, generally, as the Issuer's current expenses, paid or accrued, of operation, maintenance and repair of the System, as calculated in accordance with generally accepted accounting principles, but not including, among other items, capital expenditures, expenses not periodically occurring, such as extraordinary repairs or conditions, any reserve for renewals and replacement, any allowance for depreciation or amortization or similar charges, and any general administrative charges payable to the Issuer's general fund.

Net Revenues of the System (defined in the Master Bond Ordinance to mean the Gross Revenues, after deduction of the Cost of Operation and Maintenance) must be sufficient to generate payment of the Debt Service Requirement on Outstanding Bonds, debt service on outstanding Subordinated Debt and other such requirements as needed to fund reserves and meet covenant provisions set forth in the Master Bond Ordinance.

Historical financial results were reviewed and compiled from audited information contained in the City's Annual Comprehensive Financial Report ("ACFR") for the Historical Period, consisting of fiscal years ending September 30, 2019, 2020, 2021, 2022, and 2023. A summary of the Utility Fund's historical

financial results for the Historical Period showing Gross Revenues, Net Revenues and the Cost of Operation and Maintenance, determined using the definitions of those terms in the City's Master Bond Ordinance, are provided in Table 4. Note that during portions of the Historical Period the City had outstanding (i) its Water and Sewer Refunding Revenue Bonds, Series 2014 (the "Series 2014 Bonds"), which were issued under a bond ordinance that is no longer in effect, were secured by a pledge of revenues of the System and matured and were paid in full on July 1, 2020, and (ii) the Series 2021 Bond, which was issued on June 24, 2021 pursuant to the Master Bond Ordinance, as supplemented. Table 4 shows the applicable Debt Service Requirement for the Series 2014 Bond and the Series 2021 Bond during the Historical Period, with debt service coverage calculated in accordance with the Master Bond Ordinance, notwithstanding that that the Series 2014 Bonds were not issued under the Master Bond Ordinance.

Like most other utilities across Florida and the country, operations and maintenance costs increased significantly in the last several years resulting from inflationary pressures in most items but especially related to chemicals, electricity, personnel, and insurance costs. In addition, the fees paid to Broward County for wastewater treatment increased significantly in FY 2023 due to a combination of increased rates charged by Broward County (specifically the fixed component as explained later in this report) and variability in the wastewater flow sent to Broward County.

The revenues shown in Table 4 include the following rate adjustments which were approved by the City Commission and implemented in FY 2019 through FY 2023 as shown in Table 3.

Table 3. City Commission Approved Rate Adjustments- Historical Period

	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Water	4.25%	10.25%	0.00%	6.00%	4.25%
Wastewater	3.00%	12.50%	0.00%	9.50%	7.75%
Reuse Water	4.25%	10.25%	0.00%	6.00%	4.25%

Table 4. Summary of Historical Financial Results– Historical Period (1)

	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Gross Revenues (2)	$45,745,931	$48,167,930	$49,533,894	$53,544,183	$57,016,176
Cost of Operation and Maintenance (3)	30,918,627	31,022,005	32,154,542	34,164,186	39,768,981
Net Revenues	$14,827,304	$17,145,925	$17,379,352	$19,379,997	$17,247,195
Debt Service Requirement (4)					
Series 2014 Refunding Bond	$3,034,540	$3,040,232			
Series 2021 Bond			$190,294	$624,774	$679,687
Total Debt Service Requirement	$3,034,540	$3,040,232	$190,294	$624,774	$679,687
Calculated Debt Service Coverage (5)	**4.89**	**5.64**	**91.33**	**31.02**	**25.38**
Debt Service Coverage Requirement	**1.20**	**1.20**	**1.20**	**1.20**	**1.20**

1. Information is from the City of Pompano Beach Annual Comprehensive Financial Reports for fiscal years ending 2019, 2020, 2021, 2022, and 2023.

2. Per the City's Master Bond Ordinance, Gross Revenues exclude Contributions in Aid of Construction and impact fees, sometimes also referred to as "Capital Recovery Fees".
3. Per the City's Master Bond Ordinance, Cost of Operation and Maintenance exclude any general administrative charges payable to the general fund.
4. The Debt Service Requirement in FY 2019 and FY 2020 includes the Series 2014 Bond which matured in FY 2020. The Debt Service Requirement in FY 2021 through FY 2023 includes the Debt Service Requirement associated with the Series 2021 Bond.
5. The debt service coverage calculation is calculated according to the Master Bond Ordinance for FY 2019 through FY 2023.

Historical and Projected System Sales and Customer Statistics

The System's customer base is comprised primarily of residential service connections with generally expected levels of commercial, industrial and other forms of non-residential services. The City has entered into the following agreements and arrangements with respect to the System:

1. The Reuse Agreements, of which the one with Broward County has a perpetual term that commenced in August, 2016, subject to earlier termination by either of the parties as permitted by the Agreement, and the one with Lighthouse Point has an original 10-year term commencing in 2017 and provides for four automatic five-year renewal options, subject to earlier termination by either of the parties as permitted by the Agreement.

2. A written agreement with the Town of Lauderdale-by-the-Sea (the "Wholesale Agreement") with an effective date of November 13, 2007, pursuant to which the Town is a wholesale wastewater customer of the City. The Wholesale Agreement had an original 15-year term and provides that the term is automatically extended for five-year terms, unless terminated by either party within 60 days of the expiration of the then-current term. The current term of the Wholesale Agreement ends in November 2027. Additionally, the City provides water service to customers in a portion of the Town that was previously in unincorporated Broward County and served by the City at the time it was annexed into the Town's boundaries in 2000.

3. Pursuant to an ordinance of Lighthouse Point, the City has been granted a 40-year franchise commencing in 2002 (the "LHP Franchise") to provide water service to customers in a portion of Lighthouse Point, subject to the provisions of the LHP Franchise giving Lighthouse Point the right to purchase the portions of the System within the boundaries of Lighthouse Point.

Customers of the System outside of the City's boundaries are subject to a 25% surcharge for water, wastewater, and reuse service, unless the rates for service to such customers are otherwise set forth in an agreement between the City and another applicable governmental entity.

A five-year historical summary of service connections and corresponding billable flows for the Historical Period is provided in Table 5. An account represents a single connection regardless of size, where a unit represents the number of dwelling units serviced by that connection. For example, a single-family connection is equivalent to 1 account and 1 unit, whereas a multi-family duplex is equivalent to 1 account and 2 dwelling units.

Table 5. Historical Customers and Usage – Historical Period

Description	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Active Water Customers	18,650	18,701	18,854	18,868	18,913
Active Sewer Customers	16,913	16,957	17,105	17,113	17,146
Active Reuse Water Customers	1,187	1,251	1,276	1,360	1,449
Active Water Units	59,908	60,476	61,202	61,236	61,302
Active Sewer Units	57,819	58,230	58,830	59,209	59,427
Active Reuse Water Units	1,299	1,612	1,649	1,819	1,996
Change in Water Units		569	726	34	66
% change		*0.9%*	*1.2%*	*0.1%*	*0.1%*
Change in Sewer Units		411	600	379	218
% change		*0.7%*	*1.0%*	*0.6%*	*0.4%*
Change in Reuse Units		313	37	170	177
% change		*24.1%*	*2.3%*	*10.3%*	*9.7%*
Total Water Sold (1,000 gallons)	4,754,315	4,584,619	4,514,066	4,502,738	4,569,377
% change		*-3.6%*	*-1.5%*	*-0.3%*	*1.5%*
Total Billable Sewer Flow (1,000 gallons)	3,397,523	3,341,152	3,332,600	3,365,332	3,364,144
% change		*-1.7%*	*-0.3%*	*1.0%*	*0.0%*
Reuse Water Sold (gallons)	879,499	873,362	814,483	832,649	802,613
		-0.7%	*-6.7%*	*2.2%*	*-3.6%*

The historical customers and usage presented above were derived from historic billing data as provided by the Utilities Department customer service staff. The data provided is reasonably in line with detailed customer billing frequency analysis completed by Raftelis from time to time during the same period. As shown, the growth levels for water and sewer accounts and units have been modest. The Service Area is built out and most growth in water and sewer customers is attributed to redevelopment, particularly the conversion to multi-family developments. As a result, water and wastewater billable usage over the last five years has typically declined due to price elasticity (as explained later, the City has increased its rates over the last several years), the impact of more water efficient fixtures installed in new developments, and the availability of reuse service. As mentioned previously, the City has continued to reflect the expansion of its reuse distribution system in its five-year capital improvement plan, as this system is currently only available in certain parts of the City's Service Area. Total water reuse consumption has varied over the last several years mainly due to the variability in one large user (the City's municipal golf course that has undergone renovations).

The projected growth in System accounts for the Forecast Period, shown together with the annual percentage increases, in Table 6 represent an annual growth rate of approximately 0.2 percent each for water and wastewater accounts, and 1.0 percent for reuse accounts. Over the last three fiscal years, while the number of accounts has increased, water use has declined on average by 0.3 percent per year and sewer use has remained flat. As demonstrated in the table below, it is anticipated that water usage will continue to decline each year while sewer usage is estimated to remain flat throughout the Forecast Period. As mentioned, reuse demand has fluctuated due to the variability in use from the City's municipal golf course. As the City continues to connect residential customers to the reuse system, the continued variability in use from large reuse customers is anticipated to temper any increase in reuse consumption. Therefore, reuse is anticipated to remain at current levels over the Forecast Period.

Table 6. Projected Customers and Usage – Forecast Period

Description	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Accounts						
Water	18,940	18,969	18,997	19,026	19,054	19,083
Increase	28	28	28	28	29	29
% Increase	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
Wastewater	17,184	17,218	17,252	17,287	17,323	17,358
Increase	37	34	35	35	35	36
% Increase	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
Reclaimed	2,082	2,103	2,124	2,145	2,166	2,188
Increase	86	21	21	21	21	22
% Increase	4.3%	1.0%	1.0%	1.0%	1.0%	1.0%
Units						
Water	61,425	61,548	61,672	61,796	61,920	62,045
Increase	123	123	124	124	124	125
% Increase	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
Wastewater	59,857	60,257	60,661	61,069	61,481	61,897
Increase	430	400	404	408	412	416
% Increase	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%
Reclaimed	2,082	2,103	2,124	2,145	2,166	2,188
Increase	86	21	21	21	21	22
% Increase	4.3%	1.0%	1.0%	1.0%	1.0%	1.0%
Billable Flow						
Water	4,523,460	4,484,308	4,446,053	4,408,667	4,370,320	4,332,843
% Increase	-1.0%	-0.9%	-0.9%	-0.8%	-0.9%	-0.9%
Wastewater	3,367,241	3,367,241	3,367,241	3,367,241	3,367,241	3,367,241
% Increase	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Reclaimed	807,971	807,971	807,971	807,971	807,971	807,971
% Increase	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Ten Largest Customers of the System

Data from the Utilities Department billing system for the fiscal year ending September 30, 2023, was used to identify the ten largest customers of the System in terms of Revenues. The results of the query including annual usage and corresponding Revenues are summarized in Table 7. The ten largest water customers represent approximately 5.5% of the total billable water flow and 4.0% of the total Revenues generated through the user fees, rates and charges for the System. The ten largest wastewater customers represent approximately 12.8% of the total billable wastewater flow and 4.6% of the total Revenues generated through the user fees, rates and charges for the System. The largest wastewater customer is the Town. Several of the other largest customers are either multi-family or governmental agencies that (together with the Town) are historically stable and generally not affected by conditions that reduce or discontinue usage over a long period of time.

Table 7. Ten Largest Customers -FY 2023 (Audited)

Customer	Class	Annual Water Usage (gallons)	Water Revenues	% of Total Water Revenues	Annual Wastewater Flow (gallons)	Wastewater Revenues	%of Total Wastewater Revenues
Town [1]	Wholesale				199,096,000	$919,438	3.5%
Broward County Detention Center	Commercial	50,183,000	$218,735	0.8%	50,183,000	$207,858	0.8%
Pomp Bus Park Owners Association	Commercial	36,810,000	$164,452	0.6%	36,810,000	$151,601	0.6%
Florida Textile Services LLC	Commercial	23,334,000	$101,024	0.4%	23,334,000	$91,294	0.3%
Golden Acres Redev LTD	Multi-Family	22,709,000	$103,440	0.4%	22,709,000	$122,956	0.5%
Broward Sheriff's Office	Commercial	21,613,000	$96,677	0.3%	21,613,000	$84,670	0.3%
West Atlantic Blvd Owner LLC	Multi-Family	21,161,000	$96,773	0.3%	21,161,000	$160,794	0.6%
Captiva Associates, LLC	Multi-Family	19,225,000	$93,128	0.3%	19,225,000	$125,731	0.5%
SNH/LTA Properties Trust	Multi-Family	18,827,000	$76,121	0.3%	18,827,000	$121,973	0.5%
Golf View Mobile Home Park	Multi-Family	18,185,000	$78,904	0.3%	18,185,000	$140,152	0.5%
Palm Aire	Multi-Family	18,006,000	$92,550	0.3%			
Subtotal: Largest Customers		250,053,000	$1,121,803		431,143,000	$1,207,029	
Total System		4,569,377,000	$27,917,026		3,364,144,000	$26,213,733	
% of Total System		**5.5%**	**4.0%**		**12.8%**	**4.6%**	

(1) The City provides wastewater service to customers in a portion of the Town pursuant to the Wholesale Agreement, and also provides water service to customers in a portion of the Town that was annexed into the Town's boundaries, subject to a 25% surcharge.

User Rates, Fees, and Charges

The Utility Fund's primary sources of Gross Revenues are from user rates, fees and charges. The user rates, fees and charges are designed and structured to: (i) recover the cost incurred by the Utility Fund for water, wastewater and reuse water services; (ii) pay the annual Debt Service Requirement on Outstanding Bonds and the principal and interest payments associated with outstanding Subordinated Debt; and (iii) pay for other budgeted revenue requirements of the Utility Fund including addressing the necessary minimum reserves and rate covenant requirements of the Mater Bond Ordinance. The O&M Expenses and

minor capital costs for services and facilities are primarily recovered from user rates, fees and charges including miscellaneous income from ancillary charges and interest income.

In November of 2023, the City Commission approved a series of water, wastewater, and reuse rate increases through FY 2029, as shown in Table 8. These rate adjustments were determined from a rate and financial planning study conducted by Raftelis in the summer of 2023 that was based on the City's approved FY 2023 operating budget and CIP, and proposed Broward County wastewater treatment rates for FY 2022.

Table 8. City Commission Approved Rate Adjustments[1] - Forecast Period

	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Water	0.0%	9.5%	9.5%	9.5%	9.5%	9.5%
Wastewater (1)	0.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Reuse Water	0.0%	12.0%	12.0%	12.0%	12.0%	12.0%

(1) The wastewater rate adjustments apply to all wastewater rates and charges except the multi-family fixed monthly fees which will remain at the current rate throughout the forecast period.

As previously mentioned, the City provides wholesale wastewater service to customers in a portion of the Town and the Town was the single largest user of the Wastewater System in FY 2023. Under the Wholesale Agreement, the Town can convey up to 1.5 MGD of its wastewater flow to the City. The City then pumps the wastewater flow to Broward County for wastewater treatment. The wastewater flow conveyed by the Town has represented on average about 3.7% of total wastewater flow sent by the City to Broward County for treatment, as explained later in this report. Based on the Wholesale Agreement, the City annually calculates charges for wastewater service to be paid by the Town for wastewater service. The charges include both a fixed component and a variable component, a portion of which includes the Broward County fees that are assessed to the City for wastewater treatment. The charges to be paid by the Town are calculated each year and the Town pays the City on a monthly basis based on metered wastewater flows. The charges for 2024 are $34,709 per month and $2.661 per 1,000 gallons of wastewater flow (which results in total anticipated revenues paid to the City in the amount of $933,000). It should be noted, the volumetric rate is assessed to the total flow conveyed to the City, which can include inflow and infiltration. While the rates and revenues paid by the Town to the City have increased by 5% per year over the last three fiscal years, to be conservative it is assumed that revenues from the Town remain at the current level through the Forecast Period.

Also, as previously mentioned, the City provides water service to customers in a portion of the Town and, pursuant to the LHP Franchise, in a portion of Lighthouse Point. These customers pay the City's water rates shown in Table 9 plus the 25% outside-City surcharge. Additionally, the City provides reuse service to certain customers outside of the City pursuant to the Reuse Agreements. The reuse customers in Lighthouse Point pay the reuse rates (Class II) shown in Table 9 and the amount paid by Broward County

[1] Link to City's ordinance: https://codelibrary.amlegal.com/codes/pompanobeach/latest/pompanobeach_fl/0-0-0-79899#JD_Ch.50

for wholesale reuse service is currently $0.76 per 1,000 gallons which is based on the rate methodology specified in the reuse agreement between the City and Broward County.

As shown in Table 9, the approved rate structure effective as of October 1, 2024, for the Water System consists of a fixed monthly charge per meter size regardless of the level of usage and volumetric rates per 1,000 gallons of water use based on monthly metering activities. The rate structure for water has four customer classifications based on user characteristics with the most common being the Single-Family class generally connected through a ¾-inch water meter followed by Multi-Family, Commercial, and Irrigation. In addition, there is a fixed monthly charge for each *additional* unit for Multi-Family and Commercial customers. The water volumetric rate structure includes four inclining tiers for Single-Family, Multi-Family and Irrigation customers and two inclining tiers for Commercial customers. The allowance of water use within each tier varies based on the meter size for each customer class.

As shown in Table 9, the approved rate structure for the Wastewater System effective as of October 1, 2024, consists of a fixed monthly charge per unit for Single-Family, Multi-Family, and Commercial customers regardless of water use. The wastewater rate structure also includes a uniform volumetric charge per 1,000 gallons of water use. The volumetric charge for Single-Family and Multi-Family is capped at 10,000 gallons per unit per month of water use. The volumetric charge applies to all water use for Commercial customers.

As shown in Table 9, the approved rate structure for the reuse system effective as of October 1, 2024 consists of a fixed monthly charge per meter size regardless of the level of usage and volumetric rates per 1,000 gallons of water use based on monthly metering activities. The rate structure for reuse has two customer classifications based on when reuse customers connected to the system. The reuse volumetric rate structure includes three inclining tiers and the allowance of reuse within each tier varies based on the meter size. As noted earlier, the Reuse Agreements provide for the charges to customers of the reuse system outside of the City's boundaries.

Table 9. Water and Wastewater Rates Effective October 1, 2024 (1)

	RATE
Water – Single Family Residential	
Monthly Base Charge Per Meter Size	
¾"	$18.74
1"	$24.40
1 ½"	$34.30
2"	$48.62
Volume Rates Per 1,000 Gallons (2)	
Block 1	$3.25
Block 2	$4.47
Block 3	$6.21
Block 4	$8.74
Water – Multi Family Residential	
Monthly Base Charge Per Meter Size	
¾"	$12.88
1"	$17.31
1 ½"	$20.72
2"	$33.89

	RATE
3”	$129.81
4”	$164.74
6”	$247.71
8”	$342.29
10”	$518.87
Monthly Service Charge for each additional unit	$5.92
Volume Rates Per 1,000 Gallons	
Block 1	$3.25
Block 2	$4.47
Block 3	$6.21
Water – Commercial	
Monthly Base Charge Per Meter Size	
¾”	$21.39
1”	$27.76
1 ½”	$39.12
2”	$55.48
3”	$213.49
4”	$271.08
6”	$407.66
8”	$563.49
10”	$798.30
Monthly Service Charge for each add. unit	$11.05
Volume Rates Per 1,000 Gallons	
Block 1	$3.25
Block 2	$4.71
Wastewater	
Monthly Base Charge by customer class	
Single Family	$17.49
Multi Family	$16.10
Commercial	$19.17
Volume Rates Per 1,000 Gallons	
Uniform rate (3)	$4.08
Reuse Water	
Monthly Base Charge by meter size	
¾”	$11.64
1”	$29.11
1 ½”	$58.24
2”	$93.17
3”	$174.71
4”	$291.17
6”	$582.30
8”	$931.68
10”	$1,164.60
Volume Rates Per 1,000 Gallons Class I (4)	
Block 1	$0.91
Block 2	$1.79
Block 3	$2.65
Volume Rates Per 1,000 Gallons Class II (5)	

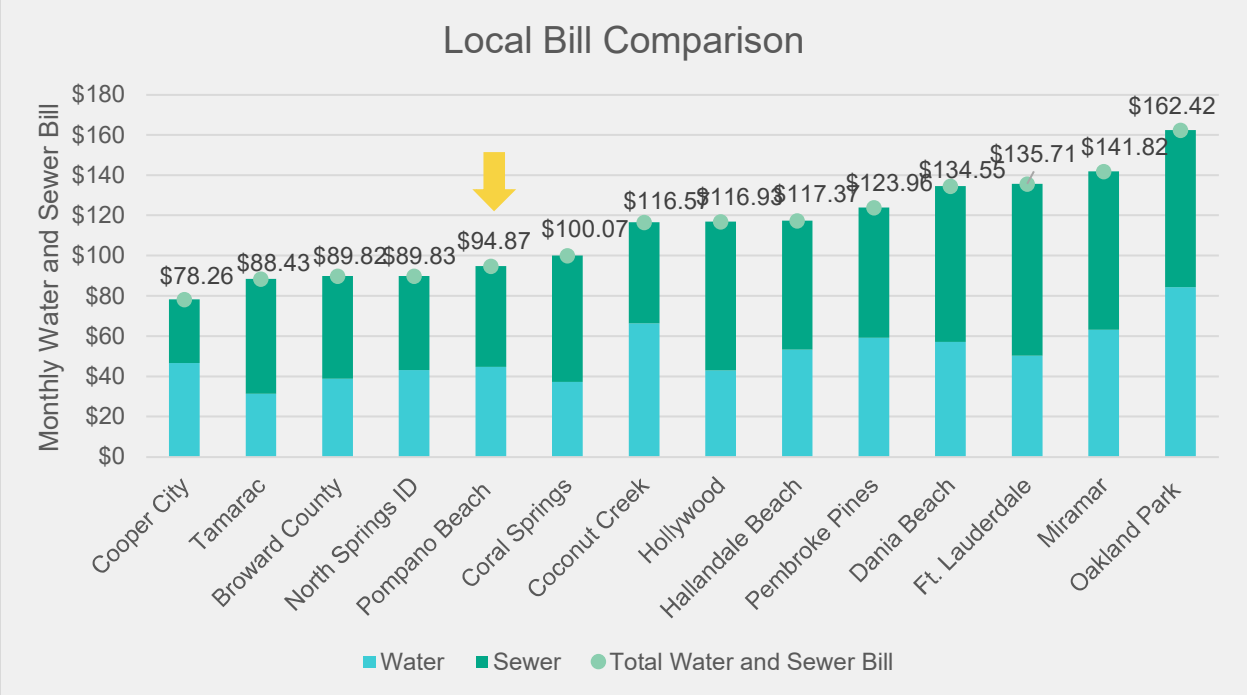
	RATE
Block 1	$1.28
Block 2	$2.49
Block 3	$3.72

1. The Rates shown in this schedule represent the rates charged inside the City limits. Rates for customers located outside the City limits are charged a 25% surcharge, unless otherwise provided by agreement as described earlier.
2. Volume rates are the same for all meter sizes, but volumetric blocks vary based on meter size.
3. Single Family and Multi-Family customers capped at 10,000 gallons per month per ERU.
4. Reuse customers connected to the system prior to July 12, 2011.
5. Reuse customers connected to the system subsequent to July 12, 2011.

Typical Monthly Bill and Comparison With Nearby Utilities

Comparisons of typical bills for monthly water and wastewater service of 8,000 gallons for Single-Family customers of the System within the portion of the Service Area in the City, using rates, fees and charges in effect as of October 1, 2024, and typical bills for monthly water and wastewater service of 8,000 gallons for Single-Family customers of certain nearby utilities are provided in Figure 1. The rates used to calculate bills issued by other nearby utilities were current as of October 2024 and are exclusive of local taxes, franchise fees or other rate adjustments unless otherwise noted. This comparison is for illustrative purposes only and should not be interpreted as an indication of anything other than Single-Family monthly service of 8,000 gallons. [FIGURE 1 TO BE UPDATED]

Figure 1. Comparison of Single-Family Residential Bills (Inside-City) with Other Communities (8,000 Gallons)



Charges for Other Services

In addition to the schedule of user rates, fees and charges the City also charges for other, generally one-time, service charges and penalties to recover costs of certain services specifically requested by customers and address violations. This secondary source of operating revenues assists with maintaining just and equitable cost recovery, which reduces the level of expenditures funded from monthly user rates, fees and charges. These other service charges include connection fees to physically connect new development to a water or sewer line for service, Capital Recovery Fees which are assessed to new development, and miscellaneous revenues collected for establishing a new utility account or transfer, late fees, returned check charges, etc. The Utility Fund generates approximately $575,000 to $1,000,000 in each Fiscal Year from these charges. It should be noted that revenues from Capital Recovery Fees are **not** included in Gross Revenues for purposes of the Master Bond Ordinance.

Capital Improvement Plan for the System

The City Commission adopts an ongoing CIP for the System. The CIP is used to plan for and address expansions, upgrades, regulatory requirements, and refurbishment needs to continue providing high quality services to existing and future customers. The current adopted CIP covers the period from FY 2025 to FY 2029. Funding for the CIP will be provided from a combination of: (i) reserves/revenues from user rates, fees and charges; (ii) proceeds of the Series 2024 Bonds; and (iii) proceeds of other proposed Additional Parity Obligations, consisting of the City's proposed Water and Wastewater Revenue Bonds, Series 2026 (the "Series 2026 Bonds") and proposed Water and Wastewater Revenue Bonds, Series 2028 (the "Series 2028 Bonds"). There is no assurance that the City will be able to issue the Series 2026 Bonds and/or the Series 2028 Bonds in the future, based on market conditions or other factors, including its ability to meet the requirements under the Master Bond Ordinance for the issuance of Additional Parity Obligation. The City Commission has not yet authorized the issuance of the Series 2026 Bonds or the Series 2028 Bonds.

The assumptions as provided by the City's Municipal Advisor with respect to the Series 2026 Bonds and the Series 2028 Bonds are as follows:

- Proposed Series 2026 Bonds - Assume a par amount of $56,685,000, 30 years to maturity, and an all-in true interest cost per annum of 4.621%.
- Proposed Series 2028 Bonds – Assume a par amount of $40,520,000, 30 years to maturity, and an all-in true interest cost per annum of 4.621%.

A summary of the current System CIP and the anticipated funding sources is provided in Table 10. Descriptions for each project in the CIP are provided within the Engineer's Report. It should be noted that the City is also working on a sanitary sewer capital improvement project that is currently under construction and will be funded by a state revolving fund loan (previously described as Loan Agreement WW062470 with a principal amount of $2,939,760). The principal and interest associated with this loan is included in the Forecast Period.

Table 10. Summary of System CIP and Funding Sources

Capital Improvement Plan (1)	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	5-Year Total
Potable Water System Projects	$ 2,410,000	$ 48,890,000	$ 28,360,000	$ 43,110,000	$ 5,120,000	$ 7,450,000	**$ 132,930,000**
Reuse System Projects	$ 440,000	$ 930,000	$ 870,000	$ 3,445,000	$ 4,945,000	$ 9,695,000	**$ 19,885,000**
Wastewater System Projects	$ 670,000	$ 5,793,667	$ 4,921,667	$ 5,271,667	$ 3,245,000	$ 3,245,000	**$ 22,477,000**
	$ 3,520,000	**$ 55,613,667**	**$ 34,151,667**	**$ 51,826,667**	**$ 13,310,000**	**$ 20,390,000**	$ 175,292,000
Funding Sources for CIP							
Series 2024 Revenue Bonds		$ 53,573,667	$ 32,251,667				**$ 85,825,333**
Proposed Series 2026 Revenue Bonds				$ 49,226,667	$ 11,050,000		**$ 60,276,667**
Proposed Series 2028 Revenue Bonds (2)						$ 17,100,000	**$ 17,100,000**
Revenues from rates/Surplus Fund	$ 3,520,000	$ 2,040,000	$ 1,900,000	$ 2,600,000	$ 2,260,000	$ 3,290,000	**$ 12,090,000**
	$ 3,520,000	**$ 55,613,667**	**$ 34,151,667**	**$ 51,826,667**	**$ 13,310,000**	**$ 20,390,000**	$ 175,292,000

(1) Thes CIP shown above includes the replacement of a boom truck (that has an estimated service life of 19 years) and is part of the City's renewal and replacement of equipment that is captured in capital outlay as opposed to the City's CIP. However, the City plans to include it as part of the Series 2024 Project, therefore it has been added to the City approved CIP.

(2) The City has identified approximately $24.85 million of capital projects in FY 2030 and FY 2031 that will also need to be funded with the proposed Series 2028 Bonds, bringing the total to $41.95 million ($17.1 million + $24.85 million).

Operating Expenses, Debt Service Requirement, and Capital Expenditures

General

The revenue requirements consist of the necessary expenditures for the City to provide, maintain, and perpetuate quality water, wastewater, and reuse water services pursuant to regulatory requirements and policies of the City. The revenue requirements shown herein reflect annual cash flows required for O&M Expenses, the existing Debt Service Requirement for the Outstanding Series 2021 Bond, the proposed Debt Service Requirement for the proposed Series 2024 Bonds, Series 2026 Bonds and Series 2028 Bonds, payments for principal and interest on existing Subordinated Debt, capital outlay not addressed through the CIP, and all other appropriate fiscal year requirements.

Comprehensive annual budgets are prepared by the City for the Utility Fund and adopted by the City Commission prior to the beginning of each fiscal year. The projected revenue requirements for the Forecast Period (FYs 2024 through 2029), as shown in Table 11, were developed based on the FY 2024 approved budget[2], the approved FY 2025 budget, and trends obtained from reviews of historical data, Utilities Department input, escalations related to inflation, and the existing and proposed Debt Service Requirement estimated to be needed to fund the System CIP. Escalation factors for O&M Expenses for FY 2026 to FY 2029 range from 2% to 3% per year. O&M Expenses have increased significantly in the past few years and the City's adopted FY 2025 budget reflects continued increases in O&M Expenses. However, in future years, costs associated with chemicals and other costs are expected to increase to more normal levels. In addition, some of the charges for wastewater treatment from Broward County are anticipated to decrease,

[2] Raftelis reviewed actual but unaudited operating expenses for FY 2024 through the period ending September 17, 2024. The preliminary estimates indicate operating expenses will be at or slightly below the FY 2024 budgeted operating expenses.

as explained below in the section titled "Large User Agreement", which is causing total O&M Expenses to increase modestly from FY 2026 and beyond.

The Debt Service Requirement during the Forecast Period is estimated to increase significantly because of the issuance of the proposed Series 2024 Bonds, Series 2026 Bonds, and Series 2028 Bonds and the debt service requirements associated with the existing Subordinated Debt. No additional State of Florida revolving fund loans are anticipated to be obtained over the Forecast Period.

Other expenditures include capital outlay and transfers to the Renewal and Replacement Account required by the Master Bond Ordinance, which provides for the City to deposit, on a monthly basis, from moneys remaining on deposit in the Operating Fund into the Renewal and Replacement Account, an amount at least equal to one-twelfth (1/12th) of five percent (5%) of the Gross Revenues received during the immediately preceding Fiscal Year. Capital outlay is anticipated to remain at current levels throughout the Forecast Period. Transfers to the Renewal and Replacement Fund (which funds projects in the CIP that are not debt funded), are assumed to decrease over the Forecast Period to offset the increase in the Debt Service Requirement. (It should be noted the level of transfers to the Renewal and Replacement Account decreased from $6 million in FY 2023 to $4 million in FY 2024 to offset increases in operations and maintenance costs).

Large User Agreement

The City receives wastewater treatment service from Broward County pursuant to the Large User Agreement between the City and Broward County. Under the Large User Agreement, the City pays a fixed monthly fee to the County based on its proportion of allocated debt service of the County, and pays a volumetric rate for operation and maintenance costs for each gallon of wastewater flow conveyed to Broward County. A summary of historical and projected changes in each fee component is provided below.

- *Fixed monthly fee* - From FY 2023 through FY 2025, the fixed component has increased on average by 4.8% per year, though there has been variability from year to year ranging from an increase of almost 16% in FY 2023 followed by average decreases of about 0.7% in FY 2024 and FY 2025. Based on the most recent projections provided from Broward County, the County's debt service component is anticipated to decrease from FY 2026 and beyond as certain County wastewater utility system obligations mature. The County's debt component is anticipated to decline by approximately 22% in FY 2028 and is reflected as such in the Forecast Period.
- *Volumetric rate* - From FY 2023 through FY 2025, the volumetric component has increased on average by 12.1% per year, with FY 2024 and FY 2025 increasing 15.5% and 14.8%, respectively. For the three FY years prior to FY 2023, the volumetric component had increased on average by 4.6% per year. This Report assumes the volumetric rate charged by Broward County will increase at more normal levels, by 5.0% per year, during the Forecast Period from FY 2026 through FY 2029.
- *True – Up* - The final rates paid by the City to Broward County annually also include a "true-up" for the prior year, which is based on a comparison of the actual costs to provide wastewater treatment service to the actual revenues paid by all of the County's large users of its wastewater treatment plant. This amount varies year-to-year.

The City's adopted CIP, including the Series 2024 Project, includes projects to reline wastewater lines which will reduce inflow and infiltration and therefore the amount of flow sent to Broward County for

wastewater treatment. It is anticipated this reduction in wastewater flow will result in annual savings in the volumetric rates paid to Broward County pursuant to the Large User Agreement of about $100,000 starting in FY 2026.

Table 11. Projected Fiscal Requirements – Forecast Period

	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Operating Expenses						
Cost of Operation and Maintenance (1)						
Personnel Services	$ 14,309,890	$ 15,722,705	$ 16,194,386	$ 16,680,218	$ 17,180,624	$ 17,696,043
Wastewater Treatment (Paid to Broward County)	12,879,254	13,404,102	13,726,880	14,125,581	13,467,994	13,966,687
All Other Cost of Operation and Maintenance	15,069,012	16,841,459	17,204,595	17,628,060	18,062,112	18,507,015
Subtotal: Cost of Operation and Maintenance	**$ 42,258,156**	**$ 45,968,266**	**$ 47,125,862**	**$ 48,433,859**	**$ 48,710,730**	**$ 50,169,745**
Other Operating Expenses						
Administrative Expenses (1)	6,977,421	7,326,292	7,509,449	7,697,186	7,889,615	8,086,856
Subtotal: Operating Expenses	**$ 49,235,577**	**$ 53,294,558**	**$ 54,635,311**	**$ 56,131,045**	**$ 56,600,345**	**$ 58,256,601**
	6.0%	*8.8%*	*2.5%*	*2.8%*	*0.6%*	*3.0%*
Debt Service Requirement						
Existing						
Series 2021 Bond	683,636	687,264	685,506	683,491	686,220	678,562
Proposed						
Series 2024 Bonds	-	5,048,250	5,047,250	5,048,750	5,047,500	5,053,500
Projected Series 2026 Bonds		-	1,457,938	2,915,875	3,820,875	3,820,625
Projected Series 2028 Bonds			-	-	-	2,084,325
Subtotal: Debt Service Requirement	$ 683,636	$ 5,735,514	$ 7,190,694	$ 8,648,116	$ 9,554,595	$ 11,637,012
Subordinated Debt Service						
Existing						
DW062450 (Interconnect)	$ 17,724	$ 15,813	$ 15,813	$ 15,813	$ 15,813	$ 15,813
DW062480 (C-51 Reservoir)	$ 277,063	$ 554,126	$ 554,126	$ 554,126	$ 554,126	$ 554,126
WW062470 (Non-sewer)	$ -	$ 146,988	$ 146,988	$ 146,988	$ 146,988	$ 146,988
Subtotal: Subordinated Debt Service	$ 294,787	$ 716,928	$ 716,928	$ 716,928	$ 716,928	$ 716,928
Subtotal: Total Debt Service	$ 978,423	$ 6,452,442	$ 7,907,621	$ 9,365,044	$ 10,271,523	$ 12,353,940
	41.9%	*559.5%*	*22.6%*	*18.4%*	*9.7%*	*20.3%*
Other Expenditures						
Capital Outlay	$ 1,835,826	$ 2,342,779	$ 2,060,981	$ 2,598,492	$ 1,880,055	$ 2,056,690
Transfers to Renewal and Replacement Account	$ 4,000,000	$ 2,040,000	$ 1,900,000	$ 2,600,000	$ 2,260,000	$ 3,290,000
Subtotal: Other Expenditures	$ 5,835,826	$ 4,382,779	$ 3,960,981	$ 5,198,492	$ 4,140,055	$ 5,346,690
		-24.9%	*-9.6%*	*31.2%*	*-20.4%*	*29.1%*
Total Projected Revenue Requirements	**$ 56,049,826**	**$ 64,129,779**	**$ 66,503,914**	**$ 70,694,581**	**$ 71,011,923**	**$ 75,957,230**
	0.7%	*14.4%*	*3.7%*	*6.3%*	*0.4%*	*7.0%*

(1) Per the City's Master Bond Ordinance, Cost of Operations and Maintenance excludes any general administrative charges payable to the general fund. It should be noted, both the fixed and volumetric charges for wholesale wastewater treatment paid by the City to Broward County are reflected in the Cost of Operation and Maintenance.

Projected Operating Results

Projected Gross Revenues consist of revenues from user fees, rates and charges for the System and Other Revenues (hereinafter defined). In projecting the financial results, attention was given to criteria and constraints that reflect conservative attributes, such as using forecasts of customer growth levels that were below or in line with anticipated amounts derived from historic trends. The Revenues from rates shown in Table 12 are estimated by applying the approved rate increases in Table 8 to the rates effective as of October 1, 2024, in Table 9 and multiplying these rates by the detailed customer account and water, wastewater, and reuse usage projections (which are summarized in Table 6). It should be noted that we have reviewed unaudited revenues for FY 2024 through the period ending September 17, 2024. The preliminary estimates indicate revenues, especially water

sales, will be higher than the FY 2024 budgeted revenues. Therefore, the revenues shown below for FY 2024 are conservative.

As shown in Table 12, the projected Revenues from user fees, rates and charges are anticipated to increase on average by 6.2% during the Forecast Period which is primarily driven by the City Commission approved rate increases shown in Table 8. (It should be noted Revenues from user fees, rates and charges increased on average by 5.7% per year during the Historical Period (FY 2019 to FY 2023) primarily driven by City Commission approved rate increases shown in Table 3. For purposes of this Report the term "Other Revenues" include connection fees to physically connect new development to a water or sewer line for service, and miscellaneous revenues collected for establishing a new utility account or transfer, late fees, returned check charges, interest earnings, etc., but exclude Contributions in Aid of Construction and impact fees (utility capital recovery fees) which are assessed to new development. Although Capital Recovery Fees are considered as income to the Utility Fund, they are not considered as part of Gross Revenues for purposes of the Master Bond Ordinance

Table 12. Projected Gross Revenues and Other Revenues- Forecast Period

	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Gross Revenues						
Revenues from Charges						
Revenues from water rates	$ 27,460,363	$ 29,802,806	$ 32,341,108	$ 35,105,639	$ 38,088,435	$ 41,349,503
Revenues from reuse rates	1,947,138	2,181,893	2,447,022	2,744,852	3,077,692	3,451,230
Revenues from wastewater rates	26,284,794	27,183,237	27,917,634	28,757,207	29,638,761	30,528,292
Subtotal: Revenues from rates and charges	$ 55,692,295	$ 59,167,936	$ 62,705,764	$ 66,607,698	$ 70,804,889	$ 75,329,025
Other Revenues (1)	909,176	1,218,477	1,006,563	975,878	963,148	967,712
Subtotal: Gross Revenues	**$ 56,601,471**	**$ 60,386,413**	**$ 63,712,327**	**$ 67,583,575**	**$ 71,768,037**	**$ 76,296,737**
		6.7%	*5.5%*	*6.1%*	*6.2%*	*6.3%*
Revenues from Capital Recovery Fees (1)	$ 747,305	$ 700,000	$ 350,000	$ 350,000	$ 350,000	$ 350,000
Gross Revenues and Other Revenues	**$ 57,348,776**	**$ 61,086,413**	**$ 64,062,327**	**$ 67,933,575**	**$ 72,118,037**	**$ 76,646,737**
		6.5%	*4.9%*	*6.0%*	*6.2%*	*6.3%*

(1) Other Revenues include connection fees to physically connect new development to a water or sewer line for service, and miscellaneous revenues collected for establishing a new utility account or transfer, late fees, returned check charges, interest earning, etc., but exclude Contributions in Aid of Construction and impact fee (capital recovery fees). Capital Recovery Fees may not be used to pay the Debt Service Requirement on Bonds or Subordinated Debt.

The Utility Fund's operating financial results for the Forecast Period (FYs 2024 through 2029) are presented on a cash flow basis. This presentation differs from the accounting presentation within the City's Annual Comprehensive Financial Reports for the Historical Period. The results shown in Table 13 demonstrate the level of Gross Revenues, Other Revenues, and unrestricted fund balance, that will be necessary to meet the cash needs (Operation and Maintenance Cost, Debt Service Requirement, and cash funded capital improvement projects) of the System over the Forecast Period.

Table 13. Projected Financial Results – Forecast Period

	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Gross Revenues	$ 56,601,471	$ 60,386,413	$ 63,712,327	$ 67,583,575	$ 71,768,037	$ 76,296,737
Operating Expenses (1)	$ (49,235,577)	$ (53,294,558)	$ (54,635,311)	$ (56,131,045)	$ (56,600,345)	$ (58,256,601)
Net Revenues	$ 7,365,893	$ 7,091,856	$ 9,077,015	$ 11,452,530	$ 15,167,692	$ 18,040,136
Revenues from Capital Recovery Fees	$ 747,305	$ 700,000	$ 350,000	$ 350,000	$ 350,000	$ 350,000
Net Revenues and Capital Recovery Fees	$ 8,113,198	$ 7,791,856	$ 9,427,015	$ 11,802,530	$ 15,517,692	$ 18,390,136
Debt Service						
Senior Debt (2)	$ (683,636)	$ (5,735,514)	$ (7,190,694)	$ (8,648,116)	$ (9,554,595)	$ (11,637,012)
Subordinated Debt	$ (294,787)	$ (716,928)	$ (716,928)	$ (716,928)	$ (716,928)	$ (716,928)
Total Debt Service	$ (978,423)	$ (6,452,442)	$ (7,907,621)	$ (9,365,044)	$ (10,271,523)	$ (12,353,940)
Operating Balance	$ 7,134,775	$ 1,339,414	$ 1,519,394	$ 2,437,487	$ 5,246,169	$ 6,036,196
Other Expenditures						
Capital Outlay	$ (1,835,826)	$ (2,342,779)	$ (2,060,981)	$ (2,598,492)	$ (1,880,055)	$ (2,056,690)
Transfers to Renewal and Replacement Account	$ (4,000,000)	$ (2,040,000)	$ (1,900,000)	$ (2,600,000)	$ (2,260,000)	$ (3,290,000)
Total Other Expenditures	$ (5,835,826)	$ (4,382,779)	$ (3,960,981)	$ (5,198,492)	$ (4,140,055)	$ (5,346,690)
Net Balance	**$ 1,298,949**	**$ (3,043,365)**	**$ (2,441,587)**	**$ (2,761,006)**	**$ 1,106,114**	**$ 689,506**

1. Operating expenses exclude depreciation, amortization and interest expense.
2. Debt Service Requirement for Senior Debt relates to the Series 2021 Bond, Series 2024 Bonds, Series 2026 Bonds and Series 2028 Bonds as assumed in this Report.

Rate Covenant and Debt Service Coverage

Per Section 20 (E) of the Master Bond Ordinance the City has agreed to the following rate covenant:

"The Issuer will fix, establish, revise from time to time whenever necessary, maintain and always collect such fees, rates, rentals and other charges for the use of the products, services and facilities of the System which will always provide Net Revenues in each Fiscal Year sufficient to pay one hundred twenty percent (120%) of the Debt Service Requirement on all Outstanding Bonds in the applicable Fiscal Year. In addition, such Net Revenues in each Fiscal Year shall also be sufficient to provide one hundred percent (100%) of any amounts required by the terms of this Ordinance or any Supplemental Resolution to be deposited into the Reserve Account (including any subaccount therein) or with any Credit Facility Issuer as a result of a withdrawal from the Reserve Account (including any subaccount therein), the Renewal and Replacement Account and debt service on other obligations payable from the Revenues of the System (including, but not limited to Subordinated Debt), and other payments, and all allocations and applications of Revenues in this Ordinance and/or any Supplemental Resolution required in such Fiscal Year."

Table 14 demonstrates the ability of the System to meet the rate covenant requirement of the Master Bond Ordinance and projected debt service coverage over the Forecast Period.

Table 14. Projected Rate Covenant and Debt Service Coverage Summary – Forecast Period

	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Gross Revenues						
Revenues from Charges	$ 55,692,295	$ 59,167,936	$ 62,705,764	$ 66,607,698	$ 70,804,889	$ 75,329,025
Other Revenues (1)	909,176	1,218,477	1,006,563	975,878	963,148	967,712
Subtotal: Gross Revenues	**$ 56,601,471**	**$60,386,413**	**$ 63,712,327**	**$ 67,583,575**	**$ 71,768,037**	**$ 76,296,737**
Cost of Operation and Maintenance (2)	(42,258,156)	(45,968,266)	(47,125,862)	(48,433,859)	(48,710,730)	(50,169,745)
Net Revenues	**$14,343,314**	**$14,418,148**	**$16,586,464**	**$19,149,716**	**$23,057,307**	**$26,126,992**
Debt Service Requirement (3)	**$ 683,636**	**$ 5,735,514**	**$ 7,190,694**	**$ 8,648,116**	**$ 9,554,595**	**$ 11,637,012**
Debt Service Coverage	**21.0**	**2.5**	**2.3**	**2.2**	**2.4**	**2.2**
Requirement	1.2	1.2	1.2	1.2	1.2	1.2
Subordinated Debt (4)	$ 294,787	$ 716,928	$ 716,928	$ 716,928	$ 716,928	$ 716,928
Total Debt Service	**$ 978,423**	**$ 6,452,442**	**$ 7,907,621**	**$ 9,365,044**	**$ 10,271,523**	**$ 12,353,940**
Total Debt Service Coverage - Calculated	**14.7**	**2.2**	**2.1**	**2.0**	**2.2**	**2.1**

1. Other Revenues include connection fees to physically connect new development to a water or sewer line for service, and miscellaneous revenues collected for establishing a new utility account or transfer, late fees, returned check charges, interest earning, etc., but exclude Contributions in Aid of Construction and Capital Recovery Fees which are assessed to new development (impact fees).
2. Cost of Operation and Maintenance excludes depreciation, amortization, interest expense, and administrative charges.
3. Debt Service Requirement includes the Series 2021 Bond, Series 2024 Bonds, Series 2026 Bonds and Series 2028 Bonds.
4. Subordinated Debt consists of the three state revolving fund loans already obtained by the City and described earlier.

Principal Considerations and Assumptions

In the preparation of this Report, certain assumptions were made with respect to conditions anticipated to occur in the future. While these assumptions are considered to be conservative and reasonable, they are essentially dependent on future events, and it is inevitable that actual events and conditions will differ from those presented herein. In addition, certain information and assumptions have been relied upon which were provided by others, including: (i) operating and financial reports and records prepared by the City's Utilities Department and City management and staff and other statistical and financial information provided by and discussions with the City management and staff and the Utilities Department; and (ii) information provided by the City's Municipal Advisor with regard to the proposed Series 2024 Bonds and proposed Series 2026 Bonds and Series 2028 Bonds. While the use of such information is believed to be reasonable for the purposes of this Report, no further assurances are offered with respect thereto, other than for the purposes of this Report. To the extent that actual conditions differ from those assumed herein, the actual results would vary from those estimated and projected. Such projections are therefore subject to change and there are no assurances that these projections will be realized.

The Principal Considerations and Assumptions used to project operating results include:

1. Projected fiscal requirements for the Forecast Period (FYs 2024 through 2029) utilize the approved FY 2024 and the approved FY 2025 budgets as a basis. As mentioned, we have reviewed actual but unaudited revenues and operating expenses for FY 2024 through the period ending September 17, 2024. The preliminary estimates indicate operating expenses will be at or slightly below the

FY 2024 budgeted operating expenses and revenues will be higher than the FY 2024 budgeted revenues. Projections in FY 2026 and beyond are further adjusted and escalated annually for needs, growth and inflation, as previously discussed for water, wastewater and reuse respectively. The projected requirements are prepared on a cash basis and do not include depreciation or amortization. Assumptions regarding O&M Expenses for the Forecast Period are based only on projections and actual O&M Expenses may differ, and potentially be materially greater than projected, depending on various factors, many of which are outside the control of the City, including matters relating to the annual rate of inflation.

2. Projected Gross Revenues are based on the approved rates and charges for the Forecast Period (FY 2024 through FY 2029) as approved by the City Commission and noted in the City's rate ordinances. The City Commission has the authority to adjust these rates should the Utility Fund's performance require modification in rates to meet the cash needs of the System.
3. The City purchases wastewater treatment from Broward County pursuant to the Large User Agreement which has provided the City with a basis to project future Broward County debt service payments that are part of the City's payment for treatment service. These projections have been incorporated into the projection of O&M Expenses for purchased wastewater treatment but are subject to change. In addition, the City's CIP for the System includes relining of certain sections of its wastewater collection system which are anticipated to reduce inflow and infiltration and the amount of wastewater flow sent to Broward County for treatment. It is anticipated this reduction in wastewater flow will result in annual savings in the volumetric rates paid to Broward County pursuant to the Large User Agreement of $100,000 starting in FY 2026. It is assumed the City can fund and complete these projects over the Forecast Period to achieve these savings. It is also assumed for the Forecast Period the volumetric rate charged by Broward County will increase by 5.0% per year from FY 2026 through FY 2029, which is consistent with annual increases from 2020 to 2022.
4. The City Commission approves, and the Utilities Department updates, manages and executes, a five-year CIP for the System on a continuing basis. A summary of anticipated funding sources for the CIP is provided in Table 10. Based on the City's capital needs, the amount or the timing of the projects in the System's CIP may change.

Fund Balances

The Operating Fund can be considered as the primary clearinghouse where Gross Revenues are deposited and transferred as required by the Master Bond Ordinance to other funds and accounts to cover the Cost of Operations and Maintenance and the annual Debt Service Requirement, among other matters. Upon satisfaction of the funding requirements for other funds and accounts established pursuant to the Master Bond Ordinance, the balance of any moneys remaining in the Operating Fund shall be deposited into the Surplus Account established under the Master Bond Ordinance and may be used for any lawful purpose related to the System, including for deposit to the Rate Stabilization Fund to mitigate future rate adjustments (it should be noted no application of this fund is projected to be used over the Forecast Period). The amounts on deposit in the Surplus Account are considered unrestricted and historically a portion has been retained for financial strength of the Utility Fund with any excess being directed at projects in the CIP.

Per Resolution No. 2019-199 adopted by the City Commission on June 11, 2019, the City has established an unrestricted fund balance/net asset policy for its enterprise funds (including the Utility Fund) to provide

for unanticipated events that would adversely affect the financial condition of the City and jeopardize the continuation of necessary public services (the "Enterprise Fund Policy"). For the enterprise funds, the City has established a policy to maintain a balance of unrestricted (not committed to capital projects) net assets equal to at least 35% of the revenue requirements for the current fiscal year budget of these funds (covers operations and maintenance, debt service, capital, transfers etc.). For the purposes of the calculation, the current fiscal year shall be the budget as originally adopted by resolution on or before September 30th for the subsequent fiscal year. When calculating this amount, the City can include amounts restricted per debt covenants for renewal and replacement or rate stabilization as applicable to an enterprise fund.

If, at the end of any fiscal year, with respect to an enterprise fund, the actual amount of unrestricted net assets falls below the minimum required funding level set by the City, all efforts should be made to replenish at least 25% of the shortfall from the minimum target within one fiscal year, 50% within two fiscal years, 75% within three fiscal years, and 100% within four fiscal years from the fiscal year within which the shortfall has occurred.

Table 15 shows the beginning balance, the net cash inflows/outflows, and the resulting ending balance for the Utility Fund's unrestricted fund balances. The beginning balances in the schedules for FY 2024 were provided by City staff and reflect unencumbered reserves as of September 30, 2023. Projected interest earnings are estimated on this balance, using the average beginning and ending balance and assuming interest earnings of about 0.75% per year. In summary, the unrestricted fund balance includes: (i) the Operating Fund; (ii) the Rate Stabilization Fund, and (iii) the Renewal and Replacement Account. As shown, the balance will fall below the targeted level due to increases in anticipated costs compared to those estimated when the rate adjustments shown in Table 8 were adopted. Once audited information for FY 2024 is available, the City will determine the impact on the fund balance for FY 2024 and beyond and identify options to meet its target fund balance policy over the Forecast Period.

Table 15. Summary of Certain Funds and Accounts – Forecast Period

	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Beginning Unrestricted Net Asset Balance (1)	$ 24,039,570	$ 24,964,145	$ 21,576,291	$ 19,002,130	$ 16,139,235	$ 17,156,190
Net Balance	$ 1,298,949	$ (3,043,365)	$ (2,441,587)	$ (2,761,006)	$ 1,106,114	$ 689,506
Ending Unrestricted Net Asset Balance	$ 25,338,519	$ 21,920,779	$ 19,134,704	$ 16,241,124	$ 17,245,349	$ 17,845,696
Required Balance (35% of Revenue Requirements)	*$ 19,617,439*	*$ 22,445,423*	*$ 23,276,370*	*$ 24,743,103*	*$ 24,854,173*	*$ 26,585,031*
Above/(Below) Required Balance	$ 5,721,080	$ (524,643)	$ (4,141,666)	$ (8,501,979)	$ (7,608,824)	$ (8,739,334)

(1) The Unrestricted Net Asset Balance includes the City's Utility operating fund 412 (which includes the rate stabilization fund) and the City's Utility Renewal and Replacement Account fund 420.

Additional Bonds Test – Series 2024 Bonds

Pursuant to the Master Bond Ordinance, Additional Parity Obligations can be issued on parity with Outstanding Bonds, provided the applicable requirements of Section 20(Q) of the Master Bond Ordinance

are met. Section 20(Q)(1) of the Master Bond Ordinance provides that one of the requirements that must be met is as follows:

> There shall have been obtained and filed with the City Clerk a certificate of the Finance Director stating : (a) that the books and records of the Issuer relative to the System and the Net Revenues have been reviewed by the Finance Director; and (b) that the amount of the Net Revenues derived for any consecutive twelve (12) months out of the preceding twenty-four (24) months preceding the date of issuance of the proposed Additional Parity Obligations (the "Test Period") adjusted as provided in paragraphs (2), (3), (4), (5) and/or (6) below is equal to not less than one hundred twenty percent (120%) of the Maximum Debt Service Requirement becoming due in any Bond Year thereafter on (a) all Bonds issued under this Ordinance, if any, then Outstanding, and (b) on the Additional Parity Obligations with respect to which such certificate is made.

Paragraphs (2), (3), (4), (5), and (6) of Section 20(Q) allow for various adjustments to Net Revenues in the Test Period. As shown in Table 16, the Test Period for the Series 2024 Bonds is for the twelve months beginning November 1, 2022, and ending on October 31, 2023. For the purposes of the following calculation, the Net Revenues do not include any adjustments as allowed by Subsection 20(Q).

Table 16. Additional Parity Obligations Test-Series 2024 Bonds

	11/1/22 - 10/31/23 (1)
Gross Revenues (2)	$56,973,437
Cost of Operation and Maintenance (3)	38,993,900
Net Revenues	$17,979,537
Debt Service Requirement (4)	
Series 2021 Bond	$679,687
Total Debt Service Requirement	$679,687
Calculated Debt Service Coverage (5)	**26.45**
Debt Service Coverage Requirement	**1.20**
Additional Parity Obligations Test	
Max Debt Service Requirement with Additional Parity Obligations (5)	**$5,735,555**
Calculated Debt Service Coverage for Additional Parity Obligations	**3.13**
Debt Service Coverage Requirement for Additional Parity Obligations	**1.20**

1. Information was provided by City staff and represents the period from November 1, 2022, to October 31, 2023.
2. Per the City's Master Bond Ordinance, Gross Revenues exclude Contributions in Aid of Construction and impact fees, also referred to as Capital Recovery Fees.
3. Per the City's Master Bond Ordinance, Cost of Operations and Maintenance excludes any general administrative charges payable to the general fund.
4. The Debt Service Requirement for this period includes the debt service associated with the Series 2021 Bond.
5. Additional Parity Obligations for the purposes of Table 16 consist of the Series 2024 Bonds. The Series 2024 Bonds are based on the information provided in Table 1, assumed to be issued on or about December 1st with a final maturity of

September 1, 2054. The Maximum Debt Service Requirement includes the Series 2021 Bond and the Series 2024 Bonds. The Maximum Debt Service Requirement occurs in FY 2041.

Findings and Conclusions

Based upon the principal considerations and assumptions and the results of our studies and analyses, as summarized in this Report, which should be read in its entirety in conjunction with the following, we are of the opinion that:

1. The Gross Revenues for the Forecast Period (Fiscal Years ending September 30, 2024 through and including 2029) should be sufficient to pay all projected Cost of Operation and Maintenance of the System and the Net Revenues for such Forecast Period should be sufficient to pay the estimated Debt Service Requirement on all Bonds (including the Series 2021 Bond, the Series 2024 Bonds, the proposed Series 2026 Bonds and the proposed Series 2028 Bonds), the existing Subordinated Debt and to make all additional deposits as required by the Master Bond Ordinance (if any), and meet the rate covenant of the Master Bond Ordinance.
2. Once audited information for FY 2024 is available, the City will have to determine the impact on the fund balance for FY 2024 and beyond and identify options to meet its target fund balance policy over the Forecast Period.
3. The projected debt service coverage as presented in this report is in accordance with the rate covenant contained in the Master Bond Ordinance. The forecast of projected operating results is considered by us to be reasonable and attainable and provides a basis for the City to meet the rate covenant as delineated in the Master Bond Ordinance. A summary of the assumptions and considerations relied upon in the development of the forecast of projected operating results are included herein.
4. The City is able to meet the test set forth in the Master Bond Ordinance for issuing the Series 2024 Bonds as Additional Parity Obligations.