CITY OF
MARGATE
Together We Make It Great

Comprehensive Plan Amendment

Element III
Sanitary Sewer, Solid Waste, Drainage, Potable Water & Natural Groundwater Aquifer Recharge

Part 1 – Potable Water
~~March 2015~~ October 2015

City of Margate - Comprehensive Plan Amendment

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Attachments

1.0 Service Area

In 1957, a private utility company, the Margate Utilities Corp. was established. That same year, the city's first water treatment plant and distribution system was built. In June 1968, the company was sold to the Margate Utility Authority (MUA), a not-for-profit corporation. In 1977, the City of Margate (City) assumed the operation of the utility and assumed the debt of the MUA. The City's Department of Environmental and Engineering Services (DEES) currently operates the facilities. The City of Margate Water and Wastewater System serves the entire geographical area within the City's corporate limits and a portion of the City of Coconut Creek. The service area for the City of Margate system and the land uses within the service area are shown on **Figures III-1 and III-2**, respectively.

2.0 Population and Consumption

Population projections and water demand forecast through 2030 are identified in Section 4.0 of the 2015 update to the 10-year water supply facilities work plan (10-year work plan) provided in **Attachment - A**.

A level of service is a quantitative measure of a given City function. Comprehensive plans must adopt these quantitative standards and provide the means to meet them as development adds pressure to the existing capacity. The most useful standard for water treatment and distribution is gallons per capita per day (gpc/d).

Water consumption data for the service area is calculated based on historical water usage and the published population figures. A detailed description of the per capita figures is provided in Section 4.0 of the 10-year work plan.

The City of Margate Water Treatment Plant has sufficient treatment capacity to service the entire service area through build-out. However, the current limiting condition is the Consumptive Use Permit (CUP) allocation from the Biscayne Aquifer issued by the South Florida Water Management District (SFWMD). Based on the 2007 Regional Water Availability Rule, the City of Margate's base allocation is established at 8.531 million gallons per day (mgd), and additional water supplies required to meet the demands above the base allocation will have to be provided through alternative water supplies. As defined in the 2007 Regional Water Availability rule, this allocation is based on the highest 12-month withdrawals in the five year period prior to April 1, 2006. Using the 2006 population figures, the proportionate share of the base allocations for the City of Margate and the City of Coconut Creek are 7.88 mgd and 0.65 mgd, respectively.

3.0 Existing Facilities

The raw water source for the City's water system is the Biscayne Aquifer, a porous underground formation that underlies most of Miami-Dade, Broward, and Palm Beach Counties. The Biscayne Aquifer has been designated as a "sole source" of drinking water supply for Southeastern Florida by the United States Environmental Protection Agency.

In addition to direct rainwater recharge, the aquifer receives stored fresh water from Lake Okeechobee and the interior Conservation Areas through a system of canals owned and operated by SFWMD. These canals are hydrologically linked to the shallow aquifer. Except for the relatively high calcium hardness and occasionally high iron content, the Biscayne Aquifer water is suitable for most domestic, commercial, and industrial uses.

This 2015 update reflects new language and replaces entire text from the 2008 update of the Potable Water Element. Therefore, the text in this update is not underscored. This update also incorporates the updated 10-Year Water Supply Facilities Work Plan, required by the Florida Legislature.

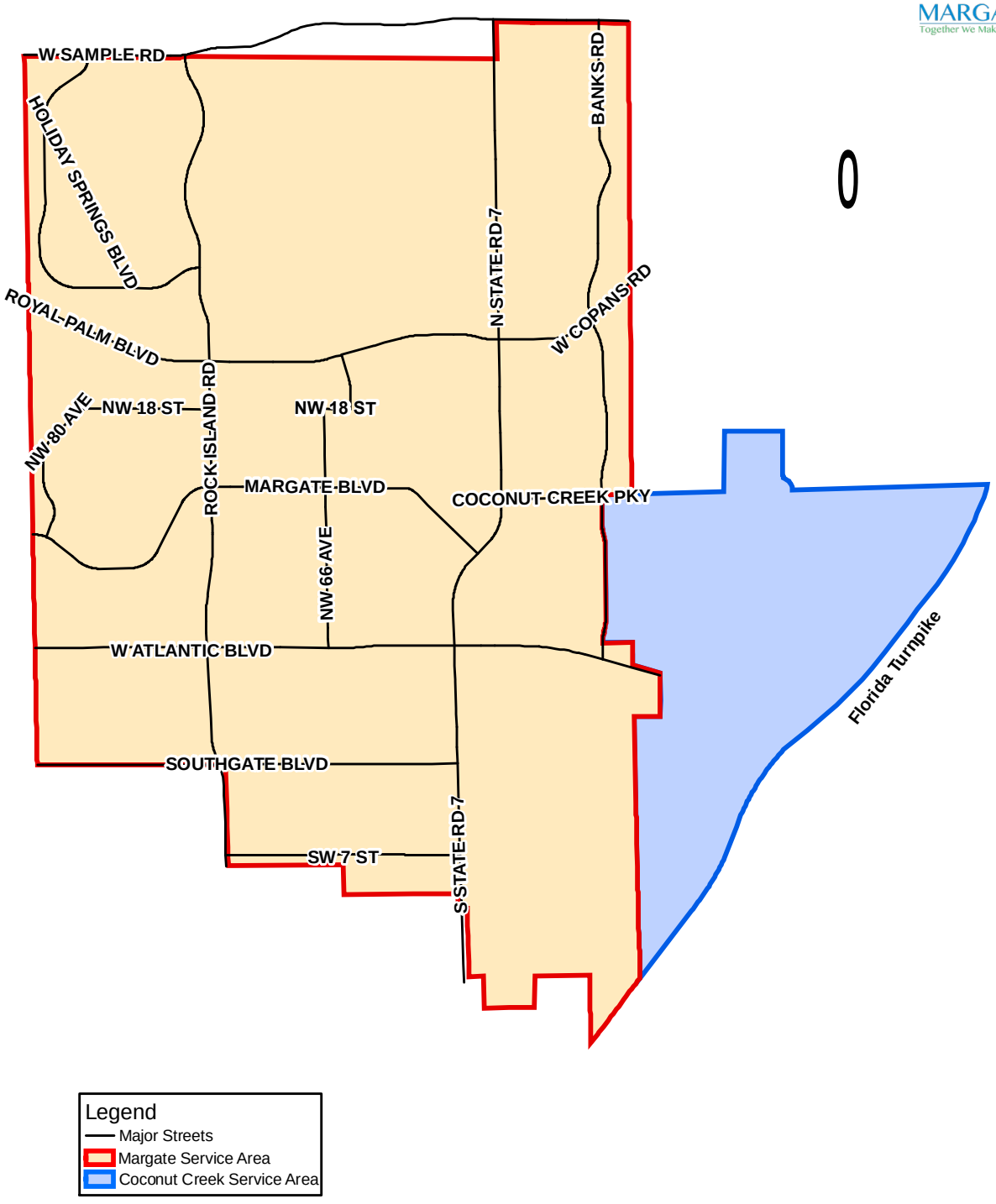
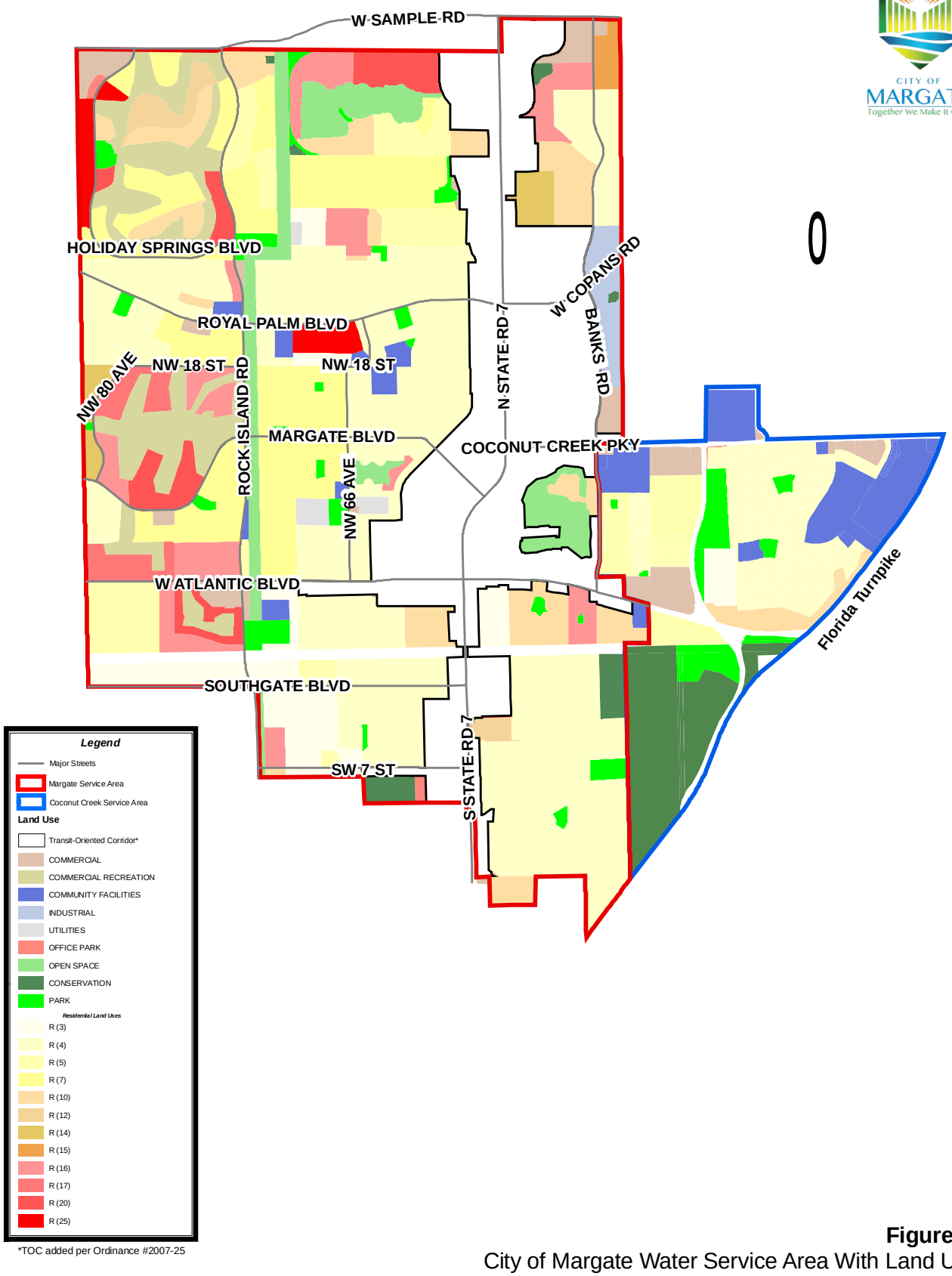


Figure III-1
City of Margate Water Service Area



*TOC added per Ordinance #2007-25

Figure III-2
City of Margate Water Service Area With Land Uses

The utility has twelve (12) wells with electrically powered pumps to extract the raw water. The raw water extracted is then conveyed to the treatment plant through a network of raw water mains. Seven (7) of the wells are located within the confines of the water treatment plant and the remaining five (5) are located in Vinson Park located west of the water treatment plant. The treated water is stored in above ground storage tanks before it is pumped to the distribution system. A detailed description of facilities is provided in Section 3.0 of the 10-year work plan.

4.0 Needs Assessment

Sections 4.0 and 5.0 of the 10-year work plan in **Attachment - A** describes in detail the future needs of the City of Margate water infrastructure, including alternative water resources projects, if needed, resulting from the changes required by the Florida Legislature.

The City of Coconut Creek reviewed the 10-year work plan and concurs with the population and demand projections identified for the portion of the service area located in the City of Coconut Creek. A copy of the letter received from the City of Coconut Creek is provided in **Attachment – B.**

5.0 Summary and Recommendations

The major components of the treatment facilities at the water treatment plant were replaced with new treatment units between 2003 and 2005. Section 3.0 of the attached 10-year work plan details all components of the treatment system. No changes are anticipated to the existing water treatment plant through 2030 which would affect the City's established Level of Service (LOS).

The City's distribution system was evaluated using a Hydraulic Water Distribution System computer model (InfoWater) and was determined that the existing system performs satisfactorily. Minor piping deficiencies were identified with no effect on the City's LOS. The City will address minor deficiencies identified in the distribution system piping through the regular Repair and Replacement (R&R) program. Currently, the distribution system piping, individual services, and new meters for new developments are installed by the developers. Subsequently, the newly installed system components are transferred over to the City with a bill of sale, including easements for future access and maintenance of the water system. The utility rates, as established by the City Commission, offset the cost of maintaining and administering the treatment plant and the distribution system.

The connection charges, currently established by ordinance, shall pay for improvements required to maintain current capacity or for future expansion. Additional funding, if required, shall be evaluated on an as needed basis and funding sources identified in advance for construction of the improvements required to maintain the City's LOS.

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6.0 Performance Assessment

The following measures are established to assess the performance of the water system:

1. Meet or exceed all existing federal, State, and local water quality standards.
2. Prepare an annual utility report to evaluate the operational and fiscal status of the water system.
3. Evaluate treatment and CUP capacity annually and implement appropriate measures to address deficiencies, if any.

7.0 Goals, Objectives, and Policies

Goal Statement

MAINTAIN WATER TREATMENT AND DISTRIBUTION FACILITIES THAT WILL ENSURE A CONTINUED SUPPLY OF HIGH QUALITY WATER FOR DOMESTIC, COMMERCIAL, AND FIRE PROTECTION PURPOSES IN ACCORDANCE WITH STANDARDS PROMULGATED BY THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION, THE BROWARD COUNTY HEALTH DEPARTMENT, AND THE CITY OF MARGATE.

Objective 1.1 Establish and meet LOS standards for the water treatment plant and the distribution system including establishment of connection charges to meet the LOS standards.

Policy 1.1.1 The LOS standards for the City's potable water facilities of 335 gallons per day (gpd) per equivalent residential connection (ERC) for capacity, and 3,000 gallons per minute (gpm) with a residual pressure of 20 pounds per square inch (psi) for storage and distribution configuration, are adopted and are currently utilized to assess adequacy of service. All other LOS standards utilized by the Florida Department of Environmental Protection (FDEP) and Broward County Health Department pertaining to potable water shall be adopted and utilized to assess adequacy of the services provided. These levels of service shall be used to determine adequacy at the time of plat and/or site plan approval.

Policy 1.1.2 Establish connection charges for various categories of water users based on an analysis of historical water demand for that type of user.

Policy 1.1.3 Utility rates should be based upon full occupancy of the subject premises.

Objective 1.2 Establish minimum standards for installation or replacement of water distribution system that will meet or exceed FDEP, American Water Works Association (AWWA), and National Fire Protection Association (NFPA) rules and recommendations.

Policy 1.2.1 Require engineering plans and specifications prior to any system addition or alteration.

Policy 1.2.2 Require surety bonds for the completion and/or restoration for any work performed within a public right-of-way or easement.

Policy 1.2.3 Require fire hydrants to be installed within the project and/or the adjoining right-of-way with any

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expansion or alteration of the water distribution system.

Policy 1.2.4 Require easements for all mains and service connections up to the meter box.

Objective 1.3 Continue with conservation of potable water as mandated by SFWMD pursuant to Rule 40E-21, F.A.C.

Policy 1.3.1 Continue with the dissemination of educational material about the importance of water conservation in South Florida.

Policy 1.3.2 Continue to implement regulations that require the use of individual water meters.

Policy 1.3.3 Continue with landscaping regulations which address the plantings of native species that are suited to the normal hydrological cycle of South Florida.

Policy 1.3.4 Continue to implement water conservation measures as follows:

1. Restrict the hours of landscape irrigation.
2. Require the use of ultra-low volume plumbing fixtures as required by the Florida Building Code.
3. Require the use of rain sensor overrides on all new automatic lawn sprinkler systems.
4. Implement a leak detection program, if required.
5. Implement a water conservation rate structure.
6. Participate in the regional and local water conservation programs.

Objective 1.~~5~~4 Assure that development within the City of Margate utility service areas receives an adequate level of service.

Policy 1.~~5~~4.1 The development review process shall enable the City to assure those areas served by the City's water treatment plant receive adequate potable water services consistent with the level of service standards established. This process, which is currently in effect, requires availability of adequate potable water service prior to the issuance of a development permit in accordance with the City of Margate land development regulations.

Policy 1.~~5~~4.2 Prior to approving a building permit, the City shall determine whether adequate water supplies to serve the new development will be available no later than the anticipated date of issuance of a certificate of occupancy by the City.

Policy 1.~~5~~4.3 Continue to provide water and sewer availability letters to developers for all development in the City of Coconut Creek service area. In addition, prior to approving a connection permit, determine whether adequate water supplies to serve the new development will be available no later than the anticipated date of issuance of a certificate of occupancy.

Objective 1.~~6~~5 Identify and coordinate development of traditional and/or alternative water supply resources with SFWMD, if required, to serve projected population through 2030.

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Policy 1.~~6~~5.1 The City shall update its 10-Year work plan within 18 months of any update to the South Florida Water Management District's *Lower East Coast Regional Water Supply Plan.*

Policy 1.5.2 The 10-year water supply facilities work plan provided as Attachment A is incorporated by reference in the Potable Water Element of the City of Margate Comprehensive Plan adopted on _____, 2015, by Ordinance #_____; Title - AN ORDINANCE AMENDING THE CODE OF THE CITY OF MARGATE, FLORIDA; PROVIDING FOR REVISION TO THE COMPREHENSIVE PLAN OF THE CITY OF MARGATE, APPENDIX B, AMENDING ELEMENT III. SANITARY SEWER, SOLID WASTE, DRAINAGE, POTABLE WATER AND NATURAL GROUND WATER, AQUIFER RECHARGE; AMENDING PART 1. POTABLE WATER TO UPDATE THE TEN YEAR WATER SUPPLY FACILITIES WORK PLAN, PURSUANT TO FLORIDA STATUTE 163.3177; PROVIDING FOR REPEAL; PROVIDING FOR SEVERABILITY; PROVIDING FOR CODIFICATION; PROVIDING FOR AN EFFECTIVE DATE.

Additional Goals, Objectives, and Policies as they relate to water resources projects to address water supply needs through 2030 are addressed in Section 6.0 of the 10-year work plan provided as **Attachment – A**.

8.0 Implementation and Monitoring Procedures

8.1 Implementation Procedures

The Director of DEES shall compile goals, objectives, and policies (GOP); achievement monitoring procedures; and updating procedures to distribute to other departments participating in plan implementation. The participating departments shall be required to incorporate GOPs into their annual work programs and to request funding for operations and capital facilities necessary to implement the GOPs.

The Director of DEES shall have the primary responsibility for implementation of the plan procedures.

8.2 Monitoring Procedures

Achievement of Objectives may be evaluated based on analysis of several performance criteria including:

1. Financial reporting included in the City of Margate Comprehensive Annual Financial Report (CAFR).
2. Continued compliance with operating permit requirements established by Federal, State, and Local regulatory agencies.
3. Continue to meet all the LOS standards established.

DEES will be responsible for implementing the policies and monitoring objectives of this Potable Water Element.

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ATTACHMENT A

10-Year Water Supply Facilities Work Plan, 2015

CITY OF
MARGATE
Together We Make It Great

10-Year Water Supply Facilities Work Plan

Department of Environmental & Engineering Services
~~March 2015~~ October 2015

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Exhibits

Section 1.0 – Introduction

The City of Margate (City) is located in Southeast Florida, at the northern end of Broward County approximately ten miles inland from the Atlantic Coast line. The City is bordered on the north and east by Coconut Creek, on the north and west by Coral Springs and on the south by North Lauderdale. See **Figure 1.1** for the Vicinity Map.

The City is 9.17 square miles in size with no opportunity for annexation of additional lands. The City was chartered as a town government in 1955 and incorporated as a City in 1961.

The City operates its own potable water supply and wastewater treatment systems and provides water and sewer service to the entire corporate limits of the City of Margate. In addition, the City provides these services to the southern portion of the City of Coconut Creek. See **Figure 1.2** for the service area boundary.

The City's water utility draws its potable water from the Biscayne Aquifer, one of the most productive aquifers in the world which is the source of water supplies to Broward, Miami-Dade, and southeastern Palm Beach County. Withdrawal from the aquifer is governed by the South Florida Water Management District (SFWMD) through the issuance of Consumptive Use Permits (CUP's).

The 2002 Florida State legislature expanded the requirements of Chapter 163, Florida Statutes (F.S.) for local governments to incorporate a long range water supply facilities work plan into the their respective comprehensive plans. In 2005, Chapters 163 and 373, F.S., were again revised to incorporate requirements for coordination between water supply and land use planning. SB 360 and 444 provided the statutory linkage between regional water supply plans prepared by the water management districts and the comprehensive plans submitted by the local governments. In summary, the new statutory requirements direct each local government, including the City of Margate, to:

1. Coordinate appropriate aspects of the City's comprehensive plan with the appropriate water management district's regional water supply plan(s). (s.163.3177 (4) (a), F.S.)

2. Ensure that the City's future land use plan is based upon the availability of adequate water supplies and public facilities and services. (s. 163.3177(6)(a), F.S.)

3. Ensure that adequate water supplies and facilities are available to serve new developments no later than the date on which the local government anticipates issuing a certificate of occupancy. Also, local governments shall consult with the applicable water supplier prior to approving the building permit, to determine whether adequate water supplies will be available to serve the development by the anticipated issuance date of certificate of occupancy. (s. 163.3180 (2) (a), F.S.)

4. Revise and subsequently adopt the potable water sub-element within 18 months after the water management district approves an updated regional water supply plan to:

    a. Identify the traditional and Alternative Water Supply (AWS) projects, bulk sales agreements, and the conservation and reuse programs necessary to meet current

Figure 1.1
Vicinity Map

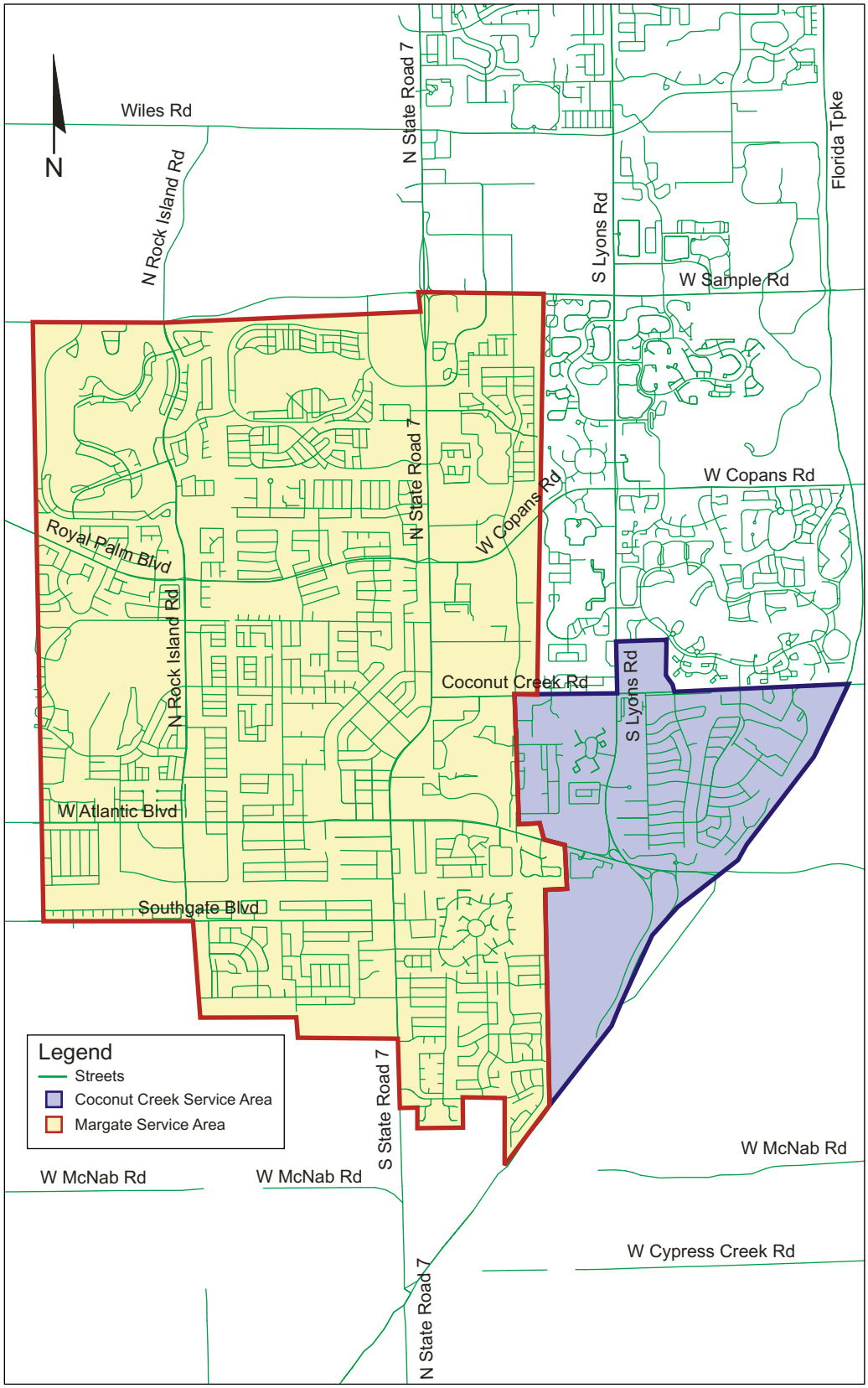


Figure 1.2
City of Margate Water Service Area

and future water use demands within the local government's jurisdiction (s. 163.3177 (6)(c), F.S.)

b. Include a water supply facilities work plan for at least a 10-year planning period for constructing the public, private, and regional water supply facilities identified in the element as necessary to serve existing and new development (s. 163.3177(6)(c), F.S.)

c. Identify and incorporate the AWS project(s) selected by the local government from projects identified in the updated regional water supply plan, or the alternative project proposed by the local government under s. 373.0361(7), F.S. (s. 163.3177(6)(c), F.S.)

5. Revise the Five-Year Schedule of Capital Improvements to include any water supply, reuse, and conservation projects and programs to be implemented during the five year period.

6. Revise the conservation element to assess projected water needs and sources for at least 10-year planning period considering the appropriate regional water supply plan(s) or, in the absence of an approved regional water supply plan(s), the district water management plan(s). (s.163.3177 (6) (d), F.S.)

7. Revise the intergovernmental coordination element to ensure coordination of the comprehensive plan with the applicable regional water supply plan(s). (s.163.3177 (6) (h) 1, F.S.)

8. Identify, during preparation of the Evaluation and Appraisal Report, the extent to which the 10-year water facilities work plan is implemented and determine if the improvements are meeting the water use demands. (s.163.3191 (2) (1), F.S.)

Based on the above requirements, the City is required to develop a 10-year water supply facilities work plan (10-year work plan) that incorporates the projects proposed for the City in the 2013 update of the Lower East Coast (LEC) water supply plan (2013 LEC water supply plan update ~~Plan~~) or other alternate projects approved by SFWMD. The work plan must be adopted into the City's comprehensive plan within 18 months after the water management district adopts a regional water supply plan or its update.

As such, this work plan is developed per the guidance document "A Guide for Local Governments in Preparing Water Supply Comprehensive Plan Amendments and Water Supply Facilities Work Plans", published by Florida Department of Community Affairs (DCA) and dated September 2007.

Section 2.0 – Relevant Regional Issues, Objectives, and Approach

~~2.1 Background~~

The City of Margate System draws potable water from the Biscayne Aquifer in conformance with the consumptive use permit (CUP) issued by SFWMD. The City's CUP was issued on April 13, 2005 for 20-year duration with an annual allocation of 9.3 million gallons per day (mgd). The CUP stipulates a reduced annual allocation of 8.51 mgd, effective April 13, 2010. Subsequently, the 2007 Regional Water Availability Rule established the base allocation from the Biscayne Aquifer as the highest consecutive 12-month period of usage during the 5-year period preceding April 1, 2006. The rule also allows the utilities to borrow additional allocation until such time that any Alternative Water Supply (AWS) projects proposed are implemented and are in service.

The City of Margate's highest 12-month period occurred from March 2004 through February 2005, during which the average withdrawal was 8.531 mgd. As a result, any allocation above the 8.531 mgd will have to be addressed using AWS projects. As such, this work plan provides a detailed plan to address the allocation surplus or shortfall for the required 10-year planning period and beyond, and includes an evaluation of existing systems, future needs, allocation surplus or deficit values, current status of previously proposed AWS projects, and financial sufficiency analysis to verify availability of funds to implement AWS project(s), if required.

2.1 Relevant Regional Issues

The three overarching regional issues identified in the 2013 LEC water supply plan update impacting local water supply planning include the following:

1. Increased withdrawals from both the Biscayne Aquifer system and the surface water from Lake Okeechobee are limited.

2. Conservation continues to be relied upon to reduce per capita use and as a means to potentially delay or perhaps avoid adding capacity.

3. Use of reclaimed water continues to be an important alternative source in the region and helps to meet requirements of the 2008 Leah G. Schad Ocean Outfall Program.

As noted previously, the City of Margate Public Water System (PWS) relies on Biscayne Aquifer (Surficial Aquifer System) for all its water supply needs, similar to the majority of other PWS' in the LEC planning area. The SFWMD issues CUP's to manage water withdrawals from the Biscayne Aquifer. As noted in the 2013 LEC water supply plan update, the LEC planning area, including the City of Margate, relies on Lake Okeechobee as the primary backup to recharge the Biscayne Aquifer through its interconnected regional canal system and the water conservation areas. The City recognizes that the withdrawals from the regional system (Biscayne Aquifer and the Lake Okeechobee) are limited and that other alternative sources of water may be required to meet future demand. The 2007 SFWMD Regional Water Availability Rule established the base condition for the City's CUP, and the City understands that additional withdrawals above the base condition, required to meet future demand, shall be addressed through alternative water sources.

As a result of limited supplies, the City has been proactive in implementing and participating in various conservation programs to maintain overall demand below the City's base condition. The City of Margate strongly believes in conservation as a reliable option to reduce the per capita demand and as a mechanism to delay and/or avoid adding additional capacity. As such, the City is actively considering various conservation programs with the goal of reducing the per capita demand by 3 gallons/day by the year 2030. Section 3.4.1 of this plan details various programs currently under implementation. In addition, the City's utility is in the construction phase for a force main to recirculate treated wastewater effluent for use as process water in the wastewater treatment plant. The recirculated effluent will reduce and/or eliminate potable water use as process water. In addition, the City will continue to participate and support conservation programs offered by SFWMD and Broward County in an effort to meet the City's long term conservation goal.

If the City's future demand exceeds the conservation goals and the CUP base condition, the City will pursue a reuse project at its wastewater treatment plant and supply reclaimed water to the area golf courses for spray irrigation. As part of the 2008 water supply facilities work plan, the City proposed construction of a reuse facility as an alternative water supply project to meet the projected demands identified at that time. The City entered into contracts to provide reuse water to the three golf courses located in the City with the understanding that their CUP allocation will be transferred over to the City CUP once they are connected to the reuse system. However, due to lower than expected demand projections based on the 2010 population projections, the City shelved the reuse project indefinitely after completing the design phase. The City will reprise the reuse project if the need arises. In addition, the City is not subject to the requirements of the 2008 Leah G. Schad Ocean Outfall Program; however, the City is evaluating the reuse credit available as part of the program with other utilities as a long term option to mitigate any future demand shortfall.

2.2 Objectives

The objectives of this work plan are to:

1. Develop water supply projections for at least the next 10 years.

2. Assess existing or traditional water resources to determine if they are adequate to meet the projected demand.

3. Identify alternative water resources if traditional resources are not adequate to meet the projected demands.

4. Define the cost and schedule to implement the alternative water resources project(s), if required.

5. If AWS projects are required, identify the AWS related capital improvement projects to be implemented in the first five years of the plan, to meet the water supply needs, and identify a financially feasible five-year schedule of capital improvements with committed funding sources for the first three years.

6. Identify the goals, objectives, and policies needed to implement the work plan and water supply concurrency requirements.

2.3 Approach

To address the objectives identified above, the following tasks were completed:

1. Evaluated existing water supply facilities and their adequacy to meet the projected growth.

2. Developed population and demand projections. Quantified allocation surplus/deficit values through 2030 (minimum required is for a 10-year planning period, through year 2025).

3. Evaluated the need for implementation of the previously proposed AWS project based on the above quantified allocation surplus/deficit values.

4. Reviewed the system revenue forecasts and funding availability to implement capital improvement projects, if any, required to meet the projected demands over the 10-year planning period.

Section 3.0 – Water Supply System

3.1 System Overview

3.1.1 Service Area

Based on the Year 2010 census, the City provides water and wastewater services to approximately 58,312 residents located within the City limits of the City of Margate and the southern portion of the City of Coconut Creek. The service area encloses an area of 10.7 square miles of which the land use is predominantly residential. The City owns and maintains the entire water supply, treatment, and distribution system, and is the sole entity responsible for the planning, financing, construction and operation of the facilities that will supply water within its service area.

The City's water system includes a 16-mgd water treatment plant (WTP) with associated Biscayne Aquifer raw water supply wells and two (2) aboveground storage tanks with a combined capacity of 3.9 million gallons (MG); a water distribution system consisting of approximately 225 miles of distribution mains; a remote 2 MG water storage tank facility; and two interconnects with neighboring municipalities. The distribution system includes service connections to approximately 17,000 residential, multi-family, and nonresidential customers.

3.1.2 Large Users of Utility Potable Water

The City's billing records were evaluated to identify the water customers with the highest annual consumption over the past six years. The top 100 consumers include hospitals, schools, condominium complexes, apartments, medical facilities, and commercial offices.

3.1.3 Large Users with Individual Consumptive Use Permits

Large users with individual consumptive use permits were identified with the assistance of the South Florida Water Management District (SFWMD). The overwhelming majority of the CUPs identified within the service area are for landscape irrigation purposes. These include CUPs issued to golf courses, parks, condominiums, schools, churches and commercial facilities. A total of five (5) large users including Carolina Golf Club, Oriole Golf and Tennis Club of Margate, Margate Executive Golf Course, Coral Cay, and Palm Springs-III were identified in the City's 2008 water supply plan as potential end users for reuse water from the City's proposed reuse system. The five (5) facilities have a combined CUP allocation of 1.01 mgd.

3.1.4 Private Wells and Septic Systems

The City is not aware of private wells for potable water located within its service area. **Figure 3.1** identifies the only area within the City's water service area known to be served by septic tanks. As shown, this unsewered area is located in that portion of the City of Coconut Creek to which the City of Margate provides potable water service.

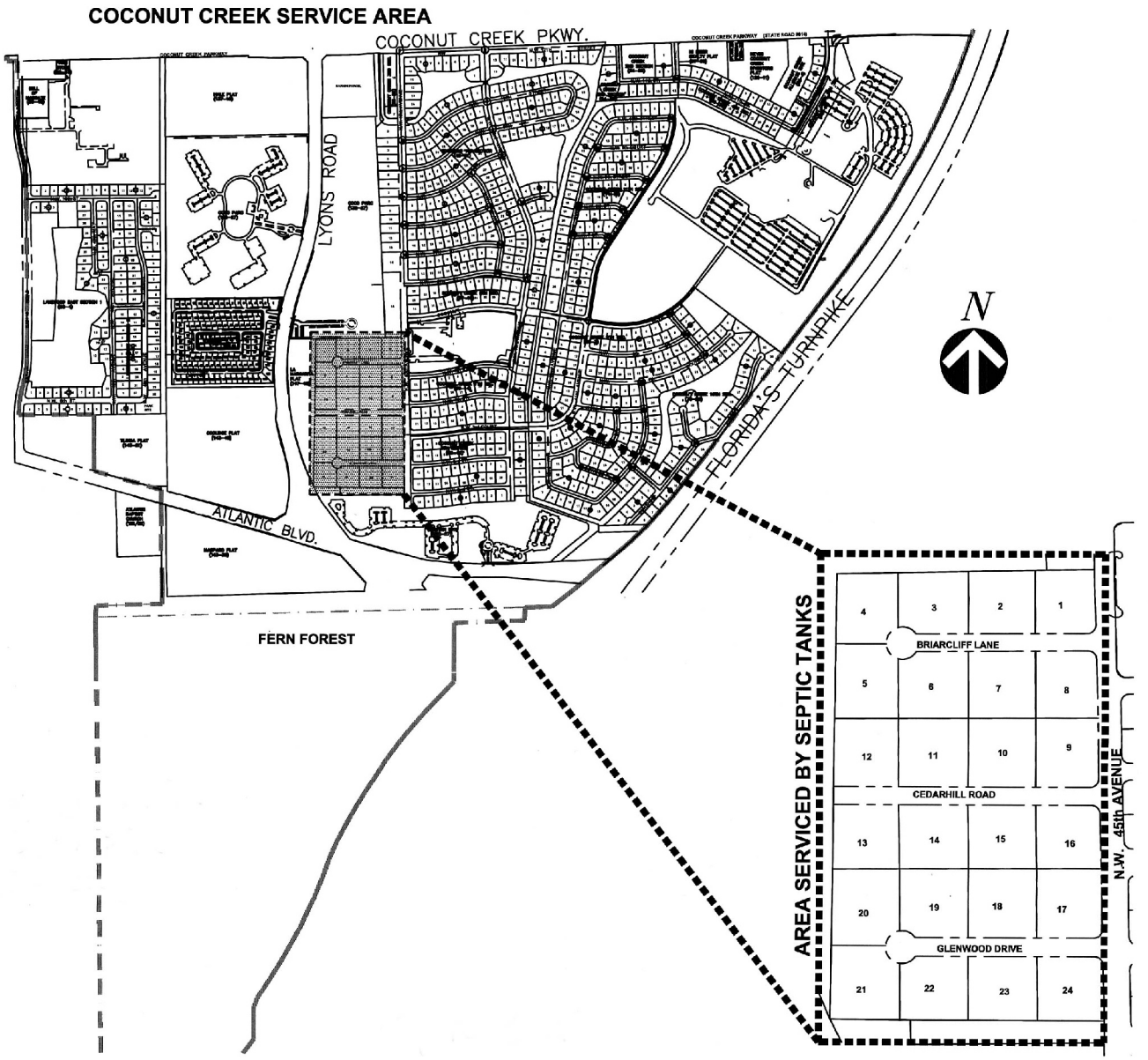


Figure 3.1
Septic System within the City of Margate Service Area

3.2 Facility Description

3.2.1 Raw Water Sources

The City is permitted by the SFWMD to extract water from the Biscayne Aquifer using a total of twelve raw water supply wells. Raw water extracted from the Biscayne Aquifer is metered at the WTP as described below.

Figure 3.2 illustrates the location of the raw water wells.

3.2.2 Treatment Facilities

Raw water mains from each well combine into a 30-inch raw water header main, which then splits to feed two parallel treatment trains. Separate venturi meters record the flow entering each of the two parallel trains. Each train consists of cascade aerators to oxidize iron and manganese (for subsequent precipitation and removal by the filters) and remove hydrogen sulfide and carbon dioxide; a single lime softening unit to reduce hardness; and a 4-bay filter unit consisting of granular media and activated carbon. Chloramination is used for disinfection. Treated water is collected in a clearwell and is subsequently transferred to the two ground storage tanks located within the water plant.

The softening units are upflow solids contact clarifiers, with integral mixing and quiescent zones, rated at 13.5 mgd each. The combined filter capacity of both treatment trains is 16 mgd.

Figure 3.3 is a process flow schematic for the WTP.

Figure 3.4 presents an overview of the overall WTP site plan.

3.2.3 Storage Facilities

From the clearwell water is transferred to two aboveground storage tanks. A 1.9 MG steel tank and 2.0 MG concrete tank are located at the plant site. A remote 2.0 MG concrete tank, located at the Coral Gate facility approximately 2 miles from the plant in the northern portion of the City's service area, is connected to the distribution mains and is filled or emptied using a valve located within the remote facility. This valve is controlled from the treatment plant via the Supervisory Control and Data Acquisition (SCADA) system.

3.2.4 Distribution System

High service pumps at the treatment plant are equipped with variable frequency drives to maintain an average pressure of 63 pounds per square inch (psi). The City's distribution system consists of approximately 225 miles of distribution mains and approximately 17,000 service connections. The service area includes the entire City of Margate and the portion of the City of Coconut Creek located south of Coconut Creek Parkway.

Figure 3.5 presents an overview of the distribution system.

3.2.5 Interconnects

The City's distribution system has two emergency interconnects with neighboring community water systems for use during emergency situations. These include one 6-inch interconnect along the

Figure 3.2
Raw Water Well Locations

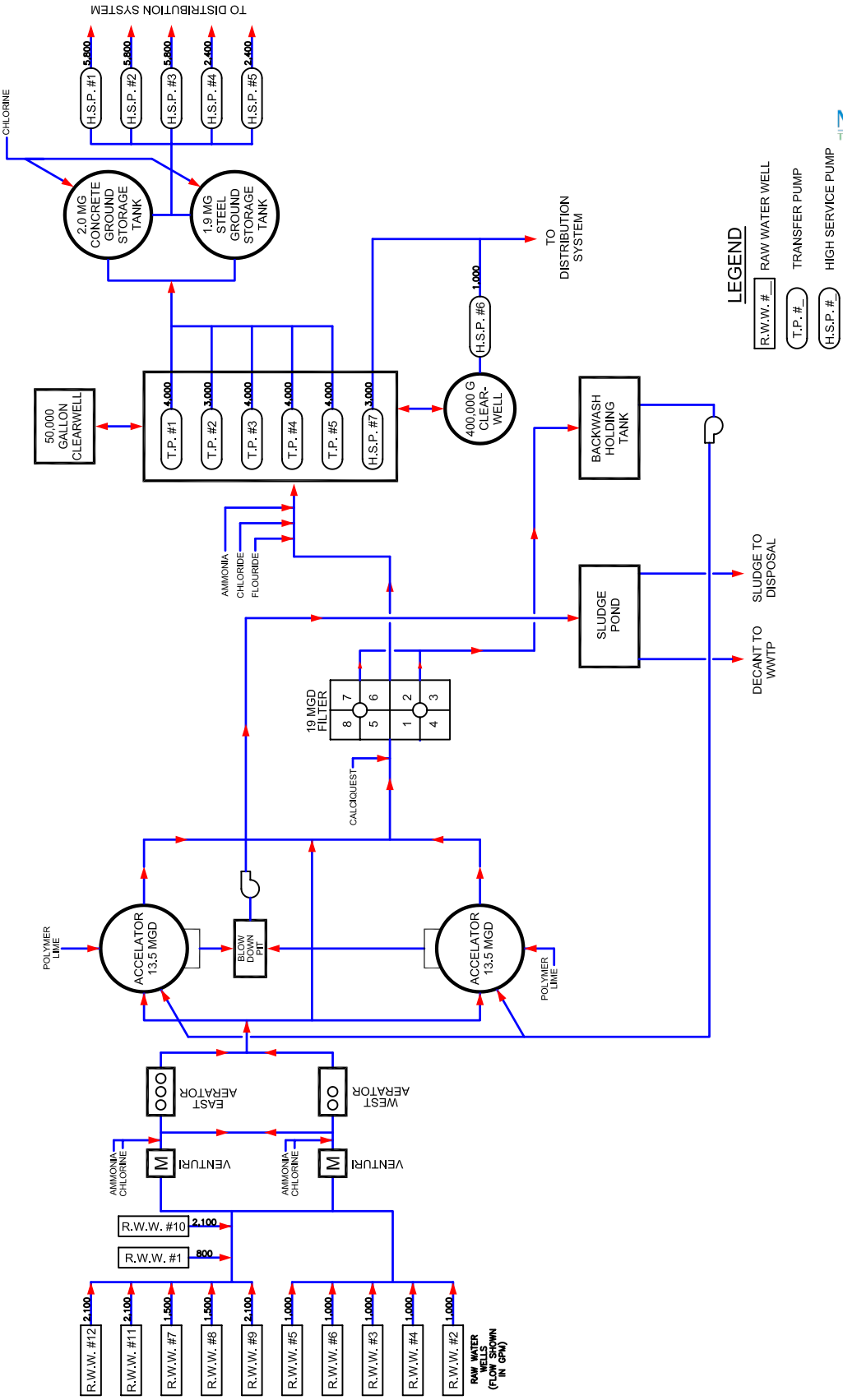


Figure 3.3
Water Treatment Plant Process Flow Diagram

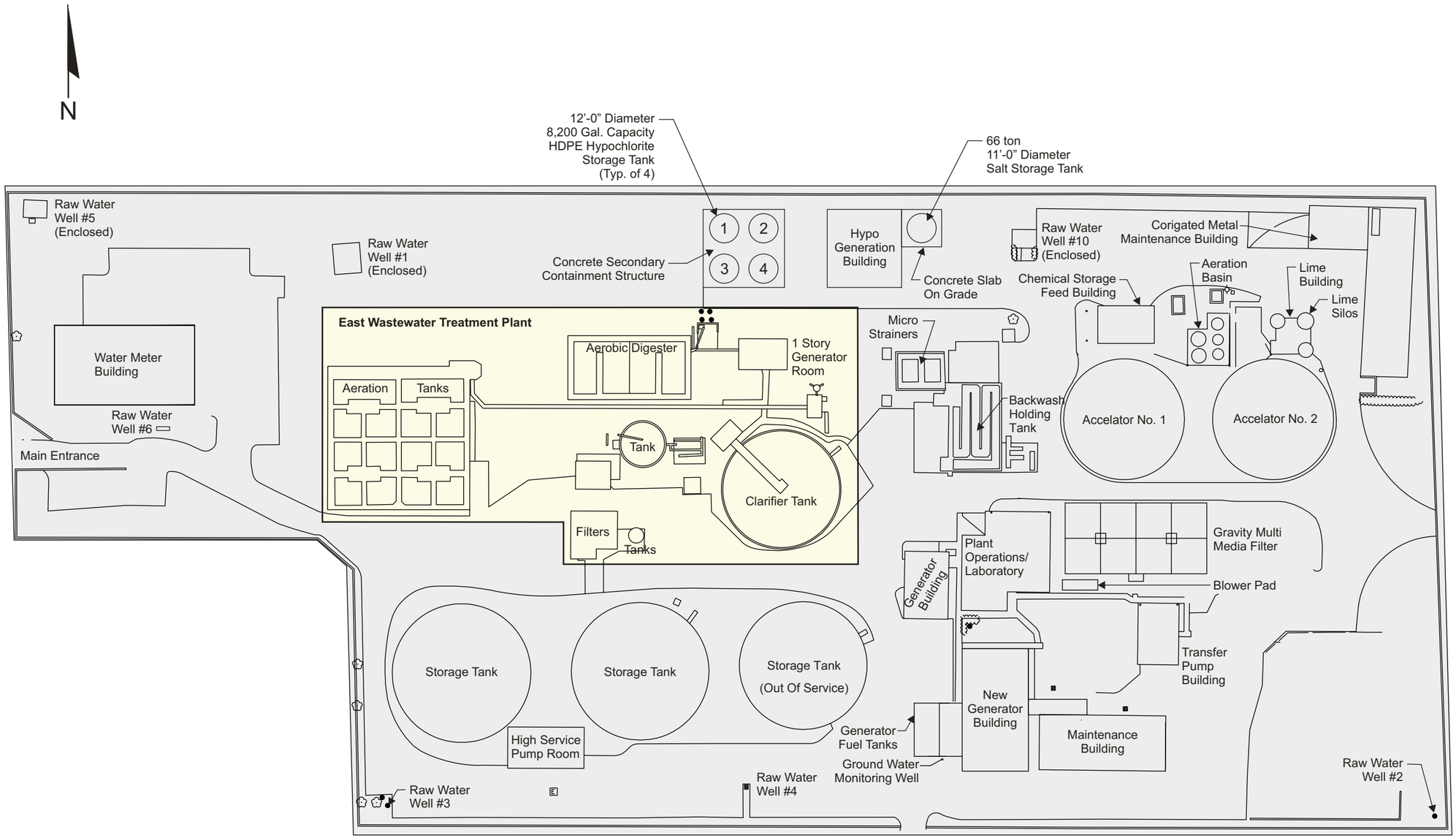


Figure 3.4
Water Treatment Plant Existing Site Plan

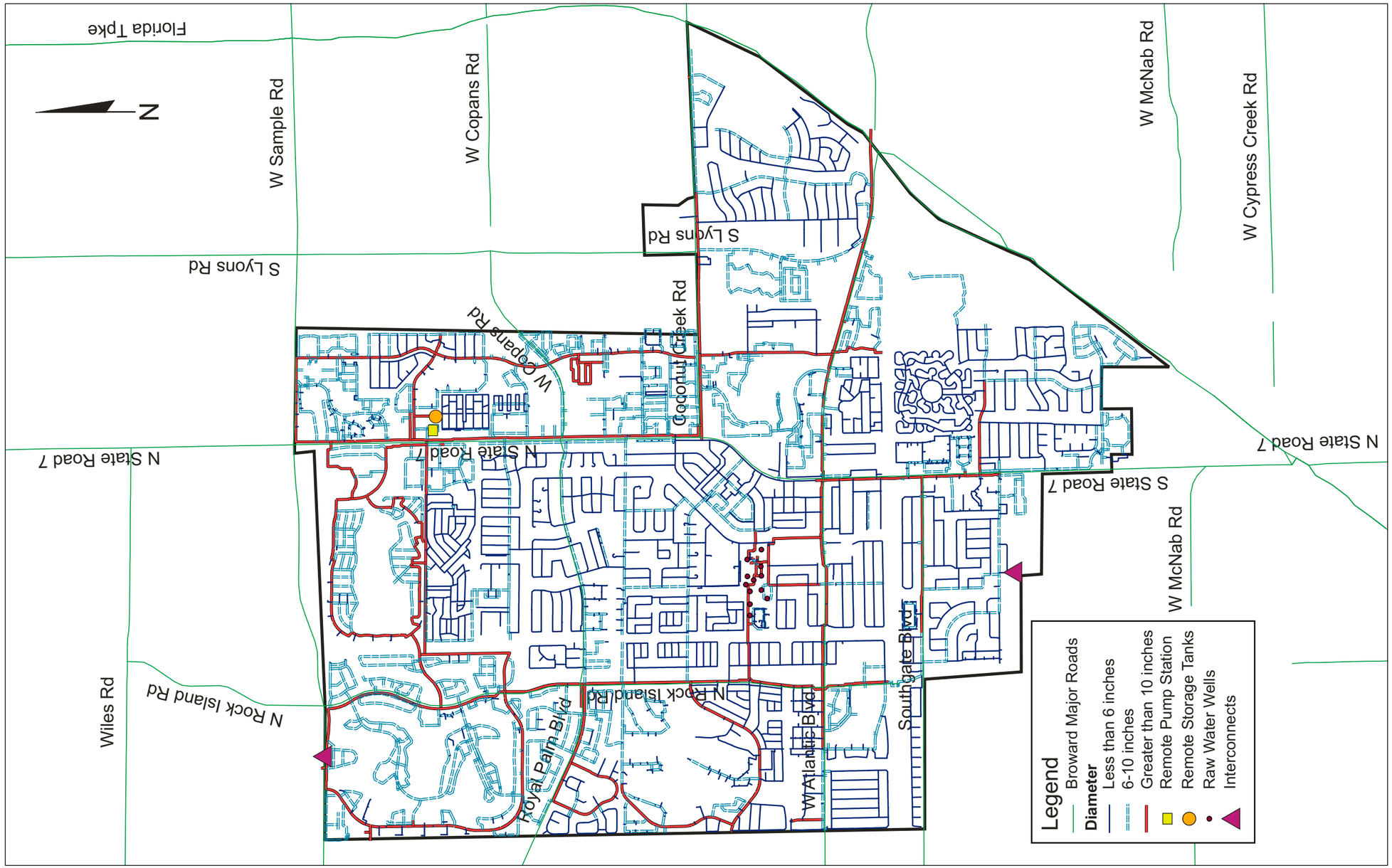


Figure 3.5
City of Margate Water Distribution System

southern boundary with the City of North Lauderdale and one 12-inch interconnect at the northern boundary with the City of Coral Springs. The two other interconnects with the City of Pompano Beach which were identified in the 2008 water supply facilities work plan and the City's most recent CUP application are no longer active. These two interconnects were serviced by water mains under the Florida Turnpike; however, during recent roadway rehabilitation, FDOT required installation of casings for the water mains as a preventative measure or be abandoned. As a result, additional valves were installed by the City to abandon the crossings and the interconnects. All interconnects are straight piped and are isolated by valves located on either side of the service area boundaries. The interconnect locations are also shown in **Figure 3.5**.

3.3 Facility Capacity and Current Demand

3.3.1 Capacity Evaluation

As outlined above, the WTP has a treatment capacity of 16 mgd and a treated water storage capacity of 5.9 MG.

Section 4 addresses WTP capacity with respect to projected demands through the year 2030.

3.3.2 Current Demand

The City's annual average daily demand for 2014 was approximately 7.61 mgd, expressed on the basis of raw water metered prior to treatment. This demand reflects a decrease from previous years, most likely as a result of the mandatory Broward County water restrictions for irrigation use and the continued implementation of water conservation programs in the City.

3.3.3 Water Utility Consumptive Use Permit

The City's current permit was renewed by the SFWMD in April 2005 (Permit No. 06-00121-W). This permit allows the City to withdraw a specified quantity of water from the Biscayne Aquifer until the permit expires in April 2025. The permit stipulates an annual allocation of 9.3 mgd and a maximum month allocation of 10.46 mgd through April 13, 2010. After April 13, 2010, the annual and maximum month allocations are reduced to 8.51 mgd and 9.31 mgd, respectively.

It is important to note that the 2007 Regional Water Availability Rule contains provisions that supersede those contained in the City's CUP and will govern the ultimate allocation. Section 4 discusses the effect of the Regional Water Availability Rule.

3.4 Conservation and Reuse

3.4.1 Conservation

The City continues to implement the conservation programs summarized below.

Limitation of lawn and ornamental irrigation hours

Landscape irrigation is addressed in Section 39-56 and Section 23-12(F) of the City Code, and is prohibited outside the hours of 5:00 PM to 9:00 AM. Section 39-56 also specifies that SFWMD restrictions take precedence when more restrictive. In addition, the City is subject to Broward County twice-a-week watering restrictions.

Use of xeriscape/Florida friendly landscaping principles

Section 39-57 of the City Code provides for applicability of the SFWMD and Broward County xeriscape/Florida friendly landscaping requirements. Compliance is administered through the City's Development Review Committee.

Requirement of ultra-low volume plumbing

Section 4613(C) of the Florida Building Code was adopted by reference and is included in Section 39-60 of the City Code.

Leak detection programs

The City actively responds to reported leaks and continuously upgrades the distribution system to reduce the magnitude of unaccounted water losses between the WTP and the end user. In addition, the City accounts for water losses during main breaks, fire hydrant flushing, fire fighting activities and the plant usage.

Requirements of rain-sensor over-rides for new lawn sprinkler systems

Section 39-58 of the City Code requires the installation of a rain-sensor override on all new automatic lawn sprinkler systems. Compliance is administered through the City's building Department.

Water conservation public education programs

The City of Margate promotes water conservation awareness through its website, www.margatefl.com, and other publications. Publications containing topics of water conservation, such as the annual water quality report are also distributed to customers and other interested parties. In addition, the City actively participates in the Broward Water Partnership and the NatureScape conservation programs offered by Broward County.

Water conservation based rate structures

Margate employs a conservation-based increasing block rate structure where higher rates are charged for greater water usage.

3.4.2 Reuse

The City does not currently treat wastewater for reuse. As part of the 2008 water supply facilities work plan, a reuse facility was proposed as an AWS project to provide reuse water to golf courses located within the City's service area. The intent, which was subsequently approved by SFWMD, was to offset the use of fresh groundwater resources by the golf courses and transfer the equivalent CUP allocation from the golf courses to the City's CUP allocation, to mitigate City's allocation shortfall as projected in 2008.

However, due to the economic downturn starting in 2009 and the conservation programs subsequently adopted by the City, the allocation deficit previously anticipated in the 2008 water supply plan was no longer projected within the next 10-year planning period. As a result, the reuse project was put on hold in 2012. Since then, the projected water demand is continually evaluated annually. If the demand is projected to exceed the City's allocation over the 10-year planning period, the City plans to develop a schedule and implement the reuse project.

Section 4.0 - Future Needs

4.1 Water Planning Area

The City's water planning area coincides with its current service area, which includes all of the City of Margate and the portion of the City of Coconut Creek located south of Coconut Creek Parkway. This geographical area is the sole focus of the population and demand projections contained herein.

4.2 Population Forecast Methodology

Population projections, along with per capita water demand rates developed using historical demand data, provide the basis for water demand forecasts and water supply infrastructure planning within the City's water planning area. Population values are presented at five-year intervals beginning in 2010 and continuing through 2030.

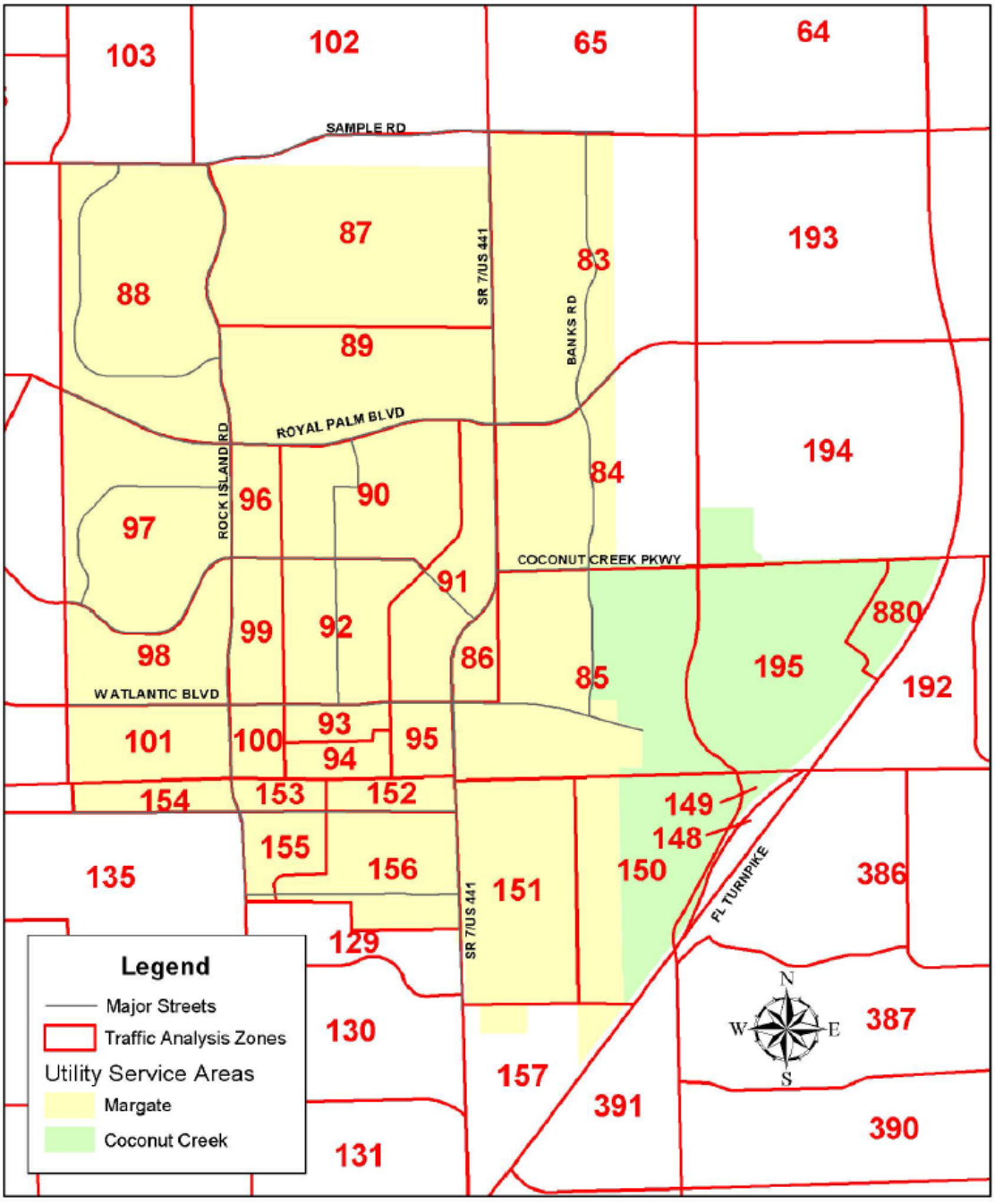
The analysis presented herein uses population data from both the Broward County Planning Services Division and the 2013 LEC water supply plan update ~~plan~~. The Planning Services Division estimated populations by traffic analysis zones (TAZs) using the 2010 U.S. Census population data and the Broward County Population Forecasting Model (BCPFM). TAZs are the smallest geographic area that the Broward County Planning Services Division uses in its analyses. **Figure 4.1** is a map of the TAZs in the City's water service area.

Population estimates for the City's water service area were determined by summing the Broward County Planning Services Division's population projections for all TAZs located within the City's service area. **Table 4.1** provides population estimates for the City's service area organized by TAZ. Population projections using TAZs were developed as part of this 10-year work plan for a comparison to projections published in the 2013 LEC water supply plan update ~~Plan~~.

4.3 Population Forecast for the Water Planning Area

Population projections developed using the TAZs and as published in the 2013 LEC water supply plan update ~~Plan~~ for the City's water service area are summarized in **Table 4.2**. The projections published by Broward County (using TAZs) and by SFWMD in the 2013 LEC water supply plan update ~~Plan~~ are through 2040 and 2030, respectively.

The projections developed using the TAZs are lower than the 2013 LEC water supply plan update ~~Plan~~. Whereas the projections using TAZs increase by 4.2% through 2030, the projections provided in the 2013 LEC water supply plan update ~~Plan~~ increase by 9.6% through 2030.



Source: City of Margate service area TAZ locations provided by Broward County Planning and Services Division.

Figure 4.1
TAZs within the City of Margate Water Utility Service Area

Table 4.1. Population Projections by TAZ for the City of Margate Water Service Area

TAZ	2010	2015	2020	2025	2030	2035	2040
Margate Service Area							
83	2,650	2,756	2,961	3,017	3,100	3,087	3,076
84	187	189	189	189	212	218	226
85	1,263	1,278	1,256	1,248	1,346	1,380	1,397
86	1,957	2,100	2,364	2,461	2,438	2,428	2,415
87	6,406	6,694	7,276	7,474	7,407	7,597	7,698
88	5,706	5,758	5,684	5,598	5,536	5,639	5,648
89	4,315	4,286	4,221	4,153	4,107	4,186	4,218
90	2,813	2,834	2,782	2,738	2,722	2,858	2,988
91	1,035	1,103	1,309	1,398	1,392	1,387	1,379
92	1,944	1,928	1,893	1,858	1,838	1,862	1,869
93	1,108	1,098	1,079	1,068	1,059	1,053	1,047
94	694	692	678	669	660	662	660
95	772	770	759	748	744	738	734
96	415	427	426	479	483	481	479
97	5,241	5,325	5,241	5,167	5,112	5,103	5,067
98	2,316	2,398	2,375	2,417	2,396	2,399	2,388
99	905	892	877	862	856	891	942
100	192	194	200	202	202	222	234
101	2,117	2,138	2,104	2,077	2,060	2,143	2,206
151	5,195	5,309	5,417	5,348	5,745	5,863	5,913
152	696	682	669	655	648	651	650
153	393	393	388	383	386	386	385
154	664	647	636	626	621	621	621
155	1,094	1,074	1,062	1,050	1,043	1,068	1,094
156	2,236	2,193	2,162	2,131	2,106	2,108	2,098
157	970	1,005	1,090	1,476	1,533	1,542	1,536
Subtotal	**53,284**	**54,163**	**55,098**	**55,491**	**55,752**	**56,574**	**56,968**
Coconut Creek Service Area							
85	223	225	222	220	238	244	246
148	0	0	0	0	0	0	0
149	1,696	1,694	1,673	1,654	1,696	1,691	1,683
150	2	2	2	2	2	2	2
195	3,107	3,092	3,049	3,017	3,049	3,033	3,020
880	0	0	0	0	0	0	0
Subtotal	**5,028**	**5,014**	**4,946**	**4,893**	**4,984**	**4,969**	**4,952**
Total	**58,312**	**59,177**	**60,044**	**60,384**	**60,737**	**61,543**	**61,919**

Table 4.2. City of Margate Service Area Population Projections

Year	TAZ	2013 LEC Water Supply Plan Update ~~Plan~~
2010	58,312	58,312
2015	59,177	59,716
2020	60,044	61,118
2025	60,384	62,521
2030	60,737	63,923
2035	61,543	-
2040	61,919	-

4.4 Historical Water Demand

Per capita water demand rates were developed using historical demand data as presented herein. Along with population projections, these rates provide the basis for water demand forecasts and the associated water supply infrastructure planning within the City's water planning area.

Table 4.3 provides metered raw and finished water data for the City's service area for the past ten (10) years (2005 through 2014), along with per capita demand values calculated using population.

Table 4.4 compares various per capita demand values for the same ten (10) year period (2005 through 2014). Selection of a per capita demand rate for future water supply planning is addressed in subsequent text.

Table 4.3. Metered and Calculated per Capita Demand Values

Year	Population [1]	Raw Water Pumped - Metered		Finished Water Leaving Plant - Metered	
		(mgd)	(gpcd)	(mgd)	(gpcd)
2005	58,882	8.35	142	6.77	115
2006	61,247	8.20	134	6.81	111
2007	60,513	7.90	131	6.32	104
2008	59,788	7.75	130	6.11	102
2009	59,072	7.93	134	6.09	103
2010	58,312	7.82	134	6.30	108
2011	58,473	7.98	137	6.35	109
2012	58,634	7.76	132	6.13	104
2013	58,796	7.28	124	6.46	110
2014	58,959	7.61	129	6.59	112
Average		**7.86**	**133**	**6.39**	**108**

[1] Population for the 5-year increments (2005, 2010 and 2015) is based on Broward County population projections and 2010 Census. The population for intermediate years is based on interpolation of the 5-year increments.

Table 4.4 Various Per Capita Demand Values

Quantity	Demand (gpcd)	Percent of Metered Raw water	Source
Metered raw water	133	100%	City of Margate data (2005-2014)
Finished water per capita use rate	98	74%	2013 LEC water supply plan update ~~Plan~~
Finished water metered at WTP	108	81%	City of Margate data (2005-2014)

4.6 Water Demand Projections

As noted in Section 2, the City's current CUP permit stipulates an annual allocation of 9.3 mgd and a maximum month allocation of 10.46 mgd through April 13, 2010. After that date, the annual and maximum month allocations are reduced to 8.51 mgd and 9.31 mgd, respectively. The CUP allocation, however, is superseded by the 2007 Regional Water Availability Rule. Therefore, as previously provided in the demand analysis in section 4.6 of the City's 2008 water supply facilities work plan, the City of Margate CUP allocation is established as 8.531 mgd. Accordingly, 8.531 mgd is used for all subsequent projections herein.

The population projections provided in the 2013 LEC water supply plan update ~~Plan~~ and the per capita demand values established based on the City's 10-year historical demand are utilized, as a conservative approach, for development of future water demand projections. The demand projections with projected surplus/deficit values through 2030 for both raw and finished water are provided in **Table 4.5**.

4.7 Improvements Required to Meet Future Demand

Based on the projected surplus through 2030, as provided in Table 4.5, additional infrastructure or AWS facilities are not required at the current time. As a result, no additional capital projects are being proposed in this 10-year work plan. Any improvements required to maintain the current system capacity and the established level of service will be completed as part of the existing repair and replacement program.

To keep track of the changes in water demand and the population projections, the City will evaluate the capital needs of the water system, including restarting the currently shelved reuse project, on an annual basis as part of the SFWMD annual reporting requirement.

Table 4.5. Projected Demand-not-Met

~~Quantity~~	~~2010~~	~~2015~~	~~2020~~	~~2025~~	~~2030~~
~~Population Served~~	~~58,312~~	~~59,716~~	~~61,118~~	~~62,521~~	~~63,923~~
~~Raw Water~~	~~-~~	~~-~~	~~-~~	~~-~~	~~-~~
~~Average Daily Demand (mgd)~~	~~7.76~~	~~7.94~~	~~8.13~~	~~8.32~~	~~8.50~~
~~Demand per Capita (gpd)~~	~~133~~	~~133~~	~~133~~	~~133~~	~~133~~
~~Permitted Amount (mgd, Annual Average)~~	~~8.531~~	~~8.531~~	~~8.531~~	~~8.531~~	~~8.531~~
~~**Permitted Surplus (Deficit)** [1,2]~~	~~**0.78**~~	~~**0.59**~~	~~**0.40**~~	~~**0.22**~~	~~**0.03**~~
~~Finished Water~~	~~-~~	~~-~~	~~-~~	~~-~~	~~-~~
~~Average Daily Demand (mgd)~~	~~6.30~~	~~6.45~~	~~6.60~~	~~6.75~~	~~6.90~~
~~Demand per Capita (gpd)~~	~~108~~	~~108~~	~~108~~	~~108~~	~~108~~
~~Permitted Amount (mgd, Annual Average)~~ [3]	~~8.190~~	~~8.190~~	~~8.190~~	~~8.190~~	~~8.190~~
~~**Permitted Surplus (Deficit)** [1,2]~~	~~**1.89**~~	~~**1.74**~~	~~**1.59**~~	~~**1.44**~~	~~**1.29**~~

Quantity	2010	2015	2020	2025	2030
Population Served (Total)	58312	59716	61118	62521	63923
Population Served (Margate)[1]	**53,284**	**54,656**	**56,084**	**57,455**	**58,678**
Raw Water					
Average Daily Demand (mgd)	7.09	7.27	7.46	7.64	7.80
Demand per Capita (gpd)	133	133	133	133	133
Permitted Amount (mgd, Annual Average)	7.88	7.88	7.88	7.88	7.88
Permitted Surplus (Deficit) [2,3]	0.79	0.61	0.42	0.24	0.08
Finished Water					
Average Daily Demand (mgd)	5.75	5.90	6.06	6.21	6.34
Demand per Capita (gpd)	108	108	108	108	108
Permitted Amount (mgd, Annual Average) [4]	7.56	7.56	7.56	7.56	7.56
Permitted Surplus (Deficit) [2, 3]	1.81	1.66	1.51	1.36	1.23
Population Served (Coconut Creek)[1]	**5,028**	**5,060**	**5,034**	**5,066**	**5,245**
Raw Water					
Average Daily Demand (mgd)	0.67	0.67	0.67	0.67	0.70
Demand per Capita (gpd)	133	133	133	133	133
Permitted Amount (mgd, Annual Average)	0.65	0.65	0.65	0.65	0.65
Permitted Surplus (Deficit) [2, 3]	(0.02)	(0.02)	(0.02)	(0.02)	(0.05)
Finished Water					

Average Daily Demand (mgd)	0.54	0.55	0.54	0.55	0.57
Demand per Capita (gpd)	108	108	108	108	108
Permitted Amount (mgd, Annual Average) [4]	0.62	0.62	0.62	0.62	0.62
Permitted Surplus (Deficit) [2, 3]	0.08	0.08	0.08	0.08	0.06
Total Permitted Surplus (Deficit) - Raw Water	**0.77**	**0.59**	**0.40**	**0.21**	**0.03**
Total Permitted Surplus (Deficit) - Finish Water	**1.89**	**1.74**	**1.59**	**1.44**	**1.29**

1 The percentage of proportionate share for population served is based on Broward County population projections since no separate figures are available for Coconut Creek service area in the 2013 LEC water supply plan update.

2 The City is limited by the permitted amount only. Water treatment plant capacity is not a limiting factor.

3 Calculated by subtracting Average Daily Demand from Permitted Amount.

4 Equates to the amount produced based on the Finish to Raw water ratio of 0.96 for the City of Margate, as provided in Appendix A: Demand Projections, Table A-5 of the 2013 LEC water supply plan update ~~Plan~~.

Section 5.0 – Water System 10-year Financial Forecast

Based on Section 4.0 above, no new capital water resources projects are anticipated in the next 10 years of this water supply plan planning period. As such, no additional funding is required at the current time. However, any improvements to maintain the current capacity and the established LOS for the system will be addressed as part of the City's repair and replacement program. The excerpts from the City's Comprehensive Annual Financial Report (CAFR) provided in **Exhibit A**, outlines the current financial position of the City's utility system in terms of the debt ratio coverage and the unrestricted reserves. As such, the City does not forecast any hardship to fund the repair and replacement program over the next 10-year planning period.

Section 6.0 – Goals, Objectives and Policies

Goal Statement

Establish procedures to identify water supply resources to address allocation deficiencies, if any, during the current 10-year planning period and beyond.

Objective 1.1:

Update Population Projections and Demand patterns to quantify water supply needs.

Policy 1.1.1.:

Track and update population projections annually, as published by Broward County Planning Services Division. Compare projections with the figures published in the 2013 LEC water supply plan update ~~Plan~~.

Policy 1.1.2:

Track and update demand projections annually based on actual demand figures as recorded in the monthly operating reports. Compare projections with the figures published in the 2013 LEC water supply plan update ~~Plan~~.

Policy 1.1.3:

Based on changes identified in Policy #1.1.1 and 1.1.2, modify the scope and size of future AWS projects or other water resources projects which may be required to address long term water supply needs.

Objective 1.2:

Track regional water resources projects and/or changes in treatment technologies, which may impact the selection of water resources projects, including the previously proposed reuse system, to address water supply needs during the current planning period and beyond.

Policy 1.2.1:

Proactively participate in regional pilot or bench scale studies which have a potential to mitigate or minimize the future demands and/or costs associated with implementation of AWS projects.

Policy 1.2.2:

Develop inter-local agreements to facilitate participation in programs stated in Policy # 1.2.1.

Objective 1.3:

Identify revenue sources to fund additional AWS projects, if required, to address water supply needs of the current planning period and beyond.

Policy 1.3.1:

Develop a comprehensive water and wastewater master plan to identify system needs over a long term planning period (i.e. beyond the current 10-year planning period).

Policy 1.3.2:

Perform a comprehensive rate study to identify revenue sources to implement the recommendations of the master plan identified in Policy # 1.3.1.

Policy 1.3.3:

Revise the rate structure or identify additional funding sources to fund the projects identified in the master plan to meet the water supply needs beyond the current 10-year planning period.

Policy 1.3.4:

Adopt an ordinance, if required, which incorporates the revised rate structure to fund projects to meet the water supply needs beyond the current 10-year planning period.

Section 7.0 – References

1. A Guide for Local Governments in Preparing Water Supply Comprehensive Plan Amendments and Water Supply Facilities Work Plan, Florida Department of Community Affairs, September 2007.

2. Lower East Coast Water Supply Plan, SFWMD, 2013 Update.

3. City of Margate Alternative Water Supply Evaluation, Hazen & Sawyer, 2008.

EXHIBIT A

Excerpts from the City's Comprehensive Annual Financial Report (CAFR)

CITY OF MARGATE, FLORIDA

STATEMENT OF FUND NET POSITION
PROPRIETARY FUNDS
SEPTEMBER 30, 2013

	Business- type activities Enterprise Funds			Governmental Activities
	Major Fund Water and Wastewater Fund	Nonmajor Fund Stormwater Utility Fund	Total	Internal Service Fund - General Insurance Fund
ASSETS				
Current assets:				
Cash and cash equivalents	$ 24,888,497	$ -	$ 24,888,497	$ 4,319,772
Investments	11,046,250	-	11,046,250	-
Accounts receivable, net	3,360,340	103,498	3,463,838	-
Inventories	372,676	-	372,676	-
Prepayments	-	-	-	-
Due from other funds	29,483	627,972	657,455	1,327,682
Total current assets	39,697,246	731,470	40,428,716	5,647,454
Capital assets:				
Infrastructure	86,606,330	2,828,069	89,434,399	-
Building	24,499,069	-	24,499,069	-
Machinery and equipment	5,510,057	1,320,714	6,830,771	-
Construction in progress	1,430,047	-	1,430,047	-
Total capital assets	118,045,503	4,148,783	122,194,286	-
Less accumulated depreciation	(72,994,686)	(886,825)	(73,881,511)	-
Total capital assets, net	45,050,817	3,261,958	48,312,775	-
Total assets	84,748,063	3,993,428	88,741,491	5,647,454
DEFERRED OUTFLOWS OF RESOURCES				
Deferred charges on refunding	332,710	-	332,710	-
Total deferred outflows of resources	332,710	-	332,710	-
LIABILITIES				
Current liabilities				
Accounts payable	1,038,253	-	1,038,253	5,639
Accrued expenses	300,560	121,458	422,018	-
Customer deposits	1,420,949	-	1,420,949	-
Estimated insurance claims payable	-	-	-	442,500
Compensated absences payable	24,598	-	24,598	
Due to other funds	2,528,864	-	2,528,864	-
Current portion of bonds payable	885,000	-	885,000	-
Total current liabilities	6,198,224	121,458	6,319,682	448,139
Net long-term liabilities:				
Net OPEB obligation	1,824,897	87,060	1,911,957	-
Compensated absences payable	1,088,294	-	1,088,294	-
Bonds payable	6,075,000	-	6,075,000	-
Total long-term liabilities	8,988,191	87,060	9,075,251	-
Total liabilities	15,186,415	208,518	15,394,933	448,139
NET POSITION				
Net investments in capital assets	38,423,527	3,261,958	41,685,485	-
Restricted for renewal and replacement	500,000	-	500,000	-
Unrestricted	30,970,831	522,952	31,493,783	5,199,315
Total net position	$ 69,894,358	$ 3,784,910	$ 73,679,268	$ 5,199,315

The notes to the financial statements are an integral part of this statement

II. DETAILED NOTES ON ALL FUNDS (CONTINUED)

E. Long-term Debt (Continued)

Debt Coverage – Water and Wastewater Revenue Bonds

The trust indentures establish a rate covenant of 1.15 to 1. The rate coverage for the year ended September 30, 2013 was 7.48 to 1. The maximum annual debt service was $1,163,400 at September 30, 2013.

Additionally, the trust indentures require the City to maintain a sinking fund reserve account equal to maximum annual debt service, or provide the bondholders with an insurance policy guaranteeing the equivalent dollar amount. The City has purchased such insurance policies, replacing the requirement to maintain a fully-funded sinking fund reserve account.

The bond coverage computation follows:

Operating income	$ 4,841,742
Additions:	
Interest income which qualifies as operating revenue for coverage purposes:	284,897
Provision for depreciation and amortization	3,780,979
Total additions	4,065,876
Subtractions:	
Nonqualifying revenues:	
Connection charges	198,256
Meter fees	2,430
Total subtractions	200,686
Income available for debt service	$ 8,706,932
Maximum annual debt service	$ 1,163,400
Coverage	7.48:1
Coverage required by bond indentures	1.15:1

Bonds Authorized, but un-issued

In February 2009, the City passed an ordinance authorizing the issuance of Water and Sewer Revenue Bonds, Series 2009 in the aggregate principal not to exceed $12,190,000 to finance all or portion of the cost of constructing, acquiring and equipping certain improvement to the water and sewer system of the City. The bonds are in parity with the Outstanding Series 2007 Water and Sewer Revenue Bonds. As of September 30, 2013, the City has not issued the 2009 Series of Water and Sewer Revenue Bonds.

Arbitrage

The City has performed the required arbitrage liability computation in accordance with the Internal Revenue Service (IRS) arbitrage regulations. As of September 30, 2013, there are no rebatable arbitrage liabilities for the outstanding revenue bond issues.

ATTACHMENT B

Letter of Concurrence from City of Coconut Creek

COCONUT CREEK
BUTTERFLY CAPITAL OF THE WORLD®

DEVELOPMENT SERVICES DEPARTMENT
PLANNING & ZONING DIVISION
4800 WEST COPANS ROAD
COCONUT CREEK, FLORIDA 33063

SHEILA N. ROSE
DEPARTMENT DIRECTOR

May 6, 2015

Mr. Reddy Chitepu, P.E.
City of Margate
Environmental Engineering
901 NW 66 Avenue
Margate, FL 33063

Dear Mr. Chitepu:

Thank you for the opportunity to review the City of Margate Comprehensive Plan Potable Water Element and the recently submitted 10-Year Water Supply Plan. Please be advised that based upon our review, we concur with the 10-year demand projections identified within the plan and are supportive of your efforts to conclude the review process.

Should you have any questions or require any additional information, please do not hesitate to contact me at 954-973-6756.

Sincerely,

W. Scott Stoudenmire, AICP
Deputy Director of Development Services

WSS:jw
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