CITY OF
SUNRISE
FLORIDA

10 - Year Water Supply Facilities Work Plan

Presented on January 2015

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Introduction

1.0 INTRODUCTION

The State of Florida has enacted legislation to strengthen the linkage between growth and water availability based on specific demands identified in the water supply planning process. This 10-Year Water Supply Facilities Work Plan (Work Plan) has been prepared for the City of Sunrise (City), located within Broward County (County). It has been prepared in response to the requirements for local governments to incorporate the Work Plan into the Comprehensive Plan. Local governments are required to revise the "Affected Elements" of their Comprehensive Plan within 18 months after the date their Regional Water Supply Plan is adopted along with a submittal for Comprehensive Plan Amendments for review by the appropriate reviewing agencies.

1.1 BACKGROUND

Beginning in 2002 and continuing through passage of the Community Planning Act in 2011 the State of Florida enacted legislation to address the State's water supply needs. These bills, particularly Senate Bills 360 and 444 (2005 legislative session) significantly changed Chapters 163 and 373 of the Florida Statutes by strengthening the statutory links between the regional water supply plans prepared by the water management districts and the comprehensive plans prepared by local governments. In addition, these bills established the basis for improving coordination between Regional Water Supply Planning and local land use planning. As a result, local governments located within an area that has a Regional Water Supply Needs and Sources Plan, must prepare a 10-Year Water Supply Facilities Work Plan (Work Plan) that ensures linkage between the Regional Water Supply Plan and their individual comprehensive plans. Each Work Plan is required to address infrastructure, conservation, capital improvements, and intergovernmental coordination in addition to water supplier coordination.

Please see **Appendix A**; Growth Management Statute and Rule Requirements Related to Water Supply Planning, provides a summary of regulatory requirements that impact local governments and their water supply planning efforts.

The South Florida Water Management District (SFWMD) evaluated the adequacy of existing water supplies to meet existing and future water demands and determined that traditional water supply resources from the Biscayne Aquifer will not be adequate to meet future demands. Their Lower East Coast Regional Water Supply Plan (LEC Plan), adopted, on September 12, 2013, documents that

increased withdrawals from the surficial aquifer system and surface water from Lake Okeechobee are limited, conservation continues to be imperative to reduce per-capita use of water and resulting impacts to the sensitive regional water supply system as it is a means to postpone capacity additions for increasing supply for utilities, and reuse continues to be a vital alternative water supply which also assists several communities in complying with the ocean outfall legislation. The City of Sunrise has adopted policies in its comprehensive plan to promote greater water conservation, including discouragement of the use of potable water for irrigation, continuous monitoring of water use within limiting conditions of the consumptive use permit, adopting a level of service consistent with the SFWMD's LEC water Supply Plan, collaborative projects with neighboring utilities for sharing strained water natural resources, and discouraging excessive water used for construction purposes. The City has also replaced many of its plant and system meters to improve water accounting. The City also continues to participate in collaborative programs and partnerships with the SFWMD, Broward County and other local utilities for ensuring best management of the regional water supplies, such as service on the C-51 Reservoir Working Groups, the Broward County Conservation Pays program, Broward County's Naturescape Irrigation Service program, the Southeast Florida Utilities Council, and the National Water Reuse Association and participates in the Broward County Water Matters Day, the City's Earth Day, the Climate Change Summits and other conservation events.

1.2 PURPOSE

The purpose of this Work Plan is to assess the City's current water sources and associated facilities and evaluate their adequacy to meet the projected raw and treated water demands. The Work Plan will outline alternative water supply sources required to meet projected shortfalls and will present an implementation plan that will guide the City's efforts to develop and maintain sustainable water sources for its overall service area. The work plan will identify the major capital improvements needed for alternative water supply needs and will be incorporated into the City's five year Capital Improvements Plan (CIP). Development of this Work Plan required coordination between the City's Community Development Department and Utility Department, the South Florida Water Management District (SFWMD), and each of the water receiving local governments in the City's service area (City of Sunrise, Town of Davie, City of Weston, and Town of Southwest Ranches). As required, it is anticipated that this Work Plan will be updated every five years, or within 18 months of a revision to the LEC Plan.

Section 2
Water Service Area

2.0 INTRODUCTION

The City of Sunrise, which is located in western Broward County, was incorporated in 1961. As development grew in the area, private water systems located inside and outside the City Limits were acquired and assembled to become part of the regional water service area. Over time, the water service area expanded to encompass an area of more than 67 square miles. The City's municipal boundary map is shown in **Figure 2-1.**

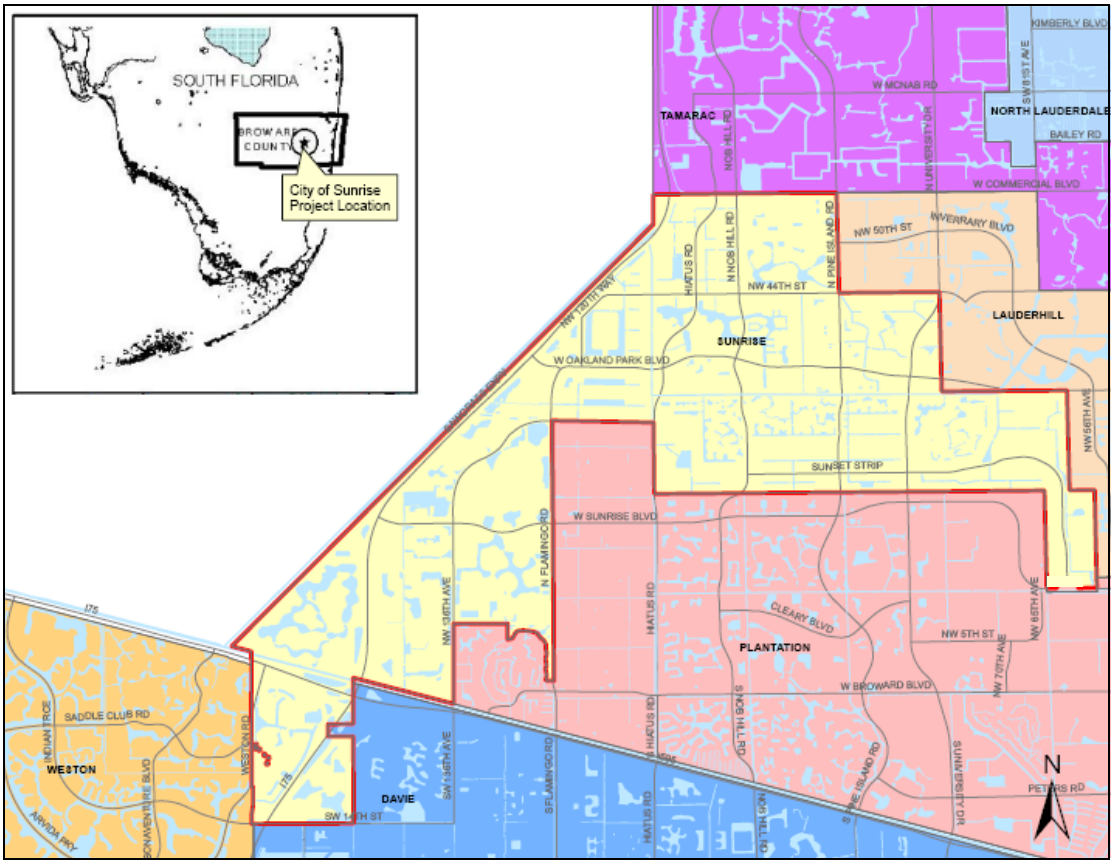

Figure 2-1 City of Sunrise Location Map

2.1 WATER SERVICE AREA

The Utility provides water service to approximately 215,000 people, and as described below, serves jurisdictions outside of the City of Sunrise municipal boundary. The City's Utility service area is bounded by Plantation and Lauderhill utility service areas to the east and south, the Tamarac service area

to the north and the Davie, Cooper City and Pembroke Pines service areas to the south. The western boundary of the service area adjoins the South Florida Water Management District (SFWMD) Water Conservation Areas 2B and 3A. The extent of the existing utility service area is shown in **Figure 2-2**. **Appendix I** illustrates the limits of the City of Sunrise Utility Service Area in comparison to City of Plantation Service Area in the upper northeast corner of the City of Sunrise Municipal Boundary.

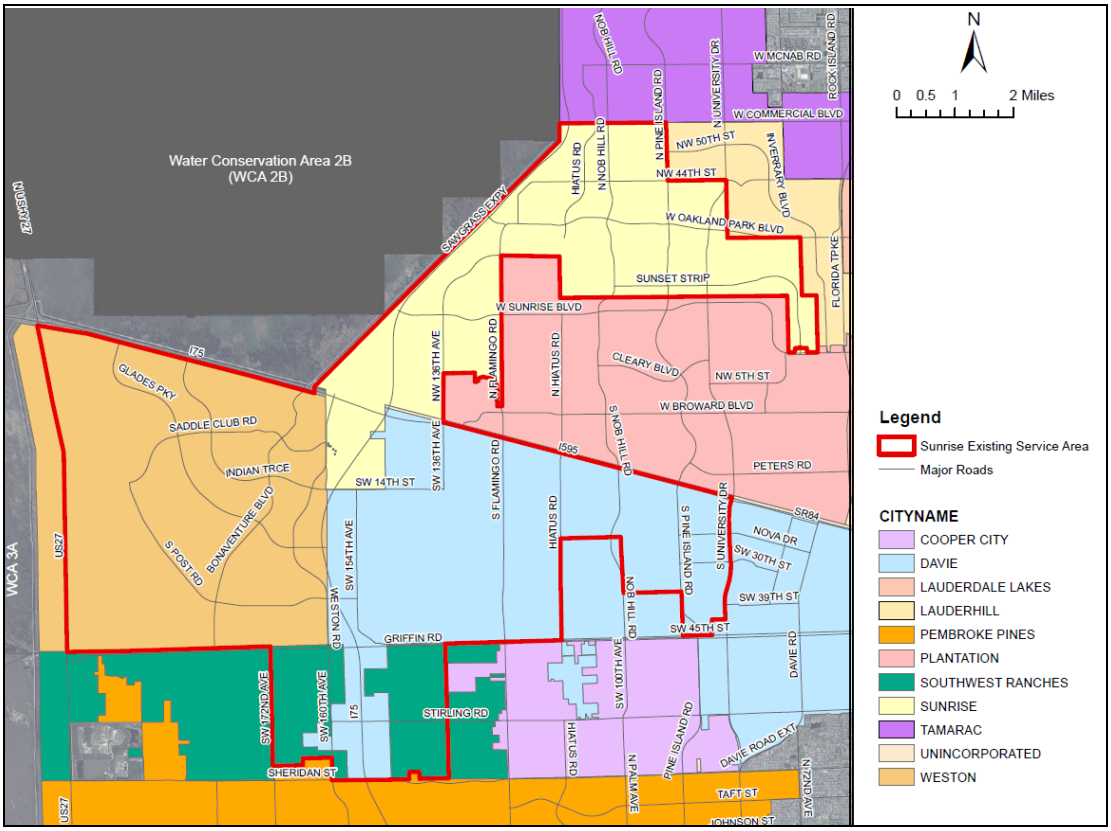

Figure 2-2 City of Sunrise Utilities Existing Service Area

2.2 SERVICE WITHIN OTHER LOCAL GOVERNMENT JURISDICTIONS

The City of Sunrise's Utility currently is the sole water service purveyor for the Cities of Weston and Sunrise. It also serves approximately 40 percent of the area encompassed by the Town of Southwest Ranches, roughly 60 percent of the area of Town of Davie and four individual homes in unincorporated Broward County, as listed in **Appendix H**.

The City is responsible for planning, financing, constructing, operating and maintaining the water utilities and public water supply systems that serve the areas shown within **Figure 2-2** and will continue to have total responsibility

over the withdrawal, treatment and distribution of potable water within this area.

Currently, a portion of the Southwest Ranches area uses private wells and septic systems. This area could potentially become part of the City's future retail service area. **Figure 2-3** shows the potential Future Service Area.

2.3 PRIVATE SUPPLIERS

Non-municipal water service providers are required to have Water Use Irrigation Permits, Major General Water Use Irrigation Permits, Individual Permits, or Major Water Use Permits issued by SFWMD. Permits are issued to allow users to withdraw a specified amount of water, either from the ground, canals, lakes or rivers. This water is typically used to irrigate golf courses, crops, nurseries, residential landscaping or for industrial uses.

Individual users withdrawing Biscayne Aquifer water within the City are identified in **Figure 2-4**. The City of Sunrise Utility does not have any involvement in the planning, financing, construction or operation of the facilities of SFWMD permittees or self-supplied users except for the City owned golf course (Seven Bridges Golf Course) and municipal green space. The City of Sunrise's water utility is responsible for obtaining the City's Seven Bridges Golf Course water use permit which withdraws water from an onsite canal.

Appendix B includes an inventory list of potable and non-potable water service providers in addition to self-supplied individuals that are mapped in **Figure 2-4**.

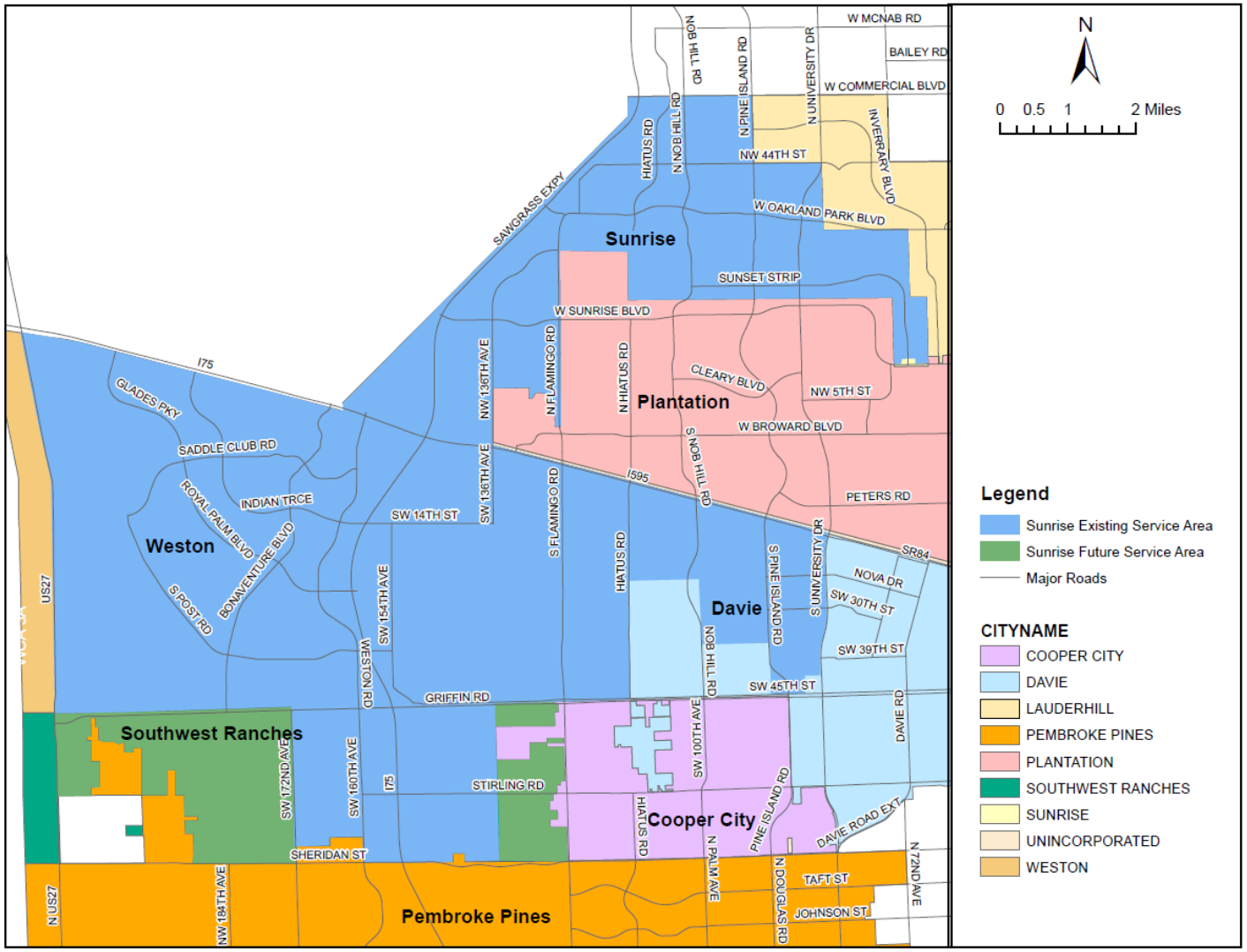

Figure 2-3 Potential Future Service Area

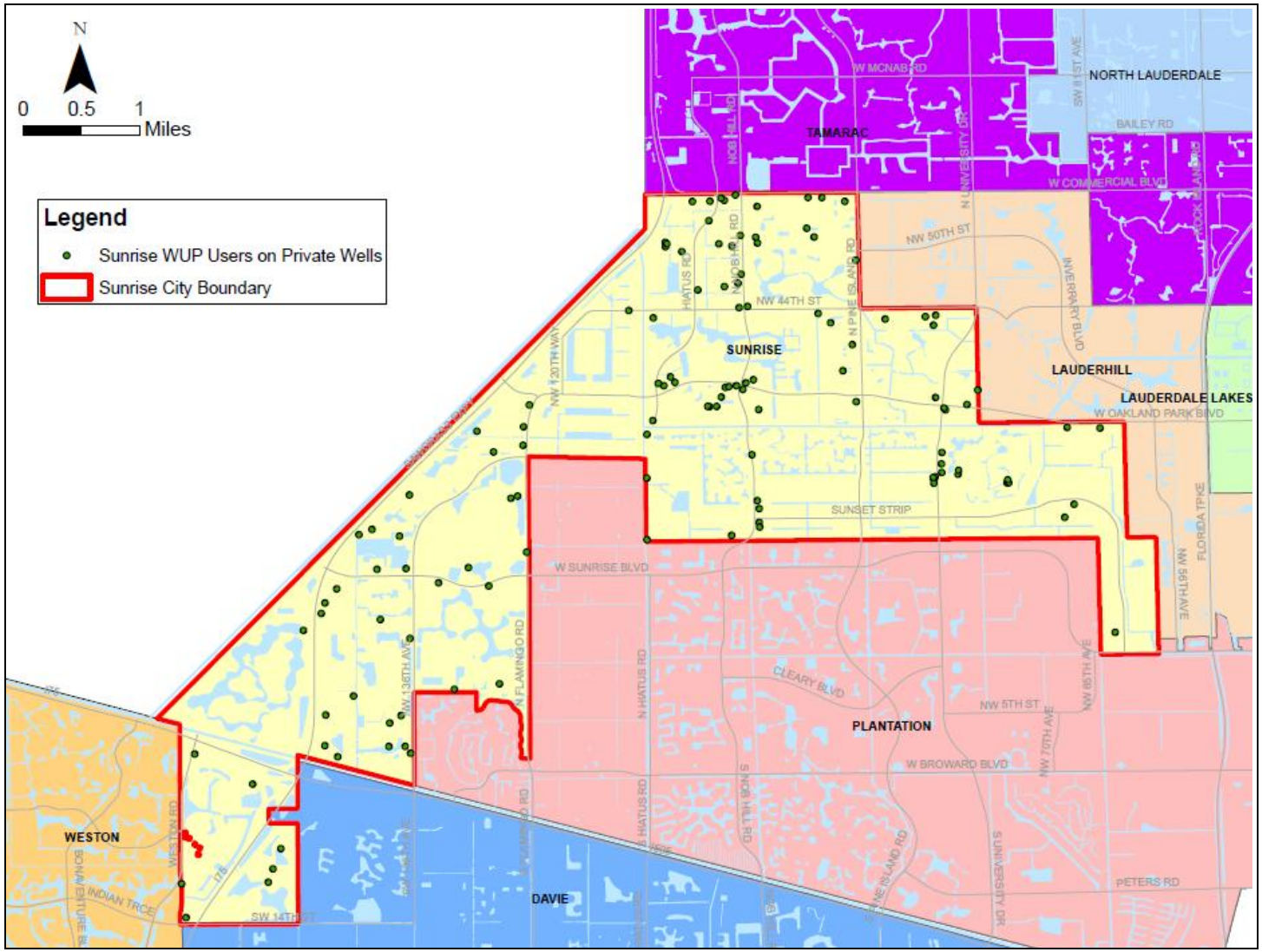

Figure 2-4 Potable and Non-Potable Users within City of Sunrise

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Section 3
Existing Water Supply, Treatment, Storage and Transmission, and Distribution Facilities

3.0 INTRODUCTION

This section will provide an overview of the City's water supply system, water treatment facilities, and transmission and distribution system.

The City of Sunrise water supply system includes four active wellfields, three water treatment plants, one active remote storage and re-pump facility, and one active Floridan Reverse Osmosis (RO) water treatment process with Floridan supply well (formerly known as Aquifer Storage and Recovery (ASR) well). The Utility's water transmission and distribution system includes approximately 750 miles of water mains ranging in size from 8 to 48 inches in diameter. The City currently has emergency interconnections with the City of Lauderhill, the Town of Davie, the City of Plantation, the City of Pembroke Pines and Cooper City.

3.1 WATER SUPPLY FACILITIES

The City of Sunrise Utilities water supply system withdraws from the Biscayne and Floridan Aquifers. The Biscayne Aquifer facilities have a constructed capacity of 60 mgd with a permitted water use allocation of 29.09 mgd and the Floridan Aquifer facilities have a capacity of 2 mgd. The City currently operates the following four wellfields: Springtree, Sawgrass (Arena), Sawgrass (Flamingo Park), and Southwest. Melaleuca and Park City wellfields have been decommissioned. The Biscayne and Floridan well field locations are shown in **Figure 3-1**. The Sawgrass and Springtree facilities and wellfields each supply about 48 percent of the entire system demand, while the remaining 4 percent is provided by the Southwest facility. **Table 3-1** presents the capacity of the Biscayne wellfields and **Table 3-2** presents the capacity of the Floridan wellfields that supply each facility.

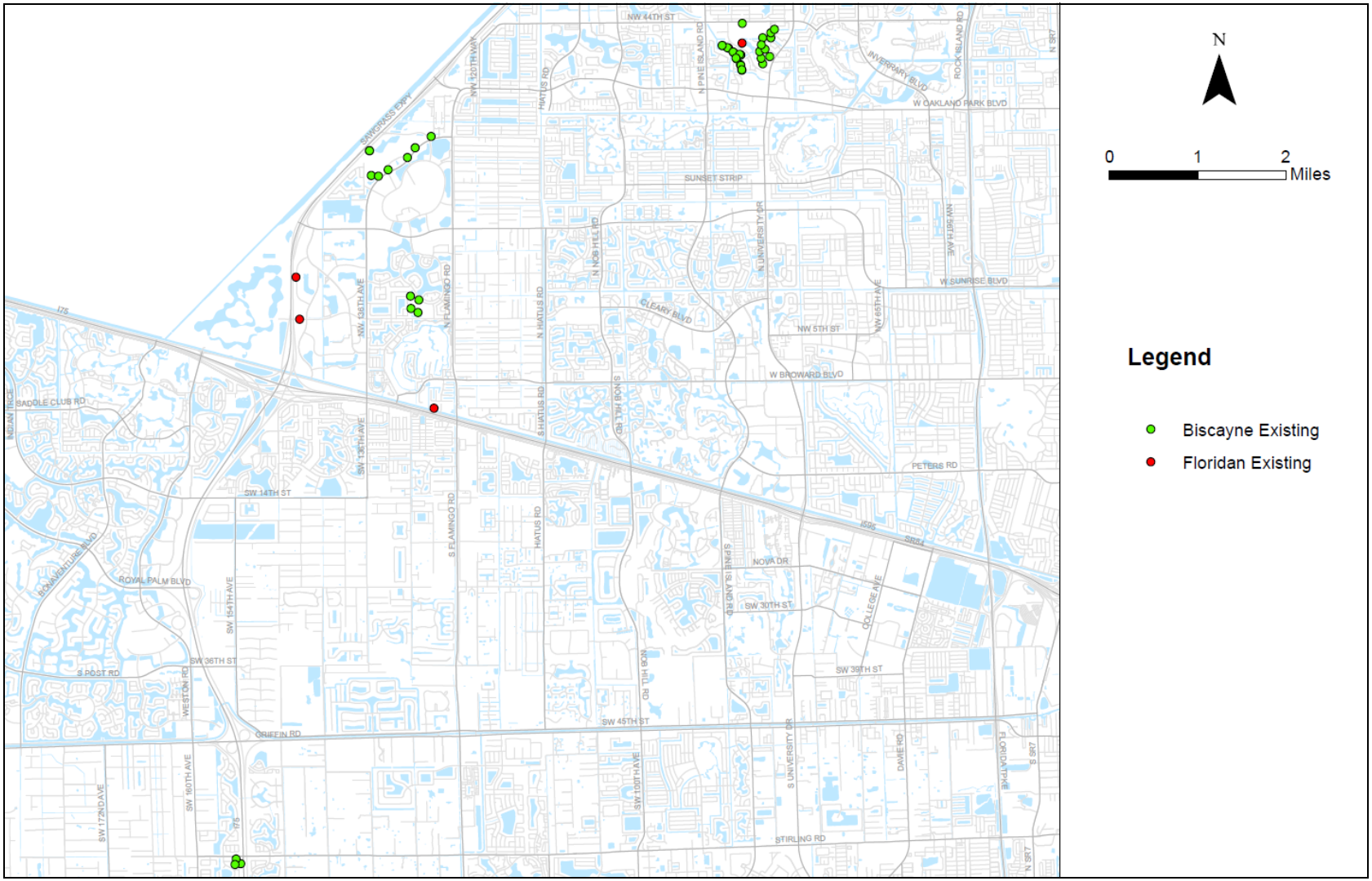

Figure 3-1 Biscayne and Floridan Wellfield Locations

Table 3-1
Biscayne Wellfield Capacity

Wellfield Location	WTP Served	Total* Installed Capacity (mgd)	Total Installed Firm Capacity (mgd)
Springtree	Springtree	24**	22**
Sawgrass (Arena)	Sawgrass	18	15
Flamingo Park	Sawgrass	15	11
Southwest	Southwest	3	2
TOTAL		**60****	**50**

*Wellfield Total Capacity includes the Standby Capacity.
**Well Capacities for rehabilitated wells (S-10R, S-11R, S-12R, S-13R, S-14R, S-15R, S-16R, and S-18R) are based on field testing results and are subject to change.

Table 3-2
Floridan Wellfield Capacity

Wellfield Location	WTP Served	Total* Installed Capacity (mgd)	Total Installed Firm Capacity (mgd)
Springtree	Springtree	2	0
Sawgrass	Sawgrass	0	0
Melaleuca	Sawgrass	*	*
TOTAL		**2**	**0**

*Melaleuca is currently not in service.

3.1.1 Springtree Wellfield

The Springtree wellfield is located at 8350 Springtree Drive on the City's Seven Bridges Golf Course. The wellfield consists of a total of 25 Biscayne production wells with 18 wells in operation and 7 wells that have been abandoned. This Biscayne Aquifer wellfield has a total installed pump capacity of 24 mgd.

The Springtree wellfield also consists of one Floridan/ASR well with a total raw water capacity of 2.0 mgd. This well supplies raw water to the Springtree Reverse Osmosis (RO) Water Treatment Plant (WTP).

3.1.2 Sawgrass Arena Wellfield

The Sawgrass wellfield is located adjacent to the BB&T Center at One Panther Parkway in Sunrise, west of NW 136th Avenue and east of the Sawgrass Expressway (State Road 869). This wellfield was constructed in 1998 and is comprised of six Biscayne wells with a total pump capacity of 18 mgd. This wellfield supplies raw water to the Sawgrass WTP.

Two additional Floridan wells were constructed in 2013 in the Sawgrass Corporate Park. These wells are located west of International Parkway and east of Sawgrass Expressway (State Road 869). One well is located in the median of NW 8th Street while the other is located north of NW 8th Street and south of Sunrise Boulevard. These wells are not operational but have been tested. The City holds these wells in reserve for future treatment with RO if needed.

3.1.3 Sawgrass Flamingo Park Wellfield

The Sawgrass Flamingo Park wellfield is located between NW 136th Avenue and Flamingo Road North of NW 8th Street. The wellfield consists of four existing wells with a total raw water capacity of 15 mgd. These wells add flow to the Sawgrass WTP.

3.1.4 Sawgrass Melaleuca Wellfield

The Melaleuca wellfield was located northwest of Flamingo Road and north of State Road 84. The Melaleuca wellfield has been abandoned for 15 years. There is also a Floridan aquifer well at this site that is not in use and is currently not equipped.

3.1.5 Park City Wellfield

The Park City wellfield was located at SW 21st Street and Pine Island Road and was abandoned in 2012. This site consisted of seven (7) Biscayne Aquifer wells. The wellfield served the Park City Water Treatment Plant until 2002. The water treatment plant site was demolished in 2012.

3.1.6 Southwest Wellfield

The Southwest wellfield is located at 15400 Watermill Road in Davie, south of Stirling Road, west of Interstate I-75 on the South West Water Treatment Plant site. The wellfield consists of three Biscayne Aquifer wells with a total raw water capacity of 2.33 mgd.

3.1.7 Aquifer Storage and Recovery (ASR)

The City has one Aquifer Storage and Recovery (ASR) well located at the Springtree WTP facility. The well is designed to store treated Biscayne Aquifer water in the shallow zone of the Floridan Aquifer during periods when excess water is available from the natural system. Stored water is then recovered during times of high water demand. With an average Total Dissolved Solids (TDS) concentration of 2,821 mg/L, the ASR recovery flow rate is approximately 2.0 mgd. This well is being used as a Floridan Aquifer supply well since 2012-2013.

3.1.8 Consumptive Use Permit Conditions

The SFWMD regulates the volume of water that can be withdrawn from surface and groundwater through the use of a Consumptive Use Permit (CUP) pursuant to Part II of Chapter 373 of the Florida Statutes. The last CUP issued to the City by the SFWMD was in May, 2008. The City is closely working with the SFWMD on alternative water supply projects in conjunction with the renewal of the permit. The last Permit No 06-00120-W included the Springtree, Sawgrass (Arena), Southwest, and Flamingo Park wellfields and allows a combined average withdrawal of 29.09 mgd from the four wellfields and a maximum day withdrawal allocation of 37.82 mgd. In addition to a system-wide maximum day allocation, the CUP also identifies a maximum day withdrawal for each wellfield as described in **Table 3-3.**

Table 3-3
CUP Biscayne Wellfield Maximum Withdrawal

Biscayne Wellfield Locations	Equivalent Annual Average Day (mgd)	Equivalent Maximum Permitted (mgd)
Sawgrass Arena (only)	6.00	15.26*
Sawgrass and Flamingo Park (combined)	11.31	22.50
Springtree	10.70	22.48
Park City (decommissioned)	-	-
Southwest Facilities	1.08	2.33
Total	**29.09**	

*Limited to minimize an adjacent wetland impact

3.2 WATER TREATMENT FACILITIES

The City of Sunrise currently operates three water treatment plants (WTPs) with a total permitted design treatment capacity of 50 mgd. The Springtree, Sawgrass, and the Southwest Utilities WTPs are currently active, while the Park City WTP has been put out of service in 2003 and later demolished in 2012. **Figure 3-2** shows the location of the active WTPs. **Table 3-4** includes the treatment facilities design capacity, treatment facilities permitted capacity and system wide average day treated water supply in 2013, from each active facility.

3.2.1 Springtree Water Treatment Plant

The Springtree WTP is located on a 20.6-acre site at 4350 Springtree Drive in Sunrise, located south of NW 44th Street and east of Springtree Drive. The water treatment facility includes a conventional lime-softening treatment facility and a reverse osmosis process. This facility has a total design and permitted treatment capacity of 25.5 mgd. Lime sludge residuals from the softening process are pumped to a lime sludge recovery process where a percentage of water is recycled back to the lime softening units, conserving additional water.

3.2.2 Sawgrass Water Treatment Plant

The Sawgrass WTP, located at 14150 NW 8th street in Sunrise, within the Sawgrass Corporate Park, was constructed in 2000 and expanded in 2003. The plant uses nanofiltration membranes as the primary treatment process with post treatment degasification and disinfection. The plant has been up-rated to a permitted treatment capacity of 24 mgd equaling its hydraulic capacity. The

concentrate produced from the membrane softening process is pumped to an industrial injection well, located on site.

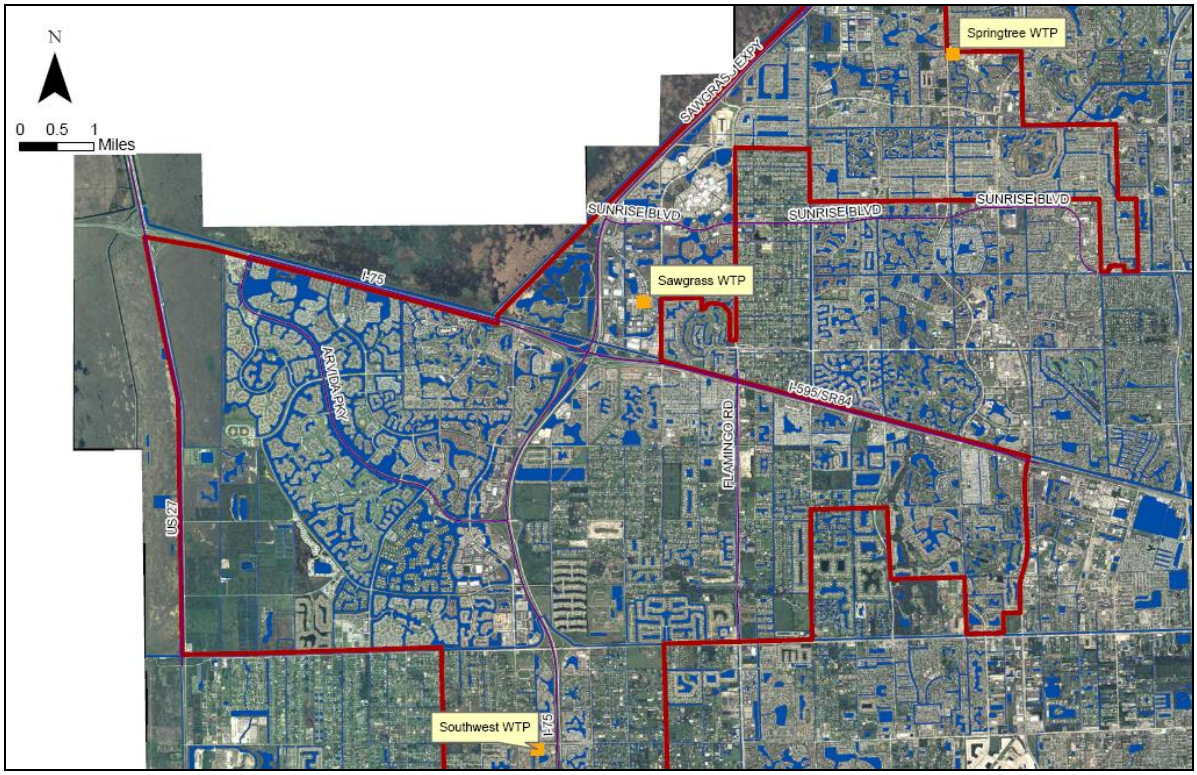

Figure 3-2 Water Treatment Plant Locations

Table 3-4
Water Treatment Facility Capacity

	Springtree WTP (mgd)	Sawgrass WTP (mgd)	Southwest WTP (mgd)	System Total (mgd)
Biscayne Treatment Design Capacity	24.0	24.0	2.0	50.0
Floridan Treatment Design Capacity	1.5	-	-	-
Treatment Capacity (Permitted) MGD	25.5	24.0	2.0	51.5
Ave Day Treated Water Supplied MGD	11.5	10.8	1.0	22.3

3.2.3 Southwest Water Treatment Plant

The Southwest WTP was built in 1988 and is located at 15400 Watermill Road in Davie, and near the intersection of Interstate 75 and Stirling Road. The water treatment facility is a conventional lime-softening treatment plant with a treatment capacity of approximately 2 mgd. The residual handling systems for this facility consist of one wash water recovery basin (Sav-All Tank) and two sludge lagoons.

3.3 WATER STORAGE FACILITIES

The three water treatment plants each have two ground water storage tanks designed to buffer the water production process from the water distribution system. In addition to the water treatment plant storage, the City maintains two offsite storage facilities. These offsite facilities are comprised of ground storage tanks, re-chlorination systems and high service pumps that assist with meeting peak hourly flow and fire flow requirements. **Table 3-5** lists the storage capacity at each location and **Figure 3-3** shows the location of the storage tanks.

Table 3-5
Storage Capacity

Facility	Capacity (MGD)
Sawgrass	10.0
Springtree	9.0
South West Utilities	1.5
Weston (Indian Trace)	2.0
Melaleuca*	0.0
Bonaventure*	0.0
Total	**22.5**

*Out of Service

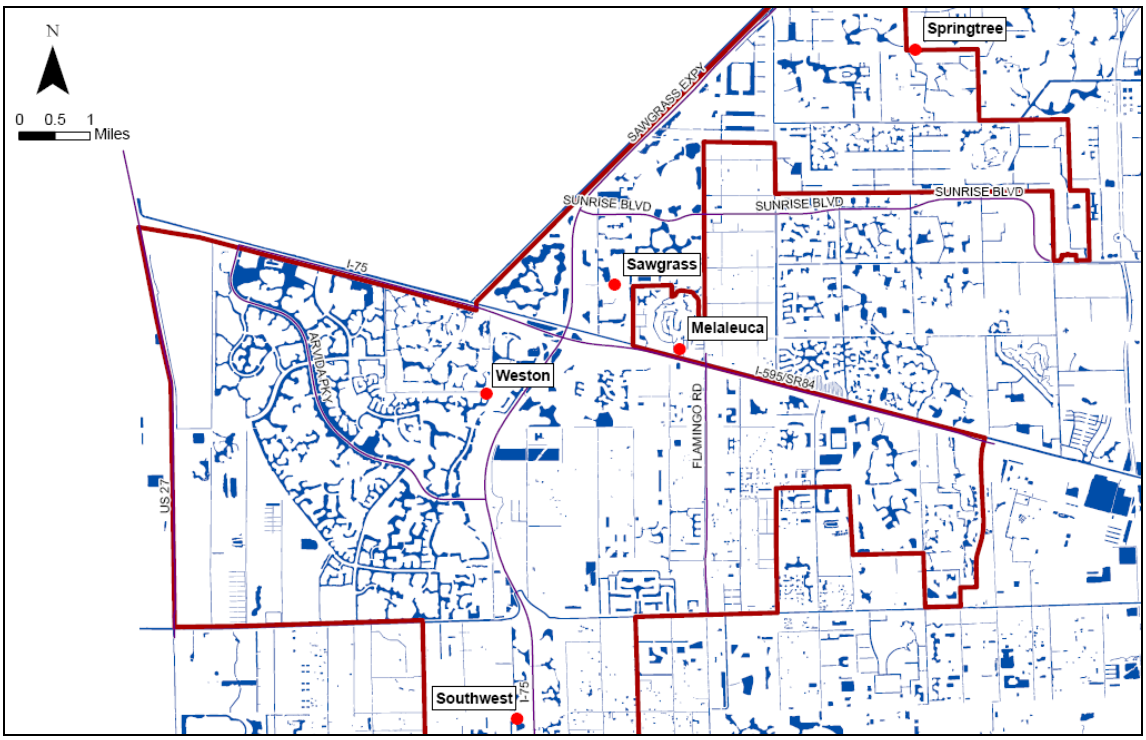

Figure 3-3 Storage Locations

3.4 WATER TRANSMISSION AND DISTRIBUTION SYSTEM

A transmission network of 30 and 24 inch mains runs from the Springtree high service pumps located in the northern part of the City, and south to the Sawgrass WTP facility. The transmission network then branches east and west along I-75 and I-595. No lines larger than 24 inch extend south of the Weston (Indian Trace) storage re-pump facility. The area south of Weston (Indian Trace) is served by mains 16 inches and smaller. **Figure 3-4** illustrates the location of transmission mains.

The City maintains water supply system interconnections for emergency with the City of Lauderhill, City of Plantation, Town of Davie, City of Pembroke Pines and Cooper City. **Appendix C** includes the details of the system interconnections.

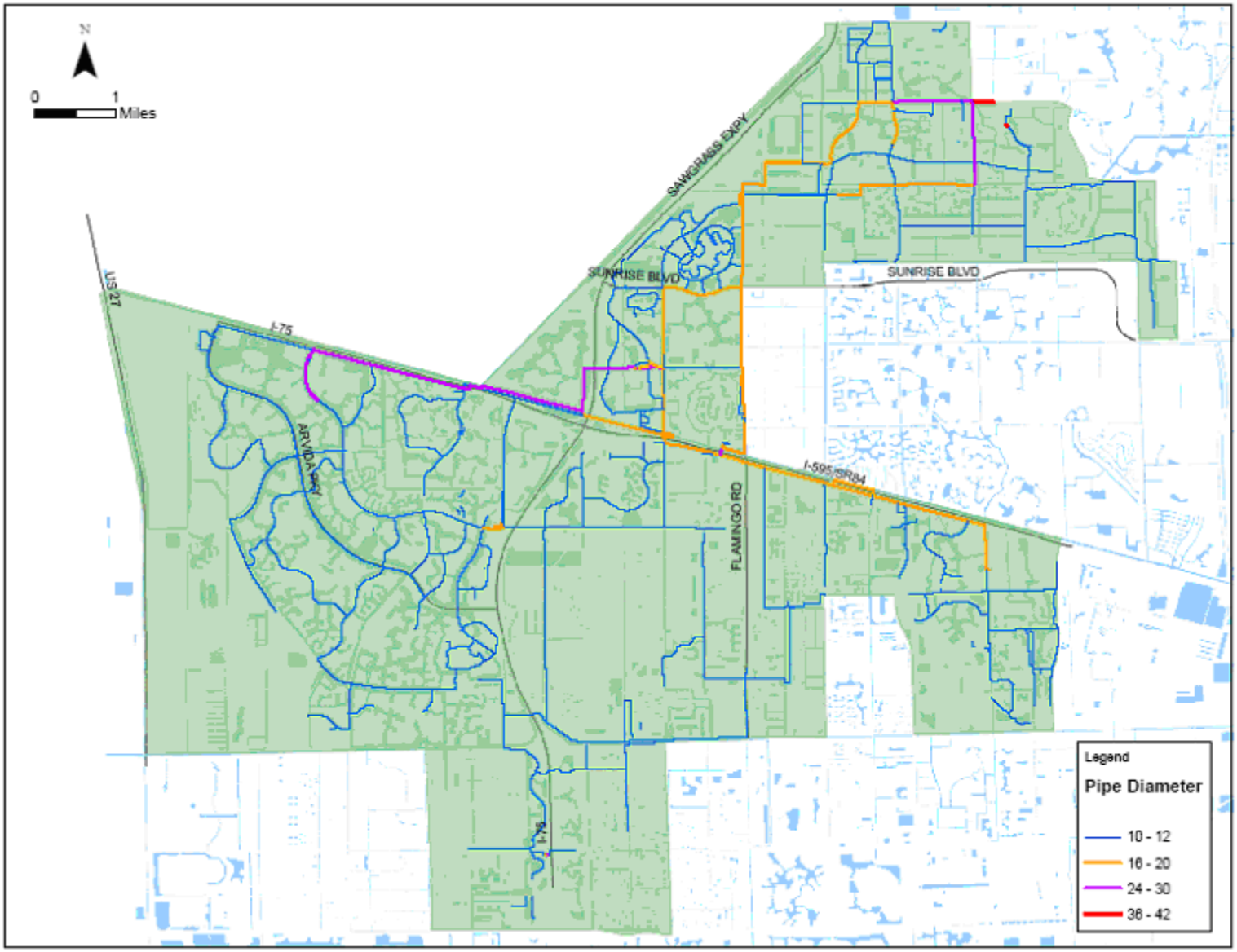

Figure 3-4 Transmission System

Section 4
Population Data and Analysis

4.0 INTRODUCTION

This section evaluates historic and future population projections within the City of Sunrise's regional utility Service Area. The development of these population projections is based upon collaborative efforts between the City of Sunrise, the City of Weston, the Town of Davie and the Town of Southwest Ranches. The population projections have been rounded to the nearest hundred.

4.1 HISTORIC POPULATION DATA

Population within the City of Sunrise Utilities water service area has increased by 10% in the last decade. Between 2004 and 2013 growth was experienced in western communities in Broward County such as the City of Weston, the City of Davie, and the City of Sunrise. **Table 4-1** presents the estimated historical population within the Utility service area.

Table 4-1
City of Sunrise Service Area Historic Population

Year	Population[1]
2004	198,700
2005	201,700
2006	204,700
2007	207,700
2008	210,700
2009	213,700
2010	216,500
2011	211,700
2012	212,300
2013	212,900

Note:
[1] Historic population data is estimated by an interpolation between 2007 TAZ data (based on the 2000 Census) and 2014 TAZ data (based on the 2010 Census) obtained from the Broward County Planning and Redevelopment Division.

4.2 EXISTING AND FUTURE POPULATION DATA

Population projections developed by Broward County are used here. The County predicts population growth with the Broward County Population Forecasting Model (BCPFM) which, in this application, uses the 2010 Census data as a base

and projects future population at 5-year intervals by applying the Cohort-Survival Methodology. Population projections are further refined based on the City and County review.

The Broward County Population Forecasting Model methodology projects population by assuming that future population is equal to present population plus births, minus deaths, and takes into account net migration. This assumption is applied to various segments of the population based on age, gender, race and ethnicity. Domestic migration rates are obtained from the United States Department of the Treasury's Internal Revenue Service (IRS) and the United States Immigration and Naturalization Service (INS) records and both are used to estimate international migration. The model methodology has been approved by the State of Florida Department of Community Affairs.

Broward County allocates the population forecast model results into the County's Traffic Analysis Zones (TAZ). TAZ areas provide a small geographic area that allows for allocation flexibility in addition to being the accepted method for transportation and water supply planning. Unlike municipal boundaries, TAZ boundaries are usually bounded by a major roadway or natural features and are relatively consistent in size. Population projections are further allocated by municipality based on the results gathered from the BCPFM and the review of roundtable panel discussions with the City and County officials.

4.3 POPULATION PROJECTIONS

This Water Supply Facility Work Plan uses the Broward County Traffic Analysis Zone (TAZ) model results dated from April 2014 as the basis for its population projections. The existing and future water service area boundaries were juxtaposed with the TAZ areas and the population was calculated based on the intersecting area. In addition, the city applied linear interpolation to project intermediate year populations that were not included in the TAZ projections. Based on this method, the population projections for the City of Sunrise's Utility Service Area are shown in **Table 4-2**. **Appendix D** provides the TAZ population projections for each municipality.

Approximately one half of the Town of Southwest Ranches is currently on private wells and is not expected to be on municipal water supply in the near future, as that decision will be driven by customer/residents discretion.

4.4 POPULATION FORECASTING RELATED TO LAND USE CHANGES & SIGNIFICANT DEVELOPMENT

Land use changes and development can impact population trends, hence a review was conducted to identify, assess and incorporate any pending or anticipated zoning and land use changes, as well as significant development projects that could result in additional population and additional water supply demand. Our review of localities in our service area indicated that all pending significant developments (two in Sunrise) within our service area are already accounted for in the County's population projections. There are no significant developments or land use changes currently pending in our service area, and this was confirmed through individual meetings with each served municipality.

Specifically, our intergovernmental coordination meetings with each locality found no pending Developments of Regional Impact (DRIs) or Land Use Plan Amendments (LUPAs) relevant to our population forecasting:

- The Town of Southwest Ranches indicated that they do not anticipate any major land use changes impacting future population projections.

- The Town of Davie does not expect 'The Commons' to be developed as a Development of Regional Impact (DRI) and does not anticipate any major land use changes impacting future population projections.

- The City of Weston does not expect any major land use changes impacting future population projections.

- The City of Sunrise expects new developments known as 'Metropica' and 'Westerra' to be developed and understands that the recent population projections released by Broward County includes these developments.

Meeting minutes for the intergovernmental coordination carried out in developing this Work Plan are in **Appendix E**

Table 4-2
City of Sunrise Service Area Population Projections

YEAR	2014	2015	2020	2025	2030	Service Area
Weston	65,800	65,900	65,100	64,300	63,700	Existing
Davie	57,400	57,500	59,500	60,100	59,800	Existing
Sunrise	86,200	86,600	90,100	93,500	93,900	Existing
SW Ranches	4,100	4,200	4,600	4,800	4,800	Existing
SW Ranches	0	0	1,900	4,000	6,000	Future*
Total	**213,500**	**214,200**	**221,200**	**226,700**	**228,200**	

*The Potential Future Service Area in SW Ranches is derived from Broward County Population Forecasting Model 2014 TAZ data and populations were applied to the Sunrise Utilities Service Area in 1/3 increments starting in 2020.

4.5 VERIFICATION OF POPULATION PROJECTIONS

Population projections computed for this work plan were shared and agreed upon with these local governments served by the City of Sunrise water Utility as part of the intergovernmental coordination carried out to develop this Water Supply Facility Work Plan. The minutes for these meetings are found in **Appendix E**.

These population projections were also compared with the projections for our service area in the SFWMD's Lower East Coast Water Supply Plan Update (LECWSP) 2013, see Table 4-3. The variation is in the range of 0% to 2%.

Table 4-3
LEC WSP Population Projections for Sunrise Utility Water Service Area

2010	2020	2030
211,403	221,570	231,736

Population estimates included in the LECWSP used the Broward County TAZ 2014 data while the population projections presented in this work plan are based on the published Broward County Population Forecasting Model 2014.

Section 5
Water Demand

5.0 INTRODUCTION

The treated and raw water needs of the City of Sunrise Utilities Water Service Area in the future are presented in this section. The projected demand is based upon the population projections presented in the previous section.

5.1 HISTORIC WATER USE

The system-wide potable water production recorded in the beginning of year 2004 was an average of 26.9 mgd and was on average, approximately 21.8 mgd in 2013 which represents a decrease of over 20 percent in the past ten years. System wide historic raw and treated water data are presented in **Table 5-1**.

Table 5-1
System Wide Historic Raw Water and Treated Water Records

	Treated Water				Raw Water				
Date	Total (mgy)	Average Month (mgm)	Max. Month (mgm)	Max.Mo./ Avg. Mo. Ratio	Total (mgy)	Raw/ Treated Ratio	Average Month (mgm)	Max. Month (mgm)	Max/Avg Month Ratio
2004	9,933	828	933	1.13	11,141	1.12	928	1,038	1.12
2005	9,801	817	902	1.10	11,073	1.13	923	1,014	1.10
2006	10,058	838	955	1.14	11,301	1.12	942	1,060	1.13
2007	9,412	784	909	1.16	10,647	1.13	887	1,027	1.16
2008	9,099	758	892	1.18	10,702	1.18	892	1,011	1.13
2009	9,697	808	913	1.13	11,072	1.14	923	1,017	1.10
2010	8,756	730	797	1.09	10,422	1.19	869	941	1.08
2011	8,683	724	827	1.14	9,802	1.13	817	953	1.17
2012	8,076	673	744	1.11	9,276	1.15	773	850	1.10
2013	7,954	663	761	1.15	8,765	1.10	730	877	1.20

Based on historic seasonal treated water demands from year 2004 to 2013, the maximum month demand is 1.09 to 1.18 times the average month demand. Usually, the maximum month occurs between March and May and the minimum month demand occurs in September.

Historic facility wide peak factors for treated water to raw water, maximum day raw water to average day raw water, and maximum month raw water to average month raw water for the past 10 years is shown in **Table 5-2**. As seen in **Table 5-2**, the system-wide treatment efficiency (product water as a percentage of raw water for the entire Utility System) is approximately 84 to 91%.

Table 5-2
Historic Peak Factors

Date	Springtree WTP			Southwest WTP			Sawgrass WTP			System Totals		
	Treated/ Raw Ratio	Max/ Avg Day Ratio	Max/Avg Month Peaking Factor	Treated/ Raw Ratio	Max/ Avg Day Ratio	Max/Avg Month Peaking Factor	Treated / Raw Ratio	Max/ Avg Day Ratio	Max/Avg Month Peaking Factor	Treated/ Raw Ratio	Max/ Avg Day Ratio	Max/Avg Month Peaking Factor
2004	0.93	1.17	1.06	1.00	1.22	1.18	0.80	1.51	1.27	0.89	1.23	1.12
2005	0.93	1.13	1.08	0.99	2.05	1.67	0.80	1.37	1.17	0.89	1.21	1.10
2006	0.95	1.24	1.13	0.98	1.70	1.14	0.80	1.48	1.18	0.89	1.32	1.13
2007	0.93	1.14	1.09	1.07	1.61	1.30	0.80	1.57	1.32	0.88	1.24	1.16
2008	0.89	1.42	1.34	1.03	2.06	1.24	0.80	1.63	1.40	0.85	1.34	1.13
2009	0.97	1.24	1.14	0.93	1.80	1.07	0.80	1.47	1.24	0.88	1.28	1.10
2010	0.81	1.32	1.24	1.06	1.38	1.17	0.84	1.39	1.10	0.84	1.22	1.08
2011	0.92	1.39	1.09	1.03	1.23	1.08	0.85	1.48	1.24	0.89	1.29	1.17
2012	0.89	1.06	1.06	1.00	1.28	1.14	0.85	1.37	1.20	0.87	1.18	1.10
2013	0.96	1.17	1.05	0.97	1.14	1.06	0.86	1.68	1.36	0.91	1.36	1.20

5.2 PER CAPITA USAGE

Based on the total water metered to customers, and the estimated historic population the treated water, the per capita usage computed for the past five years (2009 – 2013) was 109 gallons per capita per day (gpcd). This per capita usage rate is within 6% of the SFWMD LECWSP data, which shows a treated water per capita rate of 116 gpcd for the City of Sunrise Utility Water Service Area.

5.3 WATER LOSS

Losses considered in the City of Sunrise Water Utility system were of two types, treatment loss and distribution loss. As seen in **Table 5-2**, the system wide treatment loss is at an average of approximately 8.75% over the past few years. System-wide treatment losses are comprised of losses from two treatment processes; lime softening and nano-filtration. Lime softening process offers the lowest loss. These losses are expected to increase for the Sunrise Water Utility as use of alternative water sources such as Floridan brackish water increases, which also increases the need for additional capacity from these alternate treatment processes.

The distribution system losses were computed based on the amount of treated water leaving the plant and the amount of water metered to the customers. The customer water usage was computed from the billing database. While computing the distribution loss, flushing for bacterial clearance and chlorine residual maintenance was assumed in the range of 3% to 4%. **Table 5-3** shows the system wide transmission and distribution water loss data.

Table 5-3
System Wide Transmission and Distribution Loss

	Total Treated	Plant Water Use	Metered to Customers	Total Accountable*	Unaccounted for Loss
	mgy	mgy	mgy	Mgy	%
2008	9,099	1,764	7,901	9,937	7.05%
2009	9,697	1,542	7,860	9,693	12.39%
2010	8,722	1,669	7,277	9,363	9.70%
2011	8,528	1,273	6,176	7,829	7.90%
2012	8,067	1,142	7,276	8,067	6.80%
2013	7,955	875	7,026	7,955	8.68%

* Total accountable water was computed as a total of water metered to customers and flushing as maintenance of mains, where flushing was assumed in the range of 3 to 4% system wide.

5.4 WATER DEMAND PROJECTION METHODOLOGY

The forecasting of future water demands for the Sunrise Water Utility Service Area is based on population and per capita water demand projections.

The system-wide demand projections were based on 116 gpcd applied to population forecast for each time horizon until 2030. Using the SFWMD projection of per capita use at 116 gpcd, which is 6% higher than the historic utilization, is conservative.

Meetings were held with the Planning Departments of the local governments serviced by the City of Sunrise Water Utility. The Town of Southwest Ranches indicated that they do not anticipate any major land use changes impacting future population projections. The Town of Davie does not expect 'The Commons' to be developed as a Development of Regional Impact (DRI) and do not anticipate any major land use changes impacting future population projections. The City of Weston does not expect any major land use changes impacting future population projections. The City of Sunrise expects new developments known as 'Metropica' and 'Westerra' to be developed and understands that the recent population projections released by Broward County includes these developments. Meeting minutes for the intergovernmental coordination carried out in developing this Work Plan are shown in **Appendix E**.

Besides changes in land use the significant developments mentioned above (the DRIs) are not anticipated in the Water Service Area, so water demand projections were based on population projections and per capita demands. Demand forecasting was completed by multiplying the SFWMD LECWSP per capita water use estimate by population forecast data for the entire service area for the years 2013, 2015, 2020, 2025, and 2030.

Table 5-4 shows demand projections for the City of Sunrise Water Utility Service Area for years 2014, 2015, 2020, 2025, and 2030.

Table 5-4
Annual Average Day Demand Projections

	2014	2015	2020	2025	2030
Population Projections	213,500	214,200	221,200	226,700	228,200
Gallons per Capita per Day (gpcd)	116	116	116	116	116
Demand Projections (gpd)	24,766,000	24,847,200	25,659,200	26,297,200	26,471,200

Section 6
Water Supply Facilities Work Plan

6.0 WATER SUPPLY FACILITIES WORK PLAN

Our analysis anticipates increasing water demand through 2025, and our water supply plan has a phased incremental approach for keeping pace with demands. As explained in this section, demands will be met through traditional and alternative water supplies with existing and planned treatment additions, distribution and storage facilities. In addition, as described in this section, we will continue to implement several conservation measures, including a reclaimed water system.

The planning for future water sources, treatment, and distribution system improvements for the City of Sunrise Water Utility are presented in this section. The population projections presented in Section 4 and the raw water demands presented in Section 5 were used as the basis for this Water Supply Facilities Work Plan. The projects listed within this Plan are all coordinated with the SFWMD.

6.1 TRADITIONAL WATER SUPPLY PROJECTS

The majority of our anticipated water demand through 2025 will be met by the traditional water supply (Biscayne aquifer), treatment and distribution systems.

The City has existing Biscayne Aquifer wells that can provide a sustainable yield of 39.5 MGD with a firm permitted pumping capacity (capacity with one well/pump out of service) of 44.5 MGD. This yield includes the last traditional water supply source project completed in 2008: four Biscayne aquifer wells added to the City's Flamingo Park wellfield with service to the Sawgrass WTP, and a pumping capacity of 15 MGD. At this time no new Biscayne aquifer water source projects are anticipated prior to either delivery of C-51 Reservoir supplies or Biscayne credit offsets from wastewater reuse, both of which would occur in the future 3 to 5 year time horizon.

6.2 ALTERNATIVE WATER SUPPLY DEMANDS

The City of Sunrise currently does not anticipate water demands to exceed supply until year approximately 2018, although plans and designs are underway for a number of alternate water supply projects to stay ahead of the anticipated demands. The City also constructed and commissioned a low pressure 1.5 MGD reverse osmosis (RO) plant at the Springtree Water Treatment Plant facility in early 2014.

Our anticipation is that future demands will exceed our Biscayne aquifer allocation, which is fixed at 29.09 MGD as of May 2013, and that alternate water supplies from both the C-51 Reservoir and substitution credits from wastewater reuse will address these needs, depending on our success with implementing each alternative.

Table 6-1 illustrates the Plan by which the City meets future demands by alternative water supply source category. This table shows the planned growth using the Broward County population projections and the average system wide per capita demands as referenced in the South Florida Water Management District's Lower East Coast Plan.

Table 6-1 shows yearly demand projections as a function of population forecast and water use rate of 116 gpcd. It also includes demand contingencies programmed into the plan to accommodate additional water supply development to meet unknown future demands.

Figure 6-1 shows the City of Sunrise's Water Supply Plan in response to the future demand projections. The supply plan shows a phased incremental approach to stay ahead of the demand at all times.

Table 6-1
Sunrise Utilities Finished Water Demand by Source Category

A	B	C	D	E	F	G	H	I	J	K
Date	**Population to be Served**	**Projected Treated Average Day based on 2010 BCTAZ Population Projection (mgd)**	**Projected Treated Water Contingency (mgd)**	**Total Projected Average Day Treated Water Demand (mgd)**	**Biscayne Treated Water Average Equivalent (mgd)**	**Treated Water Deficit per year to be Supplied by Alternative Water (mgd)**	**C-51 or Reuse Water Biscayne Offset (mgd)**	**Springtree ASR/ Floridan Aquifer RO Treated Water (mgd)**	**Treated Alternative Water (mgd)**	**Available Annual Average Day Treated Water Supply (mgd)**
		C = B x 116gpcd	D	E = C+D		G=F-E			J=H+I	K=F+J
2014	213500	24.77	0.50	25.27	26.14	-0.87	0.00	1.50	1.50	27.64
2015	214200	24.85	0.50	25.35	26.14	-0.79	0.00	1.50	1.50	27.64
2016	215200	24.96	0.50	25.46	26.14	-0.68	0.00	1.50	1.50	27.64
2017	216200	25.08	0.50	25.58	26.14	-0.56	0.00	1.50	1.50	27.64
2018	217200	25.20	0.50	25.70	26.14	-0.44	0.00	1.50	1.50	27.64
2019	218300	25.32	0.50	25.82	26.14	-0.32	0.00	1.50	1.50	27.64
2020	221200	25.66	0.50	26.16	26.14	0.02	0.00	1.50	1.50	27.64
2021	222300	25.79	0.50	26.29	26.14	0.15	0.00	1.50	1.50	27.64
2022	223600	25.94	0.50	26.44	26.14	0.30	0.00	1.50	1.50	27.64
2023	224500	26.04	0.50	26.54	26.14	0.40	0.00	1.50	1.50	27.64
2024	225700	26.18	0.50	26.68	26.14	0.54	0.00	1.50	1.50	27.64
2025	226700	26.30	0.50	26.80	26.14	0.66	1.00	1.50	2.50	28.64
2026	227100	26.34	0.50	26.84	26.14	0.70	1.00	1.50	2.50	28.64
2027	227400	26.38	0.50	26.88	26.14	0.74	1.00	1.50	2.50	28.64
2028	227500	26.39	0.50	26.89	26.14	0.75	1.00	1.50	2.50	28.64
2029	227900	26.44	0.50	26.94	26.14	0.80	1.00	1.50	2.50	28.64
2030	228200	26.47	0.50	26.97	26.14	0.83	1.00	1.50	2.50	28.64

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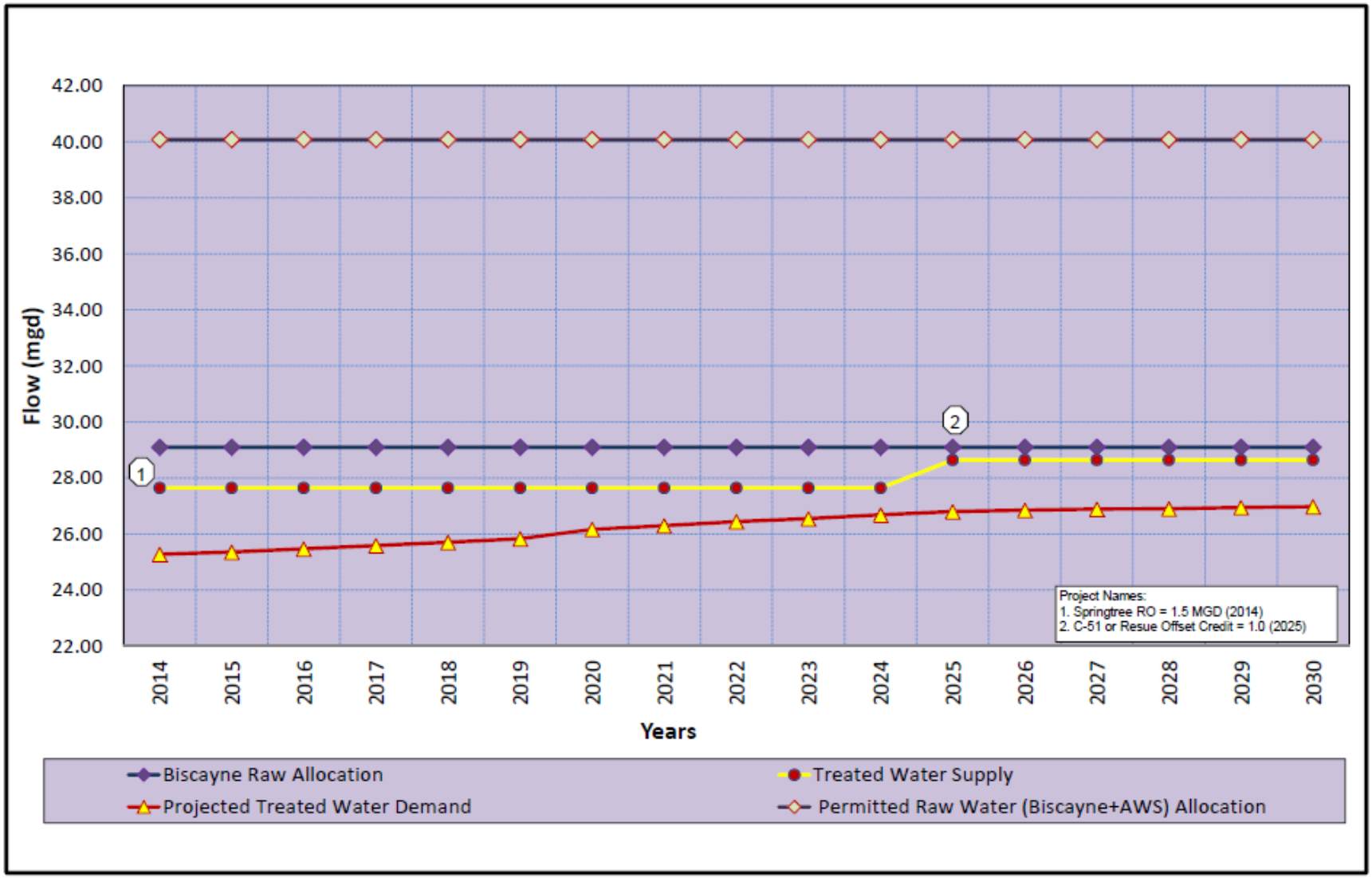

Figure 6-1City of Sunrise System Demand versus LEC Supply Plan (116 gpcd)

6.3 ALTERNATIVE WATER SUPPLY PROJECTS

The Sunrise Water Utility has planned several alternate water supply projects for phased delivery, and built in contingencies in the event one or more of them may not fully develop in time for meeting these demands. The City's Consumptive Use Permit included a 2.3 MGD borrowed allocation in addition to its base allocation of 29.09 MGD (from the Biscayne Aquifer) through May 2013. During this borrowing period the City delivered a reverse osmosis treatment process as an alternative water source and treatment to replace a portion of the borrowed Biscayne water, and manage supply of this demand. The Sunrise Water Utility plans for participation in the C-51 Reservoir Project, and is implementing a wastewater reuse program of projects at its Southwest and Sawgrass WWTPs, and will install multiple phases of reuse distribution piping projects originating from the Sawgrass WWTP site.

The projected total demand for alternative water sources in the next five (5) years is about 1.5 MGD and about 2.5 MGD over the next ten (10) years as shown in **Table 6-2**. This phasing incorporates flexibility to accelerate or decelerate depending on the actual growth in water demands. **Appendix F** provides construction details of the existing and proposed wells.

Table 6-2
City of Sunrise Existing and Proposed Alternative Water Supply Projects

Annual Average Treated Alternate Water Quantity in MGD and Source		Treated Water Capacity (MGD)	Cumulative Treated Water AWS (MGD)	Year
Springtree Floridan RO (Phase I)	AWS	1.5	1.5	2014
C-51 or Reuse Offset Credit	AWS	1.0	2.5	2025

The City has an array of projects underway for purpose of supplementing its traditional water supply with alternate water supplies. The City completed the construction of the Springtree RO WTP expansion on April 28, 2014, and has designed a potable water emergency interconnect with the Town of Davie (connecting with their Floridan aquifer supply source) that could provide a back-up for demand spikes. Other individual AWS project statuses are described below:

6.3.1 Sawgrass Recovery Increase – Conservation Project

This project was part of the WSFP-2008 and completed on schedule. The City's Sawgrass nano-filtration water plant was constructed and fully operational in 2002. Since that time, the plant was operating at 75 percent recovery. As part of the facility plan development, the City increased the recovery of the plant closer to 82 percent to reduce the water lost through the concentrate reject stream. This process change was initiated by the City operations staff on February 18, 2010. The increase in recovery results in addition of approximately 1 MGD of potable water from the same raw water allocation. Treatment of 17.31 MGD of raw water, as limited by the CUP, at 75 percent recovery, results in approximately 13 MGD of treated water. Increasing the recovery to 82 percent increases the available treated water to 14 MGD, an additional 1 MGD of treated water. This project was completed on March 30, 2010.

6.3.2 Sawgrass Reverse Osmosis (RO) Phase I

Several projects were considered for expansion of the Sawgrass WTP. These projects are summarized below.

Recovery Blend Pilot Project

The City commenced a recovery blend pilot project in November 2008 with a project cost of $497,000. The intent of the pilot project was to investigate the opportunity for additional treatment of the nano-filtration concentrate with a blend of highly brackish Floridan water using reverse osmosis technology in an effort to capture additional water from the waste stream prior to deep well injection. This process was envisioned to extract up to an additional 2 MGD from the reject stream for potable use. The RO pilot system study was completed in December 2009. The result of the study determined that the blending of brackish water with nano-membrane reject caused premature fouling and required excessive cleaning of the RO membrane treatment unit. These operational challenges were determined to be too significant for this process to be implemented at full scale.

Ion Exchange Project

The City explored an alternative conservation project using ion exchange treatment of Biscayne raw water with the goal to save an additional 1 MGD of water. On February 25, 2011 the City authorized design engineers to conduct bench scale testing and develop the Basis of Design (BODR) for the ion exchange project. In April, 2011, design engineers reported that due to high iron content in the raw water from the Sawgrass wellfields, a pretreatment step was necessary prior to the ion exchange process. Including the pretreatment step resulted in a

total project cost of $14M to yield a water savings of 1 MGD. The City decided not to pursue the ion exchange project due to the poor return on investment.

Floridan Test Wells and RO Treatment Projects

The City installed two (2) Floridan test wells in a location which is different than the two proposed Sawgrass WTP Floridan wells identified in the current CUP. The previously permitted well locations were in close proximity to the City's existing wastewater treatment effluent deep injection wells. Rather than risk interference between these systems, the City decided to install the proposed Floridan wells in the Sawgrass Corporate Park. A Floridan ground water model was run by the City in May 2011 confirming the proposed location of two test wells. The City applied for and received approval from the SFWMD of a minor permit modification in September 2012. After installation the City confirmed reasonable water quality in 2013 to support use of these wells.

Coincident with water quality, successful testing and productivity for the proposed relocated Floridan wells, the City completed design of a reverse osmosis treatment project (3 MGD) on February 25, 2011. The City has since postponed construction of this 3 MGD RO WTP expansion since demands have shifted and other alternatives can fulfill demands if they arise.

Sawgrass RO Phase II

This project is now part of Phase I project.

Sawgrass RO Phase III

This project is now part of Phase I project.

Southwest WRF – Phase I

The existing SW WWTP was permitted at 0.45 MGD on an annual average day basis. The City is making facility improvements to increase the permitted capacity from 0.45 MGD to 0.99 MGD and the addition of a 0.99 MGD high level disinfection (HLD) tertiary treatment facility for irrigational quality (IQ) reuse. This project will add additional 0.54 MGD capacity and tertiary treatment, but no initial offsite distribution of IQ water is planned yet. The City rehabilitated two of the four existing infiltration basins at the Southwest WWTP in a project completed between April 30, 2010 and December 20, 2010. The City initiated the high level disinfection (HLD) facility design project in December 22, 2010. The basis of design report investigated current and future service area flow projections and treatment process technologies and included a final recommendation to install new deep bed filters and chlorine contact tanks for total suspended solids reduction and high level disinfection.

These improvements ensure compliance with discharge criteria applicable to the infiltration ponds within the local (Broward County) pollution control ordinance and offer potential reuse water supply as development occurs near this facility.

The size of the upgrade will be limited by the ability to percolate water through the infiltration basins and those reuse sites that may develop in the future. Phase II of the project will not be carried out due to limitation of infiltration rates through existing basins. The City commenced on May 10, 2011 with the detailed design and is in construction phase and the forecasted construction completion date is March 2016.

6.3.3 Park City RO – Phase I

The City commenced the Park City regional wellfield project, consisting of aquifer testing, on September 19, 2008 with an authorization to design consultants for the design package. The design was completed and in the bidding phase when in October of 2010, the SFWMD allocated Floridan water to the Town of Davie in the vicinity of the Nova educational complex. The SFWMD staff report for the permit approval estimated an additional drawdown of 20 (+) feet on the Sunrise Park City Regional Wellfield.

The City became concerned that the combined drawdown from the Davie wells redundant with the City of Sunrise's proposed Park City Floridan wells would have caused the water quality to deteriorate, and such risk was too high to justify the capital investment. Thus, the City does not intend to move forward with this project as indicated in Exhibit 12 and WSFP–2008.

6.3.4 Springtree WTP RO – Phase I

The City plans to supplement its alternate water supply needs by using the existing ASR well at the Springtree water treatment plant. As part of permit modifications, the City may at some future date request wet weather Biscayne allocation for storage in the Floridan aquifer via the ASR well in addition to a request for Floridan water withdrawal allocation of 2 MGD from the well. The design and bidding of a skid mounted unit was completed in March 2012. This project was completed in April 2014. The ASR to Floridan conversion and RO skid project is capable of supplying 1.5 MGD of treated water on an annual average day basis.

6.3.5 Sawgrass RO Phase IV

This project has not yet been initiated and is not anticipated to be carried forward presently.

6.3.6 Park City RO – Phase II

As discussed in Phase I, this project is not anticipated to be carried forward presently.

6.3.7 C-51 Project

The C-51 Project is a regional water supply project currently being developed privately with intentions for transfer to a water control authority and operation by the South Florida Water Management District through capacity allocation agreements and water use permit allocations. Active participants in this regional project are currently considering the demands and potential opportunity for longer term permit issuances of longer than 20 years for supplementing traditional Biscayne aquifer allocations, and the additional water supply would come from captured and re-directed storm water that would otherwise be pumped to tide. The City of Sunrise is supportive of this project and anticipates receiving a modified permit allocation from the Biscayne aquifer commensurate with demonstrated demands projected out to the 50 year time horizon, associated with Phase 1 of the C-51 project.

The City's current consumptive water use permit provides 11 MGD of alternative water supply, assuming 1 MGD is allocated to the ASR well and the remaining 10 MGD is allocated to the Floridan Brackish water sources. The City recently completed updated modeling analysis assuming 10 MGD of alternative water is obtained from a C-51 Reservoir allocation. Modeling of reuse substitution credits was also performed and both can be included in a permit modification well prior to needing the water. The modeling results confirmed that with an allocation of 10 MGD from the C-51 Reservoir, no impacts to existing legal users or violations to the Minimum Flows and Levels (MFLs) set for the Water Conservation Area (WCA) are predicted.

While the C-51 Reservoir project is currently only conceptual and in the planning stages at this time, the City is planning to utilize additional water allocated, providing the project is delivered in the next 5 to 10 years. Sunrise Utilities would plan for the installation of two (2) new Biscayne wells at its Melaleuca wellfield to provide an additional 2 to 3 MGD average annual flow through new raw water piping extending from Melaleuca site to the City's existing 36-inch raw water piping coming to its Sawgrass WTP from Flamingo Park wellfield at

12855 N.W. 8 Street . The City recently upgraded the Sawgrass WTP from 18 to 24 MGD and this plant and raw water pipeline can accommodate these additional flows.

6.3.8 Sawgrass Water Reclamation Facility (WRF) - Phase I

The City has designed a 4 MGD reuse facility at its existing Sawgrass Wastewater Treatment plant. This project is scheduled to be advertised for bids in March 2015 and is planned for completion in 2017. The design and permitting for this facility is nearly complete. The City will develop the capability to distribute up to 2 MGD initially of reclaimed water on an annual average day basis to large irrigation users that are currently irrigating with surface water or ground water, and are water use permit holders. By supplying reclaimed water for irrigation to the large users, the City will seek to gain substitution and offset credits to withdraw additional Biscayne raw water. Sunrise would apply for reuse offset credits after replacing several CUP ground or surface water allocations with reclaimed water, and demonstrate offsets to the SFWMD and FDEP and request additional Biscayne aquifer by installing two additional wells and raw water piping from its Melaleuca facility. Construction of these wells or piping is not needed in the next several years, but could be brought on line toward the end ot the 10 year supply planning period.

The City commenced design of a reuse distribution piping project for supplying reclaimed water to the City's existing treated effluent discharge pipeline from the Springtree WWTP to the Sawgrass WWTP, where it is currently discharge to three existing effluent deep disposal wells. The City is currently installing two new industrial deep injection wells (IDIWs) at its Springtree WWTP. Once these industrial deep injection wells are in service, the effluent transfer piping can be re-purposed to transport reclaimed water from Sawgrass WWTP to Springtree WWTP (in the opposite direction treated effluent flows. Sunrise is also designing extensions from the reuse treatment site at Sawgrass into the Sawgrass International Corporate Park, and west to and through Broward County's Markham Park (at 16001 West S.R. 84) and southward along Weston Road to Saddle Club Road where the County uses surface or ground water to irrigate park areas and the City currently uses potable water to irrigate medians and swales (along Weston Road south of S.R. 84). This piping will also extend west from Weston Road on Blatt Boulevard to Bonaventure Boulevard where the Bonaventure Golf Course is located at 200 Bonaventure Boulevard and currently utilizes a significant CUP.

Sunrise Utilities has submitted a draft amendment to the City Commission to establish a Mandatory Reuse Zone throughout the City's Corporate Limits. This ordinance will include proposed reuse rates for all customers to be served. The connection to the Springtree WWTP treated effluent transfer pipeline will allow Sunrise to provide reclaimed water to large-use sites along its current route. This pipeline runs along N.W. 8 Street from the Sawgrass WWTP, then north along the east side of N.W. 136 Avenue and crossing Sunrise Boulevard then heading east to Flamingo Road, and north to N.W. 28 Court, east to Hiatus Road, then north to the C-13 Canal and east to N.W. 84 Avenue, north to Springtree Drive to the Springtree WWTP effluent pumping station. Sunrise Utilities intends to also serve reclaimed water to the City's own Seven Bridges Golf Course. New irrigational reuse piping was installed with the reconstruction of this golf course in year 2009. Some additional piping will be installed in the current design ongoing for the reconfigured flow delivery system to the new IDIWs.

6.4 ALTERNATIVE WATER SUPPLY DEVELOPMENT SCHEDULE

The City of Sunrise Water Utility has planned several alternative water supply projects within its 5 year Capital Improvement Plan and 10 year Water Supply Plan. Since 2007 the City has actively participated in the C-51 Reservoir project development, and expects this project to be delivered in the 3 to 5 year time horizon (2017 to 2019).

In 2009 the City completed and submitted (to FDEP) its Reuse Feasibility Plan as part of its 5 year WWTP Operating permit applications, and planned a feasible reuse program for delivery of 1.92 MGD for irrigational purpose. Sunrise progressed its irrigational reuse projects with a reuse facilities system plan, which included modeling large reuse sites proximal to the City's Sawgrass WWTP for maximizing Biscayne aquifer offset credits. The City identified approximately 40 to 50 sites for receiving the 2 MGD reuse, and is currently planning for delivery of the treatment processes by year 2017. The 2 MGD reclamation facility includes storage and some distribution system into the surrounding corporate park, and another phase of distribution reaching other sites further from the plant location, at 14150 N.W. 8 Street, Sunrise.

The City is also completing construction of a 0.99 MGD wastewater reclamation facility at 15400 Slydgemill Road, Davie for improving regulatory compliance with discharge requirements, and utilizes four (4) existing percolation ponds for effluent. This plan will be prepared to supply reclaimed water to developments as demands arise for it in the next ten years.

6.5 CONSERVATION PROGRAMS

Recognizing that water conservation preserves both the natural resources as well as capital resources; the City of Sunrise is committed to continuing and expanding on our successful track record of conservation. Specifically, we propose:

- Adopt water conservation measures aligning with the South Florida Water Management Districts, and the City has adopted the two days per week, year round water restrictions established by the SFWMD.
- Encourage the continued use of sustainable landscaping in all developments, which will reduce the overall amount of all types of water to be used for irrigation purposes.
- Continue the usage monitoring campaign which includes the identification of potential sources of illegal water uses (i.e. construction activity, non-metered facilities, etc.). Penalties for illegal water use will continue to be enforced by the City. If necessary, to encourage conservation by the public, an awareness campaign in conjunction with the SFWMD will be undertaken.
- Continue to encourage water conservation through aggressive conservation water and waste water rate structures, which effectively discourages the use of water for irrigation by increasing the rates for high usages by types and volume or quantity of use (i.e. business, residential, landscaping, etc.).
- Continue our partnership with the Broward County Naturescape Irrigation Service Program, which brings technical assistance in the form of landscaping and irrigation system analysis and recommendations that promote Florida Friendly landscapes and irrigation system efficiency, measures which combine to conserve water and promote ecosystem integrity.
- Conservation Outreach & Education: We will continue and enhance our educational outreach activities and programs throughout our service area, targeting students and adults as well as businesses, educating our customers about the environmental aspects of water conservation and its value. These include activities such as:
    1. Encouraging water conserving land use, buildings and site plans.
    2. Encouraging conversion of water fixtures throughout our service area by participating in the Conservation Pays Incentive program. The City funds approximately $70,000 annually for rebates to customers willing to change to high efficiency toilets, shower heads and install faucet aerators, and for businesses who install more efficient spray rinse valves (going on third year running).

3. Outreach and education:
    a. School presentations, tours and career orientation with focus on conservation practices.
    b. City participates in City's own Earth day, Broward County's Water Matters Day, Climate Change Summits, and sponsors booths for environmental and conservation education for public.
    c. City prepares websites, and prepares conservation related messages to public in home owners association newsletters, utility bill inserts and purchases stickers, rain gages, coloring books and other informative literature to distribute to customers and inform them of the benefits of conservation at mentioned events.
    d. Naturescape Irrigation and Landscape Evaluations, workshops and other customer technical assistance.
    e. Irrigational Reuse outreach and education.

6.6 REUSE PROGRAMS

The Utility is committed to the beneficial reuse of water. The Utility will continue to pursue and investigate further options for reusing water. The Utility will continue to work with Federal, State, County and Local Governments and our constituents to explore reuse options and funding strategies to encourage cost effective reuse. The Utility has included in this Water Supply Planning document and its 5 year Capital Improvement Program specific reuse projects to begin to make irrigational reuse an option in our service area; as discussed earlier, these include the Southwest WRF (0.99MGD) and Sawgrass WRF (2.0 MGD).

6.7 INTERGOVERNMENTAL COORDINATION

In preparation of this document, coordinated with a number of governmental agencies, hence that the findings and conclusions of this Plan are the result of information exchange and an understanding of the implications associated with this Plan. Specifically, staff from the City's Planning and Utilities Department met with the South Florida Water Management District, Broward County, the Town of Davie, the City of Weston and the Town of Southwest Ranches. Through these meetings, we jointly developed the population projections and, water demand projections upon which this Plan is based; furthermore we established the basis for continued communication as future growth occurs.

6.8 CAPITAL IMPROVEMENT ELEMENT

The City has initiated development of a reuse water system that will initially target large users in the western portions of the utility service area. The City plans to retire existing CUPs and substitute them with reuse water. The retired CUPs will be transferred to the City's Biscayne wells with a substitution credit that results in alternative water supply for the City without impacting the regional system. The City anticipates that its first phase of development of about 1 MGD will begin within the next 3 years.

The City also anticipates participating in the C-51 Storm water reservoir for additional alternative water supply. The schedule for constructing and commissioning the first phase of the reservoir is dependent on factor outside the control of the City, but likely to occur within the 10-year planning horizon.

The City is financially prepared to develop it reuse water system and participate in C-51 reservoir as the demands materialize.

6.9 GOALS, OBJECTIVES, POLICIES

The following existing and proposed goals, objectives and policies of the City's Comprehensive Plan are in support of the City's 10-Year Water Supply Facilities Work Plan:

PLANNING AND INTERGOVERNMENTAL COORDINATION

- Adopt and implement the 10-Year Water Supply Facilities Work Plan to increase the coordination between land use and future water supply planning within 18 months of the adoption of the Lower East Coast (LEC) Water Supply Plan, as required by Chapter 163, Florida Statutes. (Future Land Use Element, Policy 10.1.2).
- The City will provide immediate and ongoing coordination with the South Florida Water Management District to ensure that the City's plans, requirements and related actions contained in the 10-year Water Supply Facilities Work Plan are consistent with the Lower East Coast (LEC) Regional Water Supply Plan (Intergovernmental Coordination Element, Policy 1.1.19).
- The City shall coordinate the Comprehensive Plan and its implementation with the State, the South Florida Regional Planning Council, Broward County and adjacent cities, as well as the Broward County School District, the South Florida Water Management District, and the special districts, throughout the duration of this Plan. (Intergovernmental Coordination Element, Objective 1.1).
- The City, in cooperation with the appropriate federal, state, county and other local governmental agencies, shall encourage the appropriate coordinated level of service facilities and services. The City shall continue to provide utility services to governments with which the City has executed agreements and will continue to exchange information with surrounding local governments regarding relevant items that affect the standing of such service agreements (Intergovernmental Coordination Element, Objective 1.2; Policy 1.2.5).
- Where appropriate and feasible, the work plan shall include collaborative approaches with other local governments for long term alternative water supply source use and water treatment technology. The City will hold annual meetings with local governments in the City's Water Service Area and the South Florida Water Management District to discuss forecasted populations, service area expansions, review of land use changes that increase water supply demand, and review the implementation of conservation reuse programs and alternative water supplies. (Infrastructure Element, Policy 1.1.12; Intergovernmental Coordination Element, Policy 1.1.21).
- The City shall ensure and identify the consistency of local level of service standards by annually contacting all local governments in which water service and obtain current information, including: populations, level of services, service areas, and water supply facilities, and evaluate if future

modification to level of service standards should be included in subsequent Comprehensive Plan Amendments. (Intergovernmental Coordination Element, Policy 1.2.6).

- The City shall negotiate or renew inter-local agreements with local governments in which water is supplied, ensuring contractual agreement of the adopted level of service standards, service area, populations and time periods for services provided. (Intergovernmental Coordination Element, Policy 1.2.7).
- The City shall review the level of service standards adopted or amended by all adjacent local governments that receive water from the City. (Intergovernmental Coordination Element, Policy 1.2.8).
- Amendments to the Sunrise Future Land Use Map proposing industrial uses that could result in contamination of the aquifer shall be discouraged within wellfield protection zones of influence as identified by the Potable Water Supply Wellfield Protection Ordinance of Broward County. (Future Land Use Element, Policy 10.1.4).
- Provide immediate and ongoing coordination of water supply planning and land use planning activities of the City with municipalities receiving water from the City, and provide water to ensure that the water needs of the City's residents and other municipalities within the City's Water Service Area are met. (Future Land Use Element, Objective 10.4).
- Maintain consistency between the demand calculations in the 10-Year Water Supply Facilities Work Plan and the population projections contained in the Future Land Use Element. Implementation will be immediate, with concurrent monitoring of the population projections developed by Broward County with the use of the Broward County Population Forecasting Model (BCPFM) and adjustments to demand calculations based on updated population projections. (Future Land Use Element, Policy 10.4.1).
- Provide ongoing monitoring of water demands and applications related to future land use plan amendments located within the City's Water Service Area as defined in the Work Plan. (Future Land Use Element, Policy 10.4.2).
- The City will provide the South Florida Water Management District with periodic reports on the status of the development of new alternative water supply facilities. (Intergovernmental Coordination Element, Policy 1.1.20).

LEVEL OF SERVICE

- The City hereby adopts by reference the 10-Year Water Supply Facilities Work Plan (Work Plan), dated January 2015, for a planning period of not less than 10 years. The Work Plan addresses issues that pertain to water supply facilities and requirements needed to serve current and future development within the City of Sunrise Utility Service Area. The City shall review and update the Work Plan at least every five (5) years within 18 months after the governing board of the water management district approves an updated regional water supply plan. Any changes affecting the Work Plan shall be included in the annual update to the Five Year Schedule of Capital Improvements to ensure consistency between the Infrastructure Element and the Capital Improvements Element. (Infrastructure Element, Policy 1.1.13).
- The City shall implement procedures to ensure that at the time a development order permit is issued, adequate facility capacity is available or will be available when needed to serve the development prior to issuance of a permit. (Infrastructure Element, Objective 1.1; Policy 1.1.7).
- Monitor growth in water demands so that the annual average daily flows not exceed 90 percent of design capacity of the combined treatment plants until build-out. (Infrastructure Element, Policy 1.1.1).
- Maintain a system that can produce and deliver 127 gallons per person per day. (Infrastructure Element, Policy 1.1.1).
- The City, in cooperation with the appropriate federal, state, county and other local governmental agencies, shall encourage the appropriate coordinated level of service facilities and services. The City shall continue to provide utility services to governments with which the City has executed agreements and will continue to exchange information with surrounding local governments regarding relevant items that affect the standing of such service agreements (Intergovernmental Coordination Element, Objective 1.2; Policy 1.2.5).

COMPLIANCE

- Monitor water usage for compliance with the City's Consumptive Use Permit. (Infrastructure Element, Policy 1.1.8).
- Maintain a Water Supply Facilities Work Plan for at least a 10 year planning period addressing the water supply facilities necessary to serve existing and future development within the City's water service area. (Infrastructure Element, Policy 1.1.10).
- Protect the quality and quantity of Sunrise's potable water supply and eliminate the presence of all regulated substances, as defined by the

Broward County Potable Water Supply Wellfield Ordinance, from the potable wellfield zones of influence of Sunrise's existing and planned wellfields, as depicted on the Wellfields Map (Figure A-2). (Future Land Use Element, Objective 10.1).

- Update adopted level of service (LOS) for consistency with the South Florida Water Management Districts LEC Plan when proposing or amending the 10-Year Water Supply Facilities Work Plan. At a minimum, this coordination shall take place within 18 months following an update to the LEC and be documented in the text of the Work Plan. (Infrastructure Element, Policy 1.1.11).

CAPITAL IMPROVEMENTS

- Projected demands for the period FY 14-15 through FY 18-19, will be met by undertaking projects listed in the Capital Improvement Element and by scheduling projects as identified in the Infrastructure and analysis. This (Infrastructure Element, Objective 2.2).
- All projects required to meet projected demands through 2019 shall be scheduled in the Capital Improvements Element of this plan in accordance with the requirements of Section 163.3177(3), F.S. (Infrastructure Element, Policy 2.2.2).
- Potable Water: Average daily flow shall not exceed 90 percent of design capacity of the combined treatment plants. The system shall maintain the capacity to produce and deliver 127 gallons per person per day. (Capital Improvements Element, Policy 1.2.3).
- The City shall adequately fund and make capital improvements through the City's Renewal and Replacement Program necessary to keep its present public facilities in good condition, within sound fiscal practices. (Capital Improvements Element, Policy 1.2.10).
- The City shall provide adequate potable water and wastewater facilities meeting the adopted level of service and available to serve new development no later than the issuance of a Certificate of Occupancy. (Capital Improvements Element, Policy 1.2.11).
- The City shall implement the water supply projects described in the 10-Year Water Supply Facilities Work Plan. These improvements shall be incorporated into the Capital Improvements Element and the City's budget on an annual basis. (Capital Improvements Element, Policy 1.2.12).

CONSERVATION

- The City shall work with the SFWMD, Broward County, municipalities, independent drainage districts, and neighboring counties to plan for and develop additional surface water storage and conveyance improvements for supply, including those for the C-51 Reservoir project in Palm Beach County (Conservation Element, Policy 1.7.11).
- The City is committed to the support and development of the Phase 1 project for the C-51 Reservoir, identifying potential demands from 30 year population projections and will participate in a collaborative process with Broward County, Fort Lauderdale and other willing cities in Broward, Palm Beach and Miami-Dade counties for delivery of this alternative water supply program of projects (Conservation Element, Policy 1.7.12).
- Conserve potable water by pursuing implementation of the water conservation practices described in the 10-Year Water Supply Facilities Work Plan (Infrastructure Element, Objective 2.3).
- Continue to evaluate other methods of encouraging water conservation such as the reuse of reclaimed water as provided in the 10-Year Water Supply Facilities Plan. (Infrastructure Element, Policy 2.3.6).
- The City shall immediately provide conservation measures by implementing process improvements associated with treatment of water from the Sawgrass plant to increase treatment efficiency by five percent (5%) and reduce water lost from the water treatment process. (Infrastructure Element, Policy 2.3.7; Conservation Element, Policy 1.7.10).
- The City shall use land development regulations to preserve key natural groundwater aquifer recharge areas. (Conservation Element, Policy 1.3.3).
- In order to protect and preserve the Biscayne Aquifer the City will utilize alternative water supplies to supplement the City's consumptive use permit water withdrawal allocation. (Conservation Element, Policy 1.3.6).
- The City shall provide for emergency conservation of water in accordance with the plans of the regional water management district and the City's 10-Year Water Supply Facilities Work Plan. (Conservation Element, Objective 1.7).
- The City shall immediately implement emergency measures for conservation of water resources when required or requested by the South Florida Water Management District. Conservation action shall include but not be limited to: a program for the voluntary conservation of water through restricting usage periods and/or rationing. Nonessential water usage such as lawn watering and other outdoor activities would be

limited to certain days of the week and times of the day as required by the District. (Conservation Element, Policy 1.7.2).

- The City shall amend land development regulations to require Florida Friendly plantings in all new developments and redevelopment, which will reduce the overall amount of all types of water to be used for irrigation purposes. (Conservation Element, Policy 1.7.3).
- The City shall continue the usage monitoring campaign which includes the identification of potential sources of illegal water uses (i.e. construction activity, non-metered facilities, etc.). Penalties for illegal water use should continue to be enforced by the City. If necessary, to encourage conservation by the public, an awareness campaign in conjunction with the SFWMD will be publicized. (Conservation Element, Policy 1.7.4).
- The City should encourage conservation by the public through and educational awareness campaign (supporting the Wet in the City environmental education program) throughout the Utilities' service area. (Conservation Element, Policy 1.7.7).
- The City shall provide timely amendments to the City of Sunrise land development regulations to encourage water conservation through a tiered water and waste water fee structure, which effectively discourages the use of water for all but essential needs by increasing the rates for abnormally high usages by types of use (e.g. business, residential, landscaping, etc.). (Conservation Element, Policy 1.7.5).
- The City shall continue to support the Broward NatureScape Program, which promotes landscapes that conserve water, protect water quality, and creates wildlife habitat in new development and redevelopment. (Conservation Element, Policy 1.7.6).
- In an effort to reduce water usage, the City shall immediately undertake steps to utilize feasible measures outlined in the SFWMD's Model Water Shortage Ordinance and Florida Department of Environmental Protection's Florida Water Conservation Initiative. (Conservation Element, Policy 1.7.8).
- The City shall require new development and redevelopment to implement automatic self-actuating water conservation measures, to be utilized year-round during periods of declared drought. These conservation measures include restricted water use for irrigation purposes to the hours indicated in the South Florida Water Management District's Phased Water Use Restrictions. (Conservation Element, Policy 1.7.9).

6.10 CONCLUSIONS

The City of Sunrise Water Utility has a long standing practice for planning and developing a water system capable of meeting all the needs of its customers, both current and future. This is evidenced by its construction and operation of a water system capable of meeting not only today's demands but also demands through 2030.

As the South Florida Water Management District determined that the Biscayne Aquifer water resource can no longer be relied upon to supply future growth demands as follows from passage of the Water Availability Rule, the City has prepared to draw upon alternative water sources to meet future needs, as well as implemented measures to enhance efficiency and prevent losses, and are preparing to deliver beneficial wastewater reuse projects and potentially participate in the C-51 Reservoir project to make up any shortfalls. These projects along with our inter-governmental coordination, and active conservation measures which range from policies and programs that include the guidance of sound land use planning, development, and landscaping; as well as consumer outreach, education, assistance (incentives) and enforcement combine to position the City to be responsive to its water supply needs.

In summary, the City has prepared this Plan to ensure our water supply and facilities will meet its future demands. We have prepared this Plan as per State and regional coordination requirements – specifically, as per the South Florida Water Management District's 2013 regional Lower East Coast Water Supply Plan, and local governments are required to update and adopt their Water Supply Facilities Work Plan by March 2015, and make required attendant updates to local Comprehensive Plans accordingly.

In preparing this Plan, our water supply and demand projections were formulated through assessment of population growth projections and anticipated water demand. Our projections were matched to the data in the SFWMD's Lower East Coast Plan and to Broward County's population projections, and robust inter-governmental coordination was conducted with the localities in our service area to scan for any planned land use amendments or developments that may impact projections and require consideration in our planning.

This Water Supply Work Plan, as formulated matches alternative source water development with water demand growth. The plan also evaluates the cost impact of this plan against the City's financial status.

The result is a Plan that the City can fund from cash reserves if desired for the next five years. It is a plan that satisfies the requirements of its Consumptive Use

Permit and meets projected growth. Additionally, the plan is designed to minimize the City's risk by providing significant flexibility with the timing of new facilities thus minimizing capital outlay until it is actually needed.

Regulatory compliance was also considered in the development of this Plan. In particular, our Plan to meet projected growth and future demand builds off of the conditions and requirements of our Consumptive Use Permit. In addition, our Plan incorporates measures integrating related regulatory requirements and policy objectives, such as those around water conservation.

Table 6-3
Comparison of Facility Capacity and Anticipated Future Permitted Amount

	2014	2015	2020	2025	2030
Population Served	213,500	214,200	221,200	226,700	228,200
Average Daily Demand (Finished) MGD	24.77	24.85	25.66	26.30	26.47
Demand per Capita Finished (GPCD)	116	116	116	116	116
Available Facility Capacity (MGD)[1]	51.5	51.5	51.5	51.5	51.5
Facility Capacity Surplus (Deficit)[2]	26.73	26.65	25.84	25.20	25.03
Anticipated Permitted Amount (MGD Annual Avg.)[3]	31.09	31.09	31.09	32.09	32.09
Anticipated Permitted Surplus MGD (Deficit)[4]	1.37	0.29	1.98	2.34	2.17

MGD = Million Gallons per Day

[1] Calculated based on existing onsite facility capacity

[2] Calculated by subtracting Average Daily Demand from Available Facility Capacity

[3] Calculated as treated water by subtracting Average Daily Demand and additional DRI demand (as of December 2007) from Permitted Amount

[4] The currently permitted raw water amount is 29.09 MGD. The 20-year consumptive use permit is under preparation by SFWMD. It is anticipated that the consumptive use permit amounts from Biscayne Aquifer for future years will be equal to the 29.09 MGD. Additional water demands will be met by implementing reuse, associated credits, and additional permitted withdrawal from Floridan Aquifer.

Table 6-4
City of Sunrise, Alternative Water Supply Project Capital Costs
(No Capital is currently required for Alternative Water Supply Projects)

	Expenditure [(a)] (In Millions of Dollars)						
Project Name	**Funding Source**	**2015**	**2016**	**2017**	**2018**	**2019**	**Six Year Totals**
C-51 Reservoir Project	BP	0.00	20.00	0.00	0.00	0.00	20.00
Sawgrass 4 MGD Reuse Treatment Plant Expansion (Phase I)	408	15.43	0.31	0.31	0.00	0.00	16.04
Reuse Distribution System – SICP & Markham Park (Phase II)	408	2.12	12.79	0.26	0.26	0.00	15.43
Reuse Distribution System – SICP, Sawgrass Mills and Artesia (Phase III)	408	0.00	0.37	4.15	1.92	6.94	13.37
Reuse Distribution System – SICP (Phase IV)	408	0.00	0.00	0.93	1.18	0.23	1.29
South West WWTP Reuse Plant (HLD) Sand Filters	408	0.02	0.00	0.00	0.00	0.00	0.02

(a) February 2011 (ENR CCI = 8998)

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Appendix A

2. CITED FLORIDA STATUTE PROVISIONS (RELEVANT PORTIONS ONLY)

163.3167(9): Each local government shall address in its comprehensive plan, as enumerated in this chapter, the water supply sources necessary to meet and achieve the existing and projected water use demand for the established planning period, considering the applicable plan developed pursuant to s. 373.709.

163.3177(3)(a): The comprehensive plan shall contain a capital improvements element designed to consider the need for and the location of public facilities in order to encourage the efficient use of such facilities and set forth:

1. A component that outlines principles for construction, extension, or increase in capacity of public facilities, as well as a component that outlines principles for correcting existing public facility deficiencies, which are necessary to implement the comprehensive plan. The components shall cover at least a 5-year period.
2. Estimated public facility costs, including a delineation of when facilities will be needed, the general location of the facilities, and projected revenue sources to fund the facilities.
3. Standards to ensure the availability of public facilities and the adequacy of those facilities including acceptable levels of service.
4. A schedule of capital improvements which includes any publicly funded project of federal, state or local government, and which may include privately funded projects for which the local government has no fiscal responsibility. Projects necessary to ensure that any adopted level-of-service standards are achieved and maintained for the 5-year period must be identified as either funded or unfunded and given a level of priority for funding.

163.3177(4)(a): Coordination of the local comprehensive plan with the comprehensive plans of adjacent municipalities, the county, adjacent counties, or the region; with the appropriate water management district's regional water supply plans approved pursuant to s. 373.709; and with adopted rules pertaining to designated areas of critical state concern shall be a major objective of the local comprehensive planning process. To that end, in the preparation of a comprehensive plan or element thereof, and in the comprehensive plan or element as adopted, the governing body shall include a specific policy statement indicating the relationship of the proposed development of the area to the comprehensive plans of adjacent municipalities, the county, adjacent counties, or the region, as the case may require and as such adopted plans or plans in preparation may exist.

163.3177(5)(a): Each local government comprehensive plan must include at least two planning periods, one covering at least the first 5-year period occurring after the plan's adoption and one covering at least a 10-year period. Additional planning periods for specific components, elements, land use amendments, or projects shall be permissible and accepted as part of the planning process.

163.3177(6)(a): A future land use plan element designating proposed future general distribution, location, and extent of the uses of land for residential uses, commercial uses, industry, agriculture, recreation, conservation, education public facilities, and other categories of the public and private uses of land. The approximate acreage and the general range of density or intensity of use shall be provided for the gross land area included in each existing land use category. The element shall establish the long-term end toward which land use programs and activities are ultimately directed.

163.3177(6)(a)2.: The future land use plan and plan amendments shall be based upon surveys, studies, and data regarding the area, as applicable including:

a. The amount of land required to accommodate anticipated growth.

b. The projected permanent and seasonal population of the area.

c. The character of undeveloped land.

d. The availability of water supplies, public facilities, and services.

e. The need for redevelopment, including the renewal of blighted areas and the elimination of nonconforming uses which are inconsistent with the character of the community.

163.3177(6)(c): A general sanitary sewer, solid waste, drainage, potable water, and natural groundwater aquifer recharge element correlated to principles and guidelines for future land use, indicating ways to provide for future potable water, drainage, sanitary sewer, solid waste, and aquifer recharge protection requirements for the area. The element may be a detailed engineering plan including a topographic map depicting areas of prime groundwater recharge.

1. Each local government shall address in the data and analyses required by this section those facilities that provide service within the local government's jurisdiction. Local governments that provide facilities to serve areas within other local government jurisdictions shall also address those facilities in the data and analyses required by this section, using data from the comprehensive plan for those areas for the purpose of projecting facility needs as required in this subsection. For shared facilities, each local government shall indicate the proportional capacity of the systems allocated to serve its jurisdiction.

2. The element shall describe the problems and needs and the general facilities that will be required for solution of the problems and needs including correcting existing facility deficiencies. The element shall address coordinating the extension of, or increase in the capacity of,

facilities to meet future needs while maximizing the use of existing facilities and discouraging urban sprawl; conserving potable water resources; and protecting the functions of natural groundwater recharge areas and natural drainage features.

3. Within 18 months after the governing board approves an updated regional water supply plan, the element must incorporate the alternative water supply project or projects selected by the local government from those identified in the regional water supply plan pursuant to s. 373.709(2)(a) or proposed by the local government under s. 373.709(8)(b). If a local government is located within two water management districts, the local government shall adopt its comprehensive plan amendment within 18 months after the later updated regional water supply plan. The element must identify such alternative water supply projects and traditional water supply projects and conservation and reuse necessary to meet the water needs identified in s. 373.709(2)(a) within the local government's jurisdiction and include a work plan, covering at least a 10-year planning period, for building public, private, and regional water supply facilities, including development of alternative water supplies, which are identified in the element as necessary to serve existing and new development. The work plan shall be updated, at a minimum, every five years within 18 months after the governing board of a water management district approves an updated regional water supply plan. Local governments, public and private utilities, regional water supply authorities, special districts, and water management districts are encouraged to cooperatively plan for the development of multijurisdictional water supply facilities that are sufficient to meet projected demands for established planning periods, including the development of alternative water sources to supplement traditional sources of groundwater and surface water supplies.

163.3177(6)(d): A conservation element for the conservation, use, and protection of natural resources in the area, including air, water, water recharge areas, wetlands, water wells, estuarine marshes, soils, beaches, shores, flood plains, rivers, bays, lakes, harbors, forests, fisheries and wildlife, marine habitat, minerals, and other natural and environmental resources, including factors that affect energy conservation.

1. The following natural resources, where present within the local government’s boundaries, shall be identified and analyzed and existing recreational or conservation uses, known pollution problems, including hazardous wastes, and the potential for conservation, recreation, use, or protection shall also be identified:

    a. Rivers, bays, lakes, wetlands including estuarine marshes, groundwaters, and springs, including information on quality of the resource available.

    b. Floodplains.

2. The element must contain principles, guidelines, and standards for conservation that provide long-term goals and which:

    b. Conserves, appropriately uses, and protects the quality and quantity of current and projected water sources and waters that flow into estuarine waters or oceanic waters and protect from activities and land uses known to affect adversely the quality and quantity of identified water sources, including natural groundwater recharge areas, wellhead protection areas, and surface waters used as a source of public water supply.

    c. Provides for the emergency conservation of water sources in accordance with the plans of the regional water management district.

3. Current and projected needs and sources for at least a 10-year period based on the demands for industrial, agricultural, and potable water use and the quality and quantity of water available to meet these demands shall be analyzed. The analysis shall consider the existing levels of water conservation, use, and protection and applicable policies of the regional water management district and further must consider the appropriate regional water supply plan approved pursuant to s. 373.709, or, in the absence of an approved regional water supply plan, the district water management plan approved pursuant to s. 373.036(2). This information shall be submitted to the appropriate agencies…

163.3177(6)(h)1.: An intergovernmental coordination element showing relationships and stating principles and guidelines to be used in coordinating the adopted comprehensive plan with the plans of school boards, regional water supply authorities, and other units of local government providing services but not having regulatory authority over the use of land, with the comprehensive plans of adjacent municipalities, the county, adjacent counties, or the region, with the state comprehensive plan and with the applicable regional water supply plan approved pursuant to s. 373.709, as the case may require and as such adopted plans or plans in preparation may exist…

a. The intergovernmental coordination element must provide procedures for identifying and implementing joint planning areas, especially for the purpose of annexation, municipal incorporation, and joint infrastructure service areas.

163.3177(6)(h)3.b.: Ensure coordination in establishing level of service standards for public facilities with any state, regional, or local entity having operational and maintenance responsibility for such facilities.

163.3180: Concurrency.—

163.3180(1)(a): Sanitary sewer, solid waste, drainage, and potable water are the only public facilities and services subject to the concurrency requirement on a statewide basis…

163.3180(1)(b): The local government comprehensive plan must demonstrate, for required or optional concurrency requirements, that the levels of service adopted can be reasonably met. Infrastructure needed to ensure that adopted level-of-service standards are achieved and maintained for the 5-year period of the capital improvement schedule must be identified pursuant to the requirements of s. 163.3177(3). The comprehensive plan must include principles, guidelines, standards, and strategies for the establishment of a concurrency management system.

163.3180(2): Consistent with public health and safety, sanitary sewer, solid waste, drainage, adequate water supplies, and potable water facilities shall be in place and available to serve new development no later than the issuance by the local government of a certificate of occupancy or its functional equivalent. Prior to approval of a building permit or its functional equivalent, the local government shall consult with the applicable water supplier to determine whether adequate water supplies to serve the new development will be available no later than the anticipated date of issuance by the local government of a certificate of occupancy or its functional equivalent…

163.3180(3): Governmental entities that are not responsible for providing, financing, operating, or regulating public facilities needed to serve development may not establish binding level-of-service standards on governmental entities that do bear those responsibilities.

163.3191: **Evaluation and appraisal of comprehensive plan.—**

163.3191(1): At least once every 7 years, each local government shall evaluate its comprehensive plan to determine if plan amendments are necessary to reflect changes in state requirements in this part since the last update of the comprehensive plan, and notify the state land planning agency as to its determination.

163.3191(2): If the local government determines amendments to its comprehensive plan are necessary to reflect changes in state requirements, the local government shall prepare and transmit within 1 year such plan amendment or amendments for review pursuant to s. 163.3184.

163.3191(3): Local governments are encouraged to comprehensively evaluate and, as necessary, update comprehensive plans to reflect changes in local conditions.

Appendix B

Facility Work Plan

Appendix B - City of Sunrise Private Potable, and Private and Public Non-Potable water Use Permits

PERMIT NO.	PROJECT NAME	WATER USE	SOURCE	PERMITED AMOUNT (gpd)
06-00120-W	CITY OF SUNRISE	Public Water Supply	Biscayne Aquifer	> 500,000
06-00120-W	CITY OF SUNRISE	Public Water Supply	Biscayne Aquifer	> 500,000
06-00120-W	CITY OF SUNRISE	Public Water Supply	Biscayne Aquifer	> 500,000
06-00120-W	CITY OF SUNRISE	Public Water Supply	Biscayne Aquifer	> 500,000
06-00120-W	CITY OF SUNRISE	Public Water Supply	Floridan Aquifer System	> 500,000
06-00120-W	CITY OF SUNRISE	Public Water Supply	Biscayne Aquifer	> 500,000
06-00120-W	CITY OF SUNRISE	Public Water Supply	Biscayne Aquifer	> 500,000
06-00120-W	CITY OF SUNRISE	Public Water Supply	Biscayne Aquifer	> 500,000
06-00120-W	CITY OF SUNRISE	Public Water Supply	Biscayne Aquifer	> 500,000
06-00120-W	CITY OF SUNRISE	Public Water Supply	Biscayne Aquifer	> 500,000
06-00120-W	CITY OF SUNRISE	Public Water Supply	Biscayne Aquifer	> 500,000
06-00120-W	CITY OF SUNRISE	Public Water Supply	Biscayne Aquifer	> 500,000
06-00120-W	CITY OF SUNRISE	Public Water Supply	Biscayne Aquifer	> 500,000
06-00120-W	CITY OF SUNRISE	Public Water Supply	Biscayne Aquifer	> 500,000
06-00120-W	CITY OF SUNRISE	Public Water Supply	Biscayne Aquifer	> 500,000
06-00120-W	CITY OF SUNRISE	Public Water Supply	Biscayne Aquifer	> 500,000
06-00120-W	CITY OF SUNRISE	Public Water Supply	Biscayne Aquifer	> 500,000
06-00120-W	CITY OF SUNRISE	Public Water Supply	Biscayne Aquifer	> 500,000
06-00120-W	CITY OF SUNRISE	Public Water Supply	Floridan Aquifer System	> 500,000
06-00120-W	CITY OF SUNRISE	Public Water Supply	Floridan Aquifer System	> 500,000
06-00120-W	CITY OF SUNRISE	Public Water Supply	Biscayne Aquifer	> 500,000
06-00120-W	CITY OF SUNRISE	Public Water Supply	Floridan Aquifer System	> 500,000
06-00120-W	CITY OF SUNRISE	Public Water Supply	Floridan Aquifer System	> 500,000
06-00120-W	CITY OF SUNRISE	Public Water Supply	Biscayne Aquifer	> 500,000
06-00120-W	CITY OF SUNRISE	Public Water Supply	Biscayne Aquifer	> 500,000
06-00120-W	CITY OF SUNRISE	Public Water Supply	Biscayne Aquifer	> 500,000
06-00120-W	CITY OF SUNRISE	Public Water Supply	Biscayne Aquifer	> 500,000
06-00120-W	CITY OF SUNRISE	Public Water Supply	Biscayne Aquifer	> 500,000
06-00120-W	CITY OF SUNRISE	Public Water Supply	Biscayne Aquifer	> 500,000
06-00120-W	CITY OF SUNRISE	Public Water Supply	Biscayne Aquifer	> 500,000
06-00120-W	CITY OF SUNRISE	Public Water Supply	Biscayne Aquifer	> 500,000
06-00120-W	CITY OF SUNRISE	Public Water Supply	Biscayne Aquifer	> 500,000
06-00120-W	CITY OF SUNRISE	Public Water Supply	Biscayne Aquifer	> 500,000
06-00120-W	CITY OF SUNRISE	Public Water Supply	Biscayne Aquifer	> 500,000
06-00120-W	CITY OF SUNRISE	Public Water Supply	Biscayne Aquifer	> 500,000
06-00120-W	CITY OF SUNRISE	Public Water Supply	Biscayne Aquifer	> 500,000
06-00120-W	CITY OF SUNRISE	Public Water Supply	Biscayne Aquifer	> 500,000
06-00120-W	CITY OF SUNRISE	Public Water Supply	Biscayne Aquifer	> 500,000
06-00120-W	CITY OF SUNRISE	Public Water Supply	Biscayne Aquifer	> 500,000
06-00120-W	CITY OF SUNRISE	Public Water Supply	Biscayne Aquifer	> 500,000
06-00120-W	CITY OF SUNRISE	Public Water Supply	Biscayne Aquifer	> 500,000
06-00120-W	CITY OF SUNRISE	Public Water Supply	Biscayne Aquifer	> 500,000
06-00120-W	CITY OF SUNRISE	Public Water Supply	Biscayne Aquifer	> 500,000
06-00120-W	CITY OF SUNRISE	Public Water Supply	Biscayne Aquifer	> 500,000
06-00120-W	CITY OF SUNRISE	Public Water Supply	Biscayne Aquifer	> 500,000
06-00120-W	CITY OF SUNRISE	Public Water Supply	Biscayne Aquifer	> 500,000
06-00120-W	CITY OF SUNRISE	Public Water Supply	Biscayne Aquifer	> 500,000
06-00120-W	CITY OF SUNRISE	Public Water Supply	Biscayne Aquifer	> 500,000
06-00120-W	CITY OF SUNRISE	Public Water Supply	Biscayne Aquifer	> 500,000
06-00120-W	CITY OF SUNRISE	Public Water Supply	Biscayne Aquifer	> 500,000
06-00120-W	CITY OF SUNRISE	Public Water Supply	Biscayne Aquifer	> 500,000
06-00120-W	CITY OF SUNRISE	Public Water Supply	Biscayne Aquifer	> 500,000
06-00120-W	CITY OF SUNRISE	Public Water Supply	Biscayne Aquifer	> 500,000
06-00345-W	SAWGRASS INTERNATIONAL CORPORATE PARK	Irrigation	On-site Lake(s)/Pond(s)	> 500,000
06-00345-W	SAWGRASS INTERNATIONAL CORPORATE PARK	Irrigation	On-site Lake(s)/Pond(s)	> 500,000
06-00345-W	SAWGRASS INTERNATIONAL CORPORATE PARK	Irrigation	On-site Lake(s)/Pond(s)	> 500,000
06-00345-W	SAWGRASS INTERNATIONAL CORPORATE PARK	Irrigation	On-site Lake(s)/Pond(s)	> 500,000
06-00345-W	SAWGRASS INTERNATIONAL CORPORATE PARK	Irrigation	On-site Lake(s)/Pond(s)	> 500,000
06-00345-W	SAWGRASS INTERNATIONAL CORPORATE PARK	Irrigation	On-site Lake(s)/Pond(s)	> 500,000
06-00483-W	SAWGRASS OFFICE ASSOCIATES	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-00483-W	SAWGRASS OFFICE ASSOCIATES	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-00483-W	SAWGRASS TECHNOLOGY PARK	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-00483-W	SAWGRASS TECHNOLOGY PARK	Irrigation	On-site Lake(s)/Pond(s)	< 100,000

PERMIT NO.	PROJECT NAME	WATER USE	SOURCE	PERMITED AMOUNT (gpd)
06-00814-W	PARKWOOD HOMES ASSOCIATION	Irrigation	On-site Lake(s)/Pond(s)	> 500,000
06-01093-W	SAWGRASS MILLS	Irrigation	On-site Lake(s)/Pond(s)	> 500,000
06-01093-W	SAWGRASS MILLS	Irrigation	On-site Lake(s)/Pond(s)	> 500,000
06-01093-W	SAWGRASS MILLS	Irrigation	On-site Lake(s)/Pond(s)	> 500,000
06-01093-W	SAWGRASS MILLS	Irrigation	On-site Lake(s)/Pond(s)	> 500,000
06-01093-W	SAWGRASS MILLS	Irrigation	On-site Lake(s)/Pond(s)	> 500,000
06-01275-W	AMOCO 89-4430-26	Industry	Biscayne Aquifer	< 100,000
06-01296-W	PIPER HIGH	Air Conditioning/Withdrawl	Surficial Aquifer System	< 100,000
06-01296-W	PIPER HIGH	Irrigation	On-site Canal(s)	< 100,000
06-01296-W	PIPER HIGH	Irrigation	On-site Canal(s)	< 100,000
06-01296-W	PIPER HIGH	Irrigation	Surficial Aquifer System	< 100,000
06-01328-W	SAW BAN BUILDING	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-01344-W	SUNRISE COUNTRY CLUB	Irrigation	Biscayne Aquifer	> 500,000
06-01344-W	SUNRISE COUNTRY CLUB	Irrigation	Biscayne Aquifer	> 500,000
06-01344-W	SUNRISE COUNTRY CLUB	Irrigation	Biscayne Aquifer	> 500,000
06-01344-W	SUNRISE COUNTRY CLUB	Irrigation	Biscayne Aquifer	> 500,000
06-01397-W	CITY OF WESTON LANDSCAPE IRRIGATION	Irrigation	Indian Trace Drainage District Canal/Lake	> 500,000
06-01397-W	CITY OF WESTON LANDSCAPE IRRIGATION	Irrigation	Bonaventure DD Lake/Canal	> 500,000
06-01432-W	UNITED STATES POST OFFICE	Irrigation	SFWMD Canal (C-42)	< 100,000
06-01506-W	WEST SUNRISE COMMERCIAL PARK	Irrigation	On-site Lake(s)	< 100,000
06-01514-W	WESTPINE MIDDLE SCHOOL MIDDLE SCHOOL DD	Irrigation	Biscayne Aquifer	< 100,000
06-01532-W	MC DONALD'S RESTAURANT	Irrigation	Off-site Lake(s)	< 100,000
06-01537-W	MARKHAM PARK	Irrigation	On-site Lake(s)/Pond(s)	> 500,000
06-01537-W	MARKHAM PARK	Irrigation	On-site Lake(s)/Pond(s)	> 500,000
06-01537-W	MARKHAM PARK	Irrigation	On-site Lake(s)/Pond(s)	> 500,000
06-01537-W	MARKHAM PARK	Irrigation	On-site Lake(s)/Pond(s)	> 500,000
06-01537-W	MARKHAM PARK	Irrigation	On-site Lake(s)/Pond(s)	> 500,000
06-01537-W	MARKHAM PARK	Irrigation	On-site Lake(s)/Pond(s)	> 500,000
06-01557-W	EXXON STATION/SAWGRASS MILLS	Irrigation	On-site Lake(s)	< 100,000
06-01574-W	SPRINGTREE SUBSTATION	Irrigation	Biscayne Aquifer	< 100,000
06-01630-W	PINE ISLAND ROAD	Irrigation	On-site Canal(s)	< 100,000
06-01664-W	FLORIDA BLUE RETAIL CENTER	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-01685-W	BURGER KING	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-01698-W	ALBERTSONS #43P	Irrigation	Biscayne Aquifer	< 100,000
06-01704-W	SUNRISE FIRE STATION NO 92	Irrigation	Biscayne Aquifer	< 100,000
06-01714-W	CONSERVATION SUBSTATION	Irrigation	Biscayne Aquifer	< 100,000
06-01765-W	PARADISE GOLF & RECREATION CENTER	Irrigation	On-site Lake(s)	< 100,000
06-01783-W	G & K SERVICES	Irrigation	Biscayne Aquifer	< 100,000
06-01797-W	COMPUTER CITY SUPER STORE	Irrigation	On-site Lake(s)	< 100,000
06-01919-W	WALMART STORE @ SAWGRASS MILLS	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-01919-W	WALMART STORE @ SAWGRASS MILLS	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-01985-W	SAWGRASS MEDICAL CENTER	Irrigation	On-site Lake(s)	< 100,000
06-02125-W	SAWGRASS MEDICAL & RETAIL CENTER	Irrigation	Biscayne Aquifer	< 100,000
06-02198-W	ST. ANDREWS AT WESTON	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-02230-W	REGENCY CLUB VILLAS I	Irrigation	On-site Lake(s)	< 100,000
06-02230-W	REGENCY CLUB VILLAS I	Irrigation	On-site Lake(s)	< 100,000
06-02230-W	REGENCY CLUB VILLAS I	Irrigation	On-site Lake(s)	< 100,000
06-02253-W	MC DONALDS/AMOCO	Irrigation	Biscayne Aquifer	< 100,000
06-02278-W	DON OLSON TIRE & AUTO CENTER (SAWGRASS MILLS)	Irrigation	Surficial Aquifer System	< 100,000
06-02281-W	THE PALMS AT SAWGRASS MILLS	Irrigation	On-site Lake(s)	< 100,000
06-02284-W	GLOBAL WHOLESALE FACILITY	Irrigation	Biscayne Aquifer	< 100,000
06-02322-W	FLOWERS DISTRIBUTION CENTER	Irrigation	On-site Lake(s)	< 100,000
06-02329-W	CLASS "A" BUILDING - SUNRISE	Irrigation	Biscayne Aquifer	< 100,000
06-02334-W	COASTAL GASOLINE STATION	Irrigation	Biscayne Aquifer	< 100,000
06-02337-W	SOUTHWIND CHILD ENRICHMENT CENTER	Irrigation	On-site Lake(s)	< 100,000
06-02354-W	THE SAWGRASS PRESERVE	Irrigation	On-site Lake(s)/Pond(s)	> 500,000
06-02354-W	THE SAWGRASS PRESERVE	Irrigation	On-site Lake(s)/Pond(s)	> 500,000
06-02354-W	THE SAWGRASS PRESERVE	Irrigation	Surficial Aquifer System	> 500,000
06-02354-W	THE SAWGRASS PRESERVE	Irrigation	Surficial Aquifer System	> 500,000
06-02354-W	THE SAWGRASS PRESERVE	Irrigation	Surficial Aquifer System	> 500,000
06-02360-W	WENDY'S RESTAURANT	Irrigation	Biscayne Aquifer	< 100,000
06-02378-W	OAK NOB CORNER	Irrigation	Biscayne Aquifer	< 100,000
06-02379-W	SAWGRASS FORD	Irrigation	On-site Lake(s)/Pond(s)	< 100,000

PERMIT NO.	PROJECT NAME	WATER USE	SOURCE	PERMITED AMOUNT (gpd)
06-02385-W	WATERFORD CROSSINGS	Irrigation	Biscayne Aquifer	< 100,000
06-02387-W	AUTOMATIC ENTRANCES INC	Irrigation	Biscayne Aquifer	< 100,000
06-02390-W	REGENCY CLUB VILLAS 2	Irrigation	Lake	< 100,000
06-02394-W	UNITED HEALTHCARE	Irrigation	Lake	< 100,000
06-02410-W	WELLEBY TENNIS CENTER	Irrigation	Off-site Lake(s)	< 100,000
06-02419-W	CAMPUS CONCEPT	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-02425-W	SPRING TREE GARDENS	Irrigation	Canal	< 100,000
06-02426-W	CLASS A OFFICE BUILDING PHASE II	Irrigation	Biscayne Aquifer	< 100,000
06-02429-W	ARCUS	Irrigation	Biscayne Aquifer	< 100,000
06-02452-W	BANK ATLANTIC CENTER	Irrigation	On-site Lake(s)	> 500,000
06-02452-W	BANK ATLANTIC CENTER	Irrigation	On-site Lake(s)	> 500,000
06-02464-W	K & S MOVING SYSTEMS	Irrigation	Lake	< 100,000
06-02465-W	HEATHER GLEN - SUNRISE	Irrigation	Lake	< 100,000
06-02467-W	PINE BAY TOWNHOMES	Irrigation	On-site Lake(s)	< 100,000
06-02467-W	PINE BAY TOWNHOMES	Irrigation	On-site Lake(s)	< 100,000
06-02467-W	PINE BAY TOWNHOMES	Irrigation	On-site Lake(s)	< 100,000
06-02494-W	DRIVE LINE INC	Irrigation	On-site Canal(s)	< 100,000
06-02505-W	TRADEWINDS	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-02512-W	24000 SQ FT DISTRIBUTION FACILITY	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-02515-W	MORSE	Irrigation	Surficial Aquifer System	< 100,000
06-02515-W	MORSE	Irrigation	On-site Lake(s)	< 100,000
06-02515-W	MORSE	Irrigation	On-site Lake(s)	< 100,000
06-02515-W	MORSE	Irrigation	On-site Lake(s)	< 100,000
06-02515-W	MORSE	Irrigation	On-site Lake(s)	< 100,000
06-02516-W	MOR PRINTING FACILITY	Irrigation	On-site Lake(s)	< 100,000
06-02536-W	KELLSTROM BUILDING	Irrigation	On-site Canal(s)	< 100,000
06-02561-W	PARCEL 61 AT SAWGRASS INTERNATIONAL COPORATE PARK	Irrigation	On-site Canal(s)	< 100,000
06-02574-W	WESTON ROAD SHOPPES	Irrigation	Off-site Lake(s)	< 100,000
06-02585-W	BLOCKBUSTER VIDEO	Irrigation	Biscayne Aquifer	< 100,000
06-02587-W	SPRINGTREE GOLF PLAZA	Irrigation	On-site Canal(s)	< 100,000
06-02601-W	CLASS A PHASE III	Irrigation	Biscayne Aquifer	< 100,000
06-02622-W	SANDPIPER COVE	Irrigation	Biscayne Aquifer	< 100,000
06-02622-W	SANDPIPER COVE	Irrigation	Biscayne Aquifer	< 100,000
06-02622-W	SANDPIPER COVE	Irrigation	Biscayne Aquifer	< 100,000
06-02638-W	WALGREENS	Irrigation	Biscayne Aquifer	< 100,000
06-02679-W	EAST SIDE MARIOS RESTAURANT	Irrigation	Lake	< 100,000
06-02702-W	PEDIATRIX	Irrigation	Biscayne Aquifer	< 100,000
06-02721-W	KENTUCKY FRIED CHICKEN	Irrigation	Biscayne Aquifer	< 100,000
06-02722-W	LAUDERHILL SPORTS PARK	Irrigation	SFWMD Canal (C-13)	< 100,000
06-02730-W	DIGITAL ANTENNA CENTRE	Irrigation	Canal	< 100,000
06-02736-W	DON OLSEN TIRE AND AUTO	Irrigation	Biscayne Aquifer	< 100,000
06-02745-W	SAWGRASS CAMPUS E	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-02746-W	MEINEKE DISCOUNT MUFFLERS	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-02766-W	MARKHAM PARK NURSERY	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-02774-W	SUNRISE INDUSTRIAL PARK, PARCELS 5B & 5C	Irrigation	Biscayne Aquifer	< 100,000
06-02781-W	POLLO TROPICAL RESTAURANT	Irrigation	Biscayne Aquifer	< 100,000
06-02783-W	SUNRISE INDUSTRIAL PARK	Irrigation	On-site Canal(s)	< 100,000
06-02788-W	LA-Z-BOY SHOWROOM	Irrigation	Biscayne Aquifer	< 100,000
06-02835-W	COURTYARD DISTRIBUTION CENTER III	Irrigation	Biscayne Aquifer	< 100,000
06-02851-W	BANYAN RIDGE	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-02889-W	NEXTEL 2676A - WEST SUNRISE	Irrigation	Biscayne Aquifer	< 100,000
06-02938-W	7-ELEVEN	Irrigation	Biscayne Aquifer	< 100,000
06-02947-W	SAWGRASS INTERNATIONAL BUSINESS CENTER	Irrigation	Surficial Aquifer System	< 100,000
06-02948-W	LOWE'S OF SUNRISE	Irrigation	SFWMD Canal (C-13)	< 100,000
06-02948-W	LOWE'S OF SUNRISE	Irrigation	SFWMD Canal (C-13)	< 100,000
06-02951-W	TGI FRIDAYS	Irrigation	Biscayne Aquifer	< 100,000
06-02954-W	LONGSTAR TEXACO	Irrigation	Biscayne Aquifer	< 100,000
06-02971-W	SAWGRASS COMMERCE CENTER - PARCELS 13 & 14	Irrigation	Unspecified	< 100,000
06-02986-W	53 SOUTH COMMERCE CENTER	Irrigation	On-site Canal(s)	< 100,000
06-02995-W	COURTYARD DISTRIBUTION CENTER II	Irrigation	Canal	< 100,000
06-03043-W	RIVERWALK TOWNHOMES	Irrigation	On-site Lake(s)	< 100,000
06-03045-W	OPUS CENTER	Irrigation	On-site Lake(s)	< 100,000
06-03053-W	SHOTGUN ROAD LINEAR PARK	Irrigation	On-site Lake(s)	< 100,000

PERMIT NO.	PROJECT NAME	WATER USE	SOURCE	PERMITED AMOUNT (gpd)
06-03053-W	SHOTGUN ROAD LINEAR PARK	Irrigation	On-site Lake(s)	< 100,000
06-03084-W	HEALTH SOUTH	Irrigation	Biscayne Aquifer	< 100,000
06-03085-W	F & R SUNRISE LTD	Irrigation	Biscayne Aquifer	< 100,000
06-03111-W	SOCCER COMPLEX	Irrigation	On-site Lake(s)	< 100,000
06-03114-W	SPRINGTREE GOLF CLUBHOUSE	Irrigation	On-site Canal(s)	< 100,000
06-03150-W	OAKLAND TOWN CENTER 7/ELEVEN	Irrigation	Surficial Aquifer System	< 100,000
06-03162-W	HBO LATIN AMERICA PRODUCTION SERVICS	Air Conditioning/Withdrawl	Biscayne Aquifer	< 100,000
06-03178-W	MARINA WEST LLC	Irrigation	On-site Lake(s)	< 100,000
06-03202-W	HEALTH SOUTH SUNRISE REHABILITATION HOSPITAL	Irrigation	On-site Lake(s)	< 100,000
06-03226-W	SAWGRASS TECHNOLOGY PARK	Irrigation	On-site Lake(s)	< 100,000
06-03257-W	SPRING TREE GOLF COURSE	Irrigation	On-site Canal(s)	> 500,000
06-03257-W	SPRING TREE GOLF COURSE	Irrigation	On-site Canal(s)	> 500,000
06-03259-W	SHOPPES OF OAKLAND PARK	Irrigation	On-site Canal(s)	< 100,000
06-03266-W	WALGREENS - TAMARAC	Irrigation	Biscayne Aquifer	< 100,000
06-03267-W	DAUER AUTO STORAGE WAREHOUSE	Irrigation	Biscayne Aquifer	< 100,000
06-03315-W	SUNTRUST BANK - BROWARD	Irrigation	On-site Canal(s)	< 100,000
06-03338-W	7-11 SUNRISE	Irrigation	Biscayne Aquifer	< 100,000
06-03349-W	PUBLIX AT SUNRISE WEST	Irrigation	On-site Lake(s)	< 100,000
06-03373-W	WENDY'S AT SAWGRASS GATEWAY CENTER	Irrigation	Biscayne Aquifer	< 100,000
06-03381-W	ALHAMBRA CIRCLE	Irrigation	On-site Lake(s)	< 100,000
06-03381-W	ALHAMBRA CIRCLE	Irrigation	On-site Lake(s)	< 100,000
06-03391-W	WINDING LAKE AT WELLEBY	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-03401-W	NORTH BROWARD HOSPITAL DISTRICT SUNRISE HEALTH PARK	Irrigation	On-site Lake(s)	< 100,000
06-03404-W	CAPITOL HILL DEVELOPMENT	Irrigation	Biscayne Aquifer	< 100,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	SFWMD Canal (C-13)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000

PERMIT NO.	PROJECT NAME	WATER USE	SOURCE	PERMITED AMOUNT (gpd)
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03431-W	SUNRISE LAKES PHASE IV	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03434-W	SUNRISE AUTOMALL PHASES 2A AND 3A	Irrigation	On-site Lake(s)	< 100,000
06-03434-W	SUNRISE AUTOMALL PHASES 2A AND 3A	Irrigation	On-site Lake(s)	< 100,000
06-03448-W	JEWISH ADOPTION AND FOSTER CARE OPTION	Irrigation	Unnamed Canal	< 100,000
06-03469-W	DEL RIO VILLAGE TOWNHOUSE	Irrigation	On-site Canal(s)	< 100,000
06-03469-W	DEL RIO VILLAGE TOWNHOUSE	Irrigation	On-site Canal(s)	< 100,000
06-03469-W	DEL RIO VILLAGE TOWNHOUSE	Irrigation	On-site Canal(s)	< 100,000
06-03497-W	TRICON GOLBAL RESTAURANT	Irrigation	Biscayne Aquifer	< 100,000
06-03498-W	FLORIDA POWER AND LIGHT WELLEBY SUBSTATION	Irrigation	Biscayne Aquifer	< 100,000
06-03517-W	BANK UNITED/RETAIL ON SUNRISE BLVD	Irrigation	On-site Lake(s)	< 100,000
06-03537-W	COWCAT ENTERPRISES INC	Irrigation	Biscayne Aquifer	< 100,000
06-03550-W	BAHAMA BREEZE RESTAURANT NO 3622 SAWGRASS MILLS MALL	Irrigation	Off-site Lake(s)	< 100,000
06-03575-W	PARK TERRACES	Irrigation	Surficial Aquifer System	< 100,000
06-03575-W	PARK TERRACES	Irrigation	Surficial Aquifer System	< 100,000
06-03627-W	SUNSET STRIP ROADWAY IMPROVEMENTS	Irrigation	SFWMD Canal (C-42)	< 100,000
06-03627-W	SUNSET STRIP ROADWAY IMPROVEMENTS	Irrigation	SFWMD Canal (C-42)	< 100,000
06-03627-W	SUNSET STRIP ROADWAY IMPROVEMENTS	Irrigation	SFWMD Canal (C-42)	< 100,000
06-03636-W	SUNRISE ENTERPRISE CENTER - PHASE I	Irrigation	Biscayne Aquifer	< 100,000
06-03636-W	SUNRISE ENTERPRISE CENTER - PHASE I	Irrigation	Biscayne Aquifer	< 100,000
06-03637-W	SUNRISE LAKES - PHASE I APARTMENTS	Irrigation	On-site Lake(s)	< 100,000
06-03637-W	SUNRISE LAKES - PHASE I APARTMENTS	Irrigation	On-site Lake(s)	< 100,000
06-03637-W	SUNRISE LAKES - PHASE I APARTMENTS	Irrigation	On-site Lake(s)	< 100,000
06-03637-W	SUNRISE LAKES - PHASE I APARTMENTS	Irrigation	On-site Lake(s)	< 100,000
06-03637-W	SUNRISE LAKES - PHASE I APARTMENTS	Irrigation	On-site Lake(s)	< 100,000
06-03637-W	SUNRISE LAKES - PHASE I APARTMENTS	Irrigation	On-site Lake(s)	< 100,000
06-03637-W	SUNRISE LAKES - PHASE I APARTMENTS	Irrigation	On-site Lake(s)	< 100,000
06-03637-W	SUNRISE LAKES - PHASE I APARTMENTS	Irrigation	On-site Lake(s)	< 100,000
06-03637-W	SUNRISE LAKES - PHASE I APARTMENTS	Irrigation	On-site Lake(s)	< 100,000
06-03637-W	SUNRISE LAKES - PHASE I APARTMENTS	Irrigation	On-site Lake(s)	< 100,000

PERMIT NO.	PROJECT NAME	WATER USE	SOURCE	PERMITED AMOUNT (gpd)
06-03637-W	SUNRISE LAKES - PHASE I APARTMENTS	Irrigation	On-site Lake(s)	< 100,000
06-03637-W	SUNRISE LAKES - PHASE I APARTMENTS	Irrigation	On-site Lake(s)	< 100,000
06-03637-W	SUNRISE LAKES - PHASE I APARTMENTS	Irrigation	On-site Lake(s)	< 100,000
06-03637-W	SUNRISE LAKES - PHASE I APARTMENTS	Irrigation	On-site Lake(s)	< 100,000
06-03637-W	SUNRISE LAKES - PHASE I APARTMENTS	Irrigation	On-site Lake(s)	< 100,000
06-03637-W	SUNRISE LAKES - PHASE I APARTMENTS	Irrigation	On-site Lake(s)	< 100,000
06-03637-W	SUNRISE LAKES - PHASE I APARTMENTS	Irrigation	On-site Lake(s)	< 100,000
06-03637-W	SUNRISE LAKES - PHASE I APARTMENTS	Irrigation	On-site Lake(s)	< 100,000
06-03637-W	SUNRISE LAKES - PHASE I APARTMENTS	Irrigation	On-site Lake(s)	< 100,000
06-03643-W	SUNRISE PALMS COMMERCE CENTER	Irrigation	Off-site Canal(s)	< 100,000
06-03677-W	MCDONALD'S RESTAURANT AT PUBLIX AND SUNRISE WEST	Irrigation	Surficial Aquifer System	< 100,000
06-03679-W	EXXON CONVENIENCE CENTER	Irrigation	Biscayne Aquifer	< 100,000
06-03723-W	ECKERDS COMMERCIAL BOULEVARD AND NOB HILL ROAD	Irrigation	Biscayne Aquifer	< 100,000
06-03727-W	FLORIDA DEPARTMENT OF TRANSPORTATION DIST MATERIALS OFFICE	Irrigation	SFWMD North New River Canal	< 100,000
06-03781-W	SHAMROCK OF SUNRISE LLC	Irrigation	Biscayne Aquifer	< 100,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000

PERMIT NO.	PROJECT NAME	WATER USE	SOURCE	PERMITED AMOUNT (gpd)
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03801-W	SUNRISE LAKES PHASE I I I APARTMENTS	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03924-W	SUNRISE LAND WEST PARCEL	Irrigation	Surficial Aquifer System	< 100,000
06-03924-W	SUNRISE LAND WEST PARCEL	Irrigation	On-site Lake(s)	< 100,000
06-03926-W	ARTESIA AT SUNRISE LAND	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03926-W	ARTESIA AT SUNRISE LAND	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03926-W	ARTESIA AT SUNRISE LAND	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03926-W	ARTESIA AT SUNRISE LAND	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-03943-W	NEW RIVER CENTRE	Irrigation	Biscayne Aquifer	< 100,000
06-03952-W	SUNRISE LAKES CONDOMINIUM APARTMENTS PHASE II	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-03952-W	SUNRISE LAKES CONDOMINIUM APARTMENTS PHASE II	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-03952-W	SUNRISE LAKES CONDOMINIUM APARTMENTS PHASE II	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-03952-W	SUNRISE LAKES CONDOMINIUM APARTMENTS PHASE II	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-03952-W	SUNRISE LAKES CONDOMINIUM APARTMENTS PHASE II	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-03952-W	SUNRISE LAKES CONDOMINIUM APARTMENTS PHASE II	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-03952-W	SUNRISE LAKES CONDOMINIUM APARTMENTS PHASE II	Irrigation	On-site Lake(s)/Pond(s)	< 100,000

PERMIT NO.	PROJECT NAME	WATER USE	SOURCE	PERMITED AMOUNT (gpd)
06-03952-W	SUNRISE LAKES CONDOMINIUM APARTMENTS PHASE II	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-03952-W	SUNRISE LAKES CONDOMINIUM APARTMENTS PHASE II	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-03952-W	SUNRISE LAKES CONDOMINIUM APARTMENTS PHASE II	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-03952-W	SUNRISE LAKES CONDOMINIUM APARTMENTS PHASE II	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-03952-W	SUNRISE LAKES CONDOMINIUM APARTMENTS PHASE II	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-03952-W	SUNRISE LAKES CONDOMINIUM APARTMENTS PHASE II	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-03952-W	SUNRISE LAKES CONDOMINIUM APARTMENTS PHASE II	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-03952-W	SUNRISE LAKES CONDOMINIUM APARTMENTS PHASE II	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-03952-W	SUNRISE LAKES CONDOMINIUM APARTMENTS PHASE II	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-03952-W	SUNRISE LAKES CONDOMINIUM APARTMENTS PHASE II	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-03952-W	SUNRISE LAKES CONDOMINIUM APARTMENTS PHASE II	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-03952-W	SUNRISE LAKES CONDOMINIUM APARTMENTS PHASE II	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-03952-W	SUNRISE LAKES CONDOMINIUM APARTMENTS PHASE II	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-03952-W	SUNRISE LAKES CONDOMINIUM APARTMENTS PHASE II	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-03952-W	SUNRISE LAKES CONDOMINIUM APARTMENTS PHASE II	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-03952-W	SUNRISE LAKES CONDOMINIUM APARTMENTS PHASE II	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-03952-W	SUNRISE LAKES CONDOMINIUM APARTMENTS PHASE II	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-03952-W	SUNRISE LAKES CONDOMINIUM APARTMENTS PHASE II	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-03952-W	SUNRISE LAKES CONDOMINIUM APARTMENTS PHASE II	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-03952-W	SUNRISE LAKES CONDOMINIUM APARTMENTS PHASE II	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-03952-W	SUNRISE LAKES CONDOMINIUM APARTMENTS PHASE II	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-03952-W	SUNRISE LAKES CONDOMINIUM APARTMENTS PHASE II	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-03952-W	SUNRISE LAKES CONDOMINIUM APARTMENTS PHASE II	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-04078-W	WESTON SIGNS	Irrigation	On-site Canal(s)	< 100,000
06-04118-W	SAWGRASS LANDING	Irrigation	Off-site Lake(s)	< 100,000
06-04300-W	SUNRISE AQUATIC CIVIC CENTER	Swimming Pool Heating/Withdrawal	Surficial Aquifer System	< 100,000
06-04300-W	SUNRISE AQUATIC CIVIC CENTER	Swimming Pool Heating/Withdrawal	Surficial Aquifer System	< 100,000
06-04300-W	SUNRISE AQUATIC CIVIC CENTER	Swimming Pool Heating/Withdrawal	Surficial Aquifer System	< 100,000
06-04318-W	CITY PARK	Irrigation	Biscayne Aquifer	< 100,000
06-04318-W	CITY PARK	Irrigation	Biscayne Aquifer	< 100,000
06-04318-W	CITY PARK	Irrigation	Biscayne Aquifer	< 100,000
06-04371-W	ARAGON	Irrigation	Biscayne Aquifer	< 100,000
06-04385-W	LAKE SHORE PLAZA	Irrigation	On-site Lake(s)	< 100,000
06-04403-W	THE POINT AT SAWGRASS	Irrigation	On-site Lake(s)	< 100,000
06-04412-W	**VISTA MERCADO**	Irrigation	Biscayne Aquifer	< 100,000
06-04415-W	TAO CONDOMINIUMS	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-04426-W	PINE ISLAND ROAD RECONSTRUCTION	Irrigation	SFWMD Canal (C-13)	< 100,000
06-04433-W	IKEA SUNRISE	Irrigation	On-site Lake(s)	< 100,000
06-04435-W	GATEWAY AT SAWGRASS THE	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-04436-W	SAWGRASS OFFICE CENTER	Irrigation	On-site Canal(s)	< 100,000
06-04443-W	COURTYARD OFFICE PLAZA	Irrigation	Biscayne Aquifer	< 100,000
06-04481-W	INDIAN TRACE CENTER	Irrigation	Off-site Lake(s)	< 100,000
06-04557-W	BROWARD LAKES BUSINESS PARK	Irrigation	Surficial Aquifer System	< 100,000
06-04625-W	AGING & DISABILITY RESOURCE CENTER OF BROWARD	Irrigation	Biscayne Aquifer	< 100,000
06-04655-W	MR CAR WASH	Irrigation	Biscayne Aquifer	< 100,000
06-04679-W	WAL-MART STORE 1349-02 SUNRISE	Irrigation	SFWMD Canal (C-13)	< 100,000
06-04684-W	SUNRISE HARLEY-DAVIDSON	Irrigation	Surficial Aquifer System	< 100,000
06-04703-W	SANDPIPER, BANYAN, CHALLENGER, PINEWOOD, MORROW ELEM/MILLENN	Irrigation	On-site Lake(s)	< 100,000
06-04703-W	SANDPIPER, BANYAN, CHALLENGER, PINEWOOD, MORROW ELEM/MILLENN	Irrigation	Biscayne Aquifer	< 100,000
06-04716-W	MIRROR LAKE, LAUDERHILL PT, NOB HILL, HORIZON ELEM/PLANTATIO	Irrigation	On-site Canal(s)	< 100,000
06-04716-W	MIRROR LAKE, LAUDERHILL PT, NOB HILL, HORIZON ELEM/PLANTATIO	Irrigation	On-site Canal(s)	< 100,000
06-04716-W	MIRROR LAKE, LAUDERHILL PT, NOB HILL, HORIZON ELEM/PLANTATIO	Irrigation	On-site Canal(s)	< 100,000
06-04716-W	MIRROR LAKE, LAUDERHILL PT, NOB HILL, HORIZON ELEM/PLANTATIO	Irrigation	On-site Canal(s)	< 100,000
06-04716-W	MIRROR LAKE, LAUDERHILL PT, NOB HILL, HORIZON ELEM/PLANTATIO	Irrigation	Biscayne Aquifer	< 100,000
06-04721-W	WATERSIDE COMMERCE PARK	Irrigation	Off-site Lake(s)	< 100,000
06-04737-W	SCHOOL OF ISLAMIC STUDIES	Irrigation	Off-site Canal(s)	< 100,000
06-04740-W	WELLEBY LAKE CLUB	Irrigation	On-site Lake(s)	< 100,000
06-04740-W	WELLEBY LAKE CLUB	Irrigation	On-site Lake(s)	< 100,000
06-04800-W	SPRING TREE	Irrigation	Biscayne Aquifer	< 100,000
06-04849-W	WATER'S EDGE	Irrigation	On-site Lake(s)	< 100,000
06-04849-W	WATER'S EDGE	Irrigation	On-site Lake(s)	< 100,000
06-04849-W	WATER'S EDGE	Irrigation	On-site Lake(s)	< 100,000
06-04853-W	STRIKERS FAMILY SPORTSCENTER	Irrigation	Surficial Aquifer System	< 100,000

PERMIT NO.	PROJECT NAME	WATER USE	SOURCE	PERMITED AMOUNT (gpd)
06-04862-W	LAS BRISAS	Irrigation	Surficial Aquifer System	< 100,000
06-04867-W	CHICK-FIL-A @ SAWGRASS SQUARE SHOPPING CENTER	Irrigation	Biscayne Aquifer	< 100,000
06-04879-W	LAKESIDE VILLAS AT BONAVENTURE CONDO	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-04931-W	WESTWIND COMMONS	Irrigation	On-site Lake(s)	< 100,000
06-04931-W	WESTWIND COMMONS	Irrigation	On-site Lake(s)	< 100,000
06-04976-W	LAKE SHORE PLAZA TWO	Irrigation	Off-site Lake(s)	< 100,000
06-04982-W	SHOPS AT SAVANNAH	Irrigation	Off-site Lake(s)	< 100,000
06-04982-W	SHOPS AT SAVANNAH	Irrigation	Off-site Lake(s)	< 100,000
06-04992-W	BOARDWALK AT INVERRARY	Irrigation	On-site Lake(s)	< 100,000
06-05024-W	SAWGRASS POINTE I I	Irrigation	Off-site Lake(s)	< 100,000
06-05102-W	RACETRAC-SUNRISE	Irrigation	Biscayne Aquifer	< 100,000
06-05115-W	SKYLINE OFFICE	Irrigation	On-site Lake(s)	< 100,000
06-05122-W	EDGEWOOD, LLOYD ESTATES, WELLEBY ELEM	Irrigation	Biscayne Aquifer	< 100,000
06-05123-W	BENNETT, SAWGRASS, PARK LAKES ELEM/CHARLES DREW FAMILY RESOU	Irrigation	Biscayne Aquifer	< 100,000
06-05128-W	ABC FINE WINE AND SPIRITS	Irrigation	Biscayne Aquifer	< 100,000
06-05129-W	EASTERN FINANCIAL CREDIT UNION-SUNRISE	Irrigation	Off-site Canal(s)	< 100,000
06-05130-W	VILLAGE/ ROYAL PALM ELEM/ENDEAVOUR/LAUDERHILL SCHOOLS	Irrigation	On-site Canal(s)	< 100,000
06-05130-W	VILLAGE/ ROYAL PALM ELEM/ENDEAVOUR/LAUDERHILL SCHOOLS	Irrigation	On-site Canal(s)	< 100,000
06-05130-W	VILLAGE/ ROYAL PALM ELEM/ENDEAVOUR/LAUDERHILL SCHOOLS	Irrigation	Biscayne Aquifer	< 100,000
06-05136-W	SHANNON LAKE ESTATES	Irrigation	Biscayne Aquifer	< 100,000
06-05160-W	US ONCOLOGY	Irrigation	Biscayne Aquifer	< 100,000
06-05190-W	CITY PARKS AND FACILITIES	Irrigation	On-site Lake(s)	< 100,000
06-05190-W	CITY PARKS AND FACILITIES	Irrigation	On-site Lake(s)	< 100,000
06-05190-W	CITY PARKS AND FACILITIES	Irrigation	On-site Lake(s)	< 100,000
06-05190-W	CITY PARKS AND FACILITIES	Irrigation	On-site Lake(s)	< 100,000
06-05190-W	CITY PARKS AND FACILITIES	Irrigation	On-site Lake(s)	< 100,000
06-05191-W	IRRIG OF CITY PARKS AND FACILITIES FLAMINGO PARKS 1 AND 2	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-05191-W	IRRIG OF CITY PARKS AND FACILITIES FLAMINGO PARKS 1 AND 2	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-05192-W	IRRIG OF CITY PARKS AND FACILITIES WELLEBY PARK E AND W	Irrigation	On-site Lake(s)	< 100,000
06-05192-W	IRRIG OF CITY PARKS AND FACILITIES WELLEBY PARK E AND W	Irrigation	On-site Lake(s)	< 100,000
06-05193-W	CITY PARKS AND FACILITIES TENNIS CNTR ROARKE HALL	Irrigation	On-site Lake(s)	< 100,000
06-05193-W	CITY PARKS AND FACILITIES TENNIS CNTR ROARKE HALL	Irrigation	On-site Canal(s)	< 100,000
06-05193-W	CITY PARKS AND FACILITIES TENNIS CNTR ROARKE HALL	Irrigation	On-site Lake(s)	< 100,000
06-05193-W	CITY PARKS AND FACILITIES TENNIS CNTR ROARKE HALL	Irrigation	On-site Lake(s)	< 100,000
06-05193-W	CITY PARKS AND FACILITIES TENNIS CNTR ROARKE HALL	Irrigation	Biscayne Aquifer	< 100,000
06-05194-W	IRRIG OF CITY PARKS AND FACILITIES S A C NORTH AND SOUTH	Irrigation	On-site Lake(s)	< 100,000
06-05194-W	IRRIG OF CITY PARKS AND FACILITIES S A C NORTH AND SOUTH	Irrigation	On-site Lake(s)	< 100,000
06-05195-W	N W 15TH ST AND SUNSET STRIP	Irrigation	On-site Canal(s)	< 100,000
06-05195-W	N W 15TH ST AND SUNSET STRIP	Irrigation	On-site Canal(s)	< 100,000
06-05195-W	N W 15TH ST AND SUNSET STRIP	Irrigation	On-site Canal(s)	< 100,000
06-05195-W	N W 15TH ST AND SUNSET STRIP	Irrigation	On-site Canal(s)	< 100,000
06-05195-W	N W 15TH ST AND SUNSET STRIP	Irrigation	On-site Canal(s)	< 100,000
06-05195-W	N W 15TH ST AND SUNSET STRIP	Irrigation	On-site Canal(s)	< 100,000
06-05195-W	N W 15TH ST AND SUNSET STRIP	Irrigation	On-site Canal(s)	< 100,000
06-05195-W	N W 15TH ST AND SUNSET STRIP	Irrigation	On-site Canal(s)	< 100,000
06-05195-W	N W 15TH ST AND SUNSET STRIP	Irrigation	On-site Canal(s)	< 100,000
06-05195-W	N W 15TH ST AND SUNSET STRIP	Irrigation	On-site Canal(s)	< 100,000
06-05195-W	N W 15TH ST AND SUNSET STRIP	Irrigation	On-site Canal(s)	< 100,000
06-05195-W	N W 15TH ST AND SUNSET STRIP	Irrigation	On-site Canal(s)	< 100,000
06-05196-W	10400 N W 44TH ST	Irrigation	On-site Canal(s)	< 100,000
06-05196-W	10400 N W 44TH ST	Irrigation	On-site Canal(s)	< 100,000
06-05196-W	10400 N W 44TH ST	Irrigation	On-site Lake(s)	< 100,000
06-05196-W	10400 N W 44TH ST	Irrigation	On-site Lake(s)	< 100,000
06-05196-W	10400 N W 44TH ST	Irrigation	Biscayne Aquifer	< 100,000
06-05196-W	10400 N W 44TH ST	Irrigation	On-site Lake(s)	< 100,000
06-05196-W	10400 N W 44TH ST	Irrigation	On-site Lake(s)	< 100,000
06-05196-W	10400 N W 44TH ST	Irrigation	On-site Lake(s)	< 100,000
06-05196-W	10400 N W 44TH ST	Irrigation	On-site Lake(s)	< 100,000
06-05196-W	10400 N W 44TH ST	Irrigation	On-site Lake(s)	< 100,000
06-05196-W	10400 N W 44TH ST	Irrigation	On-site Canal(s)	< 100,000
06-05196-W	10400 N W 44TH ST	Irrigation	On-site Lake(s)	< 100,000
06-05196-W	10400 N W 44TH ST	Irrigation	On-site Canal(s)	< 100,000
06-05196-W	10400 N W 44TH ST	Irrigation	On-site Canal(s)	< 100,000

PERMIT NO.	PROJECT NAME	WATER USE	SOURCE	PERMITED AMOUNT (gpd)
06-05196-W	10400 N W 44TH ST	Irrigation	On-site Canal(s)	< 100,000
06-05196-W	10400 N W 44TH ST	Irrigation	On-site Canal(s)	< 100,000
06-05196-W	10400 N W 44TH ST	Irrigation	On-site Lake(s)	< 100,000
06-05227-W	CITY OF SUNRISE CITY HALL AND OTHER SITES	Irrigation	On-site Lake(s)	< 100,000
06-05227-W	CITY OF SUNRISE CITY HALL AND OTHER SITES	Irrigation	On-site Canal(s)	< 100,000
06-05227-W	CITY OF SUNRISE CITY HALL AND OTHER SITES	Irrigation	On-site Lake(s)	< 100,000
06-05227-W	CITY OF SUNRISE CITY HALL AND OTHER SITES	Irrigation	On-site Lake(s)	< 100,000
06-05227-W	CITY OF SUNRISE CITY HALL AND OTHER SITES	Irrigation	On-site Lake(s)	< 100,000
06-05227-W	CITY OF SUNRISE CITY HALL AND OTHER SITES	Irrigation	On-site Lake(s)	< 100,000
06-05227-W	CITY OF SUNRISE CITY HALL AND OTHER SITES	Irrigation	On-site Lake(s)	< 100,000
06-05227-W	CITY OF SUNRISE CITY HALL AND OTHER SITES	Irrigation	On-site Lake(s)	< 100,000
06-05227-W	CITY OF SUNRISE CITY HALL AND OTHER SITES	Irrigation	On-site Canal(s)	< 100,000
06-05236-W	CARWASH CAFE	Irrigation	SFWMD Canal (C-13)	< 100,000
06-05279-W	INDIAN TRACE PARCEL 2 B	Irrigation	Biscayne Aquifer	< 100,000
06-05314-W	WOODGATE COMMUNITY ASSOCIATION	Irrigation	On-site Lake(s)	< 100,000
06-05314-W	WOODGATE COMMUNITY ASSOCIATION	Irrigation	On-site Lake(s)	< 100,000
06-05314-W	WOODGATE COMMUNITY ASSOCIATION	Irrigation	On-site Lake(s)	< 100,000
06-05317-W	RESIDENCES OF SAWGRASS MILLS COMMUNITY	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-05317-W	RESIDENCES OF SAWGRASS MILLS COMMUNITY	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-05317-W	RESIDENCES OF SAWGRASS MILLS COMMUNITY	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-05317-W	RESIDENCES OF SAWGRASS MILLS COMMUNITY	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-05317-W	RESIDENCES OF SAWGRASS MILLS COMMUNITY	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-05317-W	RESIDENCES OF SAWGRASS MILLS COMMUNITY	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-05317-W	RESIDENCES OF SAWGRASS MILLS COMMUNITY	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-05317-W	RESIDENCES OF SAWGRASS MILLS COMMUNITY	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-05317-W	RESIDENCES OF SAWGRASS MILLS COMMUNITY	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-05317-W	RESIDENCES OF SAWGRASS MILLS COMMUNITY	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-05317-W	RESIDENCES OF SAWGRASS MILLS COMMUNITY	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-05317-W	RESIDENCES OF SAWGRASS MILLS COMMUNITY	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-05317-W	RESIDENCES OF SAWGRASS MILLS COMMUNITY	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-05317-W	RESIDENCES OF SAWGRASS MILLS COMMUNITY	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-05317-W	RESIDENCES OF SAWGRASS MILLS COMMUNITY	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-05317-W	RESIDENCES OF SAWGRASS MILLS COMMUNITY	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-05402-W	HIATUS RD (SUNRISE BLVD TO OAKLAND PARK BLVD)	Irrigation	Biscayne Aquifer	< 100,000
06-05402-W	HIATUS RD (SUNRISE BLVD TO OAKLAND PARK BLVD)	Irrigation	Biscayne Aquifer	< 100,000
06-05402-W	HIATUS RD (SUNRISE BLVD TO OAKLAND PARK BLVD)	Irrigation	Biscayne Aquifer	< 100,000
06-05414-W	STARBUCKS AT WESTGATE SQUARE	Irrigation	Biscayne Aquifer	< 100,000
06-05432-W	REGIONS BANK- N W CORNER OF N W 136 AVENUE AND N W 12 STREET	Irrigation	Biscayne Aquifer	< 100,000
06-05467-W	SOREF JEWISH COMMUNITY CENTER	Irrigation	Off-site Canal(s)	< 100,000
06-05510-W	V A OUTPATIENT FACILITY SUNRISE	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-05510-W	V A OUTPATIENT FACILITY SUNRISE	Public Water Supply	Biscayne Aquifer	< 100,000
06-05523-W	TRANSCAPITAL BANK	Irrigation	Surficial Aquifer System	< 100,000
06-05538-W	ELEMENTARY SCHOOL A	Irrigation	Biscayne Aquifer	< 100,000
06-05668-W	SUNRISE PUBLIC WORKS COMPLEX	Irrigation	On-site Canal(s)	< 100,000
06-05702-W	SUNRISE LAKES PHASE I I I GOLF COURSE	Irrigation	On-site Lake(s)	> 100,000 and < 500,000
06-05718-W	RACE TRAC SUNRISE	Mining/Dewatering	Water Table aquifer	< 100,000
06-05785-W	ADVANCE AUTO PARTS	Irrigation	Biscayne Aquifer	< 100,000
06-05826-W	SUNRISE PUBLIC SAFETY COMPLEX	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-05827-W	TORRE FUERTE CHRISTIAN CHURCH	Irrigation	Off-site Canal(s)	< 100,000
06-05834-W	SUNRISE PUBLIC SAFETY COMPLEX	Mining/Dewatering	Water Table aquifer	< 100,000
06-05890-W	SPECTRUM WEST PROPERTIES	Irrigation	Biscayne Aquifer	< 100,000
06-05909-W	THE FAITH CENTER	Irrigation	On-site Lake(s)	< 100,000
06-05944-W	SAWGRASS POINTE I	Irrigation	Off-site Lake(s)	< 100,000
06-05949-W	IBB REALTY LLC	Irrigation	Off-site Lake(s)	< 100,000
06-05951-W	THE FEDERATION HOUSING INC	Irrigation	Biscayne Aquifer	< 100,000
06-05957-W	F D G SUNRISE COPORATE PLAZA	Irrigation	On-site Lake(s)	< 100,000
06-05962-W	NATURES PRODUCTS	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-06004-W	REGENTS PARK OF SUNRISE	Irrigation	On-site Lake(s)	< 100,000
06-06043-W	VISTA HEALTHCARE	Irrigation	Off-site Lake(s)	< 100,000
06-06070-W	44TH STREET PASSIVE PARK	Irrigation	Biscayne Aquifer	< 100,000
06-06084-W	PINNACLE AT AVERY GLEN	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-06135-W	OAKLAND PARK BLVD. PASSIVE PARK	Irrigation	Biscayne Aquifer	< 100,000
06-06146-W	QUINTERO FAMILY PARTNERSHIP	Irrigation	On-site Canal(s)	< 100,000

PERMIT NO.	PROJECT NAME	WATER USE	SOURCE	PERMITED AMOUNT (gpd)
06-06150-W	ROBERT BLIGH & SON CORPORATION	Irrigation	On-site Canal(s)	< 100,000
06-06154-W	FLORIDA A & M TAPE AND PACKAGING	Irrigation	Off-site Canal(s)	< 100,000
06-06158-W	NOB HILL BUSINESS PLAZA	Irrigation	Surficial Aquifer System	< 100,000
06-06162-W	ARC OF BROWARD	Irrigation	Off-site Canal(s)	< 100,000
06-06162-W	ARC OF BROWARD	Irrigation	Biscayne Aquifer	< 100,000
06-06164-W	SUNRISE TWO INDUSTRIAL	Irrigation	On-Site Ditch(es)	< 100,000
06-06165-W	SUNRISE FIVE INDUSTRIAL	Irrigation	Off-site Canal(s)	< 100,000
06-06166-W	SUNRISE THREE INDUSTRIAL	Irrigation	On-Site Ditch(es)	< 100,000
06-06167-W	SAWGRASS ESTATES H O A	Irrigation	On-site Canal(s)	< 100,000
06-06183-W	SUNRISE 55	Irrigation	On-site Canal(s)	< 100,000
06-06184-W	WELLEBY SQUARE	Irrigation	Biscayne Aquifer	< 100,000
06-06188-W	SUNRISE INDUSTRIAL PARK	Irrigation	On-site Canal(s)	< 100,000
06-06190-W	COURTYARD DISTRIBUTION CENTER	Irrigation	On-site Canal(s)	< 100,000
06-06192-W	SUNRISE PARK INVESTORS	Irrigation	Surficial Aquifer System	< 100,000
06-06196-W	WATER TERRACE	Irrigation	Off-site Lake(s)	< 100,000
06-06196-W	WATER TERRACE	Irrigation	Off-site Lake(s)	< 100,000
06-06196-W	WATER TERRACE	Irrigation	Off-site Lake(s)	< 100,000
06-06205-W	SONIA AMERICA	Irrigation	On-site Canal(s)	< 100,000
06-06213-W	SUNRISE INDUSTRIAL PARK	Irrigation	On-site Canal(s)	< 100,000
06-06225-W	QUINTERO FAMILY WAREHOUSING	Irrigation	Off-site Canal(s)	< 100,000
06-06237-W	WELLEBY ISLES HOMEOWNERS ASSOCIATION	Irrigation	Off-site Canal(s)	< 100,000
06-06240-W	COLONY COURTS I I H O A	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-06244-W	LAKE ROYALE RENTALS	Irrigation	Off-site Lake(s)	< 100,000
06-06245-W	SUNRISE VILLAGE	Irrigation	On-site Lake(s)	< 100,000
06-06361-W	CHASE BANK - OAKLAND PARK & NOB HILL	Irrigation	Biscayne Aquifer	< 100,000
06-06376-W	MCDONALD'S	Irrigation	Biscayne Aquifer	< 100,000
06-06399-W	4747 NOB HILL	Irrigation	Biscayne Aquifer	< 100,000
06-06416-W	OAKLAND PARK MARATHON	Irrigation	Biscayne Aquifer	< 100,000
06-06418-W	P N C BANK	Irrigation	Biscayne Aquifer	< 100,000
06-06478-W	RHAPSODY H O A	Irrigation	On-site Lake(s)/Pond(s)	< 100,000
06-06500-W	LUSH PROPERTIES	Irrigation	Surficial Aquifer System	< 100,000
06-06512-W	CHRISTIAN LIFE RESTORATON CENTER, INC.	Irrigation	SFWMD Canal (C-42)	< 100,000
06-06517-W	SUNRISE SHOPPES - 2700-2834 N UNIVERSITY DRIVE	Irrigation	Biscayne Aquifer	< 100,000
06-06517-W	SUNRISE SHOPPES - 2700-2834 N UNIVERSITY DRIVE	Irrigation	Biscayne Aquifer	< 100,000
06-06517-W	SUNRISE SHOPPES - 2700-2834 N UNIVERSITY DRIVE	Irrigation	Biscayne Aquifer	< 100,000
06-06578-W	JAFCO CENTER FOR CHILDREN WITH DEVELOPMENT DISABILITIES	Irrigation	Biscayne Aquifer	< 100,000
06-06595-W	A M L I SAWGRASS VILLAGE	Irrigation	Biscayne Aquifer	< 100,000
06-06671-W	ADVANCED AUTO PARTS LANDSCAPE IRRIGATION WELL	Irrigation	Biscayne Aquifer	< 100,000
06-06722-W	SAWGRASS TIRE CENTER	Irrigation	On-site Lake(s)	< 100,000
06-06741-W	RICK CASE SUNRISE KIA	Irrigation	Off-site Canal(s)	< 100,000
06-06762-W	FIRST COAST ENERGY IRRIGATION WELL	Irrigation	Biscayne Aquifer	< 100,000
06-06773-W	SAWGRASS MILLS COLONNADE FOUR PHASE I	Mining/Dewatering	Water Table aquifer	< 100,000
06-06773-W	SAWGRASS MILLS COLONNADE FOUR PHASE I	Mining/Dewatering	Water Table aquifer	< 100,000
06-06773-W	SAWGRASS MILLS COLONNADE FOUR PHASE I	Mining/Dewatering	Water Table aquifer	< 100,000
06-06775-W	SAWGRASS MILLS MALL LOT O	Mining/Dewatering	Water Table aquifer	< 100,000
06-06775-W	SAWGRASS MILLS MALL LOT O	Mining/Dewatering	Water Table aquifer	< 100,000

Appendix C

APPENDIX C - WATER SUPPLY SYSTEM INTERCONNECTIONS

Interconnect with	Location Description and Map ID	Existing/ Proposed	Size (inches)	Capacity (gpm)	Metered (Yes/No)	Status (Working/Not Working)	Comments
City of LauderHill 06-00129-W	58th Terr. & 15th St	Existing	8	470	No	Working	Bob Snyder, Superintendent; Randy Arline, Plant Operator (954-730-2972)
	NW 44th St, West of NW 82nd Ave	Proposed	12	1057	---	---	
City of Plantation 0600103-W	NW 28th St, East of 118th Ave	Existing	6	264	Yes	Working	Utilities Director (954-797-2209); Hank Brietenkam, Assistant Director (954-875-9126 Beeper)
	NW 21st Ct & 124th Ave	Existing	8	470	Yes	Working	
	Melaleuca Isles at Melaleuca Facility	Existing	8	470	Yes	Working	
	Commodore Dr at North New River Canal	Existing	12	1057	Yes	Working	
	Flamingo Rd & NW 8th St	Existing	10	734	Yes	Working	
Town of Davie 06-00134-W	Hiatus Rd South of 26th St	Existing	8	470	Yes	Working	Dan Colabella, Utilities Director; Bruce Taylor, Utilities Superintendent (954-433-4000)
	Hiatus Rd North of 26th St	Existing	8	470	Yes	Working	
City of Pembroke Pines 06-00135-W	SW 166th Ave & 67th Pl	Existing	9	595	Yes	Working	Skip Keebler, Utilities Director; Joe McLaughlin (954-450-6856)
	Dykes Rd & Bellavista Ave	Existing	10	734	Yes	Working	
Cooper City 06-00365-W	SW 136th Av, South of SW 49th St	Existing	8	470	Yes	Working	George Haughney, Director; Don Long (954-434-5519)

In emergencies, any City in need of water will contact the above named person(s) to have emergency by-pass turned on.

Appendix D

City of Sunrise WSFP
Population Projections within Sunrise Water Service Area

TAZID	Pop2014	Pop2015	Pop2020	Pop2025	Pop2030	MUNICIPALITY	SERVICE AREA
558	2062	2,062	2,030	2,003	1,985	Davie	Existing
559	1235	1,252	1,241	1,228	1,227	Davie	Existing
560	6227	6,242	6,173	6,110	6,060	Davie	Existing
561	4359	4,373	4,474	4,415	4,379	Davie	Existing
562	3221	3,247	3,578	3,716	3,677	Davie	Existing
563	981	994	1,201	1,310	1,316	Davie	Existing
564	389	390	402	405	403	Davie	Existing
565	4395	4,381	4,326	4,281	4,252	Davie	Existing
566	2200	2,211	2,279	2,265	2,245	Davie	Existing
569	2671	2,668	2,636	2,604	2,586	Davie	Existing
570	422	424	458	463	460	Davie	Existing
572	1388	1,416	1,829	2,045	2,065	Davie	Existing
573	6884	6,885	6,792	6,700	6,637	Davie	Existing
574	5,275	5,264	5,190	5,134	5,093	Davie	Existing
575	32	32	32	32	32	Davie	Existing
590	679	702	1,063	1,252	1,269	Davie	Existing
603	1,403	1,403	1,422	1,411	1,402	Davie	Existing
604	1,205	1,205	1,224	1,216	1,208	Davie	Existing
610	917	917	921	913	905	Davie	Existing
611	363	366	403	426	426	Davie	Existing
811	0	-	-	-	-	Davie	Existing
889	0	-	-	-	-	Davie	Existing
891	0	0	0	0	0	Davie	Existing
591	1,821	1,834	2,069	2,186	2,183	Davie	Existing
592	1,171	1,186	1,408	1,527	1,533	Davie	Existing
593	2,346	2,349	2,419	2,414	2,399	Davie	Existing
594	1,666	1,665	1,680	1,661	1,653	Davie	Existing
595	292	297	400	463	468	Davie	Existing
596	1,296	1,307	1,470	1,556	1,556	Davie	Existing
602	0	-	-	-	-	Davie	Existing
609	1,083	1,078	1,061	1,056	1,049	Davie	Existing
810	656	655	650	645	640	Davie	Existing
924	713	716	713	706	701	Davie	Existing
SUBTOTAL	**57,400**	**57,500**	**59,500**	**60,100**	**59,800**	**Davie**	**Existing**
461	625	628	648	637	631	Sunrise	Existing
462	0	-	-	-	-	Sunrise	Existing
468	0	-	-	-	-	Sunrise	Existing
469	6461	6,465	6,432	6,344	6,288	Sunrise	Existing
471	4864	4,873	4,802	4,735	4,944	Sunrise	Existing
472	5225	5,244	5,407	5,374	5,315	Sunrise	Existing
473	5094	5,113	5,221	5,153	5,103	Sunrise	Existing
474	1297	1,297	1,312	1,299	1,292	Sunrise	Existing
475	1000	1,001	987	972	963	Sunrise	Existing
476	4805	4,808	4,828	4,764	4,725	Sunrise	Existing
477	-	-	-	-	-	Sunrise	Existing
478	798	973	3,387	5,072	5,300	Sunrise	Existing
479	930	926	916	915	910	Sunrise	Existing
480	0	-	-	-	-	Sunrise	Existing
481	0	-	-	-	-	Sunrise	Existing
482	5756	5,746	5,662	5,592	5,542	Sunrise	Existing
484	984	992	1,004	984	971	Sunrise	Existing
487	3891	3,892	3,836	3,778	3,740	Sunrise	Existing
488	4774	4,815	4,765	4,712	4,671	Sunrise	Existing
489	2078	2,073	2,043	2,020	2,007	Sunrise	Existing
490	927	924	910	900	894	Sunrise	Existing
491	1193	1,189	1,168	1,153	1,144	Sunrise	Existing
492	745	742	750	741	733	Sunrise	Existing
493	3846	3,877	3,826	5,664	5,903	Sunrise	Existing
494	5291	5,285	5,180	5,090	5,027	Sunrise	Existing
495	2702	2,695	2,651	2,617	2,592	Sunrise	Existing
496	5231	5,224	5,128	5,038	5,259	Sunrise	Existing

City of Sunrise WSFP
Population Projections within Sunrise Water Service Area

TAZID	Pop2014	Pop2015	Pop2020	Pop2025	Pop2030	MUNICIPALITY	SERVICE AREA
574	2,124	2,120	2,090	2,067	2,051	Sunrise	Existing
575	3,135	3,139	3,155	3,117	3,089	Sunrise	Existing
576	0	-	-	-	-	Sunrise	Existing
896	3939	3,927	3,867	3,822	3,792	Sunrise	Existing
898	1342	1,350	1,485	1,544	1,532	Sunrise	Existing
937	1108	1,219	2,623	3,480	3,588	Sunrise	Existing
951	1881	1,877	1,848	1,822	1,811	Sunrise	Existing
952	4170	4,189	4,153	4,117	4,084	Sunrise	Existing
SUBTOTAL	**86,200**	**86,600**	**90,100**	**93,500**	**93,900**	**Sunrise**	**Existing**
601	1,672	1,687	1,918	2,045	2,029	SW Ranches	Existing
603	468	468	474	470	467	SW Ranches	Existing
604	473	473	481	477	474	SW Ranches	Existing
605	268	273	362	403	410	SW Ranches	Existing
608	315	315	329	337	334	SW Ranches	Existing
610	59	59	59	58	58	SW Ranches	Existing
611	363	366	403	426	426	SW Ranches	Existing
809	186	187	192	195	195	SW Ranches	Existing
811	0	-	-	-	-	SW Ranches	Existing
812	10	10	11	11	11	SW Ranches	Existing
911	335	337	360	376	375	SW Ranches	Existing
SUBTOTAL	**4,100**	**4,200**	**4,600**	**4,800**	**4,800**	**SW Ranches**	**Existing**
575	183	183	184	182	181	Weston	Existing
576	2,652	2,668	2,629	2,604	2,572	Weston	Existing
577	6,574	6,626	6,506	6,367	6,256	Weston	Existing
578	4,456	4,446	4,394	4,343	4,311	Weston	Existing
579	7,073	7,060	6,978	6,907	6,862	Weston	Existing
580	10,940	10,934	10,795	10,678	10,601	Weston	Existing
583	3,769	3,781	3,884	3,878	3,848	Weston	Existing
584	4,262	4,274	4,202	4,129	4,075	Weston	Existing
585	2,216	2,211	2,190	2,165	2,152	Weston	Existing
586	1,361	1,358	1,341	1,325	1,317	Weston	Existing
587	559	558	554	546	541	Weston	Existing
588	1,660	1,659	1,640	1,614	1,603	Weston	Existing
589	2,804	2,798	2,769	2,737	2,715	Weston	Existing
590	0	-	-	-	-	Weston	Existing
597	9,584	9,570	9,422	9,289	9,221	Weston	Existing
888	6,906	6,899	6,802	6,718	6,658	Weston	Existing
889	0	-	-	-	-	Weston	Existing
890	830	827	816	806	798	Weston	Existing
891	1	1	1	1	1	Weston	Existing
SUBTOTAL	**65,800**	**65,900**	**65,100**	**64,300**	**63,700**	**Weston**	**Existing**
TOTAL	**213,500**	**214,200**	**219,300**	**222,700**	**222,200**	**-**	**Existing**
TAZ	**Pop2014**	**Pop2015**	**Pop2020**	**Pop2025**	**Pop2030**	**MUNICIPALITY**	**SERVICE AREA**
599			1,032	2,122	3,158	SW Ranches	Future
600			383	810	1,214	SW Ranches	Future
605			30	67	102	SW Ranches	Future
606			190	392	584	SW Ranches	Future
607			88	199	304	SW Ranches	Future
808			72	155	234	SW Ranches	Future
813			97	201	304	SW Ranches	Future
950			33	69	105	SW Ranches	Future
TOTAL	**0**	**0**	**1,900**	**4,000**	**6,000**	**-**	**Future**
GRAND TOTAL	**213,500**	**214,200**	**221,200**	**226,700**	**228,200**	**-**	**-**

Appendix E

MWH

BUILDING A BETTER WORLD

MEETING MINUTES

Water Supply Facilities Work Plan, City of Sunrise Update 2015
Intergovernmental Coordination between City of Sunrise Planning Division & Utilities Department
June 04, 2014

Attendees: See Attached Sign-In Sheet

Agenda Items		Action Items
1.	Introductions and a project overview of the Water Supply Facilities Work Plan (WSFP) was provided.	
2.	Point of contact person for Sunrise Planning Division will be Brad Swing. Tim Welch is point person for Sunrise Utilities and Sangeeta Dhulashia for MWH.	
3.	Review of Service Area: • A discrepancy for an area identified as Pembroke Pines but shown as served by Sunrise was discussed. Since Sunrise does not serve Pembroke Pines, this needs to be corrected. • The northeast corner of the Water Service Area is not served by Sunrise as shown but the few parcels outside the service area are still included within the City of Sunrise and not Plantation. Service area boundary is correct as that was adjusted during the last WSFP update, but the City Municipal Boundary needs to be fixed. • Comprehensive Plan includes both existing and future service areas	• MWH to revise the service area file

4.	Population Projections • Plan for future service area to be connected in 2020. Populations will be allocated in phases by 1/3 increments starting in 2020, 2025, and 2030. • C-51 to be included as a project in the CIP for the WSFP for Springtree, not Sawgrass. MWH will work with Utilities to develop a plan to include C-51 & will share this with Planning Division as the draft WSFP 2015 is prepared. • CIP will also include reuse projects.	
5.	Plan Adoption Schedule A. Draft WSFP to be completed by August commission meeting for draft adoption • MWH plans to submit the Draft WSFP to planning in July so they can review prior to August commission meeting. o MWH, Tim, Sean, Gio, and Ted to review draft WSFP. o Planning Division will send their comments to Tim. o SFWMD will review after that. o Local government meetings will be held after June 23rd B. Final WSFP, a first draft for Comprehensive Plan Amendment, to be completed for January commission meeting, January 6, 2015 C. Comprehensive Plan Amendment for Second Reading will be 2nd or 4th Tuesday in February 2015 D. Commission needs to approve Final Comprehensive Plan for adoption by March 12th.	

6.	List of Data Needs A. In Hand • LEC Plan • Goals, Objectives, and Policies – o All parties agreed not to include climate change B. Section 6- needs to match CIE with exact names and assign numbers C. Appendix I needs to be updated, there are now 2 properties that have been incorporated and need to be taken off the list.	• Brad to send a copy of the CIE to MWH • Brad to send MWH a list of properties that are no longer Unincorporated Broward County so that MWH can update Appendix I of the WSFP.
7.	Intergovernmental Coordination A. DRI B. LUPA No additional DRI's or LUPA's to be included because projections from Broward County already incorporate these upcoming projections into their TAZ population numbers. **Note:** Sunrise Planning Division stated that future development units located in TAZ Nos. 479 and 481 were allocated to TAZ No. 478 in Broward County's projections. No action is necessary at this time as this will not affect bottom line totals for the City.	

Status of Action Items:

#	Assigned To: Staff and Date	Proposal Authorization and Comments	Status
1.	Kristin Hink; 6/4/14	Fix the shapefile boundaries for area to the south that is incorrectly colored as Pembroke Pines within Sunrise Service Area as well as the area in the NE corner of the service area that is not served by Sunrise but is still within the City's municipal boundary.	*Shapefiles modified 6/6/14*
2.	Brad Swing; 6/4/14	Send a copy of the CIE to MWH	*Received 6/5/14*
3.	Brad Swing; 6/4/14	Send list of properties that are no longer Unincorporated Broward County to MWH so that they can update Appendix I of the WSFP	*Received 6/5/14*

Attachments:

- Sign-In Sheet
- Meeting Agenda
- Table of Population Projections for City of Sunrise
- Sunrise Utilities Water Service Area Location Map

MWH

BUILDING A BETTER WORLD

MEETING AGENDA

PROJECT TITLE: City of Sunrise Water Supply Facilities Work Plan

SUBJECT: Intergovernmental Coordination with City of Sunrise Planning

DATE & TIME OF MEETING: Wednesday, June 4, 2014, 3:00 PM

PLACE: City of Sunrise Community Development Panther Conference Room

Agenda Items	
1.	Project Overview- Water Supply Facilities Work Plan Overview
2.	Communications A. A Single Point of Contact per DCA Guidelines
3.	Service Area
4.	Population Projections A. Population Projections-usage of Traffic Analysis Zone (TAZ) thru 2030
5.	Plan Adoption Schedule A. Draft to be completed by August Commission meeting B. Final to be completed by January Commission meeting
6.	List of Data Needs A. In Hand • LEC Plan • Goals, Objectives, and Policies
7.	Intergovernmental Coordination A. DRI B. LUPA

MWH

BUILDING A BETTER WORLD

MEETING SIGN IN SHEET

Date: Wednesday, June 4, 2014

Time: 3:00 PM

Location: City of Sunrise Community Development Panther Conference Room

Project: City of Sunrise Water Supply Facilities Work Plan – Intergovernmental Coordination with City of Sunrise Planning

In Attendance:

	Name	Phone Number	Email Address	Firm/Organization
1.	Kristin Hink	954-846-049	KristinE.Hink@mwhglobal.com	MWH
2.	Sangeeta Dhulashia	"	Sangeeta.P.Dhulashia@mwhglobal.com	MWH
3.	Jo Sesodia	954 746 3279	jsesodia@sunrisefl.gov	Sunrise
4.	BRAD SWING	954 746-3278	BSWING@SUNRISEFL.GOV	SUNRISE
5.	Tim Welch	954 888-6055	twelch@sunrisefl.gov	Sunrise
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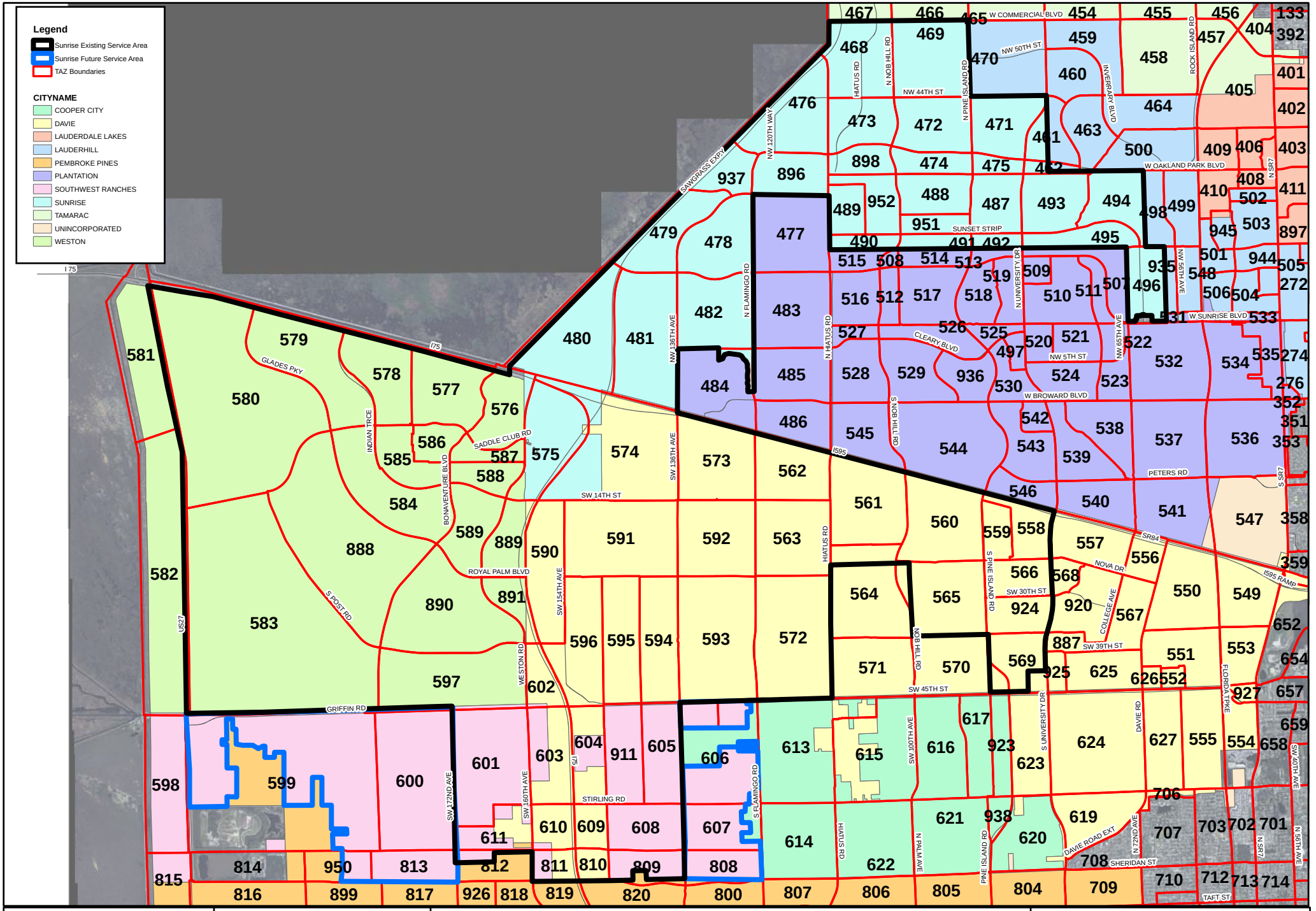
City of Sunrise

10-Year Water Supply Facility Work Plan

Sunrise Utility Service Area Population Projections for City of Sunrise – 2014 Data

Service Area	2014	2015	2020	2025	2030
Existing	86,216	86,602	90,084	93,523	93,901
Future	-	-	-	-	-
Total	**86,216**	**86,602**	**90,084**	**93,523**	**93,901**

Source: Broward County Forecasting Model Data by TAZ, April, 2014.



MWH

CITY OF SUNRISE FLORIDA

Local Governments Served by the City of Sunrise With Locations of Traffic Analysis Zones

MWH

BUILDING A BETTER WORLD

MEETING MINUTES

Water Supply Facilities Work Plan, City of Sunrise Update 2015
Intergovernmental Coordination between City of Sunrise Utilities Department & City of Weston
June 27, 2014

Attendees: See Attached Sign-In Sheet

	Agenda Items	Action Items
1.	Introductions and a project overview of the Water Supply Facilities Work Plan (WSFP) was provided.	
2.	Point of contact person for City of Weston will be Karl Kennedy. Tim Welch is point person for Sunrise Utilities and Sangeeta Dhulashia for MWH.	
3.	Population Projections A. Population Projections reported by Traffic Analysis Zones (TAZ) for City of Weston show a decline in population from 2015 to 2030. Calvin, Giordano & Associates will check the TAZ populations to verify these numbers.	• MWH to provide Calvin, Giordano & Associates with population projections by TAZ for the City of Weston. • Calvin, Giordano & Associates to verify population projections for the City of Weston.
4.	Plan Adoption Schedule A. Draft to be completed by August Commission meeting for transmittal and public comment. This draft will be available to local governments at that time. B. Final to be completed by January Commission meeting C. Final adoption due in March 2015	

5.	List of Data Needs A. In Hand • LEC Plan • Goals, Objectives, and Policies – almost complete for City of Sunrise.	
6.	Intergovernmental Coordination A. DRI and LUPA's are already included in Broward County TAZ population projections, however, Calvin, Giordano & Associates will check the TAZ projections for TAZ containing West portion of Bonaventure Golf Course Development to verify if this development is included or not in the TAZ projections. If it is not, then Calvin, Giordano & Associates is to provide MWH with projected population and demands for this area to include in the WSFP.	• Calvin, Giordano & Associates to assess whether or not West portion of Bonaventure Golf Course Development is included in TAZ projections as future development.

Status of Action Items:

#	Assigned To: Staff and Date	Proposal Authorization and Comments	Status
1.	Kristin Hink, 6/27/14	MWH to send Calvin, Giordano & Associates population projection data by TAZ for the City of Weston.	*Completed on 6/27/14*
2.	Calvin, Giordano & Associates 6/27/14	Calvin, Giordano & Associates to verify population projections for the City of Weston.	
3.	Calvin, Giordano & Associates 6/27/14	Calvin, Giordano & Associates to assess whether or not West portion of Bonaventure Golf Course Development is included in TAZ projections as future development. If it is not, Calvin, Giordano & Associates to provide population and demand projections for the West Golf Course Development to be included in the WSFP.	

Attachments:

- Sign-In Sheet
- Meeting Agenda
- Table of Population Projections for City of Weston
- Sunrise Utilities Water Service Area Location Map

MWH

BUILDING A BETTER WORLD

MEETING SIGN IN SHEET

Date: Friday, June 27, 2014

Time: 9:30 AM

Location: City of Weston, Public Works - 2599 South Post Road

Project: City of Sunrise Water Supply Facilities Work Plan – Intergovernmental Coordination with City of Weston Planning

In Attendance:

	Name	Phone Number	Email Address	Firm/Organization
1.	Tim Welch	954-888-6055	twelch@sunrisefl.gov	Sunrise
2.	Kristin Hink	954-846-0401	Kristin.E.Hink@mwhglobal.com	MWH
3.	Sangeeta Dhulashia	954-846-0401	Sangeeta.P.Dhulashia@mwhglobal.com	MWH
4.	KARL KENNEDY	954 [illegible] 829-4500	KARL@CGASOLUTIONS.com	COW
5.	Jean Dolan	954.776.2786	jdolan@cgasolutions.com	CGA
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MWH

BUILDING A BETTER WORLD

MEETING AGENDA

PROJECT TITLE: City of Sunrise Water Supply Facilities Work Plan

SUBJECT: Intergovernmental Coordination with City of Weston

DATE & TIME OF MEETING: Friday, June 27, 2014, 9:30 AM

PLACE: City of Weston, Public Works - 2599 South Post Road

	Agenda Items
1.	Project Overview- Water Supply Facilities Work Plan Overview
2.	Communications A. A Single Point of Contact per DCA Guidelines
3.	Service Area
4.	Population Projections A. Population Projections-usage of Traffic Analysis Zone (TAZ) thru 2030
5.	Plan Adoption Schedule A. Draft to be completed by August Commission meeting B. Final to be completed by January Commission meeting
6.	List of Data Needs A. In Hand • LEC Plan • Goals, Objectives, and Policies
7.	Intergovernmental Coordination A. DRI B. LUPA

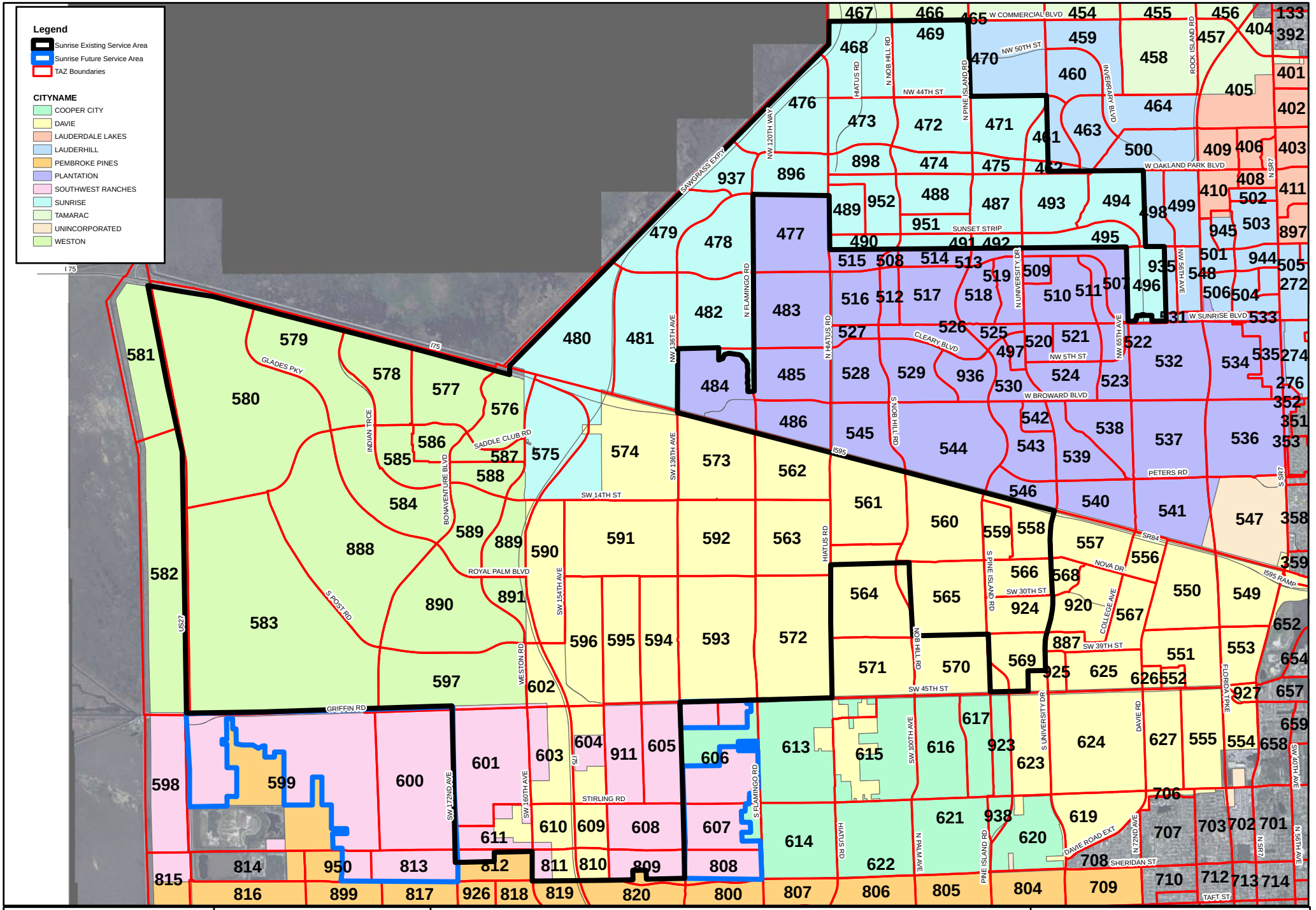
City of Sunrise

10-Year Water Supply Facility Work Plan

Sunrise Utility Service Area Population Projections for Weston – 2014 Data

Service Area	2014	2015	2020	2025	2030
Existing	65,831	65,853	65,107	64,289	63,711
Future	-	-	-	-	-
Total	**65,831**	**65,853**	**65,107**	**64,289**	**63,711**

Source: Broward County Forecasting Model Data by TAZ, April, 2014.


Legend
Sunrise Existing Service Area
Sunrise Future Service Area
TAZ Boundaries
CITYNAME
COOPER CITY
DAVIE
LAUDERDALE LAKES
LAUDERHILL
PEMBROKE PINES
PLANTATION
SOUTHWEST RANCHES
SUNRISE
TAMARAC
UNINCORPORATED
WESTON
I 75
SAWGRASS EXPY
NW 120TH WAY
HIATUS RD
N DIXIE HILL RD
NW 44TH ST
N PINE ISLAND RD
W COMMERCIAL BLVD
NW 50TH ST
INVERRARY BLVD
ROCK ISLAND RD
W OAKLAND PARK BLVD
N SR7
SUNSET STRIP
NW 136TH AVE
N FLAMINGO RD
N UNIVERSITY DR
NW 65TH AVE
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CLEARY BLVD
N HIATUS RD
S NOB HILL RD
W BROWARD BLVD
I595
PETERS RD
S SR7
SR84
NOVA DR
I595 RAMP
GLADES PKY
INDIAN TRCE
SADDLE CLUB RD
BONAVENTURE BLVD
SW 14TH ST
SW 136TH AVE
SW 154TH AVE
ROYAL PALM BLVD
S POST RD
US27
WESTON RD
GRIFFIN RD
SW 172ND AVE
SW 160TH AVE
STIRLING RD
S FLAMINGO RD
S PINE ISLAND RD
NOB HILL RD
SW 30TH ST
COLLEGE AVE
SW 39TH ST
SW 45TH ST
S UNIVERSITY DR
SW 100TH AVE
DAVIE RD
FLORIDA TPKE
SW 40TH AVE
HIATUS RD
N PALM AVE
PINE ISLAND RD
DAVIE ROAD EXT
N 72ND AVE
SHERIDAN ST
TAFT ST
N 56TH AVE
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468 469 470 459 458 457 404 392
460 405 401
476 464 402
473 472 471 461 463
898 474 475 462 500 409 406 403
937 896 W OAKLAND PARK BLVD
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951 945 503 897
479 478 477 490 491 492 495
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482 483 527 526 525 520 521 522 532 534 535 274
480 481 497 524 523 533
484 485 528 529 936 530 276
486 542 538 537 536 352
545 544 543 539 351
546 540 541 547 353
561 560 559 558 557 556 358
562 563 564 565 566 568 550 549 359
591 592 593 572 571 570 569 924 920 567 652
590 889 891 887 551 553 654
588 587 575 574 573 925 625 626 552 927 657
586 585 584 583 582 581 580 579 578 577 576
888 890 597 602 596 595 594 617 923 624 627 555 554 659
889 891 613 615 616 623 658
606 605 911 604 603 601 600 599 598
706
621 938 619 707 703 702 701
611 610 609 608 607 614 620
815 814 950 813 812 811 810 809 808 622 708
816 899 817 926 818 819 820 800 807 806 805 804 709 710 712 713 714
MWH
CITY OF SUNRISE FLORIDA
Local Governments Served by the City of Sunrise
With Locations of Traffic Analysis Zones
0 0.5 1 2 Miles
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MWH

BUILDING A BETTER WORLD

MEETING MINUTES

Water Supply Facilities Work Plan, City of Sunrise Update 2015
Intergovernmental Coordination between City of Sunrise Utilities Department and Town of South West Ranches
July 9, 2014

Attendees: See Attached Sign-In Sheet

	Agenda Items	Action Items
1.	Introductions and a project overview of the Water Supply Facilities Work Plan (WSFP) was provided.	
2.	Point of contact person for South West Ranches will be Jeff Katims. Tim Welch is point person for Sunrise Utilities and Sangeeta Dhulashia for MWH.	
3.	Population Projections A. Population Projections were reviewed. Mr. Katims provided population data set received from Broward County which is different than those computed by MWH. MWH population projections by TAZ are higher than those reported by Broward County for SW Ranches Municipality.	• MWH will inquire with with Broward County.
4.	Plan Adoption Schedule A. Draft to be completed by August Commission meeting for transmittal and public comment. This draft will be available to local governments at that time. B. Final to be completed by January Commission meeting C. Final adoption due in March 2015	
5.	List of Data Needs A. In Hand • LEC Plan • Goals, Objectives, and Policies – almost complete for City of Sunrise.	
6.	Intergovernmental Coordination A. There are currently no DRI and LUPA's in SW Ranches nor are there any anticipated for the future at this time.	

Status of Action Items:

#	Assigned To: Staff and Date	Proposal Authorization and Comments	Status
1.	Kristin Hink, 7/9/14	MWH will inquire with Broward County.	*Completed on 7/18/14*
2.			
3.			

Attachments:

- Sign-In Sheet
- Meeting Agenda
- Table of Population Projections for Town of South West Ranches
- Sunrise Utilities Water Service Area Location Map

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BUILDING A BETTER WORLD

MEETING SIGN IN SHEET

Date: Wednesday, July 9, 2014

Time: 11:00 AM

Location: 6535 Nova Drive, Suite 110

Project: City of Sunrise Water Supply Facilities Work Plan – Intergovernmental Coordination with Town of South West Ranches

In Attendance:

	Name	Phone Number	Email Address	Firm/Organization
1.	Tim Welch	954-888-6055	twelch@sunrisefl.gov	City of Sunrise
2.	Sangeeta Dholakia	954-846-0401	sangeeta.dholakia@mwhglobal.com	MWH.
3.	Eric Swanson	954-475-3070	eric@tmpgplanning.com	TMPG
4.	Jeff Katim	"	jeff@tmpgplanning.com	TMPG
5.	Kristin Hawk	954-846-0401	Kristin.E.Hawk@mwhglobal.com	MWH
6.				
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13.				

MWH

BUILDING A BETTER WORLD

MEETING AGENDA

PROJECT TITLE: City of Sunrise Water Supply Facilities Work Plan

SUBJECT: Intergovernmental Coordination with Town of South West Ranches

DATE & TIME OF MEETING: Wednesday, July 9, 2014, 11:00 AM

PLACE: 6535 Nova Drive, Suite 110

	Agenda Items
1.	Project Overview- Water Supply Facilities Work Plan Overview
2.	Communications A. A Single Point of Contact per DEO Guidelines
3.	Service Area
4.	Population Projections A. Population Projections-usage of Traffic Analysis Zone (TAZ) thru 2030
5.	Plan Adoption Schedule A. Draft to be completed by August Commission meeting B. Final to be completed by January Commission meeting
6.	List of Data Needs A. In Hand • LEC Plan • Goals, Objectives, and Policies
7.	Intergovernmental Coordination A. DRI B. LUPA

City of Sunrise

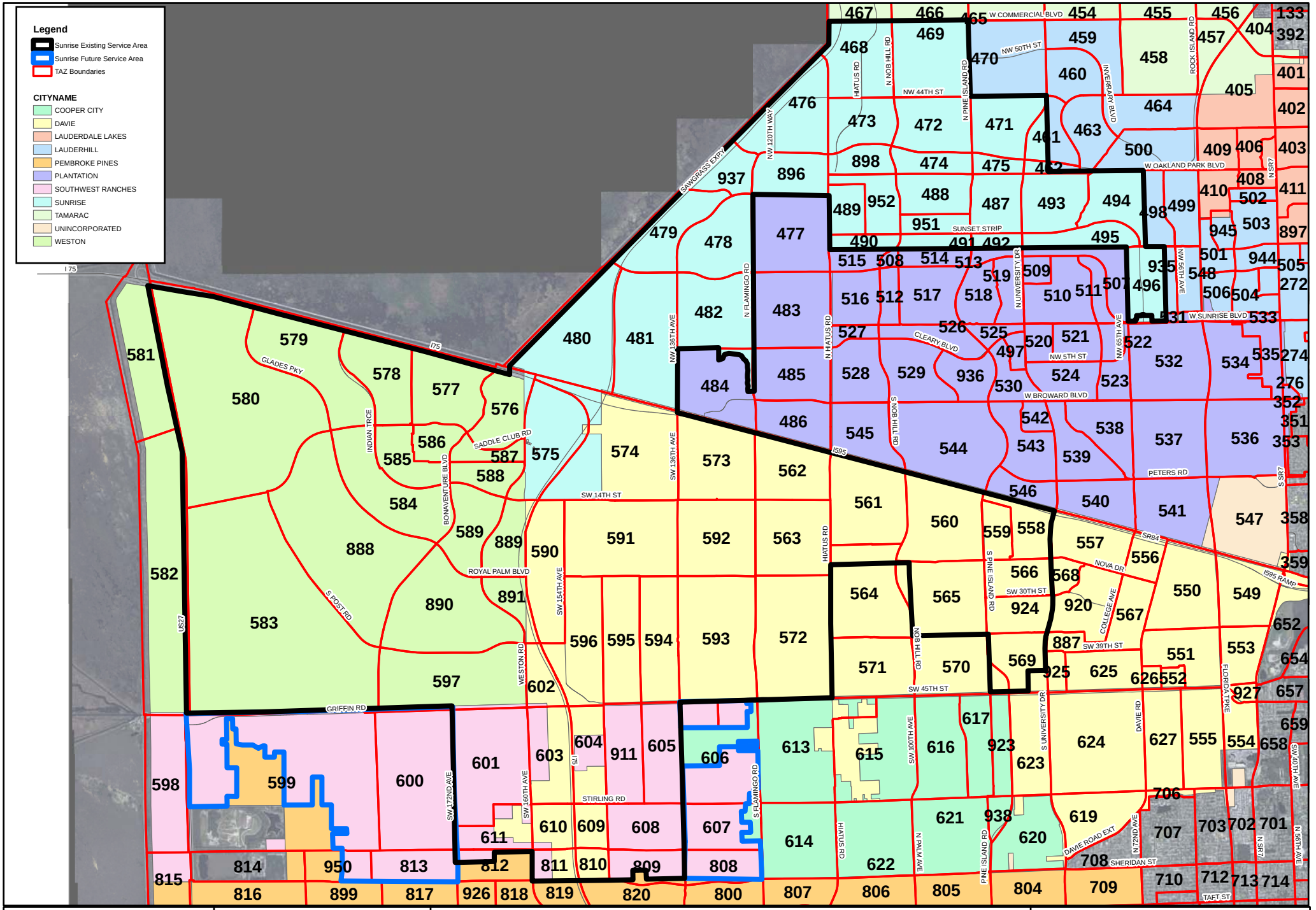
10-Year Water Supply Facility Work Plan

Sunrise Utility Service Area Population Projections for South West Ranches – 2014 Data

Service Area	2014	2015	2020	2025	2030
Existing	4,500	4,500	5,000	5,200	5,200
Future	5,600	5,600	6,100	6,400	6,400
Total	**10,100**	**10,100**	**11,100**	**11,600**	**11,600**

Source: Broward County Forecasting Model Data by TAZ, April, 2014.

*Population values are rounded either up or down to the nearest hundredth.


Legend
Sunrise Existing Service Area
Sunrise Future Service Area
TAZ Boundaries
CITYNAME
COOPER CITY
DAVIE
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LAUDERHILL
PEMBROKE PINES
PLANTATION
SOUTHWEST RANCHES
SUNRISE
TAMARAC
UNINCORPORATED
WESTON
I 75
SAWGRASS EXPY
NW 120TH WAY
HIATUS RD
N DIXIE HILL RD
NW 44TH ST
N PINE ISLAND RD
W COMMERCIAL BLVD
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ROCK ISLAND RD
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479 478 477 490 491 492 495
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480 481 497 524 523 533
484 485 528 529 936 530 276
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545 544 543 539 351
546 540 541 547 353
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562 563 564 565 566 568 550 549 359
591 592 593 572 571 570 569 924 920 567 652
590 889 891 887 551 553 654
588 587 575 574 573 925 625 626 552 927 657
586 585 584 583 582 581 580 579 578 577 576
888 890 597 602 596 595 594 617 923 624 627 555 554 659
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606 605 911 604 603 601 600 599 598
706
621 938 619 707 703 702 701
611 610 609 608 607 614 620
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816 899 817 926 818 819 820 800 807 806 805 804 709 710 712 713 714
MWH
CITY OF SUNRISE FLORIDA
Local Governments Served by the City of Sunrise
With Locations of Traffic Analysis Zones
0 0.5 1 2 Miles
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BUILDING A BETTER WORLD

MEETING MINUTES

Water Supply Facilities Work Plan, City of Sunrise Update 2015
Intergovernmental Coordination between City of Sunrise Utilities Department and Town of Davie
July 9, 2014

Attendees: See Attached Sign-In Sheet

	Agenda Items	Action Items
1.	Introductions and a project overview of the Water Supply Facilities Work Plan (WSFP) was provided.	
2.	Point of contact person for Davie will be David Quigley. Tim Welch is point person for Sunrise Utilities and Sangeeta Dhulashia for MWH.	
3.	Service Area and Population Projections A. Any comments on the service area or population projections that were presented are to be provided within a week by the Town of Davie to MWH.	• Town of Davie to verify service area boundary and population projection numbers within a week.
4.	Plan Adoption Schedule A. Draft to be completed by August Commission meeting for transmittal and public comment. This draft will be available to local governments at that time. B. Final to be completed by January Commission meeting C. Final adoption due in March 2015	
5.	List of Data Needs A. In Hand • LEC Plan • Goals, Objectives, and Policies – almost complete for City of Sunrise.	
6.	Intergovernmental Coordination A. Davie to verify if there are any DRI and LUPA's currently or anticipated in the future for the Town of Davie within the Sunrise Utility Service area.	• Town of Davie to verify if there are any current or anticipated future DRI's or LUPA's.

Status of Action Items:

#	Assigned To: Staff and Date	Proposal Authorization and Comments	Status
1.	David Quigley, 7/9/14	Town of Davie to verify Sunrise Utility Service Area boundary and population projection numbers within City of Sunrise Utility Service Area within a week.	
2.	David Quigley, 7/9/14	Town of Davie to verify if there are any current or anticipated future DRI's or LUPA's.	*Completed 7/9/14*
3.			

Attachments:

- Sign-In Sheet
- Meeting Agenda
- Table of Population Projections for Town of Davie
- Sunrise Utilities Water Service Area Location Map

MWH

BUILDING A BETTER WORLD

MEETING SIGN IN SHEET

Date: Wednesday, July 9, 2014

Time: 4:00 PM

Location: Town of Davie - Planning Department

Project: City of Sunrise Water Supply Facilities Work Plan – Intergovernmental Coordination with Town of Davie

In Attendance:

	Name	Phone Number	Email Address	Firm/Organization
1.	David Quigley	954-797-1075	david.quigley@davie-fl.gov	Davie
2.	Tim Welch	954 888 6055	twelch@sunrisefl.gov	Sunrise
3.	Sangeeta Dhulashia.	954-846-0401	Sangeeta.dhulashia@mwhglobal.com	MWH
4.	Kristin Hink	954-846-0401	Kristin.E.Hink@mwhglobal.com	MWH
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MWH

BUILDING A BETTER WORLD

MEETING AGENDA

PROJECT TITLE: City of Sunrise Water Supply Facilities Work Plan

SUBJECT: Intergovernmental Coordination with Town of Davie

DATE & TIME OF MEETING: Wednesday, July 9, 2014, 4:00 PM

PLACE: Town of Davie - Planning Department

	Agenda Items
1.	Project Overview- Water Supply Facilities Work Plan Overview
2.	Communications A. A Single Point of Contact per DEO Guidelines
3.	Service Area
4.	Population Projections A. Population Projections-usage of Traffic Analysis Zone (TAZ) thru 2030
5.	Plan Adoption Schedule A. Draft to be completed by August Commission meeting B. Final to be completed by January Commission meeting
6.	List of Data Needs A. In Hand • LEC Plan • Goals, Objectives, and Policies
7.	Intergovernmental Coordination A. DRI B. LUPA

City of Sunrise

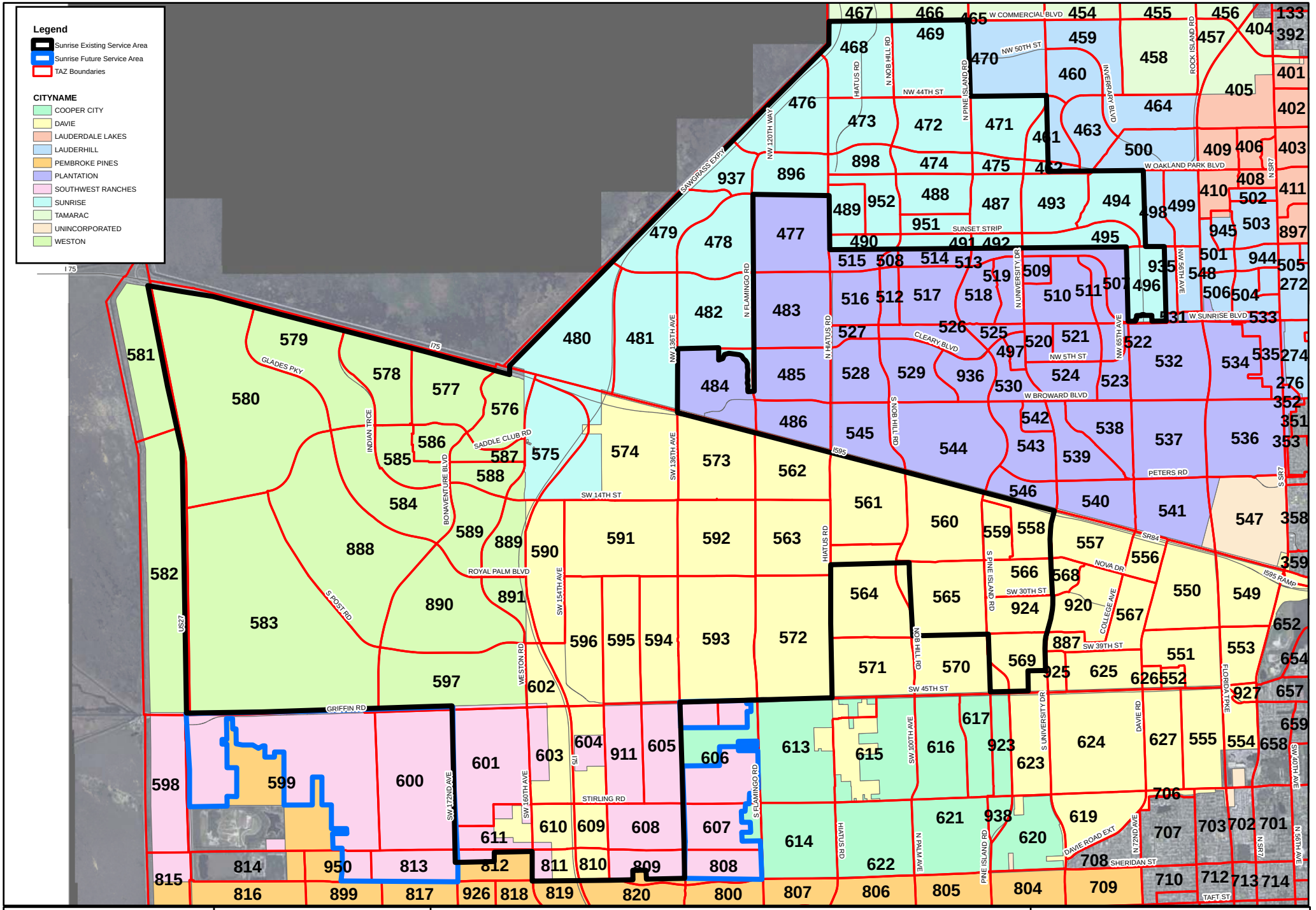
10-Year Water Supply Facility Work Plan

Sunrise Utility Service Area Population Projections for Davie – 2014 Data

Service Area	2014	2015	2020	2025	2030
Existing	57,400	57,500	59,600	60,100	59,800
Future	-	-	-	-	-
Total	**57,400**	**57,500**	**59,600**	**60,100**	**59,800**

Source: Broward County Forecasting Model Data by TAZ, April, 2014.

*Population values are rounded either up or down to the nearest hundredth.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Sunrise Existing Service Area
Sunrise Future Service Area
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LAUDERHILL
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NW 50TH ST
INVERRARY BLVD
ROCK ISLAND RD
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N UNIVERSITY DR
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PINE ISLAND RD
DAVIE ROAD EXT
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MWH
CITY OF SUNRISE FLORIDA
Local Governments Served by the City of Sunrise
With Locations of Traffic Analysis Zones
0 0.5 1 2 Miles
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Appendix F

TABLE A
CITY OF SUNRISE WELL DESCRIPTIONS

Well ID	28547	28551	28552	28553	28554	28555	261798	28556	261797	28557	261796	28558
Name	S-2	S-6	S-7	S-8	S-9	S-10	S-10R	S-11	S-11R	S-12	S-12R	S-13
Map Designator	Springtree2	Springtree6	Springtree7	Springtree8	Springtree9	Springtree10	Springtree10R	Springtree11	Springtree11R	Springtre12	Springtree12R	Springtree13
FLUWID Number	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Well Field	Springtree	Springtree	Springtree	Springtree	Springtree	Springtree	Springtree	Springtree	Springtree	Springtree	Springtree	Springtree
Existing/ Proposed (E/P)	E	E	E	E	E	AB	E	AB	E	AB	E	E
Well Diameter (inches)	18	18	18	18	18	18	16	18	16	18	16	18
Total Depth (feet)	115	76	76	72	72	84	110	91	108	91	108	84
Cased Depth (feet)	110	69	68	67	65	80	89	84	84	84	84	80
Facility Elev. (Feet, NGVD)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Screened Interval (feet)												
From	110	69	68	67	65	80	89	84	84	84	84	80
To	115	76	76	72	72	84	105	91	103	91	103	84
Pumped or Flowing (P/F)	P	P	P	P	P	P	P	P	P	P	P	P
Pump Type	Submersible	None	Submersible	Submersible	Submersible	None	TBD	None	TBD	None	TBD	Submersible
Pump Intake Elevation												
Feet NGVD	ND	ND	ND	ND	ND	ND	TBD	ND	TBD	ND	TBD	ND
Feet BLS	ND	ND	-20	-20	ND	ND	TBD	0	TBD	0	TBD	-20
Pump Capacity (GPM)	1,000	0	1,500	1,500	0	0	TBD	0	TBD	0	TBD	1,000
Year Proposed/Drilled	1971	1973	1973	1973	1973	1974	2013	1974	2013	1974	2013	1974
Planar Location												
Source	Migrate	Migrate	Migrate	Migrate	Migrate	Migrate	DIGITIZED	Migrate	DIGITIZED	Migrate	DIGITIZED	Migrate
Feet North	898,487	899,737	900,237	900,237	900,437	897,287	897,253	897,687	897,597	898,037	897,915	898,137
Feet East	671,411	670,561	670,561	670,861	671,061	670,061	670,127	669,911	670,001	669,561	669,734	669,261
Accounting Method	Flow Meter	None	Flow Meter	Flow Meter	Flow Meter	None	Flow Meter	None	Flow Meter	None	Flow Meter	Flow Meter
Use Status	Primary	Standby	Primary	Primary	Standby	AB	Primary	AB	Primary	AB	Primary	Primary
Water Use Type	Public Water Supply	Public Water Supply	Public Water Supply	Public Water Supply	Public Water Supply	Public Water Supply	Public Water Supply	Public Water Supply	Public Water Supply	Public Water Supply	Public Water Supply	Public Water Supply
Aquifer	Biscayne Aquifer	Biscayne Aquifer	Biscayne Aquifer	Biscayne Aquifer	Biscayne Aquifer	Biscayne Aquifer	Biscayne Aquifer	Biscayne Aquifer	Biscayne Aquifer	Biscayne Aquifer	Biscayne Aquifer	Biscayne Aquifer

ND: No data
TBD: To be determined
AB: Abandoned

TABLE A
CITY OF SUNRISE WELL DESCRIPTIONS

Well ID	263446	28559	263447	28560	263448	28561	263449	28562	261789	28564	28565	28566
Name	S-13R	S-14	S-14R	S-15	S-15R	S-16	S-16R	S-17	S-18R	S-19	S-20	S-21
Map Designator	Springtree13R	Springtree14	Springtree14R	Springtree15	Springtree15R	Springtree16	Springtree16R	Springtree17	Springtree18R	Springtree19	Springtree20	Springtree21
FLUWID Number	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Well Field	Springtree	Springtree	Springtree	Springtree	Springtree	Springtree	Springtree	Springtree	Springtree	Springtree	Springtree	Springtree
Existing/ Proposed (E/P)	E	E	E	E	E	E	E	E	E	E	E	E
Well Diameter (inches)	16	18	16	18	16	18	16	12	16	18	18	18
Total Depth (feet)	115	90	110	107	115	107	115	125	125	118	120	115
Cased Depth (feet)	88	84	70	87	65	80	80	70	64	97	97	98
Facility Elev. (Feet, NGVD)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Screened Interval (feet)												
From	88	84	70	87	65	80	80	70	64	97	97	98
To	110	90	105	107	110	107	110	125	120	118	120	115
Pumped or Flowing (P/F)	P	P	P	P	P	P	P	P	P	P	P	P
Pump Type	TBD	Submersible	TBD	Submersible	TBD	Submersible	TBD	Submersible	TBD	Submersible	Submersible	Submersible
Pump Intake Elevation												
Feet NGVD	TBD	ND	TBD	ND	TBD	ND	TBD	ND	TBD	ND	ND	ND
Feet BLS	TBD	-20	TBD	-20	TBD	-20	TBD	-20	TBD	-20	-20	-20
Pump Capacity (GPM)	TBD	1,000	TBD	1,500	TBD	1,500	TBD	1,000	TBD	1,000	1,050	1,000
Year Proposed/Drilled	2013	1974	2013	1974	2013	1974	2013	1989	2013	1992	1993	1993
Planar Location												
Source	DIGITIZED	Migrate	DIGITIZED	Migrate	DIGITIZED	Migrate	DIGITIZED	Migrate	DIGITIZED	Migrate	Migrate	Migrate
Feet North	898,101	898,387	898,327	898,337	898,401	898,437	898,451	899,717	900,146	899,517	899,517	899,987
Feet East	669,347	669,461	669,585	668,911	668,904	668,561	668,673	669,021	669,448	669,311	669,781	670,161
Accounting Method	Flow Meter	Flow Meter	Flow Meter	Flow Meter	Flow Meter	Flow Meter	Flow Meter	Flow Meter	Flow Meter	Flow Meter	Flow Meter	Flow Meter
Use Status	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Water Use Type	Public Water Supply	Public Water Supply	Public Water Supply	Public Water Supply	Public Water Supply	Public Water Supply	Public Water Supply	Public Water Supply	Public Water Supply	Public Water Supply	Public Water Supply	Public Water Supply
Aquifer	Biscayne Aquifer	Biscayne Aquifer	Biscayne Aquifer	Biscayne Aquifer	Biscayne Aquifer	Biscayne Aquifer	Biscayne Aquifer	Biscayne Aquifer	Biscayne Aquifer	Biscayne Aquifer	Biscayne Aquifer	Biscayne Aquifer

ND: No data
TBD: To be determined
AB: Abandoned

TABLE A
CITY OF SUNRISE WELL DESCRIPTIONS

Well ID	28567	28575	28576	28539	28538	28540	28541	28542	28543	28544	221005	264947
Name	S-22	ASR/ RO-1	ASR-2	SG-1	SG-2	SG-3	SG-4	SG-5	SG-6	SG-7	Arena MWD	Arena MWS
Map Designator	Springtree22	RO-1	ASR-2	Sawgrass1	SG-2	Sawgrass3	Sawgrass4	Sawgrass5	Sawgrass6	SG-7	Arena MWD	Arena MWS
FLUWID Number	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Well Field	Springtree	Springtree	Springtree	Sawgrass	Sawgrass	Sawgrass	Sawgrass	Sawgrass	Sawgrass	Sawgrass	Sawgrass	Sawgrass
Existing/ Proposed (E/P)	E	E	P	E	P	E	E	E	E	P	E	E
Well Diameter (inches)	18	16	16	18	20	20	20	20	20	20	2	2
Total Depth (feet)	118	1,270	1,200	95	95	95	95	95	95	95	100	20
Cased Depth (feet)	97	1,110	1,000	76	76	73	75	72	68	76	80	15
Facility Elev. (Feet, NGVD)	ND	ND	TBD	ND	TBD	ND	ND	ND	ND	TBD	ND	ND
Screened Interval (feet)												
From	97	1110	1000	76	TBD	73	75	72	68	TBD	80	15
To	118	1270	1200	95	TBD	95	95	95	95	TBD	100	20
Pumped or Flowing (P/F)	P	P	P	P	P	P	P	P	P	P	P	P
Pump Type	Submersible	Submersible	TBD	Submersible	TBD	Submersible	Submersible	Submersible	Submersible	TBD	None	None
Pump Intake Elevation												
Feet NGVD	ND	ND	TBD	ND	TBD	ND	ND	ND	ND	TBD	None	None
Feet BLS	-20	-60	TBD	-40	TBD	-40	-40	-40	-40	TBD	None	None
Pump Capacity (GPM)	1,400	1,400	TBD	2,100	TBD	2,100	2,100	2,100	2,100	TBD	None	None
Year Proposed/Drilled	1993	1998	TBD	1997	TBD	1997	1997	1997	1997	TBD	2012	2012
Planar Location												
Source	Migrate	APPLICANT	Migrate	Migrate	Migrate	Migrate	Migrate	Migrate	Migrate	Migrate	APPLICANT	APPLICANT
Feet North	899,657	898,007	898,381	880, 057	879497	878,927	878,237	877,177	876,567	876137	876135	876135
Feet East	670,301	670,372	670,552	664,686	664,601	664,181	663,341	662,746	662,391	661,811	663,893	663,893
Accounting Method	Flow Meter	Flow Meter	TBD	Flow Meter	TBD	Flow Meter	Flow Meter	Flow Meter	Flow Meter	TBD	None	None
Use Status	Primary	Monitor	TBD	Primary	TBD	Primary	Primary	Primary	Primary	TBD	Monitor	Monitor
Water Use Type	Public Water Supply	Public Water Supply	Public Water Supply	Public Water Supply	Public Water Supply	Public Water Supply	Public Water Supply	Public Water Supply	Public Water Supply	Public Water Supply	Monitor	Monitor
Aquifer	Biscayne Aquifer	Upper Floridan Aquifer	Upper Floridan Aquifer	Biscayne Aquifer	Biscayne Aquifer	Biscayne Aquifer	Biscayne Aquifer	Biscayne Aquifer	Biscayne Aquifer	Biscayne Aquifer	Biscayne Aquifer	Biscayne Aquifer

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TABLE A
CITY OF SUNRISE WELL DESCRIPTIONS

Well ID	266109	266110	28531	28574	108086	108085	28535	28536	28537	28577	27198
Name	L-35A_MWD	L-35A_MWS	SG-8	SG-9	SGF-1	SGF-2	FP-1	FP-2	FP-3	FP-4	SW-1
Map Designator	L-35A_MWD	L-35A_MWS	Sawgrass8	SG-9	SawgrassF-1	SawgrassF-2	Flamingo Park1	Flamingo Park2	Flamingo Park3	Flamingo Park4	Southwest1
FLUWID Number	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Well Field	Sawgrass	Sawgrass	Sawgrass	Sawgrass	Sawgrass	Sawgrass	Flamingo Park	Flamingo Park	Flamingo Park	Flamingo Park	Southwest
Existing/ Proposed (E/P)	P	P	E	P	E	E	E	E	E	E	E
Well Diameter (inches)	2	4	20	20	16	16	24	24	20	24	12
Total Depth (feet)	100	30	95	95	1127	1150	84	84	80	86	60
Cased Depth (feet)	80	20	72	76	1006	1014	66	68	66	66	40
Facility Elev. (Feet, NGVD)	ND	ND	ND	TBD	ND	ND	8.69	8.35	8.13	8.13	ND
Screened Interval (feet)											
From	80	20	72	TBD	1003	1014	66	68	66	66	40
To	100	30	95	TBD	1126	1150	84	84	80	86	60
Pumped or Flowing (P/F)	P	P	P	P	P	P	P	P	P	P	P
Pump Type	None	None	Submersible	TBD	TBD	TBD	Submersible	Submersible	Submersible	Submersible	Turbine
Pump Intake Elevation											
Feet NGVD	None	None	ND	TBD	ND	ND	ND	ND	ND	ND	ND
Feet BLS	None	None	-40	TBD	TBD	TBD	-31.50	-31.50	-31.50	-31.50	-32
Pump Capacity (GPM)	None	None	2,100	TBD	1800	1800	2,600	2,600	2,600	2,600	700
Year Proposed/Drilled	TBD	TBD	1997	TBD	2013	2013	2003	2003	1997	2003	1983
Planar Location											
Source	APPLICANT	APPLICANT	Migrate	Migrate	DIGITIZED	DIGITIZED	Migrate	Migrate	Migrate	DIGITIZED	DIGITIZED
Feet North	875625	875625	876,142	876437	871709	871700	878,827	878,817	879,107	879,087	868,195
Feet East	664,875	664,875	662,351	662,701	653,952	656,421	655,011	654,481	654,041	654,992	621,743
Accounting Method	None	None	Flow Meter	TBD	Flow Meter	Flow Meter	Flow Meter	Flow Meter	Flow Meter	Flow Meter	Flow Meter
Use Status	Monitor	Monitor	Primary	TBD	Primary	Standby	Primary	Monitor	Primary	Primary	Primary
Water Use Type	Monitor	Monitor	Public Water Supply	Public Water Supply	Public Water Supply	Public Water Supply	Public Water Supply	Public Water Supply	Public Water Supply	Public Water Supply	Public Water Supply
Aquifer	Biscayne Aquifer	Biscayne Aquifer	Biscayne Aquifer	Biscayne Aquifer	Upper Floridan Aquifer	Upper Floridan Aquifer	Biscayne Aquifer	Biscayne Aquifer	Biscayne Aquifer	Biscayne Aquifer	Biscayne Aquifer

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TABLE A
CITY OF SUNRISE WELL DESCRIPTIONS

Well ID	27199	27200	220736					
Name	SW-2	SW-3	SW-4					
Map Designator	Southwest2	Southwest3	Southwest4					
FLUWID Number	ND	ND	ND					
Well Field	Southwest	Southwest	Southwest					
Existing/ Proposed (E/P)	E	E	P					
Well Diameter (inches)	12	12	24					
Total Depth (feet)	60	60	100					
Cased Depth (feet)	42	40	80					
Facility Elev. (Feet, NGVD)	ND	ND	ND					
Screened Interval (feet)								
From	42	40	80					
To	60	60	100					
Pumped or Flowing (P/F)	P	P	P					
Pump Type	Turbine	Turbine	Submersible					
Pump Intake Elevation								
Feet NGVD	ND	ND	ND					
Feet BLS	-34	-32	TBD					
Pump Capacity (GPM)	700	700	TBD					
Year Proposed/Drilled	1983	1983	2008					
Planar Location								
Source	DIGITIZED	DIGITIZED	DIGITIZED					
Feet North	868,226	868,100	868,494					
Feet East	621,742	621,775	621,672					
Accounting Method	Flow Meter	Flow Meter	ND					
Use Status	Primary	Monitor	Secondary					
Water Use Type	Public Water Supply	Public Water Supply	Public Water Supply	Public Water Supply	Public Water Supply	Public Water Supply	Public Water Supply	Public Water Supply
Aquifer	Biscayne Aquifer	Biscayne Aquifer	Biscayne Aquifer	Upper Floridan Aquifer	Upper Floridan Aquifer	Upper Floridan Aquifer	Upper Floridan Aquifer	Upper Floridan Aquifer

ND: No data
TBD: To be determined
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Appendix G

Cost Assumptions
Used for 10-Year Water Supply Facilities Plan

Capital Cost Assumptions

The following is a list of assumptions used for pricing the capital improvements associated with all Alternative Water Supply (AWS) projects as part of the Capital Improvements Plan (CIP) development for 10 year Water Supply Facility Plan:

- Estimated capital costs are based on an ENR Construction Cost Index = 9835 (July 2014);

- All construction costs included a 30 percent contingency;

- Yard piping, electrical and instrumentation and control costs were estimated to equal 22 percent of facility component upgrade costs;

- Site work was estimated to equal 10 percent of facility component upgrade costs;

- Land Acquisition cost are computed based on the latest tax roll data from property appraisers site, and assumes a specific well location.

- Estimated capital costs have been rounded to the nearest ten thousand dollars;

- Estimated capital costs do not include any financing costs (interest during construction) which may be incurred as a result of the issuance of long-term debt to finance a portion of the project.

- Supplied labor rate buildup for craft labor costs is not indicated in estimate.

- All Capital cost are based on AACE Class 5 estimates, where the definition is as follow: ***AACE International CLASS 5 Cost Estimate*** – *Class 5 estimates are generally prepared based on very limited information, and subsequently have wide accuracy ranges. Typically, engineering is from 2% to 10% complete. They are often prepared for strategic planning purposes, market studies, assessment of viability, project location studies, and long range capital planning. Virtually all Class 5 estimates use stochastic estimating methods such as cost curves, capacity factors, and other parametric techniques. Expected accuracy ranges are from –20% to –50% on the low side and +30% to 100% on the high side, depending on technological complexity of the project,*

appropriate reference information, and the inclusion of an appropriate contingency determination. Ranges could exceed those shown in unusual circumstances.

- **MWH Opinion of Probable Construction Cost (OPCC) Disclaimer –** The client acknowledges that MWH has no control over cost of labor, materials, competitive bidding environment and procedures, unidentified field conditions, financial and/or market conditions, or any other factors likely to affect the OPCC of this project, all of which are and will unavoidably remain in a state of change, especially in light of the high volatility of the market attributable to Acts of God and other market events beyond the control of the parties. Client further acknowledges that this OPCC is a 'snapshot in time' and that the reliability of the OPCC will degrade over time. Client agree that MWH cannot and does not make any warranty, promise, guarantee or representation, either express or implied that proposal, bids, project costs, or cost of O&M functions will not vary significantly from MWH's good faith Class 5 OPCC.

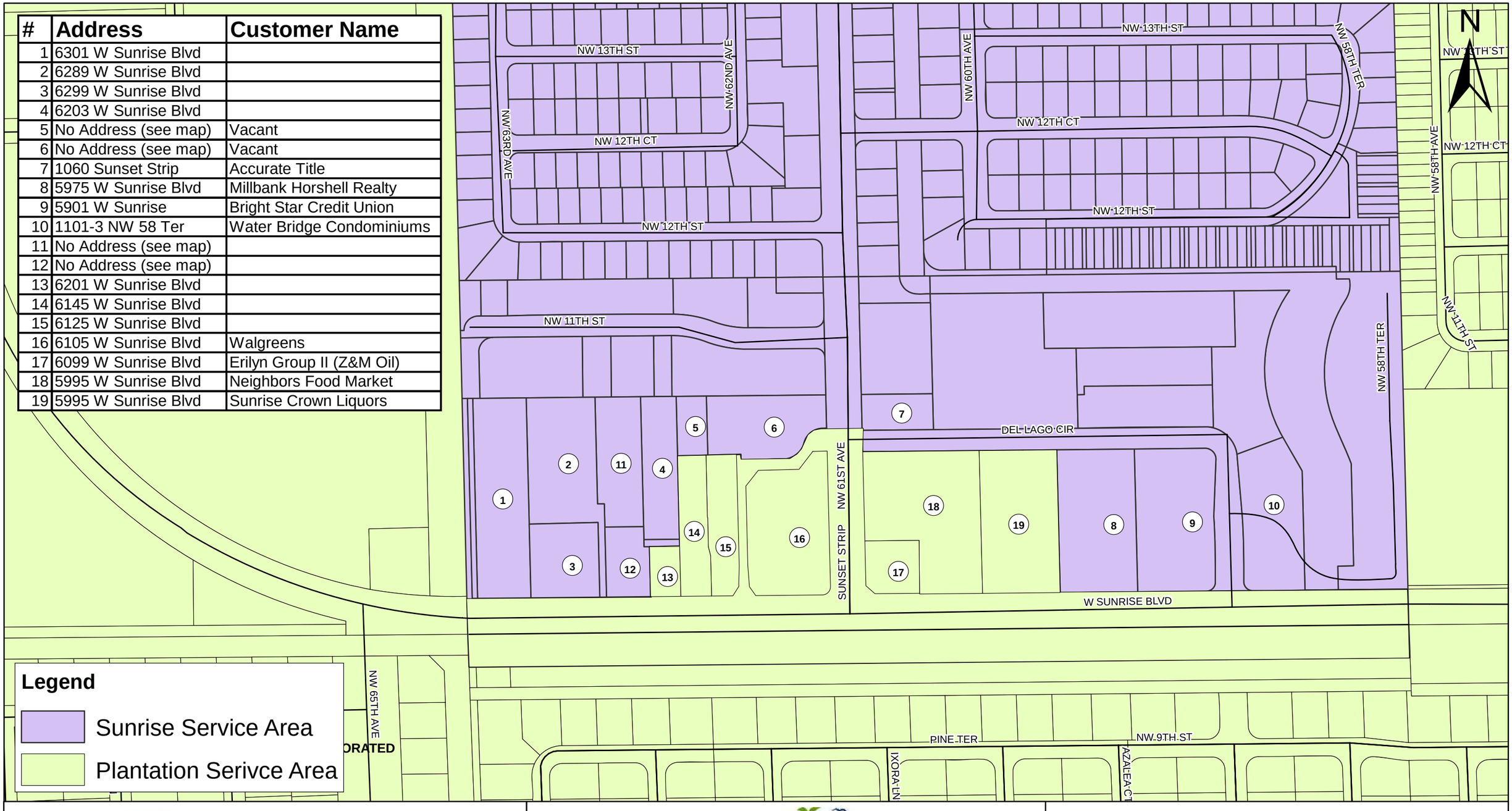
Appendix H

CITY OF SUNRISE
APPENDIX I - UNINCORPORATED PROPERTIES

- 15931 N WIND CIRCLE; NEW RIVER ESTATES SECTION ONE 103-28 B LOT 8 BLK A
- 620 SW 159 TERRACE; NEW RIVER ESTATES SECTION ONE 103-28 B LOT 3 BLK B
- 15910 N WIND CIRCLE; NEW RIVER ESTATES SECTION ONE 103-28 B LOT 4 BLK B
- 641 SW 158 TERRACE; NEW RIVER ESTATES SECTION ONE 103-28 B LOT 28 BLK D

Appendix I

#	Address	Customer Name
1	6301 W Sunrise Blvd	
2	6289 W Sunrise Blvd	
3	6299 W Sunrise Blvd	
4	6203 W Sunrise Blvd	
5	No Address (see map)	Vacant
6	No Address (see map)	Vacant
7	1060 Sunset Strip	Accurate Title
8	5975 W Sunrise Blvd	Millbank Horshell Realty
9	5901 W Sunrise	Bright Star Credit Union
10	1101-3 NW 58 Ter	Water Bridge Condominiums
11	No Address (see map)	
12	No Address (see map)	
13	6201 W Sunrise Blvd	
14	6145 W Sunrise Blvd	
15	6125 W Sunrise Blvd	
16	6105 W Sunrise Blvd	Walgreens
17	6099 W Sunrise Blvd	Erilyn Group II (Z&M Oil)
18	5995 W Sunrise Blvd	Neighbors Food Market
19	5995 W Sunrise Blvd	Sunrise Crown Liquors



MWH

CITY OF SUNRISE FLORIDA

City of Sunrise
Water Service Area