

**ORDINANCE NO. 2017-005**

**AN ORDINANCE OF THE TOWN OF SOUTHWEST RANCHES, FLORIDA, APPROVING AN UPDATE TO THE TEN-YEAR WATER SUPPLY FACILITIES PLAN ("WSFP") AND ADOPTING AN IMPLEMENTING AMENDMENT TO THE GOALS, OBJECTIVES AND POLICIES OF THE CAPITAL IMPROVEMENTS ELEMENT OF THE TOWN OF SOUTHWEST RANCHES COMPREHENSIVE PLAN; AUTHORIZING TRANSMITTAL OF THE WSFP UPDATE AND COMPREHENSIVE PLAN AMENDMENT TO REVIEWING AGENCIES; PROVIDING FOR CONFLICT; PROVIDING FOR SEVERABILITY; AND, PROVIDING FOR AN EFFECTIVE DATE.**

**WHEREAS**, Section 163.3177, F.S. requires that every local government within the South Florida Water Management District ("SFWMD") update its local water supply facilities plan to reflect changes in the Lower East Coast Water Supply Plan ("LEC Plan"), and if appropriate, revise its adopted comprehensive plan to respond to relevant changes in the LEC Plan;

**WHEREAS**, the Town has prepared an update to the 2009 WSFP; and

**WHEREAS**, pursuant to the updated WSFP, the Town will continue to rely on individual well water supply, and does not propose any capital improvements for water supply, reuse, or conservation projects; and

**WHEREAS**, the updated LEC Plan water supply policies and projects do not affect the Town of Southwest Ranches continued use of individual well water supply to meet its 10-year water supply needs; and

**WHEREAS**, the Town Council finds that the goals, objectives and policies adopted in furtherance of the 2009 Plan continue to be relevant and appropriate for the 10-year planning period, and that needed amendments to the adopted comprehensive plan are limited to updating of references to third party utilities that serve small portions of the Town.

**NOW, THEREFORE, BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF SOUTHWEST RANCHES, FLORIDA:**

**Section 1: Recitals.** That the foregoing "WHEREAS" clauses are hereby ratified and confirmed as being true and correct and are hereby made a specific part of this Ordinance.

**Section 2: Updated WSFP Approved.** That the Town of Southwest Ranches Water Supply Facilities Plan, attached as Exhibit "A" is hereby approved.

**Section 3: CIE Amendment Adopted.** That the Capital Improvements Element of the Town of Southwest Ranches Comprehensive Plan is hereby amended as follows to update references to third party utilities that provide limited service within the Town:

III.I Capital Improvements Element (CIE)

\* \* \* \* \*

CIE\_Policy 1.1-g: The five year schedule of capital improvements shall reflect the current City of Sunrise 10-Year Water Supply Facilities Work Plan (Amendment No. 15-1ESR, January 20, 2015), and the capital projects described therein for the purposes of ensuring that adequate water supply will be provided for the limited number of properties that are or will be served by City of Sunrise.

CIE\_Policy 1.1-h: The Town hereby adopts by reference the current Cooper City 10-year Water Supply Facilities Work Plan (Amendment No. 15-1ESR, December 30, 2014) as incorporated and adopted in the Infrastructure Element of its Comprehensive Plan and the capital improvement projects contained therein.

**Section 4: Transmittal.** That the Town Administrator or designee is hereby authorized to transmit the amendment and work plan to the applicable reviewing agencies under Section 163.3184(1)(c), F.S.

**Section 5: Plan Update.** That the Town Administrator or designee shall, immediately following the effective date of this Ordinance, cause the Town of Southwest Ranches Comprehensive Plan to be updated to reflect this amendment.

**Section 6: Conflicts.** All Ordinances or parts of Ordinances, Resolutions or parts of Resolutions in conflict herewith, be and the same are hereby repealed to the extent of such conflict.

**Section 7: Severability.** If any word, phrase, clause, sentence or section of this Ordinance is, for any reason, held unconstitutional or invalid, the invalidity thereof shall not affect the validity of any remaining portions of this Ordinance.

**Section 8: Effective Date.** This Ordinance shall take effect 31 days after the Department of Economic Opportunity notifies the Town that the plan amendment package is complete, unless timely challenged pursuant to sec. 163.3184(5), F.S., in which case the Ordinance shall take effect on the date that the Department of

Ordinance No. 2017-\_\_\_

Underlined words are additions and ~~stricken~~ words are deletions.

Economic Opportunity or the Administration Commission enters a final order determining the adopted amendment to be in compliance.

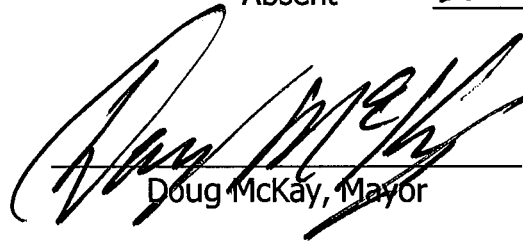
**PASSED ON FIRST READING** this 10<sup>th</sup> day of November, 2016 on a motion made by Vice Mayor Breitkreuz and seconded by Council Member Fisikelli.

**PASSED AND ADOPTED ON SECOND READING** this 23<sup>rd</sup> day of March 2017, on a motion made by V. Breitkreuz and seconded by C. M. Schroeder.

McKay  
Breitkreuz  
Fisikelli  
Jablonski  
Schroeder

Ayes  
5  
Nays  
0  
Absent  
2

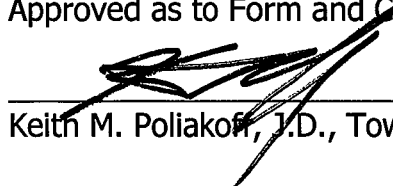
Ayes 5  
Nays 0  
Absent 2

  
\_\_\_\_\_  
Doug McKay, Mayor

ATTEST:

  
\_\_\_\_\_  
Russell Muñiz, Assistant Town Administrator/Town Clerk

Approved as to Form and Correctness:

  
\_\_\_\_\_  
Keith M. Poliakov, J.D., Town Attorney

113631247.1

Ordinance No. 2017-\_\_\_\_  
Underlined words are additions and ~~stricken~~ words are deletions.

**TOWN OF SOUTHWEST RANCHES, FLORIDA**  
**WATER SUPPLY FACILITIES WORK PLAN**  
**UPDATE**

**Prepared For:**

**Florida Department of Economic Opportunity  
&  
South Florida Water Management District**

**Prepared By:**

**The Mellgren Planning Group**

**January, 2015**

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## **1.0 INTRODUCTION**

The purpose of the Town of Southwest Ranches Water Supply Facilities Work Plan (Work Plan) is to identify and plan for the water supply sources and facilities needed to serve existing and new development within the Town's jurisdiction. Chapter 163, Part II, Florida Statutes (F.S.), requires local governments to prepare, adopt or update Work Plans into their comprehensive plans within 18 months after the South Florida Water Management District ("District" or "SFWMD") approves a regional water supply plan or its update. The Lower East Coast Water Supply Plan Update was approved by the District's Governing Board in September, 2013. Therefore, the deadline for local governments within the Lower East Coast ("LEC") Region to amend their comprehensive plans to update the Work Plan is March, 2015.

Residents of the Town of Southwest Ranches obtain their water from domestic self-supply and recreational/landscape self-supply systems (i.e., individually owned, private well systems). The Town does not own or operate any potable water distribution or supply facilities. There are two potable water distribution systems, owned and operated by adjacent municipalities, located within the Town. Each resident in the Town served by a centralized water system is a retail customer of the entity which owns and operates the system. At the eastern edge of the Town, Cooper City provides centralized potable water service to a limited number of properties, and will not extend its system to serve any additional properties. In the middle of the Town, the City of Sunrise provides potable water service to some properties.

This Work Plan ensures consistency with state guidelines and ensures adequate water supply for existing and new development by supporting various SFWMD, Broward County and local initiatives in the Town's Comprehensive Plan, identified and referenced in Section 3.0 Data and Analysis, and Section 5.0 Goals, Objectives and Policies.

The Work Plan is divided into five sections:

Section 1 – Introduction

Section 2 – Background Information

Section 3 – Data and Analysis

Section 4 – Work Plan Projects/Capital Improvement Element/Schedule

Section 5 – Goals, Objectives, and Policies

### **1.1 STATUTORY HISTORY**

The Florida Legislature enacted bills in the 2002, 2004, 2005, and 2011 sessions to address the state's water supply needs. These bills, in particular Senate Bills 360 and 444 (2005 legislative session), significantly changed Chapters 163 and 373, F.S. 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 local land use planning and water supply planning.

## **1.2 STATUTORY REQUIREMENTS**

The Town of Southwest Ranches has considered the following statutory provisions when updating the Water Supply Facilities Work Plan (Work Plan):

1. Coordinate appropriate aspects of its comprehensive plan with the Lower East Coast Regional Water Supply Plan [163.3177(4) (a), F.S.]. *The Town's Comprehensive Plan ensures a meaningful process for collaborative planning and intergovernmental coordination, on a continuing and ongoing basis on water supply issues between the Town, the South Florida Water Management District, Broward County and the local governments that provide service to the Town.*
2. Ensure the future land use plan is based upon availability of adequate water supplies and public facilities and services [s.163.3177 (6) (a), F.S.]. *Data and analysis demonstrating that adequate water supplies and associated public facilities will be available to meet projected growth demands must accompany all proposed Future Land Use Map amendments submitted for review. The Town does not own or operate any potable water distribution or supply facilities and is entirely dependent on domestic self-supply. The Town's Future Land Use Element of the Comprehensive Plan ensures the adequacy of the Town's self-supply by limiting more than 95% of the Town's land area to single family estates on lots of between one and two acres, conservation land, passive open space, and agriculture consisting of livestock farms, equestrian farms and plant nurseries. There are two potable water distribution systems, owned and operated by adjacent municipalities. Those public facilities owned and operated by Cooper City and the City of Sunrise will be available to meet optional residential demand, if deemed desirable by Town residents.*
3. Ensure that adequate water supplies and potable water facilities are available to serve new development no later than the issuance by the local government of a certificate of occupancy or its functional equivalent and consult with the applicable water supplier to determine whether adequate water supplies will be available to serve the development by the anticipated issuance date of the certificate of occupancy [s.163.3180 (2), F.S.]. *The adopted comprehensive plan and land development regulations require a determination of adequate potable water supply no later than issuance of a building permit.*
4. Revise the Five-Year Schedule of Capital Improvements to include water supply, reuse, and conservation projects and programs to be implemented during the five-year period [s. 163.3177(3)(a)4, F.S.]. *The Town does not own or operate any potable water distribution or supply facilities and therefore revisions to the five-year schedule of capital improvements to support water supply, reuse and conservation projects are not applicable.*

5. Revise the Comprehensive Plan to assess projected water needs and sources, considering the Lower East Coast Water Supply Plan, as well as applicable consumptive use permit(s) [s.163.3177 (6) (d), F.S.]. The plan should address the water supply sources necessary to meet and achieve the existing and projected water use demand for the established planning period, considering the applicable regional water supply plan [s.163.3167(9), F.S.]. *The Town, as a matter of policy, coordinates with providers operating potable water service and ensures water needs are met through adequate supply. The Town addresses the water Lower East Coast Regional Water Supply Plan and continually assesses potable water wells' environmental impacts with coordination to all applicable governments, particularly Broward County. ~~Assessing projected~~The Town's Comprehensive Plan's Utility Element provides on-going assessment, coordination and assistance to Town residents in meeting existing and future potable water supply and wastewater treatment needs, and discourages urban sprawl. This revision is not applicable as domestic self-supply is the water supply source used to meet existing and projected water use demand in the Town.*
6. To the extent necessary to maintain internal consistency after addressing the above requirements, revise the Intergovernmental Coordination Element to ensure coordination of the comprehensive plan with the Lower East Coast Regional Water Supply Plan [s.163.3177 (6) (h) 1., F.S.]. *The Town's Intergovernmental Coordination Element ensures coordination of the Comprehensive Plan and the Lower East Coast Regional Water Supply Plan as well as ongoing and continuous communication between the Town, the South Florida Water Management District, Broward County and the local governments that provide service to the Town.*
7. While an Evaluation and Appraisal Report is not required, local governments are encouraged to comprehensively evaluate, and as necessary, update comprehensive plans to reflect changes in local conditions. The evaluation could address the extent to which the local government has implemented the need to update their Work Plan, including the development of alternative water supplies, and determine whether the identified alternative water supply projects, traditional water supply projects, and conservation and reuse programs are meeting local water use demands [s.163.3191 (3), F.S.]. *The Town of Southwest Ranches continually evaluates and appraises issues on an ongoing basis through the Comprehensive Plan Advisory Committee, ensuring the Town's rural lifestyle and preventing future encroachment of development.*

## **2.0 BACKGROUND INFORMATION**

The Town of Southwest Ranches is located in southwest Broward County, Florida. It is a semi-rural agricultural and equestrian community incorporated to prevent development encroachment and preserve a rural lifestyle. Development within Southwest Ranches consists



of single-family detached residences on large lots (predominantly two acres and larger), one shopping center and several community facility land uses (mostly places of worship). The Town encompasses a land area of approximately 13 square miles and has a population of 7,616 (2014).<sup>1</sup> Only two small portions of the Town are currently served by a centralized potable water system. The Town generally opposes any further expansion of these utilities, as a matter of policy. The Town's population is projected to increase by approximately 15.5 percent between 2015 and 2040, from 7,616 to approximately 8,797. All of this growth will be accommodated by the remaining vacant land designated for single family estates. There are no areas of the Town designated for attached housing of any kind, or single-family detached housing on lots smaller than one full acre. Additionally, the few isolated areas of the Town designated for nonresidential and nonagricultural use, include the former 30-acre prison site, Master's Academy and West Broward Church, will require water service expansion

**Table 1: Town of Southwest Ranches Current and Projected Population.**

YEAR	2015	2020	2025	2030	2035	2040
POPULATION	<b>7,616</b>	<b>7,438</b>	<b>8,844</b>	<b>8,821</b>	<b>8,807</b>	<b>8,797</b>

Source: Broward County Planning Services Division, 2014.

## 2.1 OVERVIEW

"The Vision of the Town of Southwest Ranches is to enhance and preserve the unique rural character of its community. The Town shall promote, maintain and protect its agricultural, residential and equestrian lifestyles, sensitive to the natural environment."

On May 22, 2000, the Governor of Florida approved HB 177 and officially incorporated approximately Thirteen (13) square miles of unincorporated rural areas into the Town of Southwest Ranches. The primary reason the Town's residents voted for incorporation is clearly stated in the Town's Charter, Section 1.01 of Article 1 which reads:

"In order to preserve, protect and enhance the quality of life and residential character of the Southwest Ranches (The Town) is hereby created pursuant to the Constitution of the State of Florida."

## 2.2 REGIONAL ISSUES

A number of factors distinguish the South Florida Water Management District's

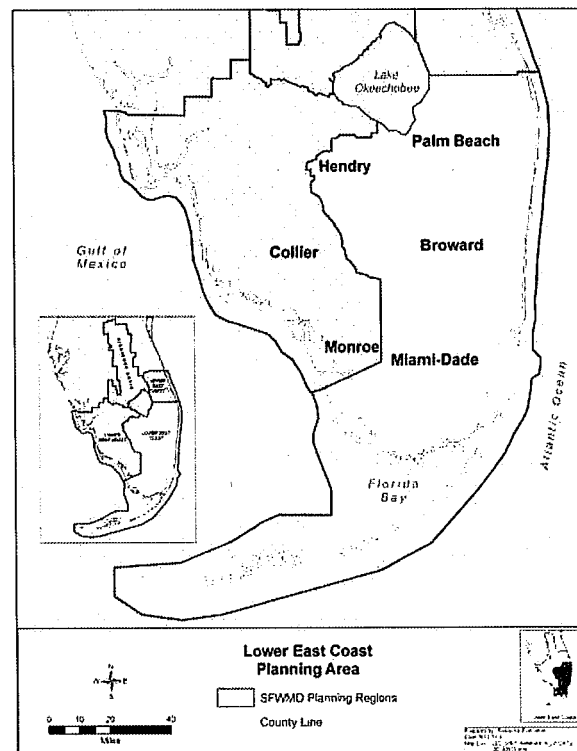


Figure 1. Map of the LEC Planning Area showing the counties within the planning area and its location relative to other planning areas within SFWMD boundaries.

<sup>1</sup> Broward County Planning Services Division, 2014

Lower East Coast (LEC) Planning Area from others regions of the state, including population, spatial extent of natural systems, availability of fresh water, and an extensive network of canals and related water works. The LEC Planning Area boundary encompasses three of the state's five most populous counties. Extensive natural systems such as Lake Okeechobee, the Everglades, Florida and Biscayne bays, are found in the LEC Planning Area. It includes two national parks and four national wildlife refuges. The area typically receives abundant fresh water seasonally, with volumes exceeding human and natural system needs. Water availability also varies annually, including periodic drought. The regional water management system, the Central and Southern Florida Project for Flood Control and Other Purposes (C&SF Project), is largely located in the LEC Planning Area. The C&SF Project plays a critical role in capturing wet season storm water and moving water between natural systems as well as delivering water to agricultural areas and the urbanized coastal communities. The Town of Southwest Ranches is located in LEC Planning Area.

According to the SFWMD, the 2013 LEC plan's twenty-year population and Public Water Supply (PWS) demand forecast are lower than the two previous plans' projections. Projections indicate the planning area's population will increase over 18 percent, from approximately 5.6 million residents in 2010 to slightly more than 6.6 million by 2030. In contrast, the 2005–2006 LEC Plan Update projected the planning area's population to increase over 31 percent, to 7.3 million by 2025. The Lower East Coast (LEC) Planning Area covers 6,100 square miles, including Palm Beach, Broward, and Miami-Dade counties, most of Monroe County, and eastern Hendry and Collier counties.

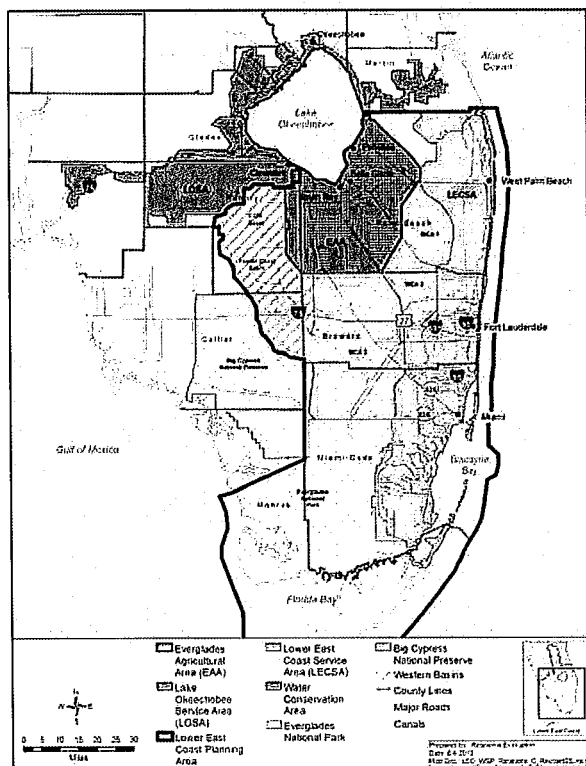


Figure 2. Location of LOSA, EAA, and LECSA in relation to the LEC Planning Area boundaries.

Total water demand is projected to increase by 12 percent to 1,933 million gallons per day (MGD) by 2030. Public Water Supply remains the LEC Planning Area's single largest water use category in 2030, representing 52 percent of the planning area's total water demand. It is followed by agriculture at 34 percent. The remaining four categories, domestic (residential) self-supply recreation and landscaping, industrial, and power generation, account for the remaining 14 percent. All or most of this demand will be supplied from alternate water sources. Alternate water sources include brackish water from the Floridan Aquifer, reclaimed water, excess storm water during the rainy season, or saltwater from the ocean. Traditional water sources include fresh groundwater from the Surficial Aquifer System (SAS) and the Biscayne Aquifer, and surface

water, primarily from the Everglades and Lake Okeechobee.

The LEC planning area traditionally has relied on fresh groundwater from the surficial aquifer system and surface water from Lake Okeechobee as primary water sources for urban, agricultural, and industrial uses. The Everglades provides groundwater and surface water recharge to the urban coastal communities, contributing to the water supply throughout most of this region. In 2010, fresh groundwater accounted for 94 percent of potable water produced by PWS utilities. The surficial aquifer system, including the Biscayne aquifer, provides more than 1 billion gallons a day for utilities, as well as agricultural production, landscape irrigation, and other uses. Since the last plan update, the SFWMD placed additional limitations on allocations from freshwater sources in the region to protect the region's natural resources. As a result, use of alternative water sources has expanded.

The Town of Southwest Ranches is cognizant of the regional water supply issues and their potential impact to the Town. These issues are:

1. Increased withdrawals from both the Surficial Aquifer System and surface water from Lake Okeechobee are limited.
2. Conservation continues to be relied upon to reduce per capita use and as a means to potentially delay or perhaps avoid adding capacity.
3. Use of reclaimed water continues to be an important alternative source in the region and helps meet requirements of the 2008 Leah G. Schad Ocean Outfall Program.

At this time, these issues are not expected to have any significant impacts to the Town or its residents. The Town's water supply is self-supplied and its water conservation programs are described in Section

### **3.0 DATA AND ANALYSIS**

The intent of the data and analysis section of the Work Plan is to describe information the Town of Southwest Ranches needs to provide to state planning and regulatory agencies as part of their proposed comprehensive plan amendments, particularly those changing the Future Land Use Map (FLUM) to increase density and intensity.

#### **3.1 POPULATION ANALYSIS**

The Town of Southwest Ranches is located in southwest Broward County, Florida. It is a semi-rural agricultural and equestrian community. The area is primarily residential, with most lots

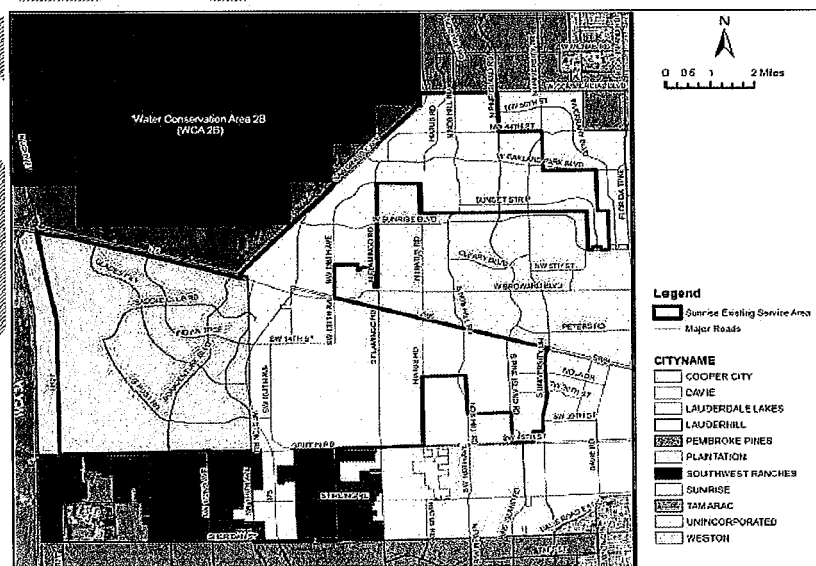
consisting of 1 acre (0.40 ha) or more. There are some small farms and equestrian ranches. The Town has laws that keep homes from being built on lots of less than 1 acre (0.40 ha) and prevents streetlights and sidewalks from being constructed. To support its rural-equestrian lifestyle, the Town has developed miles of multi-use trails. People are often seen riding horses or bicycles or walking the trails that spread throughout the Town. Since incorporation, the town has also acquired seven open-space parks.

Residents of the Town of Southwest Ranches obtain their water from private well systems for domestic self-supply in nearly all developed areas of the Town. New development in the Town is encouraged to develop and rely upon domestic water supply systems as opposed to seeking further expansion of centralized water service, which is discouraged by the Town's Comprehensive Plan. This decision, however, will be ultimately driven by customer/residents' discretion, as centralized potable water is not required due to the very-low residential density and agricultural character and Future Land Use Map restrictions. Further expansion, if any, can be anticipated in the Sunrise water service area as Cooper City has adopted an ordinance prohibiting further expansion of its utility outside of its city service area.

**3.2 MAP OF CURRENT AND FUTURE AREAS SERVED**

The map below depicts the existing service area for the City of Sunrise Water Utilities. In the middle portion of the Town, the City of Sunrise provides very limited centralized water service. Each resident in the Town served by a centralized water system is a retail customer of the entity which owns and operates that system. All other areas of the Town have domestic water self-supply (i.e., individually owned private well system).

Due to the minimal water utility support from Cooper City, no maps of current and/or future areas serviced are provided. It is estimated that twenty residents and a few non-residential properties in the Town of Southwest Ranches are serviced by Cooper City Utilities. Also of note, Cooper City adopted a policy to prohibit facility expansions outside of its limits.



Source: City of Sunrise 10-Year Water Supply Facilities Work Plan (2015)

### 3.3 POTABLE WATER LEVEL OF SERVICE STANDARD

Although the Town of Southwest Ranches does not own or operate its own potable water facilities, as a local government in Florida, it is required to meet all statutory requirements pertaining to the creation of a water supply facilities work plan. As such, included here is an inventory and analysis of the centralized potable water systems located within the Town.

At this time, the water supply for both Sunrise and Cooper City is entirely supported by a "traditional" source of drinking water, that is, the Biscayne Aquifer. The Biscayne Aquifer is one of the most productive aquifers in the world and is the primary source of freshwater for residents of Broward County, Miami-Dade County, and southeastern Palm Beach County. Hydrological modeling indicates that the Biscayne Aquifer gets two-thirds of its water from rainfall infiltration and the remaining third from lateral seepage of the Florida Everglades.

#### Level of Service Standards

The City of Sunrise Level of Service is 127 gallons per day per capita (gpd) for all uses. Existing distribution system capacity is adequate to serve 2030 demands.

Cooper City's Level of Service is 96 gallons per day per capita (gpd) for residential uses; resulting in 5% water savings from water conservation practices adopted the City. This reduced rate of water consumption is expected to level-off and continue at current demand levels for the planning period. The non-residential level of service standards are 0.08 gallons per day per square foot for office buildings and 0.15 gallons per day per square foot for commercial businesses. Based on the Cooper City's revised level of service standards, the 2030 potable water demand is projected at 3.26 mgd average day (4.13 mgd average day raw water demand) and 4.86 mgd maximum day finished water demand (6.2 mgd maximum day raw water demand). The water treatment plant production capacity is 7 mgd and is adequate to serve anticipated 2030 needs. Existing distribution system capacity is adequate to serve 2030 demands.

The Town shall maintain the 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 Town.

#### Consumptive Use Permitting

Land owners seeking to develop land, must apply for withdrawals through the SFWMD. The issuance of Consumptive Use Permits, which allows for groundwater withdrawals, applicants must meet the criteria of a "three-prong test."

This test requires:

1. Reasonable and beneficial use of the resource;
2. Consistency with public interest, including compliance with minimum flows and levels

(MLFs) established for surface water and groundwater sources; and

3. Demonstration of no adverse impact to existing legal users (Chapter 373, F.S.).

**3.4 POPULATION AND POTABLE WATER DEMAND PROJECTIONS FOR CITY OF SUNRISE & COOPER CITY**

In order to assess whether there will be sufficient potable water to serve the residents on the Town of Southwest Ranches who are, or will be connected to a centralized water service, the current and projected potable water needs of the Town must be analyzed with the needs of all water users in the City of Sunrise; and then again with the needs of all water users in Cooper City. This is because Sunrise and Cooper City each serve other areas in addition to the Town of Southwest Ranches.

The population estimates and projections and the potable water demand projections are presented below for both the City of Sunrise and Cooper City. The projections are through the year 2030. The population projections are consistent with the other elements of the Town's Comprehensive Plan. The water demands are for finished water. Population estimates included in the LEC Water Supply Plan used the Broward County TAZ 2014 data while the population projections presented in Sunrise and Cooper City Water Supply Plans were based on the published Broward County Population Forecasting Model 2014. Both sets were included, compared and provide a range of 0% to 2%.

City of Sunrise

CITY OF SUNRISE SERVICE AREA POPULATION PROJECTION INCLUDING THE TOWN OF SOUTHWEST RANCHES						
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	

Source: City of Sunrise Water Supply Plan Update, 2015

\* 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 2009.

LEC WSP POPULATION PROJECTION FOR SUNRISE UTILITY WATER SERVICE AREA INCLUDING THE TOWN OF SOUTHWEST RANCHES*		
2010	2020	2030

211,403	221,570	231,736
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Source: Lower East Coast Water Supply Plan Update, 2013

\* Population estimates included in the LECWSP used in Broward County TAZ 2014 data while the population projections presented in the City of Sunrise 2015 Water Supply Plan.

**ANNUAL AVERAGE DAY DEMAND PROJECTIONS FOR SUNRISE UTILITY WATER SERVICE AREA INCLUDING THE TOWN OF SOUTHWEST RANCHES**

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

Source: City of Sunrise Water Utility Service Area including the Town of Southwest Ranches for years 2014, 2015, 2020, 2025, and 2030.

**POPULATION AND FINISHED WATER DEMAND FOR THE SUNRISE SERVICE AREA INCLUDING THE TOWN OF SOUTHWEST RANCHES, 2010 - 2030**

	EXISTING	PROJECTED	
	2010	2020	2030
Population	211,403	221,570	231,736
Per Capita Consumption	116	116	116
<b>Potable Water Demands</b>	<b>24.52</b>	<b>25.70</b>	<b>26.88</b>

Source: Lower East Coast Water Supply Plan Update, 2013

**SFWM WATER USE PERMITTED (06-00120-W) ALLOCATION (MGD) FOR THE SUNRISE SERVICE AREA INCLUDING THE TOWN OF SOUTHWEST RANCHES, 2010 - 2030**

	EXISTING	PROJECTED	
	2010	2020	2030
<b>Potable Water Source</b>			
Fresh Water	31.39	29.09	29.09
Brackish Water	4.76	10.98	10.98
<b>Total Allocation</b>	<b>36.15</b>	<b>40.07</b>	<b>40.07</b>

Source: Lower East Coast Water Supply Plan Update, 2013

**POTABLE WATER TREATMENT CAPACITY FOR THE SUNRISE SERVICE AREA INCLUDING THE TOWN OF SOUTHWEST RANCHES, 2012 - 2030**

	Cumulative Facility & Project Capacity (MGD)		
	EXISTING	PROJECTED	
	2012	2020	2030
<b>FDEP Permitted Capacity</b>			

Fresh Water	50.00	50.00	50.00
Brackish Water	0.00	1.50	1.50
Planned Project Capacity (Brackish)	0.00	0.00	0.00
<b>Total Capacity</b>	<b>50.00</b>	<b>51.50</b>	<b>51.50</b>
<b>NONPOTABLE WATER TREATMENT CAPACITY</b>			
<b>Reclaimed Water</b>	<b>0.80</b>	<b>2.80</b>	<b>4.80</b>

Source: Lower East Coast Water Supply Plan Update, 2013

<b>PROJECT SUMMARY FOR THE SUNRISE SERVICE AREA</b>					
Water Supply Projects	Source	Completion Date	Total Capital Cost (\$ Million)	Projected Cumulative Design Capacity (MGD)	
				2020	2030
<b>Nonpotable Water</b>					
Irrigation Reuse at the Sawgrass WWTP	Reclaimed Water	2018	Information not available	2.00	4.00
<b>Total</b>			<b>\$0.00</b>	<b>2.00</b>	<b>4.00</b>

Source: Lower East Coast Water Supply Plan Update, 2013

a. The City of Sunrise estimates 10,000 housing units are currently vacant. If these units become occupied at a rate that is higher than medium Bureau of Economic and Business Research growth rates, then demand could increase above projections.

Per Capita Usage

Based on the findings from the City of Sunrise, the total water metered to customers, and the estimated historical population of 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 data, which shows a treated water pre capita rate of 116 gpcd for the City of Sunrise utility Service Area.

Cooper City

<u>COOPER CITY SERVICE AREA POPULATION PROJECTION INCLUDING THE TOWN OF SOUTHWEST RANCHES</u>						
	<u>2014</u>	<u>2015</u>	<u>2020</u>	<u>2025</u>	<u>2030</u>	<u>SERVICE AREA</u>
<u>COOPER CITY</u>	<u>32,761</u>	<u>33,255</u>	<u>33,470</u>	<u>33,685</u>	<u>33,899</u>	<u>Existing</u>
<u>SW RANCHES</u>	<u>68</u>	<u>68</u>	<u>68</u>	<u>68</u>	<u>68</u>	<u>Existing</u>
<b>TOTAL</b>	<b>32,829</b>	<b>33,323</b>	<b>33,538</b>	<b>33,753</b>	<b>33,967</b>	<b>Existing</b>

Source: Cooper City 2015 Water Supply Plan

<b>LEC WSP POPULATION PROJECTION FOR COOPER CITY UTILITY WATER SERVICE AREA</b>
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INCLUDING THE TOWN OF SOUTHWEST RANCHES*		
2010	2020	2030
28,543	33,335	33,585

Source: Lower East Coast Water Supply Plan Update, 2013

ANNUAL AVERAGE DAY DEMAND PROJECTIONS FOR COOPER CITY UTILITY WATER SERVICE AREA INCLUDING THE TOWN OF SOUTHWEST RANCHES					
	2014	2015	2020	2025	2030
Population Projections	32,829	33,323	33,538	33,753	33,967
Gallons per Capita per Day	96	96	96	96	96
Demand Projections (mgd)	4.73	4.80	4.83	4.86	4.89

Source: Cooper City Water Utility Service Area including the Town of Southwest Ranches for years 2014, 2015, 2020, 2025, and 2030.

<b>POPULATION AND FINISHED WATER DEMAND FOR THE SUNRISE SERVICE AREA INCLUDING THE TOWN OF SOUTHWEST RANCHES</b>			
	EXISTING	PROJECTED	
	2010	2020	2030
Population	28,543	33,335	33,385
Per Capita Consumption	95	95	95
<b>Potable Water Demands</b>	<b>2.71</b>	<b>3.17</b>	<b>3.19</b>

Source: Lower East Coast Water Supply Plan Update, 2013

<b>SFWMD WATER USE PERMITTED (06-00120-W) ALLOCATION (MGD)</b>			
	EXISTING	PROJECTED	
	2010	2020	2030
<b>Potable Water Source</b>			
Fresh Water	4.55	4.55	4.55
Brackish Water	0.00	0.00	0.00
<b>Total Allocation</b>	<b>4.55</b>	<b>4.55</b>	<b>4.55</b>

Source: Lower East Coast Water Supply Plan Update, 2013

### Per Capita Usage

Based on the findings from the Cooper City, the total water metered to customers, and the estimated historical population of the treated water, the per capita usage computed for the past five years (2009 – 2013) was 96 gallons per capita per day (gpcd). This per capita usage rate is

a 1% variation of the SFWMD data, which shows a treated water pre capita rate of 95 gpcd for the Cooper City Utility Service Area.

### **3.5 WATER SUPPLY PROVIDED BY THE TOWN OF SOUTHWEST RANCHES**

No water is supplied and the Town of Southwest Ranches generally opposes any further expansion of these potable water utilities as a matter of policy. Amongst the Domestic Self-Supply (DSS) and Recreational/Landscape (REC) Self-Supply, no new projects have been proposed in the 2013 LEC Plan Update, and future needs can be met under existing permit allocations; by use of existing and alternative sources, and conservation. However, future increases in withdrawals from Lake Okeechobee; the L-1, L-2, and L-3 canal system; the Everglades; and North Palm Beach/Loxahatchee Watershed water bodies must comply with the restricted allocation area criteria.

#### Domestic Self-Supply

The Domestic Self-Supply is a water supply category the Town of Southwest Ranches falls under. Domestic Self-Supply (DSS) includes potable water from a private domestic well serving a private residence, and utilities that produce less than 0.1 MGD on an annual basis. DSS finished (net) demands in the LEC Planning Area are only projected to increase by less than 1 MGD from 17 MGD in 2010 to 18 MGD in 2030 (gross [raw] demands are projected to increase by less than 1 MGD from 18 MGD in 2010 to 19 MGD in 2030). DSS needs are met almost exclusively with fresh groundwater from the Surficial Aquifer System (SAS), and will continue to do so in the future. As such, no water supply development projects are proposed for this use class.

#### Recreational/Landscape Self-Supply

The Recreational/Landscape Self-Supply is a water supply category the Town of Southwest Ranches falls under. Recreational/Landscape (REC) Self-Supply includes the use of water for irrigation of common areas, golf courses, parks, cemeteries, schools, commercial developments, and other self-supplied irrigation uses with demand of 0.1 MGD or greater. REC Self-Supply gross demand is projected to increase by 3 percent (149 MGD in 2010 compared to 153 MGD in 2030). Historically, irrigation supplies for this category include local fresh groundwater and surface water captured from canals or stormwater management systems. In recent years, irrigation for new golf courses often includes reclaimed water and on-site blending of brackish groundwater with surface water. Four golf courses use brackish groundwater treated by RO.

The small demand increase for REC Self-Supply should be met, for the most part, by currently proposed reclaimed water projects, or by surface water bodies locally derived groundwater as is the case in, which may be included in existing water use permits if applicable. Projects submitted by utilities and wastewater treatment facilities indicate that use of reclaimed water will increase significantly in the future. Expansion of water reuse systems for REC Self-Supply may reduce withdrawal demands on the water resources. Where reclaimed water is not

available, users may qualify for limited freshwater withdrawals on an application-by- application basis. Implementation of the Mandatory Year-Round Landscape Irrigation Conservation Measures Rule (Rule 40E-24.201, F.A.C.), water conservation methods using more efficient irrigation systems, and Florida-Friendly Landscaping offer potential cost savings and may reduce future demand. However, no specific projects for REC Self-Supply were provided or identified in this plan update.

### **3.6 WATER SUPPLY PROVIDED BY THE CITY OF SUNRISE AND COOPER CITY**

The Town of Southwest Ranches does not own or operate any potable water distribution or supply facilities. There are two potable water distribution systems, owned and operated by adjacent municipalities that are located within the Town. Each resident in the Town served by a centralized water system is a retail customer of the entity which owns and operates that system. At the extreme edge of the Town, the limited centralized water service provider is Cooper City. In the middle portions of the Town, the limited centralized water service is provided by the City of Sunrise. All other areas of the Town have domestic water self-supply (i.e., individually owned private well system); and the percentage of residents can increase as needed. Future expansion of centralized water service in the Town is discouraged, however, the decision ultimately rests with the customers/residents in the service areas and the entity supplying the water. No deficiencies in potable water supply currently exists or is projected to occur in the Town of Southwest Ranches through the year 2030.

#### City of Sunrise's Retail Water Service Area

The City of Sunrise is located in western Broward County, north of the Town's limits. Its utility provides centralized potable water service to the cities of Sunrise, Weston, a portion of the Town of Davie, unincorporated Broward County and to the Town of Southwest Ranches, if requested. In total, the City of Sunrise's utility service area is made up of 215,000 retail water customers. In the Town of Southwest Ranches, the City of Sunrise currently serves a minimal amount of land area. This land area may increase in the future; a decision that will be driven by the discretion of customers/residents. Currently, the City is responsible for planning, financing, constructing, operating and maintaining the utilities and public water supply systems that serve the limited area. Potable water from the City of Sunrise is not needed to accommodate future growth in the Town of Southwest Ranches.

The City of Sunrise's water supply is from the Surficial Aquifer System (SAS) and Floridian Aquifer System (FAS) and operates four wellfields and three water treatment plants primarily utilizing lime softening and membrane processes. In 2013, the city added a 1.5-MGD reverse osmosis treatment system at its Springtree Plant. The city previously planned to develop 9 MGD of reverse osmosis treatment capacity and acquired a FAS allocation of 10.98 MGD to accommodate expected demand. Slower growth and successful conservation efforts should allow the city to postpone development of additional capacity from the FAS beyond 2030. The city is upgrading the treatment system at its Southwest Waste Water Treatment Plant to

provide 1 MGD of reclaimed water capacity and is in the design phase to develop reuse facilities at its Sawgrass Waste Water Treatment Plant. The City is a contributing member of the Broward Water Partnership conservation program, which has the goal of saving a total of 30 MGD countywide.

#### Cooper City's Retail Water Service Area

Cooper City is located in southwestern Broward County, east of the Town's limits. Its utility provides centralized potable water service to Cooper City, Town of Davie, and a small portion of the Town of Southwest Ranches. In total, Cooper City's utility service area is made up of 29,987 retail water customers. It is estimated that twenty residents and a few non-residential properties in the Town of Southwest Ranches are serviced by Cooper City Utilities. Potable water from Cooper City is not needed to accommodate future growth in Southwest Ranches. Also of note, Cooper City adopted a policy to prohibit facility expansions outside of its limits. The water supply for the City of Cooper City is obtained from the Surficial Aquifer System and treated via membrane softening. The city is projected to have minimal growth beyond 2020. This utility is a contributing member to the Broward Water Partnership conservation program, which has the goal of saving a total of 30 MGD countywide.

### **3.7 CONSERVATION**

As detailed in the Conservation Element of the Town's Comprehensive Plan, the Town prioritizes critical regional ecological systems through protection and enhancements that are integral components of South Florida's and the Town's natural environment. As a matter of policy, the Town is working to increase energy efficiency of government operations and promotes improved energy standards for residents and businesses located within the Town.

#### **3.7.1 SPECIFIC ACTIONS, PROGRAMS, REGULATIONS, OR OPPORTUNITIES**

The Town of Southwest Ranches has implemented a number of water conservation elements including irrigation restrictions on irrigation (permitted water usage), use of Florida-friendly planting principles, requirement of ultra-low volume plumbing in new construction, rain sensor over-rides for new lawn sprinkler systems, and public educational programs. Summary information on each of these elements is provided below.

##### Restrictions on Permitted Water Use

- The Town of Southwest Ranches supports the conservation of potable water by adopting or supporting the water conservation practices and programs of the City of Sunrise, Cooper City, and Broward County. The Town has enacted its own irrigation ordinance that supports conservation measures.
- The Town of Southwest Ranches' Code of Ordinances includes requirements for restrictions on water use during times an "emergency situation" is declared by SFWMD or when the Town

Council determines a reduction in water consumption is necessary to alleviate a local water shortage within the Town's water system.

#### Use of Florida-Friendly Landscape Principles

- The Town of Southwest Ranches' Land Development Code recommends the use of Florida-friendly landscaping materials and the minimum percent of required pervious area that must follow the principles of Florida Friendly Landscape provisions as set forth in the South Florida Water Management District's Xeriscape Plant Guide II.

#### Requirement of Ultra-Low Volume Plumbing in New Construction

- The Town of Southwest Ranches has adopted the Florida Building Code (FBC) which contains plumbing flow restriction requirements. The Town's Building, Permitting and Inspection Services administers procedure provisions for new construction to have water conservation control devices installed per the Florida Plumbing Code, as a condition for granting Certificates of Occupancy. The Town also requires approval from either the South Broward Drainage District or the Central Broward Water Control District.

#### Rain Sensor Overrides for New Lawn Sprinkler System

- The Town of Southwest Ranches has adopted the Florida Building Code, which requires the installation of rain sensors on new irrigation systems. Additionally, the Town abides by all of the County's landscape Code requirements regarding rain sensors on automatic lawn sprinkler systems. The Town also adopted a Landscape Ordinance that encourages natural vegetation, minimal water and fertilization.

#### Public Information Program

- This program provides water conservation and open/green space information to the Town of Southwest Ranches' residents and customers. The Town provides education information at the Sunshine Ranches Equestrian Park; Trailside Park; Southwest Meadows Sanctuary; Calusa Corners; Rolling Oaks Passive Park; Country Estates Fishing Hole Park; and, the Frontier Trails.
- The Town of Southwest Ranches will coordinate future water conservation efforts with the City of Sunrise and Cooper City, as utility providers for portions of the Town, Broward County and the SFWMD. In addition, the Town continues to support and expand existing goals, objectives and policies in the comprehensive plan that promotes water conservation in a cost-effective and environmentally sensitive manner. The Town of Southwest Ranches continues to actively support the SFWMD and its water supplier(s) in the implementation of new regulations or programs designed to conserve water during the dry season.

### **3.8 REUSE**

State law supports reuse efforts. Florida's utilities, local governments, and water management districts have led the nation in the quantity of reclaimed water reused and public acceptance of reuse programs. Section 373.250(1) F.S. provides "the encouragement and promotion of water conservation and reuse of reclaimed water, as defined by the department, are state objectives and considered to be in the public interest." In addition, Section 403.064(1), F.S., states "reuse is a critical component of meeting the state's existing and future water supply needs while sustaining natural systems." The Town supports reclaimed water reuse for any of the potable water distribution and supply facilities that operate within the Town's limits.

#### **3.8.1 TOWN OF SOUTHWEST RANCHES SPECIFIC ACTIONS, PROGRAMS, REGULATIONS, OR OPPORTUNITIES**

The Town of Southwest Ranches supports water reuse initiatives under consideration by both the SFWMD and Broward County and the implementation of new regulations or programs designed to increase the volume of reclaimed water used and generate public acceptance of reclaimed water. The Town encourages the use of reclaimed water as an integral part of its wastewater management program, where economically, environmentally and technically feasible. This includes sanitary sewer facilities, including septic tanks, to be designed, constructed, maintained and operated in a manner that conserves and protects potable water resources by optimizing the use of reclaimed wastewater, where feasible, thus minimizing new demands on the Biscayne Aquifer.

### **4.0 CAPITAL IMPROVEMENTS**

This section of the report is not applicable as the Town of Southwest Ranches does not own or operate any potable water distribution or supply facilities. Most areas of the Town have a domestic self-supply that is individually owned and privately run well systems.

### **5.0 GOALS, OBJECTIVES AND POLICIES**

The following goals, objectives and policies were adopted in conjunction with the original Work Plan, and have remained sufficient. Therefore, amendments to the adopted comprehensive plan are required to ensure adequate potable water supply facilities for the ten (10) year planning horizon.

- a. Coordination of land uses and future land use changes with the availability of water supplies and water supply facilities;
- b. Revision of potable water level of service standards for residential and non-residential users;
- c. Provision for the protection of water quality in the traditional and new alternative water supply sources;

- d. Revision of priorities for the replacement of facilities, correction of existing water supply and facility deficiencies, and provision for future water supply and facility needs;
- e. Provision for conserving potable water resources, including the implementation of reuse programs and potable water conservation strategies and techniques;
- f. Provisions for improved or additional coordination between a water supply provider and the recipient local government concerning the sharing and updating of information to meet ongoing water supply needs;
- g. Coordination between local governments and the water supply provider in the implementation of alternative water supply projects, establishment of level of service standards and resource allocations, changes in service areas, and potential for annexation;
- h. Coordination of land uses with available and projected fiscal resources and a financially feasible schedule of capital improvements for water supply and facility projects;
- i. Additional revenue sources to fund water supply and facility projects;
- j. Coordination with the respective regional water supply plan;
- k. Update the Work Plan within 18 months following the approval of a regional water supply plan; and
- l. Concurrency requiring water supplies at the building permit stage.