Chapter 11 POTABLE WATER SERVICES ELEMENT/10 YEAR WATER SUPPLY FACILITIES WORK PLAN

Adopted:	February 20, 1990	By Ordinance No. 373
Amended:	July 9, 1991	By Ordinance No. 400
Amended:	October 27, 1992	By Ordinance No. 419
Amended:	October 26, 1993	By Ordinance No. 430
Amended:	November 29, 1994	By Ordinance No. 450
Amended:	December 15, 1998	By Ordinance No. 537
Amended:	September 28, 1999	By Ordinance No. 555
Amended:	May 24, 2005	By Ordinance No. 668
Amended:	December 11, 2007	By Ordinance No. 778
Amended:	December 11, 2007	By Ordinance No. 779
Amended:	December 11, 2007	By Ordinance No. 781
Amended:	December 11, 2007	By Ordinance No. 782
Amended:	February 12, 2008	By Ordinance No. 787
Amended:	December 16, 2009	By Ordinance No. 840
Amended:	December 16, 2009	By Ordinance No. 851
Amended:	August 10, 2010	By Ordinance No. 870
Amended:	January 10, 2012	By Ordinance No. 907

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Amended:	July 10, 2012	By Ordinance No. 914
Amended:	December 16, 2014	By Ordinance No. 965
Amended:	December 20, 2015	By Ordinance No. 984
Amended:	July 25, 2017	By Ordinance No. 1025
Amended:	August 22, 2017	By Ordinance No. 1032
Amended:	February 27, 2018	By Ordinance No. 1057

Section 11.0. Introduction.

The purpose of the Martin County 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 its jurisdiction, Chapter 163, Part II, Florida Statutes (F.S.), requires local governments to prepare and adopt Work Plans into their comprehensive plans within 18 months after the South Florida Water Management District (District) approves a regional water supply plan or its update. The 2016 Upper East Coast Regional Plan Update was approved by the District's Governing Board on March 10, 2016. Therefore, the deadline for local governments within the Upper East Coast Regional Water Supply Planning Region to amend their comprehensive plans to update the Work Plan is September 10, 2017. Residents of the Martin County obtain their water from five regional water suppliers including Martin County Consolidated System, Sailfish Point, City of Stuart, Indiantown Water Company, and South Martin Regional, which are responsible for ensuring enough capacity is available for existing and future customers. The Work Plan will reference the initiatives already identified to ensure adequate water supply for Martin County. According to state guidelines, the Work Plan and the comprehensive plan must address the development of traditional and alternative water supplies, service delivery and conservation and reuse programs necessary to serve existing and new development for at least a 10-year planning period. The Work Plan will have a planning time schedule consistent with the comprehensive plan and the Upper East Coast

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Regional Water Supply Plan Update. The Work Plan is divided into five sections: Section 11.0 - Introduction Section 11.1 - Background Information Section 11.2 - Existing Conditions Section 11.3 - Data and Analysis Section 11.4 - Consolidated Water System Work Plan Projects/Capital Improvement Element/Schedule Section 11.5 - Goals, Objectives, and Policies

11.0A. *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.

11.0B *Statutory Requirements.* Martin County 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 Upper East Coast Regional Water Supply Plan [163.3177(4)(a), F.S.].

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.

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.].

4. For local governments subject to a regional water supply plan, revise the General Sanitary Sewer, Solid Waste, Drainage, Potable Water, and Natural Groundwater Aquifer Recharge Element (the "Infrastructure Element"), within 18 months after the water management district approves an updated regional water supply plan, to:

    a. Identify and incorporate the alternative water supply project(s) selected by the local government from projects identified in the Upper East Coast Regional Water Supply Plan, or alternative project(s) proposed by the local government under s. 373.709(8)(b), F.S. [s. 163.3177(6)(c), F.S.];

    b. Identify the traditional and alternative water supply projects and the conservation and reuse programs necessary to meet water needs identified in Upper East Coast Regional Water Supply Plan [s. 163.3177(6)(c)3, F.S.]; and

    c. Update the Work Plan for at least a 10-year planning period for constructing the public, private, and regional water supply facilities identified in the element as necessary to serve existing and new development [s. 163.3177(6)(c)3, F.S.].

5. 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.].

6. To the extent necessary to maintain internal consistency after making changes described in Paragraph 1 through 5 above, revise the Conservation Element to assess projected water needs and sources for at least a 10-year planning period, considering the Upper East Coast

Water Supply Plan, as well as applicable consumptive use permit(s) [s.163.3177 (6) (d), F.S.]. The plan must 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.].

7. To the extent necessary to maintain internal consistency after making changes described in Paragraphs 1 through 5 above, revise the Intergovernmental Coordination Element to ensure coordination of the comprehensive plan with the Upper East Coast Regional Water Supply Plan [s.163.3177 (6) (h) 1., F.S.].

8. 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.].

Section 11.1. Background information.

11.1.A. *Overview.* The availability of potable water is one of the major determinants of growth in Martin County. Water must be provided in an economical and environmentally sensitive way that responds to the needs of residents. Water demand is a function of population distribution and density, so it must be carefully monitored and properly planned for. This requires the County to closely coordinate the pace of development with its ability to provide water to serve the anticipated population growth. The County recognizes that providing water for its growing population must not impede the quality or quantity of surface and groundwater supplies.

The 1982 Comprehensive Growth Management Plan (CGMP) included several objectives relating to water quality, use and supply development. Meeting those objectives included the following steps: updating the Water Master Plan, which is the framework for the County's provision of water services; incorporating water and sewer system design standards into the Land Development Regulations; establishing a public utilities department to expand review of water and wastewater system components; and passing the Potable Water Ordinance and the Wellfield Protection Ordinance.

The Water Master Plan was prepared in two phases. Phase I covered the Jensen Beach/Rio/Sewall's Point/Hutchinson Island area, served by the Martin County North System, and the Palm City area, served by Martin Downs Utilities. Phase II targeted the rest of the County, served by several large private utilities regulated by the Florida Public Service Commission. After development of Phase I but before Phase II, the South Florida Water Management District (SFWMD) prepared a water resource assessment study that provided additional data for County water planning activities. Phase II incorporated the Phase I document, and the consolidated Water Master Plan was adopted in October 1988.

The County's water system consisted of a combination of public and private systems, and the Water Master Plan recommended consolidation for better management of potable water supplies. Other recommendations included development of new wellfields and participation in the abandoned well plugging program of the SFWMD, as well as conservation efforts. These recommendations were considered throughout the planning process and used as guidelines to help meet the requirements of Florida Administrative Code rule 9J-5, which identified minimum criteria for local government comprehensive plans. The Potable Water Ordinance was adopted in 1995 and the Wellfield Protection Ordinances in 1993 and 1994. They were codified into the Land Development Regulations, and the system was then consolidated into the Martin County Consolidated Water System.

In 2001 the Martin County Utilities and Solid Waste Management Department updated the Water Master Plan to reflect the future water and wastewater needs of the entire service area. That update was the basis for a 10-year master plan that includes build-out scenarios of the current service area. It also identifies capital improvement projects that would meet the ultimate needs of the entire service area of the Martin County Consolidated Water System. The master plan, re-titled Martin County Utilities Master Plan, was again updated in 2007. The most recent master plan update efforts include Martin County Utilities Wastewater and Reclaimed Water Master Plan Update (2014) and Martin County Utilities Water Supply System Master Plan Update (2015).

Potable water is one component of the water supply system. The SFWMD Upper East Coast Water Supply Plan includes the following components of water supply in the region: public water supply, domestic self-supply, commercial/industrial self-supply, recreational self-supply, thermoelectric power generation self-supply and agricultural self-supply. This Chapter focuses on meeting the public water supply and domestic self-supply demand for Martin County.

11.1B *Relevant Regional Issues.* Overarching regional issues identified in the 2016 Upper East Coast Regional Water Supply Plan are:

i) Increased withdrawals from the SAS are limited due to potential impacts on wetlands as well as increased potential for saltwater intrusion.

ii) Additional surface water will not be allocated from the SFWMD C-23, C-24, and C-25 canals, or any connected canal systems that derive water supply from these District canals, over and beyond existing allocations.

iii) Extreme freshwater discharges are affecting the heath of the St. Lucie River and Estuary and southern Indian River Lagoon.

iv) Surface water users within the Lake Okeechobee Service Area (LOSA) have only a water supply level of certainty in a 1-in 6 year drought.

(ref. 2016 Upper East Coast Water Supply Plan Update, Planning Document, Chapter 1 p.9)

Martin County has wetland and groundwater protection policies in place and is committed to reduce reliance on the SAS and/or monitor and operationally manage any potential impacts to wetlands and chloride levels in accordance with the Upper East Coast Water Supply Plan and SFWMD Consumptive Use Permits.

Section 11.2. Existing Conditions

11.2.A. *Potable water supply and quality.* Two major aquifers serve Martin County: the Surficial Aquifer System (SAS) (nonartesian), 15 to 150 feet below the land surface, and the Floridan Aquifer System (FAS) (artesian), 600 to 1,500 feet below the land surface. Both aquifers yield water to wells in Martin County. Water from the FAS is used for irrigation and stock watering, and with advanced treatment, for potable water. Approximately half of the water used in Martin County is obtained from the SAS with projected increase in FAS use in the future.

Chemical analysis of water samples from Martin County indicate that water from the SAS is generally of good quality. It contains some iron (1 to 4 milligrams per liter). Water from the FAS is mineralized with chloride salt and requires advanced water treatment to be used as potable. Contamination of the surficial potable water supply can result from saltwater intrusion, leaky underground storage tanks, spills of hazardous or toxic substances, and free-flowing or leaking artesian wells that commingle Floridan water with surficial water. Saltwater intrusion has occurred in some coastal areas of Martin County. Further

discussion of water quality and groundwater contamination is detailed in Chapter 13, Drainage and Natural Groundwater Aquifer Recharge.

11.2.B. *Potable water facilities.* Martin County residents obtain potable water from a variety of water systems, both public and private (domestic self-supply). Each system operates with at least one production well. Several large capacity systems employ multiple wells. Presently five (5) of these systems are regional, designed to serve large areas and denser populations in Martin County, including Martin County Consolidated System, Sailfish Point, City of Stuart, Indiantown Water Company, and South Martin Regional. Martin Correctional Institution is currently served by the City of Port St. Lucie Utilities. The Village of Tequesta and Town of Jupiter are regional utility systems are part of the Lower East Coast Water Supply Planning Area and are not included in this water supply facilities work plan.

Given that Martin County's Water Supply System Master Plan Update and Wastewater and Reclaimed Water Master Plan Update recommend consolidation of the water systems network for more effective management of water supplies, County policy encourages the use of regional water service for new development.

Private wells are not permitted except for single-family units on lots of at least one-half acre, agricultural or testing uses, existing lots of record and churches, with the condition that the use be connected to a regional utility if the utility's water main abuts the property. Interim water systems (any water treatment/supply system approved for use until connection to a regional system is mandated) are allowed if the developer meets a series of conditions. However, within the Primary Urban Service District, any development within 150 feet of the lines of a regional system is required to connect to that system. Extension of water service to the Secondary Urban Service District is not allowed.

Consequently, Martin County's planning has focused on the regional systems that will serve much of the County's population in the future. Tables 11-1 through 11-5 show water usage for the five existing regional systems as described in the 2016 Upper East Coast Water Supply Plan.

11.2.C. *Public water supply (PWS) and domestic self-supply (DSS) water use in Martin County (average rainfall conditions).* In 2013 the regional water systems operating in Martin County had a raw water demand of 20.61 million gallons per day (MGD). Domestic self-supply systems had a raw water demand of 1.10 MGD. Martin County's 2013 public water supply demand historical total was 21.71 MGD for all public water and domestic self-supplied demands under average conditions. It is projected that Martin County's total average raw water supply demand, for regional facilities (24.27 MGD) and domestic self-supply (0.58 MGD), will be 24.85 MGD in 2030. [ref. SFWMD 2016 Upper East Coast Water Supply Plan Update Appendices, Table A-4].

All public water systems are regulated by the FDEP and are required to meet drinking water standards stipulated in Florida Administrative Code Chapter 62-550. The standards cover a wide range of contaminants, including metals, nitrate, organic compounds and bacteria. If surficial aquifer raw water meets all the standards, usually disinfection is the only treatment required. This is true for most of the County's smaller community systems. In Martin County, surficial aquifer raw water normally meets all standards except for iron. Ion exchange, softening and aeration are the most common methods for iron control. Losses in water volume through treatment of the surficial aquifer are relatively low. Reverse osmosis membranes, however, are used to treat the brackish waters of the Floridan aquifer. Consequently treatment losses increase to approximately 20 percent. Treatment technologies and efficiencies define the difference between raw water withdrawn from the aquifer and finished water distributed to users as discussed in this Chapter.

All domestic self-supply water systems draw from the surficial aquifer, and each has at least one well. Regional systems draw from either the surficial aquifer (City of Stuart and Indiantown), the Floridan aquifer (Sailfish Point) or from both the surficial and Floridan aquifers (Martin County Consolidated System and South Martin Regional).

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To assure the safety of Martin County's public wellfields, the County has adopted Wellfield Protection Regulations that apply to all public water supply wellfields. The Regulations prohibit any activities involving hazardous waste and any effluent discharge within 500 feet of a well. Septic tanks and stormwater retention ponds are prohibited within 200 feet of a public well. The Regulations reflect actual drawdown zones and refined enforcement strategies.

11.2.D. *Issues in potable water management.* Water issues emerging from current conditions in Martin County are as follows (not in priority order):

(1) The number and proximity of community wells, non-community systems and unregulated agricultural wells results in unmanaged withdrawal of water from the surficial aquifer.

(2) Unmanaged withdrawals can lower the water table and harm the environment, and they may cause isolated saltwater intrusion.

(3) Poorly maintained and operated systems diminish water quality. The cost of upgrading facilities may lead to abandonment of some systems.

(4) Contamination of groundwater results from saltwater intrusion, leaking Floridan wells, leaking underground storage tanks, agricultural pollution and contaminated industrial wells and septic tanks.

(5) Increasing demand for water requires conservation by all users.

(6) Increasing demand for water requires increased use of reclaimed water for irrigation through permitted use of all reclaimed water and regional reclaimed system interconnection. A reclaimed water interlocal agreement was executed between Martin County and the City of Stuart in October 2011, providing the County with 0.375 MGD of additional reclaimed water.

(7) The surficial aquifer has withdrawal limitations.

(8) Wellfields in drawdown zones could be contaminated from unregulated disposal or spills of hazardous or toxic materials.

The County expanded the wellfield protection program in 1993 to include the following:

(1) Determination and mapping of the projected cones of depression and zones of influence for (a) existing and future wellfields of all public potable water supply wells meeting the definitions set forth in the Wellfield Protection Regulations, and (b) existing and future wells operated outside the service areas for regional utilities as described in the Wellfield Protection Regulations;

(2) Regulation of the use, handling, production or storage of regulated materials (e.g., hazardous and toxic materials) within the projected cones of depression of the wellfield;

(3) Determination and prohibition, if necessary, of inappropriate land uses within the zones of influence;

(4) Structural containment standards for regulated materials (e.g., hazardous and toxic materials);

(5) Requirements for installation of monitoring wells;

(6) Procedures for permitting, monitoring, emergency reporting, cleanup, personnel training and material inventory;

(7) Establishment of financial responsibility for noncompliance with the conditions of the permit and/or for cleanup of regulated material spills;

(8) Procedures that set forth specific conditions to be incorporated in development orders;

(9) Development of a database to monitor existing and future land uses in drawdown zones; and

(10) Determination of specific enforcement strategies for various areas within drawdown zones.

The Wellfield Protection Regulations protect all public wells currently in use from potential adverse impacts by regulating all new development in unincorporated areas. The Regulations have been revised to protect existing and future wellfields of all public potable water supply wells meeting the definitions set forth in the Regulations by regulating all development within the Wellfield Protection Zones in Martin County.

Section 11.3. Future Needs Data and Analysis

11.3.A. *Water Supply Population Estimates 2013 to 2040.* The SFWMD has developed population estimates for Martin County regional utilities (Table 11.01). These estimates were based on work completed to establish SFWMD 2010 populations, the 2014 Land Use Update (data from 2012), current (2013) and future (2040) utilities service area maps (Figures 1 and 2), and growth plans for local governments as well as PWS utilities. Population projections for 2014 were developed from planned growth areas identified in the 2040 service area maps. Five-year incremental projections for each utility were based on a linear interpolation of the change in population from the 2010 census and 2013 estimates through 2040 (BEBR 2014) using adjusted medium BEBR populations. It was assumed that all populations outside of PWS service areas had self-supplied potable water. (ref. 2016 Upper East Coast Water Supply Plan Appendices: Appendix A, p. 4)

Table 11.01
Martin County PWS and DSS Water Supply Population Projections 2013 to 2040

	2010	2013	2015	2020	2025	2030	2035	2040
Indiantown Company	6,374	6,507	6,595	6,944	7,257	7,545	7,780	8,181
Jupiter, Town of	2,155	2,161	2,165	2,175	2,185	2,195	2,205	2,215
Martin County Consolidated System	86,535	88,887	90,802	97,339	102,661	106,925	110,074	112,572
Sailfish Point	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002
South Martin Regional Utility	19,877	23,629	24,064	25,151	26,238	27,326	28,413	29,500
Stuart, City of	15,603	16,841	17,149	17,919	18,689	19,460	20,230	21,000
Tequesta, Village of	4,011	4,095	4,150	4,370	4,567	4,748	4,896	5,030
PWS Total	135,557	143,122	145,927	154,900	162,599	169,201	174,600	179,500

DSS Total	10,761	7,588	5,473	4,500	4,000	4,000	4,000	4,000
Martin Total	146,318	150,710	151,400	159,400	166,599	173,201	178,600	183,500

(Ref. 2016 Upper East Coast Water Supply Plan, Appendix A, p.4, Table A-1)

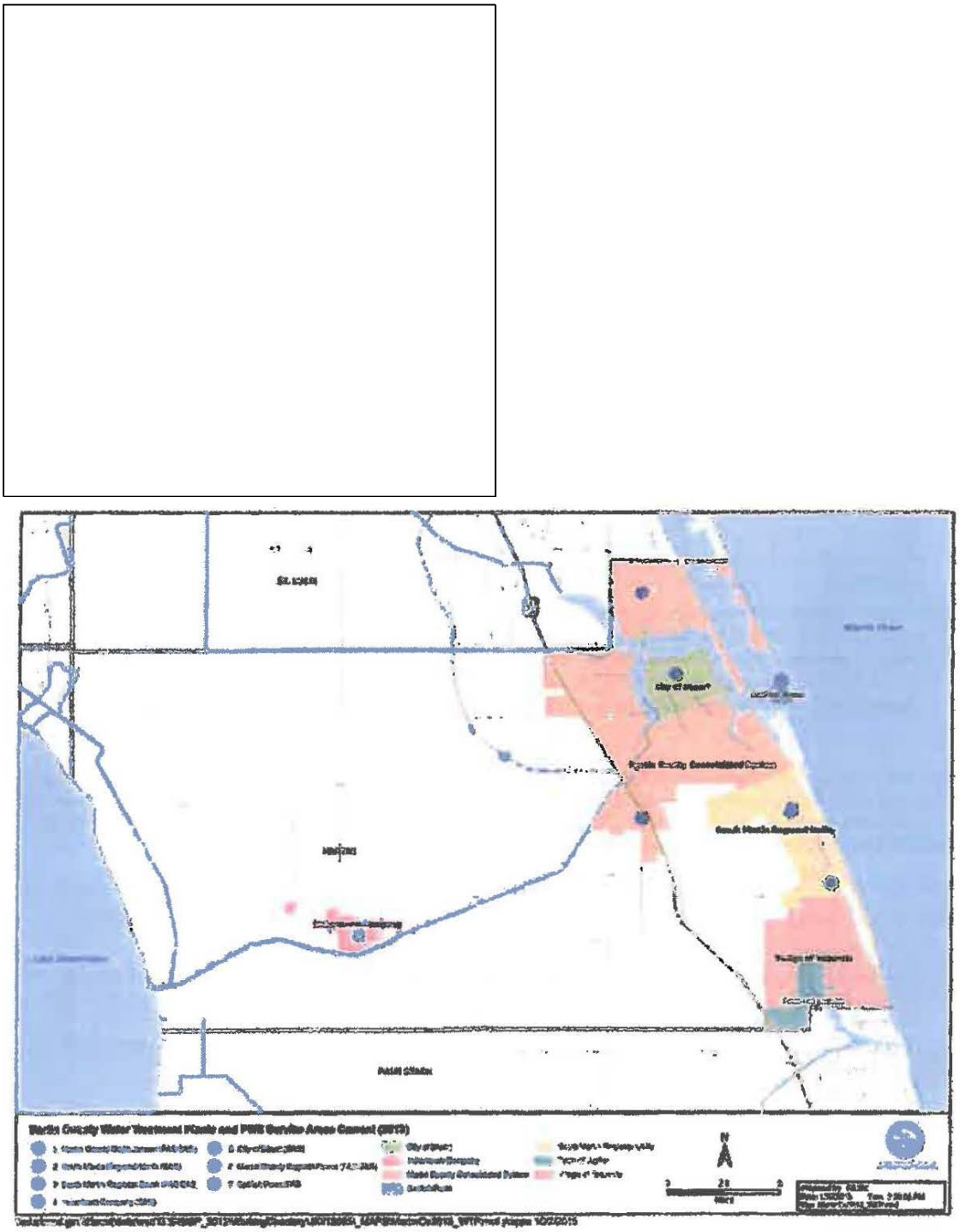

Figure 1: 2013 Potable Water Treatment Facilities in Martin County (UECWSP Appendix E, Figure E-1, p. 104)

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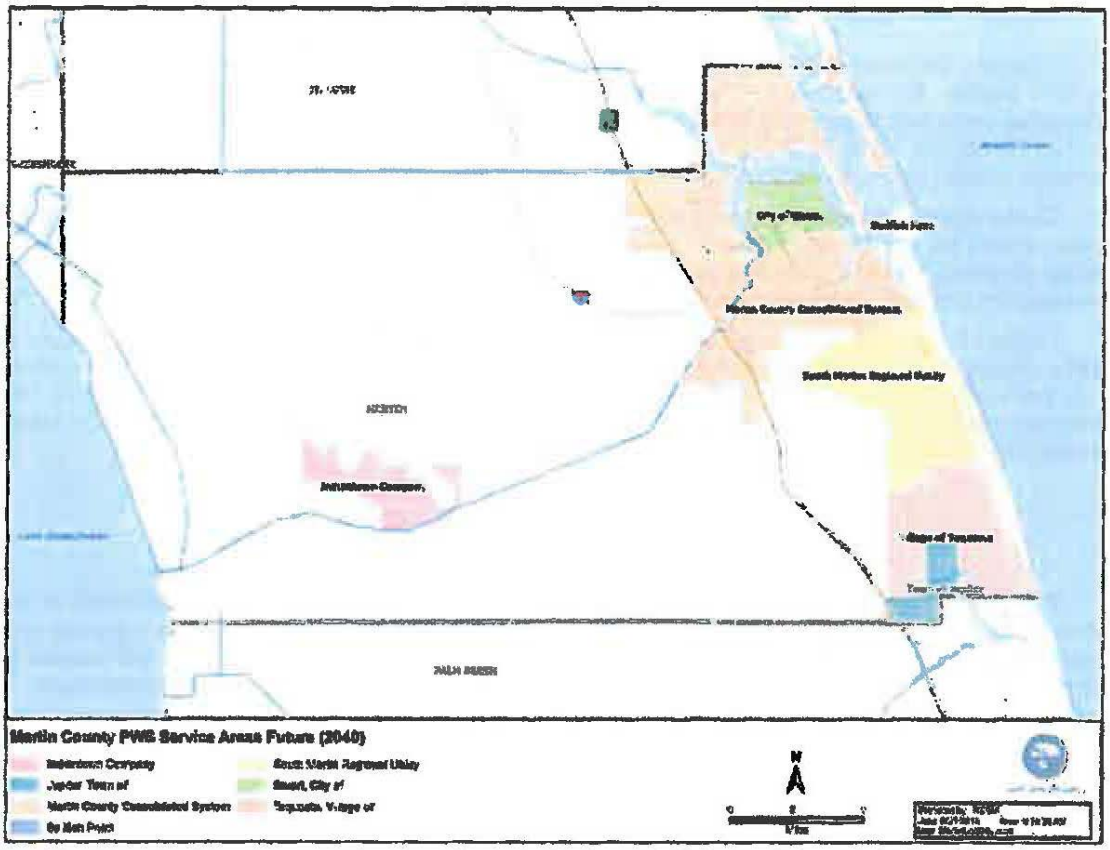

Figure 2: 2040 Utility Service Areas in Martin County (UECWSP Appendix E, Figure E-2, p. 104)

11.3.B. Public water supply and domestic self-supply projected demand. Martin County's PWS finished water demand from regional systems and the estimated demand for DSS systems for 2013 and 2030 under average conditions is shown in Table 11.02. Demand for domestic self-supply systems is projected to fall as more households connect to regional systems.

Table 11-02
Regional Systems Finished Public Water Demand in Martin County

Year	2013	2030
Public Water Supply Finished Water Demand (MGD)	17.73	20.85
Domestic Self-Supply Water Demand (MGD)	1.10	0.58
Total PWS and DSS Finished Water Demand (MGD)	18.83	21.43

(ref. SFWMD 2016 Upper East Coast Water Supply Plan Update Appendices Table A-6).

However, the increase in demand indicated in the projections does not increase the demand on the surficial aquifer. By connecting domestic self-supply systems to regional utilities and implementing alternative water supply projects, much of the demand is shifted from the surficial aquifer to the Floridan aquifer. Reclaimed water projects (also considered alternative water supply projects) contribute to the recharge needed for the surficial aquifer.

Conservation efforts are needed to effectively manage Martin County water resources. With prudent management, the County has sufficient water to meet its future needs. The County has implemented a variety of efforts to avoid depleting the resource. These include a wellfield protection program, water conservation program, water shortage requirements and a rate structure that encourages conservation.

Tables 11-1 through 11-5 summarize the projected demands for each public water supply system in Martin County. This information corresponds to the 2016 Upper East Coast Water Supply Plan Update. Note that Martin Correctional Institution was connected to the City of Port St. Lucie Utilities in 2010. The estimated population of the Towns of Ocean Breeze and Sewell's Point, located in unincorporated Martin County, are served by the Martin County Consolidated System.

Table 11-1
Indiantown Company

The Indiantown Company service area Includes the unincorporated Indiantown properties in the Primary Urban Service District and the Indiantown Golf and Country Club. Potable water supplies are 100 percent from the SAS, and are projected to remain the same in the future. The utility is reusing 100% (0.57 MGD) of its wastewater.

Description	2013 (Existing)	2020 (Projected)	2030 (Projected)

Population†	6,507	6,944	7,545
Average 2010-2013 Per Capita (gallons per day (GPD) finished water)	79	79	79
Potable Water Demand (dally average annual finished water, MGD)	0.51	0.55	0.60
Potable Water Source	Permit No. 43-00041-W (expires 2029)		
Surficial Aquifer System (SAS)	1.18		
Florida Aquifer System (FAS)	0.00		
Total Allocation	1.18		
Permitted Capacity by Source	FDEP Potable Water Treatment Capacity (MGD) (PWS ID# 4430667)		
Facility & Projects Capacity—SAS, MGD++	1.3	1.3	1.3
Facility & Projects Capacity—FAS, MGD++	0.0	0.0	0.0
Total Capacity	1.30	1.30	1.3
Non-Potable Water Facility & Projects Capacity-Reclaimed water++, MGD	0.75	0.75	0.75

† Population data are from the SFWMD's 2016 Upper East Coast Water Supply Plan Update Proposed Population Projections.

++ Facility Production Capacity: FDEP Facility design capacity plus water supply projects design capacities.

Table 11-2
Martin County Consolidated Water System
(North and Tropical Farms water treatment plants)

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Description	2013 (Existing)	2020 (Projected)	2030 (Projected)
Population†	88,887	97,339	106,925
Per Capita (gallons per day (GPD) finished water [1]	108	108	108
Potable Water Demand (daily average annual finished water, MGD)	9.60	10.5	11.5
Potable Water Source	Permit No. 43-00102-W (expires 2035)		
Surficial Aquifer System (SAS), MGD	6.68		
Florida Aquifer System (FAS), MGD	15.09		
Total Allocation	21.77		
Permitted Capacity by Source	FDEP Potable Water Treatment Capacity (MGD) (PWS ID# 4431891)		
Facility & Projects Capacity—SAS, MGD++	5.3	5.3	7.05
Facility & Projects Capacity—FAS, MGD++	13.50	13.50	15.70
Total Capacity	18.8	18.8	22.75
Non-Potable Water Facility & Projects Capacity—Reclaimed water++, MGD	8.66	8.66	8.66

† Population data are from the SFWMD's 2016 Upper East Coast Water Supply Plan Update Planning Document p. 129-133.

1 Ref. Martin County Water & Wastewater Plant Flows and Treatment Capacity Report, February 2017

++ Facility Production Capacity: FDEP Facility design capacity plus water supply projects design capacities. Ref. Martin County Utilities Water Supply System Master Plan Update (2015) and Martin County Utilities Wastewater and Reclaimed Water Master Plan (2014)

Table 11-3
Sailfish Point

Sailfish Point serves potable water to only the Sailfish Point development on Hutchinson Island. Water supplies consist of 100 percent brackish (FAS) groundwater and are projected to remain the same in the future. The utility is reusing 100% (0.08 MGD) of its wastewater.

Description	2013 (Existing)	2020 (Projected)	2030 (Projected)
Population†	1,002	1,002	1,002
Average 2010-2013 Per Capita (gallons per day (GPD) finished water)	150	150	150
Potable Water Demand (daily average annual finished water, MGD)	0.15	0.15	0.15
Potable Water Source	Permit No. 43-00146-W (expires 2022)		
Surficial Aquifer System (SAS)	0.00		
Florida Aquifer System (FAS)	0.22		
Total Allocation	0.22		
Permitted Capacity by Source	FDEP Potable Water Treatment Capacity (MGD) (PWS ID# 4434000)		
Facility & Projects Capacity—SAS, MGD++	0.0	0.0	0.0

Facility & Projects Capacity—FAS, MGD++	0.22	0.22	0.22
Total Capacity	0.22	0.22	0.22
Non-Potable Water Facility & Projects Capacity—Reclaimed water++, MGD	0.25	0.25	0.25

† Population data are from the SFWMD's 2016 Upper East Coast Water Supply Plan Update.

++ Facility Production Capacity: FDEP Facility design capacity plus water supply projects design capacities.

Table 11-4
South Martin Regional Utility

South Martin Regional Utility (SMRU) serves the Town of Jupiter Island, Hobe Sound vicinity and portions of unincorporated southeast Martin County. Water supplies consist of 75 percent traditional SAS groundwater and 25 percent brackish FAS groundwater. Future water supplies are projected to be about 59 percent traditional and 41 percent FAS in the future, SMRU reuses 100 percent (0.80 MGD) of its wastewater.

Description	2013 (Existing)	2020 (Projected)	2030 (Projected)
Population†	23,629	25,151	27,326
Average 2010-2013 Per Capita (gallons per day (GPD) finished water)	150	150	150
Potable Water Demand (daily average annual finished water, MGD)	3.54	3.77	4.10
Potable Water Source	Permit No. 43-00066-W (expires 2032)		
Surficial Aquifer System (SAS)	4.83		
Florida Aquifer System (FAS)	4.76		

Total Allocation	8.64*		
Permitted Capacity by Source	FDEP Potable Water Treatment Capacity (MGD) (PWS ID# 4430624)		
Facility & Projects Capacity—SAS, MGD++	6.14	6.14	6.14
Facility & Projects Capacity—FAS, MGD++	2.0	2.0	4.2
Total Capacity	8.14	8.14	10.34
Non-Potable Water Facility & Projects Capacity—Reclaimed water++, MGD	1.40	1.40	2.40

† Population data are from the SFWMD's 2016 Upper East Coast Water Supply Plan Update.

++ Facility Production Capacity: FDEP Facility design capacity plus water supply projects design capacities.

+ See permit for allocation calculation.

Table 11-5
City of Stuart Utilities

City of Stuart Utilities serves incorporated City of Stuart and portions of unincorporated Martin County. Potable water supplies are 92 percent from the SAS and 8 percent from the FAS: they are projected to be 88 percent SAS and 12 percent FAS in the future. This utility reuses 13 percent (0.21 MGD) of its wastewater.

Description	2013 (Existing)	2020 (Projected)	2030 (Projected)
Population†	16,841	17,919	19,460
Average 2010-2013 Per Capita (gallons per day (GPD) finished water)	196	196	196
Potable Water Demand (dally average annual	3.30	3.51	3.81

finished water, MGD)			
Potable Water Source	Permit No. 43-00053-W (expires 2029)		
Surficial Aquifer System (SAS)	3.67		
Florida Aquifer System (FAS)	0.00		
Total Allocation	3.67		
Permitted Capacity by Source	FDEP Potable Water Treatment Capacity (MGD) (PWS ID# 4430259)		
Facility & Projects Capacity—SAS, MGD++	6.0	6.0	6.0
Facility & Projects Capacity—FAS, MGD++	0.50	0.50	0.80
Total Capacity	6.50	6.50	6.80
Non-Potable Water Facility & Projects Capacity—Reclaimed water++, MGD	4.00	4.00	4.00

† Population data are from the SFWMD's 2016 Upper East Coast Water Supply Plan Update.

++ Facility Production Capacity: FDEP Facility design capacity plus water supply projects design capacities.

Section 11.4. Consolidated Water System

11.4.A. *Overview.* The Martin County Consolidated Water System consists of two water treatment facilities with an interconnected distribution system which operate under SFWMD Permit No. W-00102-W and FDEP Permit Nos. 00081025-079-WC (North WTP) and 0143244-003-WC (Tropical Farms WTP). It provides potable drinking water to customers in the Martin County Consolidated Water System service area, which serves designated areas in Palm City, Port Salerno, Tropical Farms, Jensen Beach, Hutchinson island and the City of Stuart. Table 11-6 details the existing and future capacities, treatment methods and water sources for the water treatment facilities.

Table 11-6
Martin County Consolidated Water System Facilities

EXHIBIT B

COMPREHENSIVE GROWTH MANAGEMENT PLAN

Chapter 11 POTABLE WATER SERVICES ELEMENT/10 YEAR WATER SUPPLY FACILITIES WORK PLAN

Facilities (Existing)	Source	Permitted Plant Capacity (MGD)	Treatment Method	Well Source
North water treatment plant (WTP)	Traditional supply	3.3	Lime softening	SAS
	Alternative supply	5.5	Reverse osmosis	FAS
Tropical Farms WTP	Traditional supply	2.0	Membrane softening/iron treatment	SAS
	Alternative supply	8.0	Reverse osmosis	FAS
Total		18.8		

Proposed Facilities (2020)	Source	Permitted Plant Capacity (MGD)	Treatment Method	Well Source
North WTP	Traditional supply	3.3	Lime softening	SAS
	Alternative supply	5.5	Reverse osmosis	FAS
Tropical Farms WTP	Traditional supply	2.0	Membrane softening/iron treatment	SAS
	Alternative supply	8.0	Reverse osmosis	FAS
Total		18.8		

[1] A fifth FAS well is planned for construction in FY20 to reduce demand on existing wells - no increase in plant capacity.

Proposed Facilities (2030)	Source	Permitted Plant Capacity (MGD)	Treatment Method	Well Source
North WTP	Traditional supply	3.3	Lime softening	SAS
	Alternative supply	5.5	Reverse osmosis	FAS
Tropical Farms WTP	Traditional supply	3.75	Membrane softening/iron treatment	SAS
	Alternative supply	8.0	Reverse osmosis	FAS
Total		20.55		

Source: Martin County Utilities Water Supply System Master Plan Update, October 2015 (Figure 3-1) and the FY2017 Martin County Utilities Capital Improvement Plan.

The North WTP provides two types of treatment. The lime softening facility treats the raw water from 12 SAS wells and the reverse osmosis (RO) facility treats water from four FAS wells. The Floridan aquifer contains certain dissolved minerals including chloride that requires reverse osmosis membrane treatment. Following treatment this water is blended with treated surficial aquifer water prior to distribution. The blend provides a stable, non-corrosive potable water that meets all applicable water quality criteria while reducing operational treatment cost and avoiding additional chemical costs. Based on raw water treatment methods, the system wide treatment efficiency is assumed at 86% and includes 8% system wide distribution losses [Water Use Permit No. 43-00102-W. Exhibit No. 5B Martin County Utilities Consolidated System Future Raw Water Use].

The Tropical Farms WTP includes an iron treatment facility and nanofiltration (NF) facility. The iron treatment facility removes iron from raw water pumped from 10 SAS wells for blending with the NF and RO permeate water. The RO facility draws water from 5 FAS wells. One of the fundamental goals of the Consolidate System is to provide similar water quality to all customers through the utilization of similar treatment techniques. In general, this includes a combination of FAS water, membrane softening and raw water blend at each location. [Martin County Utilities Water Supply System Master Plan Update, October 2015].

The existing plant finished water storage facilities at the North WTP include one 5 MG and one 3 MG ground storage tanks that provide a total of 8 MG in storage. At the Tropical WTP, there are two 0.5 MG

and one 5 MG storage tank that supply a total of 4.2 MG of finished water storage capacity based on minimum high service pump shutoff level. Only the storage volume above this level or 4.2 MG is included in the finished water capacity for these plants. There is one repump and storage facility not associated with the WTPs that provides system storage and high-service pumping capacity to the consolidated system. The Golden Gate Repump and Storage Facility includes of a 2 MG ground storage tank. [Martin County Utilities Water Supply System Master Plan Update. October 2015].

Martin County Utilities water system is interconnected with South Martin Regional Utilities, City of Stuart, Fort Pierce Utility Authority, Port St. Lucie and the City of Stuart water systems for emergency water supply as reflected in interlocal agreements with each utility. The County also has two additional interlocal agreements with the City of Stuart to 1) supply up to 1 MGD of finished water by 2027 and 2) to receive up to 0.375 MGD of reclaimed water.

The Consolidated Water System is included in a SFWMD designated water resource caution area as described in the Upper East Coast Water Supply Plan. Future water supplies are projected to be 30 percent traditional (surficial aquifer) and 70 percent alternative (Floridan aquifer) to reduce stress on the SAS. Operational improvements and management in addition to proposed water supply projects are adequate to serve projected demands. Martin County has made marked strides in responding to regional strategies outlined in the Upper East Coast Water Supply Plan, including implementation/adoption of a 10-year Capital Improvements Program (CIP) consistent with Upper East Coast Water Supply Plan; substantial increased use of the Floridan aquifer; continued reduced dependence on the surficial aquifer; and a wellfield protection program. In addition, the County has an approved consolidated water conservation plan for the South and North systems in its SFWMD Permit No. 43-00102-W that meets all the required elements of the SFWMD Applicants Handbook Standard Conservation Plan as follows:

i. Water Conservation public education program that consists of:

   1) Public service announcements:

   2) Presentations to schools and community organizations;

   3) Tours of water and wastewater facilities:

   4) Public water conservation exhibits; and

   5) Detailed information available on website;

ii. Outdoor Water Use Conservation program that consists of;

   1) Permanent irrigation ordinance that restricts landscape irrigation between 9:00 A.M. and 5:00 P.M.;

   2) Martin County Ordinance No. 494, Land Development Regulations, which requires the use of Florida-Friendly landscaping principles;

   3) Martin County Ordinance which requires ultra-low plumbing fixtures on all new construction;

   4) Martin County Ordinance 494, Land Development Regulations, which requires any person who purchases and installs an automatic lawn sprinkler to install, operate, and maintain a rain sensor device or automatic switch which will override the irrigation with the occurrence of adequate rainfall; and

   5) Outdoor Water Conservation Public Education- Martin County Utilities participates in the annual Stuart WaterFest which focuses on public education and water conservation;

iii. Rate Structure: A rate structure designed to promote the efficient use of water by charging a 25 percent surcharge for usage in excess of 10,000 gallons per month per residential unit and a 50 percent surcharge for usage in excess of 15,000 gallons per month per residential unit.

iv. Water Loss Reduction Program: Although water losses have not historically exceeded 10 percent, Martin County Consolidated has implemented a leak detection system and implements several water loss methods;

v. Indoor Water Conservation Program: Martin County Consolidated provides tips to reducing indoor water use by providing tips on their website and brochures on how to conserve water which lowers the cost of customer's water bill.

11.4.B *Proposed modifications to the Consolidated Water System* . To satisfy total projected water supply needs and provide effective wellfield operation, three new Floridan aquifer wells and two additional reverse osmosis treatment trains are proposed for the service area. Two wells will be located at the Tropical Farms WTP (Water Treatment Facility), and one well at the North WTP.

Martin Downs:

The County decommissioned the Martin Downs facility in 2008. It retains A SFWMD consumptive use permit is retained at this location to provide public water supply and to supplement the reuse water supply for irrigation. Water from the Martin Downs SAS wells will be piped to the Tropical Farms WTP via a raw water main planned for construction in 2018.

Vista Salerno:

Vista Salerno has been decommissioned. The County has withdrawn its consumptive use permit and abandoned SAS wells at this location.

Tropical Farms:

Tropical Farms is served by 10 SAS wells and five FAS wells which provide water to two on-site treatment plants. The reverse osmosis membrane treatment facility is rated for 8 MGD maximum daily flow (MDF) and the existing nanofiltration membrane softening plant is rated for 2 MGD (MDF), providing a combined treatment capacity of 10 MGD. Treated SAS water is blended with RO water to add needed alkalinity and hardness stability. Changes in Tropical Farms SAS water supply well production and reduced water use allocation necessitate transfer of approximately 2 MGD of raw water from the Martin Downs SAS wellfield to the Tropical Farms WTP. A transmission line is planned for construction in 2018. A sixth FAS well is planned for construction in 2021 to reduce aquifer stress by reducing individual well withdrawal (no plant capacity increase). It is estimated that a plant capacity increase from 10 MGD to 11.75 MGD will be triggered by system demands in 2026 equivalent to the construction of two iron treatment filters. Tropical Farms WTP supplies water to Martin Downs and Port Salerno.

North System:

The North System consists of a 3.3 MGD lime softening WTP and a 5.5 MGD reverse osmosis WTP. The lime softening plant is presently served by 12 surficial wells. The North System reverse osmosis WTP, expanded to 5.5 MGD in 2004, is served by four Floridan aquifer wells and three reverse osmosis membrane trains. A fifth FAS well is planned for construction in 2020 to reduce stress on the aquifer by reducing pump demands (no plant capacity increase).

11.4.C. *Water supply facilities work plan.* The CIP details the acquisitions and construction projects planned for a 10-year period for all County departments.

Martin County contracted with consultants to estimate the amount and type of water, wastewater and reclaimed water facilities needed to meet the needs of the service area. The recommendations in the

resulting reports, Martin County Utilities Wastewater and Reclaimed Water Master Plan Update (2014) and Martin County Utilities Water Supply System Master Plan Update (2015), are incorporated in the CIP and are updated annually. Summary tables listing the capital improvements are incorporated into the Capital Improvements Element (Chapter 14) of the CGMP through annual amendments. The future land use and zoning maps were also analyzed to determine demand for facilities for the 10-year period and the ultimate demand for water service. The service area is a subarea of the larger Primary Urban Service District, not served by the other regional utilities listed in Tables 11-1 through 11-5.

Table 11-7
Demand Projections, Water Supply Facilities Plan

Fiscal Year	Projected Population	Average Annual Daily Flow (MGD)	Maximum Daily Flow (MGD)*
2013	88,887	9.07	11.23
2020	97,339	10.03	14.04
2030	106,925	11.01	15.41

Source: [1] Chapter 11 Potable Water Services Element/10 Year Water Supply Facilities Work Plan Table 11-2, Martin County Consolidated System, Martin County Utilities Water Supply System Master Plan Update (2015).

* Table 1-9 Existing Potable Water Demand, Table 1-10 Peak Factors - Water Distribution System, Table 2-12 Total MCU Projected Potable Water Demands at Build-Out

2 The estimated maximum daily flow is the average daily flow multiplied by a recommended peaking factor of 1.4. The actual peaking factor for 2013 was 1.24. This calculation is used in determining the necessary size of water treatment facilities.

11.4.D. *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."

Martin County supports water reuse initiatives under consideration by both the SFWMD and other local governments in the region and the implementation of new regulations or programs designed to increase the volume of reclaimed water used and public acceptance of reclaimed water. Martin County's water conservation program encourages both conservation of water and use of alternative water supplies, such as reclaimed water for irrigation. There are no local financial responsibilities detailed in the CIE or CIS.

11.4.E. *Capital Improvements Program for Water Supply.* Martin County and the SFWMD have identified alternative water supply projects in the 2016 Upper East Coast Water Supply Plan Update for the Martin County's Consolidated System (Table 11-8). Each year Martin County selects alternative water supply projects from the Upper East Coast Water Supply Plan and Incorporates them into the Capital Improvements Element and subsequently the CIP.

Table 11-11
Alternative Water Supply Projects 2013-2030

Project Number and Description	Water Source	Raw Water Required (MGD)	Design Capacity (MGD)	Year Completed	In UECWSP
CIP #3305 Raw Water Main & Pump Martin Downs Wellfield to Tropical Farms WTP	Surficial	2.0	2.0	2018	No
CIP # 3017, North WTP, Well NRO-5	Floridan		2.0	2020	Yes
CIP # 3000, Tropical Farms WTP, Well TFRO-6	Floridan		2.0	2021	Yes
CIP # 3000, Tropical Farms WTP, Well TFRO-7	Floridan		2.0	2025	Yes

Sources: *Martin County Utilities and Solid Waste Department CIP FY2017*

Section 11.5. Goals, Objectives and Policies

Implementation of this Chapter is designed to address Martin County's long-term potable water needs while preserving the quality and quantity of groundwater supplies.

Goal 11.1. To provide for needed potable water supply facilities in a timely, cost-efficient manner that protects public health, safety and welfare; maximizes the use of existing facilities; and promotes compact urban development.

Objective 11.1A. To correct public and private facility deficiencies in a timely manner in priority order (as specified in Policy 11.1A.2).

Policy 11.1A.1. The County shall continue to undertake a preventive and corrective maintenance program for all County-owned water systems. It shall include the following activities, performed annually, and preparation of an annual report covering the activities performed:

(1) Inventory of facilities;

(2) Facility inspection program;

(3) Inventory of field equipment and stock;

(4) Regular, programmed preventive maintenance of all facilities.

Policy 11.1A.2. The priority for correcting deficiencies and maintaining County facilities shall be as follows, in descending order:

(1) Deficiencies that are immediate threats to health and safety shall be corrected directly.

(2) Deficiencies that may affect health and safety will be corrected within one year or before the health and safety of the public are affected.

(3) Deficiencies that must be corrected to meet applicable laws and regulations shall be corrected within two years, or as agreed upon by the FDEP and/or other regulatory agencies.

(4) Other corrective repairs will be undertaken as time and resources allow.

Policy 11.1A.3. Capital facility improvements needed to correct deficiencies identified during engineering inspections will receive priority funding and will be included in the next revision of the 10-year CIP.

Policy 11.1A.4. Martin County shall continue to review proposed well construction and locations, assure compliance with the Wellfield Protection Program and maintain and update regulated areas on the Wellfield Protection Maps.

Policy 11.1A.5. Martin County shall work with the County Health Department and FDEP to assure that all permitted potable water systems can be expected to continue to provide safe drinking water. The Wellfield Protection and Potable Water Land Development Regulations and any other related regulations shall be coordinated to give residents the best possible assurance that permitted water systems will continue to serve them.

Policy 11.1A.6. Martin County will review the Potable Water Regulations to determine their effectiveness in promoting consolidation of services and preventing proliferation of small systems. The potential of requiring hookup to regional systems will be investigated.

Objective 11.1B. To plan for sufficient public facilities to meet future water needs based on adopted level of service standards and projected population for the 5-year and 10-year planning periods and build-out of service areas.

Policy 11.1B.1. The Martin County Board of County Commissioners shall review and amend (as necessary) the approved Martin County Utilities Water, Wastewater and Reclaimed Water Master Plan. Following adoption by the Board of County Commissioners, it will be used as input for the Martin County 10-year water supply plan.

Policy 11.1B.2. Martin County shall maintain and improve an information system to assist in evaluating water management, including water quantity, quality and use. This system shall be used in resolving administrative, operational and maintenance issues related to the development of a comprehensive water system, including system consolidation and possible regionalization of facilities. The information system shall include existing conditions of potable water plants as reported by the FDEP.

Policy 11.1B.3. Martin County shall continue to acquire water treatment facilities that meet the minimum standards established in the Water System Regulations, provided that:

(1) The County determines that acquisition of such facilities is in the public interest;

(2) Ownership by the County will establish equal or greater long-range stability of the utility;

(3) The acquisition can be made without a significant change in existing rate structures or in a more cost-effective manner;

(4) There is a willing seller, or the County will exercise its right of eminent domain.

Policy 11.1B.4. The County shall evaluate the feasibility of providing incentives to users of private water treatment facilities or individual water wells to connect to regional public water facilities when they become available.

Policy 11.1B.5. Based on the SFWMD water assessment study, Martin County will continue to identify alternative water sources, which will be considered when the 10-year CIP is adopted.

Policy 11.1B.6. The level of service standards shall be incorporated into the Capital Improvements Element The levels of service and minimum water delivery rate standards shall be used as the basis for determining the availability of facility capacity and the demand generated by a development. The current residential level of service standard for water treatment systems is 108 gallons per capita. [Ref. Martin County Water & Wastewater Plant flows and Treatment Capacity Report, February 2017]. The nonresidential level-of-service standards for water treatment systems are as defined in F.A.C. 64E-6.008 Standards for Onsite Sewer and Disposal Systems.

(1) Fire hydrants: The minimum water delivery rate for any single fire hydrant shall be 500 gallons per minute, and the minimum pressure in any point within a water distribution system shall be 20 pounds per square inch (psi). Assuming a maximum day demand and commercial fire flow demands, the goal is 60 psi at all times.

Policy 11.1B.7. The timing of impacts of development shall be in accordance with Policy 14.1C.4 in the Capital Improvements Element.

Policy 11.1B.8. To ensure capacity of the regional water system, Martin County shall begin to design essential improvements when the system reaches 80 percent of total rated capacity. Construction will begin when the system reaches 90 percent of total rated capacity. No additional reservations shall be made at 100 percent of rated capacity unless construction of improvements is underway.

Policy 11.1B.9. The County will monitor level of service standards for potable water service by reviewing the previous 12 monthly operating reports submitted to the FDEP. The results will be reported in the annual report on level of service for all County services. Available capacity for new connections will be based on existing capacity, less current flows, less equivalent residential connections reserved.

Policy 11.1B.10. The Martin County Utilities and Solid Waste Department shall review all development proposals, plans and specifications to ensure that water transmission systems meet minimum standards, are consistent with the County's consolidation efforts and do not reduce levels of service below acceptable levels.

Objective 11.1C. To establish criteria for extending public facilities that maintain adopted level of service standards and discourage urban sprawl.

Policy 11.1C.1. The extension of potable water lines and expansion of treatment plant capacity will be based on the projected demand for service as established in the Future Land Use Maps (Chapter 4 of the CGMP). To assure consistency of efficient service provision with the established land use pattern, the following determinations must be made:

(1) The adopted level of service standards will be maintained and adequate capacity is available based on an analysis of the current and future population growth within the existing service area and the proposed areas to be served;

(2) Extension of public potable water facilities shall be limited to areas identified in the Future Land Use Element as an established urban service district including the exceptions identified in Chapter 4, Policy 4.7A.3 of the CGMP;

(3) It would be practical, feasible and cost-efficient to provide the service in a long-term expansion program;

(4) Extension of public potable water facilities would be in the public interest.

(5) Priority shall be given to projects located within the Primary Urban Service District for provision of water service.

Policy 11.1C.2. Expansion of public service areas shall be based on ability to serve new customers cost-effectively without jeopardizing levels of service for present and future customers in existing service areas.

Policy 11.1C.3. The County shall ensure that adequate capacity exists or will be provided concurrently with development to maintain adopted level of service standards. Development review staff will analyze facility capacity based on adopted levels of service and projected need resulting from the development.

Policy 11.1C.4. As part of the staff analysis, additional considerations will be evaluated in reviewing future development proposals. These considerations may include possible limitations in water supply, water quality problems and appropriate density allocations.

Policy 11.1C.5.: All development within established potable water service areas shall donate <u>all</u> needed water distribution lines <u>and appurtenances along with suitable easements,</u> and <u>shall</u> pay all applicable capital facility costs when services are ~~provided~~ <u>reserved</u> by the County. This policy shall be implemented by (a) formation of special assessment districts, or (b) execution of a standard developer's agreement, or (c) execution of an interim agreement in accordance with the Land Development Regulations.

Policy 11.1C.6.: If a transmission line must be installed to provide service to a property as requested by the owner, the County will allow a portion of the capital facility charge as a credit towards construction of the transmission line.

Policy 11.1C.7. To encourage developers to provide potable water capacity beyond their project's needs, the County shall consider cost recovery agreements. These shall be considered if the facility's construction cost exceeds the proportion of the capital facility charge to be credited to the developer. Credit shall be applied in accordance with the credit policy in effect at that time.

Policy 11.1C.8. All public and private water system improvements shall be located, designed and installed in a manner that is cost-effective, functional, responsive to fire protection needs of existing and planned future development, and compatible with surrounding natural systems. Water main extensions shall be aligned and installed in a manner that prevents undue loss of

established tree canopies or soil through induced erosion. Land features altered by construction shall be returned to their original condition as close as is reasonably possible. The timing and staging of the work will aim to minimize disruptive impacts, including impacts on residential quality of life and traffic flow.

Policy 11.1C.9. Martin County has developed detailed service area maps of regional utilities that will be used to implement the Land Development Regulations. The map(s) shall be amended as needed. The service area for private facilities shall be certified and regulated by the Florida Public Service Commission. The service areas for government-owned facilities shall be as determined by master plans or other appropriate documents authorized by the entity. Figure 11-1 shows the current regional utilities service areas in Martin County. Figure 11-2 shows the potential regional utilities service areas in Martin County.

Editor's note— Figure 11-1 is on file in the office of the Martin County Growth Management Department.

Editor's note— Figure 11-2 is on file in the office of the Martin County Growth Management Department.

Policy 11.1C.10. Potable water lines may be extended from the Primary Urban Service District to serve the following facilities, as described in the Jonathan Dickinson State Park Unit Management Plan:

River Campground restroom and 45 sites;
Boat ramp restroom;
Dump station;
Picnic area restrooms (3);
Concession building;
Environmental education and research center;
Cabins (12);
Staff residences (3);
Boy Scout Camp facilities;
Girl Scout Camp facilities;
Pine Grove Campground;
Camp Pavilion;
Ranger Station; and
Administrative/Maintenance Complex.

Such extensions are intended to reduce or eliminate the impact public facilities located in the specific portions of Jonathan Dickinson State Park listed above, have on the Loxahatchee River, and are considered to be waivers. These waivers shall not be used to serve, encourage or justify other development activity outside the Primary Urban Service District and shall not be used to encourage, support or justify an increase in density in surrounding or nearby areas, or any other amendment to the Comprehensive Growth Management Plan.

Policy 11.1C.11. Potable water lines may be extended from the Primary Urban Service District to serve:

~~(1) Fort Dawson Parcel as described in Comprehensive Plan Amendment 07-10, Indiantown International.~~

(~~2~~ 1) Lots 67, 68, 75, 89, 90, 119 through 122 and lots 191 through 220 of Canopy Creek PUD (f/k/a Tuscawilla PUD as recorded in Plat Book 16, Pages 039-001 to 039-036, Public Records of Martin County, Florida).

(~~3~~ 2) Bridgewater Preserve as recorded in Plat Book 16, Pages 033-001 to 033-007, Public Records of Martin County, Florida. Any increase in residential density shall require approval by the Board of County Commissioners for a PUD Zoning Agreement and revised master/final site plan which is consistent with the Rural Density future land use designation and requires that the project connect to the existing potable water and sanitary sewer lines.

~~(4) A project approved pursuant to a development order that may be issued by Martin County on the Tesoro Groves parcels 05-40-39-000-000-00010-1 and 05-40-39-007-000-00020-2as described in Official Record Book 02367 Page 0313 through 0317.~~

(~~5~~ 3) Seven J's Industrial Subdivision, as recorded in Plat Book 15, Page 97 and/or any replat or redevelopment of the property contained within the plat recorded in Plat Book 15, Page 97.

(~~6~~ 4) The County landfill, parcel number 07-38-40-000-000-00020-7.

(~~7~~ 5) Martingale Commons PUD f/k/a Palm City 95 PUD.

(~~8~~ 6) Sheriff's Shooting Range, parcel number 07-38-40-000-000-00030-5.

(~~9~~ 7) Parcel number 28-40-42-000-000-00020-5, parcel number 28-40-42-000-000-00040-1, parcel number 28-42-000-000-00011-0, and parcel number 21-40-42-004-000-00005-0 on S.E. Island Way.

(8) The 107-acre parcel of County owned land located on the north side of SW Citrus Boulevard, approximately 2,000 feet east of the Indiantown airport, parcel number 03-40-39-000-000-00011-0 and parcel number 34-39-39-000-000-00021-0.

Policy 11.1C.11.1. Facilities at the Martin Correctional Institution may receive potable water service from the City of Port St. Lucie in accordance with an interlocal agreement between Martin County, the City of Port St. Lucie and the Florida Department of Corrections.

Objective 11.1D. To maintain a 10-year schedule of capital improvements for public facilities, to be updated annually in conformance with the review process set forth in the Capital Improvements Element.

Measure: Completion of each year's capital improvements projects for potable water facilities.

Policy 11.1D.1. Proposed public potable water capital improvement projects will be evaluated and ranked according to the following priorities, listed in descending order:

(1) Protection of public health, safety and welfare, including of areas with contaminated wellfields or groundwater;

(2) Fulfillment of the County's legal commitment to provide facilities and services or to maximize the use of existing facilities;

(3) Provision of service to areas of high-density land use or high-intensity use; and

(4) Provision of service to enclaves and infill areas within the County's identified urban service areas or that will allow for efficient provision of necessary urban services.

Policy 11.1D.2. The 10-year Water Supply Facilities Work Plan, consistent with the Capital Improvements Element, shall be evaluated annually to ensure that necessary projects are prioritized based on current conditions and future demand.

Policy 11.1D.3. The water system projects listed in the Capital Improvements Element and the CIP will have assigned priorities in the 10-year Water Supply Facilities Work Plan. This listing may be evaluated and reprioritized annually.

Policy 11.1D.4. The 10-year Water Supply Facilities Work Plan shall be coordinated, as appropriate, with proposed State, County or municipal projects in public road rights-of-way to ensure consistency and cost-effectiveness of County efforts.

Objective 11.1E. To continue programs for conserving and protecting potable water resources in Martin County.

Measure: The reduction of the per capita water consumption rate from 120 gallons per day (1992 adoption of Martin County Comprehensive Plan) to 100 gallons per day by 2025.

Policy 11.1E.1. The County Commission and the Utilities and Solid Waste Management Department will continue to operate the water conservation program, which includes the following components:

(1) Compliance with and monitoring of native vegetation requirements, encouragement for use of xeriscape techniques and continued preservation of native vegetation, wherever practical and possible;

(2) Provision for using treated wastewater for irrigation to avoid the use of potable water;

(3) An education program to inform the public about water conservation techniques and devices; includes informing public about Mandatory Year-Round Landscape Irrigation Conservation Measures as detailed in 40E-24, F.A.C.

(4) Continuation of the leak detection and meter testing and repair program to minimize losses of water in the distribution system;

(5) Continuation of the SFWMD emergency water shortage rules during a declared drought or water emergency;

(6) Continued research and active enforcement of water-saving device requirements;

(7) Approval of dual conveyance systems with separate pipes for water and wastewater reuse to enable use of lower quality water for nonpotable uses.

Policy 11.1E.2. The County shall encourage reuse and reclamation of water for irrigation, landscape, agriculture, and industry as an alternative to the use of potable water supplies. A reclaimed water interconnect has been established for delivery of 0.375 MGD from the City of Stuart to Martin County. The County shall work with the Town of Jupiter Island to Interconnect the reclaimed water system to fully utilize the available water supply.

Policy 11.1E.3. The County shall continue to enforce a Water Conservation Regulation, which shall include time restraints for irrigation.

Policy 11.1E.4. The County will continue to cooperate with the SFWMD to investigate, evaluate and formulate techniques to develop new sources of groundwater and conserve existing supplies. Possible techniques are deep aquifer storage and recovery and reverse osmosis.

Policy 11.1E.5. New potable water wells and wellfields shall be located in areas where quantities of regulated materials do not exceed proposed criteria in the wellfield protection program.

Policy 11.1E.6. The County shall continue a wellfield protection program that prevents contamination of potable water sources by saltwater intrusion or chemical contamination and prevents adverse impacts to water levels and vegetation in adjacent wetlands.

Policy 11.1E.7. The County shall coordinate with municipalities and adjacent counties to project future well and wellfield needs. This effort should include determining needs for and locations of additional wellfields, including an assessment of the feasibility of joint development and operations between the County, the City of Stuart and the Town of Jupiter Island.

Objective 11.1F. To continue coordinating with the FDEP to determine deficiencies in potable water facilities.

Policy 11.1F.1. No new package plants shall be allowed except for those projects specified in Policy 10.1A.11. No connections to existing package plants shall be allowed if enforcement action by FDEP would preclude such connections.

Policy 11.1F.2. Existing customers of package plants will be connected to regional systems when:

(1) The useful life of the package plant has been exhausted; or

(2) Doing so is cost-effective; or

(3) A package plant falls into noncompliance with FDEP regulations and is required to connect by consent order.

Policy 11.1F.3. When package plants are connected to regional systems not purchased by the County, property owners receiving the benefit of connection shall pay all applicable connection costs, including capital facility charges.

Policy 11.1F.4. In accordance with Policy 11.1C.11 of the CGMP, if water lines become available in a public easement or right-of-way within 500 feet of Seven J's or Martingale Commons, the respective property will be required to connect to these lines within 365 days of notice of the availability of the lines. All properties deriving a special benefit from the connection shall pay for the expenses that are properly attributable to providing such connection under generally accepted accounting principles including, but not limited to expenses related to the line extension, reimbursement to the County for any funds advanced and all connection costs or

other applicable capital facility charges. Such expenses shall be apportioned to and collected from such properties in a manner that fairly and reasonably apportions such expenses based upon an objectively determinable methodology in accordance with Section 71.103 of the Martin County Code, or other similar method of cost recovery permitted under Florida law.

Goal 11.2. To coordinate growth management policies and water resource management. Martin County will coordinate and cooperate with the SFWMD and other local, regional, State and Federal agencies to ensure effective linkages between growth management and water resource management.

Objective 11.2A. To maintain a 10-year Water Supply Facilities Work Plan to link growth management with the SFWMD's Upper East Coast Water Supply Plan. The Work Plan projects will be described in the CIP and updated annually.

Policy 11.2A.1. The County shall consider the most current version of the Upper East Coast Water Supply Plan in the annual updates of the CIP.

Policy 11.2A.2. The 10-Year Water Supply Facilities Work Plan should meet current and projected potable water needs based on the availability and appropriate use of regional water resources and the combined use of alternative water supplies. The Work Plan shall incorporate alternative water supply projects from the SFWMD's Upper East Coast Water Supply Plan. The Work Plan shall be consistent with the County's Water Use Permit renewals.

Policy 11.2A.3 . The County shall work with each regional utility to define the ultimate boundaries of that entity's potable water and wastewater service areas and to coordinate development of consistent master plans and work plans when applicable. Every regional provider's master plan and/or work plan is encouraged to consider the Upper East Coast Water Supply Plan. This task shall be completed after the regional providers have adopted their respective work plans, if applicable.

Policy 11.2A.4 . Martin County shall coordinate with SFWMD, suppliers of potable water, and municipalities within Martin County on issues of potable water supply. The County shall make available information regarding changes in land use, population and demand projections, Level of Service, and other information relevant to the provision of potable water.

Objective 11.2B. To foster compatibility between the built and natural systems.

Policy 11.2B.1. The County shall coordinate with the SFWMD and other entities involved in the Upper East Coast Water Supply Plan to evaluate the long-term needs of the natural and built environments. The aim of this collaboration is to restrict activities that result in degradation or overuse of potable water resources and to assure adequate water supply for the competing needs of native ecosystems, agriculture and domestic and industrial users.

Policy 11.2B.2. The County shall coordinate with the SFWMD to ensure consistent planning throughout Martin County.

Policy 11.2B.3. The County shall support efforts to integrate land use and water resource planning to ensure the availability of water for regional water management purposes.