

**FEASIBILITY STUDY OF WATER SUPPLY
INTEGRATION
ST. LUCIE COUNTY**

Task 1.2
Summary Memorandum

July 2006

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List of Acronyms

AADF	annual average daily flow
ERC	equivalent residential connections
FDEP	Florida Department of Environmental Protection
FPUA	Fort Pierce Utility Authority
JEA	James E. Anderson water treatment facility
MDF	maximum daily flow
MG	million gallons
MGD	million gallons per day
NPDES	National Pollution Discharge Elimination System
PSLU	City of Port St. Lucie Utilities
RCW	reclaimed water
RO	reverse osmosis
SFWMD	South Florida Water Management District
SLCU	St. Lucie County Utilities
SLW	St. Lucie West Services District
TMADF	three-month average daily flow
WTF	water treatment facility
WUP	Water Use Permit
WWTF	wastewater treatment facility
WWTP	wastewater treatment plant

EXECUTIVE SUMMARY

The purpose of this study is to summarize the existing and planned water resources projects within the County and to solicit input from the major water and wastewater providers on the “state of water” within St. Lucie County. A figure depicting the location of the water and wastewater facilities in the County is shown as Figure ES-1.

The City of Fort Pierce, with a population of approximately 39,000, is served by one water treatment plant and one wastewater plant owned and operated by Fort Pierce Utilities Authority (FPUA). The water treatment plant has a firm permitted capacity of 15.99 MGD maximum day while the wastewater treatment plant has a permitted capacity of 10 MGD average daily flow. The projected water capacity is expected to remain above the current demand projections through the year 2025. Wastewater flow projections indicate that system capacity may be exceeded slightly by late 2009; therefore, FPUA has begun preliminary design of a new facility that will provide approximately 5 MGD of additional treatment capacity.

St. Lucie County Utilities operates two water treatment plants and five wastewater treatment plants that serve the north portion of the County along with North and South Hutchinson Island. The combined water treatment capacity is approximately 0.3 MGD and the combined wastewater treatment capacity is approximately 2.4 MGD. The County also purchases water through a bulk water agreement with the Fort Pierce Utilities Authority. Water demand projections for the County indicate insufficient capacity in the existing system. However, as in the past, deficit capacity will be offset by bulk water purchases from the Fort Pierce Utilities Authority. Wastewater treatment capacity is expected to remain above flows through the year 2025.

The City of Port St. Lucie has a population of approximately 151,000, of which approximately 132,000 are served by two water treatment plants and three wastewater treatment plants. An additional wastewater plant is slated to begin operation in the coming months. The existing water and wastewater capacities are approximately 25 MGD and 6.7 MGD, respectively. The addition of the new Glades Water Reclamation Facility will provide an additional 6 MGD of capacity in the coming months. Also, the completion of the new Rangeline Water Treatment Facility in 2010 will provide approximately 10 MGD of additional water. Future demand projections for water and wastewater indicate the City will have adequate capacity to serve the expected populations projections through the year 2025.

St. Lucie West Service district provides water and wastewater services to approximately 16,000 residents. The current capacity of their water and wastewater treatment facilities is approximately

2 MGD each. Additional demands on the system are expected to be minimal as a result of almost complete buildout of the service area. As a result, the service area is expected to exert demands on the water and wastewater treatment facilities that can be met with current capacities through the year 2025.

A summary of current and expected water and wastewater capacities for St. Lucie County are shown on Tables ES-1 and ES-2, respectively.

Table ES-1 – Existing and Future Water Treatment Plants

Utilities	WTP	Permitted Capacity	Future Capacity
		MGD	MGD
Fort Pierce	Henry A Gahn (LS& RO)	15.99	25.27
St. Lucie County	Holiday Pines (RO)	0.288	1.50
	Lakewood Park Subdivision	0.04	0.04 ¹
City of Port St. Lucie	Prineville (LS & RO)	19.15	19.15
	James E Anderson (RO)	6.00	6.00 - 22.50
	Rangeline (2010-2030)	-	10.00 - 30.00
St. Lucie West Service District	St. Lucie West Utility (RO)	2.00	2.50
Small Permitted Facilities > 0.1mgd - North County Region	Panther Woods (LS)	0.432	-
	Spanish Lakes Country Club (RO)	0.33	-
	Spanish Lakes Fairways (RO)	0.57	-
Small Permitted Facilities in City of Port St. Lucie > 0.1mgd	Reserve Utility Corporation (LS)	0.414	
Other Unincorporated Small Permitted Facilities > 0.1mgd	The Grove	0.16	-

Note: Future capacities are by 2025 unless noted otherwise

1 – Lakewood Park slated for decommissioning approximately 2009 – 2011.

Table ES-2 – Existing and Future Wastewater Treatment Plants

Utilities	WWTP	Permitted Capacity	Future Capacity
		MGD	MGD
Fort Pierce	Fort Pierce Utility Authority WRF	10.00	10.00
	Mainland WRF	-	5.00
St. Lucie County	South Hutchinson Island WRF	1.60	1.60
	North Hutchinson Island WRF	0.50	1.00
	Holiday Pines WWTP Package Plant, Decomm 2012	0.30	-
	Fairwinds Golf Course WRF, Decomm 2007	0.022	-
	Lakewood Park Subdivision WWTP, Decomm 2009-2011	0.02	-
	North County Regional WRF, (2012-2025)	-	1.50 - 2.50
City of Port St. Lucie	Northport WWTP, Decomm 2007	2.50	-
	Southport WRF, Decomm 2012	2.80	-
	Westport WWTP	1.38	16.00
	Glades WRF (2007-2025)	-	6.00 - 30.00
St. Lucie West District Services	St. Lucie West Utility WRF	2.00	2.50
Small Permitted Facilities > 0.1mgd - North County Region	Panther Woods WWTP	0.11	-
	Spanish Lakes Country Club WWTP	0.16	-
	Spanish Lakes Fairways WRF	0.25	-
Small Permitted Facilities in City of Port St. Lucie > 0.1mgd	Reserve Utility Corporation WRF	0.18	-
	Savannah Club WWTP	0.15	-
Other Unincorporated Small Permitted Facilities > 0.1mgd	The Grove WWTP	0.16	-
	Harbour Ridge WRF	0.12	-

Note: Future capacities are through 2025 unless noted otherwise

A chart showing the combined water and wastewater capacity versus the projected demand for all utilities within the county is shown as Figures ES-2 and ES-3.

Figure ES-2 – Projected St. Lucie County Water Demands vs. Capacity

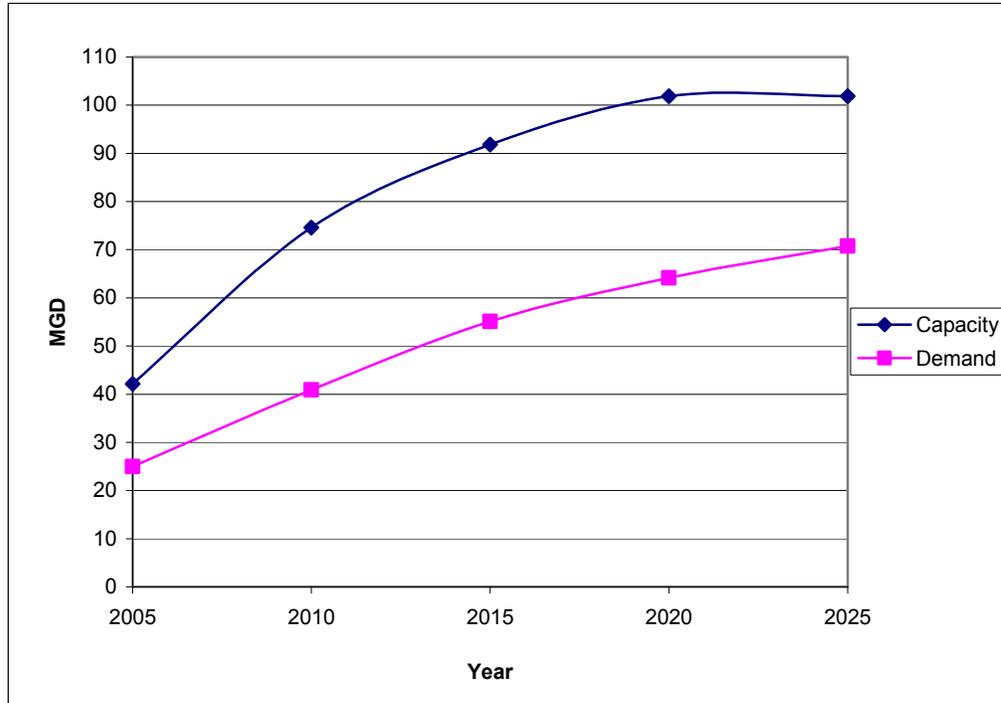
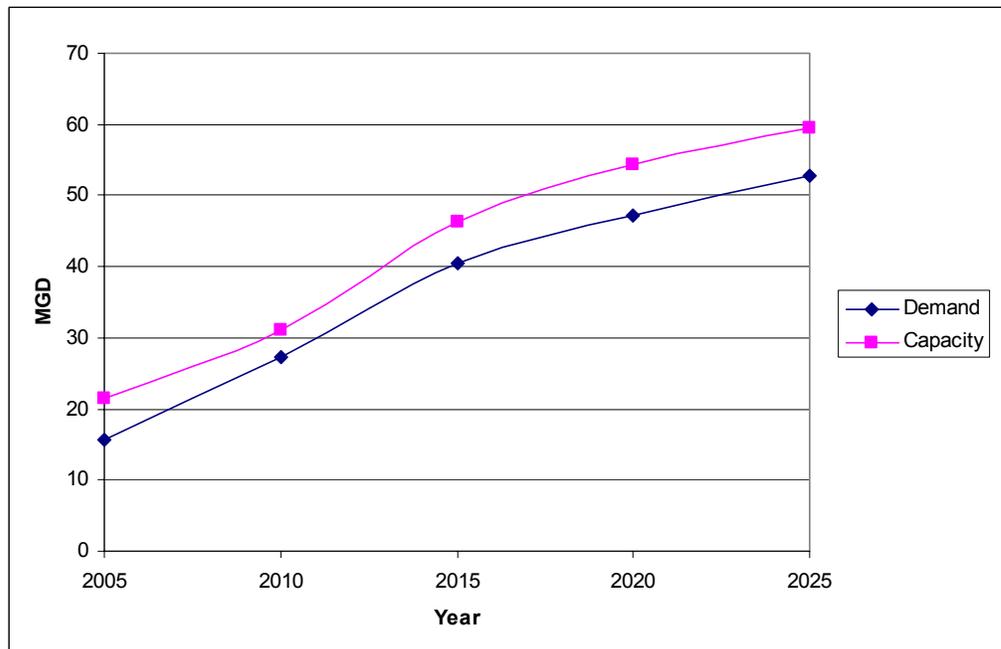
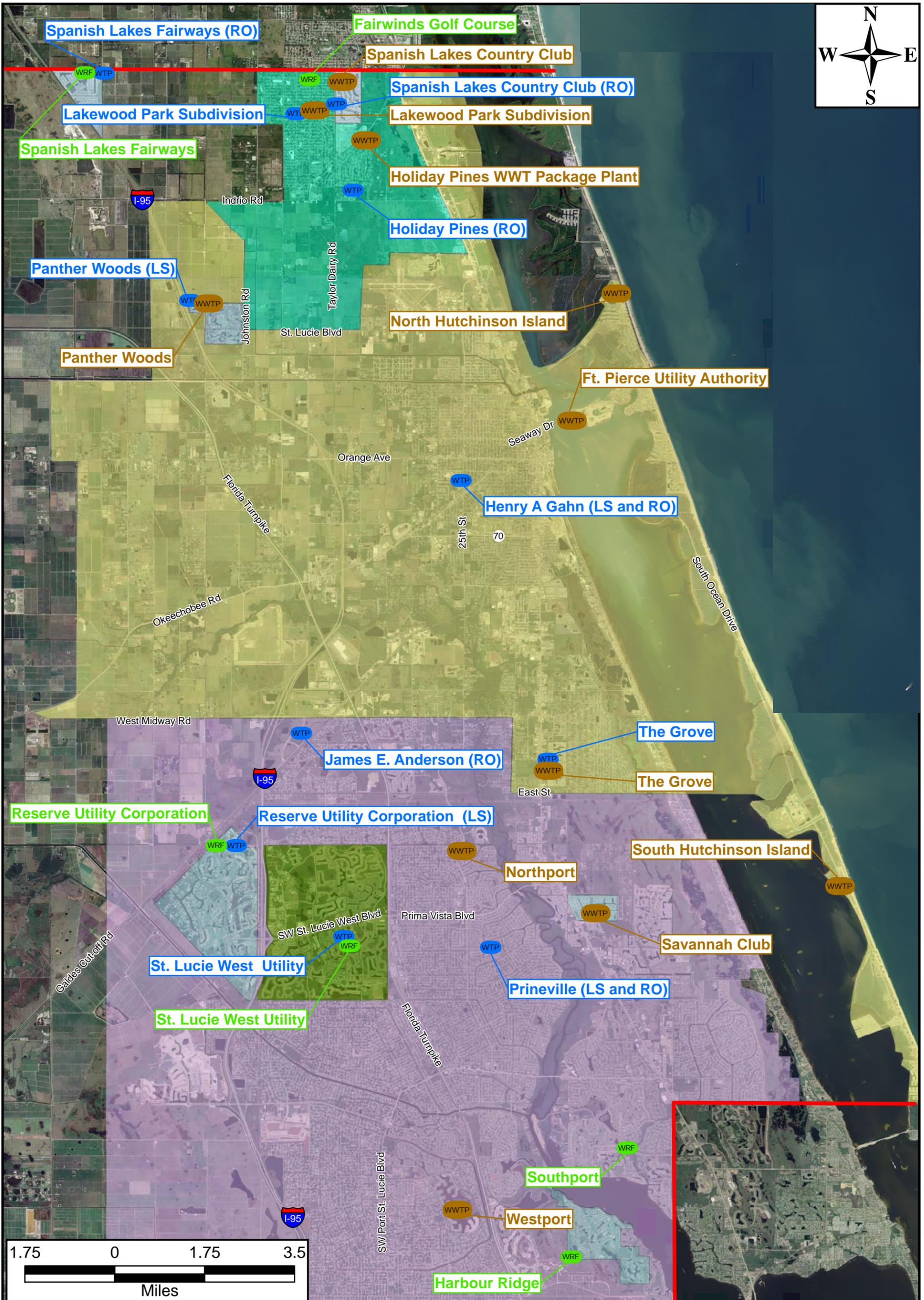


Figure ES-3 – Projected St. Lucie County Wastewater Demands vs. Capacity





Legend:

- Water Reclaim Facility
- Water Treatment Plant
- Wastewater Treatment Plant

- St. Lucie West Utility
- St. Lucie County Utilities
- City of Port St. Lucie Utilities

- Ft. Pierce Utilities
- Small Permitted Facilities
- St. Lucie County Boundary

RO: Reverse Osmosis
 LS: Lime Softening

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Existing Water & Wastewater Treatment Facilities

ST. LUCIE COUNTY



FIGURE ES-1

1.0 INTRODUCTION AND BACKGROUND

The purpose of this study is to summarize the existing and planned water resources projects within the County and to solicit input from the major water and wastewater providers on the “state of water” within St. Lucie County. In addition, the study will solicit information from the major providers to establish the current status of water and wastewater infrastructure planning. The four utilities in the study are St. Lucie County Utilities (SLCU), Fort Pierce Utilities Authority (FPUA), City of Port St. Lucie Utilities (PSLU), and St. Lucie West Services District (SLW).

The study consists of collecting documentation addressing current Water Use Permits, Capital Improvement Plans, Master Plans, conservation plans, and existing and projected water and wastewater demands and flows in St. Lucie County. Meetings were conducted with each of the four member utilities to discuss changes made to the documents being requested and to determine the individual utility views on regionalization. The collected information is to be presented to Water and Wastewater Task Force comprised of individuals of the member utilities.

2.0 ST. LUCIE COUNTY SERVICE AREAS

2.1 Fort Pierce Utilities Authority

FPUA services potable water to incorporated areas of City of Fort Pierce and surrounding areas of unincorporated St. Lucie County, including South Hutchinson Island to Martin County Line. FPUA also provides water to North Hutchinson Island to the Indian River County line, St. Lucie County west of Fort Pierce and northern St. Lucie County through bulk water agreements. Currently, FPUA serves 17,500 water accounts and 14,000 wastewater accounts not including the areas served by the bulk water agreement with St. Lucie County that comprise approximately 61 square miles. FPUA's single wastewater facility serves approximately 49,029 people in northeastern St. Lucie County (CH2MHILL, 2006). FPUA service area is depicted in Figure 2.1 Utility Service Areas in St. Lucie County.

2.2 St. Lucie County Utilities

SLCU provides potable water to the unincorporated areas of the north county mainland and through a FPUA metered interconnect to North Hutchinson Island. Wastewater services to the unincorporated north county mainland and all of North and South Hutchinson Island are also provided by SLCU. According to the SLCU 2004 Water and Wastewater Master Plan, the County sold the Port St. Lucie water and wastewater utility system to the City of Port St. Lucie in 1994. In 1991 SLCU regionalized North Hutchinson Island utilities by acquiring the Bryn Mawr and North Hutchinson Island water and wastewater utilities (LBFH, 2004). In conjunction with regionalization efforts on North Hutchinson Island, in 1996 the SLCU also regionalized the wastewater utilities on South Hutchinson Island. In 1997 the SLCU acquired the Holiday Pines water and wastewater utilities from Holiday Pines Service Corporation. The SLCU service area is depicted in Figure 2.1 Utility Service Areas in St. Lucie County.

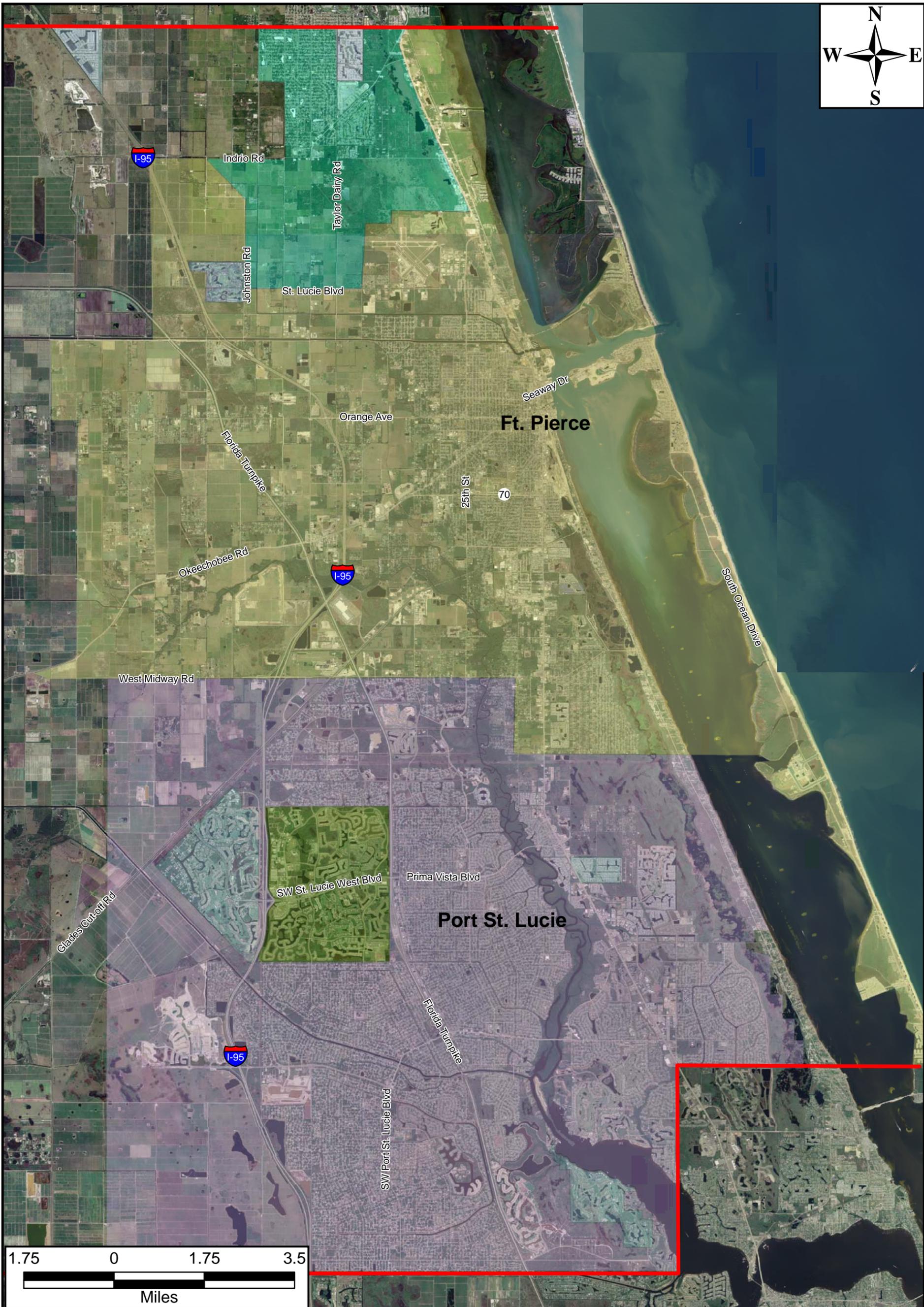
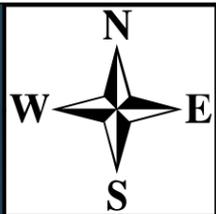
2.3 City of Port St. Lucie Utilities

PSLU provides potable water and wastewater services to an area of approximately 132 square miles, including the entire city limits and some unincorporated areas of St. Lucie County. The service area is roughly bordered to the north by Midway Road, to the east by the Indian River, to the west by Rangeline Road and to the south by the St. Lucie County southern boundary (Reiss Environmental, 2005). The current system, as of mid

2005, includes service to approximately 55,000 water and 34,000 wastewater connections. The City of Port St. Lucie, since its first development and incorporation in 1960, has grown to approximately 151,000 people. In the past decade the City of Port St. Lucie has become one of the fastest growing cities in Florida. Approximately half of the current 132 square mile service area is undeveloped with several large planned communities scheduled to be developed in the near future (Reiss Environmental, 2005). In 2004 PSLU annexed 42 square miles of developing communities west of Interstate 95 and current plans are to continue expansion to the west and within its still undeveloped service area (Reiss Environmental, 2005). The PSLU service area is depicted in Figure 2.1 Utility Service Areas in St. Lucie County.

2.4 St. Lucie West Services District

The St. Lucie West Services District, formed in 1988, is comprised of 4,700 acres with a mix of residential, commercial, institutional and light industrial development. According to the SLW Utility District Utility Master Plan, the SLW service area will reach complete buildout by 2020 with a population of 33,000 and 13,000 equivalent residential connections (ERC). Currently, St. Lucie West Utilities sells 50,000 gallons per day to the Reserve, an adjacent development located to the west. According to the Upper East Coast Water Supply Plan Update it is anticipated that SLW will eventually provide all water and wastewater services to the Reserve (SFWMD, 2004). The SLW service area is depicted in Figure 2.1 Utility Service Areas in St. Lucie County.



Legend:

- St. Lucie West Services District
- St. Lucie County Utilities
- City of Port St. Lucie Utilities
- Ft. Pierce Utilities Authority
- Small Permitted Facilities
- St. Lucie County Boundary

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Utility Service Areas

ST. LUCIE COUNTY



FIGURE 2.1

3.0 COLLECTION OF UTILITY INFORMATION

3.1 Summary of Documents and Reports

Each of the four utilities was contacted and requested the following documents addressing existing and proposed water supplies:

- Current Water Use Permits
- Current Five-year Capital Improvement Plans
- Current Water and Wastewater Master Plans
- Current (2006) and projected water/wastewater flows
- Current and projected raw water supply capacity
- Conservation Plans

In addition to the documents listed above a listing of all Florida Department of Environmental Protection (FDEP) permitted wastewater plants were obtained from the FDEP and can be found in Appendix A. The South Florida Water Management District (SFWMD) provided M&E with the 2004 SFWMD Upper East Coast Water Supply Plan and pending Alternative Water Supply Grant applications. The 2004 Upper East Coast Water Supply Plan develops comprehensive long-term regional planning for Martin County, St. Lucie County and eastern Okeechobee County while the Alternative Water Supply Grant applications outline future water supply projects.

Information such as current and projected water and wastewater flows and raw water capacities were documented in the individual utilities Master Plans and Water Use Permits. Documents such as Initial Capacity Analysis Reports and Updated Analysis Report were given additionally to the documents requested above. Nonetheless, recent up to date information was individually requested by telephone or E-mail from the individual utilities as needed.

As part of the study, M&E met with each individual utility to interview personnel about modifications, if any, to the documents received and to get an idea on what the utility's views were on regionalization.

3.2 Current and Proposed Water and Wastewater Facilities

3.2.1 Water Facilities

3.2.1(a) Fort Pierce Utilities Authority

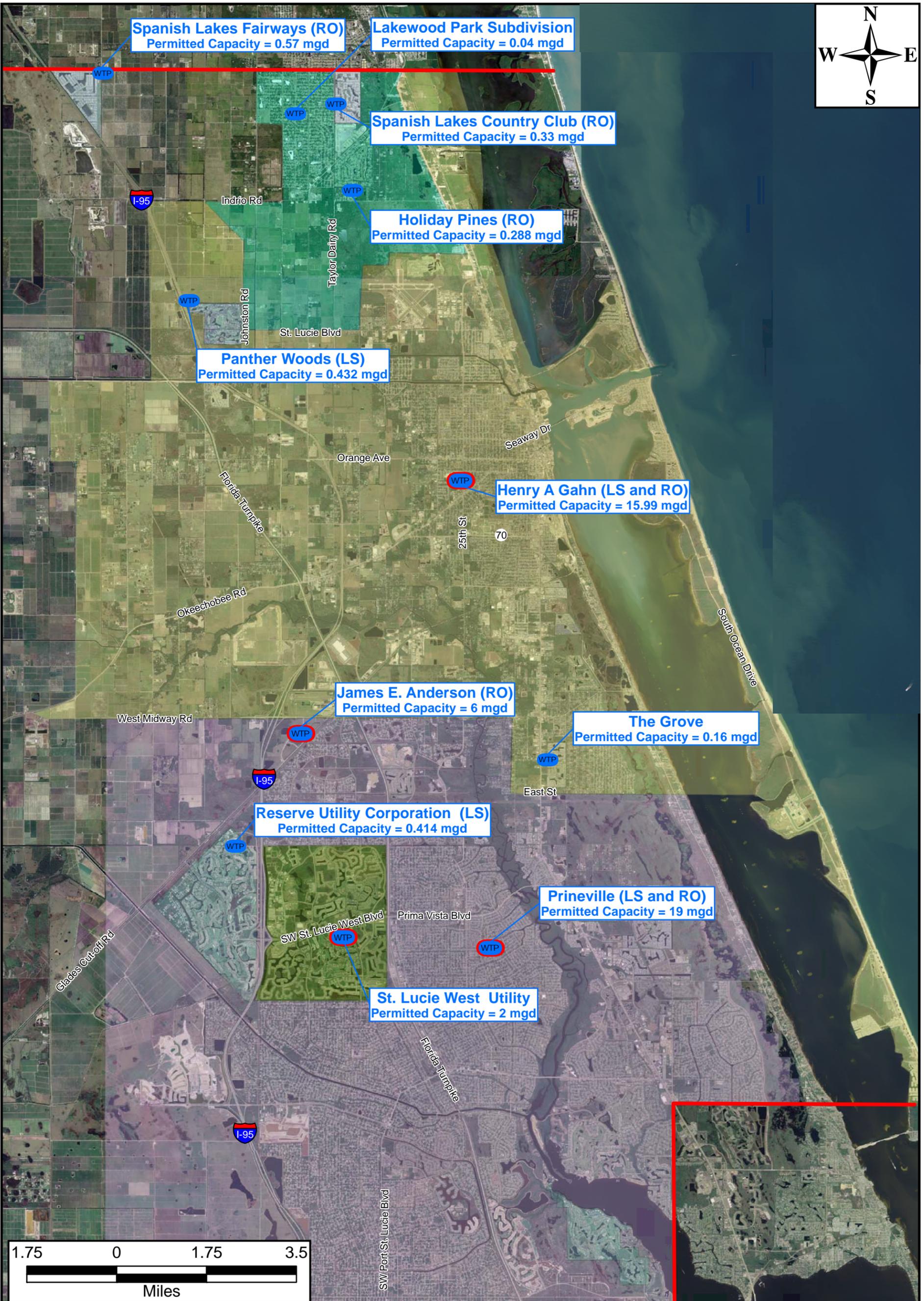
3.2.1(a)(1) Henry A. Gahn Water Treatment Facility

Fort Pierce Utilities Authority treats and supplies potable water to FPUA service areas through the Henry A. Gahn Water Treatment Facility. There are two different water treatment plants within the facility. The first and oldest plant uses a lime softening/dual media filtration process to treat water obtained from 40 shallow surficial aquifer wells and one Floridan aquifer well. The second and newest treatment plant constructed in 2002 is a reverse osmosis (RO) plant that treats brackish waters pumped from a series of eight Floridan aquifer wells. Brine disposal is achieved through a single Class I injection well with a capacity of 3.59 MGD. On average, a total of 8.8 million gallons per day (MGD) of water is processed by the water treatment facility (WTF) from both aquifers. Henry A. Gahn Water Treatment Facility location can be found in the Figure 3.1 – Existing Water Treatment Facilities.

Both treatment plants have a combined maximum daily flow (MDF) of 11.50 MGD and a permitted capacity of 15.99 MGD. The lime softening plant has a firm permitted capacity of 12.99 MGD while the RO plant has a firm capacity of 3.0 MGD. By September 2006, the RO firm capacity should be increased by 3.0 MGD when a third RO skid is placed into service. In the next 20 years the lime softening plant will reach its useful life and will be decommissioned. By this time 100 percent of the water treated will come out of the Floridan Aquifer System and will be treated solely by RO method.

The potable water system has a combined nominal storage capacity of 9.6 million gallons (MG) throughout the FPUA service area (LBFH, 2006). Approximately 64% of the storage is located at the Henry A. Gahn facility while the rest is strategically located within the service area. The approximate locations and the nominal capacities in the potable water system are shown in Table 3.1.

Since 2004, SLCU and FPUA have had a 30 year interconnect agreement where FPUA has agreed to provide bulk potable water, wastewater, and reclaimed water service to SLCU. The current agreement expires in 2034, but is renewable for two additional 30 year terms (St. Lucie County, 2004).



Spanish Lakes Fairways (RO)
Permitted Capacity = 0.57 mgd

Lakewood Park Subdivision
Permitted Capacity = 0.04 mgd

Spanish Lakes Country Club (RO)
Permitted Capacity = 0.33 mgd

Holiday Pines (RO)
Permitted Capacity = 0.288 mgd

Panther Woods (LS)
Permitted Capacity = 0.432 mgd

Henry A Gahn (LS and RO)
Permitted Capacity = 15.99 mgd

James E. Anderson (RO)
Permitted Capacity = 6 mgd

The Grove
Permitted Capacity = 0.16 mgd

Reserve Utility Corporation (LS)
Permitted Capacity = 0.414 mgd

Prineville (LS and RO)
Permitted Capacity = 19 mgd

St. Lucie West Utility
Permitted Capacity = 2 mgd



Legend:

- Water Treatment Plant
- Water Treatment Plant (Permitted Capacity > 1 mgd)
- St. Lucie West Services District
- St. Lucie County Utilities
- City of Port St. Lucie Utilities
- Ft. Pierce Utilities Authority
- Small Permitted Facilities
- St. Lucie County Boundary

RO: Reverse Osmosis
LS: Lime Softening

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Existing Water Treatment Facilities

ST. LUCIE COUNTY



FIGURE 3.1

Table 3.1 – Fort Pierce Utilities Authority - Existing Water Storage Capacity

Tank Description		Nominal Capacity (MG)
H. A. Gahn WTP	Clearwell	0.6
	Tank No. 1	1.0
	Tank No. 2	1.5
	Tank No. 3	3.0
Savannah Road		1.5
Jaycee Park- Repump No. 1		1.0
South Hutchinson Island Repump No. 2		1.0
Total		9.6

3.2.1(b) St. Lucie County Utilities

SLCU owns and operates two water treatment plants on the mainland, Holiday Pines Water Treatment Plant (WTP) and Lakewood Park Subdivision WTP, and one distribution system each on North Hutchinson Island and in the Airport Utility District. The water distributed to North Hutchinson Island residents and to the Airport Utility District is purchased in bulk from FPUA. SLCU does not own or operate water facilities on South Hutchinson Island; however FPUA and SLCU have an agreement stating that in the future the County has the right to purchase the water distribution facilities of the Island. St. Lucie County water treatment facilities can be found in Figure 3.1 – Existing Water Treatment Facilities.

3.2.1(b)(1) Holiday Pines Water Treatment Plant

The Holiday Pines RO WTP, located just north of Indrio Road, was purchased from the Holiday Pines Service Corporation by St. Lucie County in 1999. With an average daily flow of 0.14 MGD, the WTP serves 1,000 equivalent resident units through approximately 10 miles of distribution piping. The WTP, with a permitted capacity of 0.288 MGD, receives water from two surficial wells and serves all of the Holiday Pines subdivision in addition to some commercial and residential areas of Kings Highway and Indrio Rd. The ultimate water treatment and storage capacity at this site is 3.0 MGD. RO reject is pumped to a cascade aerator and stored in two cylindrical tanks prior to being pumped to the Holiday Pines WWTP. Due to the residential nature of the surrounding area, there is little room for future expansion.

With the bulk water agreement in place, the expansion of the Holiday Pines Water Treatment Plant has been placed on hold to incorporate the use of FPUA water through the current system. This will include a one million gallon storage tank with high service pumps, conversion of the disinfection system to be compatible with FPUA finished water and interconnect of piping from FPUA to the current Holiday Pines' system. This work is under construction and expected to be completed by September 2006.

Any future expansion from 0.288 MGD to 1.5 MGD will require additional raw water wells to be installed in the Floridan Aquifer and additional RO capacity to the existing plant. The expansion will be located at the present Holiday Pines WTP but the additional wells are likely to be located approximately 1.5 miles to the south on St. Lucie County Airport property.

3.2.1(b)(2) Lakewood Park Subdivision Water Treatment Plant

The Lakewood Park Subdivision WTP, constructed in 1976, has a permitted capacity of 0.040 MGD and utilizes a single 4-inch water well from the surficial aquifer. The current SLCU Master Plans indicates the raw water well, ground storage tank and cascade aerator are in poor condition and in need of replacement. The facility has a 2,000-gallon storage capacity and serves 108 single family residential lots. The subdivision is not individually metered and each connection is charged a flat rate each month.

3.2.1(b)(3) North Hutchinson Island Distribution System

SLCU water facilities in the North Hutchinson Island Service Area consist of a water distribution system that serves all development on the island and storage and pumping at the Bryn Mawr utility site. All water distributed through this system is purchased in bulk from FPUA. The distribution system currently serves 3,645 equivalent residential connections (ERC's). Current plans are to replace the facilities in the future with a 2.0-mg pre-stressed concrete storage tank and high service pumping facility.

3.2.1(b)(4) Airport Utility District Distribution System

The potable water distribution system that serves the St. Lucie County International Airport is owned and operated by SLCU. The water is purchased in bulk from FPUA and serves the fire station, airport facilities and businesses located south of the main runway between Hammond Road and Industrial 33rd Street. Currently 64 commercial connections are serviced by this distribution system.

3.2.1(b)(5) Permitted Small Facilities in St. Lucie County

Three permitted small water supply facilities exist on the mainland north county. These utilities were unable to annex with an existing utility at the time of their development and have therefore formed their own small utility. Locations of these three private treatment plants are shown in Figure 3.1 – Existing Water Treatment Facilities

Panther Woods, which has a lime softening WTP with a permitted capacity of 0.432 MGD, has operated using only aeration and filtration for approximately the last 20 years. The most recent data available indicates the WTP has a demand that is equal to approximately 20 percent of its design capacity (LBFH, 2004).

The second facility serves the Spanish Lakes Country Club, an adult mobile home park with approximately 1,300 lots. The WTP receives water from four surficial wells and has permitted capacity of 0.33 MGD. Storage is accomplished through the use of one precast concrete tank with a capacity of 0.293 MG. Water treatment is performed using aeration, settling and gas chlorination.

The existing capacity of the Spanish Lakes Country Club WTP is expected to be adequate for future demands. Currently the plant is operating at approximately 80% of its design capacity and increased demands are not expected since the community has been in buildout conditions since the late 1980's.

The third facility, Spanish Lakes Fairways, is a 1,600-unit community with both water and wastewater facilities. The WTP facility is an RO plant with a permitted capacity of 0.570 MGD that receives water from four surficial wells. Brine from the RO is blended with raw water and disposed into an onsite lake system (LBHFH Inc., 2004). One prestressed concrete tanks provides 0.7 MG of storage prior. The most recent data indicates the WTP is operating at approximately 50% of design capacity. Additional capacity is not expected as the community has reached the point where additional remaining development can be easily serviced by the existing system.

3.2.1(c) City of Port St. Lucie Utilities

Port St. Lucie Utilities owns and operates three water treatment facilities, a distribution system, and three storage tanks and repump stations within their service area. The Prineville Facility, located on Odgen Lane, houses two plants: an older lime softening plant permitted at 8.0 MGD and an RO plant permitted at 11.15 MGD. The James E. Anderson Facility (JEA), a 6.0 MGD RO plant located on LTC Parkway, was completed in

2005. In addition, three storage and repump stations, Midport, Southport and Westport are located throughout the PSLU service area to maintain system pressures. The City has interconnects with neighboring utilities SLW, FPUA, SLCU and Martin County Utilities that will allow water to enter and exit the distribution system during times of emergency (Reiss Environmental, 2005). PSLU treatment plant locations can be found in Figure 3.1 – Existing Water Treatment Facilities.

3.2.1(c)(1) Prineville Lime Softening and RO Treatment Plant

The Prineville WTP houses two treatment plants on the site, the Prineville Lime Softening Plant and the Prineville RO Plant. The Prineville Lime Softening Plant, originally constructed in 1963 and subsequently updated to a buildout capacity of 8.0 MGD, utilizes water from the surficial aquifer. Storage is achieved with the use of a single 0.6 MG on site tank.

The RO plant, utilizing water from the Floridan aquifer, began operations in 1999 and was expanded in 2003 to its buildout design capacity of 11.15 MGD (Reiss Environmental, 2005). The Prineville Reverse Osmosis Plant has a buildout storage capacity 2.0 MG.

3.2.1(c)(2) James E. Anderson RO Water Treatment Plant

The James E. Anderson RO WTP, which treats water from the Floridan aquifer, was constructed in 2005 and has a capacity of 6.0 MGD with the potential for future expansion to a capacity of 20.0 MGD. The current storage capacity of 4.0 mg allows for a future buildout capacity of 12 MG.

A summary of the three water treatment plants currently in operation in the PSLU service area is show in Table 3.2.

Table 3.2 – Port St. Lucie Utilities - Summary of Existing Water Treatment Plants

Description	Prineville WTF Lime Softening	Prineville WTF RO	James E. Anderson WTF
Rated Permit Capacity (MGD)	8.0	11.15	6.0
Buildout Capacity (MGD)	8.0	11.15	20.0
Treatment Process	Lime Softening	Low Pressure RO	Low Pressure RO
Storage Capacity (MG)	0.6	2.0	4.0
Buildout Storage Capacity (MG)	0.6	2.0	12.0

3.2.1(c)(3) Water Repump Stations

Water repump stations are strategically located to maintain pressure in remote regions of the Port St. Lucie distribution system. Midport Repump Station is located east of US 1 off Tiffany Road; Southport Repump Station is located west of US 1 and south of Port St. Lucie Blvd; while Westport Repump Station is located immediately west of the Florida Turnpike and south of the Southport Repump Station. Table 3.3 – Summary of Existing Water Repump Stations and Capacity below summarizes the existing and buildout capacities of the three repump stations in the service area.

Table 3.3 – Port St. Lucie - Summary of Existing Water Repump Stations and Capacity

Description	Midport Repump	Southport Repump	Westport Repump
Existing Storage Capacity (MG)	1.5	3.0	2.0
Buildout Storage Capacity (MG)	3.0	6.0	4.0

3.2.1(d) Future Port St. Lucie Utilities Water Treatment Facilities

3.2.1(d)(1) Rangeline Water Treatment Plant

According to the most recent Master Plan for PSLU, there is a need for an additional 30 MGD of water treatment capacity, beyond current expansion plans at existing facilities, at one or more new facilities within the next 25 years (Reiss Environmental, 2005). At present, PSLU is weighing the possibility of locating a new water treatment facility in the vicinity of Rangeline Road, located southwest of Tradition. This proposed facility will initially serve as a booster pump station to provide pressure and storage to western areas of the county while the new WTF is permitted and built. Current plans envision the need for the plant to expand to 30 MGD over the next 25 years. The future location of Rangeline WTP is found in Figure 3.2 – Proposed Water and Wastewater Treatment Facilities.

3.2.1(e) St. Lucie West Services District

3.2.1(e)(1) St. Lucie West RO Water Treatment Facility

The St. Lucie West RO Water Treatment Facility, located on SW Utility Drive, is an RO plant with a permitted capacity of 2.0 MGD used to treat water from the Floridan aquifer. According to the most recent data provided by the utility, in 2003 the average daily demand was 0.95 MGD with a maximum day demand of 1.41 MGD. Brine, or reject water from the RO process is disposed of by blending with reclaimed water in the St. Lucie West irrigation water holding pond. The utility also has an emergency interconnect with PSLU. The location of SLW WTF can be found in Figure 3.1 – Existing Water Treatment Facilities.

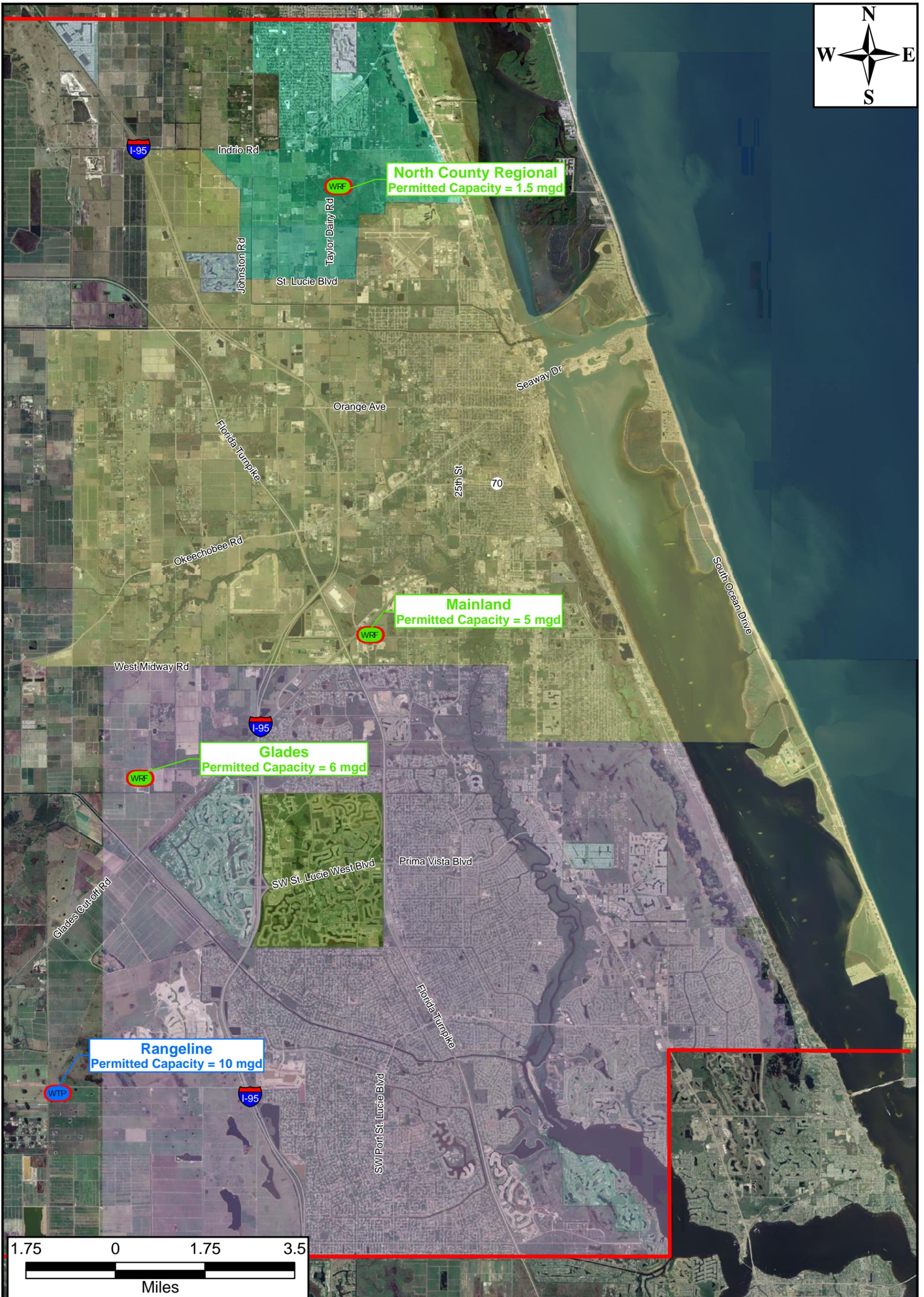
The Reserve Utility Corporation currently and owns operates a WTP lime softening facility with a permitted capacity of 0.414 MGD. The Reserve Utility also receives 50,000 gallons per day of potable water from St. Lucie West.

A summary of all existing and future water treatment facilities along with their permitted capacities are shown in Table 3.4.

Table 3.4 – Existing and Future Water Treatment Plants

Utilities	WTP	Permitted Capacity	Future Capacity
		MGD	MGD
Fort Pierce	Henry A Gahn (LS& RO)	15.99	25.27
St. Lucie County	Holiday Pines (RO)	0.288	1.5
	Lakewood Park Subdivision	0.04	0.04
City of Port St. Lucie	Prineville (LS & RO)	19.15	19.15
	James E Anderson (RO)	6.0	6.0 – 22.5
	Rangeline (2010-2030)	-	10.0 - 30.0
St. Lucie West Service District	St. Lucie West Utility (RO)	2	2.5
Small Permitted Facilities > 0.1mgd - North County Region	Panther Woods (LS)	0.432	-
	Spanish Lakes Country Club (RO)	0.33	-
	Spanish Lakes Fairways (RO)	0.57	-
Small Permitted Facilities in City of Port St. Lucie > 0.1mgd	Reserve Utility Corporation (LS)	0.414	
Other Unincorporated Small Permitted Facilities > 0.1mgd	The Grove	0.16	-

Note: Future capacities are by 2025 unless noted otherwise



Legend:

-  Water Reclaim Facility (Permitted Capacity > 1 mgd)
-  Water Treatment Plant (Permitted Capacity > 1 mgd)
-  St. Lucie West Services District
-  St. Lucie County Utilities
-  City of Port St. Lucie Utilities
-  Ft. Pierce Utilities Authority
-  Small Permitted Facilities
-  St. Lucie County Boundary

**Proposed
Water & Wastewater
Treatment Facilities**

ST. LUCIE COUNTY



3.2.2 Wastewater Facilities

3.2.2(a) Fort Pierce Utilities Authority

3.2.2(a)(1) Fort Pierce Utilities Authority Water Reclamation Facility

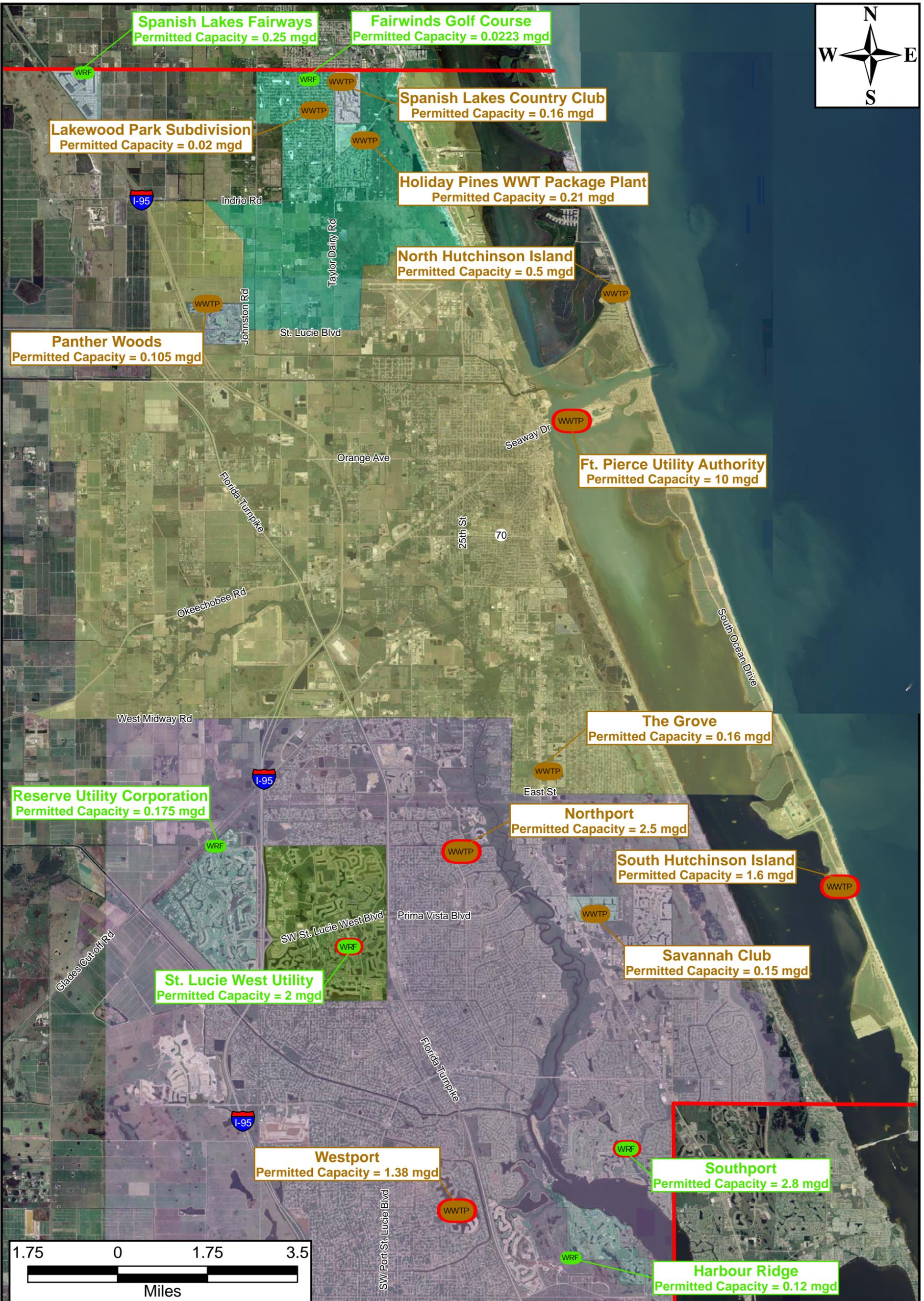
The Fort Pierce Utilities Authority Water Reclamation Facility, located on Seaway Drive, is an activated sludge system that serves approximately 49,029 people in northeastern St. Lucie County. In the future, the Utility will provide services to regions of St. Lucie County located north and west of the existing FPUA retail service area. The location of the FPUA Water Reclamation Facility is shown in Figure 3.3 – Existing Wastewater Treatment Facilities.

This Island Water Reclamation Facility is an activated sludge facility permitted for 10 MGD AADF, 11.5 MGD three-month average daily flow (TMADF) and 12.0 MGD maximum month average daily flow. The actual average flow treated at the plant is 5.62 MGD With disposal via one Class I injection well with an FDEP permitted injection capacity of 14.92 MGD maximum peak hour flow. Approximately 300,000 gallons per day of reclaimed water are used to supply irrigation and wash down needs at the Island Water Reclamation Facility. The Island Water Reclamation Facility was also previously regulated under FDEP permit to discharge to the Indian River Lagoon under the National Pollution Discharge Elimination System (NPDES). That permit appears to have expired in May of 2005 and a permit renewal is currently under review by the FDEP.

3.2.2(b) Future FPUA Wastewater Facilities

3.2.2(b)(1) Mainland Water Reclamation Facility

According to the 2005 Water and Wastewater Master Plan Update, FPUA is determining the political, economic and technical feasibility of relocating the Island Water Reclamation Facility to the mainland. The current thinking among city officials is the Island Water Reclamation Facility and the Mainland Water Reclamation Facility will both simultaneously operate for 5 to 15 years and that the Island Water Reclamation Facility will be decommissioned in a 10 to 20 year time frame. FPUA Director of Water and Wastewater Systems, William Thiess, in an interview with M&E on April 26, 2006, stated there is no firm timetable to implement this plan. Impediments to the plan include the high cost of decommissioning a relatively new plant, expanded in 1986, and incorporating that capacity into a new facility on the mainland. Current estimates to build a replacement facility on the mainland have placed the cost in excess of \$60 million.



Legend: Water Reclaim Facility Water Reclaim Facility (Permitted Capacity > 1 mgd) Wastewater Treatment Plant Wastewater Treatment Plant (Permitted Capacity > 1 mgd)		St. Lucie West Services District St. Lucie County Utilities City of Port St. Lucie Utilities RO: Reverse Osmosis LS: Lime Softening		Ft. Pierce Utilities Authority Small Permitted Facilities St. Lucie County Boundary		Existing Wastewater Treatment Facilities ST. LUCIE COUNTY	 FIGURE 3.3

Approximate location of the Mainland Water Reclamation Facility is seen in Figure 3.2 – Proposed Water and Wastewater Treatment Facilities.

3.2.2(c) St. Lucie County Utilities

3.2.2(c)(1) North Hutchinson Island Wastewater Reclamation Facility

The NHI collection system serves St. Lucie County commercial and residential developments on the island. The system is composed of approximately 2 miles of 8-inch gravity sewer, nine lift stations and approximately two miles of 4 and 8-inch force mains. Presently there remain about 400 single family homes still not connected to the collection system in addition to a county fire station, Pepper Park and the Fort Pierce Inlet State Recreation Area.

The North Hutchinson Island Wastewater Reclamation Facility, located on a four acre county-owned site on the west side of A1A, was completed and placed in operation in 1996. The current facility replaced two package treatment plants located at the site in addition to two package treatment plants at the Bryn Mawr utility site. The facility is permitted for 0.5 MGD and designed for expansion to buildout flows of 1.5 MGD for the North Hutchinson Island service area. Actual 2004 flows into the reclamation facility are 0.3 MGD.

Reclaimed water is reused through irrigation of nearby residents. An on site percolation pond is permitted for 2.56 mg of annual disposal for use during emergency situations when reclaimed water cannot be sent into the RCW distribution system. Records indicate the percolation ponds have not been used.

Reclaimed water storage is accomplished through the use of one 1.5 MG tank and one 0.5 MG reject tank. Sludge produced is lime stabilized and hauled offsite for land application. The latest documented inspection in the 2004 St. Lucie County Utilities North Hutchinson Island Annual Inspection and Evaluation Report showed the facility to be in good condition in 2004. The location of the North Hutchinson Island Wastewater Reclamation Facility is depicted on Figure 3.3 – Existing Wastewater Facilities.

3.2.2(c)(2) South Hutchinson Island Wastewater Reclamation Facility

The South Hutchinson Island Water Reclamation Facility, completed in 1997, is a 1.6 MGD (maximum month) permitted capacity plant designed to accommodate South Hutchinson Island at buildout conditions. Prior to completion in 1997 the area was serviced by various package plants. Along with the construction of the new plant, lift stations were upgraded or replaced as needed and force mains were installed to connect the lift stations to the new water Reclamation Facility (WRF). The location of the South Hutchinson Island Water Reclamation Facility is shown in Figure 3.3 Existing Wastewater Facilities. According to St. Lucie County Utilities, the annual average daily flow to the plant in 2005 was approximately 0.45 MGD. Reclaimed water is stored in a 2.0 MG pre-stressed concrete covered storage tank and is reused primarily through irrigation. Backup RCW disposal is provided by discharging to the Florida Power & Light Power Plant ocean discharge canal during prolonged wet weather seasons. The South Hutchinson Island wastewater collection system consist of approximately 12 miles of PVC pipe force main between the Fort Pierce city limits and the Martin County / St. Lucie County line to the south.

3.2.2(d) Mainland County Wastewater Facilities

3.2.2(d)(1) Holiday Pines Wastewater Treatment Package Plant

The Holiday Pines wastewater package plant is an extended aeration treatment plant designed for a 0.210 MGD flow. According to St. Lucie County Utilities, in 2005 the plant had an average daily flow of 0.113 MGD. Reclaimed water from the package plant and brine from the water treatment plant is discharged into seven percolation ponds while sludge produced at the facility is lime stabilized and transported to offsite land application. There is a golf course adjacent to the plant; however, no reclaimed water is produced for irrigation purposes at this time. In 1998 the plant reached close to 75 percent of the permitted capacity. According to the 2004 Reuse Inventory Report, the plant has a capacity of 0.18 MGD and had flows of 0.12 MGD in 2004. The site has limited area for expansion, therefore in order to convert this treatment plant to a regional plant that serves the entire North County, the percolation ponds would have to be removed to accommodate more equipment. The location of the Holiday Pine WWTP is shown in Figure 3.3 – Existing Wastewater Facilities.

3.2.2(d)(2) Lakewood Park Subdivision Wastewater Treatment Plant

The Lakewood Park Subdivision wastewater treatment plant is an extended aeration modular precast plant with a permitted capacity of 0.020 MGD. According to the 2004 Water and Wastewater Master Plan, the plant serves 108 single-family lots. This plant produces only secondary treatment standard water that is disposed into a single cell percolation pond. Although the single cell percolation pond has sufficient capacity for effluent disposal needs, a single cell pond does not conform to FDEP regulations. As a result, an FDEP Administrative Order was issued to address this violation.

Lakewood Park WWTP is scheduled to be decommissioned between 2009 and 2011. According to SLCU personnel discussions with M&E, flows will then be diverted to a regional facility. The location of the Lakewood Park WWTP is shown in Figure 3.3 – Existing Wastewater Facilities.

3.2.2(d)(3) Fairwinds Wastewater Reclamation Facility

The Fairwinds Wastewater Reclamation Facility is a 0.0223 MGD permitted capacity modular precast WWTP located at the County owned Fairwinds Golf Course. The location of the Fairwinds WRF is shown in Figure 3.3 Existing Wastewater Facilities. The plant treats flows from the Fairwinds Golf Course clubhouse, the airport and the Airport Industrial Park located to the east of the airport. According to the 2004 SLCU Master Plan, the plant produces reclaimed water that meets requirements for public access spray irrigation. The effluent is disposed through irrigation facilities adjacent to the golf course perimeter road and a single-cell percolation pond also adjacent to the WWTP. Sludge is lime stabilized and transported offsite for land application. The Fairwinds WRF is scheduled to be decommissioned in 2007 and its flows diverted to a regional facility, as stated by SLCU personnel in an interview with M&E in April 26, 2006.

3.2.2(e) Future SLCU Wastewater Facilities

3.2.2(e)(1) North County Regional Water Reclamation Facility

The NCRWRF is proposed to be located either on Taylor Dairy Road or the 42 acre county owned site adjacent to the airport. The facility will be designed to provide advanced secondary wastewater treatment and to produce irrigation quality reclaimed water. SLCU personnel indicate that the plant, expected to be permitted for a capacity of 1.5 MGD, will be in operation by 2012. According to the 2004 Water and Wastewater

Master Plan, a deep-injection well is recommended to dispose of the excess reclaimed water during excessive rainy periods when RCW demand is low. The Class I injection well will also provide a brine disposal alternative for the RO water treatment facility proposed to serve the north district. By 2020 the plant is proposed to be expanded to a permitted capacity of 2.5 MGD. The future location of the NCRWRF is shown in Figure – 3.2 Proposed Water and Wastewater Treatment Facilities.

3.2.2(f) Small Wastewater Facilities in St. Lucie County

3.2.2(f)(1) Mainland North County Area

Three small wastewater facilities exist on the mainland north county areas that have permitted capacities greater than 0.1 MGD. Regional water and wastewater were not available at the time of their development and they have therefore had to construct onsite “package” water and wastewater plants. Locations of these three small facilities are shown in Figure 3.3 – Existing Wastewater Treatment Facilities.

The Panther Woods WWTP, originally permitted at 0.180 MGD, is currently limited to only 0.105 MGD due to the limited size of its chlorine contact basins. According to the 2004 Reuse Inventory, the facility experienced average daily flows of 0.04 MGD. Reclaimed water is stored in two holding ponds with a combined capacity of 1.0 MG prior to being mixed with well water and reused of at an adjacent 120 acre golf course.

The Spanish Lakes Country Club WWTP has a permitted capacity 0.160 MGD. Although maximum monthly flow rates have approached 90% of design capacity there is little room for expansion at this small site. Sludge from the facility is lime stabilized and disposed of off site. Effluent is disposed of through a three-cell drainfield and a one-cell percolation pond. No additional demands are expected at this utility as the mobile home community has been built out since the 1980’s.

Spanish Lakes Fairways WWTP is a package plant with a permitted capacity of 0.250 MGD that the latest data indicates is operating at approximately 56% of capacity. Reclaimed water is reused through irrigation of the Spanish Lakes Fairways Golf Course while sludge is lime stabilized and disposed of off site. This facility has the capacity to service additional phases of development. There is little available room for meaningful expansion at this site.

3.2.2(g) Other Unincorporated Small Facilities in St. Lucie County

The Grove Condominiums, located on south U.S. 1 between Fort Pierce and the City of Port St. Lucie has a WWTP with a capacity greater than 0.1 MGD. The Grove owns and operates a 0.160 MGD WTP and a 0.160 MGD WWTP. Because of its geographical location, if the Grove were to be annexed it would likely be annexed by FPUA or PSLU. There are no existing SLCU connections in the vicinity to feasibly connect to the Grove. Bill Thiess, FPUA utility director, stated in a telephone conversation with M&E that PSLU has expressed interest in annexing with the Grove Condominium many times, however, the condo is privately owned and it is almost impossible to get all 300 to 400 owners to agree to annexation.

Harbour Ridge Condominiums, located in south St. Lucie County, owns and operates a 0.120 MGD WWTP. Due to its proximity to PSLU utilities, Harbour Ridge would be an ideal candidate for annexation into their wastewater system. According to Brad Macek, Utility Director of PSLU, Harbour Ridge development is considered a potential future connection although there are no current negotiations underway. Both treatment plant locations are depicted in Figure 3.3 – Existing Wastewater Locations.

3.2.2(h) City of Port St. Lucie Utilities

The City of Port St. Lucie owns and operates three wastewater treatment plants within its city limits; Northport Wastewater Treatment Plant, Southport Wastewater Treatment Plant and the Westport Wastewater Treatment Plant. There are plans to decommission the Southport WWTP and divert its flows to the Westport WWTP once it has been upgraded. All three WWTP's and the future Glades WWTP are biological nutrient removal plants (Reiss, 2005). PSLU WWTP locations can be found in the Figure 3.3 – Existing Wastewater Facilities.

3.2.2(h)(1) Northport Wastewater Treatment Plant

The Northport WWTP, which receives flows from 59 lift stations, serves the northern portions of the city service area (Reiss Environmental, 2005). Presently the Northport plant operates at a three month average daily flow of approximately 4 MGD. Effluent disposal is achieved via deep well injection. Current plans are for Northport WWTP to be phased out in 2007 when the Glades Water Reclamation Facility begins operation. In its place is a proposed transfer pump station that will divert flows to the Glades plant.

3.2.2(h)(2) Southport Reuse Wastewater Treatment Plant

Southport WWTP receives wastewater from a series of 82 lift stations throughout its service area in the eastern portions of the city. As the City expands the Westport WWTP, flows from Southport will be gradually transferred to that facility with the intention of its full decommissioning in 2012. Currently, reclaimed water from Southport is used for irrigation of the Ballantrae Golf and Country Club with deep well injection for water that is not reused (Reiss Environmental, 2005). The Southport facility is currently operating at a three month daily average flow of approximately 2.8 MGD.

3.2.2(h)(3) Westport Wastewater Treatment Plant

With a capacity of 4 MGD, the Westport WWTP serves the southwest portions of the city service area through a series of 68 lift stations (Reiss Environmental, 2005). Current plans are for the Westport WTP to be upgraded to a buildout capacity of 12MGD by 2012. As part of that upgrade, the facility will receive flows from the Southport plant until 2012 when that plant will be decommissioned. Presently, the City is constructing facilities to provide reclaimed water to nearby Tesoro Development. Alternate effluent disposal includes a 12 MGD deep injection well; a 0.5 million gallon rapid infiltration basin for backup disposal and a 173,700 gallon lined holding pond (Reiss Environmental, 2005).

3.2.2(i) Future Port St. Lucie Utilities Wastewater Facilities

3.2.2(i)(1) Glades Water Reclamation Facility

The Glades WRF, located off Glades Cutoff Rd, is slated to provide reclaimed water to existing and future developments within the newly annexed portions of the City. Upon completion of the facility in 2006, the plant will initially treat 6.0 MGD of wastewater and is expected to be expanded to a three month average daily flow of 24 MGD by approximately 2016 (Reiss Environmental, 2005). Alternate effluent disposal will be through an existing Class I underground injection well with a permitted peak hourly flow capacity 12.0 MGD.

Construction of the WWTP will be performed in three phases. Phase I and II of the construction are currently underway. Phase I, installation of the Glades WWTF Reclaimed Water System Off-site Reuse Mains, involves the construction of 12,000 linear feet of direct burial PVC lines and 6,000 linear feet of directionally drilled HDPE pipe under the St. Lucie River. Phase II, Construction of the Glades WWTF Reclaimed Water System, consists of construction of filters, filter dosing pumps and structures, chlorine contact chambers and storage, and reclaimed water piping. Phase III, Construction of

respectively (SFWMD, 2004). The location of St. Lucie West Water Reclamation Facility is shown in Figure 3.3 – Existing Wastewater Facilities.

A summary of all existing and future wastewater treatment facilities along with the permitted capacities be found in the table below.

Table 3.5 – Existing and Future Wastewater Treatment Plants

Utilities	WWTP	Permitted Capacity	Future Capacity
		MGD	MGD
Fort Pierce	Fort Pierce Utility Authority WRF	10.00	10.00
	Mainland WRF	-	5.00
St. Lucie County	South Hutchinson Island WRF	1.60	1.60
	North Hutchinson Island WRF	0.50	1.00
	Holiday Pines WWTP Package Plant, Decomm 2012	0.30	-
	Fairwinds Golf Course WRF, Decomm 2007	0.022	-
	Lakewood Park Subdivision WWTP, Decomm 2009-2011	0.02	-
	North County Regional WRF, (2012-2025)	-	1.50 - 2.50
City of Port St. Lucie	Northport WWTP, Decomm 2007	2.50	-
	Southport WRF, Decomm 2012	2.80	-
	Westport WWTP	1.38	16.00
	Glades WRF (2007-2025)	-	6.00 - 30.00
St. Lucie West District Services	St. Lucie West Utility WRF	2.00	2.50
Small Permitted Facilities > 0.1mgd - North County Region	Panther Woods WWTP	0.11	-
	Spanish Lakes Country Club WWTP	0.16	-
	Spanish Lakes Fairways WRF	0.25	-
Small Permitted Facilities in City of Port St. Lucie > 0.1mgd	Reserve Utility Corporation WRF	0.18	-
	Savannah Club WWTP	0.15	-
Other Unincorporated Small Permitted Facilities > 0.1mgd	The Grove WWTP	0.16	-
	Harbour Ridge WRF	0.12	-

Note: Future capacities are through 2025 unless noted otherwise

3.3 Population Projections

Population projections by service area from 2000 through 2025 for each of the St. Lucie County utilities are shown in Table 3.4 - Utility Service Area Population Projections. Information for FPUA, SLCU and PSLU was obtained from Upper East Coast Water Supply Plan (SFWMD,

2004) and based on Bureau of Economic and Business Research data published in 2002. Data was not reported on a yearly basis, therefore data for the years 2005 through 2020 were interpolated using a straight line growth scenario. Data for the year 2000 for SLW comes from the Upper East Coast Water Supply Plan while SLW's population projections from 2005 to 2025 were acquired directly from the SLW. SLCU and PSLU face the greatest growth within the next 20 years as these utilities have larger amounts of land available for expansion. On the contrary, SLW is 99% built out and will experience very little increase in population within its current boundaries.

Table 3.6 – Utility Service Area Population Projections

Utility Service Area Population Projections	Fort Pierce Utilities Authority		St. Lucie County Utilities		City of Port St. Lucie Utilities		St. Lucie West Services District	
	Total Population	Serviced Population	Total Population	Serviced Population	Total Population	Serviced Population	Total Population	Serviced Population
2000	61,848	58,612	80,940	19,334	68,667	61,228	4,180	4,025
2005	70,164	67,575	87,563	28,700	137,754	131,803	16,355	16,355
2010	78,480	76,538	114,829	39,009	206,841	202,378	16,355	16,355
2015	86,795	85,501	143,847	59,718	275,928	272,952	16,355	16,355
2020	95,111	94,464	242,662	107,260	345,015	343,527	16,355	16,355
2025	103,427	103,427	336,014	169,249	414,102	414,102	16,355	16,355
Percent Growth 2005 – 2025		53%		490%		214%		0%

Sources:

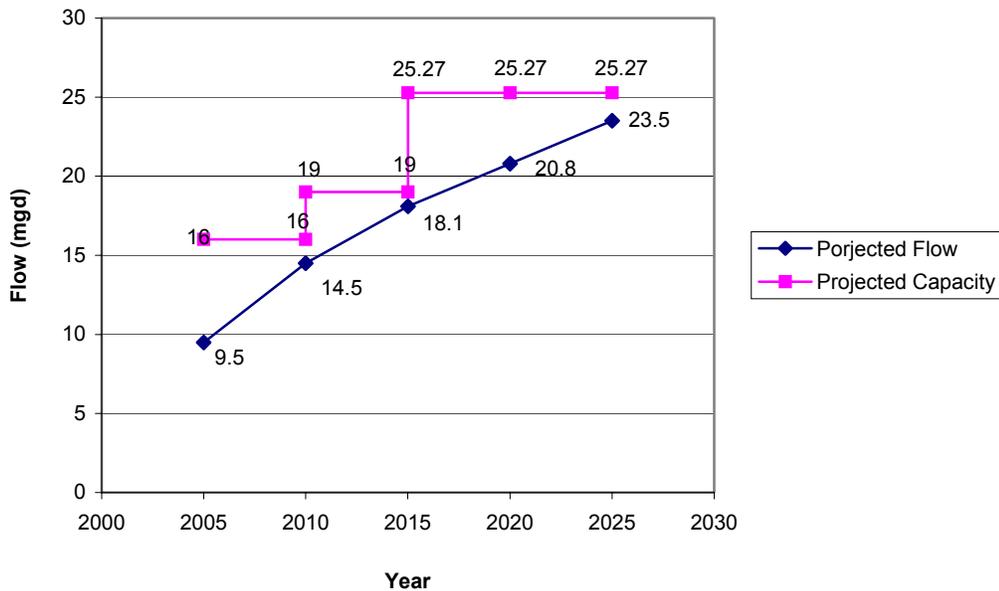
South Florida Water Management District – Upper East Coast Water Supply Plan, 2004
 Fort Pierce Utilities Authority - Water and Wastewater Master Plan Update Volume 1 Final Draft, 2005
 St. Lucie County Utilities - Water and Wastewater Master Plan Update, 2004
 City of Port St. Lucie - Water Delivery and Wastewater Collection Master Plan Final Report, 2005
 St. Lucie West Services District email correspondence, 2006

3.4 Current and Projected Water and Wastewater Capacity and Demands

3.4.1 Fort Pierce Utilities Authority

Current and projected water demands for the FPUA service area are shown in Figure 3.4. The figure shows average daily demands and firm maximum daily capacity for the FPUA service area which includes St. Lucie County North and West and North Hutchinson Island through a bulk water agreement between St. Lucie County and FPUA. Based on information from the SLC Planning Department, North Hutchinson Island will reach buildout flows by 2007. The information gathered from the FPUA Master Plan dated February 2006 and the 2005 Capacity Analysis Report (CAR), shows that the Henry A. Gahn WTP will be able to sustain all flow projections throughout 2025 (Globaltech, 2005). The projected average daily demand flow in year 2020 is an interpolated figure based on

Figure 3.4 Ft. Pierce Utilities Authority Water Flow Projections

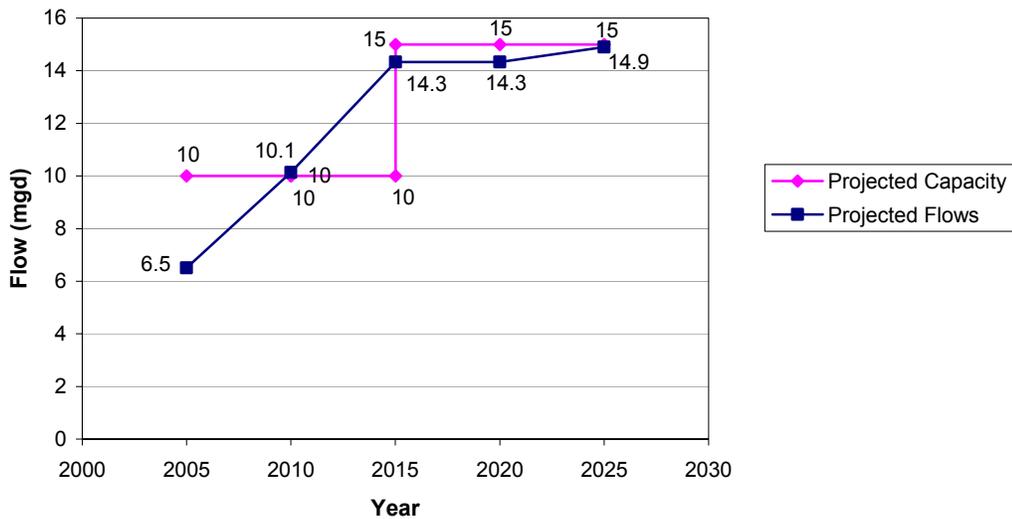


2015 and 2025 flows. Improvements to the well fields in 2005 potentially raised their firm capacity to 15.99 MGD. However, the 2005 CAR states that the well fields would be limited to a 14.6 MGD maximum day limit set by the existing SFWMD WUP. Nonetheless, this number will remain below the projected average daily demand. A modification of the WUP that will increase the FPUA allocations significantly is in progress.

According to the 2005 CAR, after Phase II improvements, it is anticipated the facility will have a total firm capacity of 19.0 MGD. The improvements, consisting of a 3.2 MGD membrane train, cartridge filter, degasifier, blower and a RO clearwell transfer pump, are anticipated to be completed in mid-2006. Phase III improvements will add built out capacity up to 23.3 MGD by the addition of a spare membrane feed pump, new emergency generator, automatic transfer switch, Floridan wells and a second deep injection well. This last phase should be sufficient to sustain average day flows to 2025 assuming the SFWMD allocates more water to FPUA.

Based on the FPUA 2006 Updated CAR, the projected wastewater AADF demands are below the projected AADF capacities (CH2M Hill, 2006). FPUA projected flows are based on the projected population multiplied by an averaged per capita flow rate from the last 6 years of 141 gallons per person per day. The average projected flows include all FPUA and the St. Lucie County population served by FPUA. Figure 3.5 – Fort Pierce Utilities Authority Wastewater Flow Projections, shows the projected capacity versus projected daily flows through the year 2025.

Figure 3.5 Ft. Pierce Utilities Authority Wastewater Flow Projections



AADF is projected to slightly exceed permitted capacity by the end of 2009. As a result, FPUA initiated the preliminary design in July of 2005, of a new 5 MGD wastewater treatment facility (WWTF) to be located near the Turnpike and Glades Cutoff Road. According to the 2006 Updated CAR the preliminary design of the Mainland Water Reclamation Facility will be complete in April of 2006 and final design is scheduled to be complete by December 2006 (CH2M Hill, 2006).

3.4.2 Port St. Lucie Utilities

According to the PSLU 2005 Master Plan, the number of water customer connections is projected to increase from approximately 55,000 in 2005 to 209,000 in 2030. The current number of connections is expected to almost double within the next five years. Figure 3.6 Port St. Lucie Utilities Water Flow Projections, shows that the projected capacity is expected to remain above the projected ADD through continued upgrades to the system and a new proposed water treatment plant.

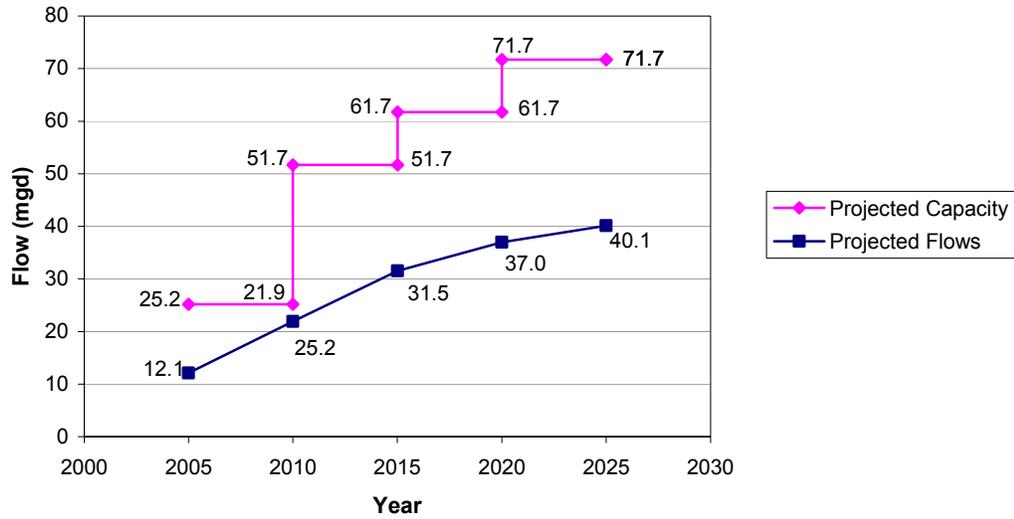
The projected water demand is based upon a common unit, an equivalent residential connection (ERC), that the City uses to discuss development size and capacity in simplified terms. The ERC represents a typical single family home, and is used to unify other types of land uses under a common unit (Reiss Environmental, 2005). The conversion is defined in the City's Comprehensive Plan as indicated in Table 3.5.

Table 3.7 – Port St. Lucie Utilities - Master Planning Service Criteria

Criteria	Water	Wastewater	Reuse
Average daily flow (ADF) per ERC	250 gpd/ERC	212.5 gpd/ERC	500 gpd/ERC

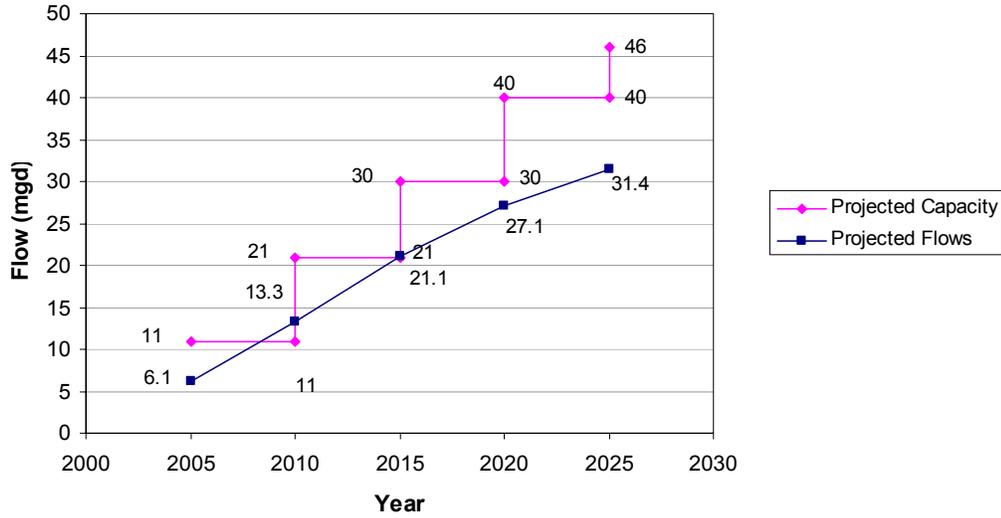
Prineville WTF is currently built out at 19.15 MGD and will not expand further, while the J. E Anderson WTF is anticipated to have a buildout capacity of 22.5 MGD by 2010. Future demands beyond the capacity available at the Prineville and JEA facilities will be supplied incrementally by the Rangeline WTP that will ultimately have a permitted capacity of 30 MGD by 2020.

Figure 3.6 Port St. Lucie Utilities Water Flow Projections



Along with the City’s water system, the wastewater system is also facing a doubling in flow in the next five years and will experience almost triple the current flows within the next ten years, as indicated in Figure 3.7. As shown in Table 3.7, the wastewater average daily projected flows are obtained by multiplying the number of ERC’s by 212.5 gpd. These projected capacities take into consideration the eventual decommissioning of the Southport and Northport facilities and the added capacity of the Glades WRF in 2006.

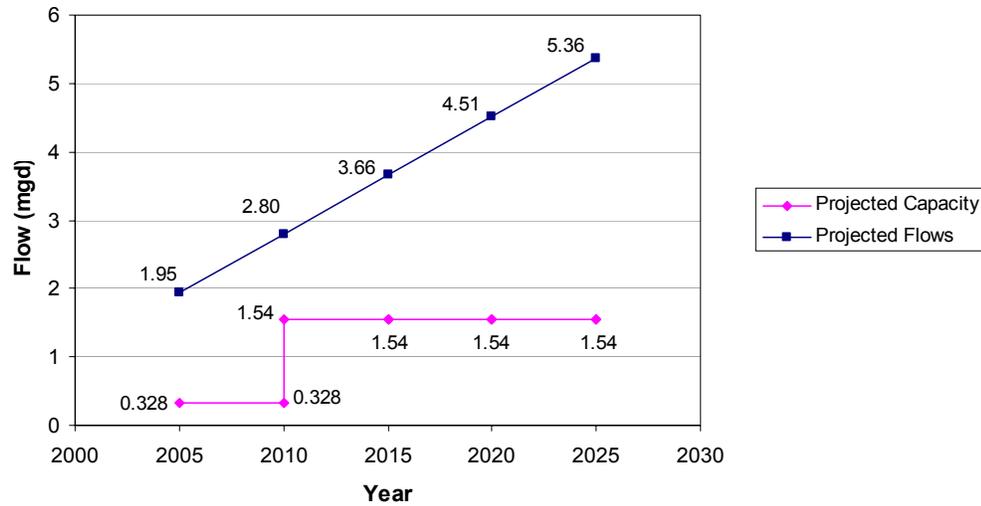
Figure 3.7 Port St. Lucie Utilities Wastewater Flow Projections



3.4.3 St. Lucie County Utilities

The projected water demands in the St. Lucie County Utilities service area for the years 2005 and 2020 are shown in Figure 3.8 (LBFH, 2004). Due to a lack of data, information for years 2010 and 2015 was interpolated and for 2025 extrapolated using a straight line scenario. The projected water demand data represents the North County service area, South Hutchinson Island and North Hutchinson Island. These capacities represent the projected upgrade of the Holiday Pines WTP to 1.212 MGD, scheduled for completion by 2010. This upgrade will bring the total for the County to 1.54 MGD. Capacities deficits will continue to be met by bulk water purchases from FPUA and Martin County Utilities for North Hutchinson Island and South Hutchinson Island.

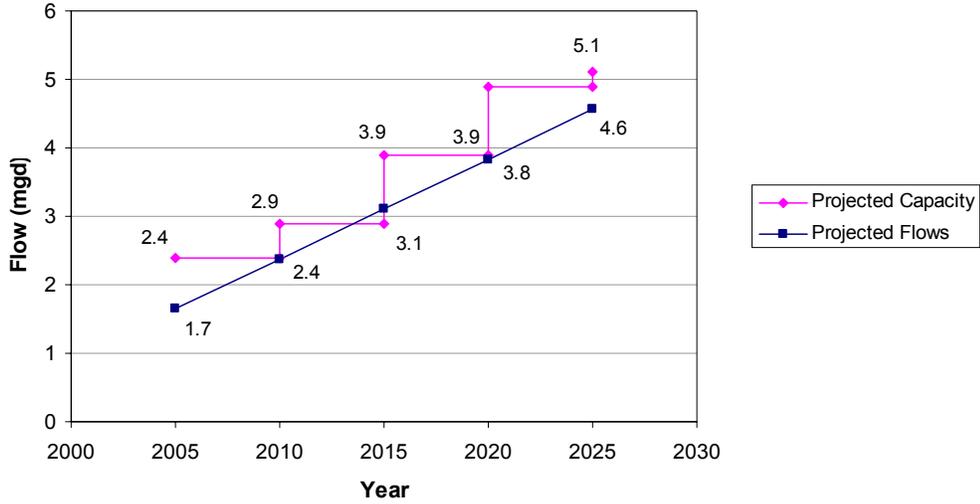
Figure 3.8 St. Lucie County Utilities Water Flow Projections



The projected wastewater flows are shown in Figure 3.9 for St. Lucie County Utilities. Wastewater Flow Projections were calculated for St. Lucie County by assuming 85% of the above projected water demands. Therefore the wastewater flow projections include North Hutchinson Island, South Hutchinson Island and the North County area. The projected facility capacities are from Holiday Pines WWTP, Lakewood Subdivision WWTP, South Hutchinson Island WRF, North Hutchinson Island WRF, Fairwinds Golf Course WRF and the future North District Regional WWTP.

These capacities take into consideration the eventual decommissioning of the Holiday Pines, Fairwinds Golf Course and Lakewood Subdivision WWTP's, North Hutchinson Island WRF upgrades and the addition of the North County Regional facility. As shown, the projected firm capacity exceeds the expected wastewater flows over the next 20 years.

Figure 3.9 St. Lucie County Utilities Wastewater Flow Projections



3.4.4 St. Lucie West Service District

According to interviews with the St. Lucie West Service District utilities manager, at the present time St. Lucie West is 99% built out. The increase in projected potable water flow seen in Figure 3.10 is due to anticipated commercial and/or industrial growth within the service area. The Reserve, located adjacent to St. Lucie West, has been under contract for the past ten years with SLWSD to receive 50,000 gallons of potable water per day. St. Lucie West officials have stated that they expect to continue to provide the Reserve with the contracted amount for the next 20 years. As shown in the figure, the projected capacities of the SLWSD are enough to sustain the projected flows for the anticipated commercial and industrial growth over the next 20 years.

In addition, Figure 3.11 shows that projected wastewater capacities are enough to sustain the expected flows from the projected commercial and industrial increase in the St. Lucie West service area. The ultimate capacity of the SLW wastewater treatment plant is 2.5 MGD.

Figure 3.10 St. Lucie West Service District Water Flow Projections

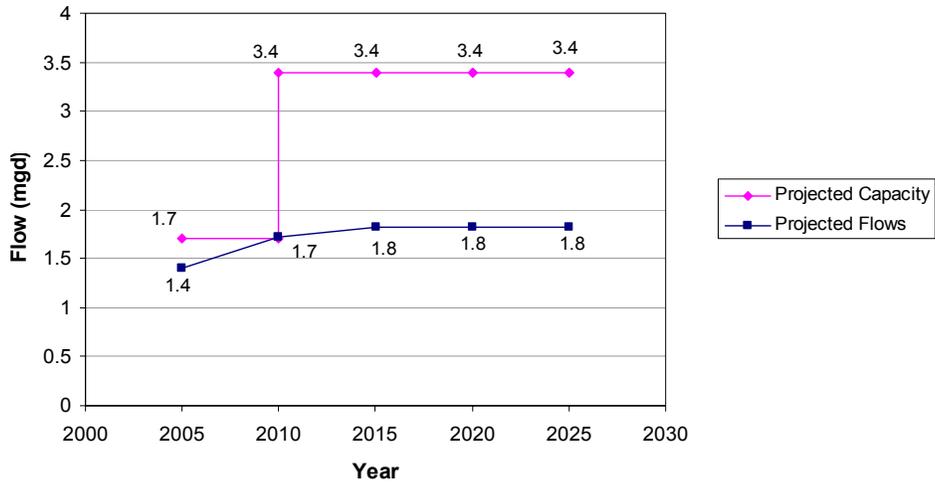
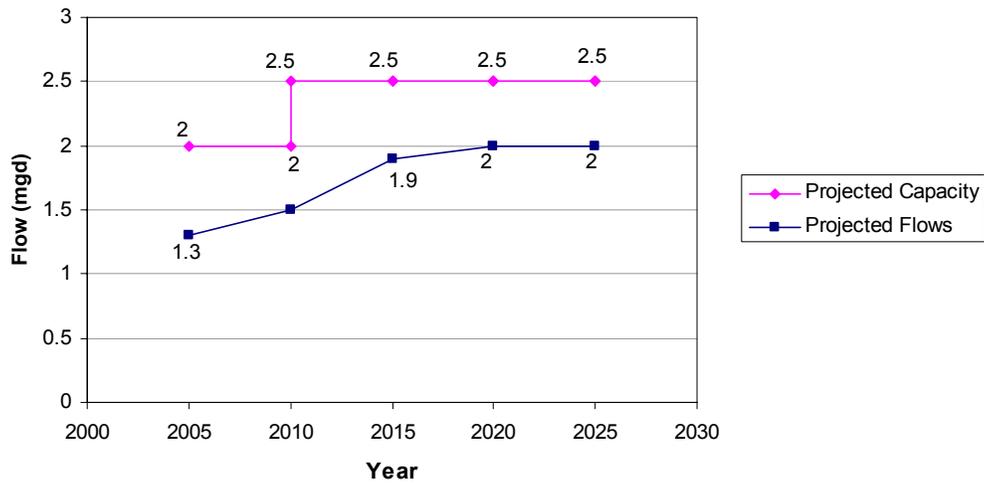


Figure 3.11 St. Lucie West Service District WW Flow Projections



3.5 Water Use Permits

All utilities are required to obtain a Water Use Permit (WUP) from the SFWMD to withdraw groundwater from the surficial and/or the Floridan Aquifer System. Permits are valid for up to 20 years and can be modified at any time. Table 3.6 tabulates the permit dates, annual and maximum monthly allocations, source aquifer and the number of wells permitted for the utilities in St. Lucie County.

The FPUA WUP expires in July of 2006 and has an annual allocation of 4,007 MG from a total of 47 wells in the Floridan and surficial aquifer system. Currently FPUA is requesting, through a modification to their WUP, permission to withdraw 13.63 MGD from the Floridan Aquifer and 8 MGD from the surficial aquifer system.

The WUP for PSLU expires in January of 2025 and has an annual and maximum monthly allocation of 12,757 MG and 1,332.5 MG, respectively, from the Floridan Aquifer and surficial aquifer systems. The PSLU is in the processing of requesting a modification to their WUP and is requesting 27 additional Floridan aquifer wells for future water demands. PSLU is estimating a maximum daily demand of 60 MGD and an average daily demand of 42.86 MGD by the year 2025.

Table 3.8 – Water Use Permits

Utilities / Permit Number	Date	Allocation		Source Aquifer	No. Wells
		Annual	Max Monthly		
Fort Pierce / 56-00085-W	July 1996 July 2006	4,007 MG, 14.6 MGD	N/A	Floridan & Surficial	47
Port St. Lucie / 56-00142-W	Jan. 2005 Jan. 2025	12,757 MG, 34.95 MGD	1,332.5 MG, 37.71 MGD	Floridan & Surficial	39
St. Lucie West / 56-00614-W	Sept. 2005 Sept. 2025	851 MG, 2.33 MGD	80.82 MG	Floridan	3
St. Lucie County / 56-00406-W	Oct. 2004 Oct. 2009	61 MG, 0.167 MGD	5.4 MG	Surficial	2

The SLW Utility WUP expires in September 2025 and has an annual allocation of 851 MG and a maximum monthly allocation of 80.82 MG from its three Floridan Aquifer wells. St. Lucie West Utility is currently applying for an additional allocation to reactivate previously used shallow

surficial aquifer wells to meet growing irrigation demand. They currently use lake and reclaimed water to irrigate their golf course and landscaping.

The SLCU WUP expires in October 2009 and has an annual allocation of 61 MG and a maximum monthly allocation of 5.4 mg from its two shallow aquifer wells.

3.6 Water Conservation Methods

As seen in Table 3.7, all four of the major utilities in St. Lucie County reuse some portion of their processed wastewater for irrigation. According to the 2004 FDEP Reuse Inventory Report, only 41% of the wastewater treated in St. Lucie County was reused for a beneficial purpose. Seven MGD was disposed of by deep well injection. Three out of the four major utilities also use tier rates, where higher water use results in higher marginal costs, as a method to conserve water. For example, a residential home on North Hutchinson Island that uses up to 7,500 gallons of water pays \$3.90 per thousand gallons used, while one that has uses between 7,501-15,000 gallons pays \$5.50 per thousand gallons used. PSLU and FPUA institute a form of water restrictions by allowing irrigation only during prescribed days in cases of drought or water shortage.

Table 3.9 – Water Conservation Methods

Utility	Reuse Irrigation (MGD)	Tier Rates	Schedule Irrigations	Mandatory Water Use Restriction	Voluntary Water Use Restriction Program
Fort Pierce Utilities Authority	0.3	✓	In time of Drought	In time of Drought	✓
City of Port St. Lucie	0.57	✓	In time of Drought		
St. Lucie West	2.89	✓			
St. Lucie County	0.58	✓	In time of Drought	Nights only for reuse	

FPUA has an ongoing voluntary water use restriction program in its service area implemented during periods of little or no rain. Methods of water conservation encouraged by the Utility include curtailing lawn and landscaping watering, reducing car washing and curtailment of washing sidewalks and driveways. FPUA also has a mandatory water restriction program in case of very dry weather or severe drought or during other conditions resulting from a reduction in water supply. The Fort Pierce city manager can mandate a water restriction policy if SFWMD or the Fort Pierce City Commission declares that a water emergency exists.

3.7 Alternative Water Supply

Alternative Water Supply Grant applications were researched to determine projects were slated at each utility. Currently, two Alternative Water Supply Grant Applications have been submitted to SFWMD and are pending; the PSLU Glades Reclaimed Water System and the FPUA RO Water Treatment Plant Phase II Improvements.

The Glades Reclaim System is a multiphase program that is now under construction to provide reuse water to current and newly annexed areas of the City. Phases I and II of the three phase improvements are currently underway. Phase I, construction of the Glades WWTF Reclaimed Water System Off-Site Reuse Mains, has a completion date of August 2006 and a total construction cost \$2,249,440. Phase II, construction of the Glades WWTF Reclaimed Water System, has an anticipated completion date of August 2006 and a total construction cost \$4,271,650 (PSLU, 2005). Currently, PSLU has not received Alternative Water Supply Grant funding from the SFWMD for this project.

The FPUA RO Water Treatment Plant Phase II Improvements at the Henry A. Gahn Water Treatment Facility are in place to double the RO firm capacity to 6.0 MGD and increase the total RO capacity to 10.3 MGD. Construction is scheduled to be completed in August 2006 at a total planning, design, engineering and construction cost of \$3,145,725 (FPUA, 2005).

3.8 Capital Improvement Plans

3.8.1 Fort Pierce Utilities Authority

Table 3.8 depicts FPUA's water and wastewater capital improvement plans through 2010. For year 2006 through 2009, the Master Plan indicates there are inadequate funds in FPUA reserves to properly address the anticipated wastewater system projects. However, by 2010 the estimated wastewater funds available are anticipated to exceed the projected needs. The FPUA water system projections indicate the estimated projects will be under funded from

2006 through 2008. However, FPUA will be applying for loans through the State Revolving Fund to cover the deficits in funding.

Table 3.10 – Fort Pierce Utilities Authority - Five Year Capital Improvement Plans

Water and Wastewater Systems	Actual	Projected				
Fiscal Year	2005	2006	2007	2008	2009	2010
Water Systems	\$681,909	\$9,348,459	\$4,712,362	\$3,672,620	\$2,393,393	\$1,371,493
Available Water Funds		\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000
Wastewater Systems	\$624,926	\$6,386,000	\$10,817,500	\$9,385,000	\$2,375,500	\$1,006,000
Available WW Funds		\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000

3.8.2 St. Lucie County Utilities

Table 3.9 summarizes the major water and wastewater capital improvement projects in the SLCU service area from 2006 through 2010. In 2006, SLCU has projected to expand Holiday Pines WTP to 0.5 MGD and add a 1.0 mg storage tank. In addition, \$260,000 has been allocated for the construction of the Lakewood Park WWTP pump station. The construction of the North County Regional WTP, projected for 2006, has been delayed until 2012. Construction of a pump station at the Fairwinds WWTP is scheduled for 2007 and the rehabilitation of an existing distribution system at a cost of \$143,000 is scheduled for 2008. In 2009, SLCU has scheduled a second Holiday Pines expansion to 1.5 MGD, installation of two new Floridan wells and construction of a new pump station for a total of \$7,248,000.

To date there are no large wastewater capital improvement projects for the South Hutchinson service area since the WWTP was built to sustain buildout flow projections. Approximately 10% of the island is not yet connected to the wastewater system; however, it is anticipated this small percentage will connect within the 20 year study period.

Capital improvements for North Hutchinson Island include proposed projects to repair existing operational problems with the reclaimed water equipment at the WWTP and to expand the water distribution system on the island.

Table 3.11 – St. Lucie County Proposed Major Water & Wastewater Capital Improvement Projects

Project Description	Fiscal Year				
	2006	2007	2008	2009	2010
Expand Holiday Pines WTP from 0.288 to 0.50 MGD (membrane softening) + 1.0 MG storage tank	\$1,446,900				
Rehabilitation of Existing Distribution System			\$143,000		
Expand Holiday Pines WTP from 0.5 MG to 1.50 MG (1 MGD RO addition)				\$6,000,000	
Installation of 2 Floridan Wells				\$988,000	
Construct Lakewood Park WWTP Pump Station – DELAYED			\$260,000		
Construct N. County Regional WWTP (1 MGD) – DELAYED	\$8,020,000				
Construct Fairwinds WWTP Pump Station		\$260,000			
Construct Pump Station 7-2				\$260,000	
Construct Pump Station 8-1					\$260,000
Total Cost	\$9,466,900	\$260,000	\$403,000	\$7,248,000	\$260,000

3.8.3 Port St. Lucie Utilities

The list of PSLU estimated project costs for 2006, taken from the 2006 Bond Report, are found below.

<u>Project Description</u>	<u>Estimated Capital Costs</u>
1. Glades WWTP Deep Injection Well	\$ 8,000,000
2. Glades WWTP Expansion from 6.0 to 12.0 MGD	\$ 26,000,000
3. Westport WWTP Expansion from 6.0 to 10.0 MGD	\$ 24,000,000
4. US Highway 1 / Walton Rd to Southport WWTF Force Main	\$ 7,500,000
5. Midport Repump Storage and Pumps	<u>\$ 2,500,000</u>
	\$ 68,000,000

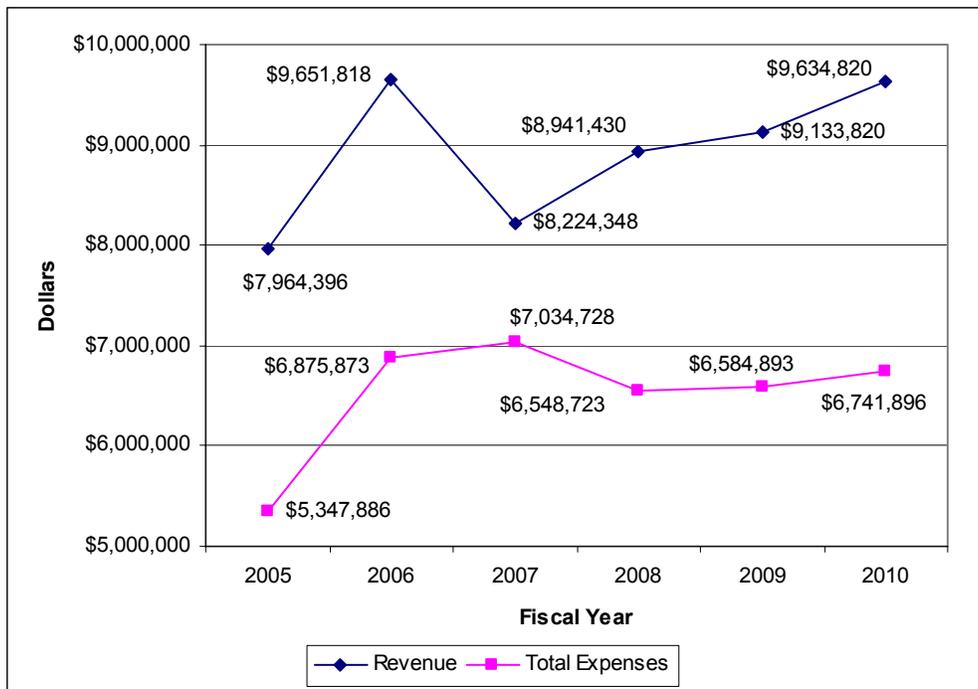
The capital improvement plans for 2006 show that all funds will be used for wastewater expansion or construction. Almost one third of the allocated funds for 2006 will be spent at the Glades WWTF to build a Class I injection well and expand the treatment plant to 12.0 MGD. The Westport WWTF is also scheduled for expansion from 6.0 MGD to 10.0 MGD.

This expansion is necessary as the Southport WWTF will divert its flows as it prepares for decommissioning to the Westport facility.

3.8.3(1) St. Lucie West Services District

Figure 3.12 St. Lucie West Services District - Five Year Forecast Revenue and Total Expenses is a graphical representation of the projected revenue and total expenses for the utility through 2010. As seen below, SLW's projected revenue far exceeds their projected total expenses. Expenses for SLW include permitting fees, billed water and wastewater revenue, irrigation revenue, wholesale water and wastewater revenue, connection fees and meter set fees. Total operating expenses include expenses for board of directors' salaries, employee payroll, finance, property control, engineering services and water and wastewater services.

Figure 3.12 – St. Lucie West Services District - Five Year Forecast Revenue and Total Expenses



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APPENDIX A

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION PERMITTED WASTEWATER TREATMENT PLANTS IN ST. LUCIE COUNTY

FACILITY ID	NAME	FACILITY TYPE	FACILITY ADDRESS	CITY	TREATMENT PROCESS SUMMARY	PERMITTED CAPACITY (MGD)	RELATED PARTY NAME	COMPANY NAME	PARTY ADDRESS	CITY, STATE, ZIP CODE	ISSUE DATE	EXPIRATION DATE
FLA013957	PORT ST LUCIE LANES INC -	Domestic WWTP	SOUTH US #1	FORT PIERCE	Anaerobic Treatment W/ Discharge To 2' 1452 Sq Ft Sand Filters, CL2 disinfection, drainfield disposal.	0.005	William E Gould, President		6759 S US Highway 1	Port St Lucie FL 34952-1427	12/21/1997	12/21/2002
FLA014025	CYPRESS BAY FKA ORCHID ACRES MHP WWTF	Domestic WWTP	US #1, .5 MI S OF COUNTY LINE	FT PIERCE	Extended Aeration To Evap Pond	0.005	Paul Badamo, President	Orchid Acres Mobile Home Park, Inc	6545 North US 1, Box 260	Fort Pierce FL 34946	7/28/2003	7/27/2008
FLA034568	BENTONWOOD MOBILE HOME PARK	Domestic WWTP	6407 SOUTH US HWY 1	FT PIERCE	Extended Aeration To Perc Pond Emergency Overflow Pipe To Ditch	0.01	Rhodes Donna, Owner	Bentonwood Mobile Home Park	29 Tangerine Ave	Fort Pierce FL 34982-6328	9/10/1999	9/9/2004
FLA013989	ST LUCIE PLAZA	Domestic WWTP	NORTH US 1	PORT ST LUCIE	Extended Aeration With Surge Tank To Perc Pond	0.01	Frank Martino, President	St Lucie Plaza, Inc	1 Brightwood Ln	Bedminster NJ 07921-1718	5/19/1999	5/19/2004
FLA014014	RIVER PARK MARINA WWTF	Domestic WWTP	370 ROUSE RD	FORT PIERCE	Extended Aeration To Perc/Evap Pond	0.01	Stephen F Vitiello, President	River Park At Fort Pierce LLC	4240 Galt Ocean Dr Ste 1704	Fort Lauderdale FL 33308-6139	5/24/1998	5/24/2003
FLA014023	LAKE MANOR	Domestic WWTP	S INDIAN R DR	JENSEN BEACH	Extended Aeration With High Level Disinfection	0.01	Jim Lawrence, Managing Agent	Lake Manor Mobile Home Park	13827 S Indian River Dr	Jensen Beach FL 34957-2218	11/20/2005	11/19/2010
FLA014031	HARBOR BRANCH FOUNDATION WWTF	Domestic WWTP	N DIXIE HWY	FT PIERCE	Extended Aeration To Perc Pond	0.02	Gene Stang, Facilities Manager	Harbor Branch Oceanographic Institution, Inc.	5600 U.S. 1 North	Fort Pierce FL 34946	4/11/2000	4/10/2005
FLA017104	HARBOR BRANCH OCEANOGRAPHIC INSTITUTION POST DOC APARTMENTS	Domestic WWTP	5600 N OLD DIXIE HWY	FORT PIERCE	Extended Aeration	0.02	Gene Stang, Facilities Manager	Harbor Branch Oceanographic Institution, Inc.	5600 U.S. 1 North	Fort Pierce FL 34946	5/27/2004	5/26/2009
FLA298450	ST. LUCIE COUNTY FAIRGROUNDS WWTF	Domestic WWTP	MIDWAY ROAD AND OKEECHOBEE RD INTERSECT	FORT PIERCE	Anaerobic Treatment Filtration And Drainfields	0.02	P. Michael Bowers, Utilities Director	St, Lucie County	2300 Virginia Ave	Fort Pierce FL 34982-5632	11/22/2002	11/21/2007
FLA013956	VILLAGE SQUARE SHOPPING CENTER	Domestic WWTP	9999 SOUTH US 1	PORT ST LUCIE	Ext. Aer, Surge Tank, Disinf By Hypochlorination, 6,800 Sq. Ft. Of Pond Divided In To 3 Cells	0.02	RPOFL	Estate of James Love	8737 South Us 1	Port St Lucie FL 34952	1/11/1999	1/11/2004
FLA039586	SLCU LAKEWOOD PARK WWTF	Domestic WWTP	LAKEWOOD PARK-DELAND AVENUE	FT PIERCE	1.02 Mgd Extended Aeration/0.04 Contact Stabilization Stp Effluent Disposal via Perc Pond. Former Npdes No Discharge Has Been Deactivated, No Discharge Cert. Received And Approved 06-Nov-97.	0.02	William R Blazak, Utilities Director	St.Lucie County Utilities	PO Box 728	Fort Pierce FL 34954-0728	1/15/2004	1/14/2009
FLA013945	SLCU FAIRWINDS GOLF COURSE WWTF, ST LUCIE COUNTY	Domestic WWTP	FAIRWINDS ROAD NEAR US 1	FORT PIERCE	Surge, Ea, Clarifiers, Filters, Chlorination, Aerobic Digestion Storage Pond	0.02	William R Blazak, Utilities Director	St Lucie County Utility Department	PO Box 728	Fort Pierce FL 34954-0728	1/23/2006	1/22/2011
FLA013966	INDIAN RIVER LANDING	Domestic WWTP	INDIAN RIVER DRIVE	ST LUCIE CO	Extended Aeration Stp With Disposal To Dual Percolation Cells	0.03	Sandra Gibson, President	Indian River Landing	13505 S Indian River Dr	Jensen Beach FL 34957-2224	10/4/2004	10/3/2009
FLA014028	COUNTRY COVE MHP	Domestic WWTP	4950 N FED HWY	FT PIERCE	Extended Aeration With Chlorination To Perc Pond	0.03	Michael Autullo, Owner	Country Cove MHP	4015 North Us 1	Fort Pierce FL 34946	2/18/2004	2/17/2009
FLA013954	LA BUONA VITA MHP	Domestic WWTP	8601 SOUTH FEDERAL HWY	PORT ST LUCIE	Cs With Disinfection & Eff To Three 5000 Ft2 Bottom Area Perc Ponds	0.04	Nat Munao, RPOFL		8550 Mary Ann Ln	Port St Lucie FL 34952-7908	2/2/1998	2/2/2003
FLA013990	TROPICAL ISLE PUD	Domestic WWTP	U.S.HWY 1, 0.6 MILES SO MIDWAY	FT PIERCE		0.05	Roger Shackel, President	Tropical Isles Utilities Corporation	281 Tropical Isles Cir	Fort Pierce FL 34982-7918	3/14/2003	3/13/2008
FLA013980	ISLAND DUNES	Domestic WWTP	8700 SOUTH A1A	HUTCHINSON ISLA	Contact Stabilization Stp/Eff.Dis.To Grndwr Vis Spray Irrigation	0.09	Robert Frisa, President	Island Dunes Country Club, Inc.	8735 S Ocean Dr	Jensen Beach FL 34957-2101	2/28/2005	2/27/2010
FLA013984	THE GROVE COMMUNITY ASSOCIATION WWTP	Domestic WWTP	6150 SOUTH FEDERAL HIGHWAY	FORT PIERCE	See Comments	0.10	Joel F Wynne, President	The Grove Community Association Inc	8000 South Us 1	Port St Lucie FL 34952	9/6/2000	9/5/2005
FLA013986	HARBOUR RIDGE PUD	Domestic WWTP	3/4 MI NW OF GILSON/BECKER RDS	FT PIERCE	Ea W Tert Filtr, Cl2 & Sludge Drying Bed. Spray Irr (Perc Pond=Emergency Backup).	0.12	Michael E Neary, General Manager	Harbour Ridge Poa, Inc.	13403 Service Trail Rd	Palm City FL 34990	4/22/2003	4/21/2008
FLA013958	SAVANNA CLUB WWTF	Domestic WWTP	US1 E. 1.25 MI. N OF WALTON RD	PORT ST LUCIE	Ea: Trtry Filtrtion & High Level Disinfect Eff To Two Ribs	0.15	Richard Turan, President		8630 South Us 1	Port St Lucie FL 34952	9/11/2002	9/10/2007
FLA013963	RESERVE UTILITY CORPORATION	Domestic WWTP	2401 NW RESERVE PARK TRCE	FORT PIERCE	Contact Stabilization, Disinfection And Perc Ponds	0.15	John Csapo, Chairman	Reserve Homes, Ltd	1601 Forum Pl Ste 805	West Palm Beach FL 33401-8108	9/2/2005	9/1/2010
FLA013977	SPANISH LAKES COUNTRY CLUB	Domestic WWTP	LA VILLA WAY/CALLE DE LAGOS	FT PIERCE	Ea W Surge 1K-Cl2-Tert Fils- 125 Mgd To Perc Pond & Rest To Dmrltds See Comments	0.16	Harvey Newman, Vice President	Spanish Lakes Country Club Village Corp	8000 S US Highway 1 Ste 402	Port St Lucie FL 34952-2338	10/10/2005	10/9/2010
FLA013982	PANTHERWOODS FKA MEADOWOOD COUNTRY CLUB	Domestic WWTP	3001 JOHNSTON RD., W. OFF T. PIERCE	FT PIERCE	Extnd Aeration Stp W/ Dual Tert Fil; Slgd Dry Beds; Eff. To Ponds; Repump To Golf Course Storage Pond To Golf Course Spray Irrigation System	0.18	RPOFL	Ralph Horar, Controller	3001 Johnston Rd	Fort Pierce FL 34951-2906	8/26/2003	8/25/2008
FLA013969	SLCU NORTH COUNTY (HOLIDAY PINES)	Domestic WWTP	KINGS HIGHWAY, S.R.#713	FT PIERCE	Extended Aeration, 2 Polishing/3 Percolation Ponds	0.21	William R Blazak, Utilities Director	St Lucie County Utilities Department	2300 Virginia Ave	Fort Pierce FL 34982-5632	11/16/2000	11/15/2005
FLA013998	SPANISH LAKES FAIRWAYS PH 1-4	Domestic WWTP	LA VILLA WAY/CALLE DE LAGOS	FT PIERCE		0.25	Harvey Newman, Vice President		8000 South Hwy 1, Ste 402	Port St Lucie FL 34952	11/17/2003	11/16/2008
FLA140228	PORT ST LUCIE UTIL NORTHPORT / DIW	Domestic WWTP	ST. JAMES DR & ROYCE AVE	PORT ST LUCIE	Complete Mix Facility W/ Deep Well Injection	1.5	Stefan K Mattes, Professional Engineer	Culpepper & Terpening	2980 S 25th St	Fort Pierce FL 34981-5605	12/26/2003	12/25/2008
FL0139475	SLCU SOUTH HUTCHINSON ISLAND REG WWTF	Domestic WWTP	SOUTH OCEAN DRIVE	ST LUCIE COUNTY	Ext Aeration Filtration Chlorination/Dechlor With Surface Water Disposal Via Ft St Lucie Nuclear Plant Discharge Canal And Public Access Spray Irrigation Of Commercial And Residential Areas	1.6	William Blazak, Director	Slcu North Hutchinson Island WWTF	PO Box 728	Fort Pierce FL 34954-0728	4/16/2003	4/15/2008
FLA013993	ST LUCIE WEST UTILITIES, INC	Domestic WWTP	450 SW UTILITY DR	PORT ST LUCIE	Contact Stabilization With High Level Disinfection	2	RPOFL	Thomas Babcock, Executive Vp	450 SW Utility Dr	Port St Lucie FL 34986-2137	9/25/1997	9/24/2002
FLA024929	PORT ST LUCIE UTIL SOUTHPORT	Domestic WWTP	SUNSHINE AVE & PINE VALLEY ST	PORT ST LUCIE	Complete Mix To Deep Well, Public Access Spray Irrigation, With No Discharge Permit To Howard Creek - Tributary Of St. Lucie River	2.2	Gary L Basham, Professional Engineer	Culpepper & Terpening, Inc.	2980 S 25th St	Fort Pierce FL 34981-5605	8/23/2004	8/22/2009
FLA139653	PORT ST LUCIE UTILITY WESTPORT (PSLU)	Domestic WWTP	DARWIN BLVD AND FELDMAN ST	PORT ST LUCIE	Complete Mix W/Chlorination Polishing Pond/Perc-Pond Basic	4.00	Gary L Basham, Professional Engineer	Culpepper & Terpening, Inc.	2980 S 25th St	Fort Pierce FL 34981-5605	4/29/2005	4/28/2010
FLA326321	PORT ST LUCIE UTILITIES (PSLU) GLADES WWTF	Domestic WWTP	S HALF OF SECTION 17 36S T 39E R	PORT ST. LUCIE		6	Stefan K Mattes, Professional Engineer	Culpepper & Terpening	2980 S 25th St	Fort Pierce FL 34981-5605	1/5/2004	1/4/2009
FL0027278	FORT PIERCE UTILITY AUTHORITY--WWTF	Domestic WWTP	403 SEAWAY DRIVE/ A1A	FT PIERCE	Activated Sludge, Deep Well Injection With Backup Discharge To Indian River Via Multiport Diffuser. Fort Pierce Inlet.	9	Thomas W Richards, Director Of Electric & Gas Systems	Fort Pierce Utilities Authority	PO Box 3191	Fort Pierce FL 34948-3191	5/10/2000	5/9/2005
FLA013946	SLCU NORTH HUTCHINSON ISLAND WWTF	Domestic WWTP	STATE RD. A1A	FT PIERCE			William R Blazak, Utilities Director	St Lucie County Utilities Department	2300 Virginia Ave	Fort Pierce FL 34982-5632	10/9/2003	10/8/2008

Note: Glades Water Reclaim Facility is under construction