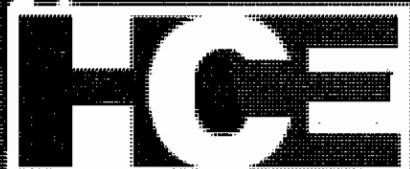
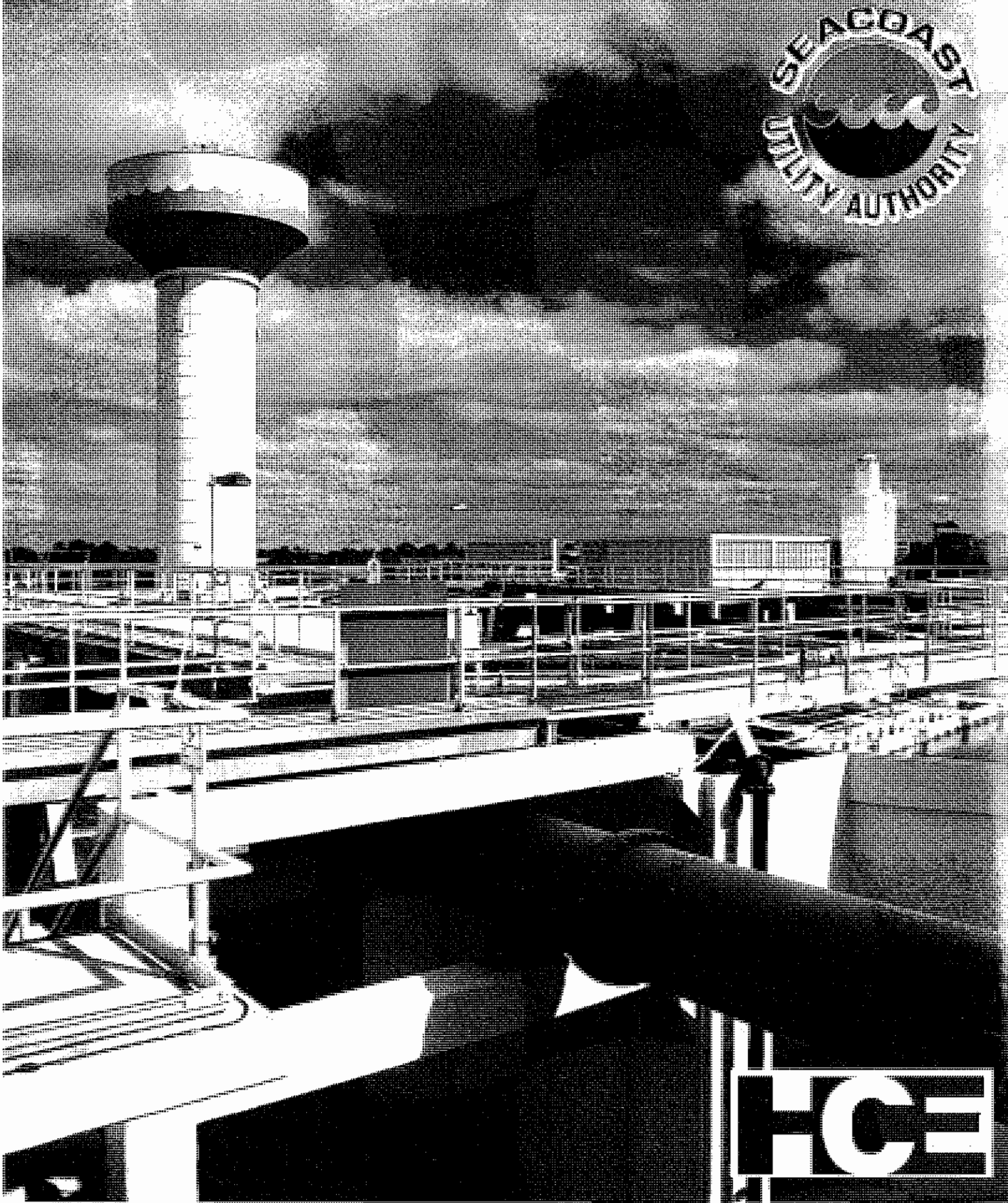


Physical Condition Report

Fiscal Year 2008-2009



**SEACOAST UTILITY AUTHORITY
ANNUAL ENGINEER'S REPORT
ON THE PHYSICAL CONDITION OF THE SYSTEM
FISCAL YEAR 2008/2009**

1.0 INTRODUCTION

In accordance with the Trust Indenture for the Seacoast Utility Authority (Seacoast) Water and Sewer Utility System Series 1989A Revenue Bonds, a review of the physical condition and operation of the Seacoast System is conducted each fiscal year by a Professional Engineer, and a summary of this review is given in report form. Section 11.05 of the Trust Indenture dictates the specifics for the report, and the following is intended to satisfy these specific requirements for the fiscal year from October 1, 2008 to September 30, 2009.

**2.0 GENERAL CONDITION OF THE SEACOAST UTILITY AUTHORITY
SYSTEM**

The physical condition and operational characteristics of each major component of the Seacoast water, wastewater, and reclaimed water systems were reviewed with the Seacoast staff. The major treatment, storage and pumping facilities were visited and inspected to verify the physical condition of the systems, document ongoing maintenance and renewal and replacement activities, and review operations. The major facilities visited include the following.

- Hood Road Water Treatment Plant.
- Richard Road Water Treatment Plant.
- Lilac Street Repump Facilities.
- Hood Road Repump Facilities.
- PGA Wastewater Treatment Plant.

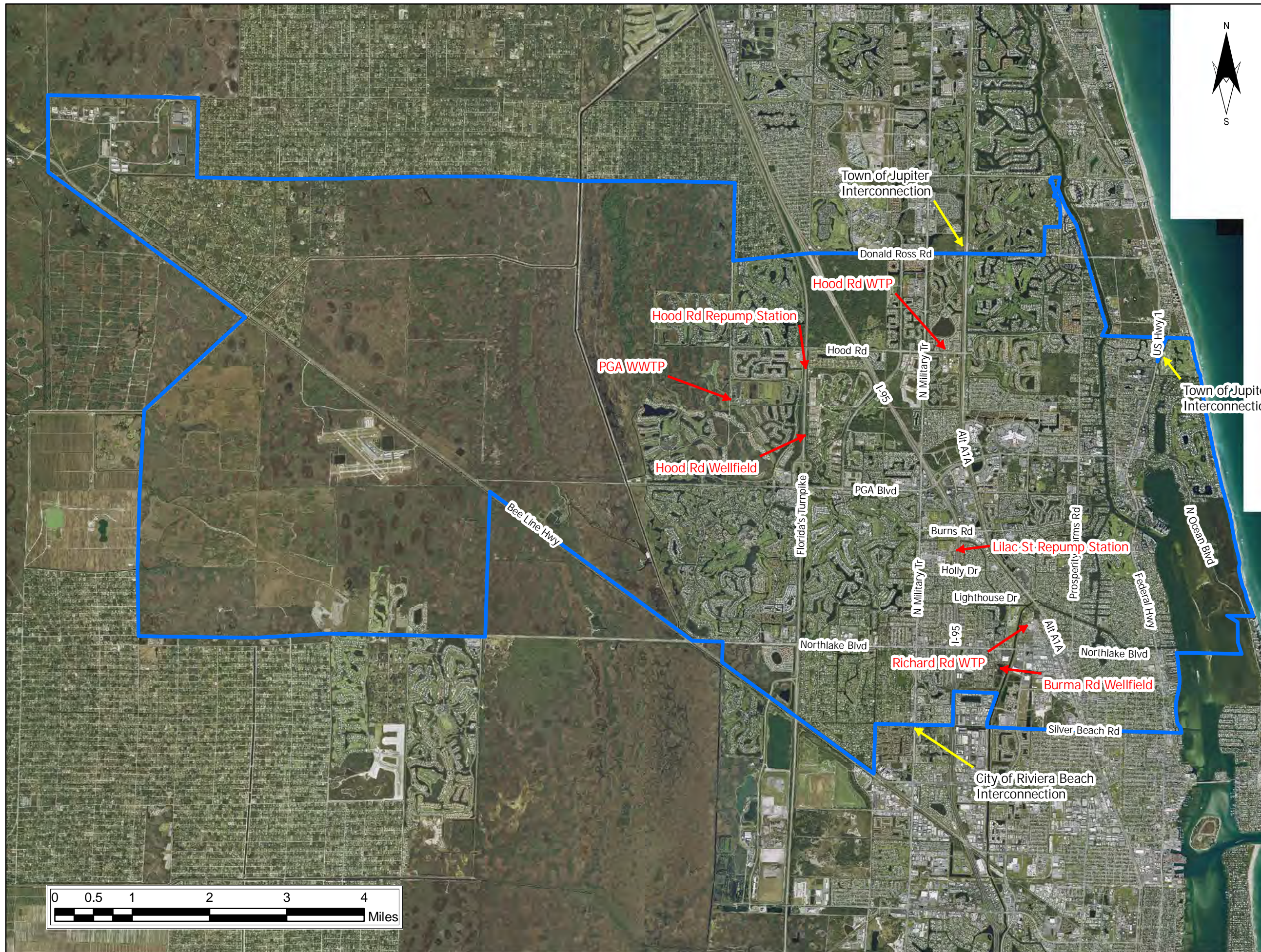
The Seacoast service area boundary and the locations of the water and wastewater treatment facilities and water storage and pumping facilities within the service area are depicted in **Figure 1**. After a thorough examination of these facilities it was concluded that the water, wastewater, and reclaimed water systems are properly maintained and operated, and are in good working order. In addition, Seacoast is making continual improvements to their facilities and is embarking on a significant improvement to the water treatment system via implementation of a state-of-the-art membrane treatment facility. The new treatment process will result in improved operations and water quality, as well as accessing alternative water

supply in the Upper Floridan aquifer. Seacoast's commitment to providing high-quality service to their existing utility customers, and the proactive planning to serve future customers is demonstrated with the many capital and operational improvements which are continually being planned and implemented. The following narrative is based on physical inspection of the major facilities, interviews with staff, and Holtz Consulting Engineering, Inc's understanding of Seacoast's water, wastewater, and reclaimed water systems.

3.0 CUSTOMER GROWTH

The customer account base continues to expand, but not as rapidly as in years past. In fiscal year (FY) 2009, four new developer agreements were executed to reserve capacity for 596 equivalent residential connections (ERC), including an agreement for the "Scripps II" project which reserved 582 ERCs. While the 596 new ERCs reserved for future development in FY 2009 is a significant increase from the 279 ERCs that were reserved in FY 2008 and the 257 ERCs reserved in FY 2007, 98 percent of them were reserved for the long-term Scripps II project. As of September 30, 2009, Seacoast had executed developer agreements totaling a reserved capacity for future developments of 1,256 ERCs. The total ERCs reserved at the end of FY 2009 is 21.5 percent less than the 1,601 ERCs reserved at the end of FY 2007, indicative of the recent general downturn in the development of residential and commercial property.

Most of these ERCs for which Seacoast currently has reserved capacity will be connected within the next 8 years, although buildout for the Scripps II project is expected to occur over the next 15 years. The Seacoast utility system is prepared for the growth as sufficient system capacity exists.



Seacoast Utility Authority Service Area

Figure 1



Legend

 Service Area Boundary

Facilities:

- Hood Road WTP
- Water Treatment Plant
- Elevated Storage Tank (0.75 MG)
- Ground Storage Tanks (8 MG)
- Administration
- Maintenance
- Hood Rd. Repump Station
- Repump Station
- Ground Storage Tank (2 MG)
- Wellfield (14 Wells)
- Lilac St. Repump Station
- Ground Storage Tank (1 MG)
- Wellfield (10 Wells)
- Richard Road WTP
- Water Treatment Plant
- Ground Storage Tanks (2 MG)
- Wellfield (8 Wells)
- Burma Rd.
- Wellfield (6 Wells)



4.0 WATER SUPPLY AND TREATMENT FACILITIES

Seacoast currently receives its raw water from four wellfields. The Lilac Street (Palm Beach Gardens) and Hood Road wellfields include ground storage and re-pumping facilities and provide raw water to the Hood Road Water Treatment Plant. The North Palm Beach and Burma Road wellfields provide raw water directly to the Richard Road Water Treatment Plant. The raw water from the surficial wellfields is treated to potable water standards at the water treatment plants (WTPs). Each WTP has onsite ground storage tanks and pumping facilities to provide potable water to the distribution system at adequate pressure. Seacoast has additional potable water storage and pumping facilities in the distribution system, including the Lilac Street Repump facility and an elevated water storage tank at the Hood Road WTP site.

Inspections were performed at the Hood Road and Richard Road Water Treatment Plants, the Hood Road wellfield and repump facilities and the Lilac Street repump facilities for both the raw water and potable water treatment components. The following is a summary of the water supply and treatment system condition and operational characteristics.

4.1 General Water Supply

In FY 2009, Seacoast continued to work with the South Florida Water Management District (SFWMD) to renew its Consumptive Use Permit (CUP). This permit will dictate the maximum amount of groundwater Seacoast can withdraw for treatment and distribution. Until the new CUP is issued, Seacoast can legally withdraw water under the terms and conditions of the existing permit.

4.2 Water Supply Wells and Raw Water Storage and Transmission System

Seacoast's raw water supply systems consists of the four wellfields, associated raw water transmission mains, and the two raw water storage and repump facilities. The descriptions of these facilities are generally as follows:

- Lilac Street Wellfield and Repump Facilities – Includes the wellfield referred to as the Palm Beach Gardens Wellfield containing ten (10) surficial wells with pumps and associated transmission mains, a raw water ground storage tank, chlorine storage and feed system and raw water pump station and transmission main to the Hood Road WTP.
- Hood Road Wellfield and Repump Facilities – Includes the wellfield containing fourteen (14) surficial wells with pumps and associated transmission mains to a raw water ground

storage tank, a repump facility, and a chemical dosing facility that pre-treats the raw water with chlorine and potassium permanganate. Raw water from the Hood Road storage and repump facility is conveyed to the Hood Road WTP.

- North Palm Beach Wellfield - Includes the wellfield containing eight (8) surficial wells with pumps and associated raw water transmission mains to convey the raw water to the nearby Richard Road WTP.
- Burma Road Wellfield – Includes the wellfield containing six (6) surficial wells with pumps and associated raw water transmission mains to convey raw water to the nearby Richard Road WTP.

4.2.1 Lilac Street Wellfield and Raw Water Repump Facilities

The Lilac Street Wellfield consists of ten (10) surficial wells with pumps and associated raw water mains. The wellfield and raw water repump facilities are located south of Burns Road and just west of Interstate 95. The ten surficial wells are provided with pumps that convey raw water to a ground storage tank and pump station for conveyance to the Hood Road WTP. The raw water repump facility includes the following components: a raw water ground storage tank, transfer pumps, and a raw water chlorination system.

Seacoast staff has made several upgrades to existing wells and equipment at the Lilac Street wellfield and repump facilities in FY 2009 and is planning significant facility improvements starting in FY 2010. Palm Beach Gardens Wells Nos. 11 and 12 were successfully rehabilitated and placed back into service in FY 2008/2009. In addition, raw water transfer pump no. 1 was rebuilt and placed back into service. In FY 2010, the existing re-pumping facilities will be demolished and new state-of-the-art raw water pre-treatment, storage and pumping facilities will be constructed that will include new pumps with variable frequency drives, on-site filters for iron removal, and chemical storage and feed facilities. This project is being performed in conjunction with the construction of the new membrane water treatment process at the Hood Road WTP, which will be discussed later in the report.

This facility appears to be well maintained and operated. The site was clean and orderly and all equipment was operational and in good condition. As described above, preventive maintenance and well and equipment renewal has been conducted to ensure continued system reliability.

The finished water storage and pumping facilities located at the Lilac Street site will be described later in this report.

4.2.2 Hood Road Wellfield and Repumping Facility

The Hood Road Wellfield consists of fourteen (14) surficial aquifer wells. The wellfield provides raw water to the Hood Road WTP and is located south of Hood Road and east of Florida's Turnpike, and is the largest of Seacoast's wellfields.

During FY 2008/2009, the following improvements to the facility were made:

- The replacement well for Hood Road Well No. 1 was design and publicly bid. The project is currently under construction and will be completed in FY 2010.
- The existing wellheads are being replaced in order to optimize the performance of each well and for ease of operation. This work will continue through FY 2010.
- Replaced a variable frequency drive controller.
- Rehabilitated the two existing vertical turbine high service pump motors.

Also in FY 2010, the Hood Road Repump Facility will be upgraded in the same way as the Lilac Street facility. New pumps with variable frequency drives and telemetry, raw water filters for iron removal, and chemical storage and feed facilities will be added at the site in preparation for the new membrane facility at the Hood Road WTP.

Based on our observations, discussions with staff, and knowledge of this facility, the Hood Road wellfield and raw water repumping facilities appear to be well maintained and operated. Wells and equipment have been repaired or replaced as necessary to ensure reliable operations, and continual improvements are planned, budgeted and executed.

4.2.3 North Palm Beach Wellfield

The North Palm Beach Wellfield consists of eight (8) surficial wells and associated raw water mains to convey raw water to the Richard Road WTP. The wellfield is located north of Northlake Boulevard and west of Old Dixie Highway. The wells continue to be maintained in good working order. In FY 2008/2009 a replacement well for Richard Road Well No. 4 was designed and publicly bid. Construction of the replacement well will occur in FY 2010. In addition, Seacoast completed the rehabilitation of Richard Road Well Nos. 7 and 8 located near the Richard Road WTP.

In addition to the wellfield improvements, a new raw water pump station will be constructed at the Richard Road WTP in order to convey the raw water through a new 20-inch raw water main that will connect the Richard Road WTP to the Hood Road WTP. The pump station and associated raw water main will be constructed in FY 2010 and FY 2011. This project will allow for the eventual decommissioning of the Richard Road WTP after the new membrane facility at the Hood Road WTP is constructed and becomes fully operational. The facility improvements and new raw water transmission main will allow for the conveyance of raw water from the North Palm Beach and Burma Road Wellfields to the Hood Road WTP.

4.2.4 Burma Road Wellfield

The Burma Road Wellfield consists of six (6) surficial wells and associated raw water mains that currently convey raw water to the Richard Road WTP. The wellfield is located south of Northlake Boulevard and east of Interstate 95 along the C-17 Canal, with the exception of Well No. 26, which is located adjacent to Burma Road. As mentioned in the discussion on the North Palm Beach Wellfield, the raw water from the Burma Road Wellfield will be conveyed to the Hood Road WTP in the future after the new membrane facility is constructed and operational.

4.3 Potable Water Treatment and Storage Facilities

Seacoast owns and operates two (2) lime-softening water treatment facilities rated for a total maximum finished water production capacity of 30.5 million gallons per day (MGD). The Hood Road Water Treatment Plant (WTP) is permitted for a maximum daily flow 23 million gallons per day (MGD), and the Richard Road WTP is permitted for a maximum daily flow of 7.5 MGD. The two water treatment plants are interconnected via the potable water distribution system and serve the entire customer base in the service area.

Seacoast currently has a total of 11.125 million gallons (MG) of ground storage capacity. The Hood Road WTP has four (4) 2.0-MG ground storage tanks (GST). The Richard Road WTP has two (2) 1.0 MG GSTs and one (1) 0.125 MG clearwell. The Lilac Street repump facility has a 1.0-MG ground storage tank for finished water storage. Seacoast also has a 0.75-MG elevated storage tank located at the Hood Road WTP site. Therefore, the total system storage capacity is 11.875 MG.

In FY 2008/2009 Seacoast completed the construction of an additional 2.0-MG GST and the demolition of the existing 1.0 MG steel GST at the Hood Road WTP. Seacoast also finalized the design, permitting, bidding and selection of a contractor for the construction of a 0.9-MG GST at the Lilac Street Facility. This tank is currently under construction and is scheduled to be completed early in 2010. After this project is completed, the total water system storage capacity will be increased to 12.775 MG. This additional storage capacity will help with the disinfectant contact time (CT) requirements established by the FDEP.

Planned improvements to Seacoast's water treatment system are now underway and will provide improved water quality using new membrane treatment processes. Membrane treatment process to be implemented include nanofiltration, or membrane softening, to better treat water from the existing surficial aquifer wells, and reverse osmosis, to remove salts and other impurities for new brackish Upper Floridan Aquifer wells. The water treatment facility improvements to be implemented starting in FY 2010 are described in Section 4.4 of this report.

4.3.1 Hood Road Water Treatment Plant

The Hood Road water treatment plant is located south of Hood Road and west of Alternate A1A. This facility is rated to treat a maximum day flow of 23 MGD of surficial aquifer water from the Hood Road and Lilac Street wellfields.

Seacoast has made continuous improvements to the Hood Road WTP to ensure reliable service, including rehabilitation of numerous high-service pumps, motors and other equipment. A summary of the significant facility upgrades that were conducted in FY 2008/2009 at the Hood Road WTP is provided below:

- Finalized the replacement of High Service Pump No. 5.
- Completed the refurbishment of High Service Pump Nos. 2, 4, 7, 10, 11, and 12.
- Completed the refurbishment of the motors for High Service Pumps Nos. 1, 2, 4, 11 and 12.
- Replaced aging air release valves, check valves, and butterfly valves in the high service pump building.
- Rehabilitated the vacuum pump priming system in the high service pump building.
- Replaced the variable frequency drive for High Service Pump No. 12.
- Installed a new roof and air conditioning system for the control room.

- Completed the rehabilitation of the south Accelerator lime softening treatment unit.
- Replaced the existing motors for the Accelerator clarifier drives.
- Rebuilt the lime slaker for the lime storage and feed system.
- Rebuilt the control panels for the filters and rebuilt the surface agitators for Filter Nos. 1 and 2.
- Rehabilitated the north backwash basin pump.
- Installed a new chlorine one-ton cylinder hoist and rail system.
- Made various improvements to the chlorine feed system including the replacement of the injectors, chlorinators, regulators, and leak detection system.
- Installed a new compressed air system for the pneumatic control valves for the filters.
- Commenced the design of a replacement generator for the existing 1,400 kW generator located onsite.

The Hood Road water treatment plant continues to be well maintained and properly operated, and appears to be in good operating condition. Seacoast is committed to maintaining reliable operations at this facility during construction of the membrane water treatment facilities at this site. The existing storage tanks, high-service pump station, chemical storage rooms and numerous other facilities will be incorporated into the modernized membrane facility design.

4.3.2 Richard Road Water Treatment Plant

The Richard Road Water Treatment Plant is located north of Northlake Boulevard and west of Alternate A1A at the western end of Richard Road. This facility is a lime softening WTP with a permitted capacity of 7.5 MGD maximum daily flow.

Improvements made to the Richard Road facility in FY 2009 include the following:

- Replacement of the chlorine residual analyzer.
- A new lime slaker in the east lime silo.
- The installation of a new actuator for Filter No. 2.

The Richard Road WTP continues to be well maintained and operated and appears to be in good operating condition.

The Richard Road WTP is proposed to be decommissioned and converted into a raw and finished water repumping facility. A new raw water pump station will be constructed to pump raw water from the North Palm Beach and Burma Road wellfields from this site to the proposed membrane facility starting construction at the Hood Road site. The raw water pump station design has been completed and construction is scheduled to commence in FY 2010. The plant's finished water storage and pumping facilities will continue to be utilized. Potable water from the Hood Road WTP will be pumped to the Richard Road WTP site, where it will be stored and pumped to distribution using the high service pumps at the Richard Road site.

4.3.3 Lilac Street Repump Facility

The Lilac Street Repump Facility is located to the west of Interstate 95 and to the south of Burns Road, adjacent to the Lilac Street raw water storage and pumping facilities.

In FY 2008/2009, the design, permitting and public bidding was completed for the construction of a new 0.9-MG ground storage tank at the Lilac Street Repump Facility. Construction of the new tank commenced in FY 2008/2009 and will be completed early in 2010. Additionally, as part of the membrane conversion project, the following improvements were designed and permitted for this site:

- A pressure filter system, including piping modifications, for removal of iron particulates from the existing air stripper.
- The demolition of three existing high service pumps.
- Two new booster pumps.
- Generator replacement.
- Electrical and instrumentation improvements to repump facility.
- Building modifications.

The Lilac Street Repump Facility appears to be well maintained and operated and will be an integral component of the Seacoast water system in the future.

4.4 Membrane Water Treatment Plant

In FY 2005, LBFH (now AECOM) evaluated the feasibility of replacing the existing lime softening water treatment processes at the Richard Road and Hood Road WTP facilities with membrane treatment process located at the Hood Road WTP. In FY 2008/2009, Seacoast finalized the design, permitting, and the selection of a prequalified contractor to construct a new 30.5-MGD water treatment plant that will utilize the nanofiltration and reverse osmosis

membrane processes to treat both surficial and Upper Floridan aquifer water, respectively. Construction of this project will commence in FY 2010 and is expected to take three years to complete.

As part of the membrane conversion project, the two lime softening water treatment plants owned and operated by Seacoast will be decommissioned. The lime softening facilities at the Hood Road and Richard Road WTPs will be demolished and surficial aquifer raw water currently being treated at the Richard Road WTP will be pumped to the Hood Road WTP. In addition, three (3) Upper Floridan wells will be constructed to provide a supplemental water source to the existing surficial aquifer and provide brackish raw water to the reverse osmosis portion of the membrane plant. These three wells have already been constructed at the Hood Road WTP site.

A new 20-inch raw water main will be constructed to convey raw water from the Richard Road WTP site to the Hood Road WTP. The design and permitting of the new raw water main was completed in FY 2009. Construction of the raw water main commenced in FY 2010 and will be completed within the next two years. The design and permitting of a deep injection well at the Hood Road facility for disposal of concentrate from the membrane treatment processes was completed during FY 2008/2009, and construction is now under way. It is expected that the injection well will be completed in FY 2010.

An existing reclaimed water pipeline will be converted for conveyance of concentrate from the nanofiltration portion of the membrane treatment process from the Hood Road WTP to the PGA Wastewater Treatment Plant site. The concentrate will be blended with reclaimed water for distribution to reclaimed water customers and used to irrigate green space.

4.5 Potable Water Distribution System

The Seacoast potable water distribution system consists of approximately 471.2 miles of water main, with diameters between two and 48 inches. The system also includes 6,734 valves, 3,432 fire hydrants, 35,012 customer meters, and many other necessary components such as air release valves, backflow assemblies, and blow-offs. The entire water distribution system is shown in **Figure 2**. The water distribution system is continually maintained, including the routine exercising of valves and other system components. The “above grade” pipeline coating program continues, ensuring meters, backflow assemblies, fire lines, canal crossings, and other exposed pipes are properly coated on a routine basis.

As part of the upcoming FDOT widening of the Little Lake Worth Bridge, the design of the relocation of a water main via horizontal directional drilling of the waterway was finalized and a contractor was selected in FY 2008/2009. It is expected that this work will commence and be completed in FY 2010.

Based on discussions with Seacoast staff and our knowledge of the water distribution system, it is our opinion that the system continues to be properly maintained and operated.

A new finished water main from the Hood Road WTP to the Richard Road WTP will be constructed to allow the storage tanks and pumping facilities at the Richard Road WTP to continue to be used to feed the water distribution system in this area. In FY 2008/2009, the design of a 20-inch main from PGA Boulevard south to the Richard Road WTP was completed and a contractor was selected after publicly bidding the project. It is expected that the construction of the new water transmission main will occur during Fiscal Years 2010 and 2011.

4.5.1 The Meter Exchange Program

The meter exchange program was established to reduce unaccounted-for water, allowing Seacoast to locate large leaks in the system and to minimize lost water. The criteria used for replacement of meters are based on aggregate flow and service time. In addition, large meters housed in below-ground pits continue to be replaced with above-ground installations to allow easier access for servicing.

4.5.2 Automated Meter Reading System

The automated meter reading system was established to assist Seacoast staff in the collection of water usage data. Water meters equipped with radio frequency transmitters send signals back to the Seacoast administration building reporting water usage to assist staff in customer service and billing.

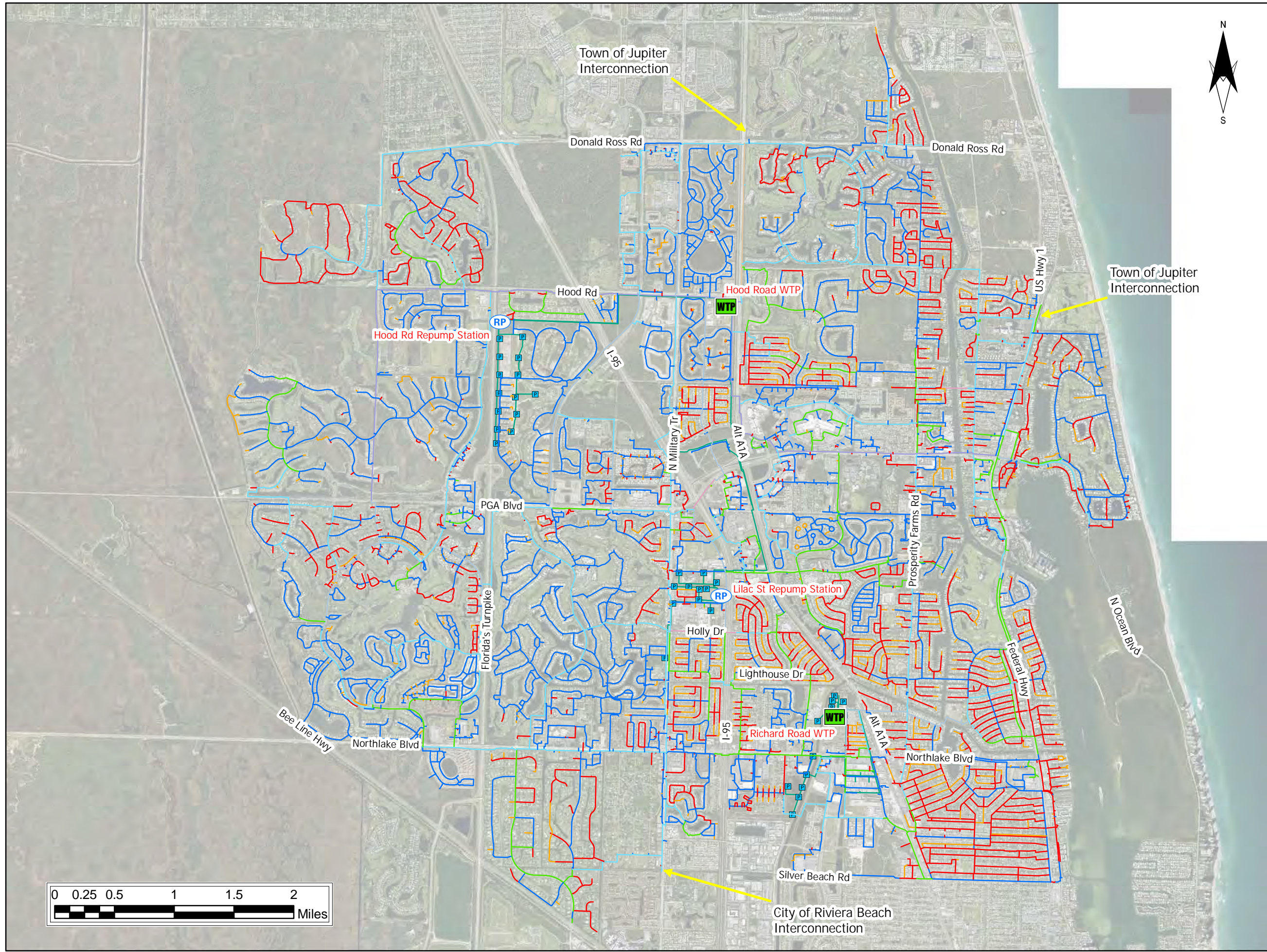
Seacoast Utility Authority
Existing Water
Distribution System

Figure 2



Legend

- Water Treatment Plant
- Repump Station
- Water Mains
 - 4" Water Main
 - 6" Water Main
 - 8" Water Main
 - 10" Water Main
 - 12" Water Main
 - 14" Water Main
 - 16" Water Main
 - 18" Water Main
 - 24" Water Main
 - 36" Water Main
 - 48" Water Main
- Production Wells
- Raw Water Mains



5.0 WASTEWATER SYSTEM

Seacoast's wastewater system includes several major components, including the sewage collection and transmission system, the PGA Wastewater Treatment Plant (PGA WWTP), and the reclaimed water pumping and distribution and excess water disposal systems. A brief description of each system and their current condition is provided below.

5.1 Wastewater Collection and Transmission System

The wastewater collection and transmission system is comprised of 280.7 miles of gravity sewer, 7,567 manholes, 87.7 miles of force main, and 150 wastewater pump stations. **Figure 3** depicts the existing wastewater gravity collection system, which is comprised of sewers and manholes. **Figure 4** shows the existing wastewater pumping and transmission system, which includes the lift stations and force mains to the PGA Wastewater Treatment Plant.

A summary of the improvements that were made to the wastewater collection and transmission system during FY 2008/2009 is provided below.

5.1.1 Gravity Collection System

Seacoast continued to implement the system-wide Geographical Information System (GIS) mapping of all valves and manholes in the system and progressed in the establishment of an electronic database identifying every segment of pipeline and collection system infrastructure. The GIS database is also used to electronically log the date and type of maintenance activities completed for each component.

In addition, routine preventive maintenance of the gravity system was performed. Routine maintenance activities included quarterly grease trap inspections, cleaning and TV inspection of 196,000 feet of the gravity sewer system, and slip lining 8,776 feet of gravity sewer. In FY 2008/2009, there were also five manholes that were rehabilitated throughout the system. Over half of the gravity system that was in place when the system was acquired by Seacoast in 1989 has now been either replaced or repaired.

Also, nearly 1,880 feet of deteriorated gravity sewer was replaced in the Lark Park area in public utility easements that had become overgrown with vegetation and encroachments by fences and other structures, making the progress of the job slower than expected.

5.1.2 Pumping Stations

During FY 2008/2009 the following improvements occurred to the pumping stations owned and operated by Seacoast.

- Completed the replacement of Lift Station No. 91 located at Bud's Chicken and Seafood restaurant on Northlake Blvd.
- Completed the replacement of Lift Station No. 29 located on Yacht Club Drive in North Palm Beach.
- Completed the rehabilitation of two (2) lift stations.
- Installed three (3) new lift station control panels to replace older control panels.

Seacoast continues to adequately maintain and operate the lift stations and associated generators throughout the collection system.

5.1.3 Force Mains

The wastewater force mains used to convey sewage from the pump stations to the PGA Wastewater Treatment plant are depicted in Figure 4. Seacoast continued scheduled maintenance on air release valves, gate valves, and plug valves in FY 2008/2009. In addition, as part of the upcoming FDOT replacement and widening of the Little Lake Worth Bridge a force main replacement was designed and permitted to be installed via horizontally directional drilling adjacent to the new bridge. The construction of the force main replacement will occur in FY 2010.

The wastewater collection and transmission system appears to be well maintained and operated.

5.2 Wastewater Treatment Facility

The PGA Wastewater Treatment Plant (PGAWWTP) is the only wastewater treatment plant owned and operated by Seacoast and is located north of PGA Boulevard and the west of Jog Road. The PGA WWTP currently has a permitted capacity of 12 MGD, average annual daily flow.

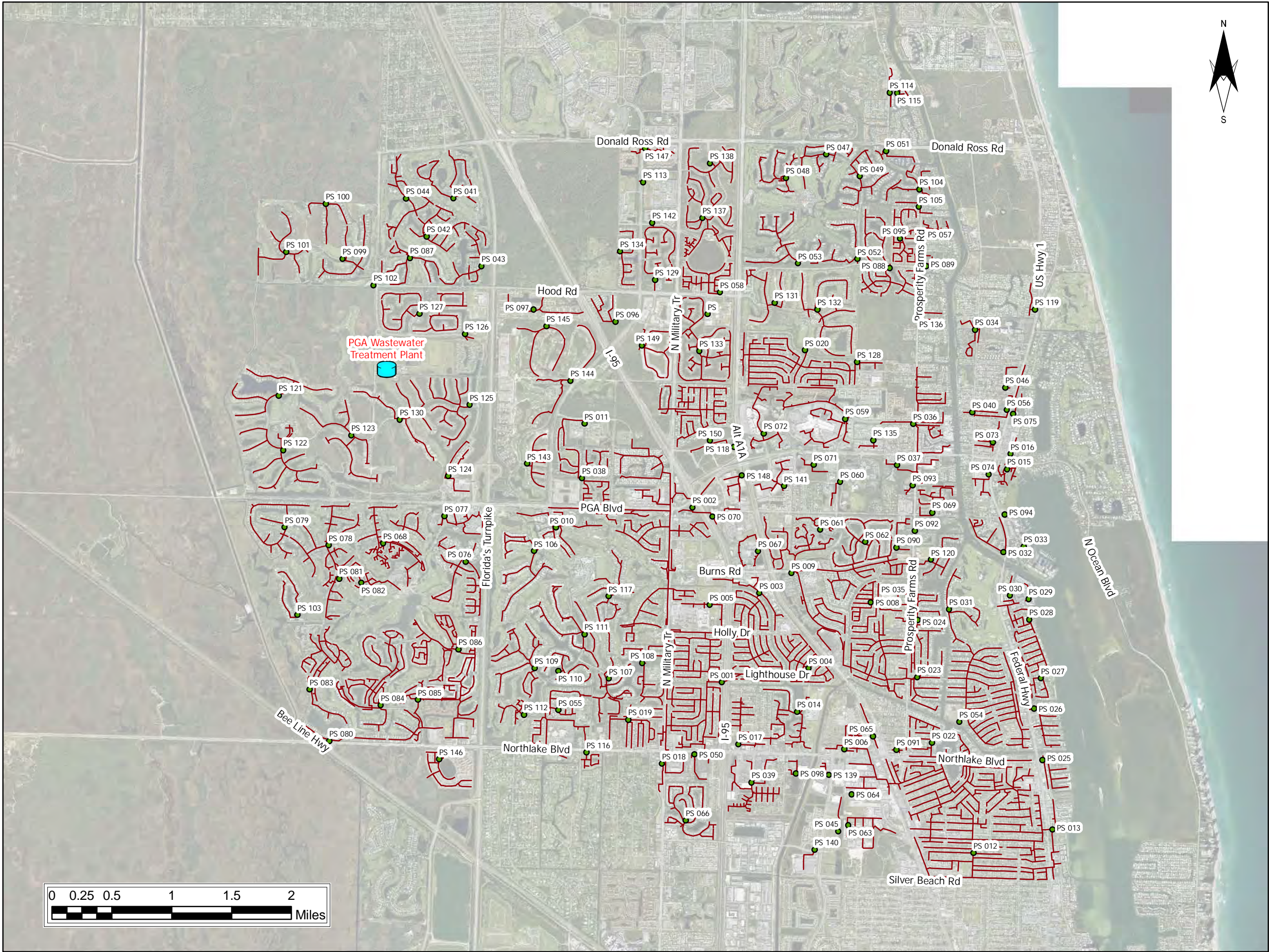
During FY 2008/2009, Seacoast implemented several improvement and maintenance projects at the PGA WWTP, including the following:

- Completed the renovations to the operations building.
- Completed the replacement of the anoxic tank mixers.
- Completed the replacement of the deteriorated odor control ducts between the odor control scrubber and the blower. The new piping is fiberglass reinforced plastic and is more corrosion resistant.
- Designed and started construction of the replacement of the existing mechanical and manual bar screens at the preliminary treatment structure with two (2) new mechanically-cleaned bar screens.
- Installed variable frequency drives and motors on the waste activated sludge pumps at the plant.
- Designed and awarded the contract for the upgrading of the existing SCADA and telemetry systems into a single, interactive SCADA system that will have the capability of controlling the plant operations.
- Acquired the materials necessary for the replacement of 1,600 linear feet of existing effluent gravity lines to the existing storage ponds located onsite.
- Completed the rebuilding of the existing gravity belt thickener.
- Performed routine service and inspections on the exiting generators and electrical control cabinets.
- Performed major service and repair to the following components:
 - NRCY Pumps used for internal recycle from the aeration basins to the anoxic basins.
 - Filter Feed Pumps.
 - Aeration basin blower motors.
 - Digester blower motors.
- Completed the scheduled sealing and crack repair to the Anoxic Basin walls.
- Replaced the grit pumps at the preliminary treatment structure.
- Completed the rehabilitation of the grit removal system.
- Installed dissolved oxygen probed in the aeration basins.
- Installed a bird screen around the filter units.
- Completed the repair work of the deep injection well pump motors.

The PGA WWTP appears to be very well maintained and operated. Numerous facility improvement and rehabilitation projects were implemented in FY 2008/2009 and the facility is in compliance with all applicable regulations and permit conditions and requirements.

In FY 2010, several projects are planned, including the following

- Painting of the Preliminary Treatment Structure, Anoxic Basins, and Aeration Basins.
- Replacement of the floating mechanical surface aerator in Aerobic Digester No. 5 with a more efficient diffused aeration system.
- Lining of Percolation Pond No. 1 for use as a reject water storage ponds and construction of a new submersible pump station to convey stored water to the aeration basins for re-treatment.






Seacoast Utility Authority
Existing Wastewater
Collection System

Figure 3



Legend

-  Wastewater Treatment Plant
-  Pump Station
-  Gravity Mains



Seacoast Utility Authority
Existing Wastewater
Transmission System

Figure 4



Legend

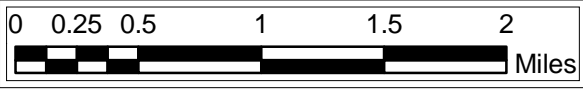
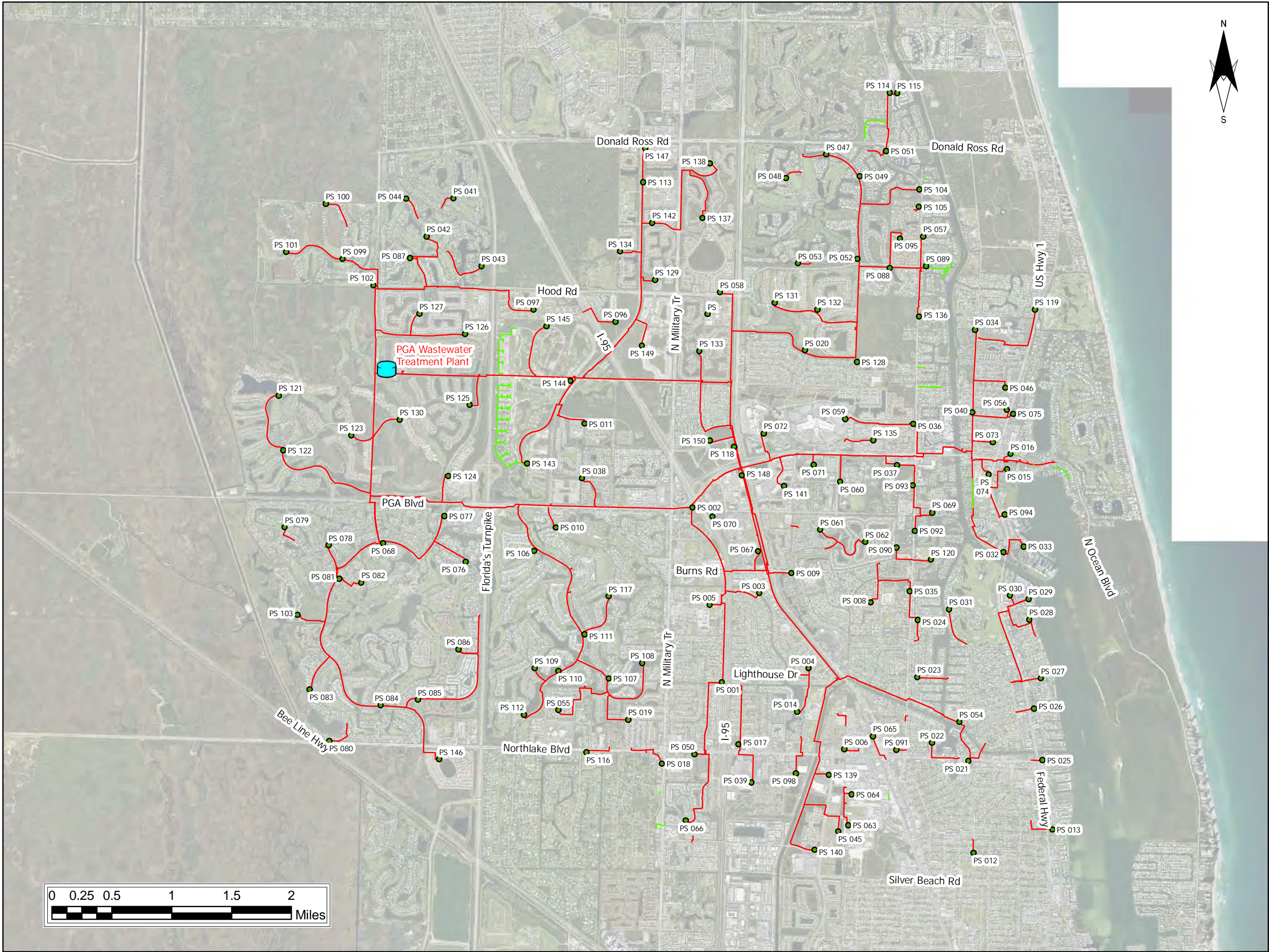
Wastewater Treatment Plant

Pump Station

Force Main

Low Pressure Force Main

SUA Force Main



5.3 Reclaimed Water and Effluent Disposal

All of the wastewater received at the PGA WWTP is treated via high-level disinfection to reclaimed water standards required for irrigation of green space and landscaping at public-access sites. During normal conditions, all of the highly-treated reclaimed water is distributed to paying customers. During wet-weather periods when demand for reclaimed water is low, or during high-flow periods, reclaimed water is stored on-site or disposed via deep-well injection. A summary of the reclaimed water system and deep well is provided below.

5.3.1 Reclaimed Water System. The Seacoast reclaimed water production and distribution system delivers high-quality treated effluent generated at the PGA WWTP to several locations for use in irrigating golf courses and landscaping. The reclaimed water system is currently capable of treating and delivering approximately 12 MGD of reclaimed water to customers located throughout northern Palm Beach County through 24.3 miles of reclaimed water mains. **Figure 5** shows the extent of the existing reclaimed water system.

There are currently 33 reclaimed water customers contracted with Seacoast to receive reclaimed water. The total capacity Seacoast has committed to the reuse customers is 10.773 MGD, of which 0.168 MGD is non-guaranteed (Class B).

During the FY 2008/2009 Seacoast delivered an average of 7.88 MGD of treated, recycled wastewater effluent to reclaimed water customers; or approximately 90% of the 8.69 MGD of daily average wastewater flow. Innovative methods developed by Seacoast to supplement the reclaimed water system include the use of supplemental wells, the use of Floridan well F-2, and the withdrawal of water from surface water bodies. In the future, as new customers are connected and wastewater flows increase, reclaimed water produced from the effluent at the PGA WWTP will replace the supplemental water withdrawn from the wells and surface waters. These innovative methods for providing sufficient irrigation water now assures that new developers will not seek other means of irrigating their property and will instead become Seacoast reclaimed water customers.

Seacoast is currently planning to blend the nanofiltration concentrate generated as part of the Hood Road membrane water treatment process with the reclaimed water produced at the PGA WWTP, and to distribute the blended water to its reclaimed water customers. The use of membrane concentrate will also provide Seacoast with another source of alternative water supplies to supplement the reclaimed water system and meet future demands.

In FY 2008/2009, Seacoast replaced the Eastpointe reclaimed water metering facility and replaced the control panel at the Regional Center, located adjacent to the Palm Beach Gardens Mall.

The reclaimed water system is monitored via telemetry, which provides continuous feedback of pressures and flows throughout the system to the operators. Based on physical inspection of the reclaimed water production and pumping facilities at the PGA WWTP and discussions with staff, the reclaimed water system appears to be properly maintained and operated.



5.3.2 Deep Injection Well. The Class I deep injection well located at the PGA WWTP is being operated under FDEP Permit No. 45384 and Consent Agreement OGC-97-0804, which were issued on July 24, 2001. Seacoast has repeatedly tested, analyzed, and evaluated the well as requested by the FDEP. The results of these activities showed that the well is operating in accordance with all applicable rules and regulations. It is anticipated that the FDEP will soon issue an operating permit allowing continuous operation in FY 2010. In addition, mechanical integrity testing that is required every five (5) years will occur in FY 2010.

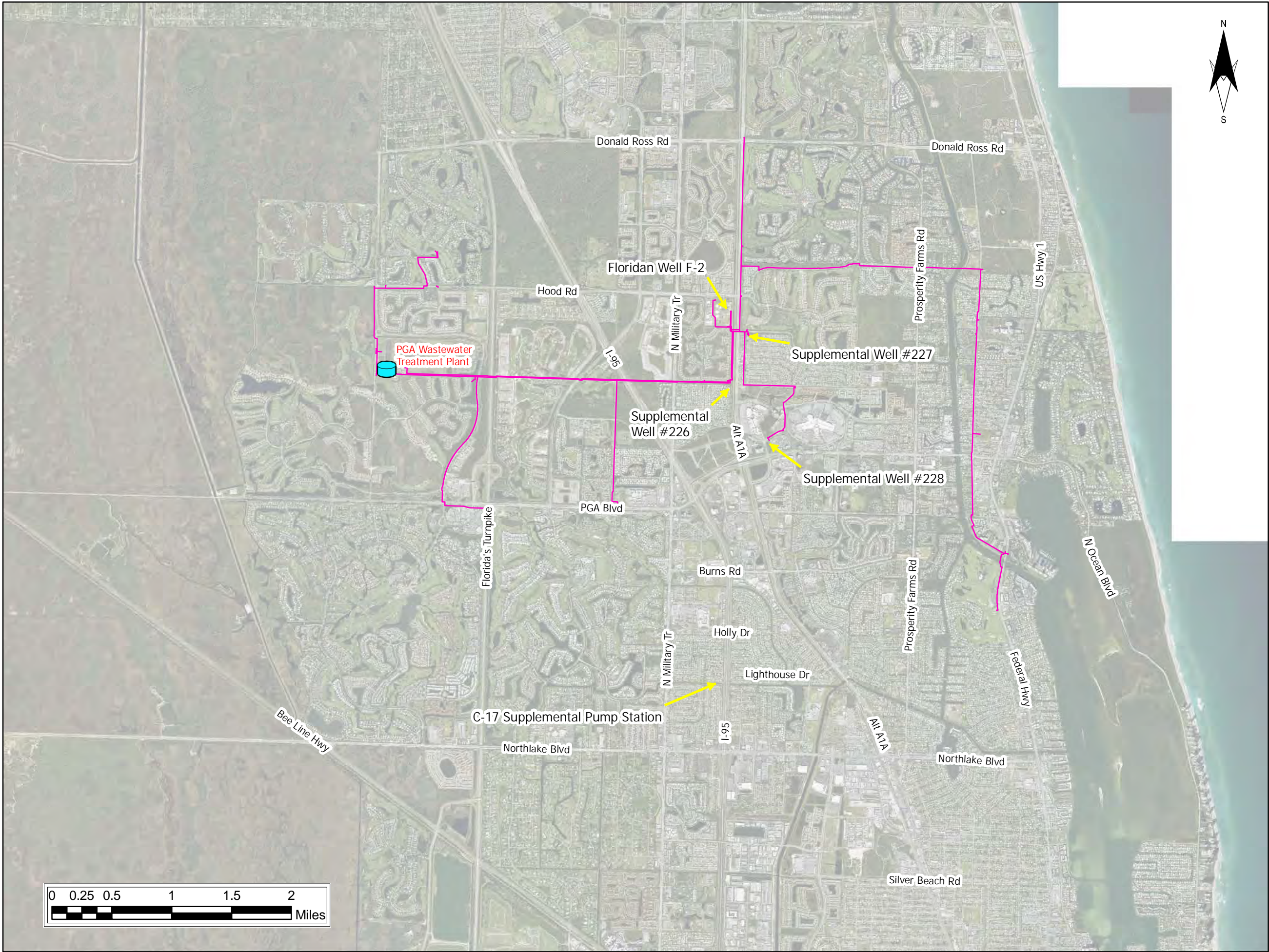
Seacoast Utility Authority
Reclaimed Water
Transmission System

Figure 5



Legend

-  Wastewater Treatment Plant
-  SUA Reclaimed Main



6.0 CONCLUSIONS

It is our professional opinion that the Seacoast Utility Authority's facilities are operated and maintained in a sound and efficient manner. This conclusion is based upon Holtz Consulting Engineers' physical inspections of facilities at the major installations as described above, discussions with Seacoast staff, and review of the operation procedures and facility upgrades and maintenance records and plans. Seacoast also continues to manage and maintain its facilities in a manner that clearly demonstrates their commitment to accommodate planned growth, while continuing to maintain the highest level of service to their customers. FY 2010 will be a year of major improvements to the water treatment facilities as Seacoast Utility Authority continues in the dedication to providing high-quality drinking water and service to their customers.

Holtz Consulting Engineers



David Holtz, P.E.

Florida Certificate No. 42595

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