



CITY COMMISSIONERS OF THE CITY OF WILDWOOD

Mayor/Commissioner – Ed Wolf – Seat 1

Mayor Pro-Tem/Commissioner – Ronald Allen – Seat 5

Pamala Harrison-Bivins – Seat 2

Don C. Clark – Seat 4

Robby Strickland – Seat 3

Bill Ed Cannon – City Manager

Special Called Workshop

Tuesday, June 05, 2012

6:00 PM

**Special Called
Workshop Agenda**

**Special Called
Workshop Agenda**

PLEASE TURN OFF ALL CELL PHONES AND PAGERS

Persons with disabilities needing assistance to participate in any of these proceedings should contact the City Clerk's Department, ADA Coordinator, at 352-330-1330, Ext. 102, forty-eight (48) hours in advance of the meeting.

F.S.S. 286.0105A - If a person decides to appeal any decision made by the Commission with respect to any matter considered at this meeting, they will need a record of the proceedings, and that for such purpose they may need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is to be based.

The City of Wildwood DOES NOT provide this verbatim record.

City Hall Commission Chamber - 100 N. Main Street, Wildwood, FL 34785

AGENDA

1. ~~TIMED ITEMS AND PUBLIC HEARINGS~~

2. ~~REPORTS AND PUBLIC INPUT / SPECIAL PRESENTATION(S)~~

- a. State of the Utilities Power Point Presentation – (Attachments) by Bruce Phillips, Utilities Director (Documents: The State of the Utilities; 5-Yr. Capital Improvement Program; 5-Yr. Renew & Replace Program; The State of the Utilities Power Point)
- b. City Manager
 - 1.
- c. City Attorney
 - 1.
- d. City Clerk
 - 1.
- e. Commission Members
 - 1.
- f. ~~Public Forum (10 minute time limit)~~
- g. ~~Notes and Reports~~

3. ~~NEW BUSINESS – ACTION REQUIRED~~

- a. ~~MINUTES~~
- b. ~~ORDINANCES FIRST READING ONLY (READ ONLY – NO VOTE)~~
- c. ~~RESOLUTIONS FOR APPROVAL~~
- d. ~~APPOINTMENTS~~
- e. ~~CONTRACTS AND AGREEMENTS~~
- f. ~~FINANCIAL~~
- g. ~~GENERAL ITEMS FOR CONSIDERATION~~

4. ~~ADJOURN~~

The State of the Utilities

City of Wildwood

April, 2012

Having now been the Utility Director for the City for 8 months I have had an opportunity to work with and listen to staff and become familiar with the workings and design of the water and wastewater facilities.

WATER FACILITIES

- **Supply and Treatment** – The end of January, the City received the amended Water Use Permit (WUP) from the Southwest Florida Water Management District (SWFWMD), permit #20 008135.009, expiration date July 29, 2013 with a permitted capacity of 4.980 million gallons per day (MGD) annual monthly average and a peak month maximum usage of 7.657 MGD. The most recent 3 month average daily flow is 2.026537 MGD (2,026,537 GPD). The City has also sold an additional 0.541425MGD (541,425 GPD) of capacity not yet connected to the system.

The modification to the WUP was initiated by SWFWMD to implement new water conservation rules. The original permit was issued on September 25, 2007 and set to expire on July 29, 2013. The permit revision requires enforcement of water usage when SWFWMD declares a water shortage. It did not change the original expiration date.

The Florida Department of Environmental Protection (FDEP) requires a capacity analysis when Average Annual Daily Flow (AADF) reaches 75% of the plant's permitted capacity. The water plants are presently operating at 40.69% capacity ($2,026,537 \div 4,980,000$). The supply and treatment facility is classified by FDEP as a Category IV, Class C treatment facility requiring staffing at 1 hour/day/plant (6 plants) and 1 hour/plant one day/weekend.

- **Prison Plant aka CR 501 plant** – This facility has two (2) 12” wells equipped with vertical hollow shaft turbine pumps (permitted average withdrawal of 1,000,000 gpd each or 40% of the total permitted withdrawal volume), high service pumps, two (2) aeration facilities and ground storage tanks, 500,000 and 1,000,000 gallons capacity. The plant is in fair condition, but there are issues with this facility that need to be address
 - The facility experienced a plumbing failure on October 24, 2010 resulting in approximately 18” of water inside of the building. An insurance claim has been filed to repair the damages. Staff and the insurance carrier have agreed to a settlement in the amount of \$85,000.

- Electric/control room does NOT meet current National Electric Code (NEC) requirements for clear workspace in front of the electric/control panel. This results in an unsafe working condition. Solution will require relocation of the control panel with clear workspace meeting NEC requirements.
- The electrical system is unreliable and needs upgrading.
- KHA has provided an Individual Project Order (IPO) scope and fee to prepare contract documents for the repair of the flooding damages and correct the code issues and unreliability of the electric system.
- The facility presently utilizes gas chlorination as a means of disinfectant. For safety reasons, this process requires two (2) staff members to be present, when the 150# cylinders are changed. Solution is to convert the facility to hypochlorite (bleach).
- The facility does not have remote security; existing security cameras cannot be accessed from remote locations.
- SCADA system is out dated and cannot be accessed from remote locations.
- The facility has poor cellular service, thus requiring a booster antenna for security and SCADA.
- **Huey Street Plant** – This facility houses the Utility Department/Water Division’s office, personnel, one 12” well with a vertical hollow shaft turbine pump (permitted average withdrawal of 600,000 gpd or 12% of the total permitted withdrawal volume), equipment, and the City’s only elevated water storage tank.
 - Plant does not have remote security; existing security cameras cannot be accessed from remote locations.
 - SCADA system is out dated and cannot be accessed from remote locations.
 - The office facility has a restroom located within the building. The fixtures and piping are located approximately 65 feet from the potable well. This is not consistent with the City’s code on “Wellhead Protection” or the Florida Administrative Code (FAC) regarding wellhead protection.
 - The elevated water storage tank is not equipped with an “Altitude Valve”.
 - The elevated water storage tank was not inspected in 2007 when all other tanks in the system were inspected.
 - The elevated water storage tank’s exterior was painted approximately 5 years ago.
- **West Well Plant** – is located approximately 3,325 feet west of I-75 and approximately 2,350 feet north of SR 44. The facility utilizes an old 8” irrigation well with a submersible pump (permitted average withdrawal of 246,900 gpd or 5% of the total permitted withdrawal volume), stand-by generator and chlorination facilities.
 - This well is located in a pasture almost $\frac{3}{4}$ of a mile west of the most westerly customer in the City’s distribution system.
 - The well site is not consistent with the City’s code or FAC regarding wellhead protection.

- A tank inspection in 2007 noted issues with the hydro-pneumatic tank, requiring a second man-way to meet code requirements.
- The well pump is controlled by pressure switches with a hydro-pneumatic tank that “floats” on line. No SCADA for remote observance or operation.
- Site has no security cameras.
- City has recently received a demand letter from the property owner’s attorney requiring the plant facilities to be removed from the property.
- Without the West Well the I-75 Interchange is on a dead end water main.
- **Okahumpka Service Plaza Plant** – This facility was originally owned and operated by the Turnpike Authority, taken over by the City approximately 20 years ago. The City has extended water mains to the site from the CR 501 plant and from the City’s distribution system on south US 301. The facility has two (2) 8” wells with submersible pumps (permitted average withdrawal of 169,100 & 197,200 gpd or 8% of the total permitted withdrawal volume), aeration, 25,000 gallon ground storage tank, high service pumps, stand-by generator and a hydro-pneumatic tank.
 - The facility, due to lack of maintenance, has reached the end of its serviceable life.
 - A tank inspection was performed in 2007.
 - The aeration and ground storage tank were report to be in very poor condition, the report recommended replacement.
 - The hydro-pneumatic tank was also reported to be in poor condition and required the installation of a second man-way to meet code requirements.
 - System operates on pressure switches with a hydro-pneumatic tank that “floats” on line. No SCADA facilities for remote observance or operation.
 - No security cameras. A recent inspection by FDEP noted that the vendors, at the Plaza, store materials within the secured area of the plant and failed to keep the facility locked and secure.
 - City has been negotiating with the Turnpike to take this plant out of service.
 - Original agreement requires both parties to agree on the abandonment of the existing facility.
 - If the facility is turned back over to Turnpike Authority it must be in “good” condition.
 - Field testing indicates the system, when fully operational, can supply 840 GPM @ 35 PSI, this equates to 1124 GPM @ 20 PSI.
 - Turnpike Authority indicates “historically” the system can supply 1200 GPM.
 - With the treatment plant off-line and supply from City water main field tests indicate a flow of 675 GPM @ 25 PSI which equates to 732 GPM @ 20 PSI.

- **Fairway's Plant** – is located in the Fairways subdivision on CR 125B. This facility was originally constructed for the Fairways development and was taken over by the City approximately 10 to 12 years ago. The system has a 10" well with a vertical hollow shaft turbine pump (permitted average withdrawal of 91,200 gpd or 2% of the total permitted withdrawal volume), inoperable stand-by generator and gas chlorination facilities.
 - A tank inspection was performed in 2007 and reported the hydro-pneumatic tank to be in poor condition with the steel having numerous pits in excess of 1/16" deep. The tank also needs a second man-way to meet current code requirements.
 - System operates on pressure switches with a hydro-pneumatic tank that "floats" on line. No SCADA facilities for remote observance or operation.
 - No security cameras.
- **CR 214 Re-pump Station** – this facility is a re-pump station, with high service pumps, stand-by generator, aeration and 500,000 gallon ground storage tank. The facility was originally constructed in anticipation of the construction of a well on site. The facility is a booster station and requires one or more of the pumps to be operational to provide sufficient pressure for potable water and fire flow to the northern limits of the City's distribution facilities. Utilizing pumps to maintain flow and pressure is costly and can be unreliable especially in times of natural disasters.
 - The aerator is not required; the re-pump station is pumping treated water. Use of the aerator requires re-chlorination of the treated water.
 - The SCADA system is a proprietary system, which can only be maintained by one individual, the system had no redundancy and is outdated. Due to recent failure in the SCADA system the City has installed a mechanical control system for redundancy.
 - Security cameras are in place but presently are not accessible from remote locations.
 - This site also has poor cellular service and will require a booster antenna.
 - A test well was constructed on site and a treatment facility was designed and constructed based on the water quality of the test well.
 - Upon application to construct a production well it was determined the site was within the supply influence of The Villages and the well construction permit was denied.
- **Champagne Farms Wells** – This facility consists of two (2) wells drilled into the Lower Floridan Aquifer, each having a capacity of approximately 3500 gallons per minute (GPM). The WUP allocates an average of 820,400 gpd for each well, a total of 33% of the total permitted withdrawal volume. Presently these wells are capped and not in use. Although the City's facilities are permitted for 4.980 MGD with these two (2) wells not in service the individual supply facilities are only permitted

- (cumulatively) for withdrawals of 3.3366 MGD. The wells appear to meet the qualifications of an Alternate Water Source (AWS) which was the intent by drilling into the Lower Floridan Aquifer. The City's consultant has provided a scope of service and fee (Commission approved at the March 26, 2012 regular meeting) to pursue the AWS designation from the Southwest Florida Water Management District (SWFWMD); create a hydraulic model of the distribution system and preliminary design report of the treatment plant.
- **Distribution Facilities** – The distribution system is presently 13 miles long, north to south and 7 miles wide, east to west with a future expansion to the south of an addition 4.5 miles. As discussed above in Supply and Treatment, the system has five supply and treatment facilities, a re-pump facility, one (1) elevated water storage tank, four (4) ground storage tanks and three (3) hydro-pneumatic tanks.

The system is primarily made up of PVC pipe, some Asbestos-Cement (AC) pipe, some galvanized pipe and some ductile iron pipe. A major mapping effort was initiated in 2009 by KHA to prepare a GIS-based reference map and database. Prior to this initiative, the location of the City owned distribution mains were largely based on personal recollections of Utility Department staff.

Maintaining pressures throughout a system as wide spread as this system, with only one elevated storage tank, located in the approximate center of the system, is a major undertaking. Additional elevated storage tanks should be considered as future growth occurs.

- **Metering & Billing system** – The system has approximately 4,163 metered accounts. Of these 4,163 meters, 613 have the upgraded “ride-by” technology, 1,598 will require upgrading to the “ride-by” technology and 1,952 will require complete new meters. The monthly process of reading meters requires approximately 120 man-hours. The City recently updated its hand held remote readers and is presently working out the bugs in the system. Past budgets have only included 200 new AMR meters per year (for both new installations and replacements), at this rate it will take more than 15 years to upgrade to a system that will then be 15+ years old. Of the 3,500 meters being read manually staff estimates 50 to 75% may be at least 20 years old. City is most likely losing revenue due to old and inefficient water meters. Staff is looking into the cost to replace all meters with “Ride By” AMR meters and the return on investment based on greater efficiency and quick read time, less than 8 man-hours/month.

The Water Division staff has recently found, by chance, at least three (3) meters that have not been operational for 1 to 3 years.

- The last rate study was performed in 1997, fifteen (15) years ago.

- A rate study for Connection and TIE fees was performed in FY 05/06, six (6) years ago.
- Looped water mains – due to extent of the system there are a number of dead end water mains in the system needing to be looped.
- City staff has just recently located, by GPS coordinates, all known water valves in the City, a great undertaking and of great benefit to the operation and maintenance of the system. KHA has upgraded the distribution system map to match the valve locations.
- The west side of the town is lacking in valves, requiring large portions of the system and excessive numbers of customers to be out of service when line breaks and repairs occur. Staff will be looking at locations to install valves for better maintenance of the system.
- The west side of town is lacking, in some areas, in sufficiently sized water mains for fire protection.
- Some developments have privately maintained water mains; these systems should be and in most cases are separated from the City's system by a backflow prevention device and a master meter.
- There are at least two cases where the City has installed water meters (approximately 385) on privately maintained water lines. This could be a liability to the City.
- In 2012, Sumter County will design and permit the expansion of CR 462 from US 301 to CR 466A, it is anticipated construction will begin in 2014. The City's water distribution system will need to be upgraded in this corridor to provide service to the future build-out of the CR 466A/Powell Road commercial properties. Due to limited right of way the City's facilities will need to be constructed along with the roadway improvements or the City will be required to purchase utility easements for the upgrade of the utilities.
- In 2012, Sumter County will design and permit the expansion of CR 466A from US 301 to CR 462, it is anticipated construction will begin in 2013. The City's water distribution system will need to be relocated due to the expansion of the road.

WASTEWATER FACILITIES

- **Treatment Facilities** – The City has just received (end of January, 2012) its wastewater treatment plant operating permit from the Florida Department of Environmental Protection (FDEP), permit #FLA013497, expiration date January 27, 2017 with a permitted capacity of 3.55 MGD (3,550,000 GPD). The most recent 3 month average daily flow is 1.552083 MGD (1,552,083 GPD) and the City has sold an additional 0.447175 MGD (447,175 GPD) of capacity not yet connected to the system.

The Florida Department of Environmental Protection (FDEP) requires a capacity analysis when Average Annual Daily Flow (AADF) reaches 50% of the plant's permitted capacity. The wastewater plant is presently at 43.72% capacity ($1,552,083 \div 3,550,000$).

The plant, operating at 43.7% capacity and less than 2,000,000 GPD, is classified as a Category III Class C plant. When the plant reaches 50% capacity or 2,000,000 GPD (3 month average flow) it will be classified by FDEP as a Category III, Class B treatment facility requiring staffing at 16 hours/day, 7 days/week.

- The treatment plant process is activated sludge utilizing oxidation ditches with treatment to reuse criteria.
 - The original treatment plant was upgraded approximately 20 years ago to provide reclaimed water; an additional expansion was completed in 2007. Mechanical equipment is starting to fail, pumps are failing, blowers are failing, conveyers are failing, sludge press needs to be upgraded, etc. A 5-year renew and replace (R&R) plan has been established and is attached.
 - The plant needs an emergency by-pass at the bar screen.
 - The bar screen needs to be updated.
 - The plant needs an emergency by-pass at the Krueger filter.
 - The pumps in the Post Equalization Pump Station and the Reuse Pump Station need to be able to be operated manually should the VFDs fail. There are a total of six (6) pumps.
- **Disposal Facilities** – All of the effluent from the plant, operating under normal conditions, is reclaimed for reuse. The City has a contract with The Villages Water Conservation Authority, L.L.C. (Water Authority) to supply reuse water for ten (10) years from the date of first delivery (July 8, 2004). The amount supplied to Water Authority is on a sliding scale dependent on the age of the agreement. The agreement is in its eighth year and therefore the minimum volume is 1,500,000 GPD and the maximum volume is 2,000,000 GPD. Presently the City is supplying an average of 1,124,000 GPD. The balance of the flow is delivered to Rolling Hills Golf Course, several of the local industrial parks and City properties.
 - RIBs (Rapid Infiltration Basins) are located on the west side of CR 121 just north of the Fox Hollow Subdivision. One basin is lined and serves as a holding pond and reservoir for the Water Authority aka North Sumter Utilities (NSU); the other ponds are unlined and serve as backups in case of a system failure resulting in effluent that does not meet reuse standards.
 - The NSU intake from the lined pond is a 16” PVC pipe connected to an inlet structure in the bottom of the lined pond. A gritty material settles out of the effluent onto the pond bottom, migrates to the sump and eventually into the inlet structure ultimately clogging the intake pipe. The gritty material is very abrasive and thus detrimental to the NSU pump.
 - An agreement dated April 11, 1994 between the City and Rolling Hills Country Club provided for the City to supply 300,000 GPD of reclaimed water for irrigation of the golf course. The golf facilities were sold to Brassboys Enterprises, Inc. and on October 24, 2001 they entered into an agreement with the

City to”.... resolve and settle all existing claims, disputes and controversies between them.” On March 31, 2005 the two parties entered into a supplemental agreement to abandon Pond “A”. Since the beginning of this fiscal year the City has delivered an average of 185,400 GPD to the facility.

- **Collection and Transmission System** – The collection and transmission system is spread out like the water distribution system 13 miles long, north to south, 7 miles wide, east to west with a planned expansion 4.5 miles to the south.
 - The City’s policy has been to not accept or construct gravity sewer mains and in some cases to not accept lift stations. This has the potential to be a problem, should a private LS fail and result in a sewage spill requiring notification, the FDEP will be looking to the City for reason, and clean-up.
 - A number of small individual lift stations referred to as “E-1 Stations” have been installed and manifold into the City’s existing force mains. Although the owners of the E-1 Stations have been made aware they are to operate and maintain their station, the City gets the call when an E-1 Station fails and therefore must respond to protect our system against any spillage.
 - In October, 2011 the City had three (3) major lift stations operating as simplex stations when they were permitted as duplex stations. The Commission approved replacement of pumps in two and the third is off-line. The City presently has lift station pumps with operating times of 20,000 to over 40,000 hours of continuous operation.
 - The 14” force main from the Federal Correctional Institute (Prison) has failed eight (8) times (Feb. 4, 2004, March 7, 2006, Oct. 17, 2007, April 29, 2009, Aug. 1, 2009, March 29, 2010, Aug. 30, 2011 & Nov. 10, 2011) since it was installed in 2003. Staff estimated over 200,000 gallons of raw sewage was discharged into the drainage ditch along CR 501 during the November 10, 2011 failure. The size of the force main is also an issue, fourteen (14) inch pipe is an odd size and no longer in production, finding repair clamps and pipe is getting extremely difficult.
 - The Prison lift station also appears to be a significant factor in the force main failures in that the pumps cycle off and on over 400 times per day, this is creating a situation called “cyclic failure” of which PVC pipe is subject to. The Prison has been requested to review the size of its lift station wet well; this would reduce the number of starts and stops/hour thus, reducing the chances of “Cyclic Failure” of the PVC force main.
 - The Prison lift station, as of this date, has a failed bar screen which is causing the WWTP to receive a large amounts of plastics causing the WWTP filters to clog and putting an unreasonable amount of plastics into the sludge. (This issue has since been corrected.)
 - Providence, Triumph South & Word Property all will require utilities from the City. The first phase of Providence will require the extension of an existing 4”

force main at an estimated cost of \$123,000. The development of other phases in Providence or the development of Triumph South or the development of the Word property will require the construction of a new force main from the developments to the WWTP at an estimated cost of \$1,000,000.

- In 2012, Sumter County will design and permit the expansion of CR 462 from US 301 to CR 466A, it is anticipated construction will begin in 2014. The City's wastewater collection system will need to be upgraded in this corridor to provide service to the future build-out of the CR 466A/Powell Road commercial properties. Due to limited right of way the City's facilities will need to be constructed along with the roadway improvements or the City will be required to purchase utility easements for the upgrade of the utilities.
- In 2012, Sumter County will design and permit the expansion of CR 466A from US 301 to CR 462, it is anticipated construction will begin in 2013. The City's wastewater collection system will need to be relocated due to the expansion of the road.

An upgrade on the SCADA systems to "Electronic Control System"¹ for both water and wastewater will help reduce staffing costs for both.

All of this appears so negative and that is not what I am trying to convey, it is my job to provide the City Commission with all of the tools that I can possibly supply you with to base your decisions upon. All in all, both systems are working, maybe not at their best and most efficient but they are working although, lack of funding for yearly maintenance is beginning to take its toll. Both the Water Department staff and the Wastewater Department staff have done an unbelievable job in keeping these systems up and operational, but in the long term they have been their own worst enemy. Staff has been asked to fix it and fix it they did, not once, not twice but numerous times. In a number of cases those fixes were only band aids but at the request of management, staff continued to replace the band aids and now the systems are getting to the point where band aids are failing.

Future needs of the utility systems are upon us and funding is going to be a major issue. The 11/12 budget provides for Water Department operating expenditures of \$1,092,700 and the Wastewater operating expenditures of \$1,408,076 (total \$2,500,776). The former Wastewater Director submitted a 5-year CIP for the FY 11/12 budget. In reviewing the FY 11/12 budget, I find only six (6) of the requested twenty one (21) items were included and only one of them was at the requested funding level. There is no documentation of a 5-year CIP being developed by the former Water Director.

The City should be carrying a 20-25% reserve fund for both water and wastewater, this would equate to between \$500,000 and \$625,000. The reserve fund is established for emergency and unforeseen issues within the system and is in addition to capital improvements and yearly R&R projects.

Staff has put together a 5-year Renew and Replace (R&R) plan as well as a 5-year Capital Improvements Plan (CIP) for both water and wastewater, see attached.

Respectively submitted,

Bruce H. Phillips

Bruce H. Phillips, PE, PLS

Utility Director

¹”ELECTRONIC CONTROL SYSTEM” means a comprehensive automatic control system plus electronic surveillance system along with capability for manual adjustment and control of domestic wastewater or water treatment plant equipment and processes via a computerized system at a central or off-site location and is staffed by a Class C or higher treatment plant operator 24 hours per day and seven days per week.

SCADA – Supervisory Control and Data Acquisition

C:\Users\bphillips\Documents\Wastewater Dept\The State of the Utilities.docx

**5-YEAR CAPITAL IMPROVEMENT PROGRAM
UTILITY DEPARTMENT
FY 12/13 THRU FY 16/17**

**WATER DIVISION
FY 12/13**

Install Hypochlorite System at CR 501 Plant	FUG	\$	5,000.00	FUG	\$	174,500.00
Temporary Office Facility for Water Division at WWTP Site	CI	\$	50,000.00	CI	\$	1,065,000.00
Remove Okahumpka Service Plaza Plant from System	CI	\$	10,000.00	CF	\$	1,713,000.00
Design Champagne Farm's Treatment Plant and Distribution Facilities	CF	\$	213,000.00	TIE	\$	100,000.00
Loop/Upgrade Water Mains/Install valves	TIE	\$	100,000.00			
Upgrade SCADA @ CR 501 Plant, Huey St. Plant & CR 214 Re-Pump Station	FUG	\$	52,500.00			
Install Altitude Valve at Huey Street Elevated Water Tank	FUG	\$	12,000.00			
Air Compressor and "Mole" for service line installations	CI	\$	5,000.00			
Upgrade Security Cameras	FUG	\$	50,000.00			
Upgrade water meters to "Ride-By" meters	CI	\$	850,000.00			
WUP Renewal	FUG	\$	30,000.00			
Rate Study	FUG	\$	25,000.00			
CR 466A Utility Relocates	CI	\$	150,000.00			
Construct Elevated Storage Tank on North end of System	CF	\$	1,500,000.00			
TOTAL FY 12/13		\$	3,052,500.00			

FY 13/14

Construct Champagne Farms Treatment Plant and Distribution Facilities	\$	3,000,000.00
Loop/Upgrade Water Mains/Install Valves	\$	100,000.00
75 kW Generator for Huey Street w/Transfer Switch	\$	50,000.00
Utility Master Plan (Consolidate water, wastewater and reuse)	\$	80,000.00
CR 462 Utility Upgrades	\$	160,000.00
TOTAL FY 13/14	\$	3,390,000.00

FY 14/15

Remove Fairway's Plant from System	\$	10,000.00
Remove West Well Plant from System	\$	10,000.00
Loop/Upgrade Water Mains/Install Valves	\$	100,000.00
TOTAL FY 14/15	\$	120,000.00

FY 15/16

Loop/Upgrade Water Mains/Install Valves	\$	100,000.00
TOTAL FY 15/16	\$	100,000.00

FY 16/17

Construct Elevated Storage Tank on South end of System	\$	1,500,000.00
Loop/Upgrade Water Mains/Install Valves	\$	100,000.00
TOTAL FY 16/17	\$	1,600,000.00

WASTEWATER DIVISION

FY 12/13

Upgrade Security Cameras at WWTP	FUG	\$	15,000.00	FUG	\$	164,000.00
Install Cl2 Residual Paced Automatic System	CI	\$	12,000.00	CI	\$	125,800.00
Triaxle 16 CY Dump Truck	CI	\$	92,000.00			
New 75 kW portable Generator Set	CI	\$	18,500.00			
Upgrade Parkson Bar Screen	FUG	\$	78,000.00			
Upgrade Sludge Conveyor System	FUG	\$	32,500.00			
Upgrade 1.2 meter Sludge Press	FUG	\$	25,000.00			
Upgrade SCADA System	FUG	\$	13,500.00			
Total Residual Chlorine Analyzer	CI	\$	3,300.00			
TOTAL FY 12/13		\$	289,800.00			

FY 13/14

Trailer Mounted Sewer Jetter Machine	\$	45,000.00
Portable Gantry Lift System	\$	6,250.00
Replace CR 501 Force Main (Portion having failures)	\$	675,000.00
CR 462 Utility Upgrades	\$	120,000.00
TOTAL FY 13/14	\$	846,250.00

FY 14/15

460v - 3-Phase Lift Station Generator Set (2)	\$	37,000.00
-----------------------------------------------	----	-----------

Construct New Lined Pond at RIBS	\$	225,000.00
Replace 3-Flags Lift Station	\$	200,000.00
TOTAL FY 14/15	\$	462,000.00

FY 15/16

Truck Mounted Vac-Con	\$	250,000.00
SCADA at Coleman Lift Station	\$	13,500.00
460v - 3-Phase Lift Station Generator Set	\$	18,500.00
Additional (2nd) 1.2 Meter Sludge Press	\$	483,000.00
New 250,000 gallon Aerobic Digester	\$	350,000.00
TOTAL FY 15/16	\$	1,115,000.00

FY 16/17

Additional Filter Tank& Coag/Floc/Sed System	\$	350,000.00
TOTAL FY 16/17	\$	350,000.00

Utility Department

	Water Division	Wastewater Division	TOTAL
FY 12/13	\$ 3,052,500.00	\$ 289,800.00	\$ 3,342,300.00
FY 13/14	\$ 3,390,000.00	\$ 846,250.00	\$ 4,236,250.00
FY 14/15	\$ 120,000.00	\$ 462,000.00	\$ 582,000.00
FY 15/16	\$ 100,000.00	\$ 1,115,000.00	\$ 1,215,000.00
<u>FY 16/17</u>	<u>\$ 1,600,000.00</u>	<u>\$ 350,000.00</u>	<u>\$ 1,950,000.00</u>
TOTAL	\$ 8,262,500.00	\$ 3,063,050.00	\$ 11,325,550.00

- FUG** Facility Upgrades
- CI** Capital Improvements
- CF** Connection Fee
- TIE** Transmission Infrastructure Extension

**5-YEAR R & R PROGRAM
UTILITY DEPARTMENT
FY 12/13 THRU FY 16/17**

**WATER DIVISION
FY 12/13**

Clean All Tanks and Aerators	\$ 5,000.00
Paint Elevated tank at Huey Street	\$ 30,000.00
Management Software for Cross-connection/Backflow	\$ 5,000.00
Large Meter Testing & Repair (yearly)	<u>\$ 7,500.00</u>
TOTAL FY 12/13	\$ 47,500.00

FY 13/14

Clean All Tanks and Aerators	\$ 5,000.00
Paint 500,000 Ground Storage Tank @ CR 501	\$ 25,000.00
AutoCadd software for map updates	\$ 4,000.00
Large Meter Testing & Repair (yearly)	<u>\$ 7,500.00</u>
TOTAL FY 13/14	\$ 34,000.00

FY 14/15

Clean all Tanks and Aerators	\$ 5,000.00
Paint 1,000,000 Ground Storage Tank @ CR 501	\$ 25,000.00
Large Meter Testing & Repair (yearly)	<u>\$ 7,500.00</u>
TOTAL FY 14/15	\$ 37,500.00

FY 15/16

Clean All Tanks and Aerators	\$ 5,000.00
Paint Ground Storage Tank @ CR 214 Re-Pump Station	\$ 25,000.00
Large Meter Testing & Repair (yearly)	<u>\$ 7,500.00</u>
TOTAL FY 15/16	\$ 37,500.00

FY 16/17

Inspect & Clean all tanks	\$	15,000.00
Large Meter Testing & Repair (yearly)	\$	7,500.00
TOTAL FY 16/17	\$	22,500.00

WASTEWATER DIVISION**FY 12/13**

Replace A/C unit in Sludge Press/MCC Room	\$	5,200.00
Replace Motor and Gear Drive Reducer for Sludge Pump	\$	6,200.00
Replace pump in Main St. LS (40,000+ hours)	\$	8,700.00
Replace Diaphragm Pump Hoses	\$	2,800.00
Recoat Interior of CCC tanks	\$	17,000.00
30 HP motor for Lakeside Oxidation Ditch	\$	3,900.00
Rotor Drive Gear Box for Lakeside Oxidation Ditch	\$	11,400.00
Replace Pump in Industrial Park LS	\$	6,200.00
Replace filter media panels in Disc Filter (134 @ \$175.00 Ea.)	\$	23,450.00
Replace NSU Pump	\$	29,000.00
Replace Influent Composite Refrigerated Sampler	\$	6,800.00
Replace Worn Equalization Blower in EQ Tank-2	\$	2,900.00
Replace Front Gate Assembly	\$	4,200.00
Rehab LS #27, CR 219 & SR 44	\$	38,000.00
TOTAL FY 12/13	\$	165,750.00

FY 13/14

Replace A/C for Machine Shop	\$	4,500.00
Replace pump in Peters St. LS (20,000+ hours)	\$	7,900.00
Replace pump in Main St. North LS (40,000+ hours)	\$	14,500.00
Replace pump in Charlotte Life LS (30,000+ hours)	\$	7,900.00
Replace pump in Osceola Ave. LS (15,000+ hours)	\$	7,900.00

Replace pump in Truck Stop LS (21,000+ hours)	\$	5,500.00
Spare Post EQ pump & motor	\$	3,500.00
Part kits (2) for Aurora Post EQ Pump	\$	14,200.00
EQ Pump VFD Unit w/Bypass unit	\$	15,000.00
30 HP motor for Lakeside Oxidation Ditch	\$	3,900.00
Rotor Drive Gear Box for Lakeside Oxidation Ditch	\$	11,400.00
Mixer for Aerobic Digester	\$	7,250.00
Rehab East Clarifier Steel Structure Above & Below WL	\$	45,000.00
Rehab West Clarifier Steel Structure Above & Below WL	\$	45,000.00
Kruger Disc Filter Backwash Pump assembly	\$	4,200.00
75 HP Hollow Shaft Reuse Pump Motor\Spare	\$	18,500.00
Replace Reuse Pump VFD Unit w\Bypass	\$	30,000.00
Replace Non Potable water system pumps	\$	24,000.00
Replace Millennium Pump	\$	26,800.00
Replace RIB Control Valve Actuators & SCADA Controls	\$	7,800.00
Replace filter media panels in Disc Filter (134 @ \$185.00 Ea.)	\$	24,790.00
TOTAL FY 13/14	\$	304,750.00

FY 14/15

Replace unsafe metal stairs on Digester w/a Stair/Landing	\$	15,000.00
30 HP motor for Lakeside Oxidation Ditch	\$	3,900.00
Rotor Drive Gear Box for Lakeside Oxidation Ditch	\$	11,400.00
Replace filter media panels in Disc Filter (134 @ \$195.00 Ea.)	\$	26,130.00
RAS 35 HP-Dry Pit Motor/Pump Assembly	\$	27,500.00
TOTAL FY 14/15	\$	83,930.00

FY 15/16

30 HP motor for Lakeside Oxidation Ditch	\$	3,900.00
Rotor Drive Gear Box for Lakeside Oxidation Ditch	\$	11,400.00
Replace filter media panels in Disc Filter (134 @ \$205.00 Ea.)	\$	27,470.00
TOTAL FY 15/16	\$	42,770.00

FY 16/17

Kruger Ox. Ditch Prop Mixer	\$	16,000.00
Kruger Ox. Ditch Rotor Drive Assembly	\$	28,500.00
TOTAL FY 16/17	\$	44,500.00

Utility Department (R&R Program)

	Water Division	Wastewater Division	TOTAL
FY 12/13	\$ 47,500.00	\$ 165,750.00	\$ 213,250.00
FY 13/14	\$ 34,000.00	\$ 304,750.00	\$ 338,750.00
FY 14/15	\$ 37,500.00	\$ 83,930.00	\$ 121,430.00
FY 15/16	\$ 37,500.00	\$ 42,770.00	\$ 80,270.00
<u>FY 16/17</u>	<u>\$ 22,500.00</u>	<u>\$ 44,500.00</u>	<u>\$ 67,000.00</u>
TOTAL	\$ 179,000.00	\$ 641,700.00	\$ 820,700.00

Utility Department (Total 5-year Program)

	R&R Projects	CIP Projects	TOTAL
FY 12/13	\$ 213,250.00	\$ 3,342,300.00	\$ 3,555,550.00
FY 13/14	\$ 338,750.00	\$ 4,236,250.00	\$ 4,575,000.00
FY 14/15	\$ 121,430.00	\$ 582,000.00	\$ 703,430.00
FY 15/16	\$ 80,270.00	\$ 1,215,000.00	\$ 1,295,270.00
<u>FY 16/17</u>	<u>\$ 67,000.00</u>	<u>\$ 1,950,000.00</u>	<u>\$ 2,017,000.00</u>
TOTAL	\$ 820,700.00	\$ 11,325,550.00	\$ 12,146,250.00

**THE STATE OF THE UTILITIES
CITY OF WILDWOOD
APRIL 2012**

Bruce H. Phillips, PE, PLS
Utility Director

Utility Department

Water Division

- Nine employees, Mark O'Dell, Division Head
- FDEP classifies the plant as a Category IV, Class C which requires staffing 1 hour/day /location each weekday and one weekend day.
- SWFWMD WUP #20 008135.009
 - Issued January 25, 2012
 - Expires July 29, 2013
 - Annual average withdrawal 4,980,000 gallons per day (GPD)
 - Peak Month maximum withdrawal 7,657,000 GPD
 - Most recent 3 month average daily flow 2,026,537 GPD
- Five Water Supply Plants
- Seven Active Wells
- Two wells for future use (Champagne Farms)
- Four Ground Storage Tanks with Aerators
- Three Hydro-Pneumatic Tanks
- One Elevated Storage Tank
- One Re-Pump Station

PRISON PLANT (CR 501)



Prison Plant Office Area



Prison Plant Pump Room



Prison Plant Electric/Control Room

Clear Area is 40", Code requires 60"



Prison Plant Electric/Control Room
Clear Area (Front of Cabinet to Wall)



Prison Plant Gas Chlorine Cylinders



150 Lb. Chlorine Cylinders

HUEY STREET



Huey Street Plant Facilities



WEST WELL



West Well Pumping Facilities

Hydro-pneumatic Tank



Pump House

Well

01/01/2006

OKAHUMPKA SERVICE PLAZA



Okahumpka Service Plaza Ground Storage Tank



Okahumpka Service Plaza Hydro-Pneumatic Tank



FAIRWAY'S PLANT



Fairway Plant Facilities



Well & Pump

Electric/Control House

01/02/2006

CR 214 RE-PUMP STATION



CR 214 Re-Pump Station Pump Room



CR 214 Re-Pump Station Controller Cabinet



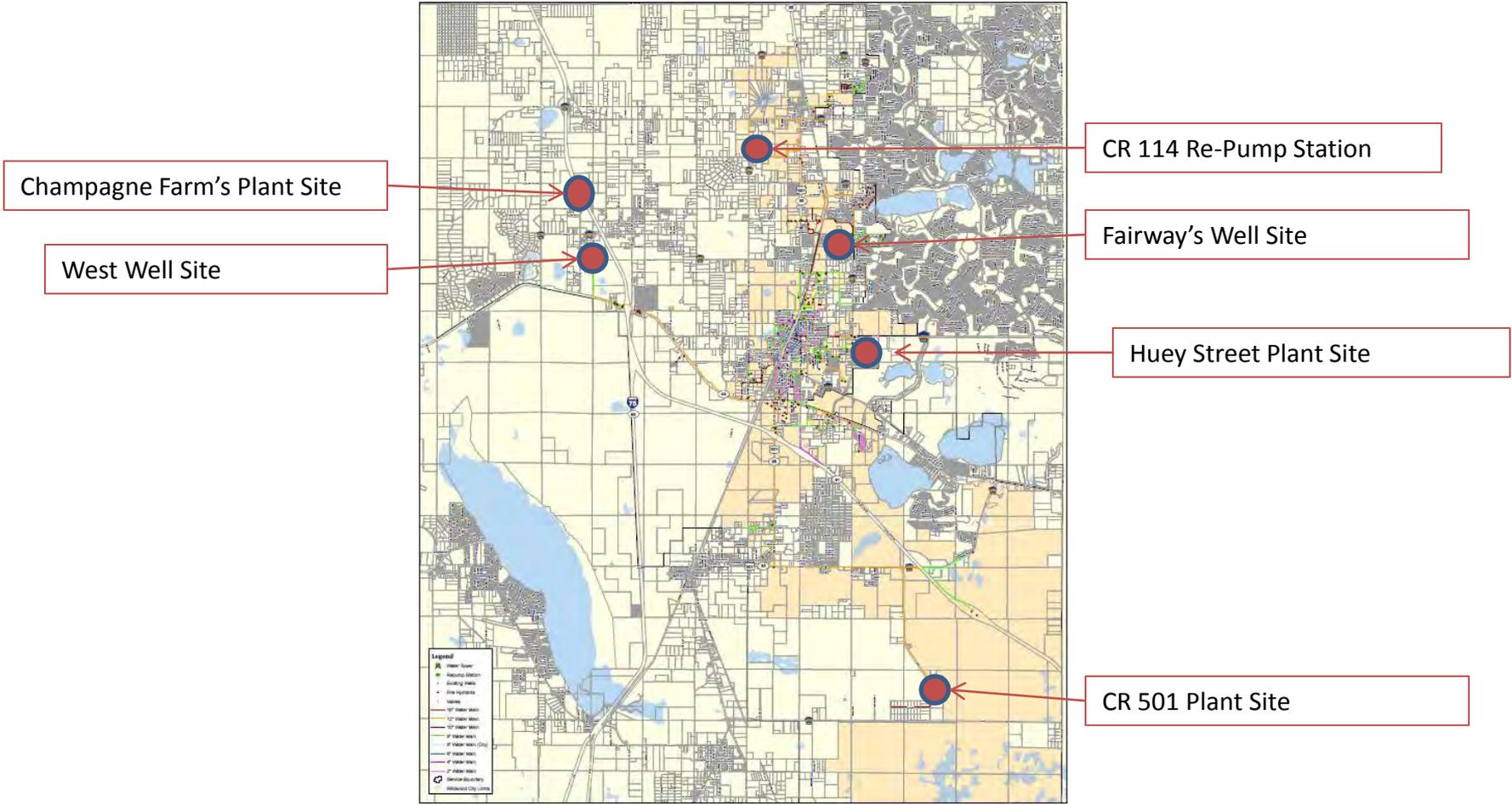
CR 214 Re-Pump Station Electric/Control Room



CHAMPAGNE FARMS



City of Wildwood Water Service Area Map



Utility Department Wastewater Division

- Thirteen Employees, Robert (Bobby) Valentich, Division Head
- FDEP Operating Permit #FLA013497
 - Issued January 18, 2012
 - Expires January 17, 2017
 - Permitted Three Month Rolling Average Daily Flow is 3,550,000 gallons per day (GPD)
 - Three Month Rolling Average Daily Flow is presently 1,552,083 GPD (43.72% capacity)
 - Capacity Analysis required when plant flow equals 50% of the permitted capacity (1,775,000 GPD)
- FDEP classifies the plant as a Category III, Class C facility, when facility reaches 50% capacity or 2,000,000 GPD the plant will be a Category III, Class B facility.
 - Requires lead operator to be a Class B or higher operator
 - Requires staffing at 16 hours per day, 7 days per week by a Class C or higher operator.

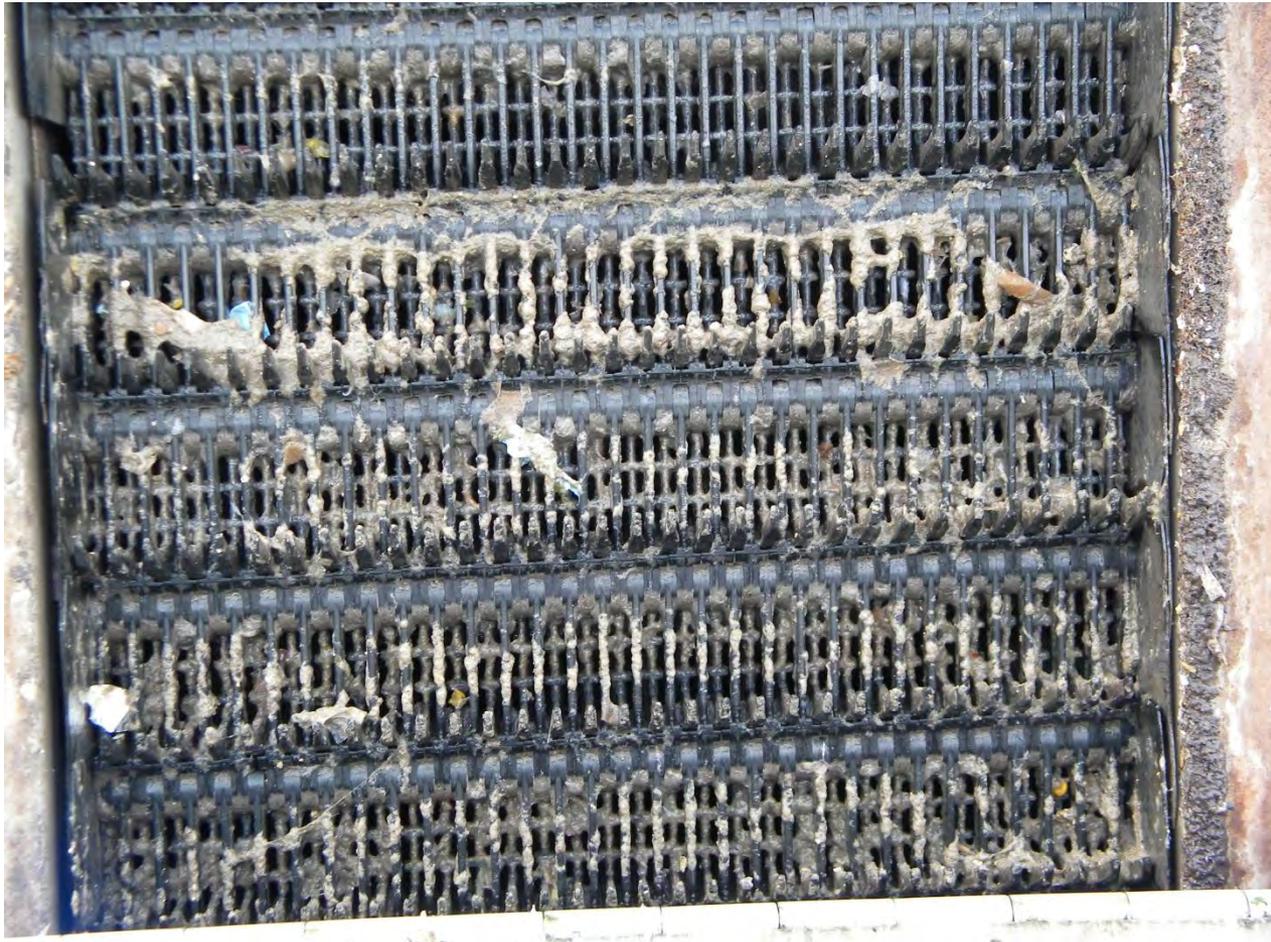
Wastewater Treatment Plant



Bar Screen



Bar Screen



Kruger Disc Filters



Variable Frequency Drives



Reuse Pump Station at Wastewater Treatment Plant

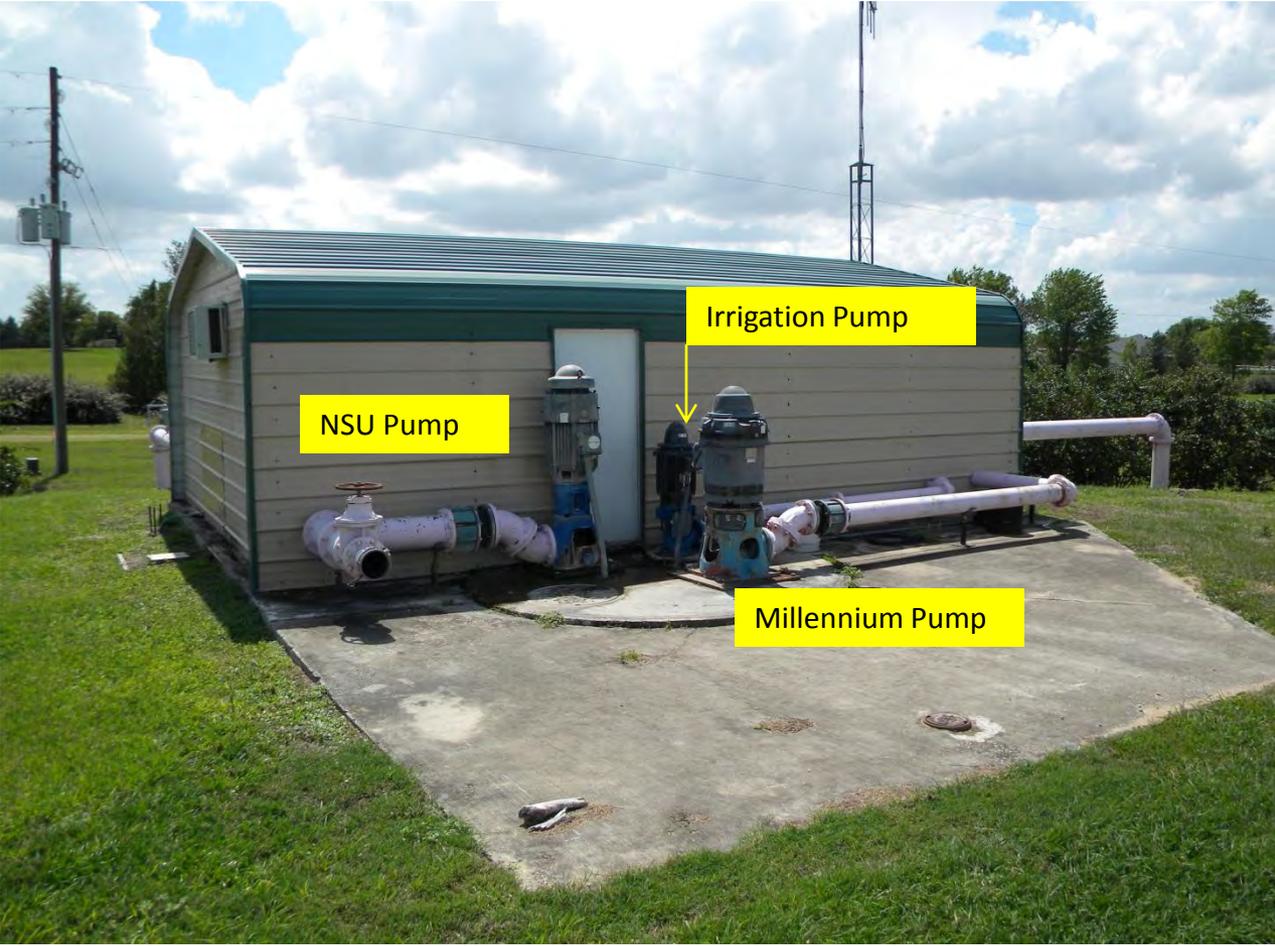


Rapid Infiltration Basins

RIBs



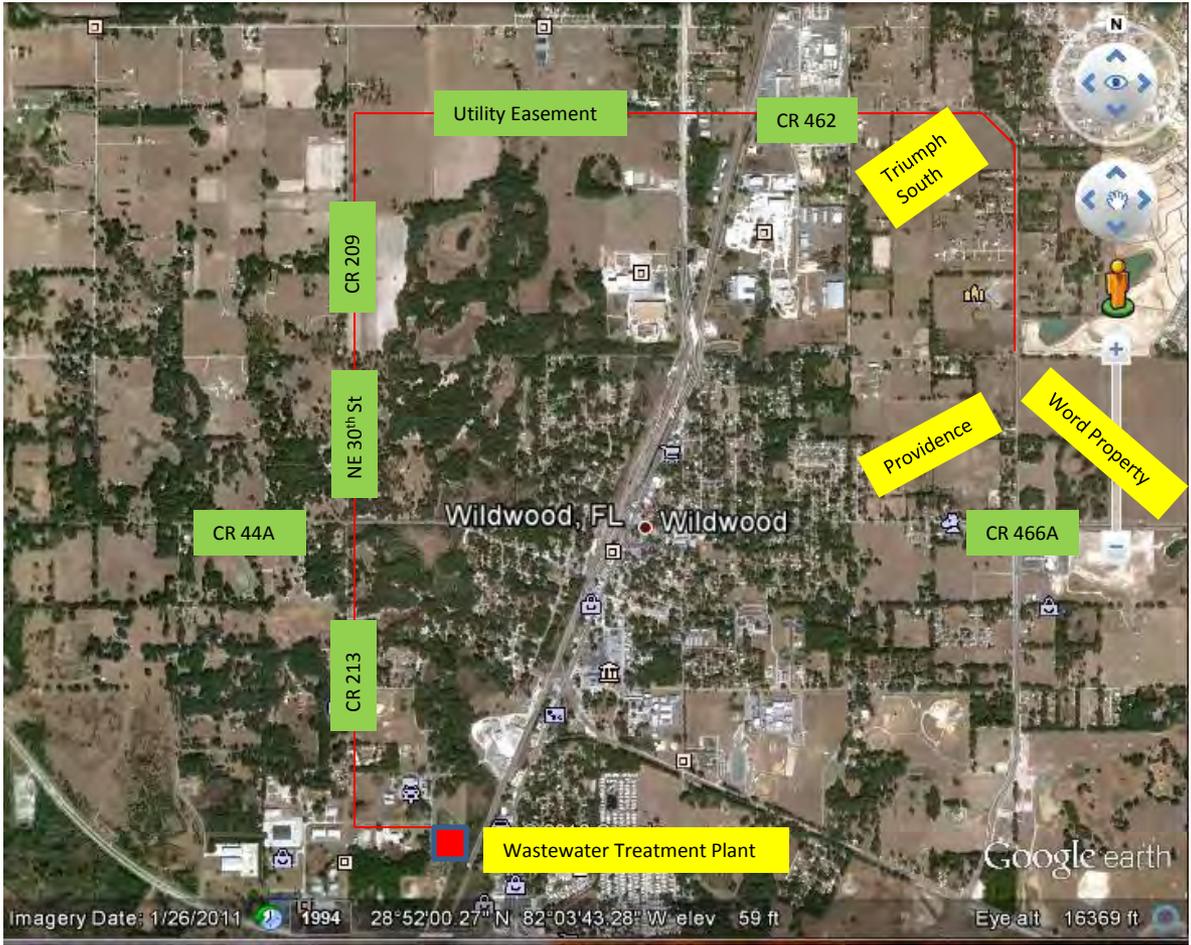
Reuse Pump Station at RIBs



Lake Miona Golf Course



New Sanitary Force Main For Development of NW & NE Quadrant of CR 466A & CR 462



Wastewater Disposal Facilities

Reclaimed Water (Reuse)

- The Villages Water Conservation Authority (NSU) Agreement for the Delivery and Use of Reclaimed Water
 - Agreement dated January 8, 2002; 10 year term from date of first delivery with (2) 5-year options
 - Began Delivery of Reclaimed Water on July 8, 2004
 - Presently in seventh year from date of first delivery
 - Year 7 thru Year 10 deliver minimum of 1,500,000 GPD; maximum of 2,000,000 GPD
 - Years 11 thru 15 – Minimum of 1,500,000 GPD; Maximum of 5,000,000 GPD
 - Years 16 thru 20 – Minimum of 1,500,000 GPD; Maximum of 5,000,000 GPD
 - Presently supplying an average of 1,124,000 GPD
- Lake Miona Golf Course
 - Agreement dated April 11, 1994 between City and Rolling Hills Country Club . City to supply up to 300,000 GPD of reclaimed water.
 - October 24, 2001 amended agreement between City and Brassboys Enterprises, Inc. to settle suit.
 - March 31, 2005 amended agreement to abandon Pond A due to sink hole activity.
 - Presently City supplying an average of 185,400 gpd of reclaimed water to the site.

City of Wildwood Wastewater Service Area Map

