



## Utilities

### Goals

The goal of the Division of Environmental Services (Utilities) is to provide customers with the highest possible quality of water and wastewater services while maintaining a competitive rate structure. The Division ensures that all regulatory agency requirements associated with the construction, operation, and maintenance of the utility system are met or exceeded.

### Objectives

Ensure both treatment plants operate at maximum efficiency in order to provide high quality potable water, along with the environmentally sound disposal of wastewater, for the customers of Pembroke Pines 24 hours a day, 365 days a year, while maintaining one of the lowest utility rates in southeast Florida.

Maintain fire hydrant systems per City of Pembroke Pines Fire Department requirements, thereby supporting the Insurance Service Organization (ISO) Class One fire protection rating.

Identify and repair major sources of inflow and infiltration into the sanitary sewer system.

Continue to replace potable water meters annually on an as-needed basis.

Inspect and maintain lift stations throughout the City and upgrade or replace outdated parts, pumps, and stations as needed.

Continue to locate, clean, and pad strategic force main and water main valves throughout the City.

### Major Functions and Activities

The six sections of responsibilities are:  
 Environmental Services (Engineering)  
 Technical Services  
 Water Treatment  
 Water Distribution  
 Wastewater Collection  
 Wastewater Treatment

These six sections work as an integrated team in a joint effort to provide the wide variety of services and support that are essential for the implementation of all operations. This includes pumping water from the ground, treating it, delivering it to our residents, and collecting and treating wastewater, as well as collecting revenues for these services.

~ ENVIRONMENTAL SERVICES (ENGINEERING) - See the separate Engineering section of this document for information on this element.

~ TECHNICAL SERVICES - The technical and regulatory requirements of the Water Treatment Plant and the Wastewater Treatment Plant are addressed by the Technical Services section. The fully certified laboratory continually monitors the water and wastewater systems, ensuring that all federal, state, and local standards for water quality are strictly met. Additionally, the computerized control systems associated with the operation of both treatment plants, along with the computerized lift station telemetry Supervisory Control and Data Acquisition (SCADA) system, are maintained and upgraded by the Technical Services section.

~ WATER TREATMENT - The City's Water Treatment Plant is staffed and operated 24 hours per day, providing our customers with approximately 13.5 million gallons of safe and reliable potable water daily. The water plant also provides water for firefighting purposes at pressures and flow rates that enable the City to maintain the highest fire insurance rating possible. Staff also provides the 24-hour communication link between customers and emergency repair crews. During plant operations, frequent inspections are performed, thereby ensuring all routine preventative maintenance is performed to prevent degenerative performance.

~ WATER DISTRIBUTION - This section is responsible for the repair and preventative maintenance of more than 489 miles of water distribution lines, service lines, meters, and associated control valves and appurtenances. Additionally, the water distribution section provides repair and preventative maintenance and testing services to 4,121 fire hydrants.

~ WASTEWATER COLLECTION - This section is responsible for the operation, repair, and preventative maintenance of more than 30 miles of force mains and 399 miles of gravity sewer mains, as well as 7,288 associated manholes and 170 lift stations. In addition, the maintenance of over 226 miles of storm drains is provided via the Sewer Collection section.

~ WASTEWATER TREATMENT - The City's Wastewater Treatment Plant is staffed and operated 24 hours a day, ensuring that approximately 7.0 million gallons/day of sanitary waste is treated and disposed of in an environmentally safe manner and in conformance with all applicable federal, state and local laws. The plant provides treatment capacity for



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those customers located west of Flamingo Road. The result of the treatment process is disposed of via deep well injection, while solids are land applied to serve the agricultural community. During plant operations, frequent inspections are performed, thereby ensuring all routine and preventative maintenance is performed in a timely manner to preclude any degenerative performance.

### Budget Highlights

The budget provides funding required to operate and maintain the existing utility infrastructure and customer service operations. Changes from the current budget include the following:

- \$4.0 million will be carried over from fiscal year 2012-13 for Phase I of a multi-year program to replace the existing odor control scrubbers and existing biological odor filters, add redundant odor control scrubbers and add advance odor control equipment to the sewer treatment plant. This project was moved to fiscal year 2013-14 while the department reviewed ways to upgrade the sludge handling process at the sewer treatment plant.
- \$6.0 million for Phase I of a multi-year program to upgrade the sludge handling process at the sewer treatment plant. This project will upgrade the existing sludge from class B to class AA. The process will allow for easier disposal of the sludge generated by the sewer plant.
- \$0.9 million to complete the rehabilitation of treatment units 2 and 3 at the wastewater plant that was started in fiscal year 2012-13.
- \$1.8 million for the rehabilitation of treatment unit 5 at the wastewater plant
- \$0.5 million for the replacement of approximately 2,500 linear feet of waterline on Johnson Street between University Drive and NW 77th Way. This work was originally scheduled for fiscal year 2011-12 but had to be delayed because the funding was needed to replace waterlines in the residential neighborhood located north of the water plant.
- \$1.1 million to rehabilitate 10 lift stations
- \$0.5 million for the installation of a new 30-inch force main on Johnson Street north of the water plant
- \$0.5 million for the relocation of the administration offices
- Phase II of the AWS project (Alternative Water System) is on hold pending a future City Commission workshop to discuss the rapidly changing regulatory environment and to determine whether the project could be delayed for another 1-2 years without having a negative impact on the utility's ability to supply water and sewer services to its customers. Funds have not been appropriated for the AWS project in the fiscal year 2013-14 budget.

### Accomplishments

- Replaced eight lift stations - including master lift station number 4.
  - Continued the meter replacement program throughout the City.
  - Continued the valve location and lift station inspection programs and repaired or replaced parts or stations as needed.
  - Completed the construction work on the rehabilitation of wastewater treatment unit number 4 in December 2012.
  - Completed the plans and permitting for the rehabilitation of wastewater treatment units 2 and 3.
  - Completed the rehabilitation of wastewater treatment unit number 3 and started the rehabilitation of wastewater treatment unit number 2. The construction work on unit number 2 is scheduled to be completed in December 2013.
  - Completed the design and permits for the rehabilitation of treatment unit number 5. The construction on unit number 5 is scheduled to start as soon as the rehabilitation of treatment unit 2 is completed.
  - Completed plans and permits for the replacement of waterlines on the following streets:
    - NW 79th Way - Johnson Street to NW 13th Street
    - NW 10th Street - NW 78th Terrace to NW 79th Way
    - NW 11th Street - NW 78th Terrace to NW 79th Way
    - NW 13th Street - NW 76th Avenue to University Drive
- The construction and inspections of waterlines at the above streets began in May 2013, and are scheduled to be completed in November 2013.

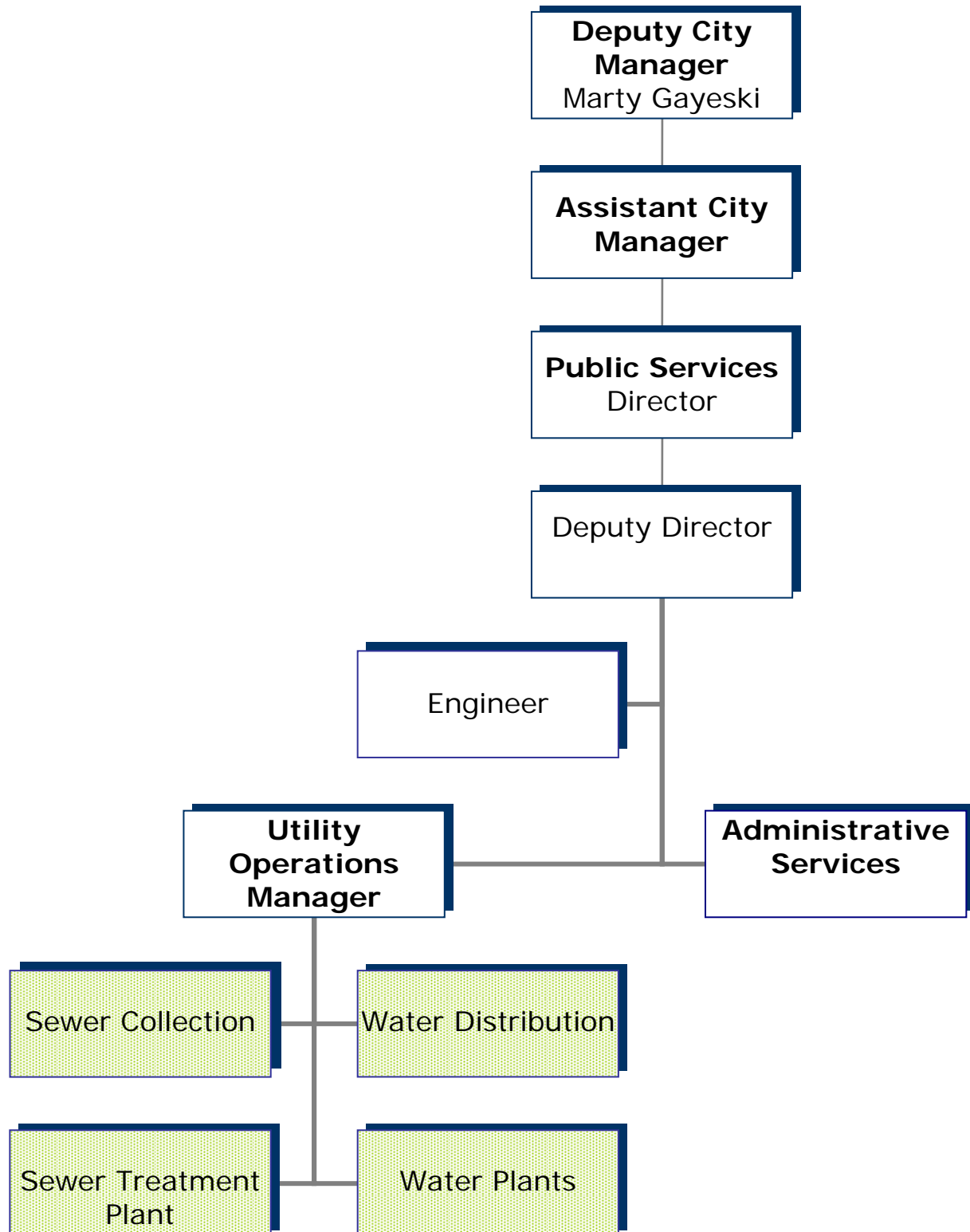
## Utilities Performance Measures

Indicator	2010-11		2011-12		2012-13	2013-14
	Actual	Goal	Actual	Goal	Goal	Goal
<b>Outputs</b>						
Number of potable water meters replaced	1,792	2,500	1,607	2,000	2,500	2,000
Linear feet of gravity sewer mains rehabilitated, eliminating inflow and infiltration into the sanitary sewer system	0*	5,000	10,000*	5,000	5,000	2,500
Miles of water main maintained	521	521	521	521	521	521
Fire hydrants maintained	4,500	4,520	4,541	4,500	4,600	4,560
Lift stations maintained	187	187	190	186	190	192
Miles of sanitary sewer maintained	411	411	412	411	412	412
Miles of force main maintained	34	34	36	34	34	36
Number of utility customers assisted	72,594	60,000	95,680	65,000	70,000	100,000
<b>Effectiveness</b>						
PH (County standard 6.5 - 9.1 or higher)	9.2	9.2	9.2	9.2	9.2	9.2
Total Residual Chlorine (County standard 4.0 or lower)	3.5	3.5	3.5	3.5	3.5	3.5
Color (County standard 15.0 or lower)	6.0	6.0	6.0	6.0	6.0	6.0
Fluoride ASF (County standard 0.8 or lower)	0.8	0.8	0.8	0.8	0.8	0.8
Turbidity NTU (County standard 1.0 or lower)	0.06	0.06	0.06	0.06	0.06	0.06
Iron Fe- (County standard 0.3 or lower)	0.02	0.02	0.02	0.02	0.02	0.02
CBOD5 Effluent (County standard 20 or lower)	5.20	5.25	5.20	5.20	5.20	5.20
TSS Effluent (County standard 20 or lower)	3.0	3.0	3.0	3.0	3.0	3.0
<b>Efficiency</b>						
Number of hours required to repair a pressure main break	4	4	4	4	4	4
Number of hours required to respond to after-hours emergency situations	1	1	1	1	1	1

\* Funds unspent in FY2010-11 were carried forward and used to help fund rehabilitation of 10,000 linear feet during FY2011-12.

## CITY MANAGER

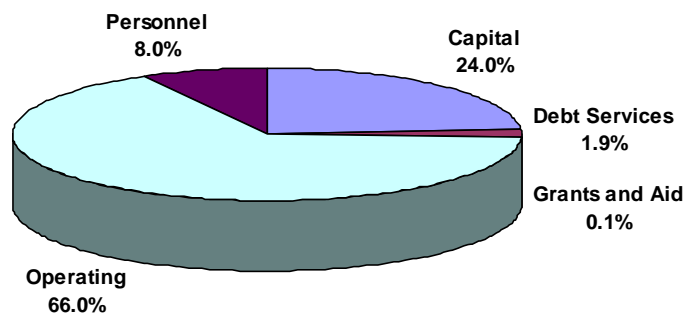
### Organizational Chart



Shading indicates direct public service provider

## Utilities - Budget Summary

Revenue Category	2010-11 Actual	2011-12 Actual	2012-13 Budget	2013-14 Budget
Building Permits	37,664	43,518	20,000	40,000
General Government Charges	49,434	52,123	48,200	48,200
Physical Environment Charges	770,014	848,498	710,000	760,000
Water/Sewer Charges	40,303,087	40,979,471	41,740,000	46,653,100
Investment Income	-6,891,075	1,471,592	388,000	563,000
Disp of Fix Assets / Sale of Equip/ Sc	-	-	1,000	1,000
Miscellaneous Revenues	-	2,869	1,000	3,000
Other Miscellaneous Revenues	1,194	813	4,500	4,500
Private Gifts / Contributions	100,000	-	-	-
Interfund Transfers	7,775,118	-	-	-
Appropriated Retained Earnings	-	-	742,014	-
Prior Year Bond Proceeds	-	-	151,270	6,300,000
Water/Sewer Connection	814,432	943,627	550,000	625,000
Capital Contributed from Developer	580,229	874,122	-	-
Capital Funded By Reserve	-	-	-	1,430,914
Beginning Retained Earnings	-	-	8,187,851	-
<b>Total</b>	<b>43,540,097</b>	<b>45,216,634</b>	<b>52,543,835</b>	<b>56,428,714</b>



### Utilities - Budget Summary

Expenditure Category	2010-11 Actual	2011-12 Actual	2012-13 Budget	2013-14 Budget
Personnel				
Salary	2,331,174	2,128,927	2,382,237	2,397,500
Benefits	1,777,520	1,899,721	2,035,358	2,133,925
Personnel Subtotal	4,108,694	4,028,649	4,417,595	4,531,425
Operating				
Professional Services	137,845	73,456	197,325	234,700
Accounting and Auditing	52,436	54,417	56,054	56,576
Other Contractual Services	3,277,259	4,195,429	4,220,552	4,707,416
Travel Per Diem	1,112	25	950	1,000
Communication and Freight Services	212,174	217,940	242,875	245,600
Utility Services	8,757,063	8,794,796	10,552,482	9,390,500
Rentals and Leases	108,761	114,950	118,984	120,839
Insurance	1,120,132	1,081,708	1,765,856	1,909,727
Repair and Maintenance Services	1,227,762	1,317,867	1,533,160	1,551,551
Printing and Binding	13,168	10,269	16,250	16,250
Promotional Activities	2,070	-	-	-
Depreciation	5,320,900	5,062,468	2,160,000	2,170,000
Other Current Charges and Obligation	14,702,655	14,202,468	14,043,361	14,971,589
Office Supplies	14,080	15,190	15,650	16,650
Operating Supplies	1,740,959	1,776,019	1,846,764	1,814,679
Road Materials and Supplies	24,433	16,524	25,000	35,000
Publications and Memberships	347	-	2,000	1,000
Operating Subtotal	36,713,154	36,933,526	36,797,263	37,243,077
Capital				
Buildings	-	-	4,093,520	6,500,000
Improvements Other Than Buildings	-	-	4,389,806	5,112,000
Machinery and Equipment	-	-	1,756,258	1,938,160
Capital Subtotal	-	-	10,239,584	13,550,160
Debt Services				
Principal Payments	-	-	661,603	684,759
Interest Payments	83,525	412,858	390,034	366,202
Debt Services Subtotal	83,525	412,858	1,051,637	1,050,961
Grants and Aid				
Aids to Government Agencies	-	3,487,494	37,756	53,091
Grants and Aid Subtotal	-	3,487,494	37,756	53,091
Other				
Other Uses	4,771	5,944	-	-
Other Subtotal	4,771	5,944	-	-
<b>Total</b>	<b>40,910,145</b>	<b>44,868,471</b>	<b>52,543,835</b>	<b>56,428,714</b>

### Utilities - Personnel Summary

Position Title	2010-11 Actual	2011-12 Actual	2012-13 Adopted Budget	2013-14 Budget
12027 Utility Operations Manager	-	1	1	1
12055 Deputy Public Services Director	0.5	0.5	0.5	1
12109 Administrative Supervisor	2	2	2	2
12149 Division Director Utilities	1	-	-	-
12499 Deputy City Manager	-	-	0.5	0.5
12513 Account Clerk III	1	1	1	1
12516 Assistant City Manager	0.5	0.5	0.5	0.5
12550 Backflow Specialist	1	1	-	-
12672 Chief Waste Water Operations	1	-	-	-
12673 Chief Water Operations	1	1	1	1
12753 Utility Service Worker II/Camera Oper	1	1	1	1
12767 Utility Maintenance Supervisor	1	1	-	-
12774 Engineer	0.5	-	0.5	0.5
12779 W-Utility Ser Worker II	6	6	4	4
12785 S-Utility Service Worker I	3	3	2	2
12786 S-Utility Service Worker II	2	2	2	2
12831 CADD Operator	1	1	1	1
12926 Water Plant Operator I	3	3	3	3
12928 Water Plant Operator III	4	4	3	3
12946 S-Treatment Plant Operator I	1	1	1	1
12947 S-Treatment Plant Operator II	4	4	2	2
12948 S-Treatment Plant Operator III	3	3	3	3
13001 Public Services Director	0.5	0.5	0.5	0.5
13160 Utility Special Project Manager	1	-	-	-
13163 Division Director of Utilities	-	1	1	1
13674 P/T Chief Chemist	1	1	1	1
13681 P/T Clerk Spec II	1	1	1	1
13926 P/T Water Plant Operator I	1	1	1	1
Total				
Full-time	38	36.5	29.5	30
Part-time	4	4	4	4