



## Utilities

### Goals

The goal of the Division of Environmental Services (Utilities) is to provide customers with the highest quality water and wastewater services possible 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 per 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 retaining the best fire insurance rating in the State of Florida.

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Inspect and maintain lift stations throughout the City, and upgrade or replace outdated parts, pumps, and stations as needed.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

Six sections of responsibilities include:

- 1 - Environmental Services (Engineering)
- 2 - Technical Services
- 3 - Water Treatment
- 4 - Water Distribution
- 5 - Wastewater Collection
- 6 - 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 Public Services Tab for details pertaining to Environmental Services (Engineering).

~ 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 adhered to. 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:

- \$0.6 million for the first principal payment on the \$12.3 million bank loan for the AWS project;
- \$0.5 million for the replacement of approximately 2,500 linear feet of waterline located immediately north of the water plant;
- \$0.3 million for increased wastewater treatment charges paid to the City of Hollywood;

Phase I of the Alternative Water Supply Project (AWS) has been completed. The project will treat more than a million gallons of raw sewage per day to drinking water standards to recharge the Biscayne Aquifer as required by the South Florida Water Management District. Phase II of the project 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 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 2011-12 adopted budget.

### 2010-11 Accomplishments

Replaced 5 Lift Stations.

Continued the meter replacement program throughout the city.

Continued the valve location and lift station inspection programs and repaired/replaced parts and/or stations as needed.

Completed plans and permits of wastewater treatment unit number one. The construction work on the rehabilitation of wastewater treatment unit number one began in September, 2011, and is scheduled to take 180 days to complete.

Completed plans and permits for the replacement of waterlines on the following streets:

- NW 77 Way - Johnson Street to NW 13 Street
- NW 10 Street - NW 77 Way to NW 76 Terrace
- NW 11 Street - NW 78 Avenue to NW 76 Terrace
- NW 11 Court - NW 77 Way to NW 76 Terrace
- NW 12 Street - NW 77 Way to NW 76 Terrace.

The construction and inspections on the replacement of waterlines on the streets began in July, 2011, and are scheduled to be completed in November, 2011.

# Utilities Performance Measures

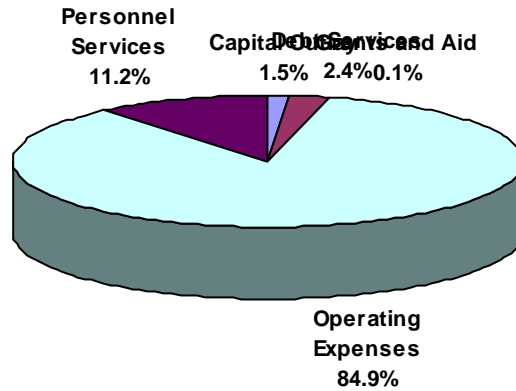
Indicator	2008-09		2009-10		2010-11	2011-12
	Actual	Goal	Actual	Goal	Goal	Goal
<b>Outputs</b>						
Number of potable water meters replaced *	1,932	1,450	1,601	2,700	2,500	2,000
Linear feet of gravity sewer mains rehabilitated eliminating inflow and infiltration into the sanitary sewer system *	5,250	5,000 ~	2,000	5,000~	5,000~	5,000
Miles of water main maintained	521	510	521	521	521	521
Fire hydrants maintained	4,500	4,470	4,480	4,510	4,520	4,500
Lift stations maintained	187	185	186	187	187	186
Miles of sanitary sewer maintained	411	420	411	411	411	411
Miles of force main maintained	34	34	34	35	34	34
<b>Effectiveness</b>						
PH (County standard 6.5 - 9.1 or higher)	9.20	9.20	9.20	9.20	9.20	9.20
Total Residual Chlorine (County standard 4.0 or lower)	3.50	3.50	3.50	3.50	3.50	3.50
Color (County standard 15.0 or lower)	6.00	6.00	6.00	6.00	6.00	6.00
Fluoride ASF (County standard 0.8 or lower)	0.80	0.80	0.80	0.80	0.80	0.80
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)	5.25	5.20	5.20	5.20	5.25	5.20
TSS Effluent (County standard 20 or lower)	3.00	3.00	3.00	3.00	3.00	3.00
<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

\* Once the goal is met the resources are directed to other needs within the City.

~ Marks the start of a smaller infiltration program due to a reduction in resource availability.

### Utilities - Budget Summary

Revenue Category	2008-09 Actual	2009-10 Actual	2010-11 Budget	2011-12 Budget
Federal Grants	-	192,400	-	-
Building Permits	14,416	7,536	20,000	30,000
General Government Charges	40,913	46,673	39,200	44,200
Physical Environment Charges	715,017	605,247	670,000	672,000
Water/Sewer Charges	36,532,568	36,150,822	40,850,770	41,511,584
Investment Income	665,177	665,360	417,688	422,000
Disp of Fix Assets / Sale of Equip/ Sc	-2,573	-	1,000	1,000
Miscellaneous Revenues	-	-	1,000	1,000
Other Miscellaneous Revenues	11,723	2,453	11,000	6,000
Debt Proceeds	-	-	12,300,000	-
Prior Year Bond Proceeds	-	-	-2,757,846	-
Water/Sewer Connection	355,884	574,813	370,000	450,000
Capital Contributed from Developer	361,261	105,740	-	-
Beginning Retained Earnings	-	-	806,446	-
<b>Total</b>	<b>38,694,386</b>	<b>38,351,045</b>	<b>52,729,258</b>	<b>43,137,784</b>



## Utilities - Budget Summary

<b>Expenditure Category</b>	<b>2008-09 Actual</b>	<b>2009-10 Actual</b>	<b>2010-11 Budget</b>	<b>2011-12 Budget</b>
Personnel Services				
Salary	4,366,070	3,416,602	3,016,272	2,802,894
Benefits	3,203,075	2,161,584	1,782,965	2,024,356
<b>Personnel Services Subtotal</b>	<b>7,569,145</b>	<b>5,578,185</b>	<b>4,799,237</b>	<b>4,827,250</b>
Operating Expenses				
Contingency	-	-	34,306	235,632
Professional Services	183,427	108,710	231,550	211,217
Accounting and Auditing	71,862	71,754	73,780	54,068
Other Contractual Services	2,343,318	3,198,773	3,830,939	4,174,738
Travel Per Diem	126	1,379	1,800	950
Communication and Freight Services	212,047	216,302	218,000	220,291
Utility Services	7,603,862	7,895,067	8,958,500	9,090,000
Rentals and Leases	108,297	106,233	112,994	112,470
Insurance	771,648	877,308	2,293,730	2,411,247
Repair and Maintenance Services	931,304	1,161,270	2,437,087	1,978,072
Printing and Binding	10,900	9,836	15,500	15,250
Promotional Activities	1,060	-	3,170	750
Depreciation	5,784,962	5,497,480	1,593,555	2,120,000
Other Current Charges and Obligation	14,106,782	13,721,939	14,782,797	14,282,795
Office Supplies	13,990	12,207	15,950	15,250
Operating Supplies	1,554,846	1,553,489	1,822,580	1,659,050
Road Materials and Supplies	19,674	19,541	25,000	25,000
Publications and Memberships	375	-	2,750	2,250
<b>Operating Expenses Subtotal</b>	<b>33,718,483</b>	<b>34,451,289</b>	<b>36,453,988</b>	<b>36,609,030</b>
Capital Outlay				
Buildings	-	-	10,404,903	-
Improvements Other Than Buildings	-	-	613,318	520,000
Machinery and Equipment	-	-	10,047	110,000
<b>Capital Outlay Subtotal</b>	<b>-</b>	<b>-</b>	<b>11,028,268</b>	<b>630,000</b>
Debt Services				
Principal Payments	-	-	-	604,854
Interest Payments	-	-	334,834	412,859
Other Debt Service Costs	-	-	700	700
<b>Debt Services Subtotal</b>	<b>-</b>	<b>-</b>	<b>335,534</b>	<b>1,018,413</b>
Grants and Aid				
Aids to Government Agencies	-	-	53,091	53,091
<b>Grants and Aid Subtotal</b>	<b>-</b>	<b>-</b>	<b>53,091</b>	<b>53,091</b>
Other				
Bond Issuance	-	-	59,140	-
<b>Other Subtotal</b>	<b>-</b>	<b>-</b>	<b>59,140</b>	<b>-</b>
<b>Total</b>	<b>41,287,628</b>	<b>40,029,474</b>	<b>52,729,258</b>	<b>43,137,784</b>

### Utilities - Personnel Summary

Position Title	2008-09 Actual	2009-10 Actual	2010-11 Budget	2011-12 Budget	
12052 Controller/Internal Auditor	0.5	-	-	-	
12055 Deputy Public Services Director	0.5	0.5	0.5	0.5	
12109 Administrative Supervisor	3	2	2	2	
12149 Division Director Utilities	1	1	1	-	
12187 Laboratory Technician II	1	-	-	-	
12188 Laboratory Technician I	1	-	-	-	
12500 City Engineer	0.5	0.5	-	-	
12513 Account Clerk III	1	1	1	1	
12515 Accounting Clerk II	1	-	-	-	
12516 Assistant City Manager	-	0.5	0.5	0.5	
12523 Accountant	2	-	-	-	
12550 Backflow Specialist	1	1	1	1	
12552 Budget Analyst	1	-	-	-	
12672 Chief Waste Water Operations	1	1	1	1	
12673 Chief Water Operations	1	1	1	1	
12684 Clerical Spec II	2	-	-	-	
12740 Custodian	1	-	-	-	
12753 Utility Service Worker II/Camera Oper	1	1	1	1	
12767 Utility Maintenance Supervisor	4	1	1	1	
12770 Engineer Inspector	2	-	-	-	
12774 Engineer	-	-	0.5	-	
12778 W-Utility Ser Worker I	1	-	-	-	
12779 W-Utility Ser Worker II	8	6	6	6	
12785 S-Utility Service Worker I	3	3	3	3	
12786 S-Utility Service Worker II	6	2	2	2	
12831 CADD Operator	1	1	1	1	
12926 Water Plant Operator I	3	3	3	3	
12928 Water Plant Operator III	6	4	4	4	
12946 S-Treatment Plant Operator I	2	1	1	1	
12947 S-Treatment Plant Operator II	4	4	4	4	
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	1	1	-	
13163 Division Director of Utilities	-	-	-	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	63	38	38	36.5
	Part-time	4	4	4	4