BROWARD COUNTY WATER AND WASTEWATER SERVICES ANNUAL REPORT

FISCAL YEAR 2012

Prepared for

Final Report Prepared July 2013 by
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Section 1 Introduction

1.1 Purpose of the Report

The purpose of this Annual Report of Consulting Engineers for Water and Wastewater Services (WWS) of Broward County, Florida (County) is to provide the following:

- A review of the management and organization of WWS which operates the County water and wastewater systems (collectively, the Utility);
- A description of the Utility;
- A financial review of the Utility regarding historical and prospective debt service coverage, insurance requirements, and future system funding needs;
- A summary of projections of future impacts on the Utility, projections of revenues and expenses, and a review of the planned capital improvements of the Utility.

This report provides descriptions and observations of the organization; the primary operating activities including the retail water and wastewater system which provides water and/or sewer service to approximately 56,500 customers and sewer only to approximately 2,645 customers, the North Regional Wastewater System which provides transmission, treatment and disposal services to other utilities on a wholesale basis and the Regional Raw Water System which provides raw water to other utilities; the water and wastewater capital improvement program (CIP); and the financial operations of the Utility.

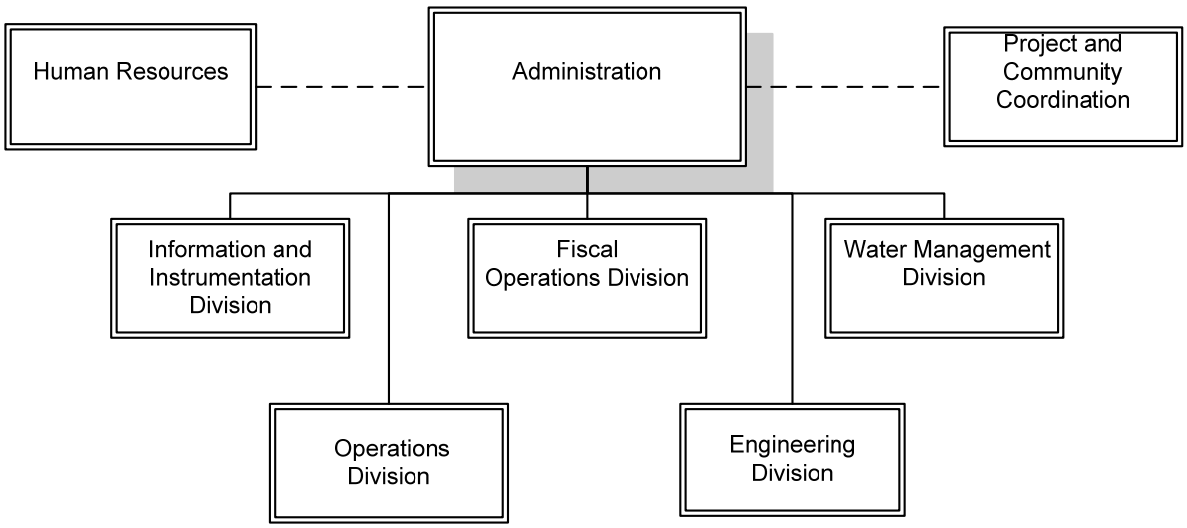
Section 2 Administration and Management

2.1 History and Organization of Water and Wastewater Services

The Broward County Utilities Division was established on January 31, 1962, with the County's purchase of a small, investor-owned water and wastewater utility. Between 1962 and 1975, the County acquired additional private utilities. In 1972, the Utility commenced construction of the North Regional Wastewater Treatment Plant (NRWWTP), and in 1975, began providing wholesale wastewater treatment service to large users. In 1976, to achieve fiscal consolidation, the County established uniform rates throughout its service areas. The water utility service area is divided into separate geographic districts; District 1 is served by Water Treatment Plant (WTP) 1A, District 2 by WTP 2A and District 3 by purchased water from the City of Hollywood.

Subsequent reorganizations created Water and Wastewater Services (WWS). Consisting of five divisions, WWS operates within the Public Works Department, and is responsible for planning, construction, operation, maintenance, customer service, water management, and financial management of the Utility. These divisions are Water and Wastewater Operations, Water and Wastewater Engineering, Water Management, Water and Wastewater Information and Instrumentation Technology, and Fiscal Operations. In addition, within WWS Administration are programs that support the divisions: Human Resources and Project & Community Coordination. As of September 30, 2012, WWS employed 356 people, including 20 certified water operators, 18 certified wastewater operators, 17 registered professional engineers, and 4 certified public accountants. Included are 4 employees who are dual certified as both water and wastewater operators. In addition, numerous employees hold recognized industry specific certifications. An organizational chart, Figure 2-1, is provided below.

Figure 2-1 Water and Wastewater Services Organizational Chart



Under the County Code of Ordinances, the County exercises exclusive jurisdiction, control and supervision over the utility system or any part of a utility system owned, operated or maintained by the County. The Board of County Commissioners of Broward County, Florida (the Board) has the specific legal authority to fix, charge and collect from its customers, rates, fees and charges, and to acquire, construct, finance and operate the Utility without supervision or regulation by any other political subdivision of the State (provided that environmental impacts are regulated as described herein).

2.2 Mission

WWS has adopted a mission statement expressing commitment to performing as a benchmark comprehensive utility providing exceptional retail and regional water and wastewater management services and programs to its customers; and supporting continuous improvement while maintaining the quality of life in Broward County through sound environmental practices.

The following goals were established by WWS:

- Provide high quality and cost-effective services.
- Treat customers professionally and with the utmost respect.
- Operate the facilities and execute programs in a manner that protects the environment.
- Protect and enhance the natural resources of Broward County.
- Create and maintain a workplace in which employees are provided the opportunity to develop to their maximum potential.
- Maintain honesty and integrity in every aspect of the operation.

Water and Wastewater Services Administration

Water and Wastewater Services Administration manages and directs the activities of the five WWS divisions: Engineering, Fiscal Operations, Information & Instrumentation Technology, Operations, and Water Management. Administration approves operating and capital budgets, assures rates, fees, charges are sufficient to support fund activities and debt service requirements while providing appropriate coverage to maintain or enhance bond ratings; develops and implements financing plans for the successful implementation of the capital plan and policies to ensure environmentally safe water resources. Administration coordinates activities to identify efficiencies and synergies to reduce overall costs and enhance the delivery of services.

Administration also manages relationships with Large Users of the North Regional Wastewater System and the Regional Raw Water System. Administration coordinates the response to information requests from the County Commission and the public; oversees HR activities,

including a program to promote personal and professional employee development; and manages water and wastewater-related internal and external public affairs, including an award-winning WWS employee newsletter. Administration promotes water conservation programs to benefit customers, preserve water resources and protect the environment, and monitors legislative and regulatory issues at local, regional, state and federal levels.

WWS Administration highlights included:

- Water and Wastewater Services celebrated 50 years of service.
- Water and Wastewater Services' water and sewer utility bonds maintained strong ratings— "Aa2", "AA+" and "AA" — from the three major rating services: Moody's, Fitch, and Standard & Poors.
- The Retail Rates were recalculated and recommended rates were approved by the Board to support the revenue required to fund retail and resale water and wastewater operating and capital costs as well as debt service principal, interest and coverage requirements for fiscal year 2013.
- The Regional Rates for wastewater and raw water were recalculated in conformance with large user agreements and recommended rates were approved by the Board for fiscal year 2013.

Water and Wastewater Operations Division

Water and Wastewater Operations Division (WWOD) is committed to supplying high quality raw and potable water; providing reliable water distribution and wastewater collection services; operating dependable transmission, treatment and disposal of wastewater to large users in the north region of the County; and ensuring all services are delivered in a safe, efficient and cost-effective manner.

WWOD is responsible for pumping, treating and distributing water and/or the provision of wastewater collection services to retail and water resale customers. The division operates and maintains water treatment plants; re-pumping and storage facilities; lift stations, underground water distribution and sewage collection systems; and other support facilities. The division is responsible for the preparation and submittal of reports to comply with federal, state and local requirements (such as the Safe Drinking Water Act) and to ensure the reliable production of high quality, safe potable drinking water for our citizens. The division provides raw water from two regional wellfields to five large users and to Broward County retail operations as well as operates two retail wellfields that supply water to the County's 1A and 2A water treatment plants.

WWOD is also responsible for providing wastewater transmission, treatment and disposal services to eleven large users and to Broward County through the operation and maintenance of a regional wastewater treatment facility and related regional pumping stations. The division operates a reclaimed water facility, which provides reclaimed water to both industrial and retail customers. In addition, WWOD operates a state certified laboratory, a nationally recognized

Industrial Pretreatment Program (IPP) and provides critical environmental service through operating and maintaining the only Septage Receiving Facility located in Broward County.

WWOD's highlights included:

- North Regional Wastewater Facility effluent ocean outfall nutrient reduction goals continue to exceed those established by the State of Florida in response to the ocean outfall legislation.

- WWOD continues to progress toward achieving Maintenance Excellence by establishing and tracking Key Performance Indicators (KPI) regarding work order backlogs, staff utilization and asset management with the Computer maintenance management system, MAXIMO 7.15.

- CodeRed procedures have been enhanced for precautionary boil water notifications with GIS mapping and prearranged notification groups established for system-wide incidents.

- The Broward County FROG (fats, rags, oil and grease elimination from the wastewater collection system) campaign received an Achievement Awards from NaCO. KPI's were developed to track successes achieved include the costs of de-ragging of wastewater pumps and the savings associated with corrective maintenance activities.

Water and Wastewater Engineering Division

Water and Wastewater Engineering Division (WWED) is committed to managing the WWS Capital Improvement Program (CIP) by ensuring that cost-effective, reliable infrastructure is available in a timely manner to meet the current and projected demands and capacities for raw water, potable water, sanitary sewer and storm drainage within WWS service areas.

WWED is responsible for developing and implementing the CIP for services provided by WWS including water, wastewater and drainage. The division is also responsible for coordination of developer-donated facilities, the maintenance of record information on potable water and wastewater facilities, administration of potable water and sewer easements, and administration of permits to connect to the potable water and wastewater plants operated by the WWS. WWED also provides general potable water and wastewater engineering support for Broward County. These processes ensure compliance with the County's minimum standards for construction and integrity of WWS systems.

WWED manages the following projects:

- The Neighborhood Improvement Program (NIP) which encompasses a total area the size of a medium city is nearing completion. The improvements include roadways, sidewalks, and pipelines for rebuilding water services and extending sanitary sewer service to eliminate septic tanks. Of the 66 bid packages, currently 59 have been completed and 6 are under construction.
- The Local Utility Program (LUP) covers an area of 1,479 acres and includes installation of approximately 54 miles of pipeline. Construction started in 2009. Each project is designed based on its Utility Analysis Zone (UAZ).

- North Regional Wastewater Treatment Plant (NRWWTP) effluent disposal and treatment enhancements to comply with outfall legislation and proposed facilities operational modifications are estimated at $172 million over the next 5 years.

- WWS has initiated design of the Guaranteed Energy Savings contract for the construction of the energy conservation measures (ECMs) for the agency's wastewater treatment facilities. The goal of this project is to reduce the carbon footprint through the implementation of the ECMs thus resulting in reduced operational costs and improved environmental efficiencies. Design completion is scheduled for mid-year 2016.

Water Management Division

Water Management Division (WMD) is committed to developing, managing, operating, and maintaining the surface and groundwater resources within our service area to provide recharge for water supply and wetlands, saltwater intrusion abatement, drainage and flood control, and environmental enhancements.

WMD programs in engineering, management and development review provide for the planning, design, construction and right-of-way management of waterways, culverts, pump stations and water control structures that provide flood protection, surface and ground water recharge, saltwater intrusion abatement and urban water supply. Water supply planning, well site assessments, and permitting services are provided to apply for, obtain and assure compliance with public water supply and diversion & impoundment water use permits. Staff also engineers and manages the inspection, cleaning and repairs of County roadway drainage elements; assures compliance with the Florida DEP National Pollutant Discharge Elimination System (NPDES); Municipal Separate Storm Sewer Systems (MS4) Permit for Broward County; and prepares and submits applications and data for the renewal of surface water management licenses for the roadway drainage system.

WMD highlights included:

- Water supply and water resource development programs, including the C-51 Reservoir Project, Integrated Water Resources Management Master Plan, Broward County Water Resources Task Force/Technical Team and the Broward County Water Advisory Board/Technical Advisory Committee were supported.

- The division prepared annual updates, permit modifications, water level information and chloride monitoring concerning the 1A, 2A/NRW, and SRW water use permits.

- Hydrogeologic assistance was provided for the rehabilitation and abandonment of various District 2A WTP wells.

- The SCADA system expansion for wellfield recharge through the canal network reached 50 percent completion.

- Staff provided assistance with the development of models to evaluate the impacts of predicted sea level rise on the 2A wellfield, the C-51 Reservoir and the Broward County Floridan Aquifer System.

Fiscal Operations Division

Fiscal Operations Division (FOD) is committed to supporting all WWS divisions by providing exceptional customer service and timely and accurate billing services; supporting sound financial management, fiscal planning and rate development; and providing efficient and effective support services.

FOD provides accounting services for all divisions of WWS to provide timely financial reporting, ensure compliance with federal and state laws, professional accounting standards and County policies and procedures. The division provides customer services including meter reading and meter repair, monthly billing and collection of revenues. The division operates a warehouse for materials and supplies used in the operation and maintenance of utility infrastructure. FOD coordinates materials management, purchasing and contract administration functions for all operational and administrative activities in WWS. In addition, the division provides grounds and building maintenance services to over 200 locations owned and operated by WWS throughout the County. The division also coordinates the budgeting activities of all divisions of WWS and supports the development of fiscal plans and rates, fees and charges for the services provided by WWS.

FOD highlights included:

- In support of water conservation efforts, the "Toilet Credit" Program continues for water customers of WWS who replace old high flow toilets with new low flow toilets. Each approved customer receives a $100 credit (a maximum of $200 per customer) to their water bill.

- Customer Service was enhanced by installing a third cash station in the Pompano office and providing documents to customers through e-fax.

- The Customer Service Survey was made available on the WWS website.

Water and Wastewater Information and Instrumentation Technology Division

Water and Wastewater Information and Instrumentation Technology Division (WWIITD) is committed to providing WWS divisions with current industry standard technologies to efficiently and effectively automate business functions and to providing a high level of service support for those systems.

WWIITD provides specialized automation services to the water and wastewater utility by acquiring, developing and maintaining the latest utility specific technology solutions on its proprietary utility network. WWIITD is responsible for maintaining the automation and industrial control systems at all four main treatment and distribution facilities and over one hundred other distribution collection and storage facilities within Broward County on a 24-hour, 7 day-per-week basis. WWIITD also provides desktop, server and network support for the WWS segment of the County's administrative network. The division also manages the safety and security programs for WWS staff and facilities which have been designated critical infrastructure by Homeland Security.

WWIITD highlights included:

- Created an enterprise data warehouse that houses data from several key applications. This is a big step forward and enables WWS to develop interactive and intelligent reports that provide executive management with actionable information.

- Revamped and enhanced the web based Online Bill Pay application used by customers to view and pay their water bills online. Major improvements include password protection, a more robust platform, daily balance updates and full integration with the AccessBROWARD application.

- Converted Programmed Logic Controllers to Ethernet communications and placed them directly on the fiber optic ring for higher efficiency data transfer.

- Procured and implemented a vehicle tracking system for 50 vehicles in the Operations Division. The web-based application allows managers real-time reporting features to monitor vehicle locations, speeds, idling and turn-by-turn information.

- Secured Admin Building interior lobby doors with wireless access control devices to reduce any outside threats to gaining access to WWS staff.

- Completed surveillance camera installation at District 4 and 3C Water Treatment Plant to protect from any criminal acts, vandalism or terrorist attempts.

- Upgraded portions of District 4 perimeter fence line from 6'ft to 10'ft to provide added security.

Project and Community Coordination

The Project and Community Coordination (P&CC) program began to wind down as the 18 year Neighborhood Improvement Projects neared completion. Operating within WWS Administration, P&CC manages public affairs for WWS, including publishing the annual Water Quality Report and the WWS employee newsletter "Keeping Connected". The group provides public information and supports public and customer relations to residents and businesses impacted by construction projects. P&CC provides outreach and education for water conservation programs, sponsors periodic customer service surveys and works closely with other agencies on special projects for Career Days, Water Matters Day, Earth Day, Drinking Water Week and other special events.

P&CC highlights included:

- Won an award in the "Excellence" category in the NACIO "Awards of Excellence" competition for its most recent Water Quality Report.

- Published and distributed approximately 50,000 copies of the Annual Consumer Confidence Report (also known as the Water Quality Report) to WWS drinking water customers and provided the report on the website.

Section 3 Retail Water and Wastewater Utilities System

This section describes the water and wastewater retail system including the service area, results of the physical inspection and review of the renewal and replacement program.

3.1 General Description

The retail water system supplies potable water to retail customers in several sections of the County and to one significant bulk water user. Over the past ten years, the County's retail water system has grown from 51,044 customers (connections) to its present retail base of 56,503. This represents a population of approximately 179,000. The City of Coconut Creek, a sale for resale customer, has approximately 54,000 residents. Including the City of Coconut Creek, the retail water system serves approximately 13 percent of Broward County's total population.

The retail wastewater system provides wastewater collection service to approximately 77 percent of the County's retail water customers and sewer only customers. The County's wastewater retail customer base has grown from 35,704 customers (connections) to its present base of 46,911 customers in the past ten years and will continue to grow through the County's extension of sanitary sewers into currently un-sewered areas. Collection, treatment and effluent disposal management is provided by the County-operated North Regional Wastewater System (the "Regional Wastewater System" discussed in Section 4 and collectively with the retail wastewater system the "Wastewater System") and by the Southern Regional Wastewater System operated by the City of Hollywood. A summary of the Retail Water and Wastewater systems is presented in Table 3.1.

Notably, finished water production has decreased in recent years. This may be attributable to a downturn in the economy, slowdown in population growth and the County's water conservation efforts, including year round lawn irrigation restrictions. Water conservation became increasingly important following a series of droughts over the past several years.

Table 3.1 Summary of Retail Water System and Retail Wastewater System

System Component	Units	Fiscal Year 2003	Fiscal Year 2012	Change	Percent Change
Water System					
Customer Base	Customers	51,044	56,503	5,459	10.7%
Water Service Area	Square Miles	40.10	41.10	1.00	2.49%
Water Lines	Miles	660.90	698.70	37.80	5.72%
Water Plant Capacity:					
Plant Capacity	MGD[2]	46.00	46.00	0.00	0.00%
Avg. Daily Production[1]	MGD[2]	23.56	18.99	-4.57	-19.40%
Max. Daily Production[1]	MGD[2]	29.12	22.43	-6.69	-22.98%
Purchased Water	MGD[2]	7.17	5.99	-1.18	-16.46%
Wastewater System					
Customer Base	Customers	35,704	46,911	11,207	31.39%
Wastewater Service Area	Square Miles	39.70	40.70	1.00	2.52%

[1] Droughts which began in April 2007 have resulted in reduced water use due to demand management efforts comprising water conservation initiatives, including year round lawn irrigation restrictions Reduced water translates to reduced billed wastewater.

[2] MGD = Million Gallons Per Day.

Source: Broward County Water and Wastewater Services

Service Area and Customer Base

The retail water system is divided into three (3) service areas - Districts 1, 2 and 3 which collectively cover approximately 41 square miles. Additionally, District 2 sells water to the City of Coconut Creek which re-sells it to its customers. Two (2) water treatment plants (WTPs), one each in District 1 and District 2, have a combined permitted water treatment capacity of 46 MGD (million gallons per day). However, potable water production is constrained by 20-year term consumptive use permits from the South Florida Water Management District. Based on the current 20-year permit, Biscayne Aquifer annual average allocations are 30.7 MGD through March 2013, and 26.7 MGD through March 2028. Starting March 2013 a Floridan Aquifer allocation of 9.3 MGD annual average is included in the 20-year consumptive use permitted withdrawal. The Utility's five year Capital Improvement Program (CIP) is predicated upon these allocations. Water for District 3 is provided by the City of Hollywood through a water-for-resale agreement.

The distribution systems in the three Districts contain approximately 699 miles of water distribution and transmission mains with 2-inch or greater diameters. Figure 3-1 shows the geographic location of each service district as well as the large user (the City of Coconut Creek). Table 3.2 summarizes information on the production wells, treatment plants and water system storage capacity in each district.

Figure 3-1 WWS Retail Water Service Areas

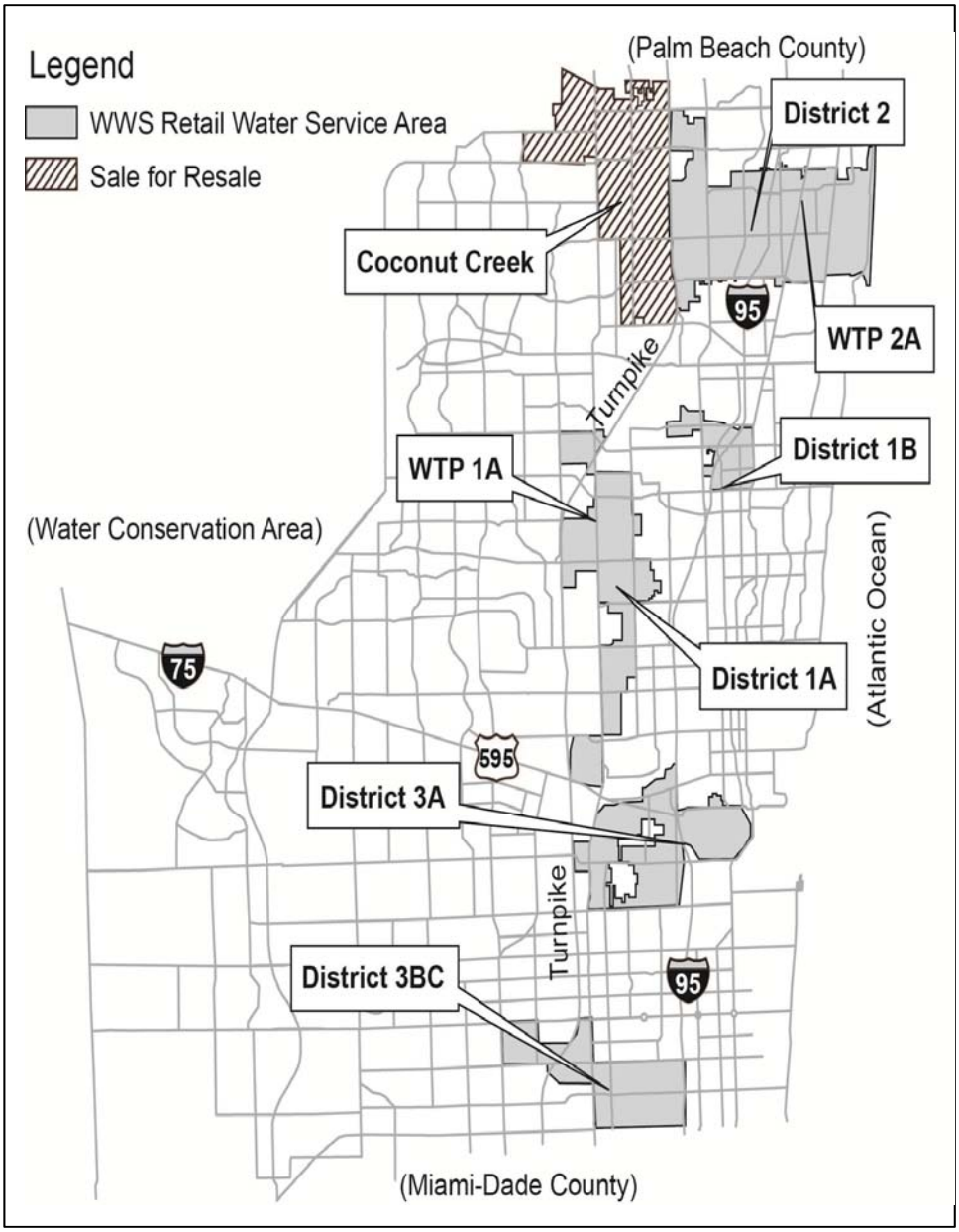


Table 3.2 Summary of Water System Facilities and Capabilities as of September 30, 2012

	District 1	District 2	District 3	Total
Production Wells	9	11	0	20
Wellfield Firm Capacity, (MGD)[1,2]	19.6	28.9	0	48.5
Treatment Plants[4]	1	1	0	2
Permitted Plant Capacity (MGD)[2,3]	16	30	0	46
Current Permitted Allocation (MGD)[2,3,]	10.7	20.0[5]	0	30.7
Storage Capacity (Million Gallons)[4]	6.2	8.5	6	20.7
Distribution Mains (Miles)	244.7	240.0	214.0	698.7
Service Area (Square Miles)	12.0	14.8	14.3	41.1
Purchased Water (MGD)[2]	0.08	0	5.91	5.99
Produced Water (MGD)[2]	7.32	11.67	0	18.99

[1] *Firm Capacity refers to the available flow with the largest well in each district out of service.*

[2] *MGD = Million Gallons Per Day*

[3] *Permit allocations are less than permitted treatment plant capacity.*

[4] *Includes clearwells, on site and distribution storage facilities.*

[5] *Includes finished water sold to Coconut Creek.*

Source: Broward County Water & Wastewater Services

The Water System supplies water primarily to retail customers but also serves the City of Coconut Creek under a resale agreement which expires as described in Section 3.5. Without prior approval by the County, the City of Coconut Creek is prohibited from buying or otherwise providing water within its service area from any source other than the County during the term of the resale agreement, and cannot provide more than 100,000 gallons per day of water to any customer unless approved by the County. Presently, there appears to be no practical or economic incentive for the City of Coconut Creek to pursue development of its own facility or to develop alternative sources of supply. The County cannot charge rates to Coconut Creek greater than those charged to other customers in the same class. Billing based upon water meter readings is provided monthly. A summary of historical treated water sold and consumption data, including service to the City of Coconut Creek, is shown in Table 3.3. Values for annual average daily consumption will differ from the sum of production plus purchased water due to system losses.

Table 3.3 Summary of Treated Water Sold as of September 30, 2012

Fiscal Year	Average Number of Units[1]	Average Number of Metered Customers	Total Billed Treated Water (1,000 GAL)	Total Billed Water for Resale (1,000 GAL)[2]	Annual Average Daily Consumption (MGD)
2003	81,658	51,044	9,962,676	2,104,272	27.30
2004	82,171	51,525	10,574,616	2,190,845	28.97
2005[3]	84,203	53,705	11,383,041	2,178,609	31.19
2006	83,725	52,938	10,362,713	2,005,205	28.39
2007[4]	87,539	55,596	9,725,151	1,958,720	26.64
2008[4]	89,452	57,003	9,063,644	1,868,562	24.83
2009[4]	92,870	58,287	9,001,466	1,872,821	24.66
2010[4]	93,183	58,323	8,628,876	1,754,856	23.64
2011[4]	92,208	58,773	8,616,736	1,731,297	23.61
2012[4]	88,344	56,503	8,339,560	1,643,812	22.85

[1] The term "unit" means individual living unit for residential (single family), multifamily, hotel/motel and mobile home categories. Several units may be served through one connection. For commercial, the term means the number of connections.

[2] Included in the total water billed; most represents service to the City of Coconut Creek.

[3] Several hurricanes resulted in significant water losses from line breaks and leaks throughout the system.

[4] Droughts which began in April 2007 have resulted in reduced water use due to demand management efforts comprising water conservation initiatives, including year round lawn irrigation restrictions. Reduced water use translates to reduced billed wastewater.

Source: Broward County Water and Wastewater Services

The retail wastewater system service area covers approximately 41 square miles with approximately 420 miles of gravity sewers, 229 lift stations, 5 master pump stations and 109 miles of force mains. Figure 3-2 shows the service districts for the retail wastewater system. Table 3.4 presents retail wastewater system characteristics. A 10-year summary of the Retail Wastewater System customers and billed wastewater flows is presented in Table 3.5. Table 3.6 presents a five-year history of water usage by customer type.

Figure 3-2 WWS Retail Wastewater Service Areas

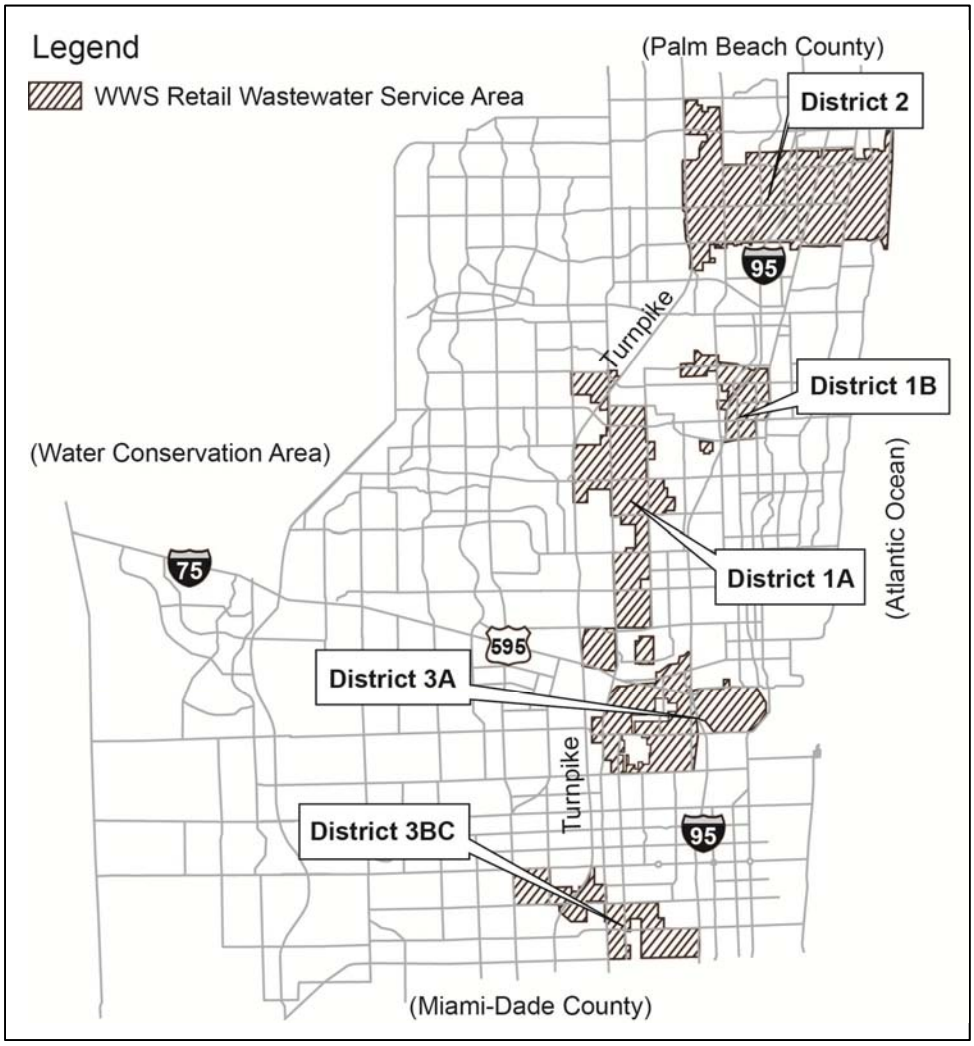


Table 3.4 Retail Wastewater System Characteristics as of September 30, 2012

	District 1	District 2	District 3	Total
Service Area (Square Miles)	13.0	15.6	12.1	40.7
Gravity Sewer (Miles)	180.4	158.1	81.6	420.1
Lift Stations	74	95	60	229
Force Mains (Miles)	41.6	34.0	33.8	109.4
Master Pump Stations	-	4	1	5

Table 3.5 Summary of Billed Wastewater - Retail as of September 30, 2012

Fiscal Year	Average Number of Units[1]	Average Number of Metered Customers	Total Billed Treated Wastewater[3] (1,000 GAL)	Annual Average Daily Flow (MGD)
2003	64,377	35,704	5,121,649	14.03
2004	65,029	36,654	5,310,427	14.55
2005	67,116	38,257	5,130,824	14.06
2006	67,736	40,021	5,077,759	13.91
2007	70,361	41,297	4,915,383[2]	13.47
2008	71,718	42,163	4,830,155[2]	13.23
2009	74,146	43,591	4,828,210[2]	13.23
2010	74,547	44,953	4,744,985[2]	13.00
2011	74,691	44,856	4,891,742[2]	13.40
2012	77,247	46,911	4,872,721[2]	13.35

[1] The term "unit" means individual living unit for residential (single family), multifamily, Hotel / Motel, and mobile home categories. Several units may be served through one connection. For commercial, the term means the number of connections and does not include large users

[2] Droughts which began in April 2007 have resulted in reduced water use due to demand management efforts comprising water conservation initiatives, including year round lawn irrigation restrictions. Reduced water use translates to reduced billed wastewater.

[3]Billed wastewater is primarily based upon water sold.

Source: Broward County Water and Wastewater Services

Table 3.6 Water Usage - Five Year History (1,000 gallons) Through September 2012

Customer Class	Fiscal Year 2008	Fiscal Year 2009	Fiscal Year 2010	Fiscal Year 2011	Fiscal Year 2012
Residential	4,811,170	4,788,005	4,608,329	4,659,677	4,534,199
Commercial	2,032,324	1,924,704	1,848,557	1,785,623	1,756,142
Irrigation	351,588	415,936	417,134	440,139	405,407
Sale For Resale	1,868,562	1,872,821	1,754,856	1,731,297	1,643,812
Total[1]	**9,063,644**	**9,001,466**	**8,628,876**	**8,616,736**	**8,339,560**

[1] Droughts which began in April 2007 have resulted in reduced water use due to demand management efforts comprising water conservation initiatives, including year round lawn irrigation restrictions. Reduced water use translates to reduced billed wastewater.

Source: Broward County Water and Wastewater Services

3.2 Water System Regulatory Requirements

Current Water Quality Regulations

The Safe Drinking Water Act (SDWA, 1974) and the Safe Drinking Water Act Amendments (SDWAA, 1986) authorized the United States Environmental Protection Agency (EPA) to establish national primary and secondary drinking water regulations to regulate maximum permissible levels of contaminants in finished drinking water. These standards were incorporated into the State of Florida Water Quality Regulations in 1993, making all regulated parameters enforceable within the State.

The Water and Wastewater Operations Division (WWOD) annually performs a complete analysis for all primary and secondary drinking water standards on raw and finished water supplies to meet the State of Florida Water Quality Regulations (Chapter 62-550.300, Florida Administrative Code). No maximum contaminant levels (MCLs) have been exceeded by WWOD's finished water. WWS tests raw water quality only for the development of baseline data; MCL limitations do not apply. The annual report presenting the results of the analysis is available at
http://www.broward.org/WaterServices/Documents/2011WaterQualityRptWebVersion.pdf

Water Quality Regulations

The Stage I Disinfectant/Disinfection By-Products Rule (D/DBP) was promulgated in 1998 and required all groundwater treatment plants, which include the WWS water treatment plants, to comply with MCL's for trihalomethanes (THMs), five haloacetic acids (HAAs), chlorite, and bromate and maximum residual disinfectant levels (MRDLs) for a number of common disinfectants including chlorine, chloramines, and chlorine dioxide. The Stage I limits for THMs and HAAs were 80 mg/l and 60 mg/l respectively, with measurements based upon a distribution system wide average.
WWS water treatment plants (WTP) currently meet all regulations and comply with current Stage I disinfection by-products regulations.

The Stage II Disinfection By-product Rule (DBPR) was promulgated on January 4, 2006, and the regulation became effective March 6, 2006. The purpose of the Stage II DBPR is to reduce DBP occurrence peaks in the distribution system by using a new method to determine MCL compliance, defining operational evaluation levels, and regulating consecutive systems. No problems have been detected since the regulation became effective.

The County completed the Stage II DBP Rule Standard Monitoring for all water distribution systems and, in accordance with the rule, submitted the Initial Distribution System Evaluation (IDSE) Report to meet the January 2009 deadline. Compliance Calculation Procedures were included in the IDSE Reports, as provided by the U.S. EPA-IDSE Guidance document (EPAQ 815-B-06-002) to meet the Compliance Monitoring Plan requirement. In February 2012, the County began quarterly monitoring under the Compliance Monitoring Plan for all systems. During the 2012 monitoring period, the 2A, 3A, and 3BC systems maintained locational running annual averages below 0.04 mg/l and 0.03 mg/l for TTHM and HAA5 respectively and thus qualified for reduced monitoring to be sampled annually. The 1A system continues to maintain

MCL compliance and is sampled on a quarterly basis under the routine monitor requirement.

3.3 Water Supply

The primary source of water supply for WWS is the Biscayne Aquifer. Presently, WWS operates wellfields to supply water to the 1A and 2A Water Treatment Plants, with firm capacities of 19.6 and 28.9 MGD, respectively. Additional water is provided to District 2 by the North Regional Wellfield with a firm capacity of 18.1 MGD. A physical description of the regional system and wellfields is provided in Section 5. Water for District 3 is provided by the City of Hollywood.

In 1979, the Biscayne Aquifer was designated as a "sole source" drinking water supply by the EPA. The water in the aquifer is primarily replenished by rainfall but also is recharged by water flowing from Lake Okeechobee and conservation areas through an extensive water conveyance system. Presently, in addition to the Utility, the Biscayne Aquifer is also the primary source for raw water supplies for the municipalities in Broward County, Miami-Dade County and the southern portion of Palm Beach County.

Section 3.0 of the South Florida Water Management District Basis of Review for Water Use Permit Allocations generally limits raw water usage from the Biscayne Aquifer for public water supply to the maximum quantity of water withdrawn during any consecutive twelve month period during the five years preceding April 1, 2006. Water supplies necessary to satisfy any demand which exceeds that maximum quantity must come from an alternative water supply source, such as the Upper Floridan Aquifer, harvested stormwater or reclaimed wastewater to offset the impacts to the Everglades Water Bodies that would be caused by the additional withdrawals.

Due to the "withdrawal and treatment" cost-effectiveness of the relatively shallow Biscayne Aquifer, it is, and is likely to remain the County's primary source of raw water supply. Alternative, future supply is currently expected to be provided through a brackish Upper Floridan Aquifer supply. The CIP for the Utility includes provisions to construct reverse osmosis treatment to effect utilization of the Upper Floridan Aquifer. It is noted, however, that Broward County, Palm Beach County, several municipalities and the South Florida Water Management District (SFWMD) are also currently evaluating a regional harvested stormwater reservoir project in Palm Beach County known as the C-51 Reservoir that could expand the supply of Biscayne Aquifer raw water through offsets to impacts on the Everglades Water Bodies. Should the C-51 Reservoir prove to be a more reliable and lower cost alternative water supply option, the County maintains the flexibility to reduce or eliminate proposed use of the Upper Floridan Aquifer.

3.4 Water Supply Regulatory Requirements

The volume of raw water withdrawal from the Utility's wellfields is regulated by the SFWMD. Each wellfield is governed by a water use permit that stipulates the maximum allowable annual and monthly withdrawal. These permits are reissued for periods of five to twenty years. The Utility's current annual permitted rate of raw water allocations is 18.3 billion gallons from all wellfields combined, including the Regional Raw Water Wellfields. The Utility holds three

permits from the SFWMD for the wellfields 1A, 2A/North Regional Wellfield (NRW), and the South Regional Wellfield (SRW). The permits for 2A/NRW were consolidated into one 20-year permit in March 2008. The 1A Wellfield was also granted a 20-year permit in April 2008.

The permit for the SRW expired in October 2007, and the submitted application for SRW permit renewal is currently under review by the SFWMD. The permit is administratively extended while under review. The County has held several review meetings with the SFWMD. Based upon the reported results of these meetings, review is expected to be favorable, but will be delayed as the SFWMD resolves sub-regional water supply solutions for Hallandale Beach and Dania Beach. Regardless of issues associated with the cities of Hallandale Beach and Dania Beach, it is expected that the SRW permit will be reissued in the ordinary course of events. Table 3.7 highlights information from the 20-year permit renewals for the 1A Wellfield and the 2A/NRW.

Beginning in 2013, the SFWMD is requiring transitioning of water supply above the baseline allocation from the Biscayne Aquifer to the Floridan Aquifer or to another alternative water supply such as the C-51 reservoir project. This requirement for shifting of additional water supply to an alternative source will have implications for future treatment technology and capital investment, as well as operating costs. As additional water supplies are needed, the Utility will evaluate the available water treatment technologies and their associated fiscal and environmental factors in making treatment decisions. Should a lower cost alternative become feasible, the Utility retains the flexibility to reduce or eliminate use of the Upper Floridan Aquifer.

Table 3.7 Summary of SFWMD Wellfield Permits as of September 30, 2012

Description	Wellfield 1A	Wellfield 2A/NRW	Wellfield SRW
Permit Period:			
Issuance	4/10/2008	3/13/2008	10/10/2002
Expiration	4/10/2028	3/13/2028	10/10/2007[1]
Total Allocations:			
Annual Average Daily (MGD)	13.9	22.1	14.2
Maximum Monthly (MGD)	15.2	24.3	-
Maximum Day (MG)	-	-	22.4
BISCAYNE AQUIFER WITHDRAWALS			
Initial Period:			
Thru	4/1/2013	3/1/2013	[1]
Annual Average Daily (MGD)			[1]
Maximum Monthly (MGD)			[1]
Subsequent Period:			
Thru	4/10/2028	3/13/2028	[1]
Annual Average Daily (MGD)	9.2	17.5	[1]
Maximum Monthly (MGD)	9.9	19.2	[1]
FLORIDAN AQUIFER WELLS			
Annual Average Daily (MGD)	4.7	4.6	[1]
Maximum Monthly (MGD)	5.3	5	[1]
Number of Wells	4	4	-
Diameter (Inches)	16	16	-
Depth (Feet)	1200	1200	-
To Be Implemented By[2]	2013	2013	-
Proposed Implementation Date Modification	2017	2022	-

[1] Permit for SRW expired October 2007. An application was submitted for permit renewal and is under review by SFWMD while sub-regional solutions for Hallandale Beach and Dania Beach are determined. Regardless of the SFWMD's ultimate resolution of the sub-regional issues, it is expected that the SRW permit will be renewed in the ordinary course of events.

[2] Due to demand management efforts and lower growth, the implementation dates for alternative water supply will be extended.

Source: Broward County Water and Wastewater Services

Long-term water supply in South Florida may also be affected by the Comprehensive Everglades Restoration Plan (CERP) undertaken by the U. S. Army Corps of Engineers (ACOE) in coordination with SFWMD and by regional water supply planning undertaken by the SFWMD and the Florida Department of Environmental Protection. The intent of CERP was to provide multiple benefits to the South Florida ecosystem. While restoration of The Everglades is a

primary objective of the plan, it also includes a provision for ensuring a reliable, adequate supply of fresh water for use by the environment, public water supply and agriculture while maintaining flood protection. The effect of CERP will be to reserve water resources for restoration of The Everglades without impacting existing legal users. Implementation through the Lower East Coast Water Supply Plan (LECWSP), and CERP account for future needs of water utilities by utilization of new surface water reservoirs and by implementation of Aquifer Storage and Recovery (ASR) wells. A decision by the State to endeavor to acquire the property owned and farmed by US Sugar as part of the CERP may limit the option of utilities to store and use excess stormwater as an alternative to water supply.

It is possible that the new water supply technologies could be delayed, or could be less effective than SFWMD and ACOE expect. Recognizing this, the Utility has taken multiple steps to assure that a continuous adequate raw water supply is available:

- The County has been actively participating in the LECWSP, the CERP and the SFWMD regulatory revision process.

- A new surface water pump station is being designed to improve the effectiveness of the existing raw water recharged by three existing pump stations through the canal system.

- The County has constructed and operates a 10 MGD wastewater reuse facility to support potable water demand reduction.

- The County continues to implement the Integrated Water Resources Plan (IWRP) in order to maximize the utilization of available water. Current projects include the design of interconnects between the C-1 and C-2 Canals and between the C-12 and C-13 Canals.

- The County is planning an alternative technology in case an alternate source of water may be necessary. As previously noted, it is currently expected that the Upper Floridan Aquifer is the most likely alternative raw water supply source. The Upper Floridan Aquifer is an artesian water supply located approximately 700 feet below the land surface in the County. Waters within the Upper Floridan Aquifer contain higher total dissolved solids than the waters of the Biscayne Aquifer. Reverse osmosis membrane technology will readily treat Upper Floridan Aquifer water to meet all applicable regulatory requirements. The Upper Floridan Aquifer is presently used by a number of utilities, primarily by the Town of Jupiter, Palm Beach County Utilities, and the City of Hollywood. Costs for future use of the Upper Floridan Aquifer are shown in Table 6.2 under “Water Treatment”.

3.5 Overview of the Water System Facilities

District 1

District 1 has a combined service area of 12.0 square miles, permitted plant capacity of 16.0 MGD and 244.7 miles of water distribution and transmission mains. WWS maintains District 1 water system interconnections with the systems of the City of Fort Lauderdale, the City of

Tamarac, the City of Plantation, and the City of Lauderhill to provide for emergency water supply.

District 2

District 2, includes the Utility's largest wholesale water customer, the City of Coconut Creek. The District, not including the City of Coconut Creek, has a service area of 14.8 square miles, a permitted plant capacity of 30 MGD and contains 240.0 miles of water distribution and transmission mains. The facilities of District 2 are interconnected with the City of Deerfield Beach, the Town of Hillsboro Beach, the City of Pompano Beach and Palm Beach County to provide for emergency water supply.

The County has an agreement with the City of Coconut Creek under which the County has agreed to provide the City of Coconut Creek with potable water for a term that exceeds by one year the last payment of any potable water system debt obligation of the County. The City of Coconut Creek constitutes approximately 20% of the total potable water consumption by customers of the Utility, and pays compensation amounting to 4.7% of the Utility's gross revenues. The agreement provides that, except by written consent of the County, the City of Coconut Creek will not purchase water other than from the County or pump water into its water distribution system from its own facilities. The County has agreed not to sell water to anyone else within the defined service area and the City of Coconut Creek is not permitted to increase its water service area without the written consent of the County.

District 3

District 3 is the southernmost service area of the County and is geographically separated into subdistricts referred to as 3A, 3B and 3C. Subdistricts 3B and 3C are interconnected. 3A, 3B and 3C receive potable water through connections principally with the City of Hollywood. District 3 has a combined service area of approximately 14.3 square miles and contains 214.0 miles of transmission and distribution mains. Subdistrict 3A has interconnects with the City of Fort Lauderdale, the City of Hollywood and the City of Dania Beach to provide for emergency water supply. Subdistrict 3B has interconnects with the City of Hollywood. Subdistrict 3C has interconnects with the City of Hollywood, the City of Pembroke Pines and the City of Miramar to provide for emergency water supply.

3.6 Overview of the Retail Wastewater System Facilities

District 1

District 1 has a service area of 13.0 square miles and includes 180.4 miles of gravity collection sewers and 74 lift stations. There are 41.6 miles of force mains. Transmission, treatment and disposal of wastewater are provided through the Utility's Regional Wastewater System.

District 2

The size of the District 2 service area is 15.6 square miles. The collection system consists of 158.1 miles of gravity sewer, 95 lift stations, 4 master pump stations, and 34.0 miles of force mains. Transmission, treatment and disposal of wastewater are provided through the Utility's Regional Wastewater System.

District 3

District 3 serves an area of 12.1 square miles. The gravity collection system has 81.6 miles of gravity sewer and 60 lift stations. The force main network contains 33.8 miles of pipe that delivers the wastewater from this area to the Southern Regional Wastewater Treatment Facilities operated by the City of Hollywood. District 3A and District 3B wastewater is treated by the City of Hollywood under a large user wastewater agreement with the County. The County has 5.883 MGD of reserved capacity in the Southern Regional Wastewater Treatment Plant. The City of Hollywood has 55.5MGD of plant capacity. One (1) of the master pump stations is located within District 3.

The agreement between the County and the City of Hollywood contains a number of major provisions including: identification of the service area; requirements for the use of metering devices; reserve capacity requirements; restrictions on excessive flows; and charges for damages to the system. Debt service and operation and maintenance costs are paid on an actual flow basis. The agreement can be terminated by either party with a 365-day notice, if all financial requirements have been met. The City of Hollywood may not terminate the agreement, unless there shall be a readily available alternative means of treating and disposing of County wastewater.

3.7 Visual Inspection and Review

The visual inspections of the District 1 water treatment plant, District 2 water treatment plant and District 3 water treatment plant were performed on July 24 and 25, 2013. These inspections were performed by Milian, Swain & Associates, Inc. accompanied by WWS staff.

Water Treatment Plant 1A

WTP 1A was originally constructed in 1960 with a treatment capacity of 3.0 MGD, which was expanded to 10.5 MGD in 1979, and finally to 16.0 MGD in 1994. Overall, the plant is in very good condition as a result of the 1994 expansion and improvement project. Water quality standards were maintained at WTP 1A throughout the year.

During the visual inspection of the plant, all equipment was operating in a satisfactory manner. The plant is clean and well maintained. The following summarizes the observations resulting from the inspection:

Plant modifications performed through FY- 2012:

- Replacement of VFD for Pump No. 2 at high service pump room in building No. 5.
- Rehabilitate receiving tank and dryer tank piping at vacuum filters.
- Replacement of existing communication tower.

The plant modifications to be initiated for FY- 2013/2014:

- Structural repairs to Treatment Unit No. 1 (in progress).
- Continue to work towards achieving the 4-log virus credit for underground rule (ongoing).
- Construction of a new 1.0 MG concrete storage tank (ongoing).
- Rebuild filters No. 5 thru No. 8 and replace piping and media (ongoing).
- Dismantling of the 0.3 MG steel tank (ongoing).
- New site lighting improvement project (ongoing).
- Replacement of sludge re-circulating pumps No. 1 and No. 2 at Treatment Units 1 and 2 (ongoing).
- Completion of new communication tower (ongoing).

Water Treatment Plant 2A

The WTP 2A was originally constructed in 1975 with a treatment capacity of 20 MGD. In FY 1994, the treatment capacity was expanded to 40 MGD with permitted capacity of 30 MGD. Water quality standards were maintained at WTP 2A throughout the year.

During the visual inspection of the plant, all mechanical and electrical equipment were operating in satisfactory condition and well maintained.

Plant modifications performed through FY- 2012:

- Transfer Pump No. 1 will be sent out to be rebuilt.
- Implementations of flume filter wall pipe penetration.

- Replacement of weirs/launders at Treatment Unit No.1.
- Thickener No. 2 out of service to be resealed.
- Replacement of slacker with Seamen at chemical room.
- Chlorine room with one ton cylinders to be dismantled upon completion of hypochlorite testing.
- Rebuilt transfer Pump No. 3.
- High service Pump No. 1 was rebuilt.
- 5 year DEP mandated tank inspection completed for clear well and Crom tanks.

Plant modifications to be initiated for FY- 2013/2014:

- Correction of surface cracks on filter walls (ongoing).
- Installation of lighting improvements for the plant (ongoing).
- Rehabilitation of wells No. 7, No. 8 and No. 9 (ongoing).
- Replacement of chemical feed pumps (ongoing).
- Replacement of backwash tanks (ongoing).
- Rehabilitation of switch gear at high service pump room at building No.1 (ongoing).
- Plans to construct a new 5MG storage tank (ongoing).
- Repaint clearwell and treatment units.
- Rehabilitate laboratory cabinets and counter tops.
- Filter #5 of 6 to be resealed, re-painted and media replaced.
- Installation of new chlorine analyzers.
- Replacement of existing communication tower.
- ASR well to be abandoned and contractor to seal well.
- Replace portion of backwash piping from backwash tank to filters.
- Outdoor electrical panels to be replaced from transfer units.
- Replace raw water influent valve at Treatment Unit No. 2 including the influent underground valve.
- Replace roof on the lime silo tower and bag house.
- Install new VFD at Transfer Pumps No. 3 and No. 4.
- Replacement of Transfer Pumps No. 1 and No. 2.
- North High Services Pump buildings to be connected to new public sewer system.

Water Distribution System 3A

In December 2001 the City of Hollywood began providing water for resale to the County in System 3A. Then re-pumping facilities consisting of high service pumps supplying the 3A distribution system which includes the Fort Lauderdale / Hollywood International Airport were constructed at the site of the former WTP 3A.

Planned modifications to the plant for FY-2013/14:

- Demolition of the existing treatment plant and adjacent plant building (ongoing).
- Construction of a new 3.5 mg storage tank (ongoing).
- Construct new chemical feed system (ongoing).
- Construct new building to house new generator (ongoing).
- Construct a new by-pass system (ongoing).
- Implementation of new site lighting system (ongoing).

The existing chlorine equipment appears in fair condition and operating properly.

The two (2) existing ammoniators appear in fair condition.

The overall distribution facility is well maintained and operating properly.

Water Distribution System 3B and 3C

The 3B distribution system water supply is fed primarily by the City of Hollywood through two (2) 12-inch potable water interconnect treatment stations located at the City's south system perimeter (on Pembroke Road at Park Road and at S.W. 57th Avenue). Another connection from the City of Pembroke Pines supplies water to the North Perry Airport perimeter. The County maintains a 2.5 MG storage tank and high service pumps and an emergency generator, all in very good condition. These facilities are remotely monitored and controlled via SCADA equipment/instrumentation.

During the visual inspection of plant 3B it was reported by the plant personnel that a temporary 350 gallon hypochlorite tank was added to the plant to increase the chloride residual. A new VDF drive was replaced for Pump No. 1. The high service pump room, electrical controls and generator equipment are in good condition. The 2.5 mg storage tank underwent interior wall leak repair by the tank manufacturer and appears in good condition. This facility is fenced for security and overall it is well maintained.

The 3C repump facility currently consists of a 2.0 MG concrete tank and three (3) high service pumps, VFD controls, sodium hypochlorite disinfection system and emergency standby diesel engine with generator housed in a brand new concrete building structure. The facility is equipped with a SCADA system to allow staff to monitor and control the facility operation remotely. The entire site is fenced with a decorative fence in the front of the facility and a standard 6-feet chain link fence on the sides and back of the property.

During the visual inspection of plant 3C it was reported by the plant personnel that the check valves for high service pumps No. 2 and No. 3 were replaced, ammoniator No. 2 control was sent to the manufacturer for repair and hypochlorite tank No. 2 was out of service for a leak repair. The three high service pumps were in service and in good operating condition. The electrical controls, emergency generator equipment, storage tank and disinfection system were in good condition.

Lift Stations

There are a total of 229 lift stations operated by the County. A representative (20) lift stations were inspected by Milian, Swain & Associates, Inc. on July 22 and 23, 2013. Overall, the lift stations inspected appeared to be efficiently operated and well maintained, and the mechanical and electrical components (control panels, variable frequency drives, motor control centers, generators, telemetry units, pumps, pipes, and accessories) appeared to be in good condition unless noted. The following serves to summarize the observations made during the visual inspection of the lift stations:

LS 10D This lift station is in good condition. The wet well interior wall needs to be re-sealed. The interior piping is showing signs of light corrosion and needs a coat of paint. The valve vault interior walls are sealed coated and in good condition; also the interior piping are sealed coated and in good condition. The valve vault has about 12” of water standing in it. The electro-mechanical equipment is in good condition. The station is equipped with a SCADA system.

LS 10E This lift station appears to be in good condition. The interior wet well wall is sealed coated and in good condition. The interior piping are also sealed coated and show no signs of corrosion. The valve vault interior walls are sealed coated and in good condition. The interior piping and valves are sealed coated and in good condition. The electro-mechanical equipment appears to be in good condition. The vent piping needs a coat of paint. This station is equipped with a SCADA system.

LS 20A This lift station is in good condition. The interior wall of this station is sealed coated and in good condition. The interior pipes are also sealed coated and with no sign of corrosion. The valve vault interior walls and piping are sealed coated and in good condition. The electro-mechanical equipment appears in good condition. This station is equipped with a SCADA system.

LS 20E This lift station appears in good condition. The interior walls and piping are sealed coated and in good condition. The valve vault interior walls and piping are also sealed coated and in good condition, except for some light corrosion on the piping. The electro-mechanical equipment is in good condition. This station is equipped with a SCADA system.

LS 21D This lift station is in good condition. The wet well is square in shape and is sealed coated and in good condition. The interior piping is showing signs of corrosion, and need to be seal coated. The valve vault walls are seal coated. The interior piping is showing signs of heavy corrosion and need to be sealed. The two (2) check valves are new. 4” wet well vents need a fresh coat of paint. Cam-lock cap is missing from pump out. The electro-mechanical equipment is in good

condition. The station is equipped with a SCADA system and station is fenced for security.

LS 23E This lift station appears in good condition. The wet well interior wall has lost all of the seal coating. The interior piping, pumps and pump rails were replaced this year. The valve vault interior wall is not seal coated. The interior piping is showing signs of light corrosion and needs to be re-painted. This valve vault is constructed on gravel. The electro-mechanical equipment is in good condition. This station is equipped with a SCADA system and fenced for security.

LS 24A This lift station is in good condition. The interior wet well wall is seal coated, but the lower portion of the wall has lost at the coating. The interior piping was replaced and in good condition. The valve vault interior walls and piping are sealed coated, but piping is showing light corrosion. The electro-mechanical equipment is in good condition. Missing cam-lock cap. This station is equipped with a SCADA system.

LS 24F This lift station is in good condition. The wet well interior wall and piping are seal coated and in good condition. The valve vault interior walls and piping are also seal coated and in good condition. The cam-lock cap is missing from the pump-out connection. The electro-mechanical equipment is in good condition. Station is equipped with a SCADA system.

LS 24G This lift station is in good condition. The wet well interior wall is sealed coated, but coating is peeling from the wall. The interior piping is showing signs of light corrosion and needs to be sealed coated. The valve vault walls are also sealed coated but the coating is peeling from the walls. The piping is in good condition. The electro-mechanical equipment is in good condition. This station is equipped with a SCADA system.

LS 30C This lift station is in fair condition. The wet well interior wall has lost almost all of the seal coating and needs to be re-sealed. The interior piping is showing signs of heavy corrosion and needs to be sealed coated. The valve vault interior walls are sealed coated and in good condition. The interior piping are showing signs of corrosion and need a coat of paint. The two check valves were replaced. The electro-mechanical equipment appears in good condition. This station is equipped with a SCADA system and the station is fenced for security.

LS 30E1 This lift station is in good condition. The interior wet well wall and piping are sealed coated and appear in good condition. The valve vault and interior piping are sealed coated and also appear in good condition. The electro-mechanical equipment is also in good condition. This station is equipped with a SCADA system.

LS 30E2 This station is in fair condition. The wet well interior wall and piping are partially sealed coated, but the coating is pealing from the wall and piping. The valve vault interior walls have lost all the seal coating and need to be re-sealed. The interior piping is sealed coated and in fair condition. The electro-mechanical equipment appears in fair condition. This station is equipped with a SCADA system.

LS 30H This lift station appears in good condition. The wet well interior wall is sealed coated and in good condition. The interior piping is in good condition with no

signs of corrosion. The valve vault interior walls are sealed coated and in good condition, but the piping is under water due to the water table. The electro-mechanical equipment appears to be in good condition. This station is equipped with a SCADA system and is fenced for security.

LS 31B This lift station is in good condition. The interior wet well wall is sealed coated and is in good condition. The interior piping are also sealed coated and in good condition. The valve vault interior walls and piping are sealed coated and in good condition. The electro-mechanical equipment is in good condition. The station is equipped with a SCADA system and is fenced for security.

LS 31C This lift station is in fair condition. The interior wet well wall is sealed coated, but the coating is pealing from the wall. The interior piping appears to have signs of heavy corrosion. This station has the piping and valves above ground and are in need of a coat of paint. Pump No. 1 had a new check valve replaced. Cam-lock cap is missing at the pump out connection. The electro-mechanical equipment appears in good condition. The concrete fence panels need to be replaced. This station is equipped with SCADA system and fenced for security.

LS 50B1 This lift station is in a fairly good condition. The wet well interior wall needs to be sealed. The interior piping are sealed coated but is showing light corrosion and needs to be re-painted. The valve vault interior wall coating needs to be re-sealed. The interior piping is showing signs of lightly corrosion. The electro-mechanical equipment appears in good condition. This station is equipped with a SCADA system and is fenced for security.

LS 50D This lift station is in good condition. The wet well structure interior wall and piping are sealed coated and in good condition. The valve vault walls and interior piping are also sealed coated and appear in good condition with no sign of corrosion on the piping. The electro-mechanical equipment also appears in good condition. The station is equipped with a SCADA system.

LS 50G Lift station appears in good condition. The interior wall of the wet well is sealed coated and in good condition. The interior piping in the wet well are also sealed coated with no signs of corrosion. The valve vault interior piping are painted and in good condition. The valve vault interior walls are sealed coated. The emergency connection is missing the cam-lock cap. The electro-mechanical equipment is in good condition. This station is equipped with SCADA and the station is fenced for security.

LS 50M2 Lift station is in fairly good condition. The wet well interior wall coating is peeling from the wall and needs to be re-sealed. The interior piping is showing light corrosion. The valve vault interior wall needs to be sealed. The valve vault interior piping are under water and the bottom of the vault is constructed of gravel. The electro-mechanical equipment appears to be in good condition. This station is equipped with a SCADA system and the station is fenced for security.

LS 51A2 This lift station is in good condition. The wet well interior wall is sealed coated and in good condition. The interior piping is showing signs of light corrosion and need to be sealed coated. The valve vault interior walls are not sealed coated. The interior piping is sealed coated, but showing signs of light corrosion. The cam-lock cap is missing from the pump out connection. The electro-mechanical

equipment is in good condition. Station is equipped with SCADA system and fenced for security. Vent pipe needs to be painted.

Section 4 Regional Wastewater System

This section describes the North Regional Wastewater System (NRWWS) including the service area, visual inspection and review of the renewal and replacement program.

4.1 General Description

The Utility owns and operates the North Regional Wastewater Treatment Plant (NRWWTP), which has provided contract wholesale wastewater services to 11 large users plus the County since 1974. The large users include the Cities of Coconut Creek, Coral Springs, Deerfield Beach, Lauderhill, North Lauderdale, Oakland Park, Pompano Beach and Tamarac; and, North Springs Improvement District (NSID), Parkland Utilities, and Royal Utilities. Service is also provided to WWS Districts 1 and 2 retail wastewater systems. The NRWWS includes 11 master pumping stations and approximately 66 miles of force mains. All of the wastewater collected from retail Districts 1 and 2 and large user customers are treated at the NRWWTP located in Pompano Beach, Florida. The plant has a permitted treatment capacity of 84 MGD. The recent expansion project increased plant treatment capacity to 95 MGD, of which 87.015 MGD has been reserved by the large users and the County. During Fiscal Year 2012, the annual average daily flow rate at the NRWWTP was approximately 71.2 MGD, and the plant currently has sufficient capacity to meet the projected demands of all large users and the County to at least the year 2035.

The large user agreements are substantially similar. Each is for a term that exceeds by one year the last payment of any wastewater system debt obligation applicable to the NRWWS. In addition to stipulating points of connection and establishing minimum quality limitations on all wastewater, the agreements designate reserve capacity in the plant for each user and provide for the method to charge each user for the availability and provision of service. The agreements also require the large users to deliver all wastewater collected to the County. On a monthly basis, each user is billed a fixed charge depending upon the user's reserve capacity in the plant. This fixed charge is designated to recover each large user's equitable share of debt service including coverage (1.2x principal and interest). The operation and maintenance costs associated with provision of treatment and transmission service, also billed monthly to each large user, are based upon the large user's pro rata usage of the NRWWS. Additionally, the contracts provide restrictions on excessive and peak flows, limitations on types of waste allowed to be discharged and requirements to pay for damages caused by a large user.

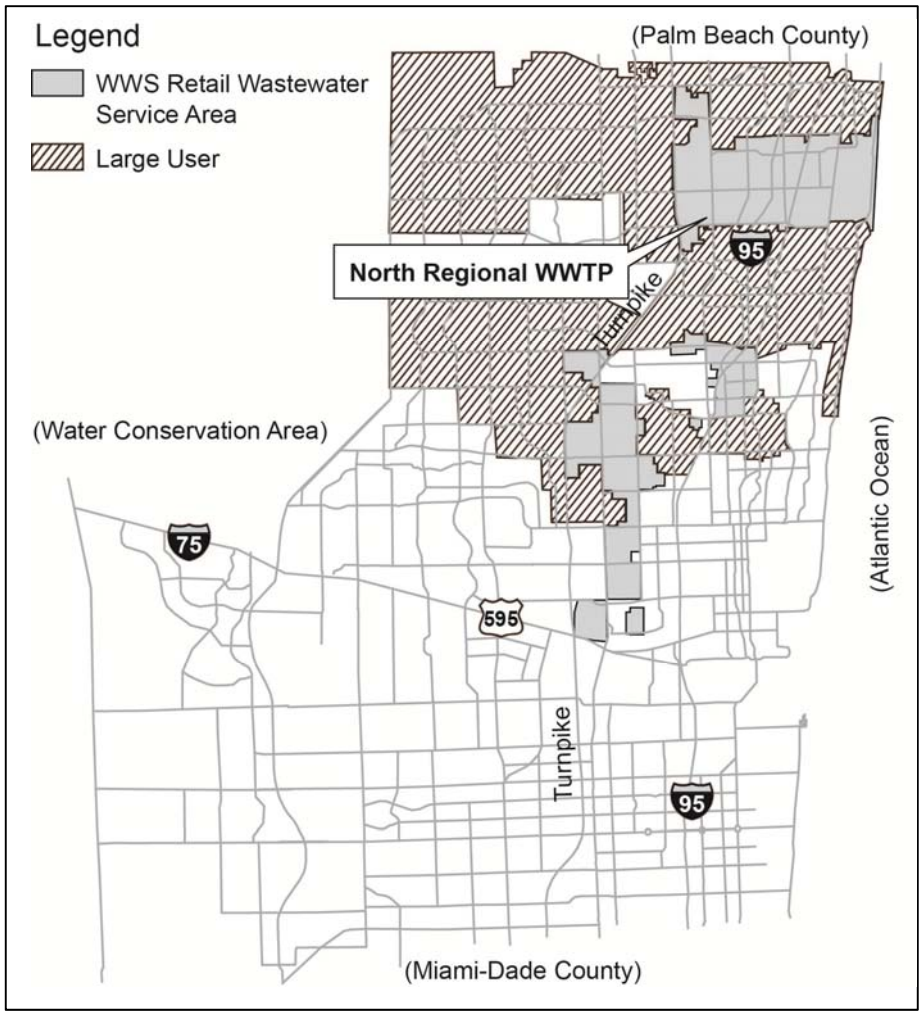
The NRWWTP was designed and constructed in accordance with a master plan approved by regulatory authorities specifically to encourage the use of regional, technologically advanced wastewater treatment processes and to discourage development and use of smaller, less efficient systems. A difficult permitting process, outstanding contractual obligations with the County and high capital costs of constructing and operating a new facility should discourage any large users from abandoning the NRWWS. The agreements as executed by the large users are binding and can only be terminated upon mutual consent of the County and the large user.

The NRWWTP utilizes an activated sludge treatment process for liquid treatment and an anaerobic digestion system for handling the biosolids produced from the liquid treatment process. After digestion, the sludge is dewatered and disposed of by landfilling and landspreading. The effluent from the liquid treatment process is chlorinated and either pumped through the outfall pipe into the Atlantic Ocean, disposed of in on-site deep injection wells, or filtered via the County's 10 MGD reclaimed water system. The reclaimed water is used for irrigation and industrial process water at the Waste to Energy Plant (Wheelabrator North Broward Plant), the Septage Receiving Facility and the NRWWTP as well as for landscape irrigation at a nearby commerce center.

Service Area and Customer Base

Figure 4-1 shows the NRWWS service area. All of the wastewater collected from retail Districts 1 and 2, and all large user customers, are treated at the NRWWTP located in Pompano Beach, Florida.

Figure 4-1 WWS Wastewater Large User Service Areas



The NRWWS service area provides service to 35 percent of the population in the County. In addition to providing treatment service to the County's retail customers in Districts 1 and 2 (District 3 treatment is provided by contract with the City of Hollywood at the South Regional Wastewater System), the NRWWTP provides treatment to 11 large users plus the County. Service is provided pursuant to individual, contractual agreements between the County and each large user. Generally, such agreements specify each large user's reserve capacity in the plant and provisions for billing and payment for service. As noted, the large users and WWS have currently subscribed to 87.015 MGD of the 95 MGD of treatment and disposal capacity.

Table 4.1 provides a summary of historical large user wastewater flow rates for treatment and disposal. The reserve capacity for each large user of the NRWWS is shown in Table 4.2. Table 4.3 provides information on the wastewater annual flows for the past five years. While some of the large users individually may be utilizing high percentages of their reserve capacity, collectively the large users will not exceed permitted plant capacity. Hence, such individual wastewater flows do not constitute a liability issue from the standpoint of plant capacity.

Table 4.1 Summary of Historical Large User Wastewater Average Monthly Flow for Treatment and Disposal (1,000 Gallons)

Large User	FY 2010	FY 2011[1]	FY 2012[2]	Change From Prior Year	% of Change
Coconut Creek	109,675	106,383	120,600	14,217	13.36%
Coral Springs	261,008	209,733	260,668	50,935	24.29%
Deerfield Beach	213,438	168,219	182,561	14,342	8.53%
Lauderhill	181,413	166,710	200,317	33,608	20.16%
North Lauderdale	82,375	89,867	118,946	29,078	32.36%
NSID	80,336	82,665	92,960	10,294	12.45%
Oakland Park	61,731	44,097	53,233	9,136	20.72%
Parkland Utilities	6,651	6,220	6,415	195	3.14%
Pompano Beach	385,597	374,685	417,423	42,738	11.41%
Royal Utilities	8,980	7,500	7,532	32	0.42%
Tamarac	201,687	220,223	294,120	73,898	33.56%
Subtotal	**1,592,890**	**1,476,302**	**1,754,775**	**278,473**	**18.86%**
Broward County	394,804	337,189	410,946	73,757	21.87%
Total	**1,987,694**	**1,813,491**	**2,165,720**	**352,229**	**19.42%**

[1] The infiltration and inflow programs, water conservation efforts and water restrictions have reduced water sales and the amount of water returned to the wastewater system.
[2] Increase in flows is principally related to infiltration and inflow associated with high rainfall in 2012.

Source: Broward County Water and Wastewater Services

Table 4.2 North Regional Wastewater System Reserve Capacity as of September 30, 2012 (MGD)

Large User	Capacity	
	Treatment	Transmission
Broward County	19.42	19.42
Coconut Creek [1]	6.54	4.41
Coral Springs	9.79	9.79
Deerfield Beach	8.50	8.50
Lauderhill	7.10	7.10
N S I D	3.53	3.53
North Lauderdale	4.40	4.40
Oakland Park	1.52	1.52
Parkland Utilities	0.27	0.27
Pompano Beach [1]	17.00	N/A
Royal Utilities	0.45	0.45
Tamarac	8.50	8.50
Total	**87.02**	**67.89**

[1] All of Pompano Beach and portions of Coconut Creek do not use the North Regional Wastewater System transmission facilities.

Source: Broward County Water and Wastewater Services

Table 4.3 Summary of Large User Wastewater Treatment Annual Flows Five-Year History as of September 2012 (1,000 Gallons)
Summary of Large User Wastewater Treatment Annual Flows

Large User (LU)	Fiscal Year 2008[1]	Fiscal Year 2009[1]	Fiscal Year 2010[1]	Fiscal Year 2011[1]	Fiscal Year 2012[2]
Coconut Creek	1,259,011	1,229,427	1,316,095	1,276,592	1,447,199
Coral Springs	3,096,615	3,069,385	3,132,096	2,516,794	3,128,012
Deerfield Beach	2,680,185	2,561,348	2,561,252	2,018,628	2,190,729
Lauderhill	2,219,783	2,210,581	2,176,961	2,000,517	2,403,809
North Lauderdale	1,169,616	1,194,511	988,496	1,078,407	1,427,346
NSID	1,003,282	978,100	964,037	991,983	1,115,514
Oakland Park	449,973	642,310	740,767	529,162	638,795
Parkland	93,272	67,215	79,808	74,642	76,984
Pompano Beach	4,918,370	4,408,880	4,627,160	4,496,220	5,009,080
Royal Utilities	102,307	117,969	107,764	90,004	90,382
Tamarac	2,307,154	2,340,756	2,420,243	2,642,672	3,529,445
Total LU	**19,299,568**	**18,820,482**	**19,114,679**	**17,715,621**	**21,057,295**
Broward County	5,856,469	4,972,950	4,737,647	4,046,268	4,931,347
Total LU and County	**25,156,037**	**23,793,432**	**23,852,326**	**21,761,889**	**25,988,642**

[1] Droughts which began in April 2007 have resulted in reduced water use due to demand management efforts comprising water conservation initiatives, including year round lawn irrigation restrictions. Reduced water use translates to reduced billed wastewater.
[2] Increase in flows is principally related to infiltration and inflow associated with high rainfall in 2012.

Source: Broward County Water and Wastewater Services

4.2 Wastewater System Regulatory Requirements

Operations of the NRWWTP are regulated by the EPA, the Florida Department of Environmental Protection (FDEP) and the Broward County Environmental Protection and Growth Management Department. Regulatory requirements are focused on effluent management, sludge disposal, reclaimed water and an industrial pretreatment program.

In Fiscal Year 2012, the North Regional Wastewater Treatment Plant (NRWWTP) had no permit violations. The NRWWTP is in compliance with effluent quality standards. Fifty-one (51) parameters are checked daily to assess conformance with these standards, amounting to 21,922 parameter checks in the year. During Fiscal Year 2012, there were ten (10) limit excursions representing only 0.045 percent of the total checks at the NRWWTP. These excursions were the result of various polling errors within the data collection and SCADA system, and have been corrected to minimize data related excursions.

4.3 Wastewater Effluent Management

The NRWWTP currently disposes of treated effluent via an open ocean outfall pipeline, a reclaimed water system and deep injection wells. The open ocean outfall is regulated through the Federal National Pollutant Discharge Elimination System (NPDES) permit program, administered by the FDEP. Deep injection wells are permitted by the FDEP Underground Injection Control Section.

Open ocean outfalls are utilized by several south Florida utilities. Concerns over possible environmental impacts exist and have been the subject of extensive study such as the Southeast Florida Ocean Outfall Experiments (SEFLOE) I and II conducted by the National Oceanic and Atmospheric Administration (NOAA). The SEFLOE studies indicated that there has been no unreasonable degradation or irreparable harm of the ocean environment. WWS is currently participating in a joint study with NOAA titled the Florida Atlantic Coastal Environment (FACE) study. The County has executed a memorandum of understanding with NOAA for a Coastal Water Quality Monitoring Plan, which will involve monthly monitoring of water quality associated with the ocean outfall discharges. Work began in June, 2010.

The County's facility permit from the FDEP rates the NRWWTP at 84 MGD and acknowledges 66 MGD of effluent disposal capacity through the ocean outfall. Broward County submitted an application to the FDEP on August 2, 2007 for the renewal of the NPDES/Facility Permit for the NRWWTP, which expired on February 2, 2008. The new NRWWTP permit was issued on January 25, 2013 and became fully enforceable in March 2013.

The FDEP continues to promote a reduction of nutrients in the face of opposition to ocean discharges from interested groups, but they have worked with the wastewater utilities with ocean outfalls (including Broward County) to reduce the economic impact of the Leah Schad Memorial Ocean Outfall Program, which became the law effective July 1, 2008. Subsequent legislation has been proposed each year to amend the law. In 2013, the Florida Legislation passed the following changes to the current law:

- Allows peak flow backup discharges not exceeding 5% of the facility's cumulative baseline flow, measured on a 5-year rolling average and requires that such discharges meet the FDEP's applicable secondary waste treatment and water-quality-based effluent limitations.

- Requires the detailed plan that an outfall utility must submit to FDEP to identify technically, environmentally and economically feasible reuse options, and to include an analysis of the costs associated with meeting state and local water quality requirements, and comparative costs for reuse using outfall flows and other domestic wastewater flows.

- Requires the detailed plan to evaluate reuse demand in context with several factors considered in the South Florida Water Management District's (SFWMD) Lower East Coast Regional Water Supply Plan.

- Requires FDEP, SFWMD and the outfall utilities to consider the above information for the purpose of adjusting, as needed, the reuse requirements, and requires FDEP to report to the Legislature any changes that may be necessary in the reuse requirements by February 15, 2015.

In order to meet the advanced wastewater treatment requirements of the rule, the County has implemented cumulative nutrient reduction strategies including modifying the existing treatment process to augment biological nutrient removal and reducing outfall discharges via diversion to the existing deep injection well system.

As noted, the effluent management system also includes Class I injection wells. The Operation Permit 0051336-502-UO for Injection Wells 1 through 6 was issued on July 2, 2010 and is valid for five (5) years. This permit requires the installation of a new monitoring well (number 5) to replace monitoring well number 4, because its lower zone no longer appears to be a reliable source of data. This determination was made based on the modified monitoring protocols and data collected under the permit 0051336-439 UO administrative order. Work began in January 2012 for monitoring well 5 and was completed in early September 2012.

The County's effluent management program currently includes a 10 MGD system providing highly treated reclaimed water for industrial and landscape uses. Due to state law, the County will be required to increase production of reclaimed water by 2025. Long term effluent management improvements include combinations of injection wells, Biscayne Aquifer recharge, Floridan Aquifer recharge, offsite large user reuse, and residential reuse. An increase in the consumptive use permit raw water allocation for the water treatment facilities may be authorized by the SFWMD when effluent management results in the potential beneficial reuse of the reclaimed water.

4.4 Biosolids Management

Pollutant concentrations in wastewater residuals are regulated by both federal and state sludge regulations. The federal regulation that currently regulates disposal is 40 CFR Part 503. The Part 503 rule regulates five categories of wastewater residuals disposal: agricultural land application, non-agricultural land application, distribution and marketing, monofills and surface disposal. WWS currently employs landfilling (20,000 tons per year) and landspreading (60,000 tons per year) for wastewater residuals disposal. H & H Liquid Sludge Disposal, Inc. is under contract to dispose of biosolids by landspreading. The contract extends to October, 2013, after which it will be re-bid and awarded to the lowest responsible bidder.

The County is currently managing most biosolids by land application of the treated residuals. Land application is a beneficial reuse of this wastewater treatment byproduct and is subject to both federal and state regulations. The County produces Class B residuals allowable for application to non-food agricultural sites.

In August 2010, revisions to the state regulations governing the treatment and disposal of biosolids, Chapter 62-640 F.A.C., went into effect. The NRWWTP became subject to the new regulations upon renewal of the facility's operating permit in January, 2013. New land

application sites were permitted under these new regulations. While land application continues to be an option, permitting of sites will likely be at greater distances, potentially making hauling to new disposal sites more costly. The County has secured alternate disposal capacity at a nearby Class I landfill and continues to investigate cost-effective long-term biosolids management alternatives. Disposal at the landfill meets all current federal, state and local regulations and since the landfill cogenerates electricity from its methane gas production, this disposal option is currently the most carbon neutral.

4.5 Wastewater Large User Agreements

The County is under obligation to provide large users with capacity under the terms of Large User Agreements (Agreements) it has executed with the cities of Coconut Creek, Coral Springs, Deerfield Beach, Lauderhill, North Lauderdale, Oakland Park, Pompano Beach and Tamarac; and the North Springs Improvement District, and the private utility companies of Parkland Utilities, Inc. and Royal Utilities, which provide for wastewater transmission, treatment and disposal services. The Agreements terminate at the end of the County's fiscal year following the date all obligations, notes or bonds at any time issued for the NRWWTP and associated transmission and disposal facilities, or any part thereof, are retired or satisfied. The current large user reserved capacity in the NRWWTP is set forth in Table 4.2.

The Agreements are substantially alike in form and a brief summary of significant provisions follows:

A. Provisions Pertaining to Connection to the County System. The Agreements require that during the term of the Agreement, each user except the City of Oakland Park will deliver all existing water flows collected by it to the County. Oakland Park sends a portion of their flow to the City of Ft Lauderdale's wastewater treatment plant. The Consulting Engineers are of the opinion that a difficult permitting process, outstanding contractual obligations with the County and high capital costs of constructing and operating a new facility should discourage any defection of users from the NRWWS.

   The Agreements also identify the points of connection of the users' systems to the County's system, and state that the user will convey to the County land needed by the County for the point of connection and access thereto. The users agree to maintain their own systems, the elevation and pressure of which are required to be sufficient to deliver wastewater to the County's facility without backing up or reversing flow. The users' systems must include provisions to prevent excessive peak flow rates and extended periods of no flow. Each of the users must list in the Agreement estimates of its future flow projection and the user must submit annual updates of these estimates to the County. The County is required to use these estimates to plan future treatment capacity and to determine whether facilities should be extended or modified. The County's obligation to provide service is limited to the capacities reserved by users, which may be increased or decreased by amendment or modification to the Agreements. The Agreements allow users to lease or sell excess capacity to other users, subject to the County's approval. The County is required to install and maintain a meter at each point of connection to determine the volume and rates of flow and to inspect the meters at

least annually to determine the accuracy thereof. The Agreements provide for credits or additional charges in the event of the inaccuracy of the meters. If the meters are inoperative, the users are required to pay an amount based on the average flow of the prior month.

B. Provisions Relating to Discharge Sampling. The Agreements specify quality limitations for wastewater discharges. A user's failure to comply with these limitations places the user in default under this Agreement and allows the County either to initiate programs to bring the user's discharge into compliance at the user's expense or to seek damages from the user. A user's system must include a sampling station and the user must upon receipt of written request from the County submit a complete laboratory analysis of a composite sample of combined wastes leaving the user's facilities. The County and the user may enter into an agreement whereby the County would accept an industrial waste of unusual strength. The County may surcharge high strength industrial waste received from large user systems.

C. Provisions Pertaining to Charges. The County is required to conduct an annual review of the costs of providing service to users, which will provide the preliminary basis for establishing fees, rates and other charges for the next succeeding fiscal year. The fees and rates charged to the users constitute the full cost of the transmission, treatment and disposal services provided to the users, including operation and maintenance charges and debt service charges for both the NRWWTP and the NRWWS transmission facilities, and include an Improvement Repair and Replacement Surcharge. Such fees, rates and charges are required to be set at a public hearing by the Board, which is required to be held after 30 days written notice to the users. The Board is required to consider recommendations of the individual users or the advisory board, which is composed of representatives from each of the users. The operation and maintenance charges applicable to the NRWWTP or the transmission system are included in the monthly rate charged to the users based upon the users' actual monthly flow in thousands of gallons. The rate is to be set by dividing the total annual budgeted operation and maintenance expense for each fiscal year by the number of gallons estimated to be treated or transmitted in that fiscal year, and is to be adjusted at year end to reflect the actual number of gallons treated and actual operation and maintenance expense. This adjustment is either collected from, or remitted to, the large users in the subsequent year.

The debt service charge included in monthly rates charged to the large users include principal, interest and coverage requirements on debt obligations issued at any time for the NRWWS and is computed by determining the ratio of the amount of capacity reserved by the user to the amount reserved by all users. The debt service charge for the NRWWS transmission facilities is computed by reference to transmission reserved capacity in the same manner. A user's contribution to the Improvement, Repair and Replacement Surcharge, which is part of the monthly rate charged to users, may not exceed 10 percent of that user's monthly bill. In addition, the Agreements provide for additional charges in the event that a customer requests additional transmission or treatment capacity or in the event that the monthly flow of a user exceeds the capacity

reserved by such user for three consecutive months. A user that fails to pay the monthly bill within 45 days of its due date is required to pay an interest penalty on the unpaid balance; and if the payment is not made within 60 days, the user is in default of the Agreement and the County may enforce the Agreement by suit. The users agree to establish service charges or other means of obtaining funds sufficient to enable them to pay the monthly charge.

D. Provisions Pertaining to Additional Obligations of Both Parties. The Agreements provide that the County will extend and expand its NRWWS to provide for the user's scheduled flow. The users must deliver their wastewater to the County facilities for treatment and the County must accept all wastewater flows collected by the users, provided the amount of such flow does not exceed the capacity reserved by such users.

E. Provisions Pertaining to Violations and Exceptions to the Terms of Agreements. If a user violates the Agreement, the County must give written notice of the violation and allow a reasonable time to correct the violation. The user must correct the violation within the stated time. If either party violates the Agreement, that party becomes liable to the other for any expense, loss or damage occasioned by such violation; provided that any payment by the County to a user for violation of any provision of the Agreement shall be from any legally available source other than the revenues pledged to any bondholders. If there is a dispute concerning a violation that cannot be settled, the user will pay the full amount billed, and the amount in dispute will be escrowed or held in a joint trust, interest-bearing bank account and held pending settlement of such dispute. Each user agrees to hold the County harmless from costs and expenses incurred by such user or the County in any litigation resulting from the improper introduction of materials by such user into the County facility. Any temporary cessation of wastewater transmission and treatment services caused by an act of God, a fire, strikes, casualty, necessary maintenance work, breakdown of or injury to machinery, pumps or pipeline shall not constitute a breach of the Agreement. The County is required to accept and dispose of wastewater transmitted by the users, if physically possible, regardless of the degree of treatment available, until written notice to the contrary is received from a government agency.

F. Provisions Relating to the Term of the Agreements and Cancellation. The users and the County were bound by the Agreements at the date of their execution. The County and each user may terminate their Agreements by mutual written consent. Otherwise, the Agreements terminate at the end of the County's next full fiscal year after all obligations issued at any time during the term of the Agreements for the NRWWS have been retired or satisfied.

4.6 Visual Inspection and Review

North Regional Wastewater Treatment Plant

The visual inspection of the NRWWTP was performed on July 29, 2013. Since the last report most of the expansion construction to the plant has been completed and is operational. The visual inspection indicates that the plant is well maintained and operated properly.

Plant modifications performed through FY-2012:

- Repair RAS pumps at E-3 and D-3 MOD.
- Repair and repaint boilers No. 1, No. 2, and No. 3 at south complex.
- Repair and repaint boilers No. 4, No. 5, No. 7 and No. 8 at north complex.
- Replacement of VFD for injection pump No.4.
- Replacement of outfall pump heat exchangers for pumps No. 2, No. 3, No. 5 and No. 6.
- Replacement of two (2) evaporators at the chlorine room.
- Replacement of VFD at drive No.2 at injection well building.
- Replacement of control panel for outfall effluent pumps.
- Replacement of VFD for two (2) water cool injection wells No. 1 and No. 3.
- Repair effluent pump No.6.
- Replacement of monitoring well No. 5.
- Repair effluent pumps No. 1 and No. 2.

Plant modifications to be initiated for FY 2013/2014:

- Replacement of liquid Rheostat 5 (ongoing).
- Install drive at clarifier D-3 MOD (ongoing).
- Repaint the monitoring wells (ongoing).
- Repair aeration weirs at A-1 and A-2 MOD (ongoing).
- Replacement of boiler No. 6 at north complex (ongoing).
- Replace pump and shredder at No.7 slot (ongoing).
- Replacement of generator No.4 (ongoing).

- Rehabilitation of plant lift station No.6 (ongoing)
- Eliminate evaporators at the chlorine facility; change piping and add two (2) scales (ongoing).
- Chevron Project (ongoing).
- Replacement of cover at P3 Digester (ongoing).
- Replacement of aerator shroud at B-2 Basin (ongoing).
- Replacement of clarifier drive at D-2 and D-3 (ongoing).
- Add skids for chlorine injection system for clarifier rings at A, B and C MOD (ongoing)
- Repaint aerator weirs at A-1 thru A-6 steel structure (ongoing).
- Replacement of 20 underground reuse valves throughout the plant (ongoing).
- Replacement of damaged concrete slab for effluent pump No. 3.

Septage Receiving Facility

The Septage Receiving Facility receives waste from septic tank pump outs, portable toilets, vacuum trucks, grease traps, leachate from landfills, etc. The waste is separated into two categories: liquids and solids. The equipment which must be maintained includes transfer pumps and electrical control panels, a diesel generator set, biofilters and miscellaneous valves.

The septage receiving facility was inspected on April 29, 2013 and from the visual inspection the facility was found to be well maintained.

Facility modifications performed in FY-2012:

- Replacement of Pump No. 2.
- Installation of pump station to NRWWTP with tie-in to exiting force main.
- Site lighting improvements.

The proposed modifications to be initiated for FY 2013/2014:

- Demolition of existing equipment, fencing and access ways required (ongoing).
- Installation of aerator grid chamber (ongoing).
- Repair existing septage receiving station, including rehabilitating the wet well, replacement of cover and removal of non-working equipment (ongoing).

- Installation of new biofilter odor control system (ongoing).
- Landscaping and irrigation system improvements (ongoing).

Master Lift Stations

Five (5) Master Lift Stations representative of the sizes and ages of master lift stations throughout Broward County were inspected on July 23, 2013. Overall, the lift stations inspected appeared to be efficiently operated and well maintained. The mechanical and electrical components (control panels, variable frequency drives, motor control centers, generators, telemetry units, pumps, pipes, and accessories) appeared to be in good condition.

LS 440 This master lift station is in good condition. The interior and exterior walls are painted and in good condition. Pump No. 1 had the motor replaced. Pump and motor for Pump No. 2 were replaced. All pumps, motors and piping are painted and appear in good condition. The electrical room control panel appears in good condition. The emergency generator also appears in good condition. The stand-by engine for the generator is supplied by a 6,000 gallon capacity diesel fuel tank on site. This station has no wet well. The station receives flows directly from the system. This station is due for rehabilitation late in Fiscal Year 2013.

LS 451 This master lift station is in good condition. The interior walls of this station are painted and in good condition. This station is equipped with three (3) pumps and appears in good operating condition. At the time of this inspection, actuator valve controls were being installed at the discharge pipes. The electrical control equipment appeared in good condition. The emergency generator also appeared in good condition. The stand-by engine for the generator is supplied by a 6,000 gallon capacity diesel fuel tank on site. The building is equipped with roll-down shutters for hurricane protection. This station had no wet well on site. The exterior wall of this station are painted and in good condition.

LS 452 This master lift station is located in the Lauderhill Water Treatment Plant. The Building Structure appears in good condition, with the interior wall painted and well maintained. This station is equipped with three (3) pumps and a spare for emergency purposes. The motor for Pump No. 3 is in the process of being replaced. The valve activators and control panels were added to the discharge pipe. The electrical control equipment appears to be in good condition. A new AC was installed for the electrical control room. The emergency generator equipment appears in good condition. The exterior walls of the building is painted and in good condition.

LS 454 This master lift station building is in good condition. This station is equipped with three (3) pumps that are well maintained and in good operating condition. The motor at pump No. 3 was in the process of being replaced at the time of the inspection. The pumps and piping are painted and in good condition. The interior walls of the station are painted and in good condition. The electrical control equipment appears in good condition. The emergency generator equipment also appears in good working condition. The exterior of the building is painted and well maintained. This station is fenced for security.

LS 462 This master lift station is in good condition. The interior and exterior walls of this station are painted and in good condition. The station is located in the property of the Coral Springs Water Treatment Plant. Pump motors No. 2 and No. 3 were replaced. The water seal tank and control panel for the pumps were replaced. The interior and exterior piping are painted and in good condition. The emergency generator equipment and electrical control equipment are in good condition. This station has no wet well, It receives direct flow from the City of Coral Springs. The electrical control equipment appears in good condition. The stand-by engine for the generator is supplied by a 6,000 gallon capacity diesel fuel tank on site.

Section 5 Regional Raw Water Supply

There are currently two wellfields operated by Broward County as part of the regional system, the North Regional Wellfield (NRW) and South Regional Wellfield (SRW). This section describes the regional raw water supply system, including the large users, physical descriptions and permit limitations.

5.1 General Description

The Biscayne Aquifer, currently the County's primary source of drinking water, is subject to saltwater intrusion. In 1986, the County adopted the Regional Raw Water Supply (RRWS) Program, which called for centralized wellfields located further inland to ensure a long term water supply for Broward County. Under the program, new wellfields and raw water delivery systems were financed, constructed and are operated as a regional system for large users. Large users are Dania Beach, Deerfield Beach, Hallandale Beach, Florida Power and Light Corporation, Hollywood and WWS District 2. The wellfields were constructed using general County revenues and the assets were contributed to the Utility. Figure 5-1 depicts the regional wellfield locations and service areas. Physical descriptions of the NRW and the SRW are presented in Tables 5-1 and 5-2.

Figure 5-1 Regional Raw Water Service Areas

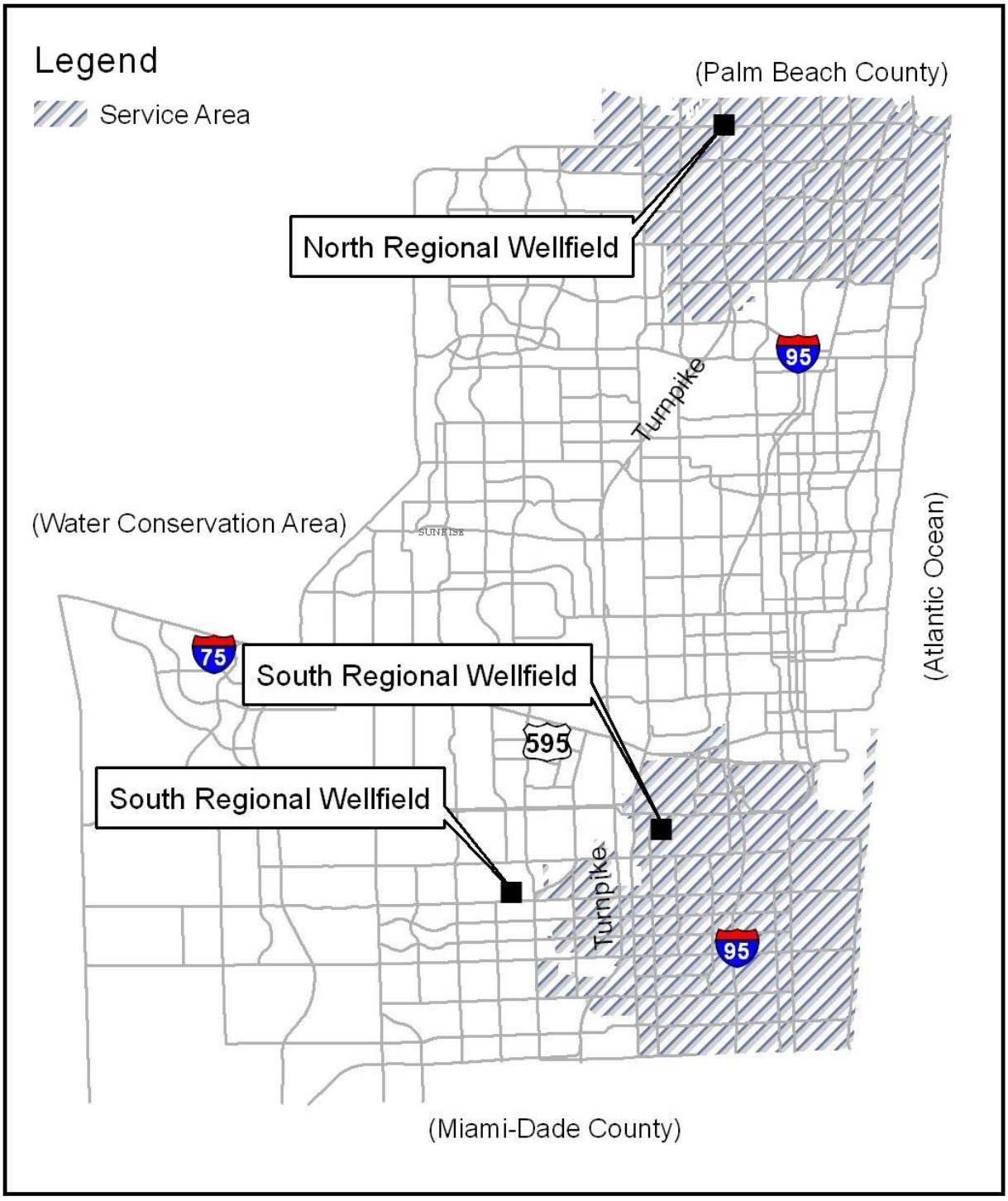


Table 5.1 NRW Physical Descriptions

Wellfield	Well No.	Size (in)	Depth (ft)	Casing Depth (ft)	Type of Casing	Normal Yield (GPM)	Capacity (GPM)	Service Status
NRW	1	20	170	112	PVC	1400	1400	ON LINE
NRW	2	20	130	116	PVC	1400	1400	ON LINE
NRW	27	20	130	95	PVC	1400	1400	ON LINE
NRW	29	20	130	94	PVC	1400	1400	ON LINE
NRW	30	20	121	92	PVC	1400	1400	ON LINE
NRW	31	20	121	92	PVC	1400	1400	ON LINE
NRW	32	20	120	88	PVC	1400	1400	ON LINE
NRW	33	20	121	92	PVC	1400	1400	ON LINE
NRW	45	20	112	94	PVC	1400	1400	ON LINE
NRW	46	20	170	131	PVC	1400	1400	ON LINE

Source: Broward County Water and Wastewater Services

Table 5.2 SRW Physical Descriptions								
Wellfield	**Well No.**	**Size (in)**	**Depth (ft)**	**Casing Depth (ft)**	**Type of Casing**	**Normal Yield (GPM)**	**Capacity (GPM)**	**Service Status**
SRW	5	20	110	75	PVC	2083	1400	*OFF LINE
SRW	6	20	110	75	PVC	2083	1400	**OFF LINE
SRW	17	12	115	81	PVC	2800	2800	ON LINE
SRW	18	12	140	80	PVC	2800	2800	ON LINE
SRW	19	12	140	80	PVC	2800	2800	ON LINE
SRW	20	12	140	80	PVC	2800	2800	ON LINE
SRW	21	12	140	80	PVC	2800	2800	ON LINE
SRW	22	12	140	80	PVC	2800	2800	ON LINE
SRW	23	12	140	80	PVC	2800	2800	ON LINE
SRW	24	12	140	80	PVC	2800	2800	**OFF LINE

*Offline due to salt intrusion.

**Out of Service for maintenance.

Source: Broward County Water and Wastewater Services

5.2 North Regional Wellfield

The NRW includes 10, 2-MGD wells and approximately 30,000 linear feet of pipeline, ranging from 12-inches to 48-inches in diameter. A permit application combining the District 2A retail wellfield and NRW permits was approved by the SFWMD and issued in March 2008. The permitted capacity of the 2A/NRW is 24.3 MGD maximum month and 22.1 MGD annual average day. The permit expires in the year 2028. The well casings at the NRW are set in the Biscayne Aquifer at a depth of approximately 100 feet below land surface. The NRW has two emergency generators capable of powering pumps for six wells. Usage data for the NRW are presented in Table 5.3.

Table 5.3 Large User Actual Flow North Regional Raw Water Flow Distribution (1,000 Gallons)

Fiscal Year	Deerfield	BC2A	NRWF
FY2007	218,280	2,338,418	2,556,698
FY2008	217,800	2,303,290	2,521,090
FY2009	216,400	2,280,890	2,497,290
FY 2010	220,694	2,299,487	2,520,181
FY 2011	201,111	2,926,030	3,127,141
FY 2012	200,980	2,567,130	2,768,110
GRAND TOTAL	1,275,265	14,715,245	15,990,510

Source: Broward County Water and Wastewater Services

5.3 South Regional Wellfield

The SRW includes eight 4-MGD wells, one 2-MGD wells and approximately 79,000 linear feet of transmission pipeline, ranging in size from 20 inches to 42 inches in diameter. Six wells have the ability to run under permanently installed auxiliary generator power with three wells being connected to one generator. The remaining wells have connections for a portable generator. The permitted capacity of the SRW is 22.4 MGD maximum day and 14.2 MGD annual average day. The permit expired in October 2007 (and is currently administratively extended), and the application submitted for permit renewal is under review by the SFWMD. Permit reissuance is expected in the normal course of events. Well 6 was formerly associated with WTP 3A. The well casings at the SRW are set in the Biscayne Aquifer at a depth of approximately 100 feet below land surface. Usage data for the SRW are presented in Table 5.4. All wells in the SRW have PVC casings.

Table 5.4 Large User Actual Flow South Regional Raw Water Flow Distribution (1,000 Gallons)					
FISCAL YEAR	Hallandale	Hollywood	Dania	FPL	SRWF
FY2008	1,288,330	2,190,930	384,970	637,940	4,502,170
FY 2009	1,392,030	1,632,870	348,470	567,210	3,940,580
FY 2010	1,401,787	1,539,507	433,268	479,590	3,854,152
FY 2011	1,316,530	1,634,700	590,960	526,280	4,068,470
FY 2012	1,338,773	1,379,070	677,090	506,214	3,901,147
GRAND TOTAL	6,737,450	8,377,077	2,434,758	2,717,234	20,266,519
Source: Broward County Water and Wastewater Services					

5.4 Contractual Agreements

The contractual agreements with each of the large users are substantially similar and run for an indefinite period of time. The exception is the City of Hollywood agreement which has a four-year term with an automatic renewal for four years unless otherwise terminated. The large user agreements provide for a method to charge each user a pro rata share of system operations and maintenance costs. Historical and projected revenues for the raw water system are noted in Table 7.6 and generally represents less than one percent of Utility revenues. As noted, the capital costs of system construction were funded using general County revenues.

5.5 Large Users

The North and South Regional Wellfields serve different areas in Broward County. The NRW serves the City of Deerfield Beach and the County‘s District 2. The SRW serves the Cities of Dania Beach, Hollywood and Hallandale Beach and Florida Power and Light.

5.6 Regional Raw Water Supply Regulations

The volume of raw water withdrawal from the Utility’s regional raw water supply wellfields is regulated by the SFWMD. Each wellfield is governed by a water use permit that stipulates the raw water maximum allowable annual and daily withdrawals. These permits are reissued for periods of five to 20 years. The permit for the combined 2A/NRW was issued in March 2008 for a 20-year period. The application for the renewal of the South Regional Wellfield permit has been filed. The Utility has responded to permit application review comments from the SFWMD and has coordinated the review of this application with the raw water permitting needs of the Cities of Hallandale Beach and Dania Beach. Because the SFWMD permit terms and conditions are dependent on the issuance of the Hallandale Beach water use permit, SFWMD has indicated that the SRW permit will not be issued until after the Hallandale Beach permit is issued in the near future.

Monitoring of well pumpage, groundwater levels in proximity to wetlands and saltwater intrusion is conducted to comply with specific limiting conditions of the water use permits. For wells that are in service, the County operating personnel regularly monitor pH, alkalinity, hardness, iron, chloride, color, standard plate count (SPC), coliforms, quarterly wellfield protection monitoring and annual analysis to comply with the SDWA. All water quality parameters are regulated by the FDEP.

5.7 Visual Inspection and Review

North Regional and South Regional Wellfields

Visual inspections of the County's regional wellfields were performed on July 25, 2013 by Milian, Swain & Associates, Inc. The findings of these inspections are summarized below.

North Regional Wellfield

Overall, the NRW was observed to be in good operating condition and well maintained. During the inspection it was observed that all piping and well head were painted and well maintained. All wells are on line.

Well #1 This well is inside a concrete vault with a submersible pump and piping. During the inspection no substantial moisture was observed on the wellhead. The seals at top of the casing and wellhead are in good condition. This well is equipped with a generator and controls housed in a building structure adjacent to the well. The piping and wellhead paint is in good condition. The electrical controls for the well are in good condition. This facility is fenced and well maintained.

Well #2 This well is inside a concrete vault with a submersible pump and piping. During this inspection no substantial moisture was observed on the wellhead. The seals at top of casing and wellhead are in good condition. The piping and wellhead paint is in good condition. The electrical controls are also in good condition. This facility is fenced and well maintained.

Well #27 This well is inside a concrete vault with a submersible pump and well piping. During the inspection no substantial moisture was observed on the wellhead. The seals at top of casing and wellhead are in good condition. The paint on the wellhead and piping are in good condition. The electrical controls are in good condition. The facility is fenced and well maintained.

Well #29 This well is inside a concrete vault with a submersible pump and well piping. During the inspection no substantial moisture was observed on the wellhead. The seals at top of well casing and wellhead are in good condition. The paint on the wellhead and piping are in good condition. New pump and motor installed in 2013. The electrical controls are in good condition. The facility is fenced and well maintained.

Well #30 This well is inside a concrete vault with a submersible pump and well piping. During the inspection no substantial moisture was observed on the wellhead. The seals at top of well casing and wellhead are in good condition. The paint on the wellhead and well piping are in good condition. The electrical controls are in good condition. The facility is fenced and well maintained.

Well #31 This well is inside a concrete vault with a submersible pump and well piping. During the inspection no substantial moisture was observed on the wellhead. The seals at top of well casing and wellhead are in good condition. Paint on wellhead and well piping are in good condition. The electrical controls are in good condition. The facility is fenced and well maintained.

Well #32 This well is inside a concrete vault with a submersible pump and piping. During the inspection no substantial moisture was observed on the wellhead. The seals at top of casing and wellhead are in good condition. This well is equipped with a generator and controls housed in a building structure next to the well. Paint on the wellhead and piping are in good condition. The electrical controls are in good condition. The facility is fenced and well maintained.

Well #33 This well is inside a concrete vault with a submersible pump and piping. During the inspection no substantial moisture was observed on the wellhead. The seals at top of casing and wellhead are in good condition. Paint on the wellhead and piping are in good condition. The electrical controls are in good condition. Well facility is fenced and well maintained.

Well #45 This well is inside a concrete vault with a submersible pump and piping. During the inspection no substantial moisture was observed on the wellhead. The seals at the top of well casing and wellhead are in good condition. The piping and wellhead paint is in good condition. The electrical controls are in good condition. The facility is fenced and well maintained.

Well #46 This well is inside a concrete vault with a submersible pump and piping. During the inspection no substantial moisture was observed on the wellhead. The seals at the top of well casing and wellhead are in good condition. The piping and wellhead paint is in good condition. The electrical controls are in good condition. The facility is fenced and well maintained.

South Regional Wellfield

The SRW was also observed to be in good operating condition and well maintained. Three (3) wells were off line. During the visual inspection it was observed that the wellhead and piping were painted and well maintained.

Well #5 This well is inside a concrete vault with a submersible pump and piping. During the inspection no substantial moisture was observed on the wellhead. The seals at top of well casing and wellhead are in good condition. Well facility is fenced and in fair condition. Well is out of service due to salt intrusion.

Well #6 This well is inside a concrete vault with a submersible pump and piping. During the inspection no substantial moisture was observed on the wellhead. The seals at top of well casing and wellhead are in good condition. Ductile iron piping needs a coat of paint. Electrical controls are in good condition. The facility is fenced and well maintained. The well was out of service for motor replacement.

Well #17 This well is inside a concrete vault with a submersible pump and piping. During the inspection there was no substantial moisture observed on the wellhead. The seal on the wellhead and top of the casing was in good condition. The wellhead and piping are freshly painted and in good condition. The electrical controls are in good condition. The facility is fenced and in good condition.

Well #18 This well is inside a concrete vault with a submersible pump and piping. During the inspection there was no substantial moisture observed on the wellhead. The seal on the wellhead and top of the casing are in good condition. The well is equipped with a building structure that houses the generator and controls that appear in good condition. The wellhead and piping are freshly painted and in good condition. The electrical controls are in good condition. The facility is fenced and in good condition.

Well #19 This well is inside a concrete vault with a submersible pump and piping. During the inspection there was no substantial moisture observed on the wellhead. The seals on the wellhead and top of the casing are in good condition. The wellhead and piping are freshly painted and in good condition. The electrical controls are in good condition. The facility is fenced and in good condition.

Well #20 This well is inside a concrete vault with a submersible pump and piping. During the inspection there was no substantial moisture observed on the wellhead. The seals on the wellhead and top of the casing are in good condition. The wellhead and piping are freshly painted and in good condition. The electrical controls are in good condition. The facility is fenced and in good condition.

Well #21 This well is inside a concrete vault with a submersible pump and piping. This well is equipped with a building structure that houses a generator and controls that appear in good condition. During the inspection no standing moisture was observed on the wellhead. The seals on the wellhead and top of the casing are in good condition. The wellhead and piping are freshly painted and in good condition. The electrical controls are in good condition. The facility is fenced and in good condition.

Well #22 This well is inside a concrete vault with a submersible pump and piping. During the inspection no substantial moisture was observed on the wellhead. The seals on the wellhead and top of the casing are in good condition. The wellhead and piping are freshly painted, but the wellhead flange and portion of the pipe need to be touched up with paint. The electrical controls are in good condition. The facility is fenced and in good condition.

Well #23 This well is inside a concrete vault with a submersible pump and piping. During the inspection no substantial moisture was observed on the wellhead. The seals on the wellhead and top of the casing are in good condition. The wellhead and

piping are freshly painted and in good condition. The electrical controls are in good condition. The facility is fenced and well maintained.

Well #24 This well is inside a concrete vault with a submersible pump and piping. During the inspection it was observed that the pump had been removed by the site contractor from the casing for maintenance of the well. The wellhead and piping are freshly painted and in good condition. The electrical controls are in good condition. The facility is fenced and well maintained. The well will be off line until the maintenance procedure is completed.

Section 6 Capital Improvement Program

This section includes descriptions of the five-year Capital Improvement Program (CIP) for the Retail Water and Wastewater Systems and the Regional Wastewater and Water Supply Systems.

6.1 Description of the Capital Improvement Program

As part of the growth management efforts mandated by State legislation, the County initiated planning efforts to accommodate future growth and compliance with regulatory requirements. The overall plan is periodically updated with the latest revision expected to be completed by the end of 2014. The revision completed in 2004 addresses the need for services and facilities based upon anticipated build out conditions of the service area in the year 2025. It is noted that the Utility conducts an annual CIP review process wherein all projects are thoroughly vetted, estimated and scheduled. Each review builds upon prior analyses and utilizes new planning data when available. Recent additional planning efforts include completion of the Alternative Water Supply Master Plan and the Effluent Disposal and Reclaimed Water Master Plan. WWS has initiated the process for the selection of a consulting firm for the new Retail Water and Wastewater Master Plan.

As noted, the Utility develops a five-year CIP recognizing costs associated with future growth and regulatory requirements. Table 6.1 presents the current CIP categorized by expenditure category. The Board approved the CIP for Fiscal Years 2013 through 2017 in September, 2012. The five-year CIP reflects the total estimated project costs for each project which is expected to be initiated within the five-year plan regardless of the estimated time required to design and complete construction of the project. Projects remain open until all related construction activities are complete. The budgets by capital project type through Fiscal Year 2017 are presented in Table 6.2.

Table 6.1 Capital Improvement Program as of September 30, 2012

Capital Budgets	Water Treatment	Water and Sewer Mains	Wastewater Treatment	Regional Transmission	Engineering Services & Misc.	Total
Unspent Prior Budget	$18,021,660	$42,697,070	$53,967,780	$11,182,060	$4.243.530	$130,112,100
2013	4,742,600	15,504,710	56,750,450	3,308,570	5,060,120	85,366,450
2014	300,000	31,200,250	41,765,000	4,803,150	4,151,670	82,220,070
2015	37,600,000	16,468,280	73,927,000	400,000	4,717,420	133,112,700
2016	1,000,000	7,690,000	2,917,000	10,924,490	8,638,220	31,169,710
2017	300,000	4,880,000	71,220,000	2,725,000	6,167,420	85,292,420
Totals	$61,964,260	$118,440,310	$300,547,230	$33,343,270	$32,978,380	$547,273,450
Five Year CIP Funding:						
Bonds FY 2013-2017	25,000,000	20,000,000	75,000,000	10,000,000	10,000,000	$140,000,000
Cash FY 2013-2017[1]	20,000,000	58,000,000	52,000,000	10,000,000	$10,000,000	150,000,000
Beyond 2017[2]	16,964,260	40,440,310	173,547,230	13,343,270	12,978,380	257,273,450
Totals	$61,964,260	$118,440,310	$300,547,230	$33,343,270	$32,978,380	$547,273,450

[1] *Cash reflects net revenues, capital recovery charges, large user contributions, and grants.*

[2] *Reflects effects of construction period. It is currently expected that $290M of the $547M program will be spent by 2017. Since the construction period extends beyond 2017, the remaining $257M will be spent in subsequent years.*

Source: Broward County Water and Wastewater Services

Table 6.2 Capital Projects Budgets by Type Through Fiscal Year 2017

Water Treatment	**Budget**
Water Treatment Plant Expansion	$47,244,300
Water Treatment Plant IRR[1] Projects	$12,288,350
Energy Efficiency for Retail Facilities	$1,719,000
Security System Upgrades	$712,610
Water Treatment Subtotal	**$61,964,260**
Water Distribution and Sewer Collection	
Neighborhood Improvement Program (NIP)	$27,635,460
Local Utility Improvement Projects (UAZ)	$30,111,460
Misc. Main Improvements	$24,940,810
Potable Water Storage Improvements	$21,340,040
Lift Station Improvements	$14,412,540
Water Distribution and Sewer Collection Subtotal	**$118,440,310**
Wastewater Treatment	
NRWWTP Effluent Disposal /Treatment Enhancements	$170,297,390
Wastewater Plant IRR[1] Projects	$128,279,290
NRWWTP Ocean Outfall Improvements	$1,970,550
Wastewater Treatment Subtotal	**$300,547,230**
Regional Transmission	
Master Pump Station Improvements	$30,656,550
Force Main Extensions/Improvements	$2,686,720
Regional Transmission Subtotal	**$33,343,270**
Engineering/Misc. Services	**$32,978,380**
GRAND TOTAL	**$547,273,450**

[1] *IRR = Improvement, Repair and Replacement*

Source: Broward County Water and Wastewater Services

The estimated funding requirements for this five-year period ending Fiscal Year 2017 are expected to be met by net revenues, debt proceeds, capital recovery charges, contributions from large users, grants and future borrowings. The County currently anticipates cash financing at least 52 percent of the actual funding requirements. Many of the projects and improvements in the CIP are in the planning stages with cost estimates that are preliminary and contracts have not been awarded. The County plans to prioritize projects as needed to maintain an affordable rate structure. Proposed rates are annually presented to the Board for discussion at an August workshop with action taken at the September budget hearings. Current projections anticipate levelized rate increases of approximately three percent or less annually through Fiscal Year 2017. The County estimates it will issue approximately $154 million in bonds in 2016 (the "Series 2016A Bonds").

The County reviews and updates the CIP annually and includes separate estimates for the Water and Wastewater Systems. The total cost of the CIP could vary from these annual estimates depending upon future demands, regulatory requirements, actual contract awards and other economic factors.

6.2 Retail Water and Wastewater System Improvements

The five-year CIP for the retail water and wastewater systems has the principal objectives of: rehabilitating or replacing water distribution systems and extending sanitary sewers to currently unsewered customers. The estimated cost of these improvements totals approximately $118 million. The Multi-District Inflow and Infiltration Program is continuing with $10.5 million budgeted for repairs to the wastewater collection system.

WWS began implementing local utility improvement projects, called Utility Analysis Zones (UAZ) in mid-2009. While the Neighborhood Improvement Program (NIP) included drainage, landscaping and sidewalk improvements, which were paid for from County general funds; UAZ's focus solely on water and sanitary sewer improvements. The total cost estimate for these improvements is nearly $275 million dollars over the next twenty plus years.

6.3 Water Treatment

The five-year CIP includes projects of approximately $62 million to improve the retail water treatment systems, which includes $47 million for the expansion of Water Treatment Plant 1A, and $13 million for improvement, repair and replacement (IRR) of process equipment and security improvements.

6.4 Neighborhood Improvement Program

The NIP was initiated by the County in 1993 to upgrade the infrastructure in what were unincorporated neighborhoods. The improvements include upgrades to the existing water and sewer system, installation of drainage, new pavement, swales and landscaping. The total estimated cost of the program is approximately $743 million dollars. Approximately $388 million, or 53 percent of total cost, is for water and sewer upgrades of which approximately $319 million has been spent to date. The remaining 47 percent of total cost associated with sidewalk, drainage and landscaping improvements is being funded by the County's general fund. A summary of the NIP projects is listed on Table 6.3.

Table 6.3 Summary of Neighborhood Improvement Program as of September 30, 2012

Neighborhood Improvement Project	Total Costs All Improvements[1]	Percent Complete	Bid Packages	Number Completed	Under Const.
North County	$219,799,697	75%	15	12	3
South County and Riverland Village	117,719,334	100%	17	17	0
North Andrews Gardens	102,691,795	100%	9	9	0
Central County	124,711,020	94%	12	11	1
North Central County	72,111,300	100%	5	5	0
Broadview Estates	32,518,050	90%	2	1	1
Broadview Park	54,976,808	100%	4	4	0
Hillsboro Pines	11,010,000	1%	1	0	0
Twin Lakes South	7,253,725	5%	1	0	1
Program Total Costs	**$742,791,729**		**66**	**59**	**6**

[1] *Includes costs for water, wastewater, streets, sidewalks, drainage and landscaping improvements. Only water, wastewater and a portion of street costs ($388M) are funded by the Utility.*

Source: Broward County Water and Wastewater Services

The NIP encompasses an area the size of a medium city with 9,335 acres, 92,500 people and 28,555 homes. The planned improvements include 295 miles of roadways, 428 miles of sidewalk and 623 miles of pipeline which will enable the elimination of 10,607 septic tanks. Construction started in 1996 and is currently scheduled to be completed in 2018. Of the 66 planned bid packages, 59 have been completed and 6 are in construction. The final bid pack, Hillsboro Pines is expected to begin construction in 2015.

6.5 Local Utility Program

WWS began implementing local utility improvement projects by Utility Analysis Zones (UAZ) in mid-2009. Where the NIP included drainage, landscaping and sidewalk improvements, which were paid for from County general funds, the UAZ projects focus solely on water and sanitary sewer improvements. The total cost estimate for these improvements is nearly $275 million dollars over the next twenty plus years.

6.6 Other Including Mains, Lift Station Improvements and Potable Storage

The CIP includes $25 million for water and wastewater main improvement projects to address aging water and wastewater lines; increase transmission and distribution capacities, and to extend service to new customers. $21 million of potable water storage improvements are included for the purpose of replacing existing aging systems and enhancing water storage capacities to meet current and future demands. The CIP also includes $14 million of retail

wastewater lift station rehabilitation projects to increase the reliability of the wastewater collection system and prevent the occurrence of sanitary sewer overflows.

6.7 Regional Wastewater Treatment

Under current regulations, the County is required to reduce the nutrient loadings discharged to the ocean outfall between 2009 and 2025, and to eliminate use of the outfall, except as a back-up discharge that is part of a functioning reuse system after December 31, 2025. These were estimated to result in plant process improvement requirements with estimated costs ranging from $766 million to $889 million in accordance with the Effluent Disposal Master Plan. With approval of the Ocean Outfall legislation in 2013, estimates are expected to be substantially reduced. The County has included approximately $170 million in the current 5 year CIP to start addressing these improvements to meet the future requirements. Various other system Utility Improvement Repair and Replacement (IRR) projects are budgeted at approximately $128 million and include digester improvements, grit removal improvements, control center upgrades, general replacements and repairs.

6.8 Regional Wastewater Transmission

The CIP includes a series of master pump station improvements to ensure adequate system capacity as well as reliability in the regional transmission system. The CIP anticipates investing approximately $31 million in improvements to the master pumping stations.

Section 7 Financial Conditions

This section describes financial operations of the utility; rates, fees and charges; revenue projections; a comparison of utility service costs with other utilities; and adequacy of insurance coverage.

7.1 Overview of Financial Operations

Operating and general maintenance costs of the retail portion of the Utility are recovered through service charges, connection charges and miscellaneous fees and charges. Capital costs for system development, large maintenance projects and renewal and replacement projects are funded through net revenues, bond proceeds, developer contributions, contributions from other municipalities and capital recovery charges.

User charges and fees are developed by WWS and approved by the Board. The Board has specific legal authority to fix charges and collect rates, fees and charges from its customers and to acquire, construct, finance and operate the Utility. The existing rate structure for retail customers is based on meter size and consumption. The County, as a matter of policy, on an annual basis reviews revenue requirements and institutes required rate increases. Revised retail water and wastewater rates were approved by the Board in September 2012 and became effective October 1, 2012. These rates are presented in Tables 7.1, 7.2 and 7.3. The rate resolutions also address rates for irrigation, reclaimed water, septage and high strength industrial wastewater surcharge, an emergency rate adjustment for water conservation during drought conditions, capital recovery charges per equivalent residential unit (ERU), customer deposits and specific service charges. Capital recovery charges underwrite the investment in additional capacity needed to serve new (additional) customers.

Table 7.1 Broward County Water and Sewer Monthly Service Costs for a Residential Customer Using 5,000 Gallons per Month

Fiscal Year	Water Fixed Charge[1]	Water Volume Charge	Total Water	% Change From Prev. Year	Sewer Fixed Charge	Sewer Volume Charge	Total Sewer	% Change From Prev. Year	Total Water and Sewer	Total % Change From Prev. Year
2009	11.69	11.30	22.99	15.9%	14.55	14.05	28.60	4.0%	51.59	9.0%
2010	12.14	11.75	23.89	3.9%	15.43	14.90	30.33	6.0%	54.22	5.1%
2011	14.20	8.58	22.78	-4.6%	17.44	15.65	33.09	9.1%	55.87	3.0%
2012	14.68	8.89	23.57	3.5%	17.44	16.60	34.04	2.9%	57.61	3.1%
2013[2]	14.89	9.01	23.90	1.4%	17.44	17.15	34.59	1.6%	58.49	1.5%

[1] Includes customer charge.

[2] Based on rates adopted by the Board effective October 1, 2012.

Source: Broward County Water and Wastewater Services

Table 7.2 Broward County Schedule of Retail Rates Minimum Monthly Charges by Customer Class and Meter Size Effective October 1, 2012

Customer Class	Meter Size (inches)	Water ($)	Wastewater ($)
Residential, Commercial, Municipal and Institutional	5/8" Residential	10.75	17.44
	1" Residential	31.94	24.39
	5/8	16.66	20.37
	1	37.71	63.09
	1 1/2	78.45	125.91
	2	187.08	369.21
	3	496.00	961.3
	4	3,334.47	2,169.64
	6	8,545.46	13,333.15
	8	10,259.22	14,451.73
Sale for Resale	4 or less	3,334.47	-
	6	8,545.46	-
	8	10,259.22	-
	10+	49,723.00	-
Multi-Family and Mobile Home (per unit)	All sizes	8.67	12.60
Hotels and Motels (per unit)	All sizes	5.60	11.09
Recreational Vehicles (per unit)	All sizes	6.52	11.38
Private Fire Protection	All Sizes	114.00	-
Irrigation	5/8	14.16	-
	1	26.42	-
	1 1/2	77.28	-
	2	179.68	
	3	431.22	
	4	1,907.96	-
Reclaimed Water (based on 1,000 GPD demand and 20% discount on capital contribution)	All sizes	6.00	-

Source: Broward County Water and Wastewater Services

Table 7.3 Broward County Schedule of Retail Rates Volume Charge (1,000 Gallons) by Customer Class and Meter Size Effective October 1, 2012				
Customer Class (all Meter sizes unless noted)	**Water**		**Wastewater**	
	Volume (per 1,000 Gals)	**Charge ($)**	**Volume (per 1,000 Gals)**	**Charge ($)**
Residential	0-3	1.39	0 - 15	3.43
	4-6	2.42	Over 15	No Charge
	7-12	5.72		
	Over 12	6.94		
Commercial, Municipal and Institutional	0 - 75% of Avg Consumption	3.47	All Volumes	3.43
	Over 75% of Avg. Consumption	6.94		
Sale for Resale	Water Treatment Charge	2.2	N/A	-
	Water Transmission Charge	0.08	N/A	-
Multi-Family and Mobile Homes (per unit)	0-2	1.39		
	3-4	2.42	0-8	3.43
	5-6	5.72		
	Over 6	6.94	Over 8	No Charge
Hotels and Motels (per unit)	0 - 75% of Avg Consumption	3.47	All Volumes	3.43
	Over 75% of Avg. Consumption	6.94		
Recreational Vehicles (per unit)	0 - 75% of Avg Consumption	3.47	All Volumes	3.43
	Over 75% of Avg. Consumption	6.94		
Private Fire Protection	All Volumes	5.72	N/A	-
Irrigation				
5/8" meter	0-8	5.72	N/A	-
	Over 8	6.94	N/A	-
1" meter	0-22	5.72	N/A	-
	Over 22	6.94	N/A	-
1 1/2" meter	0-55	5.72	N/A	-
	Over 55	6.94	N/A	-
2 to 3" meter	0-142	5.72	N/A	-
	Over 142	6.94	N/A	-
Reclaimed Water	All Volumes	0.07	N/A	-
Source: Broward County Water and Wastewater Services				

Since 1994, average residential use of water has decreased from 220 gpd (gallons per day) to 185 gpd. The decrease appears to be the result of ongoing water restrictions and the water

conservation initiatives of Broward County and the SFWMD. Further study completed as part of the comprehensive Rate Study completed in fiscal year 2010 has indicated that the treatment plant must produce 206 gpd of water to deliver 185 gpd to the average residential customer. Converting this demand to the maximum average daily flow (a factor of 1.33x) yields the requirement of 274 gpd of plant capacity necessary to serve an ERU (equivalent residential unit). Similarly, the ratio of billed water to treated wastewater is 1.13x which yields the requirement of 209 gpd of wastewater treatment capacity per ERU. As a result of the rate study, the capital recovery charges effective FY2013 changed from $1,440 and $1,960 to $1,590 and $2,010 for water and sewer respectively. At the beginning of the NIP projects, the County adopted the policy of not charging for the first ERU for wastewater per customer.

Charges for large users of the NRWWS are defined by the large user agreements, and consist of charges for operation and maintenance costs assessed on the basis of flows, debt service costs assessed on the basis of reserve capacity, and improvement, repair, and replacement fund costs that are assessed as a percentage of other charges. The charges for operation and maintenance costs are adjusted annually to reflect each user's proportionate share of actual costs during the fiscal year.

7.2 Water and Wastewater Rates and Charges

Since 1994, the County has recognized advantages in encouraging retail customers to conserve water. At the time, the County established and has continued to use a rate schedule that sets higher water rates for levels of consumption beyond basic use. As a result of a rate study completed in 2010, an additional rate tier was added. The current rate schedule is composed of four tiers:

- Rates for basic use
- Rates for normal use
- Rates for discretionary use
- Rates for excessive use

As noted in Table 7.1, there will be an increase of 1.5% in the average monthly residential bill of 5,000 gallons from Fiscal Year 2012 to Fiscal Year 2013. Tables 7.2 and 7.3 show the minimum monthly fixed charges and volume charges for all customer classes based upon rates approved by the County which went into effect October 1, 2012. A five-year summary of billing volumes is shown in Table 7.4.

Table 7.4 Retail Water and Wastewater Billing Volumes as of September 30, 2012 (1,000 Gallons)				
Fiscal Year Ended 9/30	Treated Retail	Coconut Creek	Treated Water Total[1]	Wastewater Water[1]
2008	7,195,082	1,868,562	9,063,644	4,830,155
2009	7,128,645	1,872,821	9,001,466	4,828,210
2010	6,880,573	1,748,303	8,628,876	4,744,985
2011	6,885,439	1,731,297	8,616,736	4,891,742
2012	6,695,748	1,643,812	8,339,560	4,872,721
[1] Droughts which began in April 2007 have resulted in reduced water use due to demand management efforts comprising water conservation initiatives, including year round lawn irrigation restrictions. Reduced water use translates to reduced billed wastewater.				
Source: Broward County Water and Wastewater Services				

In the event additional water restrictions are imposed, the County has instituted an automatic adjustment as noted in Table 7.5 to the water rate to encourage customers to reduce consumption. The automatic rate adjustment was adopted by the Board as a way to maintain the revenues required for operations while water consumption is curtailed. The SFWMD imposes phased restrictions as drought conditions warrant to achieve reduction of water used.

With the automatic adjustment, the higher water rates established for larger consumption levels are applied at lower levels of consumption. The result is that customers who do conserve as required will experience a reduction in their water bills. Conversely, customers who fail to achieve reductions will pay even greater amounts for water consumed than they would otherwise pay without the adjustment. As targeted reductions increase, the associated levels at which increased rates become effective decrease.

Table 7.5 Automatic Rate Adjustments for Periods of Mandated Water Restrictions

Customer Class and Block	Restrictions Per Unit Per Month (1,000 gallons)		
	Standard	Drought	Extreme Drought
Single Family (all meter sizes)			
First Tier	0-3	0-2	1
Second Tier	4-6	3-5	2-4
Third Tier	7-12	6-9	5-6
Final Tier	Over 12	Over 9	Over 6
Multi-Family (per unit, all meters)			
First Tier	0-2	1	1
Second Tier	3-4	2-3	2
Third Tier	5-6	4-5	3
Final Tier	Over 6	Over 5	Over 3
Irrigation			
5/8" Meter, First Tier	0-8	0-4	0-2
5/8" Meter, Second Tier	Over 85	Over 4	0ver 2
1" Meter, First Tier	0-22	0-11	0-5
1" Meter, Second Tier	Over 22	Over 11	Over 5
1 1/2" Meter, First Tier	0-55	0-27	0-14
1 1/2" Meter, Second Tier	Over 55	0ver-27	Over 14
2" and Over Meter, First Tier	0-142	0-71	0-35
2" and Over Meter, Second Tier	Over 142	Over 71	Over 35
Commercial, Municipal, Institutional, Hotels, Motels and Recreational Vehicles			
First Tier	0-75%	0-60%	0-45%
Second Tier	Over 75%	Over 60%	Over 45%

Source: Broward County Water and Wastewater Services

The NRWWS large users' rates are reviewed and adjusted annually by the County as part of the budget process. The rates are based on the County's estimation of total costs and total flows. Debt service requirements (including required coverage) for the NRWWS are allocated to each large user in proportion to their reserved capacity. A surcharge of up to 10 percent is added to fund improvements, repairs and replacements to the NRWWS. Currently the surcharge is 5%. These funds are currently maintained separately from the Renewal, Replacement and Improvement Fund established by resolutions of the Board authorizing the issuance of bonds for the Utility (collectively, the "Bond Resolutions") to provide a reserve for the Utility.

Presently, the Renewal, Replacement and Improvement Fund is required by the Bond Resolution to maintain a minimum balance of five percent of the previous year's revenues, or a greater amount if recommended by the Consulting Engineer. Five percent of FY 2012 revenues are approximately $5.93 million. The current balance in the Renewal, Replacement and Improvement Fund is $5.93 million, as recommended by Hazen and Sawyer, P.C.

7.3 Revenue Projections

Annual water and wastewater revenues and expenditures for Fiscal Year 2012 are based on actual values from financial statements prepared as of September 30, 2012. Fiscal Year 2013 revenues and expenditures have been projected based upon the rates approved by the County, which were implemented October 1, 2012 in conjunction with estimated expenses for the year. Revenues for Fiscal Years 2014 through 2017 have been based on average annual number of customers, historical average consumption and the retail service rates shown in Tables 7.3.

The Utility operates a mature system with limited future growth needs. Hence, growth rates in the retail water and retail wastewater system customer base beginning in Fiscal Year 2014 have been estimated at one percent annually for wastewater only. Operation and Maintenance costs are assumed to increase by an average of two percent annually for both water and wastewater beginning in Fiscal Year 2014. Retail rate increases from Fiscal Years 2014 through FY 2017 of approximately three percent or less per year for both retail water and wastewater are necessary to meet the projected revenues as presented in Table 7.6 and Table 7.7. The Board has not yet considered these rate increases. Should such rate increases not be approved, coverage would be reduced. The revenue forecast for the large users of the NRWWS have been projected to recover costs as defined under the large user agreement.

Table 7.6 shows historical and projected ratios of large user's (regional and resale) revenues to total revenues. Proposed Series 2016A debt service assumes a 5% interest rate per annum and maturities over a 25 year period, back-loaded to support levelized total debt service payments. In Fiscal Year 2012, the total revenues generated by the Utility were sufficient to meet the bond covenant requirement of 120 percent coverage of all debt service obligations. The audited financial statements at September 30, 2012 present the computation of debt service coverage on all outstanding revenue bonds as 1.69. In addition, a Balance Available for Renewal, Replacement and Capital Expenditures of approximately $22.3 million was generated during Fiscal Year 2012. Debt service coverage for Fiscal Year 2012 and projected values for Fiscal Year 2013 through Fiscal Year 2017 are presented in Table 7.7.

An estimate of interest income is projected annually from Fiscal Year 2013 through Fiscal Year 2017. Interest income is generated from three main sources: debt service reserve fund, general reserve fund, and investments of fund balances as permitted under the Bond Resolution.

Table 7.6 Historical and Projected Ratios of Large Users' Revenue to Total Revenues and Wastewater Revenues (in 1,000s)

	Historical					Projected				
	2008	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**
Total Revenues (A)	97,668	111,614	111,634	116,474	118,221	124,000	125,176	130,381	133,593	135,561
Large User Revenues (Excluding Broward County)	25,883	29,943	31,361	30,660	31,228	35,000	35,926	37,632	38,247	38,582
Percentage Large User to Total Revenues	26.5%	26.8%	28.1%	26.3%	26.4%	28.2%	28.7%	28.9%	28.6%	28.5%
Regional Raw Water Revenues	983	1,076	833	820	701	700	685	699	713	727
Percentage Regional Raw Water Total Revenues	1.0%	1.0%	0.7%	0.7%	0.6%	0.6%	0.5%	0.5%	0.5%	0.5%
Sale for Resale/ Water*	4,273	5,044	4,931	5,328	5,520	5,500	5,500	5,555	5,611	5,667
Percentage Sale for Resale Revenues to Total Revenues	4.4%	4.5%	4.4%	4.6%	4.7%	4.4%	4.4%	4.3%	4.2%	4.2%

(A) Total Revenues do not include interest earned on the construction account.

**Principally Sales to City of Coconut Creek*

Source: Broward County Water and Wastewater Services

Table 7.7 Schedule of Historical and Projected Net Revenues, Debt Service and Debt Service Coverage ($1,000)

	Historical					Projected				
	2008	2009	2010	2011	2012[1]	2013	2014	2015	2016	2017
Revenues:										
Water	$37,388	$42,305	$42,771	$45,114	$43,458	$44,510	$44,315	$45,695	$47,150	$48,141
Wastewater	55,290	61,640	62,946	64,843	66,249	69,000	71,486	74,832	76,851	78,706
Other	3,481	4,451	4,159	4,947	8,030	8,000	8,688	8,960	9,229	9,459
Interest Income	1,507	3,218	1,758	1,570	793	1,517	1,132	1,132	1,132	1,132
Total Revenues	**$97,666**	**$111,614**	**$111,634**	**$116,474**	**$118,530**	**$123,027**	**$125,621**	**$130,619**	**$134,362**	**$137,438**
Current Expenses:										
Water Transmission & Distribution	$8,189	$8,838	$8,962	$8,817	$8,811	$8,801	$8,780	$8,956	$9,135	$9,317
Water Source of Supply, Treatment & Pumping	9,229	9,961	9,420	9,184	8,702	8,692	8,671	8,845	9,022	9,202
Wastewater Collection & Transmission	11,356	9,751	10,185	9,866	11,169	11,156	11,130	11,352	11,579	11,811
Wastewater Treatment	14,869	15,529	14,955	14,729	15,324	15,307	15,270	15,576	15,887	16,205
Customer Service	3,774	4,134	5,229	5,400	5,499	5,493	5,480	5,589	5,701	5,815
Administrative/General	15,156	16,576	16,736	15,947	14,568	14,551	14,517	14,807	15,103	15,405
Total Current Expenses	**$62,573**	**$64,789**	**$65,487**	**$63,943**	**$64,073**	**$64,000**	**$63,848**	**$65,125**	**$66,427**	**$67,755**
Net Revenues	**$35,093**	**$46,825**	**$46,147**	**$52,531**	**$54,457**	**$59,027**	**$61,773**	**$65,494**	**$67,935**	**$69,683**
Debt Service:										
Senior Lien Debt:										
Series 1988-A Bonds	$2,380	$2,380	-	-	-	-	-	-	-	-
Series 2003 Bonds	5,062	5,061	5,867	5,868	3,459	1,047	-	-	-	-
Series 2003-B Bonds	8,393	8,291	9,970	9,970	9,079	8,188	-	-	-	-
Series 2005-A Bonds	3,837	3,837	3,837	3,837	3,147	2,457	2,456	2,457	2,457	2,457
Series 2009-A Bonds	-	5,361	10,324	10,324	10,322	10,324	10,326	10,321	10,328	10,324
Series 2012-A Bonds	-	-	-	-	3,219	8,252	8,252	8,252	8,251	8,253
Series 2012-B Bonds					2,623	5,523	5,523	5,523	5,523	5,523
Series 2012-C Bonds					283	1,706	10,941	10,945	10,940	10,943
Series 2016-A Bonds										4,707
Total Debt Service	**$19,672**	**$24,930**	**$29,998**	**$29,999**	**$32,132**	**$37,497**	**$37,498**	**$37,498**	**$37,499**	**$42,207**
Debt Coverage Senior Lien	1.78	1.88	1.54	1.75	1.69	1.57	1.65	1.75	1.81	1.65

[1] *Other revenues include the customer service charge previously reflected as water revenues.*

Source: Broward County Water and Wastewater Services

7.4 Comparison of Utilities Service Costs for Municipalities and the Unincorporated Area in Broward County

Table 7.8 shows the current water and wastewater monthly service charges for residential customers of municipalities and the unincorporated area in the County, as well as Miami-Dade and Palm Beach Counties.

Table 7.8 Comparative Rate Survey as of 12/31/2012 (Based On Usage of 5,000 Gallons Per Month

Utility	Water	Sewer	Total
Margate (outside City)	35.13	68.25	103.38
Davie	35.30	65.84	101.14
Dania Beach	35.00	58.82	93.82
Sunrise (outside City)	40.18	49.03	89.21
Wilton Manors	47.76	39.62	87.38
Margate (inside City)	28.11	54.60	82.71
Oakland Park	42.06	39.80	81.86
Pembroke Pines	37.09	40.62	77.71
Sunrise (inside City)	32.12	39.21	71.33
North Lauderdale	27.91	40.80	68.71
Hollywood	28.78	39.41	68.19
Average Water & Sewer for Broward	**29.08**	**38.34**	**67.42**
Cooper City	25.58	38.81	64.39
Coconut Creek	35.44	27.18	62.62
Hallandale Beach	26.36	34.76	61.12
Pompano Beach (outside City)	30.10	29.00	59.10
Tamarac	19.69	38.58	58.27
Royal Utility	26.16	30.89	57.05
Miramar	23.51	32.95	56.46
Coral Springs	21.78	33.06	54.84
Broward County (WWS)	**19.76**	**34.59**	**54.35**
Deerfield Beach	28.25	24.53	52.78
NSID	29.18	21.78	50.96
Lauderhill	18.42	31.61	50.03
CSID	25.01	25.01	50.02
Pompano Beach (inside City)	24.08	25.76	49.84
Fort Lauderdale	18.46	30.95	49.41
Plantation	18.91	30.17	49.08
Water Only			
Hillsboro	34.20		
Sewer Only			
Pembroke Park		50.33	
Lauderdale by the sea		35.88	
Tri-County Utilities			
Palm Beach County	19.44	23.78	43.22
Miami Dade County	18.21	32.74	50.95

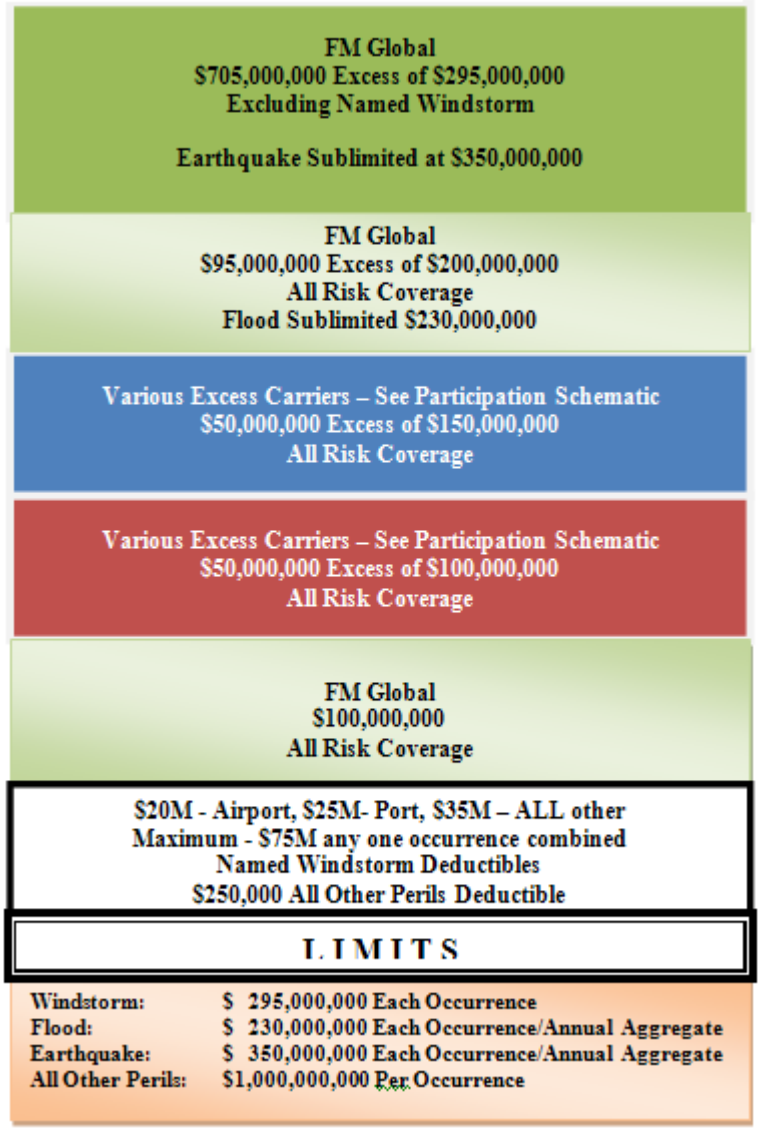
7.5 Insurance Coverage

The bond covenants require that customary insurance be carried on the physical assets of the system. The property insurance carried by WWS on its physical assets is part of a County-wide policy with FM Global. The term of the present policy is from February 1, 2012 to February 1, 2013.

The policy automatically insures new assets up to $100 million per location, for 90 days; upon declaration, the policy limit applies.

The policy provides for coverage of underground mains (water, wastewater and gas) that are within 1,000 feet of a Scheduled Location as described in Appendix A of the FM Global policy. Under a County-wide policy limits of liability per occurrence are as follows:

February 1, 2012-2013



In addition, approximately nineteen (19) other insurance carrier participation providing a $100,000,000 (see blue/red boxes above) All Risk (excluding Boiler & Machinery) layer excess of FM Global's primary layer of $100,000,000.

The four major aboveground water and wastewater facilities and their estimated value as of February, 2012 are as follows:

Facility	FY 2012 Estimated Bldg Value ($1,000s)
NRWWTP Complex	$227,106
Water Treatment Plant 2 A	$ 59,958
Water Treatment Plant 1 A	$ 50,455
Water Treatment Plant 3 A	$ 13,885

The level of coverage (less deductible) is sufficient to fund the loss of the single most expensive asset, the NRWWTP Complex; although the potential for the complete destruction of this facility is minimal. Any losses in excess of the coverage amount would have to be covered by the County through its own resources or through federal or state emergency management assistance.

This is the fourth hard market for CAT property that we have seen in Florida over the past ten years. The first, in 2002, was a market wide hardening driven by the events of 9/11/2001. The second, which was specific to CAT property in coastal areas of the Southeast, was in 2005 and 2006 following the various hurricanes that hit in 2004 and 2005 (Charlie, Ivan, Francis, Jean, Katrina, Rita and Wilma). In 2009, again after a year of multiple storms in 2008 (Gustav and Ike), the CAT property market hardened for a third time in coastal CAT windstorm prone areas, but softened quickly thereafter in 2010, due to the lack of hurricanes or natural catastrophic events.

The current market hardening is being caused by two specific factors. First were the various worldwide catastrophes that occurred in 2011 that were so visible in the media (Australian Floods, New Zealand Earthquake, Japanese Earthquake and Tsunami, multiple large tornadoes in the US, Midwest floods, and Hurricane Irene). The aggregate of those insured losses are now estimated to be between $100BN and $110BN. While most of these losses were not in Florida or the United States for that matter, most of the carriers providing this coverage in Florida write insurance worldwide. We are now part of a true global economy that didn't exist 20 years ago.

The second but more driving factor was the introduction of the new RMS Version 11 windstorm model which was adopted as an industry standard as the most up to date way to estimate carrier aggregate portfolio and individual risk exposure to CAT windstorm property losses.

The model also provides a "technical" price that is used as a guideline by many carriers providing this coverage. The model is required by financial rating agencies (Best's, S&P etc.), reinsurers as well as primary insurers to estimate their risk to catastrophic hurricane losses. This model was also approved and adopted by the State of Florida in 2011.

The new RMS v11 has had a substantial negative affect on the estimation of windstorm losses on all Florida commercial properties. The Probable Maximum Loss (PML) and Annual Average Loss (AAL) estimations driven by this model versus the prior version have increased anywhere between 25% to upwards of 300% or more depending on geographic location, construction characteristics and property use and occupancy. Because the new model is developing substantially higher loss projections across the board, most carriers are trying to shed the amount of CAT windstorm insurance they write on an aggregate portfolio basis which is leading to cuts in capacity on most individual risks. Due to the fact that available capacity is shrinking from most carriers and the demand from insured's is consistent, the price of this coverage is again increasing for the fourth time in the past ten years. Carriers are offering lower limits at increased prices. Several carriers have completely stopped offering the coverage altogether which has put further strain on pricing. While the County's primary carrier, FM Global, does not use the RMS v11 model and focus more on their "wind loss expectancy" model, they were one of the carriers that took extra ordinary losses in 2011 around the world.

Appendix

Table A-1

Water Production, Wastewater Treatment, and Regional Raw Water

(Million Gallons)

	FY-2003	FY-2004	FY-2005	FY-2006	FY-2007	FY-2008	FY-2009	FY-2010	FY-2011	FY-2012
Water Production										
Plant 1A	3,026	3,158	3,210	3,147	2,977	3,059	2,835	2,865	2,635	2,672
Plant 1B	0	0	0	0	0	0	0	0	0	0
Plant 2A	5,574	5,913	5,752	5,568	5,179	4,599	4,571	4,555	4,572	4,259
Plant 3A	0	0	0	0	0	0	0	0	0	0
Plant 3B	0	0	0	0	0	0	0	0	0	0
Plant 3C	0	0	0	0	0	0	0	0	0	0
Broadview	0	0	0	0	0	0	0	0	0	0
Purchased Water From Municipality	2,615	2,571	2,831	2,568	2,608	2,486	2,597	2,203	2,204	2,187
Total Water Production	11,215	11,642	11,793	11,283	10,764	10,143	10,003	9,623	9,411	9,118
Wastewater Treatment										
North Regional WWTP	25,486	24,841	25,807	25,110	24,257	25,156	23,793	23,852	21,762	25,989
WW Flows to Hlwd. Regional Treatment	844	926	913	988	967	1,053	1,162	1,069	958	1,158
Total Wastewater Treatment	26,330	25,767	26,720	26,098	25,224	26,209	24,955	24,921	22,720	27,147
Regional Raw Water										
	5,297	6,247	5,668	6,597	6,795	7,023	6,438	6,374	7,196	6,669

Notes:

1. Water for 1B and Broadview produced by 1A.
2. Water for 3B/3C purchased from Hollywood (after October 15, 1996).

Source: Broward County Water and Wastewater Services

Table A - 2
Average Number of Accounts
As of September 30, 2012

Consumer & Meter Size (inches)	WATER			SEWER		
	Number of Units	Number of Accounts	Average Consumption per Month (1,000 Gallons)	Number of Units	Number of Accounts	Average Consumption per Month (1,000 Gallons)
Residential Single Family						
5/8"	46,219	46,114	230,131	39,554	39,451	189,930
1"	1,755	1,754	25,703	1,843	1,842	28,233
1 1/2"	76	76	2,136	186	186	5,106
2"	1	1	-	32	32	9,875
TPK Residential Single Family						
5/8"	41	24	42	36	19	40
1 1/2"	137	3	326	36	1	-
2"	126	2	188	275	1	1,222
Residential Multi-Family, Hotel & RVs	32,925	2,077	127,455	31,688	1,782	117,514
Commercial						
5/8"	2,934	2,699	12,561	1,857	1,857	8,852
1"	1,455	1,406	16,812	720	720	11,623
1 1/2"	1,018	690	24,279	536	536	18,012
2"	637	637	49,296	460	460	44,205
3"	49	49	5,475	15	15	4,512
4"	10	10	20,851	8	8	5,858
6"	7	7	8,350	1	1	1,814
Irrigation						
5/8"	305	305	1,956	-	-	-
1"	295	295	4,658	-	-	-
1 1/2"	217	217	10,868	-	-	-
2"	134	134	16,301	-	-	-
Sale for Resale						
10"	3	3	136,984	-	-	-
TOTAL	**88,344**	**56,503**	**694,373**	**77,247**	**46,911**	**446,794**

Source: Broward County Water and Wastewater Services

Table A-3
Broward County Water and Wastewater Services
Retail Water & Wastewater
Customer Average Monthly Demand & Revenues
As of September 30, 2012

	Water			Wastewater		
	Demand	Revenue		Demand	Revenue	
Revenue Class	Total 1,000 Gal	$ Total	$ Per 1,000 Gal	Total 1,000 Gal	$ Total	$ Per 1,000 Gal
Residential Single Family	258,528	1,277,207	4.94	199,450	1,369,525	6.87
Residential Multi Family	114,793	554,532	4.83	99,875	669,779	6.71
Commercial	150,873	909,727	6.03	106,735	659,003	6.17
Sale for Resale	136,984	447,791	3.27	N/A	N/A	N/A
Irrigation	33,784	246,735	7.30	N/A	N/A	N/A
Total	**694,962**	**3,435,992**	**4.94**	**406,060**	**2,698,308**	**6.65**

Source: Broward County Water and Wastewater Services

Table A-4
WATER & WASTEWATER SERVICES
ACTIVITY BASED COSTING REPORT
FOR THE TWELVE MONTHS ENDED SEPTEMBER 30,2012

RETAIL WATER	Wellfields	Treatment	Purchased Water	Distribution	Total Water
PERSONAL SERVICES	75,928	2,670,742	-	1,574,325	4,320,994
OPERATING MATERIAL	13,594	339,952	-	244,287	597,834
OTHER MATERIAL	-	30,563	-	324	30,887
UTILITIES-OTHER	-	1,873	-	202,103	203,976
ELECTRIC	23,837	812,904	-	270,315	1,107,056
TREAT/TRANS	-	-	-	-	-
PURCHASED WATER	-	-	4,849,833	-	4,849,833
RENTAL/LEASES	-	345	-	677	1,022
MOTOR POOL	-	245,404	-	111,152	356,556
CONTRACT SERVICE	-	304,084	-	525,346	829,429
OTHER	8,347	48,222	-	314,183	370,752
EDUCATIONAL COURSES	-	6,126	-	4,798	10,924
COMPUTER MAINTENANCE	-	-	-	-	-
TRAVEL	-	-	-	-	-
OTHER CHEMICALS	-	604,123	-	11,694	615,817
CHEMICALS CHLORINE	-	91,913	-	12,001	103,914
CHEMICALS LIME	1,505	1,294,678	-	-	1,296,182
SUBTOTAL	123,210	6,450,928	4,849,833	3,271,205	14,695,177
OPERATING COST RECLASS		-			
ONE CALL	-	-	-	143,107	143,107
PAINT SHOP	-	62,992	-	-	62,992
HEAVY EQUIPMENT	-	-	-	-	-
SUBTOTAL	-	62,992	-	143,107	206,100
ALLOCATE:					
SECTION ADMIN.	1,471	69,692	-	25,465	96,628
DIVISION ADMINISTRATION	5,933	310,660	233,555	157,533	707,681
SUBTOTAL DIRECT OVERHEAD	7,405	380,352	233,555	182,997	804,309
TOTAL	130,615	6,894,273	5,083,388	3,597,310	15,705,586

Table A-4
WATER & WASTEWATER SERVICES
ACTIVITY BASED COSTING REPORT
FOR THE TWELVE MONTHS ENDED SEPTEMBER 30,2012

	District 1			District 2			Total		
ACTIVITY - Retail Wellfields	**Operations**	**Maintenance**	**Total O & M**	**Operations**	**Maintenance**	**Total O & M**	**Operations**	**Maintenance**	**Total O & M**
PERSONAL SERVICES	-	11,798	11,798	-	64,130	64,130	-	75,928	75,928
OPERATING MATERIAL	-	8,783	8,783	66	4,746	4,811	66	13,529	13,594
OTHER MATERIAL	-	-	-	-	-	-	-	-	-
UTILITIES-OTHER	-	-	-	-	-	-	-	-	-
ELECTRIC	-	-	-	23,837	-	23,837	23,837	-	23,837
TREAT/TRANS	-	-	-	-	-	-	-	-	-
PURCHASED WATER	-	-	-	-	-	-	-	-	-
RENTAL/LEASES	-	-	-	-	-	-	-	-	-
MOTOR POOL	-	-	-	-	-	-	-	-	-
CONTRACT SERVICE	-	-	-	-	-	-	-	-	-
OTHER	-	5,597	5,597	-	2,750	2,750	-	8,347	8,347
EDUCATIONAL COURSES	-	-	-	-	-	-	-	-	-
COMPUTER MAINTENANCE	-	-	-	-	-	-	-	-	-
TRAVEL	-	-	-	-	-	-	-	-	-
OTHER CHEMICALS	-	-	-	-	-	-	-	-	-
CHEMICALS CHLORINE	-	-	-	-	-	-	-	-	-
CHEMICALS LIME	-	-	-	1,505	-	1,505	1,505	-	1,505
SUBTOTAL	-	26,178	26,178	25,407	71,625	97,033	25,407	97,803	123,210
OPERATING COST RECLASS									
ONE CALL	-	-	-	-	-	-	-	-	-
PAINT SHOP	-	-	-	-	-	-	-	-	-
HEAVY EQUIPMENT	-	-	-	-	-	-	-	-	-
SUBTOTAL	-	-	-	-	-	-	-	-	-
ALLOCATE:									
SECTION ADMIN.	-	199	199	333	939	1,272	333	1,138	1,471
DIVISION ADMINISTRATION	-	1,261	1,261	1,224	3,449	4,673	1,224	4,710	5,933
SUBTOTAL DIRECT OVERHEAD	-	1,460	1,460	1,557	4,388	5,945	1,557	5,848	7,405
TOTAL	-	27,638	27,638	26,964	76,014	102,978	26,964	103,651	130,615

Table A-4
WATER & WASTEWATER SERVICES
ACTIVITY BASED COSTING REPORT
FOR THE TWELVE MONTHS ENDED SEPTEMBER 30,2012

OPERATION AND MAINTENANCE EXPENSES:	ACTIVITY - Retail Water Treatment									ACTIVITY - Purchased Water
	WTP 1-A			WTP 2-A			Total Treatment			
	Operations	Maintenance	Total O & M	Operations	Maintenance	Total O & M	Operations	Maintenance	Total O & M	
PERSONAL SERVICES	857,932	486,745	1,344,676	782,587	543,479	1,326,065	1,640,518	1,030,224	2,670,742	-
OPERATING MATERIAL	8,714	181,970	190,685	6,199	143,069	149,267	14,913	325,039	339,952	-
OTHER MATERIAL	13,586	1,433	15,019	13,606	1,938	15,544	27,192	3,371	30,563	-
UTILITIES-OTHER	1,873	-	1,873	-	-	-	1,873	-	1,873	-
ELECTRIC	355,168	-	355,168	457,736	-	457,736	812,904	-	812,904	-
TREAT/TRANS	-	-	-	-	-	-	-	-	-	-
PURCHASED WATER	-	-	-	-	-	-	-	-	-	4,849,833
RENTAL/LEASES	201	144	345	-	-	-	201	144	345	-
MOTOR POOL	63,953	74,775	138,729	72,294	34,381	106,675	136,247	109,156	245,404	-
CONTRACT SERVICE	11,629	90,250	101,879	27,970	174,235	202,205	39,599	264,485	304,084	-
OTHER	132,820	(225,884)	(93,064)	134,029	7,257	141,286	266,849	(218,627)	48,222	-
EDUCATIONAL COURSES	1,936	1,847	3,783	733	1,610	2,343	2,669	3,457	6,126	-
COMPUTER MAINTENANCE	-	-	-	-	-	-	-	-	-	-
TRAVEL	-	-	-	-	-	-	-	-	-	-
OTHER CHEMICALS	412,778	-	412,778	191,345	-	191,345	604,123	-	604,123	-
CHEMICALS CHLORINE	177	-	177	91,736	-	91,736	91,913	-	91,913	-
CHEMICALS LIME	233,947	-	233,947	1,060,731	-	1,060,731	1,294,678	-	1,294,678	-
SUBTOTAL	2,094,714	611,281	2,705,995	2,838,965	905,968	3,744,933	4,933,679	1,517,249	6,450,928	4,849,833
OPERATING COST RECLASS										
ONE CALL	-	-	-	-	-	-	-	-	-	-
PAINT SHOP		21,974	21,974		41,018	41,018	-	62,992	62,992	-
HEAVY EQUIPMENT	-	-	-	-	-	-	-	-	-	-
SUBTOTAL	-	21,974	21,974	-	41,018	41,018	-	62,992	62,992	-
ALLOCATE:										
SECTION ADMIN.	15,942	4,652	20,594	37,220	11,878	49,098	53,162	16,530	69,692	-
DIVISION ADMINISTRATION	100,876	29,438	130,314	136,717	43,629	180,346	237,593	73,067	310,660	233,555
SUBTOTAL DIRECT OVERHEAD	116,818	34,090	150,908	173,937	55,507	229,444	290,755	89,597	380,352	233,555
TOTAL	2,211,531	667,345	2,878,877	3,012,903	1,002,493	4,015,396	5,224,434	1,669,838	6,894,273	5,083,388

Table A-4
WATER & WASTEWATER SERVICES
ACTIVITY BASED COSTING REPORT
FOR THE TWELVE MONTHS ENDED SEPTEMBER 30,2012

ACTIVITY -Distribution	District One			District Two			District Three			Total Distribution		
	Operations	Maintenance	Total O & M	Operations	Maintenance	Total O & M	Operations*	Maintenance	Total O & M	Operations	Maintenance	Total O & M
PERSONAL SERVICES	-	262,964	262,964	-	303,907	303,907	625,555	381,899	1,007,454	625,555	948,770	1,574,325
OPERATING MATERIAL	-	55,343	55,343	-	43,277	43,277	10,860	134,808	145,668	10,860	233,427	244,287
OTHER MATERIAL	-	-	-	-	-	-	324	-	324	324	-	324
UTILITIES-OTHER	-	-	-	-	-	-	202,103	-	202,103	202,103	-	202,103
ELECTRIC	122,595	-	122,595	-	-	-	147,720	-	147,720	270,315	-	270,315
TREAT/TRANS	-	-	-	-	-	-	-	-	-	-	-	-
PURCHASED WATER	-	-	-	-	-	-	-	-	-	-	-	-
RENTAL/LEASES	-	-	-	-	-	-	677	-	677	677	-	677
MOTOR POOL	-	-	-	-	-	-	111,152	-	111,152	111,152	-	111,152
CONTRACT SERVICE	-	189,384	189,384	-	147,685	147,685	-	188,276	188,276	-	525,346	525,346
OTHER		155,333	155,333	-	220,901	220,901	(306,511)	244,460	(62,051)	(306,511)	620,694	314,183
EDUCATIONAL COURSES	-	-	-	-	-	-	4,798	-	4,798	4,798	-	4,798
COMPUTER MAINTENANCE	-	-	-	-	-	-	-	-	-	-	-	-
TRAVEL	-	-	-	-	-	-	-	-	-	-	-	-
OTHER CHEMICALS	-	-	-	-	-	-	11,694	-	11,694	11,694	-	11,694
CHEMICALS CHLORINE	-	-	-	-	-	-	12,001	-	12,001	12,001	-	12,001
CHEMICALS LIME	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL	122,595	663,024	785,619	-	715,770	715,770	820,374	949,442	1,769,816	942,969	2,328,236	3,271,205
OPERATING COST RECLASS												
ONE CALL	49,449	-	49,449	50,077	-	50,077	43,582	-	43,582	143,107	-	143,107
PAINT SHOP	-		-			-	-	-	-	-	-	-
HEAVY EQUIPMENT	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL	49,449	-	49,449	50,077	-	50,077	43,582	-	43,582	143,107	-	143,107
ALLOCATE:												
SECTION ADMIN.	933	5,046	5,979	-	9,384	9,384	2,876	7,226	10,101	3,809	21,656	25,465
DIVISION ADMINISTRATION	5,904	31,929	37,833		34,470	34,470	39,507	45,723	85,230	45,411	112,122	157,533
SUBTOTAL DIRECT OVERHEAD	6,837	36,975	43,812	-	43,854	43,854	42,383	52,948	95,331	49,220	133,778	182,997
TOTAL	178,881	699,999	878,880	50,077	759,624	809,701	906,338	1,002,391	1,908,729	1,135,296	2,462,014	3,597,310

*includes Underground

Table A-4
WATER & WASTEWATER SERVICES
ACTIVITY BASED COSTING REPORT
FOR THE TWELVE MONTHS ENDED SEPTEMBER 30,2012

ACTIVITY -Collection	District One Operations	District One Maintenance	District One Total O & M	District Two Operations	District Two Maintenance	District Two Total O & M	District Three Operations*	District Three Maintenance	District Three Total O & M	Total Collection Operations	Total Collection Maintenance	Total Collection Total O & M
PERSONAL SERVICES	-	150,658	150,658	-	199,796	199,796	298,574	52,984	351,559	298,574	403,438	702,012
OPERATING MATERIAL	-	16,465	16,465	-	19,352	19,352	34,097	7,896	41,992	34,097	43,713	77,809
OTHER MATERIAL	-	-	-	-	-	-	377	-	377	377	-	377
UTILITIES-OTHER	-	-	-	-	-	-	3,768,751	-	3,768,751	3,768,751	-	3,768,751
ELECTRIC	-	-	-	664	-	664	-	-	-	664	-	664
TREAT/TRANS	-	-	-	-	-	-	-	-	-	-	-	-
PURCHASED WATER	-	-	-	-	-	-	-	-	-	-	-	-
RENTAL/LEASES	-	-	-	-	-	-	-	-	-	-	-	-
MOTOR POOL	-	-	-	-	-	-	96,934	-	96,934	96,934	-	96,934
CONTRACT SERVICE	-	3,051	3,051	-	117,951	117,951	4,295	142,675	146,970	4,295	263,677	267,972
OTHER		122,753	122,753	-	173,488	173,488	(340,098)	39,788	(300,310)	(340,098)	336,028	(4,069)
EDUCATIONAL COURSES	-	-	-	-	-	-	-	-	-	-	-	-
COMPUTER MAINTENANCE	-	-	-	-	-	-	1,313	-	1,313	1,313	-	1,313
TRAVEL	-	-	-	-	-	-	-	-	-	-	-	-
OTHER CHEMICALS	-	-	-	-	-	-	-	-	-	-	-	-
CHEMICALS CHLORINE	-	-	-	-	-	-	-	-	-	-	-	-
CHEMICALS LIME	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL	-	292,927	292,927	664	510,587	511,250	3,864,242	243,343	4,107,584	3,864,906	1,046,856	4,911,761
ALLOCATE:												
SECTION ADMIN.	-	2,229	2,229	9	6,694	6,703	28,682	1,852	30,534	28,691	10,775	39,466
DIVISION ADMINISTRATION	-	14,107	14,107	32	24,589	24,620	186,092	11,719	197,810	186,124	50,414	236,538
ONE CALL	31,010	-	31,010	31,429	-	31,429	16,343		16,343	78,782	-	78,782
PAINT-SHOP												
HEAVY EQUIPMENT												
SUBTOTAL DIRECT OVERHEAD	31,010	16,336	47,346	31,470	31,283	62,752	231,117	13,571	244,688	293,597	61,189	354,786
TOTAL	31,010	309,263	340,273	32,134	541,869	574,003	4,095,359	256,913	4,352,272	4,158,503	1,108,045	5,266,548

* includes Underground

WATER & WASTEWATER SERVICES
ACTIVITY BASED COSTING REPORT
FOR THE TWELVE MONTHS ENDED SEPTEMBER 30, 2012

ACTIVITY -Lift Stations	*District One*			*District Two*			*District Three*			*Field*	*Total Lift Stations*		
	Operations	*Maintenance*	*Total O & M*	*Operations*	*Maintenance*	*Total O & M*	*Operations*	*Maintenance*	*Total O & M*	*Support*	*Operations*	*Maintenance*	*Total O & M*
PERSONAL SERVICES	0	253,192	253,192	0	443,221	443,221	0	285,433	285,433	432,397	432,397	981,845	1,414,242
OPERATING MATERIAL	0	113,207	113,207	0	313,841	313,841	0	110,610	110,610	33,085	33,085	537,658	570,743
OTHER MATERIAL	0	0	0	0	0	0	0	0	0	2,139	2,139	0	2,139
UTILITIES-OTHER	2,126	0	2,126	2,331	0	2,331	0	0	0	0	4,457	0	4,457
ELECTRIC	181,003	0	181,003	178,719	0	178,719	126,423	0	126,423	0	486,145	0	486,145
TREAT/TRANS	0	0	0	0	0	0	0	0	0	0	0	0	0
PURCHASED WATER	0	0	0	0	0	0	0	0	0	0	0	0	0
RENTAL/LEASES	0	0	0	0	0	0	0	0	0	554	554	0	554
MOTOR POOL	0	0	0	0	0	0	0	0	0	233,586	233,586	0	233,586
CONTRACT SERVICE	0	298,747	298,747	0	144,584	144,584	0	89,226	89,226	0	0	532,556	532,556
OTHER		188,554	188,937	3,200	291,114	294,314	0	195,577	195,577	(536,035)	(532,453)	675,245	142,793
EDUCATIONAL COURSES	0	0	0	0	0	0	0	0	0	0	0	0	0
COMPUTER MAINTENANCE	0	0	0	0	0	0	0	0	0	31,311	31,311	0	31,311
TRAVEL	0	0	0	0	0	0	0	0	0	0	0	0	0
OTHER CHEMICALS	0	0	0	0	0	0	0	0	0	0	0	0	0
CHEMICALS CHLORINE	0	0	0	0	0	0	0	0	0	0	0	0	0
CHEMICALS LIME	0	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	183,511	853,700	1,037,211	184,250	1,192,759	1,377,010	126,423	680,846	807,269	197,036	691,221	2,727,305	3,418,526
ALLOCATE:													
SECTION ADMIN.	1,397	6,497	7,894	2,416	15,638	18,053	962	5,182	6,144	0	4,774	27,316	32,091
DIVISION ADMINISTRATION	8,837	41,112	49,949	8,873	57,440	66,313	6,088	32,788	38,876	9,489	33,287	131,340	164,627
ONE CALL	0	0	0	0	0	0	0	0	0	0	0	0	0
PAINT SHOP	0	20,509	20,509	0	20,509	20,509	0	20,509	20,509	0	0	61,527	61,527
HEAVY EQUIPMENT	0	0	0	0	0	0	0	0	0	0	0	0	0
GENERATORS	34,390	0	34,390	48,345	0	48,345	29,406	0	29,406	0	112,141	0	112,141
SUBTOTAL DIRECT OVERHEAD	10,234	68,118	78,352	11,289	93,587	104,876	7,050	58,478	65,529	9,489	38,062	220,184	258,245
TOTAL	193,745	921,818	1,115,563	195,539	1,286,346	1,481,885	133,474	739,324	872,798	206,525	729,283	2,947,488	3,676,771

Table A-4
WATER & WASTEWATER SERVICES
ACTIVITY BASED COSTING REPORT
FOR THE TWELVE MONTHS ENDED SEPTEMBER 30,2012

ACTIVITY -Retail Sewer	Collection O & M	Lift Stations O & M	Retail Sewer TOTAL O & M
PERSONAL SERVICES	702,012	1,414,242	2,116,254
OPERATING MATERIAL	77,809	570,743	648,552
OTHER MATERIAL	377	2,139	2,515
UTILITIES-OTHER	3,768,751	4,457	3,773,207
ELECTRIC	664	486,145	486,809
TREAT/TRANS	-	-	-
PURCHASED WATER	-	-	-
RENTAL/LEASES	-	554	554
MOTOR POOL	96,934	233,586	330,520
CONTRACT SERVICE	267,972	532,556	800,528
OTHER	(4,069)	142,793	138,723
EDUCATIONAL COURSES	-	-	-
COMPUTER MAINTENANCE	1,313	31,311	32,624
TRAVEL	-	-	-
OTHER CHEMICALS	-	-	-
CHEMICALS CHLORINE	-	-	-
CHEMICALS LIME	-	-	-
SUBTOTAL	4,911,761	3,418,526	8,330,287
OPERATING COST RECLASS			
ONE CALL	78,782	-	78,782
PAINT SHOP	-	61,527	61,527
HEAVY EQUIPMENT	-	-	-
GENERATORS	-	112,141	112,141
SUBTOTAL	78,782	173,668	252,451
ALLOCATE:			
SECTION ADMIN.	39,466	32,091	71,557
DIVISION ADMINISTRATION	236,538	164,627	401,165
SUBTOTAL DIRECT OVERHEAD	276,004	196,718	472,722
TOTAL	5,266,548	3,788,912	9,055,460

Table A-4
WATER & WASTEWATER SERVICES
ACTIVITY BASED COSTING REPORT
FOR THE TWELVE MONTHS ENDED SEPTEMBER 30,2012

	North System			South System			Total		
ACTIVITY - Regional Raw Water	**Operations**	**Maintenance**	**Total O & M**	**Operations**	**Maintenance**	**Total O & M**	**Operations**	**Maintenance**	**Total O & M**
PERSONAL SERVICES	-	41,138	41,138	-	30,514	30,514	-	71,653	71,653
OPERATING MATERIAL	-	9,881	9,881	-	8,191	8,191	-	18,072	18,072
OTHER MATERIAL	-	-	-	-	-	-	-	-	-
UTILITIES-OTHER	-	-	-	-	-	-	-	-	-
ELECTRIC	121,700	-	121,700	338,777	-	338,777	460,477	-	460,477
TREAT/TRANS	-	-	-	-	-	-	-	-	-
PURCHASED WATER	-	-	-	-	-	-	-	-	-
RENTAL/LEASES	-	-	-	-	-	-	-	-	-
MOTOR POOL	-	-	-	-	-	-	-	-	-
CONTRACT SERVICE	-	9,629	9,629	5,767	100	5,867	5,767	9,729	15,496
OTHER	-	834	834	159,996	16,586	176,582	159,996	17,420	177,416
EDUCATIONAL COURSES	-	-	-	-	-	-	-	-	-
COMPUTER MAINTENANCE	-	-	-	-	-	-	-	-	-
TRAVEL	-	-	-	-	-	-	-	-	-
OTHER CHEMICALS	-	-	-	-	-	-	-	-	-
CHEMICALS CHLORINE	-	-	-	-	-	-	-	-	-
CHEMICALS LIME	-	-	-	-	-	-	-	-	-
SUBTOTAL	121,700	61,482	183,181	504,540	55,392	559,932	626,240	116,874	743,113
OPERATING COST RECLASS									
ONE CALL	2,200	-	2,200	2,200	-	2,200	4,400	-	4,400
PAINT SHOP			-			-	-	-	-
HEAVY EQUIPMENT	-	- -	-	-	-	-	-	-	-
SUBTOTAL	2,200 -	-	2,200	2,200 -	-	2,200	4,400	-	4,400
ALLOCATE:									
SECTION ADMIN.	1,596	806	2,402	3,840	422	4,261	5,435	1,228	6,663
DIVISION ADMINISTRATION	5,861	2,961	8,822	24,297	2,668	26,965	30,158	5,628	35,786
SUBTOTAL DIRECT OVERHEAD	7,456	3,767	11,223	28,137	3,089	31,226	35,593	6,856	42,449
TOTAL	131,356	65,249	196,605	534,877	58,481	593,358	666,233	123,729	789,963

Table A-4
WATER & WASTEWATER SERVICES
ACTIVITY BASED COSTING REPORT
FOR THE TWELVE MONTHS ENDED SEPTEMBER 30,2012

ACTIVITY - Wastewater Treatment (Other)	Reuse Distribution Operations	Maintenance	Total O & M	C&M & Septage	Total
PERSONAL SERVICES	-	2,698	2,698	952,616	955,314
OPERATING MATERIAL	-	3,223	3,223	45,226	48,449
OTHER MATERIAL	-	-	-	8,942	8,942
UTILITIES-OTHER	-	-	-	-	-
ELECTRIC	-	-	-	-	-
TREAT/TRANS	-	-	-	-	-
PURCHASED WATER	-	-	-	-	-
RENTAL/LEASES	-	-	-	671	671
MOTOR POOL	-	-	-	25,225	25,225
CONTRACT SERVICE	-	-	-	22,379	22,379
OTHER	-	42	42	53,593	53,635
EDUCATIONAL COURSES	-	-	-	-	-
COMPUTER MAINTENANCE	-	-	-	2,177	2,177
TRAVEL	-	-	-	-	-
OTHER CHEMICALS	-	-	-	-	-
CHEMICALS CHLORINE	-	-	-	-	-
CHEMICALS LIME	-	-	-	-	-
SUBTOTAL	-	5,963	5,963	1,110,830	1,116,793
OPERATING COST RECLASS					
ONE CALL	-	-	-	-	-
PAINT SHOP	-	-	-	-	-
HEAVY EQUIPMENT		-	-	-	-
SUBTOTAL	-	-	-	-	-
ALLOCATE:					
SECTION ADMIN.	-	81	81	-	81
DIVISION ADMINISTRATION	-	287	287	53,495	53,782
SUBTOTAL DIRECT OVERHEAD	-	368	368	53,495	53,863
TOTAL	-	6,331	6,331	1,164,324	1,170,655

Table A-4
WATER & WASTEWATER SERVICES
ACTIVITY BASED COSTING REPORT
FOR THE TWELVE MONTHS ENDED SEPTEMBER 30,2012

	Solids			Liquids			Reuse			Total Plant				
ACTIVITY - Wastewater Treatment	**Operations**	**Maintenance**	**Total O & M**	**Operations**	**Maintenance**	**Total O & M**	**Operations**	**Maintenance**	**Total O & M**	**Operations**	**Maintenance**	**Total O & M**	**Other**	**Total Treatment**
PERSONAL SERVICES	2,095,465	1,320,014	3,415,479	-	153,920	153,920	-	38,508	38,508	2,095,465	1,512,442	3,607,907	955,314	4,563,221
OPERATING MATERIAL	45,784	837,723	883,507	-	139,907	139,907	-	21,080	21,080	45,784	998,709	1,044,493	48,449	1,092,942
OTHER MATERIAL	6,317	7,928	14,244	-	-	-	-	-	-	6,317	7,928	14,244	8,942	23,187
UTILITIES-OTHER	-	-	-	333	-	333	-	-	-	333	-	333	-	333
ELECTRIC	3,292,397	-	3,292,397	-	-	-	-	-	-	3,292,397	-	3,292,397	-	3,292,397
TREAT/TRANS	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PURCHASED WATER	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RENTAL/LEASES	-	753	753	-	-	-	-	-	-	-	753	753	671	1,424
MOTOR POOL	132,834	50,414	183,248	-	-	-	-	-	-	132,834	50,414	183,248	25,225	208,473
CONTRACT SERVICE	1,656,290	796,118	2,452,408	-	722,583	722,583	-	3,589	3,589	1,656,290	1,522,290	3,178,580	22,379	3,200,959
OTHER	32,084	67,973	100,057	-	14,957	14,957	-	2,657	2,657	32,084	85,587	117,670	53,635	171,306
EDUCATIONAL COURSES	5,983	-	5,983	-	-	-	-	-	-	5,983	-	5,983	-	5,983
COMPUTER MAINTENANCE	-	5,495	5,495	-	-	-	-	-	-	-	5,495	5,495	2,177	7,672
TRAVEL	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTHER CHEMICALS	607,373	-	607,373	-	-	-	-	-	-	607,373	-	607,373	-	607,373
CHEMICALS CHLORINE	160,848	-	160,848	-	-	-	-	-	-	160,848	-	160,848	-	160,848
CHEMICALS LIME	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL	8,035,374	3,086,417	11,121,791	333	1,031,367	1,031,700	-	65,834	65,834	8,035,707	4,183,617	12,219,325	1,116,793	13,336,117
OPERATING COST RECLASS														
ONE CALL	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PAINT SHOP	-	21,974	21,974	-	-	-	-	-	-	-	21,974	21,974	-	21,974
HEAVY EQUIPMENT	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL	-	21,974	21,974	-	-	-	-	-	-	-	21,974	21,974	-	21,974
ALLOCATE:														
SECTION ADMIN.	109,057	41,889	150,947	5	13,998	14,002	-	894	894	109,062	56,781	165,842	81	165,923
DIVISION ADMINISTRATION	386,962	148,634	535,596	16	49,668	49,684	-	3,170	3,170	386,979	201,472	588,451	53,782	642,232
SUBTOTAL DIRECT OVERHEAD	496,020	190,523	686,543	21	63,666	63,686	-	4,064	4,064	496,040	258,253	754,293	53,863	808,156
TOTAL	8,531,394	3,298,914	11,830,308	354	1,095,033	1,095,386	-	69,898	69,898	8,531,748	4,463,844	12,995,592	1,170,655	14,166,247

Table A-4
WATER & WASTEWATER SERVICES
ACTIVITY BASED COSTING REPORT
FOR THE TWELVE MONTHS ENDED SEPTEMBER 30,2012

ACTIVITY -Regional Transmission (Master Lift Stations)	District Four Operations	Maintenance	Total O & M
PERSONAL SERVICES	258,431	464,670	723,101
OPERATING MATERIAL	4,464	248,777	253,242
OTHER MATERIAL	366	-	366
UTILITIES-OTHER	52,323	-	52,323
ELECTRIC	600,926	-	600,926
TREAT/TRANS	-	-	-
PURCHASED WATER	-	-	-
RENTAL/LEASES	-	-	-
MOTOR POOL	-	55,866	55,866
CONTRACT SERVICE	-	81,885	81,885
OTHER	4,297	166	4,462
EDUCATIONAL COURSES	-	-	-
COMPUTER MAINTENANCE	6,589	-	6,589
TRAVEL	-	-	-
OTHER CHEMICALS	-	-	-
CHEMICALS CHLORINE	-	-	-
CHEMICALS LIME	-	-	-
SUBTOTAL	927,395	851,365	1,778,760
OPERATING COST RECLASS			
ONE CALL	14,038	-	14,038
SUBTOTAL	14,038	-	14,038
ALLOCATE:			
SECTION ADMIN.	12,587	11,555	24,142
DIVISION ADMINISTRATION	44,661	40,999	85,660
SUBTOTAL DIRECT OVERHEAD	57,248	52,554	109,802
TOTAL	998,681	903,919	1,902,600

Table A-4
WATER & WASTEWATER SERVICES
GENERAL & ADMINISTRATIVE
ACTIVITY BASED COSTING REPORT
FOR THE TWELVE MONTHS ENDED SEPTEMBER 30,2012

ACTIVITY	WWS Administration		WWED	IITD				Fiscal Operations Division				Total
	Administration	Project & Community Coordinator		Infrastructure Support	Application Development	Desktop Support	SCADA	Customer Service	Grounds & Buildings	Warehouse Costs	Other FOD Costs	
PERSONAL SERVICES	1,077,501	309,501	962,321	335,960	541,139	467,675	415,727	2,464,595	328,094	259,181	726,600	7,888,294
OPERATING MATERIAL	315	332	6,314	174	-	9,250	-	322,443	43,779	10,496	-	393,103
OTHER MATERIAL	17,984	9,462	24,994	41,136	5,863	60,400	1,635	280,261	-	4,740	5,398	451,874
UTILITIES-OTHER	1,088	-	1,007	1,385	-	-	192,596	400	284,001	-	-	480,478
ELECTRIC	-	-	-	-	-	-	-	-	-	-	-	-
TREAT/TRANS	-	-	-	-	-	-	-	-	-	-	-	-
PURCHASED WATER	-	-	-	-	-	-	-	-	-	-	-	-
RENTAL/LEASES	1,772	-	5,533	-	-	-	-	2,941	-	2,010	-	12,256
MOTOR POOL	-	-	57,907	-	-	-	-	82,199	21,387	4	-	161,496
CONTRACT SERVICE	1,447	36,692	50,421	60,580	295,286	22,495	180,502	1,214,901	658,223	9,634	77,644	2,607,826
OTHER	2,307,515	2,099	641	219	-	-	646	918,197	24,015	2,532	-	3,255,864
COUNTY SERVICES	117,071	-		-	-	-	-	-	-	-	-	117,071
EDUCATIONAL COURSES	12,737	-	7,023	24,443	7,689	10,282	3,831	725	-	-	1,404	68,135
COMPUTER MAINTENANCE	-	-	-	66,390	-	3,620	7,793	-	-	-	-	77,803
PURCHASED INSURANCE	3,334,198	-	-	-	-	-	-	-	-	-	-	3,334,198
TRAVEL	3,757	-	850	-	10	-	300	-	-	-	-	4,917
OPERATING COSTS RECLASS	170,474	-	-	-	-	-	-	-	-	-	-	170,474
CHEMICALS CHLORINE	-	-	-	-	-	-	-	-	-	-	-	-
CHEMICALS LIME	-	-	-	-	-	-	-	-	-	-	-	-
SUBTOTAL	7,045,861	358,087	1,117,011	530,287	849,988	573,722	803,030	5,286,662	1,359,499	288,597	811,046	19,023,790
ALLOCATE:												
DIVISION ADMINISTRATION				140,815	225,711	152,349	213,241	212,643	54,683	11,608	32,622	1,043,673
TOTAL	7,045,861	358,087	1,117,011	671,102	1,075,699	726,071	1,016,271	5,499,305	1,414,181	300,205	843,669	20,067,462
	7,045,861	358,087	1,117,011	671,102	1,075,699	726,071	1,016,271	5,499,305	1,414,181	300,205	843,669	20,067,462
TOTAL TO BE ALLOCATED	(7,045,861)	(358,087)	(1,117,011)	(671,102)	(1,075,699)	(726,071)	(1,016,271)	(5,499,305)	(1,414,181)	(300,205)	(843,669)	(20,067,462)
BALANCE AFTER ALLOCATION	-	-	-	-	-	-	-	-	-	-	-	-

Table A-5
Water & Wastewater Services
Disaggregation of Operating & Maintenance Expenses
FOR THE TWELVE MONTHS ENDED SEPTEMBER 30,2012

OPERATION AND MAINTENANCE EXPENSES:	RETAIL WATER	RETAIL WASTEWATER	WHOLESALE RAW WATER	WHOLESALE TREATMENT	WHOLESALE TRANSMISSION	WWS ADMIN, IT & FOD	ENGINEERING	TOTAL
Personal Services	4,320,994	2,116,254	71,653	4,563,221	723,101	6,925,973	962,321	19,683,517
Utility Services	1,311,032	4,260,017	460,477	3,292,731	653,249	479,471	1,007	10,457,983
Material & Supplies	628,721	651,067	18,072	1,116,129	253,607	813,668	31,309	3,512,573
Chemicals	2,015,914	-	-	768,220	-	-	-	2,784,134
Motor Pool	356,556	330,520	-	208,473	55,866	103,590	57,907	1,112,912
Contractual Services	829,429	800,528	15,496	3,200,959	81,885	2,557,405	50,421	7,536,123
Purchased Insurance	-	-	-	-	-	3,334,198	-	3,334,198
County Administrative Service	-	-	-	-	-	117,071	-	117,071
Purchased Water	4,849,833	-	-	-	-	-	-	4,849,833
Rental & Leases	1,022	554	-	1,424	-	6,723	5,533	15,256
Travel	-	-	-	-	-	4,067	850	4,917
Other	370,752	138,723	177,416	171,306	4,462	3,425,698	641	4,288,997
Educational Courses	10,924	-	-	5,983	-	61,112	7,023	85,042
Computer Maintenance	-	32,624	-	7,672	6,589	77,803	-	124,687
IRR Charges	514,321	155,992	-	498,698	45,825	-	-	1,214,836
SUBTOTAL O & M EXPENSES	15,209,498	8,486,279	743,113	13,834,815	1,824,585	17,906,779	1,117,011	59,122,080
SECTION ADMINISTRATION	96,628	71,557	6,663	165,923	24,142	-	-	364,913
DIVISION ADMINISTRATION	707,681	401,165	35,786	642,232	85,660	1,043,673	-	2,916,198
ONE CALL	143,107	78,782	4,400	-	14,038	-	-	240,328
PAINT SHOP	62,992	61,527	-	21,974	-	-	-	146,494
HEAVY EQUIPMENT	-	-	-	-	-	-	-	-
GENERATORS	-	112,141	-	-	-	-	-	112,141
LAB	477,643	1,171	24,585	659,101	8,195	-	-	1,170,695
SUBTOTAL OPERATING O/H	1,488,052	726,344	71,434	1,489,231	132,035	1,043,673	-	4,950,769
TOTAL COSTS	16,697,550	9,212,623	814,547	15,324,046	1,956,620	18,950,452	1,117,011	64,072,849
CUSTOMER SERVICE	2,792,171	1,992,224	54,993	549,931	109,986	(5,499,305)	-	-
WWS ADMINISTRATION	5,527,790	3,049,875	269,659	5,073,086	647,747	(13,451,147)	(1,117,011)	(0)
SUBTOTAL ALLOCATION	8,319,961	5,042,100	324,652	5,623,017	757,733	(18,950,452)	(1,117,011)	(0)
TOTAL OPERATING EXPENSES	25,017,511	14,254,723	1,139,199	20,947,063	2,714,353	-	-	64,072,849

Table A-6
Operating and Maintenance Expense for Large User Rate
Fiscal Year 2012 and 2013 (1)
$ per 1000 Gallons

	Fiscal 2012		Fiscal 2013	
	Treatment & Disposal	Transmission	Treatment & Disposal	Transmission
Total Direct Operating Costs	16,437,800	2,655,140	15,085,080	2,795,060
Allocated A & G Costs	5,666,230	765,920	5,498,530	801,500
Projected Annual Average Daily Flow (MGD)	65.2	50.4	65.2	50.4
Operating and Maintenance Rate Per 1,000 Gallons	0.839	0.186	0.780	0.195

NOTE: (1) This charge does not include costs of debt service which are fixed monthly charges to large users or IRR.

Source: Broward County Water & Wastewater Services

Table A-7
Historical and Budgeted Large Users
Operating & Maintenance Rates

Period Large User Charge in Effect	Treatment & Disposal Rate Per 1,000 Gallons	Transmission Rate Per 1,000 Gallons	Combined Rate Per 1,000 Gallons
Fiscal 2004	$0.51	$0.09	$0.60
Fiscal 2005	$0.61	$0.12	$0.73
Fiscal 2006	$0.58	$0.12	$0.70
Fiscal 2007	$0.69	$0.14	$0.83
Fiscal 2008	$0.70	$0.14	$0.84
Fiscal 2009	$0.68	$0.14	$0.81
Fiscal 2010	$0.80	$0.18	$0.97
Fiscal 2011	$0.89	$0.21	$1.10
Fiscal 2012	$0.84	$0.19	$1.03
Fiscal 2013 (Proposed)	$0.78	$0.20	$0.98

Source: Broward County Water & Wastewater Services

Broward County Public Works Department
Water & Wastewater Fund
Statement of Net Assets
September 30, 2012, 2011, 2010, 2009, and 2008

	FY 2012	FY 2011	FY 2010	FY 2009	FY 2008
ASSETS					
Current Assets:					
Cash & Cash Equivalents	$ 14,185,822	$ 34,511,105	$ 19,153,888	$ 17,467,136	$ 20,964,003
Investments	22,986,022	$ 7,335,221			
Accounts Receivable (Net)	12,460,075	12,764,481	14,778,576	14,903,333	12,137,601
Inventory	7,557,040	7,121,114	7,242,284	6,590,565	5,438,132
Other Current Assets	1,390,511	703,014	1,262,565	1,107,662	817,973
Total Current Assets	58,579,470	62,434,935	42,437,313	40,068,696	39,357,709
Noncurrent Assets:					
Restricted Assets:					
Cash & Cash Equivalents	135,867,999	12,719,316	63,470,062	96,486,201	35,589,820
Investments	51,819,270	51,314,031	36,008,673	38,497,045	4,499,100
Total Restricted Assets	187,687,269	64,033,347	99,478,735	134,983,246	40,088,920
Property, Plant and Equipment					
Land	4,903,960	4,900,960	4,896,059	4,896,059	4,874,216
Buildings	211,706,911	209,769,182	209,769,182	199,109,808	197,865,989
Equipment	848,719,198	761,712,512	739,769,678	641,410,769	601,781,596
Utility Plant in Service before Depreciation	1,065,330,069	976,382,654	954,434,919	845,416,636	804,521,801
Less Accumulated Depreciation	(418,484,515)	(388,540,864)	(358,281,688)	(329,407,410)	(306,231,826)
Utility Plant in Service (Net)	646,845,554	587,841,790	596,153,231	516,009,226	498,289,975
Construction in Progress	70,212,181	108,117,265	65,978,177	115,108,702	118,800,015
Property, Plant, and Equipment (Net)	717,057,735	695,959,055	662,131,408	631,117,928	617,089,990
Deferred Bond Issuance Costs	3,735,184	2,466,204	2,750,043	3,012,561	2,781,755
Total Noncurrent Assets	908,480,188	762,458,606	764,360,186	769,113,735	659,960,665
Total Assets	$ 967,059,658	$ 824,893,541	$ 806,797,499	$ 809,182,431	$ 699,318,374
LIABILITIES					
Current Liabilities:					
Vouchers Payable and Accrued Liabilities	$ 14,702,370	$ 11,260,932	$ 12,375,750	$ 10,135,356	$ 12,949,847
Due to Other County Funds	-	21,355,489			
Due Other Governments	2,424,575	2,176,809	1,949,153	2,003,168	3,364,275
Customer Deposits	-	-	-	-	-
Commercial Paper	-	-	-	-	58,578,000
Total Current Liabilities	17,126,945	34,793,230	14,324,903	12,138,524	74,892,122
Noncurrent Liabilities:					
Liabilities Payable from Restricted Assets					
Accrued Interest Payable	11,913,779	9,984,191	10,116,680	10,257,680	6,033,563
Current Portion Long Term Debt	10,440,000	10,110,000	9,765,000	7,810,006	7,605,006
Customer Deposits	8,489,810	8,378,517	8,173,542	7,881,669	7,517,976
Total Liabilities Payable from Restricted Assets	30,843,589	28,472,708	28,055,222	25,949,355	21,156,545
Long Term Liabilities:					
Revenue Bonds Payable	551,054,228	402,623,397	412,674,304	422,418,643	256,356,660
Long Term OPEB Obligation	538,096	470,182	346,202	220,187	105,540
Other Long Term Liabilities	2,220,000	2,487,000	2,963,000	2,501,000	2,280,000
Total Long Term Liabilities	553,812,324	405,580,579	415,983,506	425,139,830	258,742,200
Total Noncurrent Liabilities	584,655,913	434,053,287	444,038,728	451,089,185	279,898,745
Total Liabilities	$ 601,782,858	$ 468,846,517	$ 458,363,631	$ 463,227,709	$ 354,790,867
NET ASSETS					
Invested in Capital Assets, Net of Related Debt	$ 271,136,649	$ 276,709,290	$ 275,515,952	$ 274,923,504	$ 294,550,324
Restricted For:					
Debt Service Reserve	37,499,460	40,110,292	39,764,667	37,809,672	27,555,357
Renewal, Replacement and Improvement	5,830,000	5,600,000	5,600,000	5,000,000	5,000,000
Unrestricted	50,810,691	33,627,442	27,553,249	28,221,546	17,421,826
Total Net Assets	$ 365,276,800	$ 356,047,024	$ 348,433,868	$ 345,954,722	$ 344,527,507

Table A - 9
Broward County Public Works Department
Water & Wastewater Fund
Statement of Revenue, Expense, and Changes in Net Assets
September 30, 2012, 2011, 2010, 2009, and 2008

	FY 2012	FY 2011	FY 2010	FY 2009	FY 2008
Operating Revenue:					
Retail Services:					
Water	$ 45,642,125	$ 44,293,830	$ 41,938,529	$ 41,228,986	$ 35,888,604
Wastewater	33,476,030	32,664,066	29,925,893	29,668,289	27,528,566
Septic Charges	1,545,142	1,518,932	1,659,400	2,027,870	1,879,407
Other Services	4,069,927	4,094,224	3,889,586	4,140,658	
	84,733,224	82,571,052	77,413,408	77,065,803	65,296,577
Wholesale Services:					
Water	700,699	820,138	832,617	1,076,284	1,499,824
Wastewater	31,227,856	30,659,726	31,360,994	29,943,381	25,882,550
Other Services	-	-	-	-	3,089,093
Total Operating Revenue	116,661,779	114,050,916	109,607,019	108,085,468	95,768,044
Operating Expenses:					
Personal Services	23,108,316	24,664,054	26,881,760	26,309,820	25,634,621
Utilities Services	15,399,775	14,273,462	14,016,533	14,445,819	15,167,271
Chemicals	2,784,134	2,802,623	2,555,622	2,567,199	2,317,645
County Services	3,334,198	3,389,650	3,583,190	3,255,410	3,030,850
Material and Supplies	4,431,528	5,656,117	4,837,310	4,962,861	5,138,548
Motor Pool	1,520,370	1,387,081	1,279,250	1,226,051	1,428,115
Contractual Services	8,419,379	6,196,391	7,412,282	7,967,224	7,729,129
Other	5,075,147	5,573,925	4,921,007	4,054,301	2,127,206
Total Operating Expense (Excluding Depreciation)	64,072,847	63,943,303	65,486,954	64,788,684	62,573,385
Operating Income Before Depreciation	52,588,932	50,107,613	44,120,065	43,296,784	33,194,659
Depreciation Expense	31,038,533	30,974,831	28,924,359	33,120,285	34,357,177
Operating Income	21,550,399	19,132,782	15,195,706	10,176,499	(1,162,518)
Non-Operating Income (Expense):					
Interest Income	792,626	1,569,706	1,757,549	3,218,290	1,507,408
Interest Expense	(18,646,984)	(17,608,307)	(17,771,939)	(15,626,107)	(9,647,660)
Other Expense	(11,070)	-	(4,314,509)	-	-
Other Income	1,053,113	852,739	269,204	310,334	353,242
Other Debt Service	(297,693)	(294,788)	(275,848)	(309,534)	(483,634)
Gain/(Loss) on Disposal of Assets	21,656	25,060	37,628	(2,427,507)	(544,402)
Total Non-Operating Income (Expense)	(17,088,352)	(15,455,590)	(20,297,915)	(14,834,524)	(8,815,046)
Income Before Contributions and Transfers	4,462,047	3,677,192	(5,102,209)	(4,658,025)	(9,977,564)
Capital Contributions and Operating Transfers:					
Capital Contributions	4,767,729	3,935,964	7,581,355	6,085,240	4,941,991
Total Capital Contributions and Operating Transfers	4,767,729	3,935,964	7,581,355	6,085,240	4,941,991
Changes In Net Assets Before Extraordinary/Special	9,229,776	7,613,156	2,479,146	1,427,215	(5,035,573)
Extraordinary/Special Item Gain / (Loss):	-	-	-	-	-
Total Net Assets - Beginning	356,047,024	348,433,868	345,954,722	344,527,507	349,563,080
Total Net Assets - Ending	$ 365,276,800	$ 356,047,024	$ 348,433,868	$ 345,954,722	$ 344,527,507

Table A - 10
Broward County Public Works Department
Water & Wastewater Fund
Statement of Cash Flows
September 30, 2012, 2011, 2010, 2009, and 2008

	FY 2012	FY 2011	FY 2010	FY 2009	FY 2008
Cash Flows From Operating Activities:					
Cash Received from Customers	$ 117,325,244	$ 116,497,642	$ 109,969,634	$ 104,322,322	$ 100,149,582
Cash Payments to Suppliers for Goods and Services	(41,486,559)	(38,845,785)	(39,030,655)	(41,710,796)	(37,513,353)
Other Cash Received (Paid)	1,053,350	853,031	(4,045,179)	314,947	353,242
Cash Payments to Employees for Services	(23,409,632)	(24,888,480)	(26,136,688)	(25,770,910)	(25,201,824)
Net Cash Provided by Operating Activities	53,482,403	53,616,408	40,757,112	37,155,563	37,787,647
Cash Flows From Capital and Related Financing Activities					
Acquisition and Construction of Capital Assets	(43,826,736)	(64,244,575)	(52,408,654)	(48,488,022)	(37,061,268)
Proceeds from Internal Loan	3,513,144	21,355,489	-	-	-
Payments on Internal Loan	(25,044,051)				
Proceeds from Sale of Capital Assets	21,656	25,060	37,628	-	39,142
Proceeds From Revenue Bonds	157,650,730	-	-	174,088,731	-
Proceeds from Commercial Paper Debt	-	-	-	-	19,856,000
Commercial Paper Debt Retired	-	-	-	(58,578,000)	-
Capital Recovery Fees	701,402	687,586	421,632	671,802	1,857,355
Capital Recovery Fees Refunded	(65,540)	(25,925)	(146,991)	(976,030)	
Capital Surcharges Contributed from Other Governments	1,709,311	1,721,245	1,742,223	2,178,587	1,439,117
Principal Paid on Revenue Bonds	(10,110,000)	(9,705,907)	(7,789,345)	(7,821,748)	(7,436,125)
Interest Paid on Revenue Bonds	(19,723,806)	(17,456,957)	(18,155,253)	(9,021,581)	(13,244,826)
Interest Paid on Commercial Paper	-	-	-	(862,702)	
Debt Service Cost Paid	(121,462)	(294,788)	(33,534)	(162,818)	(254,577)
Net Cash Used For Capital and Related Financing Activities	64,704,648	(67,938,772)	(76,332,294)	51,028,219	(34,805,182)
Cash Flows From Investing Activities:					
Purchase of Investment Securities	(72,358,013)	(102,645,993)	(51,448,753)	(64,838,704)	(59,871,248)
Proceeds from Sale and Maturities of Investment Securities	48,866,752	87,340,635	53,937,125	30,840,759	67,021,000
Interest on Investments	792,389	1,569,414	1,757,423	3,213,677	1,757,185
Net Cash Provided By Investing Activities	(22,698,872)	(13,735,944)	4,245,795	(30,784,268)	8,906,937
Net Increase (Decrease) In Cash & Cash Equivalents	95,488,179	(28,058,308)	(31,329,387)	57,399,514	11,889,402
Cash & Cash Equivalents, Beginning of Period	54,565,642	82,623,950	113,953,337	56,553,823	44,664,421
Cash & Cash Equivalents, End of Period (1)	$ 150,053,821	$ 54,565,642	$ 82,623,950	$ 113,953,337	$ 56,553,823
(1) Cash & Cash Equivalents:					
Current Assets	$ 14,185,822	$ 41,846,326	$ 19,153,888	$ 17,467,136	$ 20,964,003
Restricted Assets	135,867,999	12,719,316	63,470,062	96,486,201	35,589,820
Total Cash & Cash Equivalents	$ 150,053,821	$ 54,565,642	$ 82,623,950	$ 113,953,337	$ 56,553,823
Reconciliation of Operating Income to Net Cash Provided by Operating Activities:					
Operating Income	$ 21,550,399	$ 19,132,782	$ 15,195,706	$ 10,176,499	$ (1,162,518)
Depreciation	31,038,533	30,974,831	28,924,359	33,120,285	34,357,177
Miscellaneous Non-Operating Income (Expense)	1,053,350	853,031	(4,045,179)	314,947	353,242
Change in Assets and Liabilities:					
(Increase) Decrease in Accounts Receivable	304,406	2,014,095	124,757	(2,765,732)	4,530,357
(Increase) Decrease in Inventory	(435,926)	121,170	(651,719)	(1,152,433)	(1,725,278)
(Increase) Decrease in Other Current Assets	(687,497)	559,551	107,615	(520,495)	42,207
Increase (Decrease) in Vouchers Payable	300,079	(471,683)	863,715	(1,020,094)	277,289
Increase (Decrease) in Due Other Governments	247,766	227,656	(54,015)	(1,361,107)	670,322
Increase (Decrease) in Customer Deposits	111,293	204,975	291,873	363,693	444,849
Total Adjustments	31,932,004	34,483,626	25,561,406	26,979,064	38,950,165
Net Cash Provided By Operating Activities	$ 53,482,403	$ 53,616,408	$ 40,757,112	$ 37,155,563	$ 37,787,647

A-11
Water and Wastewater Retail Statistics
(1,000's gallons)
As of September 30, 2012

Water	Produced	Purchased	Billed	System Uses & Losses
District 1	2,671,806	28,410	2,455,817	244,399
District 2	4,259,167	0	2,278,356	-
District 2 - Resale	0	0	1,643,812	336,999
District 3A	0	966,210	887,963	78,247
District 3BC	0	1,192,518	1,073,612	118,906
Total	**6,930,973**	**2,187,138**	**8,339,560**	**778,551**

Wastewater	Billed *	Wastewater Transmission to Plant
District 1	2,101,325	2,188,462
District 2	1,866,514	2,134,028
District 3A	590,949	606,812
District 3BC	313,933	326,175
Total	**4,872,721**	**5,255,477**

* Based upon water billed to wastewater customers. Residential billing capped at 15,000 gallons.

Source: Broward County Water and Wastewater Services