

Miami-Dade
Water and Sewer Department

A DEPARTMENT OF MIAMI-DADE COUNTY, FL

Comprehensive Annual Financial Report

FOR THE FISCAL YEARS ENDED SEPTEMBER 30, 2017 AND 2016

PREPARED BY: CONTROLLER DIVISION AND PUBLIC AFFAIRS SECTION



Miami-Dade Water and Sewer Department

A DEPARTMENT OF MIAMI-DADE COUNTY, FL

Comprehensive Annual Financial Report

FOR THE FISCAL YEARS ENDED SEPTEMBER 30, 2017 AND 2016

PREPARED BY: CONTROLLER DIVISION AND PUBLIC AFFAIRS SECTION

VISION STATEMENT

The continuous delivery of excellent, cost-effective water supply and wastewater services in compliance with all regulatory requirements.

MISSION STATEMENT

The Miami-Dade Water and Sewer Department is committed to serving the needs of Miami-Dade County residents, businesses, and visitors by providing high-quality drinking water and wastewater disposal services while providing for future economic growth via progressive planning; implementing water conservation measures; safeguarding public health and the environment; and providing for continuous process improvements and cost efficiencies.



(This page intentionally left blank.)

Miami-Dade Water and Sewer Department

A DEPARTMENT OF MIAMI-DADE COUNTY, FL

Comprehensive Annual Financial Report

FOR THE FISCAL YEARS ENDED SEPTEMBER 30, 2017 AND 2016

PREPARED BY: CONTROLLER DIVISION AND PUBLIC AFFAIRS SECTION

Table of Contents

INTRODUCTORY SECTION	
Board of County Commissioners	4
Transmittal Letters	5
Organizational Chart	25
FINANCIAL SECTION	
Independent Auditors' Report	28
Management's Discussion and Analysis	31
Financial Statements	
Statements of Net Position	35
Statements of Revenues, Expenses and Changes in Net Position	37
Statements of Cash Flows	38
Notes to Financial Statements	40
Required Supplementary Information	65
Supplementary Financial Data	68
Water System	
Schedules of Net Position	69
Schedules of Revenues, Expenses and Changes in Net Position	71
Schedules of Cash Flows	72
Schedules of Operating and Maintenance Expenses	74
Wastewater System	
Schedules of Net Position	75
Schedules of Revenues, Expenses and Changes in Net Position	77
Schedules of Cash Flows	78
Schedules of Operating and Maintenance Expenses	80
STATISTICAL SECTION	
Net Position by Components - Last Ten Fiscal Years	83
Combined Water and Sewer Schedule of Revenues and Expenses - Last Ten Fiscal Years	84
Water System Schedule of Revenues and Expenses - Last Ten Fiscal Years	85
Wastewater System Schedule of Revenues and Expenses - Last Ten Fiscal Years	86
Water and Wastewater System Rates - Last Ten Fiscal Years	87
Water Treatment - Last Ten Fiscal Years	88
Wastewater Treatment - Last Ten Fiscal Years	89
Debt Service Coverage	90
Ratio of Outstanding Debt by Type - Last Ten Fiscal Years	91
Customer Statistics - Largest System Customers	92
Customer Statistics - Number of Customers	93
Building Permits	94
Population	95
Construction Activity	96
Principal Employers	97
Economic Statistics	98
Employees by Identifiable Activity	99
Capital Indicators	100
Insurance in Force	101

MIAMI-DADE COUNTY

Carlos A. Gimenez
Mayor



BOARD OF COUNTY COMMISSIONERS

Esteban L. Bovo, Jr.
Chairman

Audrey M. Edmonson
Vice Chairwoman

Barbara J. Jordan
District 1

Daniella Levine Cava
District 8

Jean Monestime
District 2

Dennis C. Moss
District 9

Audrey M. Edmonson
District 3

Senator Javier D. Souto
District 10

Sally A. Heyman
District 4

Joe A. Martinez
District 11

Bruno A. Barreiro
District 5

José "Pepe" Díaz
District 12

Rebeca Sosa
District 6

Esteban Bovo, Jr.
District 13

Xavier L. Suarez
District 7

Harvey Ruvín
Clerk of the Circuit and County Courts

Pedro J. Garcia
Property Appraiser

Abigail Price-Williams
County Attorney

Miami-Dade County provides equal access and equal opportunity in employment and services and does not discriminate on the basis of disability.

It is the policy of Miami-Dade County to comply with all of the requirements of the Americans with Disabilities Act.





Water and Sewer
P.O. Box 330316
3071 SW 38th Avenue
Miami, Florida 33233-0316
T 305-665-7471

miamidade.gov

February 28, 2018

Honorable Carlos A. Gimenez, Mayor
Honorable Esteban L. Bovo, Chairman and Members of the Board of County Commissioners
Honorable Harvey Ruvin, Clerk of the Circuit and County Courts
Pedro J. Garcia, Property Appraiser
Abigail Price-Williams, County Attorney
Miami-Dade County, Florida

Ladies and Gentlemen:

We are pleased to present the Comprehensive Annual Financial Report (CAFR) of the Miami-Dade Water and Sewer Department (Department, a.k.a. WASD) for the fiscal year ended September 30, 2017 (FY2017). This report presents a full set of financial statements prepared in conformity with U.S. Generally Accepted Accounting Principles (GAAP) as promulgated by the Governmental Accounting Standards Board (GASB) and audited by a firm of independent certified public accountants retained by the Department.

Management has established a comprehensive framework of internal controls to provide a reasonable basis for asserting the financial statements are fairly presented. While the independent auditor has expressed an opinion on the financial statements contained in this report, management is responsible, in all material respects, for both the completeness and reliability of the information contained in this report. For the fiscal year ended September 30, 2017, the Department received an unmodified opinion from its independent auditors.

This report may be accessed via the Internet at http://www.miami-dade.gov/wasd/reports_financial.asp.

The financial statements comprise the Management's Discussion and Analysis (MD&A), financial statements, notes to the financial statements, and Required Supplementary Information (RSI). Immediately following the independent auditors' report is the MD&A, which provides a narrative introduction, detail overview and analysis of the Department's financial activities for FY2017. The MD&A complements this Letter of Transmittal and should be read in conjunction with it.

PROFILE OF GOVERNMENT

In December 1972, the Board of County Commissioners (Board) of Miami-Dade County, Florida (County) created the Miami-Dade Water and Sewer Authority (Authority) for the purpose of establishing an agency responsible for providing water and wastewater services throughout the County. In 1973, all properties of the water and wastewater systems of the City of Miami and of the County were put under the control of the Authority. The Board changed the status of the Authority to that of a County department effective November 1, 1983, under the provisions of Miami-Dade County Ordinance 83-92, establishing the "Miami-Dade Water and Sewer Authority Department." On October 19, 1993, the Department changed its name to the Miami-Dade Water and Sewer Department.

MIAMI-DADE
COUNTY

The Department's water system, considered the largest water utility in the Southeast United States, serving approximately 443,615 retail customers and 15 municipal wholesale customers within Miami-Dade County. Water is drawn primarily from the surficial Biscayne Aquifer, a non-artesian (or near surface) aquifer, which underlies an area of about 3,200 square miles in Miami-Dade, Broward, and Palm Beach counties.

The water system consists of three regional water treatment plants (WTP), the shared Hialeah reverse osmosis water treatment plant, and five small auxiliary treatment facilities that service the southernmost area of the County. The three regional plants are John E. Preston, Hialeah and Alexander Orr, Jr. water treatment plants. The total combined rated treatment capacity of these three WTPs is 481 MGD (million gallons per day). There are fifteen wellfields comprised of 94 production wells and five aquifer storage and recovery wells. These wells supply untreated water to the treatment plants. In addition, a proposed South Miami Heights WTP is planned to replace three of the small auxiliary treatment facilities.

Water distribution throughout the 400 square miles service area is performed via seven remote finished water storage and pumping facilities and more than 8,200 miles of water mains ranging in size from 2 inches to 96 inches in diameter.

The wastewater system serves approximately 361,000 retail customers and 13 wholesale customers, consisting of 12 municipal customers and the Homestead Air Reserve Base. It consists of three regional wastewater treatment plants (WWTP), over 1,000 sewage pump stations and nearly 6,300 miles of collection and transmission pipelines. The service area of the system covers approximately 375 square miles. The three WWTPs are the South District, Central District and North District WWTPs. The disposal of the by-products of the treatment process (sludge and effluent or treated wastewater) is an important part of the Department's plan to improve and expand its sewer system.

Disposal of treated wastewater at the North District Plant and the Central District Plant is accomplished by discharge into the Atlantic Ocean. A portion of the treated effluent at the North District Plant is also disposed via deep injection wells. Environmental studies conducted by the Environmental Protection Agency (EPA) and examinations by the State and the Department conducted in 1994 have shown "no irreparable harm" and "no unreasonable degradation" to the environment because of the discharge of effluent from the North District Plant and the Central District Plant into the Atlantic Ocean. The State revised this policy when, during 2008, legislation was passed mandating a phase out of ocean outfall discharges.

The South District Plant disposes of its effluent through deep injection wells to the lower Floridan Aquifer at a depth below 2,400 feet. In 1995, the Department completed construction of five additional deep injection wells as part of its 112.5 million gallons per day (MGD) plant expansion project. In FY2014, the Department finalized operational permit for all the South District's 17 injection wells, which are now fully operational.

The Department continues to plan and design reclaimed water facilities. Currently, the Department reuses 13 MGD of treated wastewater, which includes 120,000 gallons per day for irrigation of the Florida International University Bay Vista Campus. Additional capacity and production of reclaimed water cur-

rently is available at the South District Plant, with 97.3 MGD of public access reuse quality water produced in FY2017. As part of the 20-Year Water Use Permit, the Department is committed to distributing about 117.5 MGD of additional reclaimed water for aquifer recharge, irrigation, power plant cooling and potentially coastal wetlands rehydration.

ECONOMIC CONDITION AND OUTLOOK

This economic condition and outlook report outlines the level of economic activity throughout Fiscal Year (FY) 2017 and forecasts the area's economic outlook for next fiscal year.

One year ago, in the year-end outlook for the local economy, it was anticipated that the level of economic activity in Miami-Dade would continue to grow in FY 2017 at a somewhat slower pace than in FY 2016. The reasoning behind this outlook was the assertion that the economy had reached and was operating in the mature phase of its cycle, in such a phase employment is high and grows at a slow pace, the unemployment rate is low and if it drops, it does so, modestly, and prices tend to start rising. Also mentioned was that going forward, FY 2017 should display these same characteristics absent an external shock to the system.

Prospects for growth of the United States' economy were thought to hold at a healthy 2.3 percent as reported by the Organization for Economic Co-operation and Development (OECD). A unified government would lead to a more expansionary fiscal policy than had been possible up to 2016.

Economic growth in the emerging markets and more importantly Latin America was expected to stabilize as the region found its footing after the downturn experienced in FY 2016. The combination of a strong US dollar and continued weakness in Latin America was expected to prolong the strengthening of imports and weakening of exports in the Miami Customs District, possibly resulting in the first trade deficit for the District in at least 30 years. The same phenomenon was seen as likely to extend the rebalancing of the tourist mix away from international and towards domestic visitors in FY 2017.

Real estate and construction activity in FY 2017 was expected to be moderate as foreign buyers retreated and the effects of years of real estate appreciation affected affordability for residents.

Miami-Dade's employment would continue to grow given the health of the overall economy, but at a slower pace given that both idle workers and economic resources would be harder to come by. The higher utilization rate of economic inputs coupled with a more expansionary fiscal policy was expected to put upward pressure on prices.

This forecast of FY 2017 turned out to be a fair assessment of what actually took place at the international, national and local levels.

At the national level FY 2017 saw an upswing in economic activity, with real gross domestic product (GDP) increasing at an annual rate of 2.1 percent, compared to an increase of 1.5 percent in the prior



year. The acceleration in GDP growth was brought about by a level of investment that went from negative 1.3 percent in FY 2016 to positive 2.6 percent in FY 2017 and by a more favorable Net Exports component going from negative 10.6 percent in FY 2016 to negative 7.8 percent in FY 2017. Alongside the increased economic activity, and due in part to energy prices rebounding somewhat, inflation increased from FY 2016 0.9 percent to an ideal 2.1 percent. This uptick in the level of inflation came on the heels of a decrease of the headline unemployment rate of 50 basis points to 4.5 percent, the lowest level since FY 2007.

At the County level the signs of an economy functioning at or near the mature stage of the cycle were clearly visible. FY 2017 closed with the lowest unemployment rate since FY 2007 and after adding a smaller amount of workers to payrolls, FY 2017 ended with the highest number of employed persons ever. The residential real estate market continued to moderate with permits for new residential construction remaining flat over the previous year and both single-family and multifamily home sales declining for the second year in a row.

In the last month of the fiscal year Hurricane Irma reached Florida, and coupled with the economy being in the mature phase of its cycle, caused enough of a disruption to tip the performance of several indicators from positive to negative. Of note are Taxable sales, number of visitors to Miami, passenger traffic moving through Miami International Airport, all of which contracted in FY 2017 compared to FY 2016.

What follows is an overview of the economic conditions throughout the past year and a brief discussion about the trends associated with the area's key economic drivers.

EMPLOYMENT

During FY 2017 nonagricultural wage and salary employment (annual average) recorded an overall gain of approximately 23,100 jobs. This was an increase of 2.0 percent, to put total employment at a record high of 1,173,900 according to non-seasonally adjusted data from the Bureau of Labor Statistics. This gain in employment represented a slowdown from the prior fiscal year. It also represents the second consecutive year of deceleration, signaling a maturing labor market characterized by less slack. At the same time, slower expansion of the labor force compared to the expansion of employment resulted in a decrease in the unemployment rate. The average annual unemployment rate for the year stood at 5.1 percent, compared to 5.5 percent a year earlier. Moreover, the unemployment rate for the month of September 2017 stood at 4.7 percent, a full percentage point lower than in September 2016 when it stood at 5.7 percent.

Government as well as private economic sectors with the exception of financial activities were contributors to employment growth. The top three sectors that gained jobs were education and health services, trade, transportation and utilities and leisure and hospitality, registering gains of 6,925, 4,583 and 4,300 jobs respectively. Significant job gains also occurred in other services adding 2,675 positions and government up 2,416 positions.

REAL ESTATE MARKET

Traditionally, the real estate sector in Miami-Dade County is viewed as one of the most important measures of the County's economic health. In FY 2017, as prices continued to rise, single family home sales contracted for the second year in a row, while condominium sales hit a fourth year of decline, approaching 13,000 units after reaching 17,183 in FY 2013. At the same time distressed market activity appears to be winding down as new foreclosure filings continued to decline for the fifth year in a row.

During FY 2017 sales of existing single-family homes decreased 2.5 percent over the prior fiscal year with 12,864 homes sold. Sales of condominiums dropped 8.5 percent over the prior year with 13,033 units sold. Cash sales accounted for 56.3 percent of all condo sales in FY 2016 down from 62 percent in FY 2016. Much of this investor-cash activity can be attributed to the foreign-based demand for housing, especially from South America.

In terms of valuation, housing prices continued their upward trend in FY 2017. The end of the fiscal year, September of 2017, saw the median sales price of an existing single-family home in Miami-Dade reach \$335,000, up over 6.5 percent from September of last year. Existing condominiums exhibited growth in the median sales price of 7.0 percent from September of 2016 to \$234,500.

Data from the County Clerk shows new foreclosure filings are continuing to trend downward, approaching levels not seen since 2005 and 2006 prior to the housing bubble collapse. FY 2017 saw 6,333 new filings. Mortgage rates on thirty-year fixed rate mortgages in the Miami metropolitan area averaged 4.01 percent in FY 2017, up 25 basis points from the previous year.

Following a 9 percent drop for residential units permitted in FY 2016, FY 2017 saw permitting activity remain essentially flat. Over the year permits were issued for the construction of 10,600 residential units, up 0.5 percent over the prior year.

The commercial/industrial components of the real estate market continued to improve on the gains from the previous year. Office vacancy declined 70 basis points to 8.5 percent from 9.2 percent a year earlier, prompting the average rate per square foot to inch higher, up 0.6 percent. The retail vacancy rate increased slightly from FY 2016 to FY 2017 from 3.0 percent to 3.3 percent. Average lease rates for retail stand-alone space were up 14.9 percent year over year to \$39.90 per square foot while average lease rates in shopping centers increased 6.2 percent from FY 2016 to \$31.90 per square foot. The industrial market saw an increase in vacancy rate from 3.7 percent in FY 2016 to 4.1 percent in FY 2017. Average lease rates for Industrial space were down 3.5 percent in FY 2017 compared to FY 2016 to settle at \$11.34 per square foot, due to significant deliveries of new space. 5.3 million square feet remain under construction.

SALES INDICATORS

Taxable sales declined an inflation adjusted 1.7 percent from FY 2016 to FY 2017 to settle at \$51.5 billion dollars. In nominal terms taxable sales increased by 0.3 percent, not enough to make up for an annual

inflation of 2.1 percent. September of 2017 saw a particularly sharp drop compared to September of 2016 leading to reason that Hurricane Irma left its imprint on this set of indicators. FY 2017 saw declines across-the-board for all major categories, with the exception of business, from the previous year.

After posting healthy increases in FY2015 and FY2016 Auto and Accessories experienced the sharpest decline among all sectors in FY2017, with a 6.9 percent drop to \$7.4 billion. Tourism experienced the second sharpest decline, posting a 2.8 percent drop to \$12.1 billion, followed by consumer nondurables with a decline of 1.9 percent, consumer durables down 1.7 percent and construction down 1.5 percent. The only sector that saw gains in taxable sales was Business with a 4.4 percent increase to end the year at 10.2 billion. The weakness in taxable sales was reflected in an Index of Retail Activity that remained unchanged between FY 2016 and FY2017 after increasing sharply the five prior years.

INTERNATIONAL TRADE AND COMMERCE

International trade and commerce is a key component of Miami-Dade's economy. Since achieving its highest level ever measured by value (\$132.1 billion 2017 inflation adjusted dollars) in FY 2013, merchandise trade passing through the Miami Customs District (that includes an area broader than Miami-Dade) has fallen 15.7 percent to \$111.4 billion in FY 2017.

In contrast to the recurring merchandise trade deficits that the United States maintains year after year, the Miami Customs District exports more than it imports resulting in a trade surplus. Although the surplus is still present it had been narrowing in the five years to FY 2016. This trend reversed slightly in FY 2017 when exports registered an increase of 0.5 percent compared to a decrease of 9.6 percent during the prior year. Imports decreased by 1.4 percent following an increase of 2.5 percent in the prior year. Most of the Miami Customs District export markets are in South America, Central America, and the Caribbean accounting for 77 percent of the total. In addition, the majority of all U.S. imported perishables from these same regions are passing through the Miami District. The decrease in trade flows reflects the sluggish performance in the economies of most of the countries in these regions.

Two of Miami-Dade County's barometers of trade activity are the freight tonnage moving through Miami International Airport ("MIA") and Port Miami ("the Seaport").

At the former, overall air freight tonnage increased 1.6 percent, after increasing by 0.6 percent the preceding two years. At the Seaport, cargo tonnage figures were up by 4.4 percent after increasing 1.9 percent the year before. Port Miami accounts for 80 percent of total County trade measured by weight.

TOURISM

The state of Florida played host to more than 115 million overnight visitors for the first time in FY 2017. Miami-Dade accounted for just over 13 percent of all visitors to the state.

Visitors to the Miami area fell by 0.7 percent in FY 2017, after increasing by 4.8 percent the previous year. In total, there were 15.7 million overnight visitors, down from 15.8 million recorded in FY 2016. The drop

in visitors resulted from a drop of 3.3 percent in domestic visitors outweighing an increase of international visitors of 2.1 percent. As with taxable sales, a big part of the explanation for the drop in total visitors in FY2017 can be traced back to Hurricane Irma, reflected in a 206,900 drop in visitors during the month of September 2017 vis-à-vis September 2016.

In conjunction with the decrease in visitors, the Miami International Airport passenger levels stood at 43.8 million in FY 2017, representing an annual drop of 2.5 percent compared to a gain of 3.6 percent in the prior year. By contrast passenger traffic at PortMiami increased by 7.2 percent to 5.34 million passengers in FY 2017 after a 1.3 percent increase in FY 2016 and no change in FY 2015.

The lower number of visitors coupled with an increased hotel room inventory, led to a reduction in hotel occupancy rates relative to a year ago. In FY 2017, hotel occupancy rate stood at 75.2 percent, down from 78.0 percent in FY 2016. The average hotel room rate remained unchanged at just over 190 dollars.

FUTURE OUTLOOK

As mentioned in the introductory section, since FY 2016 the Miami-Dade economy has displayed signs of a mature phase of the economic cycle, in such a phase employment is high and grows at a slow pace, the unemployment rate is low and if it drops, it does so, modestly, and prices tend to start rising. Going forward, FY 2018 will continue to operate under these same dynamics, but now coupled with the effects of a recently passed deficit financed tax code overhaul.

Since FY 2017 was negatively affected by the direct impacts of Hurricane Irma, FY 2018 will benefit from both a low bar of comparison and the economic boosts of cleanup and reconstruction that followed the hurricane.

Because of its location and economic trade and tourism ties, Miami-Dade's economy is influenced by developments in both the broader US and Latin American economies.

On the domestic front, due to the structuring of the 2017 passed tax reform bill, investment spending should see a measurable increase, as well as more personal consumption derived from increased disposable income. Prospects for growth of the United States' economy are thought to accelerate to 2.5 percent by the Organization for Economic Co-operation and Development (OECD). A healthy rate by current standards, but well below the 3 percent average between 1987 and 2007.

Within the United States, Florida is particularly well suited to benefit from the tax overhaul, given the mixture of the state's taxing structure and the design of the new legislation.

At the same time economic conditions in Latin America should continue to improve as we enter the first worldwide concerted bout of growth since 2010. Forecasts for Brazil, Mexico, Argentina, Chile and Colombia, all point to stronger growth in 2018.





The recent pullback of the US dollar, the continued strengthening of Latin American economies, coupled with the increase in investments and consumer spending in the United States should help increase trade in the Miami Customs District. Depending on what forces enact a stronger influence the District's trade surplus will expand or contract.

Looking beyond FY 2018, the changing relationship of the United States with the rest of the world, possible changes in immigration policy, and how the changes to be implemented in the federal tax code during an expansionary economic phase play out remain factors to watch closely.

Real estate and construction activity in FY 2018 is expected to continue to benefit from foreign buyers returning while at the same time suffer from the effects of years of real estate appreciation affecting affordability for residents.

Employment should continue to grow given the health of the overall economy, but at a slower pace given that both idle workers and economic resources are harder to come by. The higher utilization rate of economic inputs coupled with a more restrictive immigration approach by the administration, and a deficit financed tax overhaul should lead to higher wages and ultimately exert upward pressure on prices.

Evaluating all the likely developments in major areas of the economy leads to a forecast that the Miami-Dade economy appears poised to continue growing through FY 2018, at least at the levels achieved during the previous fiscal year. The degree of expansion will depend upon the stability in government employment, the level of growth in investments by firms, the level of growth in tourism and growth rates in Central and South America and the Caribbean.

Major Initiatives

Water System

Water-Use Efficiency Plan

The Water Use Efficiency Plan (Plan) is in its tenth year of operation as required by the 20-year Water Use Permit (WUP) issued in 2007 by South Florida Water Management District and approved by the Board of County Commissioners. The Plan requires the implementation of water conservation Best Management Practices (BMPs) through a quantifiable process that provides for accountability of the water saved through the Plan. This effort has allowed the Department to capitalize on policy measures adopted as part of the plan including: permanent irrigation restrictions, aggressive water conservation information outreach campaigns to residents and businesses, construction requirements for water efficient fixtures and water loss reduction programs. The results of these initiatives and the Plan BMPs has provided for a 20 MGD finished water demand reduction as of December 31, 2016 compared to the finished water demand prior to implementation of the Plan. Miami Dade County's (County) conservation efforts have resulted in the extension of its WUP, cancellation of two alternative water supply projects and deferral of several other water supply projects making water conservation the least expensive form of alternative water supply. The County was the first in the state to use the Florida Department

of Environmental Protection's Conserve Florida "EZ GUIDE," a web-based application that facilitates the development of goal-based water conservation planning. The Plan's objectives include improving water-use efficiency, reducing loss and waste, and complying with the State's legislative criteria and water conservation initiatives.

The following BMP projects are currently being implemented:

- ◆ High efficiency fixture rebates including toilets, faucets, and showerheads for single-family and multi-family properties
- ◆ Senior high efficiency toilet purchase and installation rebates
- ◆ High efficiency rebates for commercial and lodging facilities
- ◆ Free high efficiency showerhead exchange program for single-family and multi-family properties
- ◆ Free high efficiency showerhead exchange program for lodging facilities
- ◆ Landscape irrigation evaluation rebates for residential and commercial properties
- ◆ Landscape ordinances requiring the use of drought tolerant plants
- ◆ Implementation of a county-wide permanent two day a week landscape irrigation ordinance
- ◆ Tiered rate structure that charges more for increasing water use
- ◆ Construction standards effective January 1, 2009 that codify high efficiency plumbing fixtures in new residential, industrial, commercial and institutional properties
- ◆ Comprehensive outreach campaigns to county residents including in-school education efforts to promote water conservation
- ◆ Implementation of a leak detection survey and repair of the entire water distribution system on an annual basis

Water Reclamation

Reclaimed water is highly treated, filtered and disinfected wastewater that is reused for a variety of purposes. Reclaimed water can replace or supplement groundwater supplies. Currently, the Department has been able to replace potable water used for process water at its wastewater treatment plants with reclaimed water. Valuable drinking water is thus conserved by using reclaimed water in several wastewater treatment plant processes, as well as the landscape irrigation system at two of the Department's wastewater treatment plants and at Florida International University's Biscayne Bay Campus. The Department continues to evaluate opportunities for cost-effective use of reclaimed water that can reduce demands for potable water and meet the need for additional water to restore and enhance the environment, irrigate landscaping, and serve industrial water demands for electrical production.

Wastewater System

Consent Decree Program

The County negotiated a Consent Decree with EPA and the Florida Department of Environmental Protection (FDEP), which was lodged with the US District Court on June 6, 2013 and entered on April 9, 2014. This Consent Decree is designed to build on the successes achieved by the Department under previous Consent Decree programs. The overarching goal of the Consent Decree is to reduce sanitary sewer overflows from the wastewater system.





The Consent Decree requires the Department to upgrade its collection, transmission, and treatment facilities by completing over 80 individual capital improvement projects throughout the wastewater system. It also requires the County to implement a Capacity, Management, Operations and Maintenance (CMOM) Program to document and enhance many of its existing programs.

As of September 30, 2017, the County has completed eighteen (18) capital improvement projects with an approximate total cost of \$224M. Forty (40) projects are currently in procurement and construction with an approximate total cost of \$1.07B, and eighteen (18) projects are in the planning, design and permitting phases.

Regarding the CMOM Program, the County developed ten (10) Capacity, Management, Operations and Maintenance Plans with the objective of incorporating standard operation and maintenance activities with a new set of information management requirements. Nine (9) of these plans have been approved by EPA/FDEP and are currently in the implementation phase. In addition, the County remains in compliance with five additional plans that are a continuation from previous Consent Decree.

Implementation of the Consent Decree is underway, and the County is in full compliance with all Consent Decree requirements.

Ocean Outfall Legislation Program (OOL)

In 2008, the Florida Legislature approved and the Governor signed a law requiring all wastewater utilities in southeast Florida utilizing ocean outfalls (OOL) for disposal of treated wastewater to reduce nutrient discharges by implementing advanced wastewater treatment by 2018 or equivalent, cease using the outfalls by 2025, and reuse 60 percent of the wastewater flows by 2025. Because of this law, the Department has analyzed several compliance options. Each option includes additional system capacity to meet average daily and peak flow demands anticipated in 2035. After considering several options, the Department's recommended option includes a new West District plant with an average daily flow of 102 million gallons per day (MGD), reduced daily flows to North District of 85 MGD and to Central District of 113 MGD, and flows to South District of 131 MGD. The estimated cost of system-wide OOL Plan upgrades is \$5.7 billion. This cost includes \$3.8 billion that is specifically required for OOL compliance.

The nutrient reduction by 2018 can be met by reducing the outfall baseline loadings of total nitrogen and total phosphorus, which would be equivalent to that which would be achieved by the Association of Water Technology (AWT) if the requirements were fully implemented beginning December 31, 2018, and continued through December 31, 2025. Since 2008, the Department has been using the existing deep injection wells at the North District Wastewater Plant to reduce flow going out the outfall. In addition, the Department has completed construction of one (1) industrial deep injection well, and is in the process of completing a second-deep injection well, at the Central District Wastewater Treatment Plant, which will be able to reduce nutrient loading to meet the criteria by removing the waste stream from the centrate process, the gas scrubbers, and the treated effluent from the ocean outfall discharge and injecting into a

deep injection well. The first injection well was initially permitted as an Underground Injection Control (UIC) Class V Exploratory Well on October 30, 2013 to evaluate the Oldsmar Formation Boulder Zone for wastewater disposal, and the Upper Cretaceous formations to identify additional potentially suitable wastewater disposal zones below the Floridan Aquifer System. On July 28, 2015, the Department submitted a permit application to convert the Class V well to a Class I and to include a second injection well, CDIIW-2. Construction on the wells was started in FY2014, and completed in FY2017.

The Pump Station Improvement Program (PSIP)

The Pump Station Improvement Program was created to evaluate and improve the operation and transmission capacity for the more than 1,000 wastewater pump stations that Miami-Dade Water and Sewer Department owns and/or operates. Projects include sewer pump station refurbishing, installation of new pumps, electrical upgrades, reduction of infiltration/inflow, and the installation of new force mains. Currently, the Department is working in 112 geographic areas, known as sewer basins. This includes projects at 111 pumping stations and 25 force mains. Current estimated construction costs for this work is approximately \$172 million.

The PSIP Program Manager has validated all 112 Remedial Action Plans (RAPs) and developed a comprehensive master schedule for the entire program. This validation took into consideration several factors, including required regulatory milestones, development industry needs, sanitary sewer overflow locations, absolute moratorium stations, reserved capacity, roadway moratoria, and stations within drinking water wellfield protection areas. Since the program inception on January 2014 a total of 66 project have been completed.

Infiltration and Inflow (I & I) Reduction Program

The Department continues to perform sanitary sewer evaluation surveys on approximately 33.9 million feet (6,422 miles) of sewage collection mains and laterals. During FY2017, more than 8,599 repairs were performed to the gravity system; 1,554,384 feet of gravity sewers and 9,984 manholes were inspected with closed circuit television. These activities help reduce the amount of miscellaneous water that enters the wastewater collection system through defects in existing pipe systems. This in return reduces the cost associated with wastewater treatment and disposal.

Supervisory Control and Data Acquisition System (SCADA)

Essential to the Department's daily operations is the ability to monitor and control its water and wastewater functions from a remote location. The Department's SCADA system is at the heart of this capability and is one of the largest of its kind in the country. The SCADA system, which is particularly important in cases of emergency operations and as a tool in meeting requirements of the Consent Decree/Settlement Management (CD/SA) program, has allowed workers in the Department's 24-hour emergency call center to continuously oversee the operations at its pump stations. It has also allowed water and wastewater treatment plant operators to manage plant functions from remote control panels, providing an increased level of efficiency. To-date, all pump stations owned and operated by the Department have SCADA installed.



The Department's three regional water and three regional wastewater treatment plants have SCADA installed and operational. All water wellfields are monitored and controlled by SCADA, and all 94 production wells have flow meters installed with SCADA monitoring for compliance with SFWMD regulations.

Upgrades to the SCADA system are being planned as part of the overall infrastructure upgrades to improve real time management and operational control of treatment systems and the distribution and collection systems.

Water and Wastewater Transmission System Computer Models

The Department maintains Water and Wastewater Transmission System Computer Models, which operate with the Geographic Information System (GIS) data on the respective systems. These models are critical for planning and evaluating the availability of system capacity for new developments and system upgrades. The models will also be used for the identification of long range transmission system facilities, including pumping stations and pipelines as part of the Integrated Water, Wastewater, and Reclaimed Water Master Plan. This plan will include upgrades needed to comply with the State of Florida Ocean Outfall Legislation which requires closing of the outfalls at the North and Central District Wastewater treatment plants by 2025. Water and wastewater flow projections needed for the model for this work were developed.

Performance Improvement

The Department continues to participate in national and state benchmarking surveys that assist the Department in reviewing internal key performance indicators and allow for a comparison to other like agencies in the State and across the country. In FY 2017, the Department participated in the Florida Benchmarking Consortium Benchmarking Survey and the American Water Works Association Survey.

The Department continues to prepare its business plan following the County's prescribed process. The plan identifies key issues and priority initiatives in the achievement of the Department's mission. Performance measures and scorecard goals are aligned with key priorities and the budget to allow the Department to meet the defined objectives by capitalizing on regularly monitored progress. WASD is in the midst of a \$13.5 billion Capital Improvement Program (CIP), the largest in Miami-Dade County's history, to improve the aging infrastructure in the next 15 to 20 years. The community continues to benefit from safe, clean, high quality drinking water, increased wastewater service reliability and capacity, enhanced water pressure, and fire protection.

The CIP includes the following components:

- ◆ Pump Station Improvement Program - Projects to improve pump stations and build new sewer force mains.
- ◆ Consent Decree - A Federally mandated program which will provide upgrades to wastewater treatment plants, pump stations and force mains.
- ◆ Ocean Outfall Program - A state mandated program which will allow the Department to eliminate the current two ocean outfalls and build a new wastewater treatment plant in Northwest Miami Dade County.

- ◆ Other capital improvement projects - Includes new water treatment plants and improvements to the water and wastewater plants, pump stations and pipelines.

Objectives have been defined in the Departmental scorecard that meet the requirements of the Consent Decree as well as the Ocean Outfall legislation. This information is available on the Miami-Dade web page which provides information to the public.

The Miami-Dade Water and Sewer Department is a leader and a model for implementing innovative employee ideas which have resulted in cost savings to the Department and, in turn, its customers. During FY 2017, WASD employees implemented efficiency projects resulting in approximately \$50,000 in savings to the Department.

The Pebble Program recognizes employees who provide exceptional and outstanding customer service to WASD's internal and external customers. Nominations are submitted and ranked by a Pebble Review Committee based on the information provided and the Pebble Program criteria. Quarterly and annual winners are rewarded for exceptional customer service work.

Rate Increase

On September 22, 2016, the Board of County commissioners adopted a County Budget Ordinance Number 16-104 authorizing an eight percent water and wastewater retail rate increase, effective October 1, 2016. The monthly bill of the average residential water and wastewater customer using 6,750 gallons was increased by approximately \$4.09, or to \$55.20 from \$51.11. In addition, the County Budget Ordinance authorized an average (dry and wet season) increase to the wastewater wholesale rate by \$0.1598 per thousand gallons to \$2.9477 from \$2.7879, and the water wholesale \$1.7341 per thousand gallons to remain the same. Wholesale water and wastewater rates per thousand gallons' rates are based on cost recovery.

Recent Developments

Commercial Paper (CP) Implementation

The Department has utilized \$400 million of its Commercial Paper program since its establishment in May 2016. The CP program has allowed the Department to fund its capital program as needed and reduce negative arbitrage.

WIFIA Loan

The United States Environmental Protection Agency ("EPA") has selected the Department to be one of the 12 entities invited to apply for funding through the inaugural Water Infrastructure Finance and Innovation Act ("WIFIA") loan program. The Department has been invited to apply for approximately \$79 million in WIFIA funding for its Ocean Outfall Reduction and Resiliency Enhancement project. WIFIA will fund up to 49% of this project's costs. The Department is currently completing its application. Final finding is dependent upon approval by the EPA and the Board.



Building Better Communities General Obligation Bonds (GOB)

In November 2004, Miami-Dade County voters approved a \$2.9 billion bond program which allows the County to issue long-term bonds to fund numerous neighborhood and regional capital projects to be completed over the next 11 years. The General Obligation Bonds are legally backed by the full faith and credit of the County which has committed future taxes over the next 40 years to repay the bonds. General Obligation Bonds typically are the least expensive type of debt available to government. Among the GOB funded capital projects are several addressing current and future water and wastewater infrastructure needs. Resolution R-537-14 adopted by the Board of County Commissioners on June 3, 2014 allocated funding for “Extension of Sewer System to Developed Commercial and Industrial Corridors of the County,” aka Commercial Corridor Project. Commercial Corridor Projects will be the largest single GOB project in Miami Dade Water and Sewer Department. The commercial corridor on Bird Road and the Industrial Park Area will be addressed by two Low Pressure Sewer System projects and is underway. Also, Basis of Design Report for ten (10) areas within the commercial corridor began in FY2016 and is ongoing. Other planned projects include countywide water and wastewater main installations; pump station rehabilitation projects; reclaimed water facilities and infrastructure. GOB funding continues to be used to mediate the risk associated with Dieldrin contamination of private wells in the Falls area at Caribbean Estates and currently an extensive area at Continental Park. In FY2018, the Department will have access to \$13.3 million dollars of funding for GOB projects.

GROWING WITH INFORMATION TECHNOLOGY (IT)

The Department is committed to using the latest and best-available information technology to carry out operations and serve the expanding needs of customers. For functions from researching client records to managing assets, the Department has sought to create or purchase computer software that will significantly raise efficiency levels.

WASD Information Technology (IT) Division is responsible for supporting the Department’s IT needs. This includes support of all systems to include administrative business; operations and maintenance functions; and construction initiatives of the utility. To this end, there is close collaboration with business units, the Information Technology Department, other County departments and various vendors, consultants, and other providers to ensure the Department is supported with the needed and desired technology.

Collaborative Projects with External Agencies

iWASD Allocations: System was fully launched, including data from the following building departments: Miami-Dade County, City of Miami, City of Doral. This system is used to assist municipalities with reporting requirements as stipulated in Miami-Dade County Code, Florida Statutes, and the Federal Consent decree to ensure adequate water supply and avoid sewer overflows. We are working with other municipalities so they can also begin to contribute permit information. Access to this application can be found at <http://www.miamidade.gov/water/gis-services.asp>.

iMDC Utility Coordination: System was fully launched, including data from the following agencies: Miami-Dade Department of Transportation and Public Works, Water and Sewer Department, and Florida

Department of Transportation. This system will be used to track all municipal and utility roadway projects within the County limits. With the thousands of CIP and other roadway projects planned by WASD alone, it is paramount to facilitate project coordination with other agencies to minimize construction impact to our citizens. We are working with other municipalities so they can also begin to contribute their construction projects. Access to this application can be found at <http://www.miamidade.gov/water/gis-services.asp>.

WAZE: WASD is contributing daily construction activity information. WASD staff has developed tools to allow inspectors to generate a WAZE report for each of their construction projects, estimated project duration, project number, and construction site image. This is being done for construction related to our CIP and donation (developer) projections. Since it was launched WASD has been submitted hundreds of notifications. Aside from the obvious benefit of minimizing traffic impact associated with WASD CIP activities, WASD WAZE reports have been used to improve project information details such as location and phase for dozens of projects. GIS and (Business Intelligence) BI dashboards also help managers monitor productivity and quickly determine where most of the construction is taking place on any given day.

Engineering, Planning, and Compliance

(GIS) Data Maintenance: We met all 7 GIS Federal Consent Decree Deadlines which include: 1) Complete the GIS backlog of as-builts; 2) Facilitate mechanism to report discrepancies between the GIS, as-built and conditions on the ground; 3) Develop “flagging process” for damage investigations to note GIS inaccuracies; 4) Provision for additional GIS training and refresher training; 5) Wider usage of GIS web viewers; 6) Collect survey grade manhole rim and gravity invert elevation and reflect in the GIS; 7) Development of a system to interface with the Miami-Dade WCTS hydraulic computer model so that the information can be efficiently exported to the WCTS hydraulic computer model.

Meter to Cash

During the past year the WASD Internet Self-Service application, which interfaces with the back-end Customer Care and Billing (CCB) system, continued to expand. Customers are now able to update their Contact Information (phone number, email address and mailing address), receiving email notifications that a change was made. Another feature was the implementation of AVA (Watson) Chatbox, which allows customers to ask questions using natural language, and to request payment extensions.

The CCB system was upgraded to version 2.4 and all Oracle databases were upgraded to version 12C. Real-time notifications were implemented to automatically cancel Field Activities issued to cut service for non-payment as soon as the customer makes the payment on the ACI website. New interfaces were built from CCB to the Avaya IVR system to implement ANI lookup, which derives the customer’s account number from their phone number when they place a call. Another new interface performs account verification based on their zip code.

Current efforts include Self-Service application new features such as requests to disconnect, start and transfer service, and requests for bill adjustments in accordance with WASD Rules and Regulations.





Another current effort consists in the creation of a Data Warehouse which will allow for dashboard development and more effective reporting. Upgrade of Itron Meter Reading application to version 4.0 is also planned for the near future.

ERP Financials

The ERP Financials system was successfully upgraded to version 9.2 in August 2017. This was a collaborative project among ITD, MDAD and WASD. The goal of this project was to upgrade the ERP Financial Tools and application software to a current level supported by Oracle and to take advantage of enhancements as well as new functionality in the new release of PeopleSoft ERP Financials.

New modules and/or functionality implemented include: Fluid Mobile, Work Centers, Work Bench, Pivot Grids, Activity Guides, AP Payment Request, Chart Field Request Workflow, Asset Transfer Workflow, Capital Asset Mobile Inventory, and Bank Reconciliation for ACH Payment.

The upgrade was completed on time and within budget.

Enterprise Asset Management System (EAMS)

Deployed a tablet based mobile solution to Water Distribution and Wastewater Collection which better facilitates field data collection with GIS map capabilities and to improve work order data accuracy of equipment. Currently deployed to 120+ field staff. Plans include deployment to the Water and Wastewater plants consisting of approximately 250 users.

Planning, testing and configuration of Infor version 11.3 upgrade to maintain product support.

Systems Infrastructure

The upgrade of WASD computing and technology infrastructure continues. This includes upgrades to servers, storage, switches, Wi-Fi upgrades, and replacement of obsolete computers. In addition, Windows 10 and Office 365 with accompanying applications: OneDrive, OneNote and Skype which provides for better management of emails, video conference, audio conferencing and files were implemented.

The deployment of SharePoint Online and 2016 for content management and collaboration. This includes the migration of SharePoint 2007 and 2013 sites and the decommissioning of related infrastructure. Additionally, SharePoint Online will replace WASD intranet site with a more flexible and responsive system leading to the decommissioning of the existing intranet infrastructure based on obsolete technology.

Big Data / Business Intelligence

Big Data concepts have been applied to the management of SCADA Historical data. Over fifteen billion rows of SADA historical data have been loaded with an additional four million rows added each day into Microsoft Azure Data Warehouse. This system allows WASD to better manage and analyze the data.

Business Intelligence tools with dashboards have been developed. Use cases include: Rate Study,

Overtime, Wholesale Billing, Capital Planning, and Energy Consumption. Several other use cases have been identified such as Energy Usage, Wholesale Billing, and Vendor Payment. This technology allows for better analysis of data and presenting actionable information to help managers and other end users make more informed business decisions.

COMMUNITY OUTREACH

The Department's Public Affairs Office sponsors and participates in several programs aimed at educating the public on the quality of its drinking water, its operations, under-utilized customer services and water conservation and the Department's Multi-Year Capital Improvement Program.

WASD provides direct customer outreach and advertising via radio, television, print, transit bus benches, movie theatres, publications, and the Internet about water quality, conservation programs, and customer service programs and services. In addition to traditional forms of media such as newspapers, television and radio talk shows, Public Affairs also has utilized Facebook, Twitter, Instagram, YouTube, and movie theaters to capture a wider and more diverse audience.

The Office also revamped and revised its internal and external websites making them more user-friendly and more transaction-oriented for customers to conduct their business 24-hours-a-day. The website has become a central point for customers to conduct business with the Department. The website was redesigned to improve customer contact and transactions.

There is now a self-service component to the Department website that streamlines many features, making conducting WASD on-line account business more user-friendly, as well as convenient to the customer because they can access this information 24-hours-a-day.

Furthermore, informational videos (currently posted on the Miami-Dade County portal and YouTube) promote the County's drinking water, the proper disposal of grease, how to read your meter, and how to check for leaks.

To promote the department's Multi-Year Capital Improvement Program and Consent Decree, an advertising campaign has been developed to educate the community of the need for upgrades throughout the system as well as the need for funding.

To promote Drinking Water Week, Public Affairs continued the Drinking Water Week Photo contest. Submissions were sent to WASD through the department's social media accounts – Facebook, Twitter, and Instagram – by posting the photo with the hash tag #miamidadewater. This outreach program earned WASD one of its eight National Association of Counties (Nacho) awards for government excellence. The winning photo will be featured in WASD's 2018 Drinking Water Week advertisements, as well as other departmental marketing campaigns.

In FY2017 – Public Affairs debuted the Value of Water PSA Contest where high school students are



encouraged to use creative writing, video production skills, and imagination to submit a 20 to 30 second Public Service Announcement to demonstrate the Value of Water. The winning PSA was aired County-wide in various movie theaters as part of the department's advertising campaigns.

In FY2017, the Office planned the Ninth Annual Model Water Tower Competition to dialogue with an underserved demographic – teens. The competition engages students by having them apply scientific theory learned in the classroom and apply it in real-life situations by building a working model water tower. By initiating this communication with high school students, they were introduced to government services, as well as future career opportunities in the water profession.



Other Information

INDEPENDENT AUDIT

The accompanying financial statements have been audited by the Department's independent auditors and their report on the financial statements resulting from their audit is included in the financial section of this report.

AWARDS

Certificate of Achievement for Excellence in Financial Reporting

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to the Department for its Comprehensive Annual Financial Report for the fiscal year ended September 30, 2016. The Certificate of Achievement is a prestigious national award that recognizes conformance with the highest standards for preparation of state and local government financial reports. To be awarded a Certificate of Achievement, a government unit must publish an easily readable and efficiently organized comprehensive annual financial report, whose contents conform to program standards. Such report must satisfy both generally accepted accounting principles and applicable legal requirements. A Certificate of Achievement is valid for a period of one year only. The Department has received a Certificate of Achievement for the past 34 fiscal years. We believe our current report continues to

conform to the Certificate of Achievement program requirements, and are submitting it to the GFOA.

ACKNOWLEDGEMENTS

We would like to thank all the Department's employees for their hard work and dedication during the past fiscal year. We would also like to thank the Department's Controller Division and the Public Affairs Section, and the County's Internal Services Department's Printing and Graphics Section, for their tireless efforts and professionalism in preparing this report, as well as our external auditors for their invaluable assistance. Finally, a special acknowledgment is extended to the Mayor and Board of County Commissioners for their continued leadership in enabling the Department to fulfill its role.



Kevin T. Lynskey
Director



Frances G. Morris
Chief Financial Officer



Government Finance Officers Association

**Certificate of
Achievement
for Excellence
in Financial
Reporting**

Presented to

**Miami-Dade Water and Sewer
Department, Florida**

For its Comprehensive Annual
Financial Report
for the Fiscal Year Ended

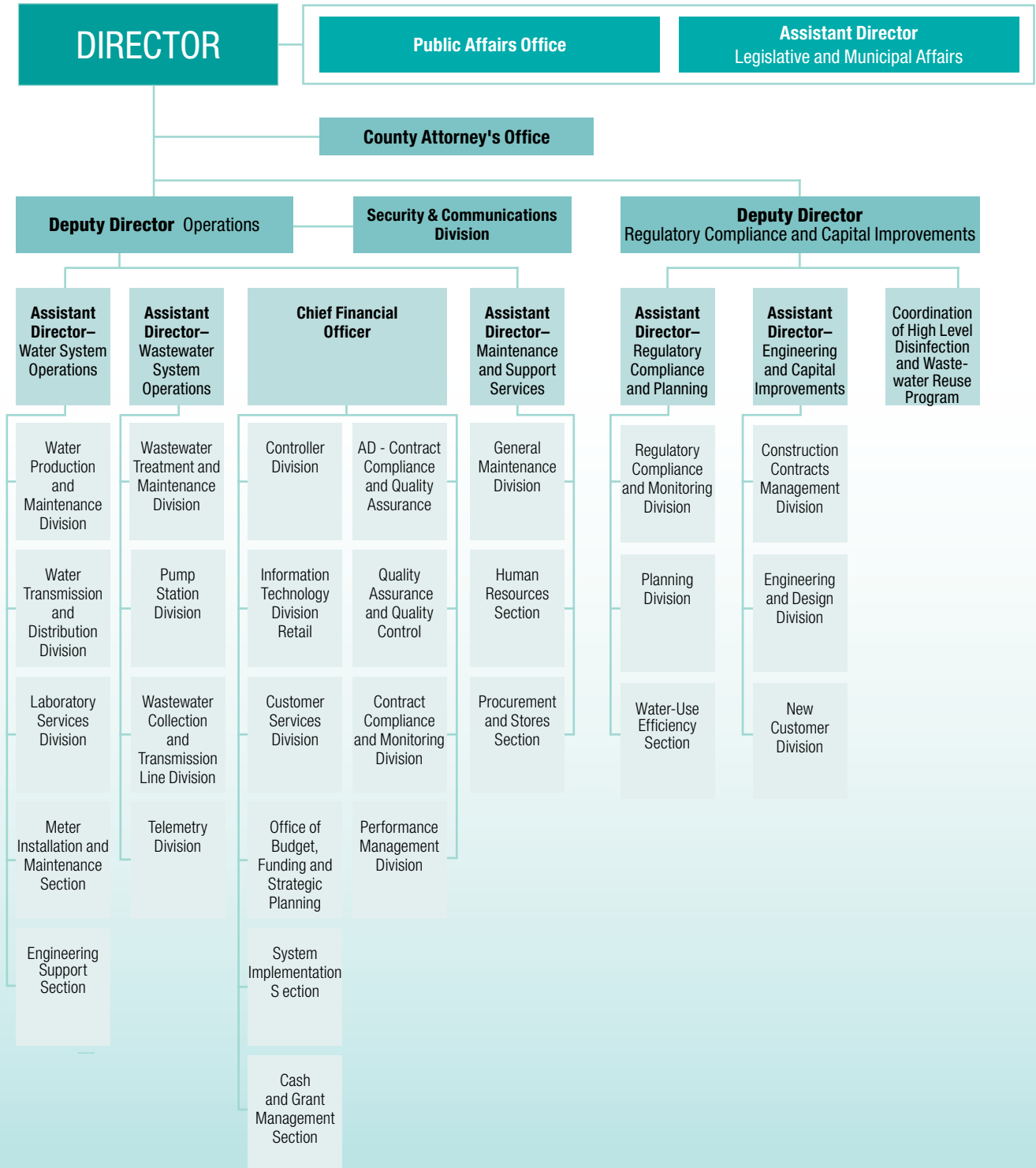
September 30, 2016

Christopher P. Morill

Executive Director/CEO



Organizational Chart





(This page left blank intentionally)

Financial Section





INDEPENDENT AUDITORS' REPORT

Honorable Carlos A. Gimenez, Mayor, and
Honorable Chairperson and Members of the
Board of County Commissioners
Miami-Dade County, Florida

Report on the Financial Statements

We have audited the accompanying financial statements of the Miami-Dade Water and Sewer Department, a department of Miami-Dade County, Florida (the Department), which comprise the statements of net position as of September 30, 2017 and 2016 and the related statements of revenues, expenses and changes in net position, and cash flows for the fiscal years then ended, and the related notes to the financial statements.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.



We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Department as of September 30, 2017 and 2016, and the changes in its financial position and its cash flows for the fiscal years then ended in accordance with accounting principles generally accepted in the United States of America.

Emphasis of Matters

As described in Note 1, the financial statements present only the Department and do not purport to, and do not, present fairly the financial position of Miami-Dade County as of September 30, 2017 and 2016, the changes in its financial position, or, where applicable, its cash flows for the fiscal years then ended in conformity with accounting principles generally accepted in the United States of America. Our opinion is not modified with respect to this matter.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis, the schedule of funding progress - OPEB, the schedules of the Department's proportionate share of the net pension liability and the schedules of Department contributions on pages 33-36 and 67-69 be presented to supplement the financial statements. Such information, although not a part of the financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the financial statements, and other knowledge we obtained during our audits of the financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Supplementary and Other Information

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise the Department's financial statements. The information identified in the table of contents as supplementary financial data is presented for purposes of additional analysis and is not a required part of the financial statements.



The supplementary financial data is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the financial statements. Such information has been subjected to the auditing procedures applied in the audits of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the supplementary financial data is fairly stated, in all material respects, in relation to the financial statements as a whole.

The introductory and statistical sections have not been subjected to the auditing procedures applied in the audits of the financial statements, and accordingly, we do not express an opinion or provide any assurance on it.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated February 28, 2018 on our consideration of the Department's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the Department's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Department's internal control over financial reporting and compliance.

Marcum LLP

Miami, FL
February 28, 2018



Management's Discussion & Analysis

OVERVIEW

The following Management's Discussion and Analysis (MD&A) serves as an introduction to the financial statements of the Miami-Dade Water and Sewer Department (Department) for the fiscal year ended September 30, 2017. The MD&A presents management's examination and analysis of the Department's financial condition and performance. It should be read in conjunction with the financial information of the transmittal letter in the introductory section and the financial statements in the financial section of this report. The financial statements include the statement of net position; statement of revenues, expenses, and changes in net position; statement of cash flows; notes to the financial statements; and required supplementary information.

The statement of net position presents the financial position of the Department as of a specific date. It provides information about the nature and amount of resources (assets and deferred outflows) and obligations (liabilities and deferred inflows), with net position being the difference between assets and deferred outflows and liabilities and deferred inflows. Increases or decreases in net position may serve as a useful indicator of whether the financial position of the Department is improving or deteriorating.

The statement of revenues, expenses and changes in net position present information showing how the Department's net position changed during the fiscal year. All changes in net position are reported as soon as the underlying event giving rise to the change occurs which may not coincide with the timing of the related cash flows.

The statement of cash flows presents the cash activities of the Department segregated in the following four major categories: operating, non-capital financing, capital and related financing, and investing. This statement also presents the changes in cash and cash equivalents of the Department. The notes to the financial statements provide required disclosures and other information that are essential to the full understanding of data provided in the statements.

FINANCIAL POSITION

A summary of the Department's net position and related changes for the fiscal years ended September 30, 2017, 2016 and 2015 is shown on the following page. The unrestricted portion of net position (available to meet ongoing and future obligations of the Department) decreased by \$0.6 million, or 2.2% in 2017. In 2016, the unrestricted portion of net position increased by \$0.02 million, or 0.1%.

Total expenses decreased by \$8.3 million, or by 1.32%, in 2017 mainly due to a decrease in interest expense attributable to an increase in capitalized interest and improvements in the water purification process. In 2016, total expenses decreased by \$19.5 million, or by 3.0%. This decrease was primarily due to depreciation and interest expense attributable to an increase in capitalized interest.

Total net position as of September 30, 2017 and 2016 were approximately \$2.5 billion and \$2.3 billion, respectively. For the fiscal year ended September 30, 2017, the Department's total net position increased by \$140.9 million, or by 6.1%. For the fiscal year ended September 30, 2016, the Department's total net position increased by \$130.3 million, or by 5.9%.



Management's Discussion & Analysis

(In thousands)

SUMMARY OF NET POSITION

	2017	2016	2015
Current and Other Assets	\$ 1,046,074	\$ 915,453	\$ 1,001,506
Capital Assets, net	4,239,832	3,966,926	3,698,846
Total Assets	<u>5,285,906</u>	<u>4,882,379</u>	<u>4,700,352</u>
Deferred Outflows of Resources	145,737	148,703	115,112
Total Assets & Deferred Outflows of Resources	<u>5,431,643</u>	<u>5,031,082</u>	<u>4,815,464</u>
Current liabilities	317,708	266,953	252,053
Long-term Liabilities	2,635,660	2,429,925	2,345,369
Total Liabilities	<u>2,953,368</u>	<u>2,696,878</u>	<u>2,597,422</u>
Deferred Inflows of Resources	9,795	6,586	20,725
Total Liabilities & Deferred Inflows of Resources	<u>2,963,163</u>	<u>2,703,464</u>	<u>2,618,147</u>
Net Position			
Net Investment in Capital Assets	1,851,041	1,730,528	1,590,653
Restricted	356,540	330,257	340,066
Unrestricted	260,899	266,833	266,597
Total Net Position	<u>\$ 2,468,480</u>	<u>\$ 2,327,618</u>	<u>\$ 2,197,316</u>

SUMMARY OF CHANGES IN NET POSITION

Water operating revenues	\$ 316,045	\$ 291,043	\$ 285,438
Wastewater operating revenues	391,287	368,739	327,878
Investment Income (Loss)	(9,649)	(4,853)	20,557
Other nonoperating revenues	29,457	51,455	51,904
Total Revenues	<u>727,140</u>	<u>706,384</u>	<u>685,777</u>
Water source of supply	14,193	14,284	10,931
Water power and pumping	1,976	1,982	2,054
Water purification	60,387	68,272	63,921
Water transmission and distribution	31,228	30,554	30,892
Wastewater collection system	33,457	26,866	27,634
Wastewater pumping	42,543	39,549	37,330
Wastewater treatment	92,347	91,915	92,308
Customer accounting	9,737	7,442	6,355
Customer service	24,423	22,797	21,713
General and Administrative	88,239	84,827	75,769
Depreciation	187,921	184,424	188,909
Interest expense	25,978	46,369	75,728
Other nonoperating expenses	8,958	10,412	15,718
Total Expenses	<u>621,387</u>	<u>629,693</u>	<u>649,262</u>
Income before contributions	105,753	76,691	36,515
Capital contributions	35,109	53,611	46,692
Increase in net position	140,862	130,302	83,207
Net position at beginning of year	2,327,618	2,197,316	2,219,687
GASB 68 Restatement ⁽¹⁾	-	-	(105,578)
Net position at end of year	<u>\$ 2,468,480</u>	<u>\$ 2,327,618</u>	<u>\$ 2,197,316</u>

⁽¹⁾ The Department implemented GASB Statement No. 68 in fiscal year 2015. As a result, the Department's beginning net position in fiscal year 2015 was restated to account for the effects of disclosing pension costs.



Management's Discussion & Analysis

CAPITAL ASSETS

The following table summarizes the Department's capital assets, net of accumulated depreciation, for the fiscal years ended September 30, 2017, 2016 and 2015 (in thousands). In 2017, total capital assets increased by \$272.9 million, or 6.9%. This increase was due to an increase in capital additions, net of plant retirements of \$171.7 million, offset by \$134.7 million net increase in accumulated depreciation. In 2016, total capital assets increased by \$268.08 million, or 7.2%. This increase was due to capital additions, net of plant retirements of \$168.0 million, offset by \$167.7 million net increase in accumulated depreciation. Additional information on changes in capital assets can be found in Note 6 to the financial statements on page 47.

	(In thousands)		
	2017	2016	2015
Land	\$ 75,155	\$ 71,568	\$ 58,654
Structures and improvements	2,743,072	2,795,293	2,744,579
Equipment	293,058	306,338	299,499
Construction work in progress	1,128,547	793,727	596,114
Total capital assets	<u>\$ 4,239,832</u>	<u>\$ 3,966,926</u>	<u>\$ 3,698,846</u>

This year's major expenditures in capital assets included:

Water projects:

- Transmission mains, meters, and services (\$57.2 million)
- Treatment facilities and equipment (\$14.6 million)
- Transportation equipment (\$3.0 million)
- Pumping facilities (\$2.7 million)
- Computer equipment and software (\$2.3 million)

Wastewater Projects

- Treatment facilities (\$99.3 million)
- Force mains (\$80.7 million)
- Pump stations (\$36.7 million)
- Inflow/infiltration/exfiltration (\$15.7 million)
- Gravity mains and services (\$13.9 million)

Budgeted capital expenditures for fiscal year 2018 amount to \$592.2 million and include \$222.0 million in water projects and \$370.2 million in wastewater projects.

LONG-TERM DEBT

Long-term debt outstanding (including current portion) at September 30, 2017, 2016 and 2015 is presented in the following table (in thousands). FY2017 shows an increase of \$205.7 million from FY2016. FY2016 shows an increase of \$26.3 million from FY2015.

	(In thousands)		
	2017	2016	2015
Revenue Bonds	\$ 1,980,348	\$ 2,053,731	\$ 2,124,019
State Loan Obligations	165,449	161,272	164,698
Commercial Paper	375,000	100,000	-
Total long-term debt	<u>\$ 2,520,797</u>	<u>\$ 2,315,003</u>	<u>\$ 2,288,717</u>

Management's Discussion & Analysis

During FY2017, draws made on state revolving loan commitments, recorded as debt, including capitalized interest, totaled \$16.1 million. Current long-term debt maturities were met in the amount of \$85.4 million. During FY2016, draws made on state revolving loan commitments, recorded as debt, including capitalized interest, totaled \$10.4 million. Current long-term debt maturities were met in the amount of \$84.1 million. Additional long-term debt details can be found in Note 7 on pages 47-52 of this report.

Subsequently, on December 7, 2017, the Department issued the Water and Sewer System Revenue Bonds, Series 2017A and the Water and Sewer System Revenue Refunding Bonds, Series 2017B for \$381.3 million and \$548.0 million, respectively. The Series 2017A Bonds will refund all outstanding Commercial Paper Notes - Series A-1 and Series B-1, make a deposit to the Reserve Account and pay the costs of issuance of the Series 2017A Bonds. The Series 2017B Bonds will refund \$567.6 million principal outstanding for the Miami-Dade County, Florida Water and Sewer System Revenue Bonds, Series 2010 maturing October 1, 2021 and pay the costs of issuance of the Series 2017B Bonds.

The Department is required to maintain rates and charges sufficient to meet two tiers of debt service coverage requirements. First, adjusted annual net operating revenues must equal or exceed 1.25 percent of the debt service on senior lien revenue bonds. The Department met the primary debt coverage for the year with a ratio of 1.94 percent. Second, adjusted net operating revenues, after payment of revenue bond debt service, must be at least equal to 1.15 percent of the debt service for the subordinate state loan obligations. The Department met the secondary debt service coverage with a ratio of 6.91 percent.

REQUEST FOR INFORMATION

Questions concerning this report or request for additional information should be directed to Frances G. Morris, Chief Financial Officer at 786-552-8104 or, at her office address at 3071 SW 38th Avenue, Miami, Florida 33146.



Statements of Net Position

	September 30, <u>2017</u>	<u>2016</u>
	(In thousands)	
ASSETS		
<i>CURRENT ASSETS:</i>		
Cash and cash equivalents	\$ 8,746	\$ 55,119
Investments	103,718	47,888
Accounts Receivable (net of allowance for uncollectible accounts of \$20.2 million and \$17.7 million, respectively)	162,601	135,186
Inventory of materials and supplies	39,279	38,523
Other current assets	3,841	2,890
Restricted cash and cash equivalents	212,238	181,982
Total Current Assets	<u>530,423</u>	<u>461,588</u>
<i>NONCURRENT RESTRICTED ASSETS:</i>		
Cash and cash equivalents	43,321	120,463
Investment derivative instrument	31,778	45,230
Investments	398,248	242,651
Long-term receivable - General Fund	10,000	10,000
Contracts receivable	-	17
Grants receivable	206	74
Total Restricted Assets	<u>483,553</u>	<u>418,435</u>
<i>OTHER ASSETS:</i>		
Bond Insurance	4,150	4,776
Other charges, net	27,948	35,430
Total Other Assets	<u>32,098</u>	<u>40,206</u>
<i>CAPITAL ASSETS:</i>		
Land	75,155	71,568
Structures and Improvements	5,073,477	5,026,423
Equipment	1,205,066	1,182,902
Utility plant in service before depreciation	6,353,698	6,280,893
Less accumulated depreciation	<u>(3,242,413)</u>	<u>(3,107,694)</u>
Net utility plant in service	3,111,285	3,173,199
Construction work in progress	1,128,547	793,727
Total Capital Assets	<u>4,239,832</u>	<u>3,966,926</u>
Total Noncurrent Assets	<u>4,755,483</u>	<u>4,425,567</u>
Total Assets	<u>5,285,906</u>	<u>4,887,155</u>
<i>DEFERRED OUTFLOWS OF RESOURCES:</i>		
Loss on refundings	82,610	88,287
Outflow related to pension	63,127	55,640
Total Deferred Outflows of Resources	<u>145,737</u>	<u>143,927</u>
Total Assets and Deferred Outflows of Resources	<u>\$ 5,431,643</u>	<u>\$ 5,031,082</u>

(Continued)

Statements of Net Position

(Continued)	September 30,	<u>2017</u>	<u>2016</u>
		(In thousands)	
LIABILITIES			
<i>CURRENT LIABILITIES (PAYABLE FROM UNRESTRICTED CURRENT ASSETS):</i>			
Accounts payable and accrued expenses	\$	69,589	\$ 46,173
Customer and developer deposits		18,860	18,368
Current portion of long-term debt		7,807	7,851
Liability for compensated absences		10,061	10,198
Other liabilities		854	2,381
Total current liabilities (payable from unrestricted current assets)		<u>107,171</u>	<u>84,971</u>
<i>CURRENT LIABILITIES (PAYABLE FROM RESTRICTED CURRENT ASSETS):</i>			
Accounts payable and accrued expenses		68,493	47,750
Retainage payable		19,565	13,618
Current portion of long-term debt		73,726	70,512
Accrued interest payable		47,805	49,321
Liability for self insurance		948	781
Total current liabilities (payable from restricted current assets)		<u>210,537</u>	<u>181,982</u>
Total current liabilities		<u>317,708</u>	<u>266,953</u>
<i>NONCURRENT LIABILITIES:</i>			
Revenue bonds payable, net		1,911,358	1,987,996
State loan obligations, net		152,906	148,644
Commercial Paper		375,000	100,000
Liability for self-insurance		997	2,026
Liability for compensated absences		32,133	31,521
Liability for post-employment benefits		6,756	5,980
Net pension liability		156,510	153,758
Total noncurrent liabilities		<u>2,635,660</u>	<u>2,429,925</u>
Total liabilities		<u>2,953,368</u>	<u>2,696,878</u>
<i>DEFERRED INFLOWS OF RESOURCES:</i>			
Inflow related to pension		9,795	6,586
Total deferred inflows of resources		<u>9,795</u>	<u>6,586</u>
Total liabilities and deferred inflows of resources		<u>2,963,163</u>	<u>2,703,464</u>
NET POSITION			
Net investment in capital assets		1,851,041	1,730,528
Restricted for:			
Capital projects		219,669	192,137
Debt service		136,871	138,120
Unrestricted		260,899	266,833
Total net position		<u>2,468,480</u>	<u>2,327,618</u>
Total Liabilities, Deferred Inflows of Resources and Net Position	\$	<u>5,431,643</u>	\$ <u>5,031,082</u>

The accompanying notes to financial statements are an integral part of these statements.



Statements of Revenues, Expenses, and Changes in Net Position

For the fiscal years ended September 30,	2017	2016
	(In thousands)	
<i>OPERATING REVENUES:</i>		
Water	\$ 316,045	\$ 291,043
Wastewater	391,287	368,739
Total operating revenues	707,332	659,782
<i>OPERATING AND MAINTENANCE EXPENSES:</i>		
Water source of supply	14,193	14,284
Water power and pumping	1,976	1,982
Water purification	60,387	68,272
Water transmission and distribution	31,228	30,554
Wastewater collection system	33,457	26,866
Wastewater pumping	42,543	39,549
Wastewater treatment	92,347	91,915
Customer accounting	9,737	7,442
Customer service	24,423	22,797
General and administrative	88,239	84,827
Total operating and maintenance expenses	398,530	388,488
Operating income before depreciation	308,802	271,294
<i>DEPRECIATION EXPENSE</i>	187,921	184,424
Operating income	120,881	86,870
<i>NON-OPERATING REVENUES (EXPENSES):</i>		
Investment Loss	(9,649)	(4,853)
Interest expense	(25,978)	(46,369)
Amortization of insurance costs	(6,749)	(8,130)
Customer connection fees	27,706	37,091
Other revenues	1,751	14,364
Other expenses	(2,209)	(2,282)
Income before contributions	105,753	76,691
Capital contributions	35,109	53,611
Increase in net position	140,862	130,302
Net position at beginning of year	2,327,618	2,197,316
Net position at end of year	\$ 2,468,480	\$ 2,327,618

The accompanying notes to financial statements are an integral part of these statements.



Statements of Cash Flows

	For the fiscal years ended September 30,	<u>2017</u>	<u>2016</u>
		(In thousands)	
<i>CASH FLOWS FROM OPERATING ACTIVITIES:</i>			
Cash received from customers		\$ 707,124	\$ 693,514
Cash paid to suppliers for goods and services		(161,974)	(186,051)
Cash paid to employees for services		<u>(217,369)</u>	<u>(202,676)</u>
Net cash provided by operating activities		<u>327,781</u>	<u>304,787</u>
<i>CASH FLOWS FROM NON-CAPITAL FINANCING ACTIVITIES:</i>			
Loan repayment received from County's General Fund		<u>-</u>	<u>5,000</u>
Net cash provided by non-capital financing activities		<u>-</u>	<u>5,000</u>
<i>CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES:</i>			
Proceeds from bond issues, loan agreements and notes		291,154	110,425
Principal payments - bond, loans and notes		(77,711)	(76,491)
Bond premium		(1,072)	(1,831)
Interest paid		(26,776)	(64,933)
Acquisition and construction of capital assets		<u>(399,011)</u>	<u>(363,926)</u>
Net cash (used) by capital and related financing activities		<u>(213,416)</u>	<u>(396,756)</u>
<i>CASH FLOWS FROM INVESTING ACTIVITIES:</i>			
Purchase of investment securities		(757,297)	(401,686)
Proceeds from sale and maturity of investment securities		475,194	579,561
Interest on investments		74,479	1,990
Net cash provided (used) by investing activities		<u>(207,624)</u>	<u>179,865</u>
Net increase (decrease) in cash and cash equivalents		<u>(93,259)</u>	92,896
Cash and cash equivalents at beginning of year		<u>357,564</u>	<u>264,668</u>
Cash and cash equivalents at end of year		<u>\$ 264,305</u>	<u>\$ 357,564</u>

(Continued)



Statements of Cash Flows

(Continued)	For the fiscal years ended September 30,	
	<u>2017</u>	<u>2016</u>
	(In thousands)	
<i>RECONCILIATION OF OPERATING INCOME TO NET CASH PROVIDED BY OPERATING ACTIVITIES:</i>		
Operating income	\$ 120,881	\$ 86,870
Adjustments to reconcile operating income to net cash provided by operating activities:		
Depreciation	187,921	184,424
Provision for uncollectible accounts	2,353	1,119
Other revenue		-
Non-operating other, net	27,246	45,092
Transfer to/from reserves	-	(6,211)
(Increase) decrease in assets and deferred outflows:		
Accounts Receivable	(29,769)	(19,229)
Inventory of materials and supplies	(755)	(103)
Other current assets	(951)	18
Contracts receivable	132	91
Other charges	994	7,482
Deferred outflows related to pension	(7,487)	(39,889)
Increase (decrease) in liabilities and deferred inflows:		
Accounts payable and accrued expenses	23,416	(8,164)
Customer and developer deposits	492	1,581
Accrued interest payable	(1,515)	2,643
Liability for compensated absences	474	(15)
Other liabilities	(1,526)	1,996
Liability for other post-employment benefits	776	488
Liability for self-insurance	(862)	828
Net pension liability	2,752	59,905
Deferred Inflows	3,209	(14,139)
Net cash provided by operating activities	<u>\$ 327,781</u>	<u>\$ 304,787</u>

NONCASH INVESTING, CAPITAL AND FINANCING ACTIVITIES

Property, plant and equipment contributions were received in amounts of \$35.1 million in fiscal year 2017.

The change in the fair value of investments was a \$0.16 million decrease in fiscal year 2017.

The change in the fair value of swaps was an \$13.5 million decrease in fiscal year 2017.

RECONCILIATION OF CASH AND CASH EQUIVALENTS AT END OF YEAR

Unrestricted Current Cash and Cash Equivalents	\$ 8,746	\$ 55,119
Restricted Current Cash and Cash Equivalents	212,238	181,982
Restricted Noncurrent Cash and Cash Equivalents	43,321	120,463
	<u>\$ 264,305</u>	<u>\$ 357,564</u>

The accompanying notes to financial statements are an integral part of these statements.

Notes to Financial Statements

NOTES TO FINANCIAL STATEMENTS

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

REPORTING ENTITY

The Miami-Dade Water and Sewer Department (the Department) functions as a self-supporting governmental enterprise fund of Miami-Dade County, Florida (the County). An enterprise fund is used to account for the financing of services to the general public on a continuing basis with costs recovered primarily through user charges. Accordingly, its financial statements have been prepared on the accrual basis of accounting. The Department issues a separate comprehensive annual financial report and its financial statements are combined in the County's comprehensive annual financial report.

The accompanying financial statements combine the accounts of both the Water and Wastewater Systems to provide meaningful information with respect to the Department, with all transactions of the Department accounted for as one enterprise fund. All significant intersystem accounts and transactions have been eliminated.

BASIS OF ACCOUNTING

The financial statements are prepared in conformity with generally accepted accounting principles established by the Governmental Accounting Standards Board (GASB).

OPERATING/NONOPERATING REVENUES AND EXPENSES

Operating revenues and expenses are those that result from providing water and wastewater services. Non-operating revenues and expenses include capital, financing, investing and other activities either not related to or incidental to the provision of water and wastewater services.

REVENUE RECOGNITION

All water and wastewater revenues are recognized when the related services are provided. Unbilled receivables have been estimated and accrued as revenue from the date of last reading of the meters based on the billing cycle. Unbilled accounts receivable for fiscal years 2017 and 2016 were approximately \$41.7 million and \$43.3 million, respectively.

CAPITAL ASSETS

Property acquired with an initial individual cost of \$1,000 or more and an estimated useful life in excess of one year is capitalized at cost. Major outlays for construction of capital assets and improvements are capitalized at cost. Expenses for maintenance and repairs are expensed as incurred. Property contributions received from municipalities are recorded as capital assets by the Department at the acquisition cost to the municipality. Property contributed in aid of construction is capitalized at its acquisition value on the date received.

Only those intangible assets valued at more than \$100,000 are recorded as an asset (threshold determinations are based on aggregate cost). For fiscal years 2017 and 2016, no separately identifiable intangible assets met the threshold for recording.

Annualized depreciation expense, expressed as a percent of depreciable capital assets, was 3.0% for fiscal years ended September 30, 2017 and 2016. The Department utilizes the single-unit straight-line depreciation method with normal retirements charged to accumulated depreciation, and gain or loss is recognized on retirements. Assets with a change in estimated life are depreciated based on net book value over the remaining life of the asset. Estimated useful lives of capital assets in service are as follows:

	Water System	Wastewater System
	(Years)	
Structures and improvements	25-45	25-45
Equipment	3-20	3-20

Total depreciation expense for the fiscal years ended September 30, 2017 and 2016 was \$187.9 million and \$184.4 million, respectively.



Notes to Financial Statements

CASH, CASH EQUIVALENTS AND INVESTMENTS

Cash includes cash on hand, amounts in demand deposits, and positions in investment pools that can be deposited or withdrawn without notice or penalty. Cash equivalents are short-term, highly liquid securities with known market values and maturities, when acquired, of less than three months.

The Department has opted to report money market and non-participating investments, with remaining maturities of one year or less at the time of purchase, at amortized cost.

Investments are carried at fair value. Fair Value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The net increase or decrease in the fair value of investments is included as part of investment income in the accompanying statements of revenues, expenses, and changes in net position.

The Department categorizes its fair value measurements within the fair value hierarchy established by Generally Accepted Accounting Principles. The hierarchy is based on the valuation input used to measure the fair value of the asset with Level 1 assets being those where quoted prices in an active market for identical assets can be readily obtained, and Level 2 assets value using a matrix pricing technique of quoted process for similar assets or liabilities in active markets.

INVENTORY

Materials and supplies inventories are stated at lower of weighted average cost or net realizable value.

INTEREST ON INDEBTEDNESS

Interest is charged to expense, as incurred, except for interest related to borrowings used for construction projects which is capitalized, net of interest earned on construction funds borrowed. For fiscal year ended September 30, 2017 Interest expense incurred was \$100.3 million and capitalized interest was \$74.3 million. Interest expense incurred during the fiscal year ended September 30, 2016 was \$100.9 million and the amount for capitalized interest was \$54.6 million

For interest rate swap agreements, the amounts recorded in the financial statements are the net interest expense along with amortization of fees paid or received resulting from these agreements. The Department recorded an upfront payment for the swap option that was terminated during FY2009 and is amortizing the payment, net of interest expense, in the financial statements.

BOND DISCOUNT AND PREMIUM

Discounts and premiums on bonds and notes payable are amortized using the straight-line method over the life of the related bond issuances or term of the notes. Discounts and premiums are presented net of the related debt.

CAPITAL CONTRIBUTIONS

The Department records external capital contributions as revenues in the proprietary funds.

GRANTS FROM GOVERNMENT AGENCIES

The Department records grants when all applicable eligibility requirements have been met. This normally occurs as amounts are expended and become reimbursable from the granting agency.

COMPENSATED ABSENCES

The Department accounts for compensated absences by accruing a liability for employees' compensation for future absences.

PENSIONS

In March 2016, the GASB issued Statement No. 82, *an amendment of GASB Statement No. 67, No. 68 and No. 73*. The objective of this Statement is to address certain issues that have been raised with respect to Statements No. 67, *Financial Reporting for Pension Plans*, No. 68, *Accounting and Financial Reporting for Pensions*, and No. 73, *Accounting and Financial Reporting for Pensions and Related Assets That Are Not within the Scope of GASB Statement 68, and Amendments to Certain Provisions of GASB Statements 67 and 68*. Specifically, this Statement addresses issues regarding (1) the presentation of payroll-related measures in required supplementary information, (2)



Notes to Financial Statements

the selection of assumptions and the treatment of deviations from the guidance in an Actuarial Standard of Practice for financial reporting purposes, and (3) the classification of payments made by employers to satisfy employee (plan member) contribution requirements. The Department adopted this standard in fiscal year 2017.

COST ALLOCATION

Certain engineering overhead and other costs are generally allocated to capital projects and operating expenses using standard rates developed by independent consultants. The rate is based on various allocation bases which bear reasonable relationship with the type of allocable expenditure.

USE OF ESTIMATES

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America (GAAP) requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

2. CASH, CASH EQUIVALENTS AND INVESTMENTS

The County is authorized through the Florida Statutes §218.415, Ordinance No. 84-47, Resolution R-31-09 and its Investment Policy to make certain investments. The County's Investment Policy objectives are, in order of priority, the safety of principal, liquidity of funds and maximizing investment income.

The Department pools all cash, cash equivalents and investments, except for certain amounts which are required to be held in trust and escrow accounts under the terms of bond ordinances and loan agreements. Various self-balancing account groups are participants in such pooling, sharing on a pro-rata basis in the pooled earnings, according to their respective average monthly balances.

DEPOSITS

The carrying amounts of the Department's local deposits as of September 30, 2017 and 2016 were \$112.9 million and \$302.7, respectively. For fiscal years ended September 30, 2017 and 2016, the bank balances at local depositories were \$124.7 million and \$306.9 million, respectively, consisting of demand deposit accounts only. All deposits are fully insured by Federal Depository Insurance and a multiple financial institution collateral pool required by Chapter 280 Florida Statutes, "Florida Security for Public Deposits Act". Under the Act, all qualified public depositories are required to pledge eligible collateral having a market value equal to or greater than the average daily or monthly balance of all public deposits, times the depository's collateral pledging level. The pledging level may range from 50% to 125% depending upon the depository's financial condition and establishment period. All collateral must be deposited with a State-approved financial institution. Any losses to public depositors are covered by applicable deposit insurance, sale of securities pledged as collateral and, if necessary, assessments against other qualified public depositories of the same type as the depository in default.

As a rule, the County intends to hold all purchased securities until their final maturity date. There may be occasional exceptions, including, but not limited to the need to sell securities to meet unexpected liquidity needs.

Cash on hand and cash held by other parties as of September 30, 2017 and 2016 was approximately \$113.2 million and \$303.5 million, respectively.



Notes to Financial Statements

INVESTMENTS

The below hierarchy is based on the valuation input used to measure the fair value of the asset with Level 1 assets being those where quoted prices in an active market for identical assets can be readily obtained, and Level 2 assets valued using a matrix pricing technique of quoted prices for similar assets or liabilities in active markets. Level 3 is for assets that have unobservable valuation inputs and should only be used when Level 1 and Level 2 inputs are unavailable. The County does not have any Level 1 or Level 3 inputs.

The Department's carrying value of cash equivalents and investments include the following as of September 30, 2017 and 2016:

	<u>Fair Value</u>	
	2017	2016
<u>Investments Level 2</u>		
Commercial Paper	\$ 137,200	\$ 66,916
Federal Home Loan Mortgage Corporation	123,063	62,453
Federal Farm Credit Bank	113,247	57,853
Federal Home Loan Bank	101,763	60,327
Treasury Notes	87,841	7,869
Federal National Mortgage Association	85,471	82,595
Jubilee Issue Bonds	3,690	4,626
Total Investments	<u>\$ 652,275</u>	<u>\$ 342,639</u>
 <u>Cash Equivalents</u>		
Interest Bearing	827	1,963
Total Investments and Cash Equivalents	<u>\$ 653,102</u>	<u>\$ 344,602</u>

CREDIT RISK

The Policy, minimizes credit risk by restricting authorized investments to: Local Government Surplus Funds Trust Fund, or any intergovernmental investment pool authorized pursuant to the Florida Interlocal Cooperation Act; Securities and Exchange Commission (SEC) registered money market funds with the highest credit rating from a nationally recognized rating agency; interest bearing time deposits or saving accounts in qualified public depositories, pursuant to Florida Statutes §280.02, which are defined as banks, savings banks, or savings associations organized under the laws of the United States with an office in this state that is authorized to receive deposits, and has deposit insurance under the provisions of the Federal Deposit Insurance Act; direct obligations of the United States Treasury; federal agencies and instrumentalities; securities of, or other interests in, and open-end or closed-end management-type investment company or investment trust registered under the Investment Company Act of 1940, provided that the portfolio is limited to the obligations of the United States government or any agency or instrumentality thereof and fully collateralized by such United States government obligations, and provided that such investment company or investment trust takes delivery of such collateral either directly or through an authorized custodian; commercial paper of prime quality with a stated maturity of 270 days or less from the date of its issuance, which has the highest letter and numerical rating as provided for by at least two nationally recognized rating services; banker acceptances which have a stated maturity of 180 days or less from the date of issuance, and have the highest letter and numerical rating as provided for by at least two nationally recognized rating services, and are drawn on and accepted by commercial banks and which are eligible for purchase by the Federal Reserve Bank, investments in repurchase agreements ("Repos") collateralized by securities authorized by this policy. All Repos shall be governed by a standard SIFMA Master Repurchase Agreement; municipal securities issued by U.S., state or local governments, having at time of purchase, a stand-alone credit rating of AA or better assigned by two or more recognized credit rating agencies or a short-term rating of A1/P1 or equivalent from one or more recognized credit rating agencies. Securities lending, securities or investments purchased or held under the provisions of this section, may be loaned to securities dealers or financial institutions provided the loan is collateralized by cash or securities having a market value of at least 102 percent of the market value of the securities loan upon initiation of the transaction.

Notes to Financial Statements

The following table summarizes the investments by type and credit ratings at September 30, 2017 and 2016:

	Credit Ratings 2017	Credit Ratings 2016
Federal Home Loan Mortgage Corporation	AA+/A-1+	AA+/A-1+
Federal Home Loan Bank	AA+/A-1+	AA+/A-1+
Federal Farm Credit Bank	AA+/A-1+	AA+/A-1+
Federal National Mortgage Association	AA+/A-1+	AA+/A-1+
Treasury Notes	AA+/A-1+	AA+/A-1+

CUSTODIAL CREDIT RISK

The Policy requires that bank deposits be secured per Chapter 280, Florida Statutes. This requires local governments to deposit funds only in financial institutions designated as qualified public depositories by the Chief Financial Officer of the State of Florida and creates the Public Deposits Trust Fund, a multiple financial institution pool with the ability to assess its member financial institutions for collateral shortfalls if a default or insolvency has occurred. At September 30, 2017 and 2016, all of the County's bank deposits were in qualified public depositories.

The Policy requires the execution of a Custodial Safekeeping Agreement (CSA) for all purchased securities which shall be held for credit of the County in an account separate and apart from the assets of the financial institution.

CONCENTRATION OF CREDIT RISK

The Policy establishes limitations on portfolio composition by investment type and by issuer to limit its exposure to concentration of credit risk. The Policy provides that a maximum of 50% of the portfolio may be invested in the State of Florida Local Government Surplus Funds Trust Fund ("Pool"); however, the bond proceeds may be temporarily deposited in the Pool until alternative investments have been purchased. Prior to any investment in the Pool, approval must be received from the Board of County Commissioners. A maximum of 30% of the portfolio may be invested in SEC registered money market funds with no more than 10% to any single money market fund; a maximum of 20% of the portfolio may be invested in non-negotiable interest bearing time certificates of deposit and savings account with no more than 5% deposited with any one insurer. There is no limit on the percent of the total portfolio that may be invested in direct obligations of the U.S. Treasury or federal agencies and instrumentalities; with no limits on individual issuers (investment in agencies containing call options shall be limited to a maximum of 25% of total portfolio). A maximum of 5% of the portfolio may be invested in open-end or closed-end funds; a maximum of 50% of the portfolio may be invested in prime commercial paper with a maximum of 5% with any one issuer; a maximum of 25% of the portfolio may be invested in banker's acceptances with a maximum of 10% with any one issuer, but a maximum of 60% of the portfolio may be invested in both commercial paper and banker's acceptances. A maximum of 20% of the portfolio may be invested in repurchase agreements with the exception of one (1) business day agreements, with a maximum of 10% of the portfolio with any one institution or dealer with the exception of one (1) business day agreements. A maximum of 25% of the portfolio may be directly invested in municipal obligations, up to 5% with any one municipal issuer.

As of September 30, 2017 and 2016, the following issuers held 5% or more of the investment portfolio:

	% of Portfolio 2017	% of Portfolio 2016
Commercial Paper	21.70	-
Federal Home Loan Mortgage Corporation	18.84	22.15
Federal Farm Credit Bank	17.34	17.68
Federal Home Loan Bank	15.58	31.44
Treasury Notes	13.45	-
Federal National Mortgage Association	13.09	25.80

The schedule excludes investments issued or explicitly guaranteed by the U.S. government.



Notes to Financial Statements

INTEREST RATE RISK

The Policy limits interest rate risk by requiring the matching of known cash needs and anticipated net cash outflow requirements; following historical spread relationships between different security types and issuers; evaluating both interest rate forecasts and maturity dates to consider short-term market expectations. The Policy requires that investments made with current operating funds shall maintain a weighted average of no longer than one year. Investments for bond reserves, construction funds and other non-operating funds shall have a term appropriate to the need for funds and in accordance with debt covenants. The Policy limits the maturity of an investment to a maximum of five years.

As of September 30, 2017, and 2016, the Department had the following investments with the weighted average maturity in years.

	Weighted Average in Years 2017	Weighted Average in Years 2016
Federal Home Loan Mortgage Corporation	1.92	1.39
Jubilee Issue Bonds	1.23	2.23
Federal National Mortgage Association	0.74	1.17
Federal Farm Credit Bank	0.59	0.46
Federal Home Loan Bank	0.44	0.28
Treasury Notes	0.15	0.19
Commercial Paper	0.13	0.12

FOREIGN CURRENCY RISK

The Policy limits the County's foreign currency risk by excluding foreign investments as an investments option.

3. RECEIVABLES

Receivables for fiscal years ended September 30, 2017 and 2016 were as follows (in thousands):

	2017	2016
Trade Accounts	\$ 173,422	\$ 144,134
Non-retail accounts	8,126	7,322
Grants & Contracts	206	91
Other County funds	11,238	11,433
Gross receivables	192,992	162,980
Less: allowance for doubtful accounts	(20,185)	(17,703)
Net receivables	<u>\$ 172,807</u>	<u>\$ 145,277</u>

On September 22, 2011, the Department signed a Memorandum of Understanding (MOU) establishing a \$25 million loan to the County's General Fund as adopted in the fiscal year 2012 Budget Ordinance.

The Department transferred \$25 million cash to the General Fund and booked a receivable from the County. The term of this loan will be five years, no interest, with repayments of \$5 million per year to begin at the end of fiscal year 2014. As of September 30, 2017, the Department received \$15 million with a current balance due of \$10 million.

Notes to Financial Statements

4. OTHER CURRENT ASSETS

Other current assets for fiscal years ended September 30, 2017 and 2016 were as follows (in thousands):

	2017	2016
Beginning Balance	\$ 2,890	\$ 2,909
Prepaid Expenses	(8)	(19)
Advance to City of Hialeah	959	-
Ending Balance	<u>\$ 3,841</u>	<u>\$ 2,890</u>

The County entered an agreement with the City of Hialeah (City) to construct a 10 MGD reverse osmosis water treatment plant. The City and the County shall have equal 50% ownership of a reverse osmosis water treatment plant (WTP), inclusive of land, structures, facilities, and appurtenances to be situated in the Annexation Area of the City. The City shall contribute and pay for 50% of the planning, design, construction, and construction management (design and construction) cost for the WTP and the County shall contribute 50% of the design and construction cost for the WTP. In Fall of 2013, the Plant began production capable of 7.5 MGD, with County and City each receiving 50% of the production. In fiscal year 2017, \$1.0 million was contributed to the City of Hialeah and the Department incurred \$1.7 million in operating expenses. As of September 30, 2017, and 2016, the Department contributed approximately \$47.8 million and 46.8 million, respectively, towards the construction of the WTP.

5. RESTRICTED ASSETS

Certain bond ordinances and loan agreements require the Department to establish accounts to be used in accounting for proceeds and collateral pledged because of the various issues of debt. In many cases, the applicable ordinances refer to the restricted accounts as “funds”. Such accounts are not “funds” as defined by the National Council of Governmental Accounting (*NCGA Statement No. 1: Governmental Accounting and Financial Reporting Principles*) and, therefore, are not funds for financial reporting purposes, but are maintained as separate accounts. Restricted assets for fiscal years ended September 30, 2017 and 2016 are represented in the following table (in thousands):

	2017	2016
Debt Service	\$ 185,856	\$ 188,107
Construction	149,156	77,139
Renewal and Replacement	78,772	61,968
Plant Expansion	147,465	143,070
Self-Insurance	4,463	5,232
Other	130,079	124,901
Total Restricted Assets	<u>\$ 695,791</u>	<u>\$ 600,417</u>



Notes to Financial Statements

6. CAPITAL ASSETS

Capital asset activity during fiscal years 2016 and 2017 was as follows (in thousands):

	<u>Balance</u>		<u>2016</u>		<u>Balance</u>		<u>2017</u>		<u>Balance</u>
	9/30/2015	Additions	Deletions		9/30/2016	Additions	Deletions	9/30/2017	
Capital Assets, not being depreciated:									
Land	\$ 58,654	\$ 12,914	\$ -	\$	71,568	\$ 3,587	\$ -	\$	75,155
Construction work in progress	596,114	348,206	(150,593)		793,727	442,214	(107,394)		1,128,547
Total capital assets, not being depreciated	654,768	361,120	(150,593)		865,295	445,801	(107,394)		1,203,702
Capital Assets, being depreciated:									
Structures and improvements	4,845,954	190,912	(10,443)	\$	5,026,423	102,251	(55,197)		5,073,477
Equipment	1,138,066	51,828	(6,992)		1,182,902	31,291	(9,127)		1,205,066
Total capital assets, being depreciated	5,984,020	242,740	(17,435)		6,209,325	133,542	(64,324)		6,278,543
Less accumulated depreciation:									
Structures and improvements	(2,101,376)	(139,602)	9,847		(2,231,131)	(143,542)	44,267		(2,330,406)
Equipment	(838,567)	(44,822)	6,826		(876,563)	(44,378)	8,934		(912,007)
Total accumulated depreciation	(2,939,943)	(184,424)	16,673		(3,107,694)	(187,920)	53,201		(3,242,413)
Total capital assets, being depreciated, net	3,044,077	58,316	(762)		3,101,631	(54,378)	(11,123)		3,036,130
Total capital assets, net	\$ 3,698,846	\$ 419,436	\$ (151,355)	\$	3,966,926	\$ 391,423	\$ (118,517)		4,239,832

7. LONG-TERM DEBT

Long-term debt includes various bonds and loans which have been issued or approved by the County for the improvement of the Department's water and wastewater infrastructure, and defeasance of outstanding debt. General covenants, along with debt service requirements, are disclosed on page 48. See Note 5, Restricted Assets, for a discussion of the accounts used in accounting for proceeds and collateral pledged as a result of the issuance of the various forms of debt.

The Department's debt instruments contain various covenants and restrictions, which among other things, (1) prohibit the Department from taking any action that could jeopardize its tax-exempt status, and (2) require the Department to meet certain financial tests. Management believes that the Department followed all such covenants and restrictions at September 30, 2017 and 2016.

MIAMI-DADE COUNTY REVENUE BONDS, SERIES 2007

On September 29, 2007, \$344.7 million of Miami-Dade County Water and Sewer System Revenue Refunding Bonds, Series 2007 were issued to refund the Miami- Dade County Water and Sewer System Revenue Bonds, Series 1997 maturing after October 1, 2009, and to pay issue costs. On June 3, 2015, \$481.2 million of Miami-Dade County Water and Sewer System Revenue Refunding Bonds, Series 2015 were issued to advance refund \$244.4 aggregate principal of Series 2007.

The Series 2007 Refunding Bonds are collateralized by the net operating revenues of the Department and are due serially on October 1 starting in 2008 through the year 2026 with semi-annual interest due on April 1 and October 1 of each year. Net revenue requirements of at least 1.10 times the current year's debt service requirements were met in fiscal years 2017 and 2016.

Notes to Financial Statements

CHANGES IN LONG-TERM LIABILITIES

A summary of long-term liability activity during fiscal years 2016 and 2017 is presented in the following table (in thousands):

Description	Outstanding Rate	Balance 9/30/2015	2016		Balance 9/30/2016	2017		Balance 9/30/2017	Due in 2018
			Additions	Deletions		Additions	Deletions		
<i>Dade County Revenue Bonds</i>									
Series 2007	4.00%-5.00%	\$ 41,305	\$ -	\$ 13,210	\$ 28,095	\$ -	\$ 13,760	\$ 14,335	\$ 14,335
Series 2008A & B	3.25%-5.25%	\$ 383,090	-	39,675	343,415	-	41,755	301,660	43,965
Series 2008C	4.00%-6.00%	\$ 29,880	-	6,900	22,980	-	7,265	15,715	7,650
Series 2010	2.00%-5.00%	\$ 586,150	-	2,855	583,295	-	2,955	580,340	3,040
Series 2013A	5.00%	\$ 340,265	-	-	340,265	-	-	340,265	-
Series 2013B	5.00%	\$ 152,400	-	-	152,400	-	-	152,400	-
Series 2015	4.00%-5.00%	\$ 481,175	-	-	481,175	-	-	481,175	-
Less: Unamortized Discount		\$ (249)	-	(83)	(166)	83	-	(83)	-
Plus: Unamortized Premium		\$ 110,003	-	7,731	102,272	-	7,731	94,541	-
Total revenue bonds		\$ 2,124,019	\$ -	\$ 70,288	\$ 2,053,731	\$ 83	\$ 73,466	\$ 1,980,348	\$ 68,990
<i>State Loan Obligations</i>									
State Revolving Fund	2.56%-4.17%	164,698	10,424	13,850	161,272	16,153	11,976	165,449	12,543
Total State Revolving Funds		\$ 164,698	\$ 10,424	\$ 13,850	\$ 161,272	\$ 16,153	\$ 11,976	\$ 165,449	\$ 12,543
<i>Commercial Paper</i>									
Commercial Paper		-	100,000	-	100,000	275,000	-	375,000	-
Total long-term debt		\$ 2,288,717	\$ 110,424	\$ 84,138	\$ 2,315,003	\$ 291,236	\$ 85,442	\$ 2,520,797	\$ 81,533
<i>Other liabilities</i>									
Compensated Absences		41,736	8,083	8,100	41,719	476	-	42,195	10,061
Self-Insurance		1,979	828	-	2,807	-	862	1,945	948
Other post-employment benefits		5,492	488	-	5,980	776	-	6,756	-
Net pension liability		93,853	59,905	-	153,758	2,752	-	156,510	-
Total long-term liabilities		\$ 2,431,777	\$ 179,728	\$ 92,238	\$ 2,519,267	\$ 295,240	\$ 86,304	\$ 2,728,203	\$ 92,542

DEBT SERVICE REQUIREMENTS

As of September 30, 2017, the Department's debt service requirements to maturity for their term were as follows (in thousands):

Maturing in Fiscal Year	Revenue Bonds		State Loans		Total		Debt
	Principal	Interest	Principal	Interest	Principal	Interest	
2018	68,990	92,205	12,543	2,903	81,533	95,108	176,641
2019	71,055	88,758	12,089	2,665	83,144	91,423	174,567
2020	74,720	85,112	11,532	2,411	86,252	87,523	173,775
2021	78,590	81,273	11,756	2,161	90,346	83,434	173,780
2022	82,675	77,185	11,463	1,912	94,138	79,097	173,235
2023-2027	473,020	318,229	41,977	7,026	514,997	325,255	840,252
2028-2032	340,750	210,634	44,410	3,455	385,160	214,089	599,249
2033-2037	270,740	141,499	19,509	386	290,249	141,885	432,134
2038-2042	345,540	64,829	170	3	345,710	64,832	410,542
2043	79,810	1,996	-	-	79,810	1,996	81,806
	1,885,890	1,161,720	165,449	22,922	2,051,339	1,184,642	3,235,981
Unamortized Discount & Premium Amounts	94,458	-	-	-	94,458	-	94,458
Total	\$ 1,980,348	\$ 1,161,720	\$ 165,449	\$ 22,922	\$ 2,145,797	\$ 1,184,642	\$ 3,330,439



Notes to Financial Statements

MIAMI-DADE COUNTY WATER AND SEWER SYSTEM REVENUE BONDS, SERIES 2008A

On July 15, 2008, the County issued \$68.3 million of Miami-Dade County Water and Sewer System Revenue Bonds, Series 2008A to pay the costs of terminating the AIG Financial Products Corporation interest rate swap associated with the variable rate Dade County Water and Sewer System Revenue Bonds, Series 1994 and to pay issuance costs.

The Series 2008A Revenue Bonds are collateralized by the net operating revenues of the Department and are due serially October 1 starting in 2009 through the year 2022 with semi-annual interest due on April 1 and October 1 of each year. Net revenue requirements of at least 1.10 times the current year's debt service requirements were met in fiscal years 2017 and 2016.

MIAMI-DADE COUNTY WATER AND SEWER SYSTEM REVENUE REFUNDING BONDS, SERIES 2008B

On July 15, 2008, \$374.6 million of Miami-Dade County Water and Sewer System Revenue Refunding Bonds, Series 2008B were issued to redeem all of the County's Water and Sewer System Revenue Bonds, Series 1994 and to pay issuance and surety costs.

The Series 2008B Refunding Bonds are collateralized by the net operating revenues of the Department and are due serially on October 1 starting in 2009 through the year 2022 with semi-annual interest due on April 1 and October 1 of each year. Net revenue requirements of at least 1.10 times the current year's debt service requirements were met in fiscal years 2017 and 2016.

MIAMI-DADE COUNTY WATER AND SEWER SYSTEM REVENUE REFUNDING BONDS, SERIES 2008C

On December 18, 2008, \$306.8 million of Miami-Dade County Water and Sewer System Revenue Refunding Bonds, Series 2008C were issued to redeem all of the County's Water and Sewer System Revenue Refunding Variable Rate Demand Bonds, Series 2005 and to pay issuance and surety costs. The aggregate difference between the refunding and refunded debt resulted in a gain of \$13.8 million. On June 3, 2015, \$481.2 million of Miami-Dade County Water and Sewer System Revenue Refunding Bonds, Series 2015 were issued to advance refund \$255.7 aggregate principal of Series 2008C.

The Series 2008C Refunding Bonds are collateralized by the net operating revenues of the Department and are due serially on October 1 starting in 2009 through the year 2026 with semi-annual interest due on April 1 and October 1 of each year. Net revenue requirements of at least 1.10 times the current year's debt service requirements were met in fiscal years 2017 and 2016.

MIAMI-DADE COUNTY WATER AND SEWER SYSTEM REVENUE BONDS, SERIES 2010

On March 10, 2010, \$594.3 million of Miami-Dade County Water and Sewer System Revenue Bonds, Series 2010 were issued to finance capital improvements under the Department's Multi-Year Capital plan, repay the Regions Bank Line of Credit and to pay issue costs.

The Series 2010 Revenue Bonds are collateralized by the net operating revenues of the Department and are due serially on October 1 starting in 2010 through the year 2040 with semi-annual interest due on April 1 and October 1 of each year. Net revenue requirements of at least 1.10 times the current year's debt service requirements were met in fiscal years 2017 and 2016.

MIAMI-DADE COUNTY WATER AND SEWER SYSTEM REVENUE BONDS, SERIES 2013A

On August 2, 2013, the County issued \$340.3 million of Miami-Dade County Water and Sewer System Revenue Bonds, Series 2013A to pay cost of constructing and acquiring certain improvements under the Department's Multi-Year Capital Plan, pay capitalized interest on the bonds, make a deposit to the Reserve Account and to pay issue costs.

The Series 2013A Revenue Bonds are collateralized by the net operating revenues of the Department and are due serially on October 1 through the year 2043 with semi-annual interest due on April 1 and October 1 of each year. Net revenue requirements of at least 1.10 times the current year's debt service requirements were met in fiscal years 2017 and 2016.



Notes to Financial Statements

MIAMI-DADE COUNTY WATER AND SEWER SYSTEM REVENUE REFUNDING BONDS, SERIES 2013B

On August 2, 2013, the County issued \$152.4 million of Miami-Dade County Water and Sewer System Revenue Refunding Bonds, Series 2013B to refund all the County's outstanding Water and Sewer System Revenue Bonds, Series 1999A, to make a deposit to the Reserve Account and pay issue costs.

The Series 2013B Revenue Bonds are collateralized by the net operating revenues of the Department and are due serially on October 1 through the year 2030 with semi-annual interest due on April 1 and October 1 of each year. Net revenue requirements of at least 1.10 times the current year's debt service requirements were met in fiscal years 2017 and 2016.

MIAMI-DADE COUNTY WATER AND SEWER SYSTEM REVENUE REFUNDING BONDS, SERIES 2015

On June 3, 2015, the County issued \$481.2 million of Miami-Dade County Water and Sewer System Revenue Refunding Bonds, Series 2015 to advance refund the \$244.4 million aggregate principal of the Miami-Dade County Revenue Bonds, Series 2007, \$255.7 million aggregate principal of Miami-Dade County Water and Sewer System Revenue Refunding Bonds, Series 2008C and pay the costs of issuance.

The Series 2015 Bonds are collateralized by the net operating revenues of the Department and are due serially on October 1 through the year 2026 with semi-annual interest due on April 1 and October 1 of each year. Net revenue requirements of at least 1.10 times the current year's debt service requirements were met in fiscal years 2017 and 2016.

STATE REVOLVING FUND

Under the State Revolving Fund program, the Department has received various loan commitments for the construction of water and wastewater treatment facilities. Draws to date against committed loans as of September 30, 2017, are detailed in the following table (in thousands).

<u>Loan #</u>	<u>Draws</u>	<u>Closed Out Date</u>
377500	2,369	12/1/2003
377650	160	8/8/2003
377670	703	10/27/2003
377860	1,243	9/20/2006
377870	1,613	9/20/2006
37788P	1,497	9/27/2004
37789A	360	8/1/2007
37789L	706	9/26/2006
300010	12,972	8/4/2008
300080	1,225	4/28/2003
377900	112,525	Active
130200	141	Active
130201	74	Active
130230	10,824	Active
130240	18,421	Active
	<u>\$164,833</u>	

Related payments of principal and interest are due through the year 2034. No further draws will be made against closed loans.

The Department has agreed to maintain rates, together with other pledged revenues, sufficient to provide "net revenues" equal to at least 1.15 times the annual loan payments after meeting the primary debt service requirements. Reserve and debt service funding requirements, as required by the agreements, were met in fiscal years 2017 and 2016.

COMMERCIAL PAPER

The Department established a commercial paper (CP) program to provide interim financing for the Department's capital improvement program. Two series of notes have been issued under the commercial paper program: The Series



Notes to Financial Statements

A CP Notes in an aggregate principal amount not to exceed \$200.0 million and Series B CP Notes in an aggregate principal amount not to exceed \$200.0 million. Resolution No. R-347-16 adopted by the Board on May 17, 2016, authorizes issuance, from time to time, of the Notes in the aggregate principal amount not exceeding \$400.0 million outstanding at any time, maturing no later than the earliest of 270 days or the second business day prior to the expiry of the applicable letter of credit. Barclay's Capital Inc. and Citigroup Global Markets Inc. have been designated as the initial dealers with respect to the offering and sale of the notes.

The notes are issued for the purpose of providing temporary funding for a portion of the Department's Capital Improvement Program, financing the payment of the principal of and interest on any maturing notes or obligations and paying certain costs of issuance. Payment of principal and interest on maturing Series A Notes and Series B Notes are supported by an irrevocable transferrable direct-pay letter of credit issued by Barclays Bank PLC and Sumitomo Mitsui Banking Corp respectively.

INTEREST RATE SWAP AGREEMENTS

The Department is currently a party to two interest rate swap agreements related to the various revenue bonds issued by the Department. The fair value of a swap is determined annually at September 30th based on an estimated mark-to-mid market assessment.

On June 15, 2008, Merrill Lynch Capital Services, Inc. exercised their option to terminate a fixed to variable rate swap option with a notional amount of \$215 million with respect to the Series 2007 Bonds at no cost to either party.

On August 2, 2013, the Department issued fixed rate bonds refunding the Miami-Dade County Revenue Bonds, Series 1999A. With the refunding of all outstanding obligations of the Series 1999A Bonds by the issuance of the fixed rate debt, the Series 2013B Bonds, the Department recognizes the swap association with the 2013B Bonds.

During fiscal year 2010, Statement No. 53 of the Governmental Accounting Standards Board, *Accounting and Financial Reporting for Derivative Instruments*, (GASB 53) became effective. This statement refers to the recognition, measurement and disclosure of information regarding derivative instruments entered into by the Department and reported at fair value. In accordance with GASB 53, Swap Financial Group, LLC evaluated the Department's swaps to determine whether they are effective hedging derivative instruments. It was determined that both swaps are basis swaps. Given that there is no identified financial risk being hedged by the swaps that can be expressed in terms of exposure to adverse changes in cash flows or fair values, the swaps are treated as investment derivative instruments, and not hedging derivative instruments. Accordingly, the change in fair value at September 30, 2017 was a decrease of \$13.5 million. This change in fair value is reflected in the investment income line item of the statement of revenues, expenses, and changes in net position. This decrease brings the total fair value to \$31.8 million which is reflected in the Investment Derivative Instrument line item of the noncurrent asset section of the balance sheet. The change in fair value at September 30, 2016 was a decrease of \$6.8 million. This decrease brought the total fair value to \$45.2 million.

INTEREST RATE SWAP AGREEMENTS

Below is a recap of each of the interest rate swap agreements that the Department has entered into:

Associated Series of Bonds	Notional Amount	Counterparty	Counterparty Ratings ⁽²⁾	Start Date	Termination Date	Counterparty Payment	County Payment	Fair Value at 09/30/17	Fair Value at 09/30/16
Series 2007	\$200,000,000	Bank of New York Mellon	Guarantor-Aa2, AA-, AA	7/18/2002	10/1/2026	Variable-USD-Libor-BBA+1.465%	Variable-(USD-SIFMA Municipal Swap Index/.0604)	\$12,356,593	\$17,552,591
Series 2013B ⁽¹⁾	\$205,070,000	Bank of New York Mellon	Guarantor- Aa2, AA-, AA	3/6/2006	10/1/2029	Variable-(USD-ISDA-Swap Rate) x 90.15% + 1.58%	Variable - (USD-SIFMA Municipal Swap Index/.0604)	\$19,421,631	\$27,677,531

⁽¹⁾ The underlying debt for the swap has been replaced with the Series 2013B Bonds.

⁽²⁾ Moody's, S&P, Fitch.

Notes to Financial Statements

Risk Disclosure

Credit Risk. Because all of the swaps rely upon the performance of the third parties who serve as swap counterparties, the Department is exposed to credit risk or the risk that the counterparty fails to perform according to its contractual obligations. The appropriate measurement of this risk at the reporting date is the fair value of the swaps, as shown and labeled fair value on the Interest Rate Swap Agreements chart above. All fair values have been calculated using the mark-to-mid-market method. To mitigate credit risk, the County maintains strict credit standards for swap counterparties. All swap counterparties for longer term swaps are rated at least in the double- A category by both Moody's and Standard & Poor's. To further mitigate credit risk, the Department swap documents require counterparties to post collateral for the Department's benefit if they are downgraded below a designated threshold.

Basis Risk. The Department's swap agreements expose the County to basis risk. Should the relationship between the variable rates the Department receives on the swap fall short of the variable rate on the associated bonds, the expected savings may not be realized. As of September 30, 2017 and 2016, the Department had no variable rate debt outstanding.

Tax Risk. For basis swaps, the interplay between the taxable index and the tax-exempt index may be affected by changes to the marginal tax rates, the elimination of tax preferences or a flat tax. The Department considers these risks to be remote.

Termination Risk. The Department swap agreements do not contain any out-of-ordinary terminating events that would expose it to significant termination risk. In keeping with the market standards the Department or the counterparty may terminate each swap if the other party fails to perform under the terms of the contract. In addition, the swap documents allow either party to terminate in the event of a significant loss of creditworthiness. If at the time of the termination, a swap has a negative value, the Department would be liable to the counterparty for a payment equal to the fair value of such swap unless the counterparty is the defaulting party. The Department is subject to Bank of New York Mellon's 10-year call provision, whereby Bank of New York Mellon has a one-time termination option.

8. PAYABLES

Payables and accrued expenses for fiscal years ended September 30, 2017 and 2016 were as follows (in thousands):

	2017	2016
Other County funds	\$ 18,278	\$ 10,982
Vendors	49,112	24,114
Other governments	24,335	25,546
Salaries and benefits	6,460	5,381
Contractors	39,637	27,640
Other	260	260
Total payables	<u>\$ 138,082</u>	<u>\$ 93,923</u>

9. PENSION PLAN

The Department, as an agency of the County, participates in the Florida Retirement System (the FRS). The FRS was created in Chapter 121, Florida Statutes, to provide a defined benefit pension plan for participating public employees. The FRS was amended in 1998 to add the Deferred Retirement Option Program under the defined benefit plan and amended in 2000 to provide a defined contribution plan alternative to the defined benefit plan for FRS members effective October 1, 2002. This integrated defined contribution pension plan is the FRS Investment Plan. Chapter 112, Florida Statutes, established the Retiree Health Insurance Subsidy (HIS) Program, a cost-sharing multiple-employer defined benefit pension plan, to assist retired members of any state-administered retirement system in paying the costs of health insurance.

Essentially all regular employees of the Department are eligible to enroll as members of the State- administered FRS. Provisions relating to the FRS are established by Chapters 121 and 122, Florida Statutes; Chapter 112, Part IV, Florida Statutes; Chapter 238, Florida Statutes; and FRS Rules, Chapter 60S, Florida Administrative Code; wherein eligibility, contributions, and benefits are defined and described in detail. Such provisions may be amended at any time by further action from the Florida Legislature.



Notes to Financial Statements

The FRS is a single retirement system administered by the Florida Department of Management Services, Division of Retirement, and consists of the two cost-sharing, multiple-employer defined benefit plans and other nonintegrated programs. A comprehensive annual financial report of the FRS, which includes its financial statements, required supplementary information, actuarial report, and other relevant information, is available from the Florida Department of Management Services' Web site: (http://www.dms.myflorida.com/workforce_operations/retirement/publications).

FRS Pension Plan Description

The FRS Pension Plan (Plan) is a cost-sharing multiple-employer defined benefit pension plan, with a Deferred Retirement Option Program (DROP) for eligible employees.

Employees enrolled in the Plan prior to July 1, 2011, vest at six years of creditable service and employees enrolled in the Plan on or after July 1, 2011, vest at eight years of creditable service. All vested members enrolled prior to July 1, 2011 are eligible for normal retirement benefits at age 62 or at any age after 30 years of service (except for members classified as special risk who are eligible for normal retirement benefits at age 55 or at any age after 25 years of service). All members enrolled in the Plan on or after July 1, 2011, once vested, are eligible for normal retirement benefits at age 65 or any time after 33 years of creditable service (except for members classified as special risk who are eligible for normal retirement benefits at age 60 or at any age after 30 years of service). Members of the Plan may include up to 4 years of credit for military service toward creditable service.

The Plan also includes an early retirement provision; however, there is a benefit reduction for each year a member retires before his or her normal retirement date. The Plan provides retirement, disability, death benefits, and annual cost-of-living adjustments to eligible participants.

DROP, subject to provisions of Section 121.091, Florida Statutes, permits employees eligible for normal retirement under the Plan to defer receipt of monthly benefit payments while continuing employment with an FRS employer. An employee may participate in DROP for a period not to exceed 60 months after electing to participate, except that certain instructional personnel may participate for up to 96 months. During the period of DROP participation, deferred monthly benefits are held in the FRS Trust Fund and accrue interest. The net pension liability does not include amounts for DROP participants, as these members are considered retired and are not accruing additional pension benefits.

Benefits Provided

Benefits under the Plan are computed on the basis of age and/or years of service, average final compensation, and service credit. Credit for each year of service is expressed as a percentage of the average final compensation. For members initially enrolled before July 1, 2011, the average final compensation is the average of the five highest fiscal years' earnings; for members initially enrolled on or after July 1, 2011, the average final compensation is the average of the eight highest fiscal years' earnings. The total percentage value of the benefit received is determined by calculating the total value of all service, which is based on the retirement class to which the member belonged when the service credit was earned. Members are eligible for in-line-of-duty or regular disability and survivors' benefits.

As provided in Section 121.101, Florida Statutes, if the member is initially enrolled in FRS before July 1, 2011, and all service credit was accrued before July 1, 2011, the annual cost-of-living adjustment is 3 percent per year. If the member is initially enrolled before July 1, 2011, and has service credit on or after July 1, 2011, there is an individually calculated cost-of-living adjustment. The annual cost-of-living adjustment is a proportion of 3 percent determined by dividing the sum of the pre-July 2011 service credit by the total service credit at retirement multiplied by 3 percent. Plan members initially enrolled on or after July 1, 2011, will not have a cost-of-living adjustment after retirement.

Contributions

The Florida Legislature establishes contribution rates for participating employers and employees. For fiscal years ended September 30, 2017 and 2016, employees were required to contribute 3% of their gross salary. Employer contribution is based on class. For fiscal year ended September 30, 2017, the contribution rate for FRS Regular and DROP were 7.52% and 12.99% respectively. The Department's contributions for FRS totaled \$11.0 million and employee contributions totaled \$3.7 million. For the fiscal year ended September 30, 2016, the contribution rate for FRS Regular and DROP were 7.37% and 12.28% respectively. The Department's contributions for FRS totaled \$12.5 million and employee contributions totaled \$3.5 million.



Notes to Financial Statements

Pension Liabilities, Pension Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

At September 30, 2017, the Department reported a liability of \$121.5 million for its proportionate share of the Plan's net pension liability. The net pension liability was measured as of June 30, 2017, and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of July 1, 2017.

At September 30, 2016, the Department reported a liability of \$111.7 million for its proportionate share of the Plan's net pension liability. The net pension liability was measured as of June 30, 2016, and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of July 1, 2016.

For the fiscal year ended September 30, 2017, the Department recognized pension expense of \$19.6 million related to the Plan. For the fiscal year ended September 30, 2016, the Department recognized pension expense of \$15.7 million. In addition, for fiscal years 2017 and 2016, the Department reported, deferred outflows of resources and deferred inflows of resources related to pensions from the following sources (in thousands):

	2017		2016	
	Deferred Outflows of Resources	Deferred Inflows of Resources	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	\$ 11,149	\$ 673	\$ 8,634	\$ 1,079
Change of assumptions	40,825	-	6,776	-
Net difference between projected and actual earnings on FRS pension plan investments	-	-	-	-
Changes in proportion and differences between Department's FRS contributions and proportionate share of contributions	-	3,011	28,194	639
Department's contributions subsequent to measurement date	2,125	2,714	1,676	4,367
	3,150	-	3,281	-
	<u>\$ 57,249</u>	<u>\$ 6,398</u>	<u>\$ 48,561</u>	<u>\$ 6,085</u>

For fiscal year ended September 30, 2017, the deferred outflows of resources related to pensions of approximately \$3.2 million, resulting from the Department's contributions to the Plan subsequent to the measurement date, will be recognized as a reduction of the net pension liability in the fiscal year ended September 30, 2018. For fiscal year ended September 30, 2016, the deferred outflows of resources related to pensions, of approximately \$3.3 million, resulting from the Department's contributions to the Plan subsequent to the measurement date, was recognized as a reduction of the net pension liability in the fiscal year ended September 30, 2017. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions would be recognized in pension expense as follows (in thousands):

Fiscal Year Ending	Deferred	Fiscal Year Ending	Deferred
September 30, 2017	outflows/(inflows), net	September 30, 2016	outflows/(inflows), net
2018	\$ 5,625	2017	\$ 4,826
2019	16,075	2018	4,826
2020	11,736	2019	15,818
2021	2,804	2020	11,267
2022	8,368	2021	1,877
Thereafter	3,094	Thereafter	581

Actuarial Assumptions

The FRS pension as of July 1, 2017 and 2016 actuarial valuations were determined using the following actuarial assumptions, applied to all periods included in the measurement

	2017	2016
Inflation	2.60%	2.60%
Salary Increases (average, including inflation)	3.25%	3.25%
Investment Rate of Return (net of pension plan investment expense, including inflation.	7.10%	7.60%



Notes to Financial Statements

The actuarial assumptions used in the July 1, 2017 and 2016 valuations were based on the results of an actuarial experience study for the period July 1, 2008 through June 30, 2013.

Long-Term Expected Rate of Return

For fiscal years ended September 30, 2017 and 2016, the long-term expected rate of return on the Plan investments was not based on historical returns, but instead was based on a forward-looking capital market economic model. The allocation policy's description of each asset class was used to map the target allocation to the asset classes shown below. Each asset class assumption is based on a consistent set of underlying assumptions, and includes an adjustment for the inflation assumption. For fiscal years ended September 30, 2017 and 2016, the target allocation and best estimates of arithmetic and geometric real rates of return for each major asset class are summarized in the following table:

2017					2016				
Asset Class	Target Allocation ¹	Annual Arithmetic Return	Compound Annual (Geometric) Return	Standard Deviation	Asset Class	Target Allocation ¹	Annual Arithmetic Return	Compound Annual (Geometric) Return	Standard Deviation
Cash	1.0%	3.0%	3.0%	1.8%	Cash	1.0%	3.0%	3.0%	1.7%
Fixed income	18.0%	4.5%	4.4%	4.2%	Fixed income	18.0%	4.7%	4.6%	4.6%
Global equity	53.0%	7.8%	6.6%	17.0%	Global equity	53.0%	8.1%	6.8%	17.2%
Real estate (property)	10.0%	6.6%	5.9%	12.8%	Real estate (property)	10.0%	6.4%	5.8%	12.0%
Private equity	6.0%	11.5%	7.8%	30.0%	Private equity	6.0%	11.5%	7.8%	30.0%
Strategic investments	12.0%	6.1%	5.6%	9.7%	Strategic investments	12.0%	6.1%	5.6%	11.1%
	<u>100.0%</u>					<u>100%</u>			
Assumed inflation-Mean		2.6%		1.9%	Assumed inflation-Mean		2.6%		1.90%

Note: (1) As outlined in the Plan's investment policy

Discount Rate

For fiscal year ended September 30, 2017 and 2016, the discount rate used to measure the net pension liability of the Plan was 7.10 percent and 7.60, respectively. The Plan's fiduciary net position was projected to be available to make all projected future benefit payments of current active and inactive employees. Therefore, the discount rate for calculating the total pension liability is equal to the long-term expected rate of return.

Sensitivity of the Department's Proportionate Share of the Net Position Liability to Changes in the Discount Rate

For fiscal years ended September 30, 2017 and 2016, the following represents the Department's proportionate share of the net pension liability calculated using the discount rate of 7.10 and 7.60 percent, respectively; as well as what the Department's proportionate share of the net pension liability would be if it is calculated using a discount rate that is one percentage point lower (6.10 and 6.60 percent) or one percentage point higher (8.10 and 8.60 percent) than the current rate (in thousands):

Miami Dade County's proportionate share of the net pension liability allocated to the Department	1% Decrease	Current Discount Rate	1% Increase
	6.10%	7.10%	8.10%
2017	\$ 219,866	\$ 121,477	\$ 39,792
	6.60%	7.60%	8.60%
2016	\$ 207,745	\$ 111,748	\$ 31,847

Pension Plan Fiduciary Net Position

Detailed information about the Plan's fiduciary net position is available in the separately issued FRS Pension Plan and Other State-Administered Systems Comprehensive Annual Financial Report.

Notes to Financial Statements

Department's Allocation

The Department's proportionate share of the FRS Plan's net pension liability, deferred outflow of resources and deferred inflow of resources, and pension expense / adjustment for the fiscal years ended September 30, 2017 and 2016 were allocated as follows (in thousands):

Water and Sewer	FRS PLAN				
	Percent Allocation	Net Pension Liability	Deferred Outflow of Resources	Deferred Inflow of Resources	Pension Expense/Adjustment
2017	5.29%	\$ (121,477)	\$ 57,250	\$ (6,398)	\$ 1,354
2016	5.65%	\$ (111,748)	\$ 48,561	\$ (6,085)	\$ 4,439

The Retiree Health Insurance Subsidy Program (HIS) Plan Description

The Retiree Health Insurance Subsidy Program (HIS Plan) is a cost-sharing multiple-employer defined benefit pension plan established under Section 112.363, Florida Statutes, and may be amended by the Florida Legislature at any time. The benefit is a monthly payment to assist retirees of the State-administered retirement systems in paying their health insurance costs and is administered by the Division of Retirement within the Florida Department of Management Services.

Benefits Provided

For the fiscal years ended September 30, 2017 and 2016, eligible retirees and beneficiaries received a monthly HIS payment of \$5 for each year of creditable service completed at the time of retirement, with a minimum HIS payment of \$30 and a maximum HIS payment of \$150 per month, pursuant to Section 112.363, Florida Statutes. To be eligible to receive a HIS Plan benefit, a retiree under a State-administered retirement system must provide proof of health insurance coverage, which may include Medicare.

Contributions

The HIS Plan is funded by required contributions from FRS participating employers as set by the Florida Legislature. Employer contributions are a percentage of gross compensation for all active FRS members. For the fiscal years ended September 30, 2017 and 2016, the HIS contribution for the periods July 1 through June 30, and from July 1, through September 30, was 1.66%. The County contributed 100 percent of its statutorily required contributions for the current year and preceding three years. The HIS Plan contributions are deposited in a separate trust fund from which payments are authorized. HIS Plan benefits are not guaranteed and are subject to annual legislative appropriation. In the event the legislative appropriation or available funds fail to provide full subsidy benefits to all participants, benefits may be reduced or canceled.

For the fiscal years ended September 30, 2017 and 2016, the Department's contributions to the HIS Plan totaled \$1.8 million.

Pension Liabilities, Pension Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

At September 30, 2017, the Department reported a net pension liability of \$35.0 million for its proportionate share of the HIS Plan's net pension liability. The total pension liability was determined by an actuarial valuation date as of June 30, 2017, and was recalculated and projected to the measurement date of June 30, 2017 using a standard actuarial roll-forward technique. At September 30, 2016, the Department reported a net pension liability of \$42.0 million for its proportionate share of the HIS Plan's net pension liability. The total pension liability was determined by an actuarial valuation date as of July 1, 2015, and was recalculated and projected to the measurement date of June 30, 2016 using a standard actuarial roll-forward technique.

For the fiscal year ended September 30, 2017, the Department recognized pension expense of \$2.7 million related to the HIS Plan. For the fiscal year ended September 30, 2016 the Department recognized pension expense of \$3.3 million related to the HIS Plan. In addition, for fiscal years 2017 and 2016, the Department reported, deferred outflows or resources and deferred inflows of resources related to the HIS Plan from the following sources (in thousands):



Notes to Financial Statements

	2017		2016	
	Deferred Outflows of Resources	Deferred Inflows of Resources	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	\$ -	\$ 73	\$ -	\$ 94
Change of assumptions	4,924	3,029	6,468	-
Net difference between projected and actual earnings on HIS pension plan investments	-	-	-	-
Changes in proportion and differences between Department's HIS contributions and proportionate share of HIS contributions	-	-	-	-
Department's contributions subsequent to measurement date	453	295	93	407
	481	-	497	-
	<u>\$ 5,878</u>	<u>\$ 3,397</u>	<u>\$ 7,079</u>	<u>\$ 501</u>

For fiscal year ended September 30, 2017, the deferred outflows of resources related to pensions of approximately \$0.5 million, resulting from the Department's contributions to the HIS Plan subsequent to the measurement date, will be recognized as a reduction of the net pension liability in the fiscal year ended September 30, 2018. For fiscal year ended September 30, 2016, the deferred outflows of resources related to pensions, of approximately \$0.5 million, resulting from the Department's contributions to the HIS Plan subsequent to the measurement date, was recognized as a reduction of the net pension liability in the fiscal year ended September 30, 2017. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows (in thousands):

Fiscal Year Ending September 30, 2017	Deferred outflows/(inflows), net	Fiscal Year Ending September 30, 2016	Deferred outflows/(inflows), net
2018	\$ 577	2017	\$ 1,079
2019	573	2018	1,079
2020	571	2019	1,075
2021	468	2020	1,073
2022	200	2021	965
Thereafter	(389)	Thereafter	810

Actuarial Assumptions

The HIS pension as of July 1, 2017 and 2016 actuarial valuations were determined using the following actuarial assumptions, applied to all periods included in the measurement:

	2017	2016
Inflation	2.60%	2.60%
Salary Increases (average, including inflation)	3.25%	3.25%
Municipal Bond Rates	3.58%	2.85%

The actuarial assumptions used in the June 30, 2017 and 2016 valuations were based on the results of an actuarial experience study for the period July 1, 2008 through June 30, 2013.

Discount Rate

For fiscal years ended September 30, 2017 and 2016, the discount rate used to measure the total pension liability for the HIS Plan was 3.58 percent and 2.85, respectively. In general, the discount rate for calculating the total pension liability is equal to the single rate equivalent to discounting at the long-term expected rate of return for benefit payments prior to the projected depletion date. Because the HIS benefit is essentially funded on a pay-as-you-go basis, the depletion date is considered to be immediate, and the single equivalent discount rate is equal to the municipal bond rate selected by the HIS Plan sponsor. The Bond Buyer General Obligation 20-Bond Municipal Bond Index was adopted as the applicable municipal bond index.

Sensitivity of the Department's Proportionate Share of the Net Pension Liability to Changes in the Discount Rate

For fiscal years ended September 30, 2017 and 2016, the following represents the Department's proportionate share of the net pension liability calculated using the discount rate of 3.58 and 2.85 percent, respectively; as well as what the Department's proportionate share of the net pension liability would be if it is calculated using a discount rate that

Notes to Financial Statements

is one percentage point lower (2.58 and 1.85 percent) or one percentage point higher (4.58 and 3.85 percent) than the current rate (in thousands):

Miami Dade County's proportionate share of the net pension liability allocated to the Department	1% Decrease	Current Discount Rate	1% Increase
	2.58%	3.58%	4.58%
2017	\$ 39,976	\$ 35,033	\$ 30,914
	1.85%	2.85%	3.85%
2016	\$ 48,181	\$ 42,010	\$ 36,887

Pension plan fiduciary net position

Detailed information regarding the HIS Plan's fiduciary net position is available in the separately issued FRS Pension Plan and Other State-Administered Systems Comprehensive Annual Financial Report.

Department's Allocation

The Department's proportionate share of the HIS Plan's net pension liability, deferred outflow of resources and deferred inflow of resources, and pension expense / adjustment for the fiscal years ended September 30, 2017 and 2016 were allocated as follows (in thousands):

Water and Sewer	HIS PLAN				
	Percent Allocation	Net Pension Liability	Deferred Outflow of Resources	Deferred Inflow of Resources	Pension Expense/Adjustment
2017	5.29%	\$ (35,033)	\$ 5,879	\$ (3,397)	\$ (2,881)
2016	5.65%	\$ (42,010)	\$ 7,079	\$ (501)	\$ 1,438

The below table represents the Department's aggregate net pension liability, deferred outflow of resources related to pensions, deferred inflow of resources related to pensions, and the pension expense/adjustments for FRS and HIS plans as of the end of the fiscal year.

Water and Sewer	FRS & HIS PLAN				
	Percent Allocation	Net Pension Liability	Deferred Outflow of Resources	Deferred Inflow of Resources	Pension Expense/Adjustment
2017	5.29%	\$ (156,510)	\$ 63,129	\$ (9,795)	\$ (1,527)
2016	5.65%	\$ (153,758)	\$ 55,640	\$ (6,586)	\$ 5,877

FRS – Defined Contribution Pension Plan

The Department contributes to the FRS Defined Contribution Investment Plan (Investment Plan). The Investment Plan is administered by the State Board of Administration (SBA), and is reported in the SBA's annual financial statements and in the State of Florida Comprehensive Annual Financial Report.

As provided in Section 121.4501, Florida Statutes, eligible FRS members may elect to participate in the Investment Plan in lieu of the FRS defined benefit plan. Miami-Dade County employees participating in the DROP are not eligible to participate in the Investment Plan. Employer and employee contributions, including amounts contributed to individual member's accounts, are defined by law, but the ultimate benefit depends in part on the performance of investment funds. Benefit terms, including contribution requirements, for the Investment Plan are established and may be amended by the Florida Legislature. The Investment Plan is funded with the same employer and employee contribution rates that are based on salary and membership class (Regular Class, Elected County Officers, etc.), as the FRS Pension Plan. Contributions are directed to individual member accounts, and the individual members allocate contributions and account balances among various approved investment choices. Allocations to the investment member's accounts, as established by Section 121.72, Florida Statutes, are based on a percentage of gross compensation, by class.

For all membership classes, employees are immediately vested in their own contributions and are vested after one year of service for employer contributions and investment earnings. If an accumulated benefit obligation for service credit originally earned under the FRS Pension Plan is transferred to the Investment Plan, the member must have the years



Notes to Financial Statements

of service required for FRS Pension Plan vesting (including the service credit represented by the transferred funds) to be vested for these funds and the earnings on the funds. Non-vested employer contributions are placed in a suspense account for up to five years. If the employee returns to FRS-covered employment within the five-year period, the employee will regain control over their account. If the employee does not return within the five-year period, the employee will forfeit the accumulated account balance. At years ended September 30, 2017 and 2016, the costs of administering the Investment Plan, including the FRS Financial Guidance Program, were funded through an employer contribution of 0.06 and 0.04 percent of payroll, respectively, and by forfeited benefits of Investment Plan members. For the fiscal years ended September 30, 2017 and 2016, the information for the amount of forfeitures was unavailable from the SBA; however, management believes that these amounts, if any, would be immaterial to Miami Dade County.

After termination and applying to receive benefits, the member may rollover vested funds to another qualified plan, structure a periodic payment under the Investment Plan, receive a lump-sum distribution, leave the funds invested for future distribution, or any combination of these options. Disability coverage is provided; the member may either transfer the account balance to the FRS Pension Plan when approved for disability retirement to receive guaranteed lifetime monthly benefits under the FRS Pension Plan, or remain in the Investment Plan and rely upon that account balance for retirement income.

For the fiscal years ended September 30, 2017 and 2016, the Department’s Investment Plan pension contributions totaled \$1.1 million and \$0.09 million, respectively.

10. RISK MANAGEMENT

The Department is exposed to various risks of loss related to torts; theft of, damage to and destruction of assets; errors and omissions; job-related injuries or illnesses to employees; natural disasters and employee health and accident. In the year ended September 30, 1987, the Department established a self-insurance program for general and automobile liability exposures as provided by Section 706 of County Ordinance 78-82, as amended. Ordinance 78-82 was amended and restated by Ordinance 93-134 and Section 609 continues to provide for such self-insurance program.

Claims are administered by the County’s Risk Management Division, and the program is based upon an actuarial study performed annually by consulting actuaries. Liabilities are reported when it is possible that a loss has occurred and the amount of that loss can be reasonably estimated. Liabilities also include an amount for claims that have been incurred but not reported (IBNR). Because actual claims liability depends on such complex factors as inflation, change in legal doctrines and damage awards, the process used in computing claims liability does not necessarily result in an exact amount. Claims liabilities are re-evaluated periodically to take into consideration recently settled claims, the frequency of claims and other economic and social factors.

Changes in the balance of claim liabilities for the general and automobile self-insurance program during fiscal year 2017 and 2016 were as follows (in thousands):

	2017	2016
Balance at beginning of year	\$ 2,807	\$ 1,979
Claims and changes in estimates	493	1,498
Less: Payments	<u>(1,355)</u>	<u>(670)</u>
Balance at end of year	<u>\$ 1,945</u>	<u>\$ 2,807</u>

The Department participates in the workers’ compensation self-insurance program of the County, administered by the Risk Management Division. Risk Management charges a “premium” to each County department based on amounts necessary to provide funding for expected payments during the fiscal year. The estimate of IBNR losses is performed by an independent actuary. The Department maintains a liability in the amount of \$1.9 million at September 30, 2017, and \$2.8 million at September 30, 2016 for possible funding of these IBNR losses. The County maintains no excess coverage with independent carriers for workers’ compensation. The Department’s total self-insurance liability was \$3.5 million and \$3.6 million as of September 30, 2017 and 2016, respectively.

The Department also participates in the County’s group health and life self-insurance program, administered by an independent administrator. The County charges a uniform “premium” per employee to each County department based on recent trends in actual claims experience, and makes provisions for catastrophic losses. Current year premiums are adjusted for County-wide prior year actual claims experience.

Notes to Financial Statements

The Department purchases a master property insurance policy covering most properties. For windstorm losses the policy carries a deductible of 5% of the total insured value of the damaged building(s), including contents, subject to a minimum of \$250,000 and a maximum of \$40,000,000 per occurrence. A \$1,000,000 deductible applies to most other perils. The current limit of the policy is \$200,000,000 per occurrence.

The Department continues to carry commercial insurance for all other risks of loss. Settled claims resulting from these risks have not exceeded commercial insurance coverage in any of the past three fiscal years.

11. CONTRIBUTIONS

Contributions during fiscal years 2017 and 2016 are presented as follows (in thousands):

	<u>2017</u>	<u>2016</u>
Contributed Facilities:		
Developers	<u>\$35,109</u>	<u>\$53,611</u>

12. RELATED PARTY TRANSACTIONS

The Department provides water and wastewater services to other County departments as part of the normal course of business, based on regular retail rates. The Department also provides billing services to other County departments. The County provides various services to the Department which are charged using direct and indirect cost allocation methods. The Department reimburses the County (General Fund) for certain administrative services. The following table presents a list of providers of services and respective payments for the fiscal years ended September 30, 2017 and 2016 (in thousands):

	<u>2017</u>	<u>2016</u>
General Fund	\$ 19,024	\$ 19,968
Other County Departments	59,605	7,987
Solid Waste	23,247	-
Regulatory	16,750	-
Information Technology	16,397	13,298
Internal Services Department	15,225	12,288

In addition to the payments, the Department had related payables of \$18.3 million at September 30, 2017. The Department also has receivables from other County departments amounting to \$11.2 million at September 30, 2017. The Department has every intention of paying the outstanding payables on a timely basis, and is confident it will collect the outstanding receivables. For year ended September 30, 2016, the Department had related payables of \$10.9 million. The Department also had receivables from other County departments amounting to \$11.4 million.

The Department has also entered other transactions with various County entities. These transactions arise from the normal course of business and in connection with the management of ongoing projects.

13. COMMITMENTS AND CONTINGENCIES

CONSTRUCTION

For fiscal years ended September 30, 2017 and 2016, the Department had contractual commitments of \$489.2 million and \$433.2 million, respectively.

LEGAL CONTINGENCIES

The County is a defendant in various actions brought by parties in the normal course of business of the Department. Based on consultation with the County Attorney's Office, it is the opinion of management that the ultimate resolution of these suits would not materially affect the financial position of the Department or its ability to conduct its business.

FEDERAL AND STATE GRANTS

Federal and state grant awards are audited under the provisions of the Single Audit Act to determine that the Department has complied with the terms and conditions of the grant awards. Federal and state grants received are also subject to audit by the grantor agency. It is management's opinion that no material liabilities will result from any such audits.



Notes to Financial Statements

REBATABLE ARBITRAGE EARNINGS

Federal tax law requires that arbitrage interest earnings be remitted to the federal government, unless the local government qualifies for an exemption. As of September 30, 2017, and 2016, the Department had no obligation to rebate and in 2017, the Department did not record any obligation of interest earned on bond proceeds invested in taxable securities in excess of interest costs. These arbitrage rebates are payable five years from the date of bond issuance and each five years thereafter. The amount of the obligation, if any, will be determined based on actual interest earned.

SETTLEMENT AGREEMENTS AND CONSENT DECREES

In 1993, the Department entered into a Settlement Agreement with the Florida Department of Environmental Protection (FDEP) resulting in very limited restriction on new sewer construction in certain areas of the County until adequate capacity became available in the wastewater system. Subsequently, in 1994 and 1995, two consent decrees, the First Partial Consent Decree (FPCD) and the Second and Final Partial Consent Decree (SFPCD), were entered into with the United States of America whereby the Department accelerated its improvement program of the wastewater system. All requirements of the Settlement Agreement were satisfied and the Agreement was closed by FDEP on September 1, 2011.

On May 21, 2013, the Board of County Commissioners approved a Resolution authorizing execution of a new Consent Decree between Miami-Dade County, the United States of America, the State of Florida and Florida Department of Environmental Protection (FDEP). It was lodged with the Clerk of the Court for the U.S. District Court for the Southern District of Florida on June 6, 2013, and became effective on December 6, 2013. The new Consent Decree was subsequently approved by The Court; the date of entry is recorded as April 9, 2014. Upon the Date of Entry, the previous FPCD and SFPCD were terminated with the Department having maintained compliance with all the provision, incurring no penalties. The terms and conditions of the new Consent Decree are intended to replace and supersede the terms and provisions of the FPCD and SFPCD, and recognize that appropriate modifications and updates are warranted due to the fact that conditions within and circumstances surrounding the Miami-Dade's Wastewater Collection and Transmission System (WCTS) have changed since entry of the FPCD and SFPCD in the middle of the 1990s. The Department is in compliance with the provisions of the new Consent Decree.

14. POSTEMPLOYMENT BENEFITS OTHER THAN PENSIONS

PLAN DESCRIPTION

Miami-Dade County administers a single-employer defined benefit healthcare plan (the Plan) that provides postemployment medical and dental coverage to retirees as well as their eligible spouses and dependents. Benefits are provided through the County's group health insurance plan, which covers both active and retired members. Benefits are established and may be amended by the Miami- Dade County Board of County Commissioners (BCC), whose powers derive from F.S. 125.01(3)(a). The Plan does not issue a publicly available financial report.

To be eligible to receive retiree medical and dental benefits, participants must be eligible for retirement benefits under the Florida Retirement System (FRS) or the Public Health Trust of Miami-Dade County, Florida, Defined Benefit Retirement Plan and pay required contributions. Refer to note 9, Pension Plan, for a description of eligibility requirements.

The medical plans offered provide hospital, medical and pharmacy coverage. Pre-65 retirees are able to select from four medical plans as follows:

- AvMed POS
- AvMed HMO High
- AvMed HMO Select
- Jackson First HMO

Post-65 retirees are able to select from three medical plans, as follows. The County only contributes to post-65 retirees electing an AvMed Medicare Supplement Plan.

- AvMed Medicare Supplement Low Option with prescription drug coverage
- AvMed Medicare Supplement High Option with prescription drug coverage
- AvMed Medicare Supplement High Option without prescription drug coverage

Notes to Financial Statements

FUNDING POLICY

The County contributes to both the pre-65 and post-65 retiree medical coverage. Medical contributions vary based on plan and tier. Retirees pay the full cost of dental coverage. The postretirement medical is currently funded on a pay-as-you go basis. Contributions are required for both retiree and dependent coverage. Retirees contribute a portion of the full active premium equivalent rates for health coverage. The County subsidy is assumed to remain flat.

The County's contribution is the actual pay-as-you-go postemployment benefit payments less participant contributions. No assets have been segregated and restricted to provide postretirement benefits. For fiscal years 2017 and 2016, the Department contributed \$1.9 million and \$2.1 million to the plan, respectively.

ANNUAL OPEB COST AND NET OPEB OBLIGATION

The Department's annual other postemployment benefit (OPEB) cost (expense) is calculated based on the *annual required contribution of the employer (ARC)*, an amount actuarially determined in accordance with the parameters of GASB Statement No. 45. The ARC represents a level of funding that, if paid on an ongoing basis, is projected to cover normal cost each year and to amortize any unfunded actuarial liabilities (or funding excess) over a period not to exceed thirty years.

The Department's annual OPEB cost for fiscal years 2017 and 2016 were as follows (dollar amounts in thousands):

	2017	2016
Annual required contribution	\$2,734	\$2,640
Interest on OPEB obligation	239	220
Adjustment of annual required contribution	229	269
Annual OPEB Cost	2,744	2,591
Contributions made	1,968	2,103
Increase in net OPEB obligation	776	488
Net OPEB obligation – beginning of year	5,980	5,492
Net OPEB obligation – end of year	<u>\$6,756</u>	<u>\$5,980</u>

The Department's annual OPEB cost, the percentage of annual cost contributed to the plan, and the net OPEB obligation for fiscal years 2017 and 2016 were as follows (dollars in thousands):

	2017	2016
Annual OPEB cost	\$2,744	\$2,591
Percentage of Annual OPEB Cost Contributed	71.7%	81.1%
Net OPEB Obligation	\$6,756	\$5,980

FUNDED STATUS AND FUNDING PROGRESS

The schedule below shows the balance of the County's actuarial accrued liability (AAL), all of which was unfunded as of September 30, 2017 and 2016. An estimated 9% of this liability can be attributed to the Department (dollar amounts in thousands).

	2017	2016
Actuarial Valuation Date	10/1/2016	10/1/2015
Actuarial Value of Assets (a)	-	-
Actuarial Accrued Liability (AAL) (b)	\$373,487	\$375,536
Unfunded AAL (UAAL) (b-a)	\$373,487	\$375,536
Funded Ratio (a/b)	0%	0%
Estimated Covered Payroll (c)	\$1,526,403	\$1,526,403
UAAL as % of Covered Payroll ([b-a]/c)	25%	25%



Notes to Financial Statements

Actuarial valuations involve estimates of the value of reported amounts and assumptions about the probability of events in the future. Amounts determined regarding the funded status of the Plan and the annual required contributions by the County are subject to continual revision as actual results are compared to past expectations and new estimates are made about the future. The required schedule of funding progress, presented as required supplementary information, provides multi-year trend information that shows whether the actuarial value of Plan assets is increasing or decreasing over time relative to the actuarial accrued liability for benefits.

ACTUARIAL METHODS AND ASSUMPTION

Projections of benefits are based on the substantive plan (the Plan as understood by the employer and plan members) and include the types of benefits in force at the valuation date and the pattern of sharing benefit costs between the County and the Plan member to that point. Actuarial calculations reflect a long-term perspective and employ methods and assumptions that are designed to reduce short-term volatility in actuarial accrued liabilities and the actuarial value of assets.

The actuarial cost method used in the valuation to determine the Actuarial Accrued Liability (AAL) and the Actuarial Required Contribution (ARC) was the Projected Unit Credit Method with service prorated. Under this method, the total present value of benefits is determined by projecting the benefit to be paid after the expected retirement date (or other event) and discounting those amounts to the valuation date. The normal cost is computed by dividing the total present value of benefits by the participant's total service (actual plus expected service) at retirement. The AAL under this method represents the total present value of benefits multiplied by the ratio of the participant's actual service to date and divided by expected service at retirement. The AAL for participants currently receiving payments and deferred vested participants is calculated as the actuarial present value of future benefits expected to be paid. No normal cost for these participants is payable. The AAL and normal costs were calculated at measurement date, which is the beginning of the applicable fiscal year using standard actuarial techniques.

The following summarizes other significant methods and assumptions used in valuing the AAL and benefits under the plan.

Actual valuation date	10/1/2016	10/1/2015
	Level	Level
Amortization method	percentage	percentage
	of payroll,	of payroll,
Remaining amortization period	21 years	22 years
Actuarial Assumptions:		
Discount rate	4.00%	4.00%
Payroll growth assumption	3.00%	3.00%
Inflation rate	3.50%	3.50%
Health care trend rates	8% initial to 5% ultimate	8% initial to 5% ultimate
Mortality table	RP 2014	RP 2014

Further, the participation assumption used in the valuation (the assumed percentage of future retirees that participate and enroll in the health plan) is 20% for those prior to age 55 (50 if special risk) and 60% until age 65. Once reaching Medicare eligibility, the participation rate is assumed to be 20%.

The valuation assumes that the County will continue to fund the liability on a pay-as-you-go basis and that the County's per-capita contribution for retiree benefits will remain flat. As a result, the retiree contributions will be increased to the extent necessary so that they are sufficient to provide for the difference between the gross costs and the fixed County contributions.

15. SUBSEQUENT EVENTS

On September 28, 2017, the Board of County Commissioners adopted a County Budget Ordinance Number 17-65 authorizing a modification to the Department's retail tiered-based structure that will generate enough revenues to support costs and to minimize the impact to the retail water and sewer user. Over the last eight years, the average water usage has decreased due to proactive conservation and low flow water fixtures, this modification will help to

Notes to Financial Statements

stabilize revenues that support fixed-costs. The median monthly bill of the residential customer using 5,236 gallons (7 ccf) per month will be \$42.54 or \$7.44 higher from the current estimated bill of \$35.10. The FY 2017-18 Adopted Budget also includes the addition of a new rate category for mixed-use buildings with one meter serving both residential and non-residential areas. In addition to changes to retail customers rate schedules, the County Budget Ordinance increased the water wholesale rate by \$0.10 per thousand gallons from \$1.7341 to \$1.8341, and the wastewater wholesale rate by \$0.146 per thousand gallons from \$2.944 to \$3.0937. The County Ordinance also authorized adjustments to other miscellaneous fees and charges. All changes will be effective October 9, 2017.

On December 7, 2017, the Department issued the Water and Sewer System Revenue Bonds, Series 2017A and the Water and Sewer System Revenue Refunding Bonds, Series 2017B for \$381.3 million and \$548.0 million, respectively. The Series 2017A Bonds will refund all outstanding Commercial Paper Notes - Series A-1 and Series B-1, make a deposit to the Reserve Account and pay the costs of issuance of the Series 2017A Bonds. The Series 2017B Bonds will refund \$567.6 million principal outstanding for the Miami-Dade County, Florida Water and Sewer System Revenue Bonds, Series 2010 maturing October 1, 2021 and pay the costs of issuance of the Series 2017B Bonds.



Required Supplementary Information

SCHEDULE OF FUNDING PROGRESS

Postemployment Healthcare Plan

Miami-Dade County*

(dollar amount in thousands)

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Estimated Covered Payroll (c)	UAAL as % of Covered Payroll ((b-a)/c)
10/1/2016	0	\$373,487	\$373,487	0%	\$1,526,403	25%
10/1/2015	0	375,536	\$375,536	0%	1,526,403	25%
10/1/2015	0	332,637	\$332,637	0%	1,430,604	23%
10/1/2013	0	330,042	330,042	0%	1,430,604	23%
10/1/2013	0	362,669	362,669	0%	1,447,127	25%
10/1/2011	0	357,006	357,006	0%	1,661,941	21%
10/1/2010	0	297,218	297,218	0%	1,620,593	18%

* This schedule shows the balance of the County's actuarial accrued liability (AAL). An estimated 9% of this liability can be attributed to the Department.



Required Supplementary Information

**MIAMI-DADE WATER & SEWER DEPARTMENT
REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF THE DEPARTMENT'S PROPORTIONATE SHARE
OF THE NET PENSION LIABILITY
FLORIDA RETIREMENT SYSTEM PENSION PLAN
(dollars in thousands)**

JUNE 30th,	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
Department's proportion of the County's FRS net pension liability	5.29%	5.65%	5.93%	5.93%
Department's proportionate share of the County's FRS net pension liability	\$ 121,477	\$ 111,748	\$ 56,648	\$ 27,104
Department's covered employee payroll	\$ 168,335	\$ 168,798	\$ 131,903	\$ 126,610
Department's proportionate share of the County's FRS net pension liability as a percentage of its covered employee payroll	72.16%	66.20%	42.95%	21.41%
FRS Plan fiduciary net position as a percentage of the total pension liability	84%	85%	92%	96%

**MIAMI-DADE WATER & SEWER DEPARTMENT
REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF THE DEPARTMENT'S CONTRIBUTIONS-
FLORIDA RETIREMENT SYSTEM PENSION PLAN
(dollars in thousands)**

SEPTEMBER 30th,	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
Contractually required FRS contribution	\$ 10,691	\$ 10,534	\$ 10,693	\$ 9,730
FRS contribution in relation to the contractually required contribution	<u>10,691</u>	<u>10,534</u>	<u>10,693</u>	<u>9,730</u>
FRS contribution deficiency (excess)	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Department's covered payroll	\$ 169,397	\$ 174,697	\$ 141,267	\$ 126,719
FRS contribution as a percentage of covered employee payroll	6.31%	6.03%	7.57%	7.68%

Note: The schedules presented above illustrate the requirements of GASB Statement No. 68. However, until a full 10-year trend is compiled, information for those years for which information is available will be presented.



Required Supplementary Information

**MIAMI-DADE WATER & SEWER DEPARTMENT
REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF THE DEPARTMENT'S PROPORTIONATE SHARE
OF THE NET PENSION LIABILITY
HEALTH INSURANCE SUBSIDY PENSION PLAN
(dollars in thousands)**

JUNE 30th,	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
Department's proportion of the County's HIS net pension liability	5.29%	5.65%	5.93%	5.93%
Department's proportionate share of the County's HIS net pension liability	\$ 35,033	\$ 42,010	\$ 37,204	\$ 33,960
Department's covered employee payroll	\$ 134,720	\$ 134,855	\$ 164,213	\$ 156,448
Department's proportionate share of the County's HIS net pension liability as a percentage of its covered employee payroll	26.00%	31.15%	22.66%	21.71%
HIS Plan fiduciary net position as a percentage of the total pension liability	0.00%	0.97%	0.50%	0.99%

**MIAMI-DADE WATER & SEWER DEPARTMENT
REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF THE DEPARTMENT'S CONTRIBUTIONS-
HEALTH INSURANCE SUBSIDY PENSION PLAN
(dollars in thousands)**

SEPTEMBER 30th,	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
Contractually required HIS contribution	\$ 1,734	\$ 1,770	\$ 1,394	\$ 1,244
HIS contribution in relation to the contractually required contribution	<u>1,734</u>	<u>1,770</u>	<u>1,394</u>	<u>1,244</u>
HIS contribution deficiency (excess)	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Department's covered payroll	\$ 135,685	\$ 139,403	\$ 162,174	\$ 156,889
HIS contribution as a percentage of covered employee payroll	1.28%	1.27%	0.86%	0.79%

Note: The schedules presented above illustrate the requirements of GASB Statement No. 68. However, until a full 10-year trend is compiled, information for those years for which information is available will be presented.

Supplementary Financial Data

Bond Ordinance 93-134 requires the Department to establish restricted accounts to be used in accounting for proceeds and collateral pledged as a result of the debt. In many cases, the bond ordinance refers to the restricted accounts as “funds”. Such accounts are not “funds” as defined by *NCGA Statement 1: Governmental Accounting and Financial Reporting Principles* and, therefore, are not funds for financial reporting purposes.

Similarly, the Water and Wastewater Systems do not meet the above-referenced definition and, therefore, combining statements are not presented. The following system schedules are furnished solely as supplementary information and are not required by GAAP.



Water System

SCHEDULES OF NET POSITION

	September 30,	<u>2017</u>	<u>2016</u>
	(In thousands)		
ASSETS			
<i>CURRENT ASSETS:</i>			
Cash and cash equivalents	\$	8,070	\$ 11,732
Investments		45,487	36,408
Accounts Receivable (net of allowance for uncollectible accounts of \$11.1 million and \$9.8 million, respectively)		66,145	55,022
Inventory of materials and supplies		16,199	16,616
Other current assets		3,841	2,890
Restricted cash and cash equivalents		54,760	40,188
Total Current Assets		<u>194,502</u>	<u>162,856</u>
<i>NONCURRENT RESTRICTED ASSETS:</i>			
Cash and cash equivalents		43,321	93,481
Investment derivative instrument		15,889	22,615
Investments		156,341	57,968
Long-term receivable - General Fund		10,000	10,000
Grants receivable		206	74
Total Restricted Assets		<u>225,757</u>	<u>184,138</u>
<i>OTHER ASSETS:</i>			
Bond Insurance		837	952
Other charges, net		5,164	6,504
Total Other Assets		<u>6,001</u>	<u>7,456</u>
<i>CAPITAL ASSETS:</i>			
Land		23,316	23,316
Structures and Improvements		1,960,058	1,954,975
Equipment		367,328	353,078
Utility plant in service before depreciation		2,350,702	2,331,369
Less accumulated depreciation		<u>(1,075,502)</u>	<u>(1,029,916)</u>
Net utility plant in service		1,275,200	1,301,453
Construction work in progress		254,250	185,370
Total Capital Assets		<u>1,529,450</u>	<u>1,486,823</u>
Total Noncurrent Assets		<u>1,761,208</u>	<u>1,678,417</u>
Total Assets		<u>1,955,710</u>	<u>1,841,273</u>
<i>DEFERRED OUTFLOWS OF RESOURCES:</i>			
Loss on refundings		14,831	15,871
Outflow related to pension		29,195	25,826
Total Deferred Outflows of Resources		<u>44,026</u>	<u>41,697</u>
Total Assets and Deferred Outflows of Resources	\$	<u>1,999,736</u>	\$ <u>1,882,970</u>

(Continued)

Water System

SCHEDULES OF NET POSITION

(Continued)

September 30,

2017

2016

(In thousands)

LIABILITIES

CURRENT LIABILITIES (PAYABLE FROM UNRESTRICTED CURRENT ASSETS):

Accounts payable and accrued expenses	\$ 26,674	\$ 19,274
Customer and developer deposits	12,860	11,589
Current portion of long-term debt	2,480	1,997
Liability for compensated absences	2,681	2,770
Other liabilities	831	1,582
Total Current Liabilities (payable from unrestricted current assets)	45,526	37,212

CURRENT LIABILITIES (PAYABLE FROM RESTRICTED CURRENT ASSETS):

Accounts payable and accrued expenses	15,702	8,583
Retainage payable	3,531	3,541
Current portion of long-term debt	13,606	12,845
Accrued interest payable	19,359	14,438
Liability for self insurance	948	781
Total Current Liabilities (payable from restricted current assets)	53,146	40,188

Total Current Liabilities

98,672

77,400

NONCURRENT LIABILITIES:

Revenue bonds payable, net	475,520	489,864
State loan obligations, net	22,219	14,415
Commercial Paper	75,000	20,000
Liability for self-insurance	997	2,026
Liability for compensated absences	12,879	12,609
Liability for post-employment benefits	6,756	5,980
Net pension liability	75,122	73,884
Total Noncurrent Liabilities	668,493	618,778

Total Liabilities

767,165

696,178

DEFERRED INFLOWS OF RESOURCES:

Inflow related to pension	5,444	4,000
Total Deferred Inflows of Resources	5,444	4,000

Total Liabilities and Deferred Inflows of Resources

772,609

700,178

NET POSITION

Net investment in capital assets	975,646	965,055
Restricted for:		
Capital projects	87,865	49,887
Debt service	23,781	30,228
Unrestricted	139,835	137,622
Total Net Position	1,227,127	1,182,792

Total Liabilities, Deferred Inflows of Resources and Net Position

\$ 1,999,736

\$ 1,882,970



Water System

SCHEDULES OF REVENUES, EXPENSES AND CHANGES IN NET POSITION

For the fiscal years ended September 30,	<u>2017</u>	<u>2016</u>
	(In thousands)	
<i>OPERATING REVENUES:</i>		
Retail	\$ 265,636	\$ 247,088
Wholesale	34,916	28,572
Other Revenues	15,493	15,383
Total operating revenues	<u>316,045</u>	<u>291,043</u>
<i>OPERATING AND MAINTENANCE EXPENSES:</i>		
Source of supply	14,193	14,284
Power and pumping	1,976	1,982
Treatment	60,387	68,272
Transmission and distribution	31,228	30,554
Customer accounting	5,389	4,093
Customer service	13,677	12,766
General and administrative	39,683	37,983
Total operating and maintenance expenses	<u>166,533</u>	<u>169,934</u>
Operating income before depreciation	149,512	121,109
<i>DEPRECIATION EXPENSE</i>		
Operating income	<u>74,142</u>	<u>72,180</u>
<i>NON-OPERATING REVENUES (EXPENSES):</i>		
Investment income (Loss)	(5,178)	(2,650)
Interest expense	(17,434)	(16,290)
Amortization of insurance costs	(1,478)	(1,470)
Customer connection fees	6,483	7,615
Other revenues	(878)	7,381
Other expenses	(1,662)	(1,683)
Income before contributions	55,223	41,832
Capital contributions	21,632	28,860
Transfer (to) Wastewater System	(32,520)	(128,373)
Increase (Decrease) in net position	44,335	(57,681)
Net position at beginning of year	<u>1,182,792</u>	<u>1,240,473</u>
Net position at end of year	<u>\$ 1,227,127</u>	<u>\$ 1,182,792</u>



Water System

SCHEDULES OF CASH FLOWS

For the fiscal years ended September 30,

	2017	2016
	(In thousands)	
<i>CASH FLOWS FROM OPERATING ACTIVITIES:</i>		
Cash received from customers	\$ 310,327	\$ 304,445
Cash paid to suppliers for goods and services	(70,044)	(81,408)
Cash paid to employees for services	(91,376)	(85,112)
Transfer from Wastewater System	(32,520)	(128,373)
Net cash provided by operating activities	116,387	9,552
<i>CASH FLOWS FROM NON-CAPITAL FINANCING ACTIVITIES:</i>		
Loan repayment received from County's General Fund	-	5,000
Net cash provided by non-capital financing activities	-	5,000
<i>CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES:</i>		
Proceeds from bond issues, loan agreements and notes	66,112	20,000
Principal payments - bond, loans and notes	(14,842)	(14,200)
Bond premium	(438)	(316)
Interest paid	(12,536)	(17,658)
Acquisition and construction of capital assets	(88,029)	(94,900)
Net cash (used) by capital and related financing activities	(49,733)	(107,074)
<i>CASH FLOWS FROM INVESTING ACTIVITIES:</i>		
Purchase of investment securities	(122,158)	(196,224)
Proceeds from sale and maturity of investment securities	(159,107)	378,459
Interest on investments	175,361	(52,212)
Net cash provided (used) by investing activities	(105,904)	130,023
Net increase (decrease) in cash and cash equivalents	(39,250)	37,501
Cash and cash equivalents at beginning of year	145,401	107,900
Cash and cash equivalents at end of year	\$ 106,151	\$ 145,401

(Continued)



Water System

SCHEDULES OF CASH FLOWS

(Continued)	For the fiscal years ended September 30,	2017	2016
		(In thousands)	
<i>RECONCILIATION OF OPERATING INCOME TO NET CASH PROVIDED BY OPERATING ACTIVITIES:</i>			
Operating income		\$ 75,370	\$ 48,929
Adjustments to reconcile operating income to net cash provided by operating activities:			
Depreciation		74,142	72,180
Provision for uncollectible accounts		1,254	552
Other revenues		-	-
Non-operating other, net		3,942	9,230
Transfer to/from reserves		(32,520)	(128,373)
(Increase) decrease in assets and deferred outflows:			
Accounts Receivable		(12,378)	(2,671)
Inventory of materials and supplies		418	1,014
Other current assets		(951)	18
Contracts receivable		132	74
Other charges		(5,270)	1,340
Deferred outflows related to pension		(3,369)	(17,950)
Increase (decrease) in liabilities and deferred inflows:			
Accounts payable and accrued expenses		7,400	(1,673)
Customer and developer deposits		1,270	1,154
Accrued interest payable		4,922	2,592
Liability for compensated absences		180	(6)
Other liabilities		(751)	1,232
Liability for other post-employment benefits		776	488
Liability for self-insurance		(862)	828
Net pension liability		1,238	26,957
Deferred inflows related to pension		1,444	(6,363)
Net cash provided by operating activities		\$ 116,387	\$ 9,552

NONCASH INVESTING, CAPITAL AND FINANCING ACTIVITIES

Property, plant and equipment contributions were received in amounts of \$21.6 million in fiscal year 2017.

The change in the fair value of investments was a \$0.07 million decrease in fiscal year 2017.

The change in the fair value of swaps was a \$6.7 million decrease in fiscal year 2017.

RECONCILIATION OF CASH AND CASH EQUIVALENTS AT END OF YEAR

Unrestricted current cash and cash equivalents	\$ 8,070	\$ 11,732
Restricted current cash and cash equivalents	54,760	40,188
Restricted noncurrent cash and cash equivalents	43,321	93,481
Total cash and cash equivalents at end of year	\$ 106,151	\$ 145,401

Water System

SCHEDULE OF OPERATING AND MAINTENANCE EXPENSES

Budget and Actual
For the fiscal year ended September 30, 2017
(In thousands)

	Budget	Actuals	Variance under (over)
Source of Supply	\$ 11,948	\$ 14,193	\$ (2,245)
Power and pumping	1,674	1,976	(302)
Treatment	71,961	60,387	11,574
Transmission and distribution	32,590	31,228	1,362
Customer accounting	3,932	5,389	(1,457)
Customer service	16,034	13,677	2,357
General and administrative	47,546	39,683	7,863
Totals	\$ 185,685	\$ 166,533	\$ 19,152



Wastewater System

SCHEDULES OF NET POSITION

September 30,	2017	2016
	(In thousands)	
ASSETS		
<i>CURRENT ASSETS:</i>		
Cash and cash equivalents	\$ 676	\$ 43,387
Investments	58,231	11,480
Accounts Receivable (net of allowance for uncollectible accounts of \$9.1 million and \$7.9 million, respectively)	-	-
	96,456	80,164
Inventory of materials and supplies	23,080	21,907
Restricted cash and cash equivalents	157,478	141,794
Total Current Assets	335,921	298,732
<i>NONCURRENT RESTRICTED ASSETS:</i>		
Cash and cash equivalents	-	26,982
Investment derivative instrument	15,889	22,615
Investments	241,907	184,683
Contracts receivable	-	17
Total Restricted Assets	257,796	234,297
<i>OTHER ASSETS:</i>		
Bond Insurance	3,313	3,824
Other charges, net	22,784	28,926
Total Other Assets	26,097	32,750
<i>CAPITAL ASSETS:</i>		
Land	51,839	48,252
Structures and Improvements	3,113,419	3,071,448
Equipment	837,738	829,824
Utility plant in service before depreciation	4,002,996	3,949,524
Less accumulated depreciation	(2,166,911)	(2,077,778)
Net utility plant in service	1,836,085	1,871,746
Construction work in progress	874,297	608,357
Total Capital Assets	2,710,382	2,480,103
Total Noncurrent Assets	2,994,275	2,747,150
Total Assets	3,330,196	3,045,882
<i>DEFERRED OUTFLOWS OF RESOURCES:</i>		
Loss on refundings	67,779	72,416
Outflow related to pension	33,932	29,814
Total Deferred Outflows of Resources	101,711	102,230
Total Assets and Deferred Outflows of Resources	\$ 3,431,907	\$ 3,148,112

(Continued)

Wastewater System

SCHEDULES OF NET POSITION

(Continued)	September 30,	2017	2016
		(In thousands)	
LIABILITIES			
<i>CURRENT LIABILITIES (PAYABLE FROM UNRESTRICTED CURRENT ASSETS):</i>			
Accounts payable and accrued expenses		\$ 42,915	\$ 26,899
Customer and developer deposits		6,000	6,779
Current portion of long-term debt		5,327	5,854
Liability for compensated absences		7,380	7,428
Other liabilities		23	799
Total Current Liabilities (payable from unrestricted current assets)		61,645	47,759
<i>CURRENT LIABILITIES (PAYABLE FROM RESTRICTED CURRENT ASSETS):</i>			
Accounts payable and accrued expenses		52,791	39,167
Retainage payable		16,034	10,077
Current portion of long-term debt		60,120	57,667
Accrued interest payable		28,446	34,883
Total Current Liabilities (payable from restricted current assets)		157,391	141,794
Total Current Liabilities		219,036	189,553
<i>NONCURRENT LIABILITIES:</i>			
Revenue bonds payable, net		1,435,838	1,498,132
State loan obligations, net		130,687	134,229
Commercial Paper		300,000	80,000
Liability for compensated absences		19,254	18,912
Net pension liability		81,388	79,874
Total noncurrent liabilities		1,967,167	1,811,147
Total liabilities		2,186,203	2,000,700
<i>DEFERRED INFLOWS OF RESOURCES:</i>			
Inflow related to pension		4,351	2,586
Total Deferred Inflows of Resources		4,351	2,586
Total Liabilities and Deferred Inflows of Resources		2,190,554	2,003,286
NET POSITION			
Net investment in capital assets		875,395	765,473
Restricted for:			
Capital projects		131,804	142,250
Debt service		113,090	107,892
Unrestricted		121,064	129,211
Total Net Position		1,241,353	1,144,826
Total Liabilities, Deferred Inflows of Resources and Net Position		\$ 3,431,907	\$ 3,148,112



Wastewater System

SCHEDULES OF REVENUES, EXPENSES AND CHANGES IN NET POSITION

For the fiscal years ended September 30,	<u>2017</u>	<u>2016</u>
	(In thousands)	
<i>OPERATING REVENUES:</i>		
Retail	\$ 288,910	\$ 273,058
Wholesale	88,938	82,380
Other Revenues	13,439	13,301
Total operating revenues	<u>391,287</u>	<u>368,739</u>
<i>OPERATING AND MAINTENANCE EXPENSES:</i>		
Collection system	33,457	26,866
Pumping	42,543	39,549
Treatment	92,347	91,915
Customer accounting	4,348	3,349
Customer service	10,746	10,031
General and administrative	48,556	46,844
Total operating and maintenance expenses	<u>231,997</u>	<u>218,554</u>
Operating income before depreciation	159,290	150,185
<i>DEPRECIATION EXPENSE</i>	<u>113,779</u>	<u>112,244</u>
Operating Income	45,511	37,941
<i>NON-OPERATING REVENUES (EXPENSES):</i>		
Investment income (Loss)	(4,471)	(2,203)
Interest expense	(8,544)	(30,079)
Amortization of insurance costs	(5,271)	(6,660)
Customer connection fees	21,223	29,476
Other revenues	2,629	6,983
Other expenses	(547)	(599)
Income before contributions	50,530	34,859
Capital contributions	13,477	24,751
Transfer from Water System	32,520	128,373
Increase in net position	96,527	187,983
Net position at beginning of year	<u>1,144,826</u>	<u>956,843</u>
Net position at end of year	<u>\$ 1,241,353</u>	<u>\$ 1,144,826</u>

Wastewater System

SCHEDULES OF CASH FLOWS

For the fiscal years ended September 30,

	2017	2016
	(In thousands)	
<i>CASH FLOWS FROM OPERATING ACTIVITIES:</i>		
Cash received from customers	\$ 396,797	\$ 389,069
Cash paid to suppliers for goods and services	(91,930)	(104,643)
Cash paid to employees for services	(125,993)	(117,564)
Transfer to Wastewater System	32,520	128,373
Net cash provided by operating activities	211,394	295,235
<i>CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES:</i>		
Proceeds from bond issues, loan agreements and notes	225,042	90,425
Principal payments - bond, loans and notes	(62,869)	(62,291)
Bond premium	(634)	(1,515)
Interest paid	(14,240)	(47,275)
Acquisition and construction of capital assets	(310,982)	(269,026)
Net cash (used) by capital and related financing activities	(163,683)	(289,682)
<i>CASH FLOWS FROM INVESTING ACTIVITIES:</i>		
Purchase of investment securities	(635,139)	(205,462)
Proceeds from sale and maturity of investment securities	634,301	201,102
Interest on investments	(100,882)	54,202
Net cash provided (used) by investing activities	(101,720)	49,842
Net increase (decrease) in cash and cash equivalents	(54,009)	55,395
Cash and cash equivalents at beginning of year	212,163	156,768
Cash and cash equivalents at end of year	\$ 158,154	\$ 212,163

(Continued)



Wastewater System

SCHEDULES OF CASH FLOWS

(Continued) For the fiscal years ended September 30, 2017 2016
(In thousands)

RECONCILIATION OF OPERATING INCOME TO NET CASH PROVIDED BY OPERATING ACTIVITIES:

Operating income	\$	45,511	\$	37,941
Adjustments to reconcile operating income to net cash provided by operating activities:				
Depreciation		113,779		112,244
Provision for uncollectible accounts		1,099		567
Other revenues				-
Non-operating other, net		23,304		35,862
Transfer to/from reserves		32,520		122,162
(Increase) decrease in assets and deferred outflows:				
Accounts Receivable		(17,391)		(16,558)
Inventory of materials and supplies		(1,173)		(1,117)
Other current assets				0
Contracts receivable				17
Other charges		6,264		6,142
Deferred outflows related to pension		(4,118)		(21,939)
Increase (decrease) in liabilities and deferred inflows:				
Accounts payable and accrued expenses		16,016		(6,491)
Customer and developer deposits		(778)		427
Accrued interest payable		(6,437)		51
Liability for compensated absences		294		(9)
Other liabilities		(775)		764
Net pension liability		1,514		32,948
Deferred Inflows related to pension		1,765		(7,776)
Net cash provided by operating activities	\$	<u>211,394</u>	\$	<u>295,235</u>

NONCASH INVESTING, CAPITAL AND FINANCING ACTIVITIES

Property, plant and equipment contributions were received in amounts of \$13.5 million in fiscal year 2017.

The change in the fair value of investments was a \$0.09 million decrease in fiscal year 2017.

The change in the fair value of swaps was a \$6.8 million decrease in fiscal year 2017.

RECONCILIATION OF CASH AND CASH EQUIVALENTS AT END OF YEAR

Unrestricted current cash and cash equivalents	\$	676	\$	43,387
Restricted current cash and cash equivalents		157,478		141,794
Restricted noncurrent cash and cash equivalents		-		26,982
Total cash and cash equivalents at end of year	\$	<u>158,154</u>	\$	<u>212,163</u>

Wastewater System

SCHEDULE OF OPERATING AND MAINTENANCE EXPENSES

Budget and Actual
For the fiscal year ended September 30, 2017
(In thousands)

	<u>Budget</u>	<u>Actuals</u>	<u>Variance under (over)</u>
Collection system	\$ 32,273	\$ 33,457	\$ (1,184)
Pumping	39,350	42,543	(3,193)
Treatment	99,095	92,347	6,748
Customer accounting	3,197	4,348	(1,151)
Customer service	12,096	10,746	1,350
General and administrative	58,132	48,556	9,576
Totals	<u>\$ 244,143</u>	<u>\$ 231,997</u>	<u>\$ 12,146</u>



Statistical Section



Statistical Section

This part of the Department's comprehensive annual report details information as a context for understanding what the information in the financial statements, note disclosures, and required supplementary information says about the Department's overall financial health.

Contents

Financial Trends

These schedules, found on pages 83-86, contain trend information to help the reader understand how the Department's financial performance and well-being have changed over time.

Revenue Capacity

These schedules, found on pages 87-89, contain information to help the reader assess the factors affecting the Department's ability to generate revenue.

Debt Capacity

These schedules, found on pages 90-91, present information to help the reader assess the affordability of the Department's current levels of outstanding debt and the Department's ability to issue additional debt in the future.

Demographic and Economic Information

These schedules, found on pages 92-98, offer demographic and economic indicators to help the reader understand the environment within which the Department's financial activities take place.

Operating and Capital Information

These schedules, found on pages 99-101, contain service and infrastructure data to help the reader understand how the information in the Department's financial report related to the services the Department provides and the activities it performs.



Net Position

BY COMPONENTS - LAST TEN FISCAL YEARS

(in thousands)	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
<i>COMBINED WATER AND WASTEWATER SYSTEMS:</i>										
Net investment in capital assets	\$1,851,041	\$1,730,528	\$1,590,653	\$1,542,930	\$1,474,197	\$1,567,455	\$1,530,096	\$1,535,755	\$1,590,038	\$1,396,153
Restricted	356,540	330,257	340,066	321,122	273,623	223,887	243,292	279,576	150,114	397,803
Unrestricted	260,899	266,833	266,597	355,635	449,515	431,933	413,233	379,683	436,651	345,543
Total net position	\$2,468,480	\$2,327,618	\$2,197,316	\$2,219,687	\$2,197,335	\$2,223,275	\$2,186,621	\$2,195,014	\$2,176,803	\$2,139,499
<i>WATER SYSTEM</i>										
Net investment in capital assets	\$975,646	\$965,055	\$1,013,229	\$988,585	\$943,883	\$971,727	\$947,539	\$936,355	\$911,206	\$830,671
Restricted	111,646	80,115	80,841	93,302	96,841	73,822	84,993	110,491	50,571	140,103
Unrestricted	139,835	137,622	146,403	189,084	252,612	222,278	214,739	193,724	233,984	191,960
Total net position	\$1,227,127	\$1,182,792	\$1,240,473	\$1,270,971	\$1,293,336	\$1,267,827	\$1,247,271	\$1,240,570	\$1,195,761	\$1,162,734
<i>WASTEWATER SYSTEM</i>										
Net investment in capital assets	\$875,395	\$765,473	\$577,424	\$554,345	\$530,314	\$595,728	\$582,557	\$599,400	\$678,832	\$565,482
Restricted	244,894	250,142	259,225	227,820	176,782	150,065	158,298	169,086	99,543	257,700
Unrestricted	121,064	129,211	120,194	166,551	196,903	209,655	198,495	185,958	202,667	153,583
Total net position	\$1,241,353	\$1,144,826	\$956,843	\$948,716	\$903,999	\$955,448	\$939,350	\$954,444	\$981,042	\$976,765

Combined Water and Wastewater System

SCHEDULE OF REVENUES AND EXPENSES - LAST TEN FISCAL YEARS

(in thousands)	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
<i>OPERATING REVENUES:</i>										
Retail	\$ 554,546	\$ 520,146	\$ 486,201	\$ 465,057	\$ 437,778	\$ 429,003	\$ 428,832	\$ 393,420	\$ 372,265	\$ 342,303
Wholesale	123,854	110,951	98,810	85,771	88,754	82,710	90,671	84,489	68,178	72,246
Other	28,932	28,685	28,305	28,022	21,876	24,589	26,157	40,486	38,293	22,927
Total operating revenues	707,332	659,782	613,316	578,850	548,408	536,302	545,660	518,395	478,736	437,476
<i>OPERATING AND MAINTENANCE EXPENSES:</i>										
Source of supply	14,193	14,284	10,931	10,788	10,874	10,705	13,558	12,354	14,208	12,006
Collection system	33,457	26,866	27,634	22,500	21,638	20,150	20,385	21,523	15,987	19,293
Pumping	44,519	41,532	39,384	37,355	36,508	35,883	32,892	31,919	32,611	32,790
Treatment	152,734	160,186	156,229	145,513	139,555	134,178	134,650	130,010	134,454	129,219
Transmission and distribution	31,228	30,554	30,892	28,844	27,882	27,423	27,929	28,459	25,428	26,528
Customer accounting and service	34,160	30,239	28,068	23,180	25,155	23,574	24,231	28,003	27,572	25,906
General and administrative	88,239	84,827	75,769	81,662	78,552	73,164	79,165	97,364	78,669	76,222
Total operating and maintenance expense	398,530	388,488	368,907	349,842	340,164	325,077	332,810	349,632	328,929	321,964
Operating income before depreciation	308,802	271,294	244,409	229,008	208,244	211,225	212,850	168,763	149,807	115,512
<i>DEPRECIATION EXPENSE</i>	187,921	184,424	188,909	183,557	177,570	163,315	159,158	160,469	152,428	154,881
Operating income (loss)	120,881	86,870	55,500	45,451	30,674	47,910	53,692	8,294	(2,621)	(39,369)
<i>NON-OPERATING REVENUES(EXPENSES):</i>										
Investment income (loss)	(9,649)	(4,853)	20,557	3,933	(18,351)	21,797	6,193	18,160	13,440	28,489
Interest expense	(25,978)	(46,369)	(75,728)	(89,678)	(78,538)	(85,478)	(85,511)	(71,229)	(63,787)	(66,320)
Other income	20,499	41,043	36,186	42,670	28,572	24,269	15,897	18,588	33,857	36,517
Income (loss) before contributions and transfers	105,753	76,691	36,515	2,376	(37,643)	8,498	(9,729)	(26,187)	(19,111)	(40,683)
Capital contributions	35,109	53,611	46,692	35,810	19,459	28,156	33,556	30,487	56,415	26,761
Transfers to County's General Fund	-	-	-	-	-	-	(32,220)	-	-	-
Increase (decrease) in net position	\$ 140,862	\$ 130,302	\$ 83,207	\$ 38,186	\$ (18,184)	\$ 36,654	\$ (8,393)	\$ 4,300	\$ 37,304	\$ (13,922)



Water System

SCHEDULE OF REVENUES AND EXPENSES - LAST TEN FISCAL YEARS

(in thousands)	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
<i>OPERATING REVENUES:</i>										
Retail	\$ 265,636	\$ 247,088	\$ 233,464	\$ 219,880	\$ 207,117	\$ 202,633	\$ 202,189	\$ 193,632	\$ 169,568	\$ 154,796
Wholesale	34,916	28,572	37,008	28,815	29,210	35,330	37,990	38,554	29,041	22,909
Other	15,493	15,383	14,966	14,908	11,985	13,167	13,517	12,936	27,102	12,839
Total operating revenues	316,045	291,043	285,438	263,603	248,312	251,130	253,696	245,122	225,711	190,544
<i>OPERATING AND MAINTENANCE EXPENSES:</i>										
Source of supply	14,193	14,284	10,931	10,788	10,874	10,705	13,558	12,354	14,208	12,006
Pumping	1,976	1,982	2,054	1,911	1,816	1,798	1,942	2,003	2,407	2,134
Treatment	60,387	68,272	63,921	58,741	60,188	59,811	62,138	61,967	64,457	61,317
Transmission and distribution	31,228	30,554	30,892	28,844	27,882	27,423	27,929	28,459	25,428	26,528
Customer accounting and service	19,066	16,859	15,651	13,025	13,908	12,841	13,325	15,602	15,325	14,337
General and administrative	39,683	37,983	34,078	36,711	35,292	32,936	35,644	43,860	35,380	34,864
Total operating and maintenance expenses	166,533	169,934	157,527	150,020	149,960	145,514	154,536	164,245	157,205	151,186
Operating income before depreciation	149,512	121,109	127,911	113,583	98,352	105,616	99,160	80,877	68,506	39,358
DEPRECIATION EXPENSE	74,142	72,180	66,642	65,456	69,581	61,158	61,122	62,604	59,028	60,859
Operating income (loss)	75,370	48,929	61,269	48,127	28,771	44,458	38,038	18,273	9,478	(21,501)
<i>NON-OPERATING REVENUES(EXPENSES):</i>										
Investment income (loss)	(5,178)	(2,650)	10,127	1,769	(8,574)	10,980	3,061	8,383	6,713	12,273
Interest expense	(17,434)	(16,290)	(19,169)	(21,731)	(14,203)	(17,437)	(18,932)	(14,088)	(15,313)	(15,035)
Other income	2,463	11,843	9,812	13,090	6,461	10,024	8,602	8,374	19,491	12,997
Income (loss) before contributions and transfers	55,221	41,832	62,039	41,255	12,455	48,025	30,769	20,942	20,369	(11,266)
Capital contributions	21,632	28,860	27,918	21,370	11,490	15,749	24,108	18,245	28,896	14,518
Transfers to County's General Fund	-	-	-	-	-	-	(14,499)	-	-	-
Transfer (to) from Wastewater System	(32,520)	(128,373)	(67,666)	(80,939)	1,564	(43,218)	(33,677)	(1,333)	(16,238)	8,306
Increase (decrease) in net position	\$ 44,333	\$ (57,681)	\$ 22,291	\$ (18,314)	\$ 25,509	\$ 20,556	\$ 6,701	\$ 37,854	\$ 33,027	\$ 11,558

Wastewater System

SCHEDULE OF REVENUES AND EXPENSES - LAST TEN FISCAL YEARS

(in thousands)	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
<i>OPERATING REVENUES:</i>										
Retail	\$ 288,910	\$ 273,058	\$ 252,737	\$ 245,167	\$ 230,661	\$ 226,370	\$ 226,643	\$ 215,945	\$ 202,697	\$ 187,507
Wholesale	88,938	82,380	61,802	56,956	59,544	47,380	52,681	45,936	39,137	49,337
Other	13,439	13,301	13,339	13,114	9,891	11,422	12,640	11,392	11,191	10,088
Total operating revenues	391,287	368,739	327,878	315,237	300,096	285,172	291,964	273,273	253,025	246,932
<i>OPERATING AND MAINTENANCE EXPENSES:</i>										
Collection system	33,457	26,866	27,634	22,500	21,638	20,150	20,385	21,523	15,987	19,293
Pumping	42,543	39,549	37,330	35,444	34,692	34,085	30,950	29,916	30,204	30,656
Treatment	92,347	91,915	92,308	86,772	79,367	74,367	72,512	68,043	69,997	67,902
Customer accounting and service	15,094	13,380	12,417	10,155	11,247	10,733	10,906	12,401	12,247	11,569
General and administrative	48,556	46,844	41,691	44,951	43,260	40,228	43,521	53,504	43,289	41,358
Total operating and maintenance expenses	231,997	218,554	211,380	199,822	190,204	179,563	178,274	185,387	171,724	170,778
Operating income before depreciation	159,290	150,185	116,498	115,415	109,892	105,609	113,690	87,886	81,301	76,154
DEPRECIATION EXPENSE	113,779	112,244	122,267	118,101	107,989	102,157	98,036	97,865	93,400	94,022
Operating income (loss)	45,511	37,941	(5,769)	(2,686)	1,903	3,452	15,654	(9,979)	(12,099)	(17,868)
<i>NON-OPERATING REVENUES(EXPENSES)</i>										
Investment income (loss)	(4,471)	(2,203)	10,430	2,164	(9,777)	10,817	3,132	9,777	6,727	16,216
Interest expense	(8,544)	(30,079)	(56,559)	(67,947)	(64,335)	(68,041)	(66,579)	(57,141)	(48,474)	(51,285)
Other income	18,034	29,200	26,374	29,580	22,111	14,245	7,295	10,214	14,366	23,520
Income (loss) before contributions and transfers	50,530	34,859	(25,524)	(38,889)	(50,098)	(39,527)	(40,498)	(40,129)	(39,480)	(29,417)
Capital contributions	13,477	24,751	18,774	14,440	7,969	12,407	9,448	12,242	27,519	12,243
Transfers to County's General Fund	-	-	-	-	-	-	(17,721)	-	-	-
Transfer (to) from Water System	32,520	128,373	67,666	80,939	(1,564)	43,218	33,677	1,333	16,238	(8,306)
Increase (decrease) in net position	\$ 96,527	\$ 187,983	\$ 60,916	\$ 56,490	\$ (43,693)	\$ 16,098	\$ (15,094)	\$ (26,554)	\$ 4,277	\$ (25,480)



Water and Wastewater System Rates

LAST TEN FISCAL YEARS

	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
<i>WATER RATES:</i>										
Meter Size Rate										
5/8"	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
1"	12.38	11.42	10.77	10.16	9.41	9.41	9.41	8.96	8.00	8.61
1.5"	24.76	22.84	21.55	20.33	18.82	18.82	18.82	17.92	16.00	13.43
2"	39.60	36.53	34.46	32.51	30.10	30.10	30.10	28.67	25.60	28.73
3"	79.21	73.07	68.93	65.03	60.21	60.21	60.21	57.34	51.20	61.32
4"	123.76	114.17	107.71	101.61	94.08	94.08	94.08	89.60	80.00	95.77
6"	247.50	228.32	215.40	203.21	188.16	188.16	188.16	179.20	160.00	153.22
8"	396.02	365.33	344.65	325.14	301.06	301.06	301.06	286.72	256.00	268.16
10"	569.28	525.16	495.43	467.39	432.77	432.77	432.77	412.16	368.00	574.63
12"	1,064.30	981.83	926.25	873.82	809.09	809.09	809.09	770.56	688.00	1,085.41
14"	1,980.07	1,826.63	1,723.24	1,625.70	1,505.28	1,505.28	1,505.28	1,433.60	1,280.00	2,043.13
16"	2,722.61	2,511.63	2,369.46	2,235.34	2,069.76	2,069.76	2,069.76	1,971.20	1,760.00	3,830.87
Composite rate (revenues/flows)	4.09	3.85	3.66	3.46	2.99	2.93	2.95	2.75	2.57	2.38
<i>WASTEWATER RATES:</i>										
Base rate (per 1,000 gallons)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.25	3.25
Meter Size Rate										
5/8"	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25	-
1"	12.53	11.60	10.94	10.32	9.56	9.56	9.56	9.10	8.13	-
1.5"	25.05	23.19	21.88	20.64	19.11	19.11	19.11	18.20	16.25	-
2"	40.08	37.11	35.01	33.03	30.58	30.58	30.58	29.12	26.00	-
3"	80.14	74.20	70.00	66.04	61.15	61.15	61.15	58.24	52.00	-
4"	125.22	115.94	109.38	103.19	95.55	95.55	95.55	91.00	81.25	-
6"	250.46	231.90	218.77	206.39	191.10	191.10	191.10	182.00	162.50	-
8"	400.72	371.03	350.03	330.22	305.76	305.76	305.76	291.20	260.00	-
10"	576.03	533.36	503.17	474.69	439.53	439.53	439.53	418.60	373.75	-
12"	1,076.93	997.16	940.72	887.47	821.73	821.73	821.73	782.60	698.75	-
14"	2,003.59	1,855.18	1,750.17	1,651.10	1,528.80	1,528.80	1,528.80	1,456.00	1,300.00	-
16"	2,754.95	2,550.88	2,406.49	2,270.27	2,102.10	2,102.10	2,102.10	2,002.00	1,787.50	-
Composite rate (revenues/flows)	5.74	5.51	5.16	4.98	4.69	4.64	4.67	4.38	4.08	3.78

Increases in Water and Wastewater rates must be approved by the Board of County Commissioners.
Beginning fiscal year 2009, base rate is no longer used for Wastewater; Meter size rate is now used for the two systems.



Water Treatment

LAST TEN FISCAL YEARS

(millions of gallons)	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
<i>WATER PUMPED:</i>										
Water treatment plants:										
Alexander Orr, Jr.	66,190	65,968	62,566	60,183	58,666	59,805	60,191	59,969	57,025	57,257
John E. Preston	27,891	26,789	27,044	26,942	30,586	27,232	26,555	27,632	30,638	29,468
Hialeah	20,093	20,142	19,488	19,248	21,241	22,688	23,685	24,335	23,880	22,794
South Dade Water System	3,752	3,921	3,570	2,607	2,670	2,658	2,580	2,274	2,502	2,384
Purchase water	116	192	164	124	178	152	179	145	386	676
Total water pumped	118,042	117,013	112,832	109,104	113,341	112,535	113,190	114,355	114,431	112,579
<i>WATER SOLD:</i>										
Wholesale:										
Miami Beach	8,566	8,249	8,346	7,615	7,903	7,918	8,410	6,952	6,489	6,848
Hialeah	7,040	6,857	6,623	7,285	9,429	9,121	9,598	9,103	8,110	8,081
North Miami	2,313	1,538	2,096	1,693	1,655	1,374	1,331	1,175	1,502	2,123
Opa-Locka	894	993	950	895	876	876	887	788	845	909
Hialeah Gardens	742	768	694	638	576	591	693	654	695	694
Homestead ⁽¹⁾	668	684	520	188	151	40	-	-	-	-
Bal Harbor	487	506	503	407	494	430	486	455	466	447
North Bay Village	435	419	430	405	415	391	387	395	365	343
Medley	378	381	365	470	516	479	328	400	393	398
Bay Harbor Islands	319	291	328	318	309	310	302	317	329	358
Surfside	389	325	326	303	299	312	317	328	343	327
West Miami	344	319	251	278	236	292	275	293	290	266
Indian Creek Village	143	119	134	117	120	122	133	121	140	133
Virginia Gardens	80	84	82	91	95	93	91	98	100	63
North Miami Beach ⁽²⁾	83	-	3	-	-	-	-	100	107	1,013
Miami Springs ⁽³⁾	-	-	-	-	-	-	-	-	-	771
Total wholesale	22,881	21,533	21,651	20,703	23,074	22,349	23,238	21,179	20,174	22,774
Retail	64,968	64,108	63,783	63,539	63,386	63,169	62,937	64,430	66,086	65,147
Total water sold	87,849	85,641	85,434	84,242	86,460	85,518	86,175	85,609	86,260	87,921
Non-account water	30,193	31,373	27,398	24,862	26,881	27,017	27,015	28,746	28,171	24,658
Non-account water as a percentage of total water pumped	25.58%	26.81%	24.28%	22.79%	23.72%	24.01%	23.87%	25.14%	24.62%	21.90%
Unaccounted for water as a percentage of total water pumped	6.69%	10.10%	8.37%	5.67%	8.88%	3.02%	10.46%	8.27%	9.90%	3.70%

⁽¹⁾ Homestead usage of water is limited to an as needed basis. Their usage is not consistent to that of a wholesale customer.

⁽²⁾ North Miami Beach constructed their own water plant and beginning fiscal year 2009, has not had the need to purchase water.

⁽³⁾ Miami Springs water system was purchased by the Department and beginning fiscal year 2009, is no longer a wholesale customer.



Wastewater Treatment

LAST TEN FISCAL YEARS

(millions of gallons)	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
<i>WASTEWATER PLANT FLOWS:</i>										
North District Plant	34,251	30,734	32,745	34,296	32,000	35,141	27,403	31,810	31,984	34,047
Central District Plant	40,000	46,432	40,662	44,044	43,696	45,014	37,653	41,654	45,095	41,987
South District Plant	38,207	38,115	33,413	37,382	36,274	41,472	33,036	33,997	32,241	33,163
Total wastewater plant flows	112,458	115,281	106,820	115,722	111,970	121,627	98,092	107,461	109,320	109,197
<i>WASTEWATER TREATED:</i>										
Wholesale:										
Miami Beach	8,054	8,797	8,399	8,312	8,141	7,452	6,983	7,870	8,733	8,764
Hialeah	9,203	8,943	7,169	7,102	7,050	7,002	6,084	6,903	7,373	8,109
North Miami	3,654	3,711	3,722	3,619	3,745	3,699	3,418	3,523	3,533	3,923
Coral Gables	1,477	1,432	1,231	1,041	1,088	1,144	987	1,060	1,114	1,196
Homestead	1,763	1,643	938	1,374	736	946	879	419	529	383
Opa-Locka	702	729	861	1,174	733	684	653	492	627	714
Hialeah Gardens	704	700	757	877	865	940	817	801	618	607
North Miami Beach	580	510	505	499	622	727	718	859	940	853
Medley	456	617	477	644	544	708	628	504	619	834
Florida City	425	458	464	420	457	494	412	404	412	431
North Bay Village ⁽¹⁾	409	457	433	418	408	316	39	-	-	-
West Miami	169	185	147	147	162	202	163	144	128	131
Homestead Air Force Base	86	98	78	79	69	65	47	98	185	196
Miami Springs ⁽²⁾	-	-	-	-	-	-	-	-	-	1,237
Total wholesale	27,682	28,281	25,181	25,706	24,620	24,379	21,828	23,077	24,811	27,378
Retail	50,334	49,550	48,998	49,247	49,345	48,752	48,547	49,315	49,671	49,646
Unaccounted for wastewater	34,442	37,450	32,641	40,769	38,005	48,496	27,717	35,069	34,838	32,173
Total wastewater treated	112,458	115,281	106,820	115,722	111,970	121,627	98,092	107,461	109,320	109,197
Unaccounted for wastewater as a percentage of total wastewater treated	30.63%	32.49%	30.56%	35.23%	33.94%	39.87%	28.26%	32.63%	31.87%	29.46%
<i>ANNUAL RAINFALL (inches): ⁽³⁾</i>	78.33	75.11	47.22	73.70	60.60	97.90	58.70	68.60	51.30	63.60

⁽¹⁾ North Bay Village was added as a new wholesale customer beginning in fiscal year 2011.

⁽²⁾ Miami Springs was purchased by WASD and beginning fiscal year 2009 is no longer a wholesale customer.

⁽³⁾ Source: National Weather Service Forecast Office in Miami for rainfall recorded in inches at Miami International Airport.



Debt Service Coverage

LAST TEN FISCAL YEARS

(in thousands)	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
<i>PRIMARY DEBT SERVICE COVERAGE</i>										
Net operating revenues	\$308,802	\$271,293	\$244,409	\$229,007	\$208,432	\$211,225	\$212,850	\$168,763	\$149,807	\$115,513
Investment earnings ⁽¹⁾	3,144	1,823	1,198	1,166	1,479	1,336	2,111	2,550	12,596	29,390
Net transfers from (to) Rate Stabilization Fund	-	-	-	-	-	-	-	-	-	-
Net revenues available for debt service	\$311,946	\$273,116	\$245,607	\$230,173	\$209,911	\$212,561	\$214,961	\$171,313	\$162,403	\$144,903
Debt service requirements ⁽²⁾	\$161,194	\$157,036	\$153,211	\$143,622	\$138,711	\$137,625	\$115,198	\$114,653	\$103,627	\$113,758
Actual coverage	1.94	1.74	1.60	1.60	1.51	1.54	1.87	1.49	1.57	1.27
Required coverage	1.25	1.25	1.25	1.25	1.25	1.10	1.10	1.10	1.10	1.10
<i>SUBORDINATE DEBT SERVICE COVERAGE</i>										
Net revenues available for debt service	\$311,946	\$273,116	\$245,607	\$230,173	\$209,911	\$212,561	\$214,961	\$171,313	\$162,403	\$144,903
Less: Maximum principal and interest ⁽³⁾	161,195	161,195	161,195	163,181	161,340	146,270	146,270	146,270	115,198	114,030
Adjusted net revenues	\$150,751	\$111,921	\$84,412	\$66,992	\$48,571	\$66,291	\$68,691	\$25,043	\$47,205	\$30,873
<i>STATE REVOLVING FUND LOANS DEBT SERVICE COVERAGE</i>										
Net revenues available for debt service	\$311,946	\$273,116	\$245,607	\$230,173	\$209,911	\$212,561	\$214,961	\$171,313	\$162,403	\$144,903
Less: revenue required for primary debt service coverage ⁽⁴⁾	201,493	196,295	191,514	179,528	173,389	151,388	126,718	126,119	113,989	125,133
Adjusted net revenues	\$110,453	\$76,821	\$54,093	\$50,646	\$36,522	\$61,173	\$88,243	\$45,194	\$48,414	\$19,770
Debt service requirements ⁽⁵⁾	15,973	16,819	18,081	15,369	\$11,386	\$13,501	\$13,501	\$13,479	\$13,470	\$13,434
Actual coverage	6.92	4.57	2.99	3.30	3.21	4.53	6.54	3.35	3.59	1.47
Required coverage	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15

⁽¹⁾ Excludes interest income from Construction Fund

⁽²⁾ Represents debt service requirements on outstanding Bonds for such fiscal year.

⁽³⁾ Maximum principal and interest requirements on the Bonds for such fiscal year

⁽⁴⁾ Represents 110% of primary debt service requirements.

⁽⁵⁾ Represents debt service requirements on outstanding State Revolving Fund Loans for such fiscal year.

Note: Debt Service requirements are on "Cash" basis.



Ratio of Outstanding Debt by Type

LAST TEN FISCAL YEARS

(In thousands)

Fiscal Year	Revenue Bonds	Loans	Line of Credit ⁽¹⁾	Commercial Paper ⁽²⁾	Total Outstanding Debt	Total Per Customer
2017	\$ 1,980,348	\$ 165,449	\$ -	\$ 375,000	\$ 2,520,797	\$ 3.16
2016	2,053,731	161,272	-	100,000	2,315,003	2.90
2015	2,024,019	164,698	-	-	2,188,717	2.77
2014	2,132,906	175,796	-	-	2,308,702	2.95
2013	2,193,562	154,873	-	-	2,348,435	3.03
2012	1,896,641	143,843	-	-	2,040,484	2.66
2011	1,932,611	124,162	-	-	2,056,773	2.70
2010	1,980,844	119,255	-	-	2,100,099	2.77
2009	1,432,012	119,093	40,000	-	1,591,105	2.11
2008	1,452,127	107,943	-	-	1,560,070	2.07

⁽¹⁾ Financing from Regions Bank to fund multiple Capital Improvement Projects as per County Ordinance 08-126. Entered on April 27, 2009.

⁽²⁾ Financing from Commercial Paper to provide interim financing for the Department's Capital Improvement Program.

Customer Statistics

LARGEST SYSTEM CUSTOMERS

CURRENT YEAR AND NINE YEARS AGO

<u>Name</u>	Dollar Amount ⁽¹⁾ (in thousands)	Percent of System Gross Revenues
<i>WATER SYSTEM:</i>		
City of Miami Beach	\$ 14,855	4.7%
City of Hialeah	12,209	3.9%
City of North Miami	4,011	1.2%
Dade County Aviation	3,653	1.3%
Florida Power & Light Company	1,994	0.6%
FL Dept of Corrections	1,736	0.5%
City of Opa-Locka	1,550	0.5%
Hialeah Gardens	1,287	0.4%
City of Homestead	1,159	0.4%
Jackson Memorial Hospital	1,008	0.3%

<i>WASTEWATER SYSTEM:</i>		
City of Hialeah	\$ 27,341	7.0%
City of Miami Beach	23,826	6.1%
City of North Miami	10,755	2.7%
City of Homestead	5,265	1.3%
City of Coral Gables	4,511	1.2%
Miami Int'l Airport	3,379	0.9%
City of Opa-Locka	2,083	0.5%
City of Hialeah Gardens	2,080	0.5%
FL Dep't of Corrections	1,774	0.4%
City of North Miami Beach	1,743	0.5%

October 2008 - September 2009

<u>Name</u>	Dollar Amount (in thousands)	Percent of System Gross Revenues
<i>WATER SYSTEM:</i>		
City of Hialeah	\$ 11,058	5.6%
City of Miami Beach	9,506	4.8%
Dade County Aviation	3,684	1.9%
City of North Miami	2,200	1.1%
Florida Power & Light Company	1,391	0.7%
City of Opa Locka	1,238	0.6%
Hialeah Gardens	1,019	0.5%
Bal Harbour	683	0.3%
Medley	575	0.3%
North Bay Village	534	0.3%

<i>WASTEWATER SYSTEM:</i>		
City of Miami Beach	\$ 14,894	6.2%
City of Hialeah	12,643	5.2%
City of North Miami	5,991	2.5%
City of Homestead	2,614	1.1%
Dade County Aviation	1,994	0.8%
City of Coral Gables	1,924	0.8%
City of North Miami Beach	1,584	0.7%
City of Opa Locka	1,064	0.4%
Hialeah Gardens	1,042	0.4%
Medley	1,034	0.4%



Customer Statistics

NUMBER OF CUSTOMERS

LAST TEN FISCAL YEARS

<u>Year</u>	<u>Water</u>	<u>Wastewater</u>	<u>Customers to Water</u>
2017	443,615	361,055	81.4%
2016	441,059	357,882	81.1%
2015	436,862	354,006	81.0%
2014	432,315	349,778	80.9%
2013	428,631	346,285	80.8%
2012	424,764	342,539	80.6%
2011	422,016	339,927	80.5%
2010	420,367	338,368	80.5%
2009	417,983	336,272	80.5%
2008	418,258	336,290	80.4%

Building Permits

Number of Buildings Permits Issued for Housekeeping Units
and Value of Permits for Housekeeping and Total Units
Miami-Dade County, Florida
Last Ten Fiscal Years

Calendar Year	Number of Permits Issued		Value of Permits Issued Residential Construction (in thousands)
	Single Family Houses	Multi-family Buildings	
2017 ⁽¹⁾	(1)	(1)	(1)
2016	2,873	6,279	(1)
2015	2,800	9,817	(1)
2014	2,077	5,654	(1)
2013	2,266	8,050	(1)
2012	1,819	3,250	(1)
2011	962	1,656	(1)
2010	941	2,262	395,139
2009	624	771	252,407
2008	1,086	2,388	477,424

Source: University of Florida, Bureau of Economic and Business Research, [Building Permit Activity in Florida](#)

(1) Information unavailable as of the date of this report.



Population

MIAMI-DADE COUNTY, FLORIDA

LAST TEN FISCAL YEARS

<u>Fiscal Year</u>	<u>Annual Resident Population</u>	<u>Increase (Decrease)</u>	<u>Percent Change</u>
2017	2,743,095	46,742	1.7%
2016	2,696,353	42,419	1.6%
2015	2,653,934	67,644	2.5%
2014	2,586,290	20,605	0.8%
2013	2,565,685	14,430	0.6%
2012	2,551,255	(44,759)	-1.8%
2011	2,596,014	32,129	1.2%
2010	2,563,885	31,885	1.2%
2009	2,532,000	40,604	1.6%
2008	2,491,396	29,819	1.2%

Source: U.S. Bureau of the Census figures 2010; Miami-Dade County Department of Regulatory and Economic Resources, Research Section.

Construction Activity

MIAMI-DADE COUNTY, FLORIDA

LAST TEN FISCAL YEARS

Fiscal Year	Commercial Construction		Residential Construction	
	Number of Buildings	Value (in thousands)	Number of Units	Value (in thousands)
2017 ^(b)	92	\$ 408,257	2,259	\$ 467,543
2016 ^(a)	83	176,969	2,064	324,500
2015	94	74,157	3,472	451,617
2014	137	242,138	1,932	265,791
2013	105	81,734	2,387	309,243
2012	95	130,148	1,535	187,533
2011	120	54,001	1,963	182,480
2010	231	184,566	1,453	129,129
2009	202	263,754	556	55,417
2008	274	477,442	1,262	159,407

Source: Miami-Dade County Building Department. Includes only Unincorporated Area.

^(a) For FY2016, Real Property Value, total actual and assessed values reflect the Final 2016 Tax Roll certified on June 22, 2017.

^(b) For FY2017, total actual and assessed values are based on estimates on the First Certified 2017 Tax Roll made October 14, 2016, prior to any adjustments processed by the Value Adjustment Board.

The Final Certified Tax Roll for 2017 has not been released as of the date of this report.



Principal Employers

MIAMI-DADE COUNTY, FLORIDA

CURRENT YEAR AND NINE YEARS AGO

Employer	2017 ⁽¹⁾			2008		
	Employees	Rank	Percentage of Total County Employment	Employees	Rank	Percentage of Total County Employment
Miami-Dade County Public Schools	31,000	1	2.32%	50,000	1	4.15%
Miami-Dade County	24,692	2	1.85%	32,000	2	2.65%
U.S. Federal Government	19,300	3	1.45%	20,400	3	1.69%
Florida State Government	19,200	4	1.44%	17,000	4	1.41%
University of Miami	13,864	5	1.04%	9,874	8	0.82%
Baptist Health South Florida	13,369	6	1.00%	10,826	6	0.90%
American Airlines	11,773	7	0.88%	9,000	9	0.75%
Jackson Health System	8,163	8	0.61%	10,500	7	0.87%
Florida International University	4,951	9	0.37%	-	-	-
City of Miami	3,820	10	0.29%	4,034	14	0.33%
Mount Sinai Medical Center	3,402	11	0.25%	-	-	-
Florida Power & Light Company	3,011	12	0.23%	3,900	15	0.32%
Miami Children's Hospital	2,991	13	0.22%	-	-	-
Homestead AFB	2,810	14	0.21%	-	-	-
Miami-Dade College	2,572	15	0.19%	6,500	10	0.54%
Precision Response Corporation	-	-	-	6,000	11	0.50%
Bell South Corporation - Florida	-	-	-	5,500	12	0.40%
Winn Dixie Stores	-	-	-	4,833	13	0.40%
Publix Super Markets	-	-	-	11,000	5	0.91%
	<u>164,918</u>		<u>12.35%</u>	<u>201,367</u>		<u>16.64%</u>

Source: The Beacon Council, Miami, Florida, Miami Business Profile

(1) Information is based on data from year 2015. The data for year 2017 is not available as of the date of this report.

Economic Statistics

U.S. UNEMPLOYMENT RATE AND LABOR FORCE

LAST 10 FISCAL YEARS

Fiscal Year	Total Personal Income	Per Capita Personal Income	Unemployment Rate	Labor Force
2017	(1)	(1)	5.0%	1,375,376
2016	\$ 123,276,064	\$ 45,440	5.8%	1,334,404
2015	116,553,169	43,278	6.2%	1,321,033
2014	111,528,866	43,123	7.2%	1,282,854
2013	104,373,301	40,680	8.9%	1,289,617
2012	100,688,604	39,466	9.7%	1,290,751
2011	96,657,710	37,834	12.7%	1,300,030
2010	92,227,399	36,846	12.0%	1,257,324
2009	90,915,774	37,909	8.9%	1,218,871
2008	88,954,732	37,264	5.3%	1,205,913

Source: U.S. Department of Commerce, Economics and Statistics Administration, Economic Analysis/Regional Economic Information System, Florida Agency for Workforce Innovation, Labor Market Statistics, Miami-Dade County Department of Regulatory and Economic Resources, Research Section University of Florida, Bureau of Economic and Business Research

(1) Information unavailable as of the date of this report.



Employees by Identifiable Activity

LAST 10 FISCAL YEARS

	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
<i>WATER:</i>										
Water Distribution	222	230	221	220	205	206	210	206	214	210
Water Production and Maintenance ⁽¹⁾	231	243	240	241	231	226	240	232	240	239
Laboratory Services	57	59	59	59	56	55	49	51	47	50
<i>SEWER:</i>										
Sewer Collection	210	206	194	194	183	187	175	189	188	180
Plant Maintenance ⁽¹⁾	-	-	-	-	-	-	-	-	-	-
Wastewater Treatment and Maintenance ⁽¹⁾	370	367	358	358	340	337	341	329	331	324
Pump Station Maintenance	230	208	195	197	193	192	193	187	192	206
<i>ENGINEERING:</i>										
Utility Pipeline and Plant Engineering & Construction	66	71	71	71	70	75	75	75	77	82
Surveying	14	-	-	-	-	-	-	15	15	15
Utilities Development	107	105	104	94	73	73	74	89	87	107
Capital Improvements Program	29	55	50	69	65	71	71	77	81	62
Planning	25	25	19	19	17	17	17	22	24	23
<i>ADMINISTRATION:</i>										
Office of Director	21	24	17	32	15	30	30	33	31	36
Office of Deputy Director of Regulatory Compliance and Capital Improvements	16	21	9	6	5	6	8	13	16	15
Office of Deputy Director of Operations	3	4	47	45	43	13	12	11	10	8
Office of Assistant Director of Engineering	2	1	1	1	1	1	1	1	1	2
Office of Chief Financial Officer	40	41	66	38	53	36	37	38	35	33
Office of Assistant Director of Maintenance and Support Services	73	77	114	114	112	143	136	155	156	157
Office of Assistant Director of Water	104	108	108	110	106	109	109	111	113	117
Office of Assistant Director of Wastewater	41	43	46	48	46	48	47	38	36	31
Office of Assistant Director of Regulatory Compliance and Planning	9	5	5	5	5	5	5	5	3	3
Attorney's Office	4	4	4	4	4	4	4	4	4	4
Controller	118	125	106	112	110	114	114	134	135	125
Information Technology ⁽³⁾	-	76	71	69	65	68	69	70	70	71
Retail Customer Service	219	238	255	243	227	224	216	253	268	266
Regulatory Compliance and Monitoring	15	17	17	16	14	15	16	18	17	16
General Maintenance	112	124	114	114	110	116	113	120	127	122
Human Resources Division ⁽²⁾	44	44	-	-	-	-	-	-	-	-
Office of Assistant Contracts Compliance and Quality Assurance ⁽²⁾	3	4	-	-	-	-	-	-	-	-
Quality Assurance and Control Division ⁽²⁾	4	13	-	-	-	-	-	-	-	-
Performance Improvements & Management Division ⁽²⁾	13	17	-	-	-	-	-	-	-	-
Contract Compliance and Monitoring Division ⁽²⁾	20	27	-	-	-	-	-	-	-	-
Security and Communications Division ⁽²⁾	43	44	-	-	-	-	-	-	-	-
Total	2,465	2,626	2,491	2,479	2,349	2,371	2,362	2,476	2,518	2,504

⁽¹⁾ The Plant Maintenance Division was eliminated as of October 1, 2007 and the employees were assigned to the Water Production and Maintenance Division and the Wastewater Treatment and Maintenance Division.

⁽²⁾ The Department's internal reorganization resulted in new divisions.

⁽³⁾ The Department's Information Technology Division was transferred to the County's Information Technology Department.

Capital Indicators

LAST 10 FISCAL YEARS

	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
<i>WATER:</i>										
Water mains ⁽¹⁾ (miles)	6,264	6,131	6,035	6,004	5,988	5,969	5,922 ⁽²⁾	5,907	5,747	5,641
Water treatment plants	9	9	9	9	9	8	8	8	8	8
Permitted water treatment capacity (million gallons per day)	461	461	464	464	454	454	452	452	452	452
Water supply wells	100	100	100	100	100	100	100	100	100	100
<i>WASTEWATER:</i>										
Sanitary sewers ⁽¹⁾ (miles)	4,184	4,165	4,110	4,072	4,048	4,027	3,995 ⁽²⁾	3,975	3,981	3,948
Wastewater treatment plants	3	3	3	3	3	3	3	3	3	3
Permitted wastewater treatment capacity (million gallons per day)	376	376	376	376	376	376	368	368	368	368
Wastewater pump stations	1,049	1,049	1,047	1,047	1,042	1,039	1,039	1,039	1,035	1,035

⁽¹⁾ Does not include laterals.

⁽²⁾ In fiscal year 2010 & 2011, the measurements for water mains and sanitary sewers do not include miscellaneous and private pipes.



Insurance in Force

Type of Coverage and Insurance Company	Policy Period	Details of Coverage	Limits of Liability
Crime Policy: Fidelity & Deposit Co. of Maryland	08/19/17- 08/19/18	Employee Dishonesty	\$1,000,000
Money and Securities: Fidelity & Deposit Co. of Maryland	11/25/17- 11/25/18	Theft of money and securities	Values scheduled per location
Accidental Death: Hartford Life Insurance Co.	01/01/17- 01/01/18	Accidental death and dismemberment	\$25,000
Property Insurance: Ace American Ins. Co. Aspen Specialty Ins. Co. Liberty International Undwtrs Arch Specialty Ins. Co. Colony Ins. Co. Landmark American Ins. Co. Liberty Surplus Ins. Co. Steadfast Ins. Co. Alterra E & S Ins. Co. Hiscox, Inc. Lloyds of London Chubb Custom Ins. Co. Evanston Ins. Co.	03/02/17 – 03/02/18	"All risk" coverage on real and personal property and outfalls	\$200,000,000
Automobile Liability:	Continous	Self-Insured	\$200,000 per person/\$300,000 per occurrence pursuant to F.S. 768.28 (certain claims may not fall with the parrameters of FS)
General Liability:	Continous	Self-Insured	\$200,000 per person/\$300,000 per occurrence pursuant to F.S. 768.28 (certain claims may not fall with the parrameters of FS)
Workers' Compensation:	Continous	Self-Insured	Statutory coverage pursuant to F.S. 440



(This page left blank intentionally)

QUALITY. VALUE. ECONOMIC GROWTH.

WWW.MIAMIDADE.GOV/WATER



Miami-Dade Water and Sewer Department

A Department of Miami-Dade County, Florida

3071 S.W. 38 Avenue

Miami, Florida 33146

305-665-7471

Miami-Dade County provides equal access and equal opportunity in employment and services and does not discriminate on the basis of disability. It is the policy of Miami-Dade County to comply with all the requirements of the Americans with Disabilities Act.