



Annual Disclosure

**ANNUAL FINANCIAL INFORMATION
For the Fiscal Year Ending
June 30, 2016**

**THE METROPOLITAN GOVERNMENT OF NASHVILLE AND DAVIDSON COUNTY
DEPARTMENT OF WATER AND SEWERAGE SERVICES**

**HISTORICAL STATEMENT OF REVENUES, EXPENSES, DEBT, AND DEBT
SERVICE COVERAGE**

For the Fiscal Year Ending June 30

	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>
Operating Revenues	200,762,485	208,495,674	211,035,704	214,336,054	217,358,507
Non-Operating Revenues	<u>500,518</u>	<u>613,880</u>	<u>2,019,225</u>	<u>1,184,697</u>	<u>1,664,320</u>
Total Revenues	<u>\$201,263,003</u>	<u>\$209,109,554</u>	<u>\$213,054,929</u>	<u>\$215,520,751</u>	<u>219,022,827</u>
Debt Service on Prior Bonds	\$71,795,694	\$64,954,170	\$72,867,233	60,450,458	67,823,808
Operating Expenses:					
Less Depreciation and Amortization	\$102,485,225	\$103,422,925	\$101,703,327	\$100,824,504	112,207,776
Debt Service on SRF Loans	\$8,235,386	-	-	-	
Undesignated Fund Balance	\$42,813,676	\$33,725,930	\$42,665,652	\$50,293,536	46,344,242
Coverage Ratio	1.38	1.63	1.53	1.90	1.57

FORECAST STATEMENT OF REVENUES, EXPENSES, DEBT, AND DEBT SERVICE COVERAGE

For Fiscal Year Ending June 30

	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Operating Revenues					
<i>Charges for Service</i>					
Water Revenues	\$ 65,540,000	\$ 65,868,000	\$ 66,197,000	\$ 66,528,000	\$ 66,861,000
Sewer Revenues	131,050,000	131,705,000	132,364,000	133,026,000	133,691,000
Customer Service Fees	3,200,000	3,216,000	3,232,000	3,248,000	3,264,000
Misc. Water & Sewer Revenue	12,718,000	12,781,000	12,845,000	12,909,000	12,973,000
<i>Subtotal: Charges for Service</i>	<u>212,508,000</u>	<u>213,570,000</u>	<u>214,638,000</u>	<u>215,711,000</u>	<u>216,789,000</u>
Non-Operating Revenues					
Interest Income on Fund Balances	\$ 300,000	\$ 302,000	\$ 304,000	\$ 306,000	\$ 308,000
Other Revenues	171,000	171,000	171,000	171,000	171,000
<i>Subtotal: Non-Operating Revenues</i>	<u>471,000</u>	<u>473,000</u>	<u>475,000</u>	<u>477,000</u>	<u>479,000</u>
Total Revenues	\$ 212,979,000	\$ 214,043,000	\$ 215,113,000	\$ 216,188,000	\$ 217,268,000
Operating Expenses	(119,176,900)	(128,411,200)	(128,411,200)	(132,263,536)	(132,263,536)
Net Revenues Available for Debt Service	\$ 93,802,100	\$ 85,631,800	\$ 86,701,800	\$ 83,924,464	\$ 85,004,464
Debt Service Funding					
<i>Revenue Bonds</i>					
Series 2008A Revenue Refunding Bonds	(16,716,413)	(16,738,725)	(16,717,525)	(16,646,950)	(16,722,513)
Series 2010A Revenue Refunding Bonds	(9,816,975)	(3,620,850)	(9,412,350)	(10,456,625)	(10,443,300)
Series 2010B Revenue Bonds Taxable (BAB)	(5,715,423)	(5,715,423)	(5,715,423)	(5,715,423)	(5,715,423)
Series 2010C Revenue Bonds Taxable (RZEDB)	(2,760,863)	(2,760,863)	(2,760,863)	(2,760,863)	(2,760,863)
Series 2010D Revenue Refunding Bonds Taxable	(329,112)	(6,808,271)	(1,013,715)	-	-
Series 2012 Subordinate Lein Water & Sewer Refunding	(15,967,750)	(22,789,625)	(21,742,375)	(20,766,500)	(19,844,125)
Series 2013 Revenue Bonds	(11,180,850)	(11,180,850)	(11,180,850)	(11,180,850)	(11,180,850)
Total Existing Bonds	<u>(62,487,386)</u>	<u>(69,614,607)</u>	<u>(68,543,101)</u>	<u>(67,527,211)</u>	<u>(66,667,074)</u>
Proposed Short-Term Financing	(2,812,500)	(4,500,000)	(2,000,000)	(5,625,000)	(9,750,000)
<i>Subtotal: Revenue Bonds</i>	<u>(65,299,886)</u>	<u>(74,114,607)</u>	<u>(70,543,101)</u>	<u>(73,152,211)</u>	<u>(76,417,074)</u>
Total Debt Service	\$ (65,299,886)	\$ (74,114,607)	\$ (70,543,101)	\$ (73,152,211)	\$ (76,417,074)
Total Revenues Available for Capital Projects	\$ 28,502,214	\$ 11,517,193	\$ 16,158,699	\$ 10,772,253	\$ 8,587,391
(transferred to E&R Fund)					
Other Budgeted Expenditures	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Total Consent Decree Program	86,500,000	177,000,000	139,000,000	235,000,000	138,000,000
Total Other Capital Projects	100,000,000	104,850,000	108,885,000	118,725,000	113,310,000
<i>Subtotal: Other Budgeted Expenditures</i>	<u>186,500,000</u>	<u>281,850,000</u>	<u>247,885,000</u>	<u>353,725,000</u>	<u>251,310,000</u>
Other Transfers In					
Transfer from Extension and Replacement Fund	11,255,088	11,592,741	11,940,523	12,298,739	12,667,701
Proposed Proceeds From Long-Term Debt		225,000,000			225,000,000
Proposed Proceeds from Short Term Financing	100,000,000	75,000,000	100,000,000	125,000,000	75,000,000
<i>Subtotal: Other Transfers In</i>	<u>\$ 111,255,088</u>	<u>\$ 311,592,741</u>	<u>\$ 111,940,523</u>	<u>\$ 137,298,739</u>	<u>\$ 312,667,701</u>
Remaining Available Funds (Revenue Surplus/Deficit)	\$ 28,502,214	\$ 11,517,193	\$ 16,158,699	\$ 10,772,253	\$ 8,587,391
Total Beginning Extension and Replacement Fund	\$ 120,967,237	\$ 140,214,363	\$ 142,138,816	\$ 148,356,992	\$ 148,830,506
Remaining Available Funds (Revenue Surplus/Deficit)	28,502,214	11,517,193	16,158,699	10,772,253	8,587,391
Water Impact Fees	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
Sewer Impact Fees	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
Net Transfers	(11,255,088)	(11,592,741)	(11,940,523)	(12,298,739)	(12,667,701)
Total Ending Extension and Replacement Fund	\$ 140,214,363.30	\$ 142,138,815.86	\$ 148,356,991.94	\$ 148,830,506.29	\$ 146,750,195.97

Calculation for Rate Covenant Requirement					
	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Operating Revenues	\$ 212,979,000	\$ 214,043,000	\$ 215,113,000	\$ 216,188,000	\$ 217,268,000
Operating Expenses (Excluding PILOT)	119,176,900	128,411,200	128,411,200	132,263,536	132,263,536
Net Revenue (Excluding PILOT)	93,802,100	85,631,800	86,701,800	83,924,464	85,004,464
Payment in Lieu of Taxes (PILOT)	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000
Debt Service - Parity Debt					
Existing Revenue Bonds 1988 - 2008	16,716,413	16,738,725	16,717,525	16,646,950	16,722,513
New Bond Series 2010	18,622,373	18,905,407	18,902,351	18,932,911	18,919,586
Short-Term Financing	2,812,500	4,500,000	2,000,000	5,625,000	9,750,000
New Revenue Bonds 2012	15,967,750	22,789,625	21,742,375	20,766,500	19,844,125
New Revenue Bonds 2013	11,180,850	11,180,850	11,180,850	11,180,850	11,180,850
Net Debt Service - Parity Debt	65,299,886	74,114,607	70,543,101	73,152,211	76,417,074
Total Operating Expenses and Net Debt Service	\$ 184,476,786	\$ 202,525,807	\$ 198,954,301	\$ 205,415,747	\$ 208,680,610
Rate Covenant Ratios					
Sr. Subordinate (1.20 Required)	1.83	1.47	1.51	1.49	1.53
Senior Debt (1.10 Required)	1.52	1.44	1.44	1.41	1.42

Rate Covenant

The Bond Resolution requires the Metropolitan Government to set and maintain rates sufficient to produce Net Revenues (Revenues minus Operation and Maintenance Expenses) in each Fiscal Year at least equal to the greater of (i) 120% of the Debt Service Requirement on the Prior Bonds and the Outstanding Bonds in such Fiscal Year; or (ii) 100% of the sum of (A) the Debt Service Requirement on the Prior First Lien Bonds, the Second Lien Bonds and Subordinated indebtedness in such Fiscal Year, (B) the amounts required to be paid during such Fiscal Year into the debt service reserve fund and the operating reserve fund established by the Prior First Lien Resolution and to the Debt Service Reserve Fund established pursuant to the Bond Resolution, and (C) the amount of all other charges and liens whatsoever payable out of Revenues during such Fiscal Year, including, but not limited to, payments in lieu of taxes.

So long as the Prior Bonds remain outstanding, the Metropolitan Government must also remain in compliance with the rate covenant established by the Prior Resolution. The Prior First Lien Resolution requires that System rates be set so as to cause System revenues in each Fiscal Year to exceed 110% of the sum of System operating expenses and Prior First Lien Bond debt service for such Fiscal Year.

THE WATER AND SEWER SYSTEM

General

The formation of the Metropolitan Government of Nashville and Davidson County ("Metropolitan Government") effective on April 1, 1963 resulted in the combination and consolidation of (1) the water and sewage system formerly maintained by the City of Nashville, and (2) the sewage system formerly maintained by the Davidson County Improvement District No. 1 into the Department of Water and Sewerage Services (the "Department"). The Department, established under Section 8.501 of the Charter of the Metropolitan Government, is charged with the responsibility for construction, operation and maintenance of all water and sanitary sewer facilities for the Metropolitan Government as well as the collection of all charges for the services of such utilities.

In addition to the facilities thus combined and consolidated, the Water System (as defined herein) and the Sewer System (as defined herein) have gradually been expanded and include: improvements financed by revenues; improvements resulting from capital contributions in aid of construction by private developers; all improvements, additions and extensions financed with the proceeds of outstanding bonds and governmental grants; and facilities acquired from the Nashville Suburban Utility District, the First Suburban Water Utility District of Davidson County, Tennessee, the sewerage service of the Parkwood

Service Company, the Joelton Water Utility District, the City of Lakewood water and sewerage system, Rayon City Water Company, the Cumberland Utility District, the sewerage service of the Nolensville/College Grove Utility District in Williamson County, and the Old Hickory Utility District of Davidson County.

Under the Charter and Tennessee Code Annotated §7-3-302, the Metropolitan Government can assume and take over any water and/or sewer utility district located within its boundaries through ordinances adopted by the Metropolitan Council. Several such systems currently operate inside Davidson County and if a decision is made to consolidate these operations into the Department, the Metropolitan Government will take subject to or retire all debts and liabilities of the systems. The economic impact of such an assumption or takeover would be evaluated prior to the submission of any legislation to the Metropolitan Council. By contract dated February 1996, the Metropolitan Government has agreed not to take over the Harpeth Valley Utility District before February 2026.

Historically, the Department managed and partially funded the Stormwater operations of the Metropolitan Government. In 2009, the Metropolitan Government established a Stormwater Division of the Department as a stand-alone enterprise fund with its own set of service fees, which are now an itemized part of the water bill. Further funding of Stormwater operations will not be required of the Department.

The Water System

The water provided by the Department's water system (the "Water System") currently meets all physical, chemical, and bacteriological water quality standards established by the United States Environmental Protection Agency (the "EPA") under the Safe Drinking Water Act, as amended, by the Tennessee Department of Environment and Conservation ("TDEC") and under the Tennessee Safe Drinking Water Act of 1983, as amended.

The Water System draws water from the Cumberland River and processes it through modern filtration plants for delivery into the distribution system. Raw water is treated by chemical coagulation, flocculation, clarification, filtration, and disinfection. The existing water treatment plants and pumping facilities have a total delivery capacity of 180 million gallons per day. In Fiscal Year 2016, net sales to retail customers were 22.8 billion gallons. The peak demand for water from the system during Fiscal Year 2016 was 112.6 million gallons on June 24, 2016.

The Robert L. Lawrence, Jr. Filtration Plant, originally placed in service in 1929, was extensively modernized and expanded in 1953 and 1963 to a capacity of 72 million gallons per day. An upgrade of this plant was completed in 2001 and it now has a treatment capacity of 90 million gallons per day. A central control room located at this plant provides constant monitoring of the status of all water pumping stations and reservoirs.

The K. R. Harrington Water Treatment Plant was completed and placed into operation in 1977. This facility provided an additional capacity of 60 million gallons per day to the Metropolitan Government's water treatment capabilities. Expansion of this plant to 90 million gallons per day was completed in 1992 and will ensure an adequate supply of potable water through the coming years. In 1999, as a precaution against prolonged power outages caused by ice storms, tornadoes, or other disasters, the Harrington Plant was equipped with four emergency generators with a capacity of 1,750 kW each. These generators allow the Department to operate the plant at a capacity of 72 million gallons per day.

The water from the existing treatment plants is delivered into the water distribution system via six major transmission mains. The distribution system contains approximately 3,053 miles of mains ranging in diameter from 2 inches to 60 inches. Storage is provided by the 51 million gallon capacity Eighth Avenue Reservoir and various other reservoirs with a combined additional capacity of 37.8 million gallons and by tanks and stand pipes, many of which are utilized to provide water service in areas of

higher elevation than the central urbanized area. At this time only half of the Eighth Avenue Reservoir is in service, thus reducing its capacity to 25.5 million gallons. The Water System has 56 booster-pumping stations to deliver water to these higher regions.

Although recent growth has been relatively flat, the Water System has experienced continuous growth over the past decade, and as of Fiscal Year 2016, has provided direct service to 197,957 customers. In Fiscal Year 2016, 60% of the water provided by the Water System was consumed by commercial and industrial customers (including residential apartment complexes), and 40% by residential customers. The following table illustrates growth of the Water System over the past 10 years.

	<u>Water System Facts in Brief</u>		
	<u>Fiscal Year Ended June 30</u>		
	<u>2016</u>	<u>2006</u>	<u>(2006-2016)</u> <u>Ten Year</u> <u>History</u>
Use of Water			
Water Customers - End of Period ⁽¹⁾ (thousands)	197,957	162,834	21.6%
Average Daily Finished (millions of gallons)	87.2	92.8	(6.0)%
Water Sales for Fiscal Year (billions of gallons)	22.8	23.3	(2.1)%
Maximum Daily Demand (millions of Gallons)	112.6	119.8	(6.0)%
Growth of System			
Utility Plant Value ⁽²⁾ (millions)	\$1,925	\$1,387	38.8%
Reservoirs	43	45	(4.4)%
Storage Capacity (millions of gallons)	73.8	95.5	(22.7)%
Auxiliary Pump Stations	56	56	0.0%
Total Miles, Distribution Lines	3,053	2,771	10.2%
Fire Hydrants	20,671	18,547	11.5%
	(1) As per billing records		
	(2) Property, Plant & Equipment of the Combined Water and Sewer System, net of depreciation		

The Department has a contract with Water Systems Optimization to perform an independent water audit annually. The audit for Fiscal Year 2016 is complete. During the audit, the system input volume is categorized as revenue water or non-revenue water. Non-revenue water is further broken down into real losses (leakage) and apparent losses (meter error). For Fiscal Year 2016, the real losses were 25.2% of system input volume and the apparent losses were 2.7% of system input volume.

The Sewer System

The existing sewerage system (the “Sewer System”) comprises 2,960 miles of gravity sewers, 114 pumping stations, 160.0 miles of force main and four treatment plants, the three most important of which are the Central Wastewater Treatment Plant, the Dry Creek Wastewater Treatment Plant, and the Whites Creek Wastewater Treatment Plant. The Central Wastewater Treatment Plant has a capacity of 250 million gallons per day plus an additional 80 million gallons per day stormwater treatment for a total capacity of 330 million gallons per day. The Dry Creek Wastewater Treatment Plant has a design capacity of 24 million gallons per day of secondary treatment while the Whites Creek Wastewater Treatment Plant has a capacity of 37.5 million gallons per day of secondary treatment.

The Department properly treats and disposes of sludge produced at its treatment plants consistent with State and Federal law, and has constructed a \$132 million biosolids facility to stabilize and further treat sludge, including sludge thickening, anaerobic digestion and heat drying. The methane gas produced from the digesters is used to heat dry the sludge into pellets, which are considered a Class A material by the USEPA and are a marketable product. The facility has significantly reduced the need to landfill the residuals.

The following table provides data on the use and facilities of the Sewer System over the last ten years. The average number of customers served increased 14.7% since Fiscal Year 2006. Over the last ten years, there has been a 16.8% increase in the number of sewerage pumping stations and a concurrent 7.5% increase in the miles of sewer lines. Wastewater treatment has increased by approximately 32.8%.

Sewer System Facts in Brief

	Fiscal Year Ended June 30		
	2016	2006	<u>(2006 - 2016)</u> <u>Ten Year</u> <u>History</u>
Sewer Customers - End of Period	203,255	177,275	14.7%
Annual Sewage Treatment (billions of gallons)	60.7	45.7	32.8%
Average Daily Treatment (millions of gallons)	166.4	125.1	33.0%
Growth of System			
Utility Plant Value ⁽¹⁾ (millions)	\$1,925	\$1,387	38.8%
Total Miles of Sewer Lines	3,120	2,901	7.5%
Number of Treatment Plants	4	4	0.0%
Number of Pumping Stations	118	101	16.8%

(1) Property, Plant & Equipment of the Combined Water and Sewer System, net of depreciation

Major Customers

The following list shows the largest customers of the Department for water and sewer services for the indicated recent one-year period, ranked according to billings.

WATER SERVICES LARGEST CUSTOMERS
One Year Period Ending June 30, 2016
(In 1,000's)

City of Brentwood	\$ 1,363
RHP Operations OH, LLC	425
Metro District Energy Systems	355
Triumph Aerostructures, LLC	292
Vandy-Power House	268
Bridgestone Tire & Rubber Co	264
U.S Smokeless Tobacco.	235
Purity Dairies INC	232
Country Dulite Farms Inc.	232
N.S.G Utility District	228

SEWER SERVICES LARGEST CUSTOMERS
One Year Period Ending June 30, 2016
(In 1,000's)

Hendersonville Utility District	\$ 3,372
Brentwood Lift Station	2,659
City of Goodlettsville District	2,560
City of Mt. Juliet	2,356
City of Lavergne	1,555
RHP Operations OH, LLC	754
Purity Dairies INC	420
Five Star Custom Foods	323
TN-Riverbend Maximum Security	307
Triumph Eerostructures, LLC	297

Management and Personnel

SCOTT A. POTTER, P.E., Director, graduated from Vanderbilt University with a Bachelor of Engineering Degree in Electrical Engineering in 1986 and was commissioned as an Ensign in the United States Navy. While serving in the Navy Mr. Potter received a Master’s Degree in Mechanical Engineering from the Naval Postgraduate School in Monterey, California, in 1991. Mr. Potter served on two destroyers: USS COCHRANE (DDG 21) and USS CALLAGHAN (DDG 994). While stationed at the United States Naval Academy, he earned the academic rank of Master Instructor, teaching courses in Statics, Materials Science, Applied Fluid Mechanics, Thermodynamics, and Applied Thermodynamics. The Louisville Water Company, in Louisville, Kentucky, employed Mr. Potter as Manager of Distribution Operations from 1998 to 2001. He was also an adjunct member of the faculty of the Mechanical Engineering Department in the Speed Scientific School at the University of Louisville, and an instructor at Vanderbilt University, where he taught a course in water and wastewater policy.

DAVID M. TUCKER, Assistant Director (Sewer Operations), graduated from Tennessee State University with a Bachelor of Science Degree in Biological Sciences. He has twenty eight years of experience in water and wastewater treatment plant operations and maintenance. Mr. Tucker holds a State of Tennessee Grade IV Operator’s Certification in both water and wastewater treatment. The Operations division is responsible for the operation and maintenance of all water and wastewater treatment facilities, all associated pumping stations and reservoirs, Laboratory Services and Security. He joined the Department in 1987 as an Assistant Plant Manager and has progressed to his present position. He is a member of the Water Environmental Federation and the American Water Works Association

GILBERT NAVE, Assistant Director (Water Operations), is a thirty eight year career employee with Metro Water Services Nashville and Davidson County, TN. Gilbert has a Bachelor of Science degree from Middle Tennessee State University majoring in Chemistry. He is responsible for all water production from the Omohundro and K. R. Harrington water treatment plants and for managing Water Reservoir operation and maintenance. He holds a Grade IV Water Filtration Certificate from the State of Tennessee. And is the licensed Operator of Record for the Department. He is a twenty-five year member of the American Waterworks Association and KY-TN Section of the AWWA. He also maintains a Grade IV Wastewater Operator License for the State of Tennessee

CYRUS Q. TOOSI, P.E., Assistant Director (Engineering), graduated from the University of Texas at Austin, in 1988, with a Bachelor of Science Degree in Civil Engineering. Mr. Toosi held a position with the City of Houston for two years prior to coming to Nashville. In 1990 he joined the Department as a hydraulic modeler, and as a flow monitoring, and planning specialist. He has since advanced to his present position of Assistant Director. He has twenty nine years of experience in the engineering of water and wastewater system. He has created MWS’ Master Water Plan, Asset Management Program, and Water Infrastructure Rehabilitation Program. He also currently serves as the Chief Engineer for the Department and also oversees the Overflow Abatement Program. He holds a Professional Engineering License in the State of Tennessee and is a member of the American Water Works Association and Water Environment Federation.

LEANNE B. SCOTT, P.E., Assistant Director (Repair and Maintenance of Distribution and Collection Systems), holds a Bachelor of Science Degree in Civil Engineering from Tennessee Technological University and a Master's Degree in Engineering Management from the University of Tennessee. She is a licensed Professional Engineer and the Department's State Licensed Collection System Manager and Water Distribution Manager. Ms. Scott serves as the Tennessee Delegate for the KY-TN Water Environment Association and serves on the Water Loss Committee for the KY-TN American Water Works Association.

MARTHA SEGAL, Assistant Director (Customer Services & Information Services), graduated from Old Dominion University with a Bachelor of Science in Business Administration Degree and a Master of Business Administration Degree. She worked with the Department of Utilities in Norfolk, Virginia for 14 years prior to being recruited to Metro Water Services in 2000. She served for many years on the AWWA Virginia Section Customer Service Committee. She is a member of the American Water Works Association Board of Directors serving as a Vice President. She is also Chair of the DMIC (Diversity & Member Inclusion Committee) for AWWA. She is a Past Chair of the KY/TN Section AWWA, and currently serves as a member of the section Diversity Committee and Water for People committee.

SHANNA C WHITELAW, P.E., Interim Assistant Director (Business and Finance), is a licensed Professional Engineer in the State of Tennessee. She holds a Bachelor of Arts Degree in Physics and Mathematics from Transylvania University and a Bachelor of Science Degree in Civil Engineering from Tennessee Technological University. Prior to joining the Department in 2006, Ms. Whitelaw was a consulting engineer in the water and wastewater industry for fourteen years focused on design and construction administrative services. She currently manages implementation of the Strategic Plan as well as the Capital Improvements Program. Ms. Whitelaw is a member of the American Water Works Association and Tennessee Society of Profession Engineers.

At the end of Fiscal Year 2016, the Department employed 666 persons. Employees of the Department are members of one of these pension plans:

Metropolitan Employees' Benefit Trust Fund

Established in 1963, the Metropolitan Employees' Benefit Trust Fund covers substantially all employees who are not members of any other plan and is used to account for Divisions A and B of the Metro Plan. Division B of the Metro Plan is the only plan open to new members. This fund receives contributions from both employees and from the Government. Under the administrative responsibility of the Employee Benefit Board, this fund provides for the accumulation of assets for the payment of disability and retirement benefits for employees covered under this plan.

Davidson County Employees' Retirement Fund

The Davidson County Employees' Retirement Fund covers certain employees of the former Davidson County and was closed to new members in 1963. Benefits are funded by contributions from the Government.

Closed City Plan Fund

The Civil Service Employees' Pension Fund covers certain employees of the former City of Nashville and was closed to new members in 1963. Benefits are funded by contributions from the Government.

Rate Setting Process

The Charter of the Metropolitan Government provides that the Metropolitan Mayor and the Metropolitan Council have the authority and are directed to establish the rates for water and sewerage services and to provide methods of changes in such rates. Acting in accordance with this authority, the

Council adopted Ordinance BL 2009-407, which beginning May 1, 2009, implemented a three-year plan of increases for both water and wastewater rates. The water rate increases were 5%, each beginning on the following dates, May 1, 2009, May 1, 2010, and May 1, 2011, and the wastewater rate increases were 9%, 8%, and 7% on those same dates.

On December 7, 2010, the Metropolitan Council adopted Ordinance BL 2010-790 imposing a 10% sewer surcharge in lieu of the surcharge that had previously been imposed to secure the payment of the TLDA Loans. Heretofore, the sewer surcharge had not been included as part of Revenues, and such funds were not available to pay System operating expenses or System debt service (other than the TLDA Loans). From the date of issuance of the Series 2010 Bonds and the prepayment of the TLDA Loans, the sewer surcharge will be included in Revenues and will be available for the payment of System operating expenses and debt service, including the Series 2010 Bonds.

Any change in the water and sewerage service rates established under the above ordinances must be adopted by the Metropolitan Council by ordinance. As stated in Section 3.05 of the Charter of the Metropolitan Government of Nashville and Davidson County “No ordinance shall become effective unless it shall have passed by a majority vote on 3 different days, on the final passage of which it shall have received a majority vote of all the members to which the council is entitled and until it shall have been signed by the Metropolitan County Mayor or become a law without his signature....”

An ordinance will become law without the signature of the Metropolitan Mayor if the Mayor fails to approve or disapprove the ordinance and does not return it to the Council at or prior to the next regular meeting of the Council occurring 10 days or more after the ordinance is delivered to the Mayor. If the Mayor vetoes the ordinance, it will become law if subsequently adopted by a two-thirds vote of all the members of the Council to which it is entitled.

Under the Charter of the Metropolitan Government, the Mayor is obligated to submit an operating budget to the Council no later than May 1st of each year. Before the beginning of each Fiscal Year, and in no event later than June 30th, the Metropolitan Council is obligated to adopt a budget, which must provide for all expenditures required by law or the Charter and for the payment of all debt service requirements for the ensuing year and a tax rate to fully fund the budget. If the Council fails to adopt a budget, the budget submitted by the Mayor becomes law and the Council must adopt a tax rate to fund that budget.

Pursuant to the Resolution, before the beginning of each Fiscal Year, the Metropolitan Government is obligated to fix or maintain rates for water and sewerage service so as to produce Revenues at least equal to 110% of the Operating Expenses for the Department budgeted for the ensuing Fiscal Year plus the aggregate of the Debt Service (being the amount of payments due during such ensuing year on the Bonds issued and outstanding pursuant to the Resolution).

Current Rates and Charges

Monthly service charges for water and sewerage services are generally based, in each case, upon a rate schedule consisting of a minimum charge and a quantity charge. The minimum charges vary according to meter size and account class, i.e. residential, small commercial, intermediate commercial and large commercial/industrial. The quantity charge is dependent on account class.

Current Water Rates

Water revenues from the Department’s customers include a fixed minimum charge per customer connection and a quantity charge per 100 cubic feet (cf) based upon the meter size and number of connections. The quantity charge is applied to all consumption in excess of 200 cf per month.

WATER AND SEWERAGE RATE SCHEDULE BY CUSTOMER CLASS

Monthly rates for water sold are based on meter measurement.

Monthly sewerage service charges for the use of the public sanitary sewerage system are set by water consumption as determined by meter measurement.

Minimum charges per month are based on size of meter and customer class.

CLASS DETERMINATION

<u>CLASS</u>	<u>ANTICIPATED OR HISTORICAL USAGE</u>
Residential	Up to two housing units on a common meter
Small Commercial and Industrial	Up to 1,600 cubic feet per month
Intermediate Commercial and Industrial	1,600 to 200,000 cubic feet per month
Large Commercial and Industrial	Over 200,000 cubic feet per month

WATER AND SEWER CHARGES AND RATES

Minimum Charges per Month (Including 200 Cubic Feet Usage)

In addition to the above rates, an additional charge of 10% of the sewerage charge is authorized to fund water and sewerage system operations, capital improvements and debt obligations. A 9.25% state and local sales tax is added to all water charges.

As a result of the passage of Ordinance BL 2009-407, beginning on May 1, 2011 the following rates came into effect.

Meter Size	WATER				SEWER			
	Residential	Small Commercial	Intermediate Commercial	Large Commercial	Residential	Small Commercial	Intermediate Commercial	Large Commercial
5/8"	\$ 3.13	\$ 3.98	\$ 13.85	\$ 597.23	\$ 7.62	\$ 8.51	\$ 27.89	\$ 1,076.37
3/4"	10.62	11.32	19.64	603.69	21.63	24.22	39.55	1,088.01
1"	12.77	13.63	21.51	605.80	26.05	29.17	43.33	1,091.79
1 1/2"	18.77	20.03	26.71	611.60	38.29	42.89	53.81	1,102.25
2"	25.29	26.97	32.63	618.22	51.57	57.75	65.73	1,114.18
3"	33.38	35.61	40.84	624.04	68.04	76.21	82.26	1,124.65
4"	54.41	58.03	64.65	650.65	110.88	124.18	130.22	1,172.65
6"	85.42	91.12	99.81	689.96	174.12	195.01	201.05	1,243.48
8"	133.59	142.50	155.38	755.41	272.29	304.96	312.96	1,361.43
10"	133.59	142.50	155.38	755.41	272.29	304.96	312.96	1,361.43
	Water usage charges per 100 Cubic Feet (For usage over 200 Cubic Feet)				Sewer usage charges per 100 Cubic Feet (For usage over 200 Cubic Feet)			
Rates	\$ 2.33	\$ 2.48	\$ 2.14	\$ 1.81	\$ 4.74	\$ 5.30	\$ 4.32	\$ 3.26

Billing and Collection Procedures

With certain limited exceptions, the Department is required to charge for all water and sewerage services provided by it and consumed by, or, in the case of sewerage services, made available to each customer. Charges for water and sewerage services are generally based on metered measurement of water consumption. The Department read meters and rendered bills to customers monthly. The charges for water and sewerage services are included in a single, combined bill in terms of a "net billing," which is the charge calculated at established rates, and a "gross billing," which is the current net billing increased by 5% or by \$2.50, whichever is greater. This addition to the net billing is a form of penalty for the customer's failure to promptly pay the monthly bill for services. The gross billing amount becomes applicable 20 days after the billing is mailed to the customer. If a customer fails to pay a bill, a delinquency notice is included in the subsequent month's bill. If the customer fails to pay the bill for a second time, a representative of the department notifies the customer, pursuant to Tennessee Code Annotated § 65-32-104, that service will be discontinued if payment is not received in 5 days. If the customer does not pay the delinquent account within 5 days following the visit, the account is subject to immediate discontinuation of water and sewer service. To have service restored the customer must then pay the total delinquent amount plus a reconnection fee. If the Department is unable to collect the amount owed, the account is then turned over to a commercial collection agency.

The foregoing billing and collection procedures have resulted in the collection of approximately 99.25% of all amounts billed during the past five Fiscal Years. In Fiscal Years 2010, arrears from “Wholesale Customers” were added to the bad debt expense, because these charges were in dispute at that time. Since Fiscal Year 2013, all contracts are in place or being billed at the agreed upon rate. All arrears have been collected or an agreed upon payment plan is in place.

Wholesale Customers

The Department provides sewage treatment services for the Cities of Brentwood, Goodlettsville, Millersville, Belle Meade, Lavergne, Ridgetop, Mount Juliet, Hendersonville Utility District, and White House Utility District (the “Wholesale Sewer Customers”), pursuant to contracts between the Department and each of the Wholesale Sewer Customers. Older contracts with all of the Wholesale Sewer Customers except Belle Meade have been recently replaced, with the net effect of an increase in revenue from \$8 million to \$12 million. Under the wholesale contracts, the Department is obligated to treat sewage (subject to volume limitations) from the Wholesale Sewer Customers, and the Wholesale Sewer Customers are required to pay a volumetric rate for sewage delivered to the Department. Capital costs incurred by the Department to maintain capacity for the Wholesale Sewer Customers are recoverable under the contracts. None of the Wholesale Sewer Customers has ready access to other sewage treatment facilities.

Wholesale Sewer Customer flows were approximately 13% of total treated flows for Fiscal Year 2016.

The following represents a summary of the effective dates and terms of the wholesale contracts:

CUSTOMER	EFFECTIVE DATE	AMENDMENT DATE	TERM OF CONTRACT
City of Belle Meade	October 1, 2014	NA	10 years
City of LaVergne	December 1, 2009	October 1, 2014	10 years
City of Millersville	February 16, 2010	October 1, 2014	10 years
City of Brentwood	November 19, 2009	October 1, 2014	10 years
City of Goodlettsville	September 27, 2010	October 1, 2014	10 years
Hendersonville Utility District	October 20, 2011	NA	20 years
City of Ridgetop	May 6, 2015	NA	9 years
City of Mount Juliet	June 22, 1999	NA	30 years
White House Utility	May 6, 2015	N/A	9 years

Operations and Maintenance

The Department has implemented operation and maintenance procedures with respect to the System and has undertaken several programs to upgrade performance, including a water quality testing program. Water quality within the water treatment facilities is tested on site on an hourly basis. Additional testing is conducted at a central laboratory maintained by the Department and certified by the State of Tennessee. Water discharged from the plants into the distribution system is monitored in accordance with the Federal Safe Drinking Water Act (42 U. S. C. 300f et seq.). Water discharged from the three wastewater treatment plants is tested to ensure compliance with the National Pollutant Discharge Elimination System as administered by the United States Environmental Protection Agency and the Tennessee Department of Environment and Conservation.

The Department performs regular maintenance and repair of equipment with outside contractors performing major repairs. To facilitate maintenance and repairs, the Department has established several

inspection programs for the different areas of operation. Inspection programs include pumping station inspection, cross-connection protection testing, smoke-testing for collection system integrity, water leak detection, fire hydrant testing and valve testing programs. Vans are equipped with closed circuit television cameras that can be maneuvered through the sewer mains to inspect the sewer system.

Comprehensive training programs have been developed for employees, from unskilled to supervisory and management positions, covering many aspects of the operation and maintenance of the Systems. Although participation in the programs is not mandatory, employees who wish to be promoted to a higher job classification must demonstrate that they have the knowledge and skills that such programs provide.

Environmental Regulation

The Federal Water Pollution Control Act of 1972 (“FWPCA”), as amended by the Clean Water Act of 1977, and the Water Quality Act of 1987 (collectively, the “CWA”), provides for the restoration and maintenance of the chemical, physical and biological integrity of the nation’s waters. To achieve that end, the FWPCA established the National Pollution Discharge Elimination System (“NPDES”), a permit system administered by the US Environmental Protection Agency (“EPA”) in conjunction with the states. The EPA has delegated the NPDES program for Tennessee to the Tennessee Department of Environment and Conservation (“TDEC”). The Tennessee General Assembly enacted the Tennessee Water Quality Control Act of 1977 to obtain the primary objectives of the CWA and to qualify for full participation in the NPDES program established under Section 402 of the FWPCA. Pursuant to the authority granted to it, the Tennessee Water Quality Control Board has enacted regulations consistent with the CWA.

In 1990, TDEC issued Order 88-3364 (the “1990 Order”) as a result of violations by the Metropolitan government of the Tennessee CWA from January 1987 through June 1989. The 1990 Order was, among other things, a result of the discharge of improperly treated wastewater into the waterways by the Metropolitan Government’s collection system and various wastewater treatment plants, leading to pollution in violation of the CWA. The 1990 Order also stated that the Metropolitan Government’s failure to comply with certain agreed upon orders entered by the Tennessee Water Quality Control Board in 1985 and 1987 was also a basis for the 1990 Order.

The 1990 Order identified specific problems regarding the Metropolitan Government’s collection system and wastewater treatment, and required the Metropolitan Government to correct them. In response, the Department developed a detailed program, referred to as the “Overflow Abatement Program” (“OAP”), for making system improvements to correct the problems identified in the 1990 Order. This program was approved by the TDEC. Although the Department substantially complied with the 1990 Order, it was not in full compliance with the CWA as of 1999.

On September 17, 1999, the TDEC issued Order 99-0390 (the “1999 Order”) replacing the 1990 Order and citing the Metropolitan Government in violation of state law. Effective July 1, 2001, the Metropolitan Government was to immediately not permit or allow any overflows of bypasses from its combined sewer system (wastewater and storm water) during dry weather to any waters of the State, nor was it to allow any discharge from the sanitary sewerage system to any tributary of the Cumberland River. The current flow limits that the tie-in points from all contributing satellite sewage systems were to be maintained.

The Metropolitan Government has substantially addressed the issues raised in the 1999 Order and continues to make capital improvements to its Sewer System in response thereto. TDEC has not assessed monetary penalties against the Metropolitan Government for failing to meet a schedule compliance date, and the Metropolitan Government is currently in compliance with the requirement of the 1999 Order.

EPA Consent Decree

In December 2005, the Department received an inquiry from the U.S. Environmental Protection Agency’s Region IV (USEPA) headquarters. This inquiry requested certain documents and records

pertaining to the Department's Operations, Capital Plan, and Stormwater Management. The Department's response was submitted in January 2006. The Department, the State of Tennessee Department of Environment and Conservation (TDEC), and USEPA agreed on a recommended consent decree to address and correct deficiencies within the Department's sewer system that have caused violations of the Clean Water Act (CWA). The consent decree originally required that MWS fully develop, by March 12, 2011, a Corrective Action Plan/Engineering Report (CAP/ER) for its sanitary sewer system and a Long Term Control Plan (LTCP) for its combined sewer system to achieve the goals of the CWA. Upon submittal and approval of the plans, MWS was originally obligated to complete the work as developed by the plans in 9 years.

On May 14, 2010, The Metropolitan Government petitioned the USEPA and TDEC for a 6 month time extension for the delivery of both plans and the 2 years for the final compliance with the Consent Decree based on the flood of May 2010. The USEPA and TDEC granted the requested time extension to the Department. Both the CAP/ER and LTCP were submitted on time based on the time extension to EPA and TDEC in September of 2011. No formal approval has been returned to MWS by either regulatory agency at this point. There have been some discussions of potential changes with respect to the LTCP but not anything that would be considered drastic or material to what was submitted. The deadline for final compliance of the Consent Decree is eleven years after final formal approval of the two plans.

Among other requirements, the Consent Decree will require capital expenditures to the System in a total amount between \$1.0 billion and \$1.5 billion. See "The Water and Sewer Capital Improvement Plan," which follow. Failure to comply with the Consent Decree and meet future established deadlines could result in penalties up to \$3,000 per incident, and up to \$5,000 per day for failure to implement work in a timely manner.

The Department has thus far been successful in meeting all the deadlines established by the Consent Decree, and is currently in compliance with the Decree in all respects.

Payments in Lieu of Taxes, the Local Cost Allocation Plan, and Shared Government Services

Tennessee law, Tennessee Code Annotated 7-34-115(a)(9), provides that a municipality may require a municipally owned utility to make payments in lieu of ad valorem property taxes, for which the utility is exempt as a governmental entity, in an amount not to exceed the taxes payable on privately owned property of a similar nature. This payment is intended to help reimburse the municipality for the municipal services and support provided to the public works. In 1996, the Metropolitan Council adopted Substitute Resolution Number R96-177, which requires the Department to make an annual payment to the Metropolitan Government of \$4,000,000. This represents a payment in lieu of ad valorem taxes. This payment, made in monthly installments, is made after payments of debt service on the all System Revenue Bonds.

The Local Cost Allocation Plan (LOCAP) for the Metropolitan Government is a method by which central service costs are distributed across the Metro departments. In Fiscal Years 2015 and 2016, the Department was charged \$4,909,100 and \$5,321,300 respectively. In Fiscal Year 2017 this plan will cost the Department \$5,804,700. The Metropolitan Government charges the Department for additional Shared Government Services such as Fleet Management, Information Systems, Legal Fees, Insurance, and Property Services. These charges totaled \$5.9 million in Fiscal Year 2016, and in Fiscal Year 2017 Shared Government Services charges will be approximately the same.

Payments in Lieu of Taxes, the Local Cost Allocation Plan payments, as well as all Shared Services charges have been included in the historical and forecasted Expenses of the Department in the Forecast Statement.

THE WATER AND SEWER SYSTEM IMPROVEMENT PLAN

The Water System

Beginning in 2002, the Metropolitan Government updated its Master Water Improvement Plan which sets out projected water needs due to growth for the service area through the year 2025. Population forecasting and computer modeling of the water distribution system has been done to update the Master Water Improvement Plan through the year 2030. There was an update in 2008, another done in 2016, and another scheduled for 2022.

Improvements to the water distribution system have been identified to supply the increased water demand due to population growth as well as during times of heavy demand (i.e. drought conditions). Specific projects for this past year included the Ocala Tank and The Swiss / Kinhawk Water Tanks Feed Reconfiguration project . The transmission tank includes the construction of 3,900 feet of 16 inch water main. This project will reduce water age and improve pumping efficiency for the pressure zone at a cost of \$1.5M. The Ocala tank will provide 4 million gallons of storage in the Powell Avenue system at a cost of \$8.2 million.. Another project currently being constructed is the redundant main out of the Thompson Lane rater pumping station in which a micro tunnel is going to place a 36” pipe in a 60” tunnel under CSX and I-65. This is a critical job as the last time the older main broke we had water outages to key customers in the west part of town. Its cost is approximately \$8 .4 million dollars

The Water Infrastructure Rehabilitation (WIR) program provides for the rehabilitation and / or replacement of old water distribution infrastructure. The 12 South Phase 1 WIR project will include installation of 13,000 feet of 8 inch water main at a cost of \$4.5M. The existing water mains are constructed of old unlined cast iron and galvanized pipe. The Elliston Place / Church Street WIR project which had been completed replaced 3,000 feet of old unlined cast iron pipe with new 12 inch lined ductile iron pipe at a cost of \$1.5M. The completion of these projects will fire flows in the area and improve the delivery of water in the distribution system. Another couple of projects in the works is the rebuilding of the water system in the Sylvan Park neighborhood , the replacement of over 100 year old pipes in the Jefferson Street corridor, and a very critical large transmission main (60” water main) from Elm Hill and McGavock to Donelson Pike and Lebanon road with also a 36 “ pipe going east on Lebanon Road to connect to the 24” water line coming out of the KRH water treatment plant. This will provide a redundancy to both the east part of the distribution system and all of the distribution system as a whole.

The Sewer System

With the submittal of the completed CAP/ER & the LTCP studies to EPA and TDEC in September 2011, an eleven year schedule was developed to pursue those projects to meet the compliance date of the Consent Decree following the approval of the submitted plans by EPA & TDEC. Metro Water Services continues to meet with EPA and TDEC, responding to their questions and concerns. However, the approvals of the CAP/ER and LTCP have not yet been received, and the Consent Decree provides for additional time for completion if the approvals are not made in a timely manner, so we have benefitted from the delay in approvals by gaining additional time to complete the required projects. Projects include improvements to pumping stations and force mains; construction of additional equalization basins; new trunk sewers to increase capacity and the rehabilitation of the collection system to reduce inflow and infiltration during wet weather, and the overall Consent Decree program is anticipated to cost \$1B - \$1.5B.

Facility work underway for the correction of overflows in the separated sewer system includes the West Park Equalization Facility, Phases 2 & 3. This project was designed during 2012 – 2014, and construction began in April 2015 at a bid cost of \$14.8 million (M). When completed in the fall of 2017, the project will provide 21 million gallons (MG) of additional wet weather system equalization storage to augment the existing 10MG of storage at this site. The design of a new Davidson Branch Pump Station and Equalization Facility began in May 2015 and was completed in 2016. Construction of this facility is

anticipated to begin in 2017 following final easement acquisitions. This project will provide a new, more reliable pump station and 6 MG of wet weather system storage with an estimated construction cost of \$24M. The design of the Ewing Creek Equalization Facility began in August 2015 and was completed in 2016, with construction bids to be taken early in 2017. This project will provide 10.6 MG of wet weather system storage with a cost estimate of \$10M. Design began in 2016 for the construction of a 10 MG Equalization Facility at the Gibson Creek Pump Station. This facility will store wet weather flows from both the Gibson Creek Pump Station and several smaller pump stations tributary to Gibson Creek, reducing overflows in this area, at a preliminary estimated cost of \$17M. Construction of this facility is anticipated to begin in 2018. Upgrades to the Central Wastewater Treatment Plant to provide operational optimization, wet weather flow equalization, and disinfection improvements began with the selection of two engineering firms to perform preliminary planning and design packages, which will be initiated in sequence to update this facility over the coming years. A Construction Manager At Risk (CMAR) has been selected to perform the construction work on these packages; contracts for these services will be in place early in 2017.

Sewer System Rehabilitation continues for the elimination of Inflow and Infiltration from the separated sanitary sewer system. New design starts in 2016 included the Langford Farms – Madison Heights, the Smith Springs Area 2, the Loves Branch, the Hidden Acres, the Vandiver, and the Shelby Park Area 5 Rehabilitation projects. The construction of a number of rehabilitation projects identified in the CAP/ER were begun in 2016, including the Smith Springs Area 1 project (\$4.9M), the 28th Avenue Area 1 project (\$3.7M), the Gibson Creek Area 1 project (\$5.0M), and the Cowan - Riverside Area 4 project (\$6.9M). Construction is anticipated to be completed on each of these projects in 2017. Also under construction is the Whites Creek Trunk Sewer Rehabilitation project, unique in that it includes larger pipe sizes up to 60-inches in diameter. This \$11.3M project will also likely be completed in 2017.

Pipeline projects to increase capacity and eliminate Inflow and Infiltration are also underway. Construction was completed in 2016 for the reconstruction and rehabilitation of sanitary sewers in the Lakewood area, combined with improvements to the water distribution system and storm water system improvements, at an overall cost of \$10.3M. The sewer work represents approximately \$3.7M of the overall bid cost. The Davidson and Brook Hollow Improvements project, increasing capacity in an undersized section of the collection system, concluded construction in 2016 at a cost of \$1.1M. Construction of the Brick Church Pike Pipe Improvements Project began in 2016 at a bid cost of \$5.5M. Design of an upsized replacement for the Hurricane Creek Trunk Sewer began in 2016, with construction anticipated to begin in 2018 pending the acquisition of easements.

Water and Sewer Capital Improvement Plan

	2017	2018	2019	2020	2021	TOTAL
Consent Decree Program						
Program Management and Water Quality	10,500,000.0	12,000,000.0	13,000,000.0	14,000,000.0	13,000,000.0	62,500,000
Combined Sewer Improvements	51,000,000.0	65,000,000.0	45,000,000.0	202,000,000.0	116,000,000.0	479,000,000
Sanitary Sewer Rehabilitation	25,000,000.0	100,000,000.0	81,000,000.0	19,000,000.0	9,000,000.0	234,000,000
Total Consent Decree Program	\$ 86,500,000	\$ 177,000,000	\$ 139,000,000	\$ 235,000,000	\$ 138,000,000	\$ 775,500,000
Other:						
Water Distribution System Improvements	40,140,000	22,220,000	33,990,000	51,605,000	44,035,000	191,990,000
Water Pump Station Improvements	2,749,000	2,787,000	2,893,000	2,888,000	2,948,000	14,265,000
Water Plant Improvements	11,635,000	16,855,000	10,165,000	4,275,000	10,875,000	53,805,000
Water Reservoir Improvements	3,460,000	11,380,000	13,465,000	3,475,000	3,350,000	35,130,000
Development Assistance	3,670,000	3,780,000	3,800,000	3,600,000	3,610,000	18,460,000
Customer Services / Information Services	4,115,000	7,865,000	6,640,000	5,850,000	5,600,000	30,070,000
Vehicles and Equipment	4,955,000	4,430,000	4,940,000	4,450,000	4,950,000	23,725,000
Wastewater Collection System Improvements	2,130,000	2,790,000	2,840,000	2,920,000	2,940,000	13,620,000
Wastewater Plant Improvements	21,110,000	26,875,000	24,210,000	33,520,000	29,020,000	134,735,000
Wastewater Pump Station Improvements	2,136,000	2,168,000	2,242,000	2,242,000	2,282,000	11,070,000
Other	3,900,000	3,700,000	3,700,000	3,900,000	3,700,000	18,900,000
Total Other Capital Projects	\$ 100,000,000	\$ 104,850,000	\$ 108,885,000	\$ 118,725,000	\$ 113,310,000	\$ 545,770,000
TOTAL	\$ 186,500,000	\$ 281,850,000	\$ 247,885,000	\$ 353,725,000	\$ 251,310,000	1,321,270,000
Sources of Funds						
Extension and Replacement Fund	11,255,088	11,592,741	11,940,523	12,298,739	12,667,701	59,754,791
Existing Bond Fund						-
Proposed Revenue Bond Proceeds	-	225,000,000	-	-	225,000,000	450,000,000
Commercial Paper Program	100,000,000	75,000,000	100,000,000	125,000,000	75,000,000	475,000,000
Water Impact Fees	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	5,000,000
Sewer Impact Fees	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	5,000,000
Others (Grants, Reserves, etc)	73,244,912	(31,742,741)	133,944,477	214,426,261	(63,357,701)	326,515,209
TOTAL	\$ 186,500,000	\$ 281,850,000	\$ 247,885,000	\$ 353,725,000	\$ 251,310,000	\$ 1,321,270,000