

# NEW YORK CITY WATER AND WASTEWATER RATE REPORT – FY 2017

MAY 2016

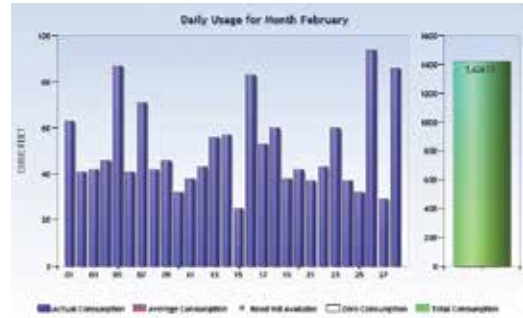
NEW YORK CITY  
WATER  
BOARD



# CUSTOMER SERVICE ONLINE TRACKING SYSTEM

## TRACK YOUR WATER USE

Did you know that you can track your water use online? If you have a wireless meter reader installed, you can go online to see your daily water usage. The online tracking system enables you as a customer to manage your water use, reduce your water bills, and detect leaks more quickly. In addition, you can view your meter readings and see your payment and billing history online.



## SIGN UP FOR LEAK NOTIFICATION

**Get alerts when your water use spikes unexpectedly**

The Leak Notification Program enables you to be alerted to potential water leaks on your property. Sign up online to receive email notifications when your water use increases significantly over a period of several days, enabling you to quickly respond to potential leaks and fix them before they become a serious billing problem. Since 2011, 251,300 customers have enrolled in the Leak Notification Program and been able to save more than \$90 million in leak-related charges.

*Enroll  
online*

[nyc.gov/dep](http://nyc.gov/dep)

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## GO GREEN AND RECEIVE \$10 CREDIT FOR MONTHLY EBILLS

You can sign up to receive monthly water and sewer bills. Not only will monthly bills help you notice leaks sooner and make budgeting easier, if you switch to monthly billing and register to receive the monthly bills as eBills, you'll get a \$10 credit on your DEP account after receiving your third consecutive monthly eBill! By signing up to receive your bills online, you'll save time and help improve our environment by reducing paper consumption. Instead of a paper bill, you'll receive an email notification when your next bill is due. You can then log in to My DEP Account to see an electronic copy of your bill.

The New York City Water Board (the “Board”) has prepared this information booklet to inform the public on its rate proposals for Fiscal Year 2017 (“FY 2017”) and provide information on the financial condition of the water and wastewater system (the “System”).

New York City’s System is among the largest in the world. The water supply system delivers more than one billion gallons of high quality drinking water every day to more than eight million people in New York City (the “City”) and nearly one million residents in four counties north of the City. The City’s fourteen Wastewater Treatment Plants (WWTPs) treat roughly 1.2 billion gallons of wastewater daily. The City’s water and sewer infrastructure plays a critical role in promoting public health and the City’s economic vitality. By 2030, the City’s population is expected to grow by more than one million residents. To accommodate this growth, uphold the high quality and integrity of the City’s drinking water, and ensure the long term viability of the System, the de Blasio Administration is committed to protecting the City’s water and wastewater infrastructure.

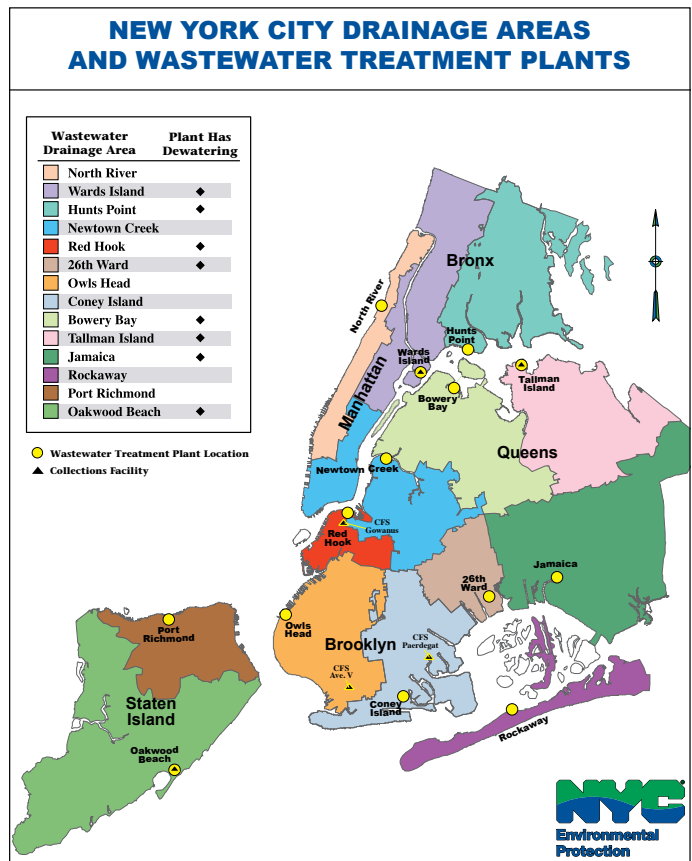
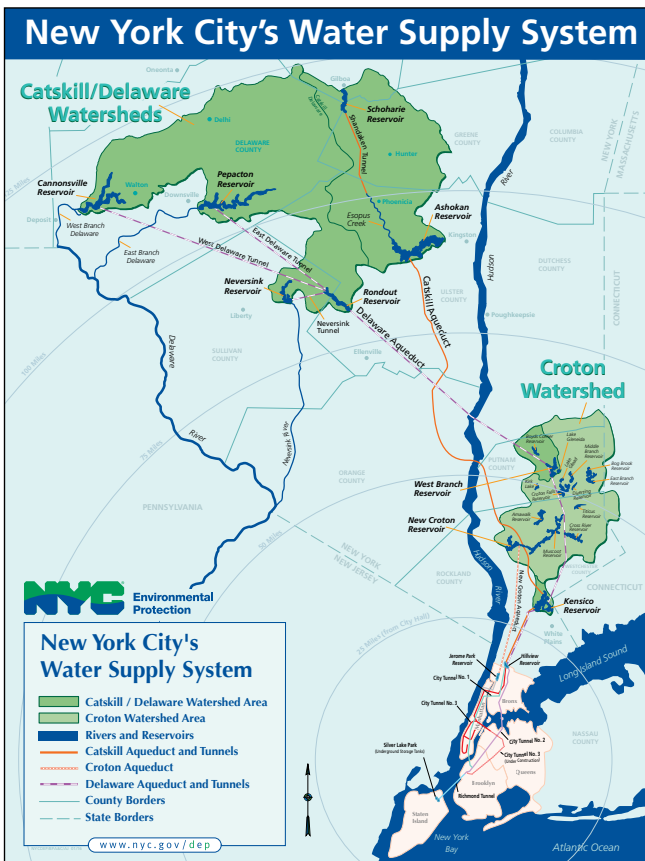
Revenue from rates charged for service covers the System’s capital and operating expenses. Most properties are charged a metered water rate based on consumption. Approximately 5% are billed on the basis of flat-rate charges, either the Multi-family Conservation Program (“MCP”) or “frontage” (i.e., the width of the property’s street frontage, the number of building fixtures, etc.). Wastewater charges for meter-billed and flat-rate properties are levied at 159% of water charges.

# NEW YORK CITY WATER BOARD

The New York City Water Board’s mission is to establish rates for and distribute the collected revenues of the Water and Sewer System of the City of New York, proactively considering the optimal level to achieve efficient financing of the System’s infrastructure and sustainable provision of high-quality service at a fair price to our customers.

### Water Board Members:

- Alfonso L. Carney, *Chair*
- Tawan Davis
- Joseph G. Finnerty, III
- Adam Freed
- Jonathan E. Goldin
- Jukay Hsu
- Arlene M. Shaw



## WATER BOARD RATE ADOPTION PROCESS

- DEP proposes rates that will satisfy the revenue requirements of the System and policies that will advance the Board's mission.
- The Board holds a public hearing in each borough of the City. (See schedule below.)
- The New York City Municipal Water Finance Authority projects debt service on bonds issued to finance water and wastewater capital projects and certifies the annual debt service to the Board.
- The City Office of Management and Budget projects the System's operating and maintenance expenses and certifies the annual amount to the Board based on the Mayor's Executive Budget.
- The System's consulting engineer certifies that the annual expenses and capital investment are reasonable and appropriate to maintain the viability of the System.
- At its Annual Meeting on May 20th, the Board adopts an Annual Budget based on the System's expenses that have been certified to it and adopts a rate. The Board must adopt a rate that will produce sufficient revenues to fund the System's capital investments and expenses.

### WATER BOARD RATE ADOPTION SCHEDULE

<b>APRIL 8</b>	Rate Proposal to Water Board
<b>MAY 4</b>	Upstate Public Hearing
<b>MAY 5 - 11</b>	In-City Public Hearings
<b>MAY 20</b>	Water Board Meeting to Adopt FY 2017 Budget and Rates
<b>JULY 1</b>	New Rates Become Effective

### SCHEDULE AND LOCATION OF PUBLIC HEARINGS

<b>BOROUGH</b>	<b>LOCATION</b>	<b>DATE/TIME</b>
<b>Staten Island</b>	Wagner College, Spiro II 631 Howard Avenue Staten Island, NY 10301	Thursday, May 5, 2016 Doors open at 7:00 p.m. Public Hearing at 7:30 p.m.
<b>Manhattan</b>	Spector Hall 22 Reade Street New York, NY 10007	Friday, May 6, 2016 Doors open at 1:00 p.m. Public Hearing at 1:30 p.m.
<b>Queens</b>	Christ the King High School CLN Center 68-02 Metropolitan Avenue Middle Village, NY 11379	Monday, May 9, 2016 Doors open at 6:30 p.m. Public Hearing at 7:00 p.m.
<b>Bronx</b>	Hostos Community College Savoy Building, 2nd Floor 120 East 149th Street Bronx, NY 10451	Tuesday, May 10, 2016 Doors open at 6:30 p.m. Public Hearing at 7:00 p.m.
<b>Brooklyn</b>	St. Francis College Founders Hall 180 Remsen Street Brooklyn, NY 11201	Wednesday, May 11, 2016 Doors open at 6:30 p.m. Public Hearing at 7:00 p.m.

## FY 2017 RATE PROPOSAL

- **Increase in-City water rates by 2.1%.**
- **Minimum Charge:** Freeze the minimum charge for meter-billed customers at the FY 2014 rate of \$0.49 per day for water service, plus the wastewater charge of 159% of water charges.
- **Home Water Assistance Program (HWAP):** Provide an annual credit of \$118.32. In FY 2016, approximately 51,700 customers who qualified for either the federal Home Energy Assistance Program (HEAP) or the NYC Department of Finance Senior Citizen Homeowners' Exemption or Disabled Homeowners' Exemption for property taxes received this credit. In FY 2017, the Board will expand this program to include an additional 68,200 senior homeowners with an annual income less than \$50,000.
- **Bill Credit:** Provide a one-time bill credit of \$183 to 664,000 one- to three-family homes based on the Mayor's elimination of the rental payment beginning in FY 2017.
- **Multi-family Water Assistance Program:** Provide an annual credit of \$250 per unit for qualified multi-family affordable housing properties identified by NYC Housing Preservation and Development. Up to 40,000 units will receive the credit, providing a total of \$10 million in assistance.
- **Multi-family Conservation Program (MCP):** Extend the grace period for compliance to December 31, 2016 for properties automatically enrolled in MCP, and change the charge for non-compliance to be an incremental 10% of the building's unit charges.
- **Service Line Protection Program (SLPP):** Continue to offer the SLPP at annual rates of \$53.88 per water service line contract (no change) and \$101.64 per sewer service line contract (no change).

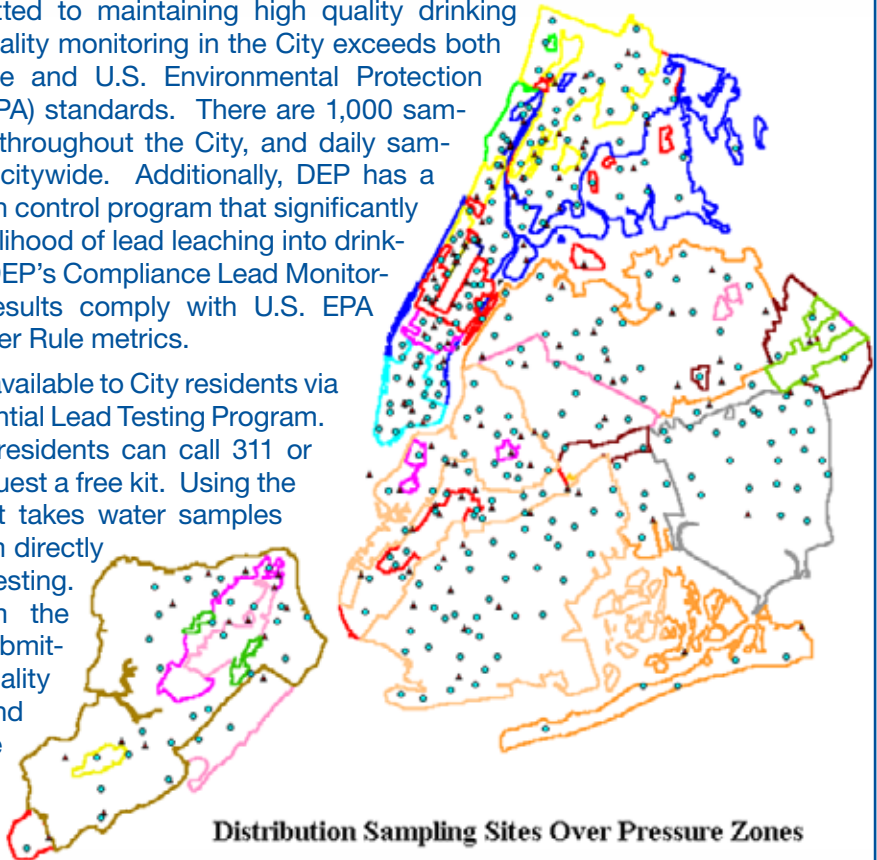


Water Sampling Station

## WATER QUALITY

DEP is committed to maintaining high quality drinking water. Water quality monitoring in the City exceeds both New York State and U.S. Environmental Protection Agency (U.S. EPA) standards. There are 1,000 sampling locations throughout the City, and daily samples are taken citywide. Additionally, DEP has a robust corrosion control program that significantly reduces the likelihood of lead leaching into drinking water, and DEP's Compliance Lead Monitoring Program results comply with U.S. EPA Lead and Copper Rule metrics.

Lead testing is available to City residents via the Free Residential Lead Testing Program. To participate, residents can call 311 or go online to request a free kit. Using the kit, the resident takes water samples and sends them directly to the lab for testing. The data from the samples is submitted to water quality regulators, and the results are shared with the resident.



## FY 2017 EXPENDITURES

In FY 2017, Mayor de Blasio will eliminate the rental payment and not request an estimated payment of \$244 million. This will be the first time there has not been a rental payment from the System to the City since the Water Board was established in 1985. Over the next four years, the elimination of the rental payment will result in \$1.1 billion of value to ratepayers.

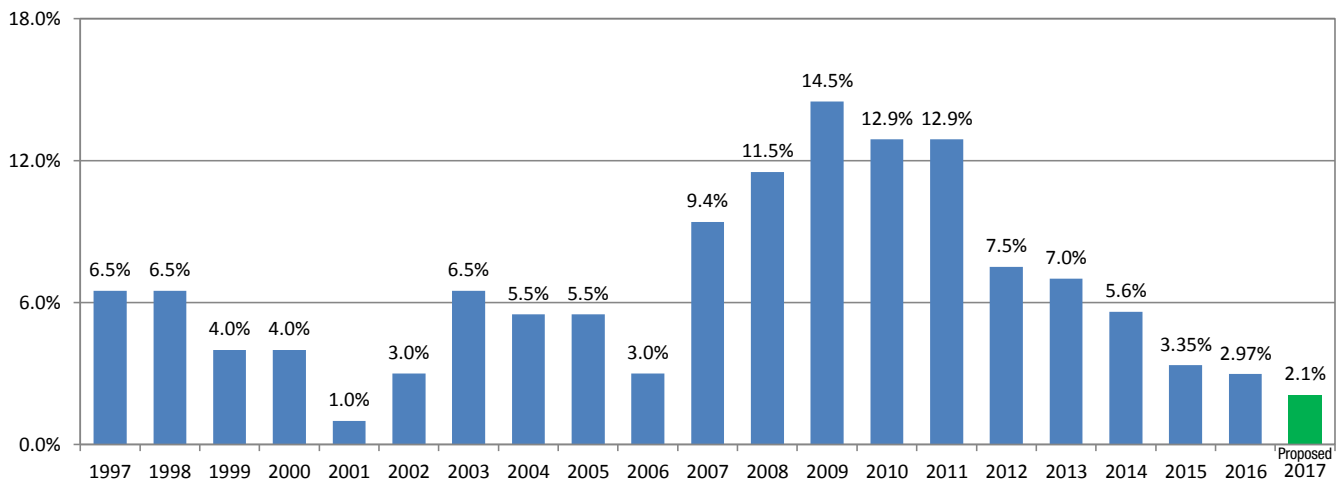
In the coming fiscal year, operations and maintenance expenses for this vast system will be 40% of the System's budget. These operational costs

include all expenses to ensure and protect the City's water supply, treat and distribute drinking water to over 9 million customers each day, and treat over 1.2 billion gallons of wastewater per day. The operations of the System are immense, and DEP continues to implement improvements to deliver the best water possible to New Yorkers. The Croton Filtration Plant is now operational and has the capacity to filter 290 million gallons per day. DEP has also continued to carry out the Operational Excellence, or OpX, program, which is an in-depth review and

### TYPICAL NEW YORK CITY CHARGES (FY 2017 WITH PROPOSED 2.1% RATE INCREASE)

	FY 2016	FY 2017	Change
<b>Metered Rates</b>			
Water (per 100 cubic feet)	\$3.81	\$3.89	\$0.08
Wastewater (per 100 cubic feet)	\$6.06	\$6.19	\$0.13
Combined Water & Wastewater (per 100 cubic feet)	\$9.87	\$10.08	\$0.21
Combined Water & Wastewater (per gallon)	\$0.0132	\$0.0135	\$0.0003
<b>Typical Metered Charges, Average Annual Charges</b>			
Single-family (80,000 gallons per year)	\$1,055.39	\$1,077.55	\$22.16
Minimum Charge (~95 gallons per day or 34,400 gallons per year)	\$463.55	\$463.55	\$0.00
Minimum Charge Less Home Water Assistance Program (HWAP) Credit	\$347.66	\$345.23	(\$2.43)
<b>Annual Multi-family Conservation Program (MCP) Charge</b>			
Per Residential Unit	\$1,004.82	\$1,025.92	\$21.10
Per Residential Unit with 10% Penalty	N/A	\$1,128.51	N/A

### WATER AND SEWER RATE HISTORY (PERCENT CHANGE)



transformation of DEP's operations. Through initiatives such as increased sludge thickening at the wastewater treatment plants, staffing optimization, improved procurement specifications and negotiations, and a prioritized replacement of large meters, DEP has already implemented changes that are estimated to produce a financial benefit of approximately \$98.2 million in FY 2017.

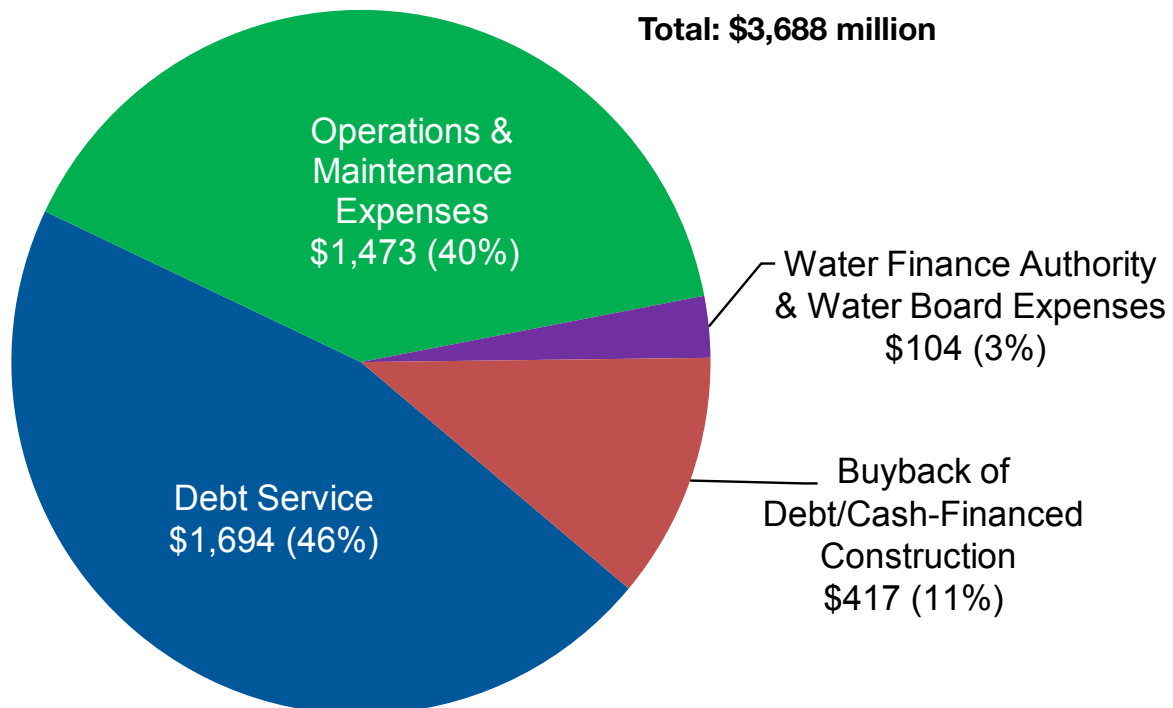
In FY 2017, the largest driver of the System's annual budget will be its debt service, accounting for 46% of expenses. This debt service is a direct result of DEP's massive capital construction projects, which have been largely driven by unfunded mandates required by state and federal regulators. From FY 2006 to FY 2015, DEP committed \$21.0 billion to its capital program, and 55% of these capital commitments were directed for mandated projects, such as the Croton Water Filtration Plant, Catskill/Delaware UV Disinfection Facility, and Newtown Creek Wastewater Treatment Plant. While these facilities all have significant benefits for the City's System, constructing them simultaneously based on contracts that were required to be bid during the peak of the New York area's heavy-construction market was costly. Mostly, they have been financed by debt that will be repaid over a thirty-year period. As a result, the New York City Municipal Water Finance Authority's total outstanding debt is currently \$29.8 billion. While the ratio of mandated to non-mandated capital projects is falling,

there are many capital projects planned and underway to maintain, improve, and expand the System, and DEP's current capital expenditure rate is approximately \$7 million per day on construction, design, and construction management.



Delaware Bypass Tunnel

### FY 2017 EXPENDITURES



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## DEP INFRASTRUCTURE INVESTMENT OVERVIEW

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From FY 2006 to FY 2015, DEP committed \$21.0 billion to its capital program, and DEP plans to spend more than \$2 billion on its capital program in FY 2016. These investments have secured the City's System today and will benefit additional New Yorkers for generations to come. The facilities that DEP has constructed have already made a significant impact on the City's waters:

- The Croton Filtration Plant became operational in May 2015 and has the capacity to treat 290 million gallons of water per day, 30% of the City's daily demand.
- The Catskill/Delaware UV Disinfection Facility began operation in FY 2013 and is capable of treating 2.02 billion gallons of water per day from the Catskill and Delaware reservoir systems with UV disinfection, which provides an additional form of disinfection to protect against Cryptosporidium and Giardia.
- The upstate watershed protection program was a significant factor in the U.S. EPA's approval of the historic 10-year Filtration Avoidance Determination, or FAD, for DEP's Catskill/Delaware water supply systems.
- Effective handling and treatment of stormwater and wastewater have made the City's harbor waters the cleanest they have been in over 100 years, based on water quality sampling data.
- The multi-billion dollar upgrade at the Newtown Creek Wastewater Treatment Plant allowed the plant to achieve secondary treatment standards

three years ahead of schedule, meaning that DEP is now meeting the Clean Water Act's 85% pollutant removal requirement harbor-wide, as recognized by the New York State Department of Environmental Conservation (NYSDEC).

- The Delaware Aqueduct is in need of repair, and DEP has a significant capital program to construct the Rondout-West Branch Bypass Tunnel. In FY 2016, construction of a shaft on each side of the Hudson River for the bypass tunnel was completed; these shafts are 843 feet and 674 feet deep.
- Two siphons currently provide a redundant water source for Staten Island. However, these siphons are being replaced by a new, deeper siphon so that the harbor channel can be dredged to make it deep enough for New York and New Jersey ports to accommodate the new generation of container ships.

DEP will continue to invest in the City's water and wastewater infrastructure, with additional multi-phase, long-term projects, such as the Green Infrastructure program and rehabilitation of the City's WWTPs. Ongoing projects, such as upstate land acquisition, energy efficiency projects systemwide, and maintaining infrastructure throughout the watershed to support the FAD will continue to enhance the City's System.

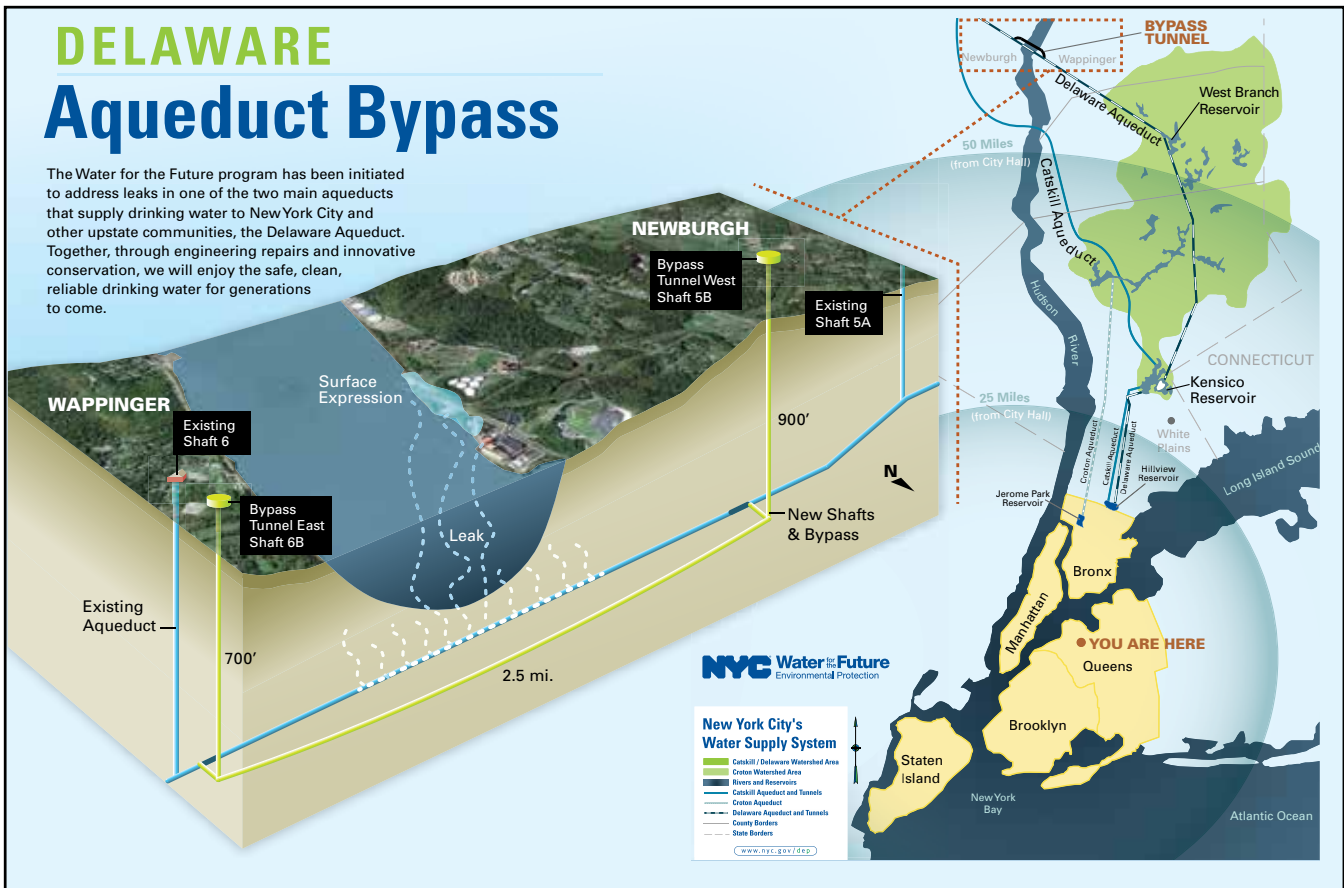
The following paragraphs summarize some of the programmatic areas for capital investment as noted in the approved FY 2017 Preliminary Capital Improvement Plan.





# DELAWARE Aqueduct Bypass

The Water for the Future program has been initiated to address leaks in one of the two main aqueducts that supply drinking water to New York City and other upstate communities, the Delaware Aqueduct. Together, through engineering repairs and innovative conservation, we will enjoy the safe, clean, reliable drinking water for generations to come.



## WATER SUPPLY

### \$1.0 billion for Delaware Aqueduct Repair to Ensure the Dependability of the City's Water Supply System

More than nine million people throughout the City, Putnam, Ulster, Westchester, and Orange counties depend on the City's water supply system. Delivering about one billion gallons of water every day, the System has provided world-class drinking water to New Yorkers for generations. Ensuring that our historic infrastructure continues to provide the same level of service to all New Yorkers is a priority for DEP. Planned work includes conducting a dependability study for the City's water supply, implementing demand reduction initiatives, and building the Cross River and Croton Falls Pumping Stations, which will be able to transfer water from the Croton system to the Delaware system during emergencies, planned service outages, and periods of drought.

In 2011, DEP commenced a comprehensive plan to permanently address the leaks in the Delaware Aqueduct, which supplies half of the City's drinking water. Based on a 10-year investigation and more than \$200 million of preparatory construction work, DEP is constructing a bypass for a section of the Delaware Aqueduct in Roseton. Construction of the

shafts for the bypass tunnel is complete; a contract for construction of the bypass tunnel was bid and registered in 2015; and the project will culminate with the connection of the bypass tunnel to the existing aqueduct in 2022. Since DEP must shut down the aqueduct when we are ready to connect the bypass tunnel, DEP is also implementing conservation measures, such as offering a toilet replacement program and reducing municipal water use.

### \$1.9 billion for Upstate Watershed Protection

Maintaining the City's healthy, pure, and great-tasting water starts right at the source. Most experts agree that protecting the lands around a watershed is the best way to ensure the quality of the water itself. Since 1997, when the City entered into the Watershed Memorandum of Agreement to expand the watershed protection program, land holdings in the watershed have quadrupled; the City now protects about 182,700 acres in the upstate watershed, and it continues to devote funds to increase its holdings. DEP also owns and operates six WWTPs that serve upstate communities and has funded construction on seven additional upstate WWTPs; in addition, DEP has paid for the upgrade of the existing WWTPs in the watersheds and for a portion of the operations and maintenance costs to provide the highest levels of treatment. Aside from building,

upgrading, and maintaining wastewater infrastructure, DEP also works with local farmers to reduce pollution and constructs basic infrastructure such as dams, bridges, and roads. Due to the City's success at creating an ecological buffer around the watershed's source waters, the U.S. EPA awarded the City a 10-year FAD until 2017. The City is currently developing a long-term watershed protection plan to present to the U.S. EPA to request a renewal of the FAD.

### **\$501 million for the Kensico-Eastview Tunnel Connection**

To provide redundancy for the delivery of water from Kensico Reservoir to the UV Facility at Eastview, DEP is constructing a second tunnel.

### **\$460 million for Upstate Dam Reconstruction**

DEP has undertaken a safety assessment of the System's dams throughout the watershed and is planning reconstruction work for several of them. The most significant project in DEP's capital plan is \$234 million for the reconstruction of dams on the Ashokan Reservoir. Also, while rehabilitation work for Gilboa Dam on the Schoharie Reservoir was substantially complete in 2015, DEP is undertaking additional work to construct a new low-level outlet structure and other improvements to meet safety standards. The estimated cost to complete the reconstruction of the Gilboa Dam facilities is \$110 million, \$71 million of which is funded in DEP's capital plan.

### **\$357 million for City Water Tunnel No. 3**

The Manhattan Section of City Water Tunnel No. 3 was activated in October 2013 to provide redundancy for the older Water Tunnel No. 1 in Manhattan. After the Brooklyn/Queens section is completed and activated, Tunnel No. 1 can be shut down for inspection and repair. \$4.5 billion has been invested in the tunnel to date and an additional \$357 million will continue the work.



### **Wastewater Treatment Plants (WWTPs) (not including CSOs)**

Every day, the City's 14 WWTPs collectively treat about 1.2 billion gallons of wastewater. Both the effectiveness of these plants and the skill of their operations personnel are evidenced by the fact that the harbor waters surrounding the City are the cleanest they've been in over a century. As with most City infrastructure, the 14 plants are aging, and DEP must invest a significant amount of its resources to maintain them in a state of good repair and to modernize them to meet constantly-evolving state and federal standards.

### **\$3.0 billion for Combined Sewer Overflow (CSO) Long-term Control Plans (LTCPs)**

These funds in the current 10-year capital program will continue the City's successes in protecting local waterways towards a goal of opening 90% of the City's waterways for recreation by 2030. CSOs occur during especially wet weather when the City's 14 WWTPs are unable to treat all the wastewater and stormwater in the System. Therefore, in response to an administrative consent order with the NYSDEC, DEP is required to submit LTCPs for CSOs in ten waterbodies, the East River, and open citywide waters. Programs such as CSO retention tanks, wastewater treatment plant upgrades, and sustainable stormwater management practices will help keep floatable trash, debris, oils, grease, and bacteria from entering our waterways. By updating our stormwater management system with both traditional mechanical upgrades (such as sewer construction and pumping stations), as well as Green Infrastructure (such as tree pits, permeable pavement, rain barrels, and green roofs), the City's waterways will continue to improve.

### **\$1.6 billion for Southeast Queens Water and Sewer Infrastructure**

Flooding has long been a concern in Southeast Queens and increasing rainfall, loss of permeable surfaces, and reduced groundwater use have only worsened the problem. DEP has begun full sewer buildout, which will require approximately 450 miles of new storm sewers and upgrades to 260 miles of sanitary sewers and 30 miles of combined sewers. In order to relieve local flooding, DEP is building Green Infrastructure to capture stormwater before it gets to the storm sewer system. DEP is also accelerating the planning and design of large trunk sewers, which transport stormwater to Jamaica Bay; building collection storm sewers in the hardest hit areas; and partnering with community groups to educate residents about steps they can take to protect their properties during rain events.

### **\$1.2 billion for CSO Mitigation near Gowanus Canal**

In 2010, the U.S. EPA designated the Gowanus Canal a “Superfund” site due to historical industrial contamination. DEP will invest approximately \$1.2 billion in the area, including \$180 million on a pump station upgrade, flushing tunnel improvements, floatables controls, high-level storm sewers, Green Infrastructure, and combined sewer overflow (CSO) retention tanks.

### **\$938 million for Green Infrastructure Projects**

To address CSOs, DEP is also installing Green Infrastructure in 29 priority areas. To date, DEP has committed \$235 million to Green Infrastructure projects, and 3,000 bioswales have been built or are under construction. DEP has also committed \$36 million to Phase I of the Community Parks Initiative to implement Green Infrastructure stormwater controls in 29 parks citywide, and DEP is partnering with the Trust for Public Land to construct Green Infrastructure on 40 public school playgrounds.

### **\$795 million for Energy and Energy Efficiency Projects**

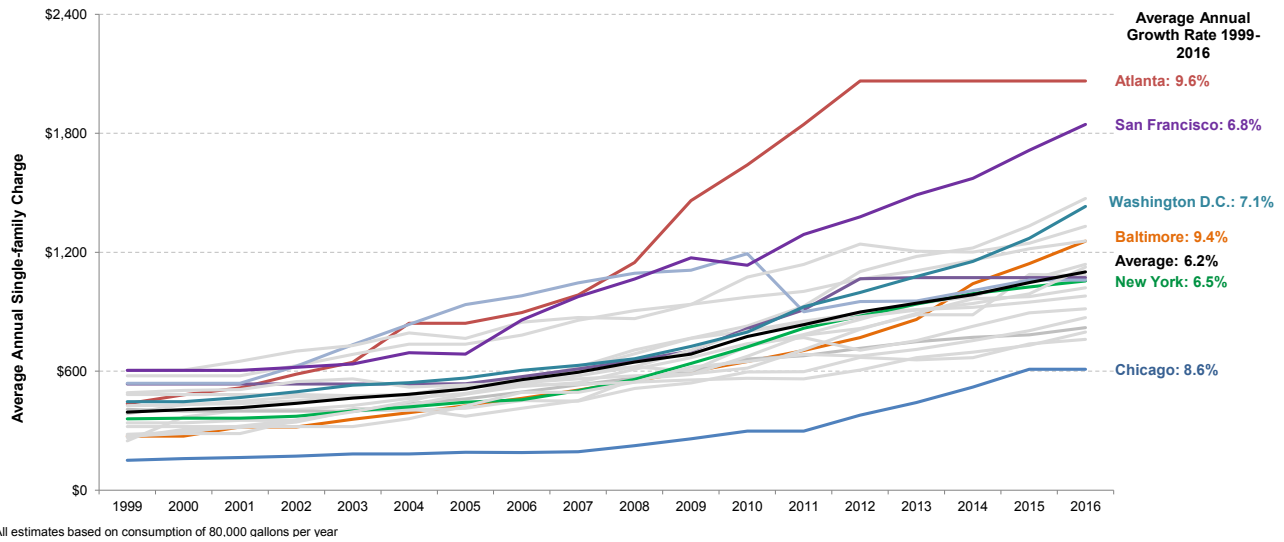
DEP facilities consume more than nine trillion British Thermal Units (BTUs) of energy each year, or the equivalent of heating 95,000 homes in New York State, and nearly 90% of this energy is consumed by the wastewater treatment processes. To lessen the System’s demand on the grid and its carbon footprint, DEP is undertaking significant energy and energy efficiency projects. In addition to upgrading the equipment at several of its WWTPs to improve energy efficiency, including reconstructing generators and installing new centrifuges, one of the largest projects is the development of a 10.5-megawatt cogeneration facility at the North River Wastewater Treatment Plant.

### **\$315 million for Wastewater Resiliency Post-Hurricane Sandy**

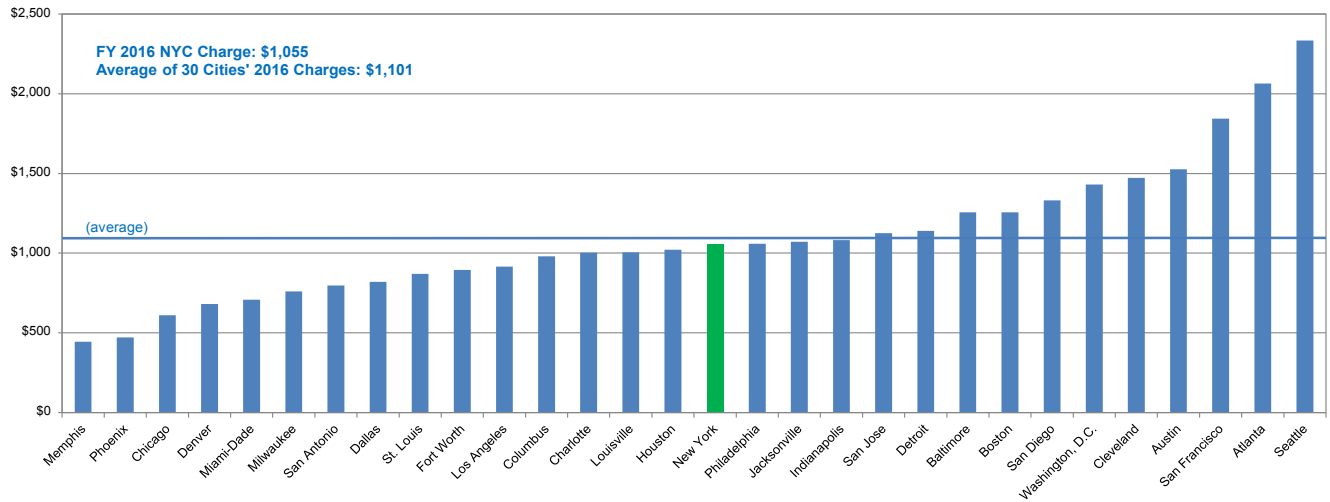
Hurricane Sandy brought destruction to many parts of the region, and it had a major impact on the City’s wastewater treatment system. DEP continued to deliver safe drinking water throughout the storm, and all of the WWTPs, except for the Rockaway WWTP, were meeting regulatory requirements within 72 hours after the storm, but repairs were needed and proactive resiliency measures are planned. Since February 2011, DEP had been conducting a study of the effects of climate change and population growth on the city’s wastewater and drainage systems, and in October 2013, DEP published the NYC Wastewater Resiliency Plan. This report focused on the site specific nature of impacts; interdependencies between DEP infrastructure and the electrical grid; and risks posed to surrounding communities, receiving waterbodies, and sensitive areas from potential failures of critical services. In total, DEP expects to incur costs of approximately \$315 million to repair infrastructure damaged by Sandy and to improve resiliency in the future.



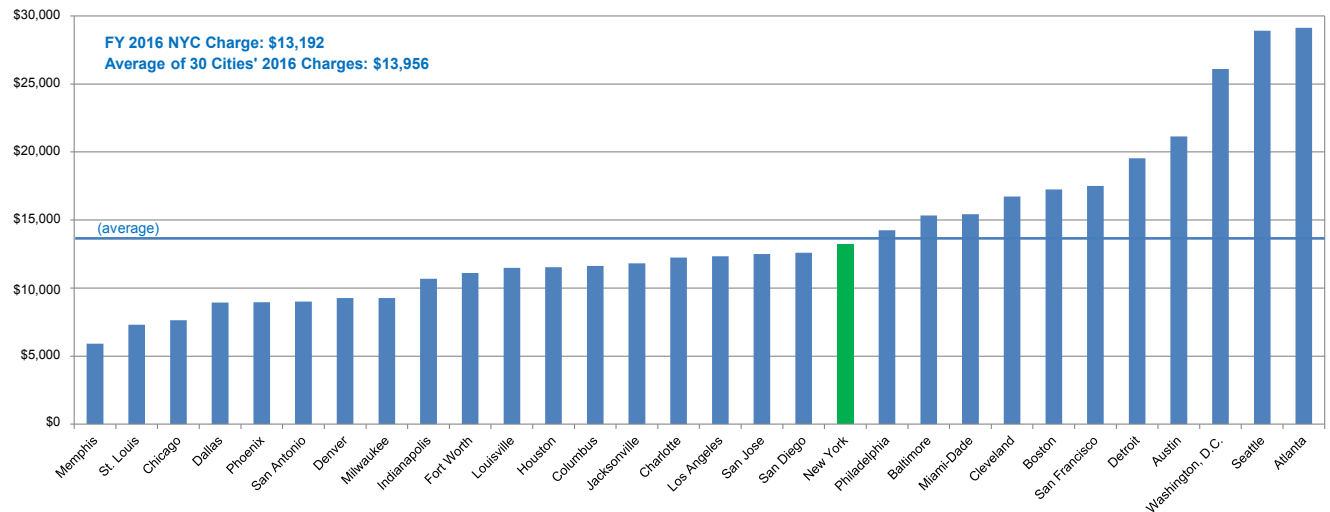
## ANNUAL RESIDENTIAL WATER/WASTEWATER CHARGES - RATE INCREASES OF VARIOUS CITIES OVER TIME



## ANNUAL RESIDENTIAL WATER/WASTEWATER FY 2016 CHARGES



## ANNUAL COMMERCIAL WATER/WASTEWATER FY 2016 CHARGES

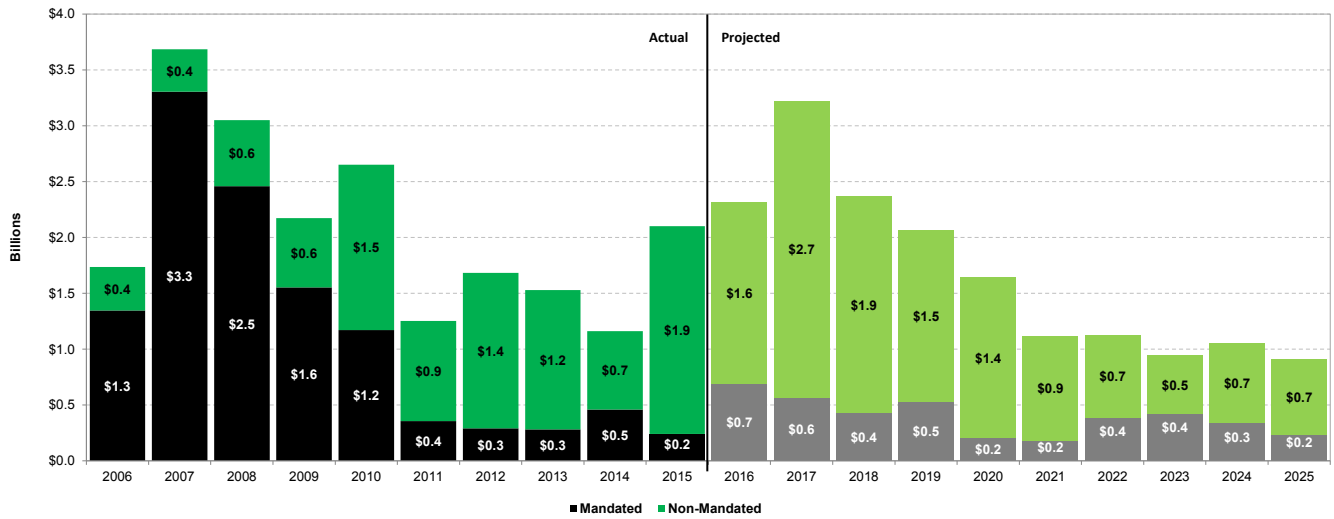


## ANTICIPATED SYSTEM REVENUES AND EXPENSES (IN MILLIONS)

	FY 2016	FY 2017	Change
<b>Revenues</b>			
<b>Operating Revenues</b>			
Water/Sewer User Payments	\$3,703.9	\$3,547.4	(\$156.5)
Upstate Revenues	73.0	80.7	7.7
Miscellaneous Revenue	15.5	16.3	0.8
<b>Total Operating Revenues</b>	<b>\$3,792.4</b>	<b>\$3,644.4</b>	<b>(\$148.0)</b>
<b>Non-operating Revenues</b>			
Water Finance Authority (Authority) Investment Income	\$29.0	\$27.0	(\$2.0)
Federal Credit Payment on Outstanding Build America Bonds	70.1	70.1	-
<b>Total Non-operating Revenues</b>	<b>\$99.1</b>	<b>\$97.1</b>	<b>(\$2.0)</b>
<b>Total Revenues</b>	<b>\$3,891.5</b>	<b>\$3,741.5</b>	<b>(\$150.0)</b>
<b>Expenses</b>			
<b>First Resolution Authority Debt Service</b>			
Outstanding Bonds	\$120.4	\$163.3	\$42.9
Anticipated Future Bonds	-	12.2	12.2
<b>Total First Resolution Debt Service</b>	<b>\$120.4</b>	<b>\$175.5</b>	<b>\$55.1</b>
<b>Subordinate Debt Service</b>			
<i>Authority Bonds</i>			
Outstanding Second Resolution Authority Bonds	\$1,013.0	\$1,018.1	\$5.2
Anticipated Future Second Resolution Authority Bonds	14.5	46.0	31.4
Interest on Commercial Paper	1.5	18.0	16.5
<i>Authority Bonds Issued to New York State Environmental Facilities Corporation (EFC)</i>			
Outstanding Second Resolution EFC Bonds	493.2	489.4	(3.8)
Anticipated Future Second Resolution EFC Bonds	38.8	47.4	8.6
Less: EFC Subsidy	(103.2)	(100.8)	2.4
<b>Total Subordinate Debt Service</b>	<b>\$1,457.8</b>	<b>\$1,518.1</b>	<b>\$60.3</b>
Less: Prior Year-end Cash Balance	(1,011.5)	(978.3)	33.2
<b>Subordinate Debt Service Payable from Current Revenues</b>	<b>\$446.3</b>	<b>\$539.8</b>	<b>\$93.5</b>
<b>Total Debt Service Payable from Current Revenues</b>	<b>\$566.6</b>	<b>\$715.3</b>	<b>\$148.6</b>
<b>DEP Operations and Maintenance (O&amp;M) Expenses</b>			
Water System	\$629.3	\$616.7	(\$12.6)
Wastewater System	661.8	812.5	150.7
Indirect Expense	19.4	19.4	-
Judgment and Claims	8.0	8.0	-
Credit for Prior Year O&M Overpayment	(119.8)	-	119.8
<b>Total DEP O&amp;M Expenses</b>	<b>\$1,198.7</b>	<b>\$1,456.6</b>	<b>\$257.9</b>
<b>Other Expenses</b>			
Authority Operations	\$49.0	\$54.9	\$5.9
Board Operations	39.6	49.5	10.0
Board Deposit to O&M Reserve Fund	-	15.9	15.9
Rental Payment	144.4	-	(144.4)
Buyback of Debt/Cash-Financed Construction	950.0	425.0	(525.0)
Less: Cash Released from Bond Escrow	(35.1)	(8.3)	26.8
<b>Total Other Expenses</b>	<b>\$1,147.8</b>	<b>\$537.0</b>	<b>(\$610.8)</b>
<b>Total Expenses</b>	<b>\$2,913.2</b>	<b>\$2,708.9</b>	<b>(\$204.3)</b>
<b>Year-end Cash Balance</b>	<b>\$978.3</b>	<b>\$1,032.6</b>	<b>\$54.3</b>

Note: This listing is for information only and does not follow the Flow of Funds priority established under the Financing Agreement.

## CAPITAL COMMITMENTS - LEGAL MANDATES HAVE DICTATED PACE OF CAPITAL INVESTMENT



Of the \$21.0 billion in capital commitments between FY 2006 and FY 2015, \$11.5 billion, or 55%, has gone to legal mandates.

## CAPITAL IMPROVEMENT PROGRAM: FY 2016 - FY 2025 (IN MILLIONS)

	2016	2017	2018	2019	2020	2021
Mandated	\$693.2	\$565.4	\$429.7	\$528.9	\$207.9	\$180.8
Non-Mandated	1,626.7	2,654.2	1,939.4	1,538.0	1,433.8	937.5
<b>Total</b>	<b>\$2,319.9</b>	<b>\$3,219.6</b>	<b>\$2,369.0</b>	<b>\$2,066.8</b>	<b>\$1,641.8</b>	<b>\$1,118.3</b>

	2022	2023	2024	2025	2016-2025
Mandated	\$389.1	\$421.7	\$340.2	\$235.7	\$3,992.6
Non-Mandated	734.8	523.8	708.8	677.8	12,774.8
<b>Total</b>	<b>\$1,124.0</b>	<b>\$945.6</b>	<b>\$1,049.0</b>	<b>\$913.5</b>	<b>\$16,767.4</b>

## CAPITAL IMPROVEMENT PROGRAM: FY 2016 - FY 2025 INVESTMENT ALLOCATION BY CATEGORY (IN MILLIONS)

Project Type	2016	2017	2018	2019	2020	2021
Equipment	\$125.8	\$62.8	\$84.7	\$52.6	\$64.6	\$46.1
Sewers	555.8	928.0	548.7	508.4	421.0	232.5
Water Supply	28.7	136.8	20.0	222.0	104.5	369.0
Water Mains	702.8	952.5	609.6	326.8	309.1	204.9
Water Pollution Control	906.8	1,139.5	1,106.0	957.0	742.5	265.9
<b>Total</b>	<b>\$2,319.9</b>	<b>\$3,219.6</b>	<b>\$2,369.0</b>	<b>\$2,066.8</b>	<b>\$1,641.8</b>	<b>\$1,118.3</b>

Project Type	2022	2023	2024	2025	2016-2025
Equipment	\$46.0	\$37.4	\$18.1	\$19.5	\$557.6
Sewers	335.5	245.1	237.1	497.0	4,509.1
Water Supply	50.0	30.0	143.0	20.0	1,124.0
Water Mains	199.6	126.8	238.4	119.5	3,790.0
Water Pollution Control	492.8	506.3	412.4	257.4	6,786.8
<b>Total</b>	<b>\$1,124.0</b>	<b>\$945.6</b>	<b>\$1,049.0</b>	<b>\$913.5</b>	<b>\$16,767.4</b>



## DEP'S MISSION

DEP's mission is to protect public health and the environment by supplying clean drinking water, collecting and treating wastewater, and reducing air, noise, and hazardous substances pollution.

DEP seeks to achieve its mission by focusing on four core areas:

- Serving nine million customers,
- Operating the safest, highest-performing water utility at the lowest possible cost,
- Building capital projects on time and on budget, and
- Delivering clean waters, clean air and a sustainable quality of life for all New Yorkers.

NEW YORK CITY  
WATER  
BOARD

