

NEW YORK CITY WATER AND WASTEWATER RATE REPORT – FY 2020

MAY 2019



Micro-tunneling machine at Schoharie Reservoir

NEW YORK CITY
**WATER
BOARD**

The New York City Water Board (the “Board”) has prepared this information booklet to inform the public on its rate proposals for Fiscal Year 2020 (“FY 2020”) 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 4% 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:

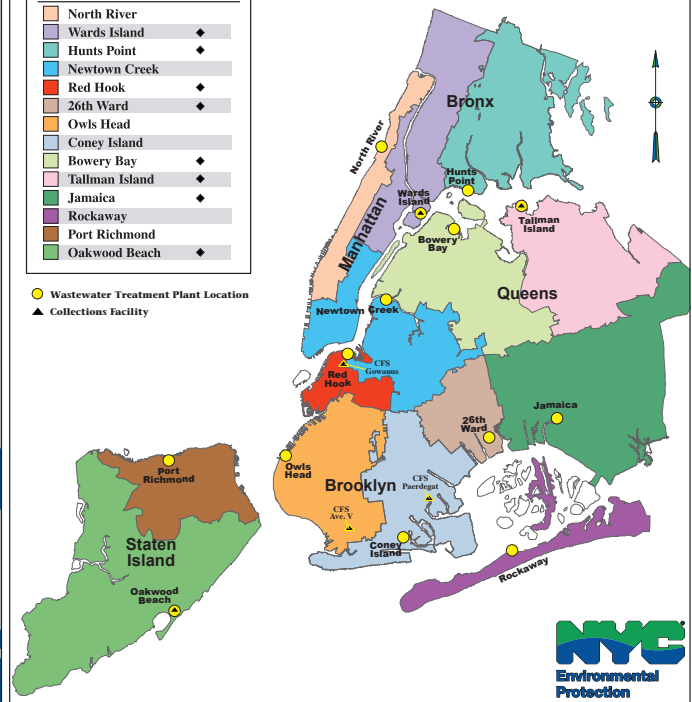
- Alfonso L. Carney, Jr., Chair
- Tawan Davis
- Evelyn Fernandez-Ketcham
- Adam Freed
- Jonathan E. Goldin
- Jukay Hsu
- Arlene M. Shaw



NEW YORK CITY DRAINAGE AREAS AND WASTEWATER TREATMENT PLANTS

Wastewater Drainage Area	Plant Has Dewatering
North River	◆
Wards Island	◆
Hunts Point	◆
Newtown Creek	◆
Red Hook	◆
26th Ward	◆
Owls Head	◆
Coney Island	◆
Bowery Bay	◆
Tallman Island	◆
Jamaica	◆
Rockaway	◆
Port Richmond	◆
Oakwood Beach	◆

- Wastewater Treatment Plant Location
- ▲ Collections Facility



WATER BOARD RATE ADOPTION PROCESS

- Rates that will satisfy the revenue requirements of the System and policies that will advance the Board's mission are presented to the Board.
- 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.
- The Board holds a public hearing in each borough of the City. (See schedule below.)
- At its Annual Meeting in June, 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 expenses.

WATER BOARD RATE ADOPTION SCHEDULE

MAY 1	Rate Proposal to Water Board
MAY 30 – JUNE 11	In-City Public Hearings
JUNE 14	Water Board Meeting to Adopt FY 2020 Budget and in-City Rate
JULY 1	New Rates Become Effective

SCHEDULE AND LOCATION OF PUBLIC HEARINGS

BOROUGH	LOCATION	DATE/TIME
Bronx	Hostos Community College Savoy Building, 2nd Floor 120 East 149th Street Bronx, NY 10451	Thursday, May 30, 2019 Doors open at 6:30 p.m. Public Hearing at 7:00 p.m.
Manhattan	255 Greenwich Street Eighth Floor, Room 8-S1S2 New York, NY 10007	Tuesday, June 4, 2019 Doors open at 1:30 p.m. Public Hearing at 2:00 p.m.
Queens	John F. Kennedy, Jr. School (P721Q) 57-12 94th Street Elmhurst, NY 11373	Wednesday, June 5, 2019 Doors open at 6:30 p.m. Public Hearing at 7:00 p.m.
Brooklyn	St. Francis College 180 Remsen Street, Founders Hall Brooklyn, NY 11201	Monday, June 10, 2019 Doors open at 6:30 p.m. Public Hearing at 7:00 p.m.
Staten Island	Joan & Alan Bernikow Jewish Community Center 1466 Manor Road Staten Island, NY 10314	Tuesday, June 11, 2019 Doors open at 6:30 p.m. Public Hearing at 7:00 p.m.

FY 2020 RATE PROPOSAL

- **Increase in-City water rates by 2.31%.**
- **Minimum Charge:** Freeze the minimum charge for meter-billed customers for the sixth consecutive year 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:** Re-authorization of \$115.89 per account bill credit to eligible low income households.
- **Multi-family Water Assistance Program:** Re-authorization of up to 40,000 bill credits of \$250 per residential unit, for properties subject to qualifying affordability agreements.
- **New permit fee for obtaining a permit to engage in excavation or drilling in certain areas of New York City.**

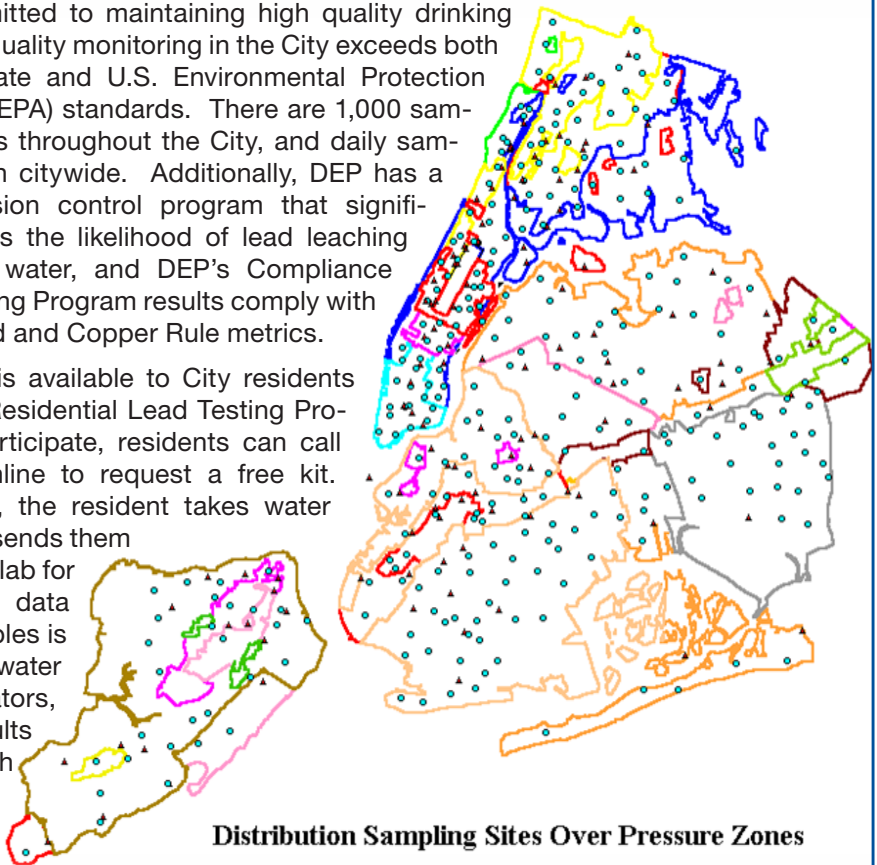


Water Sampling Station

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.



Distribution Sampling Sites Over Pressure Zones

To request a free kit, call 311 or visit nyc.gov.

FY 2020 EXPENDITURES

In the coming fiscal year, operations and maintenance expenses for this vast system will be \$1.55 billion, which is 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 nine million customers each day, and treat over 1.2 billion gallons of wastewater per day. The operations of the System are significant, including 6,000 employees, property taxes on upstate watershed land, energy costs, chemicals, and various contracts for items such as maintenance and specialized services. DEP

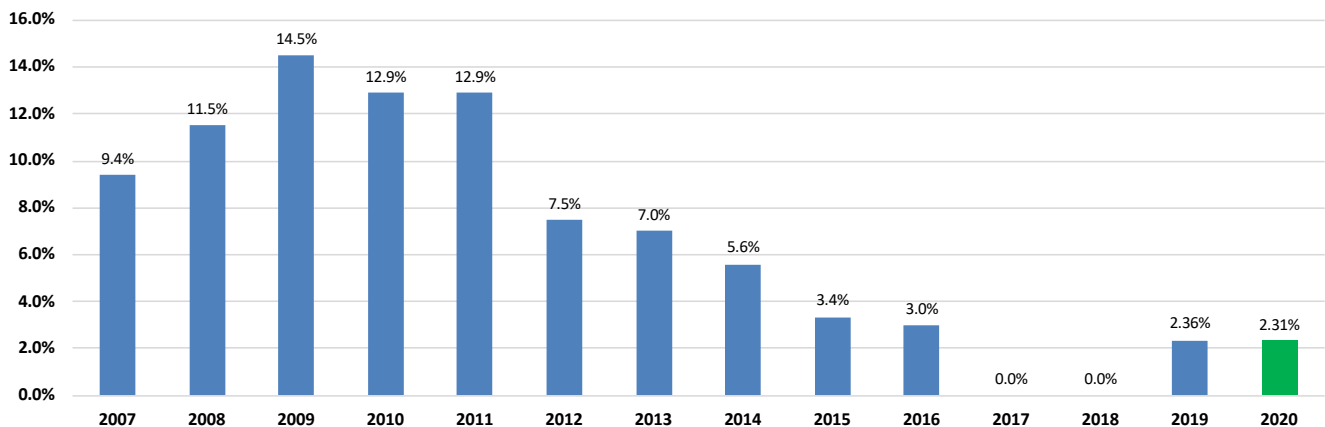
continues to implement improvements to deliver the best water possible to New Yorkers.

In FY 2020, the largest driver of the System’s annual budget will be its debt service and capital investment, accounting for \$2.16 billion or 57% of the total revenue needed in FY 2020. This debt service is a direct result of DEP’s sizable capital construction projects, which involves designing and executing large and complex engineering projects. From FY 2009 to FY 2018, DEP committed approximately \$18.6 billion to its capital program; which included a

TYPICAL NEW YORK CITY CHARGES (FY 2020 WITH PROPOSED 2.31% RATE INCREASE)

	FY 2019	FY 2020	Change
Metered Rates			
Water (per 100 cubic feet)	\$3.90	\$3.99	\$0.09
Wastewater (per 100 cubic feet)	\$6.20	\$6.34	\$0.14
Combined Water & Wastewater (per 100 cubic feet)	\$10.10	\$10.33	\$0.23
Combined Water & Wastewater (per gallon)	\$0.0135	\$0.0138	\$0.0003
Typical Metered Charges, Average Annual Charges			
Single-family (70,000 gallons per year)	\$945.28	\$967.12	\$21.84
Multi-family Metered (52,000 gallons per year)	\$702.19	\$718.43	\$16.22
Minimum Charge (~95 gallons per day)	\$463.55	\$463.55	\$0.00
Annual Multi-family Conservation Program (MCP) Charge			
Per Residential Unit	\$1,028.53	\$1,052.29	\$23.76

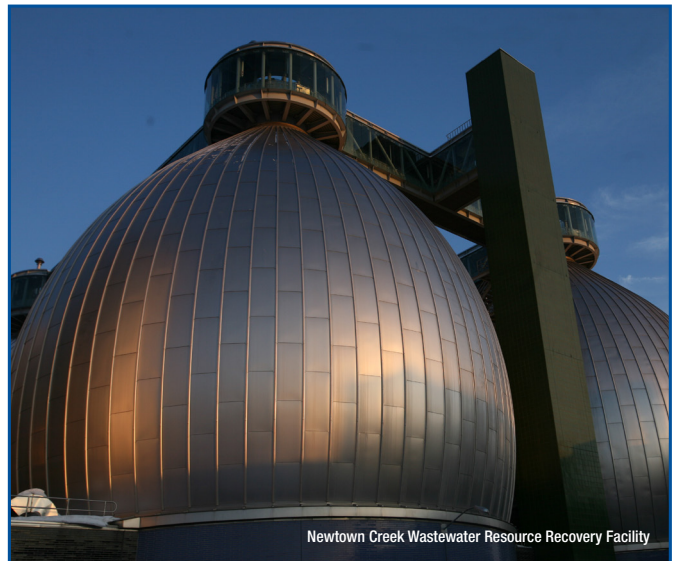
WATER AND SEWER RATE HISTORY (PERCENT CHANGE)



Proposed

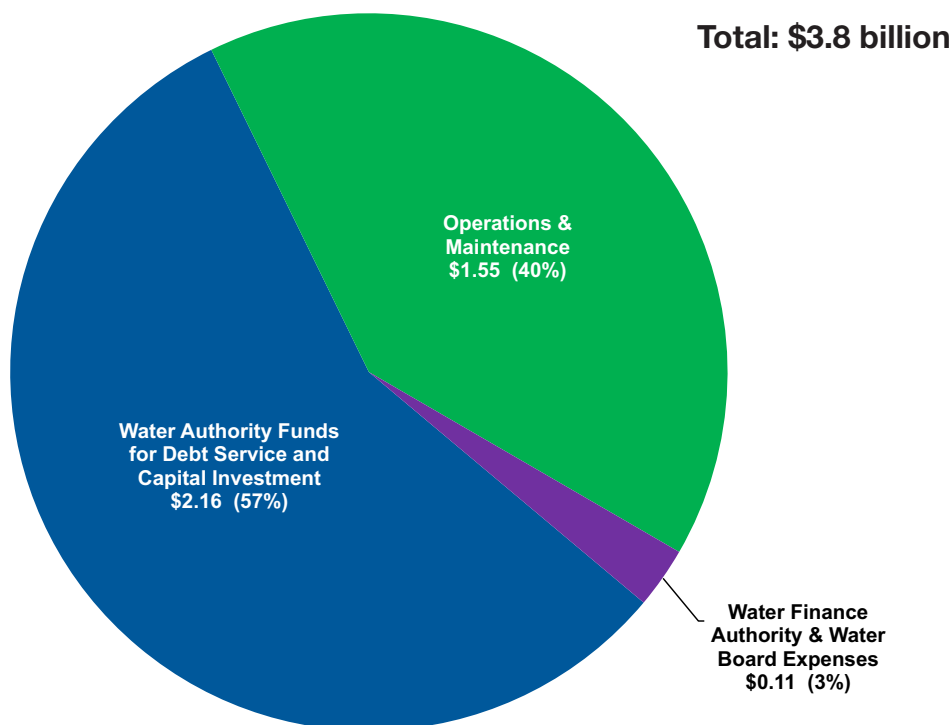
considerable number of projects that were required by Federal or New York State regulators – in fact, nearly one-third of all capital commitments during that period were for mandated projects, including the Croton Water Filtration Plant, Catskill/Delaware UV Disinfection Facility, and the Newtown Creek Wastewater Treatment Plant. Regardless of whether they are mandated by regulators or are simply necessary to operate the system, most capital projects are financed by debt that will be repaid over the next thirty years. As a result, the system’s balance sheet shows approximately \$31 billion of outstanding debt issued by the New York City Municipal Water Finance Authority. While the ratio of mandated to non-mandated capital projects is falling, the system has a significant number of new projects in its pipeline.

New York City’s water and wastewater system is well-maintained, and each year receives a positive grade from the system’s consulting engineers. Maintaining the system to this standard is a complex and expensive undertaking, and in order to continue to



appropriately maintain the system, significant ongoing investments in system assets will be required in the coming years.

FY 2020 EXPENDITURES



DEP INFRASTRUCTURE INVESTMENT OVERVIEW

From FY 2009 to FY 2018, DEP committed approximately \$18.6 billion to its capital program, and the Current Capital Improvement Plan for FY 2020 to FY 2029 is \$20.1 billion.

DEP will continue to invest in the City's water and wastewater infrastructure, with additional long-term projects, such as the Green Infrastructure program, rehabilitation of the City's wastewater treatment plants, and the planning, design, and construction of permanent repairs to the Delaware Aqueduct. Ongoing projects, such as upstate land acquisition, energy and energy efficiency projects system-wide, and maintaining infrastructure throughout the watershed to support the current Filtration Avoidance Determination 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 2020 Capital Improvement Plan.

WATER SUPPLY

Water for the Future

DEP is managing a program to repair a leak in a section of the Delaware Aqueduct that is 800 feet below the Hudson River. Mining of the bypass tunnel began in November 2017, and work is progressing, with more than 70% of the tunnel mined out to date. Construction of the shafts for the bypass tunnel has also been completed, and the project is expected to end in 2022 with the connection of the bypass tunnel. DEP has also begun work on a chlorination facility that is being constructed as part of the project, and the agency is also developing water conservation measures, if they are required during the project.

Construction of the Kensico-Eastview Connection

DEP is constructing a second tunnel to connect the Kensico Reservoir to the Catskill-Delaware ultraviolet treatment facility, which will create an additional layer of redundancy in the water supply system.



Delaware Aqueduct Bypass Tunnel

The ultraviolet treatment facility treats drinking water by removing certain microorganisms prior to distribution into New York City. The Kensico-Eastview Tunnel accounts for \$1.3 billion of the Current Capital Plan.

City Water Tunnel Number 3

A pair of water tunnels deliver water to Manhattan. The tunnels, while reliable, are aging, and a third water tunnel is being constructed to provide redundancy. Certain portions of the tunnel are already in active use. In particular, the Manhattan sections went into active use in 2013, and the Brooklyn and Queens section is activation-ready for use, if needed as a backup. The remaining work on the project includes the construction of two new shafts in Queens, which are expected to be completed in the mid-2020s.

WASTEWATER MANAGEMENT AND TREATMENT

Southeast Queens Infrastructure Build-Out

Certain parts of New York City do not have fully built-out storm sewer infrastructure, including the neighborhoods comprising Southeast Queens. The physical area involved is large, and the project will span several decades. Over the next 10 years, DEP plans to begin 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 will also construct green infrastructure assets in locations where it is appropriate, and will accelerate the planning and design of trunk sewers, in addition to building collection storm sewers and partnering with community groups to educate residents about protecting their property during rain events.

Green Infrastructure Initiatives

Green infrastructure assets incorporate organic matter and manufactured materials to capture and absorb rainfall. The main purpose of green infrastructure assets is to reduce combined sewer overflow into New York Harbor. An ancillary benefit is enhanced community and environmental features in neighborhoods where green infrastructure is constructed. Examples of green infrastructure include rain gardens, outdoor learning and play spaces that incorporate a green space or a permeable surface, and rooftop gardens. The Capital Investment Plan includes \$1.0 billion for these projects, which to date have reduced combined sewer overflows by more than 200 million gallons per year.

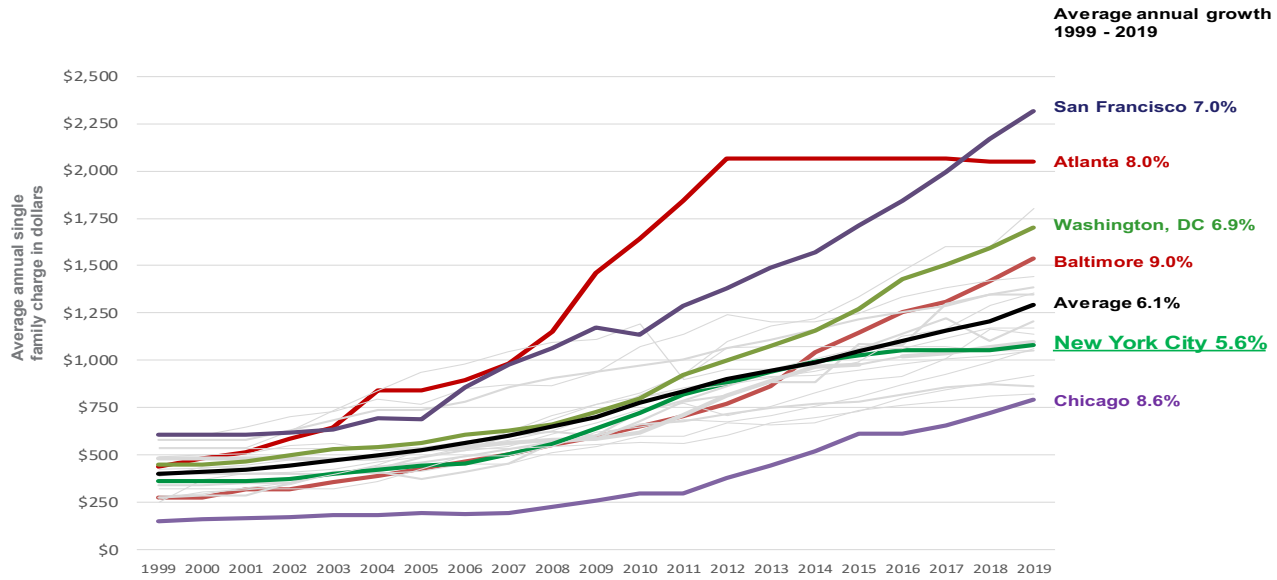
Wastewater Management Investments

DEP is subject to an order by the United States Environmental Protection Agency that requires it to submit long-term control plans for approval, with the aim of reducing the quantity of combined sewer overflow released into the waterbodies adjacent to New York City. The specific watersheds requiring long-term control plans include Alley Creek, Westchester Creek, Hutchinson River, Flushing Creek, Bronx River, Gowanus Canal, Coney Island Creek, Flushing Bay, Newtown Creek, and Jamaica Bay and its tributaries. Programs such as overflow retention tanks, wastewater treatment plant upgrades, and sustainable stormwater management practices will help keep floatable trash, debris, oils, grease, and bacteria from entering waterways. By updating our stormwater management system with both traditional mechanical upgrades (such as sewer construction and pumping stations), as well as the green infrastructure itself, the City's waterways will continue to improve.

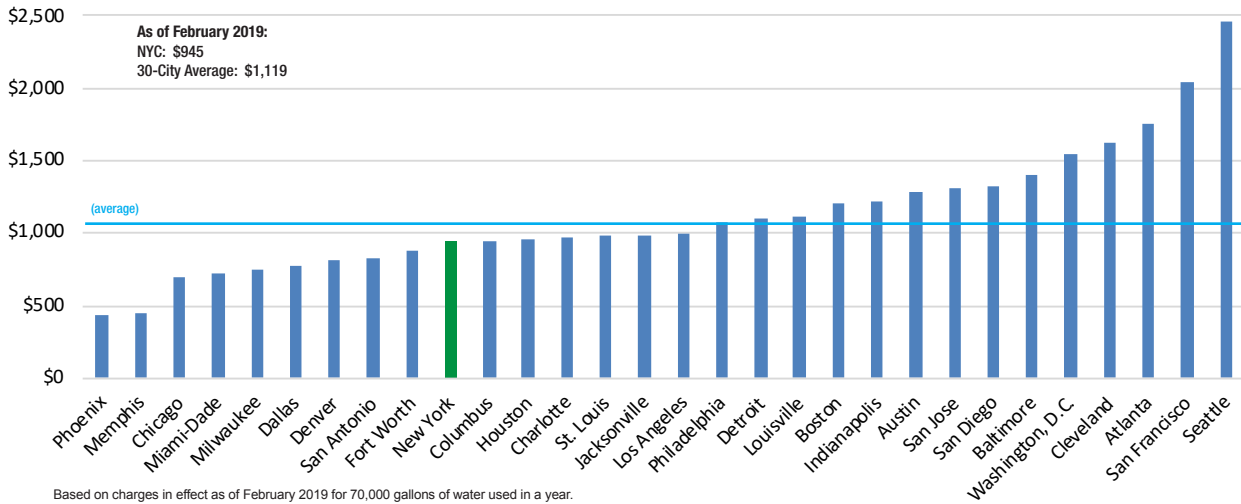


Alley Creek Wetland Restoration

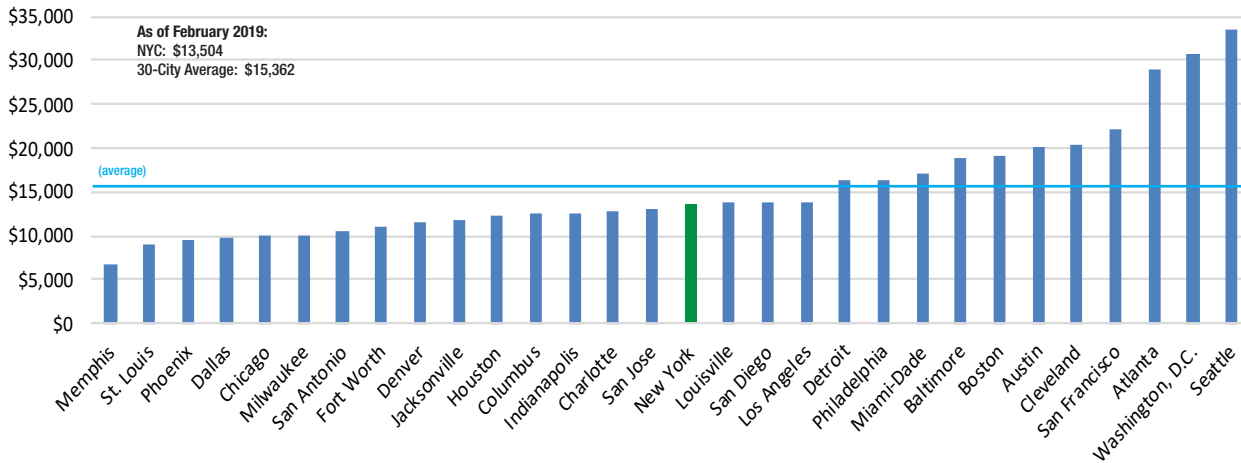
ANNUAL RESIDENTIAL WATER/WASTEWATER CHARGES - RATE INCREASES OF VARIOUS CITIES OVER TIME



ANNUAL RESIDENTIAL WATER/WASTEWATER FY2019 CHARGES



ANNUAL COMMERCIAL WATER/WASTEWATER FY2019 CHARGES

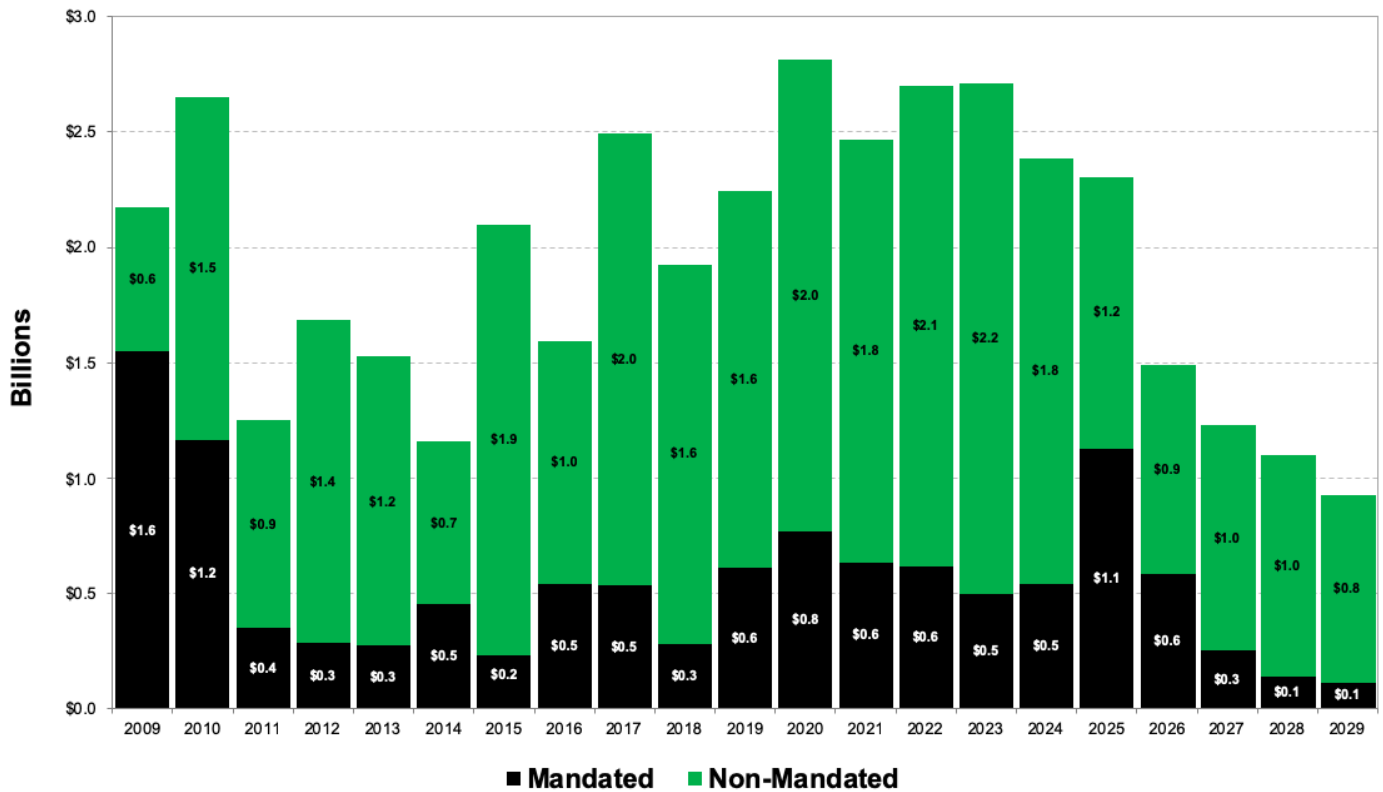


ANTICIPATED SYSTEM FINANCIALS FOR DEBT COVERAGE (\$ MILLIONS)

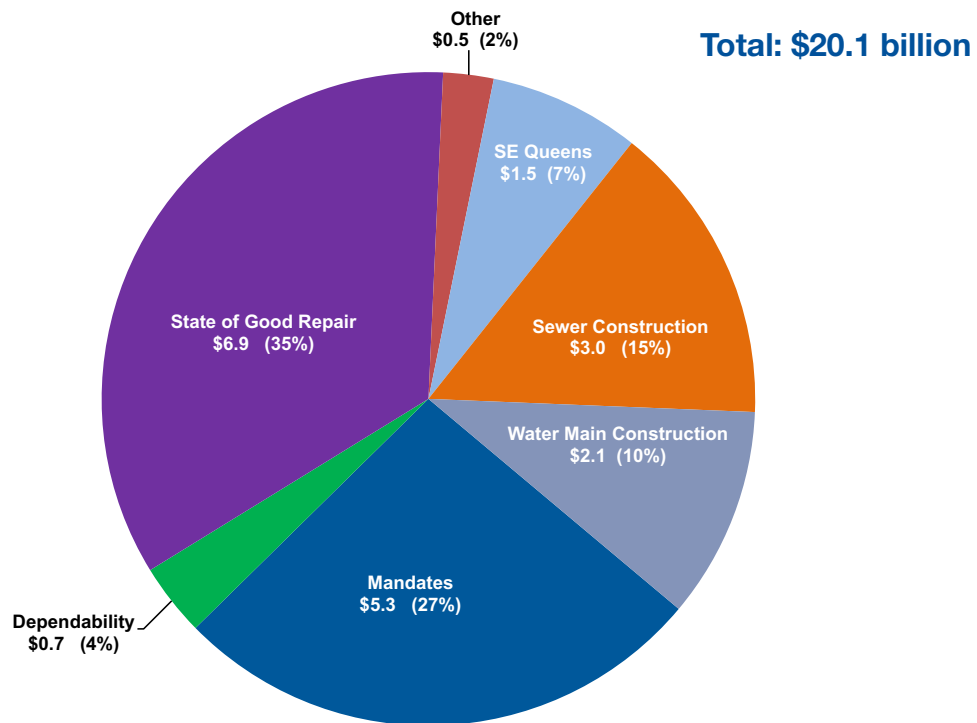
	FY 2019	FY 2020	Change
REVENUES			
Operating Revenues			
Water and Sewer User Payments	3,741	3,718	-23
Upstate Revenue	82	84	3
Miscellaneous Revenue	18	19	1
Other Revenues			
Interest on Funds	22	21	-1
Federal Subsidy on Outstanding Build America Bonds	70	70	0
Current Revenues Available for Debt Service	3,932	3,912	-20
EXPENSES			
First Resolution Debt Service			
Outstanding Bonds	94	144	50
Anticipated Future Bonds	0	12	12
Total First Resolution Debt Service	94	156	62
Debt Service on Subordinated Indebtedness			
Outstanding Second Resolution Bonds	1,097	1,163	66
Anticipated Future Second Resolution Bonds	5	62	57
Interest Payments on Commercial Paper Notes	0	17	17
Outstanding Second Resolution Bonds to EFC	564	563	-1
Anticipated Future Second Resolution EFC Bonds	0	9	9
Less: EFC Subsidy and Capitalized Interest	-106	-108	-2
Debt Service on Subordinated Indebtedness	1,561	1,706	145
Less: Carryforward Revenues	-957	-984	-27
Net Debt Service on Subordinated Indebtedness	604	723	118
Total Debt Service Payable from Current Revenues	698	879	181
Operating Expenses			
Water Authority	56	59	3
Water Board	51	54	3
DEP Operating and Maintenance	1,460	1,551	91
Other Expenses	18	18	0
Total Operating Expenses	1,585	1,682	97
Deposits to O&M Reserve Fund	2	7	5
Credit/Charge for Prior Year O&M		-20	-20
Defeasance/Cash Financed Capital Construction	680	400	-280
Total Expenses, Excluding Debt Service	2,267	2,069	-198
Cash Released from Escrow	-17	-17	0
Net Year-end Balance	984	981	-3
First Resolution Debt Service Coverage	41.8x	25.0x	
First and Second Resolution Debt Service Coverage	5.6x	4.5x	

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

CAPITAL COMMITMENTS - DEP CONTINUES TO INVEST IN INFRASTRUCTURE



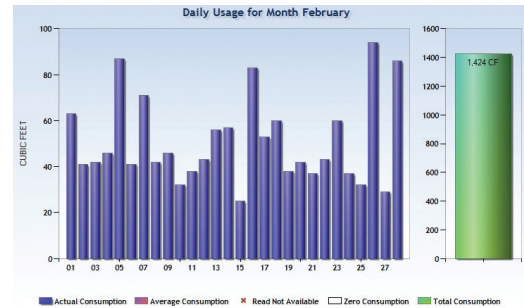
CAPITAL IMPROVEMENT PLAN: FY 2020 – FY 2029 INVESTMENT ALLOCATION (IN BILLIONS)



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, 288,800 customers have enrolled in the Leak Notification Program and been able to save more than \$150 million in leak-related charges.

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.

*Enroll
online*

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NYC Environmental
Protection