



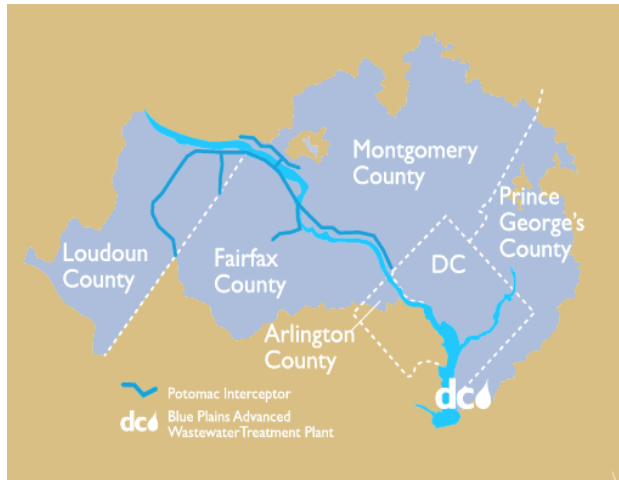
**APPROVED
BUDGETS**



DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Section V
CAPITAL PROGRAMS

FY 2017 – FY 2026



DC Water Service Area



Blue Plains Advanced Wastewater Treatment Plant



Enhanced Nitrification

OVERVIEW

DC Water’s Capital Improvement Program (CIP) supports the continuation of major capital asset investment in programs and projects that will upgrade the District’s water distribution system, improve the condition of our local waterways and create clean energy. The CIP includes all mandated projects as well as rehabilitation of assets required to meet permit and other regulatory requirements and also all immediate needs necessary to maintain existing service levels.

DC Water presents its CIP on two different bases: 10-year disbursement plan and lifetime budget. Actual cash disbursements are critical to forecasting the anticipated level of rate increases and the amount and timing of capital financing. The 10-year disbursement plan provides a more realistic projection of actual “cash out the door” excluding contingencies but including historical and projected completion rates as well as in-house labor. The CIP review process also includes an extensive review of the total project, or “lifetime” budget, which reflects historical spending prior to, during, and beyond the current 10-year period, although excludes in-house labor. Lifetime budgets represent projects active during the 10-year period and are the primary area of focus in budget development and day-to-day monitoring. In addition to ‘Active’ projects, projects for which all activities have been completed during the previous fiscal year and are listed as ‘Closed’ are also included in the CIP. Closed projects are dropped from the CIP in the next fiscal year.

Detailed information on the projects can be found online at www.dewater.com

CIP DEVELOPMENT AND APPROVAL PROCESS

DC Water’s capital budget review process begins each year in the spring. This process includes a review of major accomplishments, priorities, status of major projects, and emerging regulatory and related issues impacting the capital program by the Department of Engineering & Technical Services. Projections of changes in project lifetime budgets are also included. The review process involves the DC Water departments with responsibility for managing the operations of DC Water services and capital projects as well as staff from Finance, Accounting and Budget and Executive Management. The CIP is integrated into DC Water’s 10-year financial plan; and is the primary driver of DC Water’s projected rate increases over the current 10-year planning period.

This review process spans over several months and culminates with the presentation of the updated CIP to DC Water’s Board of Directors’ Environmental Quality and Sewerage Services, Water Quality and Water Services, Finance and Budget and DC Retail Water and Sewer Rates Committees in November 2016. The operating budgets, capital improvement program, and 10-year financial plan was forwarded to the full Board for consideration and action in December.

After adoption by the Board of Directors, DC Water is required to submit its annual operating and capital budget to the Mayor and the District of Columbia Council for review and comment. However, neither has the power to change DC Water’s annual budgets. The District of Columbia includes DC Water’s budgets in their submission to Congress.

CAPITAL AUTHORITY REQUEST

Capital authority represents the amount of Congressionally-authorized funding that DC Water can use to administer its capital program. Sufficient authority is required to be in place prior to contracts being executed. Actual commitments within the eight service areas may vary up or down for a particular year. However, they are “not to exceed the total” FY 2018 – FY 2026 capital authority request in the amount of \$3.24 billion.

It should be noted that the execution of any contract requires the approval of General Manager, as Contracting Officer, or his delegee. Major projects and contracts valued at \$1 million or more require DC Water Board approval.

CAPITALIZATION POLICY

DC Water’s capitalization policy determines how expenditures will be recognized and accounted. DC Water matches the financing of an asset to the projected useful life of an item, the policy also determines how projects will be financed.

Definition:

- Capital Project – has an average life of 30 years and is financed with long term debt.
- Capital Equipment – has a life of at least 3 years, individual component cost of \$5,000 or more, and is financed with short-term debt or cash.

The following guidelines are used to categorize items as either capital equipment or an operating expense:

Expenditure Activity	Description	Accounting Treatment
Enhancement	Replacement of an asset, or addition/replacement of a sub-component of an asset, to improve the “attributes” of the asset.	Capitalize
Refurbishment	Expenditure on an asset that creates a material extension to the Estimated Operating Life (EOL) of the asset. It does not improve its attributes. This is distinct from maintenance work, which is carried out to ensure that an asset is able to perform its designated function for its normal EOL.	Capitalize
Replacement	Expenditure to replace substantially all of an asset.	Capitalize
Repair/Maintenance	Routine expense that neither extends the life of the asset nor increase its functionality.	Expense

Capital Improvement Program

FY 2017 – FY 2026 (10-Year) Disbursement Plan – projected annual cash disbursements; Lifetime Budget – total lifetime budget for projects active during 10-year period, \$ in thousands

	FY 2017 - FY 2026 Disbursement Plan										10-Yr Total	Lifetime Budget
	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026		
NON PROCESS FACILITIES												
Facility Land Use	\$34,150	\$20,030	\$17,555	\$10,306	\$1,800	\$1,605	\$40	\$0	\$0	\$0	\$85,486	\$139,789
Subtotal	34,150	20,030	17,555	10,306	1,800	1,605	40	0	0	0	85,486	139,789
WASTEWATER TREATMENT												
Liquid Processing	16,152	24,883	52,941	43,931	24,215	34,226	39,622	49,838	45,391	45,980	377,180	1,275,084
Plantwide	11,313	14,562	17,562	32,116	22,815	26,977	29,470	18,351	22,831	13,761	209,758	477,349
Solids Processing	7,654	4,836	15,305	15,927	14,254	7,396	1,489	943	513	343	68,660	764,689
Enhanced Nitrogen Removal Facilities	88,670	54,141	5,533	4,010	983	7	1,300	916	11,101	22,446	189,107	1,034,493
Subtotal	123,789	98,423	91,341	95,985	62,266	68,605	71,882	70,049	79,836	82,530	844,706	3,551,615
COMBINED SEWER OVERFLOW												
DC Clean Rivers	171,300	116,713	115,974	148,210	175,492	115,822	95,920	73,621	63,527	145,743	1,222,320	2,764,014
Program Management	3,827	5,355	3,943	1,376	2,760	4,098	4,409	3,019	1,829	0	30,615	64,563
Combined Sewer	9,260	8,407	8,239	16,901	8,349	6,010	8,105	10,262	5,210	6,468	87,211	324,451
Subtotal	184,387	130,475	128,156	166,486	186,601	125,929	108,433	86,902	70,566	152,211	1,340,146	3,153,028
STORMWATER												
Local Drainage	172	8	76	353	69	642	272	864	1,055	222	3,733	15,736
On-Going	424	572	644	599	618	760	734	762	466	534	6,113	12,408
Pumping Facilities	368	1,743	2,068	72	1,136	4,155	20	0	0	308	9,869	25,000
DDOT	16	19	12	0	0	0	0	0	0	0	48	3,237
Research and Program Management	270	238	182	64	123	179	207	163	129	0	1,554	12,013
Trunk/Force Sewers	456	102	1,070	109	0	0	0	0	0	0	1,737	15,597
Subtotal	1,706	2,682	4,053	1,196	1,946	5,736	1,233	1,789	1,649	1,064	23,055	83,991
SANITARY SEWER												
Collection Sewers	4,890	2,249	2,057	8,042	7,304	11,799	6,962	6,531	22,763	32,239	104,837	332,601
On-Going	11,838	11,645	10,896	9,630	10,411	10,204	10,704	11,107	11,455	6,210	104,100	194,633
Pumping Facilities	2,806	290	1,793	2,389	1,588	140	209	0	0	0	9,214	36,759
Program Management	8,755	11,917	9,184	4,738	4,902	6,915	7,227	6,640	5,228	1,810	67,316	135,791
Interceptor/Trunk Force Sewers	10,013	13,194	29,068	32,942	30,499	30,419	29,346	28,956	13,307	10,304	228,049	748,806
Subtotal	38,302	39,294	52,999	57,741	54,704	59,479	54,447	53,235	52,753	50,563	513,517	1,448,589
WATER												
Distribution Systems	30,148	28,847	40,047	32,416	28,660	36,427	44,699	52,312	58,953	59,424	411,932	1,116,878
Lead Program	1,050	720	1,345	1,820	2,063	2,321	2,537	2,536	2,964	1,112	18,468	208,940
On-Going	10,643	6,886	7,521	6,944	7,235	7,275	7,366	7,735	8,007	9,336	78,948	147,604
Pumping Facilities	2,598	1,958	3,395	7,761	3,173	664	1,627	7,579	1,365	0	30,120	177,881
DDOT	830	516	188	0	0	0	0	0	0	0	1,534	33,933
Storage Facilities	7,728	8,072	6,612	4,361	1,382	1,685	5,188	9,395	2,354	0	46,779	106,364
Program Management	5,823	4,739	5,040	3,801	6,021	6,286	4,095	4,186	4,572	7,043	51,606	101,203
Subtotal	58,819	51,738	64,149	57,102	48,534	54,658	65,512	83,744	78,217	76,915	639,387	1,892,803
CAPITAL PROJECTS												
	441,153	342,642	358,253	388,816	355,852	316,013	301,546	295,719	283,021	363,283	3,446,297	10,269,817
CAPITAL EQUIPMENT												
	54,949	32,897	26,043	26,551	8,780	8,780	8,780	8,780	8,780	8,780	193,119	193,119
WASHINGTON AQUEDUCT												
	10,896	11,768	10,547	11,840	13,911	10,932	11,041	10,969	10,787	9,516	112,207	112,207
ADDITIONAL CAPITAL PROGRAMS												
	65,845	44,665	36,590	38,391	22,690	19,712	19,821	19,748	19,567	18,296	305,326	305,326
LABOR												
												374,276
TOTAL CAPITAL BUDGETS												
	\$506,998	\$387,306	\$394,843	\$427,208	\$378,542	\$335,725	\$321,367	\$315,467	\$302,588	\$381,579	\$3,751,623	\$10,949,419



New Headquarters Building (HQO)



Green Roof in New Headquarters Building

FY 2017 - FY 2026 Disbursement Plan										Lifetime Budget	
FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	10-Yr Total	
\$34,150	\$20,030	\$17,555	\$10,306	\$1,800	\$1,605	\$40	\$0	\$0	\$0	\$85,486	\$139,789
											<i>(\$ in thousands)</i>

OVERVIEW

The Non-Process Facilities Service Area accommodates projects approved under the Non-Process Facilities Master Plan (NPFMP) and related improvements necessary to support DC Water activities and critical operations. The goals of this CIP are the same as those in the NPFMP, which are designed to:

- Optimize efficient use of existing DC Water land and facilities.
- Introduce state-of-the-art material management technologies that will enhance inventory security, inventory storage and distribution, transportation, and reduce duplication and inefficiencies of human resources.
- Implement Green Strategies and Sustainable Design within DC Water infrastructure and facility planning.
- Maximize flexibility throughout DC Water facilities for future treatment needs, distribution system operations, and innovative opportunities.

PROGRAM AREA

Facility Land Use – The primary objective of this service area is to implement the NPFMP. Projects that generally improve DC Water’s operations but do not represent a core process area within DC Water’s mission continue to be evaluated and reallocated as needed, into this category. Included in this program are:

- **New Headquarters Building (HQO)** – The DC Water Administrative Headquarters Building, located next to the historic Main Pumping Station, will be DC Water’s most sustainable construction project ever. The Headquarters will anchor DC Water’s new publicly-accessible campus along the Anacostia River. Currently, DC Water’s administrative offices are spread across the District of Columbia in multiple facilities, including leased space. By relocating nonessential personnel off of the Blue Plains industrial campus, DC Water will preserve what little remaining space exists – an irreplaceable commodity – for future process improvements if required by permit or desired for innovation.
- **Floatable Debris Dock Replacement** – This project was reallocated from the Combined Sewer Overflow Service Area, as there was an opportunity to blend the dock work with related facility and security improvements needed for staff and equipment. The existing docks are more than 25 years old and need to be replaced. The replacement slips (at least five) and associated new piles will allow flexibility and maneuverability of the boats, overcome the existing draft challenges of the river bottom, and most importantly, create safe conditions for the staff and their operations. Future improvements include the installation of a new boat ramp and updated fencing and lighting to further improve the efficiencies of skimmer boat operations.
- **Main & O Redevelopment Efforts** – This project relocates sewer and fleet operations from the Main & O Campus in order to accommodate the redevelopment plans for the District of Columbia in and around the Navy Yard. All cost associated with the acquisition of new land and construction of new facilities will be reimbursed to DC Water by the District of Columbia.

ACCOMPLISHMENTS

- DC Water successfully negotiated the Guaranteed Maximum Price (GMP) for the New Headquarters Building (HQO). The Board approved the construction contract with Skanska/Smith Group.

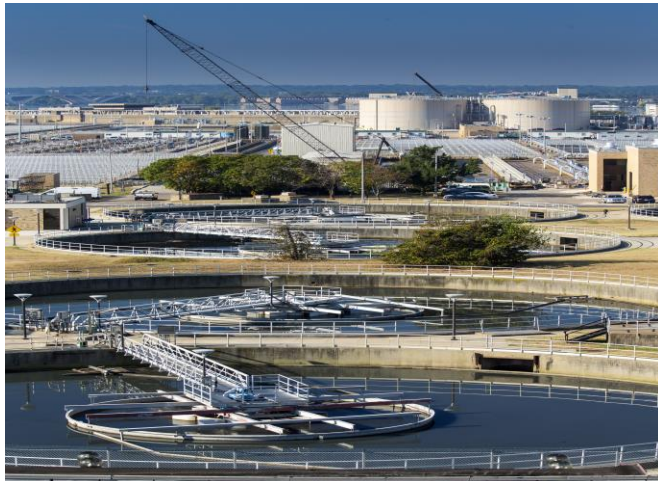
OPERATIONAL IMPACT OF MAJOR CAPITAL INVESTMENTS

New Headquarters Building (HQO) – This facility will anchor DC Water’s new publicly-accessible campus along the Anacostia River. By relocating nonessential personnel from the Blue Plains campus, the Authority will preserve all valuable remaining space at Blue Plains AWWTP for future process improvements. This new building will be LEED® Platinum Class A certified, and incorporate environmentally sustainable features that will be used to capture rainfall onsite for irrigation and non-potable water needs inside the facility. Additionally, alternative energy will be supplied by an innovative sewer heat recovery system that will lower operating cost. This project is anticipated to avoid renovation and expansion, including construction of a parking garage, at Blue Plains AWWTP.

Non Process Facilities

10-Year Disbursement Plan & Lifetime Budget by project, \$ in thousands

FACILITY LAND USE		Start	Status	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	10-Yr Total	Lifetime	Completion
HC	New Warehouse/Visitor/Security Facility	FY 2010	Closed	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$18,374	FY 2016
DS	New Headquarters Building (HQO)	FY 2009	Active	32,697	16,838	586	549	136	0	0	0	0	0	50,806	76,100	FY 2021
DU	Water System Laboratory Facilities	FY 2007	Active	86	81	0	0	0	0	0	0	0	0	166	647	FY 2018
HE	Bryant Street Pump Station Building Mods	FY 2018	Active	0	831	1,376	7,865	1,048	0	0	0	0	0	11,119	14,370	FY 2021
HF	Fort Reno Pump Station - Field Ops Facility West	FY 2020	Active	0	0	0	187	571	1,585	26	0	0	0	2,369	3,150	FY 2023
HH	Main & O Redev. Efforts (FKA New Fleet Facility)	FY 2015	Active	426	1,143	6,296	0	0	0	0	0	0	0	7,864	11,500	FY 2019
HJ	COF Renovations	FY 2017	Active	746	712	8,109	1,140	0	0	0	0	0	0	10,706	12,904	FY 2020
HK	CMF Renovations and Consolidation	FY 2017	Active	19	20	936	565	46	20	15	0	0	0	1,620	1,750	FY 2023
NZ	Floatable Debris Dock Replacement	FY 2017	Active	176	406	254	0	0	0	0	0	0	0	836	995	FY 2019
TOTAL FACILITY LAND USE BUDGETS				\$34,150	\$20,030	\$17,555	\$10,306	\$1,800	\$1,605	\$40	\$0	\$0	\$0	\$85,486	\$139,789	
TOTAL NON PROCESS FACILITIES BUDGETS				\$34,150	\$20,030	\$17,555	\$10,306	\$1,800	\$1,605	\$40	\$0	\$0	\$0	\$85,486	\$139,789	



Blue Plains Advanced Wastewater Treatment Plant



Secondary Sedimentation



Nitrification Reactors

FY 2017 - FY 2026 Disbursement Plan										Lifetime Budget	
FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	10-Yr Total	
\$123,789	\$98,423	\$91,341	\$95,985	\$62,266	\$68,605	\$71,882	\$70,049	\$79,836	\$82,530	\$844,706	\$3,551,615

(\$ in thousands)

OVERVIEW

Capital projects in the Wastewater Treatment Service Area are required to rehabilitate, upgrade or provide new facilities at Blue Plains to ensure that it can reliably meet its National Pollutant Discharge Elimination System (NPDES) permit requirements and produce a consistent, high-quality dewatered solids product. DC Water’s current NPDES permit is effective from September 30, 2010 through September 30, 2015, and remains in effect while a new permit for the next five years is negotiated. This permit requires wastewater treatment to a level that meets one of the most stringent NPDES discharge permits in the United States. The Blue Plains Enhanced Nitrogen Removal Facilities Program, which provides for projects necessary to meet the stringent total nitrogen discharge limit in the NPDES permit, comprise a significant portion of the projects within the Wastewater Treatment Service Area.

PROGRAM AREAS

Liquid Processing – Projects in this program area encompass upgrading and rehabilitating facilities involved in handling flows from the sanitary and combined sewer systems. These flows progress sequentially through the Plant processes and ultimately discharge the treated effluents into the Potomac River.

Plantwide – This program provides for upgrading, rehabilitating, or installing support systems and facilities that are required for both the liquid processing and solids processing programs.

Solids Processing – Biosolids processing involves reductions in volume along with treatment to meet applicable federal, state and local requirements for the ultimate disposal method. Treatment is provided by a system of processing facilities that include gravity thickening of primary sludge, floatation thickening of the biological waste sludge produced by the secondary and nitrification/denitrification processes, dewatering by centrifuge and lime stabilization.

Enhanced Nitrogen Removal Facilities – Provides for new facilities and upgrades to existing facilities needed at Blue Plains to meet the total nitrogen discharge limit assigned to DC Water. The necessary facilities have been completed and are in service. DC Water is fully compliant in meeting the reduced total nitrogen discharge limit, effective January 1, 2015.

ACCOMPLISHMENTS

- Enhanced Nitrogen Removal Facility – The project provided limit of technology treatment for nitrogen removal they have been substantially completed. The total annual nitrogen discharge from Blue Plains is below the stringent NPDES permit limit and monthly concentrations have been consistently low since the new facilities went on-line.
- Enhanced Nitrogen Removal Facility North – This project improved the performance of the secondary treatment facilities by providing limited nitrogen removal and more consistent quality for the downstream denitrification processes. Construction was 90 percent complete as of September 2016.
- Filtrate Treatment Facility – This side-stream treatment project will utilize anammox bacteria to remove nitrogen from the filtrate, from the belt filter press facility resulting in savings in electrical power and methanol addition, which are otherwise necessary when the filtrate is processed through the plant.
- Tunnel Dewatering Pumping Station (TDPS) – The project being designed and built in conjunction with the Enhanced Clarification Facility (ECF) will pump out the Blue Plains Tunnel at a rate up to 225 MGD for processing through ECF or the Blue Plains plant mainstream as required by permit. The design-build contract is 39 percent complete as of September 2016 and is scheduled to be operational by March 23, 2018, along with ECF.
- Enhanced Clarification Facility – The project provides facilities to treat up to 225 MGD of flow from the station in excess of the capacity of the Blue Plains mainstream flow. The design-build contract is 39 percent complete as of September 2016 and is scheduled to be operational by March 23, 2018 along with the pumping station (TDPS).
- Raw Wastewater Pumping Station 2 – The pumping station delivers wastewater from the wastewater collection system to the east preliminary treatment processes at Blue Plains. This project updates aging electrical equipment, both replacing equipment that is beyond its useful life and relocating sensitive electronic equipment to a less corrosive environment to reduce the rate of deterioration of the equipment. The construction contract was issued in September 2016 and is scheduled to be complete by May 2019.

OPERATIONAL IMPACT OF MAJOR CAPITAL PROGRAMS

Biosolids Management Program – The Walter F. Bailey Bioenergy Facility, which is now operational, significantly reduces DC Water’s carbon footprint. The innovative CAMBI® thermal hydrolysis process uses intense heat and pressure to treat wastewater solids producing a much cleaner biosolid and onsite generation of up to one third of Blue Plains’ electricity needs. This process has resulted in operational efficiencies in electricity, biosolids hauling and chemicals costs.

Tunnel De-watering Pumping Station (TDPS) / Enhanced Clarification Facility (ECF) – This facility will de-water the new tunnels being constructed by the DC Clean Rivers program. It will evacuate the stormwater gathered by tunnels. The TDPS will deliver the stormwater to the ECF, for treatment anticipated to be completed by the end of FY 2018.

Filtrate Treatment Facility (FTF) – Also known as Centrate Treatment Facility, FTF is part of the Total Nitrogen Removal Wet Weather plan. The project assists in nitrogen removal from the water processed. This new facility uses six sequencing batch reactors to treat a nitrogen-rich stream from the Final Dewatering Facility’s belt filter presses. The de-ammonification process represents a major breakthrough in nitrogen removal, which lowers the use of methanol. It also has approximately 60 percent lower energy demand than the mainstream treatment and lowers greenhouse gas (GHG) emissions.

Wastewater Treatment

10-Year Disbursement Plan & Lifetime Budget by project, \$ in thousands

LIQUID PROCESSING		Start	Status	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	10-Yr Total	Lifetime	Completion
TO	Secondary Treatment Fac	FY 1998	Closed	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$70,303	FY 2016
A2	Liquid Processing Program Management	FY 2001	Active	2,768	1,962	1,265	1,808	2,254	1,938	4,014	5,605	4,960	3,120	29,693	49,579	FY 2027
BG	Dual Purpose Rehabilitation	FY 2009	Active	2,942	494	1,714	675	0	0	0	0	0	0	5,826	32,208	FY 2020
BP	Grit Chamber Facilities Ph II	FY 2017	Active	26	79	106	55	29	0	0	0	0	0	295	397	FY 2021
BQ	Primary Treatment Facilities Ph II	FY 2017	Active	185	1,742	2,306	12,893	7,159	604	2,514	571	0	0	27,974	39,036	FY 2024
BR	Nitrification/Denitrification Fac	FY 2006	Active	1,986	2,256	1,781	643	1,014	685	247	0	0	0	8,613	53,693	FY 2023
BT	Filtration/Disinfection Fac Ph II	FY 2008	Active	323	251	109	488	1,719	362	0	0	0	0	3,253	24,967	FY 2022
BV	RVVWPS No. 2 Upgrades	FY 2013	Active	5,353	7,539	2,965	202	3	0	0	0	0	0	16,063	42,696	FY 2021
DA	DWT Research / Pilot Projects	FY 2006	Active	0	0	0	0	0	0	0	0	0	0	0	4,114	FY 2017
IX	Headworks Hvac Rehab	FY 2013	Active	0	0	0	0	0	0	0	0	0	0	0	518	FY 2021
IY	Effluent Filter Upgrade	FY 2017	Active	517	1,700	11,075	4,067	2,585	8,594	4,673	5,016	4,883	10,474	53,584	152,204	FY 2030
IZ	Replace/Upgrade Influent Screens	FY 2016	Active	527	5,937	4,051	578	566	156	1,441	2,016	2,220	8,476	25,968	82,148	FY 2032
J2	Replace/Upgrade Primary Treatment Mech.	FY 2017	Active	26	83	7,647	316	317	858	493	158	0	0	9,899	18,750	FY 2031
J6	Deammonification Project	FY 2013	Active	0	0	18	211	1,176	1,190	235	34	0	0	2,864	3,493	FY 2024
LC	Effluent Disinfection Upgrades	FY 2026	Active	0	0	0	0	0	0	0	0	0	1	1	8,011	FY 2033
OZ	Grit Chambers I&2 Upgrades	FY 2017	Active	269	828	2,761	6,845	1,824	0	0	0	0	0	12,528	18,500	FY 2021
PD	Secondary East & West Upgrades	FY 2016	Active	242	467	89	0	203	2,679	4,094	1,181	0	0	8,955	10,200	FY 2024
PE	Nitrification Reactor/Sediment Upgrades	FY 2017	Active	25	374	2,112	644	2,166	2,572	0	0	0	0	7,892	10,950	FY 2022
TF	Grit Chamber Bldg I&2	FY 1996	Active	0	0	0	0	0	0	0	0	0	0	0	71,046	FY 2017
UC	Filtration/Disinfection Fac	FY 2000	Active	837	428	12,212	13,424	678	43	0	0	0	0	27,621	101,815	FY 2022
UD	Raw Water Pump Stations I&2	FY 1999	Active	0	0	0	0	0	0	0	0	0	0	0	15,838	FY 2017
B6	Primary Sedimentation Tank Covers	FY 2018	New	0	441	766	110	6	1,865	1,819	14,542	16,535	675	36,759	43,598	FY 2027
B7	Primary Sedimentation Tank Odor Scrubblers	FY 2024	New	0	0	0	0	0	0	0	689	106	1,795	2,589	45,870	FY 2032
BC	Headworks Influent Structures	FY 2017	New	127	304	1,964	970	0	0	0	0	0	0	3,364	5,050	FY 2020
I4	Grit Removal Facilities - 20 Year Rebuild	FY 2026	New	0	0	0	0	0	0	0	0	0	1,997	1,997	52,500	FY 2031
I5	Raw Water Pump Stations I&2 - 20 Year Rebuild	FY 2021	New	0	0	0	0	1,426	5,916	5,957	6,002	6,032	967	26,301	29,000	FY 2026
I7	Primary Treatment - 20 Year Rebuild	FY 2021	New	0	0	0	0	1,088	6,763	14,135	14,018	6,615	4,481	47,100	54,600	FY 2026
JC	Secondary East And West - 20 Year Rebuild	FY 2025	New	0	0	0	0	0	0	0	0	514	5,588	6,103	96,000	FY 2032
LF	Nitrification Reactor/Sediment - 20 Year Rebuild	FY 2024	New	0	0	0	0	0	0	0	8	3,526	8,405	11,938	138,000	FY 2033
TOTAL LIQUID PROCESSING BUDGETS				\$16,152	\$24,883	\$52,941	\$43,931	\$24,215	\$34,226	\$39,622	\$49,838	\$45,391	\$45,980	\$377,180	\$1,275,084	

Wastewater Treatment

10-Year Disbursement Plan & Lifetime Budget by project, \$ in thousands

PLANTWIDE		Start	Status	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	10-Yr Total	Lifetime	Completion
DP	Chemical Building Enhancements	FY 2008	Closed	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,591	FY 2016
AL	Plantwide Project Program Management	FY 2001	Active	1,782	1,942	767	7,134	3,565	2,312	2,178	2,194	2,205	1,387	25,464	43,552	FY 2027
AZ	COF Renovations	FY 2002	Active	191	194	214	244	99	0	0	0	0	0	943	17,690	FY 2021
BY	Additional Chemical Systems Ph III	FY 2021	Active	0	0	0	0	100	399	795	856	517	404	3,071	3,822	FY 2026
CH	Misc Facility Projects	FY 2004	Active	60	37	41	47	19	0	0	0	0	0	203	8,037	FY 2021
CV	Laboratory Upgrades	FY 2006	Active	1	2	3	2	1	0	0	0	0	0	8	8,510	FY 2021
CW	Security At Blue Plains	FY 2005	Active	399	1,411	402	458	232	0	0	0	0	0	2,903	6,117	FY 2021
DQ	Non-OEM PLC Interfaces/Replacements	FY 2009	Active	75	0	0	0	0	0	0	0	0	0	75	2,133	FY 2017
EI	Plantwide Painting of Steel Pipes	FY 2012	Active	0	0	0	0	1,357	1,462	1,472	20	0	0	4,311	4,960	FY 2024
EN	WWTP - Central Fire Alarm System	FY 2008	Active	0	0	0	0	0	0	0	0	0	0	0	3,092	FY 2017
GP	I & C & Elec - EPMC	FY 2009	Active	983	1,033	409	0	0	0	0	0	0	0	2,425	7,226	FY 2019
GW	Control Systems Replacement	FY 2021	Active	0	0	0	0	763	654	814	3,715	10,097	9,032	25,075	37,000	FY 2028
HL	DWT - Process and Operations Jobs	FY 2011	Active	446	528	683	271	1,111	0	0	0	0	0	3,038	7,106	FY 2021
HU	Blue Plains Logistics	FY 2011	Active	411	45	61	34	18	0	0	0	0	0	568	6,942	FY 2021
IC	Electrical Monitoring Systems	FY 2015	Active	0	256	1,561	2,433	154	0	0	0	0	0	4,404	7,250	FY 2021
IV	Blue Plains IT Backbone FOC Tubes	FY 2016	Active	977	652	343	1,555	0	0	0	0	0	0	3,527	5,475	FY 2020
JF	Construction of Flood Seawall	FY 2018	Active	0	59	0	0	0	244	975	3,489	5,633	866	11,267	13,234	FY 2028
JY	IT - Data Center	FY 2010	Active	13	3	4	4	2	0	0	0	0	0	26	2,397	FY 2021
LP	Wastewater Asset Mngmt Tech Support	FY 2013	Active	1,386	1,055	0	0	0	0	0	0	0	0	2,441	10,000	FY 2018
LS	Misc. Facilities Projects FY2013	FY 2013	Active	1,578	903	667	839	297	0	0	0	0	0	4,285	8,188	FY 2021
LX	Process Control System Upgrade	FY 2018	Active	0	233	0	0	1,547	1,604	2	0	0	0	3,386	4,000	FY 2023
OD	Plantwide Paving	FY 2015	Active	136	138	921	954	768	751	757	762	766	182	6,136	7,990	FY 2026
OE	Plantwide Drainage & Runoff	FY 2016	Active	404	1,255	1,218	584	245	225	227	229	230	55	4,672	7,151	FY 2026
OF	Process & Service Water Rehabilitation	FY 2018	Active	0	0	589	1,903	497	0	0	0	0	0	2,990	3,950	FY 2021
OG	City Water & Sewer Upgrades at WWTP	FY 2020	Active	0	0	0	1	535	551	0	0	0	0	1,087	1,250	FY 2022
OH	Plantwide Demolition	FY 2021	Active	0	0	0	0	2,418	4,821	2,016	599	0	0	9,854	11,100	FY 2024
OI	Plantwide Painting & Signage	FY 2022	Active	0	0	0	0	0	104	258	46	0	0	409	450	FY 2024
OK	Plantwide H2S Mitigation	FY 2021	Active	0	0	0	0	1	327	840	1,514	1,977	1,536	6,195	10,000	FY 2029
OM	Plantwide Hot Water System/ Loop Rehab	FY 2017	Active	24	386	1,212	832	467	728	1,111	563	189	0	5,512	7,650	FY 2025
ON	Plantwide Grounding Upgrades	FY 2018	Active	0	61	243	768	905	1,615	899	12	0	0	4,502	5,500	FY 2024
OP	Plantwide Sump Pump Rehabilitation	FY 2023	Active	0	0	0	0	0	0	0	105	317	299	721	1,000	FY 2028
OQ	Plantwide Roofing Upgrades	FY 2020	Active	0	0	0	0	1,160	2,760	2,767	1,483	819	0	8,989	10,000	FY 2025
OS	Plantwide Lighting Upgrades	FY 2017	Active	0	291	944	649	266	0	0	0	0	0	2,151	3,000	FY 2021

Wastewater Treatment

10-Year Disbursement Plan & Lifetime Budget by project, \$ in thousands

PLANTWIDE, CONT.		Start	Status	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	10-Yr Total	Lifetime	Completion
PF	Chemical System/Building Upgrades	FY 2015	Active	\$1,380	\$1,374	\$2,388	\$4,283	\$3,649	\$1,643	\$46	\$0	\$0	\$0	\$14,763	\$22,500	FY 2023
TA	Process Computer Control System	FY 1997	Active	25	0	0	0	0	0	0	0	0	0	25	65,281	FY 2017
TZ	Elec Power System - Switch Gear	FY 2001	Active	674	1,148	3,524	7,601	1,573	5,955	13,645	2,433	0	0	36,554	59,399	FY 2024
YD	Miscellaneous Projects	FY 1999	Active	368	337	1,002	1,522	1,065	820	668	330	83	0	6,194	50,306	FY 2025
IU	Solar Photovoltaic System	FY 2017	New	1	1,218	366	0	0	0	0	0	0	0	1,585	2,500	FY 2019
TOTAL PLANTWIDE BUDGETS				\$11,313	\$14,562	\$17,562	\$32,116	\$22,815	\$26,977	\$29,470	\$18,351	\$22,831	\$13,761	\$209,758	\$477,349	
SOLIDS PROCESSING		Start	Status	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	10-Yr Total	Lifetime	Completion
AM	Solids Processing Program Management	FY 2001	Active	\$573	\$509	\$328	\$884	\$1,399	\$952	\$320	\$496	\$513	\$343	\$6,316	\$16,063	FY 2027
BX	Gravity Thickener Upgrades Ph II	FY 2010	Active	621	2,068	8,067	10,517	5,905	1,898	0	0	0	0	29,075	70,840	FY 2036
EV	Area Substation No. 6	FY 2008	Active	5	0	0	0	0	0	0	0	0	0	5	22,074	FY 2017
I2	Biosolids Loadout Crane Rehabilitation	FY 2011	Active	0	0	0	0	0	0	0	0	0	0	0	3,596	FY 2016
I3	Biosolids Blending Development Center	FY 2015	Active	69	70	77	79	770	391	0	0	0	0	1,456	2,500	FY 2022
LD	Pre-Dewatering Additional Centrifuges	FY 2019	Active	0	0	421	1,111	5,086	219	0	0	0	0	6,837	10,156	FY 2022
LE	High Strength Waste Receiving Facility	FY 2020	Active	0	0	0	194	500	2,917	432	0	0	0	4,043	6,008	FY 2023
XA	New Digestion Facilities	FY 1999	Active	6,352	627	3,766	0	0	0	0	0	0	0	10,744	553,859	FY 2019
XB	Centrifuge Thickener Facility	FY 1999	Active	30	0	0	0	0	0	0	0	0	0	30	48,670	FY 2017
XZ	Solids Processing Building / DSLF	FY 1999	Active	4	1,563	2,646	3,142	594	1,020	738	447	0	0	10,154	28,690	FY 2024
YZ	Digestion Facilities Site Preparation	FY 1999	Active	0	0	0	0	0	0	0	0	0	0	0	2,234	FY 2017
TOTAL SOLIDS PROCESSING BUDGETS				\$7,654	\$4,836	\$15,305	\$15,927	\$14,254	\$7,396	\$1,489	\$943	\$513	\$343	\$68,660	\$764,689	
ENHANCED NITROGEN REMOVAL		Start	Status	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	10-Yr Total	Lifetime	Completion
BI	Enhanced Nitrogen Removal North	FY 2008	Active	\$6,499	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$6,499	\$75,472	FY 2017
E8	Enhanced Clarification Facilities	FY 2009	Active	37,369	30,196	400	64	33	0	0	0	0	0	68,062	216,424	FY 2021
E9	Nitrogen Removal Facilities	FY 2008	Active	330	7	4	2	1	0	0	0	0	0	343	271,457	FY 2021
EE	Filtrate Treatment Facilities	FY 2009	Active	15,862	2,667	348	145	1	0	0	0	0	0	19,024	106,345	FY 2021
EG	Blue Plains Tunnel	FY 2008	Active	715	138	1	0	0	0	0	0	0	0	854	177,380	FY 2019
FG	Secondary Treatment Upgrades For TN	FY 2013	Active	392	0	0	0	0	7	1,300	916	11,101	22,446	36,163	57,142	FY 2029
FR	BP Tunnel Dewatering Pumping Sta	FY 2010	Active	7,471	5,013	188	0	0	0	0	0	0	0	12,671	33,487	FY 2019
FS	Bolling Overflow & Diversion	FY 2010	Active	13,481	5,382	0	0	0	0	0	0	0	0	18,862	53,405	FY 2018
LM	ENR Program Management	FY 2013	Active	6,552	10,738	4,592	3,799	948	0	0	0	0	0	26,629	43,381	FY 2021
TOTAL ENHANCED NITROGEN REMOVAL BUDGETS				\$88,670	\$54,141	\$5,533	\$4,010	\$983	\$7	\$1,300	\$916	\$11,101	\$22,446	\$189,107	\$1,034,493	
TOTAL WASTEWATER TREATMENT BUDGETS				\$123,789	\$98,423	\$91,341	\$95,985	\$62,266	\$68,605	\$71,882	\$70,049	\$79,836	\$82,530	\$844,706	\$3,551,615	



Anacostia River Tunnel Boring Machine, Nannie



First Street Tunnel



Combined Sewer Overflow Outfall

FY 2017 - FY 2026 Disbursement Plan

FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	10-Yr Total	Lifetime Budget
\$184,387	\$130,475	\$128,156	\$166,486	\$186,601	\$125,929	\$108,433	\$86,902	\$70,566	\$152,211	\$1,340,146	\$3,153,028

(\$ in thousands)

OVERVIEW

Similar to many older communities in the Mid-Atlantic, Northeast, and Midwest portions of the country, a portion of the District of Columbia is served by a combined sewer system. Approximately one-third of the system is combined, mostly in the downtown and older parts of the city. In dry weather, the system delivers wastewater to the Blue Plains Advanced Wastewater Treatment Plant. In wet weather, rain water also enters the system and, if the conveyance capacity of the system is exceeded, the excess flow spills into the waterways of the District of Columbia. This discharge is called combined sewer overflow (CSO). There are 47 active CSO outfalls in the District.

DC Water has continued to implement its CSO Long Term Control Plan (LTCP), called the DC Clean Rivers Project, to reduce CSO's that discharge to the Anacostia and Potomac Rivers, as well as Rock Creek. DC Water obtained an amendment to the CSO Consent Decree in January of 2016 which will allow DC Water to include Green Infrastructure and extend the completion milestone to 2030. When fully implemented, CSO's will be reduced by a projected 96 percent during an average year (98 percent on the Anacostia River) resulting in improved water quality and significantly reduce debris on our national capital's waterways.

PROGRAM AREAS

DC Clean Rivers – The plan includes a variety of improvements throughout the District. The backbone of the plan includes constructing the Anacostia River Tunnel System to control CSO's to the Anacostia River and to relieve surface flooding, a tunnel dewatering pumping station and increased excess flow treatment during wet weather events with system completion in 2025. In addition, the amended plan includes constructing green infrastructure in large scale and a tunnel system to control Potomac River overflows with project completion in 2030. Green infrastructure will also be constructed to control CSOs to Piney Branch/Rock Creek with the first project scheduled to be completed in 2019.

Program Management – The CSO Program Manager provides program management services for DC Clean Rivers activities both at Blue Plains and in all areas in the District. The Program Manager is responsible for evaluation of combined sewer systems, as well as management for tunnel system design, sewer pumping station replacement and other sewer infrastructure projects.

Combined Sewer – Projects within the Combined Sewer Program Area include rehabilitation and/or relocation of combined sewers, control of wet weather related pollution, and upgrades to pumping stations. Most projects in this Program Area are related to the Nine Minimum Controls and include planned upgrades to facilities based on our long term facilities plan.

ACCOMPLISHMENTS

- Completed mining the First Street Tunnel, which will reduce flooding in the Bloomingdale neighborhood of the District of Columbia.
- Completed design and issued documents for the procurement of the Northeast Boundary Tunnel, the final segment of the Anacostia River Tunnel System
- Completed conceptual design and issued documents for the procurement of the first Rock Creek Green Infrastructure project.
- Continued mining activities to construct the Anacostia River Tunnel, over 80 percent completed.
- Inspection and assessment of major combined sewer assets continued in FY 2016.
 - B Street/NJ Avenue Trunk Sewer was inspected, assessed, and design commenced for construction implementation in mid-2018.
 - Tiber Creek Trunk Sewer was also inspected and assessed with design commencing next year.

OPERATIONAL IMPACT OF MAJOR CAPITAL PROGRAMS

DC Clean Rivers – This project aims to nearly eliminate CSO's to the Anacostia and Potomac Rivers and Rock Creek, while improving the health of the Chesapeake Bay. This ongoing project is currently employing green infrastructure initiatives that will divert enriched water to the Blue Plains AWWTP for cleaning and processing. The tunnels have been completed between Blue Plains and Main & O Pumping Stations. The Anacostia River Tunnel is over 80 percent complete.

Combined Sewer Overflow

10-Year Disbursement Plan & Lifetime Budget by project, \$ in thousands

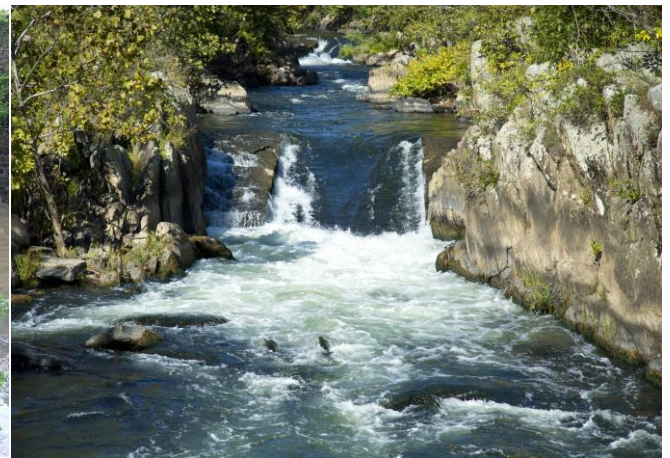
DC CLEAN RIVERS		Start	Status	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	10-Yr Total	Lifetime	Completion
CY	Anacostia LTCP Projects	FY 2005	Active	\$141,949	\$76,888	\$105,731	\$148,210	\$161,495	\$73,297	\$44,791	\$3,104	\$3,485	\$632	\$759,581	\$1,910,975	FY 2026
CZ	Potomac LTCP Projects	FY 2010	Active	22,439	31,832	6,927	0	13,996	26,823	28,136	64,760	46,866	120,590	362,370	614,100	FY 2029
DZ	Rock Creek CSS LTCP Project	FY 2010	Active	6,912	7,992	3,316	0	0	15,701	22,992	5,757	13,176	24,521	100,368	238,939	FY 2030
TOTAL DC CLEAN RIVERS BUDGETS				\$171,300	\$116,713	\$115,974	\$148,210	\$175,492	\$115,822	\$95,920	\$73,621	\$63,527	\$145,743	\$1,222,320	\$2,764,014	
PROGRAM MANAGEMENT		Start	Status	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	10-Yr Total	Lifetime	Completion
AV	CSO Program Management	FY 2001	Active	\$3,827	\$5,355	\$3,943	\$1,376	\$2,760	\$4,098	\$4,409	\$3,019	\$1,829	\$0	\$30,615	\$64,563	FY 2025
TOTAL PROGRAM MANAGEMENT BUDGETS				\$3,827	\$5,355	\$3,943	\$1,376	\$2,760	\$4,098	\$4,409	\$3,019	\$1,829	\$0	\$30,615	\$64,563	
COMBINED SEWER		Start	Status	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	10-Yr Total	Lifetime	Completion
A7	Supplemental Environmental Projects	FY 2005	Closed	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,900	FY 2015
DD	O Street Development Effort	FY 2006	Closed	0	0	0	0	0	0	0	0	0	0	0	185	FY 2016
BA	DC Water Low Impact Development	FY 2002	Active	114	58	10	0	0	0	0	0	0	0	182	2,935	FY 2019
BH	Rock Creek CSO Projects	FY 2004	Active	0	0	0	0	0	0	0	0	0	0	0	16,670	FY 2017
EJ	Potomac Pumping Station Ph III Rehab	FY 2010	Active	2,222	1,185	0	0	0	0	0	0	0	0	3,407	22,784	FY 2018
EK	Long Term Rehab-Main & O Pump Sta	FY 2021	Active	0	0	0	0	19	52	2,046	6,245	3,537	2,592	14,492	55,644	FY 2030
EL	Swirl Facility Rehabilitation	FY 2008	Active	146	186	0	0	0	0	0	0	0	0	332	4,570	FY 2018
EQ	Potomac Pumping Station Ph IV Rehab	FY 2019	Active	0	0	45	86	1,372	0	0	0	0	0	1,503	2,325	FY 2021
FQ	Main & O St. PS Intermediate Upgrade	FY 2010	Active	4,357	6,289	4,877	3,565	2,571	1,360	0	0	0	0	23,019	46,185	FY 2022
FX	Rehab Northeast Boundary Sewer Ph I	FY 2015	Active	985	9	18	581	472	4,157	5,204	98	37	27	11,588	18,500	FY 2029
FZ	Tiber Creek Sewer Lining Ph I	FY 2017	Active	587	650	2,076	5,953	1,358	0	0	0	0	0	10,624	17,113	FY 2021
G7	Combined Sewers Under Buildings	FY 2010	Active	803	31	1,029	3,675	0	0	0	0	0	0	5,537	15,981	FY 2020
IH	Combined Sewer Rehabilitation 2	FY 2013	Active	46	0	184	3,041	2,557	0	0	0	0	0	5,828	24,833	FY 2021
IP	Tiber Creek Trunk Sewer Rehabilitation	FY 2022	Active	0	0	0	0	0	442	855	3,782	1,246	0	6,324	8,250	FY 2025
KI	Main & O St. Pump Stations	FY 1999	Active	0	0	0	0	0	0	0	0	0	0	0	79,901	FY 2017
OB	Inflatable Dams Replacement FY24	FY 2024	Active	0	0	0	0	0	0	0	137	390	3,849	4,375	6,675	FY 2027
TOTAL COMBINED SEWER BUDGETS				\$9,260	\$8,407	\$8,239	\$16,901	\$8,349	\$6,010	\$8,105	\$10,262	\$5,210	\$6,468	\$87,211	\$324,451	
TOTAL COMBINED SEWER OVERFLOW BUDGETS				\$184,387	\$130,475	\$128,156	\$166,486	\$186,601	\$125,929	\$108,433	\$86,902	\$70,566	\$152,211	\$1,340,146	\$3,153,028	



City Street Catch Basin



Stormwater Overflow



Potomac River

FY 2017 - FY 2026 Disbursement Plan											Lifetime Budget
FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	10-Yr Total	
\$1,706	\$2,682	\$4,053	\$1,196	\$1,946	\$5,736	\$1,233	\$1,789	\$1,649	\$1,064	\$23,055	\$83,991

(\$ in thousands)

OVERVIEW

Stormwater is the water generated by rain or melted snow on “impervious surfaces” or surfaces that do not allow the water to soak into the ground (such as roads, driveways, sidewalks, parking lots, and buildings). Stormwater runoff occurs when rain or snowmelt flows over these impervious surfaces.

Stormwater can pick up trash, excess nutrients (such as nitrogen and phosphorus), sediment and other pollutants that flow into the storm sewer system or directly to a lake, stream, river, or wetland. Untreated stormwater runoff ends up in the waterbodies we use for swimming, fishing and drinking water. Polluted stormwater runoff can have many adverse effects on plants, fish, animals and people. For example, trash can clog waterbodies, nutrients can cause algae blooms, and sediment impacts aquatic life.

The District’s Municipal Separate Storm Sewer System (MS4), has approximately 600 miles of storm sewer pipes, catch basins, inlets, special structures and related facilities. Some components of the existing storm sewer system are over 100 years old. DC Water is responsible for the maintenance and replacement of the publicly-owned collection and conveyance facilities that transport stormwater runoff to the Anacostia and Potomac Rivers, Rock Creek, and other receiving streams within the District of Columbia.

PROGRAM AREAS

Local Drainage – Includes projects for the investigation, design and repair of the Northwest Boundary Interceptor Sewer (over eight foot in diameter) which has shown signs of structural defects during prior inspections.

On-Going – This was created as an annual program for planned projects by the Department of Sewer Services infrastructure improvements. Job numbers are issued to identify the location of the projects. These projects represent a significant effort to maintain the DC Water Sewer infrastructure.

Pumping Facilities – Rehabilitation of twelve of the sixteen stormwater pumping stations that were not upgraded in the last five years. These stations are aging and require new mechanical and electrical equipment to maintain operations. These facilities, a part of DC Water overall Sewer infrastructure are significant assets which require regular upgrades for efficient operation.

DDOT – The annual program of stormwater infrastructure projects are coordinated with street rehabilitation or other construction work performed by the District of Columbia Department of Transportation. In an effort to ease public disruption and save paving costs, DC Water coordinates its activities with those by the District Department of Transportation.

Research and Program Management – Provides engineering program management services for the stormwater service area capital projects and design management services for the rehabilitation or replacement of fifteen stormwater pumping stations. It also provides engineering services for condition assessment of the storm sewer system and development of conceptual design for the storm sewer system capital projects.

Trunk/Force Sewers – Provides for the design and construction services for stormwater sewer interceptors, trunk sewers and force mains that require upgrades. Sewers rehabilitated by this project are defined by the major planning and condition assessment program underway for the stormwater sewer system. As the assessment of the storm sewer system progresses and specific rehabilitation needs are identified, jobs will be created under this project to remediate system problems.

ACCOMPLISHMENTS

- Five projects for the rehabilitation and improvement of the storm sewer system, were completed and closed in the past fiscal year.
- FEMA grants for permanent generators at five pumping stations, and rehabilitation and flood proofing of one of these pumping station was received with construction of these improvements commencing in FY 2018.

10-Year Disbursement Plan & Lifetime Budget by project, \$ in thousands

LOCAL DRAINAGE		Start	Status	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	10-Yr Total	Lifetime	Completion
A6	Lining 22nd & P Sts. NW/NVBSO Repair	FY 2001	Active	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,040	FY 2015
GY	Storm Sewer Rehab Various Location	FY 2013	Active	172	8	76	343	0	0	0	0	0	0	599	5,680	FY 2020
IE	Storm Sewer Rehabilitation 3	FY 2020	Active	0	0	0	10	69	642	272	864	1,055	222	3,134	7,017	FY 2026
TOTAL LOCAL DRAINAGE BUDGETS				\$172	\$8	\$76	\$353	\$69	\$642	\$272	\$864	\$1,055	\$222	\$3,733	\$15,736	

ON-GOING		Start	Status	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	10-Yr Total	Lifetime	Completion
C6	FY2006 - DSS Stormwater Projects	FY 2005	Closed	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$497	FY 2007
AO	FY2009 - DSS Stormwater Projects	FY 2009	Closed	0	0	0	0	0	0	0	0	0	0	0	497	FY 2010
CD	FY2012 - DSS Stormwater Projects	FY 2011	Closed	0	0	0	0	0	0	0	0	0	0	0	630	FY 2016
D7	FY2014 - DSS Stormwater Projects	FY 2014	Closed	0	0	0	0	0	0	0	0	0	0	0	680	FY 2016
DJ	FY2015 - DSS Stormwater Projects	FY 2015	Closed	0	0	0	0	0	0	0	0	0	0	0	701	FY 2016
BD	FY2011 - DSS Stormwater Projects	FY 2011	Active	0	0	0	0	0	0	0	0	0	0	0	618	FY 2014
CN	FY2013 - DSS Stormwater Projects	FY 2013	Active	45	0	0	0	0	0	0	0	0	0	45	660	FY 2017
DX	FY2016 - DSS Stormwater Projects	FY 2016	Active	75	25	0	0	0	0	0	0	0	0	100	720	FY 2018
FN	FY2017 - DSS Stormwater Projects	FY 2017	Active	304	234	0	0	0	0	0	0	0	0	538	745	FY 2018
H5	FY2018 - DSS Stormwater Projects	FY 2018	Active	0	313	270	0	0	0	0	0	0	0	583	770	FY 2019
HM	FY2019 - DSS Stormwater Projects	FY 2019	Active	0	0	375	228	0	0	0	0	0	0	603	794	FY 2020
JH	FY2020 - DSS Stormwater Projects	FY 2020	Active	0	0	0	370	237	0	0	0	0	0	607	820	FY 2021
LO	FY2021 - DSS Stormwater Projects	FY 2021	Active	0	0	0	0	381	249	0	0	0	0	631	845	FY 2022
M8	FY2022 - DSS Stormwater Projects	FY 2022	Active	0	0	0	0	0	510	204	0	0	0	715	820	FY 2023
MG	FY2023 - DSS Stormwater Projects	FY 2023	Active	0	0	0	0	0	0	529	212	0	0	741	845	FY 2024
NV	FY2024 - DSS Stormwater Projects	FY 2024	Active	0	0	0	0	0	0	0	551	217	0	768	870	FY 2025
PI	FY2025 - DSS Stormwater Projects	FY 2025	Active	0	0	0	0	0	0	0	0	249	534	783	896	FY 2026
TOTAL ON-GOING BUDGETS				\$424	\$572	\$644	\$599	\$618	\$760	\$734	\$762	\$466	\$534	\$6,113	\$12,408	

PUMPING FACILITIES		Start	Status	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	10-Yr Total	Lifetime	Completion
NG	Stormwater Pump Stations Rehabilitation	FY 2017	Active	\$368	\$1,743	\$2,068	\$72	\$1,136	\$4,155	\$20	\$0	\$0	\$308	\$9,869	\$25,000	FY 2028
TOTAL PUMPING FACILITIES BUDGETS				\$368	\$1,743	\$2,068	\$72	\$1,136	\$4,155	\$20	\$0	\$0	\$308	\$9,869	\$25,000	

10-Year Disbursement Plan & Lifetime Budget by project, \$ in thousand

DDOT	Start	Status	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	10-Yr Total	Lifetime	Completion
P5	FY2004 - DDOT Stormwater Projects	FY 2004	Active	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$20	FY 2016
P8	FY2007 - DDOT Stormwater Projects	FY 2015	Active	0	0	0	0	0	0	0	0	0	0	155	FY 2016
P9	FY2008 - DDOT Stormwater Projects	FY 2015	Active	0	0	0	0	0	0	0	0	0	0	1,000	FY 2016
AR	FY2009 - DDOT Stormwater Projects	FY 2015	Active	0	0	0	0	0	0	0	0	0	0	160	FY 2015
B3	FY2010 - DDOT Stormwater Projects	FY 2015	Active	0	0	0	0	0	0	0	0	0	0	165	FY 2015
BM	FY2011 - DDOT Stormwater Projects	FY 2015	Active	0	0	0	0	0	0	0	0	0	0	170	FY 2015
CB	FY2012 - DDOT Stormwater Projects	FY 2015	Active	8	0	0	0	0	0	0	0	0	8	175	FY 2017
CL	FY2013 - DDOT Stormwater Projects	FY 2017	Active	2	8	0	0	0	0	0	0	0	9	180	FY 2018
D8	FY2014 - DDOT Stormwater Projects	FY 2018	Active	0	2	12	0	0	0	0	0	0	14	185	FY 2019
DK	FY2015 - DDOT Stormwater Projects	FY 2015	Active	0	0	0	0	0	0	0	0	0	0	191	FY 2015
DT	FY2016 - DDOT Stormwater Projects	FY 2016	Active	7	0	0	0	0	0	0	0	0	7	196	FY 2017
FM	FY2017 - DDOT Stormwater Projects	FY 2015	Active	0	0	0	0	0	0	0	0	0	0	205	FY 2015
H4	FY2018 - DDOT Stormwater Projects	FY 2018	Active	0	10	0	0	0	0	0	0	0	10	215	FY 2018
HP	FY2019 - DDOT Stormwater Projects	FY 2015	Active	0	0	0	0	0	0	0	0	0	0	220	FY 2015
TOTAL DDOT BUDGETS				\$16	\$19	\$12	\$0	\$0	\$0	\$0	\$0	\$0	\$48	\$3,237	

RESEARCH & PROGRAM MANAGEMENT	Start	Status	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	10-Yr Total	Lifetime	Completion	
AT	Stormwater Program Management	FY 2001	Active	\$270	\$238	\$182	\$64	\$123	\$179	\$207	\$163	\$129	\$0	\$1,554	\$12,013	FY 2025
TOTAL RESEARCH & PROGRAM MANAGEMENT BUDGETS				\$270	\$238	\$182	\$64	\$123	\$179	\$207	\$163	\$129	\$0	\$1,554	\$12,013	

TRUNK/FORCE SEWERS	Start	Status	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	10-Yr Total	Lifetime	Completion
BO	Future Stormwater Projects	FY 2005	Active	\$456	\$102	\$1,070	\$109	\$0	\$0	\$0	\$0	\$0	\$1,737	\$15,597	FY 2020
TOTAL TRUNK/FORCE SEWERS BUDGETS				\$456	\$102	\$1,070	\$109	\$0	\$0	\$0	\$0	\$0	\$1,737	\$15,597	

TOTAL STORMWATER BUDGETS				\$1,706	\$2,682	\$4,053	\$1,196	\$1,946	\$5,736	\$1,233	\$1,789	\$1,649	\$1,064	\$23,055	\$83,991
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Work on Sewer Laterals



Sewer Inspection Work



Sewer Rehabilitation - CIPP

FY 2017 - FY 2026 Disbursement Plan

FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	10-Yr Total	Lifetime Budget
\$38,302	\$39,294	\$52,999	\$57,741	\$54,704	\$59,479	\$54,447	\$53,235	\$52,753	\$50,563	\$513,517	\$1,448,589

(\$ in thousands)

OVERVIEW

DC Water is responsible for wastewater collection and transmission in the District of Columbia, including operation and maintenance of the sanitary sewer system. The sanitary sewer system includes approximately 1,900 miles of combined, sanitary, and stormwater sewers; 50,000 manholes; 25,000 catch basins; 22 flow-metering stations, nine wastewater pumping stations, and 16 stormwater pumping stations. The combined sewer system generally serves the central, older portions of the District, and the sanitary sewer system includes approximately 600 miles of large interceptor sewers and smaller gravity collection sewers. DC Water is also responsible for sewer lateral connections from the sewer mains to the property lines of residential, government, and commercial properties. In addition, DC Water is responsible for the 50-mile long Potomac Interceptor System, which provides conveyance of wastewater from Dulles International Airport, and areas in Virginia and Maryland, to the Blue Plains AWWTP.

PROGRAM AREAS

Collection Sewers – Includes studies and projects to effectively eliminate stormwater, groundwater, and other infiltration and inflow to the sewer system; to separate stormwater flows; and to reduce other extraneous flows to Blue Plains. This category also includes projects to rehabilitate sanitary sewer pipes.

On-Going – Capital projects managed by the Department of Sewer Services including the replacement of sewer laterals, sewer mains, inspection and cleaning of sewer laterals and mains.

Pumping Facilities – Projects required for the upgrade of existing wastewater pumping stations, as well as projects for the engineering and construction of new wastewater pumping facilities to enhance the reliability and integrity of DC Water’s sanitary sewer system.

Program Management – Engineering program management services for the sewer system capital improvement program, including assessing system needs, developing facilities plans, developing design scopes of work, preparing cost estimates, preparing task orders or agreements, and reviewing design documents.

Interceptor/Trunk Force Sewers – The replacement or rehabilitation of large diameter sewers that have reached the end of their useful life or are in need of major repair.

ACCOMPLISHMENTS

- Over 60 miles of sewer inspection and 50 miles of condition assessment were successfully completed in FY 2016.
- Two hundred eleven (211) sewer flow meters were installed these are continuing to gather important data on the operation of the system. This data is being used to develop an overarching coordination plan to link all monitoring efforts throughout the DC Water collection system, calibrate the system-wide sewer model, provide inflow/infiltration characterization, and assess rehabilitation effectiveness.
- The Upper Potomac Interceptor Relief Sewer was cleaned under live-flow conditions (150 MGD average daily flow) removing 20,000 cubic feet of debris.
- Two Odor Abatement Facilities in Virginia were substantially completed in late 2015. These two, together with three in Maryland and one in the District, are undergoing continued improvements through the addition of dual-media treatment which will greatly improve the conditions along the Potomac Interceptor for the adjacent residential and commercial areas, and hiker/bikers along the C&O Canal Tow Path.
- Received FEMA grants for a portable generator to serve any one of DC Water’s primary pumping stations (Sewer – Main, O Street or Potomac or Water – Bryant Street), and a generator purchase, construction to commence in 2018.
- O Street Pumping Station improvements, associated with the new headquarters building, commenced construction in FY 2016.
- Construction of the sewer rehabilitation within the National Arboretum, commenced during the summer of 2016. This project will rehabilitate the Upper ESI and local sewers within the property.
- DC Water is participating with DDOE on a stream restoration project, along Pope Branch, to protect the sewer in the stream valley.

OPERATIONAL IMPACT OF MAJOR CAPITAL PROGRAMS

Potomac Interceptor Odor Abatement Facilities – The Potomac Interceptor (PI) is a 50-mile long sanitary sewer starting at the Washington-Dulles International Airport and serving Loudoun and Fairfax Counties in Virginia, Montgomery County, Maryland, and the District of Columbia. The PI was constructed in the 1960's and today carries greater than 50 million gallons a day of wastewater to the Blue Plains Advanced Wastewater Treatment Plant. DC Water maintains this asset through regular internal inspections to identify segments needing rehabilitation, and subsequently undertakes CIP projects to rehabilitate and maintain the integrity of the PI.

DC Water operates six odor abatement facilities located strategically along the PI. Four facilities are adjacent to the C&O Canal with one facility in northwest Washington, DC and three within Maryland with the other two facilities in Virginia. These facilities use a vacuum blower to pull odorous air from the PI and push it through a dual-bed carbon filter before discharging to the atmosphere. Combined with passive treatment units (carbon canisters) located in various vents along the PI these facilities help reduce the odorous air emitted from the sewer in public areas. Contributing to better public relations.

Sanitary Sewer

10-Year Disbursement Plan & Lifetime Budget by project, \$ in thousands

COLLECTION SEWERS		Start	Status	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	10-Yr Total	Lifetime	Completion
JX	Sanitary Sewer Rehabilitation 10	FY 2017	Active	\$6	\$6	\$1,070	\$3,502	\$0	\$0	\$0	\$0	\$0	\$0	\$4,584	\$13,600	FY 2020
JU	Sanitary Sewer Rehabilitation 13	FY 2018	Active	0	46	377	3,279	1,975	197	0	0	0	0	5,875	15,175	FY 2022
JS	Sanitary Sewer Rehabilitation 15	FY 2019	Active	0	0	52	469	3,846	1,265	0	0	0	0	5,633	13,830	FY 2022
PY	Sanitary Sewer Rehabilitation 16	FY 2020	Active	0	0	0	185	744	5,868	70	0	0	0	6,868	16,100	FY 2023
LK	Sanitary Sewer Rehabilitation 17	FY 2020	Active	0	0	0	49	372	3,934	2,232	0	0	0	6,587	16,100	FY 2023
LL	Sanitary Sewer Rehabilitation 18	FY 2023	Active	0	0	0	0	0	0	460	944	6,665	135	8,204	16,582	FY 2026
NF	Sanitary Sewer Rehabilitation 19	FY 2021	Active	0	0	0	0	82	535	3,707	2,683	0	0	7,006	15,164	FY 2024
MO	Sanitary Sewer Rehabilitation 20	FY 2024	Active	0	0	0	0	0	0	0	398	923	6,251	7,571	15,000	FY 2027
NI	Sanitary Sewer Rehabilitation 21	FY 2024	Active	0	0	0	0	0	0	0	90	586	5,097	5,773	17,100	FY 2027
MP	Sanitary Sewer Rehabilitation 22	FY 2023	Active	0	0	0	0	0	0	387	1,232	7,146	30	8,796	17,600	FY 2026
NC	Sanitary Sewer Rehabilitation 23	FY 2023	Active	0	0	0	0	0	0	106	683	5,026	3,108	8,922	17,600	FY 2026
MZ	Sanitary Sewer Rehabilitation 24	FY 2024	Active	0	0	0	0	0	0	0	378	1,097	7,559	9,034	18,100	FY 2027
NX	Sanitary Sewer Rehabilitation 25	FY 2024	Active	0	0	0	0	0	0	0	123	763	7,063	7,949	18,664	FY 2027
NY	Sanitary Sewer Rehabilitation 26	FY 2025	Active	0	0	0	0	0	0	0	0	557	1,780	2,337	19,100	FY 2027
J3	Sewer Upgrade - City Wide	FY 2001	Active	1,200	1,450	558	558	285	0	0	0	0	0	4,049	18,004	FY 2021
G1	Small Local Sewer Rehab 1	FY 2010	Active	2,219	748	0	0	0	0	0	0	0	0	2,967	28,114	FY 2018
G8	Small Local Sewer Rehab 2	FY 2010	Active	476	0	0	0	0	0	0	0	0	0	476	2,842	FY 2017
G9	Small Local Sewer Rehab 3	FY 2014	Active	1	0	0	0	0	0	0	0	0	0	1	368	FY 2017
GA	Small Local Sewer Rehab 4	FY 2015	Active	988	0	0	0	0	0	0	0	0	0	988	8,557	FY 2017
QB	Sanitary Sewer Rehabilitation 27	FY 2026	New	0	0	0	0	0	0	0	0	0	1,218	1,218	45,000	FY 2028
TOTAL COLLECTION SEWERS BUDGETS				\$4,890	\$2,249	\$2,057	\$8,042	\$7,304	\$11,799	\$6,962	\$6,531	\$22,763	\$32,239	\$104,837	\$332,601	
ON-GOING		Start	Status	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	10-Yr Total	Lifetime	Completion
CE	FY2012 - DSS Sanitary Sewer Projects	FY 2012	Closed	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$9,375	FY 2015
CQ	FY2013 - DSS Sanitary Sewer Projects	FY 2013	Closed	0	0	0	0	0	0	0	0	0	0	0	10,205	FY 2015
Q3	FY2003 - DSS Sanitary Sewer Projects	FY 2003	Active	2,451	45	0	0	0	0	0	0	0	0	2,496	13,863	FY 2018
BF	FY2011 - DSS Sanitary Sewer Projects	FY 2011	Active	1,412	984	0	0	0	0	0	0	0	0	2,396	8,165	FY 2018
D6	FY2014 - DSS Sanitary Sewer Projects	FY 2014	Active	1,233	0	0	0	0	0	0	0	0	0	1,233	10,575	FY 2017
DI	FY2015 - DSS Sanitary Sewer Projects	FY 2015	Active	158	0	0	0	0	0	0	0	0	0	158	10,846	FY 2017
DW	FY2016 - DSS Sanitary Sewer Projects	FY 2015	Active	1,501	2,540	1,099	172	0	0	0	0	0	0	5,311	14,601	FY 2020
FP	FY2017 - DSS Sanitary Sewer Projects	FY 2017	Active	5,083	3,118	0	0	0	0	0	0	0	0	8,200	11,500	FY 2018
H6	FY2018 - DSS Sanitary Sewer Projects	FY 2018	Active	0	4,959	3,838	0	0	0	0	0	0	0	8,796	11,845	FY 2019
HN	FY2019 - DSS Sanitary Sewer Projects	FY 2019	Active	0	0	5,960	4,410	0	0	0	0	0	0	10,369	12,200	FY 2020
J1	FY2020 - DSS Sanitary Sewer Projects	FY 2020	Active	0	0	0	5,049	5,761	0	0	0	0	0	10,809	12,568	FY 2021

Sanitary Sewer

10-Year Disbursement Plan & Lifetime Budget by project, \$ in thousands

ON-GOING, CONT.		Start	Status	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	10-Yr Total	Lifetime	Completion
LN	FY2021 - DSS Sanitary Sewer Projects	FY 2021	Active	\$0	\$0	\$0	\$0	\$4,651	\$5,477	\$0	\$0	\$0	\$0	\$10,127	\$12,945	FY 2022
M9	FY2022 - DSS Sanitary Sewer Projects	FY 2022	Active	0	0	0	0	0	4,727	5,748	0	0	0	10,476	13,335	FY 2023
MF	FY2023 - DSS Sanitary Sewer Projects	FY 2023	Active	0	0	0	0	0	0	4,956	5,901	0	0	10,857	13,735	FY 2024
NW	FY2024 - DSS Sanitary Sewer Projects	FY 2024	Active	0	0	0	0	0	0	0	5,207	6,102	0	11,308	14,225	FY 2025
OX	FY2025 - DSS Sanitary Sewer Projects	FY 2025	Active	0	0	0	0	0	0	0	0	5,353	6,210	11,563	14,650	FY 2026
TOTAL ON-GOING BUDGETS				\$11,838	\$11,645	\$10,896	\$9,630	\$10,411	\$10,204	\$10,704	\$11,107	\$11,455	\$6,210	\$104,100	\$194,633	

PUMPING FACILITIES		Start	Status	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	10-Yr Total	Lifetime	Completion
CX	Sewer Facilities Security Upgrades	FY 2011	Active	\$246	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$246	\$1,335	FY 2017
GZ	Sewer Instrumentation & Control	FY 2012	Active	1,422	29	0	0	0	0	0	0	0	0	1,451	8,785	FY 2018
HB	DSS Sewer Pumping Project	FY 2010	Active	278	9	10	6	0	0	0	0	0	0	304	4,560	FY 2020
LY	Sewer Facilities Security Upgrades	FY 2018	Active	0	72	248	263	158	0	0	0	0	0	740	2,000	FY 2021
MB	3rd St & Constitution Ave NW PS	FY 2014	Active	194	1	727	1,123	91	0	0	0	0	0	2,135	7,374	FY 2021
MC	Additional Sewer Scada System Sites	FY 2015	Active	667	177	742	821	15	0	0	0	0	0	2,423	8,000	FY 2021
PM	East Side Pumping Station	FY 2019	Active	0	0	66	170	1,309	56	0	0	0	0	1,601	4,000	FY 2022
PT	Existing Sewer Facilities Bldg Optimization	FY 2020	Active	0	0	0	6	15	84	209	0	0	0	313	705	FY 2023
TOTAL PUMPING FACILITIES BUDGETS				\$2,806	\$290	\$1,793	\$2,389	\$1,588	\$140	\$209	\$0	\$0	\$0	\$9,214	\$36,759	

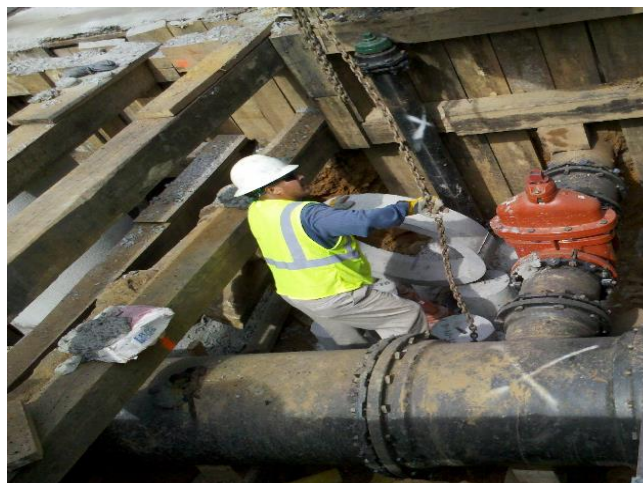
PROGRAM MANAGEMENT		Start	Status	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	10-Yr Total	Lifetime	Completion
AU	Sanitary Sewer Program Management	FY 2001	Active	\$3,651	\$5,165	\$3,822	\$1,484	\$2,841	\$4,141	\$4,508	\$3,395	\$2,578	\$0	\$31,585	\$75,901	FY 2025
DN	Sewer Inspection Program	FY 2010	Active	4,130	6,418	5,363	3,254	2,061	2,774	2,719	3,246	2,650	1,810	34,423	54,890	FY 2026
LR	Sanitary Sewer Asset Management	FY 2014	Active	975	334	0	0	0	0	0	0	0	0	1,309	5,000	FY 2018
TOTAL PROGRAM MANAGEMENT BUDGETS				\$8,755	\$11,917	\$9,184	\$4,738	\$4,902	\$6,915	\$7,227	\$6,640	\$5,228	\$1,810	\$67,316	\$135,791	

INTERCEPTOR/TRUNK FORCE SEWER		Start	Status	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	10-Yr Total	Lifetime	Completion
FV	Rehabilitation Of East Side Interceptor	FY 2011	Closed	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$15,143	FY 2016
A4	Future Sewer System Upgrades	FY 2004	Active	994	1,476	1,379	139	0	0	0	0	0	0	3,988	43,456	FY 2020
DM	UAMI Relief Sewer	FY 2010	Active	0	0	100	418	63	34	1,463	4,103	815	0	6,996	14,505	FY 2025
DR	Low Area Trunk Sewer Rehabilitation	FY 2009	Active	166	535	3,993	1,403	0	0	0	0	0	0	6,098	17,735	FY 2020
FW	Rehab Piney Branch Trunk Sewer	FY 2011	Active	40	26	1,418	3,674	2,757	7,105	1,839	0	0	0	16,858	40,443	FY 2023
FY	Rehab Upstream Rock Creek Main Intrcpt	FY 2015	Active	739	774	0	13	480	748	5,765	4,211	0	0	12,731	29,560	FY 2024
G2	Sewer Structure Rehabilitation I	FY 2010	Active	76	638	700	463	0	0	0	0	0	0	1,877	9,182	FY 2020
G4	Upper Potomac Intercept Sewer Rehab.	FY 2001	Active	641	0	0	0	0	0	0	857	1,447	2,698	5,643	13,514	FY 2026

Sanitary Sewer

10-Year Disbursement Plan & Lifetime Budget by project, \$ in thousands

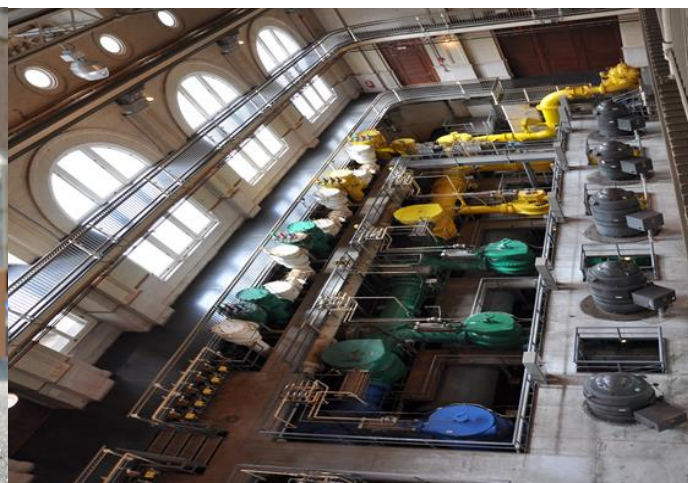
INTERCEPTOR/TRUNK FORCE, CONT.	Start	Status	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	10-Yr Total	Lifetime	Completion
G5 Sewer Rehab Near Creek Beds	FY 2010	Active	\$1,143	\$1,189	\$3,509	\$7,714	\$3,653	\$117	\$0	\$0	\$0	\$0	\$17,325	\$50,893	FY 2022
G6 Sanitary Sewers Under Buildings I	FY 2010	Active	289	0	272	1,207	0	0	0	0	0	0	1,768	6,666	FY 2020
GG Large Sewer Rehab 2	FY 2014	Active	6	0	0	0	0	0	0	0	0	0	6	452	FY 2017
GH Large Sewer Rehab 3	FY 2014	Active	0	0	0	2,657	5,693	47	0	0	0	0	8,397	20,195	FY 2022
HS Rehabilitation Of Influent Sewers	FY 2017	Active	708	446	552	1,415	5,192	5,701	2,139	89	823	859	17,922	97,430	FY 2031
HT Rehabilitation Of Anacostia Force Main	FY 2012	Active	220	55	0	110	300	161	1,219	1,485	21	0	3,572	11,290	FY 2025
IF Sanitary Sewer Rehabilitation 2	FY 2015	Active	133	0	0	0	0	0	0	0	0	0	133	1,540	FY 2017
IK Potomac Force Main Rehabilitation	FY 2013	Active	58	359	1,055	702	0	0	0	0	0	0	2,175	6,074	FY 2020
IL Creekbed Sewer Rehabilitation 2	FY 2014	Active	2,834	4,204	1,232	2,968	1,583	31	0	0	0	0	12,852	52,615	FY 2022
IM Creekbed Sewer Rehabilitation 3	FY 2016	Active	114	201	191	700	517	999	3,109	301	0	0	6,132	15,462	FY 2024
IN Upper East Side Trunk Sewer Rehab	FY 2014	Active	33	494	682	188	2,745	3,876	0	0	0	0	8,018	19,002	FY 2022
J0 B St/New Jersey Ave Trunk Sewer Rehab	FY 2004	Active	98	577	3,907	1,213	16	0	0	0	0	0	5,810	16,200	FY 2021
J1 Oxon Run Sewer Rehabilitation	FY 2004	Active	97	414	602	234	295	976	3,080	5,784	2,562	0	14,044	30,051	FY 2025
LZ Potomac Interceptor - Rehab Ph 2	FY 2015	Active	1,042	1,612	7,119	1,295	4,514	5,655	5,410	6,242	2,294	3,401	38,587	99,190	FY 2028
N7 Potomac Sewer System Rehab.	FY 2000	Active	372	52	17	0	0	0	0	0	0	0	441	48,019	FY 2019
O4 Southwest Interceptor Inspection/Rehab	FY 2019	Active	0	0	46	85	216	1,710	129	0	0	0	2,186	4,530	FY 2028
O7 East Rock Creek Diversion Inspect/Rehab	FY 2025	Active	0	0	0	0	0	0	0	0	251	1,248	1,499	6,600	FY 2026
OA West Rock Creek Diversion Inspect/Rehab	FY 2023	Active	0	0	0	0	0	0	0	0	0	0	0	3,810	FY 2025
IQ Slash Run Sewer Rehabilitation	FY 2022	Active	0	0	0	0	0	383	1,550	3,331	0	0	5,265	10,000	FY 2024
IR Anacostia Main Interceptor Rehabilitation	FY 2023	Active	0	0	0	0	0	0	1,170	2,088	4,026	0	7,285	14,250	FY 2025
JK Little Falls Rehabilitation Project	FY 2019	Active	0	0	37	149	1,243	425	0	0	0	0	1,854	4,000	FY 2029
JM Northwest Major Sewer Rehabilitation	FY 2020	Active	0	0	0	272	1,018	2,033	0	0	0	0	3,323	7,000	FY 2022
PJ Re-Activation Of Anacostia Force Main	FY 2017	Active	209	143	2,257	5,923	0	0	0	0	0	0	8,533	20,000	FY 2020
PU Easby Point Trunk Sewer	FY 2021	Active	0	0	0	0	213	419	2,472	464	0	0	3,568	7,000	FY 2024
PV Broad Branch Trunk Sewer	FY 2025	Active	0	0	0	0	0	0	0	0	1,068	2,098	3,165	13,000	FY 2029
TOTAL INTERCEPTOR/TRUNK FORCE SEWER BUDGETS			\$10,013	\$13,194	\$29,068	\$32,942	\$30,499	\$30,419	\$29,346	\$28,956	\$13,307	\$10,304	\$228,049	\$748,806	
TOTAL SANITARY SEWER BUDGETS			\$38,302	\$39,294	\$52,999	\$57,741	\$54,704	\$59,479	\$54,447	\$53,235	\$52,753	\$50,563	\$513,517	\$1,448,589	



Water line Repairs



DC Water in the Community



Bryant Street Pump Station

FY 2017 - FY 2026 Disbursement Plan

FY 2017 - FY 2026 Disbursement Plan										Lifetime Budget	
FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	10-Yr Total	
\$58,819	\$51,738	\$64,149	\$57,102	\$48,534	\$54,658	\$65,512	\$83,744	\$78,217	\$76,915	\$639,387	\$1,892,803

(\$ in thousands)

OVERVIEW

Delivery of safe, clean, high-quality drinking water is one of DC Water's highest priorities. Drinking water in the District of Columbia comes from the Potomac River. The U.S. Army Corps of Engineers, Washington Aqueduct (Aqueduct), is a federally owned agency responsible for treating the drinking water. DC Water purchases water from the Aqueduct and is responsible for maintaining the distribution system that delivers drinking water to customers. DC Water maintains over 1,300 miles of pipe and distributes drinking water to more than 660,000 residents and businesses in the District of Columbia.

The DC Water distribution system begins at the water treatment plant and ends at private service lines. Customer service lines connect to the mains in the streets and deliver water to residents and commercial buildings, eventually reaching taps. Water is continuously moving through our distribution system, typically at a high water flow that keeps the water fresh. However, once the water leaves the main and enters a customer's service line, the flow of water is dependent on individual water usage.

OVERVIEW, CONT.

DC Water is committed to providing customers with the highest quality drinking water and continuously works to deliver water that goes beyond federal standards. We accomplish this goal by aiming to meet target levels that are stricter than water quality standards required by the EPA. We have a dedicated Drinking Water division that collects and analyzes water samples throughout the District of Columbia. These monitoring programs include sampling and analyses that are required by EPA and additional sampling programs conducted voluntarily by DC Water.

DC Water conducts compliance monitoring on a daily basis to ensure that water quality meets EPA standards. Water quality technicians collect and analyze samples for lead and copper, total coliform (bacteria) and disinfection byproduct levels. Compliance monitoring ensures that drinking water treatment effectively prevents pipe corrosion, removes bacteria and other contaminants, and minimizes potentially harmful treatment byproducts.

DC Water operates voluntary sampling programs to support our commitment to providing high-quality drinking water to our customers. Water quality technicians collect and analyze hundreds of water samples throughout the District of Columbia. The Drinking Water division responds quickly to customer complaints and conducts water quality monitoring among the District's most vulnerable populations. DC Water operates two mobile laboratories that allow technicians to conduct on-site water quality tests and respond to emergencies. The Drinking Water division also distributes hundreds of lead test kits each year to residents and assists residents with identifying lead sources.

PROGRAM AREAS

Distribution Systems – Provides for the rehabilitation, replacement or extension of the water distribution system through several projects. The distribution systems program area is the largest for drinking water and includes three primary elements: small diameter water main renewal; large diameter water main rehabilitation; and valve replacements.

Lead Program – The replacement of approximately 20,500 lead water service lines with copper piping has been completed. Additional replacement continues throughout the water distribution system as part of water main renewals projects and for customers that request full replacement.

On-Going – Includes small projects for .repairing water main breaks, replacing valves and fire hydrants, replacing water service connections, and other minor water main rehabilitation work.

Pumping Facilities – Rehabilitate or upgrade water-pumping stations in the system.

DDOT – Projects for the relocation, rehabilitation, replacement and extension of water mains, for which the work is completed under District Department of Transportation (DDOT) construction contracts for street paving or reconstruction. This program is being closed and combined with distribution projects.

PROGRAM AREAS, CONT.

Storage Facilities – Rehabilitation or upgrade of elevated tanks and reservoirs. Studies to the system have identified the need for upgrades and/or new storage facilities to support changing development patterns, for regulatory compliance, to provide additional water pressure to certain areas of the District, and to provide emergency backup service.

Program Management – Provides engineering program management services for the water system capital improvements program, including asset management, developing facilities plans, conceptual designs, design scopes of work, cost estimates, task orders or agreements, and design document review.

ACCOMPLISHMENTS

- The water service areas are continuing to install small diameter water mains to meet the DC Water Board goal of renewing one (1%) percent of the system annually. This renewal includes a combination of replacement with new water mains and rehabilitation of existing water mains using cleaning and cement mortar lining.
- DC Water continued its Pipe Condition Assessment (PCA) of large diameter water mains. The assessments include detailed field inspection and leak detection of five miles of high-risk water transmission mains annually. Recommendations for rehabilitation result in targeted capital projects to address the identified pipe sections in need of repairs.
- The construction of emergency repairs to the 78-inch North Clear Well water main was completed. This project addressed pipe defects and leaks identified as part of the large diameter water main PCA program and required close coordination with the Washington Aqueduct so that repairs could be completed while the McMillan North Clear Well was out of service.

OPERATIONAL IMPACT OF MAJOR CAPITAL PROGRAMS

Water Mains – During FY 2016, the Authority continued renewal of small diameter water pipes with the goal of 1.0% annual renewal. Large water main rehabilitation projects continued with two projects using internal structural repair techniques on the existing transmission system. The capital expenditures for linear water asset renewal yields reduced reactive maintenance due to breaks and other unscheduled repairs, particularly helpful in reducing long-term maintenance costs.

Water Pumping and Storage – Three reservoir upgrade projects were completed in FY2016, which accomplished both regulatory upgrades as well as operational improvements. Maintenance costs are expected to be reduced due to improved access for water sampling equipment and well as SCADA improvements that allow for remote monitoring of reservoir water quality.

10-Year Disbursement Plan & Lifetime Budget by project, \$ in thousands

DISTRIBUTION SYSTEMS		Start	Status	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	10-Yr Total	Lifetime	Completion
MW	WSSC Interconnections	FY 2007	Closed	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$7,709	FY 2016
MX	Small Diameter Water Main Rehab 5	FY 2007	Closed	0	0	0	0	0	0	0	0	0	0	0	9,030	FY 2016
N9	Small Diameter Water Main Rehab 7	FY 2010	Closed	0	0	0	0	0	0	0	0	0	0	16,957	FY 2015	
BZ	Large Valve Repl. (Contracts 8 - 9 & 10)	FY 2009	Active	0	0	0	0	0	0	0	0	0	0	12,703	FY 2017	
C9	Large Diameter Water Mains I	FY 2014	Active	284	1,200	5,979	2,030	0	0	0	0	0	0	9,492	19,251	FY 2020
DE	Small Diameter Water Main Rehab 12	FY 2015	Active	4,647	8,824	3,784	1,432	0	0	0	0	0	0	18,687	39,850	FY 2020
F1	Small Diameter Water Main Rehab 13	FY 2016	Active	450	8,061	8,378	534	0	0	0	0	0	0	17,423	31,170	FY 2020
F2	Small Diameter Water Main Rehab 14	FY 2017	Active	657	415	9,199	10,162	286	0	0	0	0	0	20,719	40,470	FY 2021
F6	Steel Water Main Rehab - Phase I	FY 2009	Active	48	122	1,361	804	0	0	0	0	0	0	2,336	9,944	FY 2020
FE	20 Low Service Main & PRV	FY 2012	Active	863	266	0	0	0	0	0	0	0	0	1,129	8,008	FY 2018
FT	Water Mains Rehab Phase II	FY 2015	Active	687	2,071	5,477	3,473	2,766	4,193	3,646	776	0	0	23,090	39,980	FY 2024
GQ	Fire Hydrant Replacement Program - Ph II	FY 2010	Active	471	151	85	31	14	0	0	0	0	0	753	28,244	FY 2021
GR	Small Diameter Water Main Rehab 15	FY 2018	Active	0	857	1,335	5,823	8,877	2,459	0	0	0	0	19,351	39,750	FY 2022
GX	Large Dia. Water Main Repl. II	FY 2023	Active	0	0	0	0	0	0	48	404	2,062	4,697	7,210	23,180	FY 2029
HX	Small Diameter Water Main Rehab 16	FY 2019	Active	0	0	3,161	1,963	6,235	9,592	2,651	0	0	0	23,601	37,350	FY 2023
I8	Large Valve Replacement (Contract 11-13)	FY 2012	Active	2,318	812	41	0	0	0	0	0	0	0	3,171	18,549	FY 2019
IB	Large Valve Replacement (Contract 17-19)	FY 2018	Active	0	35	210	1,450	3,201	3,312	2,049	118	0	0	10,376	20,130	FY 2024
J7	Small Diameter Water Main Rehab 17	FY 2020	Active	0	0	0	4,651	2,596	7,891	12,022	3,295	0	0	30,455	46,650	FY 2024
JZ	Large Dia Water Main Repl 3 - 4 & 5	FY 2021	Active	0	0	0	0	302	1,265	5,870	12,664	14,124	9,264	43,488	63,710	FY 2027
K7	Large Dia Water Main Repl 6 - 7 & 8	FY 2024	Active	0	0	0	0	0	0	0	368	1,526	6,914	8,808	69,920	FY 2030
KA	Large Valve Repl Contracts 20 - 21 & 22	FY 2021	Active	0	0	0	0	49	269	1,792	3,920	4,016	2,378	12,425	17,610	FY 2027
KB	Large Valve Repl Contracts 23 - 24 & 25	FY 2024	Active	0	0	0	0	0	0	0	58	326	2,372	2,755	19,220	FY 2029
KE	Small Diameter Water Main Rehab 18	FY 2021	Active	0	0	0	0	4,332	2,681	8,425	12,811	3,500	0	31,749	46,340	FY 2025
KF	Small Diameter Water Main Rehab 19	FY 2022	Active	0	0	0	0	0	4,766	2,891	9,006	13,606	3,621	33,891	47,730	FY 2026
KG	Small Diameter Water Main Rehab 20	FY 2023	Active	0	0	0	0	0	0	5,305	3,107	9,678	14,016	32,105	49,160	FY 2027
KH	Small Diameter Water Main Rehab 21	FY 2024	Active	0	0	0	0	0	0	0	5,784	3,222	5,394	14,400	50,640	FY 2028
MU	Small Diameter Water Main Rehab 2	FY 2002	Active	543	0	0	0	0	0	0	0	0	0	543	15,043	FY 2017
MV	Small Diameter Water Main Rehab 3	FY 2006	Active	33	66	646	64	0	0	0	0	0	0	808	15,624	FY 2020
NA	Clean & Line 20 4th High Wtrmain	FY 2002	Active	234	52	0	0	0	0	0	0	0	0	285	4,556	FY 2018
O0	Small Diameter Water Main Rehab 8	FY 2011	Active	37	38	9	0	0	0	0	0	0	0	84	20,681	FY 2019
O1	Small Diameter Water Main Rehab 9	FY 2012	Active	2,278	210	0	0	0	0	0	0	0	0	2,489	24,987	FY 2018
O2	Small Diameter Water Main Rehab 10	FY 2013	Active	2,582	1,586	382	0	0	0	0	0	0	0	4,549	36,842	FY 2019
O3	Small Diameter Water Main Rehab 11	FY 2014	Active	13,054	4,082	0	0	0	0	0	0	0	0	17,136	38,957	FY 2018
S3	Large Valve Replacement (Contract 3-7)	FY 1999	Active	50	0	0	0	0	0	0	0	0	0	50	23,100	FY 2017

10-Year Disbursement Plan & Lifetime Budget by project, \$ in thousands

DISTRIBUTION SYSTEMS, CONT.		Start	Status	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	10-Yr Total	Lifetime	Completion
S5	Large Dia Wtrmain Int. Repairs	FY 2001	Active	\$449	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$449	\$16,972	FY 2017
KI	Small Diameter Water Main Rehab 22	FY 2025	Active	0	0	0	0	0	0	0	0	6,894	3,635	10,529	52,160	FY 2029
PK	Large Meter Vault And Piping Improve	FY 2016	Active	461	0	0	0	0	0	0	0	0	0	461	980	FY 2017
KJ	Small Diameter Water Main Rehab 23	FY 2026	New	0	0	0	0	0	0	0	0	0	7,134	7,134	53,720	FY 2030
TOTAL DISTRIBUTION SYSTEMS BUDGETS				\$30,148	\$28,847	\$40,047	\$32,416	\$28,660	\$36,427	\$44,699	\$52,312	\$58,953	\$59,424	\$411,932	\$1,116,878	

LEAD PROGRAM		Start	Status	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	10-Yr Total	Lifetime	Completion
BW	Lead Service Replacement Program	FY 2003	Active	\$1,050	\$720	\$1,345	\$1,820	\$2,063	\$2,321	\$2,537	\$2,536	\$2,964	\$1,112	\$18,468	\$208,940	FY 2026
TOTAL LEAD PROGRAM BUDGETS				\$1,050	\$720	\$1,345	\$1,820	\$2,063	\$2,321	\$2,537	\$2,536	\$2,964	\$1,112	\$18,468	\$208,940	

ON-GOING		Start	Status	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	10-Yr Total	Lifetime	Completion
CC	FY2012 - DWS Water Projects	FY 2012	Closed	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$8,282	FY 2016
CP	FY2013 - DWS Water Projects	FY 2013	Closed	0	0	0	0	0	0	0	0	0	0	0	8,830	FY 2015
D5	FY2014 - DWS Water Projects	FY 2014	Active	889	0	0	0	0	0	0	0	0	0	889	10,147	FY 2017
DG	FY2015 - DWS Water Projects	FY 2015	Active	1,648	0	0	0	0	0	0	0	0	0	1,648	9,630	FY 2017
DY	FY2016 - DWS Water Projects	FY 2015	Active	1,399	0	0	0	0	0	0	0	0	0	1,399	9,630	FY 2017
FK	FY2017 - DWS Water Projects	FY 2016	Active	6,707	97	0	0	0	0	0	0	0	0	6,803	9,630	FY 2018
GS	FY2018 - DWS Water Projects	FY 2018	Active	0	6,790	106	0	0	0	0	0	0	0	6,896	9,630	FY 2019
HY	FY2019 - DWS Water Projects	FY 2019	Active	0	0	7,415	108	0	0	0	0	0	0	7,523	9,630	FY 2020
JA	FY2020 - DWS Water Projects	FY 2020	Active	0	0	0	6,835	840	0	0	0	0	0	7,675	9,630	FY 2021
KW	FY2021 - DWS Water Projects	FY 2021	Active	0	0	0	0	6,396	1,194	0	0	0	0	7,590	9,630	FY 2022
KX	FY2022 - DWS Water Projects	FY 2022	Active	0	0	0	0	0	6,081	1,142	0	0	0	7,222	9,664	FY 2023
KY	FY2023 - DWS Water Projects	FY 2023	Active	0	0	0	0	0	0	6,224	1,147	0	0	7,371	10,150	FY 2024
KZ	FY2024 - DWS Water Projects	FY 2024	Active	0	0	0	0	0	0	0	6,588	1,203	0	7,791	10,452	FY 2025
L1	FY2025 - DWS Water Projects	FY 2025	Active	0	0	0	0	0	0	0	0	6,804	1,207	8,011	10,780	FY 2026
L2	FY2026 - DWS Water Projects	FY 2026	New	0	0	0	0	0	0	0	0	0	8,129	8,129	11,890	FY 2027
TOTAL ON-GOING BUDGETS				\$10,643	\$6,886	\$7,521	\$6,944	\$7,235	\$7,275	\$7,366	\$7,735	\$8,007	\$9,336	\$78,948	\$147,604	

PUMPING FACILITIES		Start	Status	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	10-Yr Total	Lifetime	Completion
M6	Rehab. Bryant St. Pump Sta.	FY 1999	Closed	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$61,153	FY 2016
AY	Upgrades To Ft. Reno Pumping Station	FY 2002	Active	910	341	294	0	0	0	0	0	0	0	1,544	13,549	FY 2019
F8	16th & Alaska Ave Pump Sta Upgrades	FY 2010	Active	72	5	0	0	0	0	0	0	0	0	77	4,879	FY 2018
FD	Water Fac Security System Upgrades	FY 2010	Active	89	250	263	148	0	0	0	0	0	0	750	2,067	FY 2020
FH	Discharge Piping Bryant St. Pump Sta	FY 2009	Active	144	12	9	0	0	0	0	0	0	0	165	14,279	FY 2019
HA	DWS Water Pumping Project	FY 2010	Active	173	0	0	0	0	0	0	0	0	0	173	1,460	FY 2017

10-Year Disbursement Plan & Lifetime Budget by project, \$ in thousands

PUMPING FACILITIES, CONT.			Start	Status	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	10-Yr Total	Lifetime	Completion
HV	Bryant St PS - Spill Header Flow Control	FY 2013	Active	\$17	\$15	\$842	\$2,077	\$370	\$0	\$0	\$0	\$0	\$0	\$0	\$3,321	\$6,502	FY 2021
JB	Bryant Street PS Improvements - Ph II	FY 2012	Active	515	940	247	2,574	1,418	0	0	0	0	0	0	5,694	11,736	FY 2021
LT	Water System SCADA	FY 2014	Active	395	165	1,324	2,109	713	0	0	0	0	0	0	4,706	8,137	FY 2021
LU	Water Facilities Security Sys Upgrades 2	FY 2016	Active	34	167	354	327	174	92	0	0	0	0	0	1,148	2,000	FY 2022
M7	Replacement Of Anacostia PS	FY 2002	Active	250	51	0	0	0	0	0	0	0	0	0	301	33,434	FY 2018
HI	Bryant Street Pump Station Phase III	FY 2020	Active	0	0	0	43	86	199	1,025	2,539	0	0	0	3,892	5,920	FY 2024
HR	Anacostia Pump Sta Improvements Ph II	FY 2021	Active	0	0	0	0	43	154	323	2,212	391	0	0	3,123	4,700	FY 2025
OR	Fort Reno PS Improvements Ph II	FY 2021	Active	0	0	0	0	49	173	280	2,828	974	0	0	4,304	6,430	FY 2025
PS	Existing Water Facilities Bldg Optimization	FY 2020	Active	0	0	0	145	217	45	0	0	0	0	0	408	695	FY 2022
S6	Existing Water Facilities Bldg Optimization	FY 2018	New	0	13	61	338	103	0	0	0	0	0	0	515	940	FY 2021
TOTAL PUMPING FACILITIES BUDGETS					\$2,598	\$1,958	\$3,395	\$7,761	\$3,173	\$664	\$1,627	\$7,579	\$1,365	\$0	\$30,120	\$177,881	
DDOT			Start	Status	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	10-Yr Total	Lifetime	Completion
B0	FY2010 - DDOT Water Projects	FY 2010	Active	\$145	\$6	\$1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$152	\$17,171	FY 2019
BN	FY2011 - DDOT Water Projects	FY 2011	Active	388	375	65	0	0	0	0	0	0	0	0	828	8,738	FY 2019
CJ	FY2012 - DDOT Water Projects	FY 2008	Active	167	135	122	0	0	0	0	0	0	0	0	424	6,474	FY 2019
CM	FY2013 - DDOT Water Projects	FY 2012	Active	130	0	0	0	0	0	0	0	0	0	0	130	1,549	FY 2017
TOTAL DDOT BUDGETS					\$830	\$516	\$188	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,534	\$33,933	
STORAGE FACILITIES			Start	Status	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	10-Yr Total	Lifetime	Completion
FA	Water Storage Facility Upgrades	FY 2009	Active	\$1,871	\$1,237	\$2,970	\$3,420	\$300	\$0	\$0	\$0	\$0	\$0	\$0	\$9,798	\$36,137	FY 2021
HW	Rehabilitation Of Elevated Water Tanks	FY 2020	Active	0	0	0	105	305	758	2,103	1,292	541	0	0	5,104	7,000	FY 2025
MA	St. Elizabeth Water Tank	FY 2002	Active	5,124	6,568	3,527	0	0	0	0	0	0	0	0	15,219	36,883	FY 2019
MQ	2mg 4th High Storage Tank	FY 2004	Active	643	226	0	321	418	502	1,664	1,930	0	0	0	5,705	9,580	FY 2024
MR	2nd High Water Storage	FY 2009	Active	89	41	115	515	359	426	1,422	6,172	1,814	0	0	10,953	16,764	FY 2025
TOTAL STORAGE FACILITIES BUDGETS					\$7,728	\$8,072	\$6,612	\$4,361	\$1,382	\$1,685	\$5,188	\$9,395	\$2,354	\$0	\$46,779	\$106,364	
PROGRAM MANAGEMENT			Start	Status	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	10-Yr Total	Lifetime	Completion
KV	Water Program Mgt. Services 2F	FY 2019	Active	\$0	\$0	\$1,705	\$3,801	\$6,021	\$6,286	\$4,095	\$2,284	\$0	\$0	\$0	\$24,192	\$30,610	FY 2024
LB	Water Program Mgt. Services 2G	FY 2024	Active	0	0	0	0	0	0	0	1,902	4,572	7,043	0	13,517	35,480	FY 2029
LQ	Water Service Area Asset Management	FY 2013	Active	1,304	0	0	0	0	0	0	0	0	0	0	1,304	5,000	FY 2017
ME	Water Sys Program Management Services	FY 1999	Active	4,519	4,739	3,335	0	0	0	0	0	0	0	0	12,593	30,113	FY 2019
TOTAL PROGRAM MANAGEMENT BUDGETS					\$5,823	\$4,739	\$5,040	\$3,801	\$6,021	\$6,286	\$4,095	\$4,186	\$4,572	\$7,043	\$51,606	\$101,203	
TOTAL WATER BUDGETS					\$58,819	\$51,738	\$64,149	\$57,102	\$48,534	\$54,658	\$65,512	\$83,744	\$78,217	\$76,915	\$639,387	\$1,892,803	



Maintenance Services



DC Water Quench Buggy



Washington Aqueduct

	FY 2017 - FY 2026 Disbursement Plan										10-Yr Total	Lifetime Budget
	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026		
CAPITAL EQUIPMENT	54,949	32,897	26,043	26,551	8,780	8,780	8,780	8,780	8,780	8,780	193,119	193,119
WASHINGTON AQUEDUCT	10,896	11,768	10,547	11,840	13,911	10,932	11,041	10,969	10,787	9,516	112,207	112,207
TOTAL	\$65,845	\$44,665	\$36,590	\$38,391	\$22,690	\$19,712	\$19,821	\$19,748	\$19,567	\$18,296	\$305,326	\$305,326

(\$ in thousands)

OVERVIEW

Additional Capital Programs is a subset of the CIP comprised of Capital Equipment and the Washington Aqueduct.

Capital Equipment – This category includes capital purchases that have a life of at least three years and an individual component cost of \$5,000 or more. The current capital equipment disbursement budget includes the following cluster groups:

- **Blue Plains** – This group is comprised of the Departments of Wastewater Operations, Process Engineering, and Maintenance Services. These departments’ activities are within the Blue Plains AWWTP. Activities/purchases include: major pump rebuild/replacements, large electric motors, high priority rehabilitation program, centrifuge rebuild/replacements, membrane diffuser/mechanical replacements, electrical replacements, lab equipment, process computer control systems, actuators, flow meters, and programmable logic controllers.

OVERVIEW, CONT.

- **Finance, Accounting and Budget** – Capital equipment projects within this cluster are primarily for the enhancements to DC Water’s existing financial and payroll software solutions. This group also manages reserve funds to support additional capital equipment needs throughout DC Water.
- **Customer Care and Operations** – This group is comprised of the Departments of Customer Service, Distribution and Conveyance Systems, Water Services, and Sewer Services. Work within this group is for rehabilitating and replacing equipment outside of Blue Plains in the distribution and collection systems. Activities/purchases include: pipes/fittings, manhole covers/frames, pumps, flow meters, catch basins, sewer cameras, cured-in-place pipe, locators, emergency generators, water mains, service lines, valves, water sample lab equipment, backflow preventers, SCADA hardware, and fire hydrant custodial locks. In addition to these items, this group supports replacement of residential and commercial water meters through the Automated Meter Reading (AMR) and On-going Replacement Programs.
- **Independent Offices** – Capital equipment projects within this cluster are primarily for infrastructure projects for the Department of Information Technology (IT). Activities/purchases include: computer replacements, cabling, radios, uninterruptible power system, server hardware, SCADA core switches, and telephony upgrades. In addition to infrastructure, IT also manages enterprise technology projects as approved by the IT Steering Committees.
- **Support Services** – This group is comprised of capital equipment activities for the Departments of Facilities, Security and Fleet Management. Activities/purchases include: cameras, card readers, door/window/hatch sensors, fence-line detection systems, vehicles, buses, vac-trucks, boats, backhoes, cranes, trailers, forklifts, HVAC systems, fire suppression systems, elevators, plumbing, rollup doors, photocopiers, appliances, furniture, fixtures, signage, roofing, and general facility improvements.

Washington Aqueduct – The Washington Aqueduct, managed by the U.S. Army Corps of Engineers (USACE), provides wholesale water treatment services to DC Water and two wholesale customers in Northern Virginia, Arlington County and Fairfax Water. DC Water purchases approximately 73 percent of the water produced by the Aqueduct’s two treatment facilities, the Dalecarlia and McMillan Treatment Plants, and thus is responsible for approximately 73 percent of the Aqueduct’s operating and capital costs. Under federal legislation and a memorandum of understanding enacted in 1997 and updated in 2013 when Fairfax Water replaced the City of Falls Church, DC Water and the Aqueduct’s wholesale customers in Northern Virginia have a much greater role in oversight of the Aqueduct’s operations and its Capital Improvement Program than prior to 1997. The Aqueduct’s CIP is divided into six primary areas, with specific projects under each area.

- Dalecarlia Plant
- Aqueduct Wide
- McMillan Plant
- Appurtenant Transmission and Storage Facilities
- Advanced Treatment

The USACE, in accordance with Federal procurement regulations, requires DC Water to remit cash in an amount equal to the total project cost in advance of advertising contracts, and these funds are transferred immediately to a USACE/U.S. Treasury account to be drawn down during the execution of the project, through completion, with no interest going to DC Water. Over the years, extensive discussions with the U.S. Office of Management and Budget (OMB) and the USACE resulted in a proposal in the President’s FY 2006 and FY 2007 budgets that would allow Aqueduct customers to deposit funds for any projects required by their NPDES permit (including the residuals project) to a separate escrow account, allowing the Aqueduct customers to retain interest on these funds. The proposal was

OVERVIEW, CONT.

submitted in May 2006 to the Senate and House. During FY 2006, the USACE briefed the Senate Environment and Public Works Committee staff and in conjunction with DC Water briefed the Senate Homeland Security and Government Affairs committee staff. Additionally, DC Water and Washington Aqueduct staff provided DC Delegate Norton's office with the Administration's proposal. Neither of the Senate committees acted on the proposal.

We continue to pursue other options that would be more favorable to DC Water, including transferring dollars on a phased basis, utilizing taxable bonds, or taxable commercial paper. In the past, some of these options have not been viewed favorably by the U.S. Treasury, but we will continue our outreach efforts to Congressional staff, federal agencies and the Corps on this critical issue. We expect to develop a more efficient financing system in the near future.

OPERATIONAL IMPACT OF MAJOR CAPITAL PROGRAMS

Automated Meter Reading (AMR) Replacement Program - This program aims to replace approximately 90,000 small water meters throughout the city. The program started in FY 2016 and is expected to be completed within the next two years. Data received from the water meters will better serve DC Water customers by providing timely and accurate meter reads for billing information.

Additional Capital Programs

10-Year Disbursement Plan & Lifetime Budget by project, \$ in thousands

CAPITAL EQUIPMENT		FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	10-Yr Total
BLUE PLAINS												
EQP4710	Wastewater Operations	\$110	\$110	\$110	\$110	\$0	\$0	\$0	\$0	\$0	\$0	\$440
EQP4730	Wastewater Process Engineering	1,000	1,000	500	500	0	0	0	0	0	0	3,000
EQP4830	Maintenance Services	3,000	3,000	3,000	3,000	0	0	0	0	0	0	12,000
	Subtotal	4,110	4,110	3,610	3,610	0	0	0	0	0	0	15,440
FINANCE, ACCOUNTING & BUDGET												
EQP2410	Finance, Accounting & Budget	350	0	0	0	0	0	0	0	0	0	350
EQP2411	Reserve Fund	11,158	7,800	7,692	3,000	8,780	8,780	8,780	8,780	8,780	8,780	82,329
	Subtotal	11,508	7,800	7,692	3,000	8,780	8,780	8,780	8,780	8,780	8,780	82,679
CUSTOMER CARE & OPERATIONS												
EQP2340	Customer Service	21,898	6,041	2,618	2,618	0	0	0	0	0	0	33,175
EQP4210	Distribution & Conveyance Systems	925	625	1,300	1,200	0	0	0	0	0	0	4,050
EQP4410	Water Services	425	425	350	350	0	0	0	0	0	0	1,550
EQP4610	Sewer Services	250	250	250	250	0	0	0	0	0	0	1,000
	Subtotal	23,498	7,341	4,518	4,418	0	0	0	0	0	0	39,775
INDEPENDENT OFFICES												
EQP2110	IT Infrastructure	2,560	2,290	2,700	2,500	0	0	0	0	0	0	10,050
EQP2115	IT Enterprise Technology	7,900	6,270	3,000	8,500	0	0	0	0	0	0	25,670
	Subtotal	10,460	8,560	5,700	11,000	0	0	0	0	0	0	35,720
SUPPORT SERVICES												
EQP3410	Facilities Management	1,690	1,690	1,690	1,690	0	0	0	0	0	0	6,760
EQP3610	Security	849	563	0	0	0	0	0	0	0	0	1,412
EQP5610	Fleet Management	2,834	2,833	2,833	2,833	0	0	0	0	0	0	11,333
	Subtotal	5,373	5,086	4,523	4,523	0	0	0	0	0	0	19,505
TOTAL CAPITAL EQUIPMENT		\$54,949	\$32,897	\$26,043	\$26,551	\$8,780	\$8,780	\$8,780	\$8,780	\$8,780	\$8,780	\$193,119
WASHINGTON AQUEDUCT		10,896	11,768	10,547	11,840	13,911	10,932	11,041	10,969	10,787	9,516	112,207
TOTAL ADDITIONAL CAPITAL PROGRAMS		\$65,845	\$44,665	\$36,590	\$38,391	\$22,690	\$19,712	\$19,821	\$19,748	\$19,567	\$18,296	\$305,326



APPROVED BUDGETS



DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Section VI CAPITAL FINANCING, CASH AND DEBT

\$ in thousands

Sources of Funds

	Amount	Percentage
Debt Financing ⁽¹⁾	\$ 1,519,576	39.7%
Wholesale Capital Payments	713,146	18.7%
EPA Grants & CSO Appropriations	224,082	5.9%
Interest Income on Bond Proceeds	13,600	0.4%
Pay-Go Financing ⁽²⁾	1,295,222	33.9%
System Availability Fee (SAF)	57,750	1.5%
Total Sources	\$ 3,823,376	100.0%

⁽¹⁾ Debt financing refers to the borrowing of funds through long-term revenue bonds, commercial paper and other short-term notes

⁽²⁾ Pay-go financing is any funds available after meeting the reserves and rate stabilization fund deposits

Sources & Uses of Funds

\$ in thousands

Capital Improvement Program

FY 2016 - FY 2018

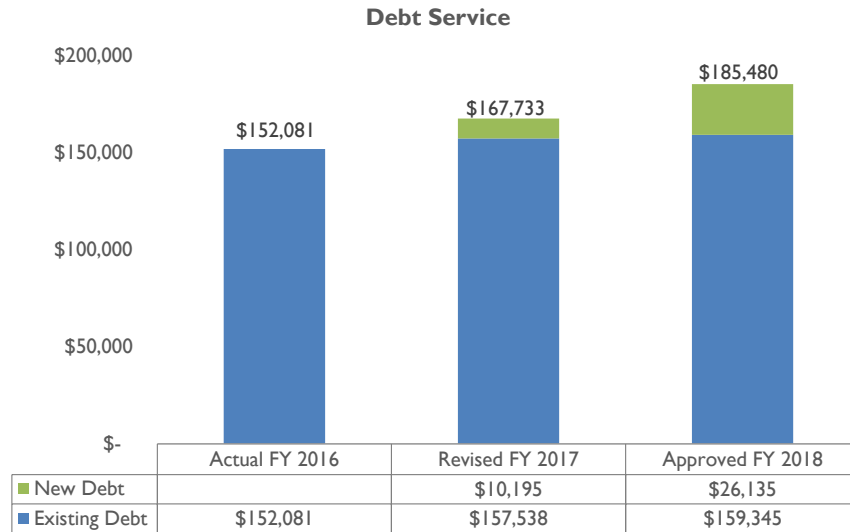
	FY 2016 Actual	FY 2017 Approved	FY 2017 Revised	FY 2018 Approved
Sources				
Beginning Balance	\$ 68,443,585	\$ 113,337	\$ 106,057	\$ 133,720
New Debt Proceeds / Commercial Paper/ EMCP (1)	454,453	300,000	300,000	154,938
Proceeds for Notes pay - off	(112,000)	-	-	-
System Availalbity Fee	-	-	-	1,925
Pay-Go Financing	71,759	78,725	100,633	93,589
EPA Grants	25,306	22,129	25,013	23,093
CSO Appropriations (2)	14,023	-	-	-
Wholesale Customer Capital Payments	140,156	97,321	107,732	80,043
Interest Income	925	2,415	1,283	1,365
Total Sources	\$ 594,622	\$ 500,590	\$ 534,661	\$ 354,953
Uses				
Water Projects	\$ 78,335	\$ 62,537	\$ 58,819	\$ 51,738
WasteWater Treatment	163,369	117,814	123,789	98,423
Sanitary Sewer Projects	47,380	61,144	38,302	39,294
Combined Sewer & LTCP Projects	235,322	151,125	184,387	130,475
Stormwater Projects	2,185	1,430	1,706	2,682
Non Process Facilities	5,200	28,613	34,150	20,030
Washington Aqueduct	7,153	10,838	10,896	11,768
Capital Equipment	13,139	29,530	28,151	23,586
Meter Replacement / AMR / CIS	4,926	9,207	26,798	9,311
Total Uses	\$ 557,009	\$ 472,238	\$ 506,998	\$ 387,306
Sources Minus Uses	\$ 37,613	\$ 28,352	\$ 27,663	\$ (32,354)

Cash Reserve Summary

\$ in thousands

	FY 2016 Actual	FY 2017 Approved	FY 2017 Revised	FY 2018 Approved
Beginning O&M Reserve Balance (Net of Rate Stabilization Fund)	\$ 160,055	\$ 140,000	\$ 162,652	\$ 140,000
Operating Surplus	94,364	78,407	82,660	75,821
Wholesale Customer Prior Year Billing Reconciliation	(13,017)	(5,000)	(10,000)	(7,000)
Transfer to Rate Stabilization Fund	(19,000)	-	-	-
Federal Customer Prior Year Billing Reconciliation	(11,679)	(19,201)	(19,201)	(9,019)
Interest Earned from Bond Proceeds	213	505	323	452
Pay-Go Capital Financing	(48,284)	(54,711)	(76,434)	(60,255)
Ending O&M Reserve Balance (Net of Rate Stabilization Fund)	\$ 162,652	\$ 140,000	140,000	140,000
Rate Stabilization Fund	\$ 51,450	\$ 19,450	\$ 51,450	\$ 51,450

\$ in thousands



INTEREST RATE ASSUMPTIONS

Budget Appropriation and Financial Plan

- Variable rate
 - 2.50% for FY 2017 and FY 2018
- Fixed rate
 - 5.75% (FY 2017) and 6.50 (FY 2018)
 - Plus cost of issuance and insurance

CAPITAL FINANCING PLAN

DC Water's comprehensive capital financing plan contains three key goals:
 1) minimize cost of capital; 2) increase operational flexibility; and 3) optimize asset/liability matching through:

- Interim financing
- Permanent bond financing
- Pay-Go financing
- Federal grants

SENIOR BOND RATINGS		
Moody's Investor Service	Aa1	Stable Outlook
Standard & Poor's Corporation	AAA+	Stable Outlook
Fitch's Rating	AA	Stable Outlook

DEBT SERIES	Actual FY 2016			Revised FY 2017			Approved FY 2018		
	Principal	Interest	Total	Principal	Interest	Total	Principal	Interest	Total
Senior Lien									
1998*	\$ 13,920	\$ 9,448	\$ 23,368	\$ 14,750	\$ 8,613	\$ 23,363	\$ 15,565	\$ 7,802	\$ 23,367
Series 2009 A	3,495	3,116	6,611	3,815	364	4,179	4,225	211	4,436
Series 2014 A	-	16,849	16,849	-	16,849	16,849	-	16,849	16,849
Total Senior Lien	\$ 17,788	\$ 29,846	\$ 46,829	\$ 18,565	\$ 25,826	\$ 44,391	\$ 20,190	\$ 25,267	\$ 44,652
Subordinate									
Jennings Randolph Bonds	\$ 373	\$ 432	\$ 805	387	418	805	400	405	805
WASA Bonds	-	-	-	-	10,195	10,195	-	26,135	26,135
Series 2007 A	-	1,893	1,893	-	-	-	-	-	-
Series 2008 A	6,600	3,369	9,969	6,735	680	7,415	6,865	343	7,208
Series 2010 A	417	10,813	11,230	-	11,094	11,094	-	11,094	11,094
Series 2012 A, B-1, B-2, C	4,915	16,192	21,107	5,140	15,918	21,058	5,345	15,713	21,058
Series 2013 A	-	14,994	14,994	-	14,994	14,994	-	14,994	14,994
Series 2014 B	-	252	252	-	1,998	1,998	-	3,250	3,250
Series 2014 C	-	17,468	17,468	-	17,468	17,468	-	17,648	17,648
Series 2015 A,B	-	16,793	16,793	-	17,521	17,521	580	17,521	18,101
Series 2016 A	-	10,500	10,500	-	17,420	17,420	-	17,420	17,420
Series 2016 B	-	-	-	-	867	867	-	858	858
EMCP	-	149	149	-	1,592	1,592	-	1,558	1,558
Commercial Paper	-	93	93	-	915	915	-	879	879
Total Subordinate Lien Debt	\$ 12,304	\$ 92,854	\$ 105,252	\$ 12,262	\$ 111,079	\$ 123,342	\$ 13,190	\$ 127,818	\$ 140,828
Total Debt	\$ 30,092	\$ 122,700	\$ 152,081	\$ 30,827	\$ 136,905	\$ 167,733	\$ 33,380	\$ 153,085	\$ 185,480

* Revenue Bond

Outstanding Debt

\$ in thousands

	Interest Rates (%)	Final Maturity	Amount Outstanding
Senior Debt			
Series 1998 Bonds	5.50-6.00	2028	\$156,605
Series 2009A Bonds	3.00-5.50	2039	8,040
Series 2014A Bonds	4.814	2114	\$350,000
Total Senior Debt			\$514,645
Subordinate Debt			
Series 2008A Bonds	5	2034	13,600
Series 2010A Bonds	4.07-5.523	2044	300,000
Series 2012A Bonds	3.00-5.00	2037	158,740
Series 2012C Bonds	4.00-5.00	2033	163,215
Series 2013A Bonds	4.75-5.00	2048	300,000
Series 2014B Bonds	VR4	2050	100,000
Series 2014C Bonds	3.00-5.00	2044	377,110
Series 2015A Bonds	2.00-5.00	2045	100,000
Series 2015B Bonds	5.00-5.25	2044	250,000
Series 2016A Bonds			389,110
Series 2016B Bonds	3.43	2046	25,000
Government Notes			
Jennings Randolph Reservoir Debt	3.25%	2041	\$12,841
Commercial Paper Notes (“CP Notes”)			
Series C CP Notes (taxable)	VR	20207	\$29,200
Extendable Municipal Commercial Paper Notes (“EMCP Notes”)			
Series A EMCP Notes	VR	N/A	\$50,000
Total Subordinate Debt			\$2,268,816
Total Debt Outstanding			\$2,783,461

DEBT LIMIT: DC Water is not subject to any legal debt limitations. However, prior to any new debt issuance, DC Water must meet an additional bonds test and certify revenue sufficiency

PUBLIC UTILITY SENIOR LIEN REVENUE BONDS: 1) Series 1998, (fixed-rate, Aaa/AAA/AAA, FSA insured, March 1998); and 2) Series 2009A (fixed-rate, Aa3/AA/AA-, January 2009)

PUBLIC UTILITY SUBORDINATE LIEN REVENUE BONDS: 1) Series 2007A (fixed-rate, Aaa/AAA/AAA, FGIC insured, May 2007); and 2) Series 2013A (fixed-rate, Aa3/AA/AA-, July 2013)

PUBLIC UTILITY SUBORDINATE LIEN REVENUE BONDS (FEDERALLY TAXABLE ISSUER SUBSIDY BUILD AMERICA BONDS): 1) Series 2010A (fixed-rate, Aa3/AA-/AA, October 2010)

PUBLIC UTILITY SUBORDINATE LIEN MULTIMODAL REVENUE BONDS: 1) Series 2012B-1 and Series 2012B-2 (SIFMA indexed variable-rate Aa3/AA/AA-, March 2012)

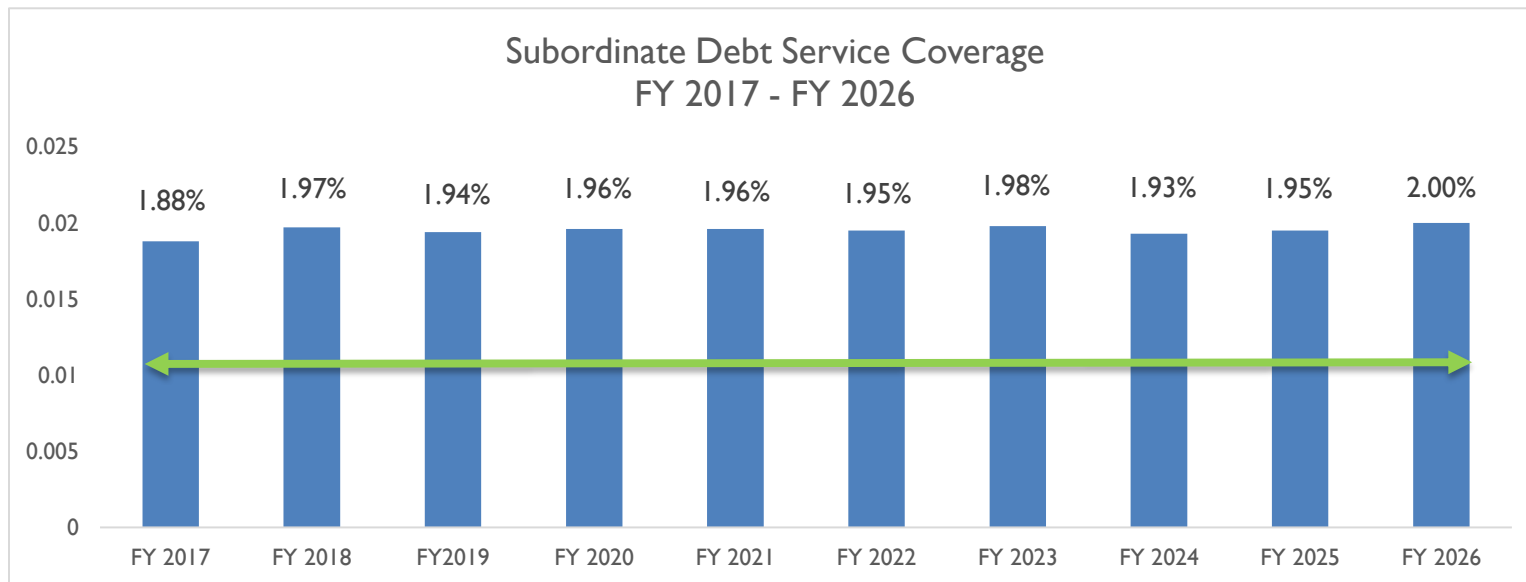
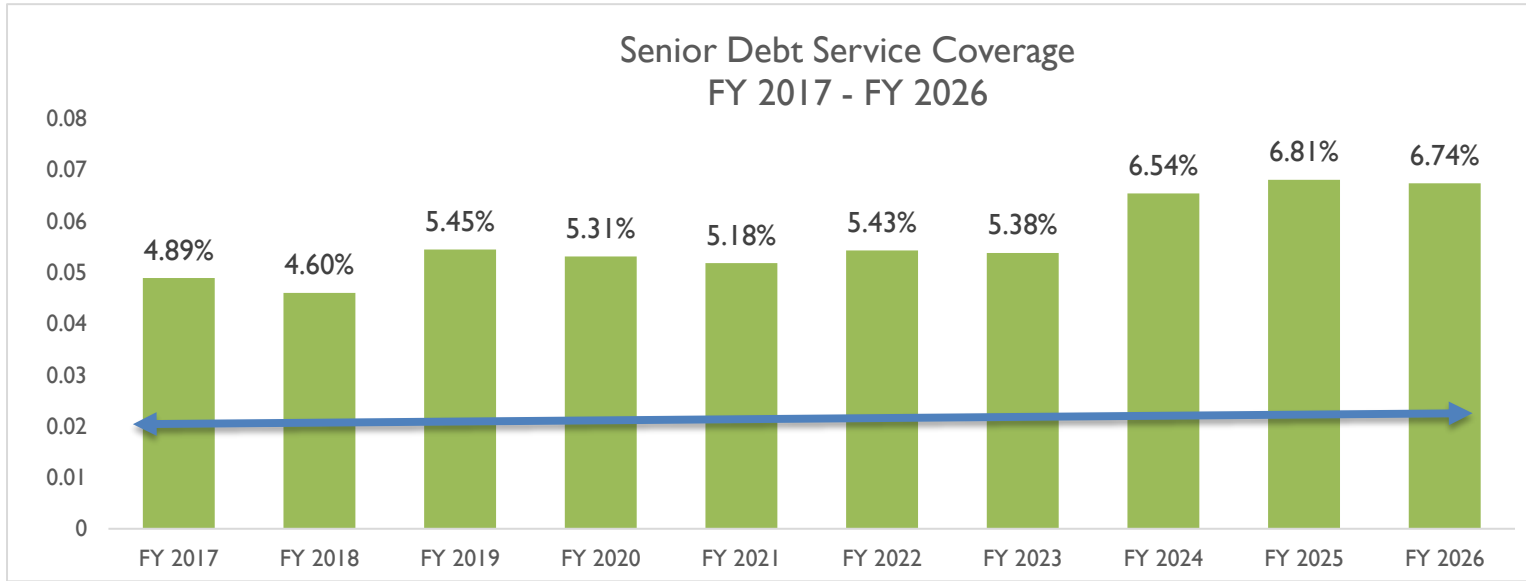
PUBLIC UTILITY SUBORDINATE LIEN REVENUE REFUNDING BONDS: 1) Series 2008A: (refunded Series 2004, fixed-rate, Aaa/AAA/AAA, Assured Guaranty insured, April 2008); 2) Series C taxable commercial paper: (refunded Series 2007B, April 2008); and 3) Series 2012C: (advance refunded Series 2003, fixed-rate, Aa3/AA/AA-, March 2012)

NOTES FOR JENNINGS RANDOLPH RESERVOIR: The note payable to the Federal government for improvements to the Jennings Randolph Reservoir is considered subordinate debt under the Master Indenture of Trust. The notes were issued to provide a backup water supply facility for the Authority. DC Water's share of operating and capital cost is 30 percent

NOTES FOR LITTLE SENECA RESERVOIR: The note payable to Washington Suburban Sanitary Commission (WSSC) is considered subordinate debt under the Master Indenture of Trust. The notes were issued by WSSC for construction of the Little Seneca Dam and Lake for backup and peak-day water supply for the Authority. DC Water's share of operating and capital costs is 40 percent. DC Water prepaid the note in full in August 2013

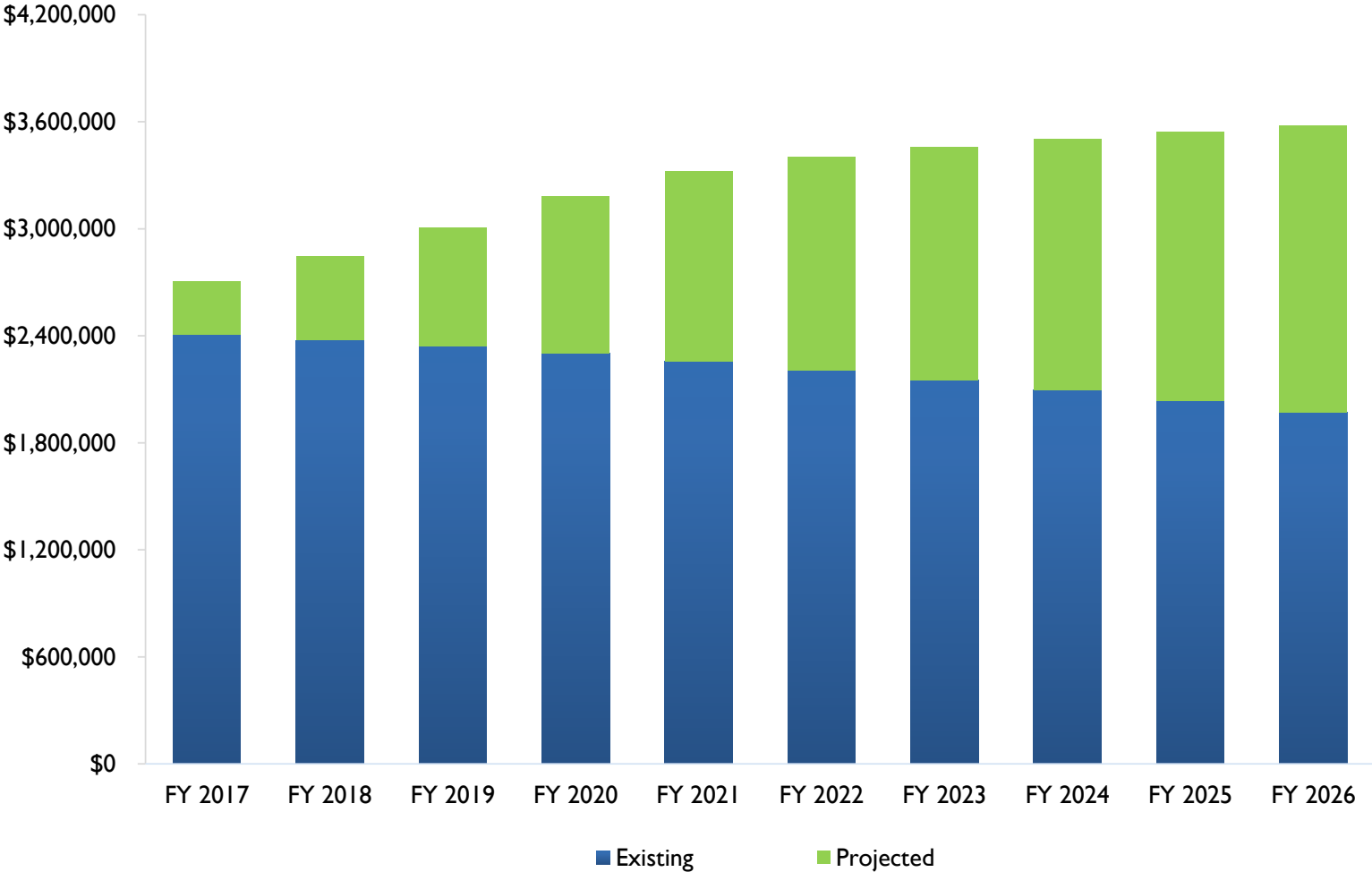
COMMERCIAL PAPER: These notes issued are considered subordinate debt under the Master Indenture of Trust. DC Water's commercial paper program is issued in increments with maturities less than 270 days. As described in Section III, the Board approved the commercial paper program in early FY 2002; proceeds from the sale of the notes are used for interim bond financing, short-term financing for capital equipment and certain taxable costs for the Washington Aqueduct. Each new bond issuance is evaluated to determine the most cost effective way of reducing the amount of taxable commercial paper. Normal market conditions for commercial paper carries significantly lower interest rates than long-term debt. In April 2013, DC Water successfully extended the Letter of Credit with JP Morgan Chase Bank and US Bank. The \$200 million commercial paper program includes: 1) Series A (tax-exempt) aggregate principal amount not to exceed \$75 million; 2) Series B (tax-exempt) aggregate principal amount not to exceed \$50 million; and (3) Series C (taxable) aggregate principal amount not to exceed \$75 million.

DEBT POLICY: DC Water's comprehensive debt policy can be found on our website at www.dcwater.com.



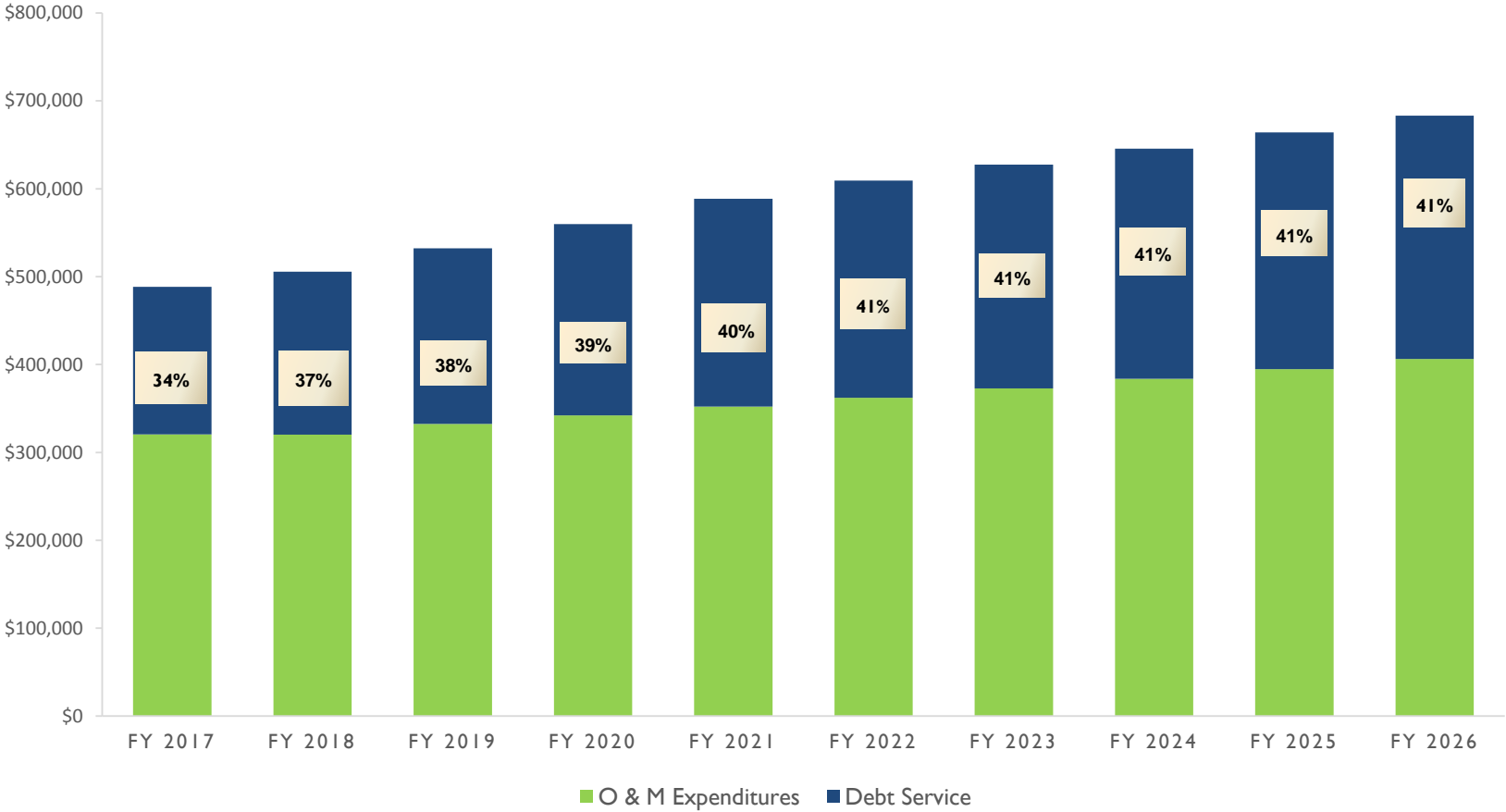
Existing & Projected Debt Service

\$ in thousands



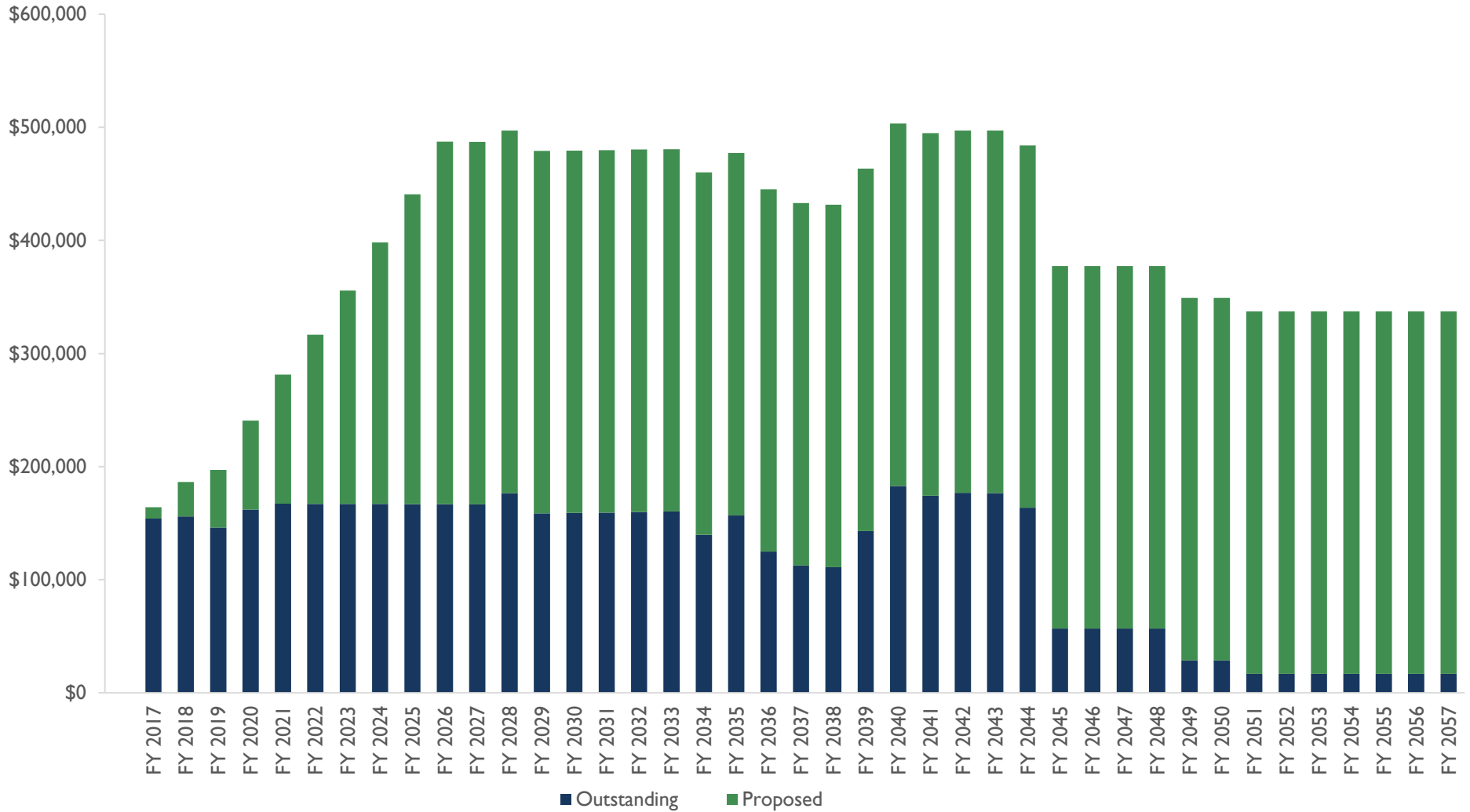
Debt Service as Percentage of O&M Expenditures

\$ in thousands



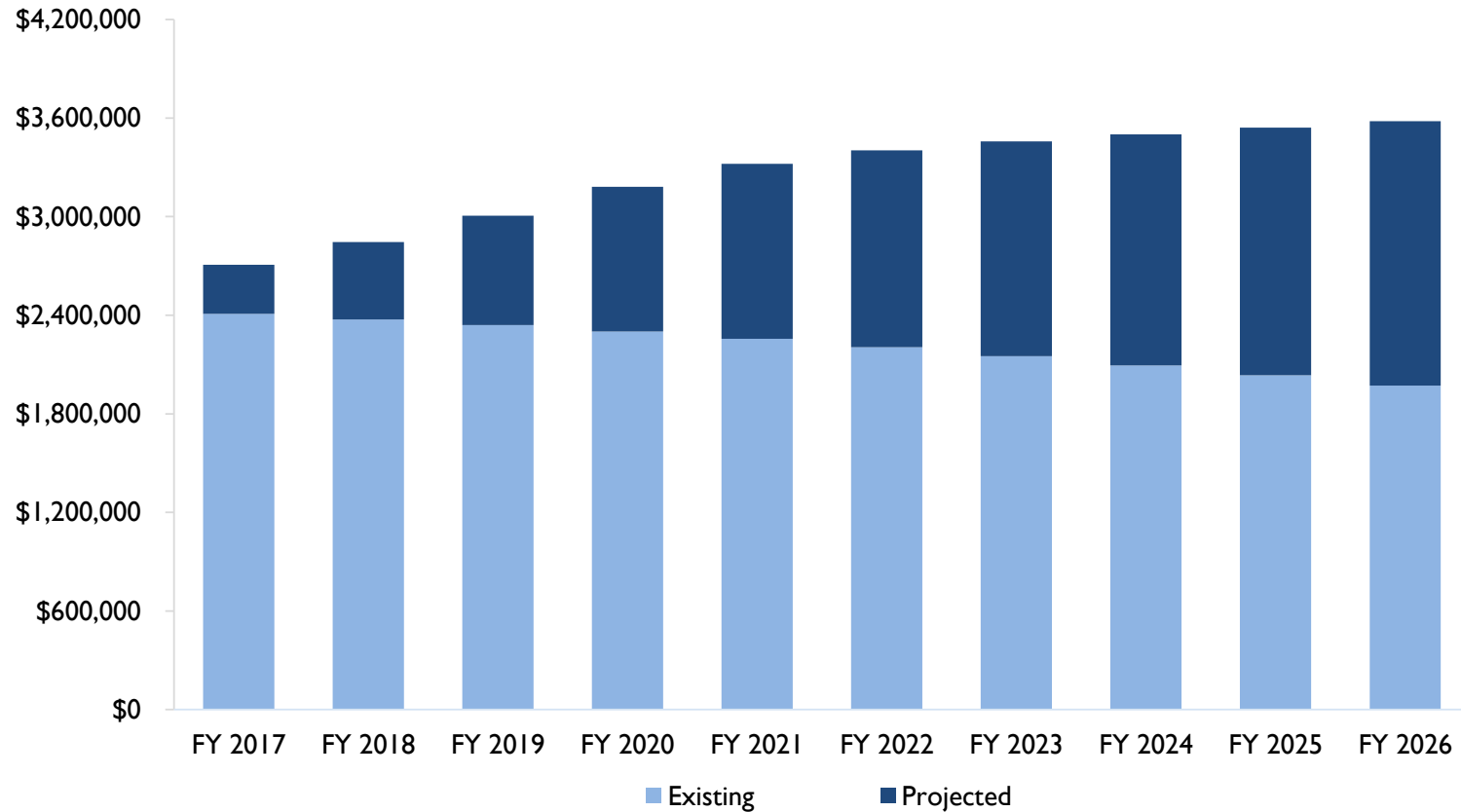
Total Proposed and Outstanding Debt

\$ in thousands



Principal Debt Outstanding

\$ in thousands

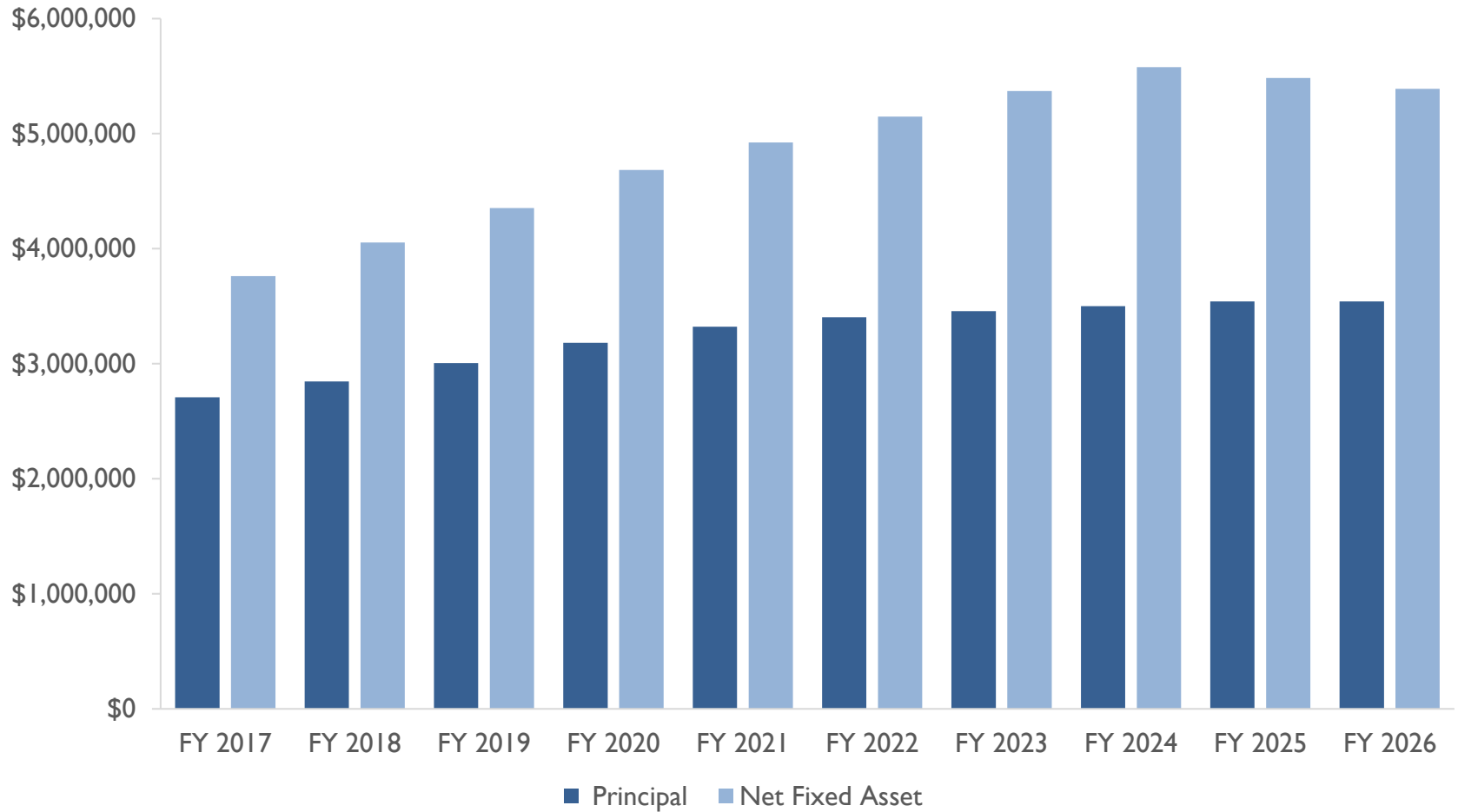


- The largest source of funding for DC Water's Capital Improvement Program is debt

- Over the next 10 - years, DC Water will issue approximately \$1.8 Billion in debt (this includes the funding of Reserves and Costs of Issuance), increasing total Debt Outstanding to \$3.6 Billion at the end of FY 2025

Principal vs. Net Fixed Assets

\$ in thousands



Debt to Net Fixed Assets Ratio

