

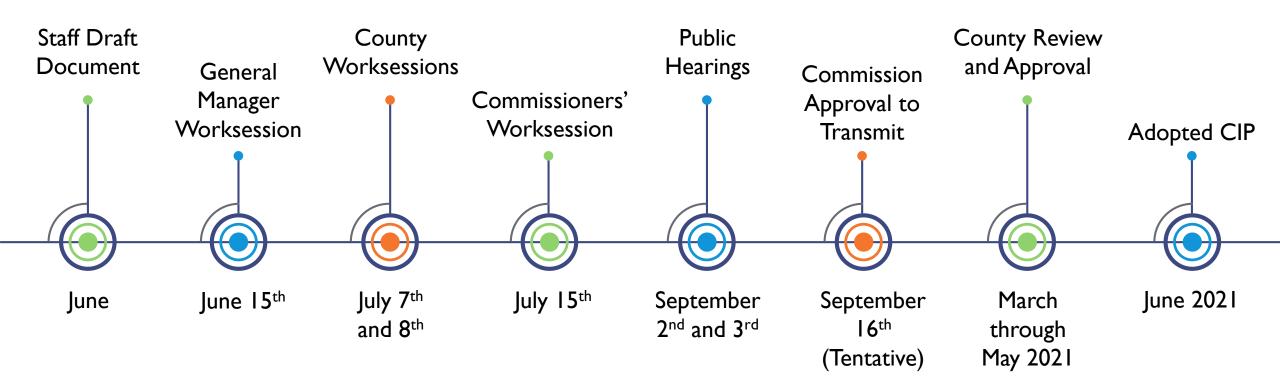
FY 2022 CIP Commissioners' Worksession

Agenda

- Capital Improvements Program (CIP) review process
- Strategic priorities
- Capital budget policy guidelines
- Capital budget affordability
- Cost saving efforts
- FY 2022 CIP overview and highlights
- Impacts of CIP reductions



CIP Review Process





Strategic Priorities

The CIP supports the following WSSC Water strategic priorities:



Optimize Infrastructure

- · Achieve industry-leading reliability and asset integrity
- Expand resilience and balance risk

Spend Customer Dollars Wisely



- Improve operational efficiency
- Improve fixed asset utilization
- Improve financial process efficiency and fiscal sustainability

Enhance Customer Experience



- Deliver safe, reliable and consistent service
- Provide timely response to customer queries
- Be a good citizen within our communities

Protect Our Resources



- Resolve and learn from past incidents
- Maintain best-in-class operating environment safety for employees
- Plan proactively with community stakeholders
- Secure the commission's critical infrastructure



Capital Budget Policy Guidelines

Attain goal of a sustainable and affordable CIP through:

- Key financial metrics to assess debt service levels while balancing rate and operating growth
 - New debt issuance and related debt service expense must stay within the following Chief Financial Officer (CFO) guidelines:
 - Debt service coverage: 1.10 1.25
 - Debt service as a percentage of total expenditures: < 40%
- Leveraging multi-year financial planning to establish capital planning expectations for resource capacity and affordability
 - Bond issuance limits (\$350 million) set over the capital planning period to smooth out demands
 - Eliminate front loading of projects in CIP years
 - Greater attention on project prioritization
 - Scale down project bond funding to align with affordability



Capital Budget Policy Guidelines

- Maintain adequate liquidity and fund balance reserves
 - Total operating expenditure growth cannot outpace total revenue growth. This includes the impact of debt service expenses and Pay-As-You-Go (PAYGO) financing
 - Days operating reserves-on-hand:
 75 105 days
 - Ending fund balance as a percentage of operating revenue: 15.0% minimum

Metric	CFO Guideline
Debt Service Coverage:	
Debt Service Coverage	1.10 - 1.25
Debt Service as a Percentage of Total Expenditures	< 40.0%
Liquidity and Reserves:	
Days Operating Reserves-on-Hand	75 - 105
Ending Fund Balance as a Percentage of Operating Revenue	15.0%



- Momentum of capital budget
 - FY 10 capital budget of \$371.1 million has grown to \$605.4 million in FY 21
- Outstanding debt growth of +146%, from \$1.36 billion in FY 10 to \$3.43 billion in FY 20
 - Higher borrowing costs due to interest rate risk
- Without constraints, debt service as a percentage of total expenditures could exceed 40% threshold
 - Restricts operating budget flexibility and program enhancements
 - Further refunding of outstanding debt is limited



- Customer affordability pressure with a preliminary anticipated rate increase of more than 10.0% in FY 22 and increases between 5.0% and 7.5% for FY 23 FY 27
 - Ready-to-serve charges should be reviewed in the near future
 - o Fund balance and Reconstruction Debt Service Offset (REDO) phase-down and phase-out
 - Increased use of PAYGO and reduction to operating expenses



A fiscally responsible CIP results in:

- Maintaining our AAA credit rating
 - Adhering to financial metrics and guidelines
- An affordable CIP
 - Fits within rate increases as proposed
 - o Aligns anticipated bond issuance limits over the six-year program
 - Keeps project funding in line with what is affordable
- Increased importance on prioritization of projects for inclusion, elimination, scaledown, or deferral
- Increased use of PAYGO to lower debt service expense and improve metric results - especially with rate risk



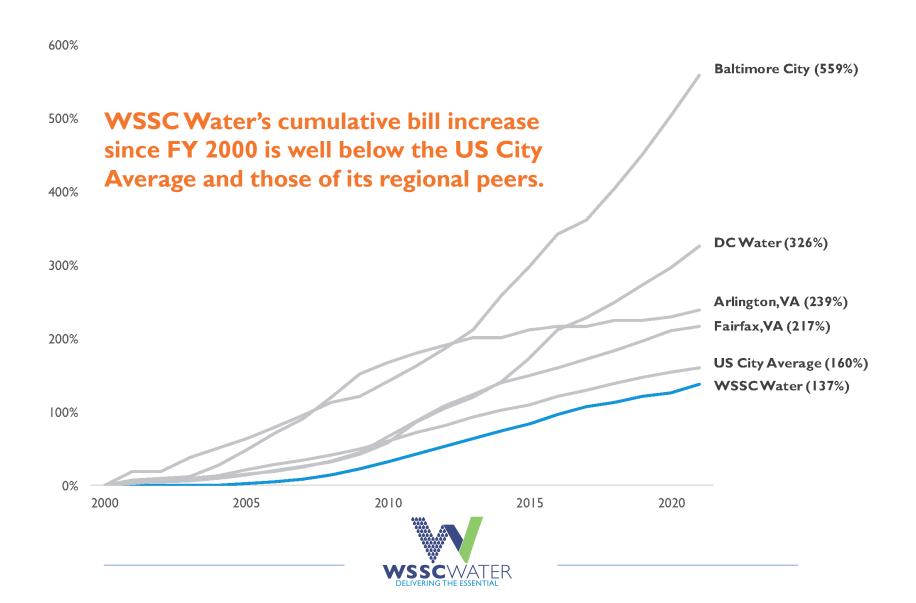
Δ	Financial Plan (Unconstrained)			FY 2021		FY 2022		FY 2023		FY 2024	ا	FY 2025	F	Y 2026	F	Y 2027
	Tinanciai Tian (Onconstramed)		A	Approved	Pr	eliminary	Р	rojected	P	rojected	P	rojected	P	rojected	Pı	ojected
I_	Affordability:															
	Rate Increase			6.0%		10.5%		7.5%		6.5%		6.0%		6.0%		5.0%
II	Capital Demands:															
	New Debt Issues		\$	409,922	\$	427,880	\$	443,100	\$	383,600	\$	350,000	\$	350,000	\$	350,000
	PAYGO			31,016		31,016		31,016		44,000		65,000		80,000		80,000
	Total Funding for Bonded Projects			440,938		458,896		474,116		427,600		415,000		430,000		430,000
	Capital Budget (Shortfall) v. Constraint			-		77,880		93,100		33,600		-		-		-
Ш	Debt Service Coverage:															
	Net Operating Revenue		\$	318,109	\$	345,421	\$	390,945	\$	432,365	\$	472,646	\$	499,904	\$	559,217
	Debt Service			313,865		327,389		352,870		374,801		399,517		420,389		440,455
	Net Revenue Strength			4,244		18,032		38,075		57,565		73,129		79,514		118,762
IV	Liquidity and Reserves:															
	Ending Fund Balance		\$	121,388	\$	145,872	\$	163,914	\$	186,461	\$	201,575	\$	208,074	\$	253,821
	Net Increase/(Shortfall)			-		-		18,042		22,547		15,114		6,499		45,747
V	Unspecified:															
	(Savings Plan)/Additional		\$	-	\$	-	\$	-	\$	-	\$	-	\$	15,926	\$	16,245
D	Metrics	CFO		FY 2021		FY 2022		FY 2023		FY 2024	ا	FY 2025	F	Y 2026	F	Y 2027
	rieurics	Guideline	A	Approved	Pr	eliminary	Р	rojected	P	rojected	P	rojected	P	rojected	Pi	ojected
ı	Debt Service Coverage:															
a	Debt Service Coverage	1.10 - 1.25		1.01		1.06		1.11		1.15		1.18		1.19		1.27
b	Debt Service as a Percentage of Total Expenditures	< 40.0%		37.5%		37.9%		39.1%		39.4%		39.5%		39.0%		39.5%
II	Liquidity and Reserves:															
a	Days Operating Reserves-on-Hand	75 - 105		53.0		61.7		66.3		71.5		72.7		70.4		83.1
b	Ending Fund Balance as a Percentage of Operating Revenue	15.0%		15.0%		17.2%		18.0%		19.3%		19.8%		19.3%		22.0%
III	Workforce															
	Workyears	N/A		1,776		1,776		1,776		1,776		1,776		1,776		1,776



٨	Financial Plan (Constrained)			FY 2021		FY 2022		FY 2023		FY 2024		FY 2025	FY 2026		FY 202	
	Financial Fian (Constrained)		A	Approved	Pr	eliminary	P	rojected	P	Projected	F	Projected	P	rojected	P	rojected
ı	Affordability:															
	Rate Increase			6.0%		10.1%		7.5%		6.5%		6.0%		6.0%		5.0%
Ш	Capital Demands:															
	New Debt Issues		\$	409,922	\$	350,000	\$	350,000	\$	350,000	\$	350,000	\$	350,000	\$	350,000
	PAYGO			31,016		31,016		31,016		44,000		65,000		80,000		80,000
	Total Funding for Bonded Projects			440,938		381,016		381,016		394,000		415,000		430,000		430,000
	Capital Budget (Shortfall) v. Constraint			-		(77,880)		(93,100)		(33,600)		-		-		-
Ш	Debt Service Coverage:															
	Net Operating Revenue		\$	318,109	\$	342,302	\$	387,592	\$	428,788	\$	468,847	\$	495,870	\$	531,97
	Debt Service			313,865		324,270		344,075		362,333		386,209		407,081		427,14
	Net Revenue Strength			4,244		18,032		43,517		66,456		82,639		88,789		104,82
IV	Liquidity and Reserves:															
	Ending Fund Balance		\$	121,388	\$	145,872	\$	169,356	\$	200,794	\$	225,417	\$	241,190	\$	273,00
	Net Increase/(Shortfall)			-		-		23,484		31,438		24,623		15,773		31,81
V	Unspecified:															
	(Savings Plan)/Additional		\$	-	\$	-	\$	-	\$	-	\$	-	\$	15,926	\$	16,24
	Metrics	CFO		FY 2021		FY 2022	ا	FY 2023		FY 2024		FY 2025		FY 2026	ı	FY 2027
Ь	Metrics	Guideline	A	pproved	Pr	eliminary	P	rojected	P	Projected	F	Projected	P	rojected	P	rojected
ı	Debt Service Coverage:															
a	Debt Service Coverage	1.10 - 1.25		1.01		1.06		1.13		1.18		1.21		1.22		1.25
b	Debt Service as a Percentage of Total Expenditures	< 40.0%		37.5%		37.7%		38.5%		38.6%		38.7%		38.2%		38.8%
II	Liquidity and Reserves:															
a	Days Operating Reserves-on-Hand	75 - 105		53.0		61.9		69.2		78.0		82.4		82.6		90.5
b	Ending Fund Balance as a Percentage of Operating Revenue	15.0%		15.0%		17.2%		18.7%		20.9%		22.2%		22.4%		24.2%
Ш	Workforce															
	Workyears	N/A		1,776		1,776		1,776		1,776		1,776		1,776		1,776



FY 2000 to 2021 Bill Increase Comparison @ 165 Gallons per Day



Cost Saving Efforts

- Supply management project savings since FY 2013
 - Cost reductions in excess of \$47.0 million
 - Cost avoidance savings of nearly \$45.0 million
- Group insurance plan revision savings of \$4.3 million since FY 2017
- 66 frozen positions
- Reduced overtime expenses of \$3.0 million since FY 2017
- Workers' compensation claim totals reduced by 50% (\$425,000)
- Cost savings to offset COVID-19 impacts
 - o FY 2020: \$61.1 million
 - o FY 2021: \$72.7 million

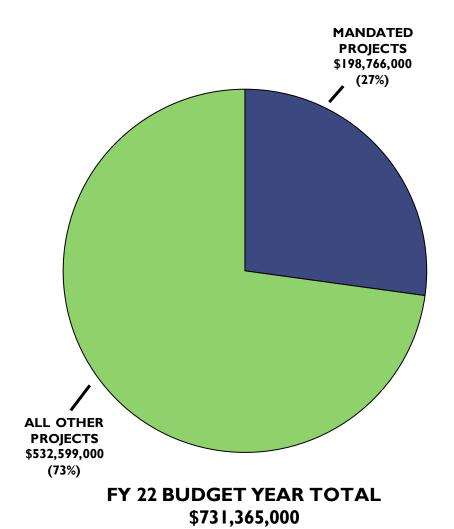


FY 2022 - FY 2027 CIP

- Six-year program cost of \$3.9 billion
 - Bond funded \$3.3 billion (plus PAYGO of \$331.0 million)
 - Mandated projects \$1.3 billion (33.3%)
 - Blue Plains \$392.1 million
 - Consent Decree \$892.6 million
 - Other Regulatory & Agreement \$14.7 million
- FY 22 budget year cost of \$731.4 million
 - Bond funded \$625.6 million (plus PAYGO of \$31.0 million)
 - Mandated projects \$198.8 million (27.2%)





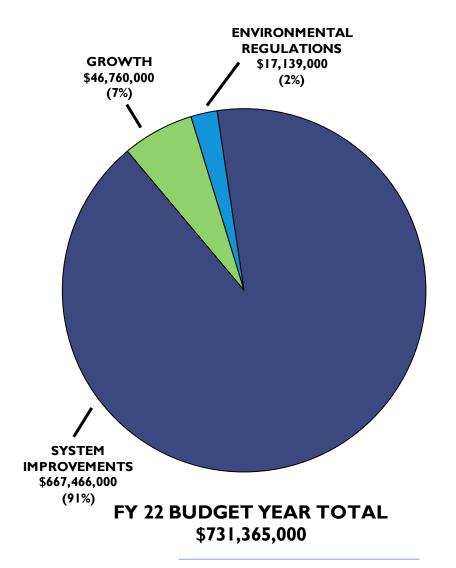


27%

of the planned spending in the FY 22 combined program is mandated by existing multi-jurisdictional agreements or by consent decrees.

Mandated Projects	FY 22 Amount
Consent Decrees	140,148,000
Blue Plains	54,635,000
Other Agreements	3,983,000
Total	198,766,000



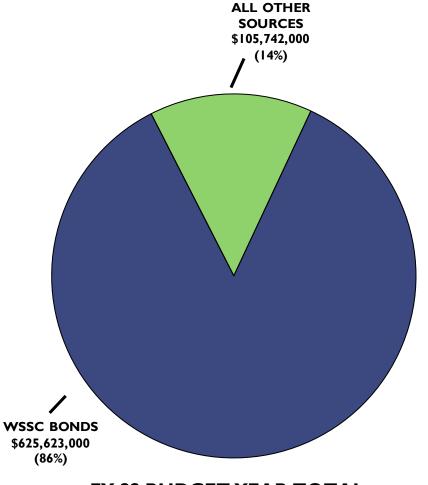


91%

of the FY 22 combined program is for reinvestment in our system infrastructure.

Major Category	FY 22 Amount
Growth	46,760,000
System Improvements	667,466,000
Environmental Regulations	17,139,000
Tota	731,365,000





FY 22 BUDGET YEAR TOTAL \$731,365,000

86%

of the FY 22 combined program is funded through long-term debt.

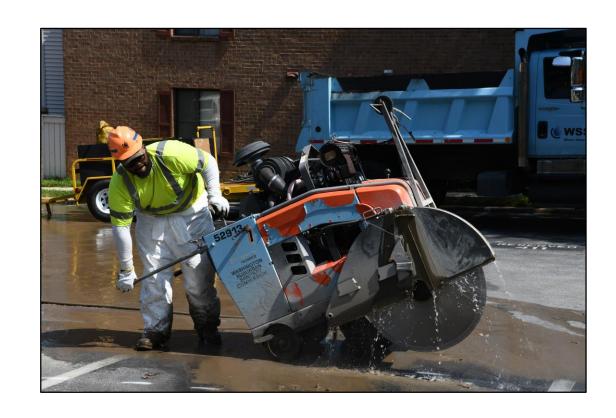
Funding Source		FY 22 Amount
Federal & State Grants		24,471,000
SDC & Others		46,912,000
Local Government Contributions		3,343,000
WSSC Bonds		625,623,000
PAYGO		31,016,000
	Total	731,365,000



Water Reconstruction Program

(W-1.00; p. 7-2)

- Program scope: over 4,500 miles of water main and associated water house connections
- Rehabilitated on average more than 50 miles per year over the past 10 years
- Investing in new technology and tools to develop a more efficient and effective program
- FY 22 program: 31 miles
- FY 22 budget: \$83.6 million





Large Diameter Water Pipe & Large Valve Rehabilitation Program

(W-161.01; p. 3-7)

- Program scope: over 1,000 miles of water pipe and over 1,400 large water valves
- Over 100 miles of Pre-stressed Concrete Cylinder Pipe (PCCP) inspected and monitored 24/7; avoided 30 imminent pipe failures
- Over 7,900 pipe joints repaired
- Over 550 pipe segments repaired/replaced
- Over 1,300 valves inspected and repaired
- FY 22 budget: \$61.7 million





Sewer Reconstruction Program

(S-1.01; p. 7-3)

- Program scope: nearly 5,000 miles of sewer main and associated sewer house connections
- Rehabilitate 20 miles per year
- Consent Decree: all 131.4 miles awarded for construction; 131.1 miles completed as of April 2020
- Funding via Maryland Department of the Environment (MDE) low-interest loans and Bay grants
- FY 22 program: 20 miles sewer mains; 6 miles lateral lines and house connections
- FY 22 budget: \$71.1 million





Trunk Sewer Reconstruction Program

(S-170.09; p. 4-13)

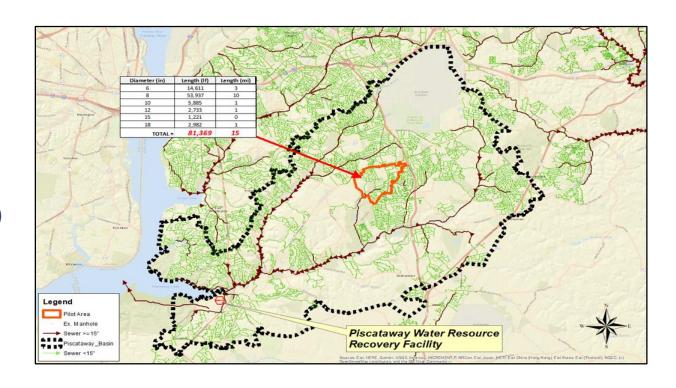
- Inspection and evaluation of all 24 sewer basins complete (over 1,300 miles inspected)
- Comprehensive rehabilitation of sewer pipes in Environmentally Sensitive Areas (ESAs) currently underway to reduce infiltration and inflow
- Replacement of pipe, relining of pipe, pipeline protection, and rehabilitation of manholes and force mains
- Consent Decree: 158.3 of 158.5 miles awarded for construction; 124.5 miles completed as of April 2020
- Sanitary Sewer Overflow (SSO) Consent Decree deadline extended to 2022
- FY 22 budget: \$58.6 million





Piscataway Rehabilitation Program

- Rehabilitation work for the Piscataway Basin was added to the Sewer and Trunk Sewer reconstruction programs in FY 22
- The work includes capital activities (pipe replacement and pipe lining) and operating activities (pipe grouting and manhole repairs)
- FY 22 budget:
 - o \$31.1 million in capital
 - o \$9.9 million in operating
- Total budget estimate:
 - o \$100.7 million in capital
 - \$26.8 million in operating





Potomac Water Filtration Plant (WFP)

 The Potomac WFP produced an average of 112.9 million gallons of water per day (MGD) in FY 20

Potomac WFP Consent Decree Program

(W-73.33, p. 3-6)

- Short-term capital projects substantial completion expected in November 2020 (delayed due to COVID-19)
- Long-term Upgrade Plan approved by MDE currently in design
- Total cost estimate: \$203.0 million
- FY 22 budget: \$10.5 million





Patuxent WFP

 The Patuxent WFP produced an average of 49.7 MGD in FY 20

Patuxent Raw Water Pipeline (W-172.07, p. 3-9)

- New raw water pipeline to plant to increase capacity up to 110 MGD
- FY 22 budget: \$9.5 million

Rocky Gorge Pump Station Upgrade (W-172.08, p. 3)

- Upgrades to expand capacity of pumps to send up to 110 MGD of raw water up to plant
- On close-out list for FY 22





Blue Plains Wastewater Treatment Plant (WWTP)

(S-22.series, p. 4-4 to 4-8)

- The Blue Plains WWTP is owned and operated by DC Water
- WSSC Water's share of the capital costs of the plant is approximately 46%
- Blue Plains treats approximately 65% of WSSC Water's wastewater
- The largest projects include the long-term control plan tunnels
- At \$392.1 million, Blue Plains projects represent 19% of the six-year CIP program
- The FY 22 budget, at \$54.6 million, represents 12% of the CIP budget year





Broad Creek Wastewater Pumping Station (WWPS) Augmentation

(S-43.02, p. 3)

- Substantial completion on January 31, 2020
- · Punchlist items being addressed
- On close-out list for FY 22
- Total estimated cost is \$183.2 million





Piscataway Bioenergy

(S-103.02; p. 4-10)

- Innovative project that will transform sewage into renewable energy
- Recover 2-3 megawatts of renewable energy
- Treat biosolids from 5 Water Resource Recovery Facilities (WRRFs)
- Reduce greenhouse gas emissions
- Protect the Chesapeake Bay
- Projected economic benefit of \$3.7 million per year
- Construction started May 2019
- Phase 2 contract approved April 2020
- FY 22 budget is \$97.9 million





Advanced Metering Infrastructure (AMI)

(A-109.00; p. 7-9)

- Implementation of a system-wide fully automated meter reading infrastructure system and new comprehensive customer billing and data analysis integration software
- AMI will improve both customer service and operational efficiency including:
 - Allows for monthly billing
 - o Provides customers near real-time water usage information to help them save money
 - o Reduced customer calls and reduced field investigation visits
 - Opportunities to employ more sophisticated rate structures
 - o Analysis of individual consumption patterns to detect meters wearing out and perform meter sizing analysis
 - Monitoring of individual consumption to perform precise, targeted conservation enforcement during droughts
 - Opportunities to improve the monitoring and operation of the distribution system and reduce non-revenue water
- Estimated total cost of \$102.6 million (order of magnitude estimate based on March 2011 study plus inflation; expected to change based upon actual bids)



• There are II new projects in the FY 22 CIP with a total cost of \$109.0 million

Prince George's County

- S 28.20 Pumpkin Hill WWPS & FM
- S 77.21 Parkway WRRF Electrical Upgrades
- S 87.19 Horsepen WWPS & FM
- S 89.25 Little Anacostia WWPS & FM
- S 118.10 Viva White Oak Sewer Augmentation*
- S 131.11 Calm Retreat Sewer Main*
- S 131.12 Swan Creek WWPS & FM

Bi-County

• S - 89.24 Anacostia #2 WWPS Upgrades

Montgomery County

- S 118.09 Viva White Oak Sewer Main*
- W 46.26 Pleasant's Property Water Main Extension*†
- W 113.21 Viva White Oak Water Main*

*Developer-built

†Cost information still pending



• There are 10 projects pending close-out in the FY 22 CIP with a total cost of \$299.2 million

Prince George's County

- S 43.02 Broad Creek WWPS Augmentation
- S 131.10 Fort Washington Forest No. I WWPS Augmentation
- W 84.02 Ritchie Marlboro Road Transmission Main & PRV
- W 111.05 Hillmeade Road Water Main

Bi-County

- W 139.02 Duckett & Brighton Dam Upgrades
- W 172.08 Rocky Gorge Pump Station Upgrade

Montgomery County

- S 84.68 Clarksburg Wastewater Pumping Station & Sewer Improvements
- W 46.24 Clarksburg Area Stage 3 Water Main, Part 4
- W 46.25 Clarksburg Area Stage 3 Water Main, Part 5
- W 90.04 Brink Zone Reliability Improvements



Impacts of CIP Reductions

Project/Program	Phase	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27
Combined Program Bond Fundable Only		656,639	678,346	611,793	554,018	550,379	561,770
Less Mandated Projects		(175,423)	(207,637)	(188,148)	(185,848)	(196,943)	(201,269)
Less Projects in Construction		(200,231)	(152,336)	(92,852)	(78,581)	(80,200)	(82,466)
Remaining Projects Eligible to be Cut		280,985	318,373	330,793	289,589	273,236	278,035
Target Reduction Amounts>		111,331	133,037	47,936	(39,839)	(64,906)	(53,516)
Prince George's County Project Cuts							
W - 000012.02 - Prince George's County HG415 Zone Water Main	D-90	2,267	9	-	-	-	-
W - 000034.02 - Old Branch Avenue Water Main	D-100	2,778	2,778	1,111	-	-	-
W - 000034.05 - Marlboro Zone Reinforcement Main	D-99	1,946	1,179	-	-	-	-
W - 000084.05 - Prince George's County 450A Zone Water Main	D-90	13,805	13,217	8,817	4,417	561	- 11
W - 000137.03 - South Potomac Supply Improvement, Phase 2	D-70	14,312	14,312	14,312	-	-	-
S - 000028.20 - Pumpkin Hill WWPS & FM	D-0	1,725	1,656	288	-	-	-
S - 000077.21 - Parkway WRRF Electrical Upgrades	P-0	1,760	803	2,453	2,453	2,453	704
S - 000087.19 - Horsepen WWPS & FM	P-15	415	1,493	858	561	-	-
S - 000157.02 - Western Branch WRRF Process Train Improvements	D-2	7,216	18,211	17,765	9,150	4,895	924
S - 000094.13 - Damascus Town Center WWPS Replacement	P-80	470	2,092	3,699	172	-	-
S - 000094.13 - Damascus Town Center WWPS Replacement S - 000094.14 - Spring Gardens WWPS Replacement	P-80 P-5	470 37	2,092	3,699	1,647	792	-
Subtotal		507	2,323	4.304	1,819	792	
i-County Projects & Program Cuts		307	2,323	1,501	1,017	,,,	
W - 000073.32 - Potomac WFP Main Zone Pipeline	P-25	913	506	17,618	14,193	3,513	_
W - 000161.01 - Large Diameter Water Pipe & Large Valve Rehabilitation Program	On-going	61,681	71,374	80,320	83,665	86,560	89,355
W - 000172.07 - Patuxent Raw Water Pipeline	D-100	9,515	3,509	2,888	-	-	-
S - 000089.24 - Anacostia #2 WWPS Upgrades	D-0	8,523	6,788	2,910	-	-	-
S - 000170.08 - Septage Discharge Facility Planning & Implementation	D-100	12,461	12,461	2,769	3,643	3,643	-
W - 000001.00 - Water Reconstruction Program	On-going	83,563	98,645	112,801	128,392	143,484	159,641
A - 000101.04 - Laboratory Division Building Expansion	D-0	9,482	9.680	722	-	-	_
A - 000102.00 - Engineering Support Program	On-going	18,000	18,000	20,000	20,000	20,000	20,000
A - 000103.00 - Energy Performance Program	On-going	3,576	4,376	2,750	1,375	-	-
W - 000105.00 - Water Storage Facility Rehabilitation Program	On-going	3,000	4,000	5,000	6,000	7,000	7,000
W - 000107.00 - Specialty Valve Vault Rehabilitation Program	On-going	2,252	1,248	1,302	457	335	400
A - 000109.00 - Advanced Metering Infrastructure	P-80	21,288	31,805	31,805	13,464		-
Subtotal		234,254	262,392	280,885	271,189	264,535	276,396

Required Reduction = 1.0% rate decrease: 151,355



Impacts of CIP Reductions



Optimize Infrastructure

- Delays to the risk reduction at the Potomac WFP
- Delays to the risk reduction and operational benefits of an expanded Patuxent WFP
- Increased backlog of water tanks needing rehabilitation
- Deferred corrections of water deficiencies in the Clinton Zone



Spend Customer Dollars Wisely

- Possible fines for failing to meet Consent Decree deadlines
- Delays to the benefits of AMI, including monthly billing
- Delays to the benefits of energy efficiency improvements



Enhance Customer Experience

- Increased frequency of breaks and leaks
- Delayed response times to breaks and leaks
- Loss of water service to residents and businesses
- Possible water quality violations at the Consolidated Laboratory
- Reduced access to recreation areas due to increased SSOs

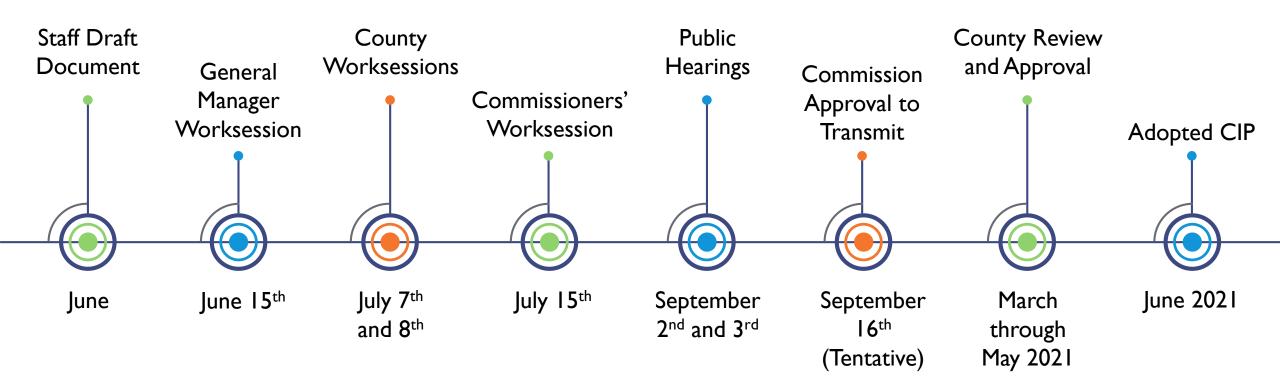


Protect Our Resources

- Increased frequency of SSOs
- Delays to security and safety improvements



CIP Review Process





Questions?



