

WASHINGTON SUBURBAN SANITARY COMMISSION

SPENDING AFFORDABILITY FISCAL YEAR 2019 Meeting #1

September 7, 2017

REVENUES AND EXPENDITURES - IMPACT ON ADOPTED CHARGES

WATER AND SEWER PROGRAM COMBINED OPERATING FUNDS

Base Case		FY 2018	FY 2019	Dollar	W&S Rev
(In Thousands \$000s)		Approved	Estimated	Change	Impact*
1	OPERATING REVENUES				
2	Adopted Water and Sewer Charges	\$ 600,902	\$ 600,902	\$ -	0.0%
3	OPERATING EXPENSES				
4	Salaries and Wages	\$ 120,276	\$ 125,688	\$ 5,412	0.9%
5	Heat, Light, and Power	22,015	22,675	660	0.1%
6	Regional Sewage Disposal	53,617	53,617	-	0.0%
7	All Other	242,177	244,598	2,422	0.4%
8	Operational Improvements	-	6,000	6,000	1.0%
9	DEBT SERVICE	257,071	281,174	24,103	4.0%
10	PAYGO (Contribution to bond fund)	30,193	36,958	6,765	1.1%
11		\$ 725,348	\$ 770,711	45,363	7.5%
12	REVENUES				
13	Other Sources and Fees	(104,466)	(104,738)	(272)	0.0%
14	OTHER TRANSFERS AND CREDITS	(19,980)	(27,968)	(7,988)	-1.3%
15	Total - Base Case Revenue Need	\$ 600,902	\$ 638,005	\$ 37,103	6.2%

16 *Approximately \$6 million in additional operating expenses = 1 percent increase in revenue

	FY 2019	W&S Rev
	Estimated**	Impact
17	Potential Offsets to Revenue Increase:	
18	\$50 million CIP Reduction = Debt Service Impact @ 5% Interest	-\$ (1,626)
19	\$100 million CIP Reduction = Debt Service Impact @ 5% Interest	-\$ (3,253)
20	\$125 million CIP Reduction = Debt Service Impact @ 5% Interest	-\$ (4,066)

21 **Notable Assumptions:**

22 4.5% increase in Salaries & Wages FY 2019 through FY 2024

23 1.0% increase in All Other FY 2019; 2.0% remains for outer years

24 \$6 million included for Operational Improvements

25 92% completion factor for CIP; 100% for Information Only (Including Reconstruction)

26 **Debt service impact on new bond issuance assumes only one payment (or half year) in FY 2019. Outer year impact would be double the amounts shown.

SUMMARY FINANCIAL FORECAST - WATER AND SEWER OPERATING FUNDS AT BASE CASE

	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
(In Thousands \$000s)	Approved	Estimated	Projected	Projected	Projected	Projected	Projected
1 SUMMARY							
2 New Water and Sewer Debt Issues	522,825	546,879	536,394	519,803	423,105	366,167	325,611
3 Total Water and Sewer Debt Service	257,071	281,174	319,840	352,501	375,919	396,713	416,814
4 Total Water and Sewer Expenditures	725,348	770,711	831,668	884,647	927,102	966,412	1,004,795
5 Water and Sewer Combined Increase (Average)	3.5%	6.2%	11.5%	7.7%	5.8%	5.0%	5.2%
6 OPERATING REVENUES							
7 Water Consumption Charges	267,080	267,080	267,080	285,632	322,252	349,689	371,864
8 Sewer Use Charges	333,822	333,822	333,822	352,374	388,994	416,431	438,606
9 Other Sources/Fees	104,466	104,738	104,942	105,146	105,351	105,556	105,762
9 Operating Revenues	705,368	705,640	742,947	816,393	871,471	916,027	956,739
10 OTHER CREDITS AND TRANSFERS	19,980	27,968	15,480	13,381	11,280	9,879	3,882
11 Total Funds Available	725,348	733,608	758,427	829,774	882,751	925,906	960,620
12 OPERATING EXPENSES							
13 Maintenance and Operating	384,467	398,962	410,310	422,034	434,146	446,663	459,598
14 Regional Sewage Disposal	53,617	53,617	55,601	55,601	55,601	55,601	55,601
15	438,084	452,579	465,911	477,635	489,747	502,264	515,199
16 DEBT SERVICE	257,071	281,174	319,840	352,501	375,919	396,713	416,814
17 Operating Expenses	695,155	733,753	785,751	830,136	865,666	898,977	932,013
19 PAYGO (Contribution to bond fund)	30,193	36,958	45,917	54,511	61,436	67,435	72,782
20 Total Expenditures	725,348	770,711	831,668	884,647	927,102	966,412	1,004,795
21 Net Revenue (Loss)	0	(37,103)	(73,241)	(54,873)	(44,351)	(40,506)	(44,175)
22 Notable Assumptions:							
23 Water Production (MGD)	164.0	164.0	164.0	164.0	164.0	164.0	164.0
24 Debt Service as a Percentage of Total Expenditures (Below 40% is target)	35.4%	36.5%	38.5%	39.8%	40.5%	41.1%	41.5%
25 Estimated Impact of Rate Increase on Residential Monthly Bill:							
26 At 160 GPD usage	n/a	\$3.55	\$7.02	\$5.26	\$4.25	\$3.88	\$4.23
27 At 137 GPD usage	n/a	\$2.67	\$5.27	\$3.95	\$3.19	\$2.92	\$3.18
28 At 100 GPD usage	n/a	\$1.95	\$3.85	\$2.88	\$2.33	\$2.13	\$2.32

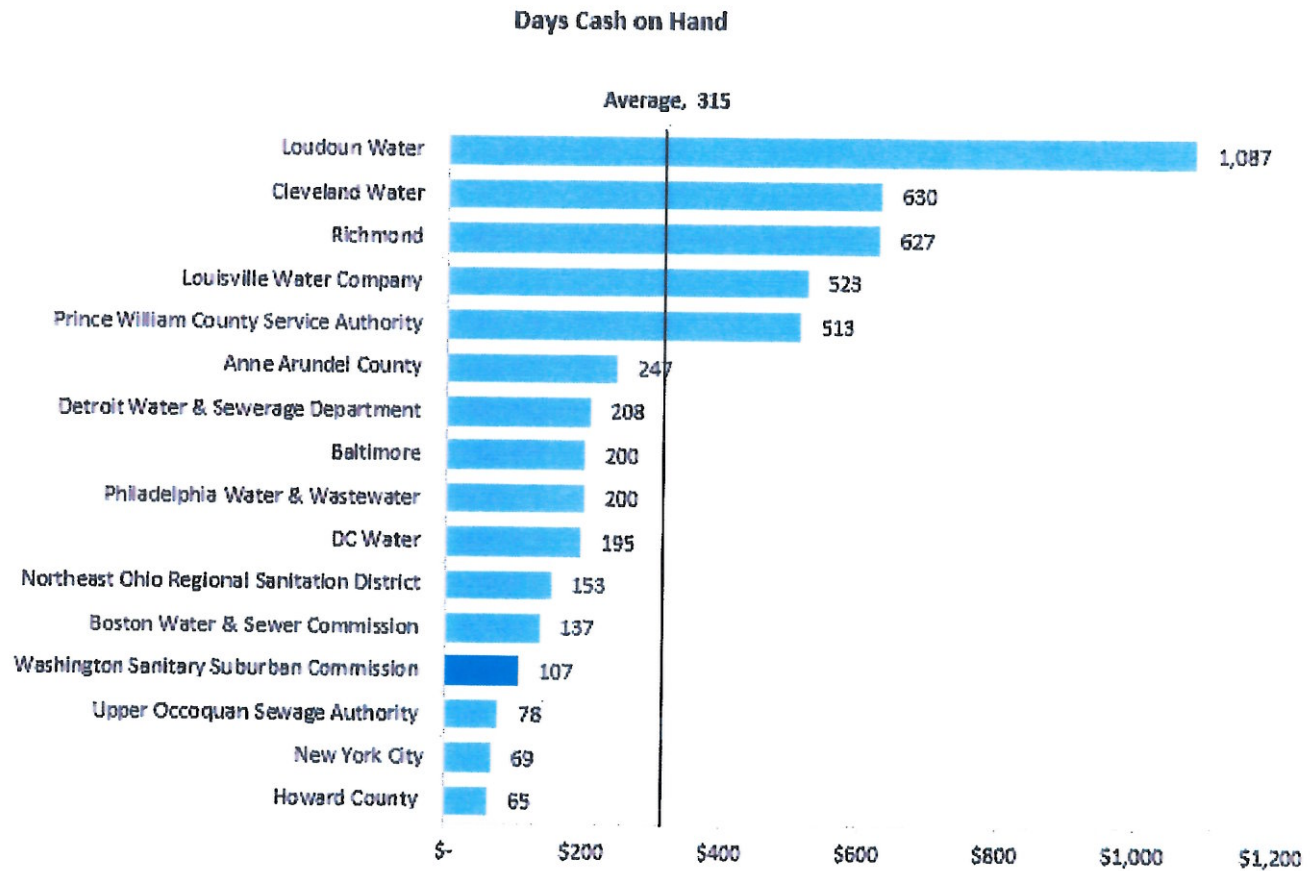
FINANCIAL FORECAST - WATER AND SEWER OPERATING FUNDS AT BASE CASE

	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024
(In Thousands \$000s)	Approved	Estimated	Projected	Projected	Projected	Projected	Projected
1 SUMMARY							
2 New Water and Sewer Debt Issues	522,825	546,879	536,394	519,803	423,105	366,167	325,611
3 Total Water and Sewer Debt Service	257,071	281,174	319,840	352,501	375,919	396,713	416,814
4 Total Water and Sewer Expenditures	725,348	770,711	831,668	884,647	927,102	966,412	1,004,795
5 Water and Sewer Combined Increase (Average)	3.5%	6.2%	11.5%	7.7%	5.8%	5.0%	5.2%
6 OPERATING REVENUES							
7 Water Consumption Charges	267,080	267,080	285,632	322,252	349,689	371,864	392,118
8 Sewer Use Charges	333,822	333,822	352,374	388,994	416,431	438,606	458,860
Revenue/Unspecified Adjustments	0	37,103	73,241	54,874	44,351	40,507	44,175
9 Other Sources/Fees	104,466	104,738	104,942	105,146	105,351	105,556	105,762
15 Operating Revenues	705,368	742,743	816,188	871,266	915,822	956,533	1,000,914
16 OTHER CREDITS AND TRANSFERS							
17 Interest Income	700	1,500	1,500	1,500	1,500	1,500	1,500
18 Fund Balance Contribution/Other	11,580	11,580	-	-	-	-	-
19 SDC Debt Service Offset	-	2,388	2,380	2,381	2,380	2,379	2,381
20 Reconstruction Debt Service Offset (REDO)	7,700	12,500	11,600	9,500	7,400	6,000	-
21 Total Funds Available	725,348	770,711	831,668	884,647	927,102	966,413	1,004,795
22 OPERATING EXPENSES							
23 Salaries and Wages	120,276	125,688	131,344	137,255	143,431	149,886	156,631
24 Heat, Light, and Power	22,015	22,675	23,356	24,056	24,778	25,521	26,287
25 Regional Sewage Disposal	53,617	53,617	55,601	55,601	55,601	55,601	55,601
26 All Other	242,177	250,598	255,610	260,722	265,937	271,256	276,681
27	438,084	452,579	465,911	477,635	489,747	502,264	515,199
28 DEBT SERVICE							
29 Bonds and Notes Principle and Interest	257,071	281,174	319,840	352,501	375,919	396,713	416,814
30	257,071	281,174	319,840	352,501	375,919	396,713	416,814
31 Operating Expenses	695,155	733,753	785,751	830,136	865,666	898,977	932,013
32 OTHER TRANSFERS							
33 PAYGO (Contribution to bond fund)	30,193	36,958	45,917	54,511	61,436	67,435	72,782
34 Total Expenditures	725,348	770,711	831,668	884,647	927,102	966,412	1,004,795
35 Net Revenue (Loss)	0	0	0	0	0	0	0
36 BEGINNING FUND BALANCE - JULY 1	\$ 189,956	\$ 178,376	\$ 166,796	\$ 166,796	\$ 166,796	\$ 166,796	\$ 166,797
37 Net Increase (Decrease) in Fund Balance	0	0	0	0	0	0	0
38 Use of Fund Balance/Other Adjustments	(11,580)	(11,580)	-	-	-	-	-
39 ENDING FUND BALANCE - JUNE 30	\$ 178,376	\$ 166,796	\$ 166,796	\$ 166,796	\$ 166,796	\$ 166,797	\$ 166,797
40 Debt Service Coverage	1.0	1.0	1.1	1.1	1.1	1.1	1.2
41 Debt Service as a Percentage of Total Expenditures (Below 40% is target)	35.4%	36.5%	38.5%	39.8%	40.5%	41.1%	41.5%
42 Operating Reserve Required 10% Level (\$)	\$70,537	\$74,274	\$81,619	\$87,127	\$91,582	\$95,653	\$100,091
43 Days Cash-on-Hand Operating Reserve (60 to 90 DCOH Target)	91.4	80.3	74.4	69.8	66.6	63.9	61.4
44 Ending Fund Balance as a Percentage of Operating Revenue (10% min)	25.3%	22.5%	20.4%	19.1%	18.2%	17.4%	16.7%
45 Total Workyears (All Funds)	1,776.0	1,776.0	1,776.0	1,776.0	1,776.0	1,776.0	1,776.0

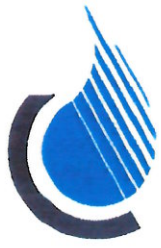
ASSUMPTIONS FOR FINANCIAL FORECAST

	WORKLOAD DATA		PROJECTED				
	FY 2018A	FY 2019E	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
1 REVENUE							
2 <u>Water Consumption and Sewer Treatment</u>							
3 Water to be supplied (Average MGD)	164.0	164.0	164.0	164.0	164.0	164.0	164.0
4 Yearly Growth %		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
5 Sewage to be treated (Average MGD)	207.2	211.4	215.6	219.9	224.3	228.8	228.8
6 Yearly Growth %		2.0%	2.0%	2.0%	2.0%	2.0%	0.0%
7 <u>Credits and Transfers</u>							
8 Use of Fund Balance	\$ 11,580	\$ 11,580	\$ -	\$ -	\$ -	\$ -	\$ -
9 SDC Debt Service Offset	\$ -	\$ 2,388	\$ 2,380	\$ 2,381	\$ 2,380	\$ 2,379	\$ 2,381
10 REDO Offset	\$ 7,700	\$ 12,500	\$ 11,600	\$ 9,500	\$ 7,400	\$ 6,000	\$ -
11 <u>Other Assumption Drivers</u>							
12 Population to be served (000s)	1,792	1,801	1,810	1,821	1,832	1,843	1,843
13 Yearly Growth %		0.5%	0.5%	0.6%	0.6%	0.6%	0.0%
14 Customer Accounts (000s)	456	458	460	462	464	466	466
15 Yearly Growth %		0.4%	0.4%	0.4%	0.4%	0.4%	0.0%
16 EXPENDITURE							
17 <u>Operating</u>							
18 CPI Baltimore-Washington	2.0%	2.0%	3.0%	3.0%	3.0%	3.0%	3.0%
19 Workyears	1,776.0	1,776.0	1,776.0	1,776.0	1,776.0	1,776.0	1,776.0
20 Salary and Wages Increase	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%
21 Heat, Light, and Power	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
22 Regional Sewage Disposal	\$ 53,617	\$ 53,617	\$ 55,601	\$ 55,601	\$ 55,601	\$ 55,601	\$ 55,601
23 All Other	2.0%	1.0%	2.0%	2.0%	2.0%	2.0%	2.0%
24 Debt Service	\$ 257,071	\$ 281,174	\$ 319,840	\$ 352,501	\$ 375,919	\$ 396,713	\$ 416,814
25 Yearly Growth %		9.4%	13.8%	10.2%	6.6%	5.5%	5.1%
26 PAYGO	\$ 30,193	\$ 36,958	\$ 45,917	\$ 54,511	\$ 61,436	\$ 67,435	\$ 72,782
27 <u>Capital Expenditure Parameters</u>							
28 Infrastructure Construction	3.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
29 Water and Sewer Completion Factor	92.1%	92.0%	90.9%	92.5%	93.0%	93.1%	93.2%
30 Information Only Completion Factor	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
31 BOND ISSUANCE							
32 Water and Sewer Issuance w Completion Factor	\$ 522,825	\$ 546,879	\$ 536,394	\$ 519,803	\$ 423,105	\$ 366,167	\$ 325,611
33 Interest Rate	3.5%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%

PEER REVIEW OF DAYS-CASH-ON-HAND



Source: Wye River Independent Financial Advisors, March 2017



**WASHINGTON SUBURBAN SANITARY
COMMISSION**

**SPENDING AFFORDABILITY
FISCAL YEAR 2019**

SEPTEMBER 21, 2017

**FY'19 WSSC Multi-Year Financial Forecast
Summary**

Forecast Scenario	PAYGO	Additional & Reinstated	Use of Fund Balance Climate Change	Use of Fund Balance Strategic Energy plan	Use of Fund Balance IT Strategic Plan	Total Use of Fund Balance	Debt Service Reductions	Unspecified Reductions	Rate
Scenario 1 - Base Case - Status Quo -No Additional & Reinstated (A&R)	36,958		100	200	11,280	11,580			5.2%
Scenario 2 - Base Case - A&R Operational Improvements	36,958	6,000	100	200	11,280	11,580			6.2%
Scenario 3 - No A&R, CIP Deferrals, Debt Service and Unspecified Reductions	35,942		100	200	11,280	11,580	(4,066)	(5,918)	3.5%

Scenario 3 is not recommended by WSSC.

REVENUES AND EXPENDITURES - IMPACT ON ADOPTED CHARGES

WATER AND SEWER PROGRAM COMBINED OPERATING FUNDS

Scenario: No \$6m Ops Improvement, \$125m CIP Deferral, \$4.5m Discretionary Reduction

		FY 2018	FY 2019	Dollar	W&S Rev
		Approved	Estimated	Change	Impact*
		(In Thousands \$000s)			
1	OPERATING REVENUES				
2	Adopted Water and Sewer Charges	\$ 600,902	\$ 600,902	\$ -	0.0%
3	OPERATING EXPENSES				
4	Salaries and Wages	\$ 120,276	\$ 125,688	\$ 5,412	0.9%
5	Heat, Light, and Power	22,015	22,675	660	0.1%
6	Regional Sewage Disposal	53,617	53,617	-	0.0%
7	All Other	242,177	238,680	(3,496)	-0.6%
8	Operational Improvements	-	-	-	0.0%
9	DEBT SERVICE	257,071	277,108	20,037	3.3%
10	PAYGO (Contribution to bond fund)	30,193	35,942	5,749	1.0%
11		\$ 725,348	\$ 753,711	\$ 28,363	4.8%
12	REVENUES				
13	Other Sources and Fees	(104,466)	(104,738)	(272)	0.0%
14	OTHER TRANSFERS AND CREDITS	(19,980)	(27,968)	(7,988)	-1.3%
15	Total - Water & Sewer Revenue Need	\$ 600,902	\$ 621,005	\$ 20,103	3.5%

16 *Approximately \$6 million in additional operating expenses = 1 percent increase in revenue

		FY 2019	W&S Rev
		Estimated**	Impact
17	Potential Offsets to Revenue Increase:		
18	\$50 million CIP Reduction = Debt Service Impact @ 5% Interest	\$ (1,626)	-0.3%
19	\$100 million CIP Reduction = Debt Service Impact @ 5% Interest	\$ (3,253)	-0.5%
20	\$125 million CIP Reduction = Debt Service Impact @ 5% Interest	\$ (4,066)	-0.7%

21 Notable Assumptions:

22 4.5% increase in Salaries & Wages FY 2019 through FY 2024

23 1.0% increase in All Other FY 2019; 2.0% remains for outer years

24 \$6 million A&R for Operational Improvements has been removed.

25 92% completion factor for CIP; 100% for Information Only (including Reconstruction)

26 **Debt service impact on new bond issuance assumes only one payment (or half year) in FY 2019. Outer year impact would
27 be double the amounts shown.

FINANCIAL FORECAST FOR WATER AND SEWER OPERATING FUNDS

Scenario (Revenue Increase: Water and Sewer +3.5%; Expense Growth: 3.9%; Debt Service Expense: \$277m/\$421m New Bond Issue)

	FY2018	FY2019	FY2020**	FY2021	FY2022	FY2023	FY2024
(In Thousands \$000s)	Approved	Estimated	Projected	Projected	Projected	Projected	Projected
1 SUMMARY							
2 New Water and Sewer Debt Issues	\$ 522,825	421,879	536,394	519,803	423,105	366,167	325,611
3 Total Water and Sewer Debt Service	257,071	277,108	311,708	344,370	367,787	388,582	408,683
4 Total Water and Sewer Expenditures	725,348	753,711	821,504	874,483	916,937	956,248	994,631
5 Water and Sewer Combined Increase (Average)	3.5%	3.5%	10.1%	6.4%	4.5%	3.8%	4.1%
6 REVENUE							
7 OPERATING REVENUE - Base Case Level	\$ 705,368	\$ 742,743	\$ 816,188	\$ 871,266	\$ 915,821	\$ 956,533	\$ 1,000,914
8 Water and Sewer Revenue Change From Base Case		(17,000)	(10,164)	(10,165)	(10,164)	(10,165)	(10,165)
9 Other Revenue Adjustments							
10 Subtotal with Adjustments	705,368	725,743	806,023	861,101	905,657	946,368	990,749
11 OTHER CREDITS AND TRANSFERS - Base Case Level	8,400	16,388	15,480	13,381	11,280	9,879	3,882
12 Fund Balance Contribution/Other	11,580	11,580	-	-	-	-	-
13 Adjustment #1	-	-	-	-	-	-	-
14 Subtotal with Adjustments	11,580	11,580	-	-	-	-	-
15 Total Funds Available	725,348	753,711	821,503	874,482	916,937	956,247	994,631
16 <i>Yearly Growth</i>	<i>n/a</i>	<i>3.9%</i>	<i>9.0%</i>	<i>6.4%</i>	<i>4.9%</i>	<i>4.3%</i>	<i>4.0%</i>
17 OPERATING							
18 OPERATING EXPENSES - Base Case Level	\$ 438,084	\$ 452,579	\$ 465,911	\$ 477,635	\$ 489,747	\$ 502,264	\$ 515,199
19 Eliminate Operational Improvem'ts (A&R)	-	(6,000)	-	-	-	-	-
20 Unspecified Adjustments	-	(5,918)	-	-	-	-	-
21 Adjustment #3	-	-	-	-	-	-	-
22 Adjustment #4	-	-	-	-	-	-	-
23 Unspecified Adjustments	-	-	-	-	-	-	-
24 Subtotal with Adjustments	438,084	440,661	465,911	477,635	489,747	502,264	515,199
25 DEBT SERVICE - Base Case Level	257,071	281,174	319,840	352,501	375,919	396,713	416,814
26 \$125 million CIP Deferral	-	(\$4,066)	(8,131)	(8,131)	(8,131)	(8,131)	(8,131)
27 Adjustment #2	-	-	-	-	-	-	-
28 Adjustment #3	-	-	-	-	-	-	-
29 Subtotal with Adjustments	257,071	277,108	311,708	344,370	367,787	388,582	408,683
30 PAYGO (Contribution to bond fund) - Base Case Level	30,193	36,958	45,917	54,511	61,436	67,435	72,782
31 \$125 million CIP Deferral (25% PAYGO)	-	(1,016)	(2,033)	(2,033)	(2,033)	(2,033)	(2,033)
32 Subtotal with Adjustments	30,193	35,942	43,884	52,478	59,403	65,402	70,749
33 Total Expenditures	725,348	753,711	821,504	874,483	916,937	956,248	994,631
34 <i>Yearly Growth</i>	<i>n/a</i>	<i>3.9%</i>	<i>9.0%</i>	<i>6.4%</i>	<i>4.9%</i>	<i>4.3%</i>	<i>4.0%</i>
35							
36 Net Revenue (Loss)	0	(0)	(0)	(0)	(0)	(0)	(0)
37							
38 BEGINNING FUND BALANCE - JULY 1	\$ 189,956	\$ 178,376	\$ 166,796	\$ 166,795	\$ 166,795	\$ 166,794	\$ 166,794
39 Net Increase (Decrease) in Fund Balance	0	(0)	(0)	(0)	(0)	(0)	(0)
40 Use of Fund Balance/Other Adjustments	(11,580)	(11,580)	-	-	-	-	-
41 ENDING FUND BALANCE - JUNE 30	\$ 178,376	\$ 166,796	\$ 166,795	\$ 166,795	\$ 166,794	\$ 166,794	\$ 166,793
42 Debt Service Coverage	1.0	1.0	1.1	1.1	1.1	1.1	1.2
43 Debt Service as a Percentage of Total Expenditures (Below 40% is target)	35.4%	36.8%	37.9%	39.4%	40.1%	40.6%	41.1%
44 Operating Reserve Required 10% Level (\$)	\$70,537	\$72,574	\$80,602	\$86,110	\$90,566	\$94,637	\$99,075
45 Days Cash-on-Hand Operating Reserve (60 to 90 DCOH target)	91.4	82.2	75.3	70.7	67.3	64.5	62.0
46 Total Workyears (All Funds)	1,776.0	1,776.0	1,776.0	1,776.0	1,776.0	1,776.0	1,776.0

**FY2020 is the planned implementation of new rate structure.

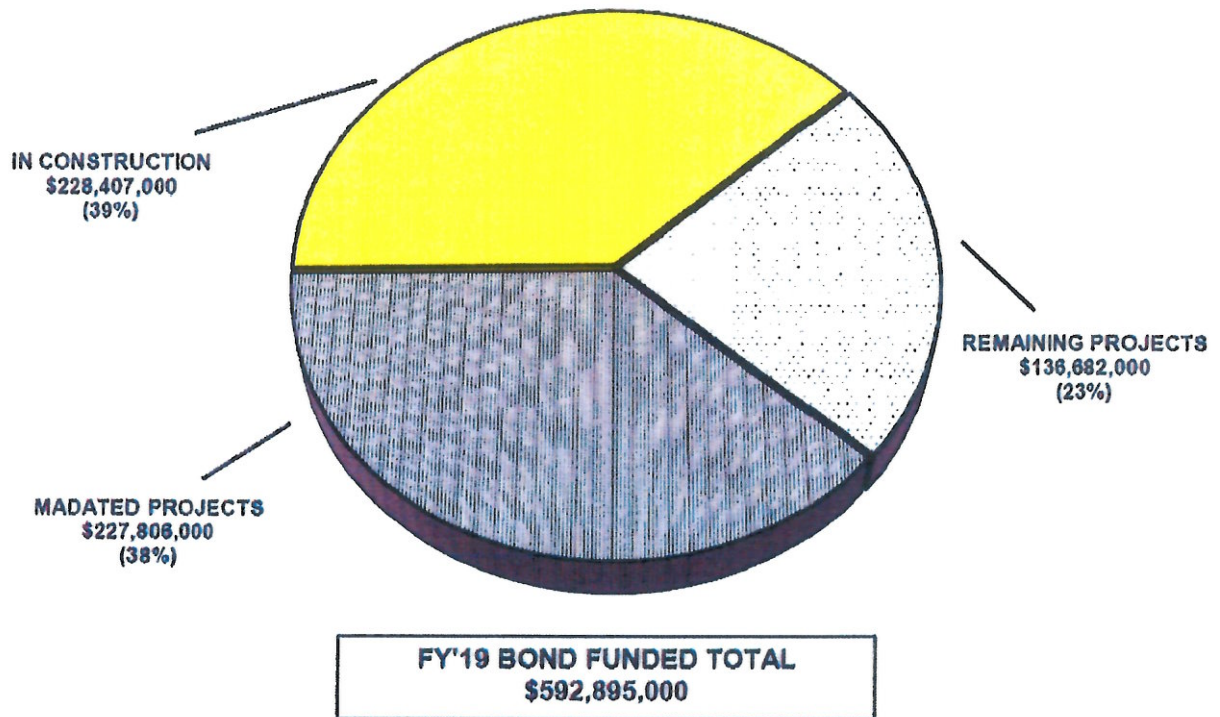
1 BILLING FACTOR	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024
2 Calculated (w impact of revenue adjustments):	Approved	Estimated	Projected	Projected	Projected	Projected	Projected
3 Water and Sewer Combined:							
4 Billing Factor - at 1 MGD (In 000s)	10.03846	10.37429	11.71202	12.62872	13.36962	14.04630	14.78428
5 Total Charges:	\$600,902	\$621,005	\$701,082	\$755,955	\$800,306	\$840,812	\$884,987
6 Water:							
7 Water to be supplied (Average MGD)	164.0	164.0	164.0	164.0	164.0	164.0	164.0
8 Yearly Growth %	n/a	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
9 Billing Factor - Water at 1 MGD (In 000s)	4.46175	4.62966	5.29853	5.75688	6.12733	6.46567	6.83465
10 Total Water Consumption Charges:	\$267,080	\$277,132	\$317,170	\$344,607	\$366,782	\$387,035	\$409,122
11 Sewer:							
12 Sewer to be treated (Average MGD)	164.0	164.0	164.0	164.0	164.0	164.0	164.0
13 Yearly Growth %	n/a	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
14 Billing Factor - Sewer at 1 MGD (In 000s)	5.57672	5.74463	6.41350	6.87184	7.24230	7.58064	7.94962
15 Total Sewer Use Charges:	\$333,822	\$343,874	\$383,912	\$411,349	\$433,524	\$453,777	\$475,864

FINANCIAL FORECAST - WATER AND SEWER OPERATING FUNDS AT BASE CASE

	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
(In Thousands \$000s)	Approved	Estimated	Projected	Projected	Projected	Projected	Projected
1 SUMMARY							
2 New Water and Sewer Debt Issues	\$ 522,825	\$ 546,879	\$ 536,394	\$ 519,803	\$ 423,105	\$ 366,167	\$ 325,611
3 Total Water and Sewer Debt Service	257,071	281,174	319,840	352,501	375,919	396,713	416,814
4 Total Water and Sewer Expenditures	725,348	770,711	831,668	884,647	927,102	966,412	1,004,795
5 Water and Sewer Combined Increase (Average)	3.5%	6.2%	11.5%	7.7%	5.8%	5.0%	5.2%
6 OPERATING REVENUES							
7 Water Consumption Charges	\$ 267,080	\$ 267,080	\$ 285,632	\$ 322,252	\$ 349,689	\$ 371,864	\$ 392,118
8 Sewer Use Charges	333,822	333,822	352,374	388,994	416,431	438,606	458,860
Revenue/Unspecified Adjustments	0	37,103	73,241	54,874	44,350	40,507	44,175
9 Other Sources/Fees	104,466	104,738	104,942	105,146	105,351	105,556	105,762
10 Account Maintenance Fees	32,118	32,182	32,247	32,311	32,376	32,440	32,505
11 Rockville Sewer Use	2,632	2,700	2,700	2,700	2,700	2,700	2,700
12 Plumbing and Inspection Fees	11,300	11,323	11,345	11,368	11,391	11,413	11,436
13 Infrastructure Investment Fee	38,816	38,894	38,971	39,049	39,127	39,206	39,284
14 Miscellaneous	19,600	19,639	19,678	19,718	19,757	19,797	19,836
15 Operating Revenues	705,368	742,743	816,188	871,266	915,821	956,533	1,000,914
16 OTHER CREDITS AND TRANSFERS							
17 Interest Income	700	1,500	1,500	1,500	1,500	1,500	1,500
18 Fund Balance Contribution/Other	11,580	11,580	-	-	-	-	-
19 SDC Debt Service Offset	-	2,388	2,380	2,381	2,380	2,379	2,381
20 Reconstruction Debt Service Offset (REDO)	7,700	12,500	11,600	9,500	7,400	6,000	-
21 Total Funds Available	725,348	770,711	831,668	884,647	927,101	966,413	1,004,796
22 OPERATING EXPENSES							
23 Salaries and Wages	\$ 120,276	\$ 125,688	\$ 131,344	\$ 137,255	\$ 143,431	\$ 149,886	\$ 156,631
24 Heat, Light, and Power	22,015	22,675	23,356	24,056	24,778	25,521	26,287
25 Regional Sewage Disposal	53,617	53,617	55,601	55,601	55,601	55,601	55,601
26 All Other	242,177	250,598	255,610	260,722	265,937	271,256	276,681
27	438,084	452,579	465,911	477,635	489,747	502,264	515,199
28 DEBT SERVICE							
29 Bonds and Notes Principle and Interest	257,071	281,174	319,840	352,501	375,919	396,713	416,814
30	257,071	281,174	319,840	352,501	375,919	396,713	416,814
31 Operating Expenses	695,155	733,753	785,751	830,136	865,666	898,977	932,013
32 OTHER TRANSFERS							
Working Capital Reserve Transfer	-	-	-	-	-	-	-
33 PAYGO (Contribution to bond fund)	30,193	36,958	45,917	54,511	61,436	67,435	72,782
34 Total Expenditures	725,348	770,711	831,668	884,647	927,102	966,412	1,004,795
35 Net Revenue (Loss)	0	(0)	(0)	0	(0)	0	0
36 BEGINNING FUND BALANCE - JULY 1	\$ 189,956	\$ 178,376	\$ 166,796	\$ 166,795	\$ 166,795	\$ 166,795	\$ 166,795
37 Net Increase (Decrease) in Fund Balance	0	(0)	(0)	0	(0)	0	0
38 Use of Fund Balance/Other Adjustments	(11,580)	(11,580)	-	-	-	-	-
39 ENDING FUND BALANCE - JUNE 30	\$ 178,376	\$ 166,796	\$ 166,795	\$ 166,795	\$ 166,795	\$ 166,795	\$ 166,796
40 Debt Service Coverage	1.0	1.0	1.1	1.1	1.1	1.1	1.2
41 Debt Service as a Percentage of Total Expenditures (Below 40% is target)	35.4%	36.5%	38.5%	39.8%	40.5%	41.1%	41.5%
42 Operating Reserve Required 10% Level (\$)	\$70,537	\$74,274	\$81,619	\$87,127	\$91,582	\$95,653	\$100,091
43 Days Cash-on-Hand Operating Reserve (60 to 90 DCOH Target)	91.4	80.3	74.4	69.8	66.6	63.9	61.4
44 Total Workyears (All Funds)	1,776.0	1,776.0	1,776.0	1,776.0	1,776.0	1,776.0	1,776.0

FY 2019 BOND FUNDED PROJECTS

COMBINED CIP & INFORMATION ONLY



Bond Funded Projects

Bond Funding Amounts

Project	Project Name	Status	Priority	Estimated				Total 6 Years	Beyond				
				EC18	EC19	EC20	EC21						
Possible Deferrals													
Sum of Deferrals below				(125,303)	(34,861)	(26,912)	(1,027)	(14,455)	(20,554)	(205,299)			
W-1100	Water Reconstruction Program per mile from \$1,600 back to \$949 net Emerg Contr for deposits \$1M to \$500k each net cut contract miles 43 to 33 net	Ongoing	8	121,472	118,722 (21,991) 96,721 (3,351) 62,380 (13,829) 79,551	121,231 (22,483) 98,748 (3,351) 98,748 (13,829) 79,551	123,860 (22,912) 100,948 (3,351) 100,948 (13,829) 79,551	126,646 (23,405) 103,241 (3,351) 103,241 (13,829) 79,551	129,222 (24,328) 105,389 (3,351) 105,389 (13,829) 79,551	131,894 (24,328) 107,538 (3,351) 107,538 (13,829) 79,551	751,545 (138,891) 612,994 (3,351) 609,248 (13,829) 79,551	0	Assumes Counties agree that pipe can be abandoned in place Could delay response time for emergency water main breaks Could increase frequency of breaks and leaks
total reductions					(39,171)	(22,483)	(22,912)	(23,405)	(24,328)	(156,131)			
W-161.01	Large Diameter Water Pipe Rehabilitation Program Ferrous miles from 6 back to 4 Reduce PCCP repairs 25%	Ongoing	9	53,208	53,622 (7,711) (5,000)	57,862 (2,000)	62,865 (2,000)	72,021 (2,000)	73,751 (2,000)	75,226 (2,000)	395,347 (7,711) (5,000)	0	Could increase frequency of breaks and leaks Could increase frequency of breaks and leaks
A-105.00	Water Storage Facility Rehabilitation Program delay/defer rate of rehab	Ongoing	23	8,000	8,000 (2,000)	8,000 (2,000)	8,000 (2,000)	8,000 (2,000)	8,000 (2,000)	48,000 (12,000)	0	Would increase backlog of tanks needing rehab	
A-102.00	Engineering Support Program No increase - delay/defer rate of rehab	Ongoing	38	14,000	16,000 (2,000)	18,000 (2,000)	18,000 (2,000)	18,000 (2,000)	20,000 (2,000)	20,000 (2,000)	110,000 (12,000)	0	Would delay needed rehab of facilities
A-109.00	Advanced Metering Infrastructure defer/lag schedule	P-15	47	7,089	27,694 (14,000)	27,694	27,694	2,884 14,000	0	85,866 0	0	Delays all benefits of AMI - monthly billing	
S-96.14	Piscataway WWTP Facility Upgrades defer/lag schedule	D-70	15	4,290	31,115 (5,000)	39,591	24,810	24,278	10,969 5,000	130,763 0	0	Would delay Raw WWSF upgrade	
W-172.07	Paluxent Raw Water Pipeline defer new supply pipeline	D-90	18	4,202	8,378 (8,378)	8,378 (8,378)	0	0	0	16,756 0	0	Delays emergency production capacity Risk reduction delayed	
W-73.30	Potomac WFP Submerged Channel Intake no movement	P-95	19	525	1,470 (1,400)	3,917	24,255	24,150	19,425	78,257 0	0	Delays benefits of project	
	Blue Plains Projects assume 80% completion rate			59,315	53,102 (6,372)	63,994	60,116	46,664	48,330	312,803 0	87,311	Assumes historic completion rate	
S-170.09	Trunk Sewer Reconstruction Program drop 2 more miles, from 15 to 13 miles drop 3 more miles, from 13 to 10 miles	Ongoing	3	141,557	84,457 (8,714) (13,071)	65,376	58,500	30,397	31,004	31,624	301,358 (8,714)	0	Could increase frequency of SSOs Delays CD P2 & P3 work

Bond Funded Projects

Project	Project Name	Status	Priority	Estimated EY18	Proposed								Total 6 Years	Beyond	
					EY19	EY20	EY21	EY22	EY23	EY24	EY25	EY26			
S-1.01	Sewer Reconstruction Program Miles from 18 back to 15 Miles from 15 to 12	Ongoing	1	63,029	64,694 (4,243)	68,863 (4,243)	70,241	71,646	73,078	74,540	74,540	423,052 (4,243)	0	Could increase frequency of SSOs Defer CD P2 & P3 work	
S-103.02	Pescadero WWTP Bio-Energy Project delay ~2 months	D-10	21	8,873	42,310 (4,000)	74,751	73,553	34,566 4,000	4,253	0	229,433 0	0	Schedule delay/lag Delays benefits of project Annual cost savings \$3.5M/year		

Bond Funded Projects

Bond Funding Amounts

Project	Project Name	Status	Priority	Estimated FY18	Proposed FY19	FY20	FY21	FY22	FY23	FY24	Total 6 Years	Beyond
Under Agreement/Mandated												
S-22.06	Blue Plains WWTP: Liquid Train Projects, Part 2	Ongoing	26	\$ 10,656	\$ 17,786	\$ 25,802	\$ 22,598	\$ 20,964	\$ 24,015	\$ 20,260	\$ 131,425	\$ 38,495
S-22.07	Blue Plains WWTP: Biosolids Management, Part	Ongoing	26	2,970	10,132	10,865	6,609	3,083	970	628	32,287	615
S-22.09	Blue Plains WWTP: Plant-wide Projects	Ongoing	26	7,084	6,654	13,175	15,041	14,005	13,822	7,324	70,021	16,020
S-22.10	Blue Plains WWTP: ENR	C-86%	6	20,513	2,504	866	730	444	665	467	5,676	17,198
S-22.11	Blue Plains WWTP: Pipelines & Appurtenances	Ongoing	26	18,092	16,026	13,286	15,138	8,168	8,858	11,918	73,394	14,983
S-170.09	Trunk Sewer Reconstruction Program	Ongoing	3	141,557	84,457	65,376	58,500	30,397	31,004	31,624	301,358	-
W-73.33	Potomac WFP CD Program	P-95	5	5,430	9,850	10,500	19,950	27,300	28,350	25,200	121,150	29,400
W-139.02	Duckett & Brighton Dam Upgrades	C-35	7	8,142	7,801	745	-	-	-	-	8,546	-
S-43.02	Broad Creek WWPS Augmentation	C-70	2	2,945	2,588	1,151	-	-	-	-	3,739	-
S-131.10	Fort Washington Forest No. 1 WWPS Augmenta	D-70	4	342	1,275	600	-	-	-	-	1,875	-
S-57.94	Western Branch WWTP Incinerator Emissions C	Close	n/a	-	-	-	-	-	-	-	-	-
S-75.21	Mattawoman WWTP Upgrades	Ongoing	32	5,911	4,049	2,783	1,928	1,897	1,897	404	12,958	580
Subtotal - Projects Under Agreement				223,642	163,122	145,149	140,494	106,258	109,581	97,825	762,429	117,291
In Construction												
W-3.02	Oney Standpipe Replacement	C-23	14	4,322	918	152	-	-	-	-	1,070	-
W-138.02	Shady Grove Standpipe Replacement	C-5	36	6,398	3,857	-	-	-	-	-	3,857	-
W-73.19	Potomac WFP Outdoor Substation No. 2 Replacement	C-99	35	580	22	-	-	-	-	-	22	-
W-73.22	Potomac WFP Pre-Filter Chlorination and Air Sec	C-30	13	4,786	7,883	4,518	23	-	-	-	12,424	-
W-73.21	Potomac WFP Corrosion Mitigation	C-90	25	1,615	65	-	-	-	-	-	65	-
W-127.01	Bt-County Water Tunnel	Close	n/a	-	-	-	-	-	-	-	-	-
W-161.01	Large Diameter Water Pipe Rehabilitation Program	Ongoing	9	53,208	-	-	-	-	-	-	-	-
W-172.05	Patuxent WFP Phase II Expansion	C-80	12	6,229	53,622	57,862	62,865	72,021	73,751	75,226	395,347	-
W-172.08	Rocky Gorge Pump Station Upgrade	C-30	33	10,974	1,076	-	-	-	-	-	1,076	-
W-137.02	South Potomac Supply Improvement, Ph 1	Close	20	300	2,484	2,069	-	-	-	-	4,553	-
W-65.10	St. Barnabas Elevated Tank Replacement	C-36	39	3,008	211	-	-	-	-	-	211	-
W-123.20	Oak Grove/Leeland Roads Water Main, Part 2	C-90	42	2,398	115	-	-	-	-	-	115	-
W-147.00	Collington Elevated Water Storage Facility	C-95	42	137	67	-	-	-	-	-	67	-
S-57.92	Western Branch Facility Upgrade	C-98	10	2,126	3,150	236	-	-	-	-	3,386	-
W-202.00	Land & Rights-of-Way Acquisition - Bt-County	N/A	53	372	1,091	1,570	18	10	10	10	2,709	-
S-203.00	Land & Rights-Of-Way Acquisition - Bt County	N/A	53	95	80	15	15	15	15	15	155	-
Subtotal - Projects in Construction				96,550	74,641	66,422	62,921	72,046	73,776	75,251	425,057	0

Bond Funded Projects

Bond Funding Amounts

Project	In Design	Project Name	Status	Priority	Estimated FY18	Proposed FY19	FY20	FY21	FY22	FY23	FY24	Total 6 Years	Beyond
W-90.04	Brnk Zone Reliability Improvements	D-90	17	4,290	6,490	968	242	-	-	-	-	7,700	-
W-73.32	Potomac WRP Main Zone Pipeline	D-10	11	550	1,100	660	19,030	-	15,180	-	-	35,970	-
W-172.07	Pakuent Raw Water Pipeline	D-90	18	4,202	8,378	9,378	-	-	-	-	-	16,756	-
S-103.02	Piscataway WWTP Bio-Energy Project	D-10	21	8,873	42,310	74,751	73,553	34,566	-	4,253	-	229,433	-
S-170.08	Septage Discharge Facility Plan & Implementation	D-100	44	382	5,229	15,136	5,255	-	-	-	-	25,620	-
W-12.02	Prince George's County HC415 Zone Water Main	D-90	49	965	2,077	194	-	-	-	-	-	2,261	-
W-34.02	Old Branch Avenue Water Main	D-100	45	99	3,036	4,345	2,860	-	-	-	-	10,615	-
W-34.05	Marlboro Zone Reinforcement Main	D-90	31	810	3,036	-	-	-	-	-	-	3,036	-
W-94.05	Prince George's County 450A Zone Water Main	D-30	30	821	694	9,149	13,622	13,622	13,622	13,622	13,622	64,321	17,899
W-137.03	South Potomac Supply Improvement, Ph 2	D-30	20	866	1,039	2,295	8,489	8,489	8,489	8,489	6,367	35,168	-
S-96.14	Piscataway WWTP Facility Upgrades	D-70	15	4,290	31,115	39,591	24,810	24,278	10,969	-	-	130,763	0
Subtotal - Projects in Design					26,148	104,868	155,457	147,861	96,135	37,333	19,989	561,643	17,899
In Planning													
W-73.30	Potomac WRP Submerged Channel Intake	P-95	19	525	1,470	3,917	24,255	24,150	19,425	5,040	-	78,257	-
S-77.20	Parkway North Substation Replacement	P-10	22	1,175	2,650	1,163	-	-	-	-	-	3,813	-
Subtotal - Projects in Planning					1,700	4,120	5,080	24,255	24,150	19,425	5,040	82,070	0
Information Only Projects													
W-1.00	Water Reconstruction Program	Ongoing	8	121,472	118,722	121,231	123,860	126,646	129,222	131,864	751,545	-	
S-1.01	Sewer Reconstruction Program	Ongoing	1	63,029	64,684	68,863	70,241	71,646	73,078	74,540	423,052	-	
A-102.00	Engineering Support Program	Ongoing	38	14,000	16,000	18,000	18,000	18,000	20,000	20,000	110,000	-	
A-103.00	Energy Performance Program	Ongoing	16	17,674	8,619	5,905	-	-	-	-	14,524	-	
A-105.00	Water Storage Facility Rehabilitation Program	Ongoing	23	8,000	8,000	8,000	8,000	8,000	8,000	8,000	48,000	-	
A-107.00	Specialty Valve Vault Rehabilitation Program	Ongoing	24	4,879	1,442	1,124	928	910	892	527	5,823	-	
A-109.00	Advanced Metering Infrastructure	P-15	47	7,089	27,694	27,694	27,694	2,884	-	-	85,966	1,363	
A-145.01	Brighton Dam Operators & Maintenance Facility	C-0	48	5,003	983	22	-	-	-	-	-	1,005	-
Subtotal - Information Only Projects					241,146	246,144	250,839	248,723	228,086	231,192	234,931	1,439,915	1,363
Total CIP Projects					\$ 348,040	\$ 346,751	\$ 372,108	\$ 375,531	\$ 298,589	\$ 240,115	\$ 198,105	\$ 1,831,199	\$ 135,180
Information Only					\$ 241,146	\$ 246,144	\$ 250,839	\$ 248,723	\$ 228,086	\$ 231,192	\$ 234,931	\$ 1,439,915	\$ 1,363
Combined Program Total					\$ 589,186	\$ 592,895	\$ 622,947	\$ 624,254	\$ 526,675	\$ 471,307	\$ 433,036	\$ 3,271,114	\$ 136,543
Less PAYGO					\$ 29,294	\$ 36,752	\$ 43,473	\$ 49,220	\$ 54,005	\$ 59,927	\$ 65,000	\$ 308,377	
Net Bond					\$ 559,892	\$ 556,143	\$ 579,474	\$ 575,034	\$ 472,670	\$ 411,380	\$ 368,036	\$ 2,962,737	

WSSC
FY 2019 HIGH PRIORITY ADDITIONAL & REINSTATED PROGRAM REQUESTS SUMMARY

Program: CREW LEADER IMPLEMENTATION

Request: 18 Crew Leaders

Cost including benefits: \$2,220,300, Water/Sewer Impact: \$2,220,300

Justification:

This request is to hire Crew Leaders (Crew Chiefs) to manage Maintenance Utility Technicians. The WSSC, at one time, had crew chiefs but eliminated those positions nearly 13 years ago.

Crew leaders are necessary to establish and maintain a continuum of accountability, safety awareness, and business control from the office to the field in the Zone Depots. The Utility Services Maintenance Utility Technicians currently operate without management supervision. The system of no management oversight is illusive and does not provide UST with the opportunity to exercise solid business systems control and the ability to manage the organization for operational efficiency.

Program: CUSTOMER SERVICE CENTER STAFFING INITIATIVE

Request: 8 Customer Service Advisors

Cost with benefits: \$748,000 Water/Sewer Impact: \$748,000 (\$248,000 after \$500,000 savings from LJ Ross contract)

Justification:

In an effort to support the top priority of customer service and continue the transformation into a world class customer service team the Customer Service Department examined feedback about customer service dissatisfaction expressed by both our internal and external customers.

Analyses revealed areas for improvement in our call handling specifically with our third-party vendor. In addition, a lack of regular systems testing and maintenance with the vendor has resulted in poor redundancy. To effectively address the myriad of issues and ongoing complaints the Senior Leadership Team has agreed to bring all customer service intake functions back "in-house".

The Department plans to phase out the use of LJ Ross call intake over the next two to three years for level 2 (all calls) and level one (bill payment) respectively and is requesting the approval to add eight (8) new Customer Service Advisor (CSA) positions to fortify the organizational structure and to begin call volume phasedown from LJ Ross.

The Department is on track to scale LJR resources down to level I (accepting and processing payments) by the end of this fiscal year, June 30, 2018.

The Department believes it is not in its best interest to train LJR staff on the new C2M system, but to manage the training of all resources in-house. While training in-house staff, temporary resources will be utilized to maintain normal business operations.

Program: CUSTOMER SERVICE CENTER OF EXCELLENCE

Request: 1 Business Analyst, 1 Training Specialist, 1 Quality Management Specialist

Cost including benefits: \$418,000 Water/Sewer Impact: \$418,000

Justification:

To support the top priority of customer service and continue the transformation into a world-class customer service team, a holistic approach across people, processes and technology is being undertaken to address a new strategy, organizational structure, systems, staffing, skills, and competencies. The Business Analyst would be dedicated to maintaining the CRM knowledge base and related analytics. The Training Specialist and the Quality Management Specialist would support employee coaching, enterprise change management, and performance management learning objectives for the Customer Service Department initiatives.

Program: BILLING & REVENUE PROTECTION**Request: 1 Business Analyst**

Cost with benefits: \$137,300 Water/Sewer Impact: \$137,300

Justification:

The Commission's billing and revenue operations represent are a key driver of revenue. To achieve a world class billing and revenue protection function process gaps across the enterprise meter-to-cash value chain must be resolved. Today customers continue to experience issues and gaps in our customer service delivery especially billing and payments. Therefore, we must transform our customer service operations to a world class organization.

Program: CUSTOMER SERVICE CENTER OF EXCELLENCE**Request: Professional Services**

Cost: \$2,000,000

Justification:

Pre and post implementation of Customer to Meter (C2M) is a priority for WSSC. A successful technological implementation will require at least 20% extra capacity to be prepared for the new C2M environment. Professional services are required for:

- Organizational readiness resources for educating, training, and documenting policies/standard operating procedures related to new systems for the Customer Service Department (C2M, Customer Relationship Management (CRM), Workforce Management, e-Interactive Voice Response System, Mobile Work Management/Work and Asset Management (MWM/WAM)) - \$450,000
- Additional temporary staff for pre and post implementation of C2M (billing and customer service resources) and MWM/WAM (dispatching, emergency services, and work order management) - \$750,000
 - Billing and Revenue Protection Division: (3) Account Specialists
 - Customer Care Division: (3) Customer Service and/or Project Specialists
 - Center of Excellence Division: (2) Analysts and (1) Training Specialist
- Customer experience and technology projects to be coordinated by Customer Service, IT and Oracle \$800,000
 - Funding to support any customer experience and 'must have' business projects and requirements not fulfilled by C2M (for example email services, and bill presentment/print)
 - CRM technology
 - Workforce Management technology

Program: JET TRUCK & SYSTEM FLUSHING TRAILERS OPTIMIZATION**Request: 4 Jet Trucks**

Cost: \$1,400,000, Water/Sewer Impact: \$200,000

Justification:

This request is to supply the Utility Services Team with one jet truck per depot, to effectively respond to after-hours sewer-related emergencies.

HIGH PRIORITY ADDITIONAL & REINSTATED DEFERRED IN FY18

Program: SYSTEM-WIDE FLUSHING

Request: 6 Workyears

Cost including benefits: \$627,900, Water/Sewer Impact: \$627,900

Justification:

Flushing is now done on an as-needed basis, i.e. someone complains about discolored water. WSSC responds and conducts an isolated flush of that particular water main. This program would be a systematic approach to flush the entire system. The spike in discolored water complaints in 2015 (up to 90 per day) resulted in WSSC taking action. Historically, WSSC receives fewer than 10 discolored water complaints per day. There was a flushing program in place over 15 years ago that was, unfortunately, discontinued. Clean pipes deliver better quality water and higher hydraulic efficiencies. Flushing is the easiest and cheapest method to maintain clean pipes (versus lining or replacement). Our performance goal is to have fewer than 0.2 discolored water complaints per 1,000 customers. Our past 5-year average is 2.9 per 1,000 customers. This is not world-class service.

With the workyear request, the goal is to complete 520 miles/year, with a 9-year cycle. Many jurisdictions with flushing programs recommend a 4 to 10-year cycle.

Program: LEAK DETECTION

Request: 2 Workyears

Cost including benefits: \$298,200, Water/Sewer Impact: \$296,200

Justification:

The Water Distribution and Water Transmission Program in Asset Management Program identified leak detection as a program to provide condition assessment of the water system. This program supports WSSC's strategic priorities by maintaining our infrastructure, supporting customer services and providing sound financial stewardship. By proactively repairing leaks before they become worse and potentially allow contaminants to enter the system, the program reduces additional costs and risks. Currently we only have three leak-detection crews performing leak surveys in the Gaithersburg, Lyttonsville and Temple Hills service area. Utility Services Central Zone does not have a leak detection crew. Leak detection will minimize lost revenue from otherwise unknown leaks.

Program: LARGE WATER VALVE CONDITION ASSESSMENT

Request: Services By Others

Cost including benefits: \$270,700, Water/Sewer Impact: \$270,700

Justification:

In order to minimize the risk associated with inoperable large valves and possible water outages, the Large Valve Inspection and Repair Program was initiated in April 2014 to systematically inspect, exercise, repair and replace (when necessary) large diameter valves located throughout the system. When the large valve program was established in 2014, the system inventory was listed at about 1,700 large valves and the condition assessment cycle was established at 4 years (425 valves per year). During the course of the initial condition assessment, the number of large valves was refined through data corrections. Currently, there are close to 1,500 large valves in the water transmission and distribution system. After conducting research, it was noted that the City of Baltimore inspects large valves on a 3-year cycle (16" thru 24") or a 2-year cycle (30" and larger). Further research suggests that Prince William County exercises large valves every 30 months. The City of Detroit spends \$4 million every 2-year for valve exercising. This is a request to increase the exercising frequency from 4 years to 3 years.

Program: FIRE HYDRANT TESTING**Request: 4 Utility Technicians****Cost including benefits: \$307,600, Water/Sewer Impact: \$307,600****Justification:**

Fire hydrant flow tests determine the flow rate and pressure in any location throughout a water company's underground water distribution system. Fire hydrants should be tested regularly to ensure that they are capable of providing water at an acceptable pressure and flow rate for public health and firefighting operations. In addition, it is also necessary to perform a flow test to properly design a fire sprinkler system for a commercial or residential structure.

WSSC has 43,000 fire hydrants in our system. AWWA recommends the we test each hydrant on a 10-year cycle. Currently, we test approximately 200 hydrants per year. These tests are mainly generated at the request of contractors, engineers, and designers. Tests are also generated at the request of fire departments. Testing all hydrants on a 10-year cycle will help to ensure they will be effective for firefighting and preventing the contamination of public water supplies by backflow. Performing a fire-hydrant flow test provides the actual static (non-flowing) pressure, residual (flowing) pressure, and the flow from the hydrant.

Program: FORCE MAIN PLANNING INITIATIVE**Request: 1 Sr. Civil Engineer, 1 Civil Engineer****Cost including benefits: \$250,000, Water/Sewer Impact: \$0****Justification:**

The Commission does not have a program to address deficient sewer force mains in the system. Funding for this program would be to establish and execute a successful program.

Program: LARGE METER DESIGN**Request: 1 Project Manager****Cost including benefits: \$150,200, Water/Sewer Impact: \$0****Justification:**

Funding to increase the rehabilitation of large meters from 45 to 55 meters a year. The request is to begin the design portion of this program.

Fund Balance Analysis

	Total
Water & Sewer Operating Fund Balance at end of FY'17	\$ <u>189,956,000</u>
IT Strategic Plan	(10,980,000)
Strategic Energy Plan Implementation (5-Year FY16 A&R)	(200,000)
Climate Change Vulnerability Assessment (5-Year FY16 A&R)	<u>(400,000)</u>
Fund Balance (end of FY'18)	\$ <u>178,376,000</u>
IT Strategic Plan	(11,180,000)
Strategic Energy Plan Implementation (5-Year FY16 A&R)	(200,000)
Climate Change Vulnerability Assessment (5-Year FY16 A&R)	(200,000)
Fund Balance (end of FY'19)	<u>166,796,000</u>
FY20 Strategic Energy Plan Implementation (A&R)	(200,000)
FY20 Climate Change Vulnerability Assessment (A&R)	(100,000)
FY'20-'22 Balance IT Strategic Plan	<u>(36,000,000)</u>
Projected Fund Balance	\$ <u>130,496,000</u>

REVENUES AND EXPENDITURES - IMPACT ON ADOPTED CHARGES
WATER AND SEWER PROGRAM COMBINED OPERATING FUNDS

Scenario: No \$6m Ops Improvement, \$125m CIP Deferral, \$4.9m Unspecified Reductions

	(In Thousands \$000s)	FY 2018 Approved	FY 2019 Estimated	Dollar Change	W&S Rev Impact*
1	OPERATING REVENUES				
2	Adopted Water and Sewer Charges	\$ 600,902	\$ 600,902	\$ -	0.0%
3	OPERATING EXPENSES				
4	Salaries and Wages	\$ 120,276	\$ 125,688	\$ 5,412	0.9%
5	Heat, Light, and Power	22,015	22,675	660	0.1%
6	Regional Sewage Disposal	53,617	53,617	-	0.0%
7	All Other	242,177	239,680	(2,496)	-0.5%
8	Operational Improvements	-	-	-	0.0%
9	DEBT SERVICE	257,071	277,108	20,037	3.3%
10	PAYGO (Contribution to bond fund)	30,193	35,942	5,749	1.0%
11		\$ 725,348	\$ 754,711	\$ 29,363	4.8%
12	REVENUES				
13	Other Sources and Fees	(104,466)	(104,738)	(272)	0.0%
14	OTHER TRANSFERS AND CREDITS	(19,980)	(27,968)	(7,988)	-1.3%
15	Total - Water & Sewer Revenue Need	\$ 600,902	\$ 622,005	\$ 21,103	3.5%

16 *Approximately \$6 million in additional operating expenses = 1 percent increase in revenue

	FY 2019 Estimated**	W&S Rev Impact
17	Potential Offsets to Revenue Increase:	
18	\$50 million CIP Reduction = Debt Service Impact @ 5% Interest	\$ (1,626)
19	\$100 million CIP Reduction = Debt Service Impact @ 5% Interest	\$ (3,253)
20	\$125 million CIP Reduction = Debt Service Impact @ 5% Interest	\$ (4,066)

21 Notable Assumptions:

22 4.5% increase in Salaries & Wages FY 2019 through FY 2024

23 1.0% increase in All Other FY 2019; 2.0% remains for outer years

24 \$6 million A&R for Operational Improvements has been removed.

25 92% completion factor for CIP; 100% for Information Only (including Reconstruction)

26 **Debt service impact on new bond issuance assumes only one payment (or half year) in FY 2019. Outer year impact would
 27 be double the amounts shown.

FINANCIAL FORECAST FOR WATER AND SEWER OPERATING FUNDS

Scenario (Revenue Increase: Water and Sewer +3.5%; Expense Growth: 3.9%; Debt Service Expense: \$277m/\$421m New Bond Issue)

(In Thousands \$000s)	FY 2018 Approved	FY 2019 Estimated	FY 2020** Projected	FY 2021 Projected	FY 2022 Projected	FY 2023 Projected	FY 2024 Projected
1 SUMMARY							
2 New Water and Sewer Debt Issues	\$ 522,825	421,879	536,394	519,803	423,105	366,167	325,611
3 Total Water and Sewer Debt Service	257,071	277,108	311,708	344,370	367,787	388,582	408,683
4 Total Water and Sewer Expenditures	725,348	754,711	821,504	874,483	916,937	956,248	994,631
5 Water and Sewer Combined Increase (Average)	3.5%	3.5%	10.1%	6.4%	4.5%	3.8%	4.1%
6 REVENUE							
7 OPERATING REVENUE - Base Case Level	\$ 705,368	\$ 742,743	\$ 816,188	\$ 871,266	\$ 915,821	\$ 956,533	\$ 1,000,914
8 Water and Sewer Revenue Change From Base Case		(17,000)	(10,164)	(10,165)	(10,164)	(10,165)	(10,165)
9 Other Revenue Adjustments							
10 Subtotal with Adjustments	705,368	725,743	806,023	861,101	905,657	946,368	990,749
11 OTHER CREDITS AND TRANSFERS - Base Case Level	8,400	16,388	15,480	13,381	11,280	9,879	3,882
12 Fund Balance Contribution/Other	11,580	11,580	-	-	-	-	-
13 Adjustment #1							
14 Subtotal with Adjustments	11,580	11,580	-	-	-	-	-
15 Total Funds Available	725,348	753,711	821,503	874,482	916,937	956,247	994,631
16 Yearly Growth	n/a	3.9%	9.0%	6.4%	4.9%	4.3%	4.0%
17 OPERATING							
18 OPERATING EXPENSES - Base Case Level	\$ 438,084	\$ 452,579	\$ 465,911	\$ 477,635	\$ 489,747	\$ 502,264	\$ 515,199
19 Eliminate Operational Improvem'ts (A&R)		(6,000)					
20 Unspecified Adjustments		(4,918)					
21 Adjustment #3							
22 Adjustment #4							
23 Unspecified Adjustments							
24 Subtotal with Adjustments	438,084	441,661	465,911	477,635	489,747	502,264	515,199
25 DEBT SERVICE - Base Case Level	257,071	281,174	319,840	352,501	375,919	396,713	416,814
26 \$125 million CIP Deferral		(\$4,066)	(8,131)	(8,131)	(8,131)	(8,131)	(8,131)
27 Adjustment #2							
28 Adjustment #3							
29 Subtotal with Adjustments	257,071	277,108	311,708	344,370	367,787	388,582	408,683
30 PAYGO (Contribution to bond fund) - Base Case Level	30,193	36,958	45,917	54,511	61,436	67,435	72,782
31 \$125 million CIP Deferral (25% PAYGO)		(1,016)	(2,033)	(2,033)	(2,033)	(2,033)	(2,033)
32 Subtotal with Adjustments	30,193	35,942	43,884	52,478	59,403	65,402	70,749
33 Total Expenditures	725,348	754,711	821,504	874,483	916,937	956,248	994,631
34 Yearly Growth	n/a	4.0%	8.9%	6.4%	4.9%	4.3%	4.0%
35							
36 Net Revenue (Loss)	0	(1,000)	(0)	(0)	(0)	(0)	(0)
37							
38 BEGINNING FUND BALANCE - JULY 1	\$ 189,956	\$ 178,376	\$ 165,796	\$ 165,795	\$ 165,795	\$ 165,794	\$ 165,794
39 Net Increase (Decrease) In Fund Balance	0	(1,000)	(0)	(0)	(0)	(0)	(0)
40 Use of Fund Balance/Other Adjustments	(11,580)	(11,580)	-	-	-	-	-
41 ENDING FUND BALANCE - JUNE 30	\$ 178,376	\$ 165,796	\$ 165,795	\$ 165,795	\$ 165,794	\$ 165,794	\$ 165,793
42 Debt Service Coverage	1.0	1.0	1.1	1.1	1.1	1.1	1.2
43 Debt Service as a Percentage of Total Expenditures (Below 40% is target)	35.4%	36.7%	37.9%	39.4%	40.1%	40.6%	41.1%
44 Operating Reserve Required 10% Level (\$)	\$70,537	\$72,574	\$80,602	\$86,110	\$90,566	\$94,637	\$99,075
45 Days Cash-on-Hand Operating Reserve (60 to 90 DCOH target)	91.4	81.6	74.8	70.2	66.9	64.2	61.6
46 Total Workyears (All Funds)	1,776.0	1,776.0	1,776.0	1,776.0	1,776.0	1,776.0	1,776.0

REVENUES AND EXPENDITURES - IMPACT ON ADOPTED CHARGES

WATER AND SEWER PROGRAM COMBINED OPERATING FUNDS

Scenario: No \$6m Ops Improvement, \$0m CIP Deferral, \$0m Unspecified Reduction

		(In Thousands \$000s)	FY 2018 Approved	FY 2019 Estimated	Dollar Change	W&S Rev Impact*
1	OPERATING REVENUES					
2	Adopted Water and Sewer Charges		\$ 600,902	\$ 600,902	\$ -	0.0%
3	OPERATING EXPENSES					
4	Salaries and Wages		\$ 120,276	\$ 125,688	\$ 5,412	0.9%
5	Heat, Light, and Power		22,015	22,675	660	0.1%
6	Regional Sewage Disposal		53,617	53,617	-	0.0%
7	All Other		242,177	244,598	2,422	0.4%
8	Operational Improvements		-	-	-	0.0%
9	DEBT SERVICE		257,071	281,174	24,103	4.0%
10	PAYGO (Contribution to bond fund)		30,193	36,958	6,765	1.1%
11			\$ 725,348	\$ 764,711	\$ 39,363	6.6%
12	REVENUES					
13	Other Sources and Fees		(104,466)	(104,738)	(272)	0.0%
14	OTHER TRANSFERS AND CREDITS		(19,980)	(27,968)	(7,988)	-1.3%
15	Total - Water & Sewer Revenue Need		\$ 600,902	\$ 632,005	\$ 31,103	5.2%

16 *Approximately \$6 million in additional operating expenses = 1 percent increase in revenue

	FY 2019 Estimated**	W&S Rev Impact
17 Potential Offsets to Revenue Increase:		
18 \$50 million CIP Reduction = Debt Service Impact @ 5% Interest	\$ (1,626)	-0.3%
19 \$100 million CIP Reduction = Debt Service Impact @ 5% Interest	\$ (3,253)	-0.5%
20 \$125 million CIP Reduction = Debt Service Impact @ 5% Interest	\$ (4,066)	-0.7%

21 **Notable Assumptions:**

- 22 4.5% increase in Salaries & Wages FY 2019 through FY 2024
- 23 1.0% increase in All Other FY 2019; 2.0% remains for outer years
- 24 \$6 million A&R for Operational Improvements has been removed.
- 25 92% completion factor for CIP; 100% for Information Only (Including Reconstruction)

26 **Debt service impact on new bond issuance assumes only one payment (or half year) in FY 2019. Outer year impact would
27 be double the amounts shown.

REVENUES AND EXPENDITURES - IMPACT ON ADOPTED CHARGES

WATER AND SEWER PROGRAM COMBINED OPERATING FUNDS

Scenario: No \$6m Ops Improvement, \$0m CIP Deferral, \$0m Discretionary Reduction

		FY 2018	FY 2019	Dollar	W&S Rev
		Approved	Estimated	Change	Impact*
		(In Thousands \$000s)			
1	OPERATING REVENUES				
2	Adopted Water and Sewer Charges	\$ 600,902	\$ 600,902	\$ -	0.0%
3	OPERATING EXPENSES				
4	Salaries and Wages	\$ 120,276	\$ 125,688	\$ 5,412	0.9%
5	Heat, Light, and Power	22,015	22,675	660	0.1%
6	Regional Sewage Disposal	53,617	53,617	-	0.0%
7	All Other	242,177	244,598	2,422	0.4%
8	Operational Improvements	-	-	-	0.0%
9	DEBT SERVICE	257,071	281,174	24,103	4.0%
10	PAYGO (Contribution to bond fund)	30,193	36,958	6,765	1.1%
11		\$ 725,348	\$ 764,711	\$ 39,363	6.6%
12	REVENUES				
13	Other Sources and Fees	(104,466)	(104,738)	(272)	0.0%
14	OTHER TRANSFERS AND CREDITS	(19,980)	(27,968)	(7,988)	-1.3%
15	Total - Water & Sewer Revenue Need	\$ 600,902	\$ 632,005	\$ 31,103	5.2%

16 *Approximately \$6 million in additional operating expenses = 1 percent increase in revenue

		FY 2019	W&S Rev
		Estimated**	Impact
17	Potential Offsets to Revenue Increase:		
18	\$50 million CIP Reduction = Debt Service Impact @ 5% Interest	\$ (1,626)	-0.3%
19	\$100 million CIP Reduction = Debt Service Impact @ 5% Interest	\$ (3,253)	-0.5%
20	\$125 million CIP Reduction = Debt Service Impact @ 5% Interest	\$ (4,066)	-0.7%

21 **Notable Assumptions:**

22 4.5% Increase in Salaries & Wages FY 2019 through FY 2024

23 1.0% Increase in All Other FY 2019; 2.0% remains for outer years

24 \$6 million A&R for Operational Improvements has been removed.

25 92% completion factor for CIP; 100% for Information Only (Including Reconstruction)

26 **Debt service impact on new bond issuance assumes only one payment (or half year) in FY 2019. Outer year impact would
27 be double the amounts shown.

	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024
1 BILLING FACTOR							
2 Calculated (w Impact of revenue adjustments):	Approved	Estimated	Projected	Projected	Projected	Projected	Projected
3 Water and Sewer Combined:							
4 Billing Factor - at 1 MGD (In 000s)	10.03846	10.55805	11.88182	12.79853	13.53943	14.21612	14.95409
5 Total Charges:	\$600,902	\$632,005	\$711,246	\$766,120	\$810,470	\$850,977	\$895,152
6 Water:							
7 Water to be supplied (Average MGD)	164.0	164.0	164.0	164.0	164.0	164.0	164.0
8 Yearly Growth %	n/a	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
9 Billing Factor - Water at 1 MGD (In 000s)	4.46175	4.72154	5.38343	5.84178	6.21223	6.55058	6.91956
10 Total Water Consumption Charges:	\$267,080	\$282,632	\$322,252	\$349,689	\$371,864	\$392,118	\$414,205
11 Sewer:							
12 Sewer to be treated (Average MGD)	164.0	164.0	164.0	164.0	164.0	164.0	164.0
13 Yearly Growth %	n/a	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
14 Billing Factor - Sewer at 1 MGD (In 000s)	5.57672	5.83651	6.49840	6.95675	7.32720	7.66554	8.03453
15 Total Sewer Use Charges:	\$333,822	\$349,374	\$388,994	\$416,431	\$438,606	\$458,860	\$480,947
16 ESTIMATED IMPACT OF INCREASE ON RESIDENTIAL MONTHLY BILL							
17 At 160 GPD usage	n/a	\$3.01	\$6.96	\$5.21	\$4.21	\$3.85	\$4.19
18 At 137 GPD usage	n/a	\$2.26	\$5.23	\$3.91	\$3.16	\$2.89	\$3.15
19 At 100 GPD usage	n/a	\$1.65	\$3.81	\$2.86	\$2.31	\$2.11	\$2.30

Note: Data input required where font is blue

REVENUES AND EXPENDITURES - IMPACT ON ADOPTED CHARGES
WATER AND SEWER PROGRAM COMBINED OPERATING FUNDS

Scenario: No \$6m Ops Improvement, \$111m CIP Deferral, \$3.4m Unspecified Reduction

	(In Thousands \$000s)	FY 2018 Approved	FY 2019 Estimated	Dollar Change	W&S Rev Impact*
1	OPERATING REVENUES				
2	Adopted Water and Sewer Charges	\$ 600,902	\$ 600,902	\$ -	0.0%
3	OPERATING EXPENSES				
4	Salaries and Wages	\$ 120,276	\$ 125,688	\$ 5,412	0.9%
5	Heat, Light, and Power	22,015	22,675	660	0.1%
6	Regional Sewage Disposal	53,617	53,617	-	0.0%
7	All Other	242,177	242,044	(132)	0.0%
8	Operational Improvements	-	-	-	0.0%
9	DEBT SERVICE	257,071	277,564	20,493	3.4%
10	PAYGO (Contribution to bond fund)	30,193	36,055	5,862	1.0%
11		\$ 725,348	\$ 757,644	\$ 32,296	5.4%
12	REVENUES				
13	Other Sources and Fees	(104,466)	(104,738)	(272)	0.0%
14	OTHER TRANSFERS AND CREDITS	(19,980)	(27,968)	(7,988)	-1.3%
15	Total - Water & Sewer Revenue Need	\$ 600,902	\$ 624,939	\$ 24,036	4.0%

16 *Approximately \$6 million in additional operating expenses = 1 percent increase in revenue

	FY 2019 Estimated**	W&S Rev Impact	
17	Potential Offsets to Revenue Increase:		
18	\$50 million CIP Reduction = Debt Service Impact @ 5% Interest	\$ (1,626)	-0.3%
19	\$100 million CIP Reduction = Debt Service Impact @ 5% Interest	\$ (3,253)	-0.5%
20	\$125 million CIP Reduction = Debt Service Impact @ 5% Interest	\$ (4,066)	-0.7%

21 **Notable Assumptions:**

- 22 4.5% increase in Salaries & Wages FY 2019 through FY 2024
- 23 1.0% increase in All Other FY 2019; 2.0% remains for outer years
- 24 \$6 million A&R for Operational Improvements has been removed.
- 25 \$14 million for Advanced Metering Infrastructure was added back to FY 2019 Capital Budget.
- 26 92% completion factor for CIP; 100% for Information Only (including Reconstruction)

27 **Debt service impact on new bond issuance assumes only one payment (or half year) in FY 2019. Outer year impact would
 28 be double the amounts shown.

Assumptions:

1. The FY 2019-2024 projections reflect WSSC's multi-year forecast and assumptions. The projected expenditures, revenues, and fund balances for these years may be based on changes to rates, fees, usage, inflation, future labor agreements, and other factors not assumed in the Approved Budget FY 2018. Data excludes General Construction Debt Service and General Construction Bonds.
2. The FY 2018 and prior spending affordability results are the values for the four spending affordability parameters as approved jointly by Montgomery and Prince George's counties. The FY 2018 spending affordability results are the values of the spending affordability parameters associated with WSSC's Approved Budget FY 2018. The FY 2019-2024 spending affordability figures correspond to the values of the various spending affordability parameters and assumptions.
3. Debt service for bonds and notes includes Maryland Water Quality Bonds and interfund debt service transfers. General Construction debt service is excluded.
4. Revenue/Unspecified Adjustments assumes a 12 month impact (commence on July 1st).
5. Debt Service Coverage = Operating Revenues less Operating Expenses (excluding Debt Service) divided by the debt service on bonds and notes.
6. Operating Reserve represents 10 percent of Operating Revenue.

**FY'19 WSSC Multi-Year Financial Forecast
Summary**

Forecast Scenario	PAYGO	Additional & Reinstated	Use of Fund Balance Climate Change	Use of Fund Balance Strategic Energy plan	Use of Fund Balance IT Strategic Plan	Total Use of Fund Balance	Debt Service Reductions	Unspecified Reductions	Rate
Scenario 1 - Base Case - Status Quo -No Additional & Reinstated (A&R)	36,958		200	200	11,180	11,580			5.2%
Scenario 2 - Base Case - A&R Operational Improvements	36,958	6,000	200	200	11,180	11,580			6.2%
Scenario 3 - No A&R, CIP Deferrals, Debt Service and Unspecified Reductions	35,942		200	200	11,180	11,580	(4,066)	(5,918)	3.5%

Scenario 3 is not recommended by WSSC.

Fund Balance Analysis

	Total
Water & Sewer Operating Fund Balance at end of FY'17	<u>\$ 189,956,000</u>
IT Strategic Plan	(10,980,000)
Strategic Energy Plan Implementation (5-Year FY16 A&R)	(200,000)
Climate Change Vulnerability Assessment (5-Year FY16 A&R)	<u>(400,000)</u>
Fund Balance (end of FY'18)	<u>\$ 178,376,000</u>
IT Strategic Plan	(11,180,000)
Strategic Energy Plan Implementation (5-Year FY16 A&R)	(200,000)
Climate Change Vulnerability Assessment (5-Year FY16 A&R)	(200,000)
Fund Balance (end of FY'19)	<u>166,796,000</u>
FY'20 Strategic Energy Plan Implementation (A&R)	(200,000)
FY'20 Climate Change Vulnerability Assessment (A&R)	(100,000)
FY'20-'24 Balance IT Strategic Plan	<u>(36,000,000)</u>
Projected Fund Balance	<u>\$ 130,496,000</u>