



# THE PRINCE GEORGE'S COUNTY GOVERNMENT

(301) 952-3700

County Council

October 24, 2019

TO: Deni Taveras, Chair  
 Transportation, Infrastructure, Energy and Environment Committee (TIEE)

FROM: J. Kenneth Battle, Jr., Committee Director *JB*  
 Transportation, Infrastructure, Energy and Environment Committee (TIEE)

Canjor D. Reed, Senior Auditor *CDR*  
 Office of Audits and Investigations (A&I)

THRU: Robert Williams, Council Administrator *R.W.*  
 Prince George's County Council

SUBJECT: Washington Suburban Sanitary Commission (WSSC)  
 FY 2021 Spending Affordability Guidelines

## I. Overview of WSSC Recommendation

Each year by November 1, both the Montgomery and Prince George's County Councils approve the spending control limits for the upcoming WSSC budget. WSSC staff develops a "base case" six-year forecast which is then reviewed by a Bi-County workgroup in September. The FY 2021 spending control limits assumed in the WSSC staff's base case scenario are presented below.

Table 1: FY 2021 WSSC Recommended Base Case

Spending Control Limits	FY 2021 Base Case	Change from FY 2020 Budget
Rate Increase	8.0%	3.0%
New Debt	\$409,922,000	6.5%
Debt Service	\$313,865,000	2.5%
Total Water and Sewer Operating Expenses *	\$844,149,000	5.2%

\*Assumes Additional & Reinstated Programs totaling \$7.736 million and fully funding the WSSC Proposed FY 2021 – FY 2026 CIP (including a \$13 million increase in PAYGO to support infrastructure needs at the Piscataway facility).

## II. Background

The WSSC's spending control limits process was established in April 1994 via a resolution by both Montgomery and Prince George's County Councils, with a goal of both Councils agreeing on certain budgetary limits by November 1 of each year. A summary of the process is as follows:

- The Spending Affordability Guidelines (SAG) are based on a multi-year planning model and strategy to stabilize annual rate increases over time.
- A goal is to hold customer fee supported debt service below 40% of the operating budget.
- The four SAG limits include:
  - Maximum Average Rate Increase
  - Debt Service
  - New Debt
  - Total Water and Sewer Operating Expenses
- Limits provide direction to WSSC as to what to request, but do not create a ceiling or floor as to what the Councils may approve jointly at a later date. [Note: State law defines the annual WSSC Proposed Budget as the "default" budget, should the Montgomery and Prince George's County Councils not agree on changes. Therefore, the limits are an important first step to define proposed budget parameters that are acceptable to both Councils.]
- The base case scenario assumes no changes in WSSC's fixed fees (i.e. Infrastructure Investment Fee (IIF) and the Account Maintenance Fee (AMF)).

## III. Schedule

The goal of the spending control limits process is for the Montgomery and Prince George's County Councils to establish limits by November 1 of each year so that WSSC can build the approved limits into its Preliminary Proposed Budget Public Hearing document which is released by January 15 each year. WSSC must transmit a Proposed Capital and Operating Budget to both counties by March 1 of each year.

- Bi-County Working Group Meetings: September 11 and 25, 2019
- TIEE Committee Discussion and WSSC Presentation: October 10, 2019
- TIEE Committee Review and Approve SAG limits: October 24, 2019
- Council Action: October 29, 2019



Note: The County Executive is expected to transmit her recommendation on WSSC's spending control limits prior to the Council Action by October 29, 2019.

#### IV. Spending Control Limits

##### A. History

The following chart presents the rate increase limits agreed upon by both Councils (unless otherwise noted) since FY 1996 and the actual rate increase later approved for each fiscal year.

*Table 2: Historical Rate Increases*

Fiscal Year	Rate Increase		Fiscal Year	Rate Increase	
	Approved Limit***	Actual Increase		Approved Limit ***	Actual Increase
1996	3.0%	3.0%	2009	9.7%	8.0%
1997	3.0%	3.0%	2010	9.5%	9.0%
1998	3.0%	2.9%	2011	8.0%	8.5%
1999	2.0%	0.0%	2012	8.0%	8.5%
2000	1.5%	0.0%	2013	8.5%	7.5%
2001	0.0%	0.0%	2014	7.5%	7.25%
2002	2.0%	0.0%	2015	6.0%	5.5%
2003	0.0%	0.0%	2016*	2.1%	1.0%
2004	0.0%	0.0%	2017*	3.5%	3.0%
2005	3.0%	3.0%	2018	3.5%	3.5%
2006	2.5%	2.5%	2019	4.0%	4.5%
2007	3.0%	3.0%	2020	5.0%	5.0%
2008	5.3%	6.5%	2021	TBD	TBD

\*The actual bill impact in FY 2016 and 2017 was 6.0% and 6.5% respectively, due to recalibration of the Account Maintenance Fee and the implementation of the Infrastructure Investment Fee.

\*\*Note: No agreement was reached in fiscal years 2002, 2006, 2009, 2010, 2011, 2012, and 2014.

\*\*\* Note: The Approved Limits shown reflects Prince George's County recommendations only.

- FY 1999 through FY 2004: Although rate increases were assumed in the approved spending control limits for FY 1999 and FY 2000, the WSSC budget was approved in those years without rate increases. In fact, there were six consecutive years without a rate increase (FY 1999 – FY 2004). During

this period, WSSC was implementing its Competitive Action Plan (CAP), efforts which resulted in a reduction of approximately 33% of its workforce.

- FY 2005 through FY 2007: Modest rate increases ranging from 2.5% to 3.0% were approved.
- FY 2008 through FY 2015: The Councils debated and ultimately approved substantial rate increases. These increases were the result of a combination of factors, including:
  1. Flat revenues: WSSC water production has been largely flat in recent years, even as customer accounts have increased.
  2. Expenditures: Increases in excess of inflationary levels in several areas were noted such as debt service (funds to cover capital needs, including WSSC's need to ramp up its water and sewer main reconstruction efforts and its large diameter water main inspections, repairs and monitoring program), as well as, many operating expenses such as chemicals, heat, light and power, regional sewage disposal, benefits and compensation.
- FY 2016 and FY 2017: The Councils supported a recalibration of the AMF in FY 2016 and the creation of a new IIF, which resulted in increased revenues equivalent to about a 6.0 % rate increase in FY 2016 and 6.5% rate increase in FY 2017. Ultimately, the two Councils approved rate increases of 1.0% and 3.0%, respectively, in FY 2016 and FY 2017.
- FY 2018: A 3.5% rate limit was approved by both Councils for FY 2018 and the FY 2018 budget was approved with this rate increase assumption.
- FY 2019: The two Councils did not agree on a rate increase limit. The Prince George's Council approved a 4.0% rate increase while the Montgomery Council supported a 5.0% rate increase. The WSSC budget was transmitted with a 4.5% rate increase, which was ultimately supported by both Councils.
- FY 2020: The two Councils agreed on a rate increase limit of 5.0% and the FY 2020 budget was approved with this rate increase assumption.

## **B. Financial Forecast Trends**

While the spending control limits process is an annual process, the Bi-County Working Group takes a multi-year perspective of trends. The out-year estimates help staff identify issues that could arise in future years. For instance, rate increases in the first year help to improve WSSC's fiscal situation in future years by increasing WSSC's base revenues. Conversely, deferring rate increases to future years, or using one-time revenue to reduce a rate increase in the first year, increases future fiscal challenges, since the revenue base is lower in the future years.

This year's base case forecast assumes an 8.0% rate increase through FY 2022 with a 7.0% increase in FY 2023 and FY 2024, and a 6.5% rate increase projected in FY 2025 and beyond. These projections accommodate WSSC's existing debt and debt service projections for its FY 2021 – FY 2026 CIP, allows for WSSC to attain its debt



service coverage target ratio of 1.10 by FY 2022, and keeps debt service as a percentage of the operating budget below 40 percent, while providing for inflationary increases in most operating expense categories. Unlike past forecasts, no unspecified reductions are assumed.

According to the United States Geological Survey, water use across the United States has declined to levels not seen since 1970. This trend has greatly impacted WSSC's revenues. Reduced per capita water usage in the WSSC service area has resulted in decreased water production. Since FY 1994, WSSC's water production has fallen by 7.3%, and work years were reduced by 15.7%. During this same timeframe, the number of customer accounts grew by more than 20% and the size of the system to be maintained by 20%. Overall water production is expected to remain flat over the financial forecast period. While water conservation is practical from an environmental standpoint, it means that WSSC's dominant revenue source (over 80%) has been stagnant, putting more pressure on rates to address large increases in debt service in recent years to address ongoing infrastructure needs. Therefore, WSSC continues to face significant fiscal challenges going forward, with rate increases being higher than inflation.

### **C. FY 2021 Spending Control Limits Base Case**

For the upcoming budget, WSSC staff prepared a base case spending control limits scenario for review and comment by County staff (for details see *Attachment 1: Spending Affordability Fiscal Year 2021*, dated October 1, 2019).

The base case scenario as depicted in *Table 1, page 1* of this report assumes the following:

- Full funding of WSSC's FY 2021 – FY 2026 Capital Improvement Program;
- Salaries and wage increases at 4.5% in FY 2021 and the out years;
- Inflationary increases in current programs (2.0% in FY 2021 and the out years)
- Increases in Regional Sewage Disposal costs in FY 2021 based on the latest information from DCWater;
- Reconstruction Debt Service Offset (REDO) is assumed at \$9.5 million in FY 2021, a slight reduction from FY 2020 at \$11.6 million, with further reductions assumed through FY 2023 where the surplus funds are expected to be fully exhausted;
- Use of \$8.0 million in excess fund balance in FY 2021, a decrease of \$3.3 million from the FY 2020 use of \$11.3 million;
- Includes \$7.736 million for Additional and Reinstated Programs to address operational improvements. No dollars were assumed for these improvements in FY 2020 base case. In addition, no Additional & Reinstated Programs were included in the FY 2018 through FY 2020 Approved Budget;

- Last year’s FY 2020 base case assumed \$4.6 million in Unspecified Reductions. This year’s base case does not assume any Unspecified Reductions. FY 2020 spending control limits were based on the 5.0% scenario which included \$10.8 million in unspecified reductions; and
- The elements of the base case funding gap are shown in *Table 3* below. The overall gap is \$51.9 million, equivalent to approximately an 8.0% rate increase.

**Table 3: Major Factors Contributing to the Base Case Rate Increase**

Factors		Changes from the FY 2020 (\$)	Impact on Rate	Cumulative Rate Increase
1	Changes in Funds Available (Use of Fund Balance and Sewer Revenue Adjustments)	\$10,383,000	1.60%	1.60%
-	Unspecified Reductions	0	0	1.60%
2	Debt Service	\$7,558,000	1.16%	2.76%
3	PAYGO	\$12,984,000	2.00%	4.76%
4	Regional Sewage Disposal	\$1,000,000	0.15%	4.91%
5	Heat, Light and Power	\$1,272,000	0.20%	5.11%
6	Maintenance and Operating (2% inflation Inc.)	\$5,143,000	0.79%	5.90%
7	Salary and Wage Increase	\$5,835,000	0.90%	6.79%
8	Additional and Reinstated Programs	\$7,736,000	1.19%	7.98%
<b>Total Base Case Rate Increase Assumption</b>		<b>\$51,911,000</b>	<b>7.98%</b>	

1. Changes in Funds Available (includes the following: revenue estimates, revenue adjustments, and the use of fund balance) results in an increase of 1.60% in the rate requirement. This is a result mostly of lower than projected volumetric rate revenue in FY 2020 and a resetting of expected revenue in FY 2021 and beyond (approx. \$8.7 million). Other adjustments, such as transfers and use of fund balance are also down approximately \$6.9 million. Partially offsetting these decreases are increases in some miscellaneous categories such as interest income.
2. Debt Service costs are up \$7.6 million (resulting in 1.16% rate impact).
3. The base case also assumes a substantial increase in PAYGO of \$13 million (2.0% rate impact), the largest increase reflected in the base case. The PAYGO increase is intended to help WSSC keep its debt service ratio as a percentage of total expenditures below 40 percent and to meet its debt service coverage target



- by FY 2023. The \$13 million includes a place holder earmarked to help fund infiltration and inflow challenges WSSC is experiencing at Piscataway.
4. Some other WSSC expenditures, which are essentially fixed are also presented. Regional Sewage Disposal expenses (based on actual WSSC sewage flows to the Blue Plains Wastewater Treatment Plant) are up \$1.0 million for FY 2021. Substantial increases in this charge were included in last year's base case.
  5. Heat, Light and Power expenses are expected to decline slightly.
  6. The Maintenance and Operating category is inflated by 2.0% in the base case (0.8% rate impact).
  7. Salary and wages are inflated by 4.5% to cover COLA and merit increases. WSSC's proposed compensation adjustments will be reviewed during the regular budget process next spring. In recent years, the Councils have supported WSSC compensation adjustment levels comparable to County Government compensation adjustments.
  8. WSSC is assuming \$7.736 million (1.19% rate impact) in Additional and Reinstated Programs.

#### **D. FY 2021 Spending Control Limits – Alternate Scenarios**

The WSSC staff proposed an initial water and sewer rate increase of 8.0% as part of the FY 2021 Spending Affordability Guidelines (SAG) for consideration by both Prince George's and Montgomery Counties. Alternate rate case scenarios of 7.2% and 6.5% increases were requested by the Spending Affordability Bi-County Working Group.

In order to achieve a rate increase of 7.2% the following adjustments are required:

- The Water and Sewer Rates, along with Account Maintenance Fees and Infrastructure Investment Fees will each need to be increased by 7.2% over the FY 2020 Approved limits.

In order to achieve a rate increase of 6.5%, it was determined that the following adjustments to the base case is required:

- A reduction in PAYGO and deletion of all Additional and Reinstated Programs will be required. For details on the Additional and Reinstated Programs, see *Attachment 2*.

In order to achieve a rate increase of 7.0%, WSSC determined that the following will be required, see *Attachment 3*.

- A reduction in Additional and Reinstated Programs from \$7.736 million to \$1.2 million.

## E. Staff Recommendation

The Spending Affordability Guidelines (SAG) process provides a framework within which the Prince George's and Montgomery County Councils can review and decide on the WSSC spending control limits. These limits do not cap what the Councils can approve within the regular budget process that concludes in May of each year.

*Table 4* below, summarizes the Prince George's County Council staff recommendation as compared to the FY 2020 Approved WSSC budget.

**Table 4: FY 2021 SAG Recommendation**

FY 2021 – Staff Recommended Rate Case Scenario @ 7.0%			
Spending Control Limits	FY 2021 PGC Staff Recommendation	FY 2020 WSSC Approved	Change from FY 2020 Budget (%)
Rate Increase	7.0%	5.0%	2.0%
New Debt	\$409,922,000	\$384,910,000	6.10%
Debt Service	\$313,865,000	\$306,350,000	2.39%
Total Water and Sewer Operating Expenses	\$837,660,000	\$802,620,000	4.18%

The Council staff has reviewed all scenarios provided by the WSSC in terms of project status and impact of both County residents, and system reliability.

*Table 5* below summarizes the annual and quarterly customer impact at various consumption levels for the base case and the alternate scenarios.

**Table 5: Customer Impact Chart**

Annual and Quarterly Customer Bill Impact						8.0%
Average Daily Consumption	Approved FY 2020	Quarterly Approved FY 2020	Proposed FY 2021	Quarterly Proposed FY 2021	Quarterly % Change	Quarterly \$ Change
100 gpd	\$555.76	\$138.94	\$591.19	\$147.80	6.4%	\$8.86
165 gpd	871.31	217.83	931.93	232.98	7.0%	\$15.16
500 gpd	3,178.63	794.66	3,423.47	855.87	7.7%	\$61.21
1000 gpd	7,612.08	1,903.02	8,152.13	2,038.03	7.1%	\$135.01
5000 gpd	38,947.68	9,736.92	41,849.38	10,462.34	7.5%	\$725.42
10,000 gpd	78,994.18	19,748.55	84,847.93	21,211.98	7.4%	\$1,463.44



Annual and Quarterly Customer Bill Impact						7.2%
Average Daily Consumption	Approved FY 2020	Quarterly Approved FY 2020	Proposed FY 2021	Quarterly Proposed FY 2021	Quarterly % Change	Quarterly \$ Change
100 gpd	\$555.76	\$138.94	\$595.71	\$148.93	7.2%	\$9.99
165 gpd	871.31	217.83	933.93	233.48	7.2%	\$15.66
500 gpd	3,178.63	794.66	3,407.05	851.76	7.2%	\$57.11
1000 gpd	7,612.08	1,903.02	8,159.18	2,039.80	7.2%	\$136.77
5000 gpd	38,947.68	9,736.92	41,746.69	10,436.67	7.2%	\$699.75
10,000 gpd	78,994.18	19,748.55	84,671.23	21,167.81	7.2%	\$1,419.26

Annual and Quarterly Customer Bill Impact						7.0%
Average Daily Consumption	Approved FY 2020	Quarterly Approved FY 2020	Proposed FY 2021	Quarterly Proposed FY 2021	Quarterly % Change	Quarterly \$ Change
100 gpd	\$555.76	\$138.94	\$586.76	\$146.69	5.6%	\$7.75
165 gpd	871.31	217.83	924.35	231.09	6.1%	\$13.26
500 gpd	3,178.63	794.66	3,392.87	848.22	6.7%	\$53.56
1000 gpd	7,612.08	1,903.02	8,804.62	2,021.16	6.2%	\$118.14
5000 gpd	38,947.68	9,736.92	41,486.66	10,371.67	6.5%	\$634.75
10,000 gpd	78,994.18	19,748.55	84,116.21	21,029.05	6.5%	\$1,280.51

Annual and Quarterly Customer Bill Impact						6.5%
Average Daily Consumption	Approved FY 2020	Quarterly Approved FY 2020	Proposed FY 2021	Quarterly Proposed FY 2021	Quarterly % Change	Quarterly \$ Change
100 gpd	\$555.76	\$138.94	\$584.55	\$146.14	5.2%	\$7.20
165 gpd	871.31	217.83	920.56	230.14	5.7%	\$12.31
500 gpd	3,178.63	794.66	3,377.57	844.39	6.3%	\$49.73
1000 gpd	7,612.08	1,903.02	8,050.87	2,012.72	5.8%	\$109.70
5000 gpd	38,947.68	9,736.92	41,305.31	10,326.33	6.1%	\$589.41
10,000 gpd	78,994.18	19,748.55	83,750.35	20,937.59	6.0%	\$1,189.04

### III. Council Staff Recommendation

In summary, a rate increase not to exceed 7.0% is recommended by Prince George's County Council Staff. This proposed rate is expected to add no more than \$13.26 to a customer's average quarterly bill based on usage of approximately 165 gallons per day. WSSC acknowledges that this can be achieved via:

- No increase to fixed fees;
- Prince George's County CIP projects to be maintained at the level currently proposed in the FY 2021 – FY 2026 Proposed Six-Year CIP for water and sewer (effective October 1, 2019);

- WSSC shall continue with the planned progress with the Piscataway Infiltration and Inflow Project as described in the Additional and Reinstated Programs (Attachment 2);
- \$0 reduction in unspecified adjustments for operating expenses; and,
- \$8.0 million in the use of fund balance.

At 7.0%, the spending affordability guideline limits are as follows:

▪ New Water and Sewer Debt	\$ 409,922,000
▪ Total Water and Sewer Debt Service	\$ 313,865,000
▪ Total Water and Sewer Operating Expenses	\$ 837,660,000
▪ Water/Sewer Rate	7.0%



#### **IV. Attachments**

- Attachment 1: WSSC Proposed Spending Affordability FY 2021 Models at 8%, 7.2% and 6.5% rate increases: (October 1, 2019)
- Attachment 2: Additional and Reinstated Programs
- Attachment 3: WSSC Spending Affordability Model at 7%.



# **SPENDING AFFORDABILITY FISCAL YEAR 2021**

**October 1, 2019**



## FISCAL PLANNING ACTIONS IMPLEMENTED TO MINIMIZE RATE INCREASE

### Capital Savings:

- Total reductions in debt of \$413 million reflected in prior CIP are maintained in FY 2021-2026 CIP:
  - Water Main Reconstruction program will remain at the reduced rate of 25 miles for FY 2021
  - Potomac Submerged Channel Intake will remain deferred beyond FY 2026
  
- Maintain AAA Bond Rating:
  - Increase PAYGO from \$44 million in FY 2021 to \$65 million in FY 2026 to manage debt service ratios
  - Implement level principal payments beginning FY 2023
  
- Strategic Sourcing Teams identified millions of dollars in capital cost savings/avoidance since FY 2013

### Operating Savings:

- Strategic Sourcing Teams identified millions of dollars in operating cost savings/avoidance since FY 2013
  
- Group Insurance plan design changes: \$4.3 million savings in FY 2017-2019
  
- Overtime Reduced by \$3.4 million since FY 2016
  
- No Increase in positions since FY 2017
  
- Workers' Compensation FY 2018 v. FY 2019 reductions:
  - 25% in lost work days
  - 50% in Workers' compensation claims - \$425,000
  
- WSSC is piloting several technologies to improve our environmental stewardship, productivity, and cost control

### FY 2021 Multi-Year Financial Forecast Summary

Forecast Scenario	PAYGO	Additional & Reinstated	Use of Fund Balance IT Strategic Plan	Unspecified Reductions	Volumetric Rate Increase	Ready to Serve Charge Increase
Scenario 1 - Base Case	44,000	7,736	8,000	-	8.0%	0.0%
Scenario 2 - Base Case + Fixed Fee Increase	44,000	7,702	8,000	-	7.2%	7.2%
Scenario 3 - Base Case with no Additional & Reinstated	42,003	-	8,000	-	6.5%	0.0%



**ASSUMPTION SUMMARY FOR SAG FINANCIAL FORECAST MODEL (NEED BASED)**

	WORKLOAD DATA		PROJECTED				
	FY 2020E	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
<b>1 REVENUE</b>							
<b>2 Water Consumption and Sewer Treatment</b>							
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%
<b>7 Credits and Transfers</b>							
8 Use of Fund Balance	\$ 11,341	\$ 8,000	\$ 7,000	\$ 6,000	\$ 5,000	\$ -	\$ -
10 REDO Offset	\$ 11,600	\$ 9,500	\$ 7,400	\$ 6,000	\$ -	\$ -	\$ -
<b>16 EXPENDITURE</b>							
<b>17 Operating</b>							
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	1.4%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%
22 Regional Sewage Disposal	\$ 59,000	\$ 60,000	\$ 61,200	\$ 62,424	\$ 63,672	\$ 64,946	\$ 66,245
23 All Other	1.9%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
24 Debt Service	\$ 306,307	\$ 313,865	\$ 336,142	\$ 365,610	\$ 389,665	\$ 415,351	\$ 438,129
25 Yearly Growth %		2.5%	7.1%	8.8%	6.6%	6.6%	5.5%
26 PAYGO	\$ 31,016	\$ 44,000	\$ 44,000	\$ 44,000	\$ 60,000	\$ 85,000	\$ 95,000
<b>27 Capital Expenditure Parameters</b>							
29 Water and Sewer Completion Factor	80.0%	80.0%	80.0%	80.0%	80.0%	84.7%	84.7%
30 Information Only Completion Factor	89.7%	90.0%	90.0%	90.0%	90.0%	95.0%	95.0%
<b>31 BOND ISSUANCE</b>							
33 Interest Rate	3.8%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%

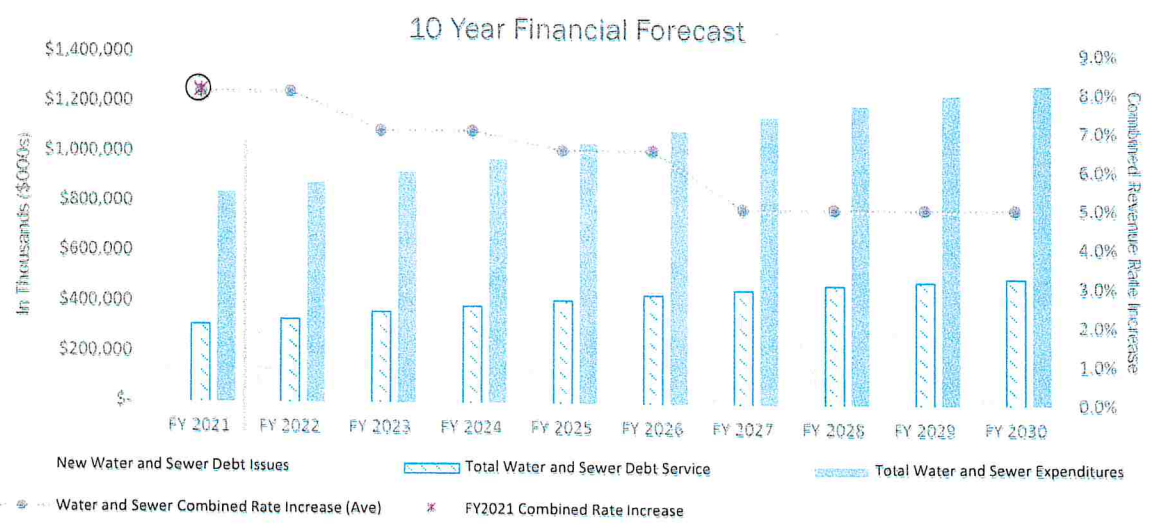
### REVENUE AND EXPENDITURES – IMPACT ON ADOPTED CHARGES (NEED BASED)

	(In Thousands \$000s)	FY 2020 Approved	FY 2021 Proposed	Dollar Change	W&S Rev Impact*
1	OPERATING REVENUES (BASE)				
2	Adopted Water and Sewer Charges	\$ 658,899	\$ 650,197		
3	ADJUSTMENTS TO REVENUES				
4	Sewer User Charge Adjustment	-	8,702	8,702	1.3%
5	Other Sources and Fees	(112,827)	(118,056)	(5,229)	-0.8%
6	OTHER TRANSFERS AND CREDITS	(30,894)	(23,984)	6,910	1.1%
7		\$ (143,721)	\$ (133,338)	\$ 10,383	1.6%
8	OPERATING EXPENSES				
9	Salaries and Wages	\$ 129,676	\$ 135,511	\$ 5,835	0.9%
10	Heat, Light, and Power	19,436	20,708	1,272	0.2%
11	Regional Sewage Disposal	59,000	60,000	1,000	0.2%
12	All Other	257,185	262,328	5,143	0.8%
13	+ Additional and Reinstated	-	7,736	7,736	1.2%
14	DEBT SERVICE	306,307	313,865	7,558	1.2%
15	PAYGO (Contribution to bond fund)	31,016	44,000	12,984	2.0%
16		\$ 802,620	\$ 844,149	\$ 41,529	6.4%
17	<b>Total - Base Case Revenue Need</b>	<b>\$ 658,899</b>	<b>\$ 710,811</b>	<b>\$ 51,912</b>	<b>8.0%</b>
18	(Line 16 + Line 7)				

\*Approximately \$6.5 million in additional operating expenses = 1 percent increase in revenue

	FY 2021 Estimated	W&S Rev Impact	
22	Potential Offsets to Revenue Increase:		
23	\$50 million CIP Reduction = Debt Service Impact @ 5.0% Interest	\$ (2,002)	-0.3%
24	\$100 million CIP Reduction = Debt Service Impact @ 5.0% Interest	\$ (4,005)	-0.6%
25	\$125 million CIP Reduction = Debt Service Impact @ 5.0% Interest	\$ (5,006)	-0.8%

27 Notable Assumptions:  
 28 4.5% annual increase in Salaries & Wages FY 2021 through FY 2026  
 29 2.0% annual increase in All Other  
 30 \$10.0 million reduction included for Sewer Use Charges in FY 2020 to rebaseline projections  
 31 80% completion factor for CIP; 90% for Information Only (including Reconstruction)  
 32 Debt service impact on new bond issuance assumes only one interest payment (or half year) in FY 2021. Outer year  
 33 impact would double interest paid.





**FINANCIAL FORECAST AT 8.0% STRAIGHT W. NO LIMIT NEW ISSUE, NO PAYGO CAP, AND FY 2025 LEVEL PRINCIPAL (NEED BASED)**

	(In Thousands \$000s)	FY 2020 Approved	FY 2021 Proposed	FY 2022 Projected	FY 2023 Projected	FY 2024 Projected	FY 2025 Projected	FY 2026 Projected
1	New Water and Sewer Debt Issues	\$ 384,910	\$ 409,922	\$ 503,092	\$ 495,728	\$ 403,775	\$ 357,972	\$ 379,483
2	Total Water and Sewer Debt Service	306,350	313,865	336,142	365,610	389,665	415,351	438,129
3	Total Water and Sewer Expenditures	802,620	844,149	882,989	926,486	981,021	1,046,657	1,098,999
4	Water and Sewer Combined Rate Increase (Ave)	5.0%	8.0%	8.0%	7.0%	7.0%	6.5%	6.5%
5	Water and Sewer User Charges	\$ 658,899	\$ 702,109	\$ 759,578	\$ 814,155	\$ 872,668	\$ 931,023	\$ 993,288
6	Other Sources/Fees	112,827	118,056	118,798	119,554	120,325	121,111	121,912
	Account Maintenance Fees	32,296	32,361	32,426	32,491	32,556	32,621	32,686
	Rockville Sewer Use	3,000	3,000	3,000	3,000	3,000	3,000	3,000
	Plumbing and Inspection Fees	12,900	13,286	13,685	14,095	14,518	14,954	15,403
	Infrastructure Investment Fee	39,331	39,410	39,488	39,567	39,647	39,726	39,805
	Miscellaneous	19,800	19,998	20,198	20,400	20,604	20,810	21,018
	Interest Income	5,500	10,000	10,000	10,000	10,000	10,000	10,000
	Unspecified Revenue Adjustment	-	-	-	-	-	-	-
7	Operating Revenues	771,726	820,164	878,375	933,709	992,993	1,052,134	1,115,200
8	OTHER TRANSFERS AND CREDITS	30,894	23,984	19,384	16,983	9,982	4,984	4,984
9	Total Funds Available	802,620	844,148	897,759	950,692	1,002,975	1,057,118	1,120,185
10	Salaries and Wages	\$ 129,676	\$ 135,511	\$ 141,609	\$ 147,982	\$ 154,641	\$ 161,600	\$ 168,872
11	Heat, Light, and Power	19,436	20,708	21,537	22,398	23,294	24,226	25,195
12	Regional Sewage Disposal	59,000	60,000	61,200	62,424	63,672	64,946	66,245
13	All Other	257,185	262,328	267,575	272,926	278,385	283,952	289,632
14	Operating Expenses	\$ 465,297	\$ 478,548	\$ 491,921	\$ 505,730	\$ 519,992	\$ 534,724	\$ 549,943
15	DEBT SERVICE							
16	Bonds and Notes Principal and Interest	306,307	313,865	336,142	365,610	389,665	415,351	438,129
18	OTHER TRANSFERS AND ADJUSTMENTS							
19	Additional and Reinstated	-	7,736	10,926	\$11,145	\$11,364	\$11,582	\$15,926
20	PAYGO (Contribution to bond fund)	31,016	44,000	44,000	44,000	60,000	85,000	95,000
21	Total Expenditures	802,620	844,149	882,989	926,486	981,021	1,046,657	1,098,999
22	Net Revenue (Loss)	0	0	14,770	24,207	21,954	10,461	21,186
23	BEGINNING FUND BALANCE - JULY 1	\$ 173,717	\$ 156,528	\$ 148,529	\$ 156,299	\$ 174,505	\$ 191,459	\$ 201,920
24	Net Increase (Decrease) in Fund Balance	0	0	14,770	24,207	21,954	10,461	21,186
25	Use of Fund Balance/Other Adjustments	(11,341)	(8,000)	(7,000)	(6,000)	(5,000)	-	-
26	ENDING FUND BALANCE - JUNE 30	\$ 162,376	\$ 148,528	\$ 156,299	\$ 174,505	\$ 191,459	\$ 201,920	\$ 223,106
27	Debt Service Coverage (1.10 is target)	1.00	1.06	1.12	1.14	1.18	1.22	1.25
28	Debt Service as a Percentage of Total Expenditures (Below 40% is target)	38.2%	37.2%	38.1%	39.5%	39.7%	39.7%	39.9%
29	Days Operating Reserve-on-Hand (60-90 days target)	73.8	64.2	64.6	68.7	71.2	70.4	74.1
30	Ending Fund Balance as a Percentage of Operating Revenue (10% min)	21.0%	18.1%	17.8%	18.7%	19.3%	19.2%	20.0%



**ANNUAL AND QUARTERLY CUSTOMER BILLS AT VARIOUS CONSUMPTION LEVELS (NEEDS BASED)**

		Proposed Revenue Rate Increase				8.0%	
Meter Size	Average Daily Consumption (Gallons Per Year)	Approved FY 2020	Quarterly Approved FY 2020	Proposed FY 2021	Quarterly Proposed FY 2021	Perc Chg	Quarterly \$ Chg
3/4" Residential Meter	100 (36,500 gal/yr)	\$555.76	\$138.94	\$591.19	\$147.80	6.4%	\$8.86
3/4" Residential Meter	165 (60,225 gal/yr)	871.31	217.83	931.93	232.98	7.0%	\$15.16
3/4" Residential Meter	500 (182,500 gal/yr)	3,178.63	794.66	3,423.47	855.87	7.7%	\$61.21
2" Meter	1,000 (365,000 gal/yr)	7,612.08	1,903.02	8,152.13	2,038.03	7.1%	\$135.01
3" Meter	5,000 (1,825,000 gal/yr)	38,947.68	9,736.92	41,849.38	10,462.34	7.5%	\$725.42
6" Meter	10,000 (3,650,000 gal/yr)	78,994.18	19,748.55	84,847.93	21,211.98	7.4%	\$1,463.44

Annual customer bills include the Account Maintenance Fee and Infrastructure Investment Fee.

## ASSUMPTION SUMMARY FOR SAG FINANCIAL FORECAST MODEL (7.2%)

	WORKLOAD DATA		PROJECTED				
	FY 2020E	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
<b>1 REVENUE</b>							
<b>2 Water Consumption and Sewer Treatment</b>							
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%
<b>7 Credits and Transfers</b>							
8 Use of Fund Balance	\$ 11,341	\$ 8,000	\$ 7,000	\$ 6,000	\$ 5,000	\$ -	\$ -
10 REDO Offset	\$ 11,600	\$ 9,500	\$ 7,400	\$ 6,000	\$ -	\$ -	\$ -
<b>16 EXPENDITURE</b>							
<b>17 Operating</b>							
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	1.4%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%
22 Regional Sewage Disposal	\$ 59,000	\$ 60,000	\$ 61,200	\$ 62,424	\$ 63,672	\$ 64,946	\$ 66,245
23 All Other	1.9%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
24 Debt Service	\$ 306,307	\$ 313,865	\$ 336,142	\$ 365,610	\$ 389,665	\$ 415,351	\$ 438,129
25 Yearly Growth %		2.5%	7.1%	8.8%	6.6%	6.6%	5.5%
26 PAYGO	\$ 31,016	\$44,000	\$44,000	\$44,000	\$60,000	\$ 85,000	\$ 95,000
<b>27 Capital Expenditure Parameters</b>							
29 Water and Sewer Completion Factor	80.0%	80.0%	80.0%	80.0%	80.0%	84.7%	84.7%
30 Information Only Completion Factor	89.7%	90.0%	90.0%	90.0%	90.0%	95.0%	95.0%
<b>31 BOND ISSUANCE</b>							
33 Interest Rate	3.8%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%



### REVENUE AND EXPENDITURES – IMPACT ON ADOPTED CHARGES (7.2%)

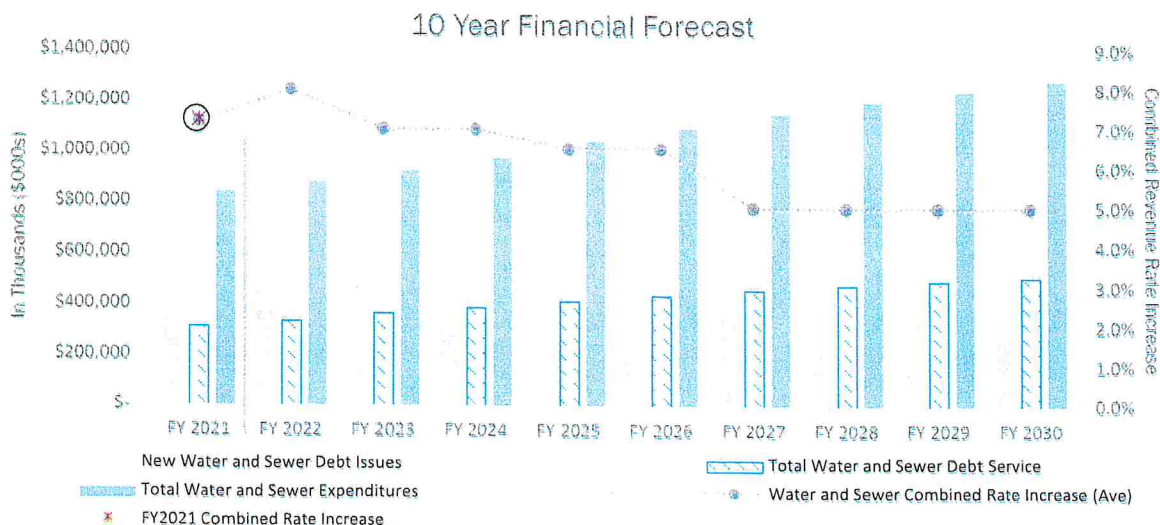
		(In Thousands \$000s)	FY 2020 Approved	FY 2021 Proposed	Dollar Change	W&S Rev Impact*
1	<b>OPERATING REVENUES (BASE)</b>					
2	Adopted Water and Sewer Charges		\$ 658,899	\$ 650,197		
3	<b>ADJUSTMENTS TO REVENUES</b>					
4	Sewer User Charge Adjustment		-	8,702	8,702	1.3%
5	Other Sources and Fees		(112,827)	(123,213)	(10,386)	-1.6%
6	<b>OTHER TRANSFERS AND CREDITS</b>		<b>(30,894)</b>	<b>(23,984)</b>	<b>6,910</b>	<b>1.1%</b>
7			\$ (143,721)	\$ (138,495)	\$ 5,226	0.8%
8	<b>OPERATING EXPENSES</b>					
9	Salaries and Wages		\$ 129,676	\$ 135,511	\$ 5,835	0.9%
10	Heat, Light, and Power		19,436	20,708	1,272	0.2%
11	Regional Sewage Disposal		59,000	60,000	1,000	0.2%
12	All Other		257,185	262,328	5,143	0.8%
13	+ Additional and Reinstated		-	7,702	7,702	1.2%
14	<b>DEBT SERVICE</b>		<b>306,307</b>	<b>313,865</b>	<b>7,558</b>	<b>1.2%</b>
15	<b>PAYGO (Contribution to bond fund)</b>		<b>31,016</b>	<b>44,000</b>	<b>12,984</b>	<b>2.0%</b>
16			\$ 802,620	\$ 844,115	\$ 41,495	6.4%
17	<b>Total - Base Case Revenue Need</b>		<b>\$ 658,899</b>	<b>\$ 705,620</b>	<b>\$ 46,721</b>	<b>7.2%</b>
18	(Line 16 + Line 7)					

\*Approximately \$6.5 million in additional operating expenses = 1 percent increase in revenue

	FY 2021 Estimated	W&S Rev Impact
22 Potential Offsets to Revenue Increase:		
23 \$50 million CIP Reduction = Debt Service Impact @ 5.0% Interest	\$ (2,002)	-0.3%
24 \$100 million CIP Reduction = Debt Service Impact @ 5.0% Interest	\$ (4,005)	-0.6%
25 \$125 million CIP Reduction = Debt Service Impact @ 5.0% Interest	\$ (5,006)	-0.8%

27 Notable Assumptions:

- 28 4.5% annual increase in Salaries & Wages FY 2021 through FY 2026
- 29 2.0% annual increase in All Other
- 30 \$10.0 million reduction included for Sewer Use Charges in FY 2020 to rebaseline projections
- 31 80% completion factor for CIP; 90% for Information Only (including Reconstruction)
- 32 Debt service impact on new bond issuance assumes only one interest payment (or half year) in FY 2021. Outer year impact would double interest paid.



**FINANCIAL FORECAST - WATER AND SEWER OPERATING FUNDS AT 7.2% W. NO LIMIT NEW ISSUE, REVISED READY-TO-SERVE, NO PAYGO CAP, AND FY 2025 LEVEL PRINCIPAL**

	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
(In Thousands \$000s)	Approved	Proposed	Projected	Projected	Projected	Projected	Projected
1 New Water and Sewer Debt Issues	\$ 384,910	\$ 409,922	\$ 503,092	\$ 495,728	\$ 403,775	\$ 357,972	\$ 379,483
2 Total Water and Sewer Debt Service	306,350	313,865	336,142	365,610	389,665	415,351	438,129
3 Total Water and Sewer Expenditures	802,620	844,115	882,989	926,486	981,021	1,046,657	1,098,999
4 Water and Sewer Combined Rate Increase (Ave)	5.0%	7.2%	8.0%	7.0%	7.0%	6.5%	6.5%
5 Water and Sewer User Charges	\$ 658,899	\$ 696,918	\$ 753,971	\$ 808,146	\$ 866,227	\$ 924,151	\$ 985,956
6 Other Sources/Fees	112,827	123,213	123,965	124,732	125,513	126,309	127,121
Account Maintenance Fees	32,296	34,687	34,756	34,826	34,895	34,965	35,035
Rockville Sewer Use	3,000	3,000	3,000	3,000	3,000	3,000	3,000
Plumbing and Inspection Fees	12,900	13,286	13,685	14,095	14,518	14,954	15,403
Infrastructure Investment Fee	39,331	42,241	42,326	42,411	42,495	42,580	42,666
Miscellaneous	19,800	19,998	20,198	20,400	20,604	20,810	21,018
Interest Income	5,500	10,000	10,000	10,000	10,000	10,000	10,000
Unspecified Revenue Adjustment	-	-	-	-	-	-	-
7 Operating Revenues	771,726	820,130	877,936	932,878	991,740	1,050,460	1,113,078
8 OTHER TRANSFERS AND CREDITS	30,894	23,984	19,384	16,983	9,982	4,984	4,984
9 Total Funds Available	802,620	844,114	897,320	949,861	1,001,722	1,055,445	1,118,062
10 Salaries and Wages	\$ 129,676	\$ 135,511	\$ 141,609	\$ 147,982	\$ 154,641	\$ 161,600	\$ 168,872
11 Heat, Light, and Power	19,436	20,708	21,537	22,398	23,294	24,226	25,195
12 Regional Sewage Disposal	59,000	60,000	61,200	62,424	63,672	64,946	66,245
13 All Other	257,185	262,328	267,575	272,926	278,385	283,952	289,632
14 Operating Expenses	\$ 465,297	\$ 478,548	\$ 491,921	\$ 505,730	\$ 519,992	\$ 534,724	\$ 549,943
15 DEBT SERVICE							
16 Bonds and Notes Principal and Interest	306,307	313,865	336,142	365,610	389,665	415,351	438,129
18 OTHER TRANSFERS AND ADJUSTMENTS							
19 Additional and Reinstated	-	7,702	10,926	11,145	11,364	11,582	15,926
20 PAYGO (Contribution to bond fund)	31,016	44,000	44,000	44,000	60,000	85,000	95,000
21 Total Expenditures	802,620	844,115	882,989	926,486	981,021	1,046,657	1,098,999
22 Net Revenue (Loss)	0	0	14,331	23,375	20,701	8,788	19,063
23 BEGINNING FUND BALANCE - JULY 1	\$ 173,717	\$ 156,528	\$ 148,529	\$ 155,860	\$ 173,235	\$ 188,935	\$ 197,723
24 Net Increase (Decrease) in Fund Balance	0	0	14,331	23,375	20,701	8,788	19,063
25 Use of Fund Balance/Other Adjustments	(11,341)	(8,000)	(7,000)	(6,000)	(5,000)	-	-
26 ENDING FUND BALANCE - JUNE 30	\$ 162,376	\$ 148,529	\$ 155,860	\$ 173,235	\$ 188,935	\$ 197,723	\$ 216,787
27 Debt Service Coverage (1.10 is target)	1.00	1.06	1.12	1.14	1.18	1.21	1.25
28 Debt Service as a Percentage of Total Expenditures (Below 40% is target)	38.2%	37.2%	38.1%	39.5%	39.7%	39.7%	39.9%
29 Days Operating Reserve-on-Hand (60-90 days target)	73.8	64.2	64.4	68.2	70.3	69.0	72.0
30 Ending Fund Balance as a Percentage of Operating Revenue (10% min)	21.0%	18.1%	17.8%	18.6%	19.1%	18.8%	19.5%



## ANNUAL AND QUARTERLY CUSTOMER BILLS AT VARIOUS CONSUMPTION LEVELS

		Proposed W&S Revenue Rate Increase		7.2%			
		Proposed IIF Revenue Rate Increase		7.2%			
		Proposed AMF Revenue Rate Increase		7.2%			
Meter Size	Average Daily Consumption (Gallons Per Year)	Approved FY 2020	Quarterly Approved FY 2020	Proposed FY 2021	Quarterly Proposed FY 2021	Quarterly Perc Chg	Quarterly \$ Chg
3/4" Residential Meter	100 (36,500 gal/yr)	\$555.76	\$138.94	\$595.71	\$148.93	7.2%	\$9.99
3/4" Residential Meter	165 (60,225 gal/yr)	871.31	217.83	933.93	233.48	7.2%	\$15.66
3/4" Residential Meter	500 (182,500 gal/yr)	3,178.63	794.66	3,407.05	851.76	7.2%	\$57.11
2" Meter	1,000 (365,000 gal/yr)	7,612.08	1,903.02	8,159.18	2,039.80	7.2%	\$136.77
3" Meter	5,000 (1,825,000 gal/yr)	38,947.68	9,736.92	41,746.69	10,436.67	7.2%	\$699.75
6" Meter	10,000 (3,650,000 gal/yr)	78,994.18	19,748.55	84,671.23	21,167.81	7.2%	\$1,419.26

Annual customer bills include the Account Maintenance Fee and Infrastructure Investment Fee.

## ASSUMPTION SUMMARY FOR SAG FINANCIAL FORECAST MODEL (6.5%)

	WORKLOAD DATA		PROJECTIONS				
	FY 2020E	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
<b>1 REVENUE</b>							
<b>2 Water Consumption and Sewer Treatment</b>							
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%
<b>7 Credits and Transfers</b>							
8 Use of Fund Balance	\$ 11,341	\$ 8,000	\$ 7,000	\$ 6,000	\$ 5,000	\$ -	\$ -
10 REDO Offset	\$ 11,600	\$ 9,500	\$ 7,400	\$ 6,000	\$ -	\$ -	\$ -
<b>16 EXPENDITURE</b>							
<b>17 Operating</b>							
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	1.4%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%
22 Regional Sewage Disposal	\$ 59,000	\$ 60,000	\$ 61,200	\$ 62,424	\$ 63,672	\$ 64,946	\$ 66,245
23 All Other	1.9%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
24 Debt Service	\$ 306,307	\$ 313,865	\$ 336,142	\$ 365,610	\$ 389,665	\$ 415,351	\$ 438,129
25 Yearly Growth %		2.5%	7.1%	8.8%	6.6%	6.6%	5.5%
26 PAYGO	\$ 31,016	\$ 42,003	\$ 44,000	\$ 44,000	\$ 60,000	\$ 85,000	\$ 95,000
<b>27 Capital Expenditure Parameters</b>							
29 Water and Sewer Completion Factor	80.0%	80.0%	80.0%	80.0%	80.0%	84.7%	84.7%
30 Information Only Completion Factor	89.7%	90.0%	90.0%	90.0%	90.0%	95.0%	95.0%
<b>31 BOND ISSUANCE</b>							
33 Interest Rate	3.8%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%

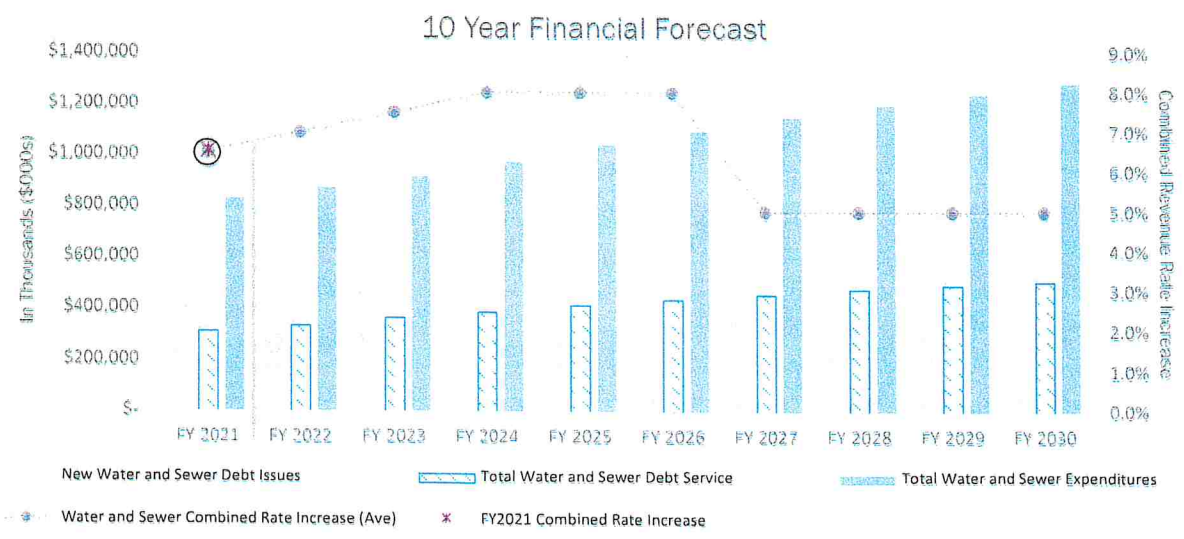
### REVENUE AND EXPENDITURES – IMPACT ON ADOPTED CHARGES (6.5%)

	(In Thousands \$000s)	FY 2020 Approved	FY 2021 Proposed	Dollar Change	W&S Rev Impact*
1	<b>OPERATING REVENUES (BASE)</b>				
2	Adopted Water and Sewer Charges	\$ 658,899	\$ 650,197		
3	<b>ADJUSTMENTS TO REVENUES</b>				
4	Sewer User Charge Adjustment	-	8,702	8,702	1.3%
5	Other Sources and Fees	(112,827)	(118,056)	(5,229)	-0.8%
6	<b>OTHER TRANSFERS AND CREDITS</b>	<b>(30,894)</b>	<b>(23,984)</b>	<b>6,910</b>	<b>1.1%</b>
7		\$ (143,721)	\$ (133,338)	\$ 10,383	1.6%
8	<b>OPERATING EXPENSES</b>				
9	Salaries and Wages	\$ 129,676	\$ 135,511	\$ 5,835	0.9%
10	Heat, Light, and Power	19,436	20,708	1,272	0.2%
11	Regional Sewage Disposal	59,000	60,000	1,000	0.2%
12	All Other	257,185	262,328	5,143	0.8%
13	+ Additional and Reinstated	-	-	-	0.0%
14	<b>DEBT SERVICE</b>	<b>306,307</b>	<b>313,865</b>	<b>7,558</b>	<b>1.2%</b>
15	PAYGO (Contribution to bond fund)	31,016	42,003	10,987	1.7%
16		\$ 802,620	\$ 834,415	\$ 31,796	4.9%
17	<b>Total - Base Case Revenue Need</b>	<b>\$ 658,899</b>	<b>\$ 701,078</b>	<b>\$ 42,179</b>	<b>6.5%</b>
18	(Line 16 + Line 7)				

\*Approximately \$6.5 million in additional operating expenses = 1 percent increase in revenue

	FY 2021 Estimated	W&S Rev Impact
22	Potential Offsets to Revenue Increase:	
23	\$ (2,002)	-0.3%
24	\$ (4,005)	-0.6%
25	\$ (5,006)	-0.8%

- 27 Notable Assumptions:
- 28 4.5% annual increase in Salaries & Wages FY 2021 through FY 2026
  - 29 2.0% annual increase in All Other
  - 30 \$10.0 million reduction included for Sewer Use Charges in FY 2020 to rebase projections
  - 31 80% completion factor for CIP; 90% for Information Only (including Reconstruction)
  - 32 Debt service impact on new bond issuance assumes only one interest payment (or half year) in FY 2021. Outer year impact would double interest paid.





## FINANCIAL FORECAST - WATER AND SEWER OPERATING FUNDS AT 6.5% W. NO LIMIT NEW ISSUE, NO PAYGO CAP, AND FY 2025 LEVEL PRINCIPAL

		FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
(In Thousands \$000s)		Approved	Proposed	Projected	Projected	Projected	Projected	Projected
1	New Water and Sewer Debt Issues	\$ 384,910	\$ 409,922	\$ 503,092	\$ 495,728	\$ 403,775	\$ 357,972	\$ 379,483
2	Total Water and Sewer Debt Service	306,350	313,865	336,142	365,610	389,665	415,351	438,129
3	Total Water and Sewer Expenditures	802,620	834,415	877,523	922,341	978,558	1,046,657	1,098,999
4	Water and Sewer Combined Rate Increase (Ave)	5.0%	6.5%	7.0%	7.5%	8.0%	8.0%	8.0%
5	Water and Sewer User Charges	\$ 658,899	\$ 692,375	\$ 742,142	\$ 799,190	\$ 864,612	\$ 935,382	\$ 1,011,946
6	Other Sources/Fees	112,827	118,056	118,798	119,554	120,325	121,111	121,912
	Account Maintenance Fees	32,296	32,361	32,426	32,491	32,556	32,621	32,686
	Rockville Sewer Use	3,000	3,000	3,000	3,000	3,000	3,000	3,000
	Plumbing and Inspection Fees	12,900	13,286	13,685	14,095	14,518	14,954	15,403
	Infrastructure Investment Fee	39,331	39,410	39,488	39,567	39,647	39,726	39,805
	Miscellaneous	19,800	19,998	20,198	20,400	20,604	20,810	21,018
	Interest Income	5,500	10,000	10,000	10,000	10,000	10,000	10,000
	Unspecified Revenue Adjustment	-	-	-	-	-	-	-
7	Operating Revenues	771,726	810,431	860,940	918,744	984,937	1,056,493	1,133,858
8	OTHER TRANSFERS AND CREDITS	30,894	23,984	19,384	16,983	9,982	4,984	4,984
9	Total Funds Available	802,620	834,415	880,323	935,727	994,919	1,061,478	1,138,842
10	Salaries and Wages	\$ 129,676	\$ 135,511	\$ 141,609	\$ 147,982	\$ 154,641	\$ 161,600	\$ 168,872
11	Heat, Light, and Power	19,436	20,708	21,537	22,398	23,294	24,226	25,195
12	Regional Sewage Disposal	59,000	60,000	61,200	62,424	63,672	64,946	66,245
13	All Other	257,185	262,328	267,575	272,926	278,385	283,952	289,632
14	Operating Expenses	\$ 465,297	\$ 478,548	\$ 491,921	\$ 505,730	\$ 519,992	\$ 534,724	\$ 549,943
15	DEBT SERVICE							
16	Bonds and Notes Principal and Interest	306,307	313,865	336,142	365,610	389,665	415,351	438,129
18	OTHER TRANSFERS AND ADJUSTMENTS							
19	Additional and Reinstated	-	-	5,460	7,000	8,900	11,582	15,926
20	PAYGO (Contribution to bond fund)	31,016	42,003	44,000	44,000	60,000	85,000	95,000
21	Total Expenditures	802,620	834,415	877,523	922,341	978,558	1,046,657	1,098,999
22	Net Revenue (Loss)	0	0	2,800	13,386	16,362	14,821	39,844
23	BEGINNING FUND BALANCE - JULY 1	\$ 173,717	\$ 156,528	\$ 148,529	\$ 144,329	\$ 151,715	\$ 163,077	\$ 177,898
24	Net Increase (Decrease) in Fund Balance	0	0	2,800	13,386	16,362	14,821	39,844
25	Use of Fund Balance/Other Adjustments	(11,341)	(8,000)	(7,000)	(6,000)	(5,000)	-	-
26	ENDING FUND BALANCE - JUNE 30	\$ 162,376	\$ 148,529	\$ 144,329	\$ 151,715	\$ 163,077	\$ 177,898	\$ 217,742
27	Debt Service Coverage (1.10 is target)	1.00	1.06	1.08	1.11	1.17	1.23	1.30
28	Debt Service as a Percentage of Total Expenditures (Below 40% is target)	38.2%	37.6%	38.3%	39.6%	39.8%	39.7%	39.9%
29	Days Operating Reserve-on-Hand (60-90 days target)	73.8	65.0	60.0	60.0	60.8	62.0	72.3
30	Ending Fund Balance as a Percentage of Operating Revenue (10% min)	21.0%	18.3%	16.8%	16.5%	16.6%	16.8%	19.2%

## ANNUAL AND QUARTERLY CUSTOMER BILLS AT VARIOUS CONSUMPTION LEVELS

Proposed Revenue Rate Increase		6.5%					
Meter Size	Average Daily Consumption (Gallons Per Year)	Approved FY 2020	Quarterly Approved FY 2020	Proposed FY 2021	Quarterly Proposed FY 2021	Perc Chg	Quarterly \$ Chg
3/4" Residential Meter	100 (36,500 gal/yr)	\$555.76	\$138.94	\$584.55	\$146.14	5.2%	\$7.20
3/4" Residential Meter	165 (60,225 gal/yr)	871.31	217.83	920.56	230.14	5.7%	\$12.31
3/4" Residential Meter	500 (182,500 gal/yr)	3,178.63	794.66	3,377.57	844.39	6.3%	\$49.73
2" Meter	1,000 (365,000 gal/yr)	7,612.08	1,903.02	8,050.87	2,012.72	5.8%	\$109.70
3" Meter	5,000 (1,825,000 gal/yr)	38,947.68	9,736.92	41,305.31	10,326.33	6.1%	\$589.41
6" Meter	10,000 (3,650,000 gal/yr)	78,994.18	19,748.55	83,750.35	20,937.59	6.0%	\$1,189.04

Annual customer bills include the Account Maintenance Fee and Infrastructure Investment Fee.

## MEETING 1 FOLLOW-UP ITEMS

- 1) Provide a 6.5% scenario with the FY22 at 7.0%, FY23 at 7.5% and FY24 – FY26 at 8.0%  
The requested scenario is attached.
- 2) Provide “Need Based CIP” scenario increasing both fixed and volumetric rates.  
This scenario is attached and has fixed and volumetric rates increasing at 7.2%
- 3) Please provide an electronic copy of the 9/11 Meeting Packet (as well as the 9/25 meeting packet when that is available)  
Provided
- 4) How many meter reader positions does WSSC have?  
There are 37 meter reader positions.
- 5) How much does each 1mgd in daily water production provide in annual revenue?  
Factoring in the \$8.7 million adjustment to sewer revenue, combined FY21 water & sewer volumetric revenue is \$650,197,000 without a rate increase. Each 1MGD would provide approximately \$10,861.96 in revenue (\$650,197K ÷ 365 ÷ 164 MGD)

- 6) Any new progress on Clean Water and developer SDC credits

There was only one project so far that was eligible and used the Wet Weather Project procedure:

- Pike and Rose Phase 2 (Part 8) DA5238H11
- SDC reimbursed so far \$11,331,185.71
- Total SDC Credit Estimate \$14,515,839
- The final audit on this project is not yet started.

A second project that is eligible and will probably use the Wet Weather Project procedure is Viva White Oak DA6420Z17. The HPA was approved and the Letter of Findings was issued on July 17, 2019. An SDC Credit Estimate has not been established at this time for this project. We are not aware of any other projects that qualify as Wet Weather.

- 7) Please provide the details/numbers behind the FY 2000 to 2020 Bill Increase Comparison @ 165 Gallons per day  
See attached Details for FY 2000 to 2020 Bill Increase Comparison.
- 8) Please provide the detail of the “Other Transfers and Credits” on Line 8 of the Financial Forecast on Page 6 of the 9/11 meeting packet.

Use of Fund Balance	8,000.00
Premium Transfer	1,500.00
SDC Debt Service Offset	4,984.00
<u>Reconstruction Debt Service Offset (REDO)</u>	<u>9,500.00</u>
Total Other Transfers & Credits	23,984.00



## MEETING 1 FOLLOW-UP ITEMS

- 9) Please provide a revised volumetric rate schedule based on the 8.0% rate increase. If you assume fractions in the rate tiers, please provide the rate schedule with the fractions showing.

Note that an 8.0% increase was applied to existing rates to estimate FY21 rates under an 8.0% volumetric revenue increase. Actual proposed rates will vary slightly when the proposed budget is loaded into the cost of service rate model.

Average Daily Consumption by Customer Unit During Billing Period (Gallons Per Day)	Total	
	Combined	
0-80.9999	\$	12.84
81-165.9999		14.36
166-275.9999		17.37
276 and Greater		21.88

- 10) Please provide the formulas you used to calculate the customer impacts at different water usage levels under the 8.0% rate increase.

Calculation for consumption of 165 gallons per day

$$1^{\text{st}} \text{ Tier (1st 80.9999 GPD): } 80.9999 * \$12.84 * 365/1000 = \$379.59$$

$$2^{\text{nd}} \text{ Tier (Remaining 84.0001 GPD): } 84.0001 * \$14.36 * 365/1000 = 440.28$$

$$\$379.59 + \$400.28 + \$48.00 + \$64.00 = \$931.87 \text{ Annual Bill}$$

At 100 GPD	Range (Gal/day)		Rate Total	Estimated Annual Customer Billing				Annual Total	Quarterly Total
	Beg	End		Used	Billed	IIF	AMF		
3/4" Res Meter	0	80.9999	\$12.84	80.9999	\$379.59				
	81	166	\$14.36	19.0001	\$99.60				
				100.0000	\$479.19	\$48.00	\$64.00	\$591.19	\$147.80
						% of Ready-to-Serve to Total Bill			19%
At 165 GPD	Beg	End	Total	Used	Billed	IIF	AMF	Total	
3/4" Res Meter	0	80.9999	\$12.84	80.9999	\$379.59				
	81	166	\$14.36	84.0001	\$440.34				
				165.0000	\$819.93	\$48.00	\$64.00	\$931.93	\$232.98
						% of Ready-to-Serve to Total Bill			12%
At 500 GPD	Beg	End	Total	Used	Billed	IIF	AMF	Total	
3/4" Res Meter	0	80.9999	\$12.84	80.9999	\$379.59				
	81	166	\$14.36	84.9999	\$445.58				
	166	276	\$17.37	109.9999	\$697.59				
	276	Greater	\$21.88	224.0003	\$1,788.71				
				500.0000	\$3,311.47	\$48.00	\$64.00	\$3,423.47	\$855.87
						% of Ready-to-Serve to Total Bill			3.3%

**MEETING 1 FOLLOW-UP ITEMS**

11) Please provide a breakdown of approved "All Other" costs (by the categories you have previously provided to me) going back 10 years

Ten Year Historical - All Other Expenses  
Water & Sewer Funds  
(\$ In Thousands)

Category	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Svc by Others & Prof Svc.	67,547	68,932	72,891	73,522	85,938	83,810	85,599	81,323	90,691	98,500
Employee Benefits	48,993	53,278	54,175	54,248	57,559	59,390	60,412	62,567	62,366	59,520
Outside Engineering	14,033	15,488	16,843	22,429	19,554	18,001	19,021	17,399	17,548	17,761
Contract Work	11,093	15,352	15,137	11,554	16,410	17,237	16,889	12,164	14,913	15,167
Materials	8,252	9,400	9,824	11,041	11,146	11,305	11,848	11,898	12,640	13,538
Contract Restoration	9,507	9,125	10,082	8,350	8,000	8,463	11,216	13,000	11,600	14,400
Chemicals	14,443	15,173	14,920	13,798	13,799	11,491	12,040	9,868	10,568	10,640
Depreciation/Moveable Assets	9,421	9,464	9,541	10,911	10,907	12,088	12,862	12,851	11,172	5,109
Insurance Premiums	1,904	1,910	1,889	1,894	1,539	2,039	2,104	2,121	2,133	2,146
Tele & Communications	1,356	1,327	1,646	1,476	1,685	1,687	2,014	1,988	1,544	1,640
Gasoline & Diesel Oil	1,520	1,678	2,301	2,664	2,852	2,431	2,121	1,439	1,409	1,406
All Other	11,336	11,890	12,702	13,748	14,192	14,615	15,297	15,558	15,937	17,361
<b>Total All Other Expenses</b>	<b>\$ 199,406</b>	<b>\$ 213,017</b>	<b>\$ 221,950</b>	<b>\$ 225,634</b>	<b>\$ 243,582</b>	<b>\$ 242,557</b>	<b>\$ 251,421</b>	<b>\$ 242,177</b>	<b>\$ 252,521</b>	<b>\$ 257,186</b>

12) If the PAYGO increase in FY21 (was zeroed out, what would be the impact on debt service to offset the reduction?

There would be no change in debt service as the increase is a place holder for Piscataway related operating expenses. The increase in PAYGO would not be transferred to the bond funds.

13) Please provide program detail along with cost and staffing impacts of the Additional and Reinstated programs

This will be provided by Friday.

14) If the account maintenance fee were to be "right-sized" for FY21 (i.e. updated to capture 100% of costs previously assumed to be captured) what would be the impact on the volumetric rate increase assuming no other budget changes?

Determining the appropriate size of the Account Maintenance Fee and its impact on the volumetric rate increase would require a study. The Ready-To-Serve Study is currently on hold.

15) Based on best practices in the water/sewer industry, what level of increase does WSSC Staff feel would be appropriate for the infrastructure investment fee? How would this change affect volumetric rates (especially given that the lowest rate tier was weighted a little heavier than the other tiers to capture some of this IIF related-revenue.

Black & Veatch provided two sources indicating 30% as a best practice for fixed fees. FitchRatings – Water and Sewer Rating Criteria, November 30, 2017, page 2 – second paragraph states that "utilities whose' fixed-charge components generate a significant amount (30% or more) of their revenue streams are considered stronger." The California Urban Water Conservation Council has a suggested 30% as part of Best Management Practice. Approximately 9% of WSSC's rate revenue comes from fixed fees. A study would be required to determine the appropriate rates for Ready-To-Serve Charges and the associated impact on volumetric tiers. We are not yet able to provide this information.



## MEETING 1 FOLLOW-UP ITEMS

16) If a lower rate increase limit were to be approved for FY21 (such as Canjor's requested scenario), please note how WSSC would likely prioritize reductions in the base case (i.e. remove some or all of the additional and reinstated items first, additional reductions in certain CIP projects, reduced PAYGO, other?)

- 1st. Remove Additional & Reinstated Programs
- 2nd. Reduce CIP
- 3rd. Reduce PAYGO

17) Please provide any information you have regarding the proportion of revenue generated through fixed fees by WSSC compared to other utilities. I believe WSSC has stated previously that they generate a lower proportion than other utilities but it would be useful to have some data behind this.  
We have encountered challenges in obtaining the proportion of revenue generated through fixed fees from other utilities. We are still working on gathering this information. We do have the fixed fees charged by other utilities including DC Water and Baltimore City. Based on the fixed charges as a percentage of quarterly bills shown in the table below, we can deduce that our neighboring utilities collect a much larger portion of their revenues from fixed fees.

Quarterly fixed charges included in bill estimates below are based on 3/4" meters.

WSSC		DCWater		Baltimore City	
Volumetric Charge	\$ 189.83	Volumetric Charge	\$ 248.96	Volumetric Charge	\$ 221.18
Account Maintenance Fee	16.00	Customer Metering Fee	12.18	Account Fee	10.77
Infrastructure Investment Fee	12.00	Water System replacement Fee	22.17	Infrastructure	107.88
		Clean Rivers Charge	62.82		
Quarterly Bill	217.83		346.13		339.83
% Fixed Charges - WSSC	13%	% Fixed Charges - DCWater	28%	% Fixed Charges - Baltimore City	35%

18) Can you provide further detail about what the use of fund balance will support in FY21 and the rest of the six-year period?

Fund balance will be used to support implementations in support of the IT Strategic Plan. FY20 was the final year to use fund balance for the Climate Change Vulnerability Assessment and the Strategic Energy Plan implementation.

19) Provide a written explanation of the sewer revenue decrease.

FY19 water production was below the five-year average. The lower water production has a greater impact on sewer use revenue than on water consumption revenue.

20) Provide DC Water's bill comparison chart.

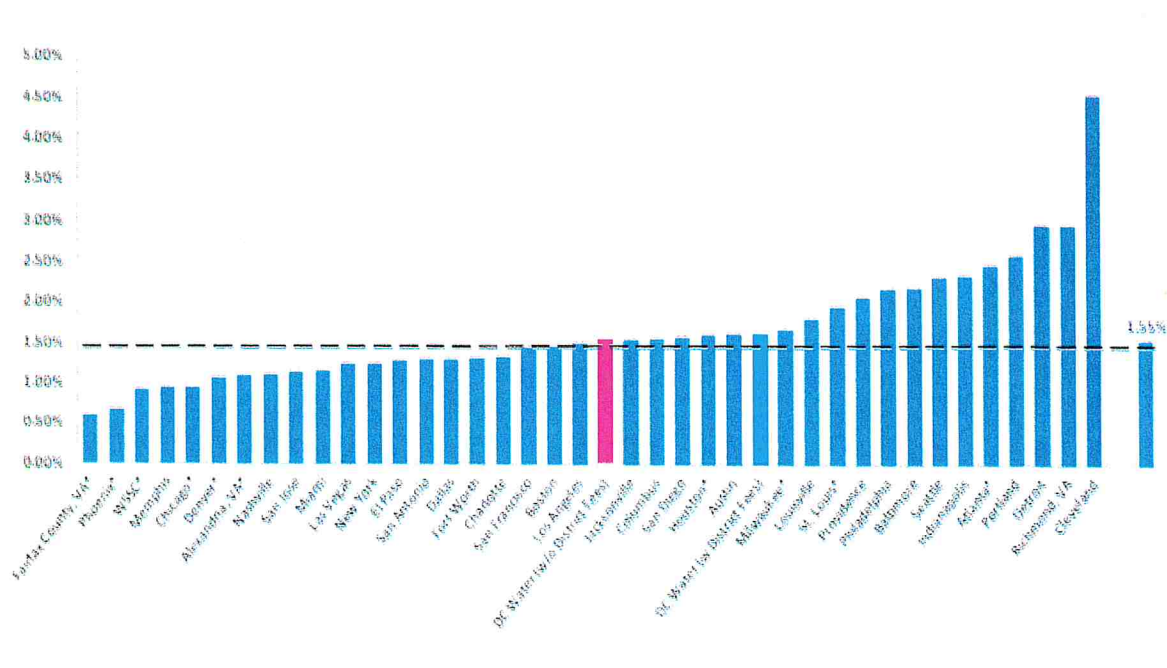
Page 89 of DC Water's 2018 Comprehensive Annual Financial Report  
<https://www.dewater.com/sites/default/files/finance/2018-cafr.pdf>



MEETING 1 FOLLOW-UP ITEMS

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

EXHIBIT 9  
RESIDENTIAL WATER AND WASTEWATER BILL COMPARISONS  
AS A PERCENTAGE OF MEDIAN HOUSEHOLD INCOME (1)



(1) This analysis is based on a single family residential monthly bill as a percentage of median household income for large national utilities based on rates in effect spring 2016.

Source: DC Water Department of Finance & Budget

## MEETING 1 FOLLOW-UP ITEMS

## Baltimore City Monthly Fixed Fees

## Water Billing Rates and Fees

Starting July 1, 2019, Baltimore City will charge water/sewer fees listed in the chart below. These charges reflect a series of 9 percent increases to the current water, wastewater and stormwater charges, and fund the enhanced customer assistance program, Baltimore H.O. Assists. The 9 percent increases are effective July 1, 2019, July 1, 2020, and July 1, 2021.

The water and wastewater rate increases apply to two components, fixed charges and volumetric charges. The monthly water charge is set by meter size and is assessed until a property is formally abandoned. Water consumption is charged in CCF (100 Cubic Feet). One CCF equals 748 Gallons.

## New Water and Sewer Rates for Baltimore City Customers

FIXED CHARGE COMPONENTS						
	FY 2020		FY 2021		FY 2022	
	<i>Effective: July 1, 2019</i>		<i>Effective: July 1, 2020</i>		<i>Effective: July 1, 2021</i>	
Account Management Fee	\$3.59		\$3.94		\$4.33	
<i>(per bill)</i>						
Infrastructure Charge	<u>Water</u>	<u>Sewer</u>	<u>Water</u>	<u>Sewer</u>	<u>Water</u>	<u>Sewer</u>
	<i>per month</i>	<i>per month</i>	<i>per month</i>	<i>per month</i>	<i>per month</i>	<i>per month</i>
<u>Meter Size</u>						
5/8"	\$10.82	\$9.16	\$11.90	\$9.99	\$13.08	\$10.89
3/4"	\$19.48	\$16.48	\$21.41	\$17.97	\$23.53	\$19.59
1"	\$43.28	\$36.63	\$47.57	\$39.93	\$52.28	\$43.53
1-1/2"	\$75.73	\$64.10	\$83.23	\$69.87	\$91.47	\$76.16
2"	\$173.10	\$146.50	\$190.24	\$159.69	\$209.08	\$174.07
3"	\$302.91	\$256.37	\$332.90	\$279.45	\$365.86	\$304.61
4"	\$692.36	\$585.98	\$760.91	\$638.72	\$836.25	\$696.21
6"	\$1,224.09	\$1,052.93	\$1,367.26	\$1,147.70	\$1,502.62	\$1,251.00
8"	\$1,947.26	\$1,648.06	\$2,140.04	\$1,796.39	\$2,351.91	\$1,958.07
10"	\$2,758.62	\$2,334.75	\$3,031.73	\$2,544.88	\$3,331.88	\$2,773.92
12"	\$4,922.24	\$4,165.92	\$5,409.55	\$4,540.86	\$5,945.10	\$4,949.54

<https://publicworks.baltimorecity.gov/Water-Bill-Rates-and-Fees>

## MEETING 1 FOLLOW-UP ITEMS



## Recent and Proposed Rate &amp; Fee Changes

[Executive Summary](#) |
 [Water Rates](#) |
 [Financial Plan](#) |
 **[Rate Changes](#)** |
 [Capital](#) |
 [Financing](#) |
 [Departmental](#) |
 [Global](#)

## AVERAGE RESIDENTIAL CUSTOMER MONTHLY BILL

FY 2016 – FY 2020

	Units	FY 2016	FY 2017	FY 2018	Current FY 2019	Proposed FY 2020
DC Water Water and Sewer Retail Rates <sup>(1)</sup>	Ccf	\$ 54.56	\$ 57.25	\$ 60.13	\$ 68.27	\$ 76.38
DC Water Clean Rivers IAC <sup>(2)</sup>	ERU	20.30	22.24	25.18	23.00	20.94
DC Water Customer Metering Fee	5/8"	3.86	3.86	3.86	3.86	3.86
DC Water Water System Replacement Fee <sup>(4)</sup>	5/8"	6.30	6.30	6.30	6.30	6.30
<b>Subtotal DC Water Rates &amp; Charges</b>		<b>\$ 85.02</b>	<b>\$ 89.65</b>	<b>\$ 95.47</b>	<b>\$ 101.43</b>	<b>\$ 107.48</b>
Increase / Decrease		\$ 10.97	\$ 4.63	\$ 5.82	\$ 5.96	\$ 6.05
District of Columbia PILOT Fee <sup>(3)</sup>	Ccf	\$ 2.91	\$ 2.98	\$ 3.04	\$ 3.10	\$ 3.16
District of Columbia Right-of-Way Fee <sup>(3)</sup>	Ccf	1.05	1.05	1.12	1.12	1.18
District of Columbia PILOT/ROW Fee <sup>(3)</sup>	Ccf	3.96	4.03	4.16	4.22	4.34
District of Columbia Stormwater Fee <sup>(3)</sup>	ERU	2.67	2.67	2.67	2.67	2.67
<b>Subtotal District of Columbia Charges</b>		<b>\$ 6.63</b>	<b>\$ 6.70</b>	<b>\$ 6.83</b>	<b>\$ 6.89</b>	<b>\$ 7.01</b>
<b>Total Amount Appearing on DC Water Bill</b>		<b>\$ 91.65</b>	<b>\$ 96.35</b>	<b>\$ 102.30</b>	<b>\$ 108.32</b>	<b>\$ 114.49</b>
Increase / Decrease Over Prior Year		\$ 11.03	\$ 4.70	\$ 5.95	\$ 6.02	\$ 6.17
<b>Percent Increase in Total Bill</b>		<b>13.7%</b>	<b>5.1%</b>	<b>6.2%</b>	<b>5.9%</b>	<b>5.7%</b>

(1) Assumes average monthly consumption of 6.2 Ccf, or (4,638 gallons)

(2) Assumes average 1 Equivalent Residential Unit (ERU)

(3) District Department of the Environment stormwater fee of \$2.67 effective November 1, 2010

(4) DC Water "Water System Replacement Fee" of \$6.30 for 5/8" meter size effective October 1, 2015



MEETING 1 FOLLOW-UP ITEMS

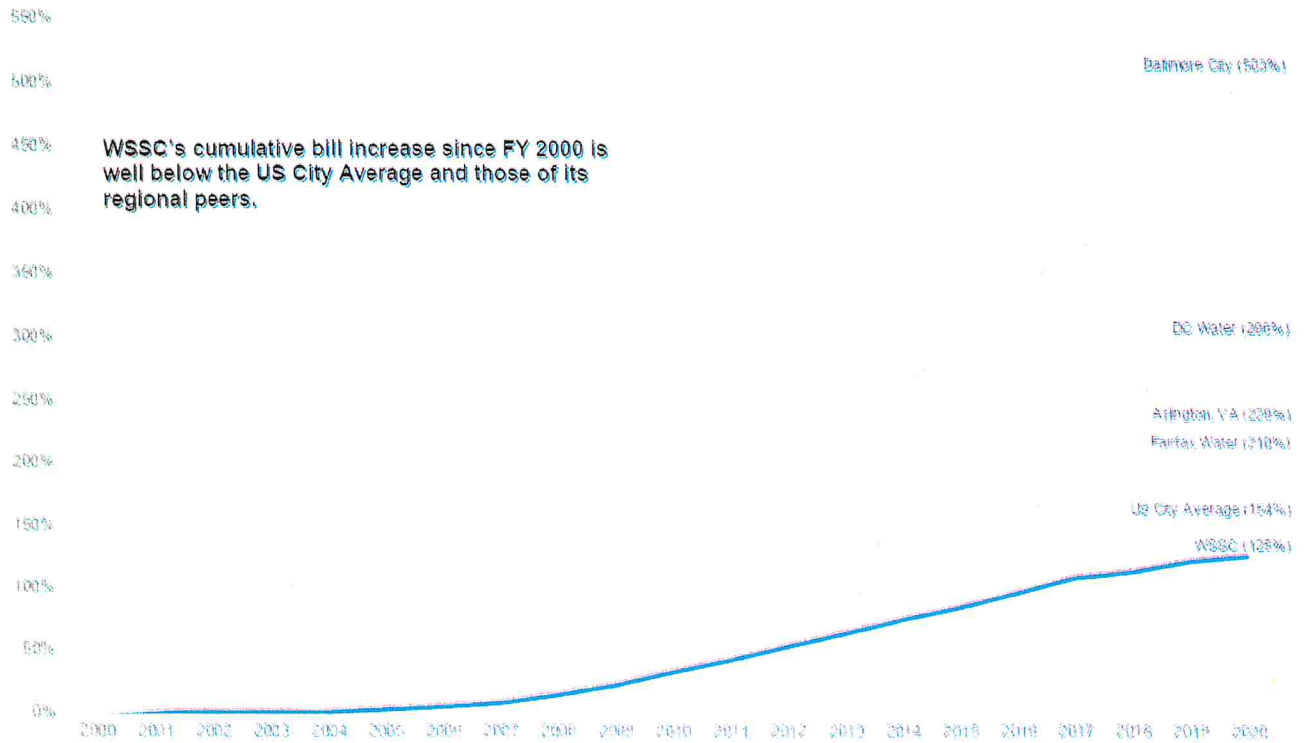
Details for FY 2000 to 2020 Bill Increase Comparison @ 165 Gallons Per Day

Fiscal Year	WSSC		U.S. City Average for Water And Sewerage Maintenance <sup>2</sup>	CPI-W	Fairfax		Arlington, VA		DC Water		Baltimore City	
	Annual Bill <sup>1</sup>	WSSC Cumulative Increase (%)			Annual Bill <sup>1,3</sup>	Cumulative Increase (%)	Annual Bill	Cumulative Increase (%)	Annual Bill <sup>1</sup>	DC Water Cumulative Increase (%)	Annual Bill <sup>1</sup>	Cumulative Increase (%)
2000	\$ 384.87	0.0%	219,000	0.0%	\$ 258.89	0.0%	\$ 252.34	0.0%	\$ 345.41	0.0%	\$ 193.57	0.0%
2001	\$ 384.87	0.0%	224,300	2.4%	\$ 268.52	3.7%	\$ 268.60	6.4%	\$ 362.32	4.9%	\$ 230.34	19.0%
2002	\$ 384.87	0.0%	231,200	5.6%	\$ 272.74	5.3%	\$ 275.83	9.3%	\$ 362.32	4.9%	\$ 230.34	19.0%
2003	\$ 384.87	0.0%	238,900	9.1%	\$ 277.95	7.4%	\$ 283.06	12.2%	\$ 367.11	6.3%	\$ 267.20	38.0%
2004	\$ 384.87	0.0%	247,900	13.2%	\$ 285.78	10.4%	\$ 319.19	26.5%	\$ 375.97	8.8%	\$ 291.25	50.5%
2005	\$ 395.11	2.7%	265,500	21.2%	\$ 299.04	15.5%	\$ 373.40	48.0%	\$ 393.68	14.0%	\$ 317.46	64.0%
2006	\$ 403.54	4.9%	280,700	28.2%	\$ 306.87	18.5%	\$ 429.40	70.2%	\$ 413.81	19.8%	\$ 346.03	78.8%
2007	\$ 414.38	7.7%	294,400	34.4%	\$ 323.13	24.8%	\$ 481.80	90.9%	\$ 433.94	25.6%	\$ 377.17	94.8%
2008	\$ 438.47	13.9%	309,907	41.5%	\$ 342.59	32.3%	\$ 554.07	119.6%	\$ 456.48	32.2%	\$ 411.12	112.4%
2009	\$ 469.79	22.1%	325,966	48.8%	\$ 374.30	44.6%	\$ 634.77	151.6%	\$ 490.69	42.1%	\$ 427.56	120.9%
2010	\$ 507.73	31.9%	349,827	59.7%	\$ 429.42	65.9%	\$ 674.52	167.3%	\$ 543.27	57.3%	\$ 466.04	140.8%
2011	\$ 545.67	41.8%	375,955	71.7%	\$ 482.82	86.5%	\$ 707.04	180.2%	\$ 642.47	86.0%	\$ 507.99	162.4%
2012	\$ 588.43	52.9%	396,520	81.1%	\$ 538.21	107.9%	\$ 734.14	190.9%	\$ 705.71	104.3%	\$ 553.70	186.0%
2013	\$ 629.39	63.5%	422,133	92.8%	\$ 579.96	124.0%	\$ 759.44	201.0%	\$ 758.58	119.6%	\$ 603.54	211.8%
2014	\$ 671.54	74.5%	442,848	102.2%	\$ 620.35	139.6%	\$ 759.44	201.0%	\$ 834.25	141.5%	\$ 694.12	258.6%
2015	\$ 705.87	83.4%	459,538	109.8%	\$ 647.07	149.9%	\$ 785.33	211.2%	\$ 941.36	172.5%	\$ 770.53	298.1%
2016	\$ 754.50	96.0%	483,515	120.8%	\$ 673.87	160.3%	\$ 799.19	216.7%	\$ 1,077.19	211.9%	\$ 855.39	341.9%
2017	\$ 796.37	106.9%	502,985	129.7%	\$ 702.82	171.5%	\$ 799.19	216.7%	\$ 1,135.59	228.8%	\$ 893.21	361.4%
2018	\$ 820.46	113.2%	522,005	138.4%	\$ 735.03	183.9%	\$ 820.26	225.1%	\$ 1,208.40	249.8%	\$ 976.27	404.3%
2019	\$ 851.78	121.3%	540,229	146.7%	\$ 768.96	197.0%	\$ 820.26	225.1%	\$ 1,288.40	273.0%	\$ 1,067.09	451.3%
2020	\$ 867.31	125.4%	555,290	153.6%	\$ 803.77	210.5%	\$ 831.11	229.4%	\$ 1,369.17	296.4%	\$ 1,167.70	503.2%

FY 2000-2020 Compound Average Annual Growth Rate: 4.1%      4.8%      5.8%      6.1%      7.1%      9.4%

<sup>1</sup>Assumes a 5/8" residential meter for purposes of determining the appropriate fees.  
<sup>2</sup>Water and sewerage maintenance in U.S. city average, urban wage earners and clerical workers, not seasonally adjusted, values for July of each fiscal year (ex. July 2018 = FY 2019 value).  
<sup>3</sup>Based on Fairfax Water rates and fees for water services and Fairfax County rates and fees for sewer services.

## FY 2000 to 2020 Bill Increase Comparison @ 165 Gallons per Day



## WSSCWater

**FY 2021 HIGH PRIORITY ADDITIONAL & REINSTATED PROGRAM REQUESTS SUMMARY****Piscataway Infiltration and Inflow (I/I) Removal Program****Request: Outside Engineering and Contract Work - Included in PAYGO****Total Cost: \$41,606,000 - Water/Sewer Impact: \$10,071,600  
Capital: \$32,850,000**

Recent rainfalls over the past eighteen months and degraded sewer assets require rehabilitation. Sewer grouting, along with other infiltration and inflow removal efforts, in the Piscataway and Broadcreek basins will be employed to achieve infiltration and inflow removal using a holistic approach to sewer basin rehabilitation. The costs shown are preliminary estimates to immediately begin addressing the leaking assets as the program continues to develop.

**Frozen Workyears Conversion****Request: 30 Workyears - Cost with benefits: \$2,820,600**

Implementation of the new Customer-to-Meter (C2M) billing system required additional staffing to meet the needs of Customer Care. To meet this challenge WSSCWater strategically froze vacant positions throughout the Commission and brought on the needed Customer Care staff. With the first phase of C2M now in place, the additional staffing requirements in Customer Care remain the same. Other utilities have experienced increased staffing requirements after implementing similar systems. The 30 positions currently frozen throughout the Commission are placing a strain on daily operations and maintenance. It is possible that as customers and internal WSSCWater processes adjust to the new system some of these positions will sunset.

**Unidirectional Flushing Program****Request: 10 Workyears (1 Project Manager, 1 Supervisor, 8 Utility Technicians)****Water/Sewer Impact with benefits: \$826,400**

A focused, unidirectional flushing program is needed to address discolored water complaints that have increased dramatically in 2018 (approximately 500 percent). The focus of this program will be to flush 2,400 miles of unlined cast iron pipe and the area's most likely affected by the manganese by-product released into our system in 2018. The long-term performance goal established by the Commission is 1.0 discolored water complaint per 1,000 customers per year.

**Inspections for Large Valve Repair and Replacement****Request: Services by Others - Water/Sewer Impact: \$199,400**

Within the large valve inspection program, it has been determined that there is a growing backlog of needed repairs and replacements for 16 to 24-inch valves. These valves fall into a current gap in the CIP project for the Large Pipe and Valve Rehabilitation Program which currently focuses only on valves that are 36-inch and above.



## WSSCWater

### FY 2021 HIGH PRIORITY ADDITIONAL & REINSTATED PROGRAM REQUESTS SUMMARY

#### Fire Flow Testing Program

**Request: 2 Workyears - Water/Sewer Impact with benefits: \$303,100**

Currently, fire hydrant flow testing is only performed when requested by a developer or by the fire department. WSSCWater has approximately 44,000 fire hydrants and averages 220 flow tests per year. Best practice, as referenced in the AWWA G440-17 - Emergency Preparedness Practices, is to test 10 percent of assets or 4,400 hydrants per year. The requested funding represents the Commission's effort to adopt and proactively address recommended health and safety guidelines.

#### Utility Services Leak Detection

**Request: 2 Workyears - Water/Sewer Impact with benefits: \$301,800**

Leak detection is a vital activity assigned to the Utility Services Depots. As such, the WSSCWater has established a performance goal for each depot to perform one hundred miles of leak tests annually, using precision equipment. This equates to four hundred miles per year. Proactive leak detection provides the opportunity to avoid water main breaks and an opportunity to mitigate the financial inefficiency of non-revenue water loss associated with system leakage. Our most recent Water Loss Reduction Plan informs us that the cost of "Real Losses" due to system leakage was \$1.9 million in 2018. Locating leaks accurately and expeditiously is a skill obtained from the use of dedicated personnel.

#### Potomac Water Filtration Plant Operational & Maintenance (O/M) Technician

**Request: 1 Workyear - Water/Sewer Impact with benefits: \$123,500**

Due to the increased obligations and demands on staff pursuant to the Potomac Plant Consent Decree, this request is for an O/M Technician to support the increased workload of additional process equipment.

#### Production Support – Asset Management

**Request: Services by Others - Water/Sewer Impact: \$2,000,000**

This program represents a consolidation of a diverse group of projects whose unified purpose is to support the extensive water, sewer, and support services infrastructure that is owned, operated, and maintained by WSSCWater. Projects are identified primarily through WSSCWater's asset management program. The projects are diverse in scope and typically include work needed to upgrade operating efficiency, improve safety and security, or rehabilitate aging facilities. These projects do not include capital funded projects. Examples of projects include roof repairs and fuel storage tanks.

## WSSCWater

### FY 2021 HIGH PRIORITY ADDITIONAL & REINSTATED PROGRAM REQUESTS SUMMARY

#### Business Case Evaluations

##### Request: Outside Engineering - Water/Sewer Impact: \$1,200,000

The Project Needs Validation Process (PNVP) is the method through which WSSCWater identifies the capital needs of the organization, validates the needs, and evaluates solutions to address those needs. Business case evaluations, which are part of the PNVP, are used by WSSC to determine the most effective solution to a validated need based on lifecycle cost, risk, and/or level of service. The number and complexity of business cases has been growing since the implementation of the PNVP.

#### Geographic Information System (GIS) Facilities & Laterals Mapping

##### Request: 2 Workyears & Professional Services - Water/Sewer Impact with benefits: \$506,200

This program is to map facilities and lateral connections in GIS. As dependency on our GIS data has increased, the need to create asset data that feeds to other enterprise applications has grown. Mapping facilities and laterals will create a better association between GIS data, customer meters, house connections and associated appurtenances, such as meters and clean-outs. Currently, customer meters are identified by the main running along the street, but there isn't GIS data on how customers are connected to WSSCWater mains. In addition, mapping buried assets at water facilities, sewage plants and pumping stations will be performed to assist Production in their operational needs.

#### Large Meter Design (Capital)

##### Request: 1 Workyear – Water/Sewer Impact with benefits: \$6,500 (Debt Service)

This workyear is to support the design of large vault replacements identified in the Asset Management Program. As the large meter vault rehabilitation program expands, the associated workload for design work is also increasing. To keep pace with the program, an additional project manager is requested.

#### Cross Connection Program Inspectors

##### Request: 2 Workyears - Water/Sewer Impact with benefits: \$308,400

Two Cross Connection Program Inspectors are requested to support the continued development of the Cross-Connection Program. As part of the program, back-flow preventers are in place throughout the system to protect our public water supply from contamination. Staff workloads for completing test reports continue to rise as violators are identified and new commercial facilities are built. Additional workforce to support this program.



## WSSCWater

### FY 2021 HIGH PRIORITY ADDITIONAL & REINSTATED PROGRAM REQUESTS SUMMARY

#### Permits Acquisition

**Request: 2 Workyears - Water/Sewer Impact with benefits: \$243,700**

Two workyears are requested to secure timely acquisition of permits for pipeline programs. Pipeline design projects consistently require full time efforts to secure a variety of permits from agencies at the Federal, State, County, and Municipal levels. The high number of active projects necessitate continuous communications with these agencies to acquire the necessary permits. Additionally, new Federal and State regulations have resulted in more challenging and complex permitting processes for water and sewer projects that impact natural resources such as wetlands, floodplains, forests, streams, etc.

#### Seneca WRRF, Damascus/Hyattstown WWTP Operators for Fats, Oils & Grease (FOG) and Septage Facilities

**Request: 3 Workyears - Water/Sewer Impact with benefits: \$276,900**

Additional Operators are needed to operate the new FOG and Septage facilities at Rock Creek. As recommended in the 2012 FOG and Septage study, the additional work load of adding the FOG facility at Rock Creek would require adding three Operators to run the facility.

#### Innovation Program

**Request: Professional Services - Water/Sewer Impact: \$264,000**

Within the Office of Innovation and Research, this program finds, nurtures and implements employee ideas. Idea development may lead to the use of new technology, materials, and process improvements to reduce ongoing operational costs, improve efficiency, and increase the sustainability of the pipe networks and plants as well as lead to development of new products and revenue to benefit WSSCWater.

#### Climate Change and Vulnerability Study

**Request: Professional Services - Water/Sewer Impact: \$200,000**

This is a new annual action plan for Green House Gas inventory and Action Plan. The study provides Climate Extremes Design Guidelines, Alternatives Analysis/Preliminary engineering for facilities with high flood risk, screening of linear assets (manholes) against FEMA floodplains, and updates to Green House Gas inventory and Action (reduction) Plan.



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

		(In Thousands \$000s)	FY 2020 Approved	FY 2021 Proposed	Dollar Change	W&S Rev Impact*
1	<b>OPERATING REVENUES (BASE)</b>					
2	Adopted Water and Sewer Charges		\$ 658,899	\$ 650,197		
3	<b>ADJUSTMENTS TO REVENUES</b>					
4	Sewer User Charge Adjustment		-	8,702	8,702	1.3%
5	Other Sources and Fees		(112,827)	(118,056)	(5,229)	-0.8%
6	<b>OTHER TRANSFERS AND CREDITS</b>		<b>(30,894)</b>	<b>(23,984)</b>	<b>6,910</b>	<b>1.1%</b>
7			\$ (143,721)	\$ (133,338)	\$ 10,383	1.6%
8	<b>OPERATING EXPENSES</b>					
9	Salaries and Wages		\$ 129,676	\$ 135,511	\$ 5,835	0.9%
10	Heat, Light, and Power		19,436	20,708	1,272	0.2%
11	Regional Sewage Disposal		59,000	60,000	1,000	0.2%
12	All Other		257,185	262,328	5,143	0.8%
13	+ Additional and Reinstated		-	1,247	1,247	0.2%
14	<b>DEBT SERVICE</b>		<b>306,307</b>	<b>313,865</b>	<b>7,558</b>	<b>1.2%</b>
15	PAYGO (Contribution to bond fund)		31,016	44,000	12,984	2.0%
16			\$ 802,620	\$ 837,660	\$ 35,040	5.4%
17	<b>Total - Base Case Revenue Need</b>		<b>\$ 658,899</b>	<b>\$ 704,322</b>	<b>\$ 45,423</b>	<b>7.0%</b>
18	(Line 16 + Line 7)					

\*Approximately \$6.5 million in additional operating expenses = 1 percent increase in revenue

	FY 2021 Estimated	W&S Rev Impact
21	<b>Potential Offsets to Revenue Increase:</b>	
22		
23	\$ (2,002)	-0.3%
24	\$ (4,005)	-0.6%
25	\$ (5,006)	-0.8%

Notable Assumptions:

- 4.5% annual increase in Salaries & Wages FY 2021 through FY 2026
- 2.0% annual increase in All Other
- \$10.0 million reduction included for Sewer Use Charges in FY 2020 to rebaseline projections
- 80% completion factor for CIP; 90% for Information Only (including Reconstruction)
- Debt service impact on new bond issuance assumes only one interest payment (or half year) in FY 2021. Outer year impact would double interest paid.

10 Year Financial Forecast



FINANCIAL FORECAST - WATER AND SEWER OPERATING FUNDS AT 7.0% TO 6.5% W. NO LIMIT NEW ISSUE. NO PAYGO CAP. AND FY 2025 LEVEL  
PRINCIPAL

		FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
	(In Thousands \$000s)	Approved	Proposed	Projected	Projected	Projected	Projected	Projected
1	New Water and Sewer Debt Issues	\$ 384,910	\$ 409,922	\$ 503,092	\$ 495,728	\$ 403,775	\$ 357,972	\$ 379,483
2	Total Water and Sewer Debt Service	306,350	313,865	336,142	365,610	389,665	415,351	438,129
3	Total Water and Sewer Expenditures	802,620	837,660	882,989	926,486	981,021	1,046,657	1,098,999
4	Water and Sewer Combined Rate Increase (Ave)	5.0%	7.0%	8.0%	7.0%	7.0%	6.5%	6.5%
5	Water and Sewer User Charges	\$ 658,899	\$ 695,620	\$ 752,570	\$ 806,643	\$ 864,616	\$ 922,433	\$ 984,123
6	Other Sources/Fees	112,827	118,056	118,798	119,554	120,325	121,111	121,912
	Account Maintenance Fees	32,296	32,361	32,426	32,491	32,556	32,621	32,686
	Rockville Sewer Use	3,000	3,000	3,000	3,000	3,000	3,000	3,000
	Plumbing and Inspection Fees	12,900	13,286	13,685	14,095	14,518	14,954	15,403
	Infrastructure Investment Fee	39,331	39,410	39,488	39,567	39,647	39,726	39,805
	Miscellaneous	19,800	19,998	20,198	20,400	20,604	20,810	21,018
	Interest Income	5,500	10,000	10,000	10,000	10,000	10,000	10,000
	Unspecified Revenue Adjustment	-	-	-	-	-	-	-
7	Operating Revenues	771,726	813,675	871,367	926,197	984,941	1,043,544	1,106,036
8	OTHER TRANSFERS AND CREDITS	30,894	23,984	19,384	16,983	9,982	4,984	4,984
9	Total Funds Available	802,620	837,659	890,751	943,181	994,923	1,048,528	1,111,020
10	Salaries and Wages	\$ 129,676	\$ 135,511	\$ 141,609	\$ 147,982	\$ 154,641	\$ 161,600	\$ 168,872
11	Heat, Light, and Power	19,436	20,708	21,537	22,398	23,294	24,226	25,195
12	Regional Sewage Disposal	59,000	60,000	61,200	62,424	63,672	64,946	66,245
13	All Other	257,185	262,328	267,575	272,926	278,385	283,952	289,632
14	Operating Expenses	\$ 465,297	\$ 478,548	\$ 491,921	\$ 505,730	\$ 519,992	\$ 534,724	\$ 549,943
15	DEBT SERVICE							
16	Bonds and Notes Principal and Interest	306,307	313,865	336,142	365,610	389,665	415,351	438,129
18	OTHER TRANSFERS AND ADJUSTMENTS							
19	Additional and Reinstated	-	1,247	10,926	\$11,145	\$11,364	\$11,582	\$15,926
20	PAYGO (Contribution to bond fund)	31,016	44,000	44,000	44,000	60,000	85,000	95,000
21	Total Expenditures	802,620	837,660	882,989	926,486	981,021	1,046,657	1,098,999
22	Net Revenue (Loss)	0	0	7,762	16,695	13,902	1,871	12,022
23	BEGINNING FUND BALANCE - JULY 1	\$ 173,717	\$ 156,528	\$ 148,528	\$ 149,290	\$ 159,985	\$ 168,888	\$ 170,759
24	Net Increase (Decrease) in Fund Balance	0	0	7,762	16,695	13,902	1,871	12,022
25	Use of Fund Balance/Other Adjustments	(11,341)	(8,000)	(7,000)	(6,000)	(5,000)	-	-
26	ENDING FUND BALANCE - JUNE 30	\$ 162,376	\$ 148,528	\$ 149,290	\$ 159,985	\$ 168,888	\$ 170,759	\$ 182,781
27	Debt Service Coverage (1.10 is target)	1.00	1.06	1.10	1.12	1.16	1.20	1.23
28	Debt Service as a Percentage of Total Expenditures (Below 40% is target)	38.2%	37.5%	38.1%	39.5%	39.7%	39.7%	39.9%
29	Days Operating Reserve-on-Hand (60-90 days target)	73.8	64.7	61.7	63.0	62.8	59.5	60.7
30	Ending Fund Balance as a Percentage of Operating Revenue (10% min)	21.0%	18.3%	17.1%	17.3%	17.1%	16.4%	16.5%



## ANNUAL AND QUARTERLY CUSTOMER BILLS AT VARIOUS CONSUMPTION LEVELS

Proposed Revenue Rate Increase

7.0%

Meter Size	Average Daily Consumption (Gallons Per Year)	Approved FY 2020	Quarterly Approved FY 2020	Proposed FY 2021	Quarterly Proposed FY 2021	Perc Chg	Quarterly \$ Chg
3/4" Residential Meter	100 (36,500 gal/yr)	\$555.76	\$138.94	\$586.76	\$146.69	5.6%	\$7.75
3/4" Residential Meter	165 (60,225 gal/yr)	871.31	217.83	924.35	231.09	6.1%	\$13.26
3/4" Residential Meter	500 (182,500 gal/yr)	3,178.63	794.66	3,392.87	848.22	6.7%	\$53.56
2" Meter	1,000 (365,000 gal/yr)	7,612.08	1,903.02	8,084.62	2,021.16	6.2%	\$118.14
3" Meter	5,000 (1,825,000 gal/yr)	38,947.68	9,736.92	41,486.66	10,371.67	6.5%	\$634.75
6" Meter	10,000 (3,650,000 gal/yr)	78,994.18	19,748.55	84,116.21	21,029.05	6.5%	\$1,280.51

Annual customer bills include the Account Maintenance Fee and Infrastructure Investment Fee shown of the following pages.



## ASSUMPTION SUMMARY FOR SAG FINANCIAL FORECAST MODEL

	WORKLOAD DATA		PROJECTIONS				
	FY 2020E	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
<b>1 REVENUE</b>							
<b>2 Water Consumption and Sewer Treatment</b>							
3	Water to be supplied (Average MGD)	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%
<b>7 Credits and Transfers</b>							
8	Use of Fund Balance	\$ 11,341	\$ 8,000	\$ 7,000	\$ 6,000	\$ 5,000	\$ -
10	REDO Offset	\$ 11,600	\$ 9,500	\$ 7,400	\$ 6,000	\$ -	\$ -
<b>16 EXPENDITURE</b>							
<b>17 Operating</b>							
19	Workyears	1,776.0	1,776.0	1,776.0	1,776.0	1,776.0	1,776.0
20	Salary and Wages Increase	1.4%	4.5%	4.5%	4.5%	4.5%	4.5%
22	Regional Sewage Disposal	\$ 59,000	\$ 60,000	\$ 61,200	\$ 62,424	\$ 63,672	\$ 64,946
23	All Other	1.9%	2.0%	2.0%	2.0%	2.0%	2.0%
24	Debt Service	\$ 306,307	\$ 313,865	\$ 336,142	\$ 365,610	\$ 389,665	\$ 415,351
25	Yearly Growth %		2.5%	7.1%	8.8%	6.6%	6.6%
26	PAYGO	\$ 31,016	\$44,000	\$44,000	\$44,000	\$60,000	\$ 85,000
<b>27 Capital Expenditure Parameters</b>							
29	Water and Sewer Completion Factor	80.0%	80.0%	80.0%	80.0%	80.0%	84.7%
30	Information Only Completion Factor	89.7%	90.0%	90.0%	90.0%	90.0%	95.0%
<b>31 BOND ISSUANCE</b>							
33	Interest Rate	3.8%	5.0%	5.0%	5.0%	5.0%	5.0%