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MEMORANDUM

Preliminary Proposed FY 2020 Budget/Charges
Executive Summary

January 16, 2019

To: Nicolette Bateson

From: Bart Foster

This memorandum is intended to provide an executive summary introduction of our preliminary proposed water and sewer service charges for FY 2020. The preliminary proposed service charges are designed to support the proposed FY 2020 GLWA proposed budgets, and to implement the results of our cost of service study to allocate the revenue requirements in the proposed budgets to GLWA Customers. The format of this discussion follows the format of prior submittals on this topic, which were set forth in memoranda dated December 19, 2018, and reflected the status of the budget request and analysis as of December 18, 2018 and January 2, 2019. Those documents provide background, history, and perspectives which remain pertinent. We'll not repeat that material in this discussion, but rather focus on introducing exhibits supporting the final proposed budgets, summarizing the proposed charges, and discussing the resolution of the open issues referenced in those documents.

We'll first address the proposed budget, then introduce a summary of the preliminary proposed service charges.

Preliminary Proposed FY 2020 Budget

We have reviewed in detail the proposed BUDGET for FY 2020, and have utilized it to establish preliminary cost of service allocations. This final version of the FY 2020 BUDGET reflects ongoing review and modifications over the past two weeks to address certain elements, as discussed herein. In effect, this final version produces a sixth scenario (Scenario "F") that appends the five sequential scenarios presented in the prior memoranda.

As a reminder, here are the scenarios.

- A. Original plan from 2nd year of the FY 2019 Biennial Budget
- B. Updated forecast resulting from the Series 2018 bond sale results
- C. Initial planning level budget targets
- D. Working version of budget as of 12/18/18
- E. Working version of budget as of 1/2/2019
- F. Preliminary Proposed GLWA Budget – 1/16/2019***

The table below presents key metrics for each FY 2020 scenario, and the exhibits to this memorandum provide additional detail¹.

FY 2020 GLWA Budget / Charge Planning Evolution						
	FY 2019 Biennial <u>Budget</u> A	Bond Sale Forecast <u>Update</u> B	Initial Planning <u>Budget</u> C	Working Budget as of <u>12/18/18</u> D	Working Budget as of <u>01/02/19</u> E	Proposed Budget Rqst <u>01/16/19</u> F
<u>Revenue Requirement Increase</u>						
Water Supply System	4.0%	4.0%	3.5%	3.5%	3.5%	3.1%
Sewage Disposal System	4.0%	4.0%	3.5%	3.5%	3.5%	2.7%
Combined Water and Sewer	4.0%	4.0%	3.5%	3.5%	3.5%	2.9%
<u>O&M Budget Increase</u>						
Water Supply System	2.0%	2.0%	2.0%	9.6%	9.7%	9.8%
Sewage Disposal System	2.0%	2.0%	2.0%	0.4%	0.4%	-3.6%
Combined Water and Sewer	2.0%	2.0%	2.0%	4.0%	4.0%	2.8%
<u>Average Charge Increase</u>						
Water Supply System	4.1%	2.1%	1.6%	1.6%	1.6%	1.2%
Sewage Disposal System	4.0%	3.1%	2.6%	2.1%	2.1%	1.3%
Combined Water and Sewer	4.0%	2.7%	2.2%	1.9%	1.9%	1.3%
<u>Planned I&E / Reserve Deposits - \$ millions</u>						
Water Supply System	42.2	45.2	43.5	34.3	34.1	34.1
Sewage Disposal System	20.5	26.8	24.4	27.4	26.7	26.7
Combined Water and Sewer	62.6	71.9	67.9	61.7	60.8	60.8
(a) Establishing an "internal" Water Customer will reduce the adjustment for existing Customers to:						0.8%

As indicated in the exhibit, the final version of the budget request (expressed as Scenario F) results in noteworthy changes compared to the prior Scenario E, as briefly introduced below².

Water Supply System

- A slight increase (\$93,000) in the Water O&M budget, related to a modification in the shared services arrangement with DWSD for water quality sampling activities;
- A \$1.4 million decrease in budgeted debt service;
 - Based on updated information regarding the approved Drinking Water Revolving Fund projects, it is apparent that any interest payment requirements will be minimal, and we have removed the originally estimated amounts from the budgeted revenue requirements.
- Maintaining the prior budgeted contributions to the I&E Fund;

¹ See Exhibit Pages 1-3.

² Several of these budget elements also impact proposed water and sewer charges, as discussed in the next section.

- **These developments reduce the overall Water BUDGET increase from 3.5% to 3.1%, and reduce the average Water Charge increase from 1.6% to 1.2%.**
 - *Further, the establishment of a new “internal” Customer related to how certain GLWA Sewer facilities will be billed for water service will reduced the average Water Charge increase for existing Water Customers to 0.8%.*

Sewage Disposal System

- A reduction of approximately \$2.2 million in the Sewer O&M budget, related to purchased water costs for certain GLWA Sewer facilities;
 - *The facilities in question are served off of GLWA transmission mains but are currently billed by DWSD as full-service retail customer. The budget assumes that this arrangement will cease as of July 1, 2019, and that GLWA Water will invoice GLWA Sewer for internal “wholesale only” costs related to this transaction. This arrangement will result in GLWA Sewer budget savings and impact water cost of service allocations, as introduced later.*
- An additional reduction of \$1.5 million in the Sewer O&M budget, related to combined sewer overflow programs;
 - *Ongoing detailed review indicates that certain of the programs introduced in the FY 2019 Budget are likely to not be complete until FY 2020. This budget modification was made to embrace the commitment to monitor the progress of such programs, and to make modifications to ensure charges reflect anticipated costs for this special cost pool.*
- A slight (\$100,000) reduction in the Sewer O&M budget related to implementation of the proposed amendment to the OMID Service Agreement;
- Maintaining the prior budgeted contributions to the I&E Fund;
- **These developments reduce the overall Sewer BUDGET increase from 3.5% to 2.7%, and reduce the average Sewer Charge increase from 2.1% to 1.3%.**

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The table below compares the operating budget request for Scenarios E and F.

FY 2020 GLWA Budget / Charge Planning O&M Expense Budget Request - \$ millions				
	Working Budget as of <u>01/02/19</u> E	Proposed Budget Rqst <u>01/16/19</u> F	<u>Variance</u>	<u>% Variance</u>
<u>Total GLWA</u>				
Water Operations	67.93	68.02	0.09	0.1%
Sewer Operations	120.69	116.90	(3.79)	-3.1%
Centralized Services	106.91	106.91	-	0.0%
Administrative Services	29.63	29.63	-	0.0%
Total	325.15	321.46	(3.70)	-1.1%
<u>Water Supply System</u>				
Water Operations	67.93	68.02	0.09	0.1%
Sewer Operations	-	-	-	0.0%
Centralized Services	50.66	50.66	-	0.0%
Administrative Services	14.81	14.81	-	0.0%
Total	133.40	133.49	0.09	0.1%
<u>Sewage Disposal System</u>				
Water Operations	-	-	-	0.0%
Sewer Operations	120.69	116.90	(3.79)	-3.1%
Centralized Services	56.26	56.26	-	0.0%
Administrative Services	14.81	14.81	-	0.0%
Total	191.76	187.97	(3.79)	-2.0%

Preliminary Proposed FY 2020 Service Charges

We have allocated the revenue requirements introduced in the prior section to Customers in accordance with the current cost of service methodologies and have prepared proposed charges for each Customer. Our proposed charges will be formally introduced and submitted next week and will be accompanied with a detailed report. Herewith a brief introduction of key elements impacting our proposed charges, followed by some comparative summaries.

Water Supply System

Let's initially define how we're classifying Water Customers for purposes of this discussion.

- Of the 88 existing GLWA Water Customers:
 - 85 are Suburban Wholesale Customers served via Master Meters
 - 49 of these Customers had their FY 2020 contractual max day and peak hour demands impacted by the Contract Alignment Process ("CAP");

- The other 36 Customers did not have their demands adjusted for this year – and are referred to herein as “NoMod” Customers;
- *The other 3 Customers are not served via Master Meters, and are referred to as the Non Master Metered (“NMM”) Customer Class*
 - Detroit, Dearborn, Highland Park
- There will be a new GLWA “internal” Water Customer, as GLWA Water will bill certain GLWA Sewer facilities directly for water service.

Next, let’s introduce key elements impacting FY 2020 Water cost of service allocations.

- The Units of Service (“UoS”) Study for the NMM Customers;
 - *Findings from the first phase of this study resulted in significant charge increases for this class. These increases were partially implemented in the current (FY 2019) water charges, with the understanding that the second – and final - step towards effecting the findings would occur in FY 2020.*
 - *Findings from the second phase of this study resulted in materially lower charges for this class that envisioned in the first phase. The proposed FY 2020 charges fully implement the phase 2 UoS findings.*
 - *The originally forecasted benefit to the other Customers associated with phase 1 findings is effectively eliminated in the FY 2020 charges.*
- The CAP results for those Customers whose demands were modified for FY 2020.
 - *The reduced demands for this class reallocates (all else being equal) approximately \$3.7 million of annual revenue requirement responsibility away from this class to the other classes.*
- Redefined water service to GLWA sewer facilities served via of GLWA transmission mains;
 - *Since these facilities will no longer be reflected as a DWSD retail customer, it is appropriate to remove the related water usage from their units of service established by the UoS study.*
 - *We have done so, which lowers the allocate revenue requirement to Detroit (although Detroit also suffers the revenue loss from the facilities).*
 - *Under this operating scenario, GLWA Sewer becomes an internal GLWA Water Customer, and assumes the units of service associated with the facilities. We have established a wholesale cost that does not impact other Suburban Wholesale Water Customers, although there is a benefit to all Sewer Customers, as discussed below.*
- The impact of the detailed cost pool analyses for the FY 2020 budget, particularly related to Centralized Services activities;

- *The results of these analyses have the general impact of increasing the portion of the revenue requirements related to Transmission Mains, which are allocated to Customers based on their peak hour demand and their distance factor;*
- *As a result, Customers with relatively high peak hour demands and/or distance factors will experience a higher than average charge adjustment than Customers with relatively low peak hour demands and/or distance factors, all else being equal.*

The impact of the proposed water service charges on the major customer classes is summarized in the table below³.

Executive Summary FY 2020 Water Charge Adjustments (\$ millions)					
	<u>Customers</u>	<u>Revenue Existing Charges</u>	<u>Allocated Revenue Req't</u>	<u>Charge Increase Variance</u>	<u>Charge Increase % Variance</u>
CAP Suburban Wholesale	49	178.55	176.73	(1.82)	-1.0%
"No Mods" Master Metered Suburban Wholesale	36	119.66	123.62	3.96	3.3%
Non Master Metered Customers	3	31.49	32.05	0.56	1.8%
Internal GLWA (Sewer Facilities)	1		1.44	1.44	NA
Total System	89	329.70	333.84	4.13	1.3%
Total less Internal Customer	88	329.70	332.40	2.69	0.8%

Sewage Disposal System

Again, let's start by defining how we're classifying Sewer Customers for purposes of this discussion.

- Oakland Macomb Interceptor District ("OMID"):
 - *Treated separately due to the OMID only cost pool and the implementation of the proposed amendment to the OMID Service Agreement, discussed herein;*
- Non-OMID Suburban Wholesale;
 - *All other Suburban Wholesale Customers;*
- Detroit Customer Class

Here are the key elements impacting FY 2020 Sewer cost of service allocations.

- The proposed amendment to the OMID Service Agreement;

³ See Exhibit Pages 4 through 6 for an illustration of how individual cost of service allocation elements impact each Customer Class in total. These exhibits follow the format for a portion of the individual charge calculation sheets that will be distributed to each Customer next week.

- *The specifics of this proposed amendment are detailed under separate cover. In summary, the proposed amendment would limit services provided to the Northeast Sewer Pump Station (“NESPS”) to operating activities. All capital financing and maintenance activities would be directly provided by OMID;*
- *The initial recognition of this new operating scenario will result in fewer costs allocated directly to OMID, and more costs allocated to other cost pools, including the “common to all SHAREs” cost pool;*
- *Our cost of service study and proposed charges implement this arrangement in a manner designed to embrace stability objectives;*
- *For purposes of the FY 2020 Charges, we have assumed that one-half (\$5.92 million) of the total capital contribution of \$11.92 million will be treated as revenue during FY 2020, and will be designed to meet FY 2020 revenue requirements;*
- *We have assumed that the remaining \$5.92 million will be treated similarly for FY 2021.*
- The impact of the detailed cost pool analyses for the FY 2020 budget, particularly related to Centralized Services activities;
 - *These analyses were particularly critical to establish the revised OMID only cost pool assignments mentioned above;*
 - *The results of these analyses have also had the effect of decreasing the overall Sewer budget, and slightly increasing allocation to the Combined Sewer Overflow (“CSO”) cost pool.*
- The reduced revenue requirements related to:
 - *Lower purchased water costs related to the redefined water service to GLWA sewer facilities;*
 - These savings are reflected as “common to all” based on existing SHAREs
 - *Reduced CSO program budget;*
 - 83% of these savings accrue to Detroit, and 17% to the Suburban Customers.
- The FY 2020 SHAREs are identical to the FY 2019 SHAREs, so there is no charge impact of differential units of service.

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The impact of the proposed Sewer service charges on the major customer classes is summarized in the table below.

Executive Summary FY 2020 Sewer Charge Adjustments (\$ millions)				
	Revenue Existing <u>Charges</u>	Allocated Revenue <u>Req't</u>	Charge Increase <u>Variance</u>	Charge Increase <u>% Variance</u>
OMID	77.53	76.26	(1.27)	-1.6%
All Other Suburban Wholesale	197.42	200.25	2.83	1.4%
Detroit	181.16	186.05	4.89	2.7%
Industrial Specific Customers	14.10	13.79	(0.31)	-2.2%
Total System	470.21	476.35	6.14	1.3%

We note that the Suburban Wholesale Sewer Charge adjustments in the above table reflect the lower allocation of bad debt expense associated with Highland Park, and the Detroit adjustments do not. Absent this adjustment, the average charge increase for the “All Other Suburban Wholesale” class would be 2.4%.

We continue diligent review of the proposed charges and preparation of additional materials to present our findings. We are prepared to discuss this matter at your convenience.

FY 2020 GLWA Budget / Charge Worksheet

Water Supply System

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(7)	(9)	(10)	(11)	
2019	A Original 2020	B - Updated 2020 from Bond Sale	C - 2020 Planning Target	D - 2020 as of 12/18/18	E - 2020 as of 1/2/19	F - 2020 Final Request						
<u>Budget</u>	<u>Budget/Fcst</u>	<u>Budget/Fcst</u>	<u>Variance</u>	<u>Budget/Fcst</u>	<u>Variance</u>	<u>Budget/Fcst</u>	<u>Variance</u>	<u>Budget/Fcst</u>	<u>Variance</u>	<u>Budget/Fcst</u>	<u>Variance</u>	
	<u>A</u>	<u>B</u>		<u>C</u>		<u>D</u>		<u>E</u>		<u>F</u>		
1 Rev Req't Increase	4.0%	4.0%	0.0%	3.5%	-0.5%	3.5%	-0.5%	3.5%	-0.5%	3.1%	-0.9%	
2 O&M Budget Increase	2.0%	2.0%	0.0%	2.0%	0.0%	9.6%	7.6%	9.7%	7.7%	9.8%	7.8%	
3 Average Charge Increase [see Line 18]	4.1%	2.1%	-1.9%	1.6%	-2.4%	1.6%	-2.5%	1.6%	-2.4%	1.2%	-2.8%	
4 Budgeted O&M (a)	121.6	124.0	124.0	0.0	124.0	0.0	133.2	9.3	133.4	9.4	133.5	9.5
5 Pension Obligation O&M	6.0	6.0	6.0	0.0	6.0	0.0	6.0	0.0	6.0	0.0	6.0	0.0
6 Total O&M Expense	127.6	130.0	130.0	0.0	130.0	0.0	139.3	9.3	139.4	9.4	139.5	9.5
7 Debt Service	134.2	141.9	139.0	(3.0)	139.0	(3.0)	139.0	(3.0)	139.0	(3.0)	137.6	(4.4)
8 MBO Requirements	30.4	30.5	30.5	(0.0)	30.5	(0.0)	30.5	(0.0)	30.5	0.0	30.5	0.0
9 I&E / Reserve Deposits	39.1	42.2	45.2	3.0	43.5	1.3	34.3	(7.9)	34.1	(8.1)	34.1	(8.1)
10 Total Gross Revenue Req'ts	331.4	344.7	344.7	0.0	343.0	(1.7)	343.0	(1.7)	343.0	(1.7)	341.7	(3.0)
11 less: Investment Income	(3.8)	(3.7)	(9.3)	(5.5)	(9.3)	(5.5)	(9.3)	(5.5)	(9.1)	(5.4)	(9.1)	(5.3)
12 Net Revenue Requirements	327.6	340.9	335.4	(5.5)	333.7	(7.2)	333.7	(7.2)	333.9	(7.0)	332.6	(8.3)
13 Regional Bad Debt True-Up Adjustment	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14 Accomodation for H/P Bad Debt Expense	1.4	1.4	1.4	0.0	1.4	0.0	1.2	(0.2)	1.2	(0.2)	1.2	(0.2)
15 Net Rev. Req't. from Charges to Customers	328.9	342.3	336.8	(5.5)	335.1	(7.2)	334.9	(7.4)	335.1	(7.2)	333.8	(8.5)
16 Revenue - Existing Charges (b)	328.9	328.9	329.7	0.8	329.7	0.8	329.7	0.8	329.7	0.8	329.7	0.8
17 Additional Charge Revenue Needed	-	13.4	7.1	(6.3)	5.4	(7.9)	5.2	(8.1)	5.4	(8.0)	4.1	(9.3)
18 Charge Increase (17) / (16)	0.0%	4.1%	2.1%	-1.9%	1.6%	-2.4%	1.6%	-2.5%	1.6%	-2.4%	1.2%	-2.8%
19 Debt Service Coverage Ratio - Regional	1.53	1.52	1.55	0.03	1.54	0.02	1.47	(0.05)	1.47	(0.05)	1.48	(0.04)
<u>(a) Budgeted O&M Detail</u>												
20 Water Operations	66.6	67.9	67.9	0.0	67.9	0.0	67.9	(0.0)	67.9	(0.0)	68.0	0.1
21 Water Allocation of Centralized	42.6	43.5	43.5	0.0	43.5	0.0	50.5	7.0	50.7	7.2	50.7	7.2
22 Water Allocation of Administrative	12.3	12.6	12.6	0.0	12.6	0.0	14.8	2.2	14.8	2.2	14.8	2.2
23 Total Water	121.6	124.0	124.0	0.0	124.0	0.0	133.2	9.3	133.4	9.4	133.5	9.5
24 Water Centralized %	43.0%	43.0%	43.0%	0.0%	43.0%	0.0%	47.2%	4.2%	47.4%	4.3%	47.4%	4.3%
25 Water Administrative %	43.0%	43.0%	43.0%	0.0%	43.0%	0.0%	50.0%	7.0%	50.0%	7.0%	50.0%	7.0%
26 (b) Based on Water Sales - m Mcf	13.17	13.17	13.28	0.11	13.28	0.11	13.28	0.11	13.28	0.11	13.28	0.11

FY 2020 GLWA Budget / Charge Worksheet

Sewage Disposal System

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(7)	(9)	(10)	(11)	
2019	A Original 2020	B - Updated 2020 from Bond Sale	C - 2020 Planning Target	D - 2020 as of 12/18/18	E - 2020 as of 1/2/19	F - 2020 Final Request						
<u>Budget</u>	<u>Budget/Fcst</u>	<u>Budget/Fcst</u>	<u>Variance</u>	<u>Budget/Fcst</u>	<u>Variance</u>	<u>Budget/Fcst</u>	<u>Variance</u>	<u>Budget/Fcst</u>	<u>Variance</u>	<u>Budget/Fcst</u>	<u>Variance</u>	
	<u>A</u>	<u>B</u>		<u>C</u>		<u>D</u>		<u>E</u>		<u>F</u>		
1 Rev Req't Increase		4.0%	4.0%	0.0%	3.5%	-0.5%	3.5%	-0.5%	3.5%	-0.5%	2.7%	-1.3%
2 O&M Budget Increase		2.0%	2.0%	0.0%	2.0%	0.0%	0.4%	-1.6%	0.4%	-1.6%	-3.6%	-5.6%
3 Average Charge Increase [see Line 18]		4.0%	3.1%	-0.9%	2.6%	-1.4%	2.1%	-1.9%	2.1%	-1.9%	1.3%	-2.7%
4 Budgeted O&M (a)	191.1	194.9	194.9	0.0	194.9	0.0	191.9	(3.0)	191.8	(3.1)	188.0	(6.9)
5 Pension Obligation O&M	10.8	10.8	10.8	0.0	10.8	0.0	10.8	0.0	10.8	0.0	10.8	0.0
6 Total O&M Expense	201.9	205.7	205.7	0.0	205.7	0.0	202.7	(3.0)	202.6	(3.1)	198.8	(6.9)
7 Debt Service	214.6	220.7	214.9	(5.8)	214.9	(5.8)	214.9	(5.8)	215.7	(5.0)	215.7	(5.0)
8 MBO Requirements	41.5	41.6	41.6	(0.0)	41.6	(0.0)	41.6	(0.0)	41.6	0.0	41.6	0.0
9 I&E / Reserve Deposits	12.2	20.5	26.8	6.3	24.4	4.0	27.4	7.0	26.7	6.2	26.7	6.2
10 Total Gross Revenue Req'ts	470.2	488.5	489.0	0.5	486.6	(1.9)	486.6	(1.9)	486.6	(1.9)	482.8	(5.7)
11 less: Investment Income	(4.6)	(4.1)	(8.8)	(4.7)	(8.8)	(4.7)	(8.8)	(4.7)	(8.7)	(4.6)	(8.7)	(4.6)
12 Net Revenue Requirements	465.6	484.3	480.1	(4.2)	477.8	(6.6)	477.8	(6.6)	477.9	(6.5)	474.1	(10.3)
13 Regional Bad Debt True-Up Adjustment	1.9	1.9	1.9	0.0	1.9	0.0	0.0	(1.9)	0.0	(1.9)	0.0	(1.9)
14 Accomodation for H/P Bad Debt Expense	2.8	2.8	2.8	0.0	2.8	0.0	2.2	(0.6)	2.2	(0.6)	2.3	(0.5)
15 Net Rev. Req't. from Charges to Customers	470.2	489.0	484.8	(4.2)	482.4	(6.6)	480.0	(9.0)	480.1	(8.9)	476.4	(12.6)
16 Revenue - Existing Charges	470.2	470.2	470.2	0.0	470.2	0.0	470.2	0.0	470.2	0.0	470.2	0.0
17 Additional Charge Revenue Needed	-	18.8	14.5	(4.2)	12.2	(6.6)	9.7	(9.0)	9.8	(8.9)	6.1	(12.6)
18 Charge Increase (17) / (16)	0.0%	4.0%	3.1%	-0.9%	2.6%	-1.4%	2.1%	-1.9%	2.1%	-1.9%	1.3%	-2.7%
19 Debt Service Coverage Ratio - Regional	1.27	1.30	1.34	0.04	1.33	0.03	1.33	0.03	1.33	0.02	1.33	0.02
<u>(a) Budgeted O&M Detail</u>												
20 Sewer Operations	118.3	120.7	120.7	0.0	120.7	0.0	120.7	0.0	120.7	0.0	116.9	(3.8)
21 Sewer Allocation of Centralized	56.4	57.5	57.5	0.0	57.5	0.0	56.4	(1.1)	56.3	(1.3)	56.3	(1.3)
22 Sewer Allocation of Administrative	16.3	16.7	16.7	0.0	16.7	0.0	14.8	(1.9)	14.8	(1.9)	14.8	(1.9)
23 Total Sewer	191.1	194.9	194.9	0.0	194.9	0.0	191.9	(3.0)	191.8	(3.1)	188.0	(6.9)
24 Sewer Centralized %	57.0%	57.0%	57.0%	0.0%	57.0%	0.0%	52.8%	-4.2%	52.6%	-4.3%	52.6%	-4.3%
25 Sewer Administrative %	57.0%	57.0%	57.0%	0.0%	57.0%	0.0%	50.0%	-7.0%	50.0%	-7.0%	50.0%	-7.0%

FY 2020 GLWA Budget / Charge Worksheet

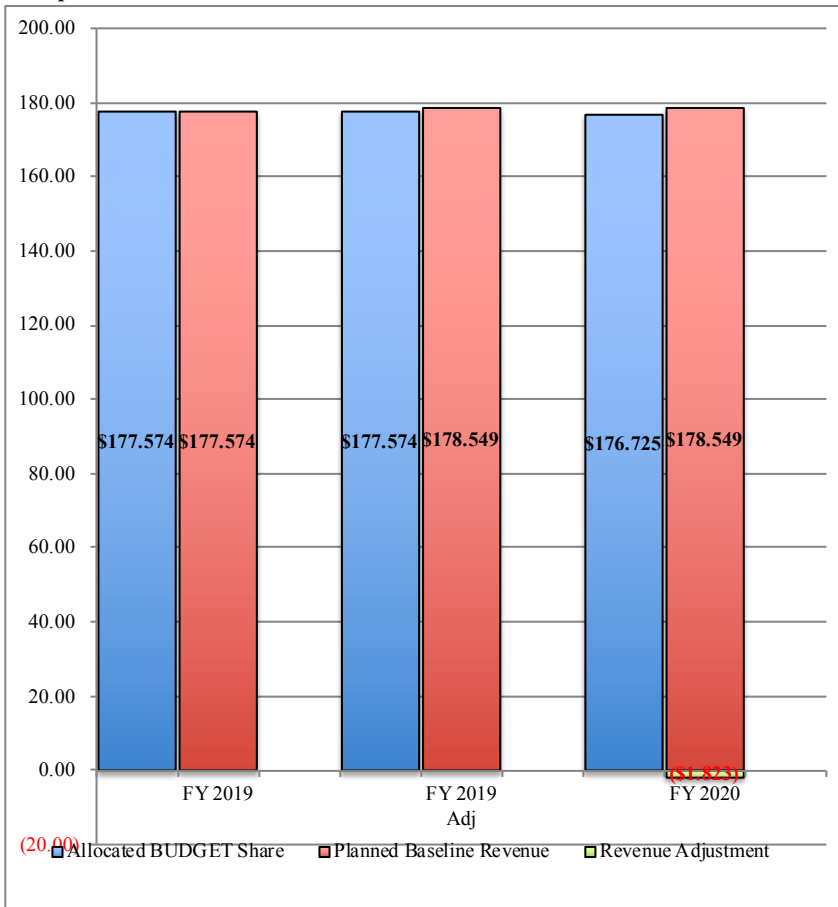
Combined Water and Sewer Systems

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(7)	(9)	(10)	(11)	
2019	A Original 2020	B - Updated 2020 from Bond Sale	C - 2020 Planning Target	D - 2020 as of 12/18/18	E - 2020 as of 1/2/19	F - 2020 Final Request						
<u>Budget</u>	<u>Budget/Fcst</u>	<u>Budget/Fcst</u>	<u>Variance</u>	<u>Budget/Fcst</u>	<u>Variance</u>	<u>Budget/Fcst</u>	<u>Variance</u>	<u>Budget/Fcst</u>	<u>Variance</u>	<u>Budget/Fcst</u>	<u>Variance</u>	
	<u>A</u>	<u>B</u>		<u>C</u>		<u>D</u>		<u>E</u>		<u>F</u>		
1 Rev Req't Increase	4.0%	4.0%	0.0%	3.5%	-0.5%	3.5%	-0.5%	3.5%	-0.5%	2.9%	-1.1%	
2 O&M Budget Increase	2.0%	2.0%	0.0%	2.0%	0.0%	4.0%	2.0%	4.0%	2.0%	2.8%	0.8%	
3 Average Charge Increase [see Line 15]	4.0%	2.7%	-1.3%	2.2%	-1.8%	1.9%	-2.1%	1.9%	-2.1%	1.3%	-2.7%	
4 Budgeted O&M (a)	312.6	318.9	318.9	0.0	318.9	0.0	325.2	6.3	325.2	6.3	321.5	2.6
5 Pension Obligation O&M	16.9	16.9	16.9	0.0	16.9	0.0	16.9	0.0	16.9	0.0	16.9	0.0
6 Total O&M Expense	329.5	335.8	335.8	0.0	335.8	0.0	342.0	6.3	342.0	6.3	338.3	2.6
7 Debt Service	348.8	362.7	353.9	(8.8)	353.9	(8.8)	353.9	(8.8)	354.7	(8.0)	353.3	(9.4)
8 MBO Requirements	71.9	72.1	72.0	(0.0)	72.0	(0.0)	72.0	(0.0)	72.1	0.0	72.1	0.0
9 I&E / Reserve Deposits	51.3	62.6	71.9	9.3	67.9	5.3	61.7	(1.0)	60.8	(1.9)	60.8	(1.9)
10 Total Gross Revenue Req'ts	801.6	833.1	833.6	0.5	829.6	(3.5)	829.6	(3.5)	829.6	(3.5)	824.5	(8.6)
11 less: Investment Income	(8.4)	(7.9)	(18.1)	(10.2)	(18.1)	(10.2)	(18.1)	(10.2)	(17.8)	(10.0)	(17.8)	(9.9)
12 Net Revenue Requirements	793.1	825.3	815.5	(9.7)	811.5	(13.7)	811.5	(13.7)	811.8	(13.5)	806.7	(18.6)
13 Regional Bad Debt True-Up Adjustment	1.9	1.9	1.9	0.0	1.9	0.0	0.0	(1.9)	0.0	(1.9)	0.0	(1.9)
14 Accomodation for H/P Bad Debt Expense	4.2	4.2	4.2	0.0	4.2	0.0	3.4	(0.8)	3.4	(0.8)	3.5	(0.7)
15 Net Rev. Req't. from Charges to Customers	799.2	831.3	821.6	(9.7)	817.6	(13.7)	814.9	(16.4)	815.2	(16.1)	810.2	(21.1)
16 Revenue - Existing Charges	799.2	799.2	799.9	0.8	799.9	0.8	799.9	0.8	799.9	0.8	799.9	0.8
17 Additional Charge Revenue Needed	-	32.1	21.6	(10.5)	17.6	(14.5)	15.0	(17.1)	15.2	(16.9)	10.2	(21.9)
18 Charge Increase (14) / (13)	0.0%	4.0%	2.7%	-1.3%	2.2%	-1.8%	1.9%	-2.1%	1.9%	-2.1%	1.3%	-2.7%
19 Debt Service Coverage Ratio - Regional	1.37	1.39	1.42	0.04	1.41	0.02	1.39	(0.00)	1.38	(0.00)	1.39	(0.00)
<u>(a) Budgeted O&M Detail</u>												
20 Water Operations	66.6	67.9	67.9	0.0	67.9	0.0	67.9	(0.0)	67.9	(0.0)	68.0	0.1
21 Sewer Operations	118.3	120.7	120.7	0.0	120.7	0.0	120.7	0.0	120.7	0.0	116.9	(3.8)
22 Centralized Services	99.0	101.0	101.0	0.0	101.0	0.0	106.9	5.9	106.9	5.9	106.9	5.9
23 Administrative Services	28.7	29.3	29.3	0.0	29.3	0.0	29.6	0.4	29.6	0.4	29.6	0.4
24 Total	312.6	318.9	318.9	0.0	318.9	0.0	325.2	6.3	325.2	6.3	321.5	2.6

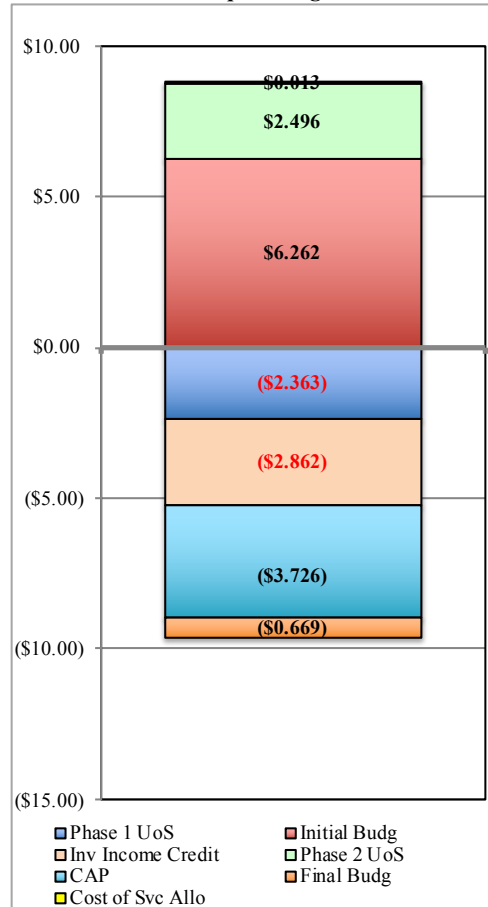
Impact of Wholesale Water Service Charge Proposals
 "Unbundling" of Revenue and Unit Cost Adjustment
 CAP Modified Demands

	Allocated <u>BUDGET</u> \$	Sales <u>Projection</u> Mcf	<u>Unit Cost</u> \$/Mcf	<u>Variance</u>	
1 Original Allocated FY 2019 BUDGET	177,573,500	8,070,700	22.00		Sales = adjusted 36 mo avg thru 9/2017
2 Revenue Under Adjusted Sales	178,548,600	8,154,840	21.89	-0.5%	Sales = adjusted 36 mo avg thru 9/2018
3 Variance	975,100	84,140			
Adjustments					
4 Anticipated Step #2 of Phase 1 UoS Study for NMM Cus	(2,362,600)	8,154,840	(0.29)	-1.3%	Projected 2nd step of FY 19 UoS for NMM
5 Initial Target FY 2020 BUDGET Adjustment	6,261,600	8,154,840	0.77	3.5%	3.5% BUDGET increase * Ln (1)
6 Investment Income Offset	(2,862,000)	8,154,840	(0.35)	-1.6%	1.6% increased credit * Ln (1)
7 Impact of Phase 2 UoS Study for NMM Customers	2,496,400	8,154,840	0.31	1.4%	Relative Phase 2 UoS Study for NMM
8 Impact of Contract Alignment Process (CAP)	(3,726,300)	8,154,840	(0.46)	-2.1%	Relative Contract Demands - CAP
9 Final FY 2020 BUDGET Modifications	(668,700)	8,154,840	(0.08)	-0.4%	Deferral of SRF Bond Sale
10 Impact of Cost of Service / Cost Pool Allocations	13,300	8,154,840	0.00	0.0%	Consolidate (7)&(8), Cost Pool Allo, etc.
11 Total Adjustments	(848,300)		(0.10)	-0.5%	Ln (11) / Ln (2)
12 Allocated FY 2020 BUDGET	176,725,200	8,154,840	21.67	-1.0%	
13 Ratio of Revised Projected Sales to Original		101.0%			Ln (2) / Ln (1)
14 BUDGET to BUDGET Change (a)	(848,300)	8,154,840	(0.10)	-0.5%	
15 Specific Sales/Revenue Variance	(975,100)	8,154,840	(0.12)	-0.5%	Necessary to adjust to baseline rev req't
16 Net Adjusted Revenue Req'd from Charges	(1,823,400)	8,154,840	(0.22)	-1.0%	Net Charge Impact

Impact Illustration - \$ millions



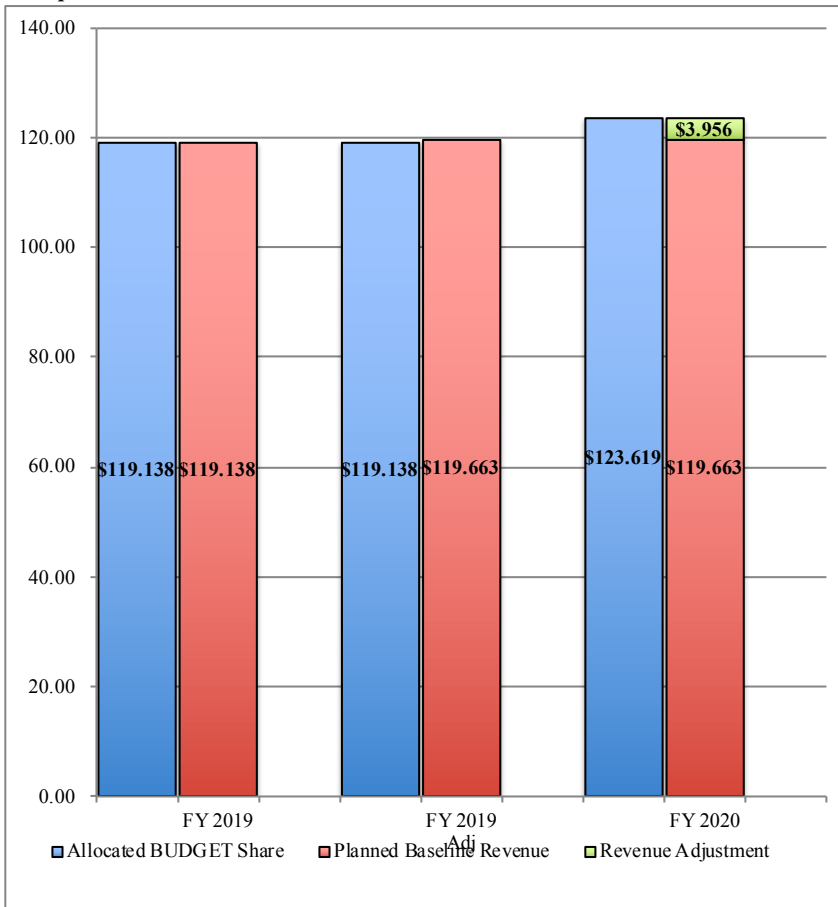
Relative Revenue Req't Change - \$ millions



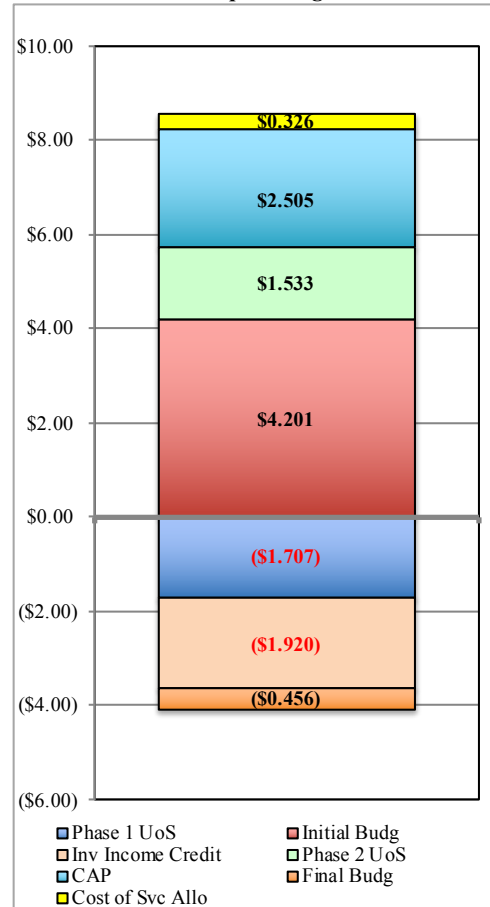
Impact of Wholesale Water Service Charge Proposals
 "Unbundling" of Revenue and Unit Cost Adjustment
 Other Master Metered

	Allocated <u>BUDGET</u> \$	Sales <u>Projection</u> Mcf	<u>Unit Cost</u> \$/Mcf	<u>Variance</u>	
1 Original Allocated FY 2019 BUDGET	119,138,000	5,101,940	23.35		Sales = adjusted 36 mo avg thru 9/2017
2 Revenue Under Adjusted Sales	119,663,100	5,128,370	23.33	-0.1%	Sales = adjusted 36 mo avg thru 9/2018
3 Variance	525,100	26,430			
Adjustments					
4 Anticipated Step #2 of Phase 1 UoS Study for NMM Customers	(1,707,000)	5,128,370	(0.33)	-1.4%	Projected 2nd step of FY 19 UoS for NMM
5 Initial Target FY 2020 BUDGET Adjustment	4,201,000	5,128,370	0.82	3.5%	3.5% BUDGET increase * Ln (1)
6 Investment Income Offset	(1,920,300)	5,128,370	(0.37)	-1.6%	1.6% increased credit * Ln (1)
7 Impact of Phase 2 UoS Study for NMM Customers	1,532,800	5,128,370	0.30	1.3%	Relative Phase 2 UoS Study for NMM
8 Impact of Contract Alignment Process (CAP)	2,505,300	5,128,370	0.49	2.1%	Relative Contract Demands - CAP
9 Final FY 2020 BUDGET Modifications	(456,000)	5,128,370	(0.09)	-0.4%	Deferral of SRF Bond Sale
10 Impact of Cost of Service / Cost Pool Allocations	325,500	5,128,370	0.06	0.3%	Consolidate (7)&(8), Cost Pool Allo, etc.
11 Total Adjustments	4,481,300		0.87	3.7%	Ln (11) / Ln (2)
12 Allocated FY 2020 BUDGET	123,619,300	5,128,370	24.10	3.3%	
13 Ratio of Revised Projected Sales to Original		100.5%			Ln (2) / Ln (1)
14 BUDGET to BUDGET Change (a)	4,481,300	5,128,370	0.87	3.7%	
15 Specific Sales/Revenue Variance	(525,100)	5,128,370	(0.10)	-0.4%	Necessary to adjust to baseline rev req't
16 Net Adjusted Revenue Req'd from Charges	3,956,200	5,128,370	0.77	3.3%	Net Charge Impact

Impact Illustration - \$ millions



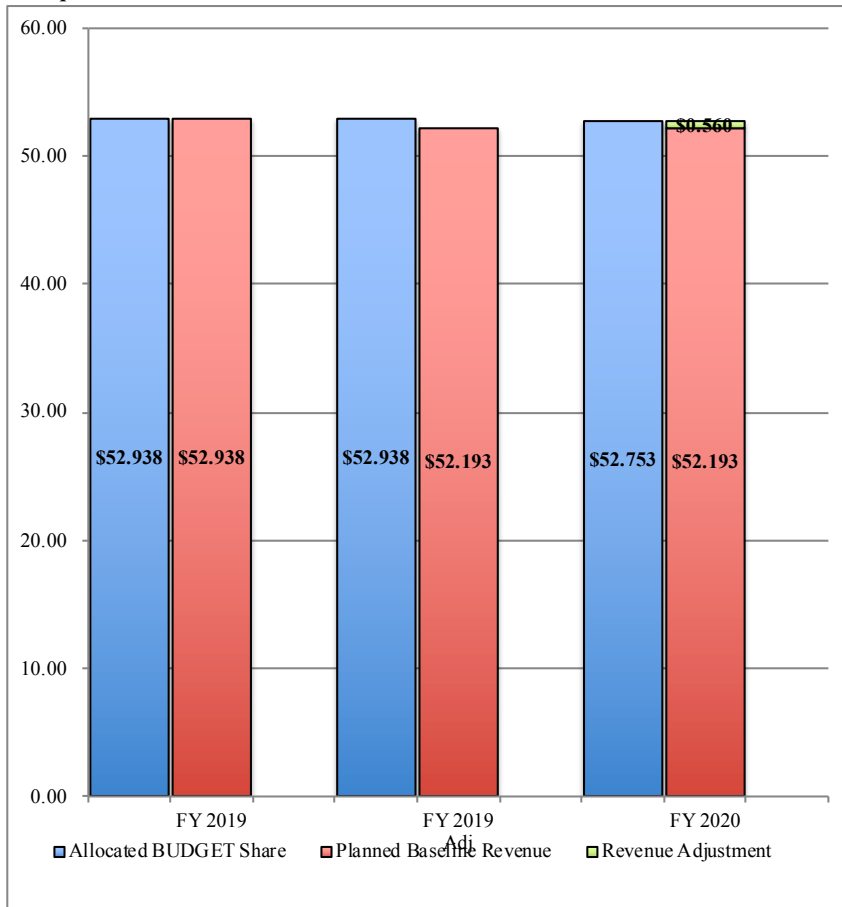
Relative Revenue Req't Change - \$ millions



Impact of Wholesale Water Service Charge Proposals
 "Unbundling" of Revenue and Unit Cost Adjustment
 Non-Master Metered

	Allocated <u>BUDGET</u> \$	Sales <u>Projection</u> Mcf	<u>Unit Cost</u> \$/Mcf	<u>Variance</u>	
1 Original Allocated FY 2019 BUDGET	52,937,900	3,934,500	13.45		Sales = adjusted 36 mo avg thru 9/2017
2 Revenue Under Adjusted Sales	52,192,700	3,791,900	13.76	2.3%	Sales = adjusted 36 mo avg thru 9/2018
3 Variance	(745,200)	(142,600)			
Adjustments					
4 Anticipated Step #2 of Phase 1 UoS Study for NMM Customers	3,897,300	3,791,900	1.03	7.4%	Projected 2nd step of FY 19 UoS for NMM
5 Initial Target FY 2020 BUDGET Adjustment	1,866,700	3,791,900	0.49	3.6%	3.5% BUDGET increase * Ln (1)
6 Investment Income Offset	(853,300)	3,791,900	(0.23)	-1.6%	1.6% increased credit * Ln (1)
7 Impact of Phase 2 UoS Study for NMM Customers	(4,413,700)	3,791,900	(1.16)	-8.5%	Relative Phase 2 UoS Study for NMM
8 Impact of Contract Alignment Process (CAP)	1,252,200	3,791,900	0.33	2.4%	Relative Contract Demands - CAP
9 Final FY 2020 BUDGET Modifications	(182,100)	3,791,900	(0.05)	-0.3%	Deferral of SRF Bond Sale
10 Impact of Cost of Service / Cost Pool Allocations	(1,751,900)	3,791,900	(0.46)	-3.4%	Consolidate (7)&(8), Cost Pool Allo, etc.
11 Total Adjustments	(184,800)		(0.05)	-0.4%	Ln (11) / Ln (2)
12 Allocated FY 2020 BUDGET	52,753,100	3,791,900	13.91	1.1%	
13 Ratio of Revised Projected Sales to Original		96.4%			Ln (2) / Ln (1)
14 BUDGET to BUDGET Change (a)	(184,800)	3,791,900	(0.05)	-0.4%	
15 Specific Sales/Revenue Variance	745,200	3,791,900	0.20	1.4%	Necessary to adjust to baseline rev req't
16 Net Adjusted Revenue Req'd from Charges	560,400	3,791,900	0.15	1.1%	Net Charge Impact

Impact Illustration - \$ millions



Relative Revenue Req't Change - \$ millions

