FY 2019 and FY 2020 Biennial Budget and

Board of Directors Meeting
June 20, 2018

GLWA
Great Lakes Water Authority

Executive Summary

- ✓ The Proposed FY 2019 and FY 2020 Biennial Budget and Five-Year Financial Plan was originally presented to the Board on January 10, 2018.
- ✓ A public hearing was conducted on February 28, 2018 and has remained open.
- ✓ The Proposed Budget remains within the 4% commitment.
- ✓ The GLWA Administration has continued additional analysis to evaluate the budget proposal in relation to financial sustainability measures.
- ✓ Additional analysis supports the long-term strategy.

Budget & Financial Plan: Financial Overview

Implementing a Cohesive, Long-term Strategy

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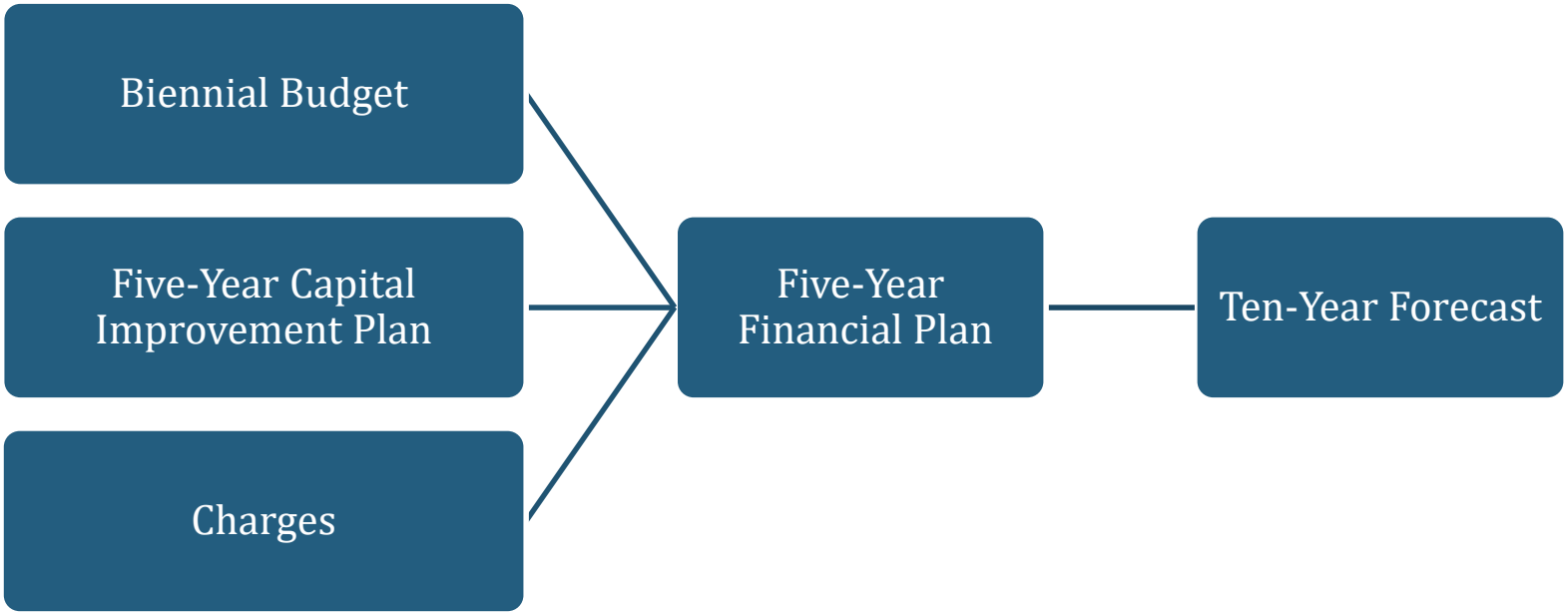
Best Practice: Long-term Financial Planning



Financial planning does not happen in a vacuum. Other initiatives such as master planning, One Water initiatives, regional planning opportunities, and deployment of asset management among many others directly impact the financial plan.

Financial Sustainability Model

In April 2018, the Audit Committee received the first iteration of a long-term financial planning model based on three objectives.

A. **Risk Management:** Ensuring that there is sufficient liquidity to seek opportunities as well as address unforeseen and/or uncontrollable events.
B. **Affordability:** Appropriate level of fixed long-term commitments, controlled variable annual costs, and balancing the two to achieve intergenerational equity.
C. **Stability:** Anticipating annual budget variances and ensuring that charges are stable and predictable (i.e. prevents "rate shock").

Overarching Goal that Positively impacts all Objectives:

Reduce Long-term Debt as a % of Budget

Financial Sustainability Model – FY 2030

In May 2018, the Financial Sustainability model was the basis for a forecast through FY 2030 to understand how decisions today impact tomorrow. This was presented to the Audit Committee and Charges Workgroup in May.

Two Budget Scenarios (including debt service) were measured against Fitch Ratings for "AA" rated utilities.

Scenario 1: Overall increase of 2% for FY 2019 and 4% thereafter (with O&M limited at 2% to improve pay-as-you go capital level)

Scenario 2: Overall increase of 0% for FY 2019 and 3% thereafter (O&M limited at 1% to improve pay-as-you go capital level)

Outcome:

Scenario 1 began to meet some AA benchmarks by FY 2030

Scenario was markedly worse with little progress in reducing annual debt burden by 2030

FY 2019 & FY 2010 Budget & Five Year Financial Plan – As originally presented on January 10, 2018

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Water System Revenue Requirement for FY 2019 (i.e. BUDGET) & Five-Year Plan

As originally presented on January 20, 2018

	Water					
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Revenue Requirement Elements						
O&M	121,562,000	125,311,800	148,145,500	151,587,200	155,712,200	150,153,200
O&M Percent Change		*3%*	*18%*	*2%*	*3%*	*-4%*
MBO Commitments	*173,735,500*	171,344,400	182,744,100	191,986,500	192,811,700	201,434,300
MBO Percent Change		*-1%*	*7%*	*5%*	*0%*	*4%*
I&E	32,821,200	38,024,900	17,178,700	18,417,300	27,946,700	39,941,900
I&E Percent Change		*16%*	*-55%*	*7%*	*52%*	*43%*
Total	**328,118,700**	**334,681,100**	**348,068,300**	**361,991,000**	**376,470,600**	**391,529,400**
		2.0%	*4.0%*	*4.0%*	*4.0%*	*4.0%*
Draft Revenue Requirement Elements as a Percent						
O&M	37.0%	37.4%	42.6%	41.9%	41.4%	38.4%
MBO Commitments	52.9%	51.2%	52.5%	53.0%	51.2%	51.4%
I&E	10.0%	11.4%	4.9%	5.1%	7.4%	10.2%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

- ✓ Preserves commitment to 4% promise with 2% BUDGET increase for FY 2019.
- ✓ Relatively modest increase to I&E transfer over the five-year plan; objective is to strategically vary by fiscal year to manage charge adjustments and capital funding.

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Sewer System Revenue Requirement for FY 2019 (i.e. BUDGET) & Five-Year Plan

As originally presented on January 20, 2018

Sewer	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Revenue Requirement Elements						
O&M	191,079,400	193,122,000	206,772,800	207,253,000	213,914,600	213,336,900
O&M Percent Change		*1%*	*7%*	*0%*	*3%*	*0%*
MBO Commitments	260,743,000	269,677,500	280,055,900	281,611,500	292,071,900	284,378,600
MBO Percent Change		*3%*	*4%*	*1%*	*4%*	*-3%*
I&E	13,677,700	12,010,600	6,973,800	24,690,100	28,110,300	57,745,200
I&E Percent Change		*-12%*	*-42%*	*254%*	*14%*	*105%*
Total	**465,500,100**	**474,810,100**	**493,802,500**	**513,554,600**	**534,096,800**	**555,460,700**
		2.0%	*4.0%*	*4.0%*	*4.0%*	*4.0%*
Draft Revenue Requirement Elements as a Percent						
O&M	41.0%	40.7%	41.9%	40.4%	40.1%	38.4%
MBO Commitments	56.0%	56.8%	56.7%	54.8%	54.7%	51.2%
I&E	2.9%	2.5%	1.4%	4.8%	5.3%	10.4%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

- ✓ Preserves commitment to 4% promise with 2% BUDGET increase for FY 2019.
- ✓ Relatively modest increase to I&E transfer over the five-year plan; objective is to strategically vary by fiscal year to manage charge adjustments and capital funding.

GLWA Great Lakes Water Authority

Combined Revenue Requirement for FY 2019 (i.e. BUDGET) & Five-Year Plan

As originally presented on January 20, 2018

	Total					
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Revenue Requirement Elements						
O&M	312,641,400	318,433,800	354,918,300	358,840,200	369,626,800	363,490,100
O&M Percent Change		2%	11%	1%	3%	-2%
MBO Commitments	434,478,500	441,021,900	462,800,000	473,598,000	484,883,600	485,812,900
MBO Percent Change		2%	5%	2%	2%	0%
I&E	46,498,900	50,035,500	24,152,500	43,107,400	56,057,000	97,687,100
I&E Percent Change		8%	-52%	78%	30%	74%
Total	793,618,800	809,491,200	841,870,800	875,545,600	910,567,400	946,990,100
		2%	*4%*	*4%*	*4%*	*4%*
Draft Revenue Requirement Elements as a Percent						
O&M	37.0%	37.4%	42.5%	41.8%	41.4%	38.4%
MBO Commitments	52.9%	51.1%	52.4%	53.0%	51.2%	51.5%
I&E	10.0%	11.5%	5.0%	5.2%	7.4%	10.1%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

- ✓ Preserves commitment to 4% promise with 2% BUDGET increase for FY 2019.
- ✓ Relatively modest increase to I&E transfer over the five-year plan; objective is to strategically vary by fiscal year to manage charge adjustments and capital funding.

FY 2019 & FY 2020 Budget & Five Year Financial Plan – as Revised

June 20, 2018

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Revisions to Proposed Budget

1. Board action regarding reduced specific Contractual Services (Water only)
    - *Reallocation between O&M and I&E Fund Deposit*
2. Adjustments to proposed Water Service Charges (Water only)
    - *Corresponding reduction in revenue*
3. Implement of Memorandum of Understanding Term Sheet between GLWA and DWSD (Water and Sewer)
    - *Reallocation between Master Bond Ordinance Requirements and I&E Fund Deposit*
4. Incorporation of final DWSD Local System FY 2019 & FY 2020 Budget inputs (Water & Sewer – no impact to Regional System GLWA Revenue Requirements)
    - DWSD Budget approved on May 16, 2018 by Board of Water Commissioners
    - Budget provides for use of lease payment of post January 1, 2016 debt service

Timeline – Key Actions Impact Budget

- ✓ January 25, 2018 – Wholesale Charges worksheets distributed to customers – one with one year implementation of water units of service (UoS) study ("Scenario 1"); the other with a two-year phase ("Scenario 2")
- ✓ February through June 2018: significant conversation with one stakeholder regarding findings and implementation
- ✓ April 3rd and 4th, 2018 - GLWA and DWSD Boards approve MOU Term Sheet
- ✓ May 16, 2018 – DWSD Budget Approved
- ✓ May 22, 2018 – Audit Committee - First review of scenario planning for AA/FY 2030
- ✓ May 31, 2018 – GLWA FY 2017 Audited financial statements filed with the state of Michigan Department of Treasury
    - The FY 2017 financial statements reflect complex accounting matters related to the MOU Term Sheet; MOU also impacts budget calculations
- ✓ June 15, 2018 Audit Committee meeting – FY 2018 4th Quarter Budget review

Revisions to Proposed Budget
Specific Contract Services Reduction

- The Water Operation and Maintenance expense budget reflects a $590,100 reduction from the originally submitted FY 2019 budget
- This reduction is related to a lower than anticipated bid price for WS-695C "Valve Exercising Water System Transmission Main" which was approved by the Board at the February 14, 2018 Workshop meeting
- Does not impact overall Regional System BUDGET for FY 2019 nor FY 2020
  - ✓ *Budgeted I&E Fund deposit is adjusted (increased) by $590,100 to balance total BUDGET*

Revisions to Proposed Budget

Adjustments to Proposed Water Service Charges

- GLWA has modified proposed Water Service Charges for three Customers
  - ✓ *New Model Contracts & resulting reduced charges for:*
    - Gibraltar - $159,700 revenue reduction
    - Inkster - $688,200 revenue reduction
  - ✓ *Modified interpretation of UoS Study for Dearborn (Amended UoS peak demand estimates to "observed" amounts rather than "potential" amounts)*
    - $305,500 revenue reduction
- On the contrary, the results of the KWA Bond refinancing decreases the monthly credits that will be applied to Flint during FY 2019 (and therefore increases budgeted revenue) by a total of $234,300
- Combined net total $921,000 million reduction in budgeted revenue has the impact of reducing budgeted revenue requirement by the same amount
  - ✓ *Reduction is reflected in the budgeted I&E Fund deposit*
- Effectively modifies FY 2019 Water BUDGET increase to 1.7% compared to originally proposed 2.0%

Revisions to Proposed Budget
Implementation of MOU / Term Sheet

- The terms of the Agreement result in modified allocation of responsibility for debt service between the Regional and Local Systems, and eliminate the original budget requirements for other MBO elements, including the ER&R Fund Deposit
  - ✓ *Debt Service "reallocation" from Local to Regional:*
    - Water - $1,004,200 / Sewer - $512,500
  - ✓ *Elimination of Regional ER&R Revenue Requirement*
    - Water - $250,500 / Sewer - $627,000
- Does not impact overall Regional System BUDGET for FY 2019 nor FY 2020
  - ✓ *Budgeted I&E Fund deposit is adjusted to balance total BUDGET*
- *Final Bad Debt Lookback Adjustment (8a of Term Sheet) - $6,527,200*
  - ✓ *Deferred credit on GLWA's Books at June 30, 2018 for benefit of DWSD*
  - ✓ *DWSD applying credit in FY 2019 to wholesale charges*
  - ✓ *Timing difference footnoted on schedule of charges*

Revisions to Proposed Budget

Incorporation of final DWSD Local System Budget

- As presented to Board of Water Commissioners on May 16, 2018 and reviewed with DWSD Administration
- The Final Proposed Budget reflects review and incorporation of Local System budget inputs, including:
  - ✓ *Recognition of final Local System Operating Expense budgets*
  - ✓ *Identification of need for new Local System Sewer Construction Funds during FY 2019*
    - Will be incorporated into GLWA Refinancing Bond Financing Plan
  - ✓ *Decisions on use of Lease Payment for Debt Service during FY 2019 and FY 2020*
    - Water - $3.9 million in FY 2019 and $6.6 million in FY 2020
    - Sewer – $4.9 million in FY 2019, none in FY 2020
- Does not impact overall Regional System BUDGET for FY 2019 nor FY 2020
- However does impact consolidated schedules, including debt service coverage and amounts available for transfer to I&E Fund

Program in Development - FY 2019 Sewer Cost of Service / Charges: *Cost Pool Allocations*

- ✓ The vast majority of the Sewer BUDGET is allocated to Customers based on their relative SHARE of the assignment of costs allocated to the "common to all" (CTA) Cost Pool
- ✓ There are two major "Customer specific" Cost Pools that are solely or primarily allocated to specific Customers:
  - ✓ Oakland Macomb Interceptor (OMID) – direct to OMID
  - ✓ Combined Sewer Overflow (CSO) – 83% to Detroit
- ✓ Both of the "Customer specific" Cost Pools are experiencing "unique" circumstances with respect to the FY 2019 Cost of Service Study, that have the effect of increasing costs allocated to them
- ✓ The increase reflects a combination of refined budgetary awareness, new maintenance programs, and the recognition of new information from the capital asset inventory and valuation project

FY 2019 Sewer Cost of Service / Charges: *Cost Pool Allocations*

- ✓ Both of these Customer class impacts may be well served by the concept of a potential ***"Charge Stability Adjustment"*** that embraces a notion of comparing actual Cost Pool expenditures to budgeted amounts
- ✓ Under this approach, Sewer Service Charges would be established at 100% of the BUDGET assigned to the Customer specific (OMID / CSO) Cost Pools, with the understanding that:
  - ✓ Actual costs to these Cost Pools would be tracked and compared to original budgets;
  - ✓ Potentially, adjustments to future charges (for FY 2020 and/or beyond) would reflect actual vs. budget performance in "Customer specific" Cost Pools
- ✓ This ***"Charge Stability Adjustment"*** concept is consistent with the overall equity and stability strategy that is fundamental to the GLWA Strategic Charge Initiatives
- ✓ The concept may provide a valuable tool for GLWA to address potentially volatile expenditures in these unique Cost Pools, and avoid unintended consequences to the directly impacted Customers
- ✓ This approach is NOT being considered for budget/actual variances in revenues or "CTA SHAREs" revenue requirements

GLWA Great Lakes Water Authority

Schedules Supporting the Updated Biennial FY 2019 and FY 2020 Budget Resolution

June 20, 2018

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Core Financial Plan Schedules

Schedule 1A - Water System Revenue Requirements Budget

Water System Revenue Requirements	Current Year FY 2018 Adopted	Biennial Budget FY 2019 Requested	FY 2019 $ Change	FY 2019 % Change	FY 2020 Requested	FY 2020 $ Change	FY 2020 % Change
Revenues							
11 Revenues from Charges	$ 325,150,400	$ **329,923,200**	$ *4,772,800*	*1.5%*	$ **343,386,700**	$ *13,463,500*	*4.1%*
10.1 Non-Operating Revenue	2,968,900	**3,836,600**	*867,700*	*29.2%*	**3,723,400**	*(113,200)*	*-3.0%*
Total Revenues	328,119,300	**333,759,800**	*5,640,500*	*1.7%*	**347,110,100**	***13,350,300***	*4.0%*
Revenue Requirements							
1 Operations & Maintenance (O&M) Expense	$121,562,600	**$124,721,700**	*$3,159,100*	*2.6%*	**$127,216,100**	*$2,494,400*	*2.0%*
2 O&M Legacy Pension Allocation	6,048,000	**6,048,000**	-	*0.0%*	**6,048,000**	-	*0.0%*
3 Debt Service Allocation	135,464,400	**134,214,600**	*(1,249,800)*	*-0.9%*	**143,810,800**	*9,596,200*	*7.1%*
4 Accelerated Legacy Pension Allocation	6,268,300	**6,268,300**	-	*0.0%*	**6,268,300**	-	*0.0%*
5 Water Residential Assistance Program	1,678,600	**1,673,400**	*(5,200)*	*-0.3%*	**1,735,600**	*62,200*	*3.7%*
6 Lease Payment to Local System	22,500,000	**22,500,000**	-	*0.0%*	**22,500,000**	-	*0.0%*
7 Improvement & Extension Fund Allocation	32,821,200	**37,280,800**	*4,459,600*	*13.6%*	**38,699,800**	*1,419,000*	*3.8%*
8 Operating Reserve Deposit	323,700	**1,053,000**	*729,300*	*225.3%*	**831,500**	*(221,500)*	*-21.0%*
9 Extraordinary Repair & Replacement Deposit	1,452,500	-	*(1,452,500)*	*-100.0%*	-	-	*NA*
Annual Revenue Requirements	$ 328,119,300	$ **333,759,800**	$ *5,640,500*	*1.7%*	$ **347,110,100**	$ ***13,350,300***	*4.0%*

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Core Financial Plan Schedules

Schedule 1B - Sewer System Revenue Requirements Budget

Sewer System Revenue Requirements	Current Year	Biennial Budget					
	FY 2018 Adopted	FY 2019 Requested	*FY 2019 $ Change*	*FY 2019 % Change*	FY 2020 Requested	*FY 2020 $ Change*	*FY 2020 % Change*
Revenues							
11 Revenues from Charges	$ 462,749,100	**$ 470,238,500**	$ 7,489,400	1.6%	**$ 489,617,000**	$ 19,378,500	4.1%
Regional Bad Debt True-Up Adjustment	2,810,600	**1,871,300**	(939,300)	-33.4%	**1,871,300**	-	0.0%
Subtotal Revenues from Charges	465,559,700	**472,109,800**	**6,550,100**	1.4%	**491,488,300**	**19,378,500**	4.1%
10.1 Non-Operating Revenue	2,751,000	**4,570,900**	1,819,900	66.2%	**4,184,800**	(386,100)	-8.4%
Total Revenues	468,310,700	**476,680,700**	**8,370,000**	1.8%	**495,673,100**	**18,992,400**	4.0%
Revenue Requirements							
1 Operations & Maintenance (O&M) Expense	$191,079,400	**$193,122,000**	$2,042,600	1.1%	**$196,984,400**	$3,862,400	2.0%
2 O&M Legacy Pension Allocation	10,824,000	**10,824,000**	-	0.0%	**10,824,000**	-	0.0%
3 Debt Service Allocation	207,615,500	**214,600,700**	6,985,200	3.4%	**221,215,100**	6,614,400	3.1%
4 Accelerated Legacy Pension Allocation	11,620,700	**11,620,700**	-	0.0%	**11,620,700**	-	0.0%
5 Water Residential Assistance Program	2,313,700	**2,374,100**	60,400	2.6%	**2,469,000**	94,900	4.0%
6 Lease Payment to Local System	27,500,000	**27,500,000**	-	0.0%	**27,500,000**	-	0.0%
7 Improvement & Extension Fund Allocation	14,732,700	**15,958,300**	1,225,600	8.3%	**23,772,400**	7,814,100	49.0%
8 Operating Reserve Deposit	341,600	**680,900**	339,300	99.3%	**1,287,500**	606,600	89.1%
9 Extraordinary Repair & Replacement Deposit	2,283,100	-	(2,283,100)	-100.0%	-	-	NA
Subtotal Revenue Requirements	468,310,700	**476,680,700**	**8,370,000**	1.8%	**495,673,100**	**18,992,400**	4.0%

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Great Lakes Water Authority

Core Financial Plan Schedules

Schedule 1C - Combined Water and Sewer System Revenue Requirements Budget

Sewer System Revenue Requirements	Current Year	Biennial Budget					
	FY 2018 Adopted	**FY 2019 Requested**	*FY 2019 $ Change*	*FY 2019 % Change*	**FY 2020 Requested**	*FY 2020 $ Change*	*FY 2020 % Change*
Revenues							
11 Revenues from Charges *(prior to adjustment)*	$ 787,899,500	**$ 800,161,700**	$ 12,262,200	1.6%	**$ 833,003,700**	$ 32,842,000	4.1%
Regional Bad Debt True-Up Adjustment	2,810,600	**1,871,300**	(939,300)	-33.4%	**1,871,300**	-	0.0%
Subtotal Revenues from Charges	790,710,100	**802,033,000**	11,322,900	1.4%	**834,875,000**	32,842,000	4.1%
10.1 Non-Operating Revenue	5,719,900	**8,407,500**	2,687,600	47.0%	**7,908,200**	(499,300)	-5.9%
Total Revenues	796,430,000	**810,440,500**	14,010,500	1.8%	**842,783,200**	32,342,700	4.0%
Revenue Requirements							
1 Operations & Maintenance (O&M) Expense	$312,642,000	**$317,843,700**	$5,201,700	1.7%	**$324,200,500**	$6,356,800	2.0%
2 O&M Legacy Pension Allocation	16,872,000	**16,872,000**	-	0.0%	**16,872,000**	-	0.0%
3 Debt Service Allocation	343,079,900	**348,815,300**	5,735,400	1.7%	**365,025,900**	16,210,600	4.6%
4 Accelerated Legacy Pension Allocation	17,889,000	**17,889,000**	-	0.0%	**17,889,000**	-	0.0%
5 Water Residential Assistance Program	3,992,300	**4,047,500**	55,200	1.4%	**4,204,600**	157,100	3.9%
6 Lease Payment to Local System I&E Account	50,000,000	**50,000,000**	-	0.0%	**50,000,000**	-	0.0%
7 Improvement & Extension Fund Allocation	47,553,900	**53,239,100**	5,685,200	12.0%	**62,472,200**	9,233,100	17.3%
8 Operating Reserve Deposit	665,300	**1,733,900**	1,068,600	160.6%	**2,119,000**	385,100	22.2%
9 Extraordinary Repair & Replacement Deposit	3,735,600	-	(3,735,600)	-100.0%	-	-	NA
Subtotal Revenue Requirements	796,430,000	**810,440,500**	14,010,500	1.8%	**842,783,200**	32,342,700	4.0%

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Core Financial Plan Schedules

Schedule 2 - Operations & Maintenance Expense

Group	Current Year FY 2018 Adopted	Biennial Budget FY 2019 Requested	FY 2019 $ Change	FY 2019 % Change	FY 2020 Requested	FY 2020 $ Change	FY 2020 % Change
A Water System Operations	$66,596,200	**$64,987,400**	($1,608,800)	-2.4%	**$66,287,100**	$1,299,700	2.0%
B Sewer System Operations	118,318,900	**122,999,100**	4,680,200	4.0%	**125,459,100**	2,460,000	2.0%
C Centralized Services	99,044,500	**101,072,700**	2,028,200	2.0%	**103,094,100**	2,021,400	2.0%
D Administrative Services	28,682,400	**28,784,500**	102,100	0.4%	**29,360,200**	575,700	2.0%
Total	$312,642,000	**$ 317,843,700**	$5,201,700	1.7%	**$ 324,200,500**	$6,356,800	2.0%

Cost Center & Description	FY 2018 Adopted	FY 2019 Requested	FY 2019 $ Change	FY 2019 % Change	FY 2020 Requested	FY 2020 $ Change	FY 2020 % Change
Water	$121,562,600	**$124,721,700**	$3,159,100	2.6%	**$127,216,100**	$2,494,400	2.0%
Wastewater	191,079,400	**193,122,000**	2,042,600	1.1%	**196,984,400**	3,862,400	2.0%
Total	$312,642,000	**$ 317,843,700**	$5,201,700	1.7%	**$ 324,200,500**	$6,356,800	2.0%

Core Financial Plan Schedules

Schedule 3A - Sources of Revenues and Use of Revenues - Flow of Funds Basis Consistent with Master Bond Ordinance

	Flow of Funds Basis	FY 2019 Water Fund	FY 2019 Sewer Fund	FY 19 Combined (Informational Only)	FY 2020 Water Fund	FY 2020 Sewer Fund	FY 20 Combined (Informational Only)
Notes for Schedule 3A							
	* Rows highlighted in light blue in the above table are designed to align with the DWSD Budget.						
	(a) See Schedule 2 for detail by Appropriation (Division) and Object (Cost Type)						
	(b) Includes amounts included in Sewer Service Charges related to Regional Bad Debt True-Up. See Schedule 1B.						
	(c) Lease Payment Allocation						
31	*Total Lease Payment*	*22,500,000*	*27,500,000*	*50,000,000*	*22,500,000*	*27,500,000*	*50,000,000*
32	*Amount Directed to Debt Service*	*3,949,200*	*4,864,000*	*8,813,200*	*6,566,400*	*0*	*6,566,400*
33	*Balance to be Deposited to DWSD-R I&E Fund for Revenue Financed*	*18,550,800*	*22,636,000*	*41,186,800*	*15,933,600*	*27,500,000*	*43,433,600*

Core Financial Plan Schedules

Schedule 3A - Sources of Revenues and Use of Revenues - Flow of Funds Basis Consistent with Master Bond Ordinance

	Flow of Funds Basis	FY 2019 Water Fund	FY 2019 Sewer Fund	FY 19 Combined (Informational Only)	FY 2020 Water Fund	FY 2020 Sewer Fund	FY 20 Combined (Informational Only)
	Revenue Requirements						
	Operations & Maintenance Expense						
8	Regional System Wholesale Expenses *(a)*	$ 124,721,700	$ 193,122,000	$ 317,843,700	$ 127,216,100	$ 196,984,400	$ 324,200,500
9	Local System Expenses	35,484,300	68,121,500	103,605,800	36,126,600	69,577,200	105,703,800
10	GRS Pension allocable to Regional System	6,048,000	10,824,000	16,872,000	6,048,000	10,824,000	16,872,000
11	GRS Pension allocable to Local System	4,272,000	2,856,000	7,128,000	4,272,000	2,856,000	7,128,000
12	Total Operations & Maintenance Expense	170,526,000	274,923,500	445,449,500	173,662,700	280,241,600	453,904,300
13	*Net Revenues after Operations & Maintenance Expense*	*240,602,300*	*299,290,500*	*539,892,800*	*248,881,600*	*322,832,800*	*571,714,400*
	Non-operating Activities						
14	Debt Service Allocable to Regional System	134,214,600	214,600,700	348,815,300	143,810,800	221,215,100	365,025,900
15	Debt Service Allocable to Local System	36,747,300	27,865,300	64,612,600	36,797,500	30,741,400	67,538,900
16	GRS Accelerated Pension from Regional System	6,268,300	11,620,700	17,889,000	6,268,300	11,620,700	17,889,000
17	GRS Accelerated Pension from Local System	4,427,400	3,066,800	7,494,200	4,427,400	3,066,800	7,494,200
18	WRAP Contribution from Regional System	1,673,400	2,374,100	4,047,500	1,735,600	2,469,000	4,204,600
19	WRAP Contribution from Local System	386,800	487,700	874,500	377,200	537,000	914,200
20	DWSD Budget Stabilization Fund Contribution	0	0	0	0	0	0
21	ER&R Fund Contribution from Regional System	0	0	0	0	0	0
22	ER&R Fund Contribution from Local System	0	0	0	0	0	0
23	Contribution to Operating Reserves	1,053,000	680,900	1,733,900	831,500	1,287,500	2,119,000
24	Total Nonoperating Activities	184,770,800	260,696,200	445,467,000	194,248,300	270,937,500	465,185,800
25	**Net Revenues Available for Revenue Financed Capital**	*55,831,500*	*38,594,300*	*94,425,800*	*54,633,300*	*51,895,300*	*106,528,600*
	Reserve for Revenue Financed Capital from Net Revenues						
26	Lease Payment to Local System I&E Account *(c)*	18,550,800	22,636,000	41,186,800	15,933,600	27,500,000	43,433,600
27	Net Revenues Allocable to Local System	0	0	0	0	622,900	622,900
28	Net Revenues Allocable to Regional System *(b)*	37,280,800	*15,958,300*	53,239,100	38,699,800	*23,772,400*	62,472,200
29	Reserve for Revenue Financed Capital Both Systems	55,831,600	38,594,300	94,425,900	54,633,400	51,895,300	106,528,700
30	**Total Revenue Requirements**	**$ 411,128,400**	**$ 574,214,000**	**$ 985,342,400**	**$ 422,544,400**	**$ 603,074,400**	**$ 1,025,618,800**

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Core Financial Plan Schedules

Schedule 3A - Sources of Revenues and Use of Revenues - Flow of Funds Basis Consistent with Master Bond Ordinance

	Flow of Funds Basis	FY 2019 Water Fund	FY 2019 Sewer Fund	FY 19 Combined (Informational Only)	FY 2020 Water Fund	FY 2020 Sewer Fund	FY 20 Combined (Informational Only)
Revenues							
1	Regional Wholesale Revenues - Suburban Wholesale Customers	$ 309,597,100	$ 289,102,200	$ 598,699,300	$ 318,341,900	$ 300,939,800	$ 619,281,700
2	Regional Wholesale Revenues - Detroit Customers	20,326,100	183,007,600	203,333,700	25,044,800	190,548,500	215,593,300
3	Total Regional System Wholesale Revenues	329,923,200	472,109,800	802,033,000	343,386,700	491,488,300	834,875,000
4	DWSD Local System Revenues - Detroit Customers	70,768,200	92,068,700	162,836,900	68,833,900	101,936,700	170,770,600
5	Miscellaneous Revenue (Local System)	6,600,300	5,464,600	12,064,900	6,600,300	5,464,600	12,064,900
6	Non-Operating Revenue (Regional System)	3,836,600	4,570,900	8,407,500	3,723,400	4,184,800	7,908,200
7	**Total Revenues**	**$ 411,128,300**	**$ 574,214,000**	**$ 985,342,300**	**$ 422,544,300**	**$ 603,074,400**	**$ 1,025,618,700**

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Core Financial Plan Schedules

Schedule 4 – Debt Service Coverage Calculations Consistent with the Master Bond Ordinance

Flow of Funds Basis		FY 2019 Water Fund	FY 2019 Sewer Fund	FY 19 Combined (Informational Only)	FY 2020 Water Fund	FY 2020 Sewer Fund	FY 20 Combined (Informational Only)
Revenues							
1	Regional System Wholesale Revenues	$329,923,200	$472,109,800	$802,033,000	$343,386,700	$491,488,300	$834,875,000
2	Local System Revenues	70,768,200	92,068,700	162,836,900	68,833,900	101,936,700	170,770,600
3	Miscellaneous Revenue (Local System)	6,600,300	5,464,600	12,064,900	6,600,300	5,464,600	12,064,900
4	Non-Operating Revenue (Regional System)	3,836,600	4,570,900	8,407,500	3,723,400	4,184,800	7,908,200
5	**Total Revenues**	$411,128,300	$574,214,000	$985,342,300	$422,544,300	$603,074,400	$1,025,618,700
Revenue Requirements							
Operations & Maintenance Expense							
6	Regional System Wholesale Expenses *(a)*	$124,721,700	$193,122,000	$317,843,700	$127,216,100	$196,984,400	$324,200,500
7	Local System Expenses	35,484,300	68,121,500	103,605,800	36,126,600	69,577,200	105,703,800
8	GRS Pension allocable to Regional System	6,048,000	10,824,000	16,872,000	6,048,000	10,824,000	16,872,000
9	GRS Pension allocable to Local System	4,272,000	2,856,000	7,128,000	4,272,000	2,856,000	7,128,000
10	Total Operations & Maintenance Expense	170,526,000	274,923,500	445,449,500	173,662,700	280,241,600	453,904,300
11	***Net Revenues after Operations & Maintenance Expense***	*$240,602,300*	*$299,290,500*	*$539,892,800*	*$248,881,600*	*$322,832,800*	*$571,714,400*
Debt Service by Lien							
12	Senior Lien Bonds	119,230,800	148,606,900	267,837,700	127,198,400	152,764,300	279,962,700
13	Second Lien Bonds	49,020,400	43,922,600	92,943,000	50,660,600	45,878,800	96,539,400
14	SRF Junior Lien Bonds	2,710,600	49,936,500	52,647,100	2,749,300	53,313,400	56,062,700
15	**Total Debt Service**	*$170,961,800*	*$242,466,000*	*$413,427,800*	*$180,608,300*	*$251,956,500*	*$432,564,800*
Debt Service Coverage ***(a)***							
15	Senior Lien Bonds *(11)/(12)*	2.02	2.01		1.96	2.11	2.04
16	Second Lien Bonds *(11)/[(12)+(13)]*	1.43	1.55		1.40	1.63	1.52
17	SRF Junior Lien Bonds *(11)/(15)*	1.41	1.23		1.38	1.28	1.32

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Core Financial Plan Schedules

Schedule 5A - Water Improvement & Extension Fund

Inflows & Outflows	Current Year	Biennial Budget		Forecast		
	Projected	FY 2019 Requested	FY 2020 Requested	FY 2021 Forecast	FY 2022 Forecast	FY 2023 Forecast
Water Improvement & Extension Fund						
Water System Revenue Transfers	$ 32,556,000	$ 38,024,900	$ 17,178,700	$ 18,417,300	$ 27,596,700	$ 34,241,900
Revenue Financed Capital - Strategic				(80,000,000)	(20,000,000)	
Revenue Financed Capital - Specific	(14,936,000)	(13,172,000)	(11,209,000)	(12,565,000)	(11,280,000)	(12,007,000)
Capital Outlay	(15,829,300)	(22,133,400)	(18,763,000)	(18,705,300)	(9,363,300)	(7,400,800)
Increase (Decrease) in I&E Reserves	$1,790,700	$2,719,500	($12,793,300)	($92,853,000)	($13,046,600)	$14,834,100
Beginning Year Balance	175,720,000	177,510,700	180,230,200	167,436,900	74,583,900	61,537,300
Projected Ending Balance	**$ 177,510,700**	**$ 180,230,200**	**$ 167,436,900**	**$ 74,583,900**	**$ 61,537,300**	**$ 76,371,400**

Schedule 5C - Water Construction Bond Fund

Inflows & Outflows	Current Year	Biennial Budget		Forecast		
	Projected	FY 2019 Requested	FY 2020 Requested	FY 2021 Forecast	FY 2022 Forecast	FY 2023 Forecast
Water Construction Bond Fund						
Bond Proceeds, Net	$ -	$ -	$145,000,000	$ -	$140,000,000	$145,000,000
Earnings on Investments, Net	-	743,000	462,000	408,000	252,000	500,000
Grant Revenues	-	-	-	-	-	-
Transfer In from I&E - Specific	10,315,000	13,172,000	11,209,000	12,565,000	11,280,000	12,007,000
Transfer In from I&E - Strategic	-	-	-	80,000,000	20,000,000	-
Project Expenditures	(40,043,000)	(66,038,000)	(137,583,000)	(155,734,000)	(178,300,000)	(175,174,000)
Increase (Decrease) in Construction Funds	(29,728,000)	(52,123,000)	19,088,000	(62,761,000)	(6,768,000)	(17,667,000)
Beginning Year Balance	173,000,000	143,272,000	91,149,000	110,237,000	47,476,000	40,708,000
Projected Ending Balance	**$ 143,272,000**	**$ 91,149,000**	**$ 110,237,000**	**$ 47,476,000**	**$ 40,708,000**	**$ 23,041,000**
Total Capital Expenditures	*$ 55,872,300*	*$ 88,171,400*	*$ 156,346,000*	*$ 174,439,300*	*$ 187,663,300*	*$ 182,574,800*

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Core Financial Plan Schedules

Schedule 5B - Sewer Improvement & Extension Fund

Inflows & Outflows	Current Year Projected	Biennial Budget FY 2019 Requested	Biennial Budget FY 2020 Requested	Forecast FY 2021 Forecast	Forecast FY 2022 Forecast	Forecast FY 2023 Forecast
Sewer Improvement & Extension Fund						
Sewer System Revenue Transfers	$14,732,700	$15,958,300	$23,772,400	$36,036,600	$40,754,700	$60,745,200
Revenue Financed Capital - Strategic			(5,000,000)			(5,000,000)
Revenue Financed Capital - Specific	(3,758,000)	(8,312,000)	(10,882,000)	(13,659,000)	(10,852,000)	(12,280,000)
Capital Outlay	(8,646,100)	(5,957,000)	(4,810,900)	(4,431,800)	(15,047,000)	(4,271,200)
Increase (Decrease) in I&E Reserves	$2,328,600	$1,689,300	$3,079,500	$17,945,800	$14,855,700	$39,194,000
Beginning Year Balance	42,837,000	45,165,600	46,854,900	49,934,400	67,880,200	82,735,900
Projected Ending Balance	**$45,165,600**	**$46,854,900**	**$49,934,400**	**$67,880,200**	**$82,735,900**	**$121,929,900**

Schedule 5D - Sewer Construction Bond Fund

Inflows & Outflows	Current Year Projected	Biennial Budget FY 2019 Requested	Biennial Budget FY 2020 Requested	Forecast FY 2021 Forecast	Forecast FY 2022 Forecast	Forecast FY 2023 Forecast
Sewer Construction Bond Fund						
Bond Proceeds, Net	$0	$0	$75,000,000	$135,000,000	$0	$140,000,000
Earnings on Investments, Net	429,000	299,000	633,000	361,000	194,000	300,000
Revolving Fund & Other Loans	45,965,000	42,197,000	30,923,000	20,799,000	10,187,000	10,187,000
Transfer In from I&E - Specific	3,380,000	8,312,000	10,882,000	13,659,000	10,852,000	12,280,000
Transfer In from I&E - Strategic	-	-	5,000,000	-	5,000,000	5,000,000
Project Expenditures	(70,632,000)	(105,183,000)	(111,155,000)	(111,952,000)	(136,411,000)	(168,458,000)
Increase (Decrease) in Construction Funds	($20,858,000)	($54,375,000)	$11,283,000	$57,867,000	($110,178,000)	($691,000)
Beginning Year Balance	136,000,000	115,142,000	60,767,000	72,050,000	129,917,000	19,739,000
Projected Ending Balance	**$115,142,000**	**$60,767,000**	**$72,050,000**	**$129,917,000**	**$19,739,000**	**$19,048,000**
Total Capital Expenditures	*$ 79,278,100*	*$ 111,140,000*	*$ 115,965,900*	*$ 116,383,800*	*$ 151,458,000*	*$ 172,729,200*

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