III. CIP FINANCIAL CONSIDERATIONS

SECTION 1 INTRODUCTION

The intersection of the CIP and the GLWA's overall financial plan balances several objectives to support the Authority's mission. Those objectives include the following:

- ✓ Transparency in the development of the financial plan
- ✓ Collaboration internally and externally
- ✓ Ensure sustainability
- ✓ Reduce the debt burden
- ✓ Smoothing of annual adjustments to service charges
- ✓ Improve the Authority's financial position

The Authority draws upon five sources of funding for its CIP:

1. **Bond Proceeds**: The Authority uses an incremental method of funding long-lived capital projects through a bond financing program. The Authority issues revenue bonds pursuant to Michigan Public Act 94 of 1933 (the Revenue Bond Act). The Act provides a pledge of "net revenues" for the payment of the bond principal and interest. "Net revenues" is the revenues of the system remaining after deducting the reasonable expenses of administration, operation, and maintenance of the system.
2. **Revenue Financed Capital (Improvement & Extension Fund):** Based upon ongoing expense, capital, and revenue optimization efforts, the Authority is able to build reserves to use pay-as-you go funding for shorter-lived and lower-dollar capital expenditures as well as to reduce the level of borrowing for longer-lived assets. These funds are not budgeted for use until received and recorded in the Improvement & Extension Fund for the water or the sewer system.
3. **Federal Loan Programs:** The Authority's sources of funding include lower cost financing programs including the State Revolving Fund (SRF) Loan Program and the Drinking Water Revolving Fund (DWRF) Loan Program.
4. **Grants:** The Authority utilizes public grants programs such as the State of Michigan's Stormwater, Asset Management, and Wastewater Program (provides both grants and loans) and is pursuing federal and private grants for energy optimization.
5. **Contribution in Aid of Construction:** Periodically, the Authority has the opportunity to partner with other entities for the design and construction or improvement of an asset. Depending on the nature of the shared financing strategy, the Authority may offset the cost of System expansion or improvements with direct or indirect capital from that partner.

To ensure proper accountability of funding sources and uses, the Authority utilizes two funds for its capital program for each system: the Construction Bond Fund and the Improvement & Extension (I&E) Fund.

- ✓ **Construction Bond Fund:** This fund represents the proceeds of bond issuances and related interest earnings for the purposes of financing capital improvements. New with this CIP, GLWA has made a concentrated effort to implement a CIP financial plan strategy where long-lived assets, defined as constructed infrastructure and plant facilities with an estimated useful life greater than 20 years, are eligible for bond funding.
- ✓ **Improvement & Extension (I&E) Fund:** The I&E Fund is defined by the Authority's Master Bond Ordinance (MBO) as the "fund used for improvements, enlargements,

extensions or betterment" of the System. Cash receipts of the Authority are transferred into the I&E Fund pursuant to a flow of funds after commitments are met for a monthly allocation of operations and maintenance expense, debt service, pension, WRAP, budget stabilization fund, and extraordinary repair and replacement fund as administered by a trustee. Capital outlay items are funded with I&E Funds. Capital outlay are items that are generally purchased (rather than constructed) and with an estimated useful life of less than 20 years.

The basis of accounting for the capital spending is the accrual basis. Under this basis of accounting, revenues are recognized when earned and measurable regardless of when collected; and expenses are recorded, or accrued, on a matching basis when incurred. Accrued expenses are expected to be paid in a subsequent accounting period. For purposes of this CIP, the terms expenses and expenditures are used interchangeably.

SECTION 2 Summary CIP Financial Plan Review and Analysis

The GLWA CIP financial plan document is based on a foundational database of capital projects and programs to support improved analysis and decision-making, provide transparency, balance risk and opportunity, and demonstrate greater clarity in the long-term GLWA financial strategy. With the ultimate performance measure of lowering the cost of capital, a better-executed financial plan optimizes the use of bonds, revenue financial capital, revolving fund loans, and grants. It also contemplates execution risk (actual rate of capital project delivery) versus inherent risk in project cost estimating. Lastly, a sustainable financial plan encompasses flexibility to allow for strategic timing of new debt, pace of cash flow needs, and adequate reserves for system needs.

While the GLWA Board of Directors approves the plan, the authority to spend does not occur until additional project review processes are completed prior to the procurement process. Depending on the scope and dollar amount of the project, final approval to proceed may include customer engagement, Chief Executive Officer review, and GLWA Board CIP Committee review and/or GLWA Board action.

Recognizing the different scope between the CIP which has a broader strategic view of system needs versus the tactical financial plan which models use of cash reserves and future borrowing, the GLWA is implementing a new "capital spend rate assumption policy" for the FY 2020 – 2024 CIP. This policy, provided below, was adopted by the GLWA Board of Directors on November 28, 2018.

Capital Program Spend Rate Assumption Policy

Purpose: The Spend Rate Assumption (SRA) policy provides an analytical approach to bridge the total dollar amount of projects in the Capital Improvement Plan (CIP) with what can realistically be spent due to limitations beyond GLWA's control and/or delayed for non-budgetary reasons. Those limitations, whether financial or non-financial, necessitate the SRA for budgetary purposes, despite the prioritization established in the CIP. The outcome is a reasoned balance between a desired level of capital investment with financial strategies to manage debt levels and control adjustments to customer charges.

Policy: Annually, a projected spend rate assumption for the financial plan related to the proposed capital improvement plan will be established based upon pertinent factors and data available at that time. Such pertinent factors and data will include the mix of projects and phases in the proposed CIP, interdependency risk, criticality, and other measures provided by the GLWA team members that develop and manage the CIP projects. That spend rate assumption will be presented to the Audit Committee no later than December 31st each year after the GLWA Board, Capital

Improvement Planning Committee, and member partners have had the opportunity to review the draft capital improvement plan.

The remainder of this chapter provides an analysis of information in the CIP database that will inform the spend rate assumption for future financial plans.

2.1. Cost Pool Responsibility

Revenue requirements are the basis for establishing customer charges. Included in that calculation are operations and maintenance expense, debt service, Master Bond Ordinance (MBO) reserve requirements, system lease requirements, revenue financed capital targets, water residential assistance program commitments, and legacy obligations. The cost of capital improvements is allocated to customers among four general cost pools as described following:

1. ***Common-to-All (CTA)*** represents costs that are allocable to all customers.
2. ***Oakland-Macomb Interceptor Drainage District (OMID)*** represents costs that are allocable to a portion of the sewer system that receives flows from OMID's system.
3. ***Suburban Only*** represents costs that are allocable to wholesale customers outside the City of Detroit.
4. ***CSO 83/17*** represents capital costs that are allocated based upon terms of a 1999 rate settlement agreement sanctioned by a federal court. The outcome was an allocation of 83% of "combined sewer overflow control facilities" (CSO) costs to City of Detroit customers and 17% to other customers.

As shown in Table III-1. and Table III-2. below, the majority of the proposed capital improvements are allocated to the common-to-all cost pool.

Table III-1. Cost Allocation: Water

Financial figures are in thousands of dollars ($1,000's).

	Projected Capital Expenditures						
Cost Allocation	FY21	FY22	FY23	FY24	FY25	Total FY's 2021-2025	Percent of Five Year Total
Water							
Common-to-all	$ 145,029	$ 177,383	$ 200,753	$ 212,732	$ 193,064	$ 928,961	99.3%
Suburban Only	2,535	2,535	1,139	121	120	6,450	0.7%
Grand Total	**$ 147,564**	**$ 179,918**	**$ 201,892**	**$ 212,853**	**$ 193,184**	**$ 935,411**	**100.0%**

Table III-2. Cost Allocation: Wastewater

Financial figures are in thousands of dollars ($1,000's).

	Projected Capital Expenditures						
Cost Allocation	**FY21**	**FY22**	**FY23**	**FY24**	**FY25**	**Total FY's 2021-2025**	**Percent of Five Year Total**
Sewer							
Common-to-all	$ 100,330	$ 100,117	$ 127,781	$ 194,221	$ 145,006	$ 667,455	90.3%
CSO 83/17	10,308	12,640	13,062	9,037	26,933	71,980	9.7%
Grand Total	**$ 110,638**	**$ 112,757**	**$ 140,843**	**$ 203,258**	**$ 171,939**	**$ 739,435**	**9.7%**

2.2. CIP Funding Based on Estimated Useful Life

The long-term financial plan differentiates between appropriate uses of long-term debt versus revenue financed capital in the Improvement & Extension (I&E) Fund as defined in the MBO. As a general rule, assets with a life of less than 20 years are funded with I&E Funds. Assets with a life greater than 20 years are funded with a blend of debt and I&E Funds. Building I&E Funds over time allows GLWA to position itself to further reduce reliance on debt. Exceptions to that plan may be to take advantage of lower cost borrowings from the revolving fund loan programs or a revision of the plan to optimize refunding savings. For this reason, the five-year financial plan is regularly reviewed during the fiscal year. Updates may also occur due to grant awards, collaboration opportunities, and changes in budgetary conditions. The financial plan reflects grants and federal and state loans only after approval is received by the grantor or authorizing party.

As shown in Table III-3. and Table III-4., most of the CIP projects are longer-lived assets, defined as greater than a 20-year estimated useful life. Shorter-lived assets scheduled for acquisition or replacement are identified in the five-year capital outlay plan provided in the GLWA Biennial Budget and Five-Year Plan document.

Table III-3. Asset Life and Eligibility for Funding with Long-Term Debt: Water
Financial figures are in thousands of dollars ($1,000's).

	Projected Capital Expenditures						
Asset Life Range	FY21	FY22	FY23	FY24	FY25	Total FY's 2021-2025	Percent of Five Year Total
Water							
<20 Years	$ 12,131	$ 7,709	$ 7,341	$ 13,565	$ 15,293	$ 56,039	6.0%
>20 Years	135,433	172,209	194,551	199,288	177,891	879,372	94.0%
Grand Total	**$ 147,564**	**$ 179,918**	**$ 201,892**	**$ 212,853**	**$ 193,184**	**$ 935,411**	**100.0%**

Table III-4. Asset Life and Eligibility for Funding with Long-Term Debt: Wastewater
Financial figures are in thousands of dollars ($1,000's).

	Projected Capital Expenditures						
Asset Life Range	FY21	FY22	FY23	FY24	FY25	Total FY's 2021-2025	Percent of Five Year Total
Sewer							
<20 Years	$ 11,515	$ 6,990	$ 10,080	$ 7,250	$ 22,861	$ 58,696	7.9%
>20 Years	99,123	105,767	130,763	196,008	149,078	680,739	92.1%
Grand Total	**$ 110,638**	**$ 112,757**	**$ 140,843**	**$ 203,258**	**$ 171,939**	**$ 739,435**	**100.0%**

2.3. Project Status Analysis

As shown in Table III-5. and Table III-6. below, approximately 72% of the water system projects and 89% of the wastewater system projects are classified as "Future Planned Start". As defined in Chapter II, those projects with a Project Status of "Future Planned Start" are projects where that was included in the previous CIP and does not have an assigned BS&A Project Number.

Table III-5. Project Status Analysis: Water
Financial figures are in thousands of dollars ($1,000's).

	Projected Capital Expenditures						
Phase Status	**FY21**	**FY22**	**FY23**	**FY24**	**FY25**	**Total FY's 2021-2025**	**Percent of Five Year Total**
Water							
Active	$ 74,771	$ 55,818	$ 23,470	$ 18,843	$ 14,593	$ 187,495	20.0%
Future Planned Start	63,143	106,041	155,409	173,098	172,803	670,494	71.7%
Under Procurement	9,650	18,059	23,013	20,912	5,788	77,422	8.3%
Grand Total	**$ 147,564**	**$ 179,918**	**$ 201,892**	**$ 212,853**	**$ 193,184**	**$ 935,411**	**100.0%**

Table III-6. Project Status Analysis: Wastewater
Financial figures are in thousands of dollars ($1,000's).

	Projected Capital Expenditures						
Phase Status	**FY21**	**FY22**	**FY23**	**FY24**	**FY25**	**Total FY's 2021-2025**	**Percent of Five Year Total**
Sewer							
Active	$ 51,023	$ 13,504	$ 3,102	$ 1,360	$ 1,191	$ 70,180	9.5%
Future Planned Start	52,430	98,345	136,851	201,507	170,681	659,814	89.2%
Under Procurement	7,185	908	890	391	67	9,441	1.3%
Grand Total	**$ 110,638**	**$ 112,757**	**$ 140,843**	**$ 203,258**	**$ 171,939**	**$ 739,435**	**100.0%**

2.4. Project Category Analysis

As noted in Chapter II, project phase categories relate to how a project will be delivered and managed. Categories may be grouped to align with how the work is to be performed and often with one vendor contract. The current project categories are identified below.

S....................Study
D....................Design
C....................Construction
CA..................Construction Assistance
DB..................Design and Build
DBA..............Design Build Assistance
CM.................Construction Management
PM.................Project Management
TBD..............To Be Determined

As shown in Table III-7. and Table III-8. below, the majority of the dollars are allocated to construction and design build. From a financial standpoint, this increases the validity of the projected CIP spend once a contract is awarded as there are significantly less dollars assigned to pre-construction activities.

Table III-7. Project Category Analysis: Water
Financial figures are in thousands of dollars ($1,000's).

	Projected Capital Expenditures						
Phase Category	FY21	FY22	FY23	FY24	FY25	Total FY's 2021-2025	Percent of Five Year Total
Water							
C	$ 58,632	$ 85,403	$ 116,846	$ 122,211	$ 117,994	$ 501,086	53.6%
CA	333	250	0	0	0	583	0.1%
D	1,776	1,776	1,776	1,781	1,046	8,155	0.9%
D/CA	13,801	11,893	6,698	10,283	11,753	54,428	5.8%
DB	57,211	64,217	61,097	61,137	43,749	287,411	30.7%
DBA	0	0	953	3,039	3,642	7,634	0.8%
GLWA-PM	7,180	9,053	8,949	8,767	9,666	43,615	4.7%
S	190	0	0	684	276	1,150	0.1%
S/D/CA	4,608	3,703	4,214	3,588	3,699	19,812	2.1%
TBD	3,833	3,623	1,359	1,363	1,359	11,537	1.2%
Total Water	**$ 147,564**	**$ 179,918**	**$ 201,892**	**$ 212,853**	**$ 193,184**	**$ 935,411**	**100.0%**

Table III-8. Project Category Analysis: Wastewater
Financial figures are in thousands of dollars ($1,000's).

	Projected Capital Expenditures						
Phase Category	**FY21**	**FY22**	**FY23**	**FY24**	**FY25**	**Total FY's 2021-2025**	**Percent of Five Year Total**
Sewer							
C	$ 45,307	$ 45,905	$ 93,912	$ 153,425	$ 116,853	$ 455,402	61.6%
CA	223	12	0	0	0	235	0.0%
D/CA	4,455	2,389	857	1,284	504	9,489	1.3%
DB	25,700	15,453	5,817	622	0	47,592	6.4%
GLWA-PM	3,327	2,696	2,634	1,915	1,372	11,944	1.6%
S	2,910	2,134	656	0	0	5,700	0.8%
S/D/CA	21,909	22,592	7,505	10,643	6,666	69,315	9.4%
TBD	6,807	21,576	29,462	35,369	46,544	139,758	18.9%
Total Sewer	**$ 110,638**	**$ 112,757**	**$ 140,843**	**$ 203,258**	**$ 171,939**	**$ 739,435**	**100.0%**