

**GRAND RAPIDS
PUBLIC UTILITIES**
Service is Our Nature

**WATER COST OF SERVICE AND RATE
DESIGN STUDY**

Final Report

December 14, 2022



REPORT OUTLINE

Cover Letter

Section 1 - Introduction

Section 2 – Projected Operating Results – Existing Rates

Section 3 – Cost of Service

Section 4 – Proposed Rates



December 14, 2022

Grand Rapids Public Utilities Commission

500 SE 4th Street
Grand Rapids, MN 55744

Subject: Water Rate Study

Commission Members:

Dave Berg Consulting, LLC has undertaken a study of the retail rates GRPUC charges its customers for water service. This report summarizes the analyses undertaken and the resulting recommendations for changes to the existing rates.

Based on the financial needs of the water utility for the projected study period of 2023-2027, I am recommending a rate increase of 15% in 2023 followed by annual 10% increases in overall water rates each year for 2024-2027. Based on the cost-of-service analysis, certain classes of customers will experience increases more than average and others will experience increases less than average. Section 4 of the report summarizes the recommendations in detail.

Thank you for the opportunity to be of service to GRPUC through the conduct of this study. I wish to express my appreciation for the valuable assistance I received from GRPUC staff relative to the execution of this study.

Sincerely,

Dave Berg Consulting, LLC

A handwritten signature in black ink that reads 'David A. Berg'.

David A. Berg, PE
Principal

Dedicated to providing personal service to consumer-owned utilities

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Section 1

Introduction

The City of Grand Rapids, MN owns a municipal utility providing service to approximately 3,300 water customers. The water utility operates under the direction of the Grand Rapids Public Utilities Commission (GRPUC). This report has been prepared by Dave Berg Consulting, LLC to examine the rates and charges for water services in Grand Rapids. The study includes an examination of the allocated cost of service based on 2021 utility operations (Test Year). It also includes projected operating results for 2022-2027 (Study Period). As a result of the analyses undertaken and reported on herein, water rate recommendations have been developed for implementation by GRPUC.

Section 2

Projected Operating Results Existing Rates

The rates charged for water services by GRPUC, combined with other operating and non-operating revenues, must be sufficient to meet the cost of providing services to GRPUC's customers. This is necessary to ensure the long-term financial health of the GRPUC water utility. The cost of providing utility service consists of normal operating expenses for water systems, customer and A&G functions, system depreciation expenses, capital improvements and other non-operating expenses.

An analysis of the operating results for the GRPUC water utility during the 2022-2027 Study Period has been performed assuming the current rates and charges remain in effect through the Study Period. This analysis has been done to determine the overall need, if any, for additional revenue through rates to meet projected revenue requirements. The analyses and assumptions utilized in these projections are explained below.

Estimated Revenues – Existing Rates

Operating Revenues

GRPUC provides water services to residential, commercial and industrial customers as well as to the City of La Prairie on a wholesale basis. Total sales to GRPUC customers for the Study Period are assumed to increase 1% per year above current sales levels.

Exhibit 2-A is a summarized listing of GRPUC's historical and projected water operating results at existing rates. The historical and projected revenues from sales of water to different groups of customers are included as part of Utility Revenues.

Section 2

Other Operating Revenues

GRPUC also receives other miscellaneous operating revenue from other normal operating procedures. These other operating revenues include service connections, permit fees, thawing service, merchandizing and jobbing, antenna rent and other miscellaneous operating revenues. These revenues are also included in the Operating Revenues in Exhibit 2-A.

Revenue Requirements

Operating Expenses

Operating expenses for the water utility are shown in Exhibit 2-A. Projections of operating expenses are based on budgeted amounts provided by GRPUC.

Depreciation

GRPUC has annual depreciation costs associated with water system investments. Depreciation during the Study Period is based on budgeted GRPUC amounts. Depreciation is a funded non-cash expense that generates monies available for annual capital improvements, debt principal payments and reserves.

Non-operating Income (Expenses)

GRPUC's non-operating income and expenses are associated with penalties, interest expenses, and costs and revenues associated with the combined service center.

Capital Improvements

GRPUC makes annual capital investments in its water system. The water utility also pays a share of improvements to the combined service center. The combined capital improvements for the water utility are shown in Table 2-1 below.

Projected Operating Results – Existing Rates

Table 2-1
Capital Improvements

Capital Item	2022	2023	2024	2025	2026	2027
Water Capital	\$439,160	\$5,912,100	\$1,343,575	\$969,580	\$908,511	\$1,270,000
Service Center Capital	<u>\$13,601</u>	<u>\$93,400</u>	<u>\$20,000</u>	<u>\$4,000</u>	<u>\$4,000</u>	<u>\$4,000</u>
Total	\$452,761	\$6,005,500	\$1,363,575	\$973,580	\$912,511	\$1,274,000

Debt Service

GRPUC had a large debt issue partially payable by the water utility that was paid in full in February of 2022. The water utility is also responsible for payment of a portion of two General Obligation bonds issued in 2021. Additionally, it is estimated that \$5.0 million in new debt will be issued in late 2023 to support ongoing capital improvements. Table 2-2 summarizes the current and planned debt service for the water utility.

Table 2-2
Annual Debt Service

Item	2022	2023	2024	2025	2026	2027
Current Interest	\$12,818	\$18,964	\$17,063	\$15,113	\$13,114	\$11,018
Current Principal	\$789,450	\$90,775	\$94,100	\$94,250	\$68,250	\$71,500
Planned Interest	-	-	\$225,000	\$219,951	\$214,675	\$209,162
Planned Principal	-	-	<u>\$112,195</u>	<u>\$117,244</u>	<u>\$122,520</u>	<u>\$128,033</u>
Total Debt	\$802,268	\$109,739	\$448,358	\$446,558	\$418,559	\$419,713

Section 2

Projected Operating Results – Existing Rates

Based on the assumptions outlined above, the resulting projected operating results assuming continued application of the existing retail rates are summarized below in Table 2-3. A summary presentation of the historical and projected operating results is also shown in Exhibit 2-A.

Table 2-3
Projected Operating Results
Existing Rates

Year	2022	2023	2024	2025	2026	2027
Operating Revenues	\$1,917,471	\$1,935,782	\$1,955,944	\$1,976,291	\$1,996,965	\$2,017,865
Less Operating Expenses	(1,857,320)	(1,924,009)	(2,188,640)	(2,309,776)	(2,422,246)	(2,536,321)
Less Non -Operating Expenses	<u>(58,171)</u>	<u>(69,105)</u>	<u>(293,836)</u>	<u>(288,518)</u>	<u>(279,975)</u>	<u>(274,149)</u>
Net Income	\$1,980	\$(57,332)	\$(526,532)	\$(622,003)	\$(705,257)	\$(792,605)
Net Income as Percent of Revenues	0.1%	-3.0%	-26.9%	-31.5%	-35.3%	-39.3%

Cash Reserves

A summary of the impact of the projected operating results on GRPUC's cash reserves for the Study Period is shown at the end of Exhibit 2-A and in Table 2-4 below.

As shown below, under existing retail rates and estimated revenue requirements over the Study Period, the cash reserves for the water utility are projected to decrease from \$1.1 million to **negative** \$3.9 million by the end of the Study Period. As a percentage of operating revenues, reserves are projected to decrease from 58% to **negative** 194% during the Study Period. The cash reserve analysis also includes the assumption of securing \$2.5 million in state grants for water capital projects.

Projected Operating Results – Existing Rates

Table 2-3
Projected Cash Reserves-Water
Existing Rates

Year	2022	2023	2024	2025	2026	2027
Beginning Balance	\$1,087,187	\$178,992	\$(858,321)	\$92,587	\$(1,121,727)	\$(2,305,049)
Plus Net Income	1,980	(57,332)	(526,532)	(622,003)	(705,257)	(792,605)
Less Capital Improvements	(452,761)	(6,005,500)	(1,363,575)	(973,580)	(912,511)	(1,274,000)
Less ERP Project Costs	-	(80,833)	-	-	-	-
Plus Depreciation	332,035	347,127	547,310	592,763	625,216	654,633
Plus State Grants	-	-	2,500,000	-	-	-
Plus Available Bond Funds	-	4,850,000	-	-	-	-
Less Existing Debt Principal	(789,450)	(90,775)	(94,100)	(94,250)	(68,250)	(71,500)
Less New Debt Principal	-	-	<u>(112,195)</u>	<u>(117,244)</u>	<u>(122,520)</u>	<u>(128,033)</u>
Ending Balance	\$178,992	\$(858,321)	\$92,587	\$(1,121,727)	\$(2,305,049)	\$(3,916,555)
Reserves as % of Operating Revenue	9.3%	-44.3%	4.7%	-56.8%	-115.4%	-194.1%

Grand Rapids Public Utilities Commission
Water Operating Results at Existing Rates

	Historical					Projected					
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
OPERATING REVENUES											
Utility Revenues											
City sales	\$ 1,465,307	\$ 1,453,122	\$ 1,543,505	\$ 1,531,862	\$ 1,633,096	\$ 1,626,338	\$ 1,639,058	\$ 1,653,714	\$ 1,668,448	\$ 1,683,400	\$ 1,698,467
Rural sales	34,796	30,816	34,744	35,249	37,877	38,616	39,156	39,511	39,870	40,233	40,599
Total Utility Revenues	\$ 1,500,103	\$ 1,483,938	\$ 1,578,249	\$ 1,567,111	\$ 1,670,973	\$ 1,664,954	\$ 1,678,214	\$ 1,693,225	\$ 1,708,318	\$ 1,723,633	\$ 1,739,066
Other Operating Revenues											
Miscellaneous service	\$ 184,560	\$ 219,813	\$ 247,799	\$ 209,774	\$ 213,862	\$ 252,517	\$ 257,568	\$ 262,719	\$ 267,973	\$ 273,332	\$ 278,799
Penalties	5,307	5,564	5,492	1,157	1,676	-	-	-	-	-	-
Total Operating Revenues	\$ 1,689,970	\$ 1,709,315	\$ 1,831,540	\$ 1,778,042	\$ 1,886,511	\$ 1,917,471	\$ 1,935,782	\$ 1,955,944	\$ 1,976,291	\$ 1,996,965	\$ 2,017,865
OPERATING EXPENSES											
Production											
Operations											
Supervision and engineering	\$ -	\$ 5,468	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Operators wages	141,248	144,538	152,676	158,636	161,855	182,512	187,987	197,387	207,256	217,619	228,500
Water treatment expense	91,516	96,407	89,041	111,014	114,019	101,460	106,533	109,729	113,021	116,411	119,904
Station Supplies and Expenses						2,325	2,441	2,514	2,590	2,668	2,748
Permits and Fees						3,900	4,095	4,218	4,344	4,475	4,609
Miscellaneous Production Expense						15,000	15,750	16,223	16,709	17,210	17,727
Power purchased	164,487	167,067	169,964	168,760	195,190	166,570	174,899	180,145	185,550	191,116	196,850
Other	18,360	16,251	22,818	18,573	26,250	-	-	-	-	-	-
Maintenance											
Supervision	15,232	8,404	209	-	-	-	-	-	-	-	-
WTP buildings and grounds	13,609	7,904	10,565	6,761	17,906	18,600	19,530	20,116	20,719	21,341	21,981
WTP HVAC System						1,000	1,050	1,082	1,114	1,147	1,182
Wellhouses						4,500	4,725	4,867	5,013	5,163	5,318
Wellhead protection						1,000	1,050	1,082	1,114	1,147	1,182
Wells, pumps, mains	4,150	3,678	4,577	6,009	14,353	2,400	2,520	2,596	2,673	2,754	2,836
Maintenance of WTP equipment	37,707	32,868	40,549	62,363	51,511	60,490	66,015	67,995	70,035	72,136	74,300
Maintenance of SCADA System						8,040	11,442	8,785	9,049	9,320	9,600
Underground Clearwell						5,500	5,775	5,948	6,127	6,310	6,500
DCS	7,154	7,037	7,922	6,954	8,183	-	-	-	-	-	-
Inspections	9,231	6,975	10,594	4,630	2,381	3,504	8,679	8,940	9,208	9,484	9,769
Total Production Expenses	\$ 502,694	\$ 496,597	\$ 508,915	\$ 543,700	\$ 591,648	\$ 576,801	\$ 612,491	\$ 631,625	\$ 654,522	\$ 678,303	\$ 703,004
Distribution											
Operations											
Supervision and engineering	\$ 17,899	\$ 10,045	\$ 27,437	\$ 29,361	\$ 43,108	38,593	39,751	41,738	43,825	46,016	48,317
Records	17,561	13,282	4,714	10,527	1,275	4,800	5,040	5,191	5,347	5,507	5,673
Inspections	1,289	-	619	6,325	11,359	9,000	17,950	18,489	19,043	19,614	20,203
Thaw and flush hydrants, etc.	376	10,005	18,499	4,932	8,054	11,700	12,285	12,654	13,033	13,424	13,827
Locating expense	-	-	15,686	21,105	13,630	21,000	21,630	22,712	23,847	25,039	26,291
Service on customer premises	6,195	8,841	21,008	7,372	46,238	21,996	22,656	23,789	24,978	26,227	27,538
Mapping	10,459	18,877	28,554	30,799	30,810	34,272	35,300	37,065	38,918	40,864	42,908
Small tools	2,672	2,440	1,665	3,412	3,465	2,400	6,920	2,728	2,809	2,894	2,981
Safety	3,674	9,408	5,683	9,000	14,826	16,500	16,995	17,845	18,737	19,674	20,658
Seminar/training	18,907	20,102	19,287	14,211	20,365	19,200	19,776	20,765	21,803	22,893	24,038
Uniforms Expense						300	315	324	334	344	355
Other	(4,253)	139	79	57	378	-	-	-	-	-	-
Stores	12,323	12,905	837	15,074	24,983	14,255	14,683	15,417	16,188	16,997	17,847
Maintenance											
Towers and tanks	57,562	50,438	3,076	8,573	16,669	5,000	5,250	5,408	5,570	5,737	5,909
Elevated Tank Control System						2,400	2,520	2,596	2,673	2,754	2,836

Grand Rapids Public Utilities Commission
Water Operating Results at Existing Rates

	Historical					Projected					
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Booster Pump						2,130	2,237	2,304	2,373	2,444	2,517
Booster station	106	372	705	303	2,563	500	525	541	557	574	591
Mains and hydrants	128,861	182,080	108,480	138,680	93,945	232,000	200,000	206,000	212,180	218,545	225,102
Services	25,327	10,046	18,326	9,019	43,923	46,000	29,925	30,823	31,747	32,700	33,681
Meters	4,621	5,249	(367)	(2,553)	8,584	2,400	6,972	7,321	7,687	8,071	8,475
Other	10,042	3,060	472	147	5,320	-	-	-	-	-	-
Total Distribution Expenses	\$ 313,621	\$ 357,289	\$ 274,760	\$ 306,344	\$ 389,495	\$ 484,446	\$ 460,729	\$ 473,706	\$ 491,650	\$ 510,319	\$ 529,745
Other Operating Expenses											
Customer accounts expense	\$ 90,247	\$ 92,884	\$ 101,017	\$ 88,418	\$ 122,931	\$ 91,935	\$ 94,710	\$ 99,428	\$ 104,382	\$ 109,584	\$ 115,044
Administrative and general	322,604	336,698	330,815	320,734	335,912	372,103	408,953	436,570	466,459	498,825	533,895
Depreciation - water	272,370	293,004	305,680	325,827	331,343	331,035	346,127	546,310	591,763	624,216	654,633
Depreciation - other	16,395	16,519	15,984	17,288	17,727	-	-	-	-	-	-
Amortization - intangibles	5,948	5,868	5,457	4,786	4,852	1,000	1,000	1,000	1,000	1,000	-
Service center	22,098	17,749	21,258	18,027	20,513	-	-	-	-	-	-
Total Other Operating Expenses	\$ 729,662	\$ 762,722	\$ 780,211	\$ 775,080	\$ 833,278	\$ 796,073	\$ 850,789	\$ 1,083,309	\$ 1,163,604	\$ 1,233,624	\$ 1,309,572
Total Operating Expenses	\$ 1,545,977	\$ 1,616,608	\$ 1,563,886	\$ 1,625,124	\$ 1,814,421	\$ 1,857,320	\$ 1,924,009	\$ 2,188,640	\$ 2,309,776	\$ 2,422,246	\$ 2,536,321
NET OPERATING INCOME	\$ 143,993	\$ 92,707	\$ 267,654	\$ 152,918	\$ 72,090	\$ 60,151	\$ 11,773	\$ (232,696)	\$ (333,485)	\$ (425,281)	\$ (518,456)
NON-OPERATING INCOME (EXPENSES)											
Gain (loss) on property disposition	\$ 3,000	\$ -	\$ (105,172)	\$ 1,125	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Penalties	-	-	-	-	-	12,085	11,400	11,400	11,400	11,400	11,400
Bond fees	(342)	(606)	(533)	(1,132)	(992)	(500)	(500)	(500)	(500)	(500)	(500)
Amortization of debt premiums and discounts	(271)	(271)	(271)	(974)	(974)	-	-	-	-	-	-
Amortization of regulatory asset	(703)	(703)	(703)	-	(642)	-	-	-	-	-	-
Interest expense - customer deposits	(4,347)	(4,208)	(1,295)	-	-	(1,140)	(1,140)	(1,140)	(1,140)	(1,140)	(1,140)
Interest expense - existing debt	(34,300)	(32,639)	(31,242)	(28,771)	(28,643)	(12,818)	(18,964)	(17,063)	(15,113)	(13,114)	(11,018)
Interest expense - new debt (1)	-	-	-	-	-	-	-	(225,000)	(219,951)	(214,675)	(209,162)
Lease revenues combined service center	20,927	2,983	5,845	4,794	3,265	5,113	3,600	3,600	3,600	3,600	3,600
CSC Building/Grounds expenses	-	-	-	-	-	(60,910)	(63,501)	(65,133)	(66,815)	(65,546)	(67,330)
Total Non-Operating Revenues (Expenses)	\$ (16,036)	\$ (35,444)	\$ (133,371)	\$ (24,958)	\$ (27,986)	\$ (58,171)	\$ (69,105)	\$ (293,836)	\$ (288,518)	\$ (279,975)	\$ (274,149)
NET INCOME	\$ 127,957	\$ 57,263	\$ 134,283	\$ 127,960	\$ 44,104	\$ 1,980	\$ (57,332)	\$ (526,532)	\$ (622,003)	\$ (705,257)	\$ (792,605)
as a percent of Operating Revenues	7.6%	3.4%	7.3%	7.2%	2.3%	0.1%	-3.0%	-26.9%	-31.5%	-35.3%	-39.3%
CASH RESERVES											
Beginning of Year						\$ 1,087,187	\$ 178,992	\$ (858,321)	\$ 92,587	\$ (1,121,727)	\$ (2,305,049)
Plus Net Income						1,980	(57,332)	(526,532)	(622,003)	(705,257)	(792,605)
Less Capital Improvements						(452,761)	(6,005,500)	(1,363,575)	(973,580)	(912,511)	(1,274,000)
Less ERP Project Costs						-	(80,833)	-	-	-	-
Plus Depreciation						332,035	347,127	547,310	592,763	625,216	654,633
Plus State Grant Funds						-	-	2,500,000	-	-	-
Plus Available Bond Funds						-	4,850,000	-	-	-	-
Less Debt Service Principal						(789,450)	(90,775)	(94,100)	(94,250)	(68,250)	(71,500)
Less New Debt Principal (1)						-	-	(112,195)	(117,244)	(122,520)	(128,033)
End of Year					\$ 1,087,187	\$ 178,992	\$ (858,321)	\$ 92,587	\$ (1,121,727)	\$ (2,305,049)	\$ (3,916,555)
As a percent of revenue					57.6%	9.3%	-44.3%	4.7%	-56.8%	-115.4%	-194.1%

(1) Assumes \$5.0 million bond issue in late FY 2023

Section 3

Cost-of-Service

A cost-of-service analysis was performed to determine the allocated cost to serve each of GRPUC's customer classes within the water utility. Customer classes exist, in part, because the cost to serve different kinds of customers varies. The cost-of-service analysis for water has been performed on a 2021 'Test Year' based on budgeted 2021 financials, operations and sales. The results of the cost-of-service study give an indication of the degree of revenue recovery warranted for each class of customers. A comparison of the allocated cost to serve a class of customers and the actual revenues received from that class is taken into consideration during rate design.

Functionalization of Costs

GRPUC's Test Year water revenue requirements have been divided into four functional categories. These categories are described below.

Production – costs associated with GRPUC's source of supply, pumping and water treatment.

Distribution – distribution expenses are related to the GRPUC system for delivering water to GRPUC customers over the local pipeline system.

Customer – these costs are fixed costs associated with the service facilities utilized to deliver water directly to customers. They also include items such as meter reading, billing, collections and customer service.

Revenue – revenue related costs include certain non-operating revenues and utility margin.

Section 3

Table 3-1 below summarizes the functional water costs for the 2021 Test Year. The detailed cost functions are shown in Exhibit 3-A.

Table 3-1
Functional Water Costs
2021 Test Year

Component	Revenue Requirement
Production	\$851,304
Distribution	720,585
Customer	197,470
Revenue	<u>(29,186)</u>
Total	<u>\$1,740,172</u>

Classification of Costs

GRPUC's Test Year revenue requirements have been divided into distinct cost classifications. The water cost classifications are described below.

Demand Related – demand related costs are costs required to meet the overall maximum demand on the system. Demand related costs are predominately associated with facility fixed costs.

Commodity Related – commodity costs tend to vary with the annual quantity of water produced.

Customer Related – costs related to serving, metering and billing of individual customers.

Revenue Related – revenue related costs vary by the amount of revenue received by the utility or are associated with other operating and non-operating revenues.

Exhibits 3-B through 3-D show the detailed classification of revenue requirements within the production, distribution and customer functions.

Allocation of Costs

Based on an analysis of customer class service characteristics, the classified costs summarized above were allocated to the major GRPUC customer classes. Allocation of costs was performed on a fully-distributed, embedded cost allocation basis. Specific allocation factors were utilized in each of the cost classification categories as described below. Exhibit 3-E contains a summary of the development of the various allocation factors.

Demand Allocations

Allocation of water production demand costs are based on each class' contribution to the utility's system peak day usage. The allocation of the distribution demand costs is based on the peak hour usage of each individual class.

Commodity Allocations

Each class' share of test year commodity requirements was used to allocate commodity related costs.

Customer Facilities Allocations

The customer facilities allocator was used to allocate costs associated with the physical facilities required to serve individual customers. For the customer facility allocators, weighted customer allocation factor was developed based on the average equivalent meter size for the customers in each class. Weighting factors are developed to represent the difference in service configurations between customer classifications. For instance, a larger customer facility is required for a single industrial demand customer than for a single residential customer.

Section 3

Customer Service Allocations

The customer service allocator is for allocation of costs associated with customer service – meter reading, billing, collections and customer inquiries. As with the customer facilities allocators, weighted customer service allocators are developed to represent the different levels of customer service required by different size customers.

Revenue Allocations

Revenue related costs were allocated based on each class' share of total demand, commodity, customer facility and customer service costs.

Cost of Service Results

Based on the classifications and allocations described above, the estimated cost to serve each major class of customers for the 2021 Test Year was determined. Exhibit 3-F presents this analysis in detail. Table 3-2 below summarizes the total allocated costs for each class compared to the total revenues received from the class during 2021.

Table 3-2
Water Cost of Service Results
Comparison of Cost and Revenues
2021 Test Year

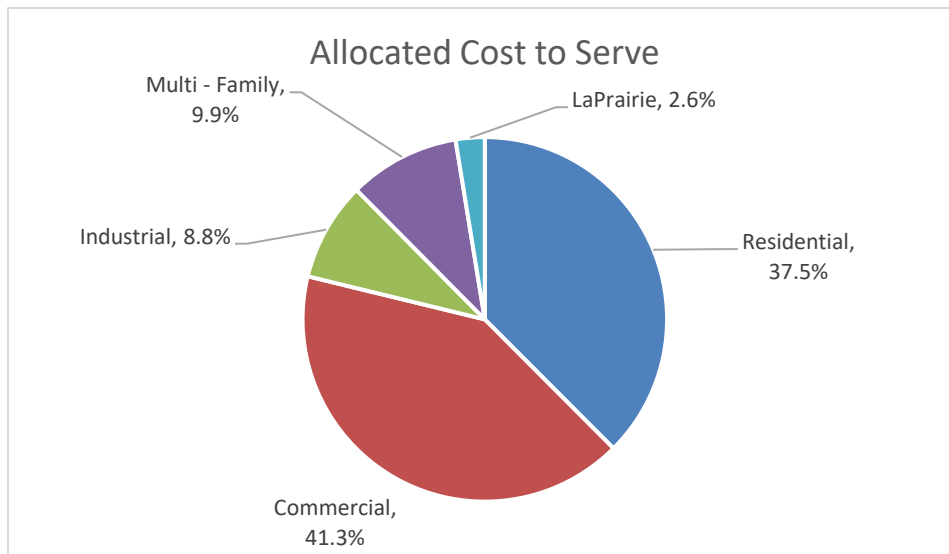
Customer Classification	Allocated Cost to Serve	Revenues
Residential	\$652,911	\$666,661
Commercial	\$718,359	\$605,610
Industrial	\$152,648	\$176,054
Multi - Family	\$171,470	\$249,974
LaPrairie	<u>\$44,785</u>	<u>\$41,873</u>
Total	\$1,740,172	\$1,740,172

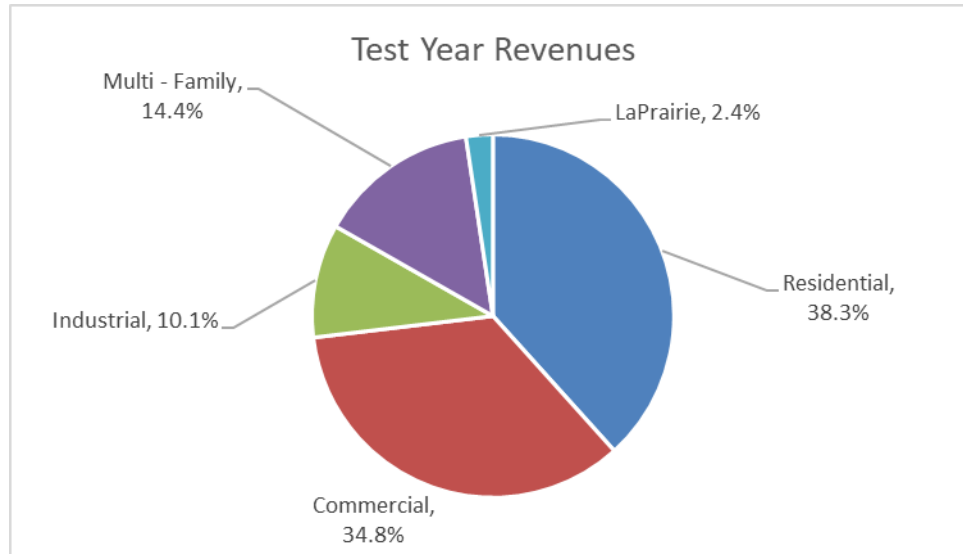
The revenue requirements and revenues as allocated to each class and summarized above are shown on a total dollar basis. Table 3-3 below makes the comparison based on percentages of total cost to serve and total revenues. The charts following Table 3-3 show a graphical comparison between allocated cost to serve and revenues as a percentage of the totals. The percentage increase/(decrease) in each class' revenue shown below is the adjustment necessary to produce revenues from each class in accordance with the allocated cost to serve. The percentage adjustments do not represent the recommended change in each class' rates. The cost-of-service results are one item for consideration in rate design. It is important to note also that the adjustments shown in the table below would not change the total revenue received by the utility and are not indicative of overall revenue needs of the utility going forward. Recommendations regarding rate design are included in Section 4 of this report.

Section 3

**Table 3-3
Water Cost of Service Results
Comparison of % Cost and Revenues
2021 Test Year**

Customer Classification	Allocated Cost to Serve	Revenues	Increase/ (Decrease)
Residential	37.5%	38.3%	-2.1%
Commercial	41.3%	34.8%	18.6%
Industrial	8.8%	10.1%	-13.3%
Multi - Family	9.9%	14.4%	-31.4%
LaPrairie	<u>2.6%</u>	<u>2.4%</u>	<u>7.0%</u>
Total	100.0%	100.0%	0.0%





As indicated above, GRPUC's existing class revenues do not exactly match the allocated cost to serve each class. Cost based rates are one of several goals in establishing rates. The relationship between allocated costs and revenues for each class should be considered, in addition to other rate related goals, in developing recommended rates.

Grand Rapids Public Utilities Commission
Functionalization of 2021 Test Year Revenue Requirements

REVENUE REQUIREMENT	2021		Distribution	Customer	Revenue	Classification Basis
	Test Year	Production				
OPERATING EXPENSES						
Production Operation						
WTP Operators Wages	127,657	127,657	-	-	-	100% production
WTP Operators Wages - OT	34,198	34,198	-	-	-	100% production
Other Operating Wages	-	-	-	-	-	100% production
Water Treatment Expense	114,018	114,018	-	-	-	100% production
Heating Fuel	-	-	-	-	-	100% production
Station Supplies and Expenses	4,031	4,031	-	-	-	100% production
Permits and Fees	3,893	3,893	-	-	-	100% production
Miscellaneous Production Expense	18,326	18,326	-	-	-	100% production
Power Purchased	195,190	195,190	-	-	-	100% production
Total Operation	497,314	497,314	-	-	-	
Production Maintenance						
WTP Buildings and Grounds	17,851	17,851	-	-	-	100% production
WTP HVAC System	54	54	-	-	-	100% production
Wellhouses	6,272	6,272	-	-	-	100% production
Wellhead Protection	-	-	-	-	-	100% production
Wells, Pumps and Mains	8,081	8,081	-	-	-	100% production
Maintenance of WTP Equipment	51,510	51,510	-	-	-	100% production
Maintenance of SCADA System - WTP	8,183	8,183	-	-	-	100% production
Underground Clearwell	-	-	-	-	-	100% production
Maintenance Inspections - WTP	2,381	2,381	-	-	-	100% production
Total Maintenance	94,333	94,333	-	-	-	
Distribution Operation						
Supervision and Engineering	43,108	-	43,108	-	-	100% distribution
Records (Mapping-Meters-Valves)	1,275	-	1,275	-	-	100% distribution
Maintenance Inspections	11,359	-	11,359	-	-	100% distribution
Thaw/Flush Hydrants, Mains, Services	8,054	-	8,054	-	-	100% distribution
Locating Expense	13,630	-	13,630	-	-	100% distribution
Service on Customer Premises	46,238	-	46,238	-	-	100% distribution
Mapping Expense	30,810	-	30,810	-	-	100% distribution
Small Tools Expense	3,465	-	3,465	-	-	100% distribution
Safety Expense	14,826	-	14,826	-	-	100% distribution
Seminar/Training Expense	20,365	-	20,365	-	-	100% distribution
Uniforms Expense	378	-	378	-	-	100% distribution
Miscellaneous Meetings	-	-	-	-	-	NA
Rentals	2	-	2	-	-	100% distribution
Stores Expense (Labor)	24,981	-	24,981	-	-	100% distribution
Total Distribution Operation	218,492	-	218,492	-	-	
Distribution Maintenance						
Towers and Tanks	16,298	-	16,298	-	-	100% distribution
Elevated Tank Control System	371	-	371	-	-	100% distribution
Booster Pump (21st St SW)	2,538	-	2,538	-	-	100% distribution
Booster Station	25	-	25	-	-	100% distribution
Mains and Hydrants	93,944	-	93,944	-	-	100% distribution
Services	43,923	-	43,923	-	-	100% distribution
Meters and Meter Installations	6,396	-	6,396	-	-	100% distribution
Miscellaneous Distribution Expense	5,320	-	5,320	-	-	100% distribution
Total Distribution Maintenance	168,816	-	168,816	-	-	
Other						
Truck Expense - Operation	(2,658)	-	(2,658)	-	-	100% distribution
Total Other	(2,658)	-	(2,658)	-	-	
Customer Accounting						
Supervision	26,434	-	-	26,434	-	100% customer
Meter Reading	2,426	-	-	2,426	-	100% customer
Customer Billing and Accounting	95,918	-	-	95,918	-	100% customer
Collecting Expense	-	-	-	-	-	NA

Grand Rapids Public Utilities Commission
Functionalization of 2021 Test Year Revenue Requirements

REVENUE REQUIREMENT	2021				Revenue	Classification Basis
	Test Year	Production	Distribution	Customer		
Miscellaneous Expense	(1,847)	-	-	(1,847)	-	100% customer
Miscellaneous Customer Information	-	-	-	-	-	NA
Total Customer Accounting	122,931	-	-	122,931	-	
Administrative and General Expenses						
Administrative & General Salaries	57,101	28,196	15,790	13,115	-	labor
Commissioner Salaries	2,680	1,324	741	616	-	labor
City Treasurer Salary	165	81	46	38	-	labor
General Office Supplies and Phone	8,407	4,151	2,325	1,931	-	labor
Accounting Outside Service	6,594	3,256	1,823	1,514	-	labor
Data Processing Outside Service	24,036	11,869	6,647	5,521	-	labor
Legal Outside Service	3,741	1,847	1,035	859	-	labor
Engineering Outside Service	3,400	1,679	940	781	-	labor
Other Outside Service	229	113	63	52	-	labor
Fiber Optic Outside Service	-	-	-	-	-	NA
Insurance - Fire	6,166	1,668	4,498	-	-	plant in service
Insurance - Liability	4,096	1,108	2,988	-	-	plant in service
Insurance - Worker's Compensation	11,369	5,614	3,144	2,611	-	labor
Insurance - Worker's Comp Deductible	-	-	-	-	-	NA
Insurance - Auto	572	155	417	-	-	plant in service
Insurance - Miscellaneous	539	146	393	-	-	plant in service
Insurance Claims - Injuries & Damages	9,980	4,928	2,760	2,292	-	labor
Insurance - Group Health	114,281	56,430	31,603	26,248	-	labor
Insurance - Group Health Co-insurance	-	-	-	-	-	NA
Insurance - Group Health HSA funding	27,980	13,816	7,737	6,426	-	labor
Insurance - Group Life	1,009	498	279	232	-	labor
Employee Assistance Programs	-	-	-	-	-	NA
Insurance - Group Dental	5,888	2,907	1,628	1,352	-	labor
Insurance - Third Party Admin Costs	276	136	76	63	-	labor
FICA	-	-	-	-	-	NA
PERA	(45,566)	(22,500)	(12,601)	(10,466)	-	labor
Paid Time Off	80,058	39,531	22,139	18,388	-	labor
Extended Illness Benefit	8,287	4,092	2,292	1,903	-	labor
Short-Term Disability Payments	-	-	-	-	-	NA
Disability Insurance	2,871	1,418	794	659	-	labor
Unemployment Compensation	-	-	-	-	-	NA
Lump Sum Payments	-	-	-	-	-	NA
Miscellaneous General Expense	(1,170)	(578)	(324)	(269)	-	labor
Maintenance of General Plant	2,922	1,443	808	671	-	labor
Total Administrative and General	335,909	163,327	98,043	74,539	-	
Depreciation	331,343	89,624	241,718	-	-	plant in service
Amortization	974	263	710	-	-	plant in service
Total Operating Expenses	1,767,453	844,861	725,122	197,470	-	

Grand Rapids Public Utilities Commission
Functionalization of 2021 Test Year Revenue Requirements

REVENUE REQUIREMENT	2021	<u>Production</u>	<u>Distribution</u>	<u>Customer</u>	<u>Revenue</u>	<u>Classification Basis</u>
	<u>Test Year</u>					
Non Operating Revenues (Expenses)						
Interest expense	(22,826)	(6,174)	(16,652)	-	-	plant in service
Bond fees - long term debt	(992)	(268)	(724)	-	-	plant in service
Total Non-Operating Revenues (Expenses)	(23,819)	(6,443)	(17,376)	-	-	
Other Operating Revenues (Expenses)						
Service Connections	20,953	-	20,953	-	-	100% distribution
Permit Fees	1,680	-	-	-	1,680	100% revenue
Thawing Service	960	-	960	-	-	100% distribution
Water Shutoff Fees	-	-	-	-	-	NA
Merchandising and Jobbing (Net)	1,285	-	-	-	1,285	100% revenue
City of Grand Rapids Jobbing (Net)	-	-	-	-	-	NA
City of LaPrairie Jobbing (Net)	2,437	-	-	-	2,437	100% revenue
Equipment Rental Revenue	-	-	-	-	-	NA
Service Center	(20,513)	-	-	-	(20,513)	100% revenue
Lease revenues combined service center	3,265	-	-	-	3,265	100% revenue
Antenna Rental Revenue	194,341	-	-	-	194,341	100% revenue
Miscellaneous Income	11,988	-	-	-	11,988	100% revenue
Total Other Operating Revenues	216,395	-	21,913	-	194,482	
Margin	165,296	-	-	-	165,296	100% revenue
Total Revenue Requirement	\$ 1,740,172	\$ 851,304	\$ 720,585	\$ 197,470	\$ (29,186)	

Grand Rapids Public Utilities Commission
2021 Test Year Water Production Classification

	2021			
REVENUE REQUIREMENT	<u>Test Year</u>	<u>Demand</u>	<u>Commodity</u>	<u>Classification Basis</u>
OPERATING EXPENSES				
Production Operation				
WTP Operators Wages	127,657	127,657	-	100% demand
WTP Operators Wages - OT	34,198	34,198	-	100% demand
Other Operating Wages	-	-	-	100% demand
Water Treatment Expense	114,018	-	114,018	100% commodity
Heating Fuel	-	-	-	NA
Station Supplies and Expenses	4,031	4,031	-	100% demand
Permits and Fees	3,893	3,893	-	100% demand
Miscellaneous Production Expense	18,326	18,326	-	100% demand
Power Purchased	<u>195,190</u>	<u>-</u>	<u>195,190</u>	100% commodity
Total Operation	497,314	188,106	309,208	
Production Maintenance				
WTP Buildings and Grounds	17,851	17,851	-	100% demand
WTP HVAC System	54	54	-	100% demand
Wellhouses	6,272	6,272	-	100% demand
Wellhead Protection	-	-	-	100% demand
Wells, Pumps and Mains	8,081	8,081	-	100% demand
Maintenance of WTP Equipment	51,510	-	51,510	100% commodity
Maintenance of SCADA System - WTP	8,183	8,183	-	100% demand
Underground Clearwell	-	-	-	NA
Maintenance Inspections - WTP	<u>2,381</u>	<u>2,381</u>	<u>-</u>	100% demand
Total Maintenance	94,333	42,822	51,510	
Distribution Operation				
Supervision and Engineering	-	-	-	NA
Records (Mapping-Meters-Valves)	-	-	-	NA
Maintenance Inspections	-	-	-	NA
Thaw/Flush Hydrants, Mains, Services	-	-	-	NA
Locating Expense	-	-	-	NA
Service on Customer Premises	-	-	-	NA
Mapping Expense	-	-	-	NA
Small Tools Expense	-	-	-	NA
Safety Expense	-	-	-	NA
Seminar/Training Expense	-	-	-	NA
Uniforms Expense	-	-	-	NA
Miscellaneous Meetings	-	-	-	NA
Rentals	-	-	-	NA
Stores Expense (Labor)	<u>-</u>	<u>-</u>	<u>-</u>	NA
Total Distribution Operation	-	-	-	
Distribution Maintenance				
Towers and Tanks	-	-	-	NA
Elevated Tank Control System	-	-	-	NA
Booster Pump (21st St SW)	-	-	-	NA
Booster Station	-	-	-	NA
Mains and Hydrants	-	-	-	NA

Grand Rapids Public Utilities Commission
2021 Test Year Water Production Classification

REVENUE REQUIREMENT	2021			Classification Basis
	<u>Test Year</u>	<u>Demand</u>	<u>Commodity</u>	
Services	-	-	-	NA
Meters and Meter Installations	-	-	-	NA
Miscellaneous Distribution Expense	-	-	-	NA
Total Distribution Maintenance	-	-	-	
Other				
Truck Expense - Operation	-	-	-	NA
Total Other	-	-	-	
Customer Accounting				
Supervision	-	-	-	NA
Meter Reading	-	-	-	NA
Customer Billing and Accounting	-	-	-	NA
Collecting Expense	-	-	-	NA
Miscellaneous Expense	-	-	-	NA
Miscellaneous Customer Information	-	-	-	NA
Total Customer Accounting	-	-	-	
Administrative and General Expenses				
Administrative & General Salaries	28,196	28,196	-	100% demand
Commissioner Salaries	1,324	1,324	-	100% demand
City Treasurer Salary	81	81	-	100% demand
General Office Supplies and Phone	4,151	4,151	-	100% demand
Accounting Outside Service	3,256	3,256	-	100% demand
Data Processing Outside Service	11,869	11,869	-	100% demand
Legal Outside Service	1,847	1,847	-	100% demand
Engineering Outside Service	1,679	1,679	-	100% demand
Other Outside Service	113	113	-	100% demand
Fiber Optic Outside Service	-	-	-	NA
Insurance - Fire	1,668	1,668	-	100% demand
Insurance - Liability	1,108	1,108	-	100% demand
Insurance - Worker's Compensation	5,614	5,614	-	100% demand
Insurance - Worker's Comp Deductible	-	-	-	NA
Insurance - Auto	155	155	-	100% demand
Insurance - Miscellaneous	146	146	-	100% demand
Insurance Claims - Injuries & Damages	4,928	4,928	-	100% demand
Insurance - Group Health	56,430	56,430	-	100% demand
Insurance - Group Health Co-insurance	-	-	-	NA
Insurance - Group Health HSA funding	13,816	13,816	-	100% demand
Insurance - Group Life	498	498	-	100% demand
Employee Assistance Programs	-	-	-	NA
Insurance - Group Dental	2,907	2,907	-	100% demand
Insurance - Third Party Admin Costs	136	136	-	100% demand
FICA	-	-	-	NA
PERA	(22,500)	(22,500)	-	100% demand
Paid Time Off	39,531	39,531	-	100% demand
Extended Illness Benefit	4,092	4,092	-	100% demand
Short-Term Disability Payments	-	-	-	NA

Grand Rapids Public Utilities Commission
2021 Test Year Water Production Classification

	2021			
REVENUE REQUIREMENT	<u>Test Year</u>	<u>Demand</u>	<u>Commodity</u>	<u>Classification Basis</u>
Disability Insurance	1,418	1,418	-	100% demand
Unemployment Compensation	-	-	-	NA
Lump Sum Payments	-	-	-	NA
Miscellaneous General Expense	(578)	(578)	-	100% demand
Maintenance of General Plant	1,443	1,443	-	100% demand
Total Administrative and General	163,327	163,327	-	
Depreciation	89,624	89,624	-	100% demand
Amortization	263	263	-	100% demand
Total Operating Expenses	844,861	484,143	360,719	
Non Operating Revenues (Expenses)				
Interest expense	(6,174)	(6,174)	-	100% demand
Bond fees - long term debt	(268)	(268)	-	100% demand
Total Non-Operating Revenues (Expenses)	(6,443)	(6,443)	-	
Other Operating Revenues (Expenses)				
Service Connections	-	-	-	NA
Permit Fees	-	-	-	NA
Thawing Service	-	-	-	NA
Water Shutoff Fees	-	-	-	NA
Merchandising and Jobbing (Net)	-	-	-	NA
City of Grand Rapids Jobbing (Net)	-	-	-	NA
City of LaPrairie Jobbing (Net)	-	-	-	NA
Equipment Rental Revenue	-	-	-	NA
Service Center	-	-	-	NA
Lease revenues combined service center	-	-	-	NA
Antenna Rental Revenue	-	-	-	NA
Miscellaneous Income	-	-	-	NA
Total Other Operating Revenues	-	-	-	
Margin	-	-	-	NA
Total Revenue Requirement	\$ 851,304	\$ 490,586	\$ 360,719	

Grand Rapids Public Utilities Commission
2021 Test Year Distribution Classification

REVENUE REQUIREMENT	2021 <u>Test Year</u>	<u>Demand</u>	<u>Customer Facilities</u>	<u>Classification Basis</u>
OPERATING EXPENSES				
Production Operation				
WTP Operators Wages	-	-	-	NA
WTP Operators Wages - OT	-	-	-	NA
Other Operating Wages	-	-	-	NA
Water Treatment Expense	-	-	-	NA
Heating Fuel	-	-	-	NA
Station Supplies and Expenses	-	-	-	NA
Permits and Fees	-	-	-	NA
Miscellaneous Production Expense	-	-	-	NA
Power Purchased	-	-	-	NA
Total Operation	-	-	-	
Production Maintenance				
WTP Buildings and Grounds	-	-	-	NA
WTP HVAC System	-	-	-	NA
Wellhouses	-	-	-	NA
Wellhead Protection	-	-	-	NA
Wells, Pumps and Mains	-	-	-	NA
Maintenance of WTP Equipment	-	-	-	NA
Maintenance of SCADA System - WTP	-	-	-	NA
Underground Clearwell	-	-	-	NA
Maintenance Inspections - WTP	-	-	-	NA
Total Maintenance	-	-	-	
Distribution Operation				
Supervision and Engineering	43,108	43,108	-	100% Dist demand
Records (Mapping-Meters-Valves)	1,275	1,275	-	100% Dist demand
Maintenance Inspections	11,359	11,359	-	100% Dist demand
Thaw/Flush Hydrants, Mains, Services	8,054	5,674	2,380	Dist/Cust split
Locating Expense	13,630	-	13,630	100% Cust facilities
Service on Customer Premises	46,238	-	46,238	100% Cust facilities
Mapping Expense	30,810	30,810	-	100% Dist demand
Small Tools Expense	3,465	3,465	-	100% Dist demand
Safety Expense	14,826	14,826	-	100% Dist demand
Seminar/Training Expense	20,365	20,365	-	100% Dist demand
Uniforms Expense	378	378	-	100% Dist demand
Miscellaneous Meetings	-	-	-	NA
Rentals	2	2	-	100% Dist demand
Stores Expense (Labor)	24,981	24,981	-	100% Dist demand
Total Distribution Operation	218,492	156,244	62,248	
Distribution Maintenance				
Towers and Tanks	16,298	16,298	-	100% Dist demand
Elevated Tank Control System	371	371	-	100% Dist demand
Booster Pump (21st St SW)	2,538	2,538	-	100% Dist demand
Booster Station	25	25	-	100% Dist demand
Mains and Hydrants	93,944	66,179	27,766	Dist/Cust split
Services	43,923	-	43,923	100% Cust facilities

Grand Rapids Public Utilities Commission
2021 Test Year Distribution Classification

	2021 <u>Test Year</u>	<u>Demand</u>	<u>Customer Facilities</u>	<u>Classification Basis</u>
REVENUE REQUIREMENT				
Meters and Meter Installations	6,396	-	6,396	100% Cust facilities
Miscellaneous Distribution Expense	5,320	5,320	-	100% Dist demand
Total Distribution Maintenance	168,816	90,731	78,085	
Other				
Truck Expense - Operation	(2,658)	(1,872)	(786)	Dist/Cust split
Total Other	(2,658)	(1,872)	(786)	
Customer Accounting				
Supervision	-	-	-	NA
Meter Reading	-	-	-	NA
Customer Billing and Accounting	-	-	-	NA
Collecting Expense	-	-	-	NA
Miscellaneous Expense	-	-	-	NA
Miscellaneous Customer Information	-	-	-	NA
Total Customer Accounting	-	-	-	
Administrative and General Expenses				
Administrative & General Salaries	15,790	11,610	4,180	labor
Commissioner Salaries	741	545	196	labor
City Treasurer Salary	46	34	12	labor
General Office Supplies and Phone	2,325	1,709	615	labor
Accounting Outside Service	1,823	1,285	539	Dist/Cust split
Data Processing Outside Service	6,647	4,682	1,964	Dist/Cust split
Legal Outside Service	1,035	729	306	Dist/Cust split
Engineering Outside Service	940	662	278	Dist/Cust split
Other Outside Service	63	45	19	Dist/Cust split
Fiber Optic Outside Service	-	-	-	NA
Insurance - Fire	4,498	3,169	1,329	Dist/Cust split
Insurance - Liability	2,988	2,105	883	Dist/Cust split
Insurance - Worker's Compensation	3,144	2,312	832	labor
Insurance - Worker's Comp Deductible	-	-	-	labor
Insurance - Auto	417	307	111	labor
Insurance - Miscellaneous	393	289	104	labor
Insurance Claims - Injuries & Damages	2,760	2,029	731	labor
Insurance - Group Health	31,603	23,236	8,366	labor
Insurance - Group Health Co-insurance	-	-	-	labor
Insurance - Group Health HSA funding	7,737	5,689	2,048	labor
Insurance - Group Life	279	205	74	labor
Employee Assistance Programs	-	-	-	labor
Insurance - Group Dental	1,628	1,197	431	labor
Insurance - Third Party Admin Costs	76	56	20	labor
FICA	-	-	-	NA
PERA	(12,601)	(9,265)	(3,336)	labor
Paid Time Off	22,139	16,278	5,861	labor
Extended Illness Benefit	2,292	1,685	607	labor
Short-Term Disability Payments	-	-	-	NA
Disability Insurance	794	584	210	labor
Unemployment Compensation	-	-	-	NA

Grand Rapids Public Utilities Commission
2021 Test Year Distribution Classification

	2021 <u>Test Year</u>	<u>Demand</u>	<u>Customer Facilities</u>	<u>Classification Basis</u>
REVENUE REQUIREMENT				
Lump Sum Payments	-	-	-	NA
Miscellaneous General Expense	(324)	(228)	(96)	Dist/Cust split
Maintenance of General Plant	808	569	239	Dist/Cust split
Total Administrative and General	98,043	71,518	26,525	
Depreciation	241,718	170,278	71,441	Dist/Cust split
Amortization	710	500	210	Dist/Cust split
Total Operating Expenses	725,122	487,398	237,723	
Non Operating Revenues (Expenses)				
Interest expense	(16,652)	(11,731)	(4,922)	Dist/Cust split
Bond fees - long term debt	(724)	(510)	(214)	Dist/Cust split
Total Non-Operating Revenues (Expenses)	(17,376)	(12,240)	(5,136)	
Other Operating Revenues (Expenses)				
Service Connections	20,953	-	20,953	100% Cust facilities
Permit Fees	-	-	-	NA
Thawing Service	960	-	960	100% Cust facilities
Water Shutoff Fees	-	-	-	NA
Merchandising and Jobbing (Net)	-	-	-	NA
City of Grand Rapids Jobbing (Net)	-	-	-	NA
City of LaPrairie Jobbing (Net)	-	-	-	NA
Equipment Rental Revenue	-	-	-	NA
Service Center	-	-	-	NA
Lease revenues combined service center	-	-	-	NA
Antenna Rental Revenue	-	-	-	NA
Miscellaneous Income	-	-	-	NA
Total Other Operating Revenues	21,913	-	21,913	
Margin	-	-	-	NA
Total Revenue Requirement	\$ 720,585	\$ 499,639	\$ 220,946	

Grand Rapids Public Utilities Commission
2021 Test Year Customer Classification

REVENUE REQUIREMENT	2021		
	<u>Test Year</u>	<u>Customer</u>	<u>Classification Basis</u>
OPERATING EXPENSES			
Production Operation			
WTP Operators Wages	-	-	100% Customer
WTP Operators Wages - OT	-	-	100% Customer
Other Operating Wages	-	-	100% Customer
Water Treatment Expense	-	-	100% Customer
Heating Fuel	-	-	100% Customer
Station Supplies and Expenses	-	-	100% Customer
Permits and Fees	-	-	100% Customer
Miscellaneous Production Expense	-	-	100% Customer
Power Purchased	-	-	100% Customer
Total Operation	-	-	
Production Maintenance			
WTP Buildings and Grounds	-	-	100% Customer
WTP HVAC System	-	-	100% Customer
Wellhouses	-	-	100% Customer
Wellhead Protection	-	-	100% Customer
Wells, Pumps and Mains	-	-	100% Customer
Maintenance of WTP Equipment	-	-	100% Customer
Maintenance of SCADA System - WTP	-	-	100% Customer
Underground Clearwell	-	-	100% Customer
Maintenance Inspections - WTP	-	-	100% Customer
Total Maintenance	-	-	
Distribution Operation			
Supervision and Engineering	-	-	100% Customer
Records (Mapping-Meters-Valves)	-	-	100% Customer
Maintenance Inspections	-	-	100% Customer
Thaw/Flush Hydrants, Mains, Services	-	-	100% Customer
Locating Expense	-	-	100% Customer
Service on Customer Premises	-	-	100% Customer
Mapping Expense	-	-	100% Customer
Small Tools Expense	-	-	100% Customer
Safety Expense	-	-	100% Customer
Seminar/Training Expense	-	-	100% Customer
Uniforms Expense	-	-	100% Customer
Miscellaneous Meetings	-	-	100% Customer
Rentals	-	-	100% Customer
Stores Expense (Labor)	-	-	100% Customer
Total Distribution Operation	-	-	
Distribution Maintenance			
Towers and Tanks	-	-	100% Customer
Elevated Tank Control System	-	-	100% Customer

Grand Rapids Public Utilities Commission
2021 Test Year Customer Classification

REVENUE REQUIREMENT	2021 <u>Test Year</u>	<u>Customer</u>	<u>Classification Basis</u>
Booster Pump (21st St SW)	-	-	100% Customer
Booster Station	-	-	100% Customer
Mains and Hydrants	-	-	100% Customer
Services	-	-	100% Customer
Meters and Meter Installations	-	-	100% Customer
Miscellaneous Distribution Expense	-	-	100% Customer
Total Distribution Maintenance	-	-	
Other			
Truck Expense - Operation	-	-	100% Customer
Total Other	-	-	
Customer Accounting			
Supervision	26,434	26,434	100% Customer
Meter Reading	2,426	2,426	100% Customer
Customer Billing and Accounting	95,918	95,918	100% Customer
Collecting Expense	-	-	100% Customer
Miscellaneous Expense	(1,847)	(1,847)	100% Customer
Miscellaneous Customer Information	-	-	100% Customer
Total Customer Accounting	122,931	122,931	
Administrative and General Expenses			
Administrative & General Salaries	13,115	13,115	100% Customer
Commissioner Salaries	616	616	100% Customer
City Treasurer Salary	38	38	100% Customer
General Office Supplies and Phone	1,931	1,931	100% Customer
Accounting Outside Service	1,514	1,514	100% Customer
Data Processing Outside Service	5,521	5,521	100% Customer
Legal Outside Service	859	859	100% Customer
Engineering Outside Service	781	781	100% Customer
Other Outside Service	52	52	100% Customer
Fiber Optic Outside Service	-	-	100% Customer
Insurance - Fire	-	-	100% Customer
Insurance - Liability	-	-	100% Customer
Insurance - Worker's Compensation	2,611	2,611	100% Customer
Insurance - Worker's Comp Deductible	-	-	100% Customer
Insurance - Auto	-	-	100% Customer
Insurance - Miscellaneous	-	-	100% Customer
Insurance Claims - Injuries & Damages	2,292	2,292	100% Customer
Insurance - Group Health	26,248	26,248	100% Customer
Insurance - Group Health Co-insurance	-	-	100% Customer
Insurance - Group Health HSA funding	6,426	6,426	100% Customer
Insurance - Group Life	232	232	100% Customer
Employee Assistance Programs	-	-	100% Customer
Insurance - Group Dental	1,352	1,352	100% Customer

Grand Rapids Public Utilities Commission
2021 Test Year Customer Classification

	2021		
REVENUE REQUIREMENT	<u>Test Year</u>	<u>Customer</u>	<u>Classification Basis</u>
Insurance - Third Party Admin Costs	63	63	100% Customer
FICA	-	-	100% Customer
PERA	(10,466)	(10,466)	100% Customer
Paid Time Off	18,388	18,388	100% Customer
Extended Illness Benefit	1,903	1,903	100% Customer
Short-Term Disability Payments	-	-	100% Customer
Disability Insurance	659	659	100% Customer
Unemployment Compensation	-	-	100% Customer
Lump Sum Payments	-	-	100% Customer
Miscellaneous General Expense	(269)	(269)	100% Customer
Maintenance of General Plant	671	671	100% Customer
Total Administrative and General	74,539	74,539	
Depreciation	-	-	100% Customer
Amortization	-	-	100% Customer
Total Operating Expenses	197,470	197,470	
Non Operating Revenues (Expenses)			
Interest expense	-	-	100% Customer
Bond fees - long term debt	-	-	100% Customer
Total Non-Operating Revenues (Expenses)	-	-	
Other Operating Revenues (Expenses)			
Service Connections	-	-	100% Customer
Permit Fees	-	-	100% Customer
Thawing Service	-	-	100% Customer
Water Shutoff Fees	-	-	100% Customer
Merchandising and Jobbing (Net)	-	-	100% Customer
City of Grand Rapids Jobbing (Net)	-	-	100% Customer
City of LaPrairie Jobbing (Net)	-	-	100% Customer
Equipment Rental Revenue	-	-	100% Customer
Service Center	-	-	100% Customer
Lease revenues combined service center	-	-	100% Customer
Antenna Rental Revenue	-	-	100% Customer
Miscellaneous Income	-	-	100% Customer
Total Other Operating Revenues	-	-	
Margin	-	-	100% Customer
Total Revenue Requirement	\$ 197,470	\$ 197,470	

Grand Rapids Public Utilities Commission
2021 Test Year Allocation Factors

	<u>Total</u>	<u>Residential</u>	<u>Commercial</u>	<u>Industrial</u>	<u>Multi - Family</u>	<u>LaPrairie</u>
Demand Allocation Factors						
System Peak Day - gallons	1,533	449	731	146	167	40
SPD	100.0%	29.3%	47.7%	9.5%	10.9%	2.6%
Class Peak Day - gallons	1,884	573	731	332	167	83
CPD	100.0%	30.4%	38.8%	17.6%	8.8%	4.4%
Class Peak Hour - gallons	131	50	53	10	14	4
CPH	100.0%	37.9%	40.4%	7.7%	10.9%	3.1%
Energy Allocation Factors						
Commodity - gallons	324,695	100,617	128,988	44,479	40,187	10,424
C	100.0%	31.0%	39.7%	13.7%	12.4%	3.2%
Customers						
Number of Customers	3,287	2,581	582	6	116	2
Equivalent Meter Weight		1.005	4.338	29.667	2.500	46.3
Customer Service Weight		1.0	2.0	50.0	2.0	20.0
Equivalent Meters						
Weighted Number of Cust	5,680	2,595	2,525	178	290	93
EM	100.0%	45.7%	44.5%	3.1%	5.1%	1.6%
Customer Service Allocation Factor						
Weighted Number of Cust	4,317	2,581	1,164	300	232	40
CS	100.0%	59.8%	27.0%	6.9%	5.4%	0.9%
Revenue Allocator						
Sum of Other Rev Reqs	1,769,358	663,861	730,408	155,208	174,346	45,536
R	100.0%	37.5%	41.3%	8.8%	9.9%	2.6%

Grand Rapids Public Utilities Commission
2021 Test Year Allocation of Revenue Requirements

	<u>Total</u>	<u>Residential</u>	<u>Commercial</u>	<u>Industrial</u>	<u>Multi - Family</u>	<u>LaPrairie</u>	<u>Allocation Factor</u>
<u>Plant</u>							
Demand	490,586	143,741	233,956	46,751	53,295	12,842	SPD
Commodity	360,719	111,780	143,299	49,414	44,646	11,580	C
Total Power Supply	851,304	255,521	377,255	96,165	97,941	24,423	
<u>Distribution</u>							
Demand	499,639	189,353	201,692	38,396	54,512	15,685	CPH
Customer Facilities	220,946	100,926	98,216	6,924	11,281	3,598	EM
Total Distribution	720,585	290,279	299,909	45,320	65,793	19,284	
<u>Customer</u>							
Customer Service	197,470	118,061	53,244	13,723	10,612	1,830	CS
Total Customer Facility	197,470	118,061	53,244	13,723	10,612	1,830	
<u>Revenue</u>							
Other Operating Revenue	(194,482)	(72,970)	(80,284)	(17,060)	(19,164)	(5,005)	R
Margin	165,296	62,019	68,236	14,500	16,288	4,254	R
Total Revenue	(29,186)	(10,951)	(12,048)	(2,560)	(2,876)	(751)	
Total Revenue Requirements	1,740,172	652,911	718,359	152,648	171,470	44,785	
Total Revenues	1,740,172	666,661	605,610	176,054	249,974	41,873	
Percent Revenue Requirements	100.0%	37.5%	41.3%	8.8%	9.9%	2.6%	
Percent Revenues	100.0%	38.3%	34.8%	10.1%	14.4%	2.4%	
Percent Change	0.0%	-2.1%	18.6%	-13.3%	-31.4%	7.0%	
Revenue Req/unit	5.359	6.489	5.569	3.432	4.267	4.296	
Revenue/unit	5.359	6.626	4.695	3.958	6.220	4.017	

Section 4

Proposed Rates

Changes to rates are generally based on the overall need for revenues and results of the cost-of-service analyses. The projected operating results at existing rates as presented in Section 2 of this report outline the overall revenue needs of the water utility. Section 3 summarizes the cost-of-service results. These factors have been considered in developing the proposed rates summarized in this section of the report.

Proposed Rates

Revenue Needs

In Section 2, it shows that GRPUC's projected annual change in water net income, assuming continuation of the existing retail rates, decreases from 0.1% in 2022 to **negative** 39.3% in 2027. GRPUC's projected cash reserves decline from \$1.1 million to **negative** \$3.9 million by the end of the Study Period. For the water utility, an overall rate increase of 15% in 2023 followed by annual 10% rate increases for 2024 through 2027 are recommended.

Cost of Service Considerations

The results of the water cost-of-service analysis in Section 3 indicate that there are subsidies from Multi-Family and Industrial customers to Commercial customers and the City LaPrairie. Rate increases for different groups of customers vary based on the cost-of-service results. Table 4-1 shows the average annual rate increases by customer class and for the total system through the Study Period.

Section 4

Table 4-1
Average Annual Rate Increases
2023-2027 Study Period

Customer Class	Avg Increase
Residential	11.1%
Commercial	13.6%
Industrial	9.1%
Multi-Family	6.0%
LaPrairie	10.5%
Total System	11.1%

Recommended Rates

Exhibit 4-A shows the existing and recommended water rates by customer class for each year from 2023-2027.

Projected Operating Results – Proposed Rates

Based on the proposed rates outlined above, the resulting projected operating results are summarized below in Table 4-2. A summary presentation of the operating results is shown in Exhibit 4-B.

**Table 4-2
Projected Operating Results
Proposed Rates**

Year	2022	2023	2024	2025	2026	2027
Operating Revenues	\$1,917,471	\$2,182,991	\$2,405,771	\$2,650,087	\$2,923,605	\$3,228,521
Less Operating Expenses	(1,857,320)	(1,924,009)	(2,188,640)	(2,309,776)	(2,422,246)	(2,536,321)
Less Non -Operating Expenses	<u>(58,171)</u>	<u>(69,105)</u>	<u>(293,836)</u>	<u>(288,518)</u>	<u>(279,975)</u>	<u>(274,149)</u>
Net Income	\$1,980	\$189,878	\$(76,705)	\$51,793	\$221,383	\$418,050
Net Income as Percent of Revenues	0.1%	8.7%	-3.2%	2.0%	7.6%	12.9%

Cash Reserves

A summary of the impact of the projected operating results with the proposed rate adjustments on GRPUC's cash reserves for the Study Period is shown at the end of Exhibit 4-B and in Table 4-3 below. As shown below, with the recommended increases, the reserve levels in 2027 increase from **negative** 194% of operating revenue to **negative** 13% of operating revenue. This represents an increase of \$3.5 million.

Section 4

Table 4-3
Projected Cash Reserves
Proposed Rates

Year	2022	2023	2024	2025	2026	2027
Beginning Balance	\$1,087,187	\$178,992	\$(611,112)	\$789,624	\$249,105	\$(7,577)
Plus Net Income	1,980	189,878	(76,705)	51,793	221,383	418,050
Less Capital Improvements	(452,761)	(6,005,500)	(1,363,575)	(973,580)	(912,511)	(1,274,000)
Less ERP Project Costs	-	(80,833)	-	-	-	-
Plus Depreciation	332,035	347,127	547,310	592,763	625,216	654,633
Plus State Grants	-	-	2,500,000	-	-	-
Plus Available Bond Funds	-	4,850,000	-	-	-	-
Less Existing Debt Principal	(789,450)	(90,775)	(94,100)	(94,250)	(68,250)	(71,500)
Less New Debt Principal	-	-	<u>(112,195)</u>	<u>(117,244)</u>	<u>(122,520)</u>	<u>(128,033)</u>
Ending Balance	\$178,992	\$(611,112)	\$789,624	\$249,105	\$(7,577)	\$(408,427)
Reserves as % of Operating Revenue	9.3%	-28.0%	32.8%	9.4%	-0.3%	-12.7%

Residential Bill Impact

Table 4-4 below summarizes the impact on monthly bills for different size residential customers. An average GRPUC residential customer consumes approximately 3000 gallons per month. For that average size customer, the first-year bill increase is \$2.94 per month. For all customer usages shown, the 2023 increase is 15% with annual increases of 10% for 2024 through 2027.

Table 4-4
Monthly Water Bill Comparisons

Residential Usage (gallons)	2,000	3,000	6,000
Current Rate	\$16.25	\$20.04	\$33.39
2023 Proposed	18.62	22.98	38.34
2024 Proposed	20.57	25.37	42.27
2025 Proposed	22.62	27.90	46.50
2026 Proposed	24.89	30.70	51.17
2027 Proposed	27.39	33.79	56.31

Grand Rapids Public Utilities Commission
Existing and Proposed Rates

Class	Current Rate	2023 Proposed Rate	2024 Proposed Rate	2025 Proposed Rate	2026 Proposed Rate	2027 Proposed Rate
Customer Charges						
Residential/Commercial/Industrial						
5/8-3/4 inch	8.67	9.90	10.97	12.06	13.27	14.59
1 inch	12.08	13.80	15.28	16.81	18.49	20.34
1 1/4 inch	13.87	15.85	17.55	19.31	21.24	23.37
1 1/2 inch	15.54	17.76	19.67	21.63	23.79	26.18
2 inch	25.12	28.70	31.77	34.95	38.44	42.29
3 inch	95.13	108.70	120.33	132.37	145.60	160.16
4 inch	121.01	138.27	153.08	168.38	185.22	203.75
6 inch	181.58	207.48	229.70	252.67	277.93	305.73
Multi-Family						
Unit Charge	5.20	5.71	5.99	6.29	6.61	6.94
Customer charge	3.47	3.99	4.39	4.83	5.31	5.84
Commodity Charges						
Residential						
0-4,000	3.79	4.36	4.8	5.28	5.81	6.4
4,000-8,000	4.78	5.50	6.05	6.66	7.33	8.06
8,000-30,000	5.99	6.89	7.58	8.34	9.18	10.1
over 30,000	9.57	11.01	12.11	13.32	14.65	16.11
Commercial						
0-40,000	3.33	3.94	4.46	5.06	5.73	6.49
40,000-400,000	4.11	4.87	5.52	6.25	7.09	8.03
over 400,000	5.25	6.22	7.05	7.99	9.05	10.26
Industrial						
0-400,000	3.33	3.76	4.07	4.39	4.75	5.12
over 400,000	4.11	4.64	5.02	5.42	5.84	6.31
Multi-Family						
0-4,000 per unit	3.79	4.16	4.37	4.59	4.82	5.06
4,000-8,000 per unit	4.78	5.25	5.51	5.78	6.07	6.38
8,000-30,000 per unit	5.99	6.58	6.90	7.25	7.61	7.99
over 30,000 per unit	9.57	10.51	11.03	11.58	12.16	12.77
Rural Industrial (LaPrairie)						
0-400,000	3.33	3.68	4.07	4.50	4.97	5.49
over 400,000	4.11	4.54	5.02	5.55	6.13	6.77

Grand Rapids Public Utilities Commission
Water Operating Results at Proposed Rates

	Historical					Projected					
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
OPERATING REVENUES											
Utility Revenues											
City sales	\$ 1,465,307	\$ 1,453,122	\$ 1,543,505	\$ 1,531,862	\$ 1,633,096	\$ 1,626,338	\$ 1,882,025	\$ 2,094,622	\$ 2,328,110	\$ 2,590,108	\$ 2,882,692
Rural sales	34,796	30,816	34,744	35,249	37,877	38,616	43,398	48,431	54,004	60,164	67,030
Total Utility Revenues	\$ 1,500,103	\$ 1,483,938	\$ 1,578,249	\$ 1,567,111	\$ 1,670,973	\$ 1,664,954	\$ 1,925,423	\$ 2,143,052	\$ 2,382,114	\$ 2,650,273	\$ 2,949,722
Other Operating Revenues											
Miscellaneous service	\$ 184,560	\$ 219,813	\$ 247,799	\$ 209,774	\$ 213,862	\$ 252,517	\$ 257,568	\$ 262,719	\$ 267,973	\$ 273,332	\$ 278,799
Penalties	5,307	5,564	5,492	1,157	1,676	-	-	-	-	-	-
Total Operating Revenues	\$ 1,689,970	\$ 1,709,315	\$ 1,831,540	\$ 1,778,042	\$ 1,886,511	\$ 1,917,471	\$ 2,182,991	\$ 2,405,771	\$ 2,650,087	\$ 2,923,605	\$ 3,228,521
OPERATING EXPENSES											
Production											
Operations											
Supervision and engineering	\$ -	\$ 5,468	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Operators wages	141,248	144,538	152,676	158,636	161,855	182,512	187,987	197,387	207,256	217,619	228,500
Water treatment expense	91,516	96,407	89,041	111,014	114,019	101,460	106,533	109,729	113,021	116,411	119,904
Station Supplies and Expenses						2,325	2,441	2,514	2,590	2,668	2,748
Permits and Fees						3,900	4,095	4,218	4,344	4,475	4,609
Miscellaneous Production Expense						15,000	15,750	16,223	16,709	17,210	17,727
Power purchased	164,487	167,067	169,964	168,760	195,190	166,570	174,899	180,145	185,550	191,116	196,850
Other	18,360	16,251	22,818	18,573	26,250	-	-	-	-	-	-
Maintenance											
Supervision	15,232	8,404	209	-	-	-	-	-	-	-	-
WTP buildings and grounds	13,609	7,904	10,565	6,761	17,906	18,600	19,530	20,116	20,719	21,341	21,981
WTP HVAC System						1,000	1,050	1,082	1,114	1,147	1,182
Wellhouses						4,500	4,725	4,867	5,013	5,163	5,318
Wellhead protection						1,000	1,050	1,082	1,114	1,147	1,182
Wells, pumps, mains	4,150	3,678	4,577	6,009	14,353	2,400	2,520	2,596	2,673	2,754	2,836
Maintenance of WTP equipment	37,707	32,868	40,549	62,363	51,511	60,490	66,015	67,995	70,035	72,136	74,300
Maintenance of SCADA System						8,040	11,442	8,785	9,049	9,320	9,600
Underground Clearwell						5,500	5,775	5,948	6,127	6,310	6,500
DCS	7,154	7,037	7,922	6,954	8,183	-	-	-	-	-	-
Inspections	9,231	6,975	10,594	4,630	2,381	3,504	8,679	8,940	9,208	9,484	9,769
Total Production Expenses	\$ 502,694	\$ 496,597	\$ 508,915	\$ 543,700	\$ 591,648	\$ 576,801	\$ 612,491	\$ 631,625	\$ 654,522	\$ 678,303	\$ 703,004
Distribution											
Operations											
Supervision and engineering	\$ 17,899	\$ 10,045	\$ 27,437	\$ 29,361	\$ 43,108	38,593	39,751	41,738	43,825	46,016	48,317
Records	17,561	13,282	4,714	10,527	1,275	4,800	5,040	5,191	5,347	5,507	5,673
Inspections	1,289	-	619	6,325	11,359	9,000	17,950	18,489	19,043	19,614	20,203
Thaw and flush hydrants, etc.	376	10,005	18,499	4,932	8,054	11,700	12,285	12,654	13,033	13,424	13,827
Locating expense	-	-	15,686	21,105	13,630	21,000	21,630	22,712	23,847	25,039	26,291
Service on customer premises	6,195	8,841	21,008	7,372	46,238	21,996	22,656	23,789	24,978	26,227	27,538
Mapping	10,459	18,877	28,554	30,799	30,810	34,272	35,300	37,065	38,918	40,864	42,908
Small tools	2,672	2,440	1,665	3,412	3,465	2,400	6,920	2,728	2,809	2,894	2,981
Safety	3,674	9,408	5,683	9,000	14,826	16,500	16,995	17,845	18,737	19,674	20,658
Seminar/training	18,907	20,102	19,287	14,211	20,365	19,200	19,776	20,765	21,803	22,893	24,038
Uniforms Expense						300	315	324	334	344	355
Other	(4,253)	139	79	57	378	-	-	-	-	-	-
Stores	12,323	12,905	837	15,074	24,983	14,255	14,683	15,417	16,188	16,997	17,847
Maintenance											
Towers and tanks	57,562	50,438	3,076	8,573	16,669	5,000	5,250	5,408	5,570	5,737	5,909
Elevated Tank Control System						2,400	2,520	2,596	2,673	2,754	2,836

Grand Rapids Public Utilities Commission
Water Operating Results at Proposed Rates

	Historical					Projected					
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Booster Pump						2,130	2,237	2,304	2,373	2,444	2,517
Booster station	106	372	705	303	2,563	500	525	541	557	574	591
Mains and hydrants	128,861	182,080	108,480	138,680	93,945	232,000	200,000	206,000	212,180	218,545	225,102
Services	25,327	10,046	18,326	9,019	43,923	46,000	29,925	30,823	31,747	32,700	33,681
Meters	4,621	5,249	(367)	(2,553)	8,584	2,400	6,972	7,321	7,687	8,071	8,475
Other	10,042	3,060	472	147	5,320	-	-	-	-	-	-
Total Distribution Expenses	\$ 313,621	\$ 357,289	\$ 274,760	\$ 306,344	\$ 389,495	\$ 484,446	\$ 460,729	\$ 473,706	\$ 491,650	\$ 510,319	\$ 529,745
Other Operating Expenses											
Customer accounts expense	\$ 90,247	\$ 92,884	\$ 101,017	\$ 88,418	\$ 122,931	\$ 91,935	\$ 94,710	\$ 99,428	\$ 104,382	\$ 109,584	\$ 115,044
Administrative and general	322,604	336,698	330,815	320,734	335,912	372,103	408,953	436,570	466,459	498,825	533,895
Depreciation - water	272,370	293,004	305,680	325,827	331,343	331,035	346,127	546,310	591,763	624,216	654,633
Depreciation - other	16,395	16,519	15,984	17,288	17,727	-	-	-	-	-	-
Amortization - intangibles	5,948	5,868	5,457	4,786	4,852	1,000	1,000	1,000	1,000	1,000	-
Service center	22,098	17,749	21,258	18,027	20,513	-	-	-	-	-	-
Total Other Operating Expenses	\$ 729,662	\$ 762,722	\$ 780,211	\$ 775,080	\$ 833,278	\$ 796,073	\$ 850,789	\$ 1,083,309	\$ 1,163,604	\$ 1,233,624	\$ 1,303,572
Total Operating Expenses	\$ 1,545,977	\$ 1,616,608	\$ 1,563,886	\$ 1,625,124	\$ 1,814,421	\$ 1,857,320	\$ 1,924,009	\$ 2,188,640	\$ 2,309,776	\$ 2,422,246	\$ 2,536,321
NET OPERATING INCOME	\$ 143,993	\$ 92,707	\$ 267,654	\$ 152,918	\$ 72,090	\$ 60,151	\$ 258,982	\$ 217,131	\$ 340,311	\$ 501,359	\$ 692,200
NON-OPERATING INCOME (EXPENSES)											
Gain (loss) on property disposition	\$ 3,000	\$ -	\$ (105,172)	\$ 1,125	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Penalties	-	-	-	-	-	12,085	11,400	11,400	11,400	11,400	11,400
Bond fees	(342)	(606)	(533)	(1,132)	(992)	(500)	(500)	(500)	(500)	(500)	(500)
Amortization of debt premiums and discounts	(271)	(271)	(271)	(974)	(974)	-	-	-	-	-	-
Amortization of regulatory asset	(703)	(703)	(703)	-	(642)	-	-	-	-	-	-
Interest expense - customer deposits	(4,347)	(4,208)	(1,295)	-	-	(1,140)	(1,140)	(1,140)	(1,140)	(1,140)	(1,140)
Interest expense - existing debt	(34,300)	(32,639)	(31,242)	(28,771)	(28,643)	(12,818)	(18,964)	(17,063)	(15,113)	(13,114)	(11,018)
Interest expense - new debt (1)	-	-	-	-	-	-	-	(225,000)	(219,951)	(214,675)	(209,162)
Lease revenues combined service center	20,927	2,983	5,845	4,794	3,265	5,113	3,600	3,600	3,600	3,600	3,600
CSC Building/Grounds expenses	-	-	-	-	-	(60,910)	(63,501)	(65,133)	(66,815)	(65,546)	(67,330)
Total Non-Operating Revenues (Expenses)	\$ (16,036)	\$ (35,444)	\$ (133,371)	\$ (24,958)	\$ (27,986)	\$ (58,171)	\$ (69,105)	\$ (293,836)	\$ (288,518)	\$ (279,975)	\$ (274,149)
NET INCOME	\$ 127,957	\$ 57,263	\$ 134,283	\$ 127,960	\$ 44,104	\$ 1,980	\$ 189,878	\$ (76,705)	\$ 51,793	\$ 221,383	\$ 418,050
as a percent of Operating Revenues	7.6%	3.4%	7.3%	7.2%	2.3%	0.1%	8.7%	-3.2%	2.0%	7.6%	12.9%
CASH RESERVES											
Beginning of Year						\$ 1,087,187	\$ 178,992	\$ (611,112)	\$ 789,624	\$ 249,105	\$ (7,577)
Plus Net Income						1,980	189,878	(76,705)	51,793	221,383	418,050
Less Capital Improvements						(452,761)	(6,005,500)	(1,363,575)	(973,580)	(912,511)	(1,274,000)
Less ERP Project Costs						-	(80,833)	-	-	-	-
Plus Depreciation						332,035	347,127	547,310	592,763	625,216	654,633
Plus State Grant Funds						-	-	2,500,000	-	-	-
Plus Available Bond Funds						-	4,850,000	-	-	-	-
Less Debt Service Principal						(789,450)	(90,775)	(94,100)	(94,250)	(68,250)	(71,500)
Less New Debt Principal (1)						-	-	(112,195)	(117,244)	(122,520)	(128,033)
End of Year					\$ 1,087,187	\$ 178,992	\$ (611,112)	\$ 789,624	\$ 249,105	\$ (7,577)	\$ (408,427)
As a percent of revenue					57.6%	9.3%	-28.0%	32.8%	9.4%	-0.3%	-12.7%

(1) Assumes \$5.0 million bond issue in late FY 2023