The background of the cover is a photograph of a city building with a brick facade and large windows. An American flag flies on a tall pole to the right. In the foreground, there are green bushes with yellow flowers and a paved walkway. The sky is blue with some clouds.

# **City of Grand Rapids**

## **Water & Sewer Rate Study**

**2023**

**Final**

# MEMORANDUM

CITY OF GRAND RAPIDS

**DATE:** January 1, 2024

**TO:** Mark Washington, City Manager  
Members of the Utility Advisory Board

**FROM:** Tai Verbrugge  
Utility Financial Officer

**SUBJECT: 2023 WATER/SEWER RATE STUDY – FINAL REPORT**

The final study, setting water and sewer rates effective January 1, 2024, for Grand Rapids and the retail and wholesale partner communities it serves, is submitted herein for reference and/or retention. The annual study consists of a comprehensive review of the operating and capital costs by community, in conjunction with customer base variation and usage, and calculates recommended commodity and service rates based upon adherence to: (a) the uniform rate-setting methodology established in 1976-77 for customer communities not party to the uniform water and sewer service agreements; and (b) rate methodology changes contractually agreed to in the uniform water and sewer service agreements for Utility Advisory Board (UAB) member customer communities. The methodology yields consistent performance in providing for the long-term needs of the water and sewage systems and ensuring adequate debt service coverage pursuant to the systems' master bond ordinance covenants. A table of contents immediately precedes the report's three sections and lists the respective tasks performed in reviewing the operating and financial performance of the utility systems.

The City's 2023 review marked the 47<sup>th</sup> annual water/sewer rate study report and resulted in utility rate increases as follows:

1. Water Supply System revenue requirements increased \$3,319,278 or 6.50% more than revenue generated by existing rates and charges.
2. Sewage Disposal System revenue requirements increased \$844,513 or 1.33% more than revenue generated by existing rates and charges.

The final rate study continues to provide funding from the penalty fees and non-operating income to support both of the City's circuit breaker programs. A contribution of \$225,662 will support the Individual Circuit Breaker program aimed at helping eligible retail customers pay their water/sewer bills. Sufficient funding was also available to apply the City and Customer Community Circuit Breaker relief to the water and sewer utility rates in the City of Grand Rapids, City of Walker,

City of Kentwood, Cascade Township, and Grand Rapids Township to limit each retail service area's revenue requirement change to a level in line with the overall systems' average change.

Five schedules supplement and immediately follow this memo. The first schedule summarizes the revenue requirement changes by customer community. The second and third schedules show water and sewer rate adjustment impacts to typical domestic and commercial customers with the system average quarterly consumption in each retail community. They also include a comparison of the approximate monthly charge for Wright Township's residential equivalent unit (REU) rate structure. The final two schedules show comparative water and sewer monthly service and commodity rate adjustments for the City's retail and wholesale customer communities.

The proposed 2024 water and sewer rates were made available to the UAB partners and other customer communities on November 3, 2023. All partner communities participated in a thirty (30) day comment period following notification of the rates as provided in the water/sewer service agreements.

Pursuant to Section 2.33 and 2.94 of the City Code, on November 14, 2023, the preliminary rate study, along with explanatory materials, was filed with the City Clerk, made available online at [www.grandrapidsmi.gov/ratestudy](http://www.grandrapidsmi.gov/ratestudy), and notice of availability of such information was published in the newspaper at least twenty (20) days prior to adoption of the resolution to provide for opportunities for public comment. The City Commission approved the final water and sewer rates by resolution on December 12, 2023.

Attachments as named

TCV

**CITY OF GRAND RAPIDS, MICHIGAN  
2023 FINAL WATER/SEWER RATE STUDY  
SUMMARY OF REVENUE REQUIREMENT CHANGES  
FOR RATES EFFECTIVE JANUARY 1, 2024**

	<u>WATER (1)</u>		<u>SEWER (1)</u>		
	<u>AMOUNT</u>	<u>PERCENT</u>	<u>AMOUNT</u>	<u>PERCENT</u>	
RETAIL COMMUNITIES	GRAND RAPIDS	\$ 2,114,864	7.06%	\$ 484,585	1.14%
	WALKER	155,412	3.92%	67,629	1.20%
	NET OF CONTRIBUTION OF:	(124,686)			
	KENTWOOD	115,094	2.30%	103,890	1.95%
	CASCADE TWP	282,030	7.06%	61,472	1.95%
	GRAND RAPIDS TWP	123,630	4.35%	59,577	1.95%
	TALLMADGE TWP	(1,044)	-0.39%	(2,778)	-0.51%
	WRIGHT TWP	N/A	N/A	1,456	0.51%
WHOLESALE COMMUNITIES	EAST GRAND RAPIDS	96,805	10.88%	20,436	1.63%
	ADA TWP	101,434	6.47%	47,937	3.12%
	OTTAWA COUNTY	206,366	7.92%	NA	NA
	GAINES TWP	N/A	N/A	6,925	2.22%
	CALEDONIA TWP	N/A	N/A	(6,616)	-2.93%
	<b>SYSTEM</b>	<b>\$ 3,319,278</b>	<b>6.50%</b>	<b>\$ 844,513</b>	<b>1.33%</b>

(1) Change in revenue requirements based on revenues currently generated from rates, customer base and volumes reported in the preliminary rate study (Includes consideration for relief from CCCCB).

**DISCLOSE RELIEF PROVIDED BY CITY & CUSTOMER COMMUNITY CIRCUIT BREAKER (CCCB)**

	<u>WATER</u>		<u>SEWER</u>	
	<u>AMOUNT</u>	<u>PERCENT</u>	<u>AMOUNT</u>	<u>PERCENT</u>
SYSTEM REVENUE REQUIREMENT	\$ 54,408,787	6.50%	\$ 64,540,737	1.33%
ADD: CCCCB RELIEF	288,624	0.56%	397,894	0.62%
SYSTEM CHANGE- WITHOUT RELIEF	<u>\$ 54,697,411</u>	<u>7.06%</u>	<u>\$ 64,938,631</u>	<u>1.95%</u>

**CITY OF GRAND RAPIDS, MICHIGAN  
2023 FINAL WATER/SEWER RATE STUDY  
IMPACT OF RATE ADJUSTMENTS ON DOMESTIC USERS  
BY CUSTOMER COMMUNITY \*  
FOR RATES EFFECTIVE JANUARY 1, 2024**

	<u>APPROXIMATE QUARTERLY BILL</u>		<u>CHANGE</u>	
	<u>2023</u>	<u>2024</u>	<u>DOLLARS</u>	<u>PERCENT</u>
<b>GRAND RAPIDS</b>				
WATER	\$ 108.45	\$ 115.97	\$ 7.52	6.93%
SEWER	142.38	144.09	1.71	1.20%
	<u>\$ 250.83</u>	<u>\$ 260.06</u>	<u>\$ 9.23</u>	3.68%
BASE RATIO	1.00	1.00		
<b>WALKER</b>				
WATER	\$ 102.73	\$ 106.79	\$ 4.06	3.95%
SEWER	163.65	165.57	1.92	1.17%
	<u>\$ 266.38</u>	<u>\$ 272.36</u>	<u>\$ 5.98</u>	2.24%
RATIO TO GR	1.06	1.05		
<b>KENTWOOD</b>				
WATER	\$ 107.55	\$ 110.05	\$ 2.50	2.32%
SEWER	99.45	101.22	1.77	1.78%
	<u>\$ 207.00</u>	<u>\$ 211.27</u>	<u>\$ 4.27</u>	2.06%
RATIO TO GR	0.83	0.81		
<b>CASCADE TWP</b>				
WATER	\$ 147.67	\$ 158.25	\$ 10.58	7.16%
SEWER	191.22	194.79	3.57	1.87%
	<u>\$ 338.89</u>	<u>\$ 353.04</u>	<u>\$ 14.15</u>	4.18%
RATIO TO GR	1.35	1.36		
<b>GRAND RAPIDS TWP</b>				
WATER	\$ 120.90	\$ 126.12	\$ 5.22	4.32%
SEWER	154.56	157.50	2.94	1.90%
	<u>\$ 275.46</u>	<u>\$ 283.62</u>	<u>\$ 8.16</u>	2.96%
RATIO TO GR	1.10	1.09		
<b>TALLMADGE TWP</b>				
WATER	\$ 97.58	\$ 97.06	\$ (0.52)	-0.53%
SEWER	274.41	273.00	(1.41)	-0.51%
	<u>\$ 371.99</u>	<u>\$ 370.06</u>	<u>\$ (1.93)</u>	-0.52%
RATIO TO GR	1.48	1.42		

\* THE COMPARISONS ABOVE ARE BASED ON SYSTEM AVERAGE DOMESTIC CUSTOMER  
QUARTERLY CONSUMPTION OF: WATER- 31.00 UNITS OR 23,188 GALLONS  
SEWER - 21.00 UNITS OR 15,708 GALLONS  
NO. OF MONTHS: 3

**REU (RESIDENTIAL EQUIVALENT UNIT) CUSTOMER COMMUNITY- APPROXIMATE QUARTERLY BILL**

<b>WRIGHT TWP-</b>				
SEWER (No. of REU 1.00)	<u>\$ 170.37</u>	<u>\$ 171.24</u>	<u>\$ 0.87</u>	0.51%

**CITY OF GRAND RAPIDS, MICHIGAN  
2023 FINAL WATER/SEWER RATE STUDY  
IMPACT OF RATE ADJUSTMENTS ON COMMERCIAL USERS  
BY CUSTOMER COMMUNITY  
FOR RATES EFFECTIVE JANUARY 1, 2024**

	<u>APPROXIMATE QUARTERLY BILL</u>		<u>CHANGE</u>	
	<u>2023</u>	<u>2024</u>	<u>DOLLARS</u>	<u>PERCENT</u>
<b>GRAND RAPIDS</b>				
WATER	\$ 534.96	\$ 569.64	\$ 34.68	6.48%
SEWER	968.69	960.36	(8.33)	-0.86%
	<u>\$ 1,503.65</u>	<u>\$ 1,530.00</u>	<u>\$ 26.35</u>	1.75%
BASE RATIO	1.00	1.00		
<b>WALKER</b>				
WATER	\$ 462.51	\$ 480.42	\$ 17.91	3.87%
SEWER	772.25	782.20	9.95	1.29%
	<u>\$ 1,234.76</u>	<u>\$ 1,262.62</u>	<u>\$ 27.86</u>	2.26%
RATIO TO GR	0.82	0.83		
<b>KENTWOOD</b>				
WATER	\$ 455.91	\$ 466.47	\$ 10.56	2.32%
SEWER	716.69	731.23	14.54	2.03%
	<u>\$ 1,172.60</u>	<u>\$ 1,197.70</u>	<u>\$ 25.10</u>	2.14%
RATIO TO GR	0.78	0.78		
<b>CASCADE TWP</b>				
WATER	\$ 628.98	\$ 673.65	\$ 44.67	7.10%
SEWER	874.94	892.72	17.78	2.03%
	<u>\$ 1,503.92</u>	<u>\$ 1,566.37</u>	<u>\$ 62.45</u>	4.15%
RATIO TO GR	1.00	1.02		
<b>GRAND RAPIDS TWP</b>				
WATER	\$ 529.74	\$ 552.75	\$ 23.01	4.34%
SEWER	713.80	727.19	13.39	1.88%
	<u>\$ 1,243.54</u>	<u>\$ 1,279.94</u>	<u>\$ 36.40</u>	2.93%
RATIO TO GR	0.83	0.84		
<b>TALLMADGE TWP</b>				
WATER	\$ 577.92	\$ 575.52	\$ (2.40)	-0.42%
SEWER	1,937.02	1,926.42	(10.60)	-0.55%
	<u>\$ 2,514.94</u>	<u>\$ 2,501.94</u>	<u>\$ (13.00)</u>	-0.52%
RATIO TO GR	1.67	1.64		

\* THE COMPARISONS ABOVE ARE BASED ON SYSTEM AVERAGE COMMERCIAL CUSTOMER  
QUARTERLY CONSUMPTION OF : WATER- 207.00 UNITS OR 154,836 GALLONS  
SEWER - 200.00 UNITS OR 149,600 GALLONS  
NO. OF MONTHS: 3

**REU (RESIDENTIAL EQUIVALENT UNIT) CUSTOMER COMMUNITY- APPROXIMATE QUARTERLY BILL**

<b>WRIGHT TWP</b>				
SEWER (No. of REU 1.00)	<u>\$ 170.37</u>	<u>\$ 171.24</u>	<u>\$ 0.87</u>	0.51%

**CITY OF GRAND RAPIDS, MICHIGAN  
2023 FINAL WATER/SEWER RATE STUDY  
WATER & SEWER RATES FOR GRAND RAPIDS & RETAIL CUSTOMER COMMUNITIES  
EFFECTIVE JANUARY 1, 2024**

**WATER RATES**

	<u>METER CODE</u>	<u>GRAND RAPIDS</u>	<u>WALKER</u>	<u>KENTWOOD</u>	<u>CASCADE</u>	<u>GR. RAPIDS TOWNSHIP</u>	<u>TALLMADGE TOWNSHIP</u>	<u>WRIGHT TOWNSHIP</u>
COMMODITY CHARGE (HCF)		\$ 2.45	\$ 1.97	\$ 1.84	\$ 2.64	\$ 2.22	\$ 2.71	NA
<b>MONTHLY SERVICE CHARGE BY METER SIZE</b>								
3/4" & Less	A	\$ 13.34	\$ 15.24	\$ 17.67	\$ 25.47	\$ 19.10	\$ 4.35	NA
1"	B	\$ 20.83	\$ 24.21	\$ 28.53	\$ 42.39	\$ 31.07	\$ 4.85	NA
1-1/4"	C	\$ 30.46	\$ 35.74	\$ 42.49	\$ 64.15	\$ 46.46	\$ 5.49	NA
1-1/2"	D	\$ 42.23	\$ 49.83	\$ 59.55	\$ 90.75	\$ 65.27	\$ 6.27	NA
2"	E	\$ 72.19	\$ 85.70	\$ 102.98	\$ 158.45	\$ 113.15	\$ 8.26	NA
3"	F	\$ 157.79	\$ 188.19	\$ 227.07	\$ 351.87	\$ 249.95	\$ 13.95	NA
4"	G	\$ 277.63	\$ 331.67	\$ 400.79	\$ 622.66	\$ 441.47	\$ 21.91	NA
6" & Over	H	\$ 620.03	\$ 741.63	\$ 897.15	\$ 1,396.35	\$ 988.67	\$ 44.67	NA

**SEWER RATES**

	<u>METER CODE</u>	<u>GRAND RAPIDS</u>	<u>WALKER</u>	<u>KENTWOOD</u>	<u>CASCADE</u>	<u>GR. RAPIDS TOWNSHIP</u>	<u>TALLMADGE TOWNSHIP</u>	<u>WRIGHT TOWNSHIP</u>
COMMODITY CHARGE (HCF)		\$ 4.38	\$ 3.05	\$ 3.44	\$ 3.41	\$ 2.80	\$ 8.91	NA
REU Charge (Monthly) *		NA	NA	NA	NA	NA	NA	\$ 57.08
<b>MONTHLY SERVICE CHARGE BY METER SIZE</b>								
3/4" & Less	A	\$ 17.37	\$ 33.84	\$ 9.66	\$ 41.06	\$ 32.90	\$ 28.63	NA
1"	B	\$ 28.12	\$ 57.40	\$ 14.41	\$ 70.24	\$ 55.73	\$ 48.14	NA
1-1/4"	C	\$ 41.94	\$ 87.69	\$ 20.52	\$ 107.75	\$ 85.08	\$ 73.22	NA
1-1/2"	D	\$ 58.83	\$ 124.71	\$ 27.99	\$ 153.59	\$ 120.95	\$ 103.87	NA
2"	E	\$ 101.83	\$ 218.95	\$ 47.00	\$ 270.29	\$ 212.26	\$ 181.90	NA
3"	F	\$ 224.67	\$ 488.19	\$ 101.31	\$ 603.71	\$ 473.15	\$ 404.83	NA
4"	G	\$ 396.65	\$ 865.13	\$ 177.35	\$ 1,070.50	\$ 838.39	\$ 716.94	NA
6" & Over	H	\$ 888.03	\$ 1,942.11	\$ 394.59	\$ 2,404.19	\$ 1,881.95	\$ 1,608.67	NA

\* REU - Residential Equivalent Unit (Wright Township Only)

**FIRE PROTECTION RATES- ALL GOVERNMENTAL UNITS**

6"	H	\$ 22.14		10"	J	\$ 61.55
8"	I	\$ 39.28		12"	K	\$ 88.57

**NOTE:** Monthly defined as 1/12th of 366 days.

**CITY OF GRAND RAPIDS, MICHIGAN  
2023 FINAL WATER/SEWER RATE STUDY  
IMPACT OF RATE ADJUSTMENTS ON WHOLESALE CUSTOMER COMMUNITIES  
EFFECTIVE JANUARY 1, 2024**

	<u>2023</u>	<u>2024</u>	<u>PERCENTAGE CHANGE</u>
<b>EAST GRAND RAPIDS</b>			
WATER - SERVICE (MONTHLY)	\$14,452.00	\$17,047.00	17.96%
- COMMODITY (100 CF)	\$1.20	\$1.31	9.17%
SEWER - SERVICE (MONTHLY)	\$1,853.00	\$2,184.00	17.86%
- COMMODITY (MG)	\$2,920.00	\$2,959.00	1.34%
<b>ADA TWP</b>			
WATER - SERVICE	\$56,931.00	\$60,124.00	5.61%
- COMMODITY	\$1.40	\$1.50	7.14%
SEWER - SERVICE	\$38,466.00	\$40,984.00	6.55%
- COMMODITY	\$3,947.00	\$4,012.00	1.65%
<b>OTTAWA COUNTY</b>			
WATER - SERVICE	\$736.00	\$0.00	-100.00%
- COMMODITY	\$1.32	\$1.43	8.33%
<b>GAINES TWP</b>			
SEWER - SERVICE	\$1,488.00	\$1,619.00	8.80%
- COMMODITY	\$2,528.00	\$2,574.00	1.82%
<b>CALEDONIA TWP</b>			
SEWER - SERVICE	\$704.00	\$728.00	3.41%
- COMMODITY	\$7,868.00	\$7,618.00	-3.18%

**NOTE: Monthly defined as 1/12th of 366 days.**

**CITY OF GRAND RAPIDS, MICHIGAN  
WATER SUPPLY SYSTEM FUND  
ANNUAL RATE REVIEW**

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**CITY OF GRAND RAPIDS, MICHIGAN  
WATER SUPPLY SYSTEM FUND  
SYSTEM ADDITIONS AND IMPROVEMENTS  
FOR THE YEAR ENDED JUNE 30, 2023  
TASKS NO. 1, 2, & 3**

COMMUNITY	LOCAL		INTERMEDIATE		PRIMARY		TOTALS	
	FEET	MILES	FEET	MILES	FEET	MILES	FEET	MILES
Grand Rapids								
Construction	20,786	3.94	6,254	1.18	718	0.14	27,758	5.26
Abandonment	(21,326)	(4.04)	(5,421)	(1.03)	(1,277)	(0.24)	(28,024)	(5.31)
CSO Construction	0	0.00	0	0.00	0	0.00	0	0.00
CSO Abandonment	0	0.00	0	0.00	0	0.00	0	0.00
	(540)	(0.10)	833	0.15	(559)	(0.10)	(266)	(0.05)
Kentwood								
Construction	4,664	0.88	1,173	0.22	0	0.00	5,837	1.10
Abandonment	(177)	(0.03)	0	0.00	0	0.00	(177)	(0.03)
	4,487	0.85	1,173	0.22	0	0.00	5,660	1.07
Cascade Twp.								
Construction	0	0.00	0	0.00	0	0.00	0	0.00
Abandonment	0	0.00	0	0.00	0	0.00	0	0.00
	0	0.00	0	0.00	0	0.00	0	0.00
G.R. Twp.								
Construction	0	0.00	1,812	0.34	0	0.00	1,812	0.34
Abandonment	0	0.00	(750)	(0.14)	0	0.00	(750)	(0.14)
	0	0.00	1,062	0.20	0	0.00	1,062	0.20
Tallmadge Twp.								
Construction	0	0.00	0	0.00	0	0.00	0	0.00
Abandonment	0	0.00	0	0.00	0	0.00	0	0.00
	0	0.00	0	0.00	0	0.00	0	0.00
Walker								
Construction	1,602	0.30	0	0.00	0	0.00	1,602	0.30
Abandonment	0	0.00	0	0.00	0	0.00	0	0.00
	1,602	0.30	0	0.00	0	0.00	1,602	0.30
<b>*TOTAL*</b>	<b>5,549</b>	<b>1.05</b>	<b>3,068</b>	<b>0.57</b>	<b>(559)</b>	<b>(0.10)</b>	<b>8,058</b>	<b>1.52</b>

	CONTRIBUTIONS		
	COMM	OTHER	TOTAL
Integrated	\$ -	\$ -	\$ -
Grand Rapids	766,221	-	766,221
Walker	174,838	-	174,838
Kentwood	822,754	-	822,754
Cascade Twp.	-	-	-
Grand Rapids Twp.	222,100	-	222,100
Tallmadge Twp.	-	-	-
<b>*TOTAL*</b>	<b>\$ 1,985,913</b>	<b>\$ -</b>	<b>\$ 1,985,913</b>

**CITY OF GRAND RAPIDS, MICHIGAN  
WATER SUPPLY SYSTEM FUND  
OPERATING EXPENSE ALLOCATION BY COST CENTER - TASK #4, PART 1  
FISCAL YEAR ENDED JUNE 30, 2023**

	ACTIVITY	EXPENSE BY ACTIVITY	FILTRATION PLANT	PUMPING STATIONS		WATERMAINS			RETAIL CUSTOMER METERING	ENGIN. SERVICES	ADMIN. EXPENSE
				PRIMARY	INTERM.	PRIMARY TRANSPORT	INTERMED. TRANSPORT	LOCAL DISTRIBUTION			
253 (4010) 5910	TREASURER-CUSTOMER SERVICE	\$ 1,200,666							\$ 1,200,666		
536 (2110 / 2700) 5910	WATER-CUSTOMER SERVICE *	2,824,283							2,824,283		
536 (3010:70) 5910	ENGINEERING	1,378,520								1,378,520	
536 (4510:80) 5910	COLDBROOK DISTRIBUTION	2,866,706		416,328	2,450,378						
536 (6010 / 6370) 5910	FIELD OPERATIONS	7,542,513				392,211	2,005,630	5,144,672			
536 (6500:90) 5910	FILTRATION	10,165,710	10,165,710								
	SUBTOTAL OPERATING EXPENSE	25,978,398	10,165,710	416,328	2,450,378	392,211	2,005,630	5,144,672	4,024,949	1,378,520	-
536 (1000:10 / 8000) 5910	ADMINISTRATION	3,374,241									3,374,241
	TOTAL	\$ 29,352,638	\$ 10,165,710	\$ 416,328	\$ 2,450,378	\$ 392,211	\$ 2,005,630	\$ 5,144,672	\$ 4,024,949	\$ 1,378,520	\$ 3,374,241

\* Reflects adjustment for circuit breaker provisions per the third amendment to W/S service agreements.

**METHOD OF DISTRIBUTION**

253 (4010) 5910	TREASURER-CUSTOMER SERVICE	100.000%							100.000%		
536 (2110 / 2700) 5910	WATER-CUSTOMER SERVICE	100.000%							100.000%		
536 (3010:70) 5910	ENGINEERING	100.000%								100.000%	
536 (4510:80) 5910	COLDBROOK DISTRIBUTION	100.000%		14.520%	85.480%						
536 (6010 / 6370) 5910	FIELD OPERATIONS	100.000%				5.200%	26.591%	68.209%			
	TOTAL MILES OF MAIN 1,195.99					62.19	318.02	815.78			
536 (6500:90) 5910	FILTRATION	100.000%	100.000%								
536 (1000:10 / 8000) 5910	ADMINISTRATION	100.000%									100.000%

**CITY OF GRAND RAPIDS, MICHIGAN  
WATER SUPPLY SYSTEM FUND  
OPERATING EXPENSE ALLOCATION BY GOVERNMENTAL UNIT - TASK #4, PART 2  
FISCAL YEAR ENDED JUNE 30, 2023**

COST CENTER	EXPENSE BY COST CENTER	INTEGRATED SYSTEM	RETAIL						WHOLESALE			
			CITY OF GR	CITY OF WALKER	CITY OF KENTWOOD	CASCADE TOWNSHIP	GR TOWNSHIP	TALLMADGE TOWNSHIP	CITY OF EAST GR	COUNTY OF OTTAWA	ADA TOWNSHIP	
FILTRATION PLANT	\$ 10,165,710	\$ 10,165,710										
PUMPING STATIONS:												
A. PRIMARY TRANSPORT	416,328	416,328										
B. INTERMEDIATE TRANSPORT	2,450,378		2,046,731	22,313	381,334	-	-	-				
WATERMAINS:												
A. PRIMARY TRANSPORT	392,211		326,496	20,371	28,886	10,594	5,864	-	-	-	-	-
B. INTERMEDIATE TRANSPORT	2,005,630		748,721	438,190	356,140	266,007	168,513	28,059	-	-	-	-
C. LOCAL DISTRIBUTION	5,144,672		3,741,205	409,619	362,133	284,552	327,973	19,190	-	-	-	-
RETAIL CUSTOMER METERING	4,024,949		2,956,406	335,842	281,706	204,387	227,852	18,756				
SUBTOTAL OPERATING EXPENSE	24,599,878	10,582,038	9,819,559	1,226,335	1,410,199	765,540	730,202	66,005	-	-	-	-
ENGINEERING SERVICES	1,378,520	592,998	550,264	68,719	79,031	42,900	40,914	3,694	-	-	-	-
ADMINISTRATIVE EXPENSE	3,374,241	1,086,534	1,856,649	125,912	144,806	78,604	74,967	6,769	-	-	-	-
TOTAL	<u>\$ 29,352,638</u>	<u>\$ 12,261,570</u>	<u>\$ 12,226,472</u>	<u>\$ 1,420,966</u>	<u>\$ 1,634,036</u>	<u>\$ 887,044</u>	<u>\$ 846,083</u>	<u>\$ 76,468</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>

**METHOD OF DISTRIBUTION**

FILTRATION PLANTS		100.00%	100.00%									
PUMPING STATIONS:												
A. PRIMARY TRANSPORT		100.00%	100.00%									
B. INTERMEDIATE TRANSPORT		100.00%		83.527%	0.911%	15.562%						
MEMO												
WATERMAINS												
TOTAL MILES:	1,195.99											
A. PRIMARY TRANSPORT		100.000%		83.245%	5.194%	7.365%	2.701%	1.495%				
MILES	62.19			51.77	3.23	4.58	1.68	0.93	-	-	-	-
B. INTERMEDIATE TRANSPORT		100.000%		37.331%	21.848%	17.757%	13.263%	8.402%	1.399%			
MILES	318.02			118.72	69.48	56.47	42.18	26.72	4.45	-	-	-
C. LOCAL DISTRIBUTION		100.000%		72.720%	7.962%	7.039%	5.531%	6.375%	0.373%			
MILES	815.78			593.24	64.95	57.42	45.12	52.01	3.04	-	-	-
RETAIL CUSTOMER METERING (1)		100.000%		73.452%	8.344%	6.999%	5.078%	5.661%	0.466%			
NUMBER OF METERS	81,396.00			59,787.00	6,792.00	5,697.00	4,133.00	4,608.00	379.00			
ENGINEERING SERVICES (2)		100.000%	43.017%	39.917%	4.985%	5.733%	3.112%	2.968%	0.268%			
ADMINISTRATIVE EXPENSE (3)		100.000%	32.199%	55.024%	3.732%	4.292%	2.330%	2.222%	0.201%			

NOTES:

- (1) ALLOCATION BASED ON NUMBER OF METERS.
- (2) ALLOCATION BASED ON DIRECT OPERATING EXPENSE.
- (3) ALLOCATION BASED ON DIRECT OPERATING EXPENSE, ADJUSTED FOR ANY COST ASSIGNABLE EXCLUSIVELY TO GR OR RETAIL COMMUNITIES, IF APPLICABLE.

**CITY OF GRAND RAPIDS, MICHIGAN  
WATER SUPPLY SYSTEM FUND  
ADJUSTED OPERATING EXPENSE ALLOCATION BY COST CENTER - TASK #5, PART 1  
FISCAL YEAR ENDED JUNE 30, 2023**

	ACTIVITY	ADJUSTED EXPENSE BY ACTIVITY	FILTRATION PLANT	PUMPING STATIONS		WATERMAINS			RETAIL CUSTOMER METERING	ENGIN. SERVICES	ADMIN. EXPENSE
				PRIMARY	INTERM.	PRIMARY TRANSPORT	INTERMED. TRANSPORT	LOCAL DISTRIBUTION			
253 (4010) 5910	TREASURER-CUSTOMER SERVICE	\$ 1,210,988							\$ 1,210,988		
536 (2110 / 2700) 5910	WATER-CUSTOMER SERVICE *	2,228,076							2,228,076		
536 (3010:70) 5910	ENGINEERING	1,443,566								1,443,566	
536 (4510:80) 5910	COLDBROOK DISTRIBUTION	2,913,486		423,123	2,490,363						
536 (6010 / 6370) 5910	FIELD OPERATIONS	6,936,947				360,721	1,844,604	4,731,622			
536 (6500:90) 5910	FILTRATION	10,304,751	10,304,751								
	SUBTOTAL OPERATING EXPENSE	25,037,813	10,304,751	423,123	2,490,363	360,721	1,844,604	4,731,622	3,439,064	1,443,566	-
536 (1000:10 / 8000) 5910	ADMINISTRATION	3,937,688									3,937,688
	TOTAL	<u>\$ 28,975,501</u>	<u>\$ 10,304,751</u>	<u>\$ 423,123</u>	<u>\$ 2,490,363</u>	<u>\$ 360,721</u>	<u>\$ 1,844,604</u>	<u>\$ 4,731,622</u>	<u>\$ 3,439,064</u>	<u>\$ 1,443,566</u>	<u>\$ 3,937,688</u>

\* Reflects adjustment for circuit breaker provisions per the third amendment to W/S service agreements.

**METHOD OF DISTRIBUTION**

253 (4010) 5910	TREASURER-CUSTOMER SERVICE	100.000%							100.000%	
536 (2110 / 2700) 5910	WATER-CUSTOMER SERVICE	100.000%							100.000%	
536 (3010:70) 5910	ENGINEERING	100.000%								100.000%
536 (4510:80) 5910	COLDBROOK DISTRIBUTION	100.000%		14.520%	85.480%					
536 (6010 / 6370) 5910	FIELD OPERATIONS	100.000%				5.200%	26.591%	68.209%		
	TOTAL MILES OF MAIN 1,195.99					62.19	318.02	815.78		
536 (6500:90) 5910	FILTRATION	100.000%	100.000%							
536 (1000:10 / 8000) 5910	ADMINISTRATION	100.000%								100.000%

**CITY OF GRAND RAPIDS, MICHIGAN  
WATER SUPPLY SYSTEM FUND  
ADJUSTED OPERATING EXPENSE ALLOCATION BY GOVERNMENTAL UNIT - TASK #5, PART 2  
FISCAL YEAR ENDED JUNE 30, 2023**

COST CENTER	ADJUSTED EXPENSE BY COST CENTER	INTEGRATED SYSTEM	RETAIL						WHOLESALE			
			CITY OF GR	CITY OF WALKER	CITY OF KENTWOOD	CASCADE TOWNSHIP	GR TOWNSHIP	TALLMADGE TOWNSHIP	CITY OF EAST GR	COUNTY OF OTTAWA	ADA TOWNSHIP	
FILTRATION PLANT	\$ 10,304,751	\$ 10,304,751										
PUMPING STATIONS:												
A. PRIMARY TRANSPORT	423,123	423,123										
B. INTERMEDIATE TRANSPORT	2,490,363		2,080,129	22,677	387,557	-	-	-				
WATERMAINS:												
A. PRIMARY TRANSPORT	360,721		300,282	18,736	26,567	9,743	5,393	-	-	-	-	-
B. INTERMEDIATE TRANSPORT	1,844,604		688,609	403,009	327,546	244,650	154,984	25,806	-	-	-	-
C. LOCAL DISTRIBUTION	4,731,622		3,440,835	376,732	333,059	261,706	301,641	17,649	-	-	-	-
RETAIL CUSTOMER METERING	3,439,064		2,526,062	286,955	240,700	174,636	194,685	16,026				
SUBTOTAL OPERATING EXPENSE	23,594,247	10,727,874	9,035,916	1,108,109	1,315,429	690,735	656,703	59,481	-	-	-	-
ENGINEERING SERVICES	1,443,566	656,360	552,843	67,804	80,479	42,268	40,174	3,638	-	-	-	-
ADMINISTRATIVE EXPENSE	3,937,688	1,404,631	2,031,514	145,103	172,227	90,454	85,974	7,785	-	-	-	-
TOTAL	<u>\$ 28,975,501</u>	<u>\$ 12,788,865</u>	<u>\$ 11,620,273</u>	<u>\$ 1,321,016</u>	<u>\$ 1,568,135</u>	<u>\$ 823,457</u>	<u>\$ 782,851</u>	<u>\$ 70,904</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>

**METHOD OF DISTRIBUTION**

FILTRATION PLANTS		100.00%	100.00%									
PUMPING STATIONS:												
A. PRIMARY TRANSPORT		100.00%	100.00%									
B. INTERMEDIATE TRANSPORT		100.00%		83.527%	0.911%	15.562%						
MEMO												
WATERMAINS												
TOTAL MILES:	1,195.99											
A. PRIMARY TRANSPORT		100.000%		83.245%	5.194%	7.365%	2.701%	1.495%				
MILES	62.19			51.77	3.23	4.58	1.68	0.93	-	-	-	-
B. INTERMEDIATE TRANSPORT		100.000%		37.331%	21.848%	17.757%	13.263%	8.402%	1.399%			
MILES	318.02			118.72	69.48	56.47	42.18	26.72	4.45	-	-	-
C. LOCAL DISTRIBUTION		100.000%		72.720%	7.962%	7.039%	5.531%	6.375%	0.373%			
MILES	815.78			593.24	64.95	57.42	45.12	52.01	3.04	-	-	-
RETAIL CUSTOMER METERING (1)		100.000%		73.452%	8.344%	6.999%	5.078%	5.661%	0.466%			
NUMBER OF METERS	81,396.00			59,787.00	6,792.00	5,697.00	4,133.00	4,608.00	379.00			
ENGINEERING SERVICES (2)		100.000%	45.468%	38.297%	4.697%	5.575%	2.928%	2.783%	0.252%			
ADMINISTRATIVE EXPENSE (3)		100.000%	35.671%	51.592%	3.685%	4.374%	2.297%	2.183%	0.198%			

NOTES:

(1) ALLOCATION BASED ON NUMBER OF METERS.

(2) ALLOCATION BASED ON DIRECT OPERATING EXPENSE.

(3) ALLOCATION BASED ON DIRECT OPERATING EXPENSE, ADJUSTED FOR ANY COST ASSIGNABLE EXCLUSIVELY TO GR OR RETAIL COMMUNITIES, IF APPLICABLE.

**CITY OF GRAND RAPIDS, MICHIGAN**  
**WATER SUPPLY SYSTEM FUND**  
**ADJUSTED ACTUAL EXPENSE**  
**YEAR ENDED JUNE 30, 2023**  
**RATE STUDY- TASKS NO. 4 & 5 SUPPORT**

ORGANIZATIONAL UNIT: ADMINISTRATION

EXPENDITURE SUB-OBJECT		OPERATING	ADJUSTED	ADJUSTED
OBJ	DESCRIPTION	EXPENSES	COST	CURRENT
			FACTORS	ANNUAL
				EXPENSES
7020	PERMANENT EMPLOYEES	\$ 557,011.98	\$ (85,938.57)	\$ 471,073.41
7025	ACT.ASSIGNMENT	1,807.68	71.37	1,879.05
7040	TEMPORARY EMPLOYEES	15,664.84	618.45	16,283.29
7055	TIME & ONE-HALF	4,023.02	158.83	4,181.85
7105	EMPLOYERS SOCIAL SECURITY	41,629.23	(4,358.87)	37,270.36
7110	HOSPITALIZATION INSURANCE	87,451.69	13,913.56	101,365.25
7115	RETIREE HEALTH CARE	22,184.39	(7,376.63)	14,807.76
7120	RETIREMENT FUND CONTRIBUTION	121,181.17	(9,937.53)	111,243.64
7135	UNEMPLOYMENT COMPENSATION	1,346.69	-	1,346.69
7150	LONGEVITY PAY	690.00	29,466.85	30,156.85
7165	SHIFT DIFFERENTIAL	7.15	-	7.15
7175	FOOD/CLEAN/CAR ALLOW	2,471.00	-	2,471.00
	TOTAL PERSONAL SERVICES	<u>855,468.84</u>	<u>(63,382.54)</u>	<u>792,086.30</u>
7520	SUPPLIES	3,117.72	-	3,117.72
7670	CLOTHING/CLEANING ALLOWANCE	36.24	-	36.24
7800	INVENTORY - COST OF GOODS SOLD	244,068.01	-	244,068.01
7910	SUBSCRIPTIONS AND PUBLICATIONS	149.94	-	149.94
	TOTAL SUPPLIES	<u>247,371.91</u>	<u>-</u>	<u>247,371.91</u>
8010	CONTRACTUAL SERVICES	194,284.86	790,240.94	984,525.80
8011	CONTRACT EMPLOYEES - TEMP SERVICES	-	-	-
8015	CONTRACT SERVICES-TRAINING	6,000.00	-	6,000.00
8016	CONTRACTS- EXTERNAL LEGAL SERVICES	954.50	-	954.50
8030	ADMINISTRATIVE SERVICES (ICB)	65,410.53	(65,410.53)	-
8240	FEES	33,471.93	-	33,471.93
8400	INSURANCE PREMIUMS	370,583.00	-	370,583.00
8420	UNEMPLOYMENT CLAIMS	90.00	-	90.00
8450	GENERAL LIABILITY INSURANCE/CLAIMS	224,904.00	17,493.00	242,397.00
8500	TELEPHONE	1,919.23	-	1,919.23
8510	POSTAGE	574.23	-	574.23
8800	COMMUNITY PROMOTION	1,358.30	-	1,358.30
9000	PRINTING & PUBLISHING	5,839.36	-	5,839.36
9560	PROFESSIONAL DEVELOPMENT	4,736.40	-	4,736.40
9561	OTHER TRAVEL & TRAINING	24,032.97	-	24,032.97
9563	FOOD-BEVERAGE	473.67	-	473.67
9580	MEMBERSHIPS	53,553.57	-	53,553.57
9280	WATER	3,849.45	-	3,849.45
9290	REFUSE COLLECTION CHARGES	5,690.16	-	5,690.16
9200	ELECTRICITY	47,905.10	58,174.00	106,079.10
9210	NATURAL GAS	25,489.53	-	25,489.53
9340	MAINTENANCE SERVICE	28,356.66	-	28,356.66
9400	LAND RENTAL OR LEASE	4,019.49	-	4,019.49
9430	BUILDINGS RENTALS OR LEASE	2,071.92	-	2,071.92
8282	ENGINEERING SERVICES	7,362.50	-	7,362.50
8283	VEHICLE USAGE/CAR MILEAGE	6,819.25	-	6,819.25
8284	COMPUTER SERVICES	29,904.00	(517.00)	29,387.00
9650	BAD DEBT WRITE-OFFS	8,415.05	-	8,415.05
	TOTAL OTHER SERVICES & CHARGES	<u>1,158,069.66</u>	<u>799,980.41</u>	<u>1,958,050.07</u>
9760	EQUIPMENT	41,754.25	-	41,754.25
	TOTAL CAPITAL	<u>41,754.25</u>	<u>-</u>	<u>41,754.25</u>
8285	A-87 COST ALLOCATION	1,071,576.00	(173,151.00)	898,425.00
	TOTAL TRANSFERS/FEES	<u>1,071,576.00</u>	<u>(173,151.00)</u>	<u>898,425.00</u>
	ORGANIZATIONAL UNIT TOTAL	<u>\$ 3,374,240.66</u>	<u>\$ 563,446.87</u>	<u>\$ 3,937,687.53</u>

**CITY OF GRAND RAPIDS, MICHIGAN  
WATER SUPPLY SYSTEM FUND  
ADJUSTED ACTUAL EXPENSE  
YEAR ENDED JUNE 30, 2023  
RATE STUDY- TASKS NO. 4 & 5 SUPPORT**

ORGANIZATIONAL UNIT: CUSTOMER SERVICES

EXPENDITURE SUB-OBJECT		OPERATING	ADJUSTED	ADJUSTED
OBJ	DESCRIPTION	EXPENSES	COST	CURRENT
			FACTORS	ANNUAL
				EXPENSES
7020	PERMANENT EMPLOYEES	\$ 1,717,309.81	\$ 67,799.39	\$ 1,785,109.20
7025	ACT.ASSIGNMENT	1,574.70	62.17	1,636.87
7050	REGULAR HOURLY RATE	310.16	12.25	322.41
7055	TIME & ONE-HALF	114,240.31	4,510.21	118,750.52
7105	EMPLOYERS SOCIAL SECURITY	131,313.51	5,184.26	136,497.77
7110	HOSPITALIZATION INSURANCE	422,497.83	67,219.40	489,717.23
7115	RETIREE HEALTH CARE	70,802.72	(11,739.09)	59,063.63
7120	RETIREMENT FUND CONTRIBUTION	387,685.94	32,643.16	420,329.10
7135	UNEMPLOYMENT COMPENSATION	2,385.45	-	2,385.45
7150	LONGEVITY PAY	9,879.00	-	9,879.00
7165	SHIFT DIFFERENTIAL	1,864.83	-	1,864.83
7175	FOOD/CLEAN/CAR ALLOW	900.00	-	900.00
	TOTAL PERSONAL SERVICES	<u>2,860,764.26</u>	<u>165,691.75</u>	<u>3,026,456.01</u>
7520	SUPPLIES	973,846.92	-	973,846.92
7670	CLOTHING/CLEANING ALLOWANCE	5,805.76	-	5,805.76
	TOTAL SUPPLIES	<u>979,652.68</u>	<u>-</u>	<u>979,652.68</u>
8010	CONTRACTUAL SERVICES	302,762.40	-	302,762.40
8011	CONTRACT EMPLOYEES - TEMP SERVICES	30,718.32	-	30,718.32
8500	TELEPHONE	18,263.18	-	18,263.18
8510	POSTAGE	174,922.59	-	174,922.59
8800	COMMUNITY PROMOTION	5,993.64	-	5,993.64
9560	PROFESSIONAL DEVELOPMENT	1,630.22	-	1,630.22
9561	OTHER TRAVEL & TRAINING	9,570.74	-	9,570.74
9340	MAINTENANCE SERVICE	2,211.75	-	2,211.75
9410	EQUIPMENT RENTALS OR LEASE	3,657.47	-	3,657.47
8280	FLEET MANAGEMENT EQUIPMENT	142,720.56	-	142,720.56
8281	311 CALL CENTER SERVICES	503,669.00	-	503,669.00
8283	VEHICLE RENTAL/CAR MILEAGE	12,927.69	-	12,927.69
8284	COMPUTER SERVICES	139,728.00	(2,441.00)	137,287.00
9550	MISCELLANEOUS	30.00	-	30.00
9650	BAD DEBT WRITE-OFFS	(398.95)	-	(398.95)
	TOTAL OTHER SERVICES & CHARGES	<u>1,348,406.61</u>	<u>(2,441.00)</u>	<u>1,345,965.61</u>
9760	EQUIPMENT	10,433.70	-	10,433.70
9800	FURNITURE	643.72	-	643.72
9840	SOFTWARE/SOFTWARE MAINTENANCE	10,300.00	-	10,300.00
	TOTAL CAPITAL	<u>21,377.42</u>	<u>-</u>	<u>21,377.42</u>
8285	A-87 COST ALLOCATION	75,962.00	578.00	76,540.00
	TOTAL TRANSFERS/FEEES	<u>75,962.00</u>	<u>578.00</u>	<u>76,540.00</u>
	ORGANIZATIONAL UNIT TOTAL (GROSS)	\$ 5,286,162.97	\$ 163,828.75	\$ 5,449,991.72
	LESS: SDSF CONTRIBUTION *	<u>(2,461,880.00)</u>	<u>(760,035.98)</u>	<u>(3,221,915.98)</u>
	ORGANIZATIONAL UNIT TOTAL (NET)	<u>\$ 2,824,282.97</u>	<u>\$ (596,207.23)</u>	<u>\$ 2,228,075.74</u>

\* Reflects adjustment for circuit breaker provisions per the third amendment to W/S service agreements.

**CITY OF GRAND RAPIDS, MICHIGAN  
WATER SUPPLY SYSTEM FUND  
ADJUSTED ACTUAL EXPENSE  
YEAR ENDED JUNE 30, 2023  
RATE STUDY- TASKS NO. 4 & 5 SUPPORT**

ORGANIZATIONAL UNIT: ENGINEERING

EXPENDITURE SUB-OBJECT		OPERATING	ADJUSTED	ADJUSTED
OBJ	DESCRIPTION	EXPENSES	COST	CURRENT
			FACTORS	ANNUAL
				EXPENSES
7020	PERMANENT EMPLOYEES	\$ 766,622.41	\$ 30,266.25	\$ 796,888.66
7055	TIME & ONE-HALF	4,310.60	170.18	4,480.78
7105	EMPLOYERS SOCIAL SECURITY	56,895.18	2,246.22	59,141.40
7110	HOSPITALIZATION INSURANCE	151,526.01	24,107.79	175,633.80
7115	RETIREE HEALTH CARE	31,184.82	(5,170.44)	26,014.38
7120	RETIREMENT FUND CONTRIBUTION	170,767.50	14,378.62	185,146.12
7135	UNEMPLOYMENT COMPENSATION	1,066.77	-	1,066.77
7150	LONGEVITY PAY	4,695.00	-	4,695.00
	TOTAL PERSONAL SERVICES	<u>1,187,068.29</u>	<u>65,998.62</u>	<u>1,253,066.91</u>
7520	SUPPLIES	2,990.42	-	2,990.42
7670	CLOTHING/CLEANING ALLOWANCE	31.00	-	31.00
7910	SUBSCRIPTIONS AND PUBLICATIONS	434.00	-	434.00
	TOTAL SUPPLIES	<u>3,455.42</u>	<u>-</u>	<u>3,455.42</u>
8010	CONTRACTUAL SERVICES	72,479.50	-	72,479.50
8500	TELEPHONE	4,478.93	-	4,478.93
9340	MAINTENANCE SERVICE	1,407.86	-	1,407.86
8280	FLEET MANAGEMENT EQUIPMENT	20,799.76	-	20,799.76
8283	VEHICLE RENTAL/CAR MILEAGE	645.85	-	645.85
8284	COMPUTER SERVICES	54,828.00	(952.00)	53,876.00
	TOTAL OTHER SERVICES & CHARGES	<u>154,639.90</u>	<u>(952.00)</u>	<u>153,687.90</u>
9760	EQUIPMENT	244.33	-	244.33
9800	FURNITURE	721.61	-	721.61
9840	SOFTWARE/SOFTWARE MAINTENANCE	8,183.00	-	8,183.00
	TOTAL CAPITAL	<u>9,148.94</u>	<u>-</u>	<u>9,148.94</u>
9954	OPERATING TRANS-DEV CENTER	24,207.00	-	24,207.00
	TOTAL TRANSFERS/FEES	<u>24,207.00</u>	<u>-</u>	<u>24,207.00</u>
	ORGANIZATIONAL UNIT TOTAL	<u>\$ 1,378,519.55</u>	<u>\$ 65,046.62</u>	<u>\$ 1,443,566.17</u>

**CITY OF GRAND RAPIDS, MICHIGAN  
WATER SUPPLY SYSTEM FUND  
ADJUSTED ACTUAL EXPENSE  
YEAR ENDED JUNE 30, 2023  
RATE STUDY- TASKS NO. 4 & 5 SUPPORT**

ORGANIZATIONAL UNIT: DISTRIBUTION

EXPENDITURE SUB-OBJECT		OPERATING	ADJUSTED	ADJUSTED
OBJ	DESCRIPTION	EXPENSES	COST	CURRENT
			FACTORS	ANNUAL
				EXPENSES
7020	PERMANENT EMPLOYEES	\$ 506,904.03	\$ 20,012.57	\$ 526,916.60
7025	ACT.ASSIGNMENT	2,033.21	80.27	2,113.48
7055	TIME & ONE-HALF	20,909.29	825.50	21,734.79
7105	EMPLOYERS SOCIAL SECURITY	37,383.49	1,475.90	38,859.39
7110	HOSPITALIZATION INSURANCE	117,320.74	18,665.73	135,986.47
7115	RETIREE HEALTH CARE	20,292.68	(3,364.53)	16,928.15
7120	RETIREMENT FUND CONTRIBUTION	110,955.52	9,342.45	120,297.97
7135	UNEMPLOYMENT COMPENSATION	670.10	-	670.10
7150	LONGEVITY PAY	2,328.75	-	2,328.75
7165	SHIFT DIFFERENTIAL	2.00	-	2.00
	TOTAL PERSONAL SERVICES	<u>818,799.81</u>	<u>47,037.89</u>	<u>865,837.70</u>
7520	SUPPLIES	67,523.55	-	67,523.55
7670	CLOTHING/CLEANING ALLOWANCE	1,822.10	-	1,822.10
	TOTAL SUPPLIES	<u>69,345.65</u>	<u>-</u>	<u>69,345.65</u>
8010	CONTRACTUAL SERVICES	392,037.42	-	392,037.42
8500	TELEPHONE	8,123.24	-	8,123.24
9280	WATER	9,268.47	-	9,268.47
9290	REFUSE COLLECTION CHARGES	24.23	-	24.23
9200	ELECTRICITY	1,350,531.57	-	1,350,531.57
9210	NATURAL GAS	74,855.56	-	74,855.56
9340	MAINTENANCE SERVICE	19,385.80	-	19,385.80
9410	EQUIPMENT RENTALS OR LEASE	2,772.59	-	2,772.59
8280	FLEET MANAGEMENT EQUIPMENT	91,561.20	-	91,561.20
8284	COMPUTER SERVICES	14,952.00	(258.00)	14,694.00
	TOTAL OTHER SERVICES & CHARGES	<u>1,963,512.08</u>	<u>(258.00)</u>	<u>1,963,254.08</u>
9760	EQUIPMENT	15,048.09	-	15,048.09
	TOTAL CAPITAL	<u>15,048.09</u>	<u>-</u>	<u>15,048.09</u>
	ORGANIZATIONAL UNIT TOTAL	<u>\$ 2,866,705.63</u>	<u>\$ 46,779.89</u>	<u>\$ 2,913,485.52</u>

**CITY OF GRAND RAPIDS, MICHIGAN  
WATER SUPPLY SYSTEM FUND  
ADJUSTED ACTUAL EXPENSE  
YEAR ENDED JUNE 30, 2023  
RATE STUDY- TASKS NO. 4 & 5 SUPPORT**

ORGANIZATIONAL UNIT: FIELD OPERATIONS

EXPENDITURE SUB-OBJECT		OPERATING	ADJUSTED	ADJUSTED
OBJ	DESCRIPTION	EXPENSES	COST	CURRENT
			FACTORS	ANNUAL
				EXPENSES
7020	PERMANENT EMPLOYEES	\$ 1,987,790.84	\$ 78,477.98	\$ 2,066,268.82
7025	ACT.ASSIGNMENT	5,945.27	234.72	6,179.99
7040	TEMPORARY EMPLOYEES	5,204.28	205.46	5,409.74
7055	TIME & ONE-HALF	220,275.09	8,696.46	228,971.55
7105	EMPLOYERS SOCIAL SECURITY	155,654.75	6,145.25	161,800.00
7110	HOSPITALIZATION INSURANCE	443,453.31	70,553.42	514,006.73
7115	RETIREE HEALTH CARE	78,471.26	(13,010.53)	65,460.73
7120	RETIREMENT FUND CONTRIBUTION	428,309.03	36,063.62	464,372.65
7135	UNEMPLOYMENT COMPENSATION	2,829.70	-	2,829.70
7150	LONGEVITY PAY	15,228.40	-	15,228.40
7165	SHIFT DIFFERENTIAL	1,442.61	-	1,442.61
7175	FOOD/CLEAN/CAR ALLOW	450.00	-	450.00
	TOTAL PERSONAL SERVICES	<u>3,345,054.54</u>	<u>187,366.38</u>	<u>3,532,420.92</u>
7520	SUPPLIES	659,427.40	-	659,427.40
7670	CLOTHING/CLEANING ALLOWANCE	10,965.89	-	10,965.89
7910	SUBSCRIPTIONS AND PUBLICATIONS	3,915.00	-	3,915.00
	TOTAL SUPPLIES	<u>674,308.29</u>	<u>-</u>	<u>674,308.29</u>
8010	CONTRACTUAL SERVICES	2,127,004.33	(790,240.94)	1,336,763.39
8011	CONTRACT EMPLOYEES - TEMP SERVICES	75,558.07	-	75,558.07
8240	FEES	105.00	-	105.00
8500	TELEPHONE	27,142.84	-	27,142.84
9560	PROFESSIONAL DEVELOPMENT	379.00	-	379.00
9200	ELECTRICITY	856.78	-	856.78
9340	MAINTENANCE SERVICE	12,037.28	-	12,037.28
9410	EQUIPMENT RENTALS OR LEASE	70,245.99	-	70,245.99
8280	FLEET MANAGEMENT EQUIPMENT	903,172.41	-	903,172.41
8283	VEHICLE USAGE/CAR MILEAGE	600.00	-	600.00
8284	COMPUTER SERVICES	154,380.00	(2,692.00)	151,688.00
	TOTAL OTHER SERVICES & CHARGES	<u>3,371,481.70</u>	<u>(792,932.94)</u>	<u>2,578,548.76</u>
9760	EQUIPMENT	148,622.95	-	148,622.95
9800	FURNITURE	3,045.89	-	3,045.89
	TOTAL CAPITAL	<u>151,668.84</u>	<u>-</u>	<u>151,668.84</u>
	ORGANIZATIONAL UNIT TOTAL	<u>\$ 7,542,513.37</u>	<u>\$ (605,566.56)</u>	<u>\$ 6,936,946.81</u>

**CITY OF GRAND RAPIDS, MICHIGAN  
WATER SUPPLY SYSTEM FUND  
ADJUSTED ACTUAL EXPENSE  
YEAR ENDED JUNE 30, 2023  
RATE STUDY- TASKS NO. 4 & 5 SUPPORT**

ORGANIZATIONAL UNIT: LAKE MI. FILTRATION

EXPENDITURE SUB-OBJECT		OPERATING	ADJUSTED	ADJUSTED
OBJ	DESCRIPTION	EXPENSES	COST	CURRENT
			FACTORS	ANNUAL
				EXPENSES
7020	PERMANENT EMPLOYEES	\$ 2,155,050.80	\$ 85,081.41	\$ 2,240,132.21
7025	ACT.ASSIGNMENT	5,777.52	228.10	6,005.62
7050	REGULAR HOURLY RATE	6,089.41	240.41	6,329.82
7055	TIME & ONE-HALF	161,171.33	6,363.04	167,534.37
7105	EMPLOYERS SOCIAL SECURITY	167,848.84	6,626.67	174,475.51
7110	HOSPITALIZATION INSURANCE	476,083.05	75,744.81	551,827.86
7115	RETIREE HEALTH CARE	87,094.55	(14,440.28)	72,654.27
7120	RETIREMENT FUND CONTRIBUTION	476,905.04	40,155.40	517,060.44
7135	UNEMPLOYMENT COMPENSATION	2,974.22	-	2,974.22
7150	LONGEVITY PAY	11,995.00	-	11,995.00
7165	SHIFT DIFFERENTIAL	12,458.83	-	12,458.83
	TOTAL PERSONAL SERVICES	<u>3,563,448.59</u>	<u>199,999.56</u>	<u>3,763,448.15</u>
7520	SUPPLIES	274,058.41	-	274,058.41
7530	PROCESS CHEMICALS	1,930,809.31	-	1,930,809.31
7670	CLOTHING/CLEANING ALLOWANCE	11,931.27	-	11,931.27
7800	INVENTORY - COST OF GOODS SOLD	(82,754.74)	-	(82,754.74)
	TOTAL SUPPLIES	<u>2,134,044.25</u>	<u>-</u>	<u>2,134,044.25</u>
8010	CONTRACTUAL SERVICES	682,282.22	-	682,282.22
8011	CONTRACT EMPLOYEES - TEMP SERVICES	116,112.48	-	116,112.48
8015	CONTRACT SERVICES-TRAINING	2,396.00	-	2,396.00
8240	FEES	409.29	-	409.29
8500	TELEPHONE	13,067.07	-	13,067.07
8510	POSTAGE	638.06	-	638.06
9560	PROFESSIONAL DEVELOPMENT	5,082.56	-	5,082.56
9561	OTHER TRAVEL & TRAINING	7,508.50	-	7,508.50
9280	WATER	29.27	-	29.27
9290	REFUSE COLLECTION CHARGES	3,284.06	-	3,284.06
9200	ELECTRICITY	2,159,863.04	(58,174.00)	2,101,689.04
9210	NATURAL GAS	229,644.02	-	229,644.02
9310	EQUIPMENT REPAIRS	173.70	-	173.70
9340	MAINTENANCE SERVICE	430,971.03	-	430,971.03
9410	EQUIPMENT RENTALS OR LEASE	1,239.45	-	1,239.45
8280	FLEET MANAGEMENT EQUIPMENT	47,566.44	-	47,566.44
8282	ENGINEERING SERVICES	430.00	-	430.00
8283	VEHICLE USAGE/CAR MILEAGE	3,366.98	-	3,366.98
8284	COMPUTER SERVICES	159,516.00	(2,785.00)	156,731.00
	TOTAL OTHER SERVICES & CHARGES	<u>3,863,580.17</u>	<u>(60,959.00)</u>	<u>3,802,621.17</u>
9740	LAND IMPROVEMENTS	98,224.09	-	98,224.09
9750	BUILDING	239,280.71	-	239,280.71
9760	EQUIPMENT	259,679.31	-	259,679.31
9800	FURNITURE	7,453.31	-	7,453.31
	TOTAL CAPITAL	<u>604,637.42</u>	<u>-</u>	<u>604,637.42</u>
	ORGANIZATIONAL UNIT TOTAL	<u>\$ 10,165,710.43</u>	<u>\$ 139,040.56</u>	<u>\$ 10,304,750.99</u>

**CITY OF GRAND RAPIDS, MICHIGAN  
WATER SUPPLY SYSTEM FUND  
ADJUSTED ACTUAL EXPENSE  
YEAR ENDED JUNE 30, 2023  
RATE STUDY- TASKS NO. 4 & 5 SUPPORT**

ORGANIZATIONAL UNIT: TREASURER - CUSTOMER SERV'S

EXPENDITURE SUB-OBJECT		OPERATING	ADJUSTED	ADJUSTED
NO.	DESCRIPTION	EXPENSES	COST	CURRENT
			FACTORS	ANNUAL
				EXPENSES
7020	PERMANENT EMPLOYEES	\$ 98,959.96	\$ 3,906.94	\$ 102,866.90
7055	TIME & ONE-HALF	302.35	11.94	314.29
7105	EMPLOYERS SOCIAL SECURITY	6,846.67	270.31	7,116.98
7110	HOSPITALIZATION INSURANCE	23,698.40	3,770.42	27,468.82
7115	RETIREE HEALTH CARE	3,876.75	(642.77)	3,233.98
7120	RETIREMENT FUND CONTRIBUTION	21,122.16	1,778.49	22,900.65
7135	UNEMPLOYMENT COMPENSATION	130.29	-	130.29
7150	LONGEVITY PAY	130.00	-	130.00
7170	ELECTION WRKR-BRD MEMBERS PAY	156.00	-	156.00
	TOTAL PERSONAL SERVICES	<u>155,222.58</u>	<u>9,095.33</u>	<u>164,317.91</u>
7520	SUPPLIES	1,019.17	-	1,019.17
	TOTAL SUPPLIES	<u>1,019.17</u>	<u>-</u>	<u>1,019.17</u>
8010	CONTRACTUAL SERVICES	14,975.00	-	14,975.00
8011	CONTRACT EMPLOYEES - TEMP SERVICES	15,507.18	-	15,507.18
8240	FEES	966,415.70	-	966,415.70
8450	GENERAL LIABILITY INSURANCE/CLAIMS	2,100.00	(349.00)	1,751.00
8500	TELEPHONE	42.00	-	42.00
9430	BUILDINGS RENTALS OR LEASE	11,354.88	-	11,354.88
8283	VEHICLE USAGE/CAR MILEAGE	14,781.34	-	14,781.34
8284	COMPUTER SERVICES	19,248.00	1,576.00	20,824.00
	TOTAL OTHER SERVICES & CHARGES	<u>1,044,424.10</u>	<u>1,227.00</u>	<u>1,045,651.10</u>
	ORGANIZATIONAL UNIT TOTAL	<u>\$ 1,200,665.85</u>	<u>\$ 10,322.33</u>	<u>\$ 1,210,988.18</u>

**CITY OF GRAND RAPIDS, MICHIGAN  
WATER SUPPLY SYSTEM FUND  
ADJUSTED ACTUAL EXPENSE  
YEAR ENDED JUNE 30, 2023  
RATE STUDY- TASKS NO. 4 & 5**

ORGANIZATIONAL. SUMMARY

EXPENDITURE SUB-OBJECT		OPERATING	ADJUSTED	ADJUSTED
OBJ	DESCRIPTION	EXPENSES	COST FACTORS	CURRENT ANNUAL CURRENT
7020	PERMANENT EMPLOYEES	\$ 7,789,649.83	\$ 199,605.97	\$ 7,989,255.80
7025	ACT.ASSIGNMENT	17,138.38	676.63	17,815.01
7040	TEMPORARY EMPLOYEES	20,869.12	823.91	21,693.03
7050	REGULAR HOURLY RATE	6,399.57	252.66	6,652.23
7055	TIME & ONE-HALF	525,231.99	20,736.16	545,968.15
7105	EMPLOYERS SOCIAL SECURITY	597,571.67	17,589.74	615,161.41
7110	HOSPITALIZATION INSURANCE	1,722,031.03	273,975.13	1,996,006.16
7115	RETIREE HEALTH CARE	313,907.17	(55,744.27)	258,162.90
7120	RETIREMENT FUND CONTRIBUTION	1,716,926.36	124,424.21	1,841,350.57
7135	UNEMPLOYMENT COMPENSATION	11,403.22	-	11,403.22
7150	LONGEVITY PAY	44,946.15	29,466.85	74,413.00
7165	SHIFT DIFFERENTIAL	15,775.42	-	15,775.42
7170	ELECTION WRKR-BRD MEMBERS PAY	156.00	-	156.00
7175	FOOD/CLEAN/CAR ALLOW	3,821.00	-	3,821.00
	TOTAL PERSONAL SERVICES	<u>12,785,826.91</u>	<u>611,806.99</u>	<u>13,397,633.90</u>
7520	SUPPLIES	1,981,983.59	-	1,981,983.59
7530	PROCESS CHEMICALS	1,930,809.31	-	1,930,809.31
7670	CLOTHING/CLEANING ALLOWANCE	30,592.26	-	30,592.26
7800	INVENTORY - COST OF GOODS SOLD	161,313.27	-	161,313.27
7910	SUBSCRIPTIONS AND PUBLICATIONS	4,498.94	-	4,498.94
	TOTAL SUPPLIES	<u>4,109,197.37</u>	<u>-</u>	<u>4,109,197.37</u>
8010	CONTRACTUAL SERVICES	3,785,825.73	-	3,785,825.73
8011	CONTRACT EMPLOYEES - TEMP SERVICES	237,896.05	-	237,896.05
8015	CONTRACT SERVICES-TRAINING	8,396.00	-	8,396.00
8016	CONTRACTS- EXTERNAL LEGAL SERVICES	954.50	-	954.50
8030	ADMINISTRATIVE SERVICES	65,410.53	(65,410.53)	-
8240	FEES	1,000,401.92	-	1,000,401.92
8400	INSURANCE PREMIUMS	370,583.00	-	370,583.00
8420	UNEMPLOYMENT CLAIMS	90.00	-	90.00
8450	GENERAL LIABILITY INSURANCE / CLAIMS	227,004.00	17,144.00	244,148.00
8500	TELEPHONE	73,036.49	-	73,036.49
8510	POSTAGE	176,134.88	-	176,134.88
8800	COMMUNITY PROMOTION	7,351.94	-	7,351.94
9000	PRINTING & PUBLISHING	5,839.36	-	5,839.36
9560	PROFESSIONAL DEVELOPMENT	11,828.18	-	11,828.18
9561	OTHER TRAVEL AND TRAINING	41,112.21	-	41,112.21
9563	FOOD-BEVERAGE	473.67	-	473.67
9580	MEMBERSHIPS	53,553.57	-	53,553.57
9280	WATER	13,147.19	-	13,147.19
9290	REFUSE COLLECTION CHARGES	8,998.45	-	8,998.45
9200	ELECTRICITY	3,559,156.49	-	3,559,156.49
9210	NATURAL GAS	329,989.11	-	329,989.11
9310	EQUIPMENT REPAIRS	173.70	-	173.70
9340	MAINTENANCE SERVICE	494,370.38	-	494,370.38
9400	LAND RENTAL OR LEASE	4,019.49	-	4,019.49
9410	EQUIPMENT RENTALS OR LEASE	77,915.50	-	77,915.50
9430	BUILDINGS RENTALS OR LEASE	13,426.80	-	13,426.80
8280	FLEET MANAGEMENT EQUIPMENT	1,205,820.37	-	1,205,820.37
8281	311 CALL CENTER SERVICES	503,669.00	-	503,669.00
8282	ENGINEERING SERVICES	7,792.50	-	7,792.50
8283	VEHICLE RENTAL/CAR MILEAGE	39,141.11	-	39,141.11
8284	COMPUTER SERVICES	572,556.00	(8,069.00)	564,487.00
9550	MISCELLANEOUS	30.00	-	30.00
9650	BAD DEBT WRITE-OFFS	8,016.10	-	8,016.10
	TOTAL OTHER SERVICES & CHARGES	<u>12,904,114.22</u>	<u>(56,335.53)</u>	<u>12,847,778.69</u>
9740	LAND IMPROVEMENTS	98,224.09	-	98,224.09
9750	BUILDING	239,280.71	-	239,280.71
9760	EQUIPMENT	475,782.63	-	475,782.63
9800	FURNITURE	11,864.53	-	11,864.53
9840	SOFTWARE/SOFTWARE MAINTENANCE	18,483.00	-	18,483.00
	TOTAL CAPITAL	<u>843,634.96</u>	<u>-</u>	<u>843,634.96</u>
8285	A-87 COST ALLOCATION	1,147,538.00	(172,573.00)	974,965.00
9954	OPERATING TRANS-DEV CENTER	24,207.00	-	24,207.00
	TOTAL TRANSFERS/FEES	<u>1,171,745.00</u>	<u>(172,573.00)</u>	<u>999,172.00</u>
	GRAND TOTAL- EXPENDITURES	\$ 31,814,518.46	\$ 382,898.46	\$ 32,197,416.92
	LESS: SDSF CONTRIBUTION	<u>(2,461,880.00)</u>	<u>(760,035.98)</u>	<u>(3,221,915.98)</u>
	NET TOTAL- EXPENDITURES	<u>\$ 29,352,638.46</u>	<u>\$ (377,137.52)</u>	<u>\$ 28,975,500.94</u>

# MEMORANDUM

CITY OF GRAND RAPIDS

DATE: October 19, 2023

TO: Jenessa B. Carter  
Crowe Consultant

FROM: Tai Verbrugge  
Utility Financial Officer

**SUBJECT: 2023 WATER RATE STUDY TASK #4  
FY23 OPERATING EXPENSES - WATER PUMPING FACILITIES**

This schedule allocates the integrated and non-integrated adjusted expenses for operating and maintaining the distribution system's pumping stations based on electricity costs. The operating expenses consist of direct labor, utilities, operating and maintenance supplies, repairs and maintenance, and equipment rental.

Attachment

TCV

ALLOCATION OF COLDBROOK PUMPING TO WATER PUMPING FACILITIES

STATION	ENERGY COST	PERCENT	EXPENDITURE ALLOCATION	
			ACTUAL	ADJUSTED
ALGER	\$ 40,981	3.02%	\$ 86,987	\$ 88,407
BOOSTER A	6,878	0.51%	14,600	14,838
BOOSTER D	22,151	1.64%	47,019	47,786
BRISTOL	10,512	0.78%	22,313	22,677
COLDBROOK	60,129	4.45%	127,633	129,714
COVELL	82,229	6.09%	174,543	177,392
EAST PARIS	179,650	13.30%	381,334	387,557
FRANKLIN	352,179	26.08%	747,553	759,752
LIVINGSTON	347,979	25.77%	738,638	750,691
WILSON	88,669	6.57%	188,213	191,285
BURTON	47,338	3.51%	100,482	102,122
DEAN LAKE	111,837	8.28%	237,391	241,265
TOTAL	<u>\$ 1,350,532</u>	<u>100.00%</u>	<u>\$ 2,866,706</u>	<u>\$ 2,913,486</u>

# MEMORANDUM

CITY OF GRAND RAPIDS

DATE: September 22, 2023

TO: Tai Verbrugge  
Utility Financial Officer

FROM: Molly Clarin  
Chief Financial Officer

**SUBJECT: 2023 WATER RATE STUDY TASK #5  
KNOWN COST ADJUSTMENTS**

Known cost adjustments by which to adjust FY23 operating costs are listed below.

Expense Object – 7020, 7025, 7030, 7035, 7040, 7045, 7050, 7055, 7060, 7190

The most recent labor negotiations resulted in GREIU wages increasing by 3.00% in FY2024 and 2.00% in FY2025. APA wages are increasing by 3.00% in FY2024 and 1.00% in FY2025. After converting these increases from a 2023 fiscal year to a 2024 calendar year basis, the result is a 4.030% factor for GREIU employees and a 3.514% factor for APA employees. A blended rate was then computed by weighting the calendar year percentages according to the percentage of Water Fund employees in each union (84% GREIU and 16% APA). Executive and non-reps amounted to only 1.5% of the population and were therefore excluded. **The wage increase factor to translate FY2023 actual costs to estimated calendar 2024 will be 3.948%** [4.030 X 84% + 3.514 X 16%].

A lump sum or signing bonus of \$1,000 was paid to both APA and GREIU employees upon ratification of the latest contracts. The payment of these bonuses occurred in FY2023 and totaled **\$107,929.40** (GREIU-\$89,119.40 and APA-\$18,810.00) for the Water Department. As the signing bonuses were a one-time expense this amount should be **excluded** from the FY2023 object code 7020 total before applying the wage increase factor noted above.

Expense Object – 7150

Retention pay based on the length of continuous service is included in the latest APA and GREIU contracts. For purposes of the 2023 Water rate study we've calculated the difference between the retention amount projected in the FY2024 budget (\$74,283.00) and the actual FY2023 retention amount paid (\$44,816.15). This net difference was not included in the wage increase factor noted above. Therefore, the expected net increase in retention pay of **\$29,466.85** must be added to the FY2023 amount in object code 7150.

Expense Object – 8284/8450/8285

Adjust FY2023 actual cost to reflect adjustments in charges for central services rendered by the Information Technology Fund (data charges), the Insurance Payment Fund (workers compensation and general liability) and the General Operating Fund (cost

allocation). The “Exhibit” workbook (inclusive of cost center allocations) maintained by the Budget Office has been utilized to blend FY2024 and FY2025 budget amounts thus arriving at an estimated 2024 calendar year rate as follows:

<b>8284-Data Charges</b>			
Cost Center	FY2024 Request	FY2025 Forecast	Calendar 2024 Estimate
253-4010-5910	\$20,494	\$21,153	<b>\$20,824</b>
536-1000-5910	\$28,922	\$29,851	<b>\$29,387</b>
536-2110-5910	\$135,116	\$139,458	<b>\$137,287</b>
536-3010-5910	\$53,024	\$54,728	<b>\$53,876</b>
536-4510-5910	\$14,461	\$14,926	<b>\$14,694</b>
536-6010-5910	\$149,288	\$154,087	<b>\$151,688</b>
536-6510-5910	\$154,252	\$159,210	<b>\$156,731</b>
<b>Total</b>	<b>\$555,557</b>	<b>\$573,413</b>	<b>\$564,485</b>

<b>8450-General Liability Insurance</b>			
Cost Center	FY2024 Request	FY2025 Forecast	Calendar 2024 Estimate
253-4010-5910	\$1,708	\$1,793	<b>\$1,751</b>
536-1000-5910	\$236,485	\$248,309	<b>\$242,397</b>
<b>Total</b>	<b>\$238,193</b>	<b>\$250,102</b>	<b>\$244,148</b>

<b>8285-Contributions to Other Funds (Cost Allocation)</b>			
Cost Center	FY2024 Request	FY2025 Forecast	Calendar 2024 Estimate
536-1000-5910	\$903,591	\$893,259	<b>\$898,425</b>
536-2110-5910	\$75,782	\$77,298	<b>\$76,540</b>
<b>Total</b>	<b>\$979,373</b>	<b>\$970,557</b>	<b>\$974,965</b>

Expense Object - 7105

Increase FY2023 actual FICA expense by 3.948% consistent with the known wage increase factor noted above. The FICA **reduction** amount (\$8,256.60) associated with the signing bonus paid in FY2023 must be **excluded** from the 7105 total before applying the wage increase factor. The FICA amount associated with the projected increase in retention pay outlined above must also be included. This is calculated by multiplying the projected net increase in retention pay by the FY2024 FICA rate of 7.65%, which

equates to **\$2,254.21** of additional FICA expense for the Water Department. This should be added to the 7105 total after the wage increase factor has already been applied.

Expense Object - 7110

The calendar 2024 Trend Report is not completed at this time. However, unfavorable health insurance cost trends were anticipated in the calendar 2023 report. Although the overall trend is still unfavorable, the 2023 report was less unfavorable than the 2022 report. Per the 2023 report the medical trend increase assumption is 6.5% (down from 7.5% in 2022) and the prescription drug trend increase assumption is 7.5% (down from 8.5% in 2022). Additionally, three-year smoothing of plan gains or losses is less favorable for calendar 2024 rates than it was for calendar 2023 rates. Smoothing favorable trends has contributed to limiting projected annual increases in health insurance costs or has provided for further decreases when applicable. The health insurance fund surplus reduction implemented in the 2021 report is also less favorable for calendar 2024 rates than it was for calendar 2023 rates. Finally, the COVID credit adjustment is not factored into any calendar year rates beyond 2023 in the 2023 Trend Report, further contributing to projected health insurance cost increases. **Increase FY2023 health insurance actual by 15.91% to reflect these anticipated rate changes.**

The budgeted FY2024 (\$17,584.00) and FY2025 (\$19,721.00) health insurance rates were blended into a 2024 calendar year rate estimate and divided by the FY2023 base budget amount (\$16,092.00) to arrive at the increase factor [(((((\$17,584.00 + \$19,721.00) / 2)) / \$16,092.00) - 1) \* 100].

Expense Object - 7115

Retiree health care ("RHC") rates are projected to trend down in FY2024 (to 3.28%) and FY2025 (to 3.38%) from a base year rate of 4.15% in FY2023. This decrease is slightly offset by the projected wage adjustments discussed above.

The RHC factor after consideration of the above rate and wage adjustments is 83.49% (or a decrease of 16.51%) for GREIU members and 83.07% (or a decrease of 16.93%) for APA members. These factors are then weighted in accordance with union membership within the Water Fund [(-16.51 \* 84%) + (-16.93 \* 16%)].

The factor to establish calendar year 2024's retiree health care cost is -16.58%. **Decrease the total of fiscal year 2023's retiree health care by this percent to establish the cost for calendar year 2024.** Since the signing bonus paid in FY2023 is not a cost adjustment factor in setting calendar 2024 rates, and was pensionable for GREIU, a retiree health care amount associated with it for GREIU members also needs to be **excluded** before the RHC decrease factor is applied. This is calculated by multiplying the GREIU signing bonus paid by the FY2023 retiree health general rate (4.15%), which equates to **\$3,698.46** of retiree health care expense that should be **excluded** for the Water Department.

Expense Object - 7120

The pension expense factor to translate FY2023 actual costs to estimated calendar 2024 will be 8.42%. **Increase the total of fiscal year 2023's pension expense by this percent to establish the cost for calendar year 2024.** This reflects the effect of a General Pension rate change increase from FY23 of 22.60% to a calendar 2024 rate of 23.46% for GREIU and 24.14% for APA along with the projected wage adjustments discussed above. The GREIU calendar 2024 rate is a blend of the FY2024 rate (23.59%) and the FY2025 rate (23.34%). The APA calendar 2024 rate is a blend of the FY2024 rate (24.25%) and the FY2025 rate (24.04%). There is a difference in rates between the two unions due to the employer's contribution being increased from 6% to 7% in the latest APA contract for the defined contribution plan.

The pension factor after consideration of the above rate and wage adjustments is 108.01% (or an increase of 8.01%) for GREIU members. The pension factor after consideration of the above rate and wage adjustments is 110.59% (or an increase of 10.59%) for APA members. These factors are then weighted in accordance with union membership within the Water Fund  $[(8.01 * 84\%) + (10.59 * 16\%)]$ . Since the signing bonus paid in FY2023 is not a cost adjustment factor in setting calendar 2024 rates, and was pensionable for GREIU, a retirement fund contribution (pension) amount associated with it also needs to be **excluded** for GREIU employees before the pension increase factor is applied. This is calculated by multiplying the GREIU signing bonus paid by the FY2023 GREIU pension rate (22.60%), which equates to **\$20,140.98** of retirement fund contribution expense that should be **excluded** for the Water Fund.

# MEMORANDUM

CITY OF GRAND RAPIDS

DATE: October 24, 2023

TO: Tai Verbrugge  
Utility Financial Officer

FROM: Wayne Jernberg  
Water System Manager

**SUBJECT: 2023 WATER RATE STUDY TASK #5  
KNOWN COST ADJUSTMENTS**

Known cost adjustments by which to adjust FY23 operating costs are listed below:

<u>ACCOUNT</u>	<u>DESCRIPTION</u>	<u>AMOUNT</u>
5910-536-6010-8010	Private Lead Service Line Replacement FY23 Expenses (adjust to admin unit 1000 to allocate GR only)	\$790,240.94
5910-536-1000-8030	Kent County Community Action Program (ICB)	(\$65,410.53)
5910-536-6510-9200	Consumers Energy Green Generation participation (adjust to admin unit 1000 to allocate GR only)	\$58,174.00

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# MEMORANDUM

CITY OF GRAND RAPIDS

DATE: September 9, 2023

TO: Jenessa B. Carter  
Crowe Consultant

FROM: Tai Verbrugge  
Utility Financial Officer

**SUBJECT: 2023 WATER RATE STUDY TASK #6**

The Water Supply System Fund's revenue by governmental unit for the year ending June 30, 2023, are disclosed on the attached page, along with the three-year average billed volume used to calculate expected revenue in the next calendar year (see Task 26 and 27). In addition, annual volume comparisons for the past five (5) years by governmental unit are included herein.

Attachments

TCV



**CITY OF GRAND RAPIDS, MICHIGAN  
WATER SUPPLY SYSTEM FUND  
2023 RATE STUDY TASK NO. 6**

VOLUME COMPARISONS FOR FIVE (5) YEARS BY GOVERNMENTAL UNIT \*  
VOLUME = 1,000 GALLONS

<b>MUNICIPALITY</b>	<b>FY19</b>		<b>FY20</b>		<b>FY21</b>		<b>FY22</b>		<b>FY23</b>		<b>FY19 - FY23 % CHANGE</b>
	<b>VOL BILLED</b>	<b>% CHANGE</b>									
GRAND RAPIDS	6,417,706		5,899,570	-8.07%	6,288,343	6.59%	6,151,371	-2.18%	6,325,990	2.84%	-1.43%
WALKER	929,719		835,703	-10.11%	952,327	13.96%	923,869	-2.99%	943,276	2.10%	1.46%
KENTWOOD	1,342,574		1,190,449	-11.33%	1,305,704	9.68%	1,270,170	-2.72%	1,270,658	0.04%	-5.36%
CASCADE TWP	695,896		585,011	-15.93%	686,898	17.42%	697,931	1.61%	716,807	2.70%	3.00%
GRAND RAPIDS TWP	545,871		462,801	-15.22%	573,570	23.93%	528,741	-7.82%	579,069	9.52%	6.08%
TALLMADGE TWP	41,592		37,831	-9.04%	48,587	28.43%	52,057	7.14%	53,593	2.95%	28.85%
EAST GRAND RAPIDS**	413,246		422,907	2.34%	430,073	1.69%	429,664	-0.10%	479,864	11.68%	16.12%
OTTAWA COUNTY***	1,280,873		1,299,136	1.43%	1,492,668	14.90%	1,426,225	-4.45%	1,471,115	3.15%	14.85%
ADA TWP	438,337		417,313	-4.80%	466,832	11.87%	461,794	-1.08%	487,813	5.63%	11.29%
<b>TOTAL</b>	<b>12,105,814</b>		<b>11,150,721</b>	<b>-7.89%</b>	<b>12,245,001</b>	<b>9.81%</b>	<b>11,941,820</b>	<b>-2.48%</b>	<b>12,328,184</b>	<b>3.24%</b>	<b>1.84%</b>

VOLUME PUMPED	12,911,000	12,735,000	13,381,000	13,365,000	13,651,000
% BILLED TO PUMPED	93.8%	87.6%	91.5%	89.4%	90.3%

GRAND RAPIDS VOLUME COMPARED TO  
CUSTOMER COMMUNITIES

<b>VOLUME = 1,000 GALLONS</b>	<b>FY19</b>		<b>FY20</b>		<b>FY21</b>		<b>FY22</b>		<b>FY23</b>	
	<b>VOL BILLED</b>	<b>% OF TOTAL</b>								
GRAND RAPIDS	6,417,706	52.91%	5,899,570	51.35%	6,288,343	51.51%	6,151,371	51.51%	6,325,990	51.31%
CUSTOMER COMMUNITIES	5,688,108	47.09%	5,251,151	48.65%	5,956,658	48.49%	5,790,449	48.49%	6,002,195	48.69%
<b>TOTAL</b>	<b>12,105,814</b>	<b>100.00%</b>	<b>11,150,721</b>	<b>100.00%</b>	<b>12,245,001</b>	<b>100.00%</b>	<b>11,941,820</b>	<b>100.00%</b>	<b>12,328,184</b>	<b>100.00%</b>

\* Volumes were restated from previous Rate Studies to reflect actual billings without adjustment for accrued revenues.

\*\* Volume adjusted in FY22 for East Grand Rapids due to faulty meter calibration.

\*\*\* Volume adjusted in FY21 and FY22 for Ottawa County due to faulty meter conversion factor.

**CITY OF GRAND RAPIDS, MICHIGAN  
WATER RATE STUDY  
WATER SUPPLY SYSTEM FUND  
TASK NO. 7**

OPERATING REVENUES OTHER THAN FROM SALES OF WATER:

536-1000-5910			
	4788	CONTRACTOR UNDERGROUND LICENSE	\$ 4,680.00
	4916	TAPPING PERMITS	68,250.00
	6260	SERVICE FEES-GENERAL	244,220.00
	6265	SERVICES FOR CONTRACTORS	29,175.58
	6140	INSPECTION FEES - UTILITIES	117,065.00
	6151	METER SETTING FEES	35,740.00
	6423	SALE OF SCRAP MATERIAL	57,814.61
	6461	INVENTORY WITHDRAWALS	7,369.94
	6434	UNMETERED WATER	142,268.11
	6723	PENALTIES ON SPECIAL ASSESSMENTS	7,813.30
			<u>7,813.30</u>
			<u>\$ 714,396.54</u>

CREDIT: UNDERUTILIZATION OF PENALTY CREDIT FROM PREVIOUS YEAR	<u>\$ 179,501.68</u>
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INTEGRATED SYSTEM CREDITS

536-1000-5910			
	6152	INTEGRATED WATER CONNECTION	365,458.50
			<u>\$ 365,458.50</u>

OFFSETTING CREDIT TO CUSTOMER ACCOUNTING ACTIVITY EXPENSES:

536-1000-5910			
	6342	BILLABLE EXPENSE - SEWAGE DISPOSAL SYSTEM*	<u>\$ 2,467,057.00</u>

\* Reflects adjustment for circuit breaker provisions per the third amendment to W/S service agreements.

# MEMORANDUM

CITY OF GRAND RAPIDS

DATE: September 21, 2023

TO: Tai Verbrugge  
Utility Financial Officer

FROM: Wayne Jernberg, PE  
Water System Manager

**SUBJECT: 2023 WATER RATE STUDY – TASK #8**

No significant changes in operating levels are anticipated to take effect by January 1, 2024, which would require adjustments to operating costs for the test period.

WJ

# MEMORANDUM

CITY OF GRAND RAPIDS

DATE: September 8, 2023

TO: Tai Verbrugge  
Utility Financial Officer

FROM: Wayne Jernberg, PE  
Water System Manager

**SUBJECT: 2023 WATER RATE STUDY – TASK #9**

No significant changes in water revenues are anticipated to take effect by January 1, 2024, which would require an adjustment to operating revenue estimates as a whole.

WJ

# MEMORANDUM

CITY OF GRAND RAPIDS

DATE: October 24, 2023

TO: Jenessa Carter  
Crowe Consultant

FROM: Tai Verbrugge  
Utility Financial Officer

**SUBJECT: 2023 WATER RATE STUDY- TASK #10**

The following are water system projects that should be considered operative as of January 1, 2024.

<u>Description</u>	<u>Location</u>	<u>Proj. Code</u>	<u>Cost</u>
LMFP Switchgear Replacement	Integrated	591619060	\$4,928,251
Galimore Stairs at LMFP	Integrated	5910-536-6510-9760	\$98,224
Plainfield Ave – Marywood to Elsmere	Grand Rapids	591223048(L)(M)	\$2,363,999
Ottawa Ave, Coldbrook St, Monroe*	Grand Rapids	591120066; 591220066	\$1,879,246
Norwich Ave – Curve to Hayden	Grand Rapids	591121025; 591621025	\$755,040
Emerald Ave – Leonard to Sweet	Grand Rapids	591123043 (L)(M)	\$725,993
Page St, Lister Ct, Plainfield Ave	Grand Rapids	591123049 (L)(M)	\$452,155
HOM Flats at Maynard	Grand Rapids	Contribution	\$341,225
Dwelling Place	Grand Rapids	Contribution	\$249,760
Market Ave and Fulton St	Grand Rapids	591121049	\$179,769
Burger-Goodwood Neighborhood	Cascade	Contribution	\$4,018,421
Avanterra Forest Hills Preserve	GR Township	Contribution	\$546,750
Braeburn Street	GR Township	Contribution	\$44,990
2539 Leffingwell	GR Township	Contribution	\$36,234
Jason Ridge West Phase 1	Walker	Contribution	\$206,521
Meadow Springs Phase 3	Walker	Contribution	\$142,852
Total:			\$16,969,430

\*Zoned asset

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**CITY OF GRAND RAPIDS, MICHIGAN**  
**WATER SUPPLY SYSTEM FUND**  
**TASK NO. 11**

COMPUTE ACCUMULATED COST, DEPRECIATION AND DEPRECIATION EXPENSE AS OF JUNE 30, 2023

**INTEGRATED SYSTEM**

	ORIGINAL COST	ACCUMULATED DEPRECIATION	DEPRECIATION EXPENSE
LAND & EASEMENTS	\$ 2,691,401	\$ -	\$ -
LAND IMPROVEMENTS	5,431,491	2,352,559	226,974
BUILDINGS & STRUCTURES	54,579,052	31,401,706	1,275,236
STORAGE	10,453,838	7,638,927	284,795
PROCESS EQUIPMENT	75,874,839	49,696,283	1,449,780
AUXILIARY EQUIPMENT	28,601,460	18,239,514	873,646
MACHINERY & EQUIPMENT	6,835,739	4,196,911	348,173
OFFICE EQUIPMENT & FURNITURE	463,229	463,229	-
WATERMAINS	56,676,525	24,460,843	729,293
	<u>\$ 241,607,574</u>	<u>\$ 138,449,972</u>	<u>\$ 5,187,897</u>

**NON-INTEGRATED SYSTEM**

	ORIGINAL COST	ACCUMULATED DEPRECIATION	DEPRECIATION EXPENSE
LAND & EASEMENTS	\$ 3,310,049	\$ -	\$ -
LAND IMPROVEMENTS	1,427,824	1,212,066	41,082
BUILDINGS & STRUCTURES	17,119,333	6,295,220	402,714
STORAGE	16,109,149	8,051,938	382,702
PROCESS EQUIPMENT	11,039,116	4,752,129	379,953
AUXILIARY EQUIPMENT	12,203,813	5,966,403	454,805
MACHINERY & EQUIPMENT	2,249,392	2,035,813	51,428
OFFICE EQUIPMENT & FURNITURE	274,277	274,277	-
WATERMAINS - GRAND RAPIDS	223,961,285	50,507,166	2,774,085
WATERMAINS - WALKER	31,593,141	9,935,583	419,378
WATERMAINS - KENTWOOD	33,063,691	11,001,429	438,686
WATERMAINS - CASCADE TWP	24,142,185	8,203,130	324,017
WATERMAINS - GRAND RAPIDS TWP	21,847,518	6,384,722	288,405
WATERMAINS - TALLMADGE TWP	3,103,088	649,505	41,378
	<u>\$ 401,443,861</u>	<u>\$ 115,269,381</u>	<u>\$ 5,998,633</u>
TOTAL	<u>\$ 643,051,435</u>	<u>\$ 253,719,353</u>	<u>\$ 11,186,530</u>

SOURCE: GENERAL LEDGER, AS ADJUSTED, FOR JUNE 30, 2023.

**CITY OF GRAND RAPIDS, MICHIGAN  
 WATER RATE STUDY  
 WATER SUPPLY SYSTEM FUND  
 TASK NO. 12**

TASK 12A DETERMINE WORKING CAPITAL NEEDS FOR MATERIALS AND SUPPLIES ON HAND.

MATERIALS AND SUPPLIES INVENTORY AS OF JUNE 30, 2023: \$ 2,682,341

TASK 12B DETERMINE WORKING CAPITAL NEEDS FOR PREPAYMENT OF OPERATING COSTS.

NO REQUIREMENT FOR PREPAYMENT OF OPERATING COSTS IS CALLED FOR IN THE ORDINARY CYCLE OF BUSINESS.

TASK 12C DETERMINE CASH WORKING CAPITAL NEEDS & DETERMINE TOTAL WORKING CAPITAL NEEDS.

MINIMUM CASH WORKING CAPITAL IS DEFINED AS THE SUM OF 90 DAYS ADJUSTED OPERATING EXPENSES.

ADJUSTED CURRENT ANNUAL EXPENSES = \$ 28,975,501 @ 90/365 = \$ 7,144,644

TOTAL WORKING CAPITAL NEEDS CONSIST OF THE FOLLOWING:

	12A INVESTMENT IN INVENTORY	\$ 2,682,341
	12B PREPAYMENT OF OPERATING EXPENSES	-
	12C 90 DAY OPERATING EXPENSES	<u>7,144,644</u>
		<u><u>\$ 9,826,985</u></u>

# MEMORANDUM

CITY OF GRAND RAPIDS

DATE: October 25, 2023

TO: Tai Verbrugge  
Utility Financial Officer

FROM: Alex Fleet, P.E.  
Assistant Water System Manager

**SUBJECT: 2023 WATER RATE STUDY- TASK #13**

Lengths and costs of all zoned primary and intermediate transmission mains as well as jointly used storage tanks and pumping stations are allocated to customer communities based on the 2020 Comprehensive Master Plan and the current hydraulic model for the Water System.

In 2023, Coldbrook Pumping Station was decommissioned. New assets were added within the City of Grand Rapids Water System to accommodate this decommissioning. The existing zoned maps, the Zoned Cross Reference List and the Joint Use List were all reviewed. From that review, the following are recommended additions for zoning of the Water System facilities for the 2023 Water Rate Study:

1. W127C includes approximately 212' of 30" Low-Pressure transmission main in Ottawa and Monroe south of Coldbrook Street and approximately 281' of 36" Low-Pressure transmission main in Coldbrook Street between Monroe and Ottawa Avenue.
2. W128A includes approximately 126' of 36" Low-Pressure transmission main in Monroe Avenue extending North from Coldbrook Street.
3. W130C includes approximately 336' of 24" Medium-Pressure transmission main that extends the other portions of the NEW EGR main in Coldbrook Street.

WJ

# MEMORANDUM

CITY OF GRAND RAPIDS

DATE: October 25, 2023

TO: Tai Verbrugge  
Utility Financial Officer

FROM: Alex Fleet, P.E.  
Assistant Water System Manager

**SUBJECT: 2023 WATER RATE STUDY- TASK #14**

In this rate study task, the transmission mains associated with the Coldbrook Decommissioning were added to the overall zonedating map. These mains are a Task 10 item and will be fully in service by the end of calendar year 2023. The following table establishes the percentage distribution of these segments to the various customer communities and further description is provided.

	Grand Rapids	Ada Township	Cascade Township	Grand Rapids Township	City of Kentwood	East Grand Rapids
W127C	69.266%	11.866%	1.907%	14.648%	2.313%	0.000%
W128A	54.232%	1.381%	12.021%	1.706%	23.650%	7.021%
W130C	99.575%	0.000%	0.000%	0.425%	0.000%	0.000%

Segment W127C was added to the zonedating map and includes approximately 212' of 30" Low-Pressure transmission main in Ottawa and Monroe south of Coldbrook Street and approximately 281' of 36" Low-Pressure transmission main in Coldbrook Street between Monroe and Ottawa Avenue. This segment is zonedating in the percentages indicated above and match that of the counterpart segments of W127 as primary feeds to Livingston Reservoir. The annotation of 2023 reflects the year of installation.

Segment W128A was added to the zonedating map and includes approximately 126' of 36" Low-Pressure transmission main in Monroe Avenue extending North from Coldbrook Street. This segment is zonedating in the percentages indicated above and match that of its counterpart W128 further north in Monroe and in the North Yard. The annotation of 2023 reflects the year of installation.

Segment W130C was added to the zonedating map and includes approximately 336' of 24" Medium-Pressure transmission main that extends the other portions of the NEW EGR main in Coldbrook Street. This segment is zonedating in the percentages indicated above and match that of its other NEW EGR counterparts and the Livingston East Intermediate Pump Station. The annotation of 2023 reflects the year of installation.

All zonegating work papers and maps are on file at the Water Administration Building located at 1900 Oak Industrial Dr. NE, Grand Rapids, MI 49505.

WJ

**CITY OF GRAND RAPIDS, MICHIGAN  
WATER RATE STUDY  
WATER SUPPLY SYSTEM FUND  
TASK NO. 15**

COMPUTE CONSTRUCTION COST RATE BASE (NET BOOK VALUE OF ASSETS, PLUS WORKING CAPITAL, LESS CONTRIBUTIONS BY OTHERS).

ORIGINAL CONSTRUCTION COST	- TASK #10	\$ 16,969,430	
	- TASK #11	643,051,435	
		<hr/>	\$ 660,020,865
LESS: ACCUMULATED DEPRECIATION	- TASK #11	\$ 253,719,353	
		<hr/>	(253,719,353)
			<hr/>
			406,301,512
WORKING CAPITAL REQUIREMENT	- TASK #12	\$ 9,826,985	
		<hr/>	9,826,985
			<hr/>
			416,128,497
CONTRIBUTIONS BY OTHERS	- TASK #21	\$ 111,338,853	
LESS: AMORTIZATION		(42,807,287)	
		<hr/>	(68,531,566)
CONSTRUCTION COST RATE BASE			<hr/> <hr/>
			\$ 347,596,931

# MEMORANDUM

CITY OF GRAND RAPIDS

DATE: September 7, 2023

TO: Tai Verbrugge  
Utility Financial Officer

FROM: Arden Postma, P.E.  
Hydraulic Engineer

**SUBJECT: 2023 Water Rate Study Integrated Connection Fees Task #15A**

Attached is the Integrated Water Connection Fee Schedule of rates effective January 1, 2024. Per the Fifth Amendment to the Water & Sanitary Sewer Service Agreements, adopted by City Commission on March 27, 2018 (Res. 87571), the methodology for connection to the water and sewer systems is calculated based on the cost of connection to the System and is evaluated annually as part of the Rate Study and shall be administered the same across the retail system.

The integrated connection fees effective January 1, 2024, shall be as follows:

Residential Users (three residential units or less)

Plan Review and Connection Fee (PRC Fee)			
Meter Size	2023	2024	% Change
3/4 inch	\$380	\$390	2.63%
1 inch	\$390	\$410	5.13%
1-1/2 inch	\$390	\$410	5.13%

All other Users (including residential of more than 3 units, commercial, industrial, governmental and religious)

Plan Review and Connection Fee (PRC Fee)			
Meter Size	2023	2024	% Change
3/4 inch	\$725	\$755	4.14%
1 inch	\$960	\$1010	5.21%
1-1/2 inch	\$1,270	\$1,340	5.51%
2 inch	\$1,750	\$1,850	5.71%
3 inch	\$2,180	\$2,305	5.73%
4 inch	\$3,130	\$3,320	6.07%
6 inch	\$4,400	\$4,675	6.25%

Plus a Meter Capacity Fee based on the meter size (when water and sanitary sewer connections are made at the same time only one Meter Capacity Fee shall be charged) as follows:

<b>Meter Capacity Charge</b>			
<b>Meter Size</b>	<b>2023</b>	<b>2024</b>	<b>% Change</b>
¾ inch	\$210	\$210	0%
1 inch	\$300	\$300	0%
1 ½ inch	\$750	\$750	0%
2 inch	\$880	\$880	0%
3 inch	\$1,650	\$2,162	31%
4 inch	At Cost	At Cost	NA
6 inch	At Cost	At Cost	NA
Ultrasonic Meters			
1-1/2" – 12"	At Cost	At Cost	NA

Irrigation/Fire Protection Review Fee

<b>Irrigation/Fire Service Review Fee</b>			
	<b>2023</b>	<b>2024</b>	<b>% Change</b>
All Sizes	\$750	\$790	5.33%

Commercial Plan Assessment Fee – For instances where there is an established connection or property has been previously reviewed to allow for connection to the System which require less System resources to verify system connection requirements.

<b>Commercial Plan Assessment Fee</b>			
	<b>2023</b>	<b>2024</b>	<b>% Change</b>
All Sizes	\$125	\$125	0%

Further information on the new integrated connection fee methodology can be provided through the Utility Business Office.

AP

Cc:

Wayne Jernberg  
Alex Fleet

James Ouzts  
Brian Bradley

**CITY OF GRAND RAPIDS, MICHIGAN  
WATER RATE STUDY  
WATER SUPPLY SYSTEM FUND  
TASK NO. 16**

INCLUDE MAJOR PROJECT COST FOR SYSTEM IMPROVEMENTS (NON-INTEGRATED)

THE ESTIMATED TOTAL PROJECT COST FOR RECOMMENDED WATER SYSTEM IMPROVEMENTS ARE  
SUMMARIZED IN THE FOLLOWING TABLE.

ITEM NO.	DESCRIPTION	ESTIMATED COST	BUDGET YEAR
1	FRANKLIN PS IMPROVEMENTS (PUMPS 1-4)	4,600,000	2022
2	FULLER WM REPLACEMENT	500,000	2023
3	INTERMEDIATE PD TANK	5,750,000	2023
4	LEAD SERVICE LINE REPLACEMENTS (ROTOMILLS)	5,000,000	2023
5	ELEANOR WM REPLACEMENTS	1,300,000	2024
6	O'BRIEN WM EXTENSION	1,300,000	2024
7	HALL WM REPLACEMENT	1,700,000	2024
8	OMENA WM REPLACEMENT	900,000	2024
9	LEAD SERVICE LINE REPLACEMENTS (ROTOMILLS)	8,000,000	2024
10	4 MILE RD WM LOOPING WITH ALPINE INTERCONNECTION	1,475,000	2024
11	GRANDVILLE WM REPLACEMENT	725,000	2025
12	GRANDVILLE WM REPLACEMENT	725,000	2025
13	LEONARD & CRAHAN WM	2,600,000	2025
14	STEVENS WM REPLACEMENT	1,000,000	2025
15	FRUITWOOD WM REPLACEMENT	500,000	2025
16	KENDALL WM REPLACEMENT	800,000	2025
17	BURTON WM REPLACEMENT	2,300,000	2025
18	BURTON WM REPLACEMENT	2,400,000	2025
19	BURTON/I-96 WM CROSSING	1,100,000	2025
20	BOSTON WM REPLACEMENT	1,900,000	2025
21	GRANDVILLE WM REPLACEMENT	750,000	2025
22	LEAD SERVICE LINE REPLACEMENTS (ROTOMILLS)	8,000,000	2025
23	GODFREY WM REPLACEMENT	3,300,000	2025
24	OAKWOOD AVE WM REPLACEMENT	1,600,000	2026
25	VALLEY, 3RD & 4TH WM REPLACEMENT	1,400,000	2026
26	BERKSHIRE, GIDDINGS, SHANGRI-LA WM REPLACEMENTS	1,500,000	2026
27	ALGER TANK IMPROVEMENTS	500,000	2026
28	JEFFERSON WM REPLACEMENT	850,000	2026
29	BUCHANAN WM REPLACEMENT	1,600,000	2026
30	MILLBANK & DERBYSHIRE WM REPLACEMENT	850,000	2026

31	PLYMOUTH WM REPLACEMENT	1,500,000	2026
32	LEAD SERVICE LINE REPLACEMENTS (ROTOMILLS)	8,000,000	2026
33	2ND ST WM REPLACEMENT	800,000	2027
34	BUCHANAN WM REPLACEMENT	1,100,000	2027
35	ALGER WM REPLACEMENT	1,350,000	2027
36	LEAD SERVICE LINE REPLACEMENTS (ROTOMILLS)	10,000,000	2027
37	BUTTERWORTH WM REPLACEMENT	850,000	2028
38	O'BRIEN WM IMPROVEMETNS	950,000	2028
39	WILSON WM IMPROVEMENTS	1,650,000	2028
40	POINSETTIA WM REPLACEMENT	515,000	2028
41	MULFORD WM REPLACEMENT	1,400,000	2028
42	ARDMORE WM REPLACEMENT	1,250,000	2028
43	COLLEGE WM REPLACEMENT	2,400,000	2028
44	HOUSEMAN WM REPLACEMENT	775,000	2028
45	HALL WM REPLACEMENT	725,000	2028
46	LEAD SERVICE LINE REPLACEMENTS (ROTOMILLS)	12,000,000	2028
		<u>\$ 110,190,000</u>	

NOTE: NONE OF THE PROJECTS ABOVE ARE INCLUDED IN RECOMMENDED REVENUE REQUIREMENTS FOR CALENDAR YEAR 2023. COSTS SHOWN ARE IN 2023 DOLLARS AND ARE TAKEN FROM THE FISCAL YEARS 2024-2028 CAPITAL PROJECT PLAN.

SOURCE: ALEX FLEET, ASSISTANT WATER SYSTEM MANAGER, SEPTEMBER 2023

**CITY OF GRAND RAPIDS, MICHIGAN  
WATER RATE STUDY  
WATER SUPPLY SYSTEM FUND  
TASK NO. 17**

**BONDS - PRINCIPAL & INTEREST PAYMENTS (SENIOR)**

FISCAL YEAR ENDING JUNE 30,	PRINCIPAL	INTEREST	PRIN & INT
2024	\$ 3,695,000	\$ 5,388,831	\$ 9,083,831
2025	3,875,000	5,208,950	9,083,950
2026	4,080,000	5,020,150	9,100,150
2027	4,285,000	4,820,950	9,105,950
2028	4,515,000	4,611,800	9,126,800
2029	4,450,000	4,388,850	8,838,850
2030	4,665,000	4,166,350	8,831,350
2031	4,900,000	3,933,100	8,833,100
2032	5,140,000	3,697,050	8,837,050
2033	5,385,000	3,449,350	8,834,350
2034	5,640,000	3,189,750	8,829,750
2035	5,930,000	2,907,750	8,837,750
2036	3,970,000	2,611,250	6,581,250
2037	4,165,000	2,412,750	6,577,750
2038	4,380,000	2,204,500	6,584,500
2039	4,600,000	1,985,500	6,585,500
2040	3,070,000	1,755,500	4,825,500
2041	3,230,000	1,602,000	4,832,000
2042	3,390,000	1,440,500	4,830,500
2043	3,555,000	1,271,000	4,826,000
2044	3,735,000	1,093,250	4,828,250
2045	3,925,000	906,500	4,831,500
2046	4,125,000	710,250	4,835,250
2047	3,330,000	504,000	3,834,000
2048	3,500,000	337,500	3,837,500
2049	1,585,000	162,500	1,747,500
2050	1,665,000	83,250	1,748,250
	<u>\$ 108,785,000</u>	<u>\$ 69,863,131</u>	<u>\$ 178,648,131</u>

**CITY OF GRAND RAPIDS, MICHIGAN  
WATER RATE STUDY  
WATER SUPPLY SYSTEM FUND  
TASK NO. 18**

DETERMINE WATER SYSTEM EQUITY IN THE CONSTRUCTION COST RATE BASE BY  
SUBTRACTING DEBT OUTSTANDING FROM THE TOTAL RATE BASE.

CONSTRUCTION COST RATE BASE - TASK NO. 15	\$ 347,596,931
LESS: BONDED INDEBTEDNESS in CCRB (CASH BASIS) - TASK NO. 20	(130,883,604)
NET WATER SYSTEM EQUITY	<u>\$ 216,713,327</u>

**CITY OF GRAND RAPIDS, MICHIGAN  
WATER RATE STUDY  
WATER SUPPLY SYSTEM FUND  
RATE OF RETURN ON EQUITY - TASK NO. 19**

AT THE APRIL 5, 1977, COMMITTEE OF THE WHOLE MEETING, THE CITY COMMISSION DECIDED THE LEVEL OF RETURN ON WATER SYSTEM EQUITY. THE LEVEL DECIDED UPON WAS ONE PERCENT MORE THAN THE AVERAGE BOND BUYER'S INDEX OF MUNICIPAL BONDS FOR THE PREVIOUS TWELVE MONTH PERIOD.

BOND BUYER'S INDEX OF 20 MUNICIPAL BONDS

<u>DATE</u>	<u>RATE</u>	<u>DATE</u>	<u>RATE</u>
22-Sep-22	3.890%	23-Mar-23	3.570%
29-Sep-22	4.020%	30-Mar-23	3.500%
06-Oct-22	3.860%	06-Apr-23	3.360%
13-Oct-22	3.840%	13-Apr-23	3.320%
20-Oct-22	3.870%	20-Apr-23	3.560%
27-Oct-22	4.160%	27-Apr-23	3.530%
03-Nov-22	4.060%	04-May-23	3.530%
10-Nov-22	4.020%	11-May-23	3.530%
17-Nov-22	3.750%	18-May-23	3.590%
24-Nov-22	3.720%	25-May-23	3.740%
01-Dec-22	3.650%	01-Jun-23	3.670%
08-Dec-22	3.630%	08-Jun-23	3.670%
15-Dec-22	3.590%	15-Jun-23	3.670%
22-Dec-22	3.660%	22-Jun-23	3.650%
29-Dec-22	3.720%	29-Jun-23	3.650%
05-Jan-23	3.660%	06-Jul-23	3.640%
12-Jan-23	3.450%	13-Jul-23	3.660%
19-Jan-23	3.330%	20-Jul-23	3.570%
26-Jan-23	3.370%	27-Jul-23	3.600%
02-Feb-23	3.390%	03-Aug-23	3.750%
09-Feb-23	3.510%	10-Aug-23	3.710%
16-Feb-23	3.650%	17-Aug-23	3.750%
23-Feb-23	3.750%	24-Aug-23	3.840%
02-Mar-23	3.750%	31-Aug-23	3.810%
09-Mar-23	3.730%	07-Sep-23	3.850%
16-Mar-23	3.570%	14-Sep-23	3.870%
		<u>52 WEEKS</u>	<u>3.677%</u>

**CITY OF GRAND RAPIDS, MICHIGAN  
 WATER RATE STUDY  
 WATER SUPPLY SYSTEM FUND  
 TASK NO. 20**

DETERMINE COMPOSITE RATE OF RETURN ON A CONSTRUCTION COST RATE BASE

	RATE BASE	RATE OF RETURN	RETURN ON INVESTMENT
WATER SYSTEM EQUITY IN THE CONSTRUCTION COST RATE BASE (CCRB)	\$ 216,713,327	@ 4.677%	= \$ 10,135,099
WATER SYSTEM INDEBTEDNESS IN THE CCRB			
2011 DWRF BONDS	841,301	@ 2.50%	= 21,033
2011 DWRF BONDS	1,546,024	@ 2.50%	= 38,651
2012 DWRF BONDS	1,990,930	@ 2.50%	= 49,773
2012 DWRF BONDS	378,514	@ 2.00%	= 7,570
2013 BONDS	1,200,000	@ 2.88%	= 34,500
2014 DWRF BONDS	1,882,840	@ 2.50%	= 47,071
2015 BONDS (refunded 2009 Bonds)	19,945,000	@ 5.00%	= 997,250
2015 DWRF BONDS	6,953,063	@ 2.50%	= 173,827
2016 DWRF BONDS	1,523,008	@ 2.50%	= 38,075
2016 BONDS (refunded 2009)	32,450,000	@ 5.00%	= 1,622,500
2018 BONDS (refunded 1993)	29,615,000	@ 4.89%	= 1,447,877
2020 BONDS	25,575,000	@ 5.00%	= 1,278,750
2022 DWRF BONDS	6,982,924	@ 1.88%	= 130,930
LESS INTEREST ON BOND RESERVE ACCOUNTS			82,406
	\$ 347,596,931		\$ 16,105,312
COMPOSITE RATE OF RETURN ON INVESTMENT		\$ 16,105,312 \$347,596,931 =	4.633%
<b><u>Noted Disclosure:</u></b>			
TOTAL BONDED INDEBTEDNESS IN CCRB (from above)	\$ 130,883,604	TASK NO. 18	

**CITY OF GRAND RAPIDS, MICHIGAN  
WATER SUPPLY SYSTEM FUND  
CONSTRUCTION COST RATE BASE & RETURN ON INVESTMENT- TASK NO. 21- PART 1  
FISCAL YEAR ENDED JUNE 30, 2023**

**PHYSICAL LOCATION**

DESCRIPTION	RETAIL							WHOLESALE			TOTAL
	INTEGRATED SYSTEM	CITY OF GR	CITY OF WALKER	CITY OF KENTWOOD	CASCADE TOWNSHIP	GR TOWNSHIP	TALLMADGE TOWNSHIP	CITY OF EAST GR	COUNTY OF OTTAWA	ADA TOWNSHIP	
COST	\$ 246,634,049	\$ 260,685,156	\$ 32,195,354	\$ 41,179,821	\$ 28,199,686	\$ 21,098,884	\$ 3,103,088	\$ 13,986	\$ -	\$ 100,965	\$ 633,210,988
LESS: ACCUMULATED DEPRECIATION	138,449,972	68,808,058	10,308,151	13,720,204	8,202,862	5,809,333	649,505	-	-	-	245,948,085
NET BOOK VALUE	\$ 108,184,077	\$ 191,877,098	\$ 21,887,203	\$ 27,459,617	\$ 19,996,824	\$ 15,289,551	\$ 2,453,583	\$ 13,986	\$ -	\$ 100,965	\$ 387,262,903
WORKING CAPITAL REQUIREMENT	4,468,134	3,413,108	464,522	565,740	419,317	359,668	26,729	24,371	-	85,396	9,826,985
	\$ 112,652,211	\$ 195,290,206	\$ 22,351,725	\$ 28,025,357	\$ 20,416,141	\$ 15,649,219	\$ 2,480,312	\$ 38,357	\$ -	\$ 186,361	\$ 397,089,888
CONTRIBUTIONS	580,137	26,641,436	23,760,812	20,046,862	20,924,496	16,256,163	3,058,480	-	-	-	111,268,386
LESS AMORTIZATION	(83,990)	(15,450,941)	(7,795,783)	(6,884,977)	(7,034,445)	(4,827,964)	(658,720)	-	-	-	(42,736,820)
	\$ (496,147)	\$ (11,190,495)	\$ (15,965,029)	\$ (13,161,885)	\$ (13,890,051)	\$ (11,428,199)	\$ (2,399,760)	\$ -	\$ -	\$ -	\$ (68,531,566)
CONSTRUCTION COST RATE BASE	\$ 112,156,064	\$ 184,099,711	\$ 6,386,696	\$ 14,863,472	\$ 6,526,090	\$ 4,221,020	\$ 80,552	\$ 38,357	\$ -	\$ 186,361	\$ 328,558,322
RETURN ON INVESTMENT- TASK 4/5											\$ -
RETURN ON INVESTMENT- TASK 20	4.633%	\$ 5,196,190	\$ 8,529,340	\$ 295,896	\$ 688,625	\$ 302,354	\$ 195,560	\$ 3,732	\$ 1,777	\$ 8,634	\$ 15,222,108

**ZONEGATED**

COST	\$ -	\$ (12,523,796)	\$ 4,401,711	\$ 4,277,074	\$ 14,260,194	\$ 7,452,068	\$ 359,758	\$ 1,875,084	\$ -	\$ 6,707,783	\$ 26,809,876
LESS: ACCUMULATED DEPRECIATION	-	(6,614,919)	1,173,452	2,272,764	5,384,440	2,315,192	135,316	835,366	-	2,269,657	7,771,268
NET BOOK VALUE	\$ -	\$ (5,908,877)	\$ 3,228,259	\$ 2,004,310	\$ 8,875,754	\$ 5,136,876	\$ 224,442	\$ 1,039,718	\$ -	\$ 4,438,126	\$ 19,038,608
WORKING CAPITAL REQUIREMENT	-	-	-	-	-	-	-	-	-	-	-
	\$ -	\$ (5,908,877)	\$ 3,228,259	\$ 2,004,310	\$ 8,875,754	\$ 5,136,876	\$ 224,442	\$ 1,039,718	\$ -	\$ 4,438,126	\$ 19,038,608
CONTRIBUTIONS	-	-	-	8,552	5,974	26,095	-	-	-	29,846	70,467
LESS AMORTIZATION	-	-	-	(8,552)	(5,974)	(26,095)	-	-	-	(29,846)	(70,467)
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CONSTRUCTION COST RATE BASE	\$ -	\$ (5,908,877)	\$ 3,228,259	\$ 2,004,310	\$ 8,875,754	\$ 5,136,876	\$ 224,442	\$ 1,039,718	\$ -	\$ 4,438,126	\$ 19,038,608
RETURN ON INVESTMENT- TASK 19/20	\$ -	\$ (483,153)	\$ 263,966	\$ 163,887	\$ 725,747	\$ 420,029	\$ 18,352	\$ 85,015	\$ -	\$ 362,894	\$ 1,556,737
RETURN ON INVESTMENT- TASK 19/20	8.177%	8.177%	8.177%	8.177%	8.177%	8.177%	8.177%	8.177%		8.177%	
TOTAL RETURN ON INVESTMENT	\$ 5,196,190	\$ 8,046,187	\$ 559,862	\$ 852,512	\$ 1,028,101	\$ 615,589	\$ 22,084	\$ 86,792	\$ -	\$ 371,528	\$ 16,778,845

**CITY OF GRAND RAPIDS, MICHIGAN**  
**WATER SUPPLY SYSTEM FUND**  
**CONSTRUCTION COST & ACCUMULATED DEPRECIATION- TASK NO. 21- PART 2**  
**FISCAL YEAR ENDED JUNE 30, 2023**

**CONSTRUCTION COST**

COST CENTER	AMOUNT	INTEGRATED SYSTEM	RETAIL						WHOLESALE			TOTAL
			CITY OF GR	CITY OF WALKER	CITY OF KENTWOOD	CASCADE TOWNSHIP	GR TOWNSHIP	TALLMADGE TOWNSHIP	CITY OF EAST GR	COUNTY OF OTTAWA	ADA TOWNSHIP	
BY PHYSICAL LOCATION- TASK 11		\$ 241,607,574	\$ 275,588,969	\$ 32,532,983	\$ 44,229,118	\$ 24,142,185	\$ 21,847,518	\$ 3,103,088	\$ -	\$ -	\$ -	\$ 643,051,435
IN SERVICE- TASK 10		5,026,475	6,596,064	-	415,603	4,058,172	758,166	-	13,986	-	100,965	16,969,430
PUMPING STATIONS:												
KNAPP SERVICE CENTER	\$ 3,967,519		(2,845,483)	-	174,410	181,212	1,412,315	-	-	-	1,077,546	-
LIVINGSTON	4,434,386		(1,362,849)	-	102,554	84,557	649,563	-	-	-	526,175	-
FRANKLIN	8,541,087		(5,830,980)	-	3,072,098	1,778,734	-	-	980,148	-	-	-
LEFFINGWELL	141,009		(86,177)	-	10,459	7,306	31,913	-	-	-	36,499	-
BRISTOL	719,950		-	-	-	-	-	-	-	-	-	-
EAST PARIS	7,226,437		429,054	-	(2,796,223)	2,367,169	-	-	-	-	-	-
BURTON	219,892		-	-	-	-	-	-	-	-	-	-
COLDBROOK PS PUMP 2	389,279		(5,815)	-	-	-	5,815	-	-	-	-	-
COVELL	1,563,604		(869,049)	869,049	-	-	-	-	-	-	-	-
WILSON	4,335,618		(3,093,856)	2,955,135	-	-	-	138,721	-	-	-	-
LIVINGSTON EIPD	5,708,345		(24,260)	-	-	-	24,260	-	-	-	-	-
STORAGE TANKS:												
ELKS	509,594		(181,858)	180,966	-	-	-	892	-	-	-	-
KNAPP	126,446		(89,318)	-	5,476	5,708	44,269	-	-	-	33,865	-
CAMBRIDGE	471,529		(64,082)	-	64,082	-	-	-	-	-	-	-
PATTERSON	3,938,991		-	-	(3,201,082)	2,928,832	-	-	-	-	-	-
WATERMAINS			(20,271,249)	58,932	3,380,399	6,906,005	3,777,133	220,145	894,936	-	5,033,698	(1)
ADJUSTED BY ZONEGATING		\$ 246,634,049	\$ 248,161,360	\$ 36,597,065	\$ 45,456,895	\$ 42,459,880	\$ 28,550,952	\$ 3,462,846	\$ 1,889,070	\$ -	\$ 6,808,748	\$ 660,020,864
LESS: ZONEGATING ADJUSTMENT		\$ -	\$ (12,523,796)	\$ 4,401,711	\$ 4,277,074	\$ 14,260,194	\$ 7,452,068	\$ 359,758	\$ 1,875,084	\$ -	\$ 6,707,783	\$ 26,809,876
PHYSICAL LOCATION		\$ 246,634,049	\$ 260,685,156	\$ 32,195,354	\$ 41,179,821	\$ 28,199,686	\$ 21,098,884	\$ 3,103,088	\$ 13,986	\$ -	\$ 100,965	\$ 633,210,988

**ACCUMULATED DEPRECIATION**

BY PHYSICAL LOCATION- TASK 11		\$ 138,449,972	\$ 74,491,242	\$ 10,511,851	\$ 15,028,931	\$ 8,203,130	\$ 6,384,722	\$ 649,505	\$ -	\$ -	\$ -	\$ 253,719,353
IN SERVICE- TASK 10		-	-	-	-	-	-	-	-	-	-	-
PUMPING STATIONS:												
KNAPP SERVICE CENTER	\$ 2,861,998		(2,052,610)	-	125,812	130,718	1,018,784	-	-	-	777,296	-
LIVINGSTON	1,561,957		(480,046)	-	36,123	29,784	228,800	-	-	-	185,339	-
FRANKLIN	5,326,484		(3,636,378)	-	1,915,855	1,109,273	-	-	611,250	-	-	-
LEFFINGWELL	141,009		(86,177)	-	10,459	7,306	31,913	-	-	-	36,499	-
BRISTOL	426,907		-	-	-	-	-	-	-	-	-	-
EAST PARIS	3,010,156		178,722	-	(1,164,761)	986,039	-	-	-	-	-	-
BURTON	149,361		-	-	-	-	-	-	-	-	-	-
COLDBROOK PS PUMP 2	129,760		(1,938)	-	-	-	1,938	-	-	-	-	-
COVELL	811,803		(451,199)	451,199	-	-	-	-	-	-	-	-
WILSON	495,431		(353,535)	337,683	-	-	-	15,852	-	-	-	-
LIVINGSTON EIPD	483,980		(2,057)	-	-	-	2,057	-	-	-	-	-
STORAGE TANKS:												
ELKS	244,142		(87,127)	86,699	-	-	-	428	-	-	-	-
KNAPP	116,295		(82,150)	-	5,037	5,250	40,716	-	-	-	31,147	-
CAMBRIDGE	210,859		(28,656)	-	28,656	-	-	-	-	-	-	-
PATTERSON	1,017,346		70,316	-	(826,762)	756,446	-	-	-	-	-	-
WATERMAINS			(5,285,268)	94,171	833,618	2,359,356	415,595	119,036	224,116	-	1,239,376	-
ADJUSTED BY ZONEGATING		\$ 138,449,972	\$ 62,193,139	\$ 11,481,603	\$ 15,992,968	\$ 13,587,302	\$ 8,124,525	\$ 784,821	\$ 835,366	\$ -	\$ 2,269,657	\$ 253,719,353
LESS: ZONEGATING ADJUSTMENT		\$ -	\$ (6,614,919)	\$ 1,173,452	\$ 2,272,764	\$ 5,384,440	\$ 2,315,192	\$ 135,316	\$ 835,366	\$ -	\$ 2,269,657	\$ 7,771,268
PHYSICAL LOCATION		\$ 138,449,972	\$ 68,808,058	\$ 10,308,151	\$ 13,720,204	\$ 8,202,862	\$ 5,809,333	\$ 649,505	\$ -	\$ -	\$ -	\$ 245,948,085

**CITY OF GRAND RAPIDS, MICHIGAN  
WATER SUPPLY SYSTEM FUND  
CONTRIBUTIONS & AMORTIZED CONTRIBUTIONS- TASK NO. 21- PART 3  
FISCAL YEAR ENDED JUNE 30, 2023**

**CONTRIBUTIONS BY OTHERS**

COST CENTER	AMOUNT	INTEGRATED SYSTEM	RETAIL						WHOLESALE			TOTAL
			CITY OF GR	CITY OF WALKER	CITY OF KENTWOOD	CASCADE TOWNSHIP	GR TOWNSHIP	TALLMADGE TOWNSHIP	CITY OF EAST GR	COUNTY OF OTTAWA	ADA TOWNSHIP	
2022 RATE STUDY- LOCATION		\$ 580,137	\$ 25,769,730	\$ 23,511,771	\$ 19,040,862	\$ 20,924,496	\$ 16,022,263	\$ 3,058,480	\$ -	\$ -	\$ -	\$108,907,739
ADDITIONS:												
FRONT FOOT FEES			105,485	74,203	183,246	-	11,800	-	-	-	-	374,734
FIXED ASSET CONTRIBUTIONS		-	766,221	174,838	822,754	-	222,100	-	-	-	-	1,985,913
OTHER CONTRIBUTIONS		-	-	-	-	-	-	-	-	-	-	-
		580,137	26,641,436	23,760,812	20,046,862	20,924,496	16,256,163	3,058,480	-	-	-	111,268,386
PUMPING STATIONS:												
LEFFINGWELL	\$ 115,303			-	8,552	5,974	26,095	-	-	-	29,846	70,467
ADJUSTED BY ZONEGATING		580,137	26,641,436	23,760,812	20,055,414	20,930,470	16,282,258	3,058,480	-	-	29,846	111,338,853
LESS: ZONEGATING ADJUSTMENT		-	-	-	8,552	5,974	26,095	-	-	-	29,846	70,467
PHYSICAL LOCATION		580,137	26,641,436	23,760,812	20,046,862	20,924,496	16,256,163	3,058,480	-	-	-	111,268,386
<b>AMORTIZED CONTRIBUTIONS</b>												
2022 RATE STUDY- LOCATION		\$ 76,255	\$ 14,839,890	\$ 7,475,106	\$ 6,615,203	\$ 6,754,168	\$ 4,609,197	\$ 617,940	\$ -	\$ -	\$ -	\$ 40,987,759
CURRENT YEAR ADJUSTMENTS		7,735	338,801	320,677	269,774	280,277	218,767	40,780				1,476,811
PRIOR PERIOD ADJUSTMENT			272,250									272,250
		83,990	15,450,941	7,795,783	6,884,977	7,034,445	4,827,964	658,720	-	-	-	42,736,820
PUMPING STATIONS:												
LEFFINGWELL	115,303			-	8,552	5,974	26,095	-	-	-	29,846	70,467
ADJUSTED BY ZONEGATING		83,990	15,450,941	7,795,783	6,893,529	7,040,419	4,854,059	658,720	-	-	29,846	42,807,287
LESS: ZONEGATING ADJUSTMENT		-	-	-	8,552	5,974	26,095	-	-	-	29,846	70,467
PHYSICAL LOCATION		83,990	15,450,941	7,795,783	6,884,977	7,034,445	4,827,964	658,720	-	-	-	42,736,820

**CITY OF GRAND RAPIDS, MICHIGAN**  
**WATER SUPPLY SYSTEM FUND**  
**RECONCILIATION OF CONSTRUCTION COST & ACCUMULATED DEPRECIATION- PHYSICAL LOCATION & ZONEGATING**  
**FISCAL YEAR ENDED JUNE 30, 2023**

**CONSTRUCTION COST- BY PHYSICAL LOCATION**

COST CENTER	AMOUNT	INTEGRATED SYSTEM	RETAIL						WHOLESALE			TOTAL
			CITY OF GR	CITY OF WALKER	CITY OF KENTWOOD	CASCADE TOWNSHIP	GR TOWNSHIP	TALLMADGE TOWNSHIP	CITY OF EAST GR	COUNTY OF OTTAWA	ADA TOWNSHIP	
COST BY PHYSICAL LOCATION- TASK 11		\$ 241,607,574	\$ 287,694,238	\$ 31,593,141	\$ 33,063,691	\$ 24,142,185	\$ 21,847,518	\$ 3,103,088	\$ -	\$ -	\$ -	\$ 643,051,435
IN SERVICE- TASK 10		5,026,475	6,596,064	-	415,603	4,058,172	758,166	-	13,986	-	100,965	16,969,430
BRISTOL			(719,950)	719,950								-
EAST PARIS			(7,226,437)		7,226,437							-
BURTON			(219,892)	219,892								-
PATTERSON TANK			(3,938,991)		3,938,991							-
WATERMAINS												-
LESS: WATERMAINS-TOTAL SUBS-HOME COMM			(32,698,195)	(725,425)	(10,825,800)	(6,200)	(2,208,247)	-	-	-	-	(46,463,867)
ADD: WATERMAINS-TOTAL ADDS-HOME COMM			11,198,319	387,796	7,360,899	5,529	701,447	-	-	-	-	19,653,990
<b>TOTAL-PHYSICAL LOCATION COST</b>		<b>\$ 246,634,049</b>	<b>\$ 260,685,156</b>	<b>\$ 32,195,354</b>	<b>\$ 41,179,821</b>	<b>\$ 28,199,686</b>	<b>\$ 21,098,884</b>	<b>\$ 3,103,088</b>	<b>\$ 13,986</b>	<b>\$ -</b>	<b>\$ 100,965</b>	<b>\$ 633,210,988</b>

**CONSTRUCTION COST- ZONEGATING**

PUMPING STATIONS:												
KNAPP SERVICE CENTER	\$ 3,967,519	\$ (2,845,483)	\$ -	\$ 174,410	\$ 181,212	\$ 1,412,315	\$ -	\$ -	\$ -	\$ -	\$ 1,077,546	\$ -
LIVINGSTON	4,434,386	(1,362,849)	-	102,554	84,557	649,563	-	-	-	-	526,175	-
FRANKLIN	8,541,087	(5,830,980)	-	3,072,098	1,778,734	-	-	980,148	-	-	-	-
LEFFINGWELL	141,009	(86,177)	-	10,459	7,306	31,913	-	-	-	-	36,499	-
BRISTOL	719,950	-	-	-	-	-	-	-	-	-	-	-
EAST PARIS	7,226,437	429,054	-	(2,796,223)	2,367,169	-	-	-	-	-	-	-
BURTON	219,892	-	-	-	-	-	-	-	-	-	-	-
COLDBROOK PS PUMP 2	389,279	(5,815)	-	-	-	5,815	-	-	-	-	-	-
COVELL	1,563,604	(869,049)	869,049	-	-	-	-	-	-	-	-	-
WILSON	4,335,618	(3,093,856)	2,955,135	-	-	-	-	138,721	-	-	-	-
LIVINGSTON EIPD	5,708,345	(24,260)	-	-	-	24,260	-	-	-	-	-	-
STORAGE TANKS:												
ELKS	509,594	(181,858)	180,966	-	-	-	892	-	-	-	-	-
KNAPP	126,446	(89,318)	-	5,476	5,708	44,269	-	-	-	-	33,865	-
CAMBRIDGE	471,529	(64,082)	-	64,082	-	-	-	-	-	-	-	-
PATTERSON	3,938,991	272,250	-	(3,201,082)	2,928,832	-	-	-	-	-	-	-
WATERMAINS- ZONEGATED COST		1,228,627	396,561	6,845,300	6,906,676	5,283,933	220,145	894,936	-	-	5,033,698	26,809,876
TOTAL- ZONEGATED COST	\$ -	\$ (12,523,796)	\$ 4,401,711	\$ 4,277,074	\$ 14,260,194	\$ 7,452,068	\$ 359,758	\$ 1,875,084	\$ -	\$ -	\$ 6,707,783	\$ 26,809,876
<b>GRAND TOTAL- COST</b>	<b>\$ 246,634,049</b>	<b>\$ 248,161,360</b>	<b>\$ 36,597,065</b>	<b>\$ 45,456,895</b>	<b>\$ 42,459,880</b>	<b>\$ 28,550,952</b>	<b>\$ 3,462,846</b>	<b>\$ 1,889,070</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 6,808,748</b>	<b>\$ 660,020,864</b>

**ACCUMULATED DEPRECIATION-BY PHYSICAL LOCATION**

ACC DEPREC BY PHYSICAL LOCATION- TASK 11	\$ 138,449,972	\$ 79,095,012	\$ 9,935,583	\$ 11,001,429	\$ 8,203,130	\$ 6,384,722	\$ 649,505	\$ -	\$ -	\$ -	\$ -	\$ 253,719,353
BRISTOL		(426,907)	426,907									-
EAST PARIS		(3,010,156)		3,010,156								-
BURTON		(149,361)	149,361									-
PATTERSON		(1,017,346)		1,017,346								-
WATERMAINS												-
LESS: WATERMAINS-TOTAL SUBS-HOME COMM		(8,499,695)	(473,527)	(3,352,187)	(2,480)	(810,698)	-	-	-	-	-	(13,138,587)
ADD: WATERMAINS-TOTAL ADDS-HOME COMM		2,816,510	269,827	2,043,460	2,212	235,309	-	-	-	-	-	5,367,318
<b>TOTAL-PHYSICAL LOCATION ACC DEP</b>	<b>\$ 138,449,972</b>	<b>\$ 68,808,057</b>	<b>\$ 10,308,151</b>	<b>\$ 13,720,204</b>	<b>\$ 8,202,862</b>	<b>\$ 5,809,333</b>	<b>\$ 649,505</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 245,948,084</b>

**ACCUMULATED DEPRECIATION-ZONEGATING**

PUMPING STATIONS:												
KNAPP SERVICE CENTER	\$ 2,861,998	\$ (2,052,610)	\$ -	\$ 125,812	\$ 130,718	\$ 1,018,784	\$ -	\$ -	\$ -	\$ -	\$ 777,296	\$ -
LIVINGSTON	1,561,957	(480,046)	-	36,123	29,784	228,800	-	-	-	-	185,339	-
FRANKLIN	5,326,484	(3,636,378)	-	1,915,855	1,109,273	-	-	611,250	-	-	-	-
LEFFINGWELL	141,009	(86,177)	-	10,459	7,306	31,913	-	-	-	-	36,499	-
BRISTOL	426,907	-	-	-	-	-	-	-	-	-	-	-
EAST PARIS	3,010,156	178,722	-	(1,164,761)	986,039	-	-	-	-	-	-	-
BURTON	149,361	-	-	-	-	-	-	-	-	-	-	-
COLDBROOK PS PUMP 2	129,760	(1,938)	-	-	-	1,938	-	-	-	-	-	-
COVELL	811,803	(451,199)	451,199	-	-	-	-	-	-	-	-	-
WILSON	495,431	(353,535)	337,683	-	-	-	-	15,852	-	-	-	-
LIVINGSTON EIPD	483,980	(2,057)	-	-	-	2,057	-	-	-	-	-	-
STORAGE TANKS:												
ELKS	244,142	(181,858)	180,966	-	-	-	892	-	-	-	-	-
KNAPP	116,295	(82,150)	-	5,037	5,250	40,716	-	-	-	-	31,147	-
CAMBRIDGE	210,859	(28,656)	-	28,656	-	-	-	-	-	-	-	-
PATTERSON	1,017,346	70,316	-	(826,762)	756,446	-	-	-	-	-	-	-
WATERMAINS- ZONEGATED ACC DEP		397,916	297,871	2,142,345	2,359,624	990,984	119,036	224,116	-	-	1,239,376	7,771,268
TOTAL- ZONEGATED ACC DEP	\$ -	\$ (6,709,650)	\$ 1,267,719	\$ 2,272,764	\$ 5,384,440	\$ 2,315,192	\$ 135,780	\$ 835,366	\$ -	\$ -	\$ 2,269,657	\$ 7,771,268
<b>GRAND TOTAL- ACC DEP</b>	<b>\$ 138,449,972</b>	<b>\$ 62,098,407</b>	<b>\$ 11,575,870</b>	<b>\$ 15,992,968</b>	<b>\$ 13,587,302</b>	<b>\$ 8,124,525</b>	<b>\$ 785,285</b>	<b>\$ 835,366</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 2,269,657</b>	<b>\$ 253,719,352</b>

**CITY OF GRAND RAPIDS, MICHIGAN  
WATER SUPPLY SYSTEM FUND  
ADJUSTED OPERATING EXPENSE ZONEGATED BY GOVERNMENTAL UNIT - TASK #22  
FISCAL YEAR ENDED JUNE 30, 2022**

COST CENTER	ADJUSTED EXPENSE BY COST CENTER	INTEGRATED SYSTEM	RETAIL						WHOLESALE			
			CITY OF GR	CITY OF WALKER	CITY OF KENTWOOD	CASCADE TOWNSHIP	GR TOWNSHIP	TALLMADGE TOWNSHIP	CITY OF EAST GR	COUNTY OF OTTAWA	ADA TOWNSHIP	
FILTRATION PLANT	\$ 10,304,751	\$ 10,304,751										
PUMPING STATIONS:												
A. PRIMARY TRANSPORT	423,123	423,123										
B. INTERMEDIATE TRANSPORT	2,490,363		1,341,898	22,677	440,205	254,155	210,604	-	55,056	-	165,768	
WATERMAINS:												
A. PRIMARY TRANSPORT	360,721		207,769	31,148	45,822	36,656	19,894	115	3,366	-	15,951	
B. INTERMEDIATE TRANSPORT	1,844,604		678,114	397,900	298,420	279,568	136,777	30,454	-	-	23,371	
C. LOCAL DISTRIBUTION	4,731,622		3,440,835	376,732	333,059	261,706	301,641	17,649	-	-	-	
RETAIL CUSTOMER METERING *	3,439,064		2,526,062	286,955	240,700	174,636	194,685	16,026				
SUBTOTAL OPERATING EXPENSE	23,594,248	10,727,874	8,194,678	1,115,412	1,358,206	1,006,721	863,601	64,244	58,422	-	205,090	
ENGINEERING SERVICES	1,443,566	656,361	501,379	68,237	83,106	61,597	52,835	3,926	3,580	-	12,545	
ADMINISTRATIVE EXPENSE	3,937,688	1,404,632	1,921,381	146,030	177,849	131,819	113,067	8,403	7,661	-	26,846	
TOTAL	\$ 28,975,501	\$ 12,788,867	\$ 10,617,438	\$ 1,329,679	\$ 1,619,161	\$ 1,200,137	\$ 1,029,503	\$ 76,573	\$ 69,663	\$ -	\$ 244,481	

\* Reflects adjustment for circuit breaker provisions per the third amendment to W/S service agreements.

**METHOD OF DISTRIBUTION**

FILTRATION PLANTS	100.00%	100.00%										
PUMPING STATIONS												
A. PRIMARY TRANSPORT	100.00%	100.00%										
B. INTERMEDIATE TRANSPORT	100.00%		53.883%	0.911%	17.676%	10.206%	8.457%		2.211%		6.656%	
MEMO												
WATERMAINS												
TOTAL MILES: 1,195.99												
A. PRIMARY TRANSPORT	100.000%		57.598%	8.635%	12.703%	10.162%	5.515%	0.032%	0.933%		4.422%	
MILES 62.19			35.82	5.37	7.90	6.32	3.43	0.02	0.58	-	2.75	
B. INTERMEDIATE TRANSPORT	100.000%		36.762%	21.571%	16.178%	15.156%	7.415%	1.651%			1.267%	
MILES 318.02			116.91	68.60	51.45	48.20	23.58	5.25	-	-	4.03	
C. LOCAL DISTRIBUTION	100.000%		72.720%	7.962%	7.039%	5.531%	6.375%	0.373%				
MILES 815.78			593.24	64.95	57.42	45.12	52.01	3.04	-	-	-	
RETAIL CUSTOMER METERING (1)	100.000%		73.452%	8.344%	6.999%	5.078%	5.661%	0.466%				
NUMBER OF METERS 81,396.00			59,787.00	6,792.00	5,697.00	4,133.00	4,608.00	379.00				
ENGINEERING SERVICES (2)	100.000%	45.468%	34.732%	4.727%	5.757%	4.267%	3.660%	0.272%	0.248%		0.869%	
ADMINISTRATIVE EXPENSE (3)	100.000%	35.670%	48.795%	3.709%	4.517%	3.348%	2.871%	0.213%	0.195%		0.682%	

NOTES:

(1) ALLOCATION BASED ON NUMBER OF METERS.

(2) ALLOCATION BASED ON DIRECT OPERATING EXPENSE.

(3) ALLOCATION BASED ON DIRECT OPERATING EXPENSE, ADJUSTED FOR ANY COST ASSIGNABLE EXCLUSIVELY TO GR OR RETAIL COMMUNITIES, IF APPLICABLE.

**CITY OF GRAND RAPIDS, MICHIGAN  
 WATER RATE STUDY  
 WATER SUPPLY SYSTEM FUND  
 TASK NO. 23**

ASSIGN OTHER OPERATING REVENUES AND UNDERUTILIZED PENALTY CREDIT FROM PREVIOUS YEAR TO EACH GOVERNMENTAL ENTITY - TASK NO. 7

BASIS OF ALLOCATION: RETAIL BILLINGS BY GOVERNMENTAL ENTITY - TASK NO. 6

	<u>RETAIL BILLINGS</u>	<u>PERCENTAGE OF TOTAL</u>	<u>ALLOCATION</u>
CITY OF GRAND RAPIDS	\$ 29,075,148	65.3184%	\$ 583,880
CITY OF WALKER	3,887,288	8.7329%	78,063
CITY OF KENTWOOD	4,752,896	10.6776%	95,447
CASCADE TOWNSHIP	3,811,442	8.5626%	76,541
GRAND RAPIDS TOWNSHIP	2,767,306	6.2169%	55,573
TALLMADGE TOWNSHIP	218,816	0.4916%	4,394
	<u>\$ 44,512,896</u>	<u>100.0000%</u>	<u>\$ 893,898</u>

**CITY OF GRAND RAPIDS, MICHIGAN  
 WATER SUPPLY SYSTEM FUND  
 ASSIGN DEPRECIATION EXPENSE TO CUSTOMER COMMUNITIES- TASK NO. 24  
 FISCAL YEAR ENDED JUNE 30, 2023**

COST CENTER	DEPRECIATION EXPENSE	INTEGRATED SYSTEM	RETAIL							WHOLESALE			TOTAL
			CITY OF GR	CITY OF WALKER	CITY OF KENTWOOD	CASCADE TOWNSHIP	GR TOWNSHIP	TALLMADGE TOWNSHIP	CITY OF EAST GR	COUNTY OF OTTAWA	ADA TOWNSHIP		
BY PHYSICAL LOCATION- TASK 11		\$ 5,187,897	\$ 4,260,651	\$ 454,845	\$ 629,337	\$ 324,017	\$ 288,405	\$ 41,378	\$ -	\$ -	\$ -	\$ 11,186,530	
IN SERVICE- TASK 10		333,461	87,949	-	5,542	54,109	10,108	-	186	-	1,347	492,702	
PUMPING STATIONS:													
KNAPP SERVICE CENTER	\$ 89,499		(64,188)	-	3,934	4,088	31,859	-	-	-	24,307	-	
LIVINGSTON	132,366		(40,680)	-	3,061	2,524	19,389	-	-	-	15,706	-	
FRANKLIN	301,852		(206,075)	-	108,572	62,863	-	-	34,640	-	-	-	
LEFFINGWELL	-		-	-	-	-	-	-	-	-	-	-	
BRISTOL	23,020												
EAST PARIS	210,021		12,470	-	(81,267)	68,797	-	-	-	-	-	-	
BURTON	12,447												
COLDBROOK PS PUMP 2	12,976		(194)	-	-	-	194	-	-	-	-	-	
COVELL	57,743		(32,093)	32,093	-	-	-	-	-	-	-	-	
WILSON	169,453		(120,920)	115,498	-	-	-	5,422	-	-	-	-	
LIVINGSTON EIPD	241,989		(1,028)	-	-	-	1,028	-	-	-	-	-	
STORAGE TANKS:													
ELKS	7,807		(2,786)	2,772	-	-	-	14	-	-	-	-	
KNAPP	225		(159)	-	10	10	79	-	-	-	60	-	
CAMBRIDGE	23,697		(3,221)	-	3,221	-	-	-	-	-	-	-	
PATTERSON	101,837		7,039	-	(82,760)	75,721	-	-	-	-	-	-	
WATERMAINS			(266,337)	786	43,027	90,975	50,241	2,935	11,332	-	67,041	-	
ADJUSTED BY ZONEGATING		5,521,358	3,630,428	605,994	632,677	683,104	401,303	49,749	46,158	-	108,461	11,679,232	
LESS DEPR ON CIS (TASK 4/5)			-									-	
LESS CONTRIBUTIONS AMORTIZED													
TASK NO. 21		(7,735)	(338,801)	(320,677)	(269,774)	(280,277)	(218,767)	(40,780)	-	-	-	(1,476,811)	
TOTAL		\$ 5,513,623	\$ 3,291,627	\$ 285,317	\$ 362,903	\$ 402,827	\$ 182,536	\$ 8,969	\$ 46,158	\$ -	\$ 108,461	\$ 10,202,421	

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**CITY OF GRAND RAPIDS, MICHIGAN  
WATER SUPPLY SYSTEM FUND  
ACCUMULATE REVENUE REQUIREMENTS BY CUSTOMER COMMUNITIES- TASK NO. 25  
FISCAL YEAR ENDED JUNE 30, 2023**

COST CENTER	INTEGRATED SYSTEM	RETAIL						WHOLESALE			TOTAL
		CITY OF GR	CITY OF WALKER	CITY OF KENTWOOD	CASCADE TOWNSHIP	GR TOWNSHIP	TALLMADGE TOWNSHIP	CITY OF EAST GR	COUNTY OF OTTAWA	ADA TOWNSHIP	
OPERATION & MAINTENANCE EXPENSE- TASK NO. 22	\$ 12,788,867	\$ 10,617,438	\$ 1,329,679	\$ 1,619,161	\$ 1,200,137	\$ 1,029,503	\$ 76,573	\$ 69,663	\$ -	\$ 244,481	\$ 28,975,501
DEPRECIATION EXPENSE TASK NO. 24	5,513,623	3,291,627	285,317	362,903	402,827	182,536	8,969	46,158	-	108,461	10,202,421
RETURN ON SYSTEM INVESTMENT TASK NO. 21	5,196,190	8,046,187	559,862	852,512	1,028,101	615,589	22,084	86,792	-	371,528	16,778,845
REVENUE CREDITS- TASK NO. 23	-	(583,880)	(78,063)	(95,447)	(76,541)	(55,573)	(4,394)	-	-	-	(893,898)
ALLOCATE:											
INTEG CONN. FEE CREDIT (A)	-	(196,443)	(39,719)	(42,660)	(31,085)	(21,504)	(2,976)	(14,099)	-	(16,973)	(365,459)
INTEGRATED SYSTEM (A)	(23,498,680)	11,119,969	2,248,349	2,414,840	1,759,588	1,217,288	168,478	798,079	2,811,283	960,806	-
LESS: CIRCUIT BREAKER (B)		(224,456)	(57,932)	-	(6,236)	-	-				(288,624)
	<u>\$ -</u>	<u>\$ 32,070,442</u>	<u>\$ 4,247,493</u>	<u>\$ 5,111,309</u>	<u>\$ 4,276,791</u>	<u>\$ 2,967,839</u>	<u>\$ 268,734</u>	<u>\$ 986,593</u>	<u>\$ 2,811,283</u>	<u>\$ 1,668,303</u>	<u>\$ 54,408,787</u>

(A) ALLOCATED ON THE BASIS OF RELATIVE BILLED VOLUME & LAND AREA TO UAB PARTNERS. OTTAWA'S ALLOCATION IS BASED ON OLD CONTRACT AND EXCLUDES ANY COST OF COLDBROOK PUMPING.

(B) PURSUANT TO CITY AND CUSTOMER COMMUNITY CIRCUIT BREAKER, AS PROVIDED FOR BY THE THIRD AMENDMENT TO THE UNIFORM SERVICE AGREEMENTS.

**CITY OF GRAND RAPIDS, MICHIGAN  
WATER RATE STUDY  
WATER SUPPLY SYSTEM FUND  
TASK NO. 25A**

REVIEW THE REVENUE REQUIREMENTS TO ASSURE COMPLIANCE WITH THE APPLICABLE BOND ORDINANCE PROVISIONS.

	<u>YEAR ENDED 6/30/23</u>	<u>PRO FORMA * 6/30/24</u>
<b>REVENUES:</b>		
RETAIL/WHOLESALE WATER SALES	\$ 49,679,585	\$ 52,266,741
CONNECTION FEES/FRONT FOOT FEES	740,193	575,000
BILLABLE TO SDS FUND	2,467,057	3,399,828
OTHER OPERATING REVENUES	1,994,381	1,591,000
INTEREST ON INVESTMENTS	1,502,124	1,404,427
MISCELLANEOUS	732,177	449,243
TOTAL REVENUES	<u>\$ 57,115,517</u>	<u>\$ 59,686,239</u>
<b>OPERATING EXPENSES:</b>		
OPERATIONS & MAINTENANCE	\$ 31,814,518	\$ 36,798,600
DEPRECIATION	11,186,530	11,186,530
TOTAL EXPENSES	<u>\$ 43,001,048</u>	<u>\$ 47,985,130</u>
ADDITIONS: DEPRECIATION	<u>11,186,530</u>	<u>11,186,530</u>
NET EARNINGS OF THE SYSTEM	<u>\$ 25,300,999</u>	<u>\$ 22,887,639</u>
<b>DEBT SERVICE</b>		
SERIES 2020 BONDS	\$ 1,746,000	\$ 1,748,750
SERIES 2018 BONDS	2,088,100	2,087,850
SERIES 2016 BONDS	2,751,250	2,752,500
SERIES 2015 BONDS	2,246,750	2,252,250
SERIES 2013 BONDS	232,231	242,481
SENIOR LIEN	9,064,331	9,083,831
JUNIOR LIEN **	1,612,870	1,743,045
TOTAL	<u>10,677,201</u>	<u>10,826,877</u>
COVERAGE RATIO - SENIOR DEBT	<u>2.79</u>	<u>2.52</u>
COVERAGE RATIO - ALL DEBT	<u>2.37</u>	<u>2.11</u>

\* WATER SALES ADJUSTED FOR RATE REVISIONS OF 5.68% AND 6.65% EFFECTIVE 1/1/23 AND 1/1/24, RESPECTIVELY; OTHER REVENUES AND OPERATIONS & MAINTENANCE EXPENSE PER 2023 FISCAL PLAN, ADJUSTED FOR CARRYFORWARDS AND KNOWN ADJUSTMENTS.

\*\* AMOUNTS IN PRO FORMA ARE BASED ON MAXIMUM PRINCIPAL AND DO NOT INCLUDE PRINCIPAL FORGIVENESS IF NOT YET FINALIZED.

**SUMMARY**

**WATER RATE STUDY  
WATER SUPPLY SYSTEM FUND  
RATE ANALYSIS - TASK NO. 26**

INITIAL SYSTEM REVENUE REQUIREMENTS		\$ 54,697,411
REVENUES FROM CURRENT RATES		
MONTHLY METER CHARGE	\$ 13,466,717	
MONTHLY BILLING CHARGE	3,515,048	
COMMODITY CHARGE	33,082,703	
MONTHLY FIRE PROTECTION	970,949	
ANNUAL HYDRANT CHARGE	<u>54,093</u>	<u>(51,089,510)</u>
INITIAL REQUIRED REVENUE INCREASE (DECREASE)		<u>\$ 3,607,902.00</u>
INITIAL PERCENTAGE INCREASE (DECREASE) OVER EXISTING RATES		<u>7.06%</u>
INITIAL SYSTEM REVENUE REQUIREMENTS FROM ABOVE		\$ 54,697,411
LESS: AMOUNT OF CIRCUIT BREAKER RELIEF TO REDUCE RR's TO RETAIL		(288,624)
SYSTEM REVENUE REQUIREMENTS		<u>\$ 54,408,787</u>
ACTUAL REQUIRED AMOUNT OF REVENUE INCREASE (DECREASE)		<u>\$ 3,319,278</u>
ACTUAL PERCENTAGE INCREASE (DECREASE) OVER EXISTING RATES		<u>6.50%</u>

**WATER RATE STUDY  
WATER SUPPLY SYSTEM FUND  
TASK NO. 26**

METER SIZE	EQUIV. FACTOR	CITY OF GR		CITY OF WALKER		CITY OF KENTWOOD		CASCADE TWP		GR TWP		TALLMADGE TWP	
		METERS	EQUIV.	METERS	EQUIV.	METERS	EQUIV.	METERS	EQUIV.	METERS	EQUIV.	METERS	EQUIV.
A 3/4" or less	1.0000	53,513	53,513	5,512	5,512	3,770	3,770	3,010	3,010	3,902	3,902	299	299
B 1"	1.7778	2,594	4,612	496	882	680	1,209	394	700	340	604	34	60
C 1 1/4"	2.7778	-	-	-	-	-	-	-	-	-	-	-	-
D 1 1/2"	4.0000	1,263	5,052	272	1,088	452	1,808	291	1,164	167	668	16	64
E 2"	7.1111	780	5,547	110	782	195	1,387	95	676	39	277	1	7
F 3"	16.0000	123	1,968	15	240	23	368	10	160	10	160	1	16
G 4"	28.4444	76	2,162	8	228	12	341	2	57	3	85	1	28
H 6" and over	64.0000	16	1,024	2	128	3	192	-	-	1	64	-	-
		<u>58,365</u>	<u>73,878</u>	<u>6,415</u>	<u>8,860</u>	<u>5,135</u>	<u>9,075</u>	<u>3,802</u>	<u>5,767</u>	<u>4,462</u>	<u>5,760</u>	<u>352</u>	<u>474</u>
<b>FIRE PROTECTION SERVICE</b>													
H 6"		1,089		251		317		187		125		22	
I 8"		298		97		212		115		20		3	
J 10"		15		6		9		2		-		-	
K 12"		20		23		24		27		1		2	
		<u>1,422</u>		<u>377</u>		<u>562</u>		<u>331</u>		<u>146</u>		<u>27</u>	
	TOTAL	<u>59,787</u>		<u>6,792</u>		<u>5,697</u>		<u>4,133</u>		<u>4,608</u>		<u>379</u>	
	TOTAL											<u>81,396</u>	

Source: City of Grand Rapids, Michigan, Water/Sewer Customer Accounts/Meters Report, dated November 1, 2023.

**CITY OF GRAND RAPIDS, MICHIGAN**

**WATER RATE STUDY  
WATER SUPPLY SYSTEM FUND  
RATE ANALYSIS - TASK NO. 26**

SYSTEM REVENUE REQUIREMENTS \$ 32,070,442

REVENUES FROM CURRENT RATES

MONTHLY METER CHARGE

73,878 meter equivalents x \$ 8.55 x 12 = \$ 7,579,883

MONTHLY BILLING CHARGE

58,365 meters x \$ 3.73 x 12 = 2,612,417

COMMODITY CHARGE

8,362,613 units (100 CF) x \$ 2.31 = 19,317,636

MONTHLY FIRE PROTECTION

445,642

ANNUAL HYDRANT CHARGE

- (29,955,578)

REQUIRED REVENUE INCREASE (DECREASE)

\$ 2,114,864

PERCENTAGE INCREASE (DECREASE) OVER EXISTING RATES

7.06%

\* REFLECTS RELIEF FROM CIRCUIT BREAKER, IN THE AMOUNT OF \$ 224,456

**CITY OF GRAND RAPIDS, MICHIGAN**

**WATER RATE STUDY  
WATER SUPPLY SYSTEM FUND  
RATE ANALYSIS - TASK NO. 27**

COMMODITY CHARGE:

$$\frac{\text{COMMODITY CHARGE @ 64\%}}{\text{BILLED UNITS}} = \frac{\$20,525,083}{8,362,613} = \underline{\underline{\$ 2.45 /100 CF *}}$$

MONTHLY SERVICE CHARGE:

SYSTEM REVENUE REQUIREMENTS **	\$ 32,070,442
NEW COMMODITY CHARGE 8,362,613 x \$ 2.45	\$ 20,488,402
NEW MONTHLY BILLING CHARGE 58,365 x \$ 3.71 x 12	2,598,410
MONTHLY FIRE PROTECTION CHARGE	445,642
ANNUAL HYDRANT CHARGE	-
	<u>(23,532,454)</u>
	<u><u>\$ 8,537,988</u></u>

$$\text{MONTHLY METER CHARGE} = \frac{\$8,537,988}{73,878 \times 12} = \underline{\underline{\$ 9.63 \text{ MONTHLY}}}$$

<u>METER SIZE</u>	<u>EQUIVALENT</u>	<u>MONTHLY SERVICE CHARGE</u>			<u>PRESENT</u>
		<u>METER</u>	<u>BILLING</u>	<u>TOTAL</u>	
3/4" or less	1.0000	\$ 9.63	\$ 3.71	\$ 13.34	\$ 12.28
1"	1.7778	17.12	3.71	20.83	18.93
1 1/4"	2.7778	26.75	3.71	30.46	27.48
1 1/2"	4.0000	38.52	3.71	42.23	37.93
2"	7.1111	68.48	3.71	72.19	64.53
3"	16.0000	154.08	3.71	157.79	140.53
4"	28.4444	273.92	3.71	277.63	246.93
6" and over	64.0000	616.32	3.71	620.03	550.93

\* NEW RATES EFFECTIVE, ON A PRO-RATA BASIS, JANUARY 1, 2024

\*\* REFLECTS RELIEF FROM CIRCUIT BREAKER, IN THE AMOUNT OF \$ 224,456

**CITY OF WALKER, MICHIGAN**

**WATER RATE STUDY  
WATER SUPPLY SYSTEM FUND  
RATE ANALYSIS - TASK NO. 26**

SYSTEM REVENUE REQUIREMENTS*	\$ 4,247,493
LESS: CASH CONTRIBUTION	(124,686)
SYSTEM REVENUE REQUIREMENTS	<u>\$ 4,122,807</u>

REVENUES FROM CURRENT RATES

MONTHLY METER CHARGE  
8,860 meter equivalents x \$ 10.88 x 12 = \$ 1,156,762

MONTHLY BILLING CHARGE  
6,415 meters x \$ 3.73 x 12 = 287,135

COMMODITY CHARGE  
1,256,449 units (100 CF) x \$ 1.90 = 2,387,253

MONTHLY FIRE PROTECTION 136,245

ANNUAL HYDRANT CHARGE - (3,967,395)

REQUIRED REVENUE INCREASE (DECREASE) \$ 155,412

PERCENTAGE INCREASE (DECREASE) OVER EXISTING RATES 3.92%

\* REFLECTS RELIEF FROM CIRCUIT BREAKER, IN THE AMOUNT OF \$ 57,932

**CITY OF WALKER, MICHIGAN**

**WATER RATE STUDY  
WATER SUPPLY SYSTEM FUND  
RATE ANALYSIS - TASK NO. 27**

COMMODITY CHARGE:

PRESENT CHARGE x RATE ADJUSTMENT \$ 1.97 /100 CF \*  
 \$ 1.90 x 103.92%

MONTHLY SERVICE CHARGE:

SYSTEM REVENUE REQUIREMENTS **	\$ 4,122,807
NEW COMMODITY CHARGE 1,256,449 x \$ 1.97	\$ 2,475,205
NEW MONTHLY BILLING CHARGE 6,415 x \$ 3.71 x 12	285,596
MONTHLY FIRE PROTECTION CHARGE	136,245
ANNUAL HYDRANT CHARGE	<u>-</u> (2,897,046)
	<u><u>\$ 1,225,761</u></u>

MONTHLY METER CHARGE =  $\frac{\$1,225,761}{8,860 \times 12}$  = \$ 11.53 MONTHLY

METER SIZE	EQUIVALENT	MONTHLY SERVICE CHARGE			PRESENT
		METER	BILLING	TOTAL	
3/4" or less	1.0000	\$ 11.53	\$ 3.71	\$ 15.24	\$ 14.61
1"	1.7778	20.50	3.71	24.21	23.07
1 1/4"	2.7778	32.03	3.71	35.74	33.95
1 1/2"	4.0000	46.12	3.71	49.83	47.25
2"	7.1111	81.99	3.71	85.70	81.10
3"	16.0000	184.48	3.71	188.19	177.81
4"	28.4444	327.96	3.71	331.67	313.21
6" and over	64.0000	737.92	3.71	741.63	700.05

\* NEW RATES EFFECTIVE, ON A PRO-RATA BASIS, JANUARY 1, 2024

\*\*REFLECTS RELIEF FROM CIRCUIT BREAKER, IN THE AMOUNT OF \$ 57,932

**CITY OF KENTWOOD, MICHIGAN**

**WATER RATE STUDY  
WATER SUPPLY SYSTEM FUND  
RATE ANALYSIS - TASK NO. 26**

SYSTEM REVENUE REQUIREMENTS \$ 5,111,309

REVENUES FROM CURRENT RATES

MONTHLY METER CHARGE

9,075 meter equivalents x \$ 13.52 x 12 = \$ 1,472,328

MONTHLY BILLING CHARGE

5,135 meters x \$ 3.73 x 12 = 229,843

COMMODITY CHARGE

1,714,141 units (100 CF) x \$ 1.80 = 3,085,454

MONTHLY FIRE PROTECTION

208,590

ANNUAL HYDRANT CHARGE

- (4,996,215)

REQUIRED REVENUE INCREASE (DECREASE)

\$ 115,094

PERCENTAGE INCREASE (DECREASE) OVER EXISTING RATES

2.30%

**CITY OF KENTWOOD, MICHIGAN**

**WATER RATE STUDY  
WATER SUPPLY SYSTEM FUND  
RATE ANALYSIS - TASK NO. 27**

COMMODITY CHARGE:

PRESENT CHARGE x RATE ADJUSTMENT \$ 1.84 /100 CF \*  
 \$ 1.80 x 102.30%

MONTHLY SERVICE CHARGE:

SYSTEM REVENUE REQUIREMENTS	\$ 5,111,309
NEW COMMODITY CHARGE 1,714,141 x \$ 1.84	\$ 3,154,019
NEW MONTHLY BILLING CHARGE 5,135 x \$ 3.71 x 12	228,610
MONTHLY FIRE PROTECTION CHARGE	208,590
ANNUAL HYDRANT CHARGE	<u>-</u> (3,591,219)
	<u>\$ 1,520,090</u>

MONTHLY METER CHARGE =  $\frac{\$1,520,090}{9,075 \times 12} = \underline{\underline{\$ 13.96 \text{ MONTHLY}}}$

<u>METER SIZE</u>	<u>EQUIVALENT</u>	<u>MONTHLY SERVICE CHARGE</u>			<u>PRESENT</u>
		<u>METER</u>	<u>BILLING</u>	<u>TOTAL</u>	
3/4" or less	1.0000	\$ 13.96	\$ 3.71	\$ 17.67	\$ 17.25
1"	1.7778	24.82	3.71	28.53	27.77
1 1/4"	2.7778	38.78	3.71	42.49	41.29
1 1/2"	4.0000	55.84	3.71	59.55	57.81
2"	7.1111	99.27	3.71	102.98	99.87
3"	16.0000	223.36	3.71	227.07	220.05
4"	28.4444	397.08	3.71	400.79	388.30
6" and over	64.0000	893.44	3.71	897.15	869.01

\* NEW RATES EFFECTIVE, ON A PRO-RATA BASIS, JANUARY 1, 2024

**CASCADE TOWNSHIP**  
**WATER RATE STUDY**  
**WATER SUPPLY SYSTEM FUND**  
**RATE ANALYSIS - TASK NO. 26**

SYSTEM REVENUE REQUIREMENTS\* \$ 4,276,791

REVENUES FROM CURRENT RATES

MONTHLY METER CHARGE					
5,767 meter equivalents	x	\$ 19.97	x	12 =	\$ 1,382,004
MONTHLY BILLING CHARGE					
3,802 meters	x	\$ 3.73	x	12 =	170,178
COMMODITY CHARGE					
936,558 units (100 CF)	x	\$ 2.47	=		2,313,298
MONTHLY FIRE PROTECTION					129,281
ANNUAL HYDRANT CHARGE				-	<u>(3,994,761)</u>
REQUIRED REVENUE INCREASE (DECREASE)					<u>\$ 282,030</u>
PERCENTAGE INCREASE (DECREASE) OVER EXISTING RATES					<u>7.06%</u>

\* REFLECTS RELIEF FROM CIRCUIT BREAKER, IN THE AMOUNT OF \$ 6,236

**CASCADE TOWNSHIP**

**WATER RATE STUDY  
WATER SUPPLY SYSTEM FUND  
RATE ANALYSIS - TASK NO. 27**

COMMODITY CHARGE:

PRESENT CHARGE x RATE ADJUSTMENT \$ 2.64 /100 CF \*  
 \$ 2.47 x 107.06%

MONTHLY SERVICE CHARGE:

SYSTEM REVENUE REQUIREMENTS **	\$ 4,276,791
NEW COMMODITY CHARGE 936,558 x \$ 2.64	\$ 2,472,513
NEW MONTHLY BILLING CHARGE 3,802 x \$ 3.71 x 12	169,265
MONTHLY FIRE PROTECTION CHARGE	129,281
ANNUAL HYDRANT CHARGE	<u>-</u> <span style="float:right"><u>(2,771,059)</u></span>
	<u><u>\$ 1,505,732</u></u>

MONTHLY METER CHARGE =  $\frac{\$1,505,732}{5,767 \times 12} = \underline{\underline{\$ 21.76 \text{ MONTHLY}}}$

METER SIZE	EQUIVALENT	MONTHLY SERVICE CHARGE			PRESENT
		METER	BILLING	TOTAL	
3/4" or less	1.0000	\$ 21.76	\$ 3.71	\$ 25.47	\$ 23.70
1"	1.7778	38.68	3.71	42.39	39.23
1 1/4"	2.7778	60.44	3.71	64.15	59.20
1 1/2"	4.0000	87.04	3.71	90.75	83.61
2"	7.1111	154.74	3.71	158.45	145.74
3"	16.0000	348.16	3.71	351.87	323.25
4"	28.4444	618.95	3.71	622.66	571.76
6" and over	64.0000	1,392.64	3.71	1,396.35	1,281.81

\* NEW RATES EFFECTIVE, ON A PRO-RATA BASIS, JANUARY 1, 2024  
 \*\* REFLECTS RELIEF FROM CIRCUIT BREAKER, IN THE AMOUNT OF \$ 6,236

**GRAND RAPIDS TOWNSHIP**  
**WATER RATE STUDY**  
**WATER SUPPLY SYSTEM FUND**  
**RATE ANALYSIS - TASK NO. 26**

SYSTEM REVENUE REQUIREMENTS\* \$ 2,967,839

REVENUES FROM CURRENT RATES

MONTHLY METER CHARGE			
5,760 meter equivalents	x	\$ 14.56	x 12 = \$ 1,006,387
MONTHLY BILLING CHARGE			
4,462 meters	x	\$ 3.73	x 12 = 199,719
COMMODITY CHARGE			
749,278 units (100 CF)	x	\$ 2.13	= 1,595,962
MONTHLY FIRE PROTECTION			42,141
ANNUAL HYDRANT CHARGE			-
			<u>(2,844,209)</u>
REQUIRED REVENUE INCREASE (DECREASE)			<u>\$ 123,630</u>
PERCENTAGE INCREASE (DECREASE) OVER EXISTING RATES			<u>4.35%</u>

**GRAND RAPIDS TOWNSHIP**

**WATER RATE STUDY  
WATER SUPPLY SYSTEM FUND  
RATE ANALYSIS - TASK NO. 27**

COMMODITY CHARGE:

PRESENT CHARGE x RATE ADJUSTMENT \$ 2.22 /100 CF \*  
 \$ 2.13 x 104.35%

MONTHLY SERVICE CHARGE:

SYSTEM REVENUE REQUIREMENTS	\$ 2,967,839
NEW COMMODITY CHARGE	
749,278 x \$ 2.22	\$ 1,663,397
NEW MONTHLY BILLING CHARGE	
4,462 x \$ 3.71 x 12	198,648
MONTHLY FIRE PROTECTION CHARGE	42,141
ANNUAL HYDRANT CHARGE	<u>-</u>
	<u>(1,904,186)</u>
	<u>\$ 1,063,653</u>

MONTHLY METER CHARGE =  $\frac{\$1,063,653}{5,760 \times 12}$  = \$ 15.39 MONTHLY

<u>METER SIZE</u>	<u>EQUIVALENT</u>	<u>MONTHLY SERVICE CHARGE</u>			<u>PRESENT</u>
		<u>METER</u>	<u>BILLING</u>	<u>TOTAL</u>	
3/4" or less	1.0000	\$ 15.39	\$ 3.71	\$ 19.10	\$ 18.29
1"	1.7778	27.36	3.71	31.07	29.61
1 1/4"	2.7778	42.75	3.71	46.46	44.17
1 1/2"	4.0000	61.56	3.71	65.27	61.97
2"	7.1111	109.44	3.71	113.15	107.27
3"	16.0000	246.24	3.71	249.95	236.69
4"	28.4444	437.76	3.71	441.47	417.88
6" and over	64.0000	984.96	3.71	988.67	935.57

\* NEW RATES EFFECTIVE, ON A PRO-RATA BASIS, JANUARY 1, 2024

**TALLMADGE TOWNSHIP**  
**WATER RATE STUDY**  
**WATER SUPPLY SYSTEM FUND**  
**RATE ANALYSIS - TASK NO. 26**

SYSTEM REVENUE REQUIREMENTS \$ 268,734

REVENUES FROM CURRENT RATES

MONTHLY METER CHARGE			
474 meter equivalents	x	\$ 0.69	x 12 = \$ 3,925
MONTHLY BILLING CHARGE			
352 meters	x	\$ 3.73	x 12 = 15,756
COMMODITY CHARGE			
68,733 units (100 CF)	x	\$ 2.72	= 186,954
MONTHLY FIRE PROTECTION <span style="float: right;">9,050</span>			
ANNUAL HYDRANT CHARGE <span style="float: right;">54,093</span>			
			<u>(269,778)</u>
REQUIRED REVENUE INCREASE (DECREASE)			<u>\$ (1,044)</u>
PERCENTAGE INCREASE (DECREASE) OVER EXISTING RATES			<u><u>-0.39%</u></u>

**TALLMADGE TOWNSHIP**

**WATER RATE STUDY  
WATER SUPPLY SYSTEM FUND  
RATE ANALYSIS - TASK NO. 27**

COMMODITY CHARGE:

PRESENT CHARGE x RATE ADJUSTMENT \$ 2.71 /100 CF \*  
 \$ 2.72 x 99.61%

MONTHLY SERVICE CHARGE:

SYSTEM REVENUE REQUIREMENTS	\$ 268,734
NEW COMMODITY CHARGE 68,733 x \$ 2.71	\$ 186,266
NEW MONTHLY BILLING CHARGE 352 x \$ 3.71 x 12	15,671
MONTHLY FIRE PROTECTION CHARGE	9,050
ANNUAL HYDRANT CHARGE	<u>54,093</u>
	<u>(265,080)</u>
	<u><u>\$ 3,654</u></u>

MONTHLY METER CHARGE =  $\frac{\$3,654}{474 \times 12} = \underline{\underline{\$ 0.64 \text{ MONTHLY}}}$

<u>METER SIZE</u>	<u>EQUIVALENT</u>	<u>MONTHLY SERVICE CHARGE</u>			<u>PRESENT</u>
		<u>METER</u>	<u>BILLING</u>	<u>TOTAL</u>	
3/4" or less	1.0000	\$ 0.64	\$ 3.71	\$ 4.35	\$ 4.42
1"	1.7778	1.14	3.71	4.85	\$ 4.96
1 1/4"	2.7778	1.78	3.71	5.49	\$ 5.65
1 1/2"	4.0000	2.56	3.71	6.27	\$ 6.49
2"	7.1111	4.55	3.71	8.26	\$ 8.64
3"	16.0000	10.24	3.71	13.95	\$ 14.77
4"	28.4444	18.20	3.71	21.91	\$ 23.36
6" and over	64.0000	40.96	3.71	44.67	\$ 47.89

\* NEW RATES EFFECTIVE, ON A PRO-RATA BASIS, JANUARY 1, 2024

**CITY OF EAST GRAND RAPIDS, MICHIGAN**

**WATER RATE STUDY  
WATER SUPPLY SYSTEM FUND  
RATE ANALYSIS - TASK NO. 26**

INTEGRATED SYSTEM REVENUE REQUIREMENTS *		\$	783,980
COMMODITY CHARGE			
(100CF) 596,970 units	x	\$ 1.20	716,364
			<hr/>
REQUIRED COMMODITY REVENUE INCREASE (DECREASE)		\$	<u>67,616</u>
NON-INTEGRATED SYSTEM REVENUE REQUIREMENTS		\$	202,613
MONTHLY SERVICE CHARGE			
\$14,452	x	12 MONTHS	173,424
			<hr/>
REQUIRED SERVICE REVENUE INCREASE (DECREASE)		\$	<u>29,189</u>
PERCENTAGE INCREASE (DECREASE) OVER EXISTING RATES			<u>10.88%</u>

\* NET OF INTEGRATED CONNECTION FEE CREDIT.

**CITY OF EAST GRAND RAPIDS, MICHIGAN**

**WATER RATE STUDY  
WATER SUPPLY SYSTEM FUND  
RATE ANALYSIS - TASK NO. 27**

SYSTEM REVENUE REQUIREMENTS	\$	986,593
NEW COMMODITY CHARGE *		
596,970 x \$1.31 =		(782,031)
		<hr/>
	\$	<u>204,562</u>

MONTHLY SERVICE CHARGE \* = \$ 204,562 / 12 = \$17,047

\* NEW RATES EFFECTIVE ON JANUARY 1, 2024

**ADA TOWNSHIP**  
**WATER RATE STUDY**  
**WATER SUPPLY SYSTEM FUND**  
**RATE ANALYSIS - TASK NO. 26**

INTEGRATED SYSTEM REVENUE REQUIREMENTS *		\$ 943,833
COMMODITY CHARGE		
(100CF) 631,212 units x \$ 1.40		883,697
		883,697
REQUIRED COMMODITY REVENUE INCREASE (DECREASE)		\$ 60,136
NON-INTEGRATED SYSTEM REVENUE REQUIREMENTS		\$ 724,470
MONTHLY SERVICE CHARGE		
\$56,931 x 12 MONTHS		683,172
		683,172
REQUIRED SERVICE REVENUE INCREASE (DECREASE)		\$ 41,298
PERCENTAGE INCREASE (DECREASE) OVER EXISTING RATES		6.47%

\* NET OF INTEGRATED CONNECTION FEE CREDIT.

**ADA TOWNSHIP**  
**WATER RATE STUDY**  
**WATER SUPPLY SYSTEM FUND**  
**RATE ANALYSIS - TASK NO. 27**

SYSTEM REVENUE REQUIREMENTS	\$ 1,668,303
NEW COMMODITY CHARGE *	
631,212 x \$1.50 =	(946,818)
	<hr/>
	<u>\$ 721,485</u>

MONTHLY SERVICE CHARGE \* = \$ 721,485 / 12 = \$60,124

\* NEW RATES EFFECTIVE ON JANUARY 1, 2024

**OTTAWA COUNTY**  
**WATER RATE STUDY**  
**WATER SUPPLY SYSTEM FUND**  
**RATE ANALYSIS - TASK NO. 26**

INTEGRATED SYSTEM REVENUE REQUIREMENTS	\$ 2,811,283
COMMODITY CHARGE	
(100CF) 1,966,731 units   x     \$ 1.32	2,596,085
	<hr/>
REQUIRED COMMODITY REVENUE INCREASE (DECREASE)	<u><u>\$ 215,198</u></u>
NON-INTEGRATED SYSTEM REVENUE REQUIREMENTS	\$ -
MONTHLY SERVICE CHARGE	
\$736                   x     12 MONTHS	8,832
	<hr/>
REQUIRED SERVICE REVENUE INCREASE (DECREASE)	<u><u>\$ (8,832)</u></u>
PERCENTAGE INCREASE (DECREASE) OVER EXISTING RATES	<u><u>7.92%</u></u>

**OTTAWA COUNTY**  
**WATER RATE STUDY**  
**WATER SUPPLY SYSTEM FUND**  
**RATE ANALYSIS - TASK NO. 27**

SYSTEM REVENUE REQUIREMENTS	\$ 2,811,283
NEW COMMODITY CHARGE * 1,966,731 x \$1.43 =	(2,812,425)
	<hr/>
	<u>\$ (1,142)</u>

MONTHLY SERVICE CHARGE \* = \$ - / 12 = \$0

\* NEW RATES EFFECTIVE ON JANUARY 1, 2024

WATER RATE STUDY  
WATER SUPPLY SYSTEM FUND  
RE-EVALUATE FRONT FOOT CHARGES  
TASK NO. 28

The City Engineer's Office has reviewed recent construction costs for water facilities and recommends the following front foot assessment rates:

Water User Type	Definition	2023 Rate	2024 Rate	% Change
Domestic	Property is domicile for single or multiple family use, such as homes, apartments, duplexes, condominium, etc.	\$ 118.00	\$ 130.00	10.17%
Commercial - Industrial	Property used to offer services and / or products, such as retail/wholesale stores, gas stations, restaurants, hotels, schools, churches, etc., and manufacturing or processing facilities (industrial).	\$ 180.00	\$ 220.00	22.22%

The above rates are based on an average of prices quoted in bid proposals which have been received by the City Engineer's Office during the period July 1, 2022 through June 30, 2023. Calculations of the rates are on file in the City Engineer's Office.

WATER RATE STUDY  
WATER SUPPLY SYSTEM FUND  
RE-EVALUATE WATER SERVICE CHARGES  
TASK NO. 29

The City Engineer's Office has evaluated the cost for water services and recommends the following water service charges:

Service Size	Year	50' R.O.W.	60' R.O.W.	66' R.O.W.	80' R.O.W.	100' R.O.W.
1" Water Service	2023	\$ 3,200	\$ 3,600	\$ 3,900	\$ 4,500	\$ 5,400
	2024	\$ 3,500	\$ 4,000	\$ 4,200	\$ 4,800	\$ 5,700
1-1/2" Water Service	2023	\$ 4,500	\$ 5,100	\$ 5,500	\$ 6,200	\$ 7,300
	2024	\$ 5,000	\$ 5,600	\$ 5,900	\$ 6,600	\$ 7,800
2" Water Service	2023	\$ 5,000	\$ 5,500	\$ 5,900	\$ 6,700	\$ 7,800
	2024	\$ 5,900	\$ 6,500	\$ 6,800	\$ 7,500	\$ 8,500

The percent increases of the water service pipe charges are as shown below:

Service Size	50' R.O.W.	60' R.O.W.	66' R.O.W.	80' R.O.W.	100' R.O.W.
1" Water Service	9.38%	11.11%	7.69%	6.67%	5.56%
1-1/2" Water Service	11.11%	9.80%	7.27%	6.45%	6.85%
2" Water Service	18.00%	18.18%	15.25%	11.94%	8.97%

# MEMORANDUM

CITY OF GRAND RAPIDS

DATE: October 19, 2023

TO: Tai Verbrugge  
Utility Financial Officer

FROM: Samarhia Giffel  
Administrative Services Officer

**SUBJECT:** 2023 WATER RATE STUDY TASK #30  
FEES, CHARGES, and PENALTIES

Fees, charges, and penalties have been reviewed and determined in accordance with the Water System Rules and Regulations and are approved for use beginning January 1, 2024.

The following are recommended changes in fee amounts, aligned to support resource requirements and cost recovery:

#### **Fire Protection Monthly**

- Fee increases 3.677% for all sizes based on Bond Buyer Index (BBI) referenced from Task 19.

#### **Meter Set/Installation and Service On/Off Requests**

- Meter installations for all sizes increased 7.14% from \$70 to \$75 to account for associated administrative costs for clerical tasks and field work including city vehicle mileage and fuel.
- Inspection/Repair increased 7.14% from \$70 to \$75 to account for associated administrative costs for clerical tasks and field work including city vehicle mileage and fuel.

#### **Meter Replacement**

- Fee increases 31% for 3" meters.

#### **Miscellaneous**

- Fees increased and aligned to support Water Engineering resource requirements and cost recovery.

Please see the attached fee, charges, and penalties schedule in entirety.

SG

Cc: Wayne Jernberg, Water System Manager

Jay Ouzts, Environmental Services Manager  
Arden Postma, Hydraulic Engineer  
Chad Reul, Utility Field Operations Superintendent

**Fees, Charges, and Penalties**

**2023 Fee (\$) 2024 Fee (\$) % Change**

<b>Fire Protection Monthly (based on pipe size)</b>			
6"	\$21.35	\$22.14	3.70%
8"	\$37.88	\$39.28	3.70%
10"	\$59.35	\$61.55	3.70%
12"	\$85.41	\$88.57	3.70%

*\*BBI referenced from Task 19*

<b>Hydrant Use Per Season</b>			
Hydrant Use Permit Fee (Non-Metered Hydrant Connection - Residential Customers)	\$50	\$50	0%
Hydrant Use Permit Fee (Metered Hydrant Connection)	\$300	\$300	0%
Non-Metered Hydrant Connection Use Fee (pool filling per connection)	\$100 (RD) + \$75/week	\$100 (RD) + \$75/week	0%
Metered Hydrant Connection Use Fee * (per connection)	\$500 (RD) + \$25/week	\$500 (RD) + \$25/week	0%

**RD=Refundable Deposit**

*\*Plus metered volume (Commodity Charges at City of Grand Rapids Rate)*

*A \$100 Services fee applies for all hydrant connection assistance requests*

<b>Tapping Permits</b>			
All sizes	\$375	\$375	0%

<b>Meter Set/Installation and Service On/Off Requests</b>			
<i>All non-emergency service requests must be scheduled (normal service Hours 8am - 7pm M-F)</i>			
All sizes	\$70	\$75	7.14%
Inspection/Repair Scheduled On & Off Request (may also need meter set/install)	\$70	\$75	7.14%

<b>Meter Reading</b>			
Final or Actual Reading	\$60	\$60	0%
Meter Interface Unit Replacement (includes Smart Endpoint Device)	\$170	\$170	0%

<b>Meter Testing</b>			
<i>Meter Testing Fee: Charged and paid by customer prior to test, if test results find the meter to read in error beyond AWWA acceptance and in the benefit of the Water System, the fee will be refunded, and a new meter will be set.</i>			
<i>*In addition to the Meter Testing fee a Service On/Off Requests fee applies.</i>			
¾" and 1"	\$150	\$150	0%
1 ½"	\$200	\$200	0%
2"	\$350	\$350	0%
3"	\$500	\$500	0%
4" or larger	Cost	Cost	0%

*\*Ultrasonic Meters charged at costs*

<b>Security Deposit</b>			
Minimum Deposit Amount	\$500	\$500	0%

**Fees, Charges, and Penalties**

**2023 Fee (\$)**   **2024 Fee (\$)**   **% Change**

**Meter Replacement (Non-System Planned/Scheduled Replacement)**

*Meter Replacement Fee: Charged to customer at time of discovery of a system known meter that requires replacement outside of Water System planned replacement program scheduling as a result of infrastructure loss (Frozen/Missing/Stolen/Damaged), unnecessary replacement, and/or customer request. Customer requested meter replacement requires meter testing prior to approval. In addition to the Meter Replacement fee a Meter Set/Installation fee applies. Note: If standard meter is unavailable, Ultrasonic meters will be charged at cost.*

	2023 Fee (\$)	2024 Fee (\$)	% Change
¾"	\$210	\$210	0%
1"	\$300	\$300	0%
1 ½"	\$750	\$750	0%
2"	\$880	\$880	0%
3"	\$1,650	\$2,162	31%
4" or larger	Cost	Cost	0%

**Miscellaneous**

	2023 Fee (\$)	2024 Fee (\$)	% Change
Street Opening Permit (Water/ESD, City Engineering, Streets)	\$300	\$300	0%
Water Inspection Permit (Within City Limits)	\$85	\$90	5.88%
Water Inspection Permit (Outside City Limits)	\$100	\$105	5%
Sanitary Service Line Inspection Permit (Within City Limits)	\$85	\$90	5.88%
Sanitary Service Line Inspection Permit (Outside City Limits)	\$100	\$105	5%
Storm Service Line Inspection Permit (Within City Limits)	\$85	\$90	5.88%
Storm Service Line Inspection Permit (Outside City Limits)	\$100	\$105	5%
Footing Drain Lateral Inspection Permit (Within City Limits)	\$85	\$90	5.88%
Footing Drain Lateral Inspection Permit (Outside City Limits)	\$100	\$105	5%
Sewer Lateral Service Demolition/Cap off Inspection Fee (Within City Limits)	\$85	\$90	5.88%
Sewer Later Service Demolition/Cap off Inspection Fee (Outside City Limits)	\$100	\$105	5%
Plumbing Service Re-inspection Fee	\$85	\$90	5.88%
Cross Connection Re-inspection Fee	\$75	\$75	0%

<b>Fees, Charges, and Penalties</b>	<b>2023 Fee (\$)</b>	<b>2024 Fee (\$)</b>	<b>% Change</b>
<b>Miscellaneous Cont...</b>			
Irrigation Service Cut/Cap Administrative Fee	\$70	\$70	0%
Delinquent Commercial Backflow Test Fee (Test fees will be applied, per device, upon the dues dates of the 1 <sup>st</sup> notice and final notice)	\$25	\$35	40%
Hydrant Flow Test	\$200	\$200	0%

<b>Services</b>			
Customer requested on-site service visit (hydrant connection assistance requests, internal plumbing, customer issue)	\$100	\$100	0%

<b>Penalties</b>			
Late Payment Penalty	10% of Net	10% of Net	0%
Return check or payment charge (City Treasurer processing fee)	\$30	\$30	0%
Administrative/Research Fee (Review or processing of account for non-payment, returned payment, shut-off, posting of property, and/or backflow non-compliance) (Documentation creation for account of location information- FOIA request may still be required)	\$70	\$70	0%
Missed Appointment	\$50	\$50	0%
Unauthorized operation, tampering, or removal of any Water or Sanitary Sewer System owned or maintained, valve, asset, infrastructure, or equipment (for example, but not limited to, valves, meters, meter reading equipment, hydrants, and curb stops & box) ** & ***	\$500	\$500	0%
Unauthorized or Illegal connection to any Water or Sanitary Sewer System owned pipe, property, and/or private plumbing system served by the Water and/or Sanitary Sewer System ** & ***	\$500	\$500	0%
Failure to return or return of damaged beyond repair/ repairable hydrant connection equipment	Cost + 10%	Cost + 10%	0%
Repair/Replace damage to a fire hydrant	Cost + 10%	Cost + 10%	0%
Permit infractions/violations ** & ***	\$100	\$100	0%
Unauthorized service tap of Water or Sewer main** & ***	\$500	\$500	0%

**\*\* Plus double the commodity rate for estimated volume and any unbilled readiness to serve charges that may apply**

**\*\*\* Penalties shall double with each subsequent infraction**

<b>Miscellaneous Damage or Loss</b>			
Any cost recovery due to damage caused or undue oversight of any location, account, or infrastructure of the Water and/or Sanitary Sewer System will be charged in accordance with cost recovery methodology for time and materials, including a 10% administrative charge for processing	Cost + 10%	Cost +10%	0%

**CITY OF GRAND RAPIDS, MICHIGAN  
WATER RATE STUDY  
WATER SUPPLY SYSTEM FUND  
TASK NO. 31**

*THERE IS NO TASK 31 FOR THE WATER RATE STUDY.*

# MEMORANDUM

CITY OF GRAND RAPIDS

**DATE:** August 30, 2023

**TO:** Tai Verbrugge  
Utility Financial Officer

**FROM:** Arden Postma, P.E.  
Hydraulic Engineer

**SUBJECT:** **2023 WATER RATE STUDY- TASK #32, WATER MAIN OVERSIZING RATES**

Water main oversizing rates are established for this year as noted below:

<u>Pipe Size</u>	<u>2022 Rate</u>	<u>2023 Rate</u>	<u>2024 Rate</u>	<u>2023 to 2024 % Change</u>
8"-12"	\$32.94/ft	\$30.17/ft	\$41.75/ft	38.37%
12"-16"	\$39.85/ft	\$57.40/ft	\$69.76/ft	21.53%
8"-16"	\$72.79/ft	\$87.57/ft	\$111.51/ft	27.34%

These rates have been determined in accordance with the Water System Rules and Regulations, and are approved for use from January 1, 2024 through December 31, 2024. Background information and calculations to establish these rates are on file in the Utility Engineering, Distribution and Collection Office.

Due to the volatility in the economic marketplace and interruptions in the supply chain, material prices have been impacted again this year. As a result of the price volatility we are seeing parallel changes in the Oversizing Rates.

These costs will be reviewed and may be adjusted again next year. If you have any questions regarding this matter, please call me at 456-4201.

AP

Cc: Wayne Jernberg  
Cindy Irving  
Jeff McCaul

Tim Burkman  
James Ouzts  
Brian Bradley

**CITY OF GRAND RAPIDS, MICHIGAN  
WATER RATE STUDY  
WATER SUPPLY SYSTEM FUND  
TASK NO. 33**

SERVICE AREA MAPS AND SERVICE AREA LAND MASS SUMMARIES

The following summarizes Utility Services Districts (USD) land mass square miles for UAB partner communities, per information on file as of June 30, 2023:

UAB Partners	Sq. Miles of USD by CC	Percent
Grand Rapids	45.344	35.106%
Walker	24.842	19.233%
Kentwood	13.523	10.469%
Cascade	21.132	16.360%
Grand Rapids Township	10.960	8.485%
Tallmadge Township	2.780	2.152%
East Grand Rapids	3.370	2.609%
Ada	7.215	5.586%
Total	129.166	100.000%

**CITY OF GRAND RAPIDS, MICHIGAN  
WATER RATE STUDY  
WATER SUPPLY SYSTEM FUND  
TASK NO. 34**

INDIVIDUAL CIRCUIT BREAKER AND CITY & CUSTOMER COMMUNITY CIRCUIT BREAKER

The Third Amendment to the Water and Sanitary Sewer Agreements stipulates penalty fees shall be used to fund the circuit breaker provisions noted above.

The following summarizes those values:

<u>Description</u>	<u>AMOUNT</u>	<u>PERCENT</u>
Individual Circuit Breaker (ICB)*	\$ 142,154	24.63%
City & Customer Community Circuit Breaker (CCCCB)	435,077	75.37%
Total	<u>\$ 577,231</u>	<u>100.00%</u>

The following tables summarize the amount, if any, of the Circuit Breaker to be applied as a revenue credit in next year's Rate Study:

<u>Description</u>	<u>AMOUNT</u>	<u>PERCENT</u>
City & Customer Community Circuit Breaker Amount- Above	\$ 435,077	100.00%
Less: Amount Applied in Current Rate Study	(288,624)	-66.34%
Total CCCCCB Revenue Credit- Next Year's Rate Study	<u>\$ 146,453</u>	<u>33.66%</u>

\*Per City Commission Resolution 84923 adopted on September 8, 2015, the Water and Sanitary Sewer Systems are authorized to utilize non-operating revenue to provide supplemental funding to the ICB. \$142,154 includes \$80,000 of facility rental revenue from fiscal year 2023 to supplement the 2024 ICB.

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWAGE DISPOSAL SYSTEM FUND  
ANNUAL RATE REVIEW**

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**CITY OF GRAND RAPIDS, MICHIGAN  
SEWAGE DISPOSAL SYSTEM FUND  
SYSTEM ADDITIONS AND IMPROVEMENTS  
FOR THE YEAR ENDED JUNE 30, 2023  
TASKS NO. 1, 2, & 3**

COMMUNITY	LOCAL		TRUNK		INTERCEPTOR		TOTALS	
	FEET	MILES	FEET	MILES	FEET	MILES	FEET	MILES
Grand Rapids								
Construction	14,360	2.72	5,349	1.01	2,112	0.40	21,821	4.13
Abandonment	(1,173)	(0.22)	(1,471)	(0.28)	(3,288)	(0.62)	(5,932)	(1.12)
CSO Construction	0	0.00	0	0.00	0	0.00	0	0.00
CSO Abandonment	0	0.00	0	0.00	0	0.00	0	0.00
	<u>13,187</u>	<u>2.50</u>	<u>3,878</u>	<u>0.73</u>	<u>(1,176)</u>	<u>(0.22)</u>	<u>15,889</u>	<u>3.01</u>
Kentwood								
Construction	4,484	0.85	0	0.00	0	0.00	4,484	0.85
Abandonment	(198)	(0.04)	0	0.00	0	0.00	(198)	(0.04)
	<u>4,286</u>	<u>0.81</u>	<u>0</u>	<u>0.00</u>	<u>0</u>	<u>0.00</u>	<u>4,286</u>	<u>0.81</u>
Cascade Twp.								
Construction	0	0.00	0	0.00	0	0.00	0	0.00
Abandonment	0	0.00	0	0.00	0	0.00	0	0.00
	<u>0</u>	<u>0.00</u>	<u>0</u>	<u>0.00</u>	<u>0</u>	<u>0.00</u>	<u>0</u>	<u>0.00</u>
G.R. Twp.								
Construction	0	0.00	1,010	0.19	0	0.00	1,010	0.19
Abandonment	0	0.00	0	0.00	0	0.00	0	0.00
	<u>0</u>	<u>0.00</u>	<u>1,010</u>	<u>0.19</u>	<u>0</u>	<u>0.00</u>	<u>1,010</u>	<u>0.19</u>
Tallmadge Twp.								
Construction	0	0.00	0	0.00	0	0.00	0	0.00
Abandonment	0	0.00	0	0.00	0	0.00	0	0.00
	<u>0</u>	<u>0.00</u>	<u>0</u>	<u>0.00</u>	<u>0</u>	<u>0.00</u>	<u>0</u>	<u>0.00</u>
Walker								
Construction	1,880	0.36	0	0.00	0	0.00	1,880	0.36
Abandonment	0	0.00	0	0.00	0	0.00	0	0.00
	<u>1,880</u>	<u>0.36</u>	<u>0</u>	<u>0.00</u>	<u>0</u>	<u>0.00</u>	<u>1,880</u>	<u>0.36</u>
Wright Twp								
Construction	0	0.00	0	0.00	0	0.00	0	0.00
Abandonment	0	0.00	0	0.00	0	0.00	0	0.00
	<u>0</u>	<u>0.00</u>	<u>0</u>	<u>0.00</u>	<u>0</u>	<u>0.00</u>	<u>0</u>	<u>0.00</u>
<b>*TOTAL*</b>	<u><u>19,353</u></u>	<u><u>3.67</u></u>	<u><u>4,888</u></u>	<u><u>0.92</u></u>	<u><u>(1,176)</u></u>	<u><u>(0.22)</u></u>	<u><u>23,065</u></u>	<u><u>4.37</u></u>

	CONTRIBUTIONS		
	COMM	OTHER	TOTAL
Integrated	\$ -	\$ -	\$ -
Grand Rapids	176,193	-	176,193
Kentwood	529,805	-	529,805
Cascade Twp.	-	-	-
Grand Rapids Twp.	-	-	-
Tallmadge Twp.	-	-	-
Walker	184,420	-	184,420
Wright Twp.	-	-	-
<b>*TOTAL*</b>	<u><u>\$ 890,418</u></u>	<u><u>\$ -</u></u>	<u><u>\$ 890,418</u></u>

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWAGE DISPOSAL SYSTEM FUND  
OPERATING EXPENSE ALLOCATION BY COST CENTER - TASK #4, PART 1  
FISCAL YEAR ENDED JUNE 30, 2023**

Dept-Unit-Fund	ACTIVITY	EXPENSE BY ACTIVITY	WASTEWATER TREATMENT PLANT	WASTEWATER LIFT STATIONS			SEWER LINES			BULK METERING STATIONS	CUSTOMER ACCOUNTING	INDUSTRIAL PRETREAT.	ADMIN. EXPENSE
				INTERCEPTOR	TRUNK	LOCAL COLLECTOR	INTERCEPTOR	TRUNK	LOCAL COLLECTOR				
527 (3000:70) 5900	WASTEWATER TREATMENT (LESS 527 - 3040 - 5900)	\$ 23,686,328	\$ 22,720,306	\$ 330,626	\$ 143,472	\$ 485,806				\$ 6,118			
527 (4000 / 4290) 5900	SEWER MAINTENANCE	5,490,012					278,399	653,476	4,558,137				
527 (2000) 5900	CUSTOMER SERVICE*	2,461,880									2,461,880		
527 (3040) 5900	INDUSTRIAL PRETREATMENT	930,034										930,034	
	SUBTOTAL OPERATING EXPENSE	32,568,254	22,720,306	330,626	143,472	485,806	278,399	653,476	4,558,137	6,118	2,461,880	930,034	
527 (1000:10 / 8000) 5900	ADMINISTRATION	2,278,631											2,278,631
	TOTAL	\$ 34,846,885	\$ 22,720,306	\$ 330,626	\$ 143,472	\$ 485,806	\$ 278,399	\$ 653,476	\$ 4,558,137	\$ 6,118	\$ 2,461,880	\$ 930,034	\$ 2,278,631

\* Reflects adjustment for circuit breaker provisions per the third amendment to W/S service agreements.

**METHOD OF DISTRIBUTION**

527 (3000:70) 5900	WASTEWATER TREATMENT		100.000%									
	A. TREATMENT PLANT			95.922%								
	B. LIFT & METER STATIONS			4.078%								
	NO. OF STATIONS	(59)			(1)	(8)	(45)			(5)		
527 (4000 / 4290) 5900	SEWER MAINTENANCE											
	TOTAL MILES	935.65	100.000%									
	A. INTERCEPTOR											
	MILES	47.45	5.071%				5.071%					
	B. TRUNK LINES											
	MILES	111.37	11.903%					11.903%				
	C. LOCAL COLLECTOR											
	MILES	776.83	83.026%						83.026%			
527 (2000) 5900	CUSTOMER SERVICE		100.000%								100.000%	
527 (3040) 5900	INDUSTRIAL PRETREATMENT		100.000%									100.000%
527 (1000:10 / 8000) 5900	ADMINISTRATION		100.000%									100.000%

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWAGE DISPOSAL SYSTEM FUND  
OPERATING EXPENSE ALLOCATION BY GOVERNMENTAL UNIT - TASK #4, PART 2  
FISCAL YEAR ENDED JUNE 30, 2023**

COST CENTER	EXPENSE BY COST CENTER	INTEGRATED SYSTEM	RETAIL							WHOLESALE			
			CITY OF GR	CITY OF WALKER	CITY OF KENTWOOD	CASCADE TOWNSHIP	GR TOWNSHIP	TALLMADGE TOWNSHIP	WRIGHT TOWNSHIP	CITY OF EAST GR	CALEDONIA TOWNSHIP	ADA TOWNSHIP	GAINES TOWNSHIP
WASTEWATER TREATMENT	\$ 22,720,306	\$ 22,720,306											
LIFT STATIONS:													
A. INTERCEPTOR	330,626		330,626	-	-	-	-	-	-	-	-	-	-
B. TRUNK	143,472		43,074	66,367	-	25,577	8,453	-	-	-	-	-	-
C. LOCAL COLLECTOR	485,806		57,587	62,489	-	118,805	190,633	34,592	12,286	-	-	9,414	-
SEWER LINES:													
A. INTERCEPTOR	278,399		158,356	40,543	71,638	7,862	-	-	-	-	-	-	-
B. TRUNK	653,476		235,585	162,650	147,450	56,859	33,621	16,605	706	-	-	-	-
C. LOCAL COLLECTOR	4,558,137		3,074,155	332,049	447,928	273,534	353,210	50,869	26,392	-	-	-	-
BULK METERING STATIONS	6,118		-	-	1,948	-	-	-	-	3,304	304	-	562
CUSTOMER ACCOUNTING	2,461,880		1,889,912	191,460	163,937	67,234	130,800	11,078	7,459				
INDUSTRIAL PRETREATMENT	930,034	930,034											
SUBTOTAL OPERATING EXPENSE	32,568,254	23,650,340	5,789,295	855,558	832,901	549,871	716,717	113,144	46,843	3,304	304	9,414	562
ADMINISTRATIVE EXPENSE	2,278,631	1,612,445	452,880	58,331	56,786	37,490	48,865	7,714	3,194	225	21	642	38
TOTAL	\$ 34,846,885	\$ 25,262,785	\$ 6,242,175	\$ 913,889	\$ 889,687	\$ 587,361	\$ 765,582	\$ 120,858	\$ 50,037	\$ 3,529	\$ 325	\$ 10,056	\$ 600

**METHOD OF DISTRIBUTION**

WASTEWATER TREATMENT													
A. TREATMENT PLANT	100.000%	100.00%											
B. LIFT & METER STATIONS (1)	100.000%												
NO. OF STATIONS (59)			(13)	(6)	(2)	(10)	(18)	(5)	(1)	(1)	(1)	(1)	(1)
SEWER LINES:													
TOTAL MILES: 935.65													
A. INTERCEPTOR	100.000%		56.881%	14.563%	25.732%	2.824%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
MILES 47.45			26.99	6.91	12.21	1.34	-	-	-	-	-	-	-
B. TRUNK LINES	100.000%		36.051%	24.890%	22.564%	8.701%	5.145%	2.541%	0.108%	0.000%	0.000%	0.000%	0.000%
MILES 111.37			40.15	27.72	25.13	9.69	5.73	2.83	0.12	-	-	-	-
C. LOCAL COLLECTOR	100.000%		62.210%	12.518%	9.827%	6.001%	7.749%	1.116%	0.579%	0.000%	0.000%	0.000%	0.000%
MILES 776.83			483.26	97.24	76.34	46.62	60.20	8.67	4.50	-	-	-	-
CUSTOMER ACCTG (2)	100.000%		77.070%	7.777%	6.659%	2.731%	5.313%	0.450%	0.303%				
NO. OF METERS 76,298.00			58,571.00	5,934.00	5,081.00	2,084.00	4,054.00	343.00	231.00				
INDUSTRIAL PRETREATMENT	100.000%	100.00%											
ADMINISTRATIVE EXPENSE (3)	100.000%	70.764%	19.875%	2.560%	2.492%	1.645%	2.144%	0.339%	0.140%	0.010%	0.001%	0.028%	0.002%

NOTES:

- (1) DIRECT COSTS PER SCHEDULE.
- (2) ALLOCATION BASED ON NUMBER OF METERS, INCLUSIVE OF USERS FOR WRIGHT TWP.
- (3) ALLOCATED ON DIRECT OPERATING EXPENSE, ADJUSTED FOR ANY COST ASSIGNABLE EXCLUSIVELY TO GR OR RETAIL COMMUNITIES, IF APPLICABLE.

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWAGE DISPOSAL SYSTEM FUND  
ADJUSTED OPERATING EXPENSE ALLOCATION BY COST CENTER - TASK #5, PART 1  
FISCAL YEAR ENDED JUNE 30, 2023**

Dept-Unit-Fund	ACTIVITY	ADJUSTED EXPENSE BY ACTIVITY	WASTEWATER TREATMENT PLANT	WASTEWATER LIFT STATIONS			SEWER LINES			BULK METERING STATIONS	CUSTOMER ACCOUNTING	INDUSTRIAL PRETREAT.	ADMIN. EXPENSE
				INTERCEPTOR	TRUNK	LOCAL COLLECTOR	INTERCEPTOR	TRUNK	LOCAL COLLECTOR				
527 (3000:70) 5900	WASTEWATER TREATMENT (LESS 527 - 3040 - 5900)	\$ 24,814,590	\$ 23,762,956	\$ 359,929	\$ 156,188	\$ 528,857				\$ 6,660			
527 (4000 / 4290) 5900	SEWER MAINTENANCE	6,029,303					305,746	717,668	5,005,889				
527 (2000) 5900	CUSTOMER SERVICE *	3,245,802									3,245,802		
527 (3040) 5900	INDUSTRIAL PRETREATMENT	975,541										975,541	
	SUBTOTAL OPERATING EXPENSE	35,065,236	23,762,956	359,929	156,188	528,857	305,746	717,668	5,005,889	6,660	3,245,802	975,541	-
527 (1000:10 / 8000) 5900	ADMINISTRATION	1,966,364											1,966,364
	TOTAL	<u>\$ 37,031,601</u>	<u>\$ 23,762,956</u>	<u>\$ 359,929</u>	<u>\$ 156,188</u>	<u>\$ 528,857</u>	<u>\$ 305,746</u>	<u>\$ 717,668</u>	<u>\$ 5,005,889</u>	<u>\$ 6,660</u>	<u>\$ 3,245,802</u>	<u>\$ 975,541</u>	<u>\$ 1,966,364</u>

\* Reflects adjustment for circuit breaker provisions per the third amendment to W/S service agreements.

**METHOD OF DISTRIBUTION**

527 (3000:70) 5900	WASTEWATER TREATMENT		100.000%										
	A. TREATMENT PLANT			95.762%									
	B. LIFT & METER STATIONS			4.238%									
	NO. OF STATIONS	(59)			(1)	(8)	(45)			(5)			
527 (4000 / 4290) 5900	SEWER MAINTENANCE												
	TOTAL MILES	935.65	100.000%										
	A. INTERCEPTOR												
	MILES	47.45	5.071%					5.071%					
	B. TRUNK LINES												
	MILES	111.37	11.903%						11.903%				
	C. LOCAL COLLECTOR												
	MILES	776.83	83.026%							83.026%			
527 (2000) 5900	CUSTOMER SERVICE		100.000%								100.000%		
527 (3040) 5900	INDUSTRIAL PRETREATMENT		100.000%									100.000%	
527 (1000:10 / 8000) 5900	ADMINISTRATION		100.000%										100.000%

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWAGE DISPOSAL SYSTEM FUND  
ADJUSTED OPERATING EXPENSE ALLOCATION BY GOVERNMENTAL UNIT - TASK #5, PART 2  
FISCAL YEAR ENDED JUNE 30, 2023**

COST CENTER	ADJUSTED EXPENSE BY COST CENTER	INTEGRATED SYSTEM	RETAIL							WHOLESALE			
			CITY OF GR	CITY OF WALKER	CITY OF KENTWOOD	CASCADE TOWNSHIP	GR TOWNSHIP	TALLMADGE TOWNSHIP	WRIGHT TOWNSHIP	CITY OF EAST GR	CALEDONIA TOWNSHIP	ADA TOWNSHIP	GAINES TOWNSHIP
WASTEWATER TREATMENT	\$ 23,762,956	\$ 23,762,956											
LIFT STATIONS:													
A. INTERCEPTOR	359,929		359,929	-	-	-	-	-	-	-	-	-	-
B. TRUNK	156,188		46,892	72,250	-	27,844	9,202	-	-	-	-	-	-
C. LOCAL COLLECTOR	528,857		62,691	68,026	-	129,334	207,526	37,658	13,374	-	-	10,248	-
SEWER LINES:													
A. INTERCEPTOR	305,746		173,911	44,526	78,675	8,634	-	-	-	-	-	-	-
B. TRUNK	717,668		258,726	178,628	161,935	62,444	36,924	18,236	775	-	-	-	-
C. LOCAL COLLECTOR	5,005,889		3,114,164	626,637	491,929	300,403	387,906	55,866	28,984	-	-	-	-
BULK METERING STATIONS	6,660		-	-	2,121	-	-	-	-	3,596	331	-	612
CUSTOMER ACCOUNTING	3,245,802		2,491,705	252,426	216,138	88,643	172,449	14,606	9,835				
INDUSTRIAL PRETREATMENT	975,541	975,541											
SUBTOTAL OPERATING EXPENSE	35,065,236	24,738,497	6,508,018	1,242,493	950,798	617,302	814,007	126,366	52,968	3,596	331	10,248	612
ADMINISTRATIVE EXPENSE	1,966,364	1,346,225	412,329	67,614	51,741	33,593	44,297	6,877	2,883	196	18	558	33
TOTAL	\$ 37,031,601	\$ 26,084,722	\$ 6,920,347	\$ 1,310,107	\$ 1,002,539	\$ 650,895	\$ 858,304	\$ 133,243	\$ 55,851	\$ 3,792	\$ 349	\$ 10,806	\$ 645

**METHOD OF DISTRIBUTION**

WASTEWATER TREATMENT													
A. TREATMENT PLANT	100.000%	100.00%											
B. LIFT & METER STATIONS (1) NO. OF STATIONS (59)	100.000%		(13)	(6)	(2)	(10)	(18)	(5)	(1)	(1)	(1)	(1)	(1)
SEWER LINES:													
TOTAL MILES: 935.65													
A. INTERCEPTOR MILES 47.45	100.000%		56.881%	14.563%	25.732%	2.824%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
B. TRUNK LINES MILES 111.37	100.000%		36.051%	24.890%	22.564%	8.701%	5.145%	2.541%	0.108%	0.000%	0.000%	0.000%	0.000%
C. LOCAL COLLECTOR MILES 776.83	100.000%		62.210%	12.518%	9.827%	6.001%	7.749%	1.116%	0.579%	0.000%	0.000%	0.000%	0.000%
CUSTOMER ACCTG (2) NO. OF METERS 76,298.00	100.000%		76.767%	7.777%	6.659%	2.731%	5.313%	0.450%	0.303%				
INDUSTRIAL PRETREATMENT	100.000%	100.00%											
ADMINISTRATIVE EXPENSE (3)	100.000%	68.462%	20.969%	3.439%	2.631%	1.708%	2.253%	0.350%	0.147%	0.010%	0.001%	0.028%	0.002%

NOTES:

- (1) ADJUSTED DIRECT COSTS PER SCHEDULE.
- (2) ALLOCATION BASED ON NUMBER OF METERS, INCLUSIVE OF USERS FOR WRIGHT TWP.
- (3) ALLOCATED ON DIRECT OPERATING EXPENSE, ADJUSTED FOR ANY COST ASSIGNABLE EXCLUSIVELY TO GR OR RETAIL COMMUNITIES, IF APPLICABLE.

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWAGE DISPOSAL SYSTEM FUND  
ADJUSTED ACTUAL EXPENSE  
YEAR ENDED JUNE 30, 2023  
RATE STUDY- TASKS NO. 4 & 5 SUPPORT**

ORGANIZATIONAL UNIT: ADMINISTRATION

EXPENDITURE SUB-OBJECT		OPERATING	ADJUSTED	ADJUSTED
OBJ	DESCRIPTION	EXPENSES	COST FACTORS	CURRENT ANNUAL EXPENSES
7020	PERMANENT EMPLOYEES	\$ 286,032.64	\$ (92,400.52)	\$ 193,632.12
7055	TIME & ONE-HALF	2,883.06	113.02	2,996.08
7105	EMPLOYERS SOCIAL SECURITY	20,696.02	(5,654.23)	15,041.79
7110	HOSPITALIZATION INSURANCE	45,490.00	7,237.46	52,727.46
7115	RETIREE HEALTH CARE	11,300.22	(5,155.29)	6,144.93
7120	RETIREMENT FUND CONTRIBUTION	61,772.04	(12,571.51)	49,200.53
7135	UNEMPLOYMENT COMPENSATION	396.26	-	396.26
7150	LONGEVITY PAY	770.00	19,096.41	19,866.41
7175	FOOD/CLEAN/CAR ALLOW	2,471.11	-	2,471.11
	TOTAL PERSONAL SERVICES	<u>431,811.35</u>	<u>(89,334.66)</u>	<u>342,476.69</u>
7520	SUPPLIES	5,982.39	-	5,982.39
7670	CLOTHING/CLEANING ALLOWANCE	(74.94)	-	(74.94)
7800	INVENTORY - COST OF GOODS SOLD	(8,148.01)	-	(8,148.01)
	TOTAL SUPPLIES	<u>(2,240.56)</u>	<u>-</u>	<u>(2,240.56)</u>
8010	CONTRACTUAL SERVICES	62,890.15	-	62,890.15
8011	CONTRACT EMPLOYEES - TEMP SERVICES	45,786.32	-	45,786.32
8016	CONTRACTS-EXTERNAL LEGAL SERVICES	2,777.00	-	2,777.00
8030	ADMINISTRATIVE SERVICES	83,249.77	(83,249.77)	-
8400	INSURANCE PREMIUMS	336,252.00	-	336,252.00
8450	GENERAL LIABILITY INSURANCE/CLAIMS	287,386.00	16,509.00	303,895.00
8500	TELEPHONE	906.46	-	906.46
9000	PRINTING & PUBLISHING	522.40	-	522.40
9560	PROFESSIONAL DEVELOPMENT	300.00	-	300.00
9561	OTHER TRAVEL & TRAINING	1,114.69	-	1,114.69
9580	MEMBERSHIPS	4,328.50	-	4,328.50
9200	ELECTRICITY	-	58,174.00	58,174.00
9210	NATURAL GAS	(389.65)	-	(389.65)
9430	BUILDINGS RENTALS OR LEASE	26,099.16	-	26,099.16
8282	ENGINEERING SERVICES	6,270.00	-	6,270.00
8283	VEHICLE USAGE/CAR MILAGE	5,039.98	-	5,039.98
8284	COMPUTER SERVICES	14,772.00	1,648.00	16,420.00
9650	BAD DEBT WRITE-OFFS	75.11	-	75.11
	TOTAL OTHER SERVICES & CHARGES	<u>877,379.89</u>	<u>(6,918.77)</u>	<u>870,461.12</u>
8285	A-87 COST ALLOCATION	971,680.00	(216,013.00)	755,667.00
	TOTAL TRANSFERS/FEES	<u>971,680.00</u>	<u>(216,013.00)</u>	<u>755,667.00</u>
	ORGANIZATIONAL UNIT TOTAL	<u>\$ 2,278,630.68</u>	<u>\$ (312,266.43)</u>	<u>\$ 1,966,364.25</u>

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWAGE DISPOSAL SYSTEM FUND  
ADJUSTED ACTUAL EXPENSE  
YEAR ENDED JUNE 30, 2023  
RATE STUDY- TASKS NO. 4 & 5 SUPPORT**

ORGANIZATIONAL UNIT: SDSF - CUST.SERV'S

<u>EXPENDITURE SUB-OBJECT</u>		<u>OPERATING</u>	<u>ADJUSTED</u>	<u>ADJUSTED</u>
<u>OBJ</u>	<u>DESCRIPTION</u>	<u>EXPENSES</u>	<u>COST</u>	<u>CURRENT</u>
			<u>FACTORS</u>	<u>ANNUAL</u>
				<u>EXPENSES</u>
8286	UTILITY CUSTOMER SERVICE	\$ 2,461,880.00	\$ 783,922.07	\$ 3,245,802.07
	TOTAL OTHER SERVICES & CHARGES	<u>2,461,880.00</u>	<u>783,922.07</u>	<u>3,245,802.07</u>
	ORGANIZATIONAL UNIT TOTAL	<u>\$ 2,461,880.00</u>	<u>\$ 783,922.07</u>	<u>\$ 3,245,802.07</u>

*\* Reflects adjustment for circuit breaker provisions per the third amendment to W/S service agreements.*

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWAGE DISPOSAL SYSTEM FUND  
ADJUSTED ACTUAL EXPENSE  
YEAR ENDED JUNE 30, 2023  
RATE STUDY- TASKS NO. 4 & 5 SUPPORT**

ORGANIZATIONAL UNIT: WASTEWATER

OBJ	EXPENDITURE SUB-OBJECT DESCRIPTION	OPERATING EXPENSES	ADJUSTED COST FACTORS	ADJUSTED CURRENT ANNUAL EXPENSES
7020	PERMANENT EMPLOYEES	\$ 4,782,608.35	\$ 187,478.25	\$ 4,970,086.60
7025	ACT. ASSIGNMENT	21,246.95	832.88	22,079.83
7040	TEMPORARY EMPLOYEES	38,898.16	1,524.81	40,422.97
7050	REGULAR HOURLY RATE	7,376.58	289.16	7,665.74
7055	TIME & ONE-HALF	284,518.99	11,153.14	295,672.13
7105	EMPLOYERS SOCIAL SECURITY	370,882.43	14,538.59	385,421.02
7110	HOSPITALIZATION INSURANCE	1,076,742.22	171,309.69	1,248,051.91
7115	RETIREE HEALTH CARE	194,897.11	(32,352.92)	162,544.19
7120	RETIREMENT FUND CONTRIBUTION	1,066,411.72	91,284.84	1,157,696.56
7135	UNEMPLOYMENT COMPENSATION	8,074.69	-	8,074.69
7150	LONGEVITY PAY	18,896.65	-	18,896.65
7165	SHIFT DIFFERENTIAL	18,148.44	-	18,148.44
7170	ELECTION WRKR-BRD MEMBERS PAY	20.00	-	20.00
	TOTAL PERSONAL SERVICES	<u>7,888,722.29</u>	<u>446,058.44</u>	<u>8,334,780.73</u>
7520	SUPPLIES	1,376,951.25	-	1,376,951.25
7530	PROCESS CHEMICALS	1,211,393.21	600,000.00	1,811,393.21
7670	CLOTHING/CLEANING ALLOWANCE	21,358.13	-	21,358.13
7910	PUBLICATIONS AND SUBSCRIPTIONS	1,786.43	-	1,786.43
	TOTAL SUPPLIES	<u>2,611,489.02</u>	<u>600,000.00</u>	<u>3,211,489.02</u>
8010	CONTRACTUAL SERVICES	8,699,544.49	(200,006.21)	8,499,538.28
8011	CONTRACT EMPLOYEES - TEMP SERVICES	116,714.26	-	116,714.26
8015	CONTRACT SERV-TRAINING	7,792.00	-	7,792.00
8016	CONTRACTS-EXTERNAL LEGAL SERVICES	1,104.00	-	1,104.00
8240	FEES	28,203.92	-	28,203.92
8500	TELEPHONE	54,058.93	-	54,058.93
9000	PRINTING & PUBLISHING	1,077.88	-	1,077.88
9010	ADVERTISING - ANY MEDIA	23.00	-	23.00
9560	PROFESSIONAL DEVELOPMENT	20,786.72	-	20,786.72
9561	OTHER TRAVEL & TRAINING	22,245.18	-	22,245.18
9562	LOCAL BUSINESS EXPENSE	423.59	-	423.59
9563	FOOD-BEVERAGE	711.94	-	711.94
9580	MEMBERSHIPS	52,562.90	-	52,562.90
9280	WATER	98,403.42	-	98,403.42
9200	ELECTRICITY	1,775,016.93	(58,174.00)	1,716,842.93
9210	NATURAL GAS	1,115,747.72	100,000.00	1,215,747.72
9310	EQUIPMENT REPAIRS	6,468.90	64.69	6,533.59
9330	SOFTWARE MAINTENANCE AGREEMENTS	162,659.50	213,000.00	375,659.50
9340	MAINTENANCE SERVICE	174.20	-	174.20
9410	EQUIPMENT RENTALS OR LEASE	45,447.57	-	45,447.57
8280	FLEET MANAGEMENT EQUIPMENT	237,680.61	-	237,680.61
8281	311 CALL CENTER SERVICES	1,761.00	-	1,761.00
8283	VEHICLE USAGE/CAR MILAGE	3,147.04	-	3,147.04
8284	COMPUTER SERVICES	245,496.00	27,319.00	272,815.00
	TOTAL OTHER SERVICES & CHARGES	<u>12,697,251.70</u>	<u>82,203.48</u>	<u>12,779,455.18</u>
9760	EQUIPMENT	464,059.96	-	464,059.96
9800	FURNITURE	24,116.68	-	24,116.68
9840	SOFTWARE	688.77	-	688.77
	TOTAL CAPITAL	<u>488,865.41</u>	<u>-</u>	<u>488,865.41</u>
	ORGANIZATIONAL UNIT TOTAL	<u>\$ 23,686,328.42</u>	<u>\$ 1,128,261.92</u>	<u>\$ 24,814,590.34</u>

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWAGE DISPOSAL SYSTEM FUND  
ADJUSTED ACTUAL EXPENSE  
YEAR ENDED JUNE 30, 2023  
RATE STUDY- TASKS NO. 4 & 5 SUPPORT**

ORGANIZATIONAL UNIT: IND. PRETREATMENT

EXPENDITURE SUB-OBJECT		OPERATING	ADJUSTED	ADJUSTED
OBJ	DESCRIPTION	EXPENSES	COST	CURRENT
			FACTORS	ANNUAL
				EXPENSES
7020	PERMANENT EMPLOYEES	\$ 526,029.83	\$ 20,620.37	\$ 546,650.20
7025	ACT.ASSIGNMENT	736.01	28.85	764.86
7055	TIME & ONE-HALF	952.77	37.35	990.12
7105	EMPLOYERS SOCIAL SECURITY	38,510.13	1,509.60	40,019.73
7110	HOSPITALIZATION INSURANCE	105,306.21	16,754.22	122,060.43
7115	RETIREE HEALTH CARE	21,650.94	(3,594.06)	18,056.88
7120	RETIREMENT FUND CONTRIBUTION	118,576.90	10,150.18	128,727.08
7135	UNEMPLOYMENT COMPENSATION	730.20	-	730.20
7150	LONGEVITY PAY	2,625.00	-	2,625.00
	TOTAL PERSONAL SERVICES	<u>815,117.99</u>	<u>45,506.51</u>	<u>860,624.50</u>
7520	SUPPLIES	43,935.47	-	43,935.47
	TOTAL SUPPLIES	<u>43,935.47</u>	<u>-</u>	<u>43,935.47</u>
8010	CONTRACTUAL SERVICES	11,331.67	-	11,331.67
8500	TELEPHONE	(36.48)	-	(36.48)
8510	POSTAGE	2,112.16	-	2,112.16
9000	PRINTING & PUBLISHING	544.65	-	544.65
9560	PROFESSIONAL DEVELOPMENT	3,050.00	-	3,050.00
9561	OTHER TRAVEL & TRAINING	6,274.12	-	6,274.12
9580	MEMBERSHIPS	1,565.00	-	1,565.00
9310	EQUIPMENT REPAIRS	2,540.00	-	2,540.00
9330	SOFTWARE MAINTENANCE AGREEMENTS	39,327.00	-	39,327.00
8282	ENGINEERING SERVICES	1,468.58	-	1,468.58
8283	VEHICLE USAGE/CAR MILAGE	90.00	-	90.00
	TOTAL OTHER SERVICES & CHARGES	<u>68,266.70</u>	<u>-</u>	<u>68,266.70</u>
9840	SOFTWARE	2,714.00	-	2,714.00
	TOTAL CAPITAL	<u>2,714.00</u>	<u>-</u>	<u>2,714.00</u>
	ORGANIZATIONAL UNIT TOTAL	<u>\$ 930,034.16</u>	<u>\$ 45,506.51</u>	<u>\$ 975,540.67</u>

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWAGE DISPOSAL SYSTEM FUND  
ADJUSTED ACTUAL EXPENSE  
YEAR ENDED JUNE 30, 2023  
RATE STUDY- TASKS NO. 4 & 5 SUPPORT**

ORGANIZATIONAL UNIT: REPAIR & MAINTENANCE

EXPENDITURE SUB-OBJECT		OPERATING	ADJUSTED	ADJUSTED
OBJ	DESCRIPTION	EXPENSES	COST FACTORS	CURRENT ANNUAL EXPENSES
7020	PERMANENT EMPLOYEES	\$ 1,682,345.69	\$ 65,947.95	\$ 1,748,293.64
7025	ACT.ASSIGNMENT	10,053.19	394.09	10,447.28
7055	TIME & ONE-HALF	120,801.41	4,735.42	125,536.83
7105	EMPLOYERS SOCIAL SECURITY	131,048.09	5,137.09	136,185.18
7110	HOSPITALIZATION INSURANCE	384,715.75	61,208.28	445,924.03
7115	RETIREE HEALTH CARE	68,307.13	(11,338.98)	56,968.15
7120	RETIREMENT FUND CONTRIBUTION	374,201.53	32,031.65	406,233.18
7135	UNEMPLOYMENT COMPENSATION	2,323.45	-	2,323.45
7150	LONGEVITY PAY	9,214.94	-	9,214.94
7165	SHIFT DIFFERENTIAL	109.60	-	109.60
7175	FOOD/CLEAN/CAR ALLOW	50.00	-	50.00
	TOTAL PERSONAL SERVICES	<u>2,783,170.78</u>	<u>158,115.50</u>	<u>2,941,286.28</u>
7520	SUPPLIES	354,807.64	-	354,807.64
7670	CLOTHING/CLEANING ALLOWANCE	12,272.88	-	12,272.88
7910	SUBSCRIPTIONS AND PUBLICATIONS	3,915.00	-	3,915.00
	TOTAL SUPPLIES	<u>370,995.52</u>	<u>-</u>	<u>370,995.52</u>
8010	CONTRACTUAL SERVICES	665,253.69	370,000.00	1,035,253.69
8011	CONTRACT EMPLOYEES - TEMP SERVICES	4,754.93	-	4,754.93
8500	TELEPHONE	16,276.10	-	16,276.10
9340	MAINTENANCE SERVICE	8,696.38	-	8,696.38
9400	LAND RENTAL OR LEASE	6,773.86	-	6,773.86
9410	EQUIPMENT RENTALS OR LEASE	61,039.41	-	61,039.41
8280	FLEET MANAGEMENT EQUIPMENT	989,328.12	-	989,328.12
8281	311 CALL CENTER SERVICES	16,262.00	-	16,262.00
8283	VEHICLE USAGE/CAR MILAGE	898.00	-	898.00
8284	COMPUTER SERVICES	100,416.00	11,176.00	111,592.00
	TOTAL OTHER SERVICES & CHARGES	<u>1,869,698.49</u>	<u>381,176.00</u>	<u>2,250,874.49</u>
9750	BUILDING	39,544.00	-	39,544.00
9760	EQUIPMENT	426,603.12	-	426,603.12
	TOTAL CAPITAL	<u>466,147.12</u>	<u>-</u>	<u>466,147.12</u>
	ORGANIZATIONAL UNIT TOTAL	<u>\$ 5,490,011.91</u>	<u>\$ 539,291.50</u>	<u>\$ 6,029,303.41</u>

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWAGE DISPOSAL SYSTEM FUND  
ADJUSTED ACTUAL EXPENSE  
YEAR ENDED JUNE 30, 2023  
RATE STUDY- TASKS NO. 4 & 5**

ORGANIZATIONAL SUMMARY

EXPENDITURE SUB-OBJECT		OPERATING	ADJUSTED	ADJUSTED
NO.	DESCRIPTION	EXPENSES	COST FACTORS	CURRENT ANNUAL CURRENT
7020	PERMANENT EMPLOYEES	\$ 7,277,016.51	\$ 181,646.05	\$ 7,458,662.56
7025	ACT.ASSIGNMENT	32,036.15	1,255.82	33,291.97
7040	TEMPORARY EMPLOYEES	38,898.16	1,524.81	40,422.97
7050	REGULAR HOURLY RATE	7,376.58	289.16	7,665.74
7055	TIME & ONE-HALF	409,156.23	16,038.93	425,195.16
7105	EMPLOYERS SOCIAL SECURITY	561,136.67	15,531.05	576,667.72
7110	HOSPITALIZATION INSURANCE	1,612,254.18	256,509.65	1,868,763.83
7115	RETIREE HEALTH CARE	296,155.40	(52,441.25)	243,714.15
7120	RETIREMENT FUND CONTRIBUTION	1,620,962.19	120,895.16	1,741,857.35
7135	UNEMPLOYMENT COMPENSATION	11,524.60	-	11,524.60
7150	LONGEVITY PAY	31,506.59	19,096.41	50,603.00
7165	SHIFT DIFFERENTIAL	18,258.04	-	18,258.04
7175	FOOD/CLEAN/CAR ALLOW	2,521.11	-	2,521.11
7170	ELECTION WRKR-BRD MEMBERS PAY	20.00	-	20.00
	TOTAL PERSONAL SERVICES	<u>11,918,822.41</u>	<u>560,345.79</u>	<u>12,479,168.20</u>
7520	SUPPLIES	1,781,676.75	-	1,781,676.75
7530	PROCESS CHEMICALS	1,211,393.21	600,000.00	1,811,393.21
7670	CLOTHING/CLEANING ALLOWANCE	33,556.07	-	33,556.07
7800	INVENTORY - COST OF GOODS SOLD	(8,148.01)	-	(8,148.01)
7910	SUBSCRIPTIONS AND PUBLICATIONS	5,701.43	-	5,701.43
	TOTAL SUPPLIES	<u>3,024,179.45</u>	<u>600,000.00</u>	<u>3,624,179.45</u>
8010	CONTRACTUAL SERVICES	9,439,020.00	169,993.79	9,609,013.79
8011	CONTRACT EMPLOYEES - TEMP SERVICES	167,255.51	-	167,255.51
8015	CONTRACT SERV-TRAINING	7,792.00	-	7,792.00
8016	CONTRACTS-EXTERNAL LEGAL SERVICES	3,881.00	-	3,881.00
8030	ADMINISTRATIVE SERVICES	83,249.77	(83,249.77)	-
8240	FEES	28,203.92	-	28,203.92
8400	INSURANCE PREMIUMS	336,252.00	-	336,252.00
8450	GENERAL LIABILITY INSURANCE/CLAIMS	287,386.00	16,509.00	303,895.00
8500	TELEPHONE	71,205.01	-	71,205.01
8510	POSTAGE	2,112.16	-	2,112.16
9000	PRINTING & PUBLISHING	2,144.93	-	2,144.93
9010	ADVERTISING - ANY MEDIA	23.00	-	23.00
9560	PROFESSIONAL DEVELOPMENT	24,136.72	-	24,136.72
9561	OTHER TRAVEL & TRAINING	29,633.99	-	29,633.99
9562	LOCAL BUSINESS EXPENSE	423.59	-	423.59
9563	FOOD-BEVERAGE	711.94	-	711.94
9580	MEMBERSHIPS	58,456.40	-	58,456.40
9280	WATER	98,403.42	-	98,403.42
9200	ELECTRICITY	1,775,016.93	-	1,775,016.93
9210	NATURAL GAS	1,115,358.07	100,000.00	1,215,358.07
9310	EQUIPMENT REPAIRS	9,008.90	64.69	9,073.59
9330	SOFTWARE MAINTENANCE AGREEMENTS	201,986.50	213,000.00	414,986.50
9340	MAINTENANCE SERVICE	8,870.58	-	8,870.58
9400	LAND RENTAL OR LEASE	6,773.86	-	6,773.86
9410	EQUIPMENT RENTALS OR LEASE	106,486.98	-	106,486.98
9430	BUILDINGS RENTALS OR LEASE	26,099.16	-	26,099.16
8280	FLEET MANAGEMENT EQUIPMENT	1,227,008.73	-	1,227,008.73
8281	311 CALL CENTER SERVICES	18,023.00	-	18,023.00
8282	ENGINEERING SERVICES	7,738.58	-	7,738.58
8283	VEHICLE USAGE/CAR MILAGE	9,175.02	-	9,175.02
8284	COMPUTER SERVICES	360,684.00	40,143.00	400,827.00
8286	UTILITY CUSTOMER SERVICE	2,461,880.00	783,922.07	3,245,802.07
9650	BAD DEBT WRITE-OFFS	75.11	-	75.11
	TOTAL OTHER SERVICES & CHARGES	<u>17,974,476.78</u>	<u>1,240,382.78</u>	<u>19,214,859.56</u>
9750	BUILDING	39,544.00	-	39,544.00
9760	EQUIPMENT	890,663.08	-	890,663.08
9800	FURNITURE	24,116.68	-	24,116.68
9840	SOFTWARE	3,402.77	-	3,402.77
	TOTAL CAPITAL	<u>957,726.53</u>	<u>-</u>	<u>957,726.53</u>
8285	A-87 COST ALLOCATION	971,680.00	(216,013.00)	755,667.00
	TOTAL TRANSFERS/FEES	<u>971,680.00</u>	<u>(216,013.00)</u>	<u>755,667.00</u>
	GRAND TOTAL- EXPENDITURES	<u>\$ 34,846,885.17</u>	<u>\$ 2,184,715.57</u>	<u>\$ 37,031,600.74</u>

# MEMORANDUM

CITY OF GRAND RAPIDS

DATE: November 1, 2023

TO: Jenessa B. Carter  
Crowe Consultant

FROM: Tai Verbrugge  
Utility Financial Officer

**SUBJECT: 2023 SEWER RATE STUDY TASK #4  
FY23 OPERATING EXPENSES - SEWAGE PUMPING STATIONS**

The attached schedule allocates the direct cost for operating and maintaining system lifting and metering stations. The operating expense consists of direct labor, utilities, operating and maintenance supplies, repairs and maintenance, and equipment rental.

The overflow regulators are components of the integrated system and subsequently not included herein.

Attachment

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWAGE PUMPING STATIONS OPERATING COSTS  
FOR THE YEAR ENDED JUNE 30, 2023**

<u>Station</u>	<u>Physical Location</u>	<u>Type</u>	<b>FY2023</b>
			<b>5900 Expenses</b>
Market Avenue Pump Station	Grand Rapids	Interceptor	\$330,626.29
Millbank Lift Station	Grand Rapids	Local	\$3,745.98
Eastlake Lift Station	Grand Rapids	Local	\$4,170.96
Eastern Lift Station	Grand Rapids	Trunk	\$5,367.48
Oak Hollow Lift Station	Grand Rapids Twmsp	Local	\$5,263.89
Kingsbury Lift Station	Walker	Trunk	\$18,689.22
Bona Vista Lift Station	Grand Rapids	Trunk	\$18,475.99
Aberdeen Lift Station	Grand Rapids	Local	\$12,827.38
O'Brien Lift Station	Walker	Trunk	\$32,270.72
Leonard Heights Lift Station	Walker	Trunk	\$15,407.35
Guild Lift Station	Grand Rapids	Local	\$8,710.51
Orchard Vista Lift Station	Cascade Twmsp	Local	\$5,004.98
Brookview Lift Station	Grand Rapids	Trunk	\$19,230.63
Remembrance Road Lift Station	Walker	Local	\$36,897.24
Kraft Avenue Lift Station	Cascade Twmsp	Local	\$12,037.25
Thornapple Lift Station	Cascade Twmsp	Trunk	\$25,577.34
Thornhills Lift Station	Cascade Twmsp	Local	\$8,185.78
Greenbrier Lift Station	Grand Rapids Twmsp	Local	\$5,241.74
Shore Haven Lift Station	Grand Rapids Twmsp	Local	\$11,990.66
Ada Lift Station	Ada	Local	\$9,414.13
Robinhood Lift Station	Grand Rapids Twmsp	Local	\$9,676.33
Lincoln School Lift Station	Grand Rapids Twmsp	Local	\$14,130.53
Reeds Lake Blvd. Lift Station	Grand Rapids Twmsp	Local	\$11,283.24
6000 28th Street Lift Station	Cascade Twmsp	Local	\$8,661.25
Ada Meter Station	Ada	Meter	\$0.00
East Grand Rapids Meter Station	East Grand Rapids	Meter	\$3,303.63
Rickman Avenue Lift Station	Grand Rapids	Local	\$6,821.33
Michigan Street Lift Station	Grand Rapids	Local	\$6,446.77
Eagle Crest Lift Station	Grand Rapids Twmsp	Local	\$12,398.56
East Paris Lift Station	Grand Rapids Twmsp	Local	\$11,846.20
Alpine Estates Lift Station	Walker	Local	\$8,269.26
Elmdale Lift Station	Grand Rapids	Local	\$4,811.57
Collindale Lift Station	Walker	Local	\$17,322.20
Bird Avenue Lift Station	Grand Rapids Twmsp	Local	\$34,296.19
Valentine Lift Station	Grand Rapids Twmsp	Local	\$3,331.89
Cascade Springs Lift Station	Cascade Twmsp	Local	\$5,501.59
Churchill Downs Lift Station	Grand Rapids	Local	\$4,061.25
Woodsboro Court Lift Station	Grand Rapids Twmsp	Local	\$3,846.43
Meadowood Trails Lift Station	Cascade Twmsp	Local	\$7,897.49
Gaines Township Meter Station	Gaines Township	Meter	\$561.82
Kentwood Meter Station	Kentwood	Meter	\$1,239.48
Stonebridge Lift Station	Grand Rapids Twmsp	Local	\$25,933.81
Burton/Cacade Lift Station	Cascade Twmsp	Local	\$15,218.31
Crahen Lift Station	Grand Rapids Twmsp	Local	\$6,091.80
Jonathan Woods Lift Station	Cascade Twmsp	Local	\$7,908.41
Watermark Lift Station	Cascade Twmsp	Local	\$48,390.07
Mountain Ash Lift Station	Tallmadge Twmsp	Local	\$7,802.24
Reeds Hollow Lift Station	Grand Rapids Twmsp	Local	\$8,973.99
Celebration Village Lift Station	Grand Rapids Twmsp	Trunk	\$8,453.14
Saddleback Lift Station	Grand Rapids Twmsp	Local	\$13,109.57
Arbor Hills Lift Station	Grand Rapids Twmsp	Local	\$8,782.79
16th Avenue Lift Station	Marne	Local	\$12,285.55
Hayes West Lift Station	Wright TWP	Local	\$9,153.75
Hayes East Lift Station	Wright TWP	Local	\$4,411.73
Cypress Trails Lift Station	Grand Rapids Twmsp	Local	\$4,435.63
8th & Leonard Lift Station	Tallmadge Twmsp	Local	\$7,098.01
Summit Ridge Lift Station	Grand Rapids	Local	\$5,991.23
Lake Michigan Estates	Tallmadge Twmsp	Local	\$6,126.39
Bretonfield Meter Station	Kentwood	Meter	\$708.91
Caledonia Meter Station	Caledonia	Meter	\$304.11

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\$966,021.97

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# MEMORANDUM

CITY OF GRAND RAPIDS

DATE: September 22, 2023

TO: Tai Verbrugge  
Utility Financial Officer

FROM: Molly Clarin  
Chief Financial Officer

**SUBJECT: 2023 SEWER RATE STUDY TASK #5  
KNOWN COST ADJUSTMENTS**

Known cost adjustments by which to adjust FY23 operating costs are listed below.

Expense Object – 7020, 7025, 7030, 7035, 7040, 7045, 7050, 7055, 7060, 7190

The most recent labor negotiations resulted in GREIU wages increasing by 3.00% in FY2024 and 2.00% in FY2025. APA wages are increasing by 3.00% in FY2024 and 1.00% in FY2025. After converting these increases from a 2023 fiscal year to a 2024 calendar year basis, the result is a 4.030% factor for GREIU employees and a 3.514% factor for APA employees. A blended rate was then computed by weighting the calendar year percentages according to the percentage of Sewer Fund employees in each union (79% GREIU and 21% APA). Executive and non-reps amounted to only 1.5% of the population and were therefore excluded. **The wage increase factor to translate FY2023 actual costs to estimated calendar 2024 will be 3.920%** [4.030 X 79% + 3.514 X 21%].

A lump sum or signing bonus of \$1,000 was paid to both APA and GREIU employees upon ratification of the latest contracts. The payment of these bonuses occurred in FY2023 and totaled **\$103,613.00** (GREIU-\$79,023.00 and APA-\$24,590.00) for the Sewer Department. As the signing bonuses were a one-time expense this amount should be **excluded** from the FY2023 object code 7020 total before applying the wage increase factor noted above.

Expense Object – 7150

Retention pay based on the length of continuous service is included in the latest APA and GREIU contracts. For purposes of the 2023 Sewer rate study we've calculated the difference between the retention amount projected in the FY2024 budget (\$50,603.00) and the actual FY2023 retention amount paid (\$31,506.59). This net difference was not included in the wage increase factor noted above. Therefore, the expected net increase in retention pay of **\$19,096.41** must be added to the FY2023 amount in object code 7150.

Expense Object – 8284/8450/8285

Adjust FY2023 actual cost to reflect adjustments in charges for central services rendered by the Information Technology Fund (data charges), the Insurance Payment Fund (workers compensation and general liability) and the General Operating Fund (cost

allocation). The “Exhibit” workbook (inclusive of cost center allocations) maintained by the Budget Office has been utilized to blend FY2024 and FY2025 budget amounts thus arriving at an estimated 2024 calendar year rate as follows:

<b>8284-Data Charges</b>			
Cost Center	FY2024 Request	FY2025 Forecast	Calendar 2024 Estimate
527-1000-5900	\$16,160	\$16,679	<b>\$16,420</b>
527-3000-5900	\$268,500	\$277,130	<b>\$272,815</b>
527-4010-5900	\$109,827	\$113,357	<b>\$111,592</b>
Total	\$394,487	\$407,166	\$400,827

<b>8450-General Liability Insurance</b>			
Cost Center	FY2024 Request	FY2025 Forecast	Calendar 2024 Estimate
527-1000-5900	\$296,483	\$311,307	<b>\$303,895</b>

<b>8285-Contributions to Other Funds (Cost Allocation)</b>			
Cost Center	FY2024 Request	FY2025 Forecast	Calendar 2024 Estimate
527-1000-5900	\$773,070	\$738,263	<b>\$755,667</b>

Expense Object - 7105

Increase FY2023 actual FICA expense by 3.920% consistent with the known wage increase factor noted above. The FICA **reduction** amount (\$7,926.39) associated with the signing bonus paid in FY2023 must be **excluded** from the 7105 total before applying the wage increase factor. The FICA amount associated with the projected increase in retention pay outlined above must also be included. This is calculated by multiplying the projected net increase in retention pay by the FY2024 FICA rate of 7.65%, which equates to **\$1,460.88** of additional FICA expense for the Sewer Department. This should be added to the 7105 total after the wage increase factor has already been applied.

Expense Object - 7110

The calendar 2024 Trend Report is not completed at this time. However, unfavorable health insurance cost trends were anticipated in the calendar 2023 report. Although the overall trend is still unfavorable, the 2023 report is less unfavorable than the 2022 report. Per the 2023 report the medical trend increase assumption is 6.5% (down from 7.5% in 2022) and the prescription drug trend increase assumption is 7.5% (down from 8.5% in 2022). Additionally, three-year smoothing of plan gains or losses is less favorable for

calendar 2024 rates than it was for calendar 2023 rates. Smoothing favorable trends has contributed to limiting projected annual increases in health insurance costs or has provided for further decreases when applicable. The health insurance fund surplus reduction implemented in the 2021 report is also less favorable for calendar 2024 rates than it was for calendar 2023 rates. Finally, the COVID credit adjustment is not factored into any calendar year rates beyond 2023 in the 2023 Trend Report, further contributing to projected health insurance cost increases. **Increase FY2023 health insurance actual by 15.91% to reflect these anticipated rate changes.**

The budgeted FY2024 (\$17,584.00) and FY2025 (\$19,721.00) health insurance rates were blended into a 2024 calendar year rate estimate and divided by the FY2023 base budget amount (\$16,092.00) to arrive at the increase factor [(((((\$17,584.00 + \$19,721.00) / 2)) / \$16,092.00) - 1) \* 100].

#### Expense Object - 7115

Retiree health care ("RHC") rates are projected to trend down in FY2024 (to 3.28%) and FY2025 (to 3.38%) from a base year rate of 4.15% in FY2023. This decrease is slightly offset by the projected wage adjustments discussed above.

The RHC factor after consideration of the above rate and wage adjustments is 83.49% (or a decrease of 16.51%) for GREIU members and 83.07% (or a decrease of 16.93%) for APA members. These factors are then weighted in accordance with union membership within the Sewer Fund [(-16.51 \* 79%) + (-16.93 \* 21%)].

The factor to establish calendar year 2024's retiree health care cost is -16.60%. **Decrease the total of fiscal year 2023's retiree health care by this percent to establish the cost for calendar year 2024.** Since the signing bonus paid in FY2023 is not a cost adjustment factor in setting calendar 2024 rates, and was pensionable for GREIU, a retiree health care amount associated with it for GREIU members also needs to be **excluded** before the RHC decrease factor is applied. This is calculated by multiplying the GREIU signing bonus paid by the FY2023 retiree health general rate (4.15%), which equates to **\$3,279.45** of retiree health care expense that should be **excluded** for the Sewer Department.

#### Expense Object - 7120

The pension expense factor to translate FY2023 actual costs to estimated calendar 2024 will be 8.56%. **Increase the total of fiscal year 2023's pension expense by this percent to establish the cost for calendar year 2024.** This reflects the effect of a General Pension rate change increase from FY23 of 22.60% to a calendar 2024 rate of 23.46% for GREIU and 24.14% for APA along with the projected wage adjustments discussed above. The GREIU calendar 2024 rate is a blend of the FY2024 rate (23.59%) and the FY2025 rate (23.34%). The APA calendar 2024 rate is a blend of the FY2024 rate (24.25%) and the FY2025 rate (24.04%). There is a difference in rates between the

two unions due to the employer's contribution being increased from 6% to 7% in the latest APA contract for the defined contribution plan.

The pension factor after consideration of the above rate and wage adjustments is 108.01% (or an increase of 8.01%) for GREIU members. The pension factor after consideration of the above rate and wage adjustments is 110.59% (or an increase of 10.59%) for APA members. These factors are then weighted in accordance with union membership within the Sewer Fund  $[(8.01 * 79\%) + (10.59 * 21\%)]$ . Since the signing bonus paid in FY2023 is not a cost adjustment factor in setting calendar 2024 rates, and was pensionable for GREIU, a retirement fund contribution (pension) amount associated with it also needs to be **excluded** for GREIU employees before the pension increase factor is applied. This is calculated by multiplying the GREIU signing bonus paid by the FY2023 GREIU pension rate (22.60%), which equates to **\$17,859.20** of retirement fund contribution expense that should be **excluded** for the Sewer Fund.

# MEMORANDUM

CITY OF GRAND RAPIDS

DATE: October 27, 2023

TO: Tai Verbrugge  
Utility Financial Officer

FROM: James Ouzts  
Environmental Services Manager

**SUBJECT: 2023 SEWER RATE STUDY TASK #5  
KNOWN COST ADJUSTMENTS**

Known cost adjustments by which to adjust FY23 operating costs are listed below:

<u>ACCOUNT/User Code</u>	<u>DESCRIPTION</u>	<u>AMOUNT</u>
5900-527-1000-8030	Kent County Community Action Program (ICB)	(\$83,249.77)
5900-527-3000-7530	WRRF Process Chemical Price Increase	\$600,000.00
5900-527-3000-8010	GVRBA Contractual Services	(\$920,006.21)
5900-527-3000-8010	GVRBA (hauling/landfill and chemical increases)	\$600,000.00
5900-527-3000-8010	CHP Operational Costs	\$120,000.00
5900-527-3000-9200	Consumers Energy Green Generation Participation (adjust to admin unit 1000 to allocate to GR Only)	\$58,174.00
5900-527-3000-9210	Natural Gas Costs	\$100,000.00
5900-527-3000-9330	Software Maintenance Agreements	\$213,000.00
5900-527-4010-8010	DAAS Flow Metering Project	\$370,000.00

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# MEMORANDUM

CITY OF GRAND RAPIDS

DATE: October 19, 2023

TO: Jenessa B. Carter  
Crowe Consultant

FROM: Tai Verbrugge  
Utility Financial Officer

**SUBJECT: 2023 SEWER RATE STUDY TASK #6**

The Sewage Disposal System Fund's revenues by governmental unit for the year ended June 30, 2023, are disclosed on the attached page, along with the three-year average billed volume used to calculate expected revenue in the next calendar year (see Task 26 and 27). In addition, annual volume comparisons for the past five (5) years by governmental unit are included herein.

Attachments

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWAGE DISPOSAL SYSTEM FUND  
TASK NO. 6**

DETERMINE SEWAGE VOLUME AND REVENUE BY GOVERNMENTAL ENTITY FOR THE YEAR ENDED JUNE 30, 2023:

RETAIL:	SALES REVENUE	<u>3 YR AVE BILLED VOL</u> (GALLONS)	<u>3 YR AVE BILLED VOL</u> (HCF)
CITY OF GRAND RAPIDS (1)	\$ 42,051,341.89	4,814,896,944	6,437,028
CITY OF WALKER	5,500,907.38	622,445,956	832,147
CITY OF KENTWOOD	5,234,438.65	997,564,964	1,333,643
CASCADE TOWNSHIP	3,200,380.74	348,222,424	465,538
GRAND RAPIDS TOWNSHIP	2,962,114.89	292,596,656	391,172
TALLMADGE TOWNSHIP	691,190.33	31,195,340	41,705
WRIGHT TOWNSHIP (2)	266,848.69	14,807,804	19,797
SUB-TOTAL RETAIL (3)	<u>\$ 59,907,222.57</u>	<u>7,121,730,088</u>	<u>9,521,030</u>
 WHOLESALE:			
CITY OF E. GRAND RAPIDS	\$ 1,314,903.38	422,107,667	564,315
CALEDONIA TOWNSHIP	253,389.76	27,629,000	36,937
ADA TOWNSHIP	1,547,605.02	272,565,333	364,392
GAINES TOWNSHIP (4)	333,518.66	116,500,000	155,749
SUB-TOTAL WHOLESALE	<u>\$ 3,449,416.82</u>	<u>838,802,000</u>	<u>1,121,393</u>
TOTAL	<u>\$ 63,356,639.39</u>	<u>7,960,532,088</u>	<u>10,642,423</u>

REVENUE CLASSIFICATION:

527-1000-5900-6281 RETAIL SEWAGE SERVICE CHARGE	\$ 59,810,476.26
527-1000-5900-6284 WYOMING SEWAGE SERVICE CHARGE	96,746.31
527-1000-5900-6282 WHOLESALE SEWAGE SERVICE CHARGE	<u>3,449,416.82</u>
TOTAL	<u>\$ 63,356,639.39</u>

- (1) THE VOLUME & REVENUE AMOUNT FOR THE CITY OF WYOMING ARE INCLUDED IN THE GRAND RAPIDS TOTALS.
- (2) CHARGES TO USERS IN WRIGHT TOWNSHIP ARE BASED ON A REU (RESIDENTIAL EQUIVALENT UNIT) CHARGE, IN LIEU OF COMMODITY & MONTHLY SERVICE CHARGES, AND AS SUCH DOES NOT RECORD ANY BILLED VOLUME IN RETAIL SERVICE CHARGES TO WRIGHT TOWNSHIP. THE AMOUNT INCLUDED ABOVE REFLECTS THE ESTIMATED BILLED VOLUME BASED ON THE WRRF'S LIFT STATION PUMPING REPORT FOR FY 2023.
- (3) A NET REVENUE ACCRUAL OF (\$511,552.63) HAS BEEN PRORATED TO ALL RETAIL CUSTOMER COMMUNITIES TO ACCRUE BILLINGS FROM THE LAST READING DATE THROUGH JUNE 30, 2023, AND ADJUST FOR PREVIOUS FISCAL YEAR ACCRUAL.
- (4) GAINES TWP RATES ARE CALCULATED BASED ON MOST RECENT FISCAL YEAR BILLED VOLUME PER CONTRACT.

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWAGE DISPOSAL SYSTEM FUND  
2023 RATE STUDY TASK NO. 6**

VOLUME COMPARISONS FOR FIVE (5) YEARS BY GOVERNMENTAL UNIT  
VOLUME = 1,000 GALLONS

<b>MUNICIPALITY</b>	<b>FY19</b>		<b>FY20</b>		<b>FY21</b>		<b>FY22</b>		<b>FY23</b>		<b>FY19 - FY23 % CHANGE</b>
	<b>VOL BILLED</b>	<b>VOL BILLED</b>	<b>% CHANGE</b>								
GRAND RAPIDS	4,998,134	4,782,754	-4.31%	4,706,480	-1.59%	4,848,898	3.03%	4,889,314	0.83%	-2.18%	
WALKER	637,561	596,412	-6.45%	604,510	1.36%	628,004	3.89%	634,824	1.09%	-0.43%	
KENTWOOD	1,060,147	976,528	-7.89%	1,001,673	2.57%	991,359	-1.03%	999,662	0.84%	-5.71%	
CASCADE	357,434	330,505	-7.53%	335,188	1.42%	351,062	4.74%	358,418	2.10%	0.28%	
GRAND RAPIDS TWP	293,245	278,126	-5.16%	284,929	2.45%	291,121	2.17%	301,740	3.65%	2.90%	
TALLMADGE	27,276	25,812	-5.37%	27,089	4.95%	29,628	9.37%	36,870	24.45%	35.17%	
WRIGHT TWP	19,834	20,025	0.96%	12,023	-39.96%	15,037	25.07%	17,363	15.47%	-12.46%	
EAST GRAND RAPIDS	461,287	498,507	8.07%	359,057	-27.97%	459,754	28.04%	447,512	-2.66%	-2.99%	
ADA TWP	291,737	292,738	0.34%	264,616	-9.61%	276,776	4.60%	276,304	-0.17%	-5.29%	
CALEDONIA TWP	28,715	25,910	-9.77%	21,012	-18.90%	30,777	46.47%	31,098	1.04%	8.30%	
GAINES TWP	115,345	122,183	5.93%	103,780	-15.06%	116,742	12.49%	116,500	-0.21%	1.00%	
<b>TOTAL</b>	<b>8,290,715</b>	<b>7,949,500</b>	<b>-4.12%</b>	<b>7,720,357</b>	<b>-2.88%</b>	<b>8,039,158</b>	<b>4.13%</b>	<b>8,109,605</b>	<b>0.88%</b>	<b>-2.18%</b>	

GRAND RAPIDS VOLUME COMPARED TO  
CUSTOMER COMMUNITIES

<b>VOLUME = 1,000 GALLONS</b>	<b>FY19</b>		<b>FY20</b>		<b>FY21</b>		<b>FY22</b>		<b>FY23</b>	
	<b>VOL BILLED</b>	<b>VOL BILLED</b>	<b>% OF TOTAL</b>							
GRAND RAPIDS	4,998,134	4,782,754	60.16%	4,706,480	60.96%	4,848,898	60.32%	4,889,314	60.29%	
CUSTOMER COMMUNITIES	3,292,581	3,166,746	39.84%	3,013,877	39.04%	3,190,260	39.68%	3,220,292	39.71%	
<b>TOTAL</b>	<b>8,290,715</b>	<b>7,949,500</b>	<b>100.00%</b>	<b>7,720,357</b>	<b>100.00%</b>	<b>8,039,158</b>	<b>100.00%</b>	<b>8,109,605</b>	<b>100.00%</b>	

\* Volumes were restated from previous Rate Studies to reflect actual billings without adjustment for accrued revenues.

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWER RATE STUDY  
SEWAGE DISPOSAL SYSTEM FUND  
TASK NO. 7**

OPERATING REVENUES OTHER THAN WASTEWATER RECEIPTS:

527-1000-5900

6260	MISCELLANEOUS SERVICE FEES	\$ 1,875.70
6140	INSPECTION FEES - UTILITIES	26,690.00
6461	INVENTORY WITHDRAWALS (SALES)	8,143.32
6723	INTEREST/PENALTIES ON SPEC ASSM	5,428.76

527-(3000/3080)-5900

4912	INDUSTRIAL PRETREATMENT PERMITS	\$ 55,482.68
6423	SALES OF SCRAP MATERIAL	1,366.86
6461	INVENTORY WITHDRAWALS (SALES)	44,355.73

\$ 143,343.05

CREDIT: UNDERUTILIZATION OF PENALTY CREDIT FROM PREVIOUS YEAR \$ 142,630.06

INTEGRATED SYSTEM CREDITS

527-1000/3000-5900

6152	INTEGRATED SEWER CONNECTION	\$ 23,806.00
6283	SEWAGE SURCHARGE	2,731,719.95
6424	RENEWABLE NATURAL GAS SALES	1,314,199.28

\$ 4,069,725.23

# MEMORANDUM

CITY OF GRAND RAPIDS

DATE: October 27, 2023

TO: Tai Verbrugge  
Utility Financial Officer

FROM: Jared Grabinski  
Assistant Environmental Services Manager

**SUBJECT: 2023 SEWER RATE STUDY – TASK #8**

No significant changes in operating levels are anticipated to take effect by January 1, 2024, which would require adjustments to the operating costs.

# MEMORANDUM

CITY OF GRAND RAPIDS

DATE: October 27, 2023

TO: Tai Verbrugge  
Utility Financial Officer

FROM: Jared Grabinski  
Assistant Environmental Services Manager

**SUBJECT: 2023 SEWER RATE STUDY – TASK #9**

No significant changes in sewer revenues are anticipated to take effect by January 1, 2024, which would require an adjustment to operating revenue estimates as a whole.

Due to further optimization efforts on renewable natural gas production and the completion of the certification process (QRIN's-D3) in March CY23, significant revenue is anticipated in FY24. However, due to the recent volatility in the natural gas market, forecasting this revenue will be challenging.

Revenue generated from the sale of renewable natural gas ("RNG") will be accounted for as integrated system credits in Task 7 of the 2023 Rate Study.

# MEMORANDUM

CITY OF GRAND RAPIDS

**DATE:** October 20, 2023

**TO:** Jenessa B. Carter  
Crowe Consultant

**FROM:** Tai Verbrugge  
Utility Financial Officer

**SUBJECT:** 2023 SEWER RATE STUDY- TASK #10

The following are sewage system projects that should be considered operative as of January 1, 2024.

<u>Description</u>	<u>Location</u>	<u>Proj. Code</u>	<u>Cost</u>
WRRF Screen Building and Grit Tank Improvements	Integrated	590822029; 590219048	\$2,953,266
WRRF South Plant Actuators and Activated Sludge Pump	Integrated	590217016; 590219047	\$1,385,616
Norwich Ave – Curve to Hayden Dwelling Place	Grand Rapids	Contribution	\$927,795
HOM Flats at Maynard	Grand Rapids	Contribution	\$332,175
Avanterra Forest Hills Preserve	Grand Rapids	Contribution	\$137,910
Braeburn Street	GR Township	Contribution	\$560,180
Bretonfield 6	GR Township	Contribution	\$42,750
Windy North	Kentwood	Contribution	\$217,200
Meadow Springs Phase 3	Kentwood	Contribution	\$106,958
Jason Ridge West Phase 1	Walker	Contribution	\$172,185
			\$90,455
			<u>\$6,926,490</u>

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWAGE DISPOSAL SYSTEM FUND  
TASK NO. 11**

COMPUTE ACCUMULATED COST, DEPRECIATION AND DEPRECIATION EXPENSE AS OF JUNE 30, 2023

**INTEGRATED SYSTEM**

	ORIGINAL COST	ACCUMULATED DEPRECIATION	DEPRECIATION EXPENSE
LAND & EASEMENTS	\$ 1,501,496	\$ -	\$ -
LAND IMPROVEMENTS	19,559,132	15,753,208	391,446
BUILDINGS & STRUCTURES	67,000,229	39,589,993	1,358,485
PROCESS EQUIPMENT	119,780,265	53,734,979	3,549,191
AUXILIARY EQUIPMENT	54,515,641	33,362,524	2,157,216
MACHINERY & EQUIPMENT	6,457,263	5,530,791	190,369
OFFICE EQUIPMENT & FURNITURE	11,720	5,039	234
WATERMAIN	1,244,221	941	941
	<u>\$ 270,069,967</u>	<u>\$ 147,977,475</u>	<u>\$ 7,647,882</u>

**NON-INTEGRATED SYSTEM**

	ORIGINAL COST	ACCUMULATED DEPRECIATION	DEPRECIATION EXPENSE
LAND & EASEMENTS	\$ 4,284,072	\$ -	\$ -
LAND IMPROVEMENTS	3,486,637	2,723,115	165,300
BUILDINGS & STRUCTURES	10,653,671	5,072,126	253,817
PROCESS EQUIPMENT	17,093,516	10,789,439	524,387
AUXILIARY EQUIPMENT	4,896,611	4,244,218	145,435
MACHINERY & EQUIPMENT	1,694,680	1,694,680	-
SERVICEMAINS - GRAND RAPIDS	420,975,509	161,807,828	7,890,976
SERVICEMAINS - WALKER	42,831,815	21,535,421	785,806
SERVICEMAINS - KENTWOOD	44,030,490	21,353,481	809,027
SERVICEMAINS - CASCADE TWP	22,334,632	11,459,676	422,988
SERVICEMAINS - GRAND RAPIDS TWP	20,146,826	9,926,268	376,602
SERVICEMAINS - TALLMADGE TWP	6,408,677	2,336,058	128,154
SERVICEMAINS - WRIGHT TWP	125,288	43,848	2,505
	<u>\$ 598,962,424</u>	<u>\$ 252,986,158</u>	<u>\$ 11,504,997</u>
TOTAL	<u><u>\$ 869,032,391</u></u>	<u><u>\$ 400,963,633</u></u>	<u><u>\$ 19,152,879</u></u>

SOURCE: GENERAL LEDGER, AS ADJUSTED, FOR JUNE 30, 2023.

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWER RATE STUDY  
SEWAGE DISPOSAL SYSTEM FUND  
TASK NO. 12**

TASK 12A DETERMINE WORKING CAPITAL NEEDS FOR MATERIALS AND SUPPLIES ON HAND.

MATERIALS AND SUPPLIES INVENTORY AS OF JUNE 30, 2023: \$ 1,194,883

TASK 12B DETERMINE WORKING CAPITAL NEEDS FOR PREPAYMENT OF OPERATING COSTS.

NO REQUIREMENT FOR PREPAYMENT OF OPERATING COSTS IS CALLED FOR IN THE ORDINARY CYCLE OF BUSINESS.

TASK 12C DETERMINE CASH WORKING CAPITAL NEEDS & DETERMINE TOTAL WORKING CAPITAL NEEDS.

MINIMUM CASH WORKING CAPITAL IS DEFINED AS THE SUM OF 90 DAYS ADJUSTED OPERATING EXPENSES.

ADJUSTED CURRENT ANNUAL EXPENSES = \$ 37,031,601 @ 90/365 = \$ 9,131,080

TOTAL WORKING CAPITAL NEEDS CONSIST OF THE FOLLOWING:

12A INVESTMENT IN INVENTORY	\$	1,194,883
12B PREPAYMENT OF OPERATING EXPENSES		-
12C 90 DAY OPERATING EXPENSES		9,131,080
		9,131,080
	\$	10,325,963

# MEMORANDUM

CITY OF GRAND RAPIDS

DATE: October 31, 2023

TO: Tai Verbrugge  
Utility Financial Officer

FROM: Jared Grabinski  
Assistant Environmental Services Manager

**SUBJECT: 2023 SEWER RATE STUDY- TASK #13  
ZONEGATING & JOINT USE ALLOCATION METHODS**

Lengths and costs of all zoned interceptor and trunk sewer mains as well as jointly used lift stations are allocated to customer communities based on the 2016 Comprehensive Master Plan update performed by Black & Veatch, Ltd. They are adjusted annually for the changes in billed flow for each customer community. In addition, a separate Zoning Study was also performed by Fishbeck Engineering Consultants in 2022, and that study resulted in modifications to flow allocations throughout the collection system.

CITY OF GRAND RAPIDS, MICHIGAN  
SEWER RATE STUDY  
SEWAGE DISPOSAL SYSTEM FUND  
METHODOLOGY FOR I/I & OTHER FLOW APPORTIONMENT - TASK NO. 13

	MILLION GALLONS
1.) ANNUAL WASTEWATER TREATMENT PLANT FLOW	14,982.00
LESS: WHOLESALE BILLED FLOW	(871.41)
LESS: RETAIL BILLED FLOW	(7,238.18)
TOTAL RETAIL I/I & OTHER FLOW	6,872.41
2.) RETAIL INFLOW FROM SEPARATED AREAS (A)	784.08
RETAIL INFLOW FROM COMBINED AREAS - AMOUNT ESTIMATED (A)	1,044.93
LESS: ANNUAL BYPASS FROM (3) PUMPING STATIONS	-
LESS: IN-SYSTEM BYPASS & RETENTION BASIN OVERFLOW	-
TOTAL RETAIL INFLOW	1,829.01
3.) RETAIL INFILTRATION:	
TOTAL RETAIL I/I & OTHER FLOW	6,872.41
LESS: TOTAL RETAIL INFLOW (#2)	(1,829.01)
	5,043.40
LESS: MARKET AVE RETENTION BASIN (MARB) CAPTURE	(11.21)
TOTAL RETAIL INFILTRATION & OTHER FLOW	5,032.19
4.) ALLOCATION OF RETAIL INFILTRATION & OTHER FLOW - APPORTIONED ON THE BASIS OF B&V SUMMARY OF 2018 MONITORED FLOW DATA (B)	

	PRORATA SHARE OF RETAIL INFILTRA- TION & OTHER	MILLION GALLONS
GOVERNMENTAL UNIT(S)		
UTILITY PARTNERS	100.0000%	5,032.19
TOTAL	100.0000%	5,032.19

(A) BASED ON RECORDED RAINFALL @ WWTP & APPORTIONED PER BLACK & VEATCH'S SUMMARY OF 2018 MONITORED FLOW DATA.  
(B) BASED ON INFILTRATION & OTHER FLOW APPORTIONED IN PREVIOUS YEAR & ADJUSTED FOR SYSTEM ADDITIONS & IMPROVEMENTS  
IN EACH CUSTOMER COMMUNITY.

CITY OF GRAND RAPIDS, MICHIGAN  
 SEWER RATE STUDY  
 SEWAGE DISPOSAL SYSTEM FUND  
 METHODOLOGY FOR I/I & OTHER FLOW APPORTIONMENT - TASK NO. 13 (CONTINUED)

5.) SUMMARY: (IN MILLION GALLONS)

<u>GOVERNMENTAL UNIT(S)</u>	<u>BILLED FLOW (TASK #6)</u>	<u>INFLOW (#2 ABOVE)</u>	<u>INFILTRATION &amp; OTHER FLOW (#4 ABOVE)</u>	<u>MARB (A) (#3 ABOVE)</u>	<u>TOTAL PLANT FLOW</u>	<u>PERCENT OF TOTAL</u>	<u>TOTAL PLANT FLOW (MGD)</u>
UTILITY PARTNERS	7,961.99	1,829.01	5,032.19	11.01	14,834.20	99.0135%	40.6416
GAINES TWP	116.50	-	-	0.16	116.66	0.7787%	0.3196
TOTAL	<u>8,109.59</u>	<u>1,829.01</u>	<u>5,032.19</u>	<u>11.21</u>	<u>14,982.00</u>	<u>100.0000%</u>	<u>41.0465</u>

(A) BASED ON BILLED FLOW (TASK #6).

# MEMORANDUM

CITY OF GRAND RAPIDS

DATE: October 13, 2023

TO: Tai Verbrugge  
Utility Financial Officer

FROM: Andrew Meyer  
Acting Wastewater Plant Superintendent

**SUBJECT: 2023 SEWER RATE STUDY – WRRF FLOW DATA**

Listed below is the Water Resource Recovery Facility (WRRF) flow data measured in million gallons (MG) for the last three completed fiscal years. Plant flow decreased by 1.210% from 15,165.46 MG treated in FY2022 to 14,981.99 MG treated in FY2023. The final, in-system Combined Sewer Overflow point was eliminated July 13, 2015 and is no longer applicable to this report.

Month	FY 2021	FY 2022	FY 2023*	% incr (decr)
July	1202.70	1283.20	1100.71	-14.22%
August	1106.00	1150.29	1120.78	-2.57%
September	1026.00	1031.09	999.73	-3.04%
October	1042.10	1307.31	1069.08	-18.22%
November	1009.00	1220.26	1052.01	-13.79%
December	1082.70	1193.50	1210.79	1.45%
January	1057.20	1124.86	1273.35	13.20%
February	948.60	1208.97	1262.63	4.44%
March	1182.90	1382.61	1712.36	23.85%
April	1034.00	1610.23	1823.48	13.24%
May	993.00	1509.13	1280.10	-15.18%
June	1198.10	1144.01	1076.97	-5.86%
<b>Total</b>	<b>12882.30</b>	<b>15165.46</b>	<b>14981.99</b>	<b>-1.21%</b>

Data Measured	FY 2021	FY 2022	FY 2023	% incr (decr)
Water Resource Recovery Facility (WRRF) avg daily flow (MG)	35.29	41.55	41.05	-1.21%
Rainfall Recorded at WRRF (inches)	35.49	35.36	47.72	34.95%
Market Ave Retention Basin (MARB) inflow (MG)	31.80	18.71	11.21	-40.10%
Market Ave Retention Basin (MARB) outflow (MG)	0.00	0.00	0.00	N/A

\* FY 2023 data was generated using ESD eRIS software. Future reports will utilize the same query to maintain consistency.

cc: Jeff McCaul, P.E. - Assistant City Engineer

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# MEMORANDUM

CITY OF GRAND RAPIDS

DATE: October 25, 2023

TO: Tai Verbrugge  
Utility Financial Officer

FROM: James Ouzts  
ESD Manager

**SUBJECT: 2023 SEWER RATE STUDY – TASK #14**

Zonegating maps for the sewage system are included in the Comprehensive Master Plan Update 2020 from Fishbeck (finalized July, 2021). The report also contains comprehensive information with respect to the basis for zonegating service mains and other system components, such as lift stations, that service more than one community. A follow-up report was also prepared by Fishbeck in October, 2022 which specifically focused on Zonegating flow allocations. All zonegating work papers are on file at the Water Resource Recovery Administration Building located at 1300 Market Ave., SW, Grand Rapids, MI 49503.

James Ouzts

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWER RATE STUDY  
SEWAGE DISPOSAL SYSTEM FUND  
TASK NO. 15**

COMPUTE CONSTRUCTION COST RATE BASE (NET BOOK VALUE OF ASSETS, PLUS WORKING CAPITAL, LESS CSO REVENUE REQUIREMENTS FOR CSO FIXED ASSETS INCLUDED IN TASK #11/21, LESS CONTRIBUTIONS BY OTHERS).

ORIGINAL CONSTRUCTION COST	- TASK #10	\$ 6,926,490	
	- TASK #11/21	598,157,424	
	- TASK #16/21	<u>(187,300,597)</u>	\$ 417,783,316
LESS: ACCUMULATED DEPRECIATION	- TASK #10	\$ -	
	TASK #11/21	252,948,545	
	TASK #16/21	<u>(84,829,031)</u>	<u>(168,119,514)</u>
			249,663,803
WORKING CAPITAL REQUIREMENT	- TASK #12	\$ 10,325,963	
		<u>10,325,963</u>	<u>10,325,963</u>
			259,989,766
CONTRIBUTIONS BY OTHERS	- TASK #21	\$ 203,777,112	
LESS: AMORTIZATION		(159,186,704)	
		<u>(44,590,408)</u>	<u>(44,590,408)</u>
CONSTRUCTION COST RATE BASE			<u><u>\$ 215,399,358</u></u>

# MEMORANDUM

CITY OF GRAND RAPIDS

DATE: September 7, 2023

TO: Tai Verbrugge, Utility Financial Officer  
Molly Clarin, Chief Financial Officer

FROM: Arden Postma, P.E.  
Hydraulic Engineer

**SUBJECT: 2023 Sewer Rate Study Integrated Connection Fees Task #15A**

Attached is the Integrated Sewer Connection Fee Schedule of rates effective January 1, 2024. Per the Fifth Amendment to the Water & Sanitary Sewer Service Agreements, adopted by City Commission on March 27, 2018 (Res. 87571), the methodology for connection to the water and sewer systems is calculated based on the cost of connection to the System and is evaluated annually as part of the Rate Study and shall be administered the same across the retail system.

The integrated connection fees effective January 1, 2024, shall be as follows:

Residential Users (three residential units or less)

Plan Review and Connection Fee (PRC Fee)			
Meter Size	2023	2024	% Change
3/4 inch	\$380	\$390	2.63%
1 inch	\$390	\$410	5.13%
1-1/2 inch	\$390	\$410	5.13%

All other Users (including residential of more than 3 units, commercial, industrial, governmental and religious)

Plan Review and Connection Fee (PRC Fee)			
Meter Size	2023	2024	% Change
3/4 inch	\$725	\$755	4.14%
1 inch	\$960	\$1010	5.21%
1-1/2 inch	\$1,270	\$1,340	5.51%
2 inch	\$1,750	\$1,850	5.71%
3 inch	\$2,180	\$2,305	5.73%
4 inch	\$3,130	\$3,320	6.07%
6 inch	\$4,400	\$4,675	6.25%

Plus a Meter Capacity Fee based on the meter size (when water and sanitary sewer connections are made at the same time only one Meter Capacity Fee shall be charged) as follows:

<b>Meter Capacity Charge</b>			
<b>Meter Size</b>	<b>2023</b>	<b>2024</b>	<b>% Change</b>
¾ inch	\$210	\$210	0%
1 inch	\$300	\$300	0%
1 ½ inch	\$750	\$750	0%
2 inch	\$880	\$880	0%
3 inch	\$1,650	\$2,162	31%
4 inch	At Cost	At Cost	NA
6 inch	At Cost	At Cost	NA
Ultrasonic Meters			
1-1/2" – 12"	At Cost	At Cost	NA

Commercial Plan Assessment Fee – For instances where there is an established connection or property has been previously reviewed to allow for connection to the System which require less System resources to verify system connection requirements.

<b>Commercial Plan Assessment Fee</b>			
	<b>2023</b>	<b>2024</b>	<b>% Change</b>
All Sizes	\$125	\$125	0%

Further information on the new integrated connection fee methodology can be provided through the Utility Business Office.

AP

Cc:

James Ouzts  
Alex Fleet

Wayne Jernberg  
Brian Bradley

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWER RATE STUDY  
SEWAGE DISPOSAL SYSTEM FUND  
CSO REVENUE REQUIREMENTS - TASK 16  
PRINCIPAL & INTEREST ON REVENUE BONDS & SRF  
DEBT FOR CALENDAR YEAR 2024 - ACCRUAL BASIS**

DATE	SRF/REVENUE REFERENCE		REVENUE BONDS			TOTAL		TOTAL PRINCIPAL & INTEREST
	5073-	SERIES	PRINCIPAL	INTEREST	EST. FEES	PRINCIPAL	INTEREST	
07/01/24	N/A	2010A	(1)	\$ 316,270.00	\$ 800.00	\$ -	\$ 317,070.00	\$ 317,070.00
01/01/25	N/A	2010A	(1)		800.00	0.00	317,070.00	317,070.00
07/01/24	N/A	2013	(2)		600.00	0.00	600.00	600.00
01/01/25	N/A	2013	(2)		600.00	0.00	600.00	600.00
07/01/24	N/A	2014	(3)		625.00	0.00	625.00	625.00
01/01/25	N/A	2014	(3)		625.00	0.00	625.00	625.00
07/01/24	N/A	2016	(4)		317,212.50	625.00	317,837.50	317,837.50
01/01/25	N/A	2016	(4)	646,800.00	317,212.50	625.00	646,800.00	964,637.50
07/01/24	N/A	2021	(5)		468,833.03	625.00	469,458.03	469,458.03
01/01/25	N/A	2021	(5)	3,186,884.71	468,833.03	625.00	3,186,884.71	3,656,342.74
						<u>\$ 3,833,684.71</u>	<u>\$ 2,211,181.05</u>	<u>\$ 6,044,865.76</u>

- (1) DS ON ES CSO PORTION OF 2010A ISSUE. (\$14.05M)
- (2) PRORATED AMOUNT OF 2013 ISSUE RELATED TO CSO DEBT. PARTIAL REFUND WITH 2021 ISSUE. FULLY PAID BY FY24.
- (3) PRORATED AMOUNT OF 2014 (2005 CSO) ISSUE RELATED TO CSO DEBT. PARTIAL REFUND WITH 2021 ISSUE
- (4) DS ON ES CSO PORTION OF REFUNDED 2008 ISSUE
- (5) PRORATED AMOUNT OF REFUNDED 2013 AND 2014 (2005 CSO REFUNDING) ISSUES RELATED TO CSO DEBT

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWER RATE STUDY  
SEWAGE DISPOSAL SYSTEM FUND  
TASK NO. 16A**

INCLUDE MAJOR PROJECT COST FOR UPCOMING SYSTEM IMPROVEMENTS (NON-INTEGRATED)  
THE ESTIMATED TOTAL PROJECT COST FOR RECOMMENDED SEWAGE SYSTEM IMPROVEMENTS  
ARE SUMMARIZED IN THE FOLLOWING TABLE.

ITEM NO.	DESCRIPTION	ESTIMATED COST	BUDGET YEAR
1	GODFREY AVE - OXFORD ST TO MARKET AVE	\$2,110,000	2025
2	CESAR E. CHAVEZ AVE - HALL TO BEACON	\$390,000	2025
3	CESAR E. CHAVEZ AVE - STOLPE TO HALL	\$150,000	2025
4	EASTERN AVE LIFT STATION UPGRADES	\$150,000	2025
5	STATE - LAFAYETTE TO MADISON	\$18,017	2025
6	VALENTINE LIFT STATION UPGRADES	\$100,000	2025
7	VAR LOC CIPP REHAB OF S/S	\$600,000	2025
8	LAFAYETTE AVENUE - FOUNTAIN TO MICHIGAN	\$270,000	2026
9	BERKSHIRE ST - GIDDINGS AV TO KALAMAZOO AV	\$225,000	2026
10	GODFREY AVE - OXFORD ST TO MARKET AVE	\$4,000,000	2026
11	BURTON/BRETON SANITARY TRUNK SEWER	\$3,000,000	2026
12	CASCADE/KENTWOOD SANITARY TRUNK SEWER	\$2,500,000	2026
13	LIFT STATION UPGRADES	\$350,000	2026
14	VAR LOC CIPP REHAB OF S/S	\$625,000	2026
15	WHISKEY CREEK SANITARY TRUNK	\$3,700,000	2027
16	GODFREY AVE - GRAND RIVER TO SOUTH OF MARKET AVE	\$5,500,000	2027
17	LIFT STATION UPGRADES	\$350,000	2027
18	VAR LOC CIPP REHAB OF S/S	\$650,000	2027
19	KENT COUNTRY CLUB SANITARY TRUNK SEWER	\$1,600,000	2028
20	BUTTERWORTH - HOGADONE TO SEWARD AVE	\$100,000	2028
21	LIFT STATION UPGRADES	\$350,000	2028
22	VAR LOC CIPP REHAB OF S/S	\$650,000	2028
		<u>\$27,388,017</u>	

NOTE: NONE OF THE PROJECTS ABOVE ARE INCLUDED IN RECOMMENDED REVENUE REQUIREMENTS FOR CALENDAR YEAR 2023. COSTS SHOWN ARE IN 2022 DOLLARS.

SOURCE: BRIAN BRADLEY, HYDRAULIC ENGINEER, OCTOBER 2023

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWER RATE STUDY  
SEWAGE DISPOSAL SYSTEM FUND  
TASK NO. 17**

**BONDS - PRINCIPAL & INTEREST PAYMENTS (SENIOR)**

FISCAL YEAR ENDING JUNE 30,	PRINCIPAL	INTEREST	PRIN & INT
2024	\$ 13,560,000	\$ 9,665,519	23,225,519
2025	14,025,000	9,155,225	23,180,225
2026	14,540,000	8,702,589	23,242,589
2027	15,060,000	8,219,392	23,279,392
2028	15,570,000	7,700,535	23,270,535
2029	11,385,000	7,149,652	18,534,652
2030	12,650,000	6,835,012	19,485,012
2031	13,030,000	6,453,850	19,483,850
2032	13,425,000	6,050,316	19,475,316
2033	13,865,000	5,619,582	19,484,582
2034	15,925,000	5,159,803	21,084,803
2035	14,210,000	4,637,596	18,847,596
2036	9,585,000	4,138,313	13,723,313
2037	10,010,000	3,703,861	13,713,861
2038	10,460,000	3,263,135	13,723,135
2039	8,650,000	2,802,114	11,452,114
2040	9,010,000	2,441,647	11,451,647
2041	9,380,000	2,065,700	11,445,700
2042	5,560,000	1,657,797	7,217,797
2043	3,825,000	1,421,850	5,246,850
2044	4,020,000	1,230,600	5,250,600
2045	4,220,000	1,029,600	5,249,600
2046	4,430,000	818,600	5,248,600
2047	4,630,000	617,550	5,247,550
2048	4,840,000	407,300	5,247,300
2049	2,295,000	187,400	2,482,400
2050	2,390,000	95,600	2,485,600
	<u>\$ 260,550,000</u>	<u>\$ 111,230,136</u>	<u>\$ 371,780,136</u>

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWER RATE STUDY  
SEWAGE DISPOSAL SYSTEM FUND  
TASK NO. 18**

DETERMINE SEWER SYSTEM EQUITY IN THE CONSTRUCTION COST RATE BASE BY  
SUBTRACTING DEBT OUTSTANDING FROM THE TOTAL RATE BASE.

CONSTRUCTION COST RATE BASE - TASK NO. 15	\$ 215,399,358
LESS: BONDED INDEBTEDNESS IN CCRB (CASH BASIS) - TASK NO. 20	(188,160,232)
NET SEWER SYSTEM EQUITY	<u><u>\$ 27,239,126</u></u>

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWER RATE STUDY  
SEWAGE DISPOSAL SYSTEM FUND  
RATE OF RETURN ON EQUITY - TASK NO. 19**

AT THE APRIL 5, 1977, COMMITTEE OF THE WHOLE MEETING, THE CITY COMMISSION DECIDED THE LEVEL OF RETURN ON SEWER SYSTEM EQUITY. THE LEVEL DECIDED UPON WAS ONE PERCENT MORE THAN THE AVERAGE BOND BUYER'S INDEX OF MUNICIPAL BONDS FOR THE PREVIOUS TWELVE MONTH PERIOD.

BOND BUYER'S INDEX OF 20 MUNICIPAL BONDS

<u>DATE</u>	<u>RATE</u>	<u>DATE</u>	<u>RATE</u>
18-Aug-22	3.440%	16-Feb-23	3.650%
25-Aug-22	3.590%	23-Feb-23	3.750%
01-Sep-22	3.640%	02-Mar-23	3.750%
08-Sep-22	3.730%	09-Mar-23	3.730%
15-Sep-22	3.810%	16-Mar-23	3.570%
22-Sep-22	3.890%	23-Mar-23	3.570%
29-Sep-22	4.020%	30-Mar-23	3.500%
06-Oct-22	3.860%	06-Apr-23	3.360%
13-Oct-22	3.840%	13-Apr-23	3.320%
20-Oct-22	3.870%	20-Apr-23	3.560%
27-Oct-22	4.160%	27-Apr-23	3.530%
03-Nov-22	4.060%	04-May-23	3.530%
10-Nov-22	4.020%	11-May-23	3.530%
17-Nov-22	3.750%	18-May-23	3.590%
23-Nov-22	3.720%	25-May-23	3.740%
01-Dec-22	3.650%	01-Jun-23	3.670%
08-Dec-22	3.630%	08-Jun-23	3.670%
15-Dec-22	3.590%	15-Jun-23	3.670%
22-Dec-22	3.660%	22-Jun-23	3.650%
29-Dec-22	3.720%	29-Jun-23	3.650%
05-Jan-23	3.660%	06-Jul-23	3.640%
12-Jan-23	3.450%	13-Jul-23	3.660%
19-Jan-23	3.330%	20-Jul-23	3.570%
26-Jan-23	3.370%	27-Jul-23	3.600%
02-Feb-23	3.390%	03-Aug-23	3.750%
09-Feb-23	3.510%	10-Aug-23	3.710%
		<u>52 WEEKS</u>	<u>3.659%</u>

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWER RATE STUDY  
SEWAGE DISPOSAL SYSTEM FUND  
TASK NO. 20**

DETERMINE COMPOSITE RATE OF RETURN ON CONSTRUCTION COST RATE BASE

	RATE BASE	@	RATE OF RETURN	=	RETURN ON INVESTMENT
SEWER SYSTEM EQUITY IN THE CONSTRUCTION COST RATE BASE (CCRB)	\$ 27,239,126		4.659%		\$ 1,269,134
SEWER SYSTEM INDEBTEDNESS IN THE CCRB					
2010 BONDS	25,270,000		5.00%		1,263,500
2010A BONDS	7,895,000		4.37%		345,012
2011 SRF BONDS	3,289,675		2.50%		82,242
2013 SRF BONDS	664,125		2.00%		13,283
2014 BONDS (refunded 2005 Bonds)	699,200		5.00%		34,960
2016 BONDS (partially refunded 2008 Bonds)	23,563,250		5.00%		1,178,163
2018 BONDS	38,935,000		5.00%		1,946,750
2020 BONDS	34,290,000		4.64%		1,591,056
2021 BONDS (refunded 2012, 2013, 2014 Bonds)	53,553,982		1.95%		1,043,232
LESS INTEREST ON BOND RESERVE ACCOUNTS					193,378
	\$ 215,399,358				\$ 8,960,710
COMPOSITE RATE OF RETURN ON INVESTMENT			\$ 8,960,710	=	4.160%
			\$215,399,358		

**Noted Disclosure:**

TOTAL BONDED INDEBTEDNESS IN CCRB (from above) \$ 188,160,232 TASK NO. 18

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWAGE DISPOSAL SYSTEM FUND  
CONSTRUCTION COST RATE BASE & RETURN ON SYSTEM INVESTMENT- TASK NO. 21- PART 1  
FISCAL YEAR ENDED JUNE 30, 2023**

**PHYSICAL LOCATION**

DESCRIPTION	INTEGRATED SYSTEM	RETAIL							WHOLESALE				TOTAL	
		CITY OF GR	CITY OF WALKER	CITY OF KENTWOOD	CASCADE TOWNSHIP	GR TOWNSHIP	TALLMADGE TOWNSHIP	WRIGHT TOWNSHIP	CITY OF EAST GR	CALEDONIA TOWNSHIP	ADA TOWNSHIP	GAINES TOWNSHIP		
COST	\$ 274,408,849	\$ 257,122,351	\$ 43,006,521	\$ 31,916,562	\$ 21,190,754	\$ 23,388,254	\$ 5,735,670	\$ 118,230	\$ -	\$ -	\$ -	\$ -	\$ 656,887,190	
LESS: ACCUMULATED DEPRECIATION	147,977,475	92,065,068	22,150,205	17,121,793	11,116,224	10,407,814	2,195,451	75,535	-	-	-	-	303,109,565	
NET BOOK VALUE	\$ 126,431,374	\$ 165,057,283	\$ 20,856,316	\$ 14,794,769	\$ 10,074,530	\$ 12,980,440	\$ 3,540,219	\$ 42,695	\$ -	\$ -	\$ -	\$ -	\$ 353,777,626	
WORKING CAPITAL REQUIREMENT	7,284,966	1,861,978	376,381	269,921	188,552	263,828	34,179	25,712	4,234	1,033	11,049	4,130	10,325,963	
	<u>\$ 133,716,340</u>	<u>\$ 166,919,261</u>	<u>\$ 21,232,697</u>	<u>\$ 15,064,690</u>	<u>\$ 10,263,082</u>	<u>\$ 13,244,268</u>	<u>\$ 3,574,398</u>	<u>\$ 68,407</u>	<u>\$ 4,234</u>	<u>\$ 1,033</u>	<u>\$ 11,049</u>	<u>\$ 4,130</u>	<u>\$ 364,103,589</u>	
CONTRIBUTIONS	50,267,759	58,983,988	27,039,087	26,577,932	18,809,078	16,791,536	5,307,732	-	-	-	-	-	203,777,112	
LESS AMORTIZATION	(51,431,294)	(54,146,716)	(14,662,236)	(15,695,502)	(10,565,151)	(8,673,440)	(1,974,743)	-	-	-	-	-	(157,149,082)	
	<u>\$ 1,163,535</u>	<u>\$ (4,837,272)</u>	<u>\$ (12,376,851)</u>	<u>\$ (10,882,430)</u>	<u>\$ (8,243,927)</u>	<u>\$ (8,118,096)</u>	<u>\$ (3,332,989)</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ (46,628,030)</u>	
CONSTRUCTION COST RATE BASE	<u>\$ 134,879,875</u>	<u>\$ 162,081,989</u>	<u>\$ 8,855,846</u>	<u>\$ 4,182,260</u>	<u>\$ 2,019,155</u>	<u>\$ 5,126,172</u>	<u>\$ 241,409</u>	<u>\$ 68,407</u>	<u>\$ 4,234</u>	<u>\$ 1,033</u>	<u>\$ 11,049</u>	<u>\$ 4,130</u>	<u>\$ 317,475,559</u>	
RETURN ON INVESTMENT- TASK 20	4.160%	<u>\$ 5,611,003</u>	<u>\$ 6,742,611</u>	<u>\$ 368,403</u>	<u>\$ 173,982</u>	<u>\$ 83,997</u>	<u>\$ 213,249</u>	<u>\$ 10,043</u>	<u>\$ 2,846</u>	<u>\$ 176</u>	<u>\$ 43</u>	<u>\$ 460</u>	<u>\$ 172</u>	<u>\$ 13,206,985</u>
<b>ZONEGATED</b>														
COST	\$ -	\$ (361,130)	\$ 6,411,607	\$ 1,988,795	\$ 3,896,746	\$ 7,835,223	\$ 1,927,471	\$ 1,429,536	\$ 357,069	\$ 245,804	\$ 6,233,073	\$ 1,001,899	\$ 30,966,093	
LESS: ACCUMULATED DEPRECIATION	-	(861,173)	2,960,827	1,459,668	1,482,450	3,427,162	655,261	644,043	256,476	173,718	2,080,924	708,068	12,987,424	
NET BOOK VALUE	\$ -	\$ 500,043	\$ 3,450,780	\$ 529,127	\$ 2,414,296	\$ 4,408,061	\$ 1,272,210	\$ 785,493	\$ 100,593	\$ 72,086	\$ 4,152,149	\$ 293,831	\$ 17,978,669	
WORKING CAPITAL REQUIREMENT	-	-	-	-	-	-	-	-	-	-	-	-	-	
	<u>\$ -</u>	<u>\$ 500,043</u>	<u>\$ 3,450,780</u>	<u>\$ 529,127</u>	<u>\$ 2,414,296</u>	<u>\$ 4,408,061</u>	<u>\$ 1,272,210</u>	<u>\$ 785,493</u>	<u>\$ 100,593</u>	<u>\$ 72,086</u>	<u>\$ 4,152,149</u>	<u>\$ 293,831</u>	<u>\$ 17,978,669</u>	
CONTRIBUTIONS	-	-	7,390	950,911	297,031	231,915	209	149	1,796	204,125	270,701	832,056	2,796,283	
LESS AMORTIZATION	-	-	(7,390)	(722,693)	(225,743)	(176,686)	(209)	(149)	(1,365)	(137,436)	(205,733)	(560,218)	(2,037,622)	
	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ (228,218)</u>	<u>\$ (71,288)</u>	<u>\$ (55,229)</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ (431)</u>	<u>\$ (66,689)</u>	<u>\$ (64,968)</u>	<u>\$ (271,838)</u>	<u>\$ (758,661)</u>	
CONSTRUCTION COST RATE BASE	<u>\$ -</u>	<u>\$ 500,043</u>	<u>\$ 3,450,780</u>	<u>\$ 300,909</u>	<u>\$ 2,343,008</u>	<u>\$ 4,352,832</u>	<u>\$ 1,272,210</u>	<u>\$ 785,493</u>	<u>\$ 100,162</u>	<u>\$ 5,397</u>	<u>\$ 4,087,181</u>	<u>\$ 21,993</u>	<u>\$ 17,220,008</u>	
RETURN ON INVESTMENT- TASK 19/21	-	\$ 40,800	\$ 281,557	\$ 24,552	\$ 191,171	\$ 355,158	\$ 103,803	\$ 64,090	\$ 8,172	\$ 440	\$ 333,483	\$ 915	\$ 1,404,141	
RETURN ON INVESTMENT- TASK 19/21	8.159%	8.159%	8.159%	8.159%	8.159%	8.159%	8.159%	8.159%	8.159%	8.159%	8.159%	4.160%		
TOTAL RETURN ON INVESTMENT	<u>\$ 5,611,003</u>	<u>\$ 6,783,411</u>	<u>\$ 649,960</u>	<u>\$ 198,534</u>	<u>\$ 275,168</u>	<u>\$ 568,407</u>	<u>\$ 113,846</u>	<u>\$ 66,936</u>	<u>\$ 8,348</u>	<u>\$ 483</u>	<u>\$ 333,943</u>	<u>\$ 1,087</u>	<u>\$ 14,611,126</u>	

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWAGE DISPOSAL SYSTEM FUND  
CONSTRUCTION COST & ACCUMULATED DEPRECIATION- TASK NO. 21- PART 2  
FISCAL YEAR ENDED JUNE 30, 2023**

**CONSTRUCTION COST**

COST CENTER	AMOUNT	INTEGRATED SYSTEM	RETAIL							WHOLESALE				TOTAL
			CITY OF GR	CITY OF WALKER	CITY OF KENTWOOD	CASCADE TOWNSHIP	GR TOWNSHIP	TALLMADGE TOWNSHIP	WRIGHT TOWNSHIP	CITY OF EAST GR	CALEDONIA TOWNSHIP	ADA TOWNSHIP	GAINES TOWNSHIP	
BY PHYSICAL LOCATION- TASK 11		\$ 270,069,967	\$ 455,812,393	\$ 46,220,911	\$ 44,030,490	\$ 23,033,289	\$ 22,903,372	\$ 6,765,623	\$ 196,346	\$ -	\$ -	\$ -	\$ -	\$ 869,032,391
ADD: IN SERVICE- TASK 10/8		4,338,882	1,397,880	262,640	324,158	-	602,930	-	-	-	-	-	-	6,926,490
MARNE CONNECTOR AGREEMENT			(211,573)					(515,311)	(78,116)					(805,000)
SADDLEBACK SEWER			(1,187,160)		1,115,707	71,453								-
TASK 11/16/21- CSO FA AMT			(187,300,597)											(187,300,597)
LIFT STATIONS / CHAMBERS:														
FULLER-BROOKVIEW	\$ 1,252,893		(966,294)	-	-	-	966,294	-	-	-	-	-	-	-
FULTON- MIDDLEBORROW	37,983		(37,983)	-	-	-	37,983	-	-	-	-	-	-	-
WEALTHY ST EXT. CHAMBER	458,953		(136,879)	128,209	-	-	-	8,670	-	-	-	-	-	-
WEALTHY	20,444		(6,889)	6,630	-	-	-	60	199	-	-	-	-	-
MARKET	12,965,095		(1,748,862)	1,354,204	-	-	329,054	38,377	27,227	-	-	-	-	-
VANPORTFLIET / LEONARD HTS	1,239,326		409,523	(409,523)	-	-	-	-	-	-	-	-	-	-
REMEMBRANCE / 3 MILE	1,213,244		-	(201,180)	-	-	-	46,552	154,628	-	-	-	-	-
16th AVENUE	71,058													
HAYES- WEST	141,105		-	-	-	-	-	(141,105)	141,105	-	-	-	-	-
HAYES- EAST	215,841		-	-	-	-	-	-	-	-	-	-	-	-
O'BRIEN	546,532		19,664	(70,114)	-	-	-	50,450	-	-	-	-	-	-
SERVICEMAINS			(9,282,002)	2,126,351	(11,564,998)	1,982,758	6,383,844	1,409,825	1,106,377	357,069	245,804	6,233,073	1,001,899	-
ADJUSTED BY ZONEGATING		\$ 274,408,849	\$ 256,761,221	\$ 49,418,128	\$ 33,905,357	\$ 25,087,500	\$ 31,223,477	\$ 7,663,141	\$ 1,547,766	\$ 357,069	\$ 245,804	\$ 6,233,073	\$ 1,001,899	\$ 687,853,283
ZONEGATING ADJUSTMENT		\$ -	\$ (361,130)	\$ 6,411,607	\$ 1,988,795	\$ 3,896,746	\$ 7,835,223	\$ 1,927,471	\$ 1,429,536	\$ 357,069	\$ 245,804	\$ 6,233,073	\$ 1,001,899	\$ 30,966,093
PHYSICAL LOCATION		\$ 274,408,849	\$ 257,122,351	\$ 43,006,521	\$ 31,916,562	\$ 21,190,754	\$ 23,388,254	\$ 5,735,670	\$ 118,230	\$ -	\$ -	\$ -	\$ -	\$ 656,887,190

**ACCUMULATED DEPRECIATION**

BY PHYSICAL LOCATION- TASK 11	\$ 147,977,475	\$ 183,342,309	\$ 23,417,170	\$ 21,353,481	\$ 11,681,902	\$ 10,525,862	\$ 2,563,961	\$ 101,473	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 400,963,633
ADD: IN SERVICE- TASK 10		-	-	-	-	-	-	-	-	-	-	-	-	-
MARNE CONNECTOR AGREEMENT			(167,914)				(162,653)	(25,938)						(356,505)
SADDLEBACK SEWER				300,314	18,578									318,892
TASK 11/16/21- CSO ACC DEP			(84,829,031)											(84,829,031)
LIFT STATIONS / CHAMBERS:														
FULLER-BROOKVIEW	\$ 886,822		(683,961)	-	-	-	683,961	-	-	-	-	-	-	-
FULTON- MIDDLEBORROW	37,983		(37,983)	-	-	-	37,983	-	-	-	-	-	-	-
WEALTHY ST EXT. CHAMBER	219,379		(65,428)	61,284	-	-	-	4,144	-	-	-	-	-	-
WEALTHY	20,444		(6,889)	6,630	-	-	-	60	199	-	-	-	-	-
MARKET	8,928,102		(1,204,311)	932,540	-	-	226,595	26,427	18,749	-	-	-	-	-
VANPORTFLIET / LEONARD HTS	481,097		158,974	(158,974)	-	-	-	-	-	-	-	-	-	-
REMEMBRANCE / 3 MILE	948,603		-	(157,297)	-	-	-	36,398	120,899	-	-	-	-	-
16th AVENUE	57,625													
HAYES- WEST	97,263		-	-	-	-	-	(97,263)	97,263	-	-	-	-	-
HAYES- EAST	130,640		-	-	-	-	-	-	-	-	-	-	-	-
O'BRIEN	355,246		12,782	(45,575)	-	-	-	32,793	-	-	-	-	-	-
SERVICEMAINS			(5,314,653)	1,055,254	(3,072,334)	898,194	2,360,575	446,845	406,933	256,476	173,718	2,080,924	708,068	-
ADJUSTED BY ZONEGATING	\$ 147,977,475	\$ 91,203,895	\$ 25,111,032	\$ 18,581,461	\$ 12,598,674	\$ 13,834,976	\$ 2,850,712	\$ 719,578	\$ 256,476	\$ 173,718	\$ 2,080,924	\$ 708,068	\$ 316,096,989	
ZONEGATING ADJUSTMENT	\$ -	\$ (861,173)	\$ 2,960,827	\$ 1,459,668	\$ 1,482,450	\$ 3,427,162	\$ 655,261	\$ 644,043	\$ 256,476	\$ 173,718	\$ 2,080,924	\$ 708,068	\$ 12,987,424	
PHYSICAL LOCATION	\$ 147,977,475	\$ 92,065,068	\$ 22,150,205	\$ 17,121,793	\$ 11,116,224	\$ 10,407,814	\$ 2,195,451	\$ 75,535	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 303,109,565

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWAGE DISPOSAL SYSTEM FUND  
CONTRIBUTIONS & AMORTIZED CONTRIBUTIONS- TASK NO. 21- PART 3  
FISCAL YEAR ENDED JUNE 30, 2023**

**CONTRIBUTIONS BY OTHERS**

COST CENTER	AMOUNT	INTEGRATED SYSTEM	RETAIL							WHOLESALE				TOTAL
			CITY OF GR	CITY OF WALKER	CITY OF KENTWOOD	CASCADE TOWNSHIP	GR TOWNSHIP	TALLMADGE TOWNSHIP	WRIGHT TOWNSHIP	CITY OF EAST GR	CALEDONIA TOWNSHIP	ADA TOWNSHIP	GAINES TOWNSHIP	
2022 RATE STUDY (LOCATION)		\$ 50,267,759	\$ 58,701,865	\$ 26,823,219	\$ 25,917,927	\$ 18,809,078	\$ 16,795,236	\$ 5,307,732	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 202,622,816
ADDITIONS:														
CONNECTION & FRONT FOOT FEES			105,930	31,448	130,200	-	(3,700)	-	-	-	-	-	-	263,878
FIXED ASSET CONTRIBUTIONS		-	176,193	184,420	529,805	-	-	-	-	-	-	-	-	890,418
		\$ 50,267,759	\$ 58,983,988	\$ 27,039,087	\$ 26,577,932	\$ 18,809,078	\$ 16,791,536	\$ 5,307,732	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 203,777,112
PLASTER CREEK INTERCEPTOR GRANT	\$ 2,244,621	-	-	950,911	297,031	230,119	-	-	1,796	27,137	270,701	110,615	-	
INTERCEPTOR	1,314,819	-	-	-	-	-	-	-	-	176,988	-	721,441	-	
LIFT STATION	70,753	-	7,390	-	-	1,796	209	149	-	-	-	-	-	
ADJUSTED BY ZONEGATING		\$ 50,267,759	\$ 58,983,988	\$ 27,046,477	\$ 27,528,843	\$ 19,106,109	\$ 17,023,451	\$ 5,307,941	\$ 149	\$ 1,796	\$ 204,125	\$ 270,701	\$ 832,056	\$ 203,777,112
LESS: ZONEGATING ADJUSTMENT		\$ -	\$ -	\$ 7,390	\$ 950,911	\$ 297,031	\$ 231,915	\$ 209	\$ 149	\$ 1,796	\$ 204,125	\$ 270,701	\$ 832,056	\$ -
PHYSICAL LOCATION		50,267,759	58,983,988	27,039,087	26,577,932	18,809,078	16,791,536	5,307,732	-	-	-	-	-	203,777,112

**AMORTIZED CONTRIBUTIONS**

2022 RATE STUDY (LOCATION)		\$ 50,425,939	\$ 53,002,009	\$ 14,154,486	\$ 15,166,039	\$ 10,188,969	\$ 8,341,075	\$ 1,868,543	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 153,147,060
CURRENT YEAR ADJUSTMENT		1,005,355.18	1,144,707.00	507,750.00	529,463.00	376,182.00	332,365.00	106,200.00	-	-	-	-	-	4,002,022.18
		\$ 51,431,294	\$ 54,146,716	\$ 14,662,236	\$ 15,695,502	\$ 10,565,151	\$ 8,673,440	\$ 1,974,743	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 157,149,082
PLASTER CREEK INTERCEPTOR GRANT	\$ 1,705,912	-	-	722,693	225,743	174,890	-	-	1,365	20,624	205,733	84,067	-	
INTERCEPTOR	867,781	-	-	-	-	-	-	-	-	116,812	-	476,151	-	
LIFT STATION	70,753	-	7,390	-	-	1,796	209	149	-	-	-	-	-	
ADJUSTED BY ZONEGATING		\$ 51,431,294	\$ 54,146,716	\$ 14,669,626	\$ 16,418,195	\$ 10,790,894	\$ 8,850,126	\$ 1,974,952	\$ 149	\$ 1,365	\$ 137,436	\$ 205,733	\$ 560,218	\$ 157,149,082
LESS: ZONEGATING ADJUSTMENT		\$ -	\$ -	\$ 7,390	\$ 722,693	\$ 225,743	\$ 176,686	\$ 209	\$ 149	\$ 1,365	\$ 137,436	\$ 205,733	\$ 560,218	\$ -
PHYSICAL LOCATION		\$ 51,431,294	\$ 54,146,716	\$ 14,662,236	\$ 15,695,502	\$ 10,565,151	\$ 8,673,440	\$ 1,974,743	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 157,149,082

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWAGE DISPOSAL SYSTEM FUND  
RECONCILIATION OF CONSTRUCTION COST & ACCUMULATED DEPRECIATION- PHYSICAL LOCATION & ZONEGATING  
FISCAL YEAR ENDED JUNE 30, 2023**

COST CENTER	AMOUNT	INTEGRATED SYSTEM	RETAIL							WHOLESALE				TOTAL
			CITY OF GR	CITY OF WALKER	CITY OF KENTWOOD	CASCADE TOWNSHIP	GR TOWNSHIP	TALLMADGE TOWNSHIP	WRIGHT TOWNSHIP	CITY OF EAST GR	CALEDONIA TOWNSHIP	ADA TOWNSHIP	GAINES TOWNSHIP	
<b>CONSTRUCTION COST- BY PHYSICAL LOCATION:</b>														
BY PHYSICAL LOCATION- TASK 11		\$ 270,069,967	\$ 463,084,696	\$ 42,831,815	\$ 44,030,490	\$ 22,334,632	\$ 20,146,826	\$ 6,408,677	\$ 125,288	\$ -	\$ -	\$ -	\$ -	\$ 869,032,391
IN SERVICE- TASK 10/8		4,338,882	1,397,880	262,640	324,158	-	602,930	-	-	-	-	-	-	6,926,490
MARNE CONNECTOR AGREEMENT		-	(211,573)	-	-	-	-	(515,311)	(78,116)	-	-	-	-	(805,000)
SADDLEBACK SEWER		-	(1,187,160)	-	-	1,115,707	71,453	-	-	-	-	-	-	-
TASK 11/16/21- CSO COST		-	(187,300,597)	-	-	-	-	-	-	-	-	-	-	(187,300,597)
O'BRIEN		-	(546,532)	546,532	-	-	-	-	-	-	-	-	-	-
VANPORTFLIET / LEONARD HTS		-	(1,239,326)	1,239,326	-	-	-	-	-	-	-	-	-	-
REMEMBRANCE / 3 MILE		-	(1,213,244)	1,213,244	-	-	-	-	-	-	-	-	-	-
16th AVENUE		-	(71,058)	-	-	-	-	-	71,058	-	-	-	-	-
HAYES- WEST		-	(141,105)	-	-	-	-	141,105	-	-	-	-	-	-
HAYES- EAST		-	(215,841)	-	-	-	-	215,841	-	-	-	-	-	-
KINGSBURY	\$ 323,154		(323,154)	323,154	-	-	-	-	-	-	-	-	-	-
MEADOWWOOD TRAILS	66,841		(66,841)	-	-	66,841	-	-	-	-	-	-	-	-
OAK HOLLOW	66,840		(66,840)	-	-	-	66,840	-	-	-	-	-	-	-
COLLINDALE	66,840		(66,840)	66,840	-	-	-	-	-	-	-	-	-	-
THORNAPPLE	224,216		(224,216)	-	-	224,216	-	-	-	-	-	-	-	-
6000 28TH ST	111,401		(111,401)	-	-	111,401	-	-	-	-	-	-	-	-
THORNHILLS	118,407		(118,407)	-	-	118,407	-	-	-	-	-	-	-	-
ROBINHOOD	178,399		(178,399)	-	-	-	178,399	-	-	-	-	-	-	-
CASCADE SPRINGS	65,478		(65,478)	-	-	65,478	-	-	-	-	-	-	-	-
SHOREHAVEN	72,602		(72,602)	-	-	-	72,602	-	-	-	-	-	-	-
EAGLECREST	345,633		(345,633)	-	-	-	345,633	-	-	-	-	-	-	-
GREENBRIER	48,486		(48,486)	-	-	-	48,486	-	-	-	-	-	-	-
LINCOLN SCHOOL	153,651		(153,651)	-	-	-	153,651	-	-	-	-	-	-	-
REEDS LAKE	962,898		(962,898)	-	-	-	962,898	-	-	-	-	-	-	-
KRAFT	72,602		(72,602)	-	-	72,602	-	-	-	-	-	-	-	-
ORCHARD VISTA	39,712		(39,712)	-	-	39,712	-	-	-	-	-	-	-	-
BIRD AVE-ALPINE ESTATES	797,860		(797,860)	-	-	-	797,860	-	-	-	-	-	-	-
EAST PARIS	323,478		(323,478)	-	-	-	323,478	-	-	-	-	-	-	-
SERVICE MAINS														
LESS: SERVICE MAINS- TOTAL SUBS- PHY. LOC.			(38,878,203)	(13,840,328)	(19,707,869)	(2,312,401)	(140,457)	(590,665)	-	-	-	-	-	(75,469,923)
ADD: SERVICE MAINS- TOTAL ADDS- PHY. LOC.			12,213,480	10,363,298	6,154,076	398,413	22,409	76,023	-	-	-	-	-	29,227,699
TOTAL- PHYSICAL LOCATION COST		<u>\$ 274,408,849</u>	<u>\$ 241,652,919</u>	<u>\$ 43,006,521</u>	<u>\$ 31,916,562</u>	<u>\$ 21,190,754</u>	<u>\$ 23,581,555</u>	<u>\$ 5,735,670</u>	<u>\$ 118,230</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 641,611,060</u>
<b>CONSTRUCTION COST- ZONEGATING:</b>														
LIFT STATIONS / CHAMBERS:														
FULLER-BROOKVIEW	\$ 1,252,893		(966,294)	-	-	-	966,294	-	-	-	-	-	-	-
FULTON- MIDDLEBORROW	37,983		(37,983)	-	-	-	37,983	-	-	-	-	-	-	-
WEALTHY ST EXT. CHAMBER	458,953		(136,879)	128,209	-	-	-	8,670	-	-	-	-	-	-
WEALTHY	20,444		(6,889)	6,630	-	-	-	60	199	-	-	-	-	-
MARKET	12,965,095		(1,748,862)	1,354,204	-	-	329,054	38,377	27,227	-	-	-	-	-
VANPORTFLIET / LEONARD HTS	1,239,326		409,523	(409,523)	-	-	-	-	-	-	-	-	-	-
REMEMBRANCE / 3 MILE	1,213,244		-	(201,180)	-	-	-	46,552	154,628	-	-	-	-	-
16th AVENUE	71,058		-	-	-	-	-	-	-	-	-	-	-	-
HAYES- WEST	141,105		-	-	-	-	-	(141,105)	141,105	-	-	-	-	-
HAYES- EAST	215,841		-	-	-	-	-	-	-	-	-	-	-	-
O'BRIEN	546,532		19,664	(70,114)	-	-	-	50,450	-	-	-	-	-	-
SERVICEMAINS- ZONEGATED COST			2,106,590	5,603,381	1,988,795	3,896,746	6,501,892	1,924,467	1,106,377	357,069	245,804	6,233,073	1,001,899	30,966,093
TOTAL- ZONEGATED COST		<u>\$ -</u>	<u>\$ (361,130)</u>	<u>\$ 6,411,607</u>	<u>\$ 1,988,795</u>	<u>\$ 3,896,746</u>	<u>\$ 7,835,223</u>	<u>\$ 1,927,471</u>	<u>\$ 1,429,536</u>	<u>\$ 357,069</u>	<u>\$ 245,804</u>	<u>\$ 6,233,073</u>	<u>\$ 1,001,899</u>	<u>\$ 30,966,093</u>
GRAND TOTAL- COST		<u>\$ 274,408,849</u>	<u>\$ 241,291,789</u>	<u>\$ 49,418,128</u>	<u>\$ 33,905,357</u>	<u>\$ 25,087,500</u>	<u>\$ 31,416,778</u>	<u>\$ 7,663,141</u>	<u>\$ 1,547,766</u>	<u>\$ 357,069</u>	<u>\$ 245,804</u>	<u>\$ 6,233,073</u>	<u>\$ 1,001,899</u>	<u>\$ 672,577,153</u>

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWAGE DISPOSAL SYSTEM FUND  
RECONCILIATION OF CONSTRUCTION COST & ACCUMULATED DEPRECIATION- PHYSICAL LOCATION & ZONEGATING  
FISCAL YEAR ENDED JUNE 30, 2023**

COST CENTER	AMOUNT	INTEGRATED SYSTEM	RETAIL							WHOLESALE				TOTAL
			CITY OF GR	CITY OF WALKER	CITY OF KENTWOOD	CASCADE TOWNSHIP	GR TOWNSHIP	TALLMADGE TOWNSHIP	WRIGHT TOWNSHIP	CITY OF EAST GR	CALEDONIA TOWNSHIP	ADA TOWNSHIP	GAINES TOWNSHIP	
<b>ACCUMULATED DEPRECIATION- BY PHYSICAL LOCATION:</b>														
BY PHYSICAL LOCATION- TASK 11		\$ 147,977,475	\$ 184,857,624	\$ 21,820,382	\$ 21,353,481	\$ 12,079,201	\$ 10,300,948	\$ 2,429,581	\$ 144,941	\$ -	\$ -	\$ -	\$ -	\$ 400,963,633
IN SERVICE- TASK 10		-	-	-	-	-	-	-	-	-	-	-	-	-
MARNE CONNECTOR AGREEMENT		-	(167,914)	-	-	-	-	(162,653)	(25,938)	-	-	-	-	(356,505)
SADDLEBACK SEWER		-	-	-	300,314	18,578	-	-	-	-	-	-	-	318,892
TASK 11/16/21- CSO ACC. DEPRECIATION		-	(84,829,031)	-	-	-	-	-	-	-	-	-	-	(84,829,031)
O'BRIEN		-	(355,246)	355,246	-	-	-	-	-	-	-	-	-	-
VANPORTFLIET		-	(481,097)	481,097	-	-	-	-	-	-	-	-	-	-
REMEMBRANCE / 3 MILE		-	(948,603)	948,603	-	-	-	-	-	-	-	-	-	-
16th AVENUE		-	(57,625)	-	-	-	-	-	57,625	-	-	-	-	-
HAYES- WEST		-	(97,263)	-	-	-	-	97,263	-	-	-	-	-	-
HAYES- EAST		-	(130,640)	-	-	-	-	130,640	-	-	-	-	-	-
KINGSBURY	\$ 171,838		(171,838)	171,838	-	-	-	-	-	-	-	-	-	-
MEADOWWOOD TRAILS	28,964		(28,964)	-	-	28,964	-	-	-	-	-	-	-	-
OAK HOLLOW	28,964		(28,964)	-	-	-	28,964	-	-	-	-	-	-	-
COLLINDALE	28,964		(28,964)	28,964	-	-	-	-	-	-	-	-	-	-
THORNAPPLE	151,053		(151,053)	-	-	151,053	-	-	-	-	-	-	-	-
6000 28TH ST	51,987		(51,987)	-	-	51,987	-	-	-	-	-	-	-	-
THORNHILLS	63,150		(63,150)	-	-	63,150	-	-	-	-	-	-	-	-
ROBINHOOD	101,093		(101,093)	-	-	-	101,093	-	-	-	-	-	-	-
CASCADE SPRINGS	52,382		(52,382)	-	-	52,382	-	-	-	-	-	-	-	-
SHOREHAVEN	41,141		(41,141)	-	-	-	41,141	-	-	-	-	-	-	-
EAGLECREST	104,440		(104,440)	-	-	-	104,440	-	-	-	-	-	-	-
GREENBRIER	24,243		(24,243)	-	-	-	24,243	-	-	-	-	-	-	-
LINCOLN SCHOOL	73,112		(73,112)	-	-	-	73,112	-	-	-	-	-	-	-
REEDS LAKE	374,680		(374,680)	-	-	-	374,680	-	-	-	-	-	-	-
KRAFT	41,141		(41,141)	-	-	41,141	-	-	-	-	-	-	-	-
ORCHARD VISTA	19,856		(19,856)	-	-	19,856	-	-	-	-	-	-	-	-
BIRD AVE-ALPINE ESTATES	321,688		(321,688)	-	-	-	321,688	-	-	-	-	-	-	-
EAST PARIS	204,869		(204,869)	-	-	-	204,869	-	-	-	-	-	-	-
SERVICE MAINS														
LESS: SERVICE MAINS- TOTAL SUBS- PHY. LOC.			(13,842,925)	(5,170,522)	(7,069,264)	(694,909)	(140,457)	(236,266)	-	-	-	-	-	(27,154,343)
ADD: SERVICE MAINS- TOTAL ADDS- PHY. LOC.			6,951,585	3,903,557	2,537,262	110,653	22,409	30,409	-	-	-	-	-	13,555,875
		<u>\$ 147,977,475</u>	<u>\$ 89,015,300</u>	<u>\$ 22,539,165</u>	<u>\$ 17,121,793</u>	<u>\$ 11,922,056</u>	<u>\$ 11,457,130</u>	<u>\$ 2,288,974</u>	<u>\$ 176,628</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 302,498,521</u>
<b>ACCUMULATED DEPRECIATION- ZONEGATED</b>														
LIFT STATIONS / CHAMBERS:														
FULLER-BROOKVIEW	\$ 886,822		(683,961)	-	-	-	683,961	-	-	-	-	-	-	-
FULTON- MIDDLEBORROW	37,983		(37,983)	-	-	-	37,983	-	-	-	-	-	-	-
WEALTHY ST EXT. CHAMBER	219,379		(65,428)	61,284	-	-	-	4,144	-	-	-	-	-	-
WEALTHY	20,444		(6,889)	6,630	-	-	-	60	199	-	-	-	-	-
MARKET	8,928,102		(1,204,311)	932,540	-	-	226,595	26,427	18,749	-	-	-	-	-
VANPORTFLIET	481,097		158,974	(158,974)	-	-	-	-	-	-	-	-	-	-
REMEMBRANCE / 3 MILE	948,603		-	(157,297)	-	-	-	36,398	120,899	-	-	-	-	-
16th AVENUE	57,625		-	-	-	-	-	-	-	-	-	-	-	-
HAYES- WEST	97,263		-	-	-	-	-	(97,263)	97,263	-	-	-	-	-
HAYES- EAST	130,640		-	-	-	-	-	-	-	-	-	-	-	-
O'BRIEN	355,246		12,782	(45,575)	-	-	-	32,793	-	-	-	-	-	-
SERVICEMAINS-ZONEGATED ACC. DEPRECIATION			965,643	2,322,219	1,459,668	1,482,450	2,478,623	652,702	406,933	256,476	173,718	2,080,924	708,068	12,987,424
TOTAL- ZONEGATED ACC. DEPRECIATION		<u>\$ -</u>	<u>\$ (861,173)</u>	<u>\$ 2,960,827</u>	<u>\$ 1,459,668</u>	<u>\$ 1,482,450</u>	<u>\$ 3,427,162</u>	<u>\$ 655,261</u>	<u>\$ 644,043</u>	<u>\$ 256,476</u>	<u>\$ 173,718</u>	<u>\$ 2,080,924</u>	<u>\$ 708,068</u>	<u>\$ 12,987,424</u>
GRAND TOTAL- ACC. DEPRECIATION		<u>\$ 147,977,475</u>	<u>\$ 88,154,127</u>	<u>\$ 25,499,992</u>	<u>\$ 18,581,461</u>	<u>\$ 13,404,506</u>	<u>\$ 14,884,292</u>	<u>\$ 2,944,235</u>	<u>\$ 820,671</u>	<u>\$ 256,476</u>	<u>\$ 173,718</u>	<u>\$ 2,080,924</u>	<u>\$ 708,068</u>	<u>\$ 315,485,945</u>

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWAGE DISPOSAL SYSTEM FUND  
ADJUSTED OPERATING EXPENSE ZONEGATING ALLOCATION BY GOVERNMENTAL UNIT - TASK #22  
FISCAL YEAR ENDED JUNE 30, 2023**

COST CENTER	ADJUSTED EXPENSE BY COST CENTER	INTEGRATED SYSTEM	RETAIL							WHOLESALE			
			CITY OF GR	CITY OF WALKER	CITY OF KENTWOOD	CASCADE TOWNSHIP	GR TOWNSHIP	TALLMADGE TOWNSHIP	WRIGHT TOWNSHIP	CITY OF EAST GR	CALEDONIA TOWNSHIP	ADA TOWNSHIP	GAINES TOWNSHIP
WASTEWATER TREATMENT	\$ 23,762,956	\$ 23,762,956											
LIFT STATIONS:													
A. INTERCEPTOR	359,929		311,378	37,595	-	-	9,135	1,065	756	-	-	-	-
B. TRUNK	156,188		37,552	62,201	-	27,844	25,348	3,243	-	-	-	-	-
C. LOCAL COLLECTOR	528,857		62,691	61,366	-	129,334	207,526	29,234	28,458	-	-	10,248	-
SEWER LINES:													
A. INTERCEPTOR	305,746		173,911	44,526	78,675	8,634	-	-	-	-	-	-	-
B. TRUNK	717,668		258,726	178,628	161,935	62,444	36,924	18,236	775	-	-	-	-
C. LOCAL COLLECTOR	5,005,889		3,114,164	626,637	491,929	300,403	387,906	55,866	28,984	-	-	-	-
D. ZONEGATING			(127,269)	14,757	(34,282)	22,941	56,578	(6,057)	18,494	10,955	3,286	27,258	13,339
BULK METERING STATIONS	6,660		-	-	2,121	-	-	-	-	3,596	331	-	612
CUSTOMER ACCOUNTING *	3,245,802		2,491,705	252,426	216,138	88,643	172,449	14,606	9,835				
INDUSTRIAL PRETREATMENT	975,541	975,541											
SUBTOTAL OPERATING EXPENSE	35,065,237	24,738,497	6,322,858	1,278,136	916,516	640,243	895,866	116,193	87,302	14,551	3,617	37,506	13,951
ADMINISTRATIVE EXPENSE	1,966,364	1,346,226	402,253	69,554	49,875	34,841	48,752	6,323	4,751	792	197	2,041	759
TOTAL	\$ 37,031,601	\$ 26,084,724	\$ 6,725,111	\$ 1,347,690	\$ 966,391	\$ 675,084	\$ 944,618	\$ 122,516	\$ 92,053	\$ 15,343	\$ 3,814	\$ 39,547	\$ 14,710

\* Reflects adjustment for circuit breaker provisions per the third amendment to W/S service agreements.

**METHOD OF DISTRIBUTION**

WASTEWATER TREATMENT	100.000%	100.00%											
LIFT STATIONS:	(54)												
A. INTERCEPTORS	(1)	100.000%	(1)	-	-	-	-	-	-	-	-	-	-
B. TRUNK	(8)	100.000%	(3)	(3)	-	(1)	(1)	-	-	-	-	-	-
C. LOCAL	(45)	100.000%	(9)	(3)	-	(9)	(17)	(5)	(1)	-	-	(1)	-
SEWER LINES:													
TOTAL MILES:	935.65												
A. INTERCEPTOR		100.000%	56.881%	14.563%	25.732%	2.824%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
MILES	47.45		26.99	6.91	12.21	1.34	-	-	-	-	-	-	-
B. TRUNK LINES		100.000%	36.051%	24.890%	22.564%	8.701%	5.145%	2.541%	0.108%	0.000%	0.000%	0.000%	0.000%
MILES	111.37		40.15	27.72	25.13	9.69	5.73	2.83	0.12	-	-	-	-
C. LOCAL COLLECTOR		100.000%	62.210%	12.518%	9.827%	6.001%	7.749%	1.116%	0.579%	0.000%	0.000%	0.000%	0.000%
MILES	776.83		483.26	97.24	76.34	46.62	60.20	8.67	4.50	-	-	-	-
D. ZONEGATING													
MILES	(5)		(19.75)	2.29	(5.32)	3.56	8.78	(0.94)	2.87	1.70	0.51	4.23	2.07
BULK METERING STATIONS	(5)		-	-	(2)	-	-	-	-	(1)	(1)	-	(1)
CUSTOMER ACCTG (1)		100.000%	76.767%	7.777%	6.659%	2.731%	5.313%	0.450%	0.303%				
NO. OF METERS	76,298.00		58,571.00	5,934.00	5,081.00	2,084.00	4,054.00	343.00	231.00				
INDUSTRIAL PRETREATMENT	100.000%	100.00%											
ADMINISTRATIVE EXPENSE (2)	100.000%	68.462%	20.457%	3.537%	2.536%	1.772%	2.479%	0.322%	0.242%	0.040%	0.010%	0.104%	0.039%

**NOTES:**

- (1) MAINTENANCE & COLLECTION COSTS ARE ALLOCATED ON THE NUMBER OF METERS, INCLUSIVE OF USERS FOR WRIGHT TWP.
- (2) ALLOCATED ON DIRECT OPERATING EXPENSE, ADJUSTED FOR ANY COST ASSIGNABLE EXCLUSIVELY TO GR OR RETAIL COMMUNITIES, IF APPLICABLE.

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWER RATE STUDY  
SEWAGE DISPOSAL SYSTEM FUND  
TASK NO. 23**

ASSIGN OTHER OPERATING REVENUES TO EACH GOVERNMENTAL ENTITY.

BASIS OF ALLOCATION: RETAIL BILLINGS BY GOVERNMENTAL ENTITY - TASK NO. 6 & 7

	<u>RETAIL BILLINGS</u>	<u>PERCENTAGE OF TOTAL</u>	<u>ALLOCATION *</u>
CITY OF GRAND RAPIDS	\$ 42,051,342	70.1941%	\$ 200,736
CITY OF WALKER	5,500,907	9.1824%	26,259
CITY OF KENTWOOD	5,234,439	8.7376%	24,987
CASCADE TOWNSHIP	3,200,381	5.3422%	15,277
GRAND RAPIDS TOWNSHIP	2,962,115	4.9445%	14,140
TALLMADGE TOWNSHIP	691,190	1.1538%	3,300
WRIGHT TOWNSHIP	266,849	0.4454%	1,274
	<u>\$ 59,907,223</u>	<u>100.0000%</u>	<u>\$ 285,973</u>

*\* Reflects adjustment for circuit breaker provisions per 3rd amendment of W/S agreements*

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWAGE DISPOSAL SYSTEM FUND  
ASSIGN DEPRECIATION EXPENSE TO CUSTOMER COMMUNITIES- TASK NO. 24  
FISCAL YEAR ENDED JUNE 30, 2023**

COST CENTER	DEPRECIATION EXPENSE	INTEGRATED SYSTEM	RETAIL							WHOLESALE				TOTAL
			CITY OF GR	CITY OF WALKER	CITY OF KENTWOOD	CASCADE TOWNSHIP	GR TOWNSHIP	TALLMADGE TOWNSHIP	WRIGHT TOWNSHIP	CITY OF EAST GR	CALEDONIA TOWNSHIP	ADA TOWNSHIP	GAINES TOWNSHIP	
BY PHYSICAL LOCATION- TASK 11		\$ 7,647,882	\$ 8,835,678	\$ 855,499	\$ 809,027	\$ 446,277	\$ 427,857	\$ 128,154	\$ 2,505	\$ -	\$ -	\$ -	\$ -	\$ 19,152,879
ADD: IN SERVICE- TASK 10/8		170,715	27,958	5,253	6,483	-	12,059	-	-	-	-	-	-	222,468
MARNE CONNECTOR AGREEMENT			(2,695)											(14,565)
SADDLEBACK SEWER					22,313	1,429		(10,307)	(1,563)					23,742
LESS: TASK 11/16/21- CSO DEP. EXP.			(3,775,766)											(3,775,766)
LIFT STATIONS / CHAMBERS:														
FULLER-BROOKVIEW (GR)	\$ 18,488		(14,259)	-	-	-	14,259	-	-	-	-	-	-	-
FULTON- MIDDLEBORO (GR)	-		-	-	-	-	-	-	-	-	-	-	-	-
WEALTHY ST EXT. CHAMBER	8,261		(2,464)	2,308	-	-	-	156	-	-	-	-	-	-
WEALTHY	-		-	-	-	-	-	-	-	-	-	-	-	-
MARKET	367,888		(49,625)	38,426	-	-	9,337	1,089	773	-	-	-	-	-
VANPORTFLIET	34,991		11,562	(11,562)	-	-	-	-	-	-	-	-	-	-
REMEMBRANCE / 3 MILE	9,679		-	(1,605)	-	-	-	371	1,234	-	-	-	-	-
O'BRIEN	12,023		433	(1,543)	-	-	-	1,110	-	-	-	-	-	-
KINGSBURY	10,772													
MEADOWOOD TRAILS	2,228													
OAK HOLLOW	2,228													
COLLINDALE	2,228													
THORNAPPLE	7,474													
6000 28TH ST	3,713													
THORNHILLS	3,947													
ROBINHOOD	5,947													
CASCADE SPRINGS	2,183													
SHOREHAVEN	2,420													
EAGLECREST	8,944													
GREENBRIER	1,616													
LINCOLN SCHOOL	5,121													
REEDS LAKE	24,979													
KRAFT	2,420													
ORCHARD VISTA	1,324													
16TH AVE	826		(826)	-	-	-	-	-	826	-	-	-	-	-
HAYES- WEST	2,160		(2,160)	-	-	-	-	-	2,160	-	-	-	-	-
HAYES- EAST	3,205		(3,205)	-	-	-	-	3,205	-	-	-	-	-	-
BIRD AVE-ALPINE ESTATES	23,258		(23,258)				23,258							
EAST PARIS	10,783		(10,783)				10,783							
SERVICEMAINS			(142,062)	29,288	(234,361)	36,637	117,327	27,665	21,988	2,704	4,430	118,328	18,056	-
ADJUSTED BY ZONEGATING		7,818,597	4,848,528	916,064	603,462	484,343	614,880	151,443	27,923	2,704	4,430	118,328	18,056	15,608,758
LESS CONTRIBUTIONS AMORTIZED														
TASK NO. 21		(1,005,355)	(1,144,707)	(507,750)	(515,034)	(376,182)	(332,365)	(106,200)	-	-	-	-	(14,429)	(4,002,022)
TOTAL		\$ 6,813,242	\$ 3,703,821	\$ 408,314	\$ 88,428	\$ 108,161	\$ 282,515	\$ 45,243	\$ 27,923	\$ 2,704	\$ 4,430	\$ 118,328	\$ 3,627	\$ 11,606,736

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWAGE DISPOSAL SYSTEM FUND  
ACCUMULATE REVENUE REQUIREMENTS BY CUSTOMER COMMUNITIES- TASK NO. 25  
FISCAL YEAR ENDED JUNE 30, 2023**

COST CENTER	INTEGRATED SYSTEM	RETAIL							WHOLESALE				TOTAL
		CITY OF GR	CITY OF WALKER	CITY OF KENTWOOD	CASCADE TOWNSHIP	GR TOWNSHIP	TALLMADGE TOWNSHIP	WRIGHT TOWNSHIP	CITY OF EAST GR	CALEDONIA TOWNSHIP	ADA TOWNSHIP	GAINES TOWNSHIP	
OPERATION & MAINTENANCE EXPENSE- TASK NO. 22	\$ 26,084,724	\$ 6,725,111	\$ 1,347,690	\$ 966,391	\$ 675,084	\$ 944,618	\$ 122,516	\$ 92,053	\$ 15,343	\$ 3,814	\$ 39,547	\$ 14,710	\$ 37,031,601
DEPRECIATION EXPENSE TASK NO. 24	6,813,242	3,703,821	408,314	88,428	108,161	282,515	45,243	27,923	2,704	4,430	118,328	3,627	11,606,736
RETURN ON SYSTEM INVESTMENT TASK NO. 21	5,611,003	6,783,411	649,960	198,534	275,168	568,407	113,846	66,936	8,348	483	333,943	1,087	14,611,126
REVENUE CREDITS- TASK NO. 23		(200,736)	(26,259)	(24,987)	(15,277)	(14,140)	(3,300)	(1,274)					(285,973)
CSO DEBT SERVICE REQUIREMENTS		6,044,866											6,044,866
ALLOCATE:													
INTEGRATED SYSTEM CREDITS		(2,360,656)	(395,211)	(521,633)	(261,888)	(182,701)	(30,946)	(12,367)	(148,872)	(25,092)	(130,359)	-	(4,069,725)
INTEGRATED SYSTEM (A)	(38,508,968)	22,163,294	3,710,486	4,897,413	2,458,771	1,715,313	290,542	116,110	1,397,704	235,582	1,223,884	299,869	-
LESS: CIRCUIT BREAKER (B)		-	-	(172,571)	(26,116)	(199,207)	-	-					(397,894)
	<u>\$ -</u>	<u>\$ 42,859,112</u>	<u>\$ 5,694,980</u>	<u>\$ 5,431,575</u>	<u>\$ 3,213,903</u>	<u>\$ 3,114,805</u>	<u>\$ 537,901</u>	<u>\$ 289,381</u>	<u>\$ 1,275,227</u>	<u>\$ 219,217</u>	<u>\$ 1,585,343</u>	<u>\$ 319,293</u>	<u>\$ 64,540,737</u>

(A) ALLOCATED TO CUSTOMER COMMUNITIES UNDER OLD CONTRACT BASIS OF PLANT FLOW. REMAINING ALLOCATION TO UAB PARTNERS UNDER UNIFORM SERVICE AGREEMENTS BASED ON PLANT FLOW & LAND, AS NOTED BELOW

	CITY OF GR	CITY OF WALKER	CITY OF KENTWOOD	CASCADE TOWNSHIP	GR TOWNSHIP	TALLMADGE TOWNSHIP	WRIGHT TOWNSHIP	CITY OF EAST GR	CALEDONIA TOWNSHIP	ADA TOWNSHIP	GAINES TOWNSHIP	TOTAL
OLD METHOD- PLANT FLOW	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 299,869	\$ 299,869
NEW METHOD- PLANT FLOW / LAND	22,163,294	3,710,486	4,897,413	2,458,771	1,715,313	290,542	116,110	1,397,704	235,582	1,223,884	-	38,209,099
	<u>\$ 22,163,294</u>	<u>\$ 3,710,486</u>	<u>\$ 4,897,413</u>	<u>\$ 2,458,771</u>	<u>\$ 1,715,313</u>	<u>\$ 290,542</u>	<u>\$ 116,110</u>	<u>\$ 1,397,704</u>	<u>\$ 235,582</u>	<u>\$ 1,223,884</u>	<u>\$ 299,869</u>	<u>\$ 38,508,968</u>

(B) PURSUANT TO CITY AND CUSTOMER COMMUNITY CIRCUIT BREAKER, AS PROVIDED FOR BY THE THIRD AMENDMENT TO THE UNIFORM SERVICE AGREEMENTS

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWER RATE STUDY  
SEWAGE DISPOSAL SYSTEM FUND  
TASK NO. 25A**

REVIEW THE REVENUE REQUIREMENTS TO ASSURE COMPLIANCE WITH THE APPLICABLE BOND ORDINANCE PROVISIONS.

	<u>YEAR ENDED</u> <u>6/30/23</u>	<u>PRO FORMA *</u> <u>6/30/24</u>
<b>REVENUES:</b>		
RETAIL/WHOLESALE SEWAGE SERVICE	\$ 63,356,639	\$ 63,959,532
CONNECTION FEES/FRONT FOOT FEES	287,684	400,000
SEWAGE SURCHARGES	2,731,720	3,000,000
RENEWABLE NATURAL GAS SALES	1,314,199	3,000,000
OTHER OPERATING REVENUES	1,073,069	809,418
INTEREST ON INVESTMENTS	1,437,663	1,352,770
MISCELLANEOUS	28,277	25,000
TOTAL REVENUES	<u>\$ 70,229,251</u>	<u>\$ 72,546,720</u>
<b>OPERATING EXPENSES:</b>		
OPERATIONS & MAINTENANCE	\$ 34,846,885	\$ 40,003,534
DEPRECIATION	19,152,880	19,152,880
TOTAL EXPENSES	<u>\$ 53,999,765</u>	<u>\$ 59,156,414</u>
ADDITIONS: DEPRECIATION	<u>19,152,880</u>	<u>19,152,880</u>
NET EARNINGS OF THE SYSTEM	<u>\$ 35,382,366</u>	<u>\$ 32,543,186</u>
<b>DEBT SERVICE</b>		
SERIES 2021 BONDS	\$ 3,493,588	\$ 5,676,932
SERIES 2020 BONDS	1,813,450	1,815,700
SERIES 2018 BONDS	2,765,750	2,761,750
SERIES 2016 BONDS	3,879,500	3,880,750
SERIES 2014 BONDS	2,288,000	2,294,250
SERIES 2013 BONDS	2,205,000	-
SERIES 2012 BONDS	26,000	-
SERIES 2010A BONDS (after BAB subsidy)	957,637	957,637
SERIES 2010 BONDS	5,836,250	5,838,500
SENIOR LIEN	23,265,175	23,225,519
JUNIOR LIEN **	469,374	545,134
TOTAL	<u>\$ 23,734,550</u>	<u>\$ 23,770,653</u>
COVERAGE RATIO - SENIOR DEBT	<u>1.52</u>	<u>1.40</u>
COVERAGE RATIO - ALL DEBT	<u>1.49</u>	<u>1.37</u>

\* SEWAGE SERVICE ADJUSTED FOR RATE REVISIONS OF 1.07% AND 1.34% EFFECTIVE 1/1/23 AND 1/1/24, RESPECTIVELY; OTHER REVENUES AND OPERATIONS & MAINTENANCE EXPENSE PER 2023 FISCAL PLAN, ADJUSTED FOR CARRYFORWARDS & KNOWN COST ADJUSTMENTS.

\*\* AMOUNTS IN PRO FORMA ARE BASED ON MAXIMUM PRINCIPAL AND DO NOT INCLUDE PRINCIPAL FORGIVENESS IF NOT YET FINALIZED.

**SUMMARY**

**SEWER RATE STUDY  
SEWAGE DISPOSAL SYSTEM FUND  
RATE ANALYSIS - TASK NO. 26**

INITIAL SYSTEM REVENUE REQUIREMENTS		\$ 64,938,631
REVENUES FROM CURRENT RATES		
REU CHARGE	\$ 287,925	
MONTHLY METER CHARGE	18,180,109	
MONTHLY BILLING CHARGE	3,759,713	
COMMODITY CHARGE	<u>41,468,477</u>	<u>(63,696,224)</u>
INITIAL REQUIRED REVENUE INCREASE (DECREASE)		<u>\$ 1,242,407</u>
INITIAL PERCENTAGE INCREASE (DECREASE) OVER EXISTING RATES		<u>1.95%</u>
INITIAL SYSTEM REVENUE REQUIREMENTS FROM ABOVE		\$ 64,938,631
LESS: AMOUNT OF CIRCUIT BREAKER RELIEF TO REDUCE RR's TO RETAIL		(397,894)
SYSTEM REVENUE REQUIREMENTS		<u>\$ 64,540,737</u>
ACTUAL REQUIRED AMOUNT OF REVENUE INCREASE (DECREASE)		<u>\$ 844,513</u>
ACTUAL PERCENTAGE INCREASE (DECREASE) OVER EXISTING RATES		<u>1.33%</u>

**SEWER RATE STUDY  
SEWAGE DISPOSAL SYSTEM FUND  
TASK NO. 26**

METER SIZE	EQUIV. FACTOR	CITY OF GR		CITY OF WALKER		CITY OF KENTWOOD		CASCADE TWP		GR TWP		TALLMADGE TWP		WRIGHT TWP	
		METERS *	EQUIV.	METERS *	EQUIV.	METERS *	EQUIV.	METERS *	EQUIV.	METERS *	EQUIV.	METERS *	EQUIV.	USERS*	REU
A 3/4" or less	1.0000	54,328	54,328	5,279	5,279	3,994	3,994	1,575	1,575	3,628	3,628	301	301		-
B 1"	1.7778	2,333	4,148	364	647	514	914	260	462	267	475	26	46	-	-
C 1 1/4"	2.7778	-	-	-	-	-	-	-	-	-	-	-	-	-	-
D 1 1/2"	4.0000	1,029	4,116	182	728	346	1,384	172	688	118	472	10	40	-	-
E 2"	7.1111	659	4,686	88	626	188	1,337	65	462	27	192	3	21	-	-
F 3"	16.0000	114	1,824	8	128	23	368	9	144	8	128	2	32	-	-
G 4"	28.4444	74	2,105	7	199	13	370	3	85	1	28	-	-	-	-
H 6" and over	64.0000	34	2,176	6	384	3	192	-	-	5	320	1	64	-	-
<i>Other- Wright Twp</i>		<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	231	422.500
		58,571	73,383	5,934	7,991	5,081	8,559	2,084	3,416	4,054	5,243	343	504	231	422.500
<b>TOTAL</b>															<u>76,298</u>

Source: City of Grand Rapids, Michigan, Water/Sewer Customer Accounts/Meters Report, dated November 1, 2023

**CITY OF GRAND RAPIDS, MICHIGAN**

**SEWER RATE STUDY  
SEWAGE DISPOSAL SYSTEM FUND  
RATE ANALYSIS - TASK NO. 26**

SYSTEM REVENUE REQUIREMENTS \$ 42,859,112

REVENUES FROM CURRENT RATES

MONTHLY METER CHARGE

73,383 meter equivalents x \$ 12.75 x 12 = \$ 11,227,599

MONTHLY BILLING CHARGE

58,571 meters x \$ 3.56 x 12 = 2,502,153

COMMODITY CHARGE

6,437,028 units (100 CF) x \$ 4.45 = 28,644,775 (42,374,527)

REQUIRED REVENUE INCREASE (DECREASE) \$ 484,585

PERCENTAGE INCREASE (DECREASE) OVER EXISTING RATES 1.14%

**CITY OF GRAND RAPIDS, MICHIGAN**

**SEWER RATE STUDY  
SEWAGE DISPOSAL SYSTEM FUND  
RATE ANALYSIS - TASK NO. 27**

COMMODITY CHARGE:

$$\frac{\text{INTEGRATED SYSTEM COST}}{\text{BILLED UNITS}} = \frac{\$28,208,160}{6,437,028} = \underline{\underline{\$ 4.38 /100 \text{ CF}^*}}$$

MONTHLY SERVICE CHARGE:

SYSTEM REVENUE REQUIREMENTS \$ 42,859,112

NEW COMMODITY CHARGE  
6,437,028 x \$ 4.38 \$ 28,194,183

NEW MONTHLY BILLING CHARGE  
58,571 x \$ 3.55 x 12 2,495,125 (30,689,308)

\$ 12,169,804

$$\text{MONTHLY METER CHARGE} = \frac{\$12,169,804}{73,383 \times 12} = \underline{\underline{\$ 13.82 \text{ MONTHLY}}}$$

METER SIZE	EQUIVALENT	MONTHLY SERVICE CHARGE			PRESENT
		METER	BILLING	TOTAL	
3/4" or less	1.0000	\$ 13.82	\$ 3.55	\$ 17.37	\$ 16.31
1"	1.7778	24.57	3.55	28.12	26.23
1 1/4"	2.7778	38.39	3.55	41.94	38.98
1 1/2"	4.0000	55.28	3.55	58.83	54.56
2"	7.1111	98.28	3.55	101.83	94.23
3"	16.0000	221.12	3.55	224.67	207.56
4"	28.4444	393.10	3.55	396.65	366.23
6" and over	64.0000	884.48	3.55	888.03	819.56

\* NEW RATES EFFECTIVE, ON A PRO-RATA BASIS, JANUARY 1, 2024

**CITY OF WALKER, MICHIGAN**  
**SEWER RATE STUDY**  
**SEWAGE DISPOSAL SYSTEM FUND**  
**RATE ANALYSIS - TASK NO. 26**

SYSTEM REVENUE REQUIREMENTS		\$ 5,694,980
REVENUES FROM CURRENT RATES		
MONTHLY METER CHARGE		
7,991 meter equivalents	x \$ 29.92	
	x 12 =	\$ 2,869,089
MONTHLY BILLING CHARGE		
5,934 meters	x \$ 3.56	
	x 12 =	253,500
COMMODITY CHARGE		
832,147 units (100 CF)	x \$ 3.01	
	=	<u>2,504,762</u>
		<u>(5,627,351)</u>
REQUIRED REVENUE INCREASE (DECREASE)		<u>\$ 67,629</u>
PERCENTAGE INCREASE (DECREASE) OVER EXISTING RATES		<u>1.20%</u>

**CITY OF WALKER, MICHIGAN**

**SEWER RATE STUDY  
SEWAGE DISPOSAL SYSTEM FUND  
RATE ANALYSIS - TASK NO. 27**

COMMODITY CHARGE:

PRESENT CHARGE x RATE ADJUSTMENT \$ 3.05 /100 CF \*  
 \$ 3.01 x 101.20%

MONTHLY SERVICE CHARGE:

SYSTEM REVENUE REQUIREMENTS			\$ 5,694,980
NEW COMMODITY CHARGE			
832,147 x \$ 3.05		\$ 2,538,048	
NEW MONTHLY BILLING CHARGE			
5,934 x \$ 3.55 x 12		<u>252,788</u>	<u>(2,790,836)</u>
			<u>\$ 2,904,144</u>

MONTHLY METER CHARGE =  $\frac{\$2,904,144}{7,991 \times 12}$  = \$ 30.29 MONTHLY

METER SIZE	EQUIVALENT	MONTHLY SERVICE CHARGE			PRESENT
		METER	BILLING	TOTAL	
3/4" or less	1.0000	\$ 30.29	\$ 3.55	\$ 33.84	\$ 33.48
1"	1.7778	53.85	3.55	57.40	56.75
1 1/4"	2.7778	84.14	3.55	87.69	86.67
1 1/2"	4.0000	121.16	3.55	124.71	123.24
2"	7.1111	215.40	3.55	218.95	216.32
3"	16.0000	484.64	3.55	488.19	482.28
4"	28.4444	861.58	3.55	865.13	854.62
6" and over	64.0000	1,938.56	3.55	1,942.11	1,918.44

\* NEW RATES EFFECTIVE, ON A PRO-RATA BASIS, JANUARY 1, 2024

**CITY OF KENTWOOD, MICHIGAN**  
**SEWER RATE STUDY**  
**SEWAGE DISPOSAL SYSTEM FUND**  
**RATE ANALYSIS - TASK NO. 26**

SYSTEM REVENUE REQUIREMENTS \* \$ 5,431,575

REVENUES FROM CURRENT RATES

MONTHLY METER CHARGE

8,559 meter equivalents x \$ 6.00 x 12 = \$ 616,248

MONTHLY BILLING CHARGE

5,081 meters x \$ 3.56 x 12 = 217,060

COMMODITY CHARGE

1,333,643 units (100 CF) x \$ 3.37 = 4,494,377 (5,327,685)

REQUIRED REVENUE INCREASE (DECREASE) \$ 103,890

PERCENTAGE INCREASE (DECREASE) OVER EXISTING RATES 1.95%

\* REFLECTS RELIEF FROM CIRCUIT BREAKER, IN THE AMOUNT OF \$ 172,571



**CASCADE TOWNSHIP**  
**SEWER RATE STUDY**  
**SEWAGE DISPOSAL SYSTEM FUND**  
**RATE ANALYSIS - TASK NO. 26**

SYSTEM REVENUE REQUIREMENTS \* \$ 3,213,903

REVENUES FROM CURRENT RATES

MONTHLY METER CHARGE

3,416 meter equivalents x \$ 36.80 x 12 = \$ 1,508,506

MONTHLY BILLING CHARGE

2,084 meters x \$ 3.56 x 12 = 89,028

COMMODITY CHARGE

465,538 units (100 CF) x \$ 3.34 = 1,554,897 (3,152,431)

REQUIRED REVENUE INCREASE (DECREASE) \$ 61,472

PERCENTAGE INCREASE (DECREASE) OVER EXISTING RATES 1.95%

\* REFLECTS RELIEF FROM CIRCUIT BREAKER, IN THE AMOUNT OF \$ 26,116

**CASCADE TOWNSHIP**  
**SEWER RATE STUDY**  
**SEWAGE DISPOSAL SYSTEM FUND**  
**RATE ANALYSIS - TASK NO. 27**

COMMODITY CHARGE:

PRESENT CHARGE x RATE ADJUSTMENT \$ 3.41 /100 CF \*  
 \$ 3.34 x 101.95%

MONTHLY SERVICE CHARGE:

SYSTEM REVENUE REQUIREMENTS **		\$ 3,213,903
NEW COMMODITY CHARGE		
465,538 x \$ 3.41		\$ 1,587,485
NEW MONTHLY BILLING CHARGE		
2,084 x \$ 3.55 x 12	88,778	(1,676,263)
		\$ 1,537,640

MONTHLY METER CHARGE =  $\frac{\$1,537,640}{3,416 \times 12}$  = \$ 37.51 MONTHLY

METER SIZE	EQUIVALENT	MONTHLY SERVICE CHARGE			PRESENT
		METER	BILLING	TOTAL	
3/4" or less	1.0000	\$ 37.51	\$ 3.55	\$ 41.06	\$ 40.36
1"	1.7778	66.69	3.55	70.24	68.98
1 1/4"	2.7778	104.20	3.55	107.75	105.78
1 1/2"	4.0000	150.04	3.55	153.59	150.76
2"	7.1111	266.74	3.55	270.29	265.25
3"	16.0000	600.16	3.55	603.71	592.36
4"	28.4444	1,066.95	3.55	1,070.50	1,050.31
6" and over	64.0000	2,400.64	3.55	2,404.19	2,358.76

\* NEW RATES EFFECTIVE, ON A PRO-RATA BASIS, JANUARY 1, 2024

\*\* REFLECTS RELIEF FROM CIRCUIT BREAKER, IN THE AMOUNT OF \$ 26,116

**GRAND RAPIDS TOWNSHIP**  
**SEWER RATE STUDY**  
**SEWAGE DISPOSAL SYSTEM FUND**  
**RATE ANALYSIS - TASK NO. 26**

SYSTEM REVENUE REQUIREMENTS \* \$ 3,114,805

REVENUES FROM CURRENT RATES

MONTHLY METER CHARGE

5,243 meter equivalents x \$ 28.71 x 12 = \$ 1,806,318

MONTHLY BILLING CHARGE

4,054 meters x \$ 3.56 x 12 = 173,187

COMMODITY CHARGE

391,172 units (100 CF) x \$ 2.75 = 1,075,723 (3,055,228)

REQUIRED REVENUE INCREASE (DECREASE) \$ 59,577

PERCENTAGE INCREASE (DECREASE) OVER EXISTING RATES 1.95%

\* REFLECTS RELIEF FROM CIRCUIT BREAKER, IN THE AMOUNT OF \$ 199,207



**TALLMADGE TOWNSHIP**  
**SEWER RATE STUDY**  
**SEWAGE DISPOSAL SYSTEM FUND**  
**RATE ANALYSIS - TASK NO. 26**

SYSTEM REVENUE REQUIREMENTS		\$	537,901
REVENUES FROM CURRENT RATES			
MONTHLY METER CHARGE			
504 meter equivalents	x	\$ 25.19	x 12 = \$ 152,349
MONTHLY BILLING CHARGE			
343 meters	x	\$ 3.56	x 12 = 14,653
COMMODITY CHARGE			
41,705 units (100 CF)	x	\$ 8.96	= <u>373,677</u>
			<u>(540,679)</u>
REQUIRED REVENUE INCREASE (DECREASE)		\$	<u><u>(2,778)</u></u>
PERCENTAGE INCREASE (DECREASE) OVER EXISTING RATES			<u><u>-0.51%</u></u>



**WRIGHT TOWNSHIP**

**SEWER RATE STUDY  
SEWAGE DISPOSAL SYSTEM FUND  
RATE ANALYSIS - TASK NO. 26**

SYSTEM REVENUE REQUIREMENTS \$ 289,381

REVENUES FROM CURRENT RATES

REU CHARGE

422.500 meter equivalents x \$ 56.79 x 12 = \$ 287,925

MONTHLY METER CHARGE

422.500 meter equivalents x \$ - x 12 = -

MONTHLY BILLING CHARGE

231 meters x \$ - x 12 = -

COMMODITY CHARGE

19,797 units (100 CF) x \$ - = - (287,925)

REQUIRED REVENUE INCREASE (DECREASE)

\$ 1,456

PERCENTAGE INCREASE (DECREASE) OVER EXISTING RATES

0.51%

**WRIGHT TOWNSHIP**  
**SEWER RATE STUDY**  
**SEWAGE DISPOSAL SYSTEM FUND**  
**RATE ANALYSIS - TASK NO. 27**

**MONTHLY REU CHARGE:**

$$\frac{\text{SYSTEM REVENUE REQUIREMENTS}}{\text{TOTAL REU'S * 12 MONTHS}} = \frac{\$289,381}{422.500 \times 12} = \$ \underline{\underline{57.08}} \quad \text{MONTHLY REU CHARGE *}$$

**EXAMPLES OF APPROXIMATE MONTHLY CHARGE BY NUMBER OF REU:**

<u>NUMBER OF REU</u>	<u>AMOUNT</u>	<u>NUMBER OF REU</u>	<u>AMOUNT</u>	<u>NUMBER OF REU</u>	<u>AMOUNT</u>
1.0000	\$ 57.08	7.5000	\$ 428.10	19.0000	\$ 1,084.52
1.5000	85.62	8.0000	456.64	20.0000	1,141.60
2.0000	114.16	8.5000	485.18	25.0000	1,427.00
2.5000	142.70	9.0000	513.72	30.0000	1,712.40
3.0000	171.24	9.5000	542.26	35.0000	1,997.80
3.5000	199.78	10.0000	570.80	40.0000	2,283.20
4.0000	228.32	11.0000	627.88	50.0000	2,854.00
4.4000	251.15	12.0000	684.96	60.0000	3,424.80
4.5000	256.86	13.0000	742.04	70.0000	3,995.60
5.0000	285.40	14.0000	799.12	80.0000	4,566.40
5.5000	313.94	15.0000	856.20	90.0000	5,137.20
6.0000	342.48	16.0000	913.28	100.0000	5,708.00
6.5000	371.02	17.0000	970.36	150.0000	8,562.00
7.0000	399.56	18.0000	1,027.44	200.0000	11,416.00

\*NEW RATES EFFECTIVE ON JANUARY 1, 2024

**CITY OF EAST GRAND RAPIDS, MICHIGAN**

**SEWER RATE STUDY  
SEWAGE DISPOSAL SYSTEM FUND  
RATE ANALYSIS - TASK NO. 26**

INTEGRATED SYSTEM REVENUE REQUIREMENTS		\$ 1,248,832
COMMODITY CHARGE		
422.108 units (MG) x	\$ 2,920.00	1,232,555
		<hr/>
REQUIRED COMMODITY REVENUE INCREASE (DECREASE)		<u>\$ 16,277</u>
NON-INTEGRATED SYSTEM REVENUE REQUIREMENTS		\$ 26,395
MONTHLY SERVICE CHARGE		
\$1,853	x 12 MONTHS	22,236
		<hr/>
REQUIRED SERVICE REVENUE INCREASE (DECREASE)		<u>\$ 4,159</u>
PERCENTAGE INCREASE (DECREASE) OVER EXISTING RATES		<u>1.63%</u>

**CITY OF EAST GRAND RAPIDS, MICHIGAN**

**SEWER RATE STUDY  
SEWAGE DISPOSAL SYSTEM FUND  
RATE ANALYSIS - TASK NO. 27**

SYSTEM REVENUE REQUIREMENTS	\$ 1,275,227
NEW COMMODITY CHARGE *	
422.108 x \$ 2,959.00 =	(1,249,018)
	<hr/>
	<u>\$ 26,209</u>

MONTHLY SERVICE CHARGE \* = \$ 26,209 / 12 = \$2,184

\* NEW RATES EFFECTIVE ON JANUARY 1, 2024

**CALEDONIA TOWNSHIP**  
**SEWER RATE STUDY**  
**SEWAGE DISPOSAL SYSTEM FUND**  
**RATE ANALYSIS - TASK NO. 26**

INTEGRATED SYSTEM REVENUE REQUIREMENTS		\$ 210,490
COMMODITY CHARGE		
27.629 units (MG) x	\$ 7,868.00	217,385
		217,385
REQUIRED COMMODITY REVENUE INCREASE (DECREASE)		\$ (6,895)
NON-INTEGRATED SYSTEM REVENUE REQUIREMENTS		\$ 8,727
MONTHLY SERVICE CHARGE		
\$704	x 12 MONTHS	8,448
		8,448
REQUIRED SERVICE REVENUE INCREASE (DECREASE)		\$ 279
PERCENTAGE INCREASE (DECREASE) OVER EXISTING RATES		-2.93%

**CALEDONIA TOWNSHIP**  
**SEWER RATE STUDY**  
**SEWAGE DISPOSAL SYSTEM FUND**  
**RATE ANALYSIS - TASK NO. 27**

SYSTEM REVENUE REQUIREMENTS	\$ 219,217
NEW COMMODITY CHARGE * 27.629 x \$ 7,618.00 =	(210,478)
	<hr/>
	<u>\$ 8,739</u>

MONTHLY SERVICE CHARGE \* = \$ 8,739 / 12 = \$728

\* NEW RATES EFFECTIVE ON JANUARY 1, 2024

**ADA TOWNSHIP**  
**SEWER RATE STUDY**  
**SEWAGE DISPOSAL SYSTEM FUND**  
**RATE ANALYSIS - TASK NO. 26**

INTEGRATED SYSTEM REVENUE REQUIREMENTS		\$ 1,093,525
COMMODITY CHARGE		
272.565 units (MG) x	\$ 3,947.00	1,075,814
		1,075,814
REQUIRED COMMODITY REVENUE INCREASE (DECREASE)		\$ 17,711
NON-INTEGRATED SYSTEM REVENUE REQUIREMENTS		\$ 491,818
MONTHLY SERVICE CHARGE		
\$38,466	x 12 MONTHS	461,592
		461,592
REQUIRED SERVICE REVENUE INCREASE (DECREASE)		\$ 30,226
PERCENTAGE INCREASE (DECREASE) OVER EXISTING RATES		3.12%

**ADA TOWNSHIP**  
**SEWER RATE STUDY**  
**SEWAGE DISPOSAL SYSTEM FUND**  
**RATE ANALYSIS - TASK NO. 27**

SYSTEM REVENUE REQUIREMENTS	\$ 1,585,343
NEW COMMODITY CHARGE *	
272.565 x \$ 4,012.00 =	(1,093,531)
	<hr/>
	<u>\$ 491,812</u>

MONTHLY SERVICE CHARGE \* = \$491,812 / 12 = \$40,984

\* NEW RATES EFFECTIVE ON JANUARY 1, 2024

**GAINES TOWNSHIP**  
**SEWER RATE STUDY**  
**SEWAGE DISPOSAL SYSTEM FUND**  
**RATE ANALYSIS - TASK NO. 26**

INTEGRATED SYSTEM REVENUE REQUIREMENTS		\$ 299,869
COMMODITY CHARGE		
116.500 units (MG) x	\$ 2,528.00	294,512
		294,512
REQUIRED COMMODITY REVENUE INCREASE (DECREASE)		\$ 5,357
NON-INTEGRATED SYSTEM REVENUE REQUIREMENTS		\$ 19,424
MONTHLY SERVICE CHARGE		
\$1,488	x 12 MONTHS	17,856
		17,856
REQUIRED SERVICE REVENUE INCREASE (DECREASE)		\$ 1,568
PERCENTAGE INCREASE (DECREASE) OVER EXISTING RATES		2.22%

**GAINES TOWNSHIP**  
**SEWER RATE STUDY**  
**SEWAGE DISPOSAL SYSTEM FUND**  
**RATE ANALYSIS - TASK NO. 27**

SYSTEM REVENUE REQUIREMENTS	\$ 319,293
NEW COMMODITY CHARGE *	
116.500 x \$ 2,574.00 =	(299,871)
	<hr/>
	<u>\$ 19,422</u>

MONTHLY SERVICE CHARGE \* = \$ 19,422 / 12 = \$1,619

\* NEW RATES EFFECTIVE ON JANUARY 1, 2024

SEWER RATE STUDY  
 SEWAGE DISPOSAL SYSTEM FUND  
 RE-EVALUATE FRONT FOOT CHARGES  
 TASK NO. 28

The City Engineer's Office has reviewed recent construction costs for sanitary sewer facilities and recommends the following front foot assessment rates:

Sewer User Type	Definition	2023 Rate	2024 Rate	% Change
Domestic	Property is domicile for single or multiple family use, such as homes, apartments, duplexes, condominium, etc.	\$ 110.00	\$ 117.00	6.36%
Commercial - Industrial	Property used to offer services and / or products, such as retail/wholesale stores, gas stations, restaurants, hotels, schools, churches, etc., and manufacturing or processing facilities (industrial).	\$ 175.00	\$ 200.00	14.29%

SEWER RATE STUDY  
 SEWAGE DISPOSAL SYSTEM FUND  
 EVALUATE SEWER LATERAL CHARGES  
 TASK NO. 29

The City Engineer’s Office has evaluated the recent costs for a six inch (6”) sanitary sewer lateral and recommends the following sanitary sewer lateral charges:

R.O.W. Width	Year	Lateral Charge	% Change
50 feet	2023	\$3,300	6.06%
	2024	\$3,500	
60 feet	2023	\$3,800	7.89%
	2024	\$4,100	
66 feet	2023	\$4,100	7.32%
	2024	\$4,400	
80 feet	2023	\$4,900	8.16%
	2024	\$5,300	
100 feet	2023	\$6,000	8.33%
	2024	\$6,500	

# MEMORANDUM

CITY OF GRAND RAPIDS

**Date:** October 30, 2023

**To:** Tai Verbrugge  
Utility Financial Officer

**From:** Tiffany L. Berry  
Assistant Environmental Service Manager

**Subject:** **Sewer Rate Study – Task #30 - Surcharges**

The Water Resource Recovery Facility (WRRF) has a limited amount of capacity which is typically allocated to industries having discharges exceeding ordinance limits. These industries are charged for utilizing this remaining plant capacity in four categories of conventional pollutants. These pollutants are:

- 1) Biochemical Oxygen Demand (BOD),
- 2) Total Suspended Solids (TSS),
- 3) Total Phosphorus (Phos), and
- 4) Ammonia Nitrogen (NH<sub>3</sub>).

This benefits the industries in that it reduces their pretreatment requirements and benefits the system by utilizing available system capacity.

As shown on the attached sheets, the surcharge methodology includes evaluating various cost centers at the Water Resource Recovery Facility and allocating costs based on unit process operating cost. Cumulative costs can then be allocated to the four conventional pollutant categories identified above to determine appropriate surcharge rates.

**City of Grand Rapids Michigan**  
**Sewage Disposal System Fund**  
**Evaluation of Wastewater Surcharges for Industrial Customers- BOD, TSS, Phos & NH3**  
**TASK NO. 30- Part 1**

Description	Rate Study Year 2023	Volume	Wastewater Surcharges				Industrial	Other
			BOD	TSS	Phos	NH3		
Operation & Maintenance (See Part 2)	\$ 36,929,598	\$ 7,135,693	\$ 6,409,240	\$ 7,650,621	\$ 1,653,657	\$ 811,743	\$ 975,541	\$ 12,293,103
Depreciation (See Part 3)	11,606,736	2,054,738	1,845,571	2,202,994	476,177	233,762	-	4,793,494
Return on System Investment (See Part 3)	14,611,126	1,692,166	1,519,908	1,814,262	392,153	192,514	-	9,000,123
<b>Total</b>	<b>\$ 63,147,461</b>	<b>\$ 10,882,597</b>	<b>\$ 9,774,719</b>	<b>\$ 11,667,877</b>	<b>\$ 2,521,987</b>	<b>\$ 1,238,019</b>	<b>\$ 975,541</b>	<b>\$ 26,086,720</b>

**Recommended Surcharge Rate - 2024**

**\$ 0.474    \$ 0.661    \$ 5.097    \$ 0.560**

**Actual Surcharge Rate - 2023**

**\$ 0.446    \$ 0.655    \$ 4.758    \$ 0.518**

**Change in Surcharge Rate - Amount- 2023 to 2024**

**\$ 0.028    \$ 0.006    \$ 0.339    \$ 0.042**

**Change in Surcharge Rate - Percent- 2023 to 2024**

**6.28%    0.92%    7.12%    8.11%**

Loadings - lb/day (Per K.Anderson) \*

**56,466      48,333      1,356      6,057**

Loadings - lb/year

20,610,212      17,641,545      494,818      2,210,805

\* Loadings are the average of the last three years.

**Task No. 30 - Part 2**

**City of Grand Rapids Michigan  
Sewage Disposal System Fund  
Evaluation of High Strength Surcharges- BOD, TSS, Phos & NH3  
Allocation of Operation & Maintenance Expense & Determination of WWTP Allocation Factors**

	Primary Allocation		See Task 30 - Part 4		Component Allocation (3)						
	Base Year- 2023	Calendar Year- 2024	Allocation Basis	Line No. Ref.	Volume	Wastewater Surcharges				Industrial	Other
	Allocation (1)	Allocation (2)				BOD	TSS	Phos	NH3		
<b>Wastewater Treatment Plant</b>											
Pre-Treatment	\$ 2,219,153	\$ 2,296,516	WWTP	(1)	\$ 2,296,516	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Primary Treatment	3,526,156	3,649,083	WWTP	(2)	-	1,094,725	2,189,450	-	364,908	-	-
Secondary Treatment	5,096,218	5,273,880	WWTP	(3)	1,318,470	2,109,552	791,082	791,082	263,694	-	-
Disinfection/Dechlorination	1,860,704	1,925,571	WWTP	(4)	1,925,571	-	-	-	-	-	-
Phosphorus Removal	1,313,091	1,358,867	WWTP	(5)	679,433	-	-	679,434	-	-	-
Residue Handling/Disposal	8,848,561	9,157,037	WWTP	(6)	915,703	3,204,963	4,670,089	183,141	183,141	-	-
	<u>\$ 22,863,883</u>	<u>\$ 23,660,954</u>			<u>\$ 7,135,693</u>	<u>\$ 6,409,240</u>	<u>\$ 7,650,621</u>	<u>\$ 1,653,657</u>	<u>\$ 811,743</u>	<u>\$ -</u>	<u>\$ -</u>
<b>Lift Stations</b>											
Interceptor		359,929	Collection	(11)	-	-	-	-	-	-	359,929
Trunk		156,188	Collection	(11)	-	-	-	-	-	-	156,188
Local Collector		528,857	Collection	(11)	-	-	-	-	-	-	528,857
<b>Sewer Lines</b>											
Interceptor		305,746	Collection	(11)	-	-	-	-	-	-	305,746
Trunk		717,668	Collection	(11)	-	-	-	-	-	-	717,668
Local Collector		5,005,889	Collection	(11)	0	-	-	-	-	-	5,005,889
Bulk Meter Stations		6,660	Collection	(7)	-	-	-	-	-	-	6,660
Customer Accounting		3,245,802	Admin	(8)	0	-	-	-	-	-	3,245,802
Industrial Pretreatment		975,541	Industry	(9)	-	-	-	-	-	975,541	-
Subtotal		\$ 34,963,234			\$ 7,135,693	\$ 6,409,240	\$ 7,650,621	\$ 1,653,657	\$ 811,743	\$ 975,541	\$ 10,326,739
Admin		1,966,364	Admin	(10)	0	-	-	-	-	-	1,966,364
<b>Total</b>		<u>\$ 36,929,598</u>			<u>\$ 7,135,693</u>	<u>\$ 6,409,240</u>	<u>\$ 7,650,621</u>	<u>\$ 1,653,657</u>	<u>\$ 811,743</u>	<u>\$ 975,541</u>	<u>\$ 12,293,103</u>
<b>WWTP Allocation Factors</b>		<b>100.000%</b>			<b>30.158%</b>	<b>27.088%</b>	<b>32.334%</b>	<b>6.989%</b>	<b>3.431%</b>	<b>0.000%</b>	<b>0.000%</b>

(1) Per K.Anderson 10/30/2023

(2) Primary Allocation of Current Year for Calendar 2023, based on 2022 Base Year.

(3) - (11) Refer to Task 30- Part 4 as noted.

**Task No. 30 - Part 3**

**City of Grand Rapids Michigan  
Sewage Disposal System Fund  
Evaluation of High Strength Surcharges- BOD, TSS, Phos & NH3  
Allocation of Depreciation Expense & Return on System Investment**

*Depreciation Expense- Task 24*

<i>Description</i>	<i>Amount</i>	<i>Volume</i>	<b>Wastewater Surcharges</b>				<i>Industrial</i>	<i>Other</i>
			<b>BOD</b>	<b>TSS</b>	<b>Phos</b>	<b>NH3</b>		
<i>Integrated System (1)</i>	\$ 6,813,242	\$ 2,054,738	\$ 1,845,571	\$ 2,202,994	\$ 476,177	\$ 233,762	\$ -	\$ -
<i>Other</i>	4,793,494	-	-	-	-	-	-	4,793,494
<i>Total</i>	<u>\$ 11,606,736</u>	<u>\$ 2,054,738</u>	<u>\$ 1,845,571</u>	<u>\$ 2,202,994</u>	<u>\$ 476,177</u>	<u>\$ 233,762</u>	<u>\$ -</u>	<u>\$ 4,793,494</u>

*Return on System Investment- Task 21*

<i>Description</i>	<i>Amount</i>	<i>Volume</i>	<b>Wastewater Surcharges</b>				<i>Industrial</i>	<i>Other</i>
			<b>BOD</b>	<b>TSS</b>	<b>Phos</b>	<b>NH3</b>		
<i>Integrated System (1)</i>	\$ 5,611,003	\$ 1,692,166	\$ 1,519,908	\$ 1,814,262	\$ 392,153	\$ 192,514	\$ -	\$ -
<i>Other</i>	9,000,123	-	-	-	-	-	-	9,000,123
<i>Total</i>	<u>\$ 14,611,126</u>	<u>\$ 1,692,166</u>	<u>\$ 1,519,908</u>	<u>\$ 1,814,262</u>	<u>\$ 392,153</u>	<u>\$ 192,514</u>	<u>\$ -</u>	<u>\$ 9,000,123</u>

**(1) Allocated on WWTP Allocation Factors \***                      **30.1580%**      **27.0880%**      **32.3340%**      **6.9890%**      **3.4310%**

**\* Refer to Task No. 30 - Part 2**

**Task No. 30 - Part 4**

**City of Grand Rapids Michigan  
Sewage Disposal System Fund  
Evaluation of High Strength Surcharges- BOD, TSS, Phos & NH3  
Functional Cost Allocation Factors**

Line No. Ref.	Cost Function	Total %	Allocation Basis	Volume %	Wastewater Surcharges				Industrial %	Other %
					BOD %	TSS %	Phos %	NH3 %		
(1)	Pre-Treatment (a)	100.000%	WWTP	100.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
(2)	Primary Treatment (a)	100.000%	WWTP	0.000%	30.000%	60.000%	0.000%	10.000%	0.000%	0.000%
(3)	Secondary Treatment (a)	100.000%	WWTP	25.000%	40.000%	15.000%	15.000%	5.000%	0.000%	0.000%
(4)	Disinfection/Dechlorination (a)	100.000%	WWTP	100.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
(5)	Phosphorus Removal (a)	100.000%	WWTP	50.000%	0.000%	0.000%	50.000%	0.000%	0.000%	0.000%
(6)	Residue Handling/Disposal (a)	100.000%	WWTP	10.000%	35.000%	51.000%	2.000%	2.000%	0.000%	0.000%
(7)	Bulk Metering Stations	100.000%	Collection	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	100.000%
(8)	Customer Accounting	100.000%	Admin	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	100.000%
(9)	Industrial Pretreatment	100.000%	Industry	0.000%	0.000%	0.000%	0.000%	0.000%	100.000%	0.000%
(10)	Admin	100.000%	Admin	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	100.000%
(11)	Collection System	100.000%	Collection	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	100.000%

(a) With the exception of phosphorus removal, foregoing based on "Final Allocation Table" in August 1, 2003 memo from Randall Fisher & Mike Lunn to Eric DeLong regarding 2001 Surcharge Rate Evaluation. Evaluation by WWTP staff for 2013 RS Review concluded percentages for phosphorus removal shall remain allocated 50/50 to the categories above, as initially recommended in the 2006 RS Review, to recommend 2023 RS adjustments.



**CITY OF GRAND RAPIDS, MICHIGAN**  
**SEWER RATE STUDY**  
**IPP PERMIT FEE STRUCTURE – TASK NO. 31**

The City of Grand Rapids Industrial Pretreatment Program (IPP) Permit fee structure is based on the actual cost of administration and implementation. Administration includes all the costs associated with clerical, data, software, permitting, and inspection requirements. The implementation costs include all sampling and associated laboratory analyses required by the permit. These two fees are identified on permit documents as a Permit Fee and an Analytical Fee.

**Permit Fee:** This fee is based on the actual costs associated with administering the permit program, including time spent on permit required inspections, clerical requirements, data handling requirements, and software maintenance costs.

**Analytical Fee:** This fee is based on actual costs associated with each permit. The costs, and an explanation of how they are determined, are outlined in an accompanying attachment. Labor time, including sampling and sample delivery to our laboratory, was derived from experience:

Composite samples:	1.5 hours each
Grab samples:	1.0 hours each

Four examples of analytical fees are attached herewith.

**City of Grand Rapids**  
**Cost of Services Provided by IPP**

FY      FY24

Permit Fee:      \$      1,000.00

**IPP Costs:**

Labor:      \$      75.48 per hour  
Vehicle:      \$      4.42 per hour  
Sampler:      \$      50.00 per day

**IPP Accounting:**

Composite Labor:      1.5 hours per sample  
Grab Sample Labor:      1.0 hours per sample

**Laboratory Costs:**

metals			
1 metal	\$	11.00	ea.
2 metals	\$	15.00	total
3 metals	\$	19.00	total
4 metals	\$	23.00	total
5 metals	\$	27.00	total
6 metals	\$	31.00	total
7 metals	\$	35.00	total
8 metals	\$	39.00	total
9 metals	\$	43.00	total
10 metals	\$	47.00	total
11 metals	\$	51.00	total
12 metals	\$	55.00	total
13 metals	\$	59.00	total
14 metals	\$	64.00	total
<b>TSS</b>	\$	11.00	ea.
<b>BOD</b>	\$	22.00	ea.
<b>BOD 7</b>	\$	22.00	ea.
<b>COD</b>	\$	16.00	ea.
<b>Total Phosphorus</b>	\$	11.00	ea.
<b>pH</b>	\$	5.50	ea.
<b>EPA 624.1</b>	\$	47.00	ea.
<b>EPA 625.1</b>	\$	104.00	ea.
<b>BTEX/MTBE</b>	\$	47.00	ea.
<b>Sulfide</b>	\$	22.00	ea.
<b>Oil &amp; Grease</b>	\$	22.00	ea.
<b>Total cyanide</b>	\$	22.00	ea.
<b>Hexavalent chromium</b>	\$	27.00	ea.
<b>Fecal coliform</b>	\$	18.50	ea.
<b>Ammonia nitrogen</b>	\$	16.00	ea.
<b>Mercury (EPA 245.1 or 245.2)</b>	\$	19.00	ea.
<b>Pesticides and PCBs EPA 608</b>	\$	124.00	ea.

PCBs	\$	62.00	ea.
Phenols, Total	\$	22.00	ea.
PFAS EPA 537 Modified (sample, duplicate and blank are separate samples)	\$	325.00	ea.
PFAS by LCMSMS (sample, duplicate and blank are separate samples)	\$	350.00	ea.
PFAS by EPA Draft method 1633 (sample, duplicate and blank are separate samples)	\$	525.00	ea.
EPA 1666 Volatile organics in pharmaceuticals	\$	47.00	ea.
EPA 524.2 Purgeable Organics	\$	47.00	ea.
Methyl Blue Active substances (MBAS)	\$	64.00	ea.
Color	\$	16.00	ea.
Surfactants	\$	66.40	ea.
GC-MS Fingerprint	\$	128.00	ea.

Explanation of Costs:

Labor: Labor is the hourly pay rate of an Industrial Pretreatment Program Inspector (classification 21A @ "F" step = to \$37.742 x 2) per the latest agreement between the City of Grand Rapids and the Grand Rapids Employees Independent Union plus 100% as specified in section 2.81(1) of the City of Grand Rapids Sewage Disposal System Ordinance. If personnel in a different classification are required, time will be billed based on that classification's pay scale plus 100%.

Vehicle: Hourly rate is the actual cost charged to City departments for vehicle use plus 25% for overhead.

Sampler: Sampler costs are based on the most recently approved competitive bid obtained for contract work provided to the Grand Rapids Water Resource Recovery Facility

Analysis: Laboratory costs are based on the most recently approved competitive bid obtained for contract work provided to the Grand Rapids Water Resource Recovery Facility

Permit No: Example 1

Company: Typical Metal Finisher 4 day sampling  
Facility Address:  
City, State, Zip

Permit Fee: \$ 1,000.00  
Analytical Fee: \$ 1,155.42  
Amount Due: \$ 2,155.42

**Composite Samples:** 4

**IPP Requirements:**  
man hours = 6.0 x \$ 75.48 = \$ 452.90  
sampler days = 4.0 x \$ 50.00 = \$ 200.00  
vehicle hours = 6.0 x \$ 4.42 = \$ 26.52

**Total IPP Composite Costs:** \$ 679.42

**Laboratory Analysis:**  
(each composite)  
Metals 6 \$ 31.00 = \$ 31.00  
TSS 1 x \$ 11.00 = \$ 11.00  
BOD x \$ 22.00 = \$ -  
Total phosphorus x \$ 11.00 = \$ -  
Ammonia nitrogen x \$ 16.00 = \$ -  
EPA 625.1 x \$ 104.00 = \$ -  
Sulfide x \$ 22.00 = \$ -  
other x = \$ -

**total per composite:** \$ 42.00

**Total Laboratory Composite Costs:** \$ 168.00

**Total Composite Sample Costs:** \$ 847.42

**Grab Samples:** 4

**IPP Requirements:**  
man hours = 0.0 x \$ 75.48 = \$ -  
vehicle hours = 0.0 x \$ 4.42 = \$ -

**Total IPP Grab Costs:** \$ -

**Laboratory Analysis:**  
Metals \$ - = \$ -  
pH 1 x \$ 5.50 = \$ 6.00  
EPA 624.1 x \$ 47.00 = \$ -  
EPA 625.1 x \$ 104.00 = \$ -  
BTEX/MTBE x \$ 47.00 = \$ -  
Sulfide x \$ 22.00 = \$ -  
Oil & grease 1 x \$ 22.00 = \$ 22.00  
Total cyanide 1 x \$ 22.00 = \$ 22.00  
Hexavalent Chromium 1 x \$ 27.00 = \$ 27.00  
other x = \$ -

**total per grab:** \$ 77.00

**Total Laboratory Grab Costs:** \$ 308.00

**Total Grab Sample Costs:** \$ 308.00

**Total Analytical Permit Costs:** \$ 1,155.42

Permit No: Example 2

Company: Litho Process

Facility Address:  
City, State, Zip

Permit Fee: \$ 1,000.00  
Analytical Fee: \$ 231.86  
Amount Due: \$ 1,231.86

Composite Samples: 1

**IPP Requirements:** man hours = 1.5 x \$ 75.48 = \$ 113.23  
sampler days = 1.0 x \$ 50.00 = \$ 50.00  
vehicle hours = 1.5 x \$ 4.42 = \$ 6.63

**Total IPP Composite Costs: \$ 169.86**

**Laboratory Analysis:** Metals 4 \$ 23.00 = \$ 23.00  
(each composite) TSS 1 x \$ 11.00 = \$ 11.00  
BOD x \$ 22.00 = \$ -  
Total phosphorus x \$ 11.00 = \$ -  
Ammonia nitrogen x \$ 16.00 = \$ -  
EPA 625.1 x \$ 104.00 = \$ -  
Sulfide x \$ 22.00 = \$ -  
other x = \$ -

**total per composite: \$ 34.00**

**Total Laboratory Composite Costs: \$ 34.00**

**Total Composite Sample Costs: \$ 203.86**

Grab Samples: 1

**IPP Requirements:** man hours = 0.0 x \$ 75.48 = \$ -  
vehicle hours = 0.0 x \$ 4.42 = \$ -

**Total IPP Grab Costs: \$ -**

**Laboratory Analysis:** Metals \$ - = \$ -  
pH 1 x \$ 5.50 = \$ 6.00  
EPA 624.1 x \$ 47.00 = \$ -  
EPA 625.1 x \$ 104.00 = \$ -  
BTEX/MTBE x \$ 47.00 = \$ -  
Sulfide x \$ 22.00 = \$ -  
Oil & grease 1 x \$ 22.00 = \$ 22.00  
Total cyanide x \$ 22.00 = \$ -  
Hexavalent Chromium x \$ 27.00 = \$ -  
other x = \$ -

**total per grab: \$ 28.00**

**Total Laboratory Grab Costs: \$ 28.00**

**Total Grab Sample Costs: \$ 28.00**

**Total Analytical Permit Costs: \$ 231.86**

Permit No: Example 3

Company: Stripping Process  
Facility Address:  
City, State, Zip

Permit Fee: \$ 1,000.00  
Analytical Fee: \$ 235.86  
Amount Due: \$ 1,235.86

Composite Samples: 1

**IPP Requirements:**  
man hours = 1.5 x \$ 75.48 = \$ 113.23  
sampler days = 1.0 x \$ 50.00 = \$ 50.00  
vehicle hours = 1.5 x \$ 4.42 = \$ 6.63

**Total IPP Composite Costs: \$ 169.86**

**Laboratory Analysis:**  
(each composite)  
Metals 5 \$ 27.00 = \$ 27.00  
TSS 1 x \$ 11.00 = \$ 11.00  
BOD x \$ 22.00 = \$ -  
Total phosphorus x \$ 11.00 = \$ -  
Ammonia nitrogen x \$ 16.00 = \$ -  
EPA 625.1 x \$ 104.00 = \$ -  
Sulfide x \$ 22.00 = \$ -  
other x = \$ -

**total per composite: \$ 38.00**

**Total Laboratory Composite Costs: \$ 38.00**

**Total Composite Sample Costs: \$ 207.86**

Grab Samples: 1

**IPP Requirements:**  
man hours = 0.0 x \$ 75.48 = \$ -  
vehicle hours = 0.0 x \$ 4.42 = \$ -

**Total IPP Grab Costs: \$ -**

**Laboratory Analysis:**  
(each grab)  
Metals \$ - = \$ -  
pH 1 x \$ 5.50 = \$ 6.00  
EPA 624.1 x \$ 47.00 = \$ -  
EPA 625.1 x \$ 104.00 = \$ -  
BTEX/MTBE x \$ 47.00 = \$ -  
Sulfide x \$ 22.00 = \$ -  
Oil & grease 1 x \$ 22.00 = \$ 22.00  
Total cyanide x \$ 22.00 = \$ -  
Hexavalent Chromium x \$ 27.00 = \$ -  
other x = \$ -

**total per grab: \$ 28.00**

**Total Laboratory Grab Costs: \$ 28.00**

**Total Grab Sample Costs: \$ 28.00**

**Total Analytical Permit Costs: \$ 235.86**

Permit No: Example 4

Company: Surcharge  
Facility Address:  
City, State, Zip

Permit Fee: \$ 1,000.00  
Analytical Fee: \$ 431.62  
Amount Due: \$ 1,431.62

**Composite Samples:**

**IPP Requirements:** man hours = 0.0 x \$ 75.48 = \$ -  
sampler days = 0.0 x \$ 50.00 = \$ -  
vehicle hours = 0.0 x \$ 4.42 = \$ -

**Total IPP Composite Costs:** \$ -

**Laboratory Analysis:** Metals \$ 31.00 = \$ 31.00  
(each composite) TSS x \$ 11.00 = \$ -  
BOD x \$ 22.00 = \$ -  
Total phosphorus x \$ 11.00 = \$ -  
Ammonia nitrogen x \$ 16.00 = \$ -  
EPA 625.1 x \$ 104.00 = \$ -  
Sulfide x \$ 22.00 = \$ -  
other x = \$ -

**total per composite:** \$ 31.00

**Total Laboratory Composite Costs:** \$ -

**Total Composite Sample Costs:** \$ -

**Grab Samples:** 4

**IPP Requirements:** man hours = 4.0 x \$ 75.48 = \$ 301.94  
vehicle hours = 4.0 x \$ 4.42 = \$ 17.68

**Total IPP Grab Costs:** \$ 319.62

**Laboratory Analysis:** Metals \$ - = \$ -  
(each grab) pH 1 x \$ 5.50 = \$ 6.00  
EPA 624.1 x \$ 47.00 = \$ -  
EPA 625.1 x \$ 104.00 = \$ -  
BTEX/MTBE x \$ 47.00 = \$ -  
Sulfide x \$ 22.00 = \$ -  
Oil & grease 1 x \$ 22.00 = \$ 22.00  
Total cyanide x \$ 22.00 = \$ -  
Hexavalent Chromium x \$ 27.00 = \$ -  
other x = \$ -

**total per grab:** \$ 28.00

**Total Laboratory Grab Costs:** \$ 112.00

**Total Grab Sample Costs:** \$ 431.62

**Total Analytical Permit Costs:** \$ 431.62

# MEMORANDUM

CITY OF GRAND RAPIDS

**DATE:** August 30, 2023

**TO:** Tai Verbrugge  
Utility Financial Officer

**FROM:** Arden Postma, P.E.  
Hydraulic Engineer

**SUBJECT: 2023 SEWER RATE STUDY- TASK #32 - SANITARY SEWER  
OVERSIZING RATES**

Sanitary Sewer oversizing rates are established for this year as noted below:

<u>Pipe Size</u>	<u>2022 Rate</u>	<u>2023 Rate</u>	<u>2024 Rate</u>	<u>2023 to 2024 % Change</u>
8"-10"	\$3.44/ft	\$8.72/ft	\$8.72/ft	0.00%
8"-12"	\$10.71/ft	\$15.57/ft	\$18.18/ft	16.76%
8"-15"	\$20.52/ft	\$34.88/ft	\$34.88/ft	0.00%
10"-12"	\$7.27/ft	\$6.85/ft	\$9.46/ft	38.10%
10"-15"	\$17.08/ft	\$26.16/ft	\$26.16/ft	0.00%
12"-15"	\$9.81/ft	\$19.31/ft	\$16.70/ft	-13.52%

These rates have been determined in accordance with the Sewer Disposal System Rules and Regulations, and are approved for use from January 1, 2024 through December 31, 2024.

Due to the ongoing volatility in the economic marketplace, some material prices have been impacted again this year. While most prices remained constant, the information we gathered from vendors showed an increase in 12" pipe products over last year. As a result of the price fluctuation, we are seeing parallel changes in the Oversizing Rates.

Background information and calculations to establish these rates are on file in the Utility Engineering, Distribution and Collection Office located at 1900 Oak Industrial Drive NE. If you have any questions regarding this matter, please call me at 456-4201.

AP

Cc: James Ouzts  
Cindy Irving  
Jeff McCaul

Tim Burkman  
Wayne Jernberg  
Brian Bradley

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWER RATE STUDY  
SEWAGE DISPOSAL SYSTEM FUND  
TASK NO. 33**

SERVICE AREA MAPS AND SERVICE AREA LAND MASS SUMMARIES

The following summarizes Utility Service Districts (USD) land mass square miles for UAB partner communities, per information on file as of June 30, 2023:

<u>UAB Partners</u>	<u>Sq. Miles of USD by CC</u>	<u>Percent</u>
Grand Rapids	45.346	37.526%
Walker	19.230	15.913%
Kentwood	14.227	11.773%
Cascade	16.814	13.914%
Grand Rapids Township	8.582	7.102%
Tallmadge Township	2.617	2.166%
Wright Township	0.898	0.743%
East Grand Rapids	3.370	2.789%
Ada	7.258	6.006%
Caledonia Township	2.499	2.068%
Total	<u>120.841</u>	<u>100.000%</u>

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWER RATE STUDY  
SEWAGE DISPOSAL SYSTEM FUND  
TASK NO. 34**

INDIVIDUAL CIRCUIT BREAKER AND CITY & CUSTOMER COMMUNITY CIRCUIT BREAKER

The Third Amendment to the Water and Sanitary Sewer Agreements stipulates penalty fees shall be used to fund the circuit breaker provisions noted above. The following summarizes those values:

<u>Description</u>	<u>AMOUNT</u>	<u>PERCENT</u>
Individual Circuit Breaker (ICB)	\$ 83,508	12.50%
City & Customer Community Circuit Breaker (CCCCB)	584,555	87.50%
Total	<u>\$ 668,063</u>	<u>100.00%</u>

The following tables summarize the amount, if any, of the Circuit Breaker to be applied as a revenue credit in next year's Rate Study:

<u>Description</u>	<u>AMOUNT</u>	<u>PERCENT</u>
City & Customer Community Circuit Breaker Amount- Above	\$ 584,555	100.00%
Less: Amount Applied in Current Rate Study	(397,894)	-68.07%
Total CCCCCB Revenue Credit- Next Year's Rate Study	<u>\$ 186,661</u>	<u>31.93%</u>

# MEMORANDUM

CITY OF GRAND RAPIDS

DATE: October 31, 2023

TO: Tai Verbrugge  
Utility Financial Officer

FROM: Jared Grabinski  
Assistant Environmental Services Manager

**SUBJECT: 2023 SEWER RATE STUDY - TASK #35 - FDD Opt Out Charge**

The Footing Drain Disconnection Ordinance (FDD) Authorizes the City Manager or his designee to identify FDD Project Areas within the City of Grand Rapids based on the severity of System groundwater and stormwater inflow surcharge problems. Once designated, the ordinance requires homeowners within the FDD Project Areas to disconnect their footing drains from the City's sanitary sewer system at City expense.

The additional charge for non-compliance with the footing drain disconnection ordinance has been calculated based on current information and is recommended to be \$76.95 / month which is the actual cost to the system for the additional flow.

JMG

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWER RATE STUDY  
SEWER SUPPLY SYSTEM FUND  
TASK NO. 35**

DETERMINE FOOTING DRAIN OPT OUT SEWER RATE.

**1. Avoided Claims for Sewage Backups**

**Annual claim costs**

Annual Backup Claims	\$150,000 /year <sup>1</sup>	Estimated annual claims cost
System Retail Customers	76,298	Total retail customers <sup>2</sup>
Grand Rapids Retail Customers	<u>58,571</u>	Total retail customers in Grand Rapids <sup>2</sup>
Annual Cost	<b>\$1.97 /yr/cust.</b>	Annual cost for claims in Grand Rapids

**2. Avoided Costs to treat the additional flow generated by footing drains**

**Flow Estimate**

DWF	43,800 gal/year	Average generation rate
WWF	<u>21,796</u> gal/year	Average generation rate
Total	65,596 gal/year	Average per house

**Unit Conveyance & Treatment Costs**

Annual average FD flows	0.065596 MG/yr	Average per house
Conveyance	\$444 /MG	Unit conveyance cost <sup>3</sup>
Treatment	<u>\$1,586</u> /MG	Unit treatment cost <sup>3</sup>
Conveyance & Treatment	\$2,030 /MG	
Annual Cost	<b>\$133.16 /yr/cust.</b>	Annual cost for a connected FD

**3. Actual MDNRE penalties for SSO's**

**Penalties for SSO**

Grand Rapids Customers	58,571	
Penalties	\$25,000	Per occurrence
Potential SSOs	0 /year	Occurrences
Annual cost	<u>0</u> /year	
	<b>\$0.00 /yr/cust.</b>	Annual cost for penalties

**4. Avoided Transport & Future Projects**

**Cost Per FDD**

Pilot Project Costs	1,788 \$/yr/FDD cust.	Annual cost of FDD work <sup>5</sup>
FDD Equivalents	<u>25,598</u> FDD	FDDs needed to correct backup problems
Total Cost	\$45,769,224	Annualized Conveyance and Storage Costs
Grand Rapids Customers	<u>58,571</u>	Customers in Grand Rapids
Cost Per single Family Home	<b>\$781.43</b> \$/home/not removed	Annualized cost for Grand Rapids Customers

**5. Avoided Administrative (Engineering & Legal) Costs**

**Associated with Administration of claims, construction**

Legal	0.5	Citywide claims administration
Engineering	<u>1.5</u>	Citywide engineering investigation
Staffing	2.0	Total staffing
Rate	\$200,000 /year	Average loaded staffing rate <sup>4</sup>
Total	\$400,000 /year	
Customers	<u>58,571</u>	In Grand Rapids
	<b>\$6.83 \$/yr/cust.</b>	

**Annual Cost Summary**

1. Avoided Claims	\$1.97	
2. Avoided Treatment	\$133.16	
3. Actual MDNRE Penalties for SSOs	\$0.00	
4. Avoided Future Projects	\$781.43	
5. Administration	<u>\$6.83</u>	
<b>TOTAL</b>	<b>\$923.39 \$/yr/cust.</b>	
	<b>\$76.95 /month/cust.</b>	Monthly fee for not disconnecting

**Notes:**

- <sup>1</sup> Sinking fund annual budget
- <sup>2</sup> Customer numbers per 2023 Rate Study
- <sup>3</sup> Value for sewer maintenance and WRRF costs from 2023 rate study.
- <sup>4</sup> Estimated staff rate with benefits
- <sup>5</sup> Total cost per FDD amortized over 20 years with 2.5% interest rate

**CITY OF GRAND RAPIDS, MICHIGAN  
APPENDICES  
ANNUAL WATER/SEWER RATE REVIEW**

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# CITY OF GRAND RAPIDS AGENDA ACTION REQUEST

**DATE:** November 14, 2023

**TO:** Mark Washington, City Manager

**COMMITTEE:** Committee of the Whole  
**LIAISON:** Mark Washington, City Manager

**FROM:** Tai Verbrugge, Utility Financial Officer  
Fiscal Services Department

**SUBJECT:** **2023 Water/Sewer Rate Study - Introduction and Initiation of the 20 Day Comment Period**

A comprehensive review of operating and capital costs by community, in conjunction with customer base variation and usage, is performed annually for the purpose of recommending water and sewer rate adjustments for the City of Grand Rapids and its partner communities. The City of Grand Rapids continues to adhere to its water and sewer rate-setting methodology first established in 1976-77. The methodology yields consistent performance in providing for the long-term financing needs of the Water Supply and Sewage Disposal Systems and assuring adequate debt service coverage pursuant to the Systems' master bond ordinance covenants. This year's review marks the 47<sup>th</sup> annual water/sewer rate study report.

The City's review of the Water Supply and Sewage Disposal Systems' performance has identified the revenue requirements for water and sewer operations and service for calendar year 2024. Water Supply System revenue requirements increased by \$3,398,235 or 6.65% more than revenues generated by existing rates and charges. Sewage Disposal System revenue requirements increased by \$850,937 or 1.34% more than revenues generated by existing rates and charges. Comparatively, the identified system increase for Sewer is less than the current rate of inflation, with annual inflation for the 12 months ending September 2023 at 3.7%, while the system increase for Water exceeds the inflation rate.

Both Systems experienced fluctuations in the three-year average of billed volume that impacted the rate changes. Billed volume is used in the rate study to forecast the next calendar year's expected revenue. In 2010, the rate study implemented a three-year average billed volume to smooth significant volume variances and prevent reactionary rate fluctuations. The Water System experienced a 3.22% increase in the three-year average of billed volume, primarily as a result of a historically dry spring. This results in a downward pressure on rates for the Water System. The Sewer System experienced a 0.70% increase in the three-year average of billed volume. With overall consumption up, this likewise causes downward pressure on rates for the Sewer System as well.

Asset management remains a priority for both Systems, and asset additions, combined with the increase in the return-on-investment (ROI) rate, are the biggest drivers in this year's study. Water main replacements in the City of Grand Rapids and investments in integrated assets at the Lake Michigan Filtration Plant, such as switchgear replacements and improvements to the residuals process, were the major drivers for the Water System rate increase. Furthermore, the Water System is continuing to focus on private lead service line replacements for City of Grand Rapids residents in accordance with the Environmental Protection Agency (EPA) and The State of Michigan Environment, Great Lakes & Energy Division (EGLE) regulatory requirements. Operational costs played a significant role in the rate increase as well, with the inflationary impact on wages, process chemicals, and electricity driving up costs.

With the Sewer System, investments in sewer mains in the City of Grand Rapids were major drivers in this year's study, alongside work being done at the Water Resource Recovery Facility (WRRF). These capital expenditures included the installation of FEW supply lines and additional equipment related to the biodigester program. On the operations side, increased demand for natural gas needed to run our CHP generators and the renewal of software licenses were significant costs influencing Sewer rates. Rate impacts were tempered by the continued reduction in debt service from the Combined Sewer Overflow (CSO) program, and the growth of natural gas sales from the biodigesters.

Recommended rate adjustments incorporate provisions of the third amendment to the uniform service agreements with customer communities, which eliminates penalty fee credits from retail revenue requirements to fund the Individual Circuit Breaker (ICB) and the City and Customer Community Circuit Breaker (CCCCB). This amendment generated \$145,662 to support the ICB, the program aimed to assist retail customers requiring assistance in payment of their water/sewer bills. This amount will again be supplemented with an additional appropriation of non-operating revenue. The third amendment also provides for a City and Customer Community Circuit Breaker, if sufficient funding is available, to limit each retail service area revenue requirement change to a level in line with the overall systems' initial average change. Adequate funds were available in both utility systems to apply the CCCCCB and limit the revenue requirement changes. Total City and Customer Community Circuit Breaker funds used in the 2023 rate study was \$691,029 in relief.

Attached are detailed schedules by customer community of revenue requirement changes and rate adjustment impacts to a typical domestic and commercial customer with the system average quarterly consumption.

The Preliminary 2023 Water and Sewer Rate Study has been made available to the Utility Advisory Board partners and other customer communities on November 3, 2023. All partner and customer communities have a thirty-day comment period following notification of the rates as provided in the water/sewer service agreements. Approval of the resolution for the 2024 Water and Sewer rates by the City Commission is scheduled for Tuesday, December 12, 2023.

The annual rate study along with explanatory materials will be filed with the City Clerk's Office no later than close of business on November 14, 2023 and are available for public review and comment. This is at least twenty (20) days prior to the City Commission's consideration of an approval resolution. Those wishing to provide feedback may submit comments to the City Clerk's Office or by sending an email to [info@grcity.us](mailto:info@grcity.us). Public notice will also be published in the newspaper, and the rate study and supplemental materials have been posted on the City's website at:

<https://www.grandrapidsmi.gov/Government/Departments/Water-System/Water-and-Sewer-Rate-Studies>.

Comments will be reported and considered as part of the FY2025 budget planning process.

**CITY OF GRAND RAPIDS, MICHIGAN  
2023 PRELIMINARY WATER/SEWER RATE STUDY  
SUMMARY OF REVENUE REQUIREMENT CHANGES  
FOR RATES EFFECTIVE JANUARY 1, 2024**

	<u>WATER (1)</u>		<u>SEWER (1)</u>		
	<u>AMOUNT</u>	<u>PERCENT</u>	<u>AMOUNT</u>	<u>PERCENT</u>	
RETAIL COMMUNITIES	GRAND RAPIDS	\$ 2,165,788	7.23%	\$ 489,153	1.15%
	WALKER	162,157	4.09%	68,226	1.21%
	NET OF CONTRIBUTION OF:	(124,686)			
	KENTWOOD	123,998	2.48%	104,423	1.96%
	CASCADE TWP	288,821	7.23%	61,788	1.96%
	GRAND RAPIDS TWP	128,814	4.53%	59,882	1.96%
	TALLMADGE TWP	(634)	-0.24%	(2,702)	-0.50%
WRIGHT TWP	N/A	N/A	1,485	0.52%	
WHOLESALE COMMUNITIES	EAST GRAND RAPIDS	96,805	10.88%	20,436	1.63%
	ADA TWP	101,434	6.47%	47,937	3.12%
	OTTAWA COUNTY	206,366	7.92%	NA	NA
	GAINES TWP	N/A	N/A	6,925	2.22%
	CALEDONIA TWP	N/A	N/A	(6,616)	-2.93%
<hr/>					
SYSTEM	\$ 3,398,235	6.65%	\$ 850,937	1.34%	
<hr/>					

(1) Change in revenue requirements based on revenues currently generated from rates, customer base and volumes reported in the preliminary rate study (Includes consideration for relief from CCCCB).

**DISCLOSE RELIEF PROVIDED BY CITY & CUSTOMER COMMUNITY CIRCUIT BREAKER (CCCB)**

	<u>WATER</u>		<u>SEWER</u>	
	<u>AMOUNT</u>	<u>PERCENT</u>	<u>AMOUNT</u>	<u>PERCENT</u>
SYSTEM REVENUE REQUIREMENT	\$ 54,487,745	6.65%	\$ 64,547,161	1.34%
ADD: CCCCB RELIEF	293,052	0.57%	397,977	0.62%
SYSTEM CHANGE- WITHOUT RELIEF	<u>\$ 54,780,797</u>	<u>7.23%</u>	<u>\$ 64,945,138</u>	<u>1.96%</u>

**CITY OF GRAND RAPIDS, MICHIGAN  
2023 PRELIMINARY WATER/SEWER RATE STUDY  
IMPACT OF RATE ADJUSTMENTS ON DOMESTIC USERS  
BY CUSTOMER COMMUNITY \*  
FOR RATES EFFECTIVE JANUARY 1, 2024**

	<u>APPROXIMATE QUARTERLY BILL</u>		<u>CHANGE</u>	
	<u>2023</u>	<u>2024</u>	<u>DOLLARS</u>	<u>PERCENT</u>
<b>GRAND RAPIDS</b>				
WATER	\$ 106.14	\$ 113.70	\$ 7.56	7.12%
SEWER	142.38	144.12	1.74	1.22%
	<u>\$ 248.52</u>	<u>\$ 257.82</u>	<u>\$ 9.30</u>	3.74%
BASE RATIO	1.00	1.00		
<b>WALKER</b>				
WATER	\$ 100.83	\$ 104.94	\$ 4.11	4.08%
SEWER	163.65	165.57	1.92	1.17%
	<u>\$ 264.48</u>	<u>\$ 270.51</u>	<u>\$ 6.03</u>	2.28%
RATIO TO GR	1.06	1.05		
<b>KENTWOOD</b>				
WATER	\$ 105.75	\$ 108.45	\$ 2.70	2.55%
SEWER	99.45	101.22	1.77	1.78%
	<u>\$ 205.20</u>	<u>\$ 209.67</u>	<u>\$ 4.47</u>	2.18%
RATIO TO GR	0.83	0.81		
<b>CASCADE TWP</b>				
WATER	\$ 145.20	\$ 155.79	\$ 10.59	7.29%
SEWER	191.22	194.82	3.60	1.88%
	<u>\$ 336.42</u>	<u>\$ 350.61</u>	<u>\$ 14.19</u>	4.22%
RATIO TO GR	1.35	1.36		
<b>GRAND RAPIDS TWP</b>				
WATER	\$ 118.77	\$ 124.11	\$ 5.34	4.50%
SEWER	154.56	157.53	2.97	1.92%
	<u>\$ 273.33</u>	<u>\$ 281.64</u>	<u>\$ 8.31</u>	3.04%
RATIO TO GR	1.10	1.09		
<b>TALLMADGE TWP</b>				
WATER	\$ 94.86	\$ 94.56	\$ (0.30)	-0.32%
SEWER	274.41	273.06	(1.35)	-0.49%
	<u>\$ 369.27</u>	<u>\$ 367.62</u>	<u>\$ (1.65)</u>	-0.45%
RATIO TO GR	1.49	1.43		

\* THE COMPARISONS ABOVE ARE BASED ON SYSTEM AVERAGE DOMESTIC CUSTOMER  
 QUARTERLY CONSUMPTION OF: WATER- 30.00 UNITS OR 22,440 GALLONS  
 SEWER - 21.00 UNITS OR 15,708 GALLONS  
 NO. OF MONTHS: 3

**REU (RESIDENTIAL EQUIVALENT UNIT) CUSTOMER COMMUNITY- APPROXIMATE QUARTERLY BILL**

<b>WRIGHT TWP-</b>				
SEWER (No. of REU 1.00)	<u>\$ 170.37</u>	<u>\$ 171.24</u>	<u>\$ 0.87</u>	0.51%

**CITY OF GRAND RAPIDS, MICHIGAN  
2023 PRELIMINARY WATER/SEWER RATE STUDY  
IMPACT OF RATE ADJUSTMENTS ON COMMERCIAL USERS  
BY CUSTOMER COMMUNITY  
FOR RATES EFFECTIVE JANUARY 1, 2024**

	<u>APPROXIMATE QUARTERLY BILL</u>		<u>CHANGE</u>	
	<u>2023</u>	<u>2024</u>	<u>DOLLARS</u>	<u>PERCENT</u>
<b>GRAND RAPIDS</b>				
WATER	\$ 537.27	\$ 573.96	\$ 36.69	6.83%
SEWER	959.79	951.66	(8.13)	-0.85%
	<u>\$ 1,497.06</u>	<u>\$ 1,525.62</u>	<u>\$ 28.56</u>	1.91%
BASE RATIO	1.00	1.00		
<b>WALKER</b>				
WATER	\$ 464.41	\$ 484.14	\$ 19.73	4.25%
SEWER	766.23	776.10	9.87	1.29%
	<u>\$ 1,230.64</u>	<u>\$ 1,260.24</u>	<u>\$ 29.60</u>	2.41%
RATIO TO GR	0.82	0.83		
<b>KENTWOOD</b>				
WATER	\$ 457.71	\$ 468.73	\$ 11.02	2.41%
SEWER	709.95	724.35	14.40	2.03%
	<u>\$ 1,167.66</u>	<u>\$ 1,193.08</u>	<u>\$ 25.42</u>	2.18%
RATIO TO GR	0.78	0.78		
<b>CASCADE TWP</b>				
WATER	\$ 631.45	\$ 678.16	\$ 46.71	7.40%
SEWER	868.26	885.93	17.67	2.04%
	<u>\$ 1,499.71</u>	<u>\$ 1,564.09</u>	<u>\$ 64.38</u>	4.29%
RATIO TO GR	1.00	1.03		
<b>GRAND RAPIDS TWP</b>				
WATER	\$ 531.87	\$ 556.90	\$ 25.03	4.71%
SEWER	708.30	721.65	13.35	1.88%
	<u>\$ 1,240.17</u>	<u>\$ 1,278.55</u>	<u>\$ 38.38</u>	3.09%
RATIO TO GR	0.83	0.84		
<b>TALLMADGE TWP</b>				
WATER	\$ 580.64	\$ 578.59	\$ (2.05)	-0.35%
SEWER	1,919.10	1,910.31	(8.79)	-0.46%
	<u>\$ 2,499.74</u>	<u>\$ 2,488.90</u>	<u>\$ (10.84)</u>	-0.43%
RATIO TO GR	1.67	1.63		

\* THE COMPARISONS ABOVE ARE BASED ON SYSTEM AVERAGE COMMERCIAL CUSTOMER  
 QUARTERLY CONSUMPTION OF : WATER- 208.00 UNITS OR 155,584 GALLONS  
 SEWER - 198.00 UNITS OR 148,104 GALLONS  
 NO. OF MONTHS: 3

**REU (RESIDENTIAL EQUIVALENT UNIT) CUSTOMER COMMUNITY- APPROXIMATE QUARTERLY BILL**

<b>WRIGHT TWP</b>				
SEWER (No. of REU 1.00)	<u>\$ 170.37</u>	<u>\$ 171.24</u>	<u>\$ 0.87</u>	0.51%

**CITY OF GRAND RAPIDS, MICHIGAN  
2023 PRELIMINARY WATER/SEWER RATE STUDY  
WATER & SEWER RATES FOR GRAND RAPIDS & RETAIL CUSTOMER COMMUNITIES  
EFFECTIVE JANUARY 1, 2024**

**WATER RATES**

	<u>METER CODE</u>	<u>GRAND RAPIDS</u>	<u>WALKER</u>	<u>KENTWOOD</u>	<u>CASCADE</u>	<u>GR. RAPIDS TOWNSHIP</u>	<u>TALLMADGE TOWNSHIP</u>	<u>WRIGHT TOWNSHIP</u>
COMMODITY CHARGE (HCF)		\$ 2.46	\$ 1.98	\$ 1.84	\$ 2.65	\$ 2.23	\$ 2.71	NA
<b>MONTHLY SERVICE CHARGE BY METER SIZE</b>								
3/4" & Less	A	\$ 13.30	\$ 15.18	\$ 17.75	\$ 25.43	\$ 19.07	\$ 4.42	NA
1"	B	\$ 20.76	\$ 24.10	\$ 28.67	\$ 42.32	\$ 31.02	\$ 4.97	NA
1-1/4"	C	\$ 30.35	\$ 35.57	\$ 42.71	\$ 64.04	\$ 46.38	\$ 5.68	NA
1-1/2"	D	\$ 42.07	\$ 49.59	\$ 59.87	\$ 90.59	\$ 65.15	\$ 6.55	NA
2"	E	\$ 71.91	\$ 85.27	\$ 103.55	\$ 158.16	\$ 112.94	\$ 8.76	NA
3"	F	\$ 157.15	\$ 187.23	\$ 228.35	\$ 351.23	\$ 249.47	\$ 15.07	NA
4"	G	\$ 276.49	\$ 329.97	\$ 403.07	\$ 621.52	\$ 440.62	\$ 23.91	NA
6" & Over	H	\$ 617.47	\$ 737.79	\$ 902.27	\$ 1,393.79	\$ 986.75	\$ 49.15	NA

**SEWER RATES**

	<u>METER CODE</u>	<u>GRAND RAPIDS</u>	<u>WALKER</u>	<u>KENTWOOD</u>	<u>CASCADE</u>	<u>GR. RAPIDS TOWNSHIP</u>	<u>TALLMADGE TOWNSHIP</u>	<u>WRIGHT TOWNSHIP</u>
COMMODITY CHARGE (HCF)		\$ 4.38	\$ 3.05	\$ 3.44	\$ 3.41	\$ 2.80	\$ 8.92	NA
REU Charge (Monthly) *		NA	NA	NA	NA	NA	NA	\$ 57.08
<b>MONTHLY SERVICE CHARGE BY METER SIZE</b>								
3/4" & Less	A	\$ 17.38	\$ 33.84	\$ 9.66	\$ 41.07	\$ 32.91	\$ 28.58	NA
1"	B	\$ 28.14	\$ 57.40	\$ 14.41	\$ 70.25	\$ 55.75	\$ 48.05	NA
1-1/4"	C	\$ 41.97	\$ 87.69	\$ 20.52	\$ 107.77	\$ 85.11	\$ 73.08	NA
1-1/2"	D	\$ 58.87	\$ 124.71	\$ 27.99	\$ 153.63	\$ 120.99	\$ 103.67	NA
2"	E	\$ 101.90	\$ 218.95	\$ 47.00	\$ 270.36	\$ 212.33	\$ 181.54	NA
3"	F	\$ 224.83	\$ 488.19	\$ 101.31	\$ 603.87	\$ 473.31	\$ 404.03	NA
4"	G	\$ 396.94	\$ 865.13	\$ 177.35	\$ 1,070.78	\$ 838.68	\$ 715.51	NA
6" & Over	H	\$ 888.67	\$ 1,942.11	\$ 394.59	\$ 2,404.83	\$ 1,882.59	\$ 1,605.47	NA

\* REU - Residential Equivalent Unit (Wright Township Only)

**FIRE PROTECTION RATES- ALL GOVERNMENTAL UNITS**

6"	H	\$ 22.14		10"	J	\$ 61.55
8"	I	\$ 39.28		12"	K	\$ 88.57

**NOTE:** Monthly defined as 1/12th of 366 days.

**CITY OF GRAND RAPIDS, MICHIGAN  
2023 PRELIMINARY WATER/SEWER RATE STUDY  
IMPACT OF RATE ADJUSTMENTS ON WHOLESALE CUSTOMER COMMUNITIES  
EFFECTIVE JANUARY 1, 2024**

	<u>2023</u>	<u>2024</u>	<u>PERCENTAGE CHANGE</u>
<b>EAST GRAND RAPIDS</b>			
WATER - SERVICE (MONTHLY)	\$14,452.00	\$17,047.00	17.96%
- COMMODITY (100 CF)	\$1.20	\$1.31	9.17%
SEWER - SERVICE (MONTHLY)	\$1,853.00	\$2,184.00	17.86%
- COMMODITY (MG)	\$2,920.00	\$2,959.00	1.34%
<b>ADA TWP</b>			
WATER - SERVICE	\$56,931.00	\$60,124.00	5.61%
- COMMODITY	\$1.40	\$1.50	7.14%
SEWER - SERVICE	\$38,466.00	\$40,984.00	6.55%
- COMMODITY	\$3,947.00	\$4,012.00	1.65%
<b>OTTAWA COUNTY</b>			
WATER - SERVICE	\$736.00	\$0.00	-100.00%
- COMMODITY	\$1.32	\$1.43	8.33%
<b>GAINES TWP</b>			
SEWER - SERVICE	\$1,488.00	\$1,619.00	8.80%
- COMMODITY	\$2,528.00	\$2,574.00	1.82%
<b>CALEDONIA TWP</b>			
SEWER - SERVICE	\$704.00	\$728.00	3.41%
- COMMODITY	\$7,868.00	\$7,618.00	-3.18%

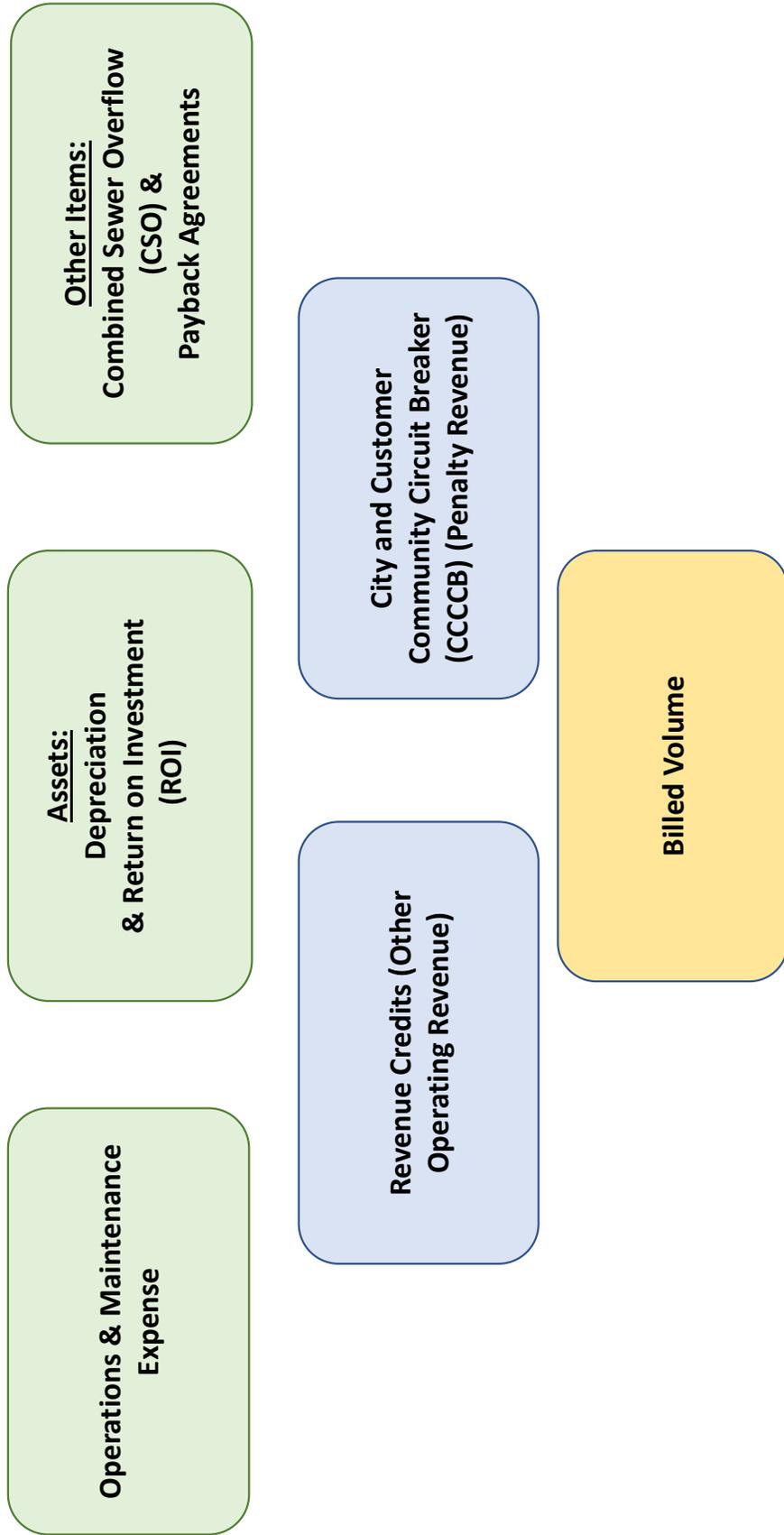
**NOTE: Monthly defined as 1/12th of 366 days.**

City of Grand  
Rapids  
Water & Sewer  
Systems

47<sup>th</sup> Annual  
Preliminary  
Rate Study



# Building Blocks of the Revenue Requirement



# 15-Year Historical Rate Changes

Rate Study Year	Water Supply System			Sewage Disposal System		
	Revenue Requirements	% change in RR over prev year	% gross rate incr (decr) **	Revenue Requirements	% change in RR over prev year	% gross rate incr (decr) **
2008	\$ 42,017,680	4.34%	2.45%	\$ 47,092,925	10.18%	14.69%
2009	42,939,752	2.19%	9.89%	51,378,424	9.10%	14.04%
2010	41,200,107	-4.05%	-6.27%	49,673,390	-3.32%	-3.30%
2011	41,802,404	1.46%	5.15%	50,082,541	0.82%	2.89%
2012	39,247,442	-6.11%	-4.41%	48,183,681	-3.79%	-2.46%
2013	38,646,748	-1.53%	-4.30%	48,946,212	1.58%	2.46%
2014	40,055,985	3.65%	2.50%	49,962,043	2.08%	2.81%
2015	40,178,439	0.31%	1.00%	49,868,027	-0.19%	0.30%
2016	41,187,517	2.51%	3.63%	50,400,344	1.07%	0.36%
2017	42,828,972	3.99%	2.45%	52,319,981	3.81%	3.08%
2018	43,868,464	2.43%	2.71%	54,611,300	4.38%	3.28%
2019	45,752,997	4.30%	2.47%	56,969,417	4.32%	3.49%
2020	45,501,943	-0.55%	0.62%	61,242,290	7.50%	7.92%
2021	47,692,896	4.82%	4.08%	62,943,059	2.78%	4.00%
2022	50,122,073	5.09%	5.68%	63,232,742	0.46%	1.07%
2023*	54,487,745	8.71%	6.65%	64,547,161	2.08%	1.34%
AVG	43,595,698	1.97%	2.14%	53,840,846	2.68%	3.50%

\* Revenue Requirements per the 2023 Preliminary Rate Study.

\*\* The percentage gross rate increase (decrease) differs from the annual percentage change in Revenue Requirements due to differences in usage volumes/customers/application of Circuit Breaker -Annual inflation for the 12 months ending September 2023 was 3.7%



## Rate Impact Factors - Water

2023 Water Rate Study Rate Drivers	% Impact
<b>Increases:</b>	
Assets – ROI and Depreciation: \$22.5 in service (water mains, PRV Replacements, LMFP Investments) (ROI % up)	5.15%
O&M – Personnel services (union wage increase) Inflationary impact (process chemicals, electricity) Equipment & buildings (lake access staircase, windows)	3.65%
<b>Decreases:</b>	
Revenue Expectation (3-yr avg water billed volume up)	(1.89%)
Revenue Credits (tapping/inspections up, unused penalty credits)	(0.19%)
Integrated Connection Fee Credit / Penalty Offset	(0.06%)
<b>Proposed System Average Rate Increase</b>	<b>6.65%</b>



## Rate Impact Factors - Sewer

2023 Sewer Rate Study Rate Drivers		% Impact
<b>Increases:</b>		
Assets – ROI and Depreciation: \$13.6M in service (sewer mains, FEW Supply Lines, WRRF Investments) (ROI % up)		1.78%
O&M – Natural Gas for Generators (electricity reduction) Software Maintenance Agreements (license renewals) Equipment (WRRF & Field Ops)		0.78%
IPP Surcharges – Discharged volume down Natural gas credits offset		0.34%
<b>Decreases:</b>		
Revenue Expectation (3-yr avg sewer billed volume up)		(0.73%)
CSO Debt Service Requirement (GR only)		(0.61%)
Revenue Credits (unused penalty credits)		(0.22%)
<b>Proposed System Average Rate Increase</b>		<b>1.34%</b>

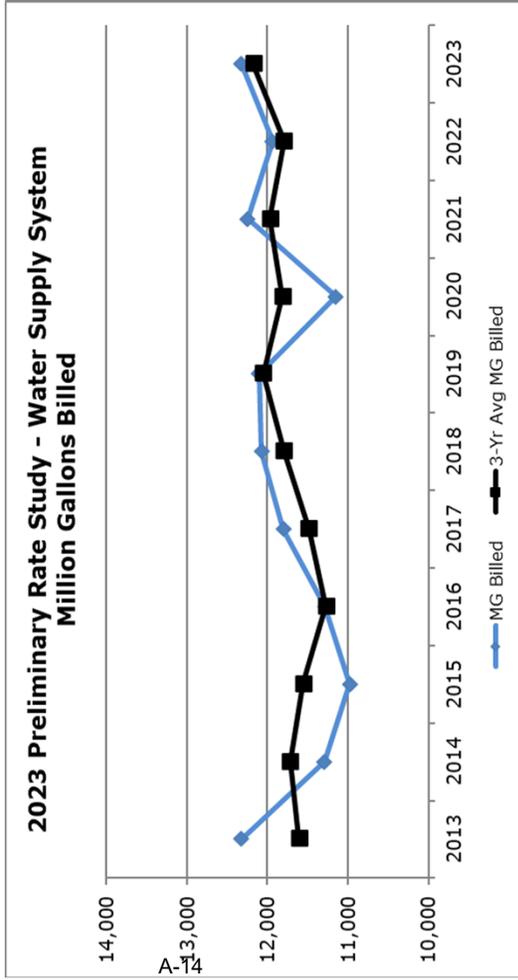


Rate Impact Factors – Sewer

## Billed Volume

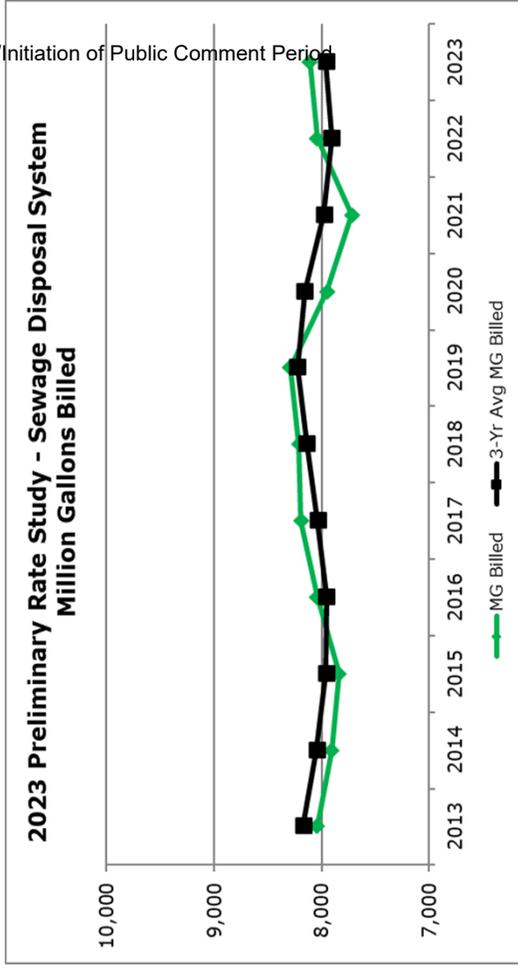
### Water Supply System

2023 Water volume up 3.24% over 2022  
 3-Yr Avg Water volume **up** 3.22%



### Sewer Disposal System

2023 Sewer Volume up 0.88% over 2022  
 3-Yr Avg Sewer Volume **up** 0.70%



# Partner Communities Water Billed Volume

MUNICIPALITY	FY19		FY20		FY21		FY22		FY23		FY19 - FY23	
	VOL BILLED	% CHANGE	VOL BILLED	% CHANGE	VOL BILLED	% CHANGE	VOL BILLED	% CHANGE	VOL BILLED	% CHANGE	VOL BILLED	% CHANGE
GRAND RAPIDS	6,417,706	-8.07%	5,899,570	-8.07%	6,288,343	6.59%	6,151,371	-2.18%	6,325,990	2.84%	6,325,990	-1.43%
WALKER	929,719	-10.11%	835,703	-10.11%	952,327	13.96%	923,869	-2.99%	943,276	2.10%	943,276	1.46%
KENTWOOD	1,342,574	-11.33%	1,190,449	-11.33%	1,305,704	9.68%	1,270,170	-2.72%	1,270,658	0.04%	1,270,658	-5.36%
CASCADE TWP	695,896	-15.93%	585,011	-15.93%	686,898	17.42%	697,931	1.61%	716,807	2.70%	716,807	3.40%
GRAND RAPIDS TWP	545,871	-15.22%	462,801	-15.22%	573,570	23.93%	528,741	-7.82%	579,069	9.52%	579,069	6.08%
TALLMADGE TWP	41,592	-9.04%	37,831	-9.04%	48,587	28.43%	52,057	7.14%	53,593	2.95%	53,593	28.65%
EAST GRAND RAPIDS**	413,246	2.34%	422,907	2.34%	430,073	1.69%	429,664	-0.10%	479,864	11.68%	479,864	16.42%
OTTAWA COUNTY***	1,280,873	1.43%	1,299,136	1.43%	1,492,668	14.90%	1,426,225	-4.45%	1,471,115	3.15%	1,471,115	14.85%
ADA TWP	438,337	-4.80%	417,313	-4.80%	466,832	11.87%	461,794	-1.08%	487,813	5.63%	487,813	11.29%
<b>TOTAL</b>	<b>12,105,814</b>	<b>-7.89%</b>	<b>11,150,721</b>	<b>-7.89%</b>	<b>12,245,001</b>	<b>9.81%</b>	<b>11,941,820</b>	<b>-2.48%</b>	<b>12,328,184</b>	<b>3.24%</b>	<b>12,328,184</b>	<b>1.84%</b>



# Partner Communities Sewer Billed Volume

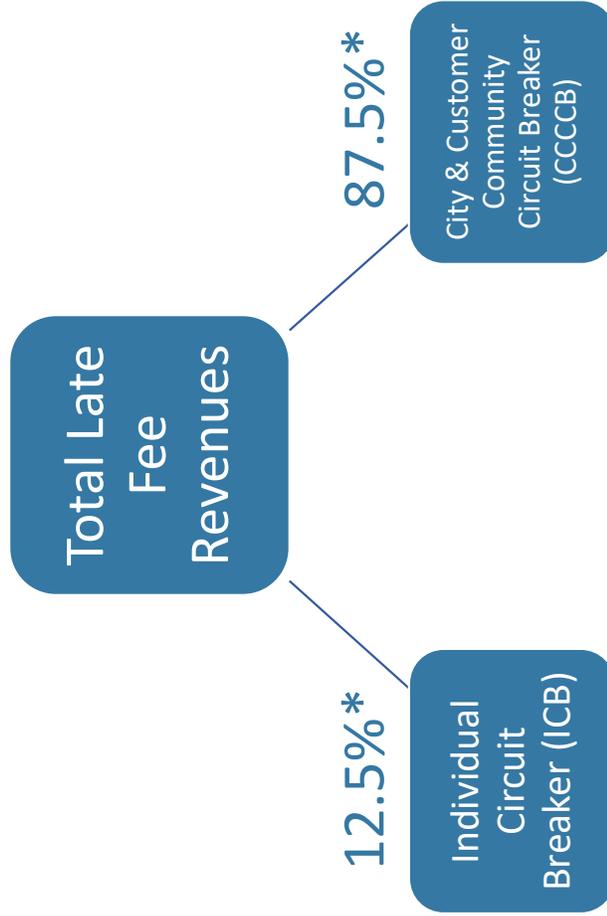
MUNICIPALITY	FY19		FY20		FY21		FY22		FY23		FY19 - FY23	
	VOL BILLED	% CHANGE	VOL BILLED	% CHANGE	VOL BILLED	% CHANGE	VOL BILLED	% CHANGE	VOL BILLED	% CHANGE	VOL BILLED	% CHANGE
GRAND RAPIDS	4,998,134	-4.31%	4,782,754	-4.31%	4,706,480	-1.59%	4,848,898	3.03%	4,889,314	0.83%	4,889,314	-2.18%
WALKER	637,561	-6.45%	596,412	-6.45%	604,510	1.36%	628,004	3.89%	634,824	1.09%	634,824	-0.43%
KENTWOOD	1,060,147	-7.89%	976,528	-7.89%	1,001,673	2.57%	991,359	-1.03%	999,662	0.84%	999,662	-5.71%
CASCADE	357,434	-7.53%	330,505	-7.53%	335,188	1.42%	351,062	4.74%	358,418	2.10%	358,418	0.28%
GRAND RAPIDS TWP	293,245	-5.16%	278,126	-5.16%	284,929	2.45%	291,121	2.17%	301,740	3.65%	301,740	2.96%
TAYLOR	27,276	-5.37%	25,812	-5.37%	27,089	4.95%	29,628	9.37%	36,870	24.45%	36,870	35.16%
WRIGHT TWP	19,834	0.96%	20,025	0.96%	12,023	-39.96%	15,037	25.07%	17,363	15.47%	17,363	-12.46%
EAST GRAND RAPIDS	461,287	8.07%	498,507	8.07%	359,057	-27.97%	459,754	28.04%	447,512	-2.66%	447,512	-2.99%
ADA TWP	291,737	0.34%	292,738	0.34%	264,616	-9.61%	276,776	4.60%	276,304	-0.17%	276,304	-5.29%
CALEDONIA TWP	28,715	-9.77%	25,910	-9.77%	21,012	-18.90%	30,777	46.47%	31,098	1.04%	31,098	8.30%
GAINES TWP	115,345	5.93%	122,183	5.93%	103,780	-15.06%	116,742	12.49%	116,500	-0.21%	116,500	1.00%
<b>TOTAL</b>	<b>8,290,715</b>	<b>-4.12%</b>	<b>7,949,500</b>	<b>-4.12%</b>	<b>7,720,357</b>	<b>-2.88%</b>	<b>8,039,158</b>	<b>4.13%</b>	<b>8,109,605</b>	<b>0.88%</b>	<b>8,109,605</b>	<b>-2.18%</b>



# System Investment – Asset Additions June 30, 2023

Water Supply System: \$22.5M		Sewer Disposal System: \$13.6M	
Integrated System: \$4.5M		Integrated System: \$2.3M	
LMP Switchgear Replacements	\$2.75M	FEW Supply Lines	\$1.25M
LMP Accelerator Conversion & Residual Improvement	\$989k	WRRF – Biodigestion	\$722k
LMP South Clearwell Improvements	\$613k	WRRF – Primary Tank Refurbishment	\$251k
		WRRF – RNG & Phosphorous	\$83k
Non-Integrated System: \$18.0M		Non-Integrated System: \$12.3M	
<b>Grand Rapids:</b>		<b>Sewer Mains:</b>	
-Water Mains	\$15.2M	-Grand Rapids	\$11.7M
-PRV Replacements (Alger & West Regulated)	\$1.38M	-Kentwood	\$500k
-Storage	\$640k	-Walker	\$184k
-Process Equipment (Coldbrook)	(\$555k)	-GR Township	\$83k
<b>Walker:</b>		<b>Process Equipment:</b>	
-Water Mains	\$202k		\$251k
-Auxiliary Equipment	\$149k	<b>Easements:</b>	
<b>Kentwood:</b>			\$89k
-Water Mains	\$823k		
<b>GR Township:</b>			
-Water Mains	\$215k		

# Assistance/Affordability Programs - Overview



*\*Methodology, including % split, dictated by 3<sup>rd</sup> Amendment to Service Agreement w/ Retail Communities. Effective 2007*

Used for individual utility assistance. Administered by the Kent County Community Action (KCCA).

Used to lower retail community rates that are higher than the system average. Built into rate study.



## Individual Assistance Program (ICB)

	Water/Sewer
<b>Total Penalty Revenue (FY23)</b>	<b>\$1,165,294</b>
Individual Circuit Breaker (ICB):	
Penalty Revenue (12.5%)	145,662
Other Non-op Revenue	80,000
<b>Total ICB for CY24</b>	<b>\$225,662</b>

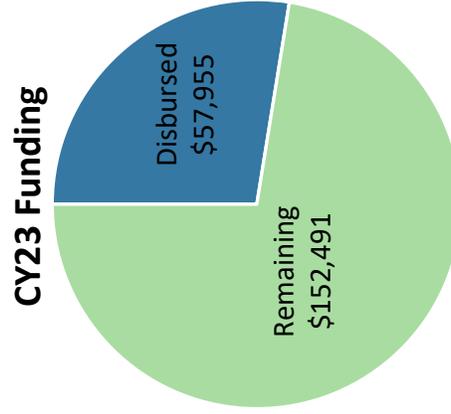
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Previous Rate Study set aside **\$210,446** for CY23

Current figures reflect draws thru Sep'23

Low usage due to availability of other assistance

Projected to use ~50% of CY23 funds



## Community Affordability Program (CCCCB)

	Water/Sewer
<b>Total Penalty Revenue (FY23)</b>	<b>\$1,165,294</b>
City & Customer Community Circuit Breaker (CCCCB):	
<b>Penalty Revenue (87.5%) – Total Available CCCCCB</b>	<b>1,019,632</b>
CCCCB Funds Applied in 2023 Rate Study*	691,029
Remaining CCCCCB Funds (rolled to next year)	328,603

\*CCCCB Funds are only applied to reduce rates when a retail community projects a rate increase greater than the system-wide average. Remaining funds reduce system-wide rates the next year.



# 2024 Rate Impact by Community

**Retail Communities:** charges assessed directly to User based on water consumption (except for Wright Twp – REUs). Readiness to Serve (RTS) based on meter size and Commodity based on volume. City of GR maintains assets and bills users directly.

**Wholesale Communities:** charges assessed directly to Wholesale Community based on water consumption measured through a master meter at the point of service in the customer community. Readiness to Serve (RTS) based on non-integrated system requirements and Commodity based on volume. Customer community maintains assets and bills users directly.

	WATER (1)		SEWER (1)	
	AMOUNT	PERCENT	AMOUNT	PERCENT
<b>RETAIL COMMUNITIES</b>				
GRAND RAPIDS	\$ 2,165,788	7.23%	\$ 489,153	1.15%
WALKER	162,157	4.09%	68,226	1.21%
NET OF CONTRIBUTION OF:	(124,686)			
KENTWOOD	123,998	2.48%	104,423	1.96%
CASCADE TWP	288,821	7.23%	61,788	1.96%
GRAND RAPIDS TWP	128,814	4.53%	59,882	1.96%
TALLMADGE TWP	(634)	-0.24%	(2,702)	-0.50%
WRIGHT TWP	N/A	N/A	1,485	0.52%
<b>WHOLESALE COMMUNITIES</b>				
EAST GRAND RAPIDS	96,805	10.88%	20,436	1.63%
ADA TWP	101,434	6.47%	47,937	3.12%
OTTAWA COUNTY	206,366	7.92%	NA	NA
GAINES TWP	N/A	N/A	6,925	2.22%
CALEDONIA TWP	N/A	N/A	(6,616)	-2.93%
<b>SYSTEM</b>	<b>\$ 3,398,235</b>	<b>6.65%</b>	<b>\$ 850,937</b>	<b>1.34%</b>

(1) Change in revenue requirements based on revenues currently generated from rates, customer base and volumes reported in the preliminary rate study (Includes consideration for relief from CCCCBB).

# Preliminary 2024 Quarterly Bill

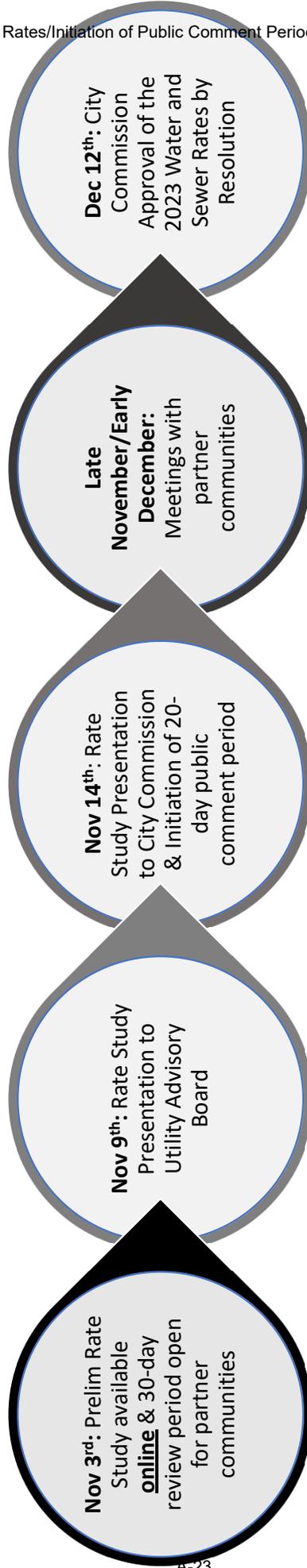
	APPROXIMATE QUARTERLY BILL		CHANGE	
	2023	2024	DOLLARS	PERCENT
<b>GRAND RAPIDS</b>				
WATER	\$ 106.14	\$ 113.70	\$ 7.56	7.12%
SEWER	142.38	144.12	1.74	1.22%
	\$ 248.52	\$ 257.82	\$ 9.30	3.74%
BASE RATIO	1.00	1.00		
<b>WALKER</b>				
WATER	\$ 100.83	\$ 104.94	\$ 4.11	4.08%
SEWER	163.65	165.57	1.92	1.17%
	\$ 264.48	\$ 270.51	\$ 6.03	2.28%
RATIO TO GR	1.06	1.05		
<b>KENTWOOD</b>				
WATER	\$ 105.75	\$ 108.45	\$ 2.70	2.55%
SEWER	99.45	101.22	1.77	1.78%
	\$ 205.20	\$ 209.67	\$ 4.47	2.18%
RATIO TO GR	0.83	0.81		
<b>CASCADE TWP</b>				
WATER	\$ 145.20	\$ 155.79	\$ 10.59	7.29%
SEWER	191.22	194.82	3.60	1.88%
	\$ 336.42	\$ 350.61	\$ 14.19	4.22%
RATIO TO GR	1.35	1.36		
<b>GRAND RAPIDS TWP</b>				
WATER	\$ 118.77	\$ 124.11	\$ 5.34	4.50%
SEWER	154.56	157.53	2.97	1.92%
	\$ 273.33	\$ 281.64	\$ 8.31	3.04%
RATIO TO GR	1.10	1.09		
<b>TALLMADGE TWP</b>				
WATER	\$ 94.86	\$ 94.56	\$ (0.30)	-0.32%
SEWER	274.41	273.06	(1.35)	-0.49%
	\$ 369.27	\$ 367.62	\$ (1.65)	-0.45%
RATIO TO GR	1.49	1.43		

\* THE COMPARISONS ABOVE ARE BASED ON SYSTEM AVERAGE DOMESTIC CUSTOMER QUARTERLY CONSUMPTION OF: WATER - 30.00 UNITS OR 22,440 GALLONS  
SEWER - 21.00 UNITS OR 15,708 GALLONS  
NO. OF MONTHS: 3



## Preliminary 2024 Quarterly Bill

# 2023 Water & Sewer Rate Study Schedule





Thank you





# Grand Rapids Press

## LEGAL AFFIDAVIT

AD#: 0010771131

Total

\$146.00

State of Michigan,) ss

County of Kent and County of Ottawa)

Nancy Block being duly sworn, deposes that he/she is principal clerk of MLive Media Group; that Grand Rapids Press is a public newspaper published in the city of Grand Rapids, with general circulation in Kent and Ottawa county, and this notice is an accurate and true copy of this notice as printed in said newspaper, was printed and published in the regular edition and issue of said newspaper on the following date(s):

**Grand Rapids Press 11/14/2023**

*Nancy Block*

Principal Clerk of the Publisher

Sworn to and subscribed before me this 14th day of November 2023

*Teasha R Payne*

Notary Public

TEASHA R. PAYNE  
NOTARY PUBLIC, STATE OF MI  
COUNTY OF MECOSTA  
COMMISSION EXP FEB 24 2026  
ACTING IN COUNTY OF Kent



### CITY OF GRAND RAPIDS

#### WATER/SEWER RATES AND CHARGES FOR 2024 NOW AVAILABLE FOR PUBLIC COMMENT

The City of Grand Rapids has completed the "Preliminary Water/Sewer 2023 Rate Study" report, which is the basis for recommending water and sewer rates to become effective January 1, 2024, for all residential, commercial, and industrial users. That report, which also includes information on the Individual Circuit Breaker Program, the program aimed to help retail users requiring assistance in payment of their water/sewer bills, is available for public inspection in the City Clerk's Office, 2nd floor of City Hall, 300 Monroe NW, Grand Rapids, MI 49503 between 8:00 a.m. and 5:00 p.m. weekdays and can also be reviewed at:

<https://www.grandrapidsmi.gov/Government/Departments/Water-System/Water-and-Sewer-Rate-Study>

Opportunity for public commentary runs through December 4th. You may submit comments to the City Clerk's Office or by sending an email to [info@grcity.us](mailto:info@grcity.us).

The Grand Rapids City Commission is scheduled to consider approval on the rates on Tuesday, December 12, 2023.

10771131-01

**93146 Result: Approved**

**Mover: O'Connor. Supporter: Ysasi.**

**Yeas: Ysasi, O'Connor, Bliss, Perdue, Robbins**

WHEREAS:

1. The Water/Sewer rate studies have been undertaken and completed for the years 1976 through 2022; and
2. The 2023 Water/Sewer Rate Review has been completed using the same general methodology as the 1976 through 2022 Water/Sewer Rate Studies, as adjusted where appropriate for the uniform water and sanitary sewer service agreements; therefore

RESOLVED:

1. That pursuant to Section 2.33 of Chapter 26 of the City Code, the following City water rates, charges, and fees will be as follows:

a. Front foot rate

Domestic	\$130
Commercial	\$220

b. Integrated water connection fees

i. Plan Review and Connection Fee (PRC)

1. Residential Users (three residential units or less)

Meter Size	PRC Fee
¾ inch or less	\$390
1 inch	\$410
1½ inch	\$410

2. All other Users (including residential of more than 3 units, commercial, industrial, governmental and religious)

Meter Size	PRC Fee
¾ inch or less	\$755
1 inch	\$1,010
1½ inch	\$1,340
2 inch	\$1,850
3 inch	\$2,305
4 inch	\$3,320

6 inch \$4,675

ii. Meter Capacity Fee (MCC) (when water and sanitary sewer connections are made at the same time only one Meter Capacity Fee shall be charged)

Meter Size	MCC Fee
¾ inch or less	\$210
1 inch	\$300
1½ inch	\$750
2 inch	\$880
3 inch	\$2,162
4 inch	At Cost
6 inch	At Cost
Ultrasonic Meters	
1-1/2" – 12"	At Cost

iii. Fire Protection Review Fee

All Fire Service Sizes \$790

iv. Commercial Plan Assessment Fee (for instances where there is an established connection or property has been previously reviewed)

All Sizes \$125

c. Commodity rates within the City of Grand Rapids

Domestic	\$2.45 per 100 cubic feet
Commercial	\$2.45 per 100 cubic feet
Industrial	\$2.45 per 100 cubic feet

d. Monthly service charge within the City of Grand Rapids

Size of Meter	Charge
¾ inch or less	\$13.34

1 inch	\$20.83
1¼ inch	\$30.46
1½ inch	\$42.23
2 inches	\$72.19
3 inches	\$157.79
4 inches	\$277.63
6 inches or larger	\$620.03

e. Fire protection charge

Size of Pipe	Monthly	Quarterly
6 inches	\$22.14	\$66.42
8 inches	\$39.28	\$117.84
10 inches	\$61.55	\$184.65
12 inches	\$88.57	\$265.71

f. Water service pipe costs

	50 ft. R.O.W.	60 ft. R.O.W.	66 ft. R.O.W.	80 ft. R.O.W.	100 ft. R.O.W.
Cost for 1 inch Water Service	\$3,500	\$4,000	\$4,200	\$4,800	\$5,700
Cost for 1½ inch Water Service	\$5,000	\$5,600	\$5,900	\$6,600	\$7,800
Cost for 2 inches Water Service	\$5,900	\$6,500	\$6,800	\$7,500	\$8,500

g. Non-metered hydrant connection use fee (pool filling per connection) - \$100 refundable deposit + \$75/week

h. Hydrant use permit (non-metered connection – residential customers) - \$50

i. Hydrant use permit fee (metered connection) - \$300

j. Metered hydrant connection use fee (per connection) - City of Grand Rapids account holder and Non-account holder - \$500 refundable deposit + \$25/week + metered volume (commodity charges at City of Grand Rapids rate)

k. Hydrant connection assistance requests - \$100 service fee

- l. Hydrant flow test - \$200
- m. Tapping permits (all sizes) - \$375
- n. Meter service on/off requests (normal service hours 8am-7pm M-F)

Meter Size	Fee
All Sizes	\$75
Inspections/repair scheduled on & off request (may also need meter install)	\$75

- o. Meter replacement (non-system planned/scheduled replacement) (In addition to meter installation fee)

Meter Size	Fee
¾ inch or less	\$210
1 inch	\$300
1½ inch	\$750
2 inches	\$880
3 inches	\$2,162
4 inches or larger	At cost
Ultrasonic Meters	At cost

- p. Final or actual meter reading - \$60
- q. Meter testing fee – paid by customer if meter is accurate, no charge if meter is faulty (In addition to Service On/Off Requests Fee)

Meter Size	Fee
¾ inch or less	\$150
1 inch	\$150
1½ inch	\$200
2 inches	\$350
3 inches	\$500
4 inches or larger	At cost
Ultrasonic Meters	At cost

- r. Meter interface unit replacement - \$170
- s. Security deposit - \$500
- t. Street opening permit - \$300
- u. Water inspection permit (within City) - \$90

- v. Water inspection permit (outside City) - \$105
- w. Sanitary Service line inspection permit (within City) - \$90
- x. Sanitary Service line inspection permit (outside City) - \$105
- y. Storm Service line inspection permit (within City) - \$90
- z. Storm Service line inspection permit (outside City) - \$105
- aa. Footing drain lateral inspection permit (within City) - \$90
- bb. Footing drain lateral inspection permit (outside City) - \$105
- cc. Sewer lateral service demolition/cap off inspection fee (within City) - \$90
- dd. Sewer lateral service demolition/cap off inspection fee (outside City) - \$105
- ee. Plumbing service re-inspection fee - \$90
- ff. Cross connection re-inspection fee - \$75
- gg. Irrigation Service Cut/Cap Administration fee - \$70
- hh. Delinquent Commercial Backflow Test fee (per device) - \$35
- ii. Customer requested onsite service - \$100
- jj. Administrative/Research fee (review or processing of account for non-payment, returned payment, shut-off, posting of property, and/or backflow non-compliance. Documentation creation for account of location information, FOIA request may still be required) – \$70
- kk. Late payment penalty – 10% of net
- ll. Missed appointment fee - \$50
- mm. Unauthorized operation, tampering, or removal of any Water or Sanitary Sewer System owned or maintained valve, asset, infrastructure, or equipment (for example, but not limited to, valves, meters, meter reading equipment, hydrants, and curb stops and box) - \$500 plus double commodity rate for estimated volume and unbilled readiness to serve charges that may apply plus doubling of penalties for each subsequent infraction
- nn. Unauthorized use or illegal connection to any Water or Sanitary Sewer System owned pipe, property and/or private plumbing system served by the Water and/or Sanitary Sewer System - \$500 plus double commodity rate for estimated volume and any unbilled readiness to serve charges that may apply plus doubling of penalties for each subsequent infraction
- oo. Failure to return or return of damaged beyond repair / repairable hydrant connection equipment – Cost + 10%
- pp. Repair/replace damage to fire hydrant – Cost + 10%
- qq. Permit infractions/violations – \$100 plus double commodity rate for estimated volume and any unbilled readiness to serve charges that may apply plus doubling of penalties for each subsequent infraction
- rr. Returned check charge - \$30
- ss. Unauthorized service tap of Water or Sewer main - \$500 plus double commodity rate for estimated volume and any unbilled readiness to serve charges that may apply plus doubling of penalties for each subsequent infraction
- tt. Any cost recovery due to damaged caused or undue oversight of any location, account, or infrastructure of the Water and/or Sanitary Sewer System will be charged in accordance with cost recovery methodology for time and materials, including a 10% administrative charge for processing – Cost + 10%

uu. Watermain oversizing rates

8 – 12 inches	\$41.75 per lineal foot
12 – 16 inches	\$69.76 per lineal foot
8 – 16 inches	\$111.51 per lineal foot

vv. Circuit breaker allocation

Individual Circuit Breaker (ICB)	\$225,662
City and Customer Community Circuit Breaker (CCCCB)	\$1,019,632

2. That Pursuant to Section 2.94 of Chapter 27 of the City Code, the following City sewer rates, charges and fees will be as follows:

a. Front foot rate

Domestic	\$117
Commercial	\$200

b. Integrated sewer connection fees (based on water meter size)

i. Plan Review and Connection Fee (PRC)

1. Residential Users (three residential units or less)

Meter Size	PRC Fee
¾ inch or less	\$390
1 inch	\$410
1½ inch	\$410

2. All other Users (including residential of more than 3 units, commercial, industrial, governmental, and religious)

Meter Size	PRC Fee
¾ inch or less	\$755
1 inch	\$1,010
1½ inch	\$1,340
2 inch	\$1,850
3 inch	\$2,305
4 inch	\$3,320

6 inch \$4,675

ii. Meter Capacity Fee (when water and sanitary sewer connections are made at the same time only one Meter Capacity Fee shall be charged)

Meter Size	MCC Fee
¾ inch or less	\$210
1 inch	\$300
1½ inch – T2	\$750
2 inch – T2	\$880
3 inch – T2	\$2,162
4 inch – T2	At Cost
6 inch – T2	At Cost
Ultrasonic Meters	
1-1/2" – 12"	At Cost

iii. Commercial Plan Assessment Fee (for instances where there is an established connection or property has been previously reviewed)

All Sizes \$125

c. Commodity rates within the City of Grand Rapids

Domestic	\$4.38 per 100 cubic feet
Commercial	\$4.38 per 100 cubic feet
Industrial	\$4.38 per 100 cubic feet

d. Monthly service charge within the City of Grand Rapids

Size of Meter	Charge
¾ inch or less	\$17.37
1 inch	\$28.12
1¼ inch	\$41.94
1½ inch	\$58.83

2 inches	\$101.83
3 inches	\$224.67
4 inches	\$396.65
6 inches or larger	\$888.03

e. Wastewater surcharges for industrial customers

BOD	\$0.474
TSS	\$0.661
Phos	\$5.097
NH3	\$0.560

f. Concentrated waste credit

BOD	\$0.239
Phos	\$9.301
NH3	\$32.640

g. Significant industrial user discharge permit fee - \$1,00 plus the surcharge analytical fees

h. Surcharge analytical fees

Metals	
1 Metal	\$11.00/each
2 Metals	\$15.00 total
3 Metals	\$19.00 total
4 Metals	\$23.00 total
5 Metals	\$27.00 total
6 Metals	\$31.00 total
7 Metals	\$35.00 total
8 Metals	\$39.00 total
9 Metals	\$43.00 total
10 Metals	\$47.00 total

11 Metals	\$51.00 total
12 Metals	\$55.00 total
13 Metals	\$59.00 total
14 Metals	\$64.00 total
TSS	\$11.00/each
BOD	\$22.00/each
BOD 7	\$22.00/each
COD	\$16.00/each
Total Phosphorus	\$11.00/each
pH	\$5.50/each
EPA 624.1	\$47.00/each
EPA 625.2	\$104.00/each
BTEX/MTBE	\$47.00/each
Sulfide	\$22.00/each
Oil and Grease	\$22.00/each
Total Cyanide	\$22.00/each
Hexavalent Chromium	\$27.00/each
Fecal Coliform	\$18.50/each
Ammonia Nitrogen	\$16.00/each
Mercury (EPA 245.1 or 245.2)	\$19.00/each
Pesticides and PCB's EPA 608	\$124.00/each
PCB's	\$62.00/each
Phenols	\$22.00/each
PFAS EPA 537 Modified (samples, duplicate and blank)	\$325.00/each
PFAS by LCMSMS (samples, duplicate and blank)	\$350.00/each
PFAS by EPA Draft Method 1633 (samples, duplicate and blank)	\$525.00/each
EPA 1666 Volatile Organics in Pharmaceuticals	\$47.00/each
EPA 524.2 Purgeable Organics	\$47.00/each

Methyl Blue Active Substances (MBAS)	\$64.00/each
Color	\$16.00/each
Surfactants	\$66.40/each
GC-MS Fingerprint	\$128.00/each
Labor	\$75.48/hour
Sampler	\$50.00/day
Vehicle	\$4.42/hour
Composite Labor	1.5 hours per sample
Grab Sample Labor	1.0 hours per sample

i. Sewer lateral charges

	50 ft.	60 ft.	66 ft.	80 ft.	100 ft.
	R.O.W.	R.O.W.	R.O.W.	R.O.W.	R.O.W.
Cost for 6 inch lateral	\$3,500	\$4,100	\$4,400	\$5,300	\$6,500

j. Sewer oversizing rates

Description	Amount (per lineal foot)
8 – 10 inches	\$8.72
8 – 12 inches	\$18.18
8 – 15 inches	\$34.88
10 – 12 inches	\$9.46
10 – 15 inches	\$26.16
12 – 15 inches	\$16.70

k. Footing drain disconnect opt out charge - \$76.95 per customer per month

3. That the above Water and Sewer rates, charges and fees are approved and shall be effective January 1, 2024.

I hereby certify that the foregoing is a true transcript of the action of the City Commission of the City of Grand Rapids, Michigan, in public session held December 12, 2023.

A handwritten signature in cursive script that reads "Joel H. Hondorp".

---

Joel H. Hondorp, City Clerk

**93145 Result: Approved**

**Mover: O'Connor. Supporter: Ysasi.**

**Yeas: Ysasi, O'Connor, Bliss, Perdue, Robbins**

WHEREAS:

1. The Water/Sewer rate studies have been undertaken and completed for the years 1976 through 2022; and
2. The 2023 Water/Sewer Rate Review has been completed using the same general methodology as the 1976 through 2022 Water/Sewer Rate Studies, as adjusted where appropriate for the uniform water and sanitary sewer service agreements; therefore

RESOLVED:

1. That the attached water and sewer rates are approved for retail and wholesale partner communities of the City's Water Supply System and Sanitary Sewer System and shall be effective January 1, 2024; and
2. That the Utility Financial Officer is directed to notify the contractual water and sewer service customers in writing of the water and sewer rates, and the Mayor and City Clerk are authorized to take any action as may be required to evidence the new water and sewer rates.

I hereby certify that the foregoing is a true transcript of the action of the City Commission of the City of Grand Rapids, Michigan, in public session held December 12, 2023.



---

Joel H. Hondorp, City Clerk

# MEMORANDUM

CITY OF GRAND RAPIDS

**DATE:** January 1, 2024

**TO:** Molly J. Clarin  
Chief Financial Officer

**FROM:** Tai Verbrugge  
Utility Financial Officer

**SUBJECT:** **2023 WATER/SEWER RATES STUDY PARTNER COMMUNITY CONTRIBUTIONS**

The following community has elected to make a contribution to reduce their water or sewer 2023 rate study revenue requirement. The below amounts are applied in Task 26.

<u>Community</u>	<u>Utility</u>	<u>Check Number</u>	<u>Amount</u>
City of Walker	Water	207953	\$124,686

TCV

# MEMORANDUM

CITY OF GRAND RAPIDS

**DATE:** December 12, 2023

**TO:** City of Grand Rapids Mayor and City Commissioners

**FROM:** Tai Verbrugge, Utility Financial Officer

**SUBJECT:** **2023 Rate Study – City of Grand Rapids 20-day Public Comment Period Comments and Answers**

During the 2023 Water and Sewer Rate Study comment period, the City of Grand Rapids received two public comments included below and presented with the December 12, 2023, City Clerk’s Office Petitions and Communications. As indicated at the Committee of the Whole Preliminary Rate Study Presentation on November 14, 2023, all public comments received will be reviewed by staff and considered as part of the FY2025 budget planning process.

**Email from Mr. Bob Taylor:**

**From:** Bob Taylor  
**Sent:** Wednesday, November 29, 2023 4:27 PM  
**To:** Water Customer Service  
**Subject:** 2024 Water Rates

We live in GR Township and with the surcharge, our water is very expensive. The water portion is very small compared to all of the other fees packed in the bill.

My comment/suggestion is, can't the city increase its budget without hanging it on the users every year? The uncapping of skyrocketing real estate values has caused a windfall for most municipalities. Some are even reducing taxes. The City should allocate some of this increase to the water department.

We are a retired couple that uses very little water. \$250 a quarter is ridiculously high! Did you know that the average in Madison Wisconsin (and many cities in Wisconsin) quarterly bill is around \$100? Ohio is much the same as Wisc. How can they do this? Are they not facing the same challenges?

Most citizens do not realize the impact of rising home and commercial values and the amount of revenue that cities are gaining through uncapping taxable values. Give us a break.

**Email from Mr. Nick (no surname provided):**

From: Nick

Sent: Saturday, December 2, 2023 6:33 PM

To: Customer Service Information Center

Subject: Water & Sewer Rate – Reaching out from GR Connected!

This is ridiculous our water bills are already too much and you don't even let us have a separate meter for watering lawns or filling pools that we get charged for the sewer