UTILITY ADVISORY BOARD

Thursday, January 21, 2021

8:30 am.

AGENDA

- 1. Approval of Minutes December 17, 2020
- 2. Public Comment on Agenda Items
- 3. Approval of Agenda
- 4. Financial Update- Jenessa Carter
- 5. EPA Lead & Copper Rule Wayne Jernberg
- 6. Updates
 - a. Lead & Copper Rule Testing Results- Wayne Jernberg
 - b. Year-End Report Jeff McCaul
 - c. Grant Application for Cascade & Caledonia Wayne Jernberg
 - d. Lake Michigan Filtration Plant Solar Wayne Jernberg
 - e. Biodigester- Mike Grenier
 - f. 2020 Water/Sewer Rate Study Revised Tallmadge Rates
- 7. Public Comment
- 8. Items from Members
- 9. Next Meeting February 18, 2021
- 10. Adjournment

UTILITY ADVISORY BOARD

Thursday, December 17, 2020 8:30 am. Minutes AGENDA

Call to Order

The meeting was called to order by Mr. DeLong at 8:35 am. The meeting was conducted virtually through WebEx.

Mr. DeLong introduced the new UAB representatives from Ada Township, City of Grand Rapids, and Tallmadge Township.

Members Present

Mike Grenier, Brad Boomstra, Kolene Allen, Brian Vu, Chuck Schroeder, Darrel Schmalzel, Ed Robinette Doug La Fave, Jeff McCaul, Jenessa Carter, Julius Suchy, Kolene Allen, Mark Rambo, Sam Giffel, Todd Boerman, Wayne Jernberg, David Datema, James Hurt

<u>Others Present</u>: Alisson Sutter (Sustainability Manager, City of GR), Chad Reenders (Water Plant Supervisor), Jay Ouzts (Lake Michigan Filtration Plant Superintendent)

Approval of Minutes - November 19, 2020

Motion by Mr. Schmalzel second by Mr. Rambo to approve the minutes.

MOTION CARRIED.

Public Comment on Agenda Items

None

Approval of Agenda

Motion by Mr. Jernberg second by Mr. Robinette to approve the agenda.

MOTION CARRIED.

Adoption of the Water and Sewer Rates in Accordance with the 2020 Water/Sewer Rate Review

Mrs. Carter said that this is the last item related to the 2020 Rate Study. The public comment period for partner communities ended on December 6, 2020. There were public comments received from partner communities. There was one partner community that contributed to the rate buy-down. As previously discussed, the system average increase for the water system is .62%, and for the sewer system, it is

7.92%. There is no recommendation for adjustment. City Commission approved the resolution on December 15, 2020. The new rates will be implemented on January 1, 2021.

Mrs. Carter thanked partner communities and internal partners for their collaboration in the 2020 Water/Sewer Rate Study.

Updates

November Awards

Mr. McCaul gave an update on the November awards, including the revetment improvement project at the filtration plant. The project was awarded to Grand River Construction for \$1.2 million.

Lake Michigan Filtration Plant Solar

Mrs. Alison Sutter gave an update on the solar project to the board. Regarding cost estimates, ES Services, an affiliate of CMS Energy, is interested in investing \$1.5-\$2 million in capital cost and an additional \$25,000 in maintenance and operation costs. This will support the 1 MW solar array that would be installed at the filtration plant. The City Commission approved the lease agreement on December 1. The agreement states that the Water System will pay CMS Energy a monthly fixed lease of \$9,917. The annual lease fee will be \$119,004. Once the solar array is installed, the filtration plant will reduce its energy consumption. It is estimated that there will be a net savings of \$1.2 million.

The Grand Haven Township ordinance prohibits the installation of solar panels in the front yard. A public hearing took place on December 7, and the planning commission tabled the request until their next meeting. Additional information was requested by the Township, which she will follow up on. If the Township approves the request in January, a site application will need to be submitted to the Grand Haven Township Planning Commission, but it will not require a public hearing.

The Lake Michigan Filtration Plant Revetment Project

Mr. Jernberg said that staff is waiting for the construction permit from EGLE. EGLE requires a 30-day public comment period before approval of the project. He expects to have the permit in the next week.

Biodigester- Mike Grenier

Mr. Grenier gave an update on the Biodigester. The first digester is now sided, and the walkways are being installed. The shakedown of equipment should start shortly; this ensures that the pumps and valves are functioning correctly. They are working with Grandville to get seed. There are still issues with the switchgear that supports the generators. A plan has been developed to resolve this issue.

Commission has approved revisions to the gas purchasing agreement with DTE, and it extended the length of the agreement from 5 to 6 years. The agreement will allow the City to meet its gas purchase obligations. The phosphorus removal system is moving right along.

Mr. DeLong asked that once there is seed for the digester, what comes next? Mr. Grenier said that gas would start forming, but gas will not be produced until May.

Utility Assistance Program/Water Shutoffs – Sam Giffel

Mrs. Giffel said that City Commission approved the contract with KCCA on December 15. The second round of funding from the state for utility assistance totaled \$76,000. To receive funding, the Water System agreed not to do water shutoffs for 90 days. She has met with the Managing Director and Water System Manager, and it agreed that water shutoff would be suspended until further notice.

Partner Communities Capital Project Requests

Mrs. Carter said that this is the last call for partner communities for capital projects. The City is beginning its budget process for FY22. If you have questions or requests, please contact her.

Public Comment

None

<u>Items from Members</u>

Mr. Boerman said that they would be looking at additional connections for Caledonia Township in 2021. Mr. Jernberg introduced Mr. Ouzts as the new Lake Michigan Filtration Plant Superintendent. He also thanked Mr. Reenders for his work as Acting Lake Michigan Filtration Plant Superintendent.

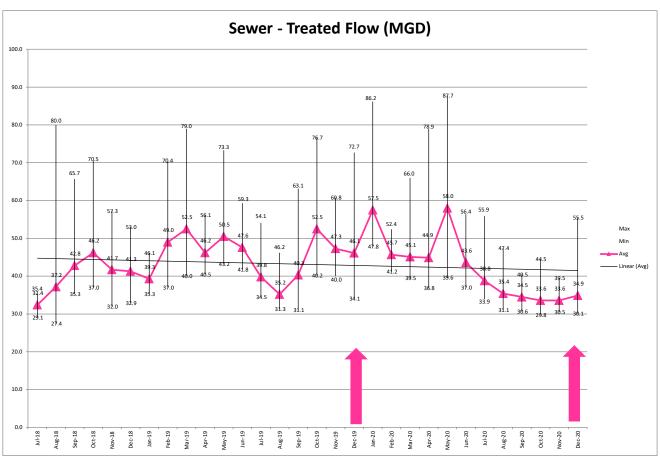
Next Meeting – January 21, 2021

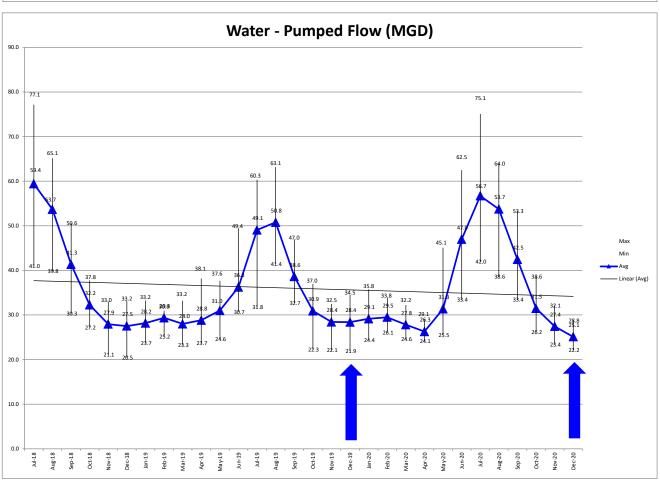
Adjournment

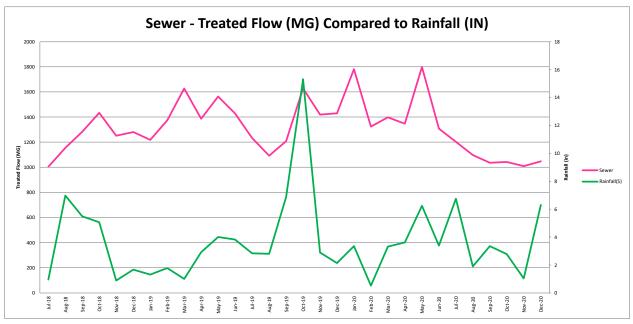
The meeting was adjourned at 9:12 by Mr. DeLong.

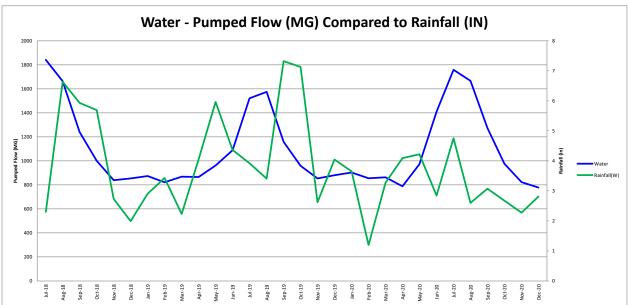
WATER SUPPLY SYSTEM					Fun	d:				5910
FINANCIAL REPORT										
QUARTER ENDING 12/31/20										
	FINAL FY20	Α	MENDED FY21						-	FY21/FY20
Description	BUDGET		BUDGET		Q	2FYTD-FY20	Q2FYTD-FY21		1	/ARIANCE
Retail Service Charges	\$ 39,939,526	\$	\$ 40,779,064		\$ 17,358,825		\$	18,298,370	\$	939,545
Wholesale Service Charges	\$		4,024,294		\$	1,872,381	\$	2,350,677	\$	478,296
Front Footage Fees	\$ 175,000	\$	175,000		\$	129,430	\$	164,074	\$	34,644
Integrated Connection Fees	\$ 400,000	\$	350,000		\$	236,680	\$	144,775	\$	(91,905)
Sewage Disposal Fund-Customer Service	\$ 2,397,570	\$	2,911,384		\$	1,198,785	\$	1,455,692	\$	256,907
Penalties	\$ 1,000,000	\$	950,000		\$	488,077	\$	593,655	\$	105,578
Miscellaneous	\$ 2,113,880	\$	1,963,701		\$	781,464	\$	553,013	\$	(228,451)
Total Revenue	\$ 50,210,228	\$	51,153,443		\$	22,065,642	\$	23,560,256	\$	1,494,614
Personal Services	\$ 12,815,734	\$	12,942,422	-	\$	5,887,438	\$	5,698,231	\$	(189,206)
Supplies	\$ 2,411,780	\$	3,115,150		\$	1,526,684	\$	1,373,332	\$	(153,352)
Other Services and Charges	\$ 13,977,531	\$	15,367,257		\$	5,527,466	\$	5,498,514	\$	(28,952)
Capital Outlay	\$ 1,147,918	\$	882,325		\$	424,174	\$	95,474	\$	(328,701)
Appropriation Lapse	\$ (1,414,000)	\$	(1,018,000)		\$	-	\$	=	\$	-
Transfers Out	\$ 888,000	\$	992,292		\$	444,000	\$	415,214	\$	(28,786)
Total Expenses	\$ 29,826,963	\$	32,281,446		\$	13,809,762	\$	13,080,764	\$	(728,998)
Net Income (Loss)	\$ 20,383,265	\$	18,871,997		\$	8,255,880	\$	10,479,492	\$	2,223,612

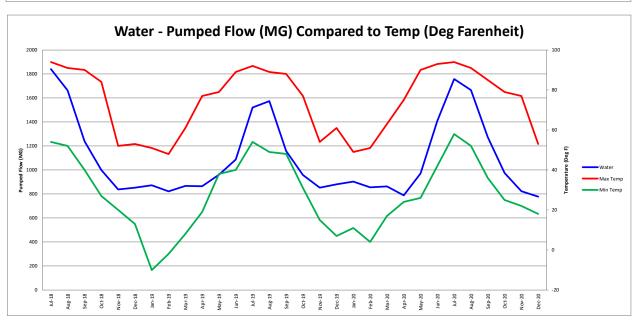
SEWAGE DISPOSAL SYSTEM					Fund	d:			5900
FINANCIAL REPORT									
QUARTER ENDING 12/31/20									
	FINAL FY20	А٨	MENDED FY21						FY21/FY20
Description	BUDGET	BUDGET			Q	2FYTD-FY20	C	2FYTD-FY21	VARIANCE
Retail Service Charges	\$ 51,205,657	\$	54,791,957		\$	20,933,473	\$	19,503,033	\$ (1,430,439)
Wholesale Service Charges	\$ 2,473,648	\$	2,800,732		\$	988,468	\$	1,159,407	\$ 170,939
Sewer Surcharges	\$ 2,131,500	\$	2,131,500		\$	557,173	\$	566,930	\$ 9,757
Renewable Natural Gas Sales	\$ -	\$	1,275,000		\$	-	\$	-	\$ -
Front Footage Fees	\$ 175,000	\$	175,000		\$	204,237	\$	40,797	\$ (163,440)
Integrated Connection Fees	\$ 400,000	\$	250,000		\$	171,932	\$	91,812	\$ (80,120)
Miscellaneous	\$ 3,347,168	\$	1,491,792		\$	308,790	\$	205,282	\$ (103,508)
Total Revenue	\$ 59,732,973	\$	62,915,981		\$	23,164,073	\$	21,567,262	\$ (1,596,811)
Personal Services	\$ 12,174,475	\$	12,372,678		\$	5,358,486	\$	5,183,607	\$ (174,880)
Supplies	\$ 2,242,500	\$	2,741,913		\$	1,103,381	\$	1,290,322	\$ 186,941
Other Services and Charges	\$ 12,345,511	\$	13,681,205		\$	5,240,136	\$	8,446,887	\$ 3,206,751
Capital Outlay	\$ 213,569	\$	329,000		\$	106,358	\$	52,298	\$ (54,061)
Appropriation Lapse	\$ (1,834,000)	\$	(1,847,000)		\$	-	\$	-	\$ -
Transfers Out	\$ 3,072,463	\$	726,707		\$	1,536,231	\$	302,795	\$ (1,233,437)
Total Expenses	\$ 28,214,518	\$	28,004,503		\$	13,344,593	\$	15,275,908	\$ 1,931,315
Net Income (Loss)	\$ 31,518,455	\$	34,911,478		\$	9,819,480	\$	6,291,355	\$ (3,528,125)

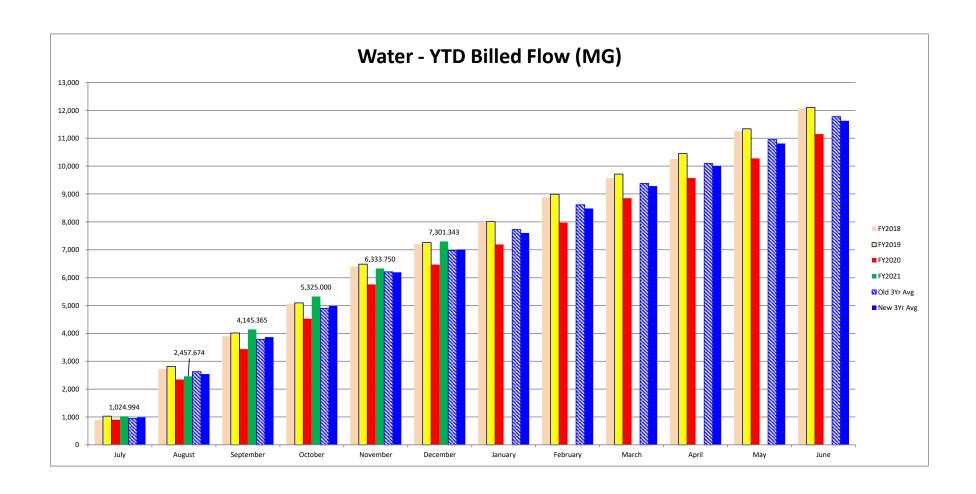


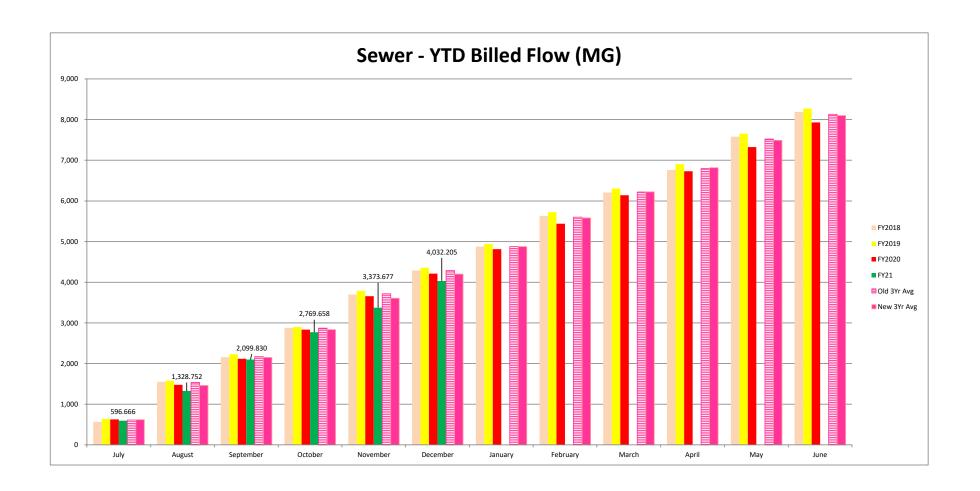














DATE: January 11, 2021

TO: Eric DeLong, Deputy City Manager

FROM: Wayne Jernberg, Water System Manager

SUBJECT: 2021 EPA Lead and Copper Rule

In December of 2020, the United States Environmental Protection Agency (EPA) released documentation regarding a final version of a revised federal Lead and Copper Rule (LCR). In the information released, there several changes that have been made from the previous LCR. It should be noted that even though changes have been made at the federal level, EGLE still has a rule promulgation period of three years to make changes to the current State of Michigan LCR that are at least as strict (or stricter) than the federal LCR. Below is a description of some of the more significant changes made in the federal LCR and how they relate to the current State of Michigan LCR.

- 1. **Establishment of a Trigger Level** The EPA is going to maintain the 15 ppb Action Level and is implementing a "trigger level" of 10 ppb for the 90th percentile reporting value. The trigger level (TL) would fall in the range of greater than 10 ppb but less than or equal to 15 ppb. If the 90th percentile reporting value falls in this range, it would trigger additional planning, monitoring and treatment requirements (re-optimize the corrosion control techniques, notification to customers with LSL's, implement a goal based LSLR program and annual tap sampling). Michigan's planned action level is slated to be reduced to 12 ppb on 1/1/2025. In a recent conversation, EGLE will be considering dropping the Action Level to 10 ppb to avoid the entire trigger level range and requirements.
- 2. **Lead Sample Site Selection** Changes prioritization to give collection of samples at sites with full LSL's greater focus. Michigan is already doing this.
- 3. **Lead Sample Collection** Requires collection of the 5th liter. This is the same as what Michigan is already doing.
- 4. **Sampling Frequency** Creates new tiered sampling frequency guidelines based on 90th percentile results. The EPA requirement is still less than the Michigan requirement of annual sampling if greater than 5 ppb.
- 5. **Find and Fix** If an individual site exceeds the Action Level, additional steps are to be conducted by the Water Supply including more sampling and possible LSLR if customer okays the replacement. This would be something new in Michigan as past practice has been to try to replicate previous sample results with additional sampling.
- 6. **LSL Inventory** All system must develop an LSL Inventory with in 3 years of final rule publication. The LSL inventory must be updated annually, and all supplies must develop an LSLR plan. This portion of the rule is similar to Michigan's rule as both will require the final inventory about the same time.
- 7. **LSLR** This portion of the federal is very confusing as a result of adding in the Trigger Level. Nonetheless, the changes at the federal level are still not as strict as the 20-year replacement schedule set by the State.
- 8. **Lead in drinking water at Schools and Daycares** Water supplies are now required to sample at 20% of elementary schools and 20% of childcare facilities each year. Water supplies will also be required to sample at secondary schools at least once every 5 years. This requirement is more stringent than the State of Michigan, as the responsibility is being shifted to the water supply to do this work.
- 9. **Public Education** The requirements of this section are similar to those in the State's LCR and includes revised mandatory language.
- 10. **LSL Outreach** Systems are required to notify customers if they have an LSL, similar to the State's existing requirement.

In my conversations with EGLE, I was informed there will likely be a stakeholder process in the future and as noted, the entire rule promulgation could take up to three years. EGLE will have to go through every line of the federal LCR and then compare to the existing LCR. Going forward, changes are certainly not going to be in place in 2021 for Michigan, with later in 2022 being the likely implementation timeframe.



DATE: January 8, 2021

TO: Utility Advisory Board

FROM: Wayne Jernberg, PE, Water System Manager

SUBJECT: Lead and Copper Sampling – 2020

The Grand Rapids Water System is committed to working to provide city residents and our partner communities with the highest-quality drinking water. This past June through September, the Water System conducted its required annual lead and copper sampling. This is the second year that community water systems were required to sample the first liter and the fifth liter after a six-hour stagnation period (sitting overnight). This testing method is helping to provide insight into what is happening in homes with lead plumbing and being served by a lead service line. Water System staff would typically collect the samples ourselves, however, due to the COVID virus this year, the Water System asked customers to collect the necessary water samples. Water System staff then picked up the samples and routed them to an independent lab for analysis.

Our lead sampling results from 51 homes ranged from non-detect levels to 12.7 ppb; no samples exceeded the lead action level of 15 ppb. In addition, sample results for copper ranged from non-detect to 77 ppb; no samples exceeded the copper action level of 1300 ppb. Our 90th percentile results are 9 ppb for lead and 0 ppm for copper.

The results continue to show that our phosphate treatment is doing its job protecting our customers water. The variables this year including warmer water temperatures and customer sampling likely contributed to the slight increase in our lead 90th percentile numbers. As the Water System continues to learn more about improving water quality through additional corrosion optimization studies, we will begin to see an overall decrease in our 90th percentile numbers.

WJ

Project Name	c	Contractor Award Date Substantial Completion Date Final Completion Date		Jetion Date Mater Fund A	dinorial Arrange	ed Hife	Luthorited wife	st. Vear for Rates		
Improvements to PLASTER CREEK FAMILY PARK	Wyoming Excavators, Inc.	5/141/9	6/1/2020	6/25/2020		N/A	\$	101,750.00	2021	N (GR)
Improvements to Filter No. 1 at the LAKE MICHIGAN FILTRATION PLANT	BVR Restoration LLC	1/7/2020	7/10/2020	7/31/2020		\$990,290		N/A	2021	Υ
Improvements in WALKER AVENUE and SEVENTH STREET from Leonard Street to Jennette Avenue and STOCKING AVENUE from 250' Southerly of Seventh Street to Seventh Street and JENNETTE AVENUE from Stocking Avenue to	Kamminga & Roodvoets	2/11/2020	8/28/2020	6/30/2021		\$36,500.00		N/A	2021	N (GR)
Reconstruction of EMERALD AVENUE from Arbor Street to Leonard Street and Reconstruction of CEDAR STREET from College Avenue to Union Avenue	Wyoming Excavators, Inc.	8/13/2018	6/19/2020	8/28/2020	\$	1,223,800.00		N/A	2021	N (GR)
Pump Improvements to BOOSTER STATION D (609 B Street SW)	Franklin Holwerda Company	2/25/2020	11/29/2020	12/31/2020	\$	477,810.00		N/A	2021	N (GR)
Reconstruction of HALL STREET from Kalamazoo Avenue to Sylvan Avenue	Kamminga & Roodvoets, Inc.	4/14/2020	10/15/2021	7/1/2022	\$	895,000.00		N/A	2023	N (GR)
Reconstruction of MADISON AVENUE from Cottage Grove Street to Adams Street	Kamminga & Roodvoets, Inc.	4/14/2020	7/17/2020	10/31/2020	\$	38,000.00	\$	32,100.00	2021	N (GR)
Reconstruction of ROSEWOOD AVENUE from CSX Railroad to Burton Street	Lodestar Construction Company	4/14/2020	8/14/2020	11/6/2020	\$	693,853.00		N/A	2021	N (GR)
Improvements in SINCLAIR AVENUE from Hastings Street to Trowbridge Street and Construction of TROWBRIDGE STREET from North Avenue to Sinclair Avenue and "LAKER CONNECTOR" from Sinclair Avenue to College Avenue	Wyoming Excavators, Inc.	4/14/2020	10/9/2020	10/12/2020	\$	172,300.00	\$	99,050.00	2021	N (GR)
Improvements at the WILSON PUMP STATION and RESERVOIR	Davis Construction	4/14/2020	6/18/2021	7/23/2021	\$	3,631,700.00		N/A	2022	Y

Project Name	c	ontractor .	Award Date	tial Completion Date	Completion Date	semer fund	Authorized Arth	st. Veat for Rates
Reconstruction of ALGER STREET from Madison Avenue to Eastern Avenue and from Eastern Avenue to Kalamazoo Avenue	Diversco Construction Co.	4/28/2020	10/30/2020	11/13/2020	\$ 1,580,000.00	N/A	2021	N (GR)
Reconstruction of HASTINGS STREET from Prospect Avenue to College Avenue and SINCLAIR AVENUE from Hastings Street to 275' North of Hastings Street	Kamminga & Roodvoets, Inc.	5/19/2020	8/14/2020	10/12/2020	\$ 410,000.00	\$ 130,000.00	2021	N (GR)
Reconstruction of MASON STREET from Monroe Ave to Division Ave and OTTAWA AVENUE from Mason St to Walbridge St (Vacated) and FAIRVIEW AVENUE from 270' North of Newberry St to Livingston Ave (Vacated) and Water Main and Improvements in MASON STREET (VACATED) from Division Ave to Fairview Ave and Water Main Abandonment in WALBRIDGE STREET (VACATED) from Ottawa Ave to Ionia Ave (Vacated) and IONIA AVENUE (VACATED) from Mason St to Walbridge St (Vacated) and NEWBERRY STREET from Bond Ave to Livingston Ave (Abandonment of Coldbrook Pumping Station)	Kamminga & Roodvoets, Inc.	6/2/2020	8/28/2020	9/18/2020	\$4,824,100.00	\$953,200.00	2021	N (varies)

Project Name	c	ontractor	Award Date	tial Completion Da	A Completion Date	stroited wife	Authorized wife	at. Vear for Rates
Reconstruction of TREMONT BOULEVARD from Covell Avenue to Ravine Drive; Resurfacing of TREMONT BOULEVARD from Ravine Drive to Mount Mercy Drive and RAVINE DRIVE from Tremont Boulevard to Fourth Street; and Water Main Replacement in SIMPSON COURT from Tremont Boulevard to North End, BEECHTON DRIVE from Tremont Boulevard to North End, and TREMONT COURT from Tremont Boulevard to North End; and Shared Use Path in TREMONT BOULEVARD from Shawmut BIVd. to Mount Mercy Dr.		6/2/2020	10/30/2020	5/21/2021	\$1,181,856.00	N/A	2021	N (GR)
Reconstruction of WOODWARD LANE from Sunnybrook Avenue to Fulton Street and SUNNYBROOK AVENUE from Woodward Lane to Fulton Street and Resurfacing of LYON STREET from Mack Avenue to Fuller Avenue	Roodvoets, Inc.	6/16/2020	10/30/2020	5/21/2021	\$1,117,850.00	N/A	2021	N (GR)
Reconstruction of PRINCE STREET from Madison Avenue to Eastern Avenue; COLLEGE AVENUE from Prince Street to Worden Street; UNION AVENUE from Prince Street to Worden Street and HENRY AVENUE from Prince Street to Worden Street	Nagel Construction, Inc.	7/7/2020	6/11/2021	8/27/2021	\$1,586,000	\$442,100	2022	N (GR)
LAKE MICHIGAN FILTRATION PLANT South Clearwell Coating	L&T Painting Company, Inc.	8/11/2020	4/16/2021	5/28/2021	\$727,880	N/A	2022	Υ
Reconstruction of GODFREY AVENUE from City Limits Street to Oxford Street, HALL STREET from Godfrey Avenue to Underhill Avenue and 250' South and in CURVE STREET from Godfrey Avenue to Grandville Avenue	Ponstein Enterprise LLC dba Georgetown Construction Co.	8/11/2020	7/23/2021	9/19/2022	\$3,567,100	\$4,768,100	2022	N (GR)

Project Name	C	ontractor	Award Date Substant	tal Completion De	te Mater Fund A	stroized Wife	Authorized wife	st. Tearfor Rates
Water Main Replacement in ARLINGTON STREET from Plainfield Avenue to Pasadena Drive and Water Main in PASADENA DRIVE from Arlington Street to Hollywood Street	Lodestar Construction, Inc.	8/25/2020	6/25/2021	8/27/2021	\$199,150	N/A	2022	N (GR)
Laboratory Modernization at WATER RESOURCE RECOVERY FACILITY	Elzinga & Volkers, Inc.	7/9/2019	5/15/2020	5/30/2020	N/A	\$3,386,997	2021	Y
LAKE MICHIGAN FILTRATION PLANT Residuals Handling System Improvements	N/A	10/13/20	3/26/2021	4/30/2021	\$ 860,580.00	N/A	TBD	Y
Electrical Improvements to DEAN LAKE PUMP STATION	Shoreline Power Servcies Inc	10/13/2020	6/25/2021	7/30/2021	\$ 622,220.00	N/A	2022	N (Varies)
Revetment Improvements at the LAKE MICHIGAN FILTRATION PLANT	Grand River Construction, Inc.	11/10/20	3/26/21	4/30/21	\$1,267,480	N/A	2022	Υ



DATE: December 23, 2020

TO: Members of the Utility Advisory Board

FROM: Jenessa B. Carter

Acting Utility Financial Officer

SUBJECT: 2020 WATER/SEWER RATE STUDY – REVISED TALLMADGE RATES

After City Commission approved the final water and sewer rates by resolution on December 15, 2020 one adjustment to the Water Rate Study was required. Because of a nuance in the existing formulas used to calculate rate changes, one retail partner community, Tallmadge Township, requires a modification. The significant decrease in Tallmadge Township water rates and subsequent change in commodity rate caused the monthly meter charge to be negative for meter sizes over 2". This occurrence is extremely rare, however an additional check has been implemented in the rate study to avoid this situation from happening in the future. A negative meter charge is not feasible, so an adjustment was made to the commodity charge calculation to correct this anomaly.

This adjustment is now noted in the footnote section in Task 26 and Task 27 of the Water Rate Study. The adjustment has no impact on the revenue requirement for the Water System and does not impact user rates for other partner communities.

The five schedules that supplement and immediately follow this memo have been revised to reflect the changes to Tallmadge Township. The City Commission will ratify the rate resolution on January 12, 2021. The revised rates will be applied January 1, 2021.

Attachments as named

JBC: jbc

CITY OF GRAND RAPIDS, MICHIGAN 2020 FINAL WATER/SEWER RATE STUDY SUMMARY OF REVENUE REQUIREMENT CHANGES FOR RATES EFFECTIVE JANUARY 1, 2021

			WATER	? (1)	 SEWER	? (1)
		A	MOUNT	PERCENT	 AMOUNT	PERCENT
	GRAND RAPIDS	\$	(12,430)	-0.05%	\$ 2,607,909	6.75%
RETAIL COMMUNITIES	WALKER NET OF CONTRIBUTION OF:		42,708	1.21%	345,907 90,871	7.06%
MMUI	KENTWOOD		54,306	1.21%	515,546	11.62%
.IL CO	CASCADE TWP		(167,913)	-4.51%	284,906	10.99%
RETA	GRAND RAPIDS TWP		29,795	1.20%	216,496	8.14%
	TALLMADGE TWP		(25,517)	-14.05%	(17,120)	-3.66%
	– WRIGHT TWP		N/A	N/A	26,685	9.09%
ITIES	FEAST GRAND RAPIDS		30,955	3.81%	215,954	21.76%
MON	ADA TWP		115,036	9.13%	129,273	9.42%
COV	OTTAWA COUNTY		213,412	10.78%	NA	NA
SALE	GAINES TWP		N/A	N/A	37,343	16.70%
WHOLESALE COMMUNITIES	CALEDONIA TWP		N/A	N/A	41,281	27.03%
	SYSTEM	\$	280,352	0.62%	\$ 4,495,051	7.92%

⁽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 (CCCCB)

	WATE	R	SEW	'ER		
	AMOUNT	PERCENT	AMOUNT	PERCENT		
SYSTEM REVENUE REQUIREMENT	\$ 45,501,943	0.62%	\$ 61,242,290	7.92%		
ADD: CCCCB RELIEF	260,317	0.58%	349,611	0.62%		
SYSTEM CHANGE- WITHOUT RELIEF	\$ 45,762,260	1.20%	\$ 61,591,901	8.54%		

CITY OF GRAND RAPIDS, MICHIGAN 2020 FINAL WATER/SEWER RATE STUDY IMPACT OF RATE ADJUSTMENTS ON DOMESTIC USERS BY CUSTOMER COMMUNITY * FOR RATES EFFECTIVE JANUARY 1, 2021

	APPROXIMATE G	QUARTERLY BILL	СНА	NGE
	2020	2021	DOLLARS	PERCENT
GRAND RAPIDS WATER	\$ 87.24	\$ 86.86	\$ (0.38)	-0.44%
SEWER	φ 67.24 122.20	φ 00.00 128.90	\$ (0.38) 6.70	-0.44% 5.48%
	\$ 209.44	\$ 215.76	\$ 6.32	3.02%
BASE RATIO	1.00	1.00	Ψ 0.02	0.0270
WALKED				
WALKER WATER	\$ 86.68	\$ 87.38	\$ 0.70	0.81%
SEWER	138.99	148.24	9.25	6.66%
	\$ 225.67	\$ 235.62	\$ 9.95	4.41%
RATIO TO GR	1.08	1.09		
KENTWOOD				
WATER	\$ 89.18	\$ 89.67	\$ 0.49	0.55%
SEWER	76.44	84.17	7.73	10.11%
	\$ 165.62	\$ 173.84	\$ 8.22	4.96%
RATIO TO GR	0.79	0.81		
CASCADE TWP				
WATER	\$ 133.11	\$ 126.59	\$ (6.52)	-4.90%
SEWER	153.88	169.84	15.96	10.37%
	\$ 286.99	\$ 296.43	\$ 9.44	3.29%
RATIO TO GR	1.37	1.37		
GRAND RAPIDS TWP				
WATER	\$ 103.04	\$ 104.01	\$ 0.97	0.94%
SEWER	134.53	144.96	10.43	7.75%
	\$ 237.57	\$ 248.97	\$ 11.40	4.80%
RATIO TO GR	1.13	1.15		
TALLMADGE TWP				
WATER	\$ 90.98	\$ 77.36	\$ (13.62)	-14.97%
SEWER	256.82	247.07	(9.75)	-3.80%
	\$ 347.80	\$ 324.43	\$ (23.37)	-6.72%
RATIO TO GR	1.66	1.50		

^{*} THE COMPARISONS ABOVE ARE BASED ON SYSTEM AVERAGE DOMESTIC CUSTOMER

QUARTERLY CONSUMPTION OF: WATER- 26.00 UNITS OR 19,448 GALLONS SEWER - 19.00 UNITS OR 14,212 GALLONS

NO. OF MONTHS: 3

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

WRIGHT TWP-

 SEWER (No. of REU 1.00)
 \$ 173.76
 \$ 189.54
 \$ 15.78
 9.08%

CITY OF GRAND RAPIDS, MICHIGAN 2020 FINAL WATER/SEWER RATE STUDY IMPACT OF RATE ADJUSTMENTS ON COMMERCIAL USERS BY CUSTOMER COMMUNITY FOR RATES EFFECTIVE JANUARY 1, 2021

	APPROXIMAT	E QUARTERLY BILL	СНА	NGE
	2020	2021	DOLLARS	PERCENT
GRAND RAPIDS			·	
WATER	\$ 465.60	\$ 469.12	\$ 3.52	0.76%
SEWER	796.17	904.32	108.15	13.58%
	\$ 1,261.77	\$ 1,373.44	\$ 111.67	8.85%
BASE RATIO	1.00	1.00		
WALKER				
WATER	\$ 420.73	\$ 426.14	\$ 5.41	1.29%
SEWER	671.67	720.30	48.63	7.24%
	\$ 1,092.40	\$ 1,146.44	\$ 54.04	4.95%
RATIO TO GR	0.87	0.83		
KENTWOOD				
WATER	\$ 404.78	\$ 409.83	\$ 5.05	1.25%
SEWER	575.25	642.51	67.26	11.69%
	\$ 980.03	\$ 1,052.34	\$ 72.31	7.38%
RATIO TO GR	0.78	0.77		
CASCADE TWP				
WATER	\$ 608.31	\$ 580.52	\$ (27.79)	-4.57%
SEWER	719.49	798.09	78.60	10.92%
	\$ 1,327.80	\$ 1,378.61	\$ 50.81	3.83%
RATIO TO GR	1.05	1.00		
GRAND RAPIDS TWP				
WATER	\$ 485.87	\$ 491.76	\$ 5.89	1.21%
SEWER	635.82	688.17	52.35	8.23%
	\$ 1,121.69	\$ 1,179.93	\$ 58.24	5.19%
RATIO TO GR	0.89	0.86		
TALLMADGE TWP				
WATER	\$ 619.64	\$ 530.63	\$ (89.01)	-14.36%
SEWER	1,919.01	1,848.48	(70.53)	-3.68%
	\$ 2,538.65	\$ 2,379.11	\$ (159.54)	-6.28%
RATIO TO GR	2.01	1.73		
* THE COMPARISONS ABOVE ARE	BASED ON SYSTEM AVE	RAGE COMMERCIAL CU	JSTOMER	
QUARTERLY CONSUMPTION OF :		203.00 UNITS OR	151,844 GALLONS	
	SEWER - NO. OF MONTHS:	198.00 <i>UNITS OR</i> 3	148,104 <i>GALLONS</i>	

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

WRIGHT TWP

 SEWER (No. of REU 1.00)
 \$ 173.76
 \$ 189.54
 \$ 15.78
 9.08%

CITY OF GRAND RAPIDS, MICHIGAN 2020 FINAL WATER/SEWER RATE STUDY WATER & SEWER RATES FOR GRAND RAPIDS & RETAIL CUSTOMER COMMUNITIES EFFECTIVE JANUARY 1, 2021

WATER RATES

	METER	GRAND							G	R. RAPIDS	T	ALLMADGE	WRIGHT
				WALKED		ENTWOOD.		0400405					_
	CODE	<u>RAPIDS</u>	1	<u>WALKER</u>	K	<u>ENTWOOD</u>	9	CASCADE	1	<u>OWNSHIP</u>		<u>OWNSHIP</u>	<u>TOWNSHIP</u>
COMMODITY													
CHARGE (HCF)	\$ 2.06	\$	1.78	\$	1.65	\$	2.32	\$	2.01	\$	2.56	NA
			МО	NTHLY SE	RVI	CE CHARG	EE	BY METER :	SIZE	<u> </u>			
3/4" & Less	Α	\$ 11.10	\$	13.70	\$	15.59	\$	22.09	\$	17.25	\$	3.60	NA
1"	В	\$ 16.98	\$	21.60	\$	24.96	\$	36.52	\$	27.91	\$	3.65	NA
1-1/4"	С	\$ 24.54	\$	31.76	\$	37.01	\$	55.07	\$	41.62	\$	3.71	NA
1-1/2"	D	\$ 33.78	\$	44.18	\$	51.74	\$	77.74	\$	58.38	\$	3.78	NA
2"	E	\$ 57.30	\$	75.79	\$	89.23	\$	135.45	\$	101.03	\$	3.97	NA
3"	F	\$ 124.50	\$	166.10	\$	196.34	\$	300.34	\$	222.90	\$	4.50	NA
4"	G	\$ 218.58	\$	292.54	\$	346.30	\$	531.18	\$	393.51	\$	5.25	NA
6" & Over	Н	\$ 487.38	\$	653.78	\$	774.74	\$	1,190.74	\$	880.98	\$	7.38	NA

SEWER RATES

	METER CODE	GRAND RAPIDS		<u>WALKER</u>	<u> </u>	(ENTWOOD	_	<u>CASCADE</u>		R. RAPIDS OWNSHIP	ALLMADGE OWNSHIP	RIGHT VNSHIP
COMMODITY CHARGE (HC	F)	\$ 4.16	\$	2.83	\$	3.05	\$	3.07	\$	2.67	\$ 8.63	NA
REU Charge (M	onthly) *	NA		NA		NA		NA		NA	NA	\$ 63.18
			MC	NTHLY SE	R۷	ICE CHARG	E E	BY METER	SIZ	E		
3/4" & Less	Α	\$ 16.62	\$	31.49	\$	8.74	\$	37.17	\$	31.41	\$ 27.70	NA
1"	В	\$ 26.88	\$	53.32	\$	12.87	\$	63.41	\$	53.17	\$ 46.58	NA
1-1/4"	С	\$ 40.07	\$	81.38	\$	18.18	\$	97.15	\$	81.15	\$ 70.85	NA
1-1/2"	D	\$ 56.19	\$	115.67	\$	24.67	\$	138.39	\$	115.35	\$ 100.51	NA
2"	E	\$ 97.23	\$	202.97	\$	41.19	\$	243.36	\$	202.40	\$ 176.02	NA
3"	F	\$ 214.47	\$	452.39	\$	88.39	\$	543.27	\$	451.11	\$ 391.75	NA
4"	G	\$ 378.61	\$	801.58	\$	154.47	\$	963.14	\$	799.30	\$ 693.78	NA
6" & Over	Н	\$ 847.59	\$	1,799.27	\$	343.27	\$	2,162.79	\$	1,794.15	\$ 1,556.71	NA

^{*} REU - Residential Equivalent Unit (Wright Township Only)

FIRE PROTECTION RATES- ALL GOVERNMENTAL UNITS

6"	Н	\$ 20.32	10"	J	\$ 56.51
8"	1	\$ 36.07	12"	K	\$ 81.32

NOTE: Monthly defined as 1/12th of 365 days.

CITY OF GRAND RAPIDS, MICHIGAN 2020 FINAL WATER/SEWER RATE STUDY IMPACT OF RATE ADJUSTMENTS ON WHOLESALE CUSTOMER COMMUNITIES EFFECTIVE JANUARY 1, 2021

	2020	2021	PERCENTAGE CHANGE
EAST GRAND RAPIDS			
WATER - SERVICE (MONTHLY)	\$17,849.00	\$15,299.00	-14.29%
- COMMODITY (100 CF)	\$1.07	\$1.18	10.28%
SEWER - SERVICE (MONTHLY)	\$2,213.00	\$1,918.00	-13.33%
- COMMODITY (MG)	\$2,068.00	\$2,538.00	22.73%
ADA TWP			
WATER - SERVICE	\$45,244.00	\$48,464.00	7.12%
- COMMODITY	\$1.22	\$1.35	10.66%
SEWER - SERVICE	\$47,747.00	\$41,740.00	-12.58%
- COMMODITY	\$2,721.00	\$3,407.00	25.21%
OTTAWA COUNTY			
WATER - SERVICE	\$0.00	\$416.00	N/A
- COMMODITY	\$1.14	\$1.26	10.53%
GAINES TWP			
SEWER - SERVICE	\$1,631.00	\$1,566.00	-3.99%
- COMMODITY	\$1,670.00	\$1,982.00	18.68%
CALEDONIA TWP			
SEWER - SERVICE	\$739.00	\$708.00	-4.19%
- COMMODITY	\$5,115.00	\$6,596.00	28.95%

NOTE: Monthly defined as 1/12th of 365 days.