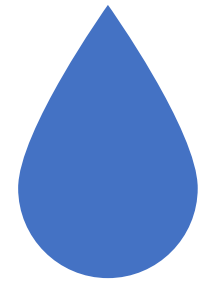


CITY OF GRAND LEDGE WATER & SEWER RATE CALCULATION SUMMARY



GALLONS OF WATER & SEWER USE DECLINING

FISCAL YEAR ENDING IN YEAR OF

	2016	2017	2018	2019	2020	PERCENT OF TOTAL	AVERAGE	MAX. YEAR	MIN. YEAR	PERCENT DIFFERENCE FROM MAX. TO MIN. YEAR	UNITS USED IN RATE EVALUATION
City Water < 4,000	93,026,185	92,001,240	92,028,700	98,853,500	92,842,000	46.0%	93,750,325	98,853,500	92,001,240	7%	92,001,240
City Water > 4,000	99,359,655	94,277,375	90,247,500	90,876,500	85,189,400	42.2%	91,990,086	99,359,655	85,189,400	14%	85,189,400
Township < 4,000	14,078,182	12,764,475	13,897,000	15,183,400	14,415,100	7.1%	14,067,631	15,183,400	12,764,475	16%	12,764,475
Township > 4,000	12,216,982	9,417,025	9,063,300	8,094,900	9,294,700	4.6%	9,617,381	12,216,982	8,094,900	34%	8,094,900
TOTALS	218,681,004	208,460,115	205,236,500	213,008,300	201,741,200		209,425,424	225,613,537	198,050,015	18%	198,050,015

GALLONS OF SEWAGE

	2016	2017	2018	2019	2020	AVERAGE	MAX. YEAR	MIN. YEAR	PERCENT DIFFERENCE FROM MAX. TO MIN. YEAR	UNITS USED IN RATE EVALUATION - SELECTED BY STAFF
Grand Ledge Sewer	202,878,859	195,688,215	190,910,300	205,049,700	188,092,700	196,523,955	205,049,700	188,092,700	8%	193,000,000

COMPLETE WATER RATE CALCULATION

City Water < 4,000	ANNUAL BUDGET	BASE RATE FIXED EXPENSES	COST PER REU	CONSUMPTION VARIABLE EXPENSES	VOLUME COST PER UNIT
Dept: 591.544 PUMPING	\$114,596	\$39,575	\$0.75	\$75,021	\$0.294
Dept: 591.545 WATER TREATMENT	\$120,476	\$41,606	\$0.79	\$78,870	\$0.309
Dept: 591.546 TRANSMISSION AND DISTRIBUTION	\$577,469	\$199,426	\$3.77	\$378,043	\$1.483
Dept: 591.548 WATER-GENERAL EXPENSE	\$335,216	\$115,765	\$2.19	\$219,451	\$0.861
OPERATION & MAINTENANCE EXPENSES	\$1,147,758	\$396,372	\$7.49	\$751,386	\$2.948
DEBT - PRINCIPAL & INTEREST ANNUAL PAYMENTS					
2014 Refunded complete 2025	\$343,463	\$343,463	\$6.49	\$0	\$0.00
2019 Capital Improvement Bonds	\$146,978	\$146,978	\$2.78	\$0	\$0.00
ANNUAL DEBT PAYMENTS PRINCIPAL & INTEREST	\$490,441	\$490,441	\$9.26	\$0	\$0.00
"NON OPERATING" INCOME REDUCTION CONTRIBUTION			0.489		0.193
EQUIPMENT REPLACEMENT SHORT LIVED ASSETS	\$55,000	\$18,994	\$0.36	\$36,006	\$0.14
EQUIPMENT REPLACEMENT PAGE 2	\$14,000	\$4,835	\$0.09	\$9,165	\$0.04
CAPITAL IMPROVEMENT & IRON REMOVAL PLANT	\$822,000	\$283,873	\$5.36	\$538,127	\$2.11
Lead and Copper	\$100,000	\$34,534	\$0.65	\$65,466	\$0.26
ADOPTED BUDGET	\$2,629,199	\$1,229,050		\$1,400,149	
CALCULATED RATE PER PER REU PER MONTH			\$22.72	1,000 GAL.	\$5.30
ANNUAL EQUIVALENT REU'S 52,950		CURRENT RATES	\$14.40		\$5.04
ANTICIPATED EQUIVALENT GALLONS / UNITS 254,915		PERCENT INCREASE	56.8%		5.2%
INVOICES PER YEAR 12		INCREASE OF	\$8.23		\$0.26

TYPICAL BILL - WATER				NEW	OLD		
			RTS	\$22.72	\$14.49		
			COST 1,000 GAL.	\$5.30	\$5.04		
			MONTHLY				

METER SIZE IN INCHES	GALLONS USED	VOLUME CHARGE	BASE RATE CHARGE	NEW BILL	OLD BILL	CHANGE IN BILL	PERCENT INCREASE
3/4	2,000	\$10.60	\$22.72	\$33.32	\$24.57	\$8.75	35.6%
3/4	4,000	\$21.20	\$22.72	\$43.92	\$34.65	\$9.27	26.8%
3/4	6,000	\$31.80	\$22.72	\$54.52	\$44.73	\$9.79	21.9%
3/4	8,000	\$42.40	\$22.72	\$65.12	\$54.81	\$10.31	18.8%
3/4	20,000	\$106.00	\$22.72	\$128.72	\$115.29	\$13.43	11.7%

1	50,000	\$265.00	\$56.81	\$321.81	\$288.23	\$33.58	11.7%
1 1/2	75,000	\$397.50	\$113.61	\$511.11	\$450.45	\$60.66	13.5%
2	100,000	\$530.00	\$181.78	\$711.78	\$619.92	\$91.86	14.8%
3	200,000	\$1,060.00	\$363.56	\$1,423.56	\$1,239.84	\$183.72	14.8%
4	300,000	\$1,590.00	\$568.06	\$2,158.06	\$1,874.25	\$283.81	15.1%
6	400,000	\$2,120.00	\$1,136.11	\$3,256.11	\$2,740.50	\$515.61	18.8%

WATER RATE SUMMARY OF CHARGES WITH PART OF IRON REMOVAL PLANT

City Water < 4,000						
	CURRENT		NEW		PERCENT INCREASE	DIFFERENCE
PER 1,000 GAL.	\$5.04		\$5.30		5.2%	\$0.26
2021	CURRENT		NEW			DIFFERENCE PER MONTH
METER SIZE	READY TO SERVE PER MONTH	CURRENT / OLD METER RATIO REU'S PER METER SIZE	READY TO SERVE PER MONTH	METER RATIO FACTOR - REU'S PER METER SIZE	PERCENT INCREASE	
3/4	\$14.49	1.00	\$22.72	1.00	56.8%	\$8.23
1	\$36.23	2.50	\$56.81	2.50	56.8%	\$20.58
1 1/2	\$72.45	5.00	\$113.61	5.00	56.8%	\$41.16
2	\$115.92	8.00	\$181.78	8.00	56.8%	\$65.86
3	\$231.84	16.00	\$363.56	16.00	56.8%	\$131.72
4	\$362.25	25.00	\$568.06	25.00	56.8%	\$205.81
6	\$724.50	50.00	\$1,136.11	50.00	56.8%	\$411.61

WATER RATE SUMMARY WITH PART OF IRON PLANT

City Water > 4,000		Township < 4,000		Township > 4,000	
CURRENT	NEW	CURRENT	NEW	CURRENT	NEW
\$6.83	\$7.18	\$10.08	\$10.60	\$13.66	\$14.36
CURRENT	NEW	CURRENT	NEW	CURRENT	NEW
READY TO SERVE PER MONTH					
\$28.98	\$45.44				
\$72.46	\$113.63				
\$144.90	\$227.22				
\$231.84	\$363.56				
\$463.68	\$727.11				
\$724.50	\$1,136.11				
\$1,449.00	\$2,272.22				

CURRENT WATER METER EQUIVALENT RATIO

METER SIZE IN INCHES	SELECTED METER EQUIVALENT
3/4	1.00
1	2.50
1 1/2	5.00
2	8.00
3	16.00
4	25.00
6	50.00

- **THE NEW SEWER METER RATIOS WILL MATCH THE WATER RATIOS**

CURRENT SEWER CHARGES

- EVERY **SEWER** CUSTOMER PAYS THE SAME MONTHLY RTS FEE

METER SIZE IN INCHES	CURRENT "BASE RATE" CHARGE	NUMBER OF METERS / REU'S
3/4	\$8.30	2789
1	\$8.30	37
1 1/2	\$8.30	32
2	\$8.30	36
3	\$8.30	6
4	\$8.30	3
6	\$8.30	1

- UNLIKE THE **WATER** MONTHLY RTS FEE

METER SIZE IN INCHES	CURRENT "BASE RATE" CHARGE	NUMBER OF METERS / REU'S
3/4	\$14.49	2789
1	\$36.23	37
1 1/2	\$72.45	32
2	\$115.92	36
3	\$231.84	6
4	\$362.25	3
6	\$724.50	1

Grand Ledge Sewer	ANNUAL BUDGET	BASE RATE FIXED EXPENSES	COST PER REU	CONSUMPTION VARIABLE EXPENSES	VOLUME COST PER UNIT
Dept.: 592.536 PLANT OPERATION & MAINTENANCE	\$696,901	\$23,287	\$0.48	\$673,614	\$3.490
Dept.: 592.538 LIFT STATION	\$105,141	\$3,513	\$0.07	\$101,628	\$0.527
Dept.: 592.539 SEWERS	\$292,341	\$9,769	\$0.20	\$282,572	\$1.464
Dept.: 592.542 SEWER GENERAL EXPENSE	\$346,792	\$11,588	\$0.24	\$335,204	\$1.737
OPERATION & MAINTENANCE EXPENSES	\$1,441,175	\$48,158	\$0.99	\$1,393,017	\$7.218
DEBT - PRINCIPAL & INTEREST ANNUAL PAYMENTS					
2014 Refunded complete 2025	\$217,882	\$196,094	\$4.05	\$21,788	\$0.11
2019 Capital Improvement Bonds	\$146,978	\$132,280	\$2.73	\$14,698	\$0.08
2009 Bonds	\$223,102	\$200,792	\$4.15	\$22,310	\$0.12
ANNUAL DEBT PAYMENTS PRINCIPAL & INTEREST	\$587,962	\$529,166	\$10.93	\$58,796	\$0.30
ANNUAL O & M + DEBT	\$2,029,136	\$577,323	\$11.92	\$1,451,813	\$7.52
"NON OPERATING" INCOME REDUCTION CONTRIBUTION			0.010		0.075
EQUIPMENT REPLACEMENT SHORT LIVED ASSETS	\$20,000	\$668	\$0.01	\$19,332	\$0.10
EQUIPMENT REPLACEMENT PAGE 2	\$27,500	\$919	\$0.02	\$26,581	\$0.14
EQUIPMENT REPLACEMENT PAGE 3	\$50,000	\$1,671	\$0.03	\$48,329	\$0.25
CAPITAL IMPROVEMENT	\$229,500	\$7,669	\$0.16	\$221,831	\$1.15
ADOPTED BUDGET	\$2,356,136	\$588,250		\$1,767,886	
CALCULATED RATE PER PER REU PER MONTH			\$12.14	1,000 GAL.	\$9.08
ANNUAL EQUIVALENT REU'S 48,414		CURRENT RATES	\$8.30		\$9.24
ANTICIPATED EQUIVALENT GALLONS / UNITS 193,000		PERCENT INCREASE	46.3%		-1.7%
INVOICES PER YEAR 12		INCREASE OF	\$3.84		(\$0.16)

SEWER RATES WITH METER EQUIVALENT RATIO – MATCHING WATER RATIOS

Grand Ledge Sewer						
		CURRENT		NEW		DIFFERENCE
PER 1,000 GAL.		\$9.24		\$9.08		-\$0.16
2021	CURRENT		NEW		DIFFERENCE PER MONTH	
METER SIZE	READY TO SERVE PER MONTH	CURRENT / OLD METER RATIO REU'S PER METER SIZE	READY TO SERVE PER MONTH	METER RATIO FACTOR - REU'S PER METER SIZE		
3/4	\$8.30	1.00	\$12.14	1.00	\$3.84	
1	\$8.30	1.00	\$30.35	2.50	\$22.05	
1 1/2	\$8.30	1.00	\$60.70	5.00	\$52.40	
2	\$8.30	1.00	\$97.12	8.00	\$88.82	
3	\$8.30	1.00	\$194.24	16.00	\$185.94	
4	\$8.30	1.00	\$303.50	25.00	\$295.20	
6	\$8.30	1.00	\$607.00	50.00	\$598.70	

TYPICAL BILL SEWER			NEW	OLD		
NEW METER EQUIVALENTS			RTS	\$12.14	\$8.30	
			COST 1,000 GAL.	\$9.08	\$9.24	
			MONTHLY			

METER SIZE IN INCHES	GALLONS USED	VOLUME CHARGE	BASE RATE CHARGE	NEW BILL	OLD BILL	CHANGE IN BILL	PERCENT INCREASE
3/4	2,000	\$18.17	\$12.14	\$30.31	\$26.78	\$3.53	13.18%
3/4	4,000	\$36.34	\$12.14	\$48.48	\$45.26	\$3.22	7.11%
3/4	6,000	\$54.51	\$12.14	\$66.65	\$63.74	\$2.91	4.56%
3/4	8,000	\$72.68	\$12.14	\$84.82	\$82.22	\$2.60	3.16%
3/4	20,000	\$181.70	\$12.14	\$193.84	\$193.10	\$0.74	0.38%

1	20,000	\$181.70	\$30.35	\$212.05	\$193.10	\$18.95	9.81%
1 1/2	50,000	\$454.25	\$60.70	\$514.95	\$470.30	\$44.65	9.49%
2	75,000	\$681.37	\$97.12	\$778.49	\$701.30	\$77.19	11.01%
3	200,000	\$1,816.98	\$194.24	\$2,011.22	\$1,856.30	\$154.92	8.35%
4	300,000	\$2,725.47	\$303.50	\$3,028.97	\$2,780.30	\$248.67	8.94%
6	400,000	\$3,633.96	\$607.00	\$4,240.96	\$3,704.30	\$536.66	14.49%

TYPICAL BILL - Utility

NEW FIXED WATER **\$22.72**

OLD FIXED WATER **\$14.49**

NEW COST 1,000 GAL WATER **\$5.30**

OLD COST 1,000 GAL WATER **\$5.04**

NEW FIXED SEWER **\$12.14**

OLD FIXED SEWER **\$8.30**

MONTHLY

NEW COST 1,000 GAL SEWER **\$9.08**

OLD COST 1,000 GAL SEWER **\$9.24**

SERVICE	GALLONS USED	VOLUME CHARGE	BASE RATE CHARGE	NEW BILL	OLD BILL	CHANGE IN BILL
WATER	4,000	\$21.20	\$15.22	\$36.42	\$34.64	\$1.78
IRON REMOVAL PLANT	4,000	\$0.00	\$7.50	\$7.50	\$0.00	\$7.50
SEWER	4,000	\$36.34	\$12.14	\$48.48	\$45.26	\$3.22
TOTAL	4,000	\$57.54	\$34.86	\$92.40	\$79.90	\$12.50