



Michigan Rural
Water Association



City of Grand Ledge Water & Sewer Rate Calculations

BY

Mike Engels

Training Director

MICHIGAN RURAL WATER ASSOCIATION

mrwa.net

COMPARING RATES

- **DO NOT Compare to Neighboring Communities**
 - Different Type of Treatment
 - Larger grant / loan & interest, when financed
 - Asset Management Plans Void Rate Comparisons

Asset Management Program Required by EGLE Starting 2018

1. Determine the needs of the system
2. Budget must meet the needs of the system
3. Rates must support the budget

Community Goal



- **Ensuring the long-term sustainability of water & sewer infrastructure FOR the residents of Grand Ledge**
- **To Protect YOUR Investment !**
- **Fair and Equitable rate structure**

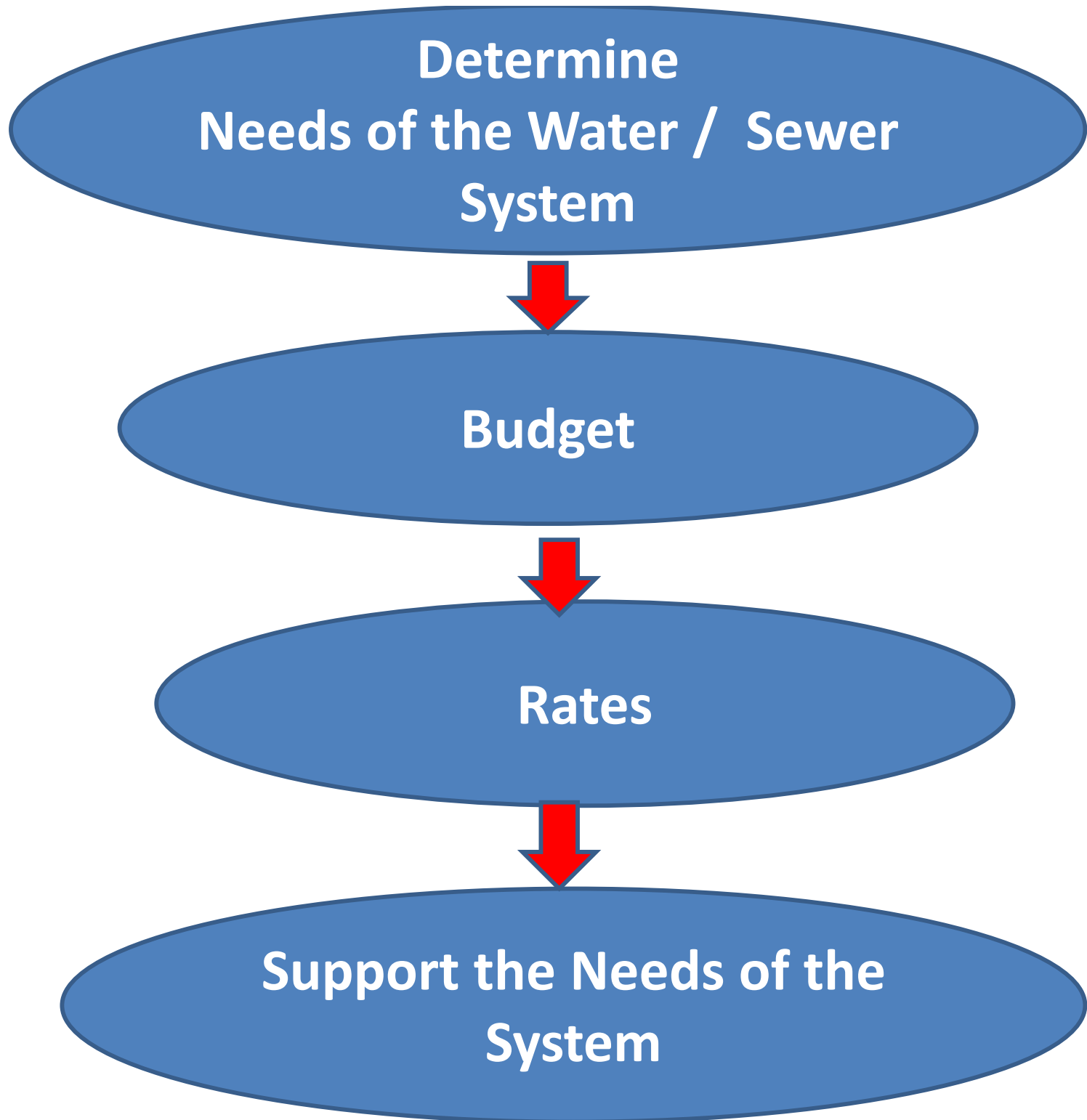
A City Council Member's Responsibility

- To **protect** the water and sewer infrastructure for today's, and tomorrow's customers through;
- Adequate Foresight & Planning
- Adequate / Accurate Budgeting
- Adequate Rate changes

What Should Customers Expect

- A product that meets all EPA and State of Michigan Standards
- Reliability
- Long System Life Span Through
 - Proper Maintenance
 - Capital Investments
- Efficient Use of Finances

HOW RATE
CHARGES
ARE SET



How the rate charges are calculated

City Water < 4,000	ANNUAL BUDGET	PERCENT FIXED EXPENSES	ASSIGNED AS FIXED EXPENSES	ANTICIPATED ANNUAL METER EQUIVALENTS	COST PER METER EQUIVALENT	ASSIGNED AS VARIABLE EXPENSES	ANTICIPATED EQUIVALENT UNITS	\$ COST PER 1,000 GALLONS
Dept: 591.544 PUMPING	\$148,359	23%	\$34,345	51,627	\$0.67	\$114,014	245,288	\$0.465

$$\$34,345 / 51,627 = \$0.67$$

$$\$114,014 / 245,288 = \$0.465$$

GRAND LEDGE WATER RTS CHARGE

FINAL ANALYSIS RATE CALCULATION - CURRENT FISCAL YEAR	2024			RTS CHARGE
City Water < 4,000	ANNUAL BUDGET	ASSIGNED AS FIXED EXPENSES	ANTICIPATED ANNUAL METER EQUIVALENTS	COST PER METER EQUIVALENT
Dept: 591.544 PUMPING	\$148,359	\$34,345	51,627	\$0.67
Dept: 591.545 WATER TREATMENT	\$189,635	\$43,901	51,627	\$0.85
Dept: 591.546 TRANSMISSION AND DISTRIBUTION	\$844,327	\$195,462	51,627	\$3.79
Dept: 591.548 WATER-GENERAL EXPENSE	\$416,500	\$96,420	51,627	\$1.87
OPERATION & MAINTENANCE EXPENSES	\$1,598,821	\$370,127		\$7.17
DEBT - PRINCIPAL & INTEREST ANNUAL PAYMENTS				
2014 Refunded complete 2025	\$343,463	\$343,463	51,627	\$6.65
2019 Capital Improvement Bonds	\$146,978	\$146,978	51,627	\$2.85
Iron Removal Plant DWSRF 2023	\$585,931	\$585,931	51,627	\$11.35
Well Development DWSRF 2023	\$147,200	\$147,200	51,627	\$2.85
ANNUAL DEBT PAYMENTS PRINCIPAL & INTEREST	\$1,223,572	\$1,223,572		\$23.70
ANNUAL O & M + DEBT	\$2,822,393	\$1,593,699		\$30.87
RESERVES				
CAPITAL + EQUIPMENT	\$424,831	\$98,348		\$1.90
ADOPTED BUDGET	\$3,247,224	\$1,692,047	51,627	
		52%		
REVENUE COLLECTED CALCULATED RATES	\$3,172,224	\$1,674,685		
REVENUE COLLECTED CURRENT RATES	\$3,143,769			
CALCULATED RATE PER METER EQUIVALENT		PER MONTH		\$32.44
ANNUAL METER EQUIVALENTS/ REU'S COUNT 51,627	CURRENT RATES			\$31.36
ANTICIPATED EQUIVALENT GALLONS / UNITS 245,288	PERCENT INCREASE			3.4%
INVOICES PER YEAR 12	INCREASE OF			\$1.08

GRAND LEDGE WATER COST PER 1,000 GALLONS

FINAL ANALYSIS RATE CALCULATION - CURRENT FISCAL YEAR	2024			VOLUME CHARGE
City Water < 4,000	ANNUAL BUDGET	ASSIGNED AS VARIABLE EXPENSES	ANTICIPATED EQUIVALENT UNITS	\$ COST PER 1,000 GALLONS
Dept: 591.544 PUMPING	\$148,359	\$114,014	245,288	\$0.465
Dept: 591.545 WATER TREATMENT	\$189,635	\$145,734	245,288	\$0.594
Dept: 591.546 TRANSMISSION AND DISTRIBUTION	\$844,327	\$648,865	245,288	\$2.645
Dept: 591.548 WATER-GENERAL EXPENSE	\$416,500	\$320,080	245,288	\$1.305
OPERATION & MAINTENANCE EXPENSES	\$1,598,821	\$1,228,694		\$5.01
DEBT - PRINCIPAL & INTEREST ANNUAL PAYMENTS				
2014 Refunded complete 2025	\$343,463	\$0	245,288	\$0.00
2019 Capital Improvement Bonds	\$146,978	\$0	245,288	\$0.00
Iron Removal Plant DWSRF 2023	\$585,931	\$0	245,288	\$0.00
Well Development DWSRF 2023	\$147,200	\$0	245,288	\$0.00
ANNUAL DEBT PAYMENTS PRINCIPAL & INTEREST	\$1,223,572	\$0		\$0.00
ANNUAL O & M + DEBT	\$2,822,393	\$1,228,694		\$5.01
RESERVES				
CAPITAL + EQUIPMENT	\$424,831	\$326,483		\$1.33
ADOPTED BUDGET	\$3,247,224	\$1,555,177	245,288	
		48%		
REVENUE COLLECTED CALCULATED RATES	\$3,172,224	\$1,497,539		
REVENUE COLLECTED CURRENT RATES	\$3,143,769			
CALCULATED RATE PER METER EQUIVALENT		RATE PER 1,000 GAL.		\$6.11
ANNUAL METER EQUIVALENTS / REU'S COUNT 51,627		CURRENT RATES PERCENT INCREASE OF		\$5.90
ANTICIPATED EQUIVALENT GALLONS / UNITS 245,288				3.5%
INVOICES PER YEAR 12				\$0.21

GRAND LEDGE WATER

FINAL ANALYSIS RATE CALCULATION - CURRENT FISCAL YEAR	2024		RTS CHARGE		VOLUME CHARGE
City Water < 4,000	ANNUAL BUDGET	ASSIGNED AS FIXED EXPENSES	COST PER METER EQUIVALENT	ASSIGNED AS VARIABLE EXPENSES	\$ COST PER 1,000 GALLONS
Dept: 591.544 PUMPING	\$148,359	\$34,345	\$0.67	\$114,014	\$0.465
Dept: 591.545 WATER TREATMENT	\$189,635	\$43,901	\$0.85	\$145,734	\$0.594
Dept: 591.546 TRANSMISSION AND DISTRIBUTION	\$844,327	\$195,462	\$3.79	\$648,865	\$2.645
Dept: 591.548 WATER-GENERAL EXPENSE	\$416,500	\$96,420	\$1.87	\$320,080	\$1.305
OPERATION & MAINTENANCE EXPENSES	\$1,598,821	\$370,127	\$7.17	\$1,228,694	\$5.01
DEBT - PRINCIPAL & INTEREST ANNUAL PAYMENTS					
2014 Refunded complete 2025	\$343,463	\$343,463	\$6.65	\$0	\$0.00
2019 Capital Improvement Bonds	\$146,978	\$146,978	\$2.85	\$0	\$0.00
Iron Removal Plant DWSRF 2023	\$585,931	\$585,931	\$11.35	\$0	\$0.00
Well Development DWSRF 2023	\$147,200	\$147,200	\$2.85	\$0	\$0.00
ANNUAL DEBT PAYMENTS PRINCIPAL & INTEREST	\$1,223,572	\$1,223,572	\$23.70	\$0	\$0.00
ANNUAL O & M + DEBT	\$2,822,393	\$1,593,699	\$30.87	\$1,228,694	\$5.01
RESERVES					
CAPITAL + EQUIPMENT	\$424,831	\$98,348	\$1.90	\$326,483	\$1.33
ADOPTED BUDGET	\$3,247,224	\$1,692,047		\$1,555,177	
		52%		48%	
REVENUE COLLECTED CALCULATED RATES	\$3,172,224	\$1,674,685		\$1,497,539	
REVENUE COLLECTED CURRENT RATES	\$3,143,769				
CALCULATED RATE PER METER EQUIVALENT		PER MONTH	\$32.44	RATE PER 1,000 GAL.	\$6.11
ANNUAL METER EQUIVALENTS / REUS COUNT 51,627		CURRENT RATES	\$31.36		\$5.90
ANTICIPATED EQUIVALENT GALLONS / UNITS 245,288		PERCENT INCREASE	3.4%		3.5%
INVOICES PER YEAR 12		INCREASE OF	\$1.08		\$0.21

GRAND LEDGE WATER SUMMARY

City Water < 4,000						City Water > 4,000		Township < 4,000		Township > 4,000	
	CURRENT	NEW		PERCENT INCREASE	DIFFERENCE	CURRENT	NEW	CURRENT	NEW	CURRENT	NEW
PER 1,000 GAL.	\$5.90	\$6.11		3.5%	\$0.21	\$8.03	\$8.31	\$8.85	\$9.16	\$12.05	\$12.46
2024	CURRENT	NEW			DIFFERENCE PER MONTH			CURRENT	NEW		
METER SIZE IN INCHES	READY TO SERVE PER MONTH	READY TO SERVE PER MONTH	METER RATIO FACTOR - REU'S PER METER SIZE			READY TO SERVE PER MONTH					
3/4	\$31.36	\$32.44	1.00	3.4%	\$1.08			\$47.04	\$48.66		
1	\$78.40	\$81.10	2.50	3.4%	\$2.70			\$117.60	\$121.64		
1 1/2	\$156.80	\$162.19	5.00	3.4%	\$5.39			\$235.20	\$243.29		
2	\$250.88	\$259.51	8.00	3.4%	\$8.63			\$376.32	\$389.26		
3	\$501.76	\$519.01	16.00	3.4%	\$17.25			\$752.64	\$778.52		
4	\$784.00	\$810.95	25.00	3.4%	\$26.95			\$1,176.00	\$1,216.43		
6	\$1,568.00	\$1,621.91	50.00	3.4%	\$53.91			\$2,352.00	\$2,432.86		
8	\$2,508.80	\$2,595.05	80.00		\$86.25			\$3,763.20	\$3,892.58		

GRAND LEDGE SEWER RTS CHARGE

FINAL ANALYSIS RATE CALCULATION - CURRENT FISCAL YEAR	2024			RTS CHARGE
Grand Ledge Sewer	ANNUAL BUDGET	ASSIGNED AS FIXED EXPENSES	ANTICIPATED ANNUAL METER EQUIVALENTS	COST PER METER EQUIVALENT
Dept.: 592.536 PLANT OPERATION & MAINTENANCE	\$854,013	\$88,817	49,206	\$1.81
Dept.: 592.538 LIFT STATION	\$84,650	\$8,804	49,206	\$0.18
Dept.: 592.539 SEWERS	\$283,517	\$29,486	49,206	\$0.60
Dept.: 592.542 SEWER GENERAL EXPENSE	\$421,597	\$43,846	49,206	\$0.89
OPERATION & MAINTENANCE EXPENSES	\$1,643,777	\$170,953		\$3.47
DEBT - PRINCIPAL & INTEREST ANNUAL PAYMENTS				
2014 Refunded complete 2025	\$217,882	\$217,882	49,206	\$4.43
2019 Capital Improvement Bonds complete 2034	\$146,978	\$146,978	49,206	\$2.99
2009 Bonds Complete 2029	\$224,227	\$224,227	49,206	\$4.56
WWTP First Payment 2026 FY24, 25, 26	\$1,588,373	\$1,588,373	49,206	\$32.28
ANNUAL DEBT PAYMENTS PRINCIPAL & INTEREST + NEW WWTP LOAN	\$2,177,460	\$2,177,460		\$44.25
ANNUAL O & M + DEBT	\$3,821,237	\$2,348,413		\$47.73
NON SALES INCOME	\$35,000	\$3,640		0.074
EQUIPMENT REPLACEMENT & RESERVE REQUIREMENTS	\$165,500	\$17,212		\$0.35
CAPITAL FUNDING	\$279,704	\$29,089		\$0.59
CAPITAL + EQUIPMENT	\$445,204	\$46,301		\$0.94
ADOPTED BUDGET	\$4,266,441	\$2,394,714	49,206	
		56%		
REVENUE COLLECTED CALCULATED RATES	\$4,231,441	\$2,391,074		
REVENUE COLLECTED CURRENT RATES	\$3,434,090			
CALCULATED RATE PER METER EQUIVALENT	PER MONTH			\$48.59
ANNUAL METER EQUIVALENTS / REU'S COUNT 49,206	CURRENT RATES			\$31.83
ANTICIPATED EQUIVALENT GALLONS / UNITS 186,670	PERCENT INCREASE			52.7%
INVOICES PER YEAR 12	INCREASE OF			\$16.76

GRAND LEDGE SEWER COST PER 1,000 GALLONS

FINAL ANALYSIS RATE CALCULATION - CURRENT FISCAL YEAR	2024			VOLUME CHARGE
Grand Ledge Sewer	ANNUAL BUDGET	ASSIGNED AS VARIABLE EXPENSES	ANTICIPATED EQUIVALENT UNITS	\$ COST PER 1,000 GALLONS
Dept.: 592.536 PLANT OPERATION & MAINTENANCE	\$854,013	\$765,196	186,670	\$4.099
Dept.: 592.538 LIFT STATION	\$84,650	\$75,846	186,670	\$0.406
Dept.: 592.539 SEWERS	\$283,517	\$254,031	186,670	\$1.361
Dept.: 592.542 SEWER GENERAL EXPENSE	\$421,597	\$377,751	186,670	\$2.024
OPERATION & MAINTENANCE EXPENSES	\$1,643,777	\$1,472,824		\$7.890
DEBT - PRINCIPAL & INTEREST ANNUAL PAYMENTS				
2014 Refunded complete 2025	\$217,882	\$0	186,670	\$0.00
2019 Capital Improvement Bonds complete 2034	\$146,978	\$0	186,670	\$0.00
2009 Bonds Complete 2029	\$224,227	\$0	186,670	\$0.00
WWTP First Payment 2026 FY24, 25, 26	\$1,588,373	\$0	186,670	\$0.00
ANNUAL DEBT PAYMENTS PRINCIPAL & INTEREST + NEW WWTP LOAN	\$2,177,460	\$0		\$0.00
ANNUAL O & M + DEBT	\$3,821,237	\$1,472,824		\$7.89
NON SALES INCOME	\$35,000	\$31,360		0.168
EQUIPMENT REPLACEMENT & RESERVE REQUIREMENTS	\$165,500	\$148,288		\$0.79
CAPITAL FUNDING	\$279,704	\$250,615		\$1.34
CAPITAL + EQUIPMENT	\$445,204	\$398,903		\$2.14
ADOPTED BUDGET	\$4,266,441	\$1,871,727	186,670	
		44%		
REVENUE COLLECTED CALCULATED RATES	\$4,231,441	\$1,840,367		
REVENUE COLLECTED CURRENT RATES	\$3,434,090			
CALCULATED RATE PER METER EQUIVALENT		RATE PER 1,000 GAL.		\$9.86
ANNUAL METER EQUIVALENTS / REUS COUNT 49,206		CURRENT RATES		\$9.53
ANTICIPATED EQUIVALENT GALLONS / UNITS 186,670		PERCENT INCREASE		3.5%
INVOICES PER YEAR 12		INCREASE OF		\$0.33

GRAND LEDGE SEWER

FINAL ANALYSIS RATE CALCULATION - CURRENT FISCAL YEAR	2024		RTS CHARGE		VOLUME CHARGE
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OPERATION & MAINTENANCE EXPENSES	\$1,643,777	\$170,953	\$3.47	\$1,472,824	\$7.890
DEBT - PRINCIPAL & INTEREST ANNUAL PAYMENTS					
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2019 Capital Improvement Bonds complete 2034	\$146,978	\$146,978	\$2.99	\$0	\$0.00
2009 Bonds Complete 2029	\$224,227	\$224,227	\$4.56	\$0	\$0.00
WWTP First Payment 2026 FY24, 25, 26	\$1,588,373	\$1,588,373	\$32.28	\$0	\$0.00
ANNUAL DEBT PAYMENTS PRINCIPAL & INTEREST + NEW WWTP LOAN	\$2,177,460	\$2,177,460	\$44.25	\$0	\$0.00
ANNUAL O & M + DEBT	\$3,821,237	\$2,348,413	\$47.73	\$1,472,824	\$7.89
NON SALES INCOME	\$35,000	\$3,640	0.074	\$31,360	0.168
EQUIPMENT REPLACEMENT & RESERVE REQUIREMENTS	\$165,500	\$17,212	\$0.35	\$148,288	\$0.79
CAPITAL FUNDING	\$279,704	\$29,089	\$0.59	\$250,615	\$1.34
CAPITAL + EQUIPMENT	\$445,204	\$46,301	\$0.94	\$398,903	\$2.14
ADOPTED BUDGET	\$4,266,441	\$2,394,714		\$1,871,727	
REVENUE COLLECTED CALCULATED RATES	\$4,231,441	\$2,391,074	56%	\$1,840,367	44%
REVENUE COLLECTED CURRENT RATES	\$3,434,090				
CALCULATED RATE PER METER EQUIVALENT		PER MONTH	\$48.59	RATE PER 1,000 GAL	\$9.86
ANNUAL METER EQUIVALENTS / REUS COUNT 49,206			\$31.83	CURRENT RATES PERCENT INCREASE OF	\$9.53
ANTICIPATED EQUIVALENT GALLONS / UNITS 186,670			52.7%		3.5%
INVOICES PER YEAR 12			\$16.76		\$0.33

NOTES

PERCENT RESERVE

10.4%

GRAND LEDGE SEWER SUMMARY

	Grand Ledge Sewer				Oneida Twp Sewer	
	CURRENT	NEW		DIFFERENCE	CURRENT	NEW
PER 1,000 GAL.	\$9.53	\$9.86		\$0.33	\$9.53	\$9.86
2024	CURRENT	NEW			CURRENT	NEW
METER SIZE IN INCHES	READY TO SERVE PER MONTH	READY TO SERVE PER MONTH	METER RATIO FACTOR - REU'S PER METER SIZE	DIFFERENCE PER MONTH	READY TO SERVE PER MONTH	READY TO SERVE PER MONTH
3/4	\$31.83	\$48.59	1.00	\$16.76	\$31.83	\$48.59
1	\$79.58	\$121.49	2.50	\$41.91	\$79.58	\$121.49
1 1/2	\$159.15	\$242.97	5.00	\$83.82	\$159.15	\$242.97
2	\$254.64	\$388.74	8.00	\$134.10	\$254.64	\$388.74
3	\$509.28	\$728.90	15.00	\$219.62	\$509.28	\$728.90
4	\$795.75	\$1,214.83	25.00	\$419.08	\$795.75	\$1,214.83
6	\$1,591.50	\$2,429.65	50.00	\$838.15	\$1,591.50	\$2,429.65
8	\$2,546.40	\$3,887.44	80.00	\$1,341.04	\$2,546.40	\$3,887.44

TYPICAL BILL - Utility	<i>NEW FIXED WATER</i> \$32.44	<i>OLD FIXED WATER</i> \$31.36
	<i>NEW COST 1,000 GAL WATER</i> \$6.11	<i>OLD COST 1,000 GAL WATER</i> \$5.90
MONTHLY	<i>NEW FIXED SEWER</i> \$48.59	<i>OLD FIXED SEWER</i> \$31.83
	<i>NEW COST 1,000 GAL SEWER</i> \$9.86	<i>OLD COST 1,000 GAL SEWER</i> \$9.53

SERVICE	GALLONS USED	VOLUME CHARGE	BASE RATE CHARGE	NEW BILL	OLD BILL	CHANGE IN BILL	PERCENT INCREASE
WATER	4,000	\$24.44	\$32.44	\$56.88	\$54.96	\$1.92	3.5%
SEWER	4,000	\$39.44	\$16.31	\$55.75	\$53.33	\$2.42	3.4%
New Wastewater Treatment Plant Facility Debt	4,000	\$0.00	\$32.28	\$32.28	\$16.62	\$15.66	94.2%
TOTAL	4,000	\$63.88	\$81.03	\$144.91	\$124.91	\$20.00	16.0%

QUESTIONS ?

THANK YOU!