



City of Montrose, Michigan

Water System Asset Management Program

Executive Summary

December 2017

The asset management program team consisted of the following people:

<u>Name</u>	<u>Position</u>	<u>Employer</u>
Sam Spence	DPW Supervisor	City of Montrose
Neil Rankin	City Manager	City of Montrose
Janet Loomis	Secretary	City of Montrose

This report contains the asset management program for the City of Montrose water system. The city's assets include 56,855 feet, or over 10 miles of water main, 107 fire hydrants, 156 main valves, and 633 curb stops. Our city's water is sourced from the Genesee County Water Distribution System (GCWDS). The city does not store or treat its water. The city currently has one backup well for emergency situations that is tested accordingly. We currently service an estimated population of 1,657 people. We are extremely lucky to receive our high quality water from the GCWDS.


City Manager


Water Superintendent

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HOME OF THE ANNUAL BLUEBERRY FESTIVAL

Asset inventory,-

The Director of Public Works will maintain and make changes to the file as needed. The inventory will be updated as system improvements are made. The file will be kept on the DPW garage computer as well as the shared drive with the city office.

The following assets are tracked:

Water mains, main valves, fire hydrants, water meters, and curb stops.

The City of Montrose does not employ any form of treatment. We receive our water from the Genesee County Water Distribution System (GCWDS), which is administered by the Genesee County Drain Commissioner (GCDC). This such water is now provided to the City of Montrose by the KWA pipeline.

The City of Montrose is currently working to budget in the upcoming fiscal year for a GIS system to properly locate and document all aspects of the water system. As well as the purchase of a powered valve exerciser from Municipal Supply Co. Then develop a program to track and document all such activities.

Montrose Water	UNITS OF WATER OR SEWAGE INVOICED TO CUSTOMERS												
	2013		2014		2015		2016		AVERAGE		MIN. YEAR	UNITS USED IN RATE EVALUATION	
	USAGE REPORTED IN	PERCENT OF TOTAL	USAGE REPORTED IN	PERCENT OF TOTAL	USAGE REPORTED IN	PERCENT OF TOTAL	USAGE REPORTED IN	PERCENT OF TOTAL	AVERAGE	MAX. YEAR			
Montrose Water	26,365,630	100.0%	27,093,640	100.0%	31,381,520	####	31,029,507	100.0%	28,967,574	31,381,520	26,365,630	25,838,317	
	0	0.0%		0.0%		0.0%		0.0%		-	-	0	
	0	0.0%		0.0%		0.0%		0.0%		-	-	0	
	0	0.0%		0.0%		0.0%		0.0%		-	-	0	
	0	0.0%		0.0%		0.0%		0.0%		-	-	0	
	0	0.0%		0.0%		0.0%		0.0%		-	-	0	
TOTALS	26,365,630		27,093,640		31,381,520		31,029,507		28,967,574	31,381,520	26,365,630	25,838,317	
											PERCENT OFF MINIMUM YEAR	2.00%	
											GALLONS OF REDUCTION		527,313
											GALLONS USED FOR EVALUATION		25,838,317

The Volumes listed above are only those gallons that are a revenue source.

The gallons listed above do not include any water NOT invoiced for winter "Let Runs"

The gallons listed above were generated by the City. The City takes full responsibility for the accuracy of these numbers.

This table shows the gallons of water / sewage invoiced to customers. The Township is showing a slight decrease in usage over the past three years. For purposes of this evaluation we used the lowest for each class. We also anticipated a reduction in usage of X % to follow the trend.

Rate evaluations must be based on a worst case scenario. Taking into account factors that could influence the amount of water sold or sewage invoiced, (which is based on water usage) These factors include;

A wet rainy summer will result in less outdoor activities and lawn sprinkling

Technology alone will account for a reduction in use per person, things like water efficient appliances, washing machines etc. and water efficient shower heads, toilets etc. will naturally reduce the water use per customer.

Loss of a major water user because of things like a fire or a business that chooses to relocate into another community, or just closes its doors can have an impact on gallons of water/sewer sold.

Montrose Water

UN-METERED CUSTOMERS

CALCULATING GALLONS TO ADD TO "GALLONS SOLD"

NUMBER OF UN-METERED CUSTOMERS

0

AVERAGE GALLONS USED PER CUSTOMER PER BILL

4200

IS THIS GALLONS PER MONTH OR PER QUARTER?

BILLING PERIODS PER YEAR

12

GALLONS PER YEAR ATTRIBUTED TO UNMETERED CUSTOMERS

-

THIS FIGURE SHOULD BE ADDED TO THE ANNUAL GALLONS INVOICED

NOTES

MICHIGAN RURAL WATER ASSOCIATION RATE EVALUATION PROGRAM

2017	RATE CLASS 1		RATE CLASS 2		RATE CLASS 3		RATE CLASS 4		RATE CLASS 5		RATE CLASS 6		ANNUAL EQUIVALENT REU'S (UNITS)
	NUMBER OF METERS	Montrose Water	NUMBER OF METERS	0	NUMBER OF METERS	0	NUMBER OF METERS	0	NUMBER OF METERS	0	NUMBER OF METERS	0	
METER SIZE - INCHES	633	0	0	0	0	0	0	0	0	0	0	0	0
5/8	633	0	0	0	0	0	0	0	0	0	0	0	0
1	13	0	0	0	0	0	0	0	0	0	0	0	0
1 1/4	6	0	0	0	0	0	0	0	0	0	0	0	0
1 1/2	4	0	0	0	0	0	0	0	0	0	0	0	0
2	7	0	0	0	0	0	0	0	0	0	0	0	0
3	4	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	667	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL EQUIVALENT ANNUAL REU'S												852	
PERCENT REDUCTION												0.00%	
REU REDUCTION PER BILLING CYCLE												0.0	
ANNUAL EQUIVALENT REU'S USED FOR RATE EVALUATION												0	

The table above list the number of water meters being invoiced for each size water meter for each entity being served.

NOTES

MICHIGAN RURAL WATER ASSOCIATION RATE EVALUATION PROGRAM

CURRENT RATE CHARGES		BASE RATE			
Customers Are Invoiced	MONTHLY PER	1,000 GALLONS			
ENTER THE CHARGES CURRENTLY ASSOCIATED WITH EACH ENTITY					
METER SIZE	CURRENT RATES	CURRENT RATES	CURRENT RATES	CURRENT RATES	CURRENT RATES
0	0	0	0	0	0
3/4	\$34.25				
1	\$34.25				
1 1/4					
1 1/2	\$171.25				
2	\$274.00				
3	\$513.75				
4					
6					
8					
10					

City of Montrose

Conclusion of Analysis

Cost per	Current Rates	Calculated Rates	Difference
1,000 gal	\$7.58		
Meter size- Inches	Current Rates	Calculated Rates	Difference
5/8	\$7.58		
1 1/2"	\$7.58		
2"	\$7.58		
3"	\$7.58		

WATER DISTRIBUTION SUMMARY

WATER DISTRIBUTION PIPE SUMMARY				
Pipe size	Feet of pipe	Percent of total	\$ per foot	Replacement cost
4	8,890	28%	\$170	\$151,300
6	24,280	42%	\$170	\$4,127,600
8	6,425	11%	\$170	\$1,092,250
10	20,902	37%	\$185	\$3,870,200
12	4,340	7%	\$200	\$933,100
TOTAL	56,855	100%		
				TOTAL
				\$10,174,450
				Overall cost per foot
				\$177

Current Year: 2017 Water Distribution Pipe Summary PERCENT BASED ON AGE			Estimated Life Span of Pipe		90
Date of Installation	Length	Age of pipe	Percent of total	Percent of life remaining	Percent of life consumed
2014	4,810	3	8%	95%	5%
2000	1,817	17	3%	81.1%	19%
1990	6,075	27	10%	70%	30%
1980	14,000	37	25%	58.9%	41%
1970	2,200	47	4%	47.8%	52%
1960	7,450	57	13%	36.7%	63%
1950	12,850	67	23%	25.6%	74%
1940	5,100	77	9%	14.4%	86%
1930	2,550	87	5%	3.3%	97%
TOTAL:	56,855		100%		

LEVELS OF SERVICE STATEMENT

Level of Service statement defines the way in which the utility stakeholders want the utility to perform over the long term. The Levels of Service plan below is a fundamental part of how the utility operates through the setting of practical goals for the City's water system.

<u>AREAS</u>	<u>GOALS/OBJECTIVES</u>	<u>LEVEL OF SERVICE</u>
Safe drinking water	All federal and state water quality regulations will be met	<ul style="list-style-type: none"> • Perform all required monitoring
Health and safety	To provide a safe and injury free work place	<ul style="list-style-type: none"> • Conduct regular safety meetings • No MIOSHA safety violations
Security	Secure all water installations from break ins/intrusions	<ul style="list-style-type: none"> • Name sure all water installations have two barriers of security
Operator certification	Must have operator in charge and back up operator on staff	<ul style="list-style-type: none"> • Department will consist of at least 2 operators • Operators will possess S-2, D-2 licensing, or we will be working toward them in less than 2 years
Customer complaints	To provide excellent customer service	<ul style="list-style-type: none"> • All customer complaints will be investigated within 2 business days of reporting the complaint
Upcoming regulatory changes	Be aware of regulatory changes and comply with changes as they occur	<ul style="list-style-type: none"> • Attend industry conferences and training sessions to stay abreast of changes and requirements • Request annual meeting with local MDEQ representative to ensure compliance
Response Time	To provide excellent customer service	<ul style="list-style-type: none"> • Customer emergency response time within 2 hours
Operating Reserves	Enough reserves to cover all anticipated major expenses and potential unexpected breakdowns	<ul style="list-style-type: none"> • Follow MDEQ asset management guidelines • Evaluate water rates every 3 hours
Alternative Power Source	Goals- all wells have a permanent generator or back up power or portable generator, generator service contract	<ul style="list-style-type: none"> • Annual inspections of generators by outside professionals • Keep building painted

		and clean
Quality drinking water	To provide high quality good tasting drinking water	<ul style="list-style-type: none"> • Flush water mains twice per year
Distribution System	Distribution system valves	<ul style="list-style-type: none"> • Exercise all water distribution valves on rotating 3 year program. To insure all valves are exercised every year. • Provide adequate manpower to perform valve exercise program • Have written documentation of valve exercising • Insure that 90% of valves function properly
	Fire Hydrants	<ul style="list-style-type: none"> • Insure that 100% of fire hydrants are in good working order
	Water main flushing	<ul style="list-style-type: none"> • Water mains will be flushed every 6 months • Provide adequate manpower to perform water main flushing • Have written documentation of water main/hydrant flushing • Under normal conditions pressures will be maintained between 30 and 40 psi
	General System Maintenance	<ul style="list-style-type: none"> • Insure water rates and budget are adequate to provide manpower to perform valve exercising, hydrant maintenance, water main flushing and replacement if necessary
	Water Loss will be maintained below 10%	<ul style="list-style-type: none"> • Meter replacement program was completed in 2014.

CITY OF MONTROSE

PROPRIETARY FUNDS

STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN FUND NET POSITION

Year Ended June 30, 2017

	<u>Sewer Fund</u>	<u>Water Fund</u>	<u>Total</u>
Operating revenues:			
Charges for services			
Sales	\$ 363,465	\$ 622,530	\$ 985,995
Penalties and fees	9,980	19,962	29,942
Other	-	13,040	13,040
Total operating revenues	<u>373,445</u>	<u>655,532</u>	<u>1,028,977</u>
Operating expenses:			
Salaries and fringe benefits	104,955	118,437	223,392
Supplies	5,009	12,376	17,385
Contracted services	26,445	28,728	55,173
Sewage treatment charges	149,631	-	149,631
Water purchases	-	304,011	304,011
Other services and charges	12,257	32,620	44,877
Depreciation	23,581	92,525	116,106
Total operating expenses	<u>321,878</u>	<u>588,697</u>	<u>910,575</u>
Operating income (loss)	<u>51,567</u>	<u>66,835</u>	<u>118,402</u>
Non-operating revenues (expenses):			
Interest income	858	1,118	1,976
Insurance recoveries	7,563	-	7,563
Interest expense	-	(26,508)	(26,508)
Net non-operating revenues (expenses)	<u>8,421</u>	<u>(25,390)</u>	<u>(16,969)</u>
Changes in fund net position	59,988	41,445	101,433
Net position, beginning of year	<u>597,856</u>	<u>1,637,243</u>	<u>2,235,099</u>
Net position, end of year	<u>\$ 657,844</u>	<u>\$ 1,678,688</u>	<u>\$ 2,336,532</u>

The accompanying notes are an integral part of these financial statements.

CITY OF MONTROSE

BUSINESS-TYPE ACTIVITIES

SCHEDULE OF INDEBTEDNESS, CONTINUED

June 30, 2017

2014B WATER REVENUE BOND, CONTINUED

<i>Fiscal</i> <i>Year Ended</i>	<i>Interest</i> <i>Rate</i>	<i>Interest due</i> <i>December 1</i>	<i>Principal due</i> <i>June 1</i>	<i>Interest due</i> <i>June 1</i>	<i>Total</i> <i>Annual</i> <i>Requirement</i>
2050	3.25%	423	4,000	423	4,846
2051	3.25%	358	4,000	358	4,716
2052	3.25%	293	4,000	293	4,586
2053	3.25%	228	4,000	228	4,456
2054	3.25%	163	10,000	163	10,326
		<u>\$ 37,591</u>	<u>\$ 98,000</u>	<u>\$ 37,591</u>	<u>\$ 173,182</u>

CITY OF MONTROSE

PROPRIETARY FUNDS

STATEMENT OF CASH FLOWS

Year Ended June 30, 2017

	<u>Sewer</u> <u>Fund</u>	<u>Water</u> <u>Fund</u>	<u>Total</u>
Cash flows from operating activities:			
Receipts from customers	\$ 375,137	\$ 656,037	\$ 1,031,174
Payments to and on behalf of employees	(86,467)	(100,129)	(186,596)
Payments to suppliers	(204,773)	(399,189)	(603,962)
Net cash provided (used) by operating activities	<u>83,897</u>	<u>156,719</u>	<u>240,616</u>
Cash flows from noncapital financing activities:			
Insurance recoveries	<u>7,563</u>	-	<u>7,563</u>
Cash flows from capital and related financing activities:			
Principal payments	-	(71,720)	(71,720)
Interest paid	-	(26,733)	(26,733)
Net cash used by capital related financing activities	<u>-</u>	<u>(98,453)</u>	<u>(98,453)</u>
Cash flows from investing activities:			
Interest received	<u>858</u>	<u>1,118</u>	<u>1,976</u>
Net increase in cash and cash equivalents	92,318	59,384	151,702
Cash, cash equivalents, and investments, beginning of year	<u>449,345</u>	<u>515,031</u>	<u>964,376</u>
Cash and cash equivalents, end of year	<u>\$ 541,663</u>	<u>\$ 574,415</u>	<u>\$ 1,116,078</u>
Reconciliation of operating income to net cash provided (used) by operating activities:			
Operating income	\$ 51,567	\$ 66,835	\$ 118,402
Adjustments:			
Depreciation	23,581	92,525	116,106
Change in assets and liabilities:			
Accounts receivable	1,692	505	2,197
Prepaid expenses	(160)	(624)	(784)
Accounts payable	(11,271)	(20,830)	(32,101)
Accrued expenses	(2,003)	(2,182)	(4,185)
Compensated absences payable	254	254	508
Net OPEB obligation	24,997	24,997	49,994
Net pension liability and related deferred outflows	<u>(4,760)</u>	<u>(4,761)</u>	<u>(9,521)</u>
Net cash provided (used) by operating activities	<u>\$ 83,897</u>	<u>\$ 156,719</u>	<u>\$ 240,616</u>

The accompanying notes are an integral part of these financial statements.

CITY OF MONTROSE

MANAGEMENT'S DISCUSSION AND ANALYSIS

June 30, 2017

The following table shows the comparison of the change in net position in a condensed format for the fiscal years ended June 30:

	<i>Governmental Activities</i>		<i>Business-type Activities</i>		<i>Total</i>	
	<i>2017</i>	<i>2016</i>	<i>2017</i>	<i>2016</i>	<i>2017</i>	<i>2016</i>
Revenues:						
Program revenues						
Charges for services	\$ 140,621	\$ 144,880	\$ 1,028,977	\$ 1,008,235	\$ 1,169,598	\$ 1,153,115
Operating grants	219,927	192,229	-	12,520	219,927	204,749
Capital grants	103,449	859	-	23,314	103,449	24,173
General revenues						
Property taxes	409,006	407,718	-	-	409,006	407,718
Franchise fees	27,421	16,489	-	-	27,421	16,489
State shared revenue	184,362	168,793	-	-	184,362	168,793
Investment earnings	927	3,529	1,976	4,293	2,903	7,822
Other	3,386	14,406	7,563	-	10,949	14,406
Total revenues	<u>1,089,099</u>	<u>948,903</u>	<u>1,038,516</u>	<u>1,048,362</u>	<u>2,127,615</u>	<u>1,997,265</u>
Program Expenses:						
General government	158,054	171,250	-	-	158,054	171,250
Public safety	370,571	407,586	-	-	370,571	407,586
Public works	359,326	403,396	-	-	359,326	403,396
Health and welfare	17,500	14,000	-	-	17,500	14,000
Community and economic development	769	2,445	-	-	769	2,445
Recreation and culture	19,215	18,906	-	-	19,215	18,906
Interest on long-term debt	13,021	15,702	-	-	13,021	15,702
Sewer	-	-	321,878	371,693	321,878	371,693
Water	-	-	615,205	612,177	615,205	612,177
Total program expenses	<u>938,456</u>	<u>1,033,285</u>	<u>937,083</u>	<u>983,870</u>	<u>1,875,539</u>	<u>2,017,155</u>
Increase (decrease) in net position before other	<u>150,643</u>	<u>(84,382)</u>	<u>101,433</u>	<u>64,492</u>	<u>252,076</u>	<u>(19,890)</u>
Other items:						
Disposal of capital assets	-	-	-	(4,125)	-	(4,125)
Change in net position	<u>150,643</u>	<u>(84,382)</u>	<u>101,433</u>	<u>60,367</u>	<u>252,076</u>	<u>(24,015)</u>
Net position, beginning of year	<u>881,500</u>	<u>965,882</u>	<u>2,235,099</u>	<u>2,174,732</u>	<u>3,116,599</u>	<u>3,140,614</u>
Net position, end of year	<u>\$ 1,032,143</u>	<u>\$ 881,500</u>	<u>\$ 2,336,532</u>	<u>\$ 2,235,099</u>	<u>\$ 3,368,675</u>	<u>\$ 3,116,599</u>

READY TO SERVE CHARGE
BASED ON WATER METER SIZE

CITY OF MONTROSE		
METER SIZE	NUMBER OF METERS	CURRENT \$ RATE PER MONTH
5/8"	633	\$34.25
1"	13	\$34.25
1.5"	6	\$171.25
2"	7	\$274.00
3"	4	\$513.75

City of Montrose**UNITS OF WATER INVOICED TO CUSTOMERS ANNUALLY**

Usage Reported In GALLONS
Usage Reported In FISCAL YEAR

	2012/2013	2013/2014	2014/2015	2015/2016
GALLONS INVOICED	26,365,630	27,093,640	31,381,520	31,029,507
CHARGE PER 1,000 GALLONS OF WATER	\$4.90	\$5.37	\$5.92	\$6.60
TOTAL WATER THROUGH METER STARTING FROM GALLON ZERO				

REU Table

Customer Name	# of REU's Charged
Forest Creek Apts	48
Beechtrail Apts	48
Montrose Manor	38
Montrose Country Est.	32
Larry Leonard	17
Warren Edwards	4
O'Guinn's Funeral Home	2
Rick Wilson	2
Anthony Grella	2
Uncle Matty's LLC	2
Montrose Tax & Acct.	2
Richard Woosley	2
(12 Customers)	Total
	199