

July 25, 2021

Ms. Karen R. Ervin Mr. Gary Morton City of Monroe 233 S. Main Street Monroe, OH 45050 Baker Tilly Municipal Advisors, LLC 8365 Keystone Crossing, Ste 300 Indianapolis, IN 46240 United States of America

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Dear Ms. Ervin and Mr. Morton:

The attached schedules (listed below) present unaudited and limited information for the purpose of discussion and consideration in the preliminary planning stage of a water rate analysis by the appropriate officers, officials and advisors of the City of Monroe Municipal Water Utility. The use of these schedules should be restricted to this purpose, for internal use only, as the information is subject to future revision and final report.

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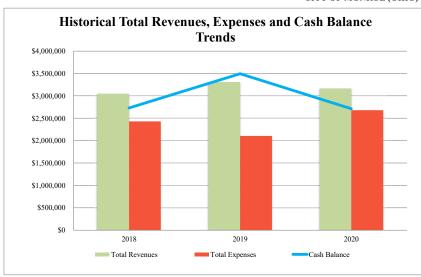
We would appreciate your questions or comments on this information and would provide additional information upon request.

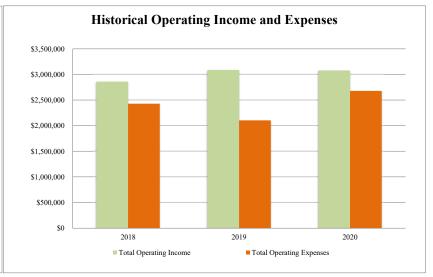
Very truly yours,

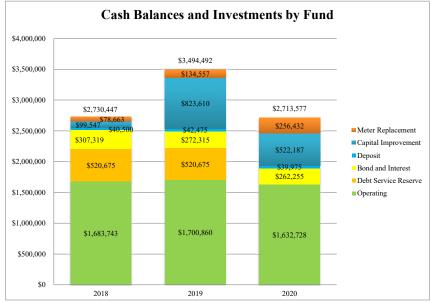
BAKER/TILLY MUNICIPAL ADVISORS, LLC

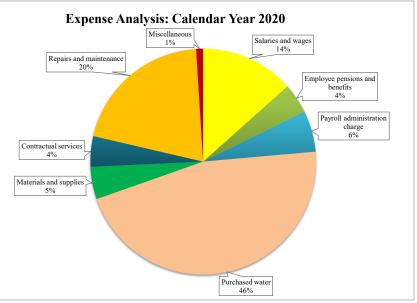
Douglas L. Baldessari, Partner

# CITY OF MONROE (OHIO) MUNICIPAL WATER UTILITY PRO FORMA FINANCIAL INFORMATION









#### PRO FORMA OPERATION AND MAINTENANCE EXPENSES

(For explanation of references, see pages 5 - 7) (Rounded to nearest \$100)

	12 Months Ended 12/31/20 (Unaudited)	Adjustments	Reference	Inflation (8)	Pro Forma
Salaries and wages	\$359,500	\$45,500	(1)	\$53,200	\$458,200
Employee pensions and benefits	114,900	12,400	(2)(3)	16,700	144,000
Payroll administration charge	158,400	(4,400)	(6)	-	154,000
Purchased water	1,232,800	(89,600)	(4)	100,500	1,243,700
Materials and supplies	124,400			16,400	140,800
Contractual services	117,400	7,900	(5)	16,500	141,800
Printing and advertising	5,800			800	6,600
Utilities	7,100			1,000	8,100
Repairs and maintenance	545,400	(285,500)	(7)	34,200	294,100
Miscellaneous	14,200			2,000	16,200
Totals	\$2,679,900	(\$313,700)		\$241,300	\$2,607,500

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#### PRO FORMA OPERATION AND MAINTENANCE EXPENSES

#### Adjustment (1) - Salaries and Wages

To adjust test year salaries and wages to reflect 26 pays and pro forma 2021 pay rates per utility management.

Pro forma salaries and wages Less test year expense	\$405,000 (359,500)
Adjustment	\$45,500
Adjustment (2) - Health Insurance	
To adjust test year health insurance expense for 2021 health insurance premiums.	
Pro forma health insurance Less test year amount	\$41,900 (35,400)
Adjustment	\$6,500
Adjustment (3) - OPERS	
To adjust test year OPERS expense for pro forma salaries and wages.	
Pro forma full-time salaries and wages Times 14.0%	\$405,000 14.0%
Sub-total Less test year expense	56,700 (50,800)
Adjustment	\$5,900

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(Cont'd)

(158,400)

(\$4,400)

#### PRO FORMA OPERATION AND MAINTENANCE EXPENSES

#### Adjustment (4) - Purchased Water Adjustment

To adjust the test year for an increase in purchased water costs. The reductions is due to the normalization for 13 payments in the test year.

Pro forma purchased water expense Less test year expense	\$1,143,200 (1,232,800)
Adjustment	(\$89,600)
Adjustment (5) - Rate Study Allowance	
To adjust test year administrative professional services for periodic rate study expense	S.
Rate study expenses Amortized over 5 years	\$39,500 5
Adjustment	\$7,900
Adjustment (6) - Payroll Administration Charge	
To adjust test year payroll administration charge to reflect the 2020 operating revenues	s.
2020 operating revenues Times 5.0%	\$3,079,600 5.0%
Pro forma amount	154,000

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Less test year expense

Adjustment

(Cont'd)

#### PRO FORMA OPERATION AND MAINTENANCE EXPENSES

#### Adjustment (7) - Tank Maintenance

To adjust test year to include an allowance for tank maintenance costs.

Annual allowance per consulting engineer	\$100,000
Less test year expense	(385,500)
Adjustment	(\$285,500)

#### Adjustment (8) - Inflation and Contingencies

To provide a 2.5% allowance for inflation and contingencies for 5 years for all expenses other than purchased water and payroll administration charge based on the three year historical average. An annual increase of 1.7% is assumed for purchased water based on the 10 year historical CPI increase.

#### PROPOSED CAPITAL IMPROVEMENT PLAN

(Per Utility Management) (Rounded to nearest \$100)

Description	2021	2022	2023	2024	2025	Total
Water Mains:						
Mason Rd - Gallaher to Gateway	\$1,260,000					\$1,260,000
East Avenue/Lebanon	165,000	\$1,155,000				1,320,000
Main St between Carson and Mason		90,000	\$630,000			720,000
Bridle Creek - Gallaher to Woodsdale			180,000	\$1,260,000		1,440,000
West: Yankee Rd-SR 63				255,000	\$1,785,000	2,040,000
Meter replacement - Residential	168,000	159,900	164,700	169,500	174,300	836,400
Allowance for future storage tank	100,000	100,000	100,000	100,000	100,000	500,000
Allowance for vehicles, equipment	83,300	85,000	86,700	88,400	90,200	433,600
Non-residential meter replacement fee	79,400	79,400	79,400	79,400	79,400	397,000
System development charges	(77,000)	(77,000)	(77,000)	(77,000)	(77,000)	(385,000)
Total proposed capital improvements	\$1,778,700	\$1,592,300	\$1,163,800	\$1,875,300	\$2,151,900	8,562,000
Amortization period			<u> </u>		<u> </u>	5
Annual Requirement (Rounded)						\$1,710,000
Assumed Loan, Bond and/or Grant Funding Alterna	ntives_					
Total proposed capital improvements						\$8,562,000
Less assumed loan, bond and/or grant funding						(5,500,000)
Sub-total						3,062,000
Amortization period						5
Annual Requirement (Rounded)						\$610,000

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(Cont'd)

#### PROPOSED CAPITAL IMPROVEMENT PLAN

(Per Utility Management) (Rounded to nearest \$100)

Description	2026	2027	2028	2029	2030	Total
Line extensions and replacements (1)	\$700,000	\$700,000	\$700,000	\$700,000	\$700,000	\$3,500,000
Yankee Road Elevated Storage Tank - 1MG (1)			2,900,000 (2)			2,900,000
Butler County Connection (1)				2,000,000		2,000,000
Meter replacement - Residential	179,100	183,900	181,600	181,500	181,500	907,600
Allowance for vehicles, equipment	92,000	93,800	95,700	97,600	99,600	478,700
Allowance for future storage tank	100,000	100,000				200,000
Non-residential meter replacement fee	79,400	79,400	79,400	79,400	79,400	397,000
System development charges	(77,000)	(77,000)	(77,000)	(77,000)	(77,000)	(385,000)
Total proposed capital improvements	\$1,073,500	\$1,080,100	\$3,879,700	\$2,981,500	\$983,500	\$9,998,300
Less assumed loan, grant or bond funding			(2,900,000)	(2,000,000)		(4,900,000)
Net funding requirement	\$1,073,500	\$1,080,100	\$979,700	\$981,500	\$983,500	5,098,300
Amortization period						5
Annual Requirement (Rounded)						\$1,020,000

<sup>(1)</sup> Additional projects for future consideration. Not currently impacting proposed rates.

<sup>(2)</sup> Shown net of \$100,000 annual funding (\$3,600,000 less \$700,000 of annual funding).

#### PRO FORMA ANNUAL REVENUE REQUIREMENTS AND ANNUAL REVENUES

(See explanation of references on page 11) (Rounded to nearest \$100)

#### Revenue Requirements:

Additional payroll administration charge (2)       33,900         Debt service:       373,200         Outstanding bonds (3)       373,200         Outstanding loan (4)       -         Proposed bonds (5)       312,500         Replacements and improvements (6)       610,000         Sub-total       3,937,100         Less interest income (7)       (18,000)         Less penalties (8)       (28,300)         Less other revenues (7)       (6,700)         Total Net Revenue Requirements       \$3,884,100         Annual Revenues:       8         Metered revenue (9)       \$2,625,800         Administration fee (7)       154,800         Non-residential meter replacement fee (10)       65,200         Total Annual Revenues       \$3,205,300         Total Additional Revenues Required       \$678,800         Total Revenue Requirement Increase       21.2%         Across-The-Board Resulting Monthly Water Bill       \$42.67         Resulting Increase In Monthly Water Bill       \$7.59         Cost of Service Rates Resulting Monthly Water Bill       \$43.56	Operation and maintenance (1)	\$2,607,500
Outstanding bonds (3)         373,200           Outstanding loan (4)         -           Proposed bonds (5)         312,500           Replacements and improvements (6)         610,000           Sub-total         3,937,100           Less interest income (7)         (18,000)           Less other revenues (8)         (28,300)           Less other revenues (7)         (6,700)           Total Net Revenue Requirements         \$3,884,100           Annual Revenues:         \$2,625,800           Metered revenue (9)         \$2,625,800           Administration fee (7)         359,500           Meter replacement fee (7)         154,800           Non-residential meter replacement fee (10)         65,200           Total Annual Revenues         \$3,205,300           Total Additional Revenues Required         \$678,800           Total Revenue Requirement Increase         21.2%           Across-The-Board Resulting Monthly Water Bill         \$42.67           Resulting Increase In Monthly Water Bill         \$7.59	- · · · · · · · · · · · · · · · · · · ·	33,900
Outstanding loan (4)         -           Proposed bonds (5)         312,500           Replacements and improvements (6)         610,000           Sub-total         3,937,100           Less interest income (7)         (18,000)           Less penalties (8)         (28,300)           Less other revenues (7)         (6,700)           Total Net Revenue Requirements         \$3,884,100           Annual Revenues:         Metered revenue (9)         \$2,625,800           Administration fee (7)         359,500           Meter replacement fee (7)         154,800           Non-residential meter replacement fee (10)         65,200           Total Annual Revenues         \$3,205,300           Total Additional Revenues Required         \$678,800           Total Revenue Requirement Increase         21.2%           Across-The-Board Resulting Monthly Water Bill         \$42.67           Resulting Increase In Monthly Water Bill         \$7.59		
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Replacements and improvements (6)         610,000           Sub-total         3,937,100           Less interest income (7)         (18,000)           Less penalties (8)         (28,300)           Less other revenues (7)         (6,700)           Total Net Revenue Requirements         \$3,884,100           Annual Revenues:         S2,625,800           Administration fee (7)         359,500           Meter replacement fee (7)         154,800           Non-residential meter replacement fee (10)         65,200           Total Annual Revenues         \$3,205,300           Total Additional Revenues Required         \$678,800           Total Revenue Requirement Increase         21.2%           Across-The-Board Resulting Monthly Water Bill         \$42.67           Resulting Increase In Monthly Water Bill         \$7.59		-
Sub-total       3,937,100         Less interest income (7)       (18,000)         Less penalties (8)       (28,300)         Less other revenues (7)       (6,700)         Total Net Revenue Requirements       \$3,884,100         Annual Revenues:       \$2,625,800         Metered revenue (9)       \$2,625,800         Administration fee (7)       154,800         Non-residential meter replacement fee (10)       65,200         Total Annual Revenues       \$3,205,300         Total Additional Revenues Required       \$678,800         Total Revenue Requirement Increase       21.2%         Across-The-Board Resulting Monthly Water Bill       \$42.67         Resulting Increase In Monthly Water Bill       \$7.59	1	312,500
Less interest income (7)       (18,000)         Less penalties (8)       (28,300)         Less other revenues (7)       (6,700)         Total Net Revenue Requirements       \$3,884,100         Annual Revenues:       S2,625,800         Metered revenue (9)       \$2,625,800         Administration fee (7)       154,800         Non-residential meter replacement fee (10)       65,200         Total Annual Revenues       \$3,205,300         Total Additional Revenues Required       \$678,800         Total Revenue Requirement Increase       21.2%         Across-The-Board Resulting Monthly Water Bill       \$42.67         Resulting Increase In Monthly Water Bill       \$7.59	Replacements and improvements (6)	610,000
Less penalties (8)       (28,300)         Less other revenues (7)       (6,700)         Total Net Revenue Requirements       \$3,884,100         Annual Revenues:       \$2,625,800         Metered revenue (9)       \$2,625,800         Administration fee (7)       359,500         Meter replacement fee (7)       154,800         Non-residential meter replacement fee (10)       65,200         Total Annual Revenues       \$3,205,300         Total Additional Revenues Required       \$678,800         Total Revenue Requirement Increase       21.2%         Across-The-Board Resulting Monthly Water Bill       \$42.67         Resulting Increase In Monthly Water Bill       \$7.59	Sub-total	3,937,100
Less other revenues (7)         (6,700)           Total Net Revenue Requirements         \$3,884,100           Annual Revenues:         \$2,625,800           Metered revenue (9)         \$2,625,800           Administration fee (7)         359,500           Meter replacement fee (7)         154,800           Non-residential meter replacement fee (10)         65,200           Total Annual Revenues         \$3,205,300           Total Additional Revenues Required         \$678,800           Total Revenue Requirement Increase         21.2%           Across-The-Board Resulting Monthly Water Bill         \$42.67           Resulting Increase In Monthly Water Bill         \$7.59	Less interest income (7)	(18,000)
Total Net Revenue Requirements  Annual Revenues:  Metered revenue (9) Administration fee (7) Meter replacement fee (7) Non-residential meter replacement fee (10)  Total Annual Revenues  Total Additional Revenues  S3,205,300  Total Additional Revenues Required  Total Revenue Requirement Increase  Across-The-Board Resulting Monthly Water Bill (Currently \$35.08 for 4,000 gallons per month for inside users)  \$3,884,100  \$2,625,800 \$359,500  154,800  \$32,625,800  \$32,625,800  \$32,05,200  \$32,05,200  \$32,05,200  \$40,000 \$57,800  \$42,67	Less penalties (8)	(28,300)
Annual Revenues:  Metered revenue (9) \$2,625,800 Administration fee (7) 359,500 Meter replacement fee (7) 154,800 Non-residential meter replacement fee (10) 65,200  Total Annual Revenues \$3,205,300  Total Additional Revenues Required \$678,800  Total Revenue Requirement Increase 21.2%  Across-The-Board Resulting Monthly Water Bill (Currently \$35.08 for 4,000 gallons per month for inside users) \$42.67	Less other revenues (7)	(6,700)
Metered revenue (9) Administration fee (7) Meter replacement fee (7) Non-residential meter replacement fee (10)  Total Annual Revenues  Total Additional Revenues Required  \$678,800  Total Revenue Requirement Increase  Across-The-Board Resulting Monthly Water Bill (Currently \$35.08 for 4,000 gallons per month for inside users)  \$7.59	Total Net Revenue Requirements	\$3,884,100
Administration fee (7) Meter replacement fee (7) Non-residential meter replacement fee (10)  Total Annual Revenues  Total Additional Revenues Required  \$678,800  Total Revenue Requirement Increase  Across-The-Board Resulting Monthly Water Bill (Currently \$35.08 for 4,000 gallons per month for inside users)  \$42.67  Resulting Increase In Monthly Water Bill  \$7.59	Annual Revenues:	
Meter replacement fee (7) Non-residential meter replacement fee (10)  Total Annual Revenues  \$3,205,300  Total Additional Revenues Required  \$678,800  Total Revenue Requirement Increase  Across-The-Board Resulting Monthly Water Bill (Currently \$35.08 for 4,000 gallons per month for inside users)  \$42.67  Resulting Increase In Monthly Water Bill  \$7.59	Metered revenue (9)	\$2,625,800
Non-residential meter replacement fee (10) 65,200  Total Annual Revenues \$3,205,300  Total Additional Revenues Required \$678,800  Total Revenue Requirement Increase 21.2%  Across-The-Board Resulting Monthly Water Bill (Currently \$35.08 for 4,000 gallons per month for inside users) \$42.67  Resulting Increase In Monthly Water Bill \$7.59	Administration fee (7)	359,500
Total Annual Revenues \$3,205,300  Total Additional Revenues Required \$678,800  Total Revenue Requirement Increase 21.2%  Across-The-Board Resulting Monthly Water Bill (Currently \$35.08 for 4,000 gallons per month for inside users) \$42.67  Resulting Increase In Monthly Water Bill \$7.59	Meter replacement fee (7)	154,800
Total Additional Revenues Required  \$678,800  Total Revenue Requirement Increase  Across-The-Board Resulting Monthly Water Bill (Currently \$35.08 for 4,000 gallons per month for inside users)  \$42.67  Resulting Increase In Monthly Water Bill  \$7.59	Non-residential meter replacement fee (10)	65,200
Total Revenue Requirement Increase  Across-The-Board Resulting Monthly Water Bill (Currently \$35.08 for 4,000 gallons per month for inside users)  Resulting Increase In Monthly Water Bill  \$7.59	Total Annual Revenues	\$3,205,300
Across-The-Board Resulting Monthly Water Bill (Currently \$35.08 for 4,000 gallons per month for inside users)  Resulting Increase In Monthly Water Bill  \$7.59	Total Additional Revenues Required	\$678,800
(Currently \$35.08 for 4,000 gallons per month for inside users)  Resulting Increase In Monthly Water Bill  \$7.59	Total Revenue Requirement Increase	21.2%
Resulting Increase In Monthly Water Bill \$7.59	Across-The-Board Resulting Monthly Water Bill	
	(Currently \$35.08 for 4,000 gallons per month for inside users)	\$42.67
Cost of Service Rates Resulting Monthly Water Bill \$43.56	Resulting Increase In Monthly Water Bill	\$7.59
	Cost of Service Rates Resulting Monthly Water Bill	\$43.56

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### PRO FORMA ANNUAL REVENUE REQUIREMENTS AND ANNUAL REVENUES (Explanation of References)

- (1) See Pro Forma Operation and Maintenance Expenses, pages 4 7.
- (2) To provide an allowance for the additional payroll administration charge resulting from the increase in operating revenues.
- (3) To provide an allowance for the average annual debt service on the outstanding 2020 bonds.
- (4) The outstanding loan of the water utility matures June 1, 2021.
- (5) Assumes a \$5.5 million WLSRA Loan amortized over 20 years.
- (6) Assume \$610,000 will be funded through rates and the remaining amount be funded with the proposed bond issue.
- (7) Assumed at test year amounts.
- (8) Assumed at the three year historical average.
- (9) Assumed at test year amount adjusted for assumed revenue growth of 30 customers per year for 5 years at average monthly usage.

Customers as of 12/31/20	4,531
Less: customers as of 12/31/13	(4,308)
Sub-total	223
Divided by 7 years	
Total	32
Rounded (use)	30
Number of additional annual bills	360
Times average bill for inside city users	\$36.82
Sub-total	13,255
Times 5 years	5
Adjustment	\$66,300

(10) Assumes the meter replacement fee will be billed to non-residential users.

### PRO FORMA ANNUAL REVENUE REQUIREMENTS AND ANNUAL REVENUES (See explanation of references on page 11)

### (Rounded to nearest \$100)

Revenue Requirements:	2021	Phase I 2022	Phase II 2023	Phase III 2024	Phase IV 2025
Operation and maintenance (1)	\$2,412,300	\$2,459,600	\$2,507,800	\$2,557,100	\$2,607,500
Additional payroll administration charge (2)	\$2,412,500	7,900	16,300	25,000	34,000
Debt service:	_	7,500	10,500	23,000	34,000
Outstanding bonds (3)	373,200	373,200	373,200	373,200	373,200
Outstanding loan (4)	373,200	373,200	373,200	373,200	373,200
Proposed bonds (5)	16,500	156,300	312,500	312,500	312,500
Replacements and improvements (6)	403,300	380,000	348,000	478,000	610,000
	,			,	
Sub-total	3,205,300	3,377,000	3,557,800	3,745,800	3,937,200
Less interest income (7)	(18,000)	(18,000)	(18,000)	(18,000)	(18,000)
Less penalties (8)	(28,300)	(28,300)	(28,300)	(28,300)	(28,300)
Less other revenues (7)	(6,700)	(6,700)	(6,700)	(6,700)	(6,700)
Total Net Revenue Requirements	\$3,152,300	\$3,324,000	\$3,504,800	\$3,692,800	\$3,884,200
Annual Revenues:					
Metered revenue (9)	\$2,572,800	\$2,586,100	\$2,599,400	\$2,612,700	\$2,625,800
Administration fee (7)	359,500	359,500	359,500	359,500	359,500
Meter replacement fee (7)	154,800	154,800	154,800	154,800	154,800
Non-residential meter replacement fee (10)	65,200	65,200	65,200	65,200	65,200
Additional revenues from prior phase increase			158,400	325,900	500,600
Total Annual Revenues	\$3,152,300	\$3,165,600	\$3,337,300	\$3,518,100	\$3,705,900
Total Additional Revenues Required	\$0	\$158,400	\$167,500	\$174,700	\$178,300
Across-The-Board Total Revenue Requirement Increase	0.0%	5.0%	5.0%	5.0%	5.0%
Resulting Monthly Water Bill* (Currently \$35.08 for 4,000 gallons per month for inside users)	\$35.08	\$36.84	\$38.68	\$40.66	\$42.67
Cost of Service Resulting Monthly Water Bill		\$37.19	\$39.30	\$41.46	\$43.56

#### Across-The-Board

#### SCHEDULE OF PRESENT AND PROPOSED RATES AND CHARGES

		Proposed			
	Present (1)	Phase I	Phase II	Phase III	Phase IV
		(2022)	(2023)	(2024)	(2025)
(A) Metered Rates (per 1,000 gallons):					
Inside City					
Less than 20,000 gallons	\$6.77	\$7.11	\$7.47	\$7.84	\$8.23
More than 20,000 gallons	7.84	8.23	8.64	9.07	9.52
Wille than 20,000 gallons	7.04	0.23	0.04	2.07	7.32
Outside City					
Less than 20,000 gallons	\$11.18	\$11.74	\$12.33	\$12.95	\$13.60
More than 20,000 gallons	12.95	13.60	14.28	14.99	15.74
(B) Monthly Administration Charge:					
Inside and Outside City					
5/8 - 3/4 inch	\$5.00	\$5.25	\$5.50	\$5.80	\$6.10
1 inch	26.25	27.55	28.95	30.40	31.95
1 1/2 inch	33.50	35.20	36.95	38.80	40.75
2 inch	38.00	39.90	41.90	44.00	46.20
3 inch	51.00	53.55	56.25	59.05	62.00
4 inch	87.50	91.90	96.50	101.35	106.45
6 inch	116.50	122.35	128.50	134.95	141.70
8 inch	145.75	153.05	160.70	168.75	177.20
10 inch	229.00	240.45	252.45	265.10	278.35
10 men	227.00	240.43	232.43	203.10	276.33
(C) Meter Replacement Fee					
Inside and Outside City					
5/8 - 3/4 inch	\$3.00	\$3.15	\$3.30	\$3.50	\$3.65
1 inch	ψ3.00	7.90	8.30	8.70	9.15
1 1/2 inch		15.75	16.55	17.40	18.25
2 inch		25.20	26.45	27.80	29.20
3 inch		47.25	49.60	52.10	54.75
4 inch		78.75	82.70	86.85	91.25
6 inch		157.50	165.40	173.70	182.50
		252.00	264.60	277.85	292.00
10 inch		362.25	380.35	399.40	419.75
(D) <u>UGN special rate per 1,000 gallons per month:</u>	<b>\$7.00</b>	05.24	0.5.61	0.5.00	06.45
All Flow	\$5.09	\$5.34	\$5.61	\$5.89	\$6.17
(E) <u>System Development Charge</u>					
Residential	\$1,637.00	\$1,637.00	\$1,637.00	\$1,637.00	\$1,637.00
Non-Residential					
5/8 - 3/4 inch	\$3,851.07	\$3,851.07	\$3,851.07	\$3,851.07	\$3,851.07
1 inch	4,492.91	4,492.91	4,492.91	4,492.91	4,492.91
1 1/2 inch	6,418.45	6,418.45	6,418.45	6,418.45	6,418.45
2 inch	12,836.89	12,836.89	12,836.89	12,836.89	12,836.89
3 inch	33,375.91	33,375.91	33,375.91	33,375.91	33,375.91
4 inch	51,347.56	51,347.56	51,347.56	51,347.56	51,347.56
6 inch	128,368.90	128,368.90	128,368.90	128,368.90	128,368.90
8 inch	192,553.35	192,553.35	192,553.35	192,553.35	192,553.35
	1,2,000.00	1,2,000.00	1,2,000.00	1,2,000.00	1,2,000.00

<sup>(1)</sup> Present rates and charges effective January 1, 2019, pursuant to Ordinance No. 2014-13 passed May 13, 2014.

# CONSUMER STUDY SUMMARY - INSIDE USERS (12 Months Ended 12/31/2020)

		Ad	dministration Fee		Usage Charge					
		Number of	Times		UGN Special	Under 20,000	Over 20,000			
		Bills	Rate	Revenues	Rate	Gallon Usage	Gallon Usage			
				_	(	1,000's Gallons	)			
5/8	inch meter	51,327	\$5.00	\$256,635	-	201,818	21,304			
3/4	inch meter	-	5.00	-	-	-	-			
1	inch meter	1,067	26.25	28,009	-	4,266	8,513			
1 1/2	inch meter	486	33.50	16,281	-	1,844	13,653			
2	inch meter	832	38.00	31,616	-	2,069	39,033			
3	inch meter	192	51.00	9,792	-	571	11,020			
4	inch meter	60	87.50	5,250	18,605	212	122			
6	inch meter	73	116.50	8,505	-	24	15,825			
8	inch meter	-	145.75	-	-	-	-			
10	inch meter		229.00	-						
Totals					18,605	210,804	109,470			
Times rat	te				\$5.09	\$6.77	\$7.84			
Test Year	r Totals	54,037	=	\$356,088	\$94,699	\$1,427,143	\$858,245			
Total Bil	ls						54,037			
Total Usa	age						338,879			
Total Cal	culated Revenues						\$2,736,175			

# CONSUMER STUDY SUMMARY - OUTSIDE USERS (12 Months Ended 12/31/2020)

		Ac	dministration Fee		Usage Charge			
		Number of	Times	_	Under 20,000	Over 20,000		
		Bills	Rate	Revenues	Gallon Usage	Gallon Usage		
					( 1,000's	Gallons)		
5/8	inch meter	389	\$5.00	\$1,945	1,366	14,755		
3/4	inch meter	-	5.00	- -	-	- -		
1	inch meter	12	26.25	315	84	103		
1 1/2	inch meter	-	33.50	-	-	-		
2	inch meter	-	38.00	-	-	-		
3	inch meter	-	51.00	-	-	-		
4	inch meter	-	87.50	-	-	-		
6	inch meter	-	116.50	-	-	-		
8	inch meter	-	145.75	-	-	-		
10	inch meter		229.00					
Totals					1,450	14,858		
Times rat	te				\$11.18	\$12.95		
Test Year	r Totals	401	:	\$2,260	\$16,211	\$192,411		
Total Bill	ls					401		
Total Usa	age					16,308		
Total Cal	culated Revenues					\$210,882		

# CONSUMER STUDY SUMMARY - ALL USERS (12 Months Ended 12/31/2020)

Total	Inside User Calculated Revenues		\$2,736,175				
Total	Outside User Calculated Revenues		210,882				
Total	Meter Replacement Fee Revenues (	1)	147,960				
Less ]	Billing Adjustments		(23,332)				
Total	Total Calculated Revenues						
Total	\$3,053,900						
Varia	nce	\$17,785					
Perce	ntage		0.58%				
(1)	Number of residential users Times 12 bills	4,110 12					
	Total annual bills Times \$3.00 fee	49,320 \$3.00					
	Total	\$147,960					

# CITY OF MONROE (OHIO) MUNICIPAL WATER UTILITY <u>CONSUMER ANALYSIS SUMMARY</u>

#### CALCULATION OF TEST YEAR EQUIVALENT METERS

(Based upon test year billings) (Inside Users)

Cost of service cu	stomer class	Normalized Annual Bills	Average Connections	Equivalency Factor	Equivalent Meters and Services	
Residential	Stomer class	Dilis	Connections	1 actor	Bervices	
5/8	inch meter	51,260 *	4,272	1.0	4,272	
1	inch meter	231	19	2.5	48	
1 1/2	inch meter	108	9	5.0	45	
2	inch meter	180	15	8.0	120	
Sub-totals		51,779	4,315		4,485	
Commercial						
5/8	inch meter	1,216	101	1.0	101	
1	inch meter	522	44	2.5	110	
1 1/2	inch meter	126	11	5.0	55	
2	inch meter	300	25	8.0	200	
3	inch meter	96	8	15.0	120	
4	inch meter	24	2	25.0	50	
6	inch meter	48	4	50.0	200	
Sub-totals		2,332	195		836	
Industrial						
5/8	inch meter	651	54	1.0	54	
1	inch meter	314	26	2.5	65	
1 1/2	inch meter	252	21	5.0	105	
2	inch meter	352	29	8.0	232	
3	inch meter	96	8	15.0	120	
4	inch meter	12	1	25.0	25	
6	inch meter	25	2	50.0	100	
Sub-totals		1,702	141		701	
UGN						
4	inch meter	24	2	25.0	50	
Total meter	red water billings	55,837	4,653		6,072	

<sup>\*</sup>Adjusted for growth of 30 customers per year for 5 years.

(Continued on next page)

(Cont'd)

#### CALCULATION OF TEST YEAR EQUIVALENT METERS

#### (Based upon test year billings) (Outside Users)

Cost of service cu Residential	stomer class	Normalized Annual Bills	Average Connections	Equivalency Factor	Equivalent Meters and Services
5/8			27	1.0	27
1	inch meter	12	1	2.5	3
Sub-totals		337	28		30
Commercial					
5/8	inch meter	64	5	1.0	5
Total meter	Total metered water billings		33		35

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(Cont'd)

# CALCULATION OF TEST YEAR EQUIVALENT METERS (Based upon test year billings)

Fire Protection		Annual Bills	Number of Connections		Equivalency Factor (1)	Equivalent Fire Connections
Private fire protect	ion					
Inside						
6 i	nch fire line	1,440	120		111.310	13,357.2
Public hydrants	- inside (2)		1,092	(3)	111.310	121,550.5
Public hydrants	- outside (2)		8	(3)	111.310	890.5
Totals		1,440	1,220	_		135,798.2

<sup>(1)</sup> Per M1 ed. 6, page 146.

<sup>(2)</sup> Per utility management. Allocated to inside and outside based on public fire equivalent meters.

<sup>(3)</sup> The 1,100 total public hydrants are allocated inside and outside based on the number of customers.

### TEST YEAR UNITS OF SERVICE Base-Extra Capacity Method

	Base	Maximum Day			Maximum Hour			Customer		Equivalent	
Customer	Normalized	Average	Capacity	Total	Extra	Capacity	Total	Extra	Equivalent		Fire
Class	Annual Sales	Day	Factor (3)	Capacity	Capacity (4)	Factor (3)	Capacity	Capacity (5)	Connections	Bills	Connections
	(1)	(2)	%	(2)	(2)	%	(2)	(2)			
Residential											
Inside	226,503.0 (6)	620.6	185	1,148.1	527.5	430	2,668.6	1,520.5	4,485	51,779	
Outside	1,696.0	4.6	185	8.5	3.9	430	19.8	11.3	30	337	
Commercial											
Inside	35,884.0	98.3	220	216.3	118.0	295	290.0	73.7	836	2,332	
Outside	14,612.0	40.0	220	88.0	48.0	295	118.0	30.0	5	64	
Industrial											
Inside	65,087.0	178.3	245	436.8	258.5	325	579.5	142.7	701	1,702	
UGN	18,605.0	51.0	180	91.8	40.8	210	107.1	15.3	50	24	
Fire Protection Outside				840.0	840.0 *	<b>k</b>	3,360.0	* 2,520.0			134,908 891
Totals	362,387.0	992.8		2,829.5	1,836.7		7,143.0	4,313.5	6,107	56,238	135,799

<sup>(1) 1,000&#</sup>x27;s of gallons.

<sup>(2) 1,000&#</sup>x27;s of gallons per day.

<sup>(3)</sup> Calculated based on test year usage data.

<sup>(4)</sup> Capacity in excess of average day usage.

<sup>(5)</sup> Capacity in excess of maximum day demand.

<sup>(6)</sup> Adjusted for assumed new customers added to the system assuming 30 customers per year for 5 years at 4,000 gallons per month.

<sup>\*</sup>Based on estimated fire requirement of 3,500 gallons per minute for a 4 hour duration.

### <u>ALLOCATION OF UTILITY PLANT TO FUNCTIONAL COST COMPONENTS</u> Base-Extra Capacity Method

			Extra C	apacity	Customer	Direct Fire						
			Maximum	Maximum	Meters and	Protection	Percentage Allocations					
	Total	Base	Day	Hour	Services	Service	BAS	MXD	MXH	CUS	FP	Ref.
Source of Supply Plant:												
Land and Land Rights	\$563,741	\$563,741					100.00%					(1)
Pumping Equipment	34,200	22,675	\$11,525				66.30%	33.70%				(2)
Treatment:												
Structure and Improvements	216,200	143,341	72,859				66.30%	33.70%				(2)
Machinery and Equipment	43,130	19,158	9,739	\$14,233			44.42%	22.58%	33.00%			(3)
Water Treatment Equipment	464,600	206,375	104,907	153,318			44.42%	22.58%	33.00%			(3)
Transmission and Distribution:												
Transmission and Distribution Mains												
Transmission*	5,312,261	3,522,029	1,790,232				66.30%	33.70%				(2)
Distribution*	5,312,261	2,359,706	1,199,509	1,753,046			44.42%	22.58%	33.00%			(3)
Distribution Reservoirs and Standpipe	354,495	35,450		283,595		\$35,450	10.00%		80.00%		10.00%	(4)
Meters and Meter Installs	793,561				\$793,561					100.00%		(5)
Hydrants	6,983					6,983					100.00%	(6)
Other Plant and Equipment	102,700	102,700					100.00%					(1)
General Plant:												
Structures and Improvements	203,014	107,252	49,028	33,883	12,201	650	52.83%	24.15%	16.69%	6.01%	0.32%	(7)
Communication Equipment	68,263	36,063	16,486	11,393	4,103	218	52.83%	24.15%	16.69%	6.01%	0.32%	(7)
Infrastructure	25,587	13,519	6,179	4,269	1,538	82	52.83%	24.15%	16.69%	6.01%	0.32%	(7)
Machinery and Equipment	98,311	51,938	23,742	16,408	5,908	315	52.83%	24.15%	16.69%	6.01%	0.32%	(7)
Miscellaneous Equipment	22,477	11,875	5,428	3,750	1,351	73	52.83%	24.15%	16.69%	6.01%	0.32%	(7)
Power Operated Equipment	2,136	1,128	516	356	128	8	52.83%	24.15%	16.69%	6.01%	0.32%	(7)
Office Furniture and Equipment	22,993	12,147	5,553	3,838	1,382	73	52.83%	24.15%	16.69%	6.01%	0.32%	(7)
Tools, Shop and Garage Equipment	8,730	4,612	2,108	1,456	525	29	52.83%	24.15%	16.69%	6.01%	0.32%	(7)
Transportation Equipment	337,082	178,081	81,405	56,258	20,259	1,079	52.83%	24.15%	16.69%	6.01%	0.32%	(7)
Less Accumulated Depreciation	(7,764,447)	(4,101,957)	(1,875,114)	(1,295,886)	(466,643)	(24,847)	52.83%	24.15%	16.69%	6.01%	0.32%	(7)
Net Utility Plant in Service	\$6,228,278	\$3,289,833	\$1,504,102	\$1,039,917	\$374,313	\$20,113	52.82%	24.15%	16.70%	6.01%	0.32%	

<sup>\*</sup>Assumes 50/50 split of transmission and distribution mains.

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## ALLOCATION OF UTILITY PLANT TO FUNCTIONAL COST COMPONENTS Base-Extra Capacity Method

(1) Allocated 100% to base.

(2) Allocated in ratio to maximum day demand.	Flow	Allocation
	(Gallons)	
Average day demand	992.8	66.30%
Maximum day excess capacity (Non coincidental adjusted)	504.7	33.70%
Totals	1,497.5	100.00%
(3) Allocated in ratio to maximum hour demand.	Flow	Allocation
	(Gallons)	
Average day demand	992.8	44.42%
Maximum day excess capacity (Non coincidental adjusted)	504.7	22.58%
Maximum hour excess capacity (Non coincidental adjusted)	737.6	33.00%
Totals	2,235.1	100.00%

- (4) Allocated 10% to base, 80% to maximum hour and 10% to fire protection per estimates.
- (5) Allocated 100% to customer meters and services.
- (6) Allocated 100% to direct fire protection.
- (7) Allocated pro rata to all other allocable utility plant.

### $\frac{\text{ALLOCATION OF PRO FORMA OPERATION AND MAINTENANCE EXPENSES}}{\text{TO FUNCTIONAL COST COMPONENTS}}$

Base-Extra Capacity Method

			Extra C	apacity	Custom	er Class	Direct Fire							
	Pro Forma		Maximum	Maximum	Meters and	Billing and	Protection			Percentage A	llocation			
	Expense	Base	Day	Hour	Services	Collecting	Service	BAS	MXD	MXH	MET	BILL	FP	Ref.
G : 14 G !! F	#200					#200						100.000/		(1)
Special Assessment Coll Fees	\$200	612.070	ØC 201	04.254	£1.607	\$200	600	50.660/	25.160/	17.140/	( (00/	100.00%	0.260/	(1)
Consultant Services	25,400	\$12,868	\$6,391	\$4,354	\$1,697		\$90	50.66%	25.16%	17.14%	6.68%		0.36%	(2)
Other Prof/Tech Services	24,700					24,700						100.00%		(1)
Service/Maintenance Agreements	1,800	912	453	309	120		6	50.66%	25.16%	17.14%	6.68%		0.36%	(1)
Dues/Fees/Subscriptions	15,800	8,004	3,975	2,708	1,055		58	50.66%	25.16%	17.14%	6.68%		0.36%	(2)
Testing Services	12,200	6,181	3,070	2,091	815		43	50.66%	25.16%	17.14%	6.68%		0.36%	(2)
Vehicle Repair	6,000	3,040	1,510	1,028	401		21	50.66%	25.16%	17.14%	6.68%		0.36%	(2)
Property Repair	600	304	151	103	40		2	50.66%	25.16%	17.14%	6.68%		0.36%	(2)
Equipment Repair	6,000	3,040	1,510	1,028	401		21	50.66%	25.16%	17.14%	6.68%		0.36%	(2)
Fleet Leasing & Maintenance	26,600	13,476	6,693	4,559	1,777		95	50.66%	25.16%	17.14%	6.68%		0.36%	(2)
Printing Services	5,000					5,000						100.00%		(1)
Postage	25,900					25,900						100.00%		(1)
Advertising	1,600	811	403	274	107		5	50.66%	25.16%	17.14%	6.68%		0.36%	(2)
Fuel	6,600	3,344	1,661	1,131	441		23	50.66%	25.16%	17.14%	6.68%		0.36%	(2)
Water Contract - Butler	1,243,700	1,243,700					0	100.00%						(3)
Tools and Minor Equipment	15,200	7,700	3,824	2,605	1,015		56	50.66%	25.16%	17.14%	6.68%		0.36%	(2)
Operating Supplies/Materials	87,100	44,125	21,914	14,929	5,818		314	50.66%	25.16%	17.14%	6.68%		0.36%	(2)
Uniforms	4,600	2,330	1,157	788	307		18	50.66%	25.16%	17.14%	6.68%		0.36%	(2)
Gas and Electric	7,700	3,534	1,756	1,198	466	721	25	45.90%	22.80%	15.56%	6.05%	9.36%	0.33%	(4)
Water	300	138	68	47	18	28	1	45.90%	22.80%	15.56%	6.05%	9.36%	0.33%	(4)
Full Time Wages	442,200	202,970	100,822	68,806	26,753	41,390	1,459	45.90%	22.80%	15.56%	6.05%	9.36%	0.33%	(4)
Payroll Administration Charge	154,000	70,686	35,112	23,962	9,317	14,414	509	45.90%	22.80%	15.56%	6.05%	9.36%	0.33%	(4)
Overtime Wages	15,500	7,115	3,534	2,412	938	1,451	50	45.90%	22.80%	15.56%	6.05%	9.36%	0.33%	(4)
Acting Shift Supervisor	500	230	114	78	30	46	2	45.90%	22.80%	15.56%	6.05%	9.36%	0.33%	(4)
Full Time OPERS	64,200	29,468	14,638	9,990	3,884	6.009	211	45.90%	22.80%	15.56%	6.05%	9.36%	0.33%	(4)
Ft Medicare	5,700	2,616	1,300	887	345	534	18	45.90%	22.80%	15.56%	6.05%	9.36%	0.33%	(4)
Health Insurance	47,400	21,757	10.807	7,375	2,868	4.437	156	45.90%	22.80%	15.56%	6.05%	9.36%	0.33%	(4)
Dental Insurance	4,400	2.020	1.003	685	2,666	4,437	14	45.90%	22.80%	15.56%	6.05%	9.36%	0.33%	(4)
Life Insurance	1,900	2,020 872	433	296	115	178	6	45.90%	22.80%	15.56%	6.05%	9.36%	0.33%	
						178	5							(4)
Vision Insurance	1,700	780 689	388 342	265 233	103 91	139	5	45.90%	22.80%	15.56%	6.05%	9.36%	0.33%	(4)
Unemployment Compensation	1,500						-	45.90%	22.80%	15.56%	6.05%	9.36%		(4)
Uniform Allowance	1,800	826	410	280	109	168	7	45.90%	22.80%	15.56%	6.05%	9.36%	0.33%	(4)
HSA Contribution	14,300	6,564	3,260	2,225	865	1,338	48	45.90%	22.80%	15.56%	6.05%	9.36%	0.33%	(4)
Training/Seminar Fee	1,100	557	277	189	73		4	50.66%	25.16%	17.14%	6.68%		0.36%	(2)
Travel/Transportation	400					400						100.00%		(1)
Service/Maintenance Agreements	18,400	9,321	4,629	3,154	1,229		67	50.66%	25.16%	17.14%	6.68%		0.36%	(2)
Consultant Services	77,600	39,312	19,524	13,301	5,184		279	50.66%	25.16%	17.14%	6.68%		0.36%	(2)
Equipment Maintenance	113,100	57,296	28,456	19,385	7,555		408	50.66%	25.16%	17.14%	6.68%		0.36%	(2)
Operating Supplies/Materials	1,300	659	327	223	87		4	50.66%	25.16%	17.14%	6.68%		0.36%	(2)
Vehicles	108,400	54,915	27,273	18,580	7,241		391	50.66%	25.16%	17.14%	6.68%		0.36%	(2)
Furniture/Fixtures/Equipment	15,100	7,650	3,799	2,588	1,009		54	50.66%	25.16%	17.14%	6.68%		0.36%	(2)
Total operating expenses	2,607,500	1,869,810	310,984	212,066	82,540	127,625	4,475							
Additional payroll administration charge	33,900	15,560	7,729	5,275	2,051	3,173	113	45.90%	22.80%	15.56%	6.05%	9.36%	0.33%	(4)
Less interest income	(18,000)	(12,908)	(2,147)	(1,463)	(571)	(880)	(31)	71.71%	11.93%	8.13%	3.17%	4.89%	0.17%	(5)
Less penalties	(28,300)	(20,294)	(3,376)	(2,301)	(897)	(1,384)	(48)	71.71%	11.93%	8.13%	3.17%	4.89%	0.17%	(5)
Less other revenues	(6,700)	(4,805)	(799)	(545)	(212)	(328)	(11)	71.71%	11.93%	8.13%	3.17%	4.89%	0.17%	(5)
Total net operating expenses	\$2,588,400	\$1,847,363	\$312,391	\$213,032	\$82,911	\$128,206	\$4,498	71.38%	12.07%	8.23%	3.20%	4.95%	0.17%	

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#### **ALLOCATION OF PRO FORMA OPERATION AND MAINTENANCE EXPENSES** TO FUNCTIONAL COST COMPONENTS

**Base-Extra Capacity Method** 

- (1) Allocated 100% to billing and collection.
- (2) Allocated pro rata based on the allocation of total transmission and distribution plant.

	Transmission and	
	Distribution Plant	<u>%</u>
Average day demand	\$6,019,885	50.66%
Maximum day excess capacity	2,989,741	25.16%
Maximum hour excess capacity	2,036,641	17.14%
Meters and services	793,561	6.68%
Direct fire protection	42,433	0.36%
Totals	\$11,882,261	100.00%

- (3) Allocated 100% to base.
- (4) Allocated pro rata based on total operating expenses less purchased water.
- (5) Allocated pro rata based on total functionalized operating expenses.

#### <u>UNIT COSTS OF SERVICE</u> (12 Months Ended 12/31/2020)

	Net	Allocable To All Customers							
	Pro Forma		Extra C	apacity	Customer Costs		Direct Fire		
	Revenue		Maximum	Maximum	Meters and	Billing and	Protection		
	Requirements	Base	Day	Hour	Services	Collection	Service	Ref	
		$\overline{(1,000\text{'s of gallons})}$			Equiv.	Bills	Equiv.		
<u>Units of Service</u>					Meters		Connections		
Inside		346,079.0	1,784.8	4,272.2	6,072	55,837	134,908	(1)	
Outside		16,308.0	51.9	41.3	35	401	891	(1)	
Total system		362,387.0	1,836.7	4,313.5	6,107	56,238	135,799		
Pro Forma Cost of Service									
Net operation and maintenance expense									
and additional payroll administration charge	\$2,588,400	\$1,847,362	\$312,391	\$213,032	\$82,911	\$128,206	\$4,498	(2)	
Debt service	685,700	362,188	165,597	114,512	41,211		2,192	(3)	
Replacements and improvements	610,000	322,202	147,315	101,870	36,661		1,952	(3)	
Outside city surcharge	(80,758)	(57,646)	(9,747)	(6,646)	(2,584)	(3,998)	(137)	(2)	
Meter replacement fee	(267,700)	(141,398)	(64,650)	(44,706)	(16,089)		(857)	(3)	
Net cost of service	\$3,535,642	\$2,332,708	\$550,906	\$378,062	\$142,110	\$124,208	\$7,648		
Total unit cost of service									
Inside		\$6.4371	\$299.9434	\$87.6462	\$23.2700	\$2.2086	\$0.0563		
Outside		\$10.6212	\$494.9066	\$144.6162	\$23.2700	\$2.2086	\$0.0929		

<sup>(1)</sup> As presented on pages 17 - 20.

<sup>(2)</sup> See pages 23 - 24.

<sup>(3)</sup> Allocated in ratio to plant values, see page 21.

#### COST OF SERVICE ALLOCATED TO CUSTOMER CLASS

(12 Months Ended 12/31/2020)

		Allocable To Inside Customers					
	Total		Extra C	Extra Capacity		Customer Costs	
	Costs of		Maximum	Maximum	Meters and	Billing and	Protection
	Service	Base	Day	Hour	Services	Collection	Service
		(]	,000's of Gallons	s)	Equiv.	Bills	Equiv
		`		,	Meters		Connections
Unit Costs of Service (1)		\$6.4371	\$299.9434	\$87.6462	\$23.2700	\$2.2086	\$0.0563
Allocated Costs of Service							
Residential:							
Units of service (2)		226,503	528	1,521	4,485	51,779	
Cost	\$1,968,233	\$1,458,022	\$158,220	\$133,266	\$104,366	\$114,359	
Commercial:							
Units of service (2)		35,884	118	74	836	2,332	
Cost	297,446	230,989	35,393	6,460	19,454	5,150	
Industrial:							
Units of service (2)		65,087	259	143	701	1,702	
Cost	529,085	418,972	77,535	12,507	16,312	3,759	
UGN							
Units of service (2)		18,605.0	40.8	15.3	50	24	
Cost	134,558	\$119,762	\$12,238	\$1,341	\$1,164	\$53	
Fire Protection:							
Units of service			840	2,520			134,908
Cost	480,415		251,952	220,868			\$7,595
Total allocated cost of service	\$3,409,737	\$2,227,745	\$535,338	\$374,442	\$141,296	\$123,321	\$7,595

<sup>(1)</sup> See page 25.

(Continued on next page)

<sup>(2)</sup> See page 20.

(Cont'd)

### COST OF SERVICE ALLOCATED TO CUSTOMER CLASS (12 Months Ended 12/31/2020)

		Allocable To Outside Customers					
	Total		Extra C	apacity	Customer Costs		Direct Fire
	Costs of		Maximum	Maximum	Meters and	Billing and	Protection
	Service	Base	Day	Hour	Services	Collection	Service
		(1	,000's of Gallon	s)	Equiv.	Bills	Equiv
					Meters		Connections
Unit Costs of Service (1)		\$10.6212	\$494.9066	\$144.6162	\$23.2700	\$2.2086	\$0.0929
Allocated Costs of Service							
Residential:							
Units of service (2)		1,696.0	3.9	11.3	30	337	
Cost	\$23,020	\$18,014	\$1,930	\$1,634	\$698	\$744	
Commercial:							
Units of service (2)		14,612.0	48.0	30.0	5	64	
Cost	183,560	155,197	23,756	4,350	116	141	
Fire Protection:							
Units of service			-	-			891
Cost	83						\$83
Total allocated cost of service	\$206,663	\$173,211	\$25,686	\$5,984	\$814	\$885	\$83

<sup>(1)</sup> See page 25.

<sup>(2)</sup> See page 20.

# <u>CALCULATION OF PROPOSED MONTHLY SERVICE CHARGES</u> (All Users)

	5/8 inch Equivalency	Meter Cost Per	Meter Cost	Billing Cost		
Meter Size	Factor	Equiv. Unit (1)	Per Unit	Per Unit (2)	Total	Rounded
5/8-3/4 inch meter	1.0	\$1.9392	\$1.9392	\$2.2086	¢4 1470	¢1 15
	_	•	,	·	\$4.1478	\$4.15
1 inch meter	2.5	1.9392	4.8479	2.2086	7.0565	7.10
1 1/2 inch meter	5.0	1.9392	9.6958	2.2086	11.9044	11.95
2 inch meter	8.0	1.9392	15.5133	2.2086	17.7219	17.70
3 inch meter	15.0	1.9392	29.0875	2.2086	31.2961	31.25
4 inch meter	25.0	1.9392	48.4792	2.2086	50.6878	50.70
6 inch meter	50.0	1.9392	96.9583	2.2086	99.1669	99.20
8 inch meter	80.0	1.9392	155.1333	2.2086	157.3419	157.35
10 inch meter	115.0	1.9392	223.0042	2.2086	225.2128	225.25
12 inch meter	215.0	1.9392	416.9208	2.2086	419.1294	419.15

#### (1) Calculated as follows:

Annual charge per equivalent meter (page 25)	\$23.2700
Divided by 12 months	12
Monthly charge per equivalent meter	\$1.9392

(2) See page 25

### <u>ALLOCATION OF FIRE SERVICE COSTS TO PUBLIC AND PRIVATE FIRE SERVICE</u> Base-Extra Capacity Method

	Number of Services	Demand Factor	Equivalent Connections	Percentage Allocation	Allocation	Total Fire Protection
Public Fire Service						
Public Hydrants (inside) Public Hydrants (outside) Direct Fire Protection (inside) Direct Fire Protection (outside)	1,092 8	111.31 111.31	121,551 890	90.16% 0.00%	\$426,314 -	\$426,314 - 7,595 83
Total Public Fire Protection						433,992 *
Private Fire Service						
Size of Connections (inside) 6 inch connection	120	111.31	13,357	9.84%	46,506	
Total Private Fire Protection						46,506
Total	1,220		135,798	100.00%	\$472,820	\$480,498

<sup>\*</sup>Allocated back to flow rate.

# <u>CALCULATION OF FIRE PROTECTION CHARGES BASED UPON</u> <u>ALLOCATED COST OF SERVICE</u>

#### Automatic Sprinkler Charges:

	Size of	Equivalency	Rate per Equivalent	Adjusted
	Connection	Ratio*	Connection	Rates
1	inch connection	1.00	\$3.50	\$3.50
2	inch connection	6.19	3.50	21.67
3	inch connection	17.98	3.50	62.93
4	inch connection	38.32	3.50	134.12
6	inch connection	111.31	3.50	389.59
8	inch connection	237.21	3.50	830.24
10	inch connection	426.58	3.50	1,493.03
12	inch connection	689.04	3.50	2,411.64
Priv	rate hydrants	111.31	3.50	389.59
* P	er M1 Sixth Edition, page 14	6.		
Fire	Hydrants			

#### Fire Hydrants

Total costs to be recovered from private fire protection, see page 29 Divide by equivalent connections, see pages 29				
Annual charge per equivalent connection	\$3.48			
Use (Rounded)	\$3.50			

#### **CALCULATION OF EQUIVALENT CONNECTIONS**

			Total Annual
Meter Size	Total Annual Bills (1)	Ratio to 5/8" Meter	<b>Equivalent Connections</b>
6"	1,100	50.0	55,000.0

<sup>(1)</sup> See page 29.

<sup>(2)</sup> Public fire protection will not be charged and will get reallocated to flow rates. This schedule is for illustrative purposes only.

#### **CALCULATION OF METER REPLACEMENT FEE**

		Non-Residential		Annual
	_	Bills Test Year	Monthly Rate	Revenues
5/8 - 3/4	inch	1,931	\$3.65	\$7,048.15
1	inch	1,079	9.15	9,872.85
1 1/2	inch	486	18.25	8,869.50
2	inch	832	29.20	24,294.40
3	inch	192	54.75	10,512.00
4	inch	60	91.25	5,475.00
6	inch	73	182.50	13,322.50
8	inch	0	292.00	0.00
10	inch	0	419.75	0.00
	Sub-totals	4,653		\$79,394.40
	_	Residential Bills Test Year	Monthly Rate	Annual Revenues
5/8 - 3/4	inch _	51,585	\$3.65	\$188,285.25
	Totals	56,238		\$267,679.65

### PRO FORMA ANNUAL OPERATING REVENUE AT ADJUSTED RATES AND CHARGES BASED UPON ALLOCATED COST OF SERVICE

	Percent of Use	Billing Deter	Normalized Annual Bills	Allocated Cost of Service Rates	Pro Forma Revenue Under Adjusted Rates
D 11 (11 T 11		(1,000's of Gallons	·)		
Residential - Inside:					
Base Charge: 5/8 inch meter			51,260	\$4.15	\$212,729
1 inch meter			231	7.10	1,640
1 1/2 inch meter			108	11.95	1,040
2 inch meter			180	17.70	3,186
Volume Charge Per 1,000 Gallons:			100	17.70	3,100
Under 20	91.50%	207,264	*	8.94	1,852,940
Over 20	8.50%	19,263		9.10	175,293
Over 20	0.5070	17,203		7.10	175,275
Sub-totals	100.00%	226,527	51,779		2,247,079
Commercial - Inside:					
Base Charge:					
5/8 inch meter			1,216	4.15	5,046
1 inch meter			522	7.10	3,706
1 1/2 inch meter			126	11.95	1,506
2 inch meter			300	17.70	5,310
3 inch meter			96	31.25	3,000
4 inch meter			24	50.70	1,217
6 inch meter			48	99.20	4,762
Volume Charge Per 1,000 Gallons:					
Under 20	15.49%	5,560		8.94	49,706
Over 20	84.51%	30,324		9.10	275,948
Sub-totals	100.00%	35,884	2,332		350,201
Sub-totals carried forward to next	page	262,411	54,111		\$2,597,280

<sup>\*</sup> Adjusted for assumed growth of 30 users per year for 5 years at 4,000 gallons per month.

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### PRO FORMA ANNUAL OPERATING REVENUE AT ADJUSTED RATES AND CHARGES BASED UPON ALLOCATED COST OF SERVICE

		Percent of Use	Billing Det Annual Consumption	Normalized Annual Bills	Allocated Cost of Service Rates	Pro Forma Revenue Under Adjusted Rates
	_		1,000's of Gallon		Service Itales	Ttates
Industrial -	Inside:		,	-,		
Base Cha	arge:					
5/8	inch meter			651	\$4.15	\$2,702
1	inch meter			314	7.10	2,229
1 1/2	inch meter			252	11.95	3,011
2	inch meter			352	17.70	6,230
3	inch meter			96	31.25	3,000
4	inch meter			12	50.70	608
6	inch meter			25	99.20	2,480
Volume (	Charge Per 1,000 Gallons:					
Under	20	7.97%	5,184		8.94	46,345
Over	20	92.03%	59,883		9.10	544,935
Sub-tot	als	100.00%	65,067	1,702		611,540
UGN - Spec	rial Rate:					
Base Cha	arge:					
4	inch meter			24	50.70	1,217
Volume (	Charge Per 1,000 Gallons:					
Under	20	0.00%	-		6.17 *	-
Over	20	100.00%	18,605		6.17 *	114,793
Sub-tot	als	100.00%	18,605	24		116,010
Sub-tot	als carried forward to next p	age	83,672	1,726		\$727,550

<sup>\*</sup>The proposed UGN rate assumes a flat percentage increase to the current special rate based on the Revenue Requirements. See page 10.

(Continued on next page)

(Cont'd)

### PRO FORMA ANNUAL OPERATING REVENUE AT ADJUSTED RATES AND CHARGES BASED UPON ALLOCATED COST OF SERVICE

			Billing Det	terminants	Allocated	Pro Forma Revenue
		Percent	Annual	Normalized	Cost of	Under Adjusted
		of Use	Consumption	Annual Bills	Service Rates	Rates
Residential - O	utside:	(1	1,000's of Gallon	s)		
Base Charge	<b>:</b> :					
5/8	inch meter			325	\$4.15	\$1,349
1	inch meter			12	7.10	85
Volume Cha	arge Per 1,000 Gallons:					
Under	20	82.48%	1,398		14.75	20,621
Over	20	17.52%	297		15.02	4,461
Sub-totals		100.00%	1,695	337		26,516
Commercial - C	Outside:					
Base Charge	2:					
5/8	inch meter			64	4.15	266
Volume Cha	arge Per 1,000 Gallons:					
Under	20	0.35%	51		14.75	752
Over	20	99.65%	14,560		15.02	218,691
Sub-totals		100.00%	14,611	64		219,709
Sub-totals	carried forward to next pag	ge	16,306	401		\$246,225

(Continued on next page)

(Cont'd)

### PRO FORMA ANNUAL OPERATING REVENUE AT ADJUSTED RATES AND CHARGES BASED UPON ALLOCATED COST OF SERVICE

	Percent of Use	Billing Determined Annual Consumption (1,000's of Gallons)	Normalized Annual Bills	Allocated Cost of Service Rates	Pro Forma Revenue Under Adjusted Rates
Fire Protection:		(1,000 3 of Gallons)			
Private sprinklers 6" fire line			120	389.59	46,751
Meter Replacement Fees					267,700
Totals		362,389	56,358		\$3,885,506
Control					\$3,884,100
Variance					\$1,406
Variance percentage					0.04%

# COMPARISON OF ALLOCATED COST OF SERVICE WITH REVENUE UNDER ADJUSTED RATES

		Normalized					
	Revenue				Revenue	Variance Between Adjusted Revenues	
	Under			Under			
	Cost of	Existing	Increase (Decrease)		Adjusted	and Cost of Service	
Customer Classification	Service	Rates	%	Amount	Rates	%	Amount
Inside:							
Residential	\$2,241,101	\$1,816,716	23.36%	\$424,385	\$2,247,079	0.27%	\$5,978
Commercial	344,877	315,880	9.18%	28,997	350,201	1.54%	5,324
Industrial	611,102	546,274	11.87%	64,828	611,540	0.07%	438
UGN	134,558	94,699	42.09%	39,859	116,010	-13.78%	(18,548)
Outside:							
Residential	26,231	21,422	22.45%	4,809	26,516	1.09%	285
Commercial	212,027	189,454	11.91%	22,573	219,709	3.62%	7,682
Fire Protection - Private							
Inside	46,506		100.00%	46,506	46,751	0.53%	245
Totals	\$3,616,402	\$2,984,445	21.18%	\$631,957	\$3,617,806	0.04%	\$1,404

#### **Phase IV**

#### **CUSTOMER BILL IMPACT**

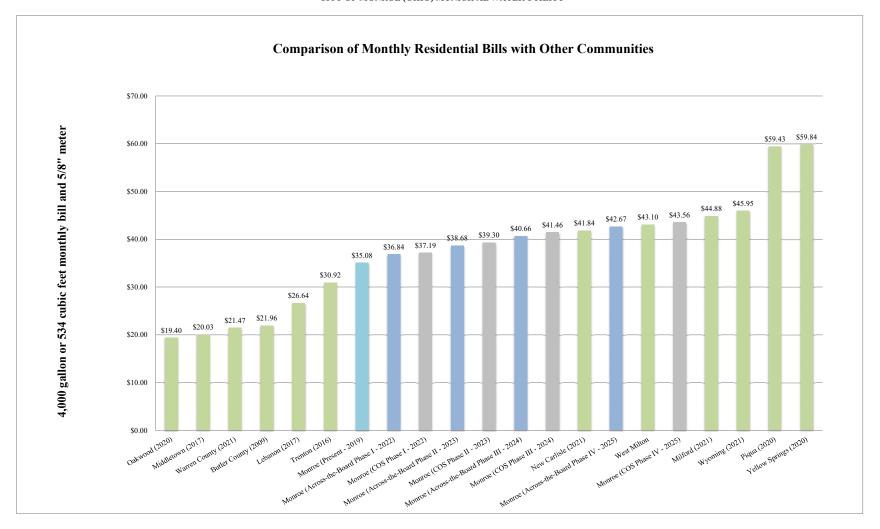
	Current	Proposed		% Change Over Prior
	Rates	Rates	Change	Rates
Inside City:	<del></del> -			
1,000 Gallons	\$14.77	\$16.74	\$1.97	13%
5,000 Gallons	41.85	52.50	10.65	25%
10,000 Gallons	75.70	97.20	21.50	28%
30,000 Gallons	243.20	280.80	37.60	15%
50,000 Gallons	400.00	462.80	62.80	16%
100,000 Gallons	825.00	956.90	131.90	16%
150,000 Gallons	1,217.00	1,411.90	194.90	16%
250,000 Gallons	2,001.00	2,321.90	320.90	16%
500,000 Gallons	3,961.00	4,596.90	635.90	16%
700,000 Gallons	5,529.00	6,416.90	887.90	16%
1,500,000 Gallons	11,801.00	13,696.90	1,895.90	16%
Outside City:				
1,000 Gallons	\$19.18	\$22.55	\$3.37	18%
5,000 Gallons	63.90	81.55	17.65	28%
10,000 Gallons	119.80	155.30	35.50	30%
30,000 Gallons	417.75	458.40	40.65	10%
50,000 Gallons	676.75	758.80	82.05	12%
100,000 Gallons	1,336.00	1,548.90	212.90	16%
150,000 Gallons	1,983.50	2,299.90	316.40	16%
250,000 Gallons	3,278.50	3,801.90	523.40	16%
500,000 Gallons	6,516.00	7,556.90	1,040.90	16%
700,000 Gallons	9,106.00	10,560.90	1,454.90	16%
1,500,000 Gallons	19,466.00	22,576.90	3,110.90	16%

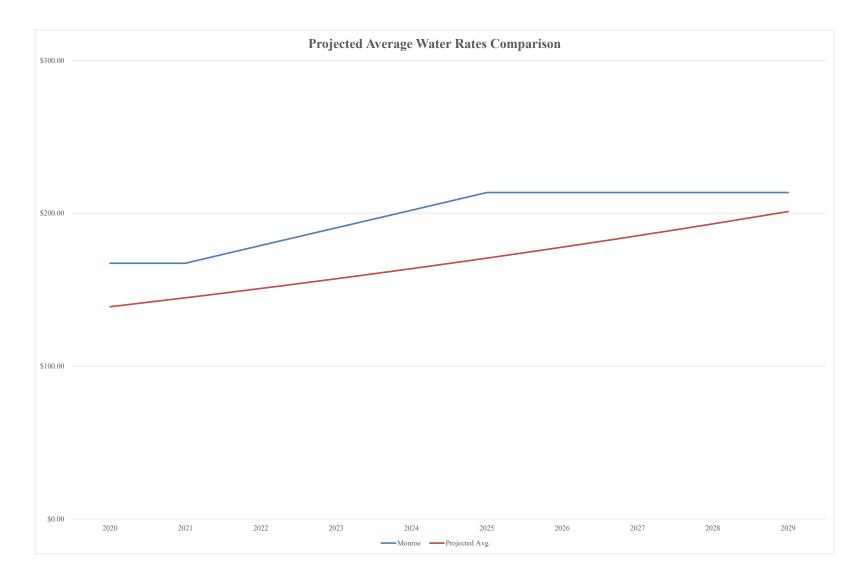
#### SCHEDULE OF PRESENT AND PROPOSED RATES AND CHARGES

				Proposed			
(A) Usage per 1,	000 gallo	ons per month:	Current (1)	Phase I	Phase II	Phase III	Phase IV
Inside City							
Under		) Gallons	\$6.77	\$7.31	\$7.85	\$8.39	\$8.94
Over	20,000	) Gallons	7.84	8.16	8.48	8.80	9.10
Outside City							
Under	20,000	) Gallons	\$11.18	\$12.07	\$12.96	\$13.85	\$14.75
Over		) Gallons	12.95	13.47	13.99	14.51	15.02
(B) Monthly Ada	ministrat	ion Charga					
Inside and Out							
5/8 - 3/4 incl		<del>-</del>	\$5.00	\$4.80	\$4.60	\$4.40	\$4.15
1 incl	h		26.25	21.50	16.75	12.00	7.10
1 1/2 incl			33.50	28.15	22.80	17.45	11.95
2 incl			38.00	32.95	27.90	22.85	17.70
3 incl			51.00	46.10	41.20	36.30	31.25
4 incl			87.50	78.30	69.10	59.90	50.70
6 incl			116.50	112.20	107.90	103.60	99.20
8 incl			145.75	148.65	151.55	154.45	157.35
10 incl			229.00	228.10	227.20	226.30	225.25
10 me	ш		227.00	220.10	227.20	220.30	223.23
(C) Meter Replace							
Inside and Out		<u>(2)</u>					
5/8 - 3/4 incl			\$3.00	\$3.15	\$3.30	\$3.50	\$3.65
1 incl				7.90	8.30	8.70	9.15
1 1/2 incl	h			15.75	16.55	17.40	18.25
2 incl	h			25.20	26.45	27.80	29.20
3 incl	h			47.25	49.60	52.10	54.75
4 incl	h			78.75	82.70	86.85	91.25
6 incl	h			157.50	165.40	173.70	182.50
8 incl	h			252.00	264.60	277.85	292.00
10 incl	h			362.25	380.35	399.40	419.75
(D) UGN specia	l rate ner	1,000 gallons pe	r month:				
All flow (2)	rate per	1,000 ganons pe	\$5.09	\$5.34	\$5.61	\$5.89	\$6.17
7 Hi How (2)			ψ5.07	ψ3.31	ψ3.01	ψ3.07	ψ0.17
(E) System Deve	elopment	Charge					
Residentia	1		\$1,637.00	\$1,637.00	\$1,637.00	\$1,637.00	\$1,637.00
1100110011111	=		\$1,007.00	\$1,057.00	\$1,057.00	\$1,057.00	\$1,007.00
Non-Resid	ential						
5	/8 - 3/4	inch	3,851.07	3,851.07	3,851.07	3,851.07	3,851.07
	1	inch	4,492.91	4,492.91	4,492.91	4,492.91	4,492.91
	1 1/2	inch	6,418.45	6,418.45	6,418.45	6,418.45	6,418.45
	2	inch	12,836.89	12,836.89	12,836.89	12,836.89	12,836.89
	3	inch	33,375.91	33,375.91	33,375.91	33,375.91	33,375.91
	4	inch	51,347.56	51,347.56	51,347.56	51,347.56	51,347.56
	6	inch	128,368.90	128,368.90	128,368.90	128,368.90	128,368.90
	8	inch	192,553.35	192,553.35	192,553.35	192,553.35	192,553.35

<sup>(1)</sup> Present rates and charges effective January 1, 2019, pursuant to Ordinance No. 2014-13 passed May 13, 2014.

<sup>(2)</sup> Assumes the across-the-board increases as calculated on page 12.





Rates are based off 22,500 gallons or 3,000 cubic feet of water in a three month period.

Projected average based on the Oakwood Southwest Ohio Rate Study with information collected from jurisdictions in Southwest Ohio. This study assumes an average growth rate of 4.5% annually.