

Technical Memorandum

To: Mike Weber
Water Resources Director
City of Buckeye

From: Todd Cristiano
Senior Manager, Raftelis

Date: April 29, 2019

Re: Water and Wastewater Rate Study – Meter Installation Fees Review

The City of Buckeye (City) retained Raftelis to conduct a comprehensive water and wastewater rate study which included a review of the City’s meter installation fees. This memorandum summarizes the development of the proposed fees.

The City assesses a water meter installation fee to new development. The fee is intended to recover the cost the City incurs to purchase and install the meter. Meter related costs include the meter itself, the encoder receiver transmitter (ERT), and antenna. Operator installation costs incurred by the City to install the new development’s meter include labor, transportation, and indirect overhead costs. The fee does not recover the cost associated with installing the service line connecting the meter to the new development’s plumbing.

Based on discussion with City staff, installation of new meters sized 2 inches and smaller requires a two-person operator crew for 2 hours, for a total of 4 labor hours. Meter installations more than 2 inches require a four-person operator crew for 2 hours, for a total of 8 labor hours. The calculated operator install cost for 2 inch and smaller meters is \$263.12. The operator install cost for meters more than 2 inches is \$526.24. Table 1 below compares the existing meter fees to the proposed meter fees. Tables 2 and 3 detail the development of the operator install costs for meters 2 inches and smaller and more than 2 inches, respectively.

Table 1: Comparison of Proposed and Current Meter Installation Fees

Meter Type	Meter/Ert/Ant Cost	Operator Installation Cost	Proposed Fee	Current Fee	Change - \$	Change - %
1" Water Meter (Displacement)	\$307.57	\$263.12	\$570.69	\$515.20	\$55.49	11%
1 1/2" Water Meter (Displacement)	\$556.23	\$263.12	\$819.35	\$964.01	(\$144.66)	-15%
1 1/2" Water Meter (Turbo)	\$970.07	\$263.12	\$1,233.19	\$1,877.21	(\$644.02)	-34%
2" Water Meter (Displacement)	\$805.95	\$263.12	\$1,069.07	\$1,324.10	(\$255.03)	-19%
2" Compound Meter	\$1,750.00	\$263.12	\$2,013.12		<i>Not Applicable</i>	
2" Turbo Meter	\$894.77	\$263.12	\$1,157.89	\$2,094.46	(\$936.57)	-45%
3" Compound Meter	\$1,907.43	\$526.24	\$2,433.67	\$4,211.55	(\$1,777.89)	-42%
3" Turbo Meter	\$1,317.80	\$526.24	\$1,844.04	\$2,497.61	(\$653.58)	-26%
4" Compound Meter	\$3,666.41	\$526.24	\$4,192.65	\$6,666.93	(\$2,474.29)	-37%
4" Turbo Meter	\$1,667.15	\$526.24	\$2,193.39	\$3,727.11	(\$1,533.73)	-41%
6" Compound Meter	\$5,227.21	\$526.24	\$5,753.45	\$8,725.71	(\$2,972.27)	-34%
6" Turbo Meter/Mag	\$3,735.63	\$526.24	\$4,261.87	\$11,534.73	(\$7,272.87)	-63%
8" Compound Meter	\$7,664.69	\$526.24	\$8,190.93	\$17,035.80	(\$8,844.88)	-52%
8" Turbo Meter/Mag	\$4,011.45	\$526.24	\$4,537.69	\$10,590.92	(\$6,053.24)	-57%

Table 2: Meter Installation Fees: 2 inches and Smaller

Parameters				
Truck Charge		\$75		
Number of Trucks		1		
Materials and Supplies		\$0		
Calculated Meter Install Fee		\$263		

Line No	Staffing Requirements		Meter Install	Total
Level of Effort, Hours per Task				
1	Operator I, Mid Range		3.0	3.0
2	Operator II, Mid Range		1.0	1.0
3	Total Level of Effort		4.0	4.0
Direct Labor Costs, \$ per hour				
		<u>\$ per Hour</u>		
4	Operator I, Mid Range	\$39.05	\$117.15	\$117.15
5	Operator II, Mid Range	\$42.95	42.95	42.95
6	Total Direct Costs		\$160.10	\$160.10
Indirect Costs, \$ per hour				
		<u>Units</u>		
7	Indirect Charge (% of Salaries) [1]	17.5%	\$28.02	\$28.02
8	Total Indirect Costs		\$28.02	\$28.02
9	Subtotal		\$188.12	\$188.12
10			Truck Charge	\$75
11	Total Meter Installation Fees, 2-inch and Smaller			\$263

[1] Based on indirect costs allocation divided total salaries and wages for the water utility.

Table 3: Meter Installation Fees: More Than 2 inches

Parameters				
Truck Charge		\$75		
Number of Trucks		2		
Materials and Supplies		\$0		
Calculated Meter Install Fee		\$526		

Line No	Staffing Requirements	Meter Install	Total
Level of Effort, Hours per Task			
1	Operator I, Mid Range	3.0	3.0
2	Operator II, Mid Range	1.0	1.0
3	Operator I, Mid Range	3.0	3.0
4	Operator II, Mid Range	1.0	1.0
5	Total Level of Effort	8.0	8.0
Direct Labor Costs, \$ per hour		\$ per Hour	
6	Operator I, Mid Range	\$39.05	\$117.15
7	Operator II, Mid Range	\$42.95	42.95
8	Operator I, Mid Range	\$39.05	117.15
9	Operator II, Mid Range	\$42.95	42.95
10	Total Direct Costs	\$320.20	\$320.20
Indirect Costs, \$ per hour		Units	
11	Indirect Charge (% of Salaries)	17.5%	\$56.04
12	Total Indirect Costs		\$56.04
13	Subtotal	\$376.24	\$376.24
14		Truck Charge	\$150
15	Total Meter Installation Fee (Greater Than 2-inch)		\$526

[1] Based on indirect costs allocation divided total salaries and wages for the water utility.

