



KENVIRONS

# FINAL ENGINEERING REPORT

*for*

## SOUTHEASTERN WATER ASSOCIATION

### KY 192/KY 1003 IMPROVEMENTS & VARIOUS PUMP STATION REPLACEMENTS

*prepared by:*

**KENVIRONS, INC.**  
770 WILKINSON BLVD.  
FRANKFORT, KENTUCKY 40601

**PROJECT No. 2016173**



**REVISED: JANUARY 2020**

## INTRODUCTION

Southeastern Water Association (SEWA) made applications for financial assistance to USDA Rural Development (RD) for the KY 192/KY 1003 Improvements & Various Pump Station Replacements project. A Preliminary Engineering Report dated August 2017 was prepared describing the need and scope of this project and is included herewith by reference.

## BIDS

Bids were opened and read aloud at 10:00 A.M. on December 4, 2019 at the Southeastern Water Association Office. One (1) bid was received by Weddle Enterprises, Inc. of Somerset, Kentucky for an amount of \$3,307,673.25.

Certified bid tabulations are contained in Appendix A.

## PROJECT COST

### PROJECT COST & FUNDING

The following Table 1 outlines the original project budget as contained in the Letter of Conditions from RD and the revised budget based upon the construction of only the total base project amount received and the anticipated sources of funding, respectively.

**Table 1 – Project Budget**

Project Component	Letter of Conditions	Revised Project Budget
Development	\$2,134,000	\$2,734,924
Land and Rights	20,000	20,000
Legal and Administrative	20,000	10,000
Engineering Fees	288,800	314,300
Interest	35,000	45,000
PER & Additional Services	37,000	20,000
Contingencies	210,200	210,776
<b>TOTAL PROJECT COST</b>	<b>\$2,745,000</b>	<b>\$3,355,000</b>

The deficit between the revised project budget and the available funding is \$610,000, to which RD has been informed of the project overruns. It is anticipated that funding will be available for the project overruns but, at this time, it is unknown whether the same grant:loan ratio, or if any additional grant monies, will be allocated to the project. Discussions with RD have indicated that the current interest rate is 2.375% for a 40 year term.

**FEASIBILITY ANALYSIS**

A feasibility analysis was performed to evaluate the water rate increase needed to pay for the additional loan. The analysis assumes that no additional grant funds will be available. The feasibility analysis also assumes an interest rate of 2.375% for the additional loan.

The following Table 2 shows the proposed project funding and the revenue requirements for the revised project funding.

**Table 2 – Proposed Project Funding & Revenue Requirement**

<b>PROPOSED PROJECT FUNDING</b>	<b>Letter of Conditions</b>	<b>Additional Funding</b>	<b>TOTALS</b>
Rural Development Grant	\$549,000	\$0	\$549,000
Rural Development Loan	2,196,000	610,000	2,806,000
	<b>\$2,745,000</b>	<b>\$610,000</b>	<b>\$3,355,000</b>
<b>PROJECT REVENUE REQUIREMENT</b>			
RD Loan Amount	\$2,196,000	\$610,000	\$2,806,000
Term of Loan, Years	40	40	
Interest Rate	3.125%	2.375%	
Capital Recovery Factor	0.0441	0.0390	
Annual Principal & Interest	\$96,933	\$23,791	\$120,724
Coverage at 10%	9,693	2,379	12,072
<b>TOTAL REVENUE REQUIREMENTS FOR PROPOSED PROJECT.....</b>	<b>\$106,626</b>	<b>\$26,170</b>	<b>\$132,797</b>

Prior to receiving bids on the proposed project, a Summary Addendum was completed to analyze the Association’s water rates, and whether or not a rate increase was needed to produce the additional revenue for the RD loan payments. The study utilized the Association’s 2016 Financial Statement and assumed the proposed project could be completed for a total project of cost \$2,745,000. The study included a billing analysis based upon water consumption for 2016. Kenvirons was asked to revise the study based on the Association’s 2018 Financial Statement and a total project cost of \$3,355,000 to establish the rates needed to cover the projects revenue requirements. Table 3 shows the proposed user rates necessary to finance the proposed project.

**Table 3 – Proposed Water Rates**

**5/8" x 3/4" Meter**

Water Use	Existing Rate	Proposed Rate
First 2,000	\$25.15 Min. Bill	\$25.87 Min. Bill
All Over 2,000	\$10.90 /1,000 gal.	\$11.21 /1,000 gal.

**1" Meter**

Water Use	Existing Rate	Proposed Rate
First 5,000	\$57.85 Min. Bill	\$59.49 Min. Bill
All Over 5,000	\$10.90 /1,000 gal.	\$11.21 /1,000 gal.

**1 1/2" Meter**

Water Use	Existing Rate	Proposed Rate
First 10,000	\$112.35 Min. Bill	\$115.54 Min. Bill
All Over 10,000	\$10.90 /1,000 gal.	\$11.21 /1,000 gal.

**2" Meter**

Water Use	Existing Rate	Proposed Rate
First 20,000	\$221.35 Min. Bill	\$227.64 Min. Bill
All Over 20,000	\$10.90 /1,000 gal.	\$11.21 /1,000 gal.

**3" Meter**

Water Use	Existing Rate	Proposed Rate
First 30,000	\$330.35 Min. Bill	\$339.74 Min. Bill
All Over 30,000	\$10.90 /1,000 gal.	\$11.21 /1,000 gal.

**4" Meter**

Water Use	Existing Rate	Proposed Rate
First 50,000	\$548.35 Min. Bill	\$563.94 Min. Bill
All Over 50,000	\$10.90 /1,000 gal.	\$11.21 /1,000 gal.

**6" Meter**

Water Use	Existing Rate	Proposed Rate
First 100,000	\$1,093.35 Min. Bill	\$1,124.44 Min. Bill
All Over 100,000	\$10.90 /1,000 gal.	\$11.21 /1,000 gal.

Appendix B contains a billing analysis based on the 2018 water consumption and the proposed rates. The billing analysis indicates that the new rates will generate \$3,656,482 for residential, \$229,547 for commercial, \$26,099 for wholesale, and \$214,081 from taxes and penalties which totals \$4,126,209 for all water sales. The 2018 Financial Statement indicates that the water sales including taxes and penalties for all customers totaled \$4,104,403. Therefore, the new rates generated an additional revenue \$21,806 for the Association.

The following Table 4 contains the Association operating budgets for years 2017, 2018, and projections for year 2020, the year the proposed project will be completed. The bottom of the table shows the "Balance Available for Coverage" and the total coverage needed with the proposed project.

**Table 4 – Proposed Operating Budget**

OPERATING REVENUE	2017	2018	Adjust	2020
Sales	\$3,974,493	\$4,104,403	2.8%	\$4,126,209
Cost of Water Sold	(1,812,275)	(2,062,195)	0.4%	(2,078,726)
Sub-Total Operating Rev. (1)	\$2,162,218	\$2,042,208		\$2,047,483
<b>NON-OPERATING REVENUES</b>				
Gain (Loss) on Sale	\$305	(\$22,232)	3yr Avg	(\$7,034)
Membership Fees Collected	4,540	4,575	3yr Avg	\$4,608
Tap-On Fees Collected	44,290	48,925	3yr Avg	\$42,917
Interest Income	42,275	69,440	3yr Avg	42,936
Sub-Total Non-Operating Rev. (2)	\$91,410	\$100,708		\$83,427
<b>TOTAL REVENUE (3=&gt;1+2)</b>	<b>\$2,253,628</b>	<b>\$2,142,916</b>		<b>\$2,130,910</b>
<b>OPERATING EXPENSES</b>				
Wages	\$204,454	\$216,660	7.0%	\$248,054
Maintenance	\$165,648	\$198,971	7.0%	\$227,802
Insurance	\$210,034	\$252,141	7.0%	\$288,676
Other General and Administrative	\$56,943	\$64,349	7.0%	\$73,673
Customer Billing	\$29,022	\$29,984	7.0%	\$34,329
Directors' Fees	\$40,000	\$36,000	7.0%	\$41,216
Office Expenses	\$38,946	\$43,250	7.0%	\$49,517
Bad Debts	\$8,651	\$8,503	7.0%	\$9,735
Professional Services	\$61,066	\$52,151	7.0%	\$59,708
Tax and Licenses	\$20,954	\$21,991	7.0%	\$25,177
Short Lived Assets	\$0	\$0		\$179,867
<b>TOTAL OPERATING EXPENSES (4)</b>	<b>\$835,718</b>	<b>\$924,000</b>		<b>\$1,237,754</b>
<b>NET INCOME (LOSS) (5=&gt;3-4)</b>	<b>\$1,417,910</b>	<b>\$1,218,916</b>		<b>\$893,156</b>
<b>DEBT REPAYMENT</b>				Year 2020
Existing Interest	\$371,965	\$367,808		\$335,450
Existing Principal	294,472	305,370		337,728
Proposed Project P&I	0	0		132,797
<b>TOTAL DEBT REPAYMENT (6)</b>	<b>\$666,437</b>	<b>\$673,178</b>		<b>\$805,975</b>
<b>BALANCE AVAILABLE FOR COVERAGE (5-6)</b>	<b>\$751,473</b>	<b>\$545,738</b>		<b>\$87,181</b>
<b>TOTAL COVERAGE &amp; FEES</b>	<b>\$64,934</b>	<b>\$65,055</b>		<b>\$76,602</b>

## **CONCLUSIONS**

1. The feasibility analysis and rate adjustment evaluated in this report is sufficient to generate the revenues needed to cover the Association's current and proposed operating expenses and debt service.
2. For customers with 5/8" x 3/4" meter settings, the cost for 4,000 gallons of water would increase from \$46.95 to \$48.28 based on the analysis and assumptions herein.

## **RECOMMENDATIONS**

1. It is recommended that the Association pursue the additional funding needed to finance the project through USDA Rural Development.
2. It is recommended that the Association adjust the user rates as presented herein and/or as stipulated by USDA Rural Development.
3. Pursuant to the additional funds being secured, it is recommended that the contract for the KY 192/KY 1003 Improvements & Various Pump Station Replacements project be awarded to Weddle Enterprises, Inc. in the amount of \$2,734,923.75. The contractor has constructed many similar projects and has an exceptional reputation in the region.

**APPENDIX A**  
**CERTIFIED BID TABULATIONS**

**BID TABULATIONS**

**KENVIRONS, INC.**  
 770 Wilkinson Blvd.  
 Frankfort, KY 40601

Owner: Southeastern Water Association  
 Project: KY 192/KY 1003 Improvements & Various Pump Station Replacements  
 Bid Date: December 4, 2019 at 10:00 A.M. Local Time

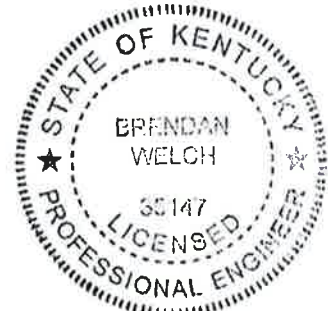
Project No. 2016173

Base Bid				Weddle Enterprises, Inc. 25 Shanes Lane Somerset, KY 42501	
Item No.	Item Description	Unit	Quantity	Unit Cost	Cost
1	8" PVC, SDR-17 Pipe	LF	26,460	\$31.00	\$820,260.00
2	8" D.I., CL 350 Pipe	LF	6,265	35.70	223,660.50
3	6" PVC, SDR-17 Pipe	LF	1,265	17.25	21,821.25
4	6" D.I., CL 350 Pipe	LF	930	37.80	35,154.00
5	4" PVC, SDR-17 Pipe	LF	120	35.00	4,200.00
6	4" D.I., CL 350 Pipe	LF	8,000	45.70	365,600.00
7	4" PVC, C900 DR-14 Pipe	LF	180	12.20	2,196.00
8	3" PVC, SDR-17 Pipe	LF	140	21.70	3,038.00
9	2" Service Tubing	LF	20	18.20	364.00
10	1" Service Tubing	LF	75	10.00	750.00
11	3/4" Service Tubing	LF	6,500	14.30	92,950.00
12	Bored Encasement for 8" Pipe	LF	110	180.00	19,800.00
13	Open Cut Encasement for 8" Pipe	LF	600	50.00	30,000.00
14	P.E. Encasement for 8" Pipe	LF	80	35.00	2,800.00
15	8" Gate Valve	EA	15	1,400.00	21,000.00
16	4" Gate Valve	EA	10	810.00	8,100.00
17	3" Gate Valve	EA	7	800.00	5,600.00
18	2" Gate Valve	EA	2	660.00	1,320.00
19	6" X 6" Tapping Sleeve & Valve	EA	2	2,320.00	4,640.00
20	4" X 4" Tapping Sleeve & Valve	EA	1	2,100.00	2,100.00
21	4" Tie-in	EA	7	1,360.00	9,520.00
22	3" Tie-in	EA	7	1,200.00	8,400.00
23	2" Tie-in	EA	2	1,200.00	2,400.00
24	1" Tie-in	EA	3	400.00	1,200.00
25	Air Release Valve	EA	3	1,100.00	3,300.00
26	6" Blowoff Assembly	EA	1	2,600.00	2,600.00
27	4" Blowoff Assembly	EA	4	2,250.00	9,000.00
28	Cut & Cap Existing Line	EA	5	2,050.00	10,250.00
29	Free Bore	LF	650	25.00	16,250.00
30	Leak Detection Meter	EA	3	1,120.00	3,360.00
31	Pitman Creek Directional Bore	LS	1	125,000.00	125,000.00
32	Steward Road Directional Bore	LS	1	65,000.00	65,000.00
33	Whetstone Creek Directional Bore	LS	1	55,000.00	55,000.00
34	Creek Crossing for 8" Pipe	LF	60	125.00	7,500.00
35	Reconnect Meter	EA	110	325.00	35,750.00
36	Relocate Meter	EA	20	202.00	4,040.00
37	KY 192 Pump Station	LS	1	180,000.00	180,000.00
38	Dixie Bend Pump Station	LS	1	180,000.00	180,000.00
39	Sandy Gap Pump Station	LS	1	180,000.00	180,000.00
40	Dahl Pump Station Rehabilitation	LS	1	135,000.00	135,000.00
41	Pavement Replacement				
	Item 41a: Crushed Stone	LF	1,000	10.00	10,000.00
	Item 41b: Light Duty Bituminous	LF	650	40.00	26,000.00
<b>TOTAL BASE PROJECT</b>					<b>\$2,734,923.75</b>
<b>Total Alternate No. 1</b>					<b>\$358,487.60</b>
<b>Total Alternate No. 2</b>					<b>\$214,262.00</b>
<b>TOTAL BASE BID</b>					<b>\$3,307,673.25</b>

The above is a true and complete tabulation of the Bids received by Southeastern Water Association at their office located at 147 E. Somerset Church Road, Somerset, KY on December 4, 2019 at 10:00 A.M. Local Time.

By Brendan Welch  
 Brendan Welch, P.E.

12/16/19  
 Date





**BID TABULATIONS**

**KENVIRONS, INC.**  
**770 Wilkinson Blvd.**  
**Frankfort, KY 40601**

Owner: Southeastern Water Association  
 Project: KY 192/KY 1003 Improvements & Various Pump Station Replacements  
 Bid Date: December 4, 2019 at 10:00 A.M. Local Time

Alternate No. 1

Weddle Enterprises, Inc.  
 25 Shanes Lane  
 Somerset, KY 42501

Item No.	Item Description	Unit	Quantity	Unit Cost	Cost
5	4" PVC SDR 17 Pipe	LF	15,250	\$15.25	\$232,562.50
10	1" Service Tubing	LF	300	13.50	4,050.00
11	3/4" Service Tubing	LF	1,500	13.00	19,500.00
19	4" Gate Valve	EA	7	830.00	5,810.00
23	4" x 4" Tapping Sleeve & Valve	EA	3	2,100.00	6,300.00
24	4" Tie-In	EA	3	775.00	2,325.00
30	4" Blow-Off Assembly	EA	3	1,250.00	3,750.00
31	Cut & Cap Existing Line	EA	3	670.00	2,010.00
32	Free Bore	LF	30	18.00	540.00
33	Leak Detection Meter	EA	1	1,100.00	1,100.00
39	Reconnect Meter	EA	27	300.00	8,100.00
40	Relocate Meter	EA	3	600.00	1,800.00
41	Pavement Replacement				
	Item 41a: Crushed Stone	LF	200	10.00	2,000.00
	Item 41b: Light Duty Bituminous Asphalt	LF	30	43.00	1,290.00
42	Open Cut Steel Encasement for 4" Pipe	LF	30	45.00	1,350.00
43	Rock Lick Creek Directional Bore	LS	1	40,000.00	40,000.00
44	Blaze Valley Pressure Reducing Station	LS	1	26,000.00	26,000.00
<b>Total Alternate No. 1</b>					<b>\$358,487.50</b>

**BID TABULATIONS**

**KENVIRONS, INC.**  
 770 Wilkinson Blvd.  
 Frankfort, KY 40601

Owner: Southeastern Water Association  
 Project: KY 192/KY 1003 Improvements & Various Pump Station Replacements  
 Bid Date: December 4, 2019 at 10:00 A.M. Local Time

**Alternate No. 2**

Weddie Enterprises, Inc  
 25 Shanes Lane  
 Somerset, KY 42501

Item No.	Item Description	Unit	Quantity	Unit Cost	Cost
3	6" PVC SDR 17 Pipe	LF	5,900	\$26.80	\$158,120.00
8	3" PVC SDR 17 Pipe	LF	70	23.10	1,617.00
11	3/4" Service Line	LF	500	15.00	7,500.00
22	6" x 6" Tapping Sleeve & Valve	EA	2	2,500.00	5,000.00
23	4" x 4" Tapping Sleeve & Valve	EA	2	2,100.00	4,200.00
25	3" Tie-In	EA	1	725.00	725.00
30	4" Blow-Off Assembly	EA	1	1,400.00	1,400.00
31	Cut & Cap Existing Line	EA	5	900.00	4,500.00
32	Free Bore	LF	80	20.00	1,600.00
33	Leak Detection Meter	EA	1	1,100.00	1,100.00
39	Reconnect Meter	EA	2	300.00	600.00
40	Relocate Meter	EA	9	600.00	5,400.00
41	Pavement Replacement				
	Item 41a: Crushed Stone	LF	180	10.00	1,800.00
	Item 41b: Light Duty Bituminous Asphalt	LF	80	40.00	3,200.00
45	Open Cut Steel Encasement for 6" Pipe	LF	40	50.00	2,000.00
46	6" Gate Valve	EA	2	950.00	1,900.00
47	8" x 6" Tapping Sleeve & Valve	EA	1	2,800.00	2,800.00
48	3" x 3" Tapping Sleeve & Valve	EA	2	1,750.00	3,500.00
49	Creek Crossing for 6" Pipe	LF	60	125.00	7,500.00
<b>Total Alternate No. 2</b>					<b>\$214,262.00</b>

**APPENDIX B**  
**REVISED BILLING ANALYSIS**  
**&**  
**PROPOSED RATE**

XII. ANALYSIS OF ACTUAL WATER USAGE - EXISTING SYSTEM - 12 MONTH PERIOD

For Period January 1, 2018 to December 31, 2018

<b>5/8" x 3/4" Meters</b>			<b>Residential</b>		<b>Non-Residential</b>	
Usage Bracket	Unit	Average	No. of Users	Usage (1,000 Gal.)	No. of Users	Usage (1,000 Gal.)
0 - 2,000	Gallons	0	841	0	16	0
2,000 - Over	Gallons	4,430	6,538	278,792.3	131	16,766.3
		<b>Subtotal</b>	<b>7,379</b>	<b>278,792.3</b>	<b>147</b>	<b>16,766.3</b>

<b>1" Meters</b>			<b>Residential</b>		<b>Non-Residential</b>	
Usage Bracket	Unit	Average	No. of Users	Usage (1,000 Gal.)	No. of Users	Usage (1,000 Gal.)
0 - 5,000	Gallons	0	0	0	3	0
5,000 - Over	Gallons	10,310	0	0	6	742.2
		<b>Subtotal</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>742.2</b>

<b>2" Meters</b>			<b>Residential</b>		<b>Non-Residential</b>	
Usage Bracket	Unit	Average	No. of Users	Usage (1,000 Gal.)	No. of Users	Usage (1,000 Gal.)
0 - 20,000	Gallons	0	0	0	3	0
20,000 - Over	Gallons	45,450	0	0	2	1,090.8
		<b>Subtotal</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>1,090.8</b>

Total Water Purchased  
Total Water Sold

604,455,000 Gallons  
304,468,000 Gallons

**XXV. FORECAST OF WATER USAGE - INCOME - EXISTING SYSTEM - EXISTING USERS**  
 (For Period: January 1, 2018 to December 31, 2018)

**DEMONSTRATION OF BILLING ANALYSIS ACCURACY**

5/8" x 3/4" RESIDENTIAL WATER USE TABLE

Water Use (Gal.)	Number Bills	Total Usage (1,000 Gal.)	First 2,000	Over 2,000
First 2,000	10,088	0.0	0.0	
Over 2,000	78,460	278,792.3	156,920.0	121,872.3
<b>TOTALS</b>	<b>88,548</b>	<b>278,792.3</b>	<b>156,920.0</b>	<b>121,872.3</b>

5/8" x 3/4" RESIDENTIAL REVENUE TABLE

Water Use	No. Bills	Gallons (1,000)	Existing Rates	Revenue
First 2,000 gallons	88,548	156,920.0	\$25.15 Minimum Bill	\$2,226,982.20
Over 2,000 gallons		121,872.3	\$10.90 per 1,000 Gal.	\$1,328,408.07
<b>ANNUAL REVENUE</b>				<b>\$3,555,390.27</b>

5/8" x 3/4" COMMERCIAL WATER USE TABLE

Water Use (Gal.)	Number Bills	Total Usage (1,000 Gal.)	First 2,000	Over 2,000
First 2,000	192	0.0	0.0	
Over 2,000	1,572	16,766.3	3,144.0	13,622.3
<b>TOTALS</b>	<b>1,764</b>	<b>16,766.3</b>	<b>3,144.0</b>	<b>13,622.3</b>

5/8" x 3/4" COMMERCIAL REVENUE TABLE

Water Use	No. Bills	Gallons (1,000)	Existing Rates	Revenue
First 2,000 gallons	1,764	3,144.0	\$25.15 Minimum Bill	\$44,364.60
Over 2,000 gallons		13,622.3	\$10.90 per 1,000 Gal.	\$148,483.07
<b>ANNUAL REVENUE</b>				<b>\$192,847.67</b>

1" COMMERCIAL WATER USE TABLE

Water Use (Gal.)	Number Bills	Total Usage (1,000 Gal.)	First 5,000	Over 5,000
First 5,000	36	0.0	0.0	
Over 5,000	72	742.2	360.0	382.2
<b>TOTALS</b>	<b>108</b>	<b>742.2</b>	<b>360.0</b>	<b>382.2</b>

1" COMMERCIAL REVENUE TABLE

Water Use	No. Bills	Gallons (1,000)	Existing Rates	Revenue
First 5,000 gallons	108	360.0	\$57.85 Minimum Bill	\$6,247.80
Over 5,000 gallons		382.2	\$10.90 per 1,000 Gal.	\$4,165.98
<b>ANNUAL REVENUE</b>				<b>\$10,413.78</b>

2" COMMERCIAL WATER USE TABLE

Water Use (Gal.)	Number Bills	Total Usage (1,000 Gal.)	First 20,000	Over 20,000
First 20,000	36	0.0	0.0	
Over 20,000	24	1,090.8	480.0	610.8
<b>TOTALS</b>	<b>60</b>	<b>1,090.8</b>	<b>480.0</b>	<b>610.8</b>

2" COMMERCIAL REVENUE TABLE

Water Use	No. Bills	Gallons (1,000)	Existing Rates	Revenue
First 20,000 gallons	60	480.0	\$221.35 Minimum Bill	\$13,281.00
Over 20,000 gallons		450.3	10.90 per 1,000 Gal.	\$6,657.72
<b>ANNUAL REVENUE</b>				<b>\$19,938.72</b>

TOTAL REVENUE

Meter Size	No. Bills	Revenue
5/8" x 3/4" Residential	88,548	\$3,555,390.27
5/8" x 3/4" Commercial	1,764	\$192,847.67
1" Commercial	108	\$10,413.78
2" Commercial	60	\$19,938.72
<b>TOTAL REVENUE</b>		<b>\$3,778,590.44</b>

TOTAL RESALE REVENUE

Utility	Gallons (1,000)	Existing Rate	Revenue
City of Burnside	7,072.9	\$3.69 per 1,000 Gal.	\$26,099.00
<b>ANNUAL REVENUE</b>			<b>\$26,099.00</b>

Total Residential Revenue	\$3,555,390.27
Total Commercial Revenue	223,200.17
Total Resale Revenue	26,099.00
Total Revenue from Taxes & Penalties	214,079.99
<b>Annual Revenue from Billing Analysis.....</b>	<b>\$4,018,769.43</b>
<b>Water Sales Reported in 2018 Financial Statement.....</b>	<b>\$4,104,403.00</b>
<b>Percent Error</b>	<b>2.13%</b>

## FORECAST WITH THE PROPOSED RATES

5/8" x 3/4" RESIDENTIAL WATER USE TABLE

Water Use (Gal.)	Number Bills	Total Usage (1,000 Gal.)	First 2,000	Over 2,000
First 2,000	10,088	0.0	0.0	
Over 2,000	78,460	278,792.3	156,920.0	121,872.3
<b>TOTALS</b>	<b>88,548</b>	<b>278,792.3</b>	<b>156,920.0</b>	<b>121,872.3</b>

5/8" x 3/4" RESIDENTIAL REVENUE TABLE

Water Use	No. Bills	Gallons (1,000)	Existing Rates	Revenue
First 2,000 gallons	98,184	156,920.0	\$25.87 Minimum Bill	\$2,290,303.16
Over 2,000 gallons		121,872.3	\$11.21 per 1,000 Gal.	\$1,366,179.40
<b>ANNUAL REVENUE</b>				<b>\$3,656,482.55</b>

5/8" x 3/4" COMMERCIAL WATER USE TABLE

Water Use (Gal.)	Number Bills	Total Usage (1,000 Gal.)	First 2,000	Over 2,000
First 2,000	192	0.0	0.0	
Over 2,000	1,572	16,766.3	3,144.0	13,622.3
<b>TOTALS</b>	<b>1,764</b>	<b>16,766.3</b>	<b>3,144.0</b>	<b>13,622.3</b>

5/8" x 3/4" COMMERCIAL REVENUE TABLE

Water Use	No. Bills	Gallons (1,000)	Existing Rates	Revenue
First 2,000 gallons	1,764	3,144.0	\$25.87 Minimum Bill	\$45,626.04
Over 2,000 gallons		13,622.3	\$11.21 per 1,000 Gal.	\$152,704.97
<b>ANNUAL REVENUE</b>				<b>\$198,331.01</b>

1" COMMERCIAL WATER USE TABLE

Water Use (Gal.)	Number Bills	Total Usage (1,000 Gal.)	First 5,000	Over 5,000
First 5,000	36	0.0	0.0	
Over 5,000	72	742.2	360.0	382.2
<b>TOTALS</b>	<b>108</b>	<b>742.2</b>	<b>360.0</b>	<b>382.2</b>

1" COMMERCIAL REVENUE TABLE

Water Use	No. Bills	Gallons (1,000)	Existing Rates	Revenue
First 5,000 gallons	108	360.0	\$59.49 Minimum Bill	\$6,425.45
Over 5,000 gallons		382.2	\$11.21 per 1,000 Gal.	\$4,284.43
<b>ANNUAL REVENUE</b>				<b>\$10,709.88</b>

2" COMMERCIAL WATER USE TABLE

Water Use (Gal.)	Number Bills	Total Usage (1,000 Gal.)	First 20,000	Over 20,000
First 20,000	36	0.0	0.0	
Over 20,000	24	1,090.8	480.0	610.8
<b>TOTALS</b>	<b>60</b>	<b>1,090.8</b>	<b>480.0</b>	<b>610.8</b>

2" COMMERCIAL REVENUE TABLE

Water Use	No. Bills	Gallons (1,000)	Existing Rates	Revenue
First 20,000 gallons	60	480.0	\$227.64 Minimum Bill	\$13,658.63
Over 20,000 gallons		450.3	11.21 per 1,000 Gal.	\$6,847.02
<b>ANNUAL REVENUE</b>				<b>\$20,505.65</b>

TOTAL REVENUE

Meter Size	No. Bills	Revenue
5/8" x 3/4" Residential	87,420	\$3,656,482.55
5/8" x 3/4" Commercial	1,764	\$198,331.01
1" Commercial	72	\$10,709.88
2" Commercial	48	\$20,505.65
<b>TOTAL REVENUE</b>		<b>\$3,886,029.09</b>

TOTAL RESALE REVENUE

Utility	Gallons (1,000)	Existing Rate	Revenue
City of Burnside	7,072.9	\$3.69 per 1,000 Gal.	\$26,099.00
<b>ANNUAL REVENUE</b>			<b>\$26,099.00</b>

Total Residential Revenue	\$3,656,482.55
Total Commercial Revenue	229,546.54
Total Resale Revenue	26,099.00
Total Revenue from Taxes & Penalties	214,080.87
<b>Forecasted Revenue from 2.84% Rate Increase.....</b>	<b>\$4,126,208.96</b>
Less Revenue from 2018 Rates.....	\$4,104,403.00
 Additional Revenue Generated Through Rate Increase.....	 <u>\$ 21,805.96</u>