

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

APPLICATION OF MONROE COUNTY WATER	)	CASE NO.
DISTRICT FOR AN ALTERNATIVE RATE	)	2019-00293
ADJUSTMENT	)	

NOTICE OF FILING OF STAFF REPORT

Notice is hereby given that, in accordance with the Commission's Order of September 24, 2019, the attached report, containing the findings of Commission Staff regarding the Applicant's proposed rate adjustment, has been filed in the record of the above-styled proceeding. Pursuant to the Commission's September 24, 2019 Order, Monroe County Water District is required to file written comments regarding the findings of Staff no later than 14 days from the date of entry of this Staff Report.

  
for Gwen R. Pinson  
Executive Director  
Public Service Commission  
P.O. Box 615  
Frankfort, KY 40602

DATED JAN 09 2020

cc: Parties of Record

STAFF REPORT  
ON  
MONROE COUNTY WATER DISTRICT  
CASE NO. 2019-00293

Monroe County Water District (Monroe District), a water district organized pursuant to KRS Chapter 74, provides water service to approximately 3,487 residential and commercial customers located in Monroe County, Kentucky.<sup>1</sup> On August 22, 2019, Monroe District tendered an application (Application) requesting to adjust its monthly water service rates pursuant to the procedures set forth in 807 KAR 5:076. By letter dated August 27, 2019, the Commission notified Monroe District that its Application was rejected as being deficient. Monroe District corrected its filing deficiencies and the Application was deemed filed on September 4, 2019. To ensure the orderly review of the Application, the Commission established a procedural schedule by Order dated September 24, 2019.

To comply with the requirements of 807 KAR 5:076, Section 9,<sup>2</sup> Monroe District based its requested rates on a historic test period that coincides with the reporting period shown in its most recent Annual Report on file with the Commission; the calendar year ended December 31, 2018.

Using its pro forma test-year operations, Monroe District determined that it could justify a revenue increase of \$175,996, or 8.54 percent, as shown in the table below.<sup>3</sup>

---

<sup>1</sup> *Annual Report of Monroe County Water District to the Public Service Commission for the Calendar Year Ended December 31, 2018* (2018 Annual Report) at pp. 12 and 49.

<sup>2</sup> "The reasonableness of the proposed rates shall be determined using a 12-month historical test period, adjusted for known and measureable changes, that coincides with the reporting period of the applicant's annual report for the immediate past year."

<sup>3</sup> Application, ARF Form 1 -Attachment RR-DC- September 2011.

The rates requested by Monroe District would increase the monthly bill of a typical residential customer using 4,000 gallons per month by \$3.47, from \$40.71 to \$44.18, or approximately 8.52 percent.<sup>4</sup>

Pro Forma Operation & Maintenance Expenses	\$ 1,562,110
Pro Forma Depreciation	
Pro Forma Operating Expenses	1,562,110
Plus: Average Annual Debt Principal and Interest Payments	632,138
Debt Coverage Requirement	126,428
Total Revenue Requirement	2,320,676
Less: Other Operating Revenue	(74,105)
Non-operating Income	(20,160)
Interest Income	11,225
Revenue Required from Rates	2,237,636
Less: Normalized Revenues from Water Sales	(2,061,640)
Required Revenue Increase/(Decrease)	\$ 175,996
Percentage Increase	8.54%

To determine the reasonableness of the rates requested by Monroe District, Commission Staff (Staff) performed a limited financial review of Monroe District's last-year operations. The scope of Staff's review was limited to determining whether operations reported for the test year were representative of normal operations. Known and measurable changes to test-year operations were identified, and adjustments were made when their effects were deemed material. Insignificant and immaterial discrepancies were not necessarily pursued or addressed.

---

<sup>4</sup>*Id.*, Billing Analysis Attachment.

Staff's findings are summarized in this report. Mark Frost and Anthony Wooldridge reviewed the calculation of Monroe District's Overall Revenue Requirement. Sam Reid reviewed Monroe District's reported revenues and rate design.

### SUMMARY OF FINDINGS

1. Overall Revenue Requirement and Required Revenue Increase. By applying the Debt Service Coverage (DSC) Method, as generally accepted by the Commission, Staff found Monroe District's Overall Revenue Requirement to be \$2,862,022. A revenue increase of \$645,100, or 30.55 percent, is necessary to generate the Overall Revenue Requirement Staff determined that Monroe District could justify.

The reason for the dramatic difference between the revenue requirements calculated by Monroe District and Staff is that Monroe District mistakenly excluded the pro forma depreciation expense of \$783,417 from its calculation. If Monroe District wishes to request that the Commission approve a revenue increase of the amount calculated by Staff, it should do so in its written response to this report.

2. Water Service Rates. With exception to its wholesale water rate, Monroe District proposed to increase its water service rates by approximately 8.52 percent across the board. Monroe District has not performed a cost-of-service study (COSS). The Commission has previously found that an across-the-board increase is an appropriate and equitable method of cost allocation in the absence of a COSS.

Monroe District informed Staff, during the field review that it did not want to increase its wholesale rate in this case. During the test year, Monroe District changed from purchasing all of its water to producing all of its water. Monroe District informed Staff that it is studying the impact of the revised operations and plans to revise the wholesale

rate as well as its retail rates in a future proceeding. Staff agrees with Monroe District's request that the wholesale rate should not be adjusted in this proceeding and that only the retail rates should be increased. However, the annual revenue requirement determination includes the wholesale customers; therefore, when Staff's across-the-board revenue increase of 30.55 percent is applied to the retail rates, an additional revenue of \$638,911 is generated, an amount less than the \$645,098 Staff found warranted. Therefore, Staff finds that an across-the-board increase of 30.85 percent to the retail water service rates will produce the required revenue requirement and is the appropriate means to allocate the increased revenue requirement.

Monroe District allocated its requested revenue increase evenly across its retail rate for the 5/8 inch meter, as shown below. Because Monroe District requested to increase the retail rate for the 5/8 inch meter only, it sought recovery of \$179,379 from those customers. Staff developed the table below using the billing analysis contained in the Application and Monroe District's requested rates.<sup>5</sup>

	Monroe District's Billing Analysis			
	Present Rates	Requested Rates	Revenue Increase	Percentage Increase
Retail Customers:				
Residential	\$ 1,984,892	\$ 2,154,402	\$ 169,510	8.54%
Commercial	115,560	125,429	9,869	8.54%
Total Retail Customers	2,100,452	125,429	179,379	8.54%
Wholesale Customers	20,277	0	0	0.00%
Totals	<u>\$ 2,120,729</u>	<u>\$ 125,429</u>	<u>\$ 179,379</u>	<u>8.46%</u>

Using the billing analysis, Staff developed for all three-meter sizes and the wholesale customer usage, the proposed rates for the 5/8 inch meter results in an

---

<sup>5</sup> The source of the wholesale revenue is the 2018 Annual Report.

increase to revenues of \$139,585 for an 8.54 percent increase for the 5/8 inch meter customers and an overall increase of 6.61 percent, as shown in the table below.

Staff's Billing Analysis with the Requested Rates				
	Present Rates	Requested Rates	Revenue Increase	Percentage Increase
Retail Customers:				
5/8 Inch Meter	\$ 1,634,491	\$ 1,774,076	\$ 139,585	8.54%
1 Inch Meter	97,643	97,643	0	0.00%
2 Inch Meter	359,023	359,023	0	0.00%
Total Retail Customers	2,091,157	2,230,742	139,585	6.68%
Wholesale Customers	20,275	20,275	0	0.00%
Totals	<u>\$ 2,111,432</u>	<u>\$ 2,251,017</u>	<u>\$ 139,585</u>	<u>6.61%</u>

### PRO FORMA OPERATING STATEMENT

Monroe District's Pro Forma Operating Statement for the test year ended December 31, 2018, as determined by Staff, appears below.<sup>6</sup>

	Test-Year Actual Operations	Staffs Pro Forma Adjustments	Staffs Pro Forma Operations
Operating Revenue	\$ 2,206,358	\$ (20,821)	\$ 2,185,537
Operating Expense	2,176,843	(113,141)	2,063,702
Net Utility Operating Income	29,515	92,320	121,835
Nonutility Income	31,385	0	31,385
Net Income Available for Debt Service	<u>\$ 60,900</u>	<u>\$ 92,320</u>	<u>\$ 153,220</u>

(A) Billing Analysis Adjustment. Monroe District's Billing Analysis in the Application separated the test year usage by residential and commercial classification of customers. The Billing Analysis did not include wholesale customers' usage and revenues. Additionally, Monroe District's Billing Analysis did not apply test-year usage data to the rate design in Monroe District's tariff. Staff used data from Monroe District's billing software to develop a Billing Analysis that reflects normalized test-year revenues

<sup>6</sup> See Attachment A for a detailed summary of this table.

in accordance with Monroe District's tariffed rate design. Staff's normalized test-year Billing Analysis results in revenues from current retail rates of \$2,091,155. Staff's normalized test-year Billing Analysis for Monroe District is included as Attachment C.

(B) Employee Salaries and Wages. Monroe District reported a test-year employee salaries and wages expense of \$518,042.<sup>7</sup> During 2019, Monroe District experienced a change in its staffing due to retirements, resignations, and promotions. Using Monroe District's current staff level of 13 full-time employees, 3 part-time/seasonal employees, and the 2019 employee wages, Staff calculates a pro forma employee salaries and wages expense of \$482,878, which is \$35,164 below the reported expense level. Staff's calculation of Monroe District's pro forma employee salaries and wage expense is below:

	Hours Worked		Hourly Wage Rates		Pro Forma Salaries & Wages		Total
	Regular	Overtime	Regular	Overtime	Regular	Overtime	
0001 Office Manager	2,080.0	63.0	\$ 24.03	\$ 36.05	\$ 49,982	\$ 2,271	\$ 52,253
0003 Accts Receivable III	2,080.0	67.5	\$ 16.70	\$ 25.05	34,736	1,691	36,427
0004 Distribution System Crew Supervisor & Operator II	2,080.0	102.0	\$ 20.50	\$ 30.75	42,640	3,137	45,777
0006 Distribution Operator II; Equip. Operator II; & Meter Tester	2,080.0	164.5	\$ 20.03	\$ 30.05	41,662	4,943	46,605
0007 Field Maintenance (Part-Time seasonal)	275.0	7.5	\$ 12.50	\$ 18.75	3,438	141	3,579
0008 Accts Receivable II	2,080.0	38.0	\$ 12.93	\$ 19.40	26,894	737	27,631
0011 Customer Service Rep	2,080.0	137.0	\$ 13.50	\$ 20.25	28,080	2,774	30,854
0014 Accts Receivable I	1,406.0	3.5	\$ 12.00	\$ 18.00	16,872	63	16,935
0017 General Manager	2,080.0	390.5	\$ 20.50	\$ 30.75	42,640	12,008	54,648
0018 WTP Operator III	2,080.0	221.5	\$ 18.00	\$ 27.00	37,440	5,981	43,421
0019 Lead WTP Operator III	2,080.0	61.5	\$ 18.50	\$ 27.75	38,480	1,707	40,187
0020 Office Clerk (seasonal)	374.0	0.0	\$ 10.00	\$ 15.00	3,740	0	3,740
0021 Accts Receivable (PT)	253.0	0.0	\$ 11.00	\$ 16.50	2,783	0	2,783
0022 WTP Operator I	2,080.0	0.0	\$ 12.00	\$ 18.00	24,960	0	24,960
0023 Distribution Operator II	2,080.0	57.5	\$ 12.50	\$ 18.75	26,000	1,078	27,078
0024 Maintenance / WTP O-I-T	2,080.0	0.0	\$ 12.50	\$ 18.75	26,000	0	26,000
Pro Forma Salaries & Wages Employees							482,878
Less: Test-Year Salaries & Wages Employees							(518,042)
Pro Forma Adjustment							\$ (35,164)

(C) Employee Pensions and Benefits.

Employee Insurance Benefits. Monroe District currently provides health, dental, and life insurance coverage to all of its eligible full-time employees. The Commission is placing greater emphasis on evaluating employees' total compensation

<sup>7</sup> Application, ARF Form 1 - Attachment SAO-W- September 2011, Schedule of Adjusted Operations-Water Utility.



packages, including both salary and benefit programs, for market and geographic competitiveness to ensure the development of a fair, just, and reasonable rate. In most cases, the Commission has found that health care that is 100 percent funded by the employer does not meet those criteria.

In Case No. 2017-00070,<sup>8</sup> the Commission took into consideration the extensive testimony and exhibits provided by Monroe District to support its employee compensation levels. The Commission evaluated the employees' total compensation packages, including both salary and benefits programs for market and geographic competitiveness to ensure the development of fair, just, and reasonable rates. The Commission explained, "Absent a utility's requirement of reasonable employee participation in healthcare costs, the Commission has applied a consistent standard by utilizing the Bureau of Labor Statistics report, which reflects an average employee contribution to single healthcare coverage of 21 percent of cost."<sup>9</sup> Ultimately, the Commission reduced Monroe District's employee health insurance premiums to a 21 percent contribution rate for single healthcare coverage.

Monroe District currently requires its employees to contribute \$10, or 25 percent,<sup>10</sup> toward the cost of their dental insurance premiums, but does not require an employee contribution for health insurance premiums. Following the Commission's decision in Case No. 2017-00070, Staff is reducing Monroe District's pro forma employee insurance benefit

---

<sup>8</sup> Case No. 2017-00070, *Electronic Application of Monroe County Water District for Rate Adjustment Pursuant to 807 KAR 5:076* (Ky. PSC Jan. 12, 2018).

<sup>9</sup> *Id.* at 14.

<sup>10</sup> \$10 (Employee Monthly Contribution) ÷ \$40 (Monthly Dental Premium) = 25%.



expense of \$137,309 by \$31,911<sup>11</sup> for a net employee insurance benefit expense of \$105,398. Staff's adjustment reflects the current employee health, dental, and life insurance premiums; a 21 percent employee contribution rate for health insurance coverage;<sup>12</sup> and a 20 percent employee contribution rate for dental coverage.

Retirement. Monroe District reported a test-year employee retirement expense (401(k) plan) of \$44,804.<sup>13</sup> Monroe District contributes 8 percent into each full-time employee's 401(k) plan. Using the pro forma employee salaries and wages expense for full-time employees of \$472,776 and an 8 percent employer 401(k) contribution rate, Staff calculates a pro forma employee retirement expense of \$37,822.<sup>14</sup> Accordingly, the employee pension and benefit expense is being reduced by \$6,982.

Monroe District reported a test-year employee pension and benefit expense of \$182,114.<sup>15</sup> Due to the insurance and retirement adjustments, Staff is reducing test-year employee pension and benefit expense by \$38,893.<sup>16</sup>

---

<sup>11</sup>  $\$127,704 \text{ (Pro Forma Health Insurance Premium)} \times 79\% \text{ (Employer Contribution Rate)} = \$100,886 + \$1,992 \text{ (Life Premium)} + \$2,520 \text{ (Employer Dental Contribution)} = \$105,398 - \$137,309 \text{ (Test-Year Employee Insurance Benefit)} = \$31,911$ .

<sup>12</sup> <https://www.bls.gov/ncs/ebs/benefits/2019/ownership/private/table10a.pdf>

<sup>13</sup> Application, ARF Form 1 - Attachment SAO-W- September 2011, Schedule of Adjusted Operations-Water Utility.

<sup>14</sup>  $\$472,776 \text{ (Salaries and Wages Full-time Employees)} \times 8\% \text{ (Employer 401(k) Contribution Rate)} = \$37,822$ .

<sup>15</sup> *Id.*

<sup>16</sup>  $\$31,911 \text{ (Employee Insurance Benefits)} + \$6,982 \text{ (401(k) Employee Benefit)} = \$38,893$ .

(D) Water Production. The Commission granted a Certificate of Public Convenience and Necessity in Case No. 2015-00315<sup>17</sup> authorizing Monroe District to construct and finance a new water treatment facility, a new water intake and transmission line, and a 600,000-gallon water storage tank. In May 2018, Monroe District placed its new water treatment facility in service. Staff determined that Monroe District's test-year purchased water expense should be decreased by \$271,531; its purchased power expense should be increased by \$33,875;<sup>18</sup> its chemical expense should be increased by \$34,170;<sup>19</sup> and its water-testing expense should be increased by \$6,991, as explained below.

Purchased Water. Monroe District proposes to reduce test-year operating expenses by \$271,531 to eliminate the cost of the water that it purchased from the city of Tompkinsville (Tompkinsville).<sup>20</sup> Monroe District explained that since its water treatment plant went online in May 2018, Monroe District will no longer purchase water from Tompkinsville, but will maintain a master meter for emergency purchases only.<sup>21</sup> Given the operational changes that have occurred at Monroe District, Staff finds that the adjustment to eliminate water purchases meets the ratemaking criteria of being known and measurable. Accordingly, Staff is decreasing operating expenses by \$271,531.

---

<sup>17</sup> Case No. 2015-00315, *Application of Monroe County Water District for Authorization to Enter an Assistance Agreement with the Kentucky Infrastructure Authority and for a Certificate of Public Convenience to Construct a Water Treatment Facility, Elevated Storage Tank, and Water Transmission and Distribution Mains* (Ky. PSC Mar. 18, 2016).

<sup>18</sup> \$40,330 (Adjustment New Treatment Facility) - \$6,455 (Excessive Line Loss) = \$33,875.

<sup>19</sup> \$38,803 (Adjustment New Treatment Facility) - \$4,633 (Excessive Line Loss) = \$34,170.

<sup>20</sup> Application, ARF Form 1 - Attachment SAO-W- September 2011, Schedule of Adjusted Operations-Water Utility.

<sup>21</sup> *Id.*, References, A.

Purchased Power. Monroe District proposes to increase test-year purchased power expense of \$141,240 by \$56,604 for a pro forma level of \$199,844.<sup>22</sup> According to Monroe District, its adjustment is to reflect a full year of electric use at its treatment plant.<sup>23</sup> Monroe District extrapolated electricity purchases for July 2019 through December 2019 using the average of the electricity that it purchased in the first six months of 2019. The table below is Monroe District's calculation.

	Jan	Feb	Mar	Apr	May	Jun	Year-to-Date Average	Extrapolated Data Jul - Dec	Total Purchased Power
Pumping/Intake		\$ 1,958.02	\$ 2,012.78	\$ 1,898.56	\$ 1,957.09	\$ 2,023.81	\$ 1,970.05	\$ 11,820.31	\$ 21,670.57
Treatment	\$ 10,933.37	\$ 11,350.70	\$ 12,251.25	\$ 10,871.92	\$ 10,831.87	\$ 9,589.70	\$ 10,971.47	\$ 65,828.81	131,657.62
Distribution System	\$ 3,314.32	\$ 3,584.47	\$ 3,769.21	\$ 3,442.32	\$ 3,598.90	\$ 3,401.61	\$ 3,518.47	\$ 21,110.83	42,221.66
Office Building	\$ 181.88	\$ 193.38	\$ 211.83	\$ 176.50	\$ 185.99	\$ 190.81	\$ 190.07	\$ 1,140.39	2,280.78
Total Purchased Power Expense:									197,830.63
2018 Annual Report - Purchased Power Expense:									141,240.00
Total Purchased Power Expense Adjustment:									\$ 56,590.63

Staff believes that the methodology employed by Monroe District to calculate its adjustment to electricity expense would be classified as a budgetary projection, which the Commission has historically disallowed in rate cases involving a historical test year.<sup>24</sup> Further, changing from a water purchaser to a water producer would not directly affect either the electricity used at the office or in the distribution system. Staff is increasing Monroe District's purchased power expense by \$40,330 using the actual electricity purchased by Monroe District at the raw water intake pump and at the treatment plant for the 12-month period from May 2018 through April 2019, as shown in the table below.

<sup>22</sup> *Id.*, Schedule of Adjusted Operations-Water Utility.

<sup>23</sup> *Id.*, References, B.

<sup>24</sup> See, e.g., Case No. 2001-00211, *The Application of Hardin County Water District No. 1 for (1) Issuance of Certificate of Public Convenience and Necessity, (2) Authorization to Borrow Funds and to Issue Its Evidence of Indebtedness therefor, (3) Authority to Adjust Rates, and (4) Approval to Revise and Adjust Tariff* (Ky. PSC Mar. 1, 2002); Case No. 2002-00105, *Application of Northern Kentucky Water District for (A) an Adjustment of Rates; (B) a Certificate of Convenience and Necessity for Improvements to Water Facilities if Necessary; and (C) Issuance of Bonds* (Ky. PSC Oct 21, 2002); and Case No. 2017-00417, *Electronic Proposed Adjustment of the Wholesale Water Service Rates of Lebanon Water Works* (Ky. PSC July 12, 2018).

Month		Pumping	Treatment	
Used	Purchased		Plant	Total
May-18	Jun-18	\$ 1,796	\$ 8,625	\$ 10,421
Jun-18	Jul-18	1,964	9,426	11,390
Jul-18	Aug-18	1,990	9,172	11,162
Aug-18	Sep-18	2,020	9,293	11,313
Sep-18	Oct-18	1,934	8,608	10,542
Oct-18	Nov-18	1,897	9,296	11,193
Nov-18	Dec-18	1,991	10,933	12,924
Dec-18	Jan-19	1,958	11,351	13,309
Jan-19	Feb-19	2,013	12,251	14,264
Feb-19	Mar-19	1,899	10,872	12,771
Mar-19	Apr-19	1,957	10,832	12,789
Apr-19	May-19	2,024	9,590	11,614
Total		23,443	120,249	143,692
Less: Reported		(15,538)	(87,824)	(103,362)
Adjustment Pumping & Plant		\$ 7,905	\$ 32,425	\$ 40,330

Chemicals. Monroe District original proposed to increase test-year chemical expense of \$91,525 by \$202,305 for a pro forma level of \$293,830.<sup>25</sup> According to Monroe District, its adjustment is to reflect a full year of chemical use at its treatment plant.<sup>26</sup> To support its proposed chemical adjustment, Monroe District provided a schedule listing each chemical that it uses to treat water, the price it pays for each chemical, and the frequency each chemical is purchased.

At the field review, Monroe District explained that, although on the schedule the Hypochlorite Solution was correctly identified as a bi-weekly purchase, the pro forma calculation reflects purchasing the chemical twice per week or 104 times per year. As shown in the table below, correcting for this error results in a pro forma chemical expense

<sup>25</sup> Application, ARF Form 1 - Attachment SAO-W- September 2011, Schedule of Adjusted Operations-Water Utility.

<sup>26</sup> *Id.*, References, C.

of \$130,328. Accordingly, Staff is increasing chemical expense by \$38,803 to reflect the corrected pro forma chemical expense.

Chemical	Chemical Price	Frequency	Annual Cost
MANLEY #65 White Filter Sand	\$ 324.00	Quarterly	\$ 1,296
PRAESTOL 2540TR Flocculant	\$ 4,960.00	Annually	4,960
UN1760, Corrosive Liquids, NOS 8, PGIII, DELPAC 2020, (Polyaluminum Hydroxychlorofulfate)	\$ 1,978.50	Weekly	102,882
UN1778, Fluorosilicic Acid, 8, PGII, (Hydrofluorosilicic Acid Solution) Tote	\$ 1,701.65	Quarterly	6,807
UN1791, Hypochlorite Solutions, 8, PGIII, Tote (12.5% Sodium Hypochlorite)	\$ 483.82	Bi-Weekly	12,579
HACH Secondary Gel Standards Set, DPD Chlorine	\$ 182.00	Annually	182
DPD Total Chlorine Reagent powder pillows 10 ml pk/1000	\$ 183.00	2Xs/Yr	366
DPD Free Chlorine Reagent powder pillows 10 ml pk/1000	\$ 183.00	2Xs/Yr	366
Flouride Reagent (0-2MG/L 50PK)	\$ 445.06	2Xs/Yr	890
Total Chemical Expense:			130,328
2018 Annual Report - Chemical Expense:			(91,525)
Total Chemical Expense Adjustment:			<u>\$ 38,803</u>

Water Testing. Monroe District proposes to increase test-year water testing expense of \$12,694 by \$6,991 for a pro forma level of \$19,685.<sup>27</sup> According to Monroe District, its adjustment is to reflect a full year of water testing in its system.<sup>28</sup> To support its proposed water testing adjustment, Monroe District provided the following schedule that lists each test that it is required to perform, the testing prices, and the test frequency. Staff finds that Monroe District's adjustment is correct and has increased testing expense by \$6,991.

<sup>27</sup> *Id.*

<sup>28</sup> *Id.*, References, C.

Test	Fee per Test	Test Frequency	Pro Forma Expense
Collection Fee ("Sample Pick up)	\$ 30.00	Semi-Monthly	\$ 720
TCLP Analysis	\$ 1,150.00	Annually	1,150
Analysis of Backwash	\$ 97.00	Monthly	1,164
E. coli Analysis	\$ 25.00	Monthly	300
Cryptosporidium Analysis	\$ 550.00	Monthly	6,600
Cryptosporidium Analysis - Blank	\$ 25.00	Monthly	300
Bin Calculations for Cryptosporidium	\$ 85.00	2 per Year	170
Fluoride (Water Treatment Plant)	\$ 15.00	Monthly	180
Fluoride (Distribution)	\$ 15.00	Monthly	180
Total Coliform Analysis	\$ 18.00	10 per Month	2,160
TOC Analysis	\$ 35.00	2 Per Month	840
Alkalinity Analysis	\$ 15.00	Monthly	180
Haloacetic Acid Analysis	\$ 150.00	2 per Quarter	1,200
Total Trihalomethane Analysis	\$ 35.00	3 per Quarter	420
Nitrate Analysis	\$ 20.00	Quarterly	80
Nitrite Analysis	\$ 20.00	Annually	20
Complete Secondary Analysis	\$ 352.00	Annually	352
Sodium Analysis	\$ 25.00	Annually	25
Regulated VOC Analysis	\$ 175.00	Annually	175
Radiological Analysis	\$ 355.00	Annually	355
Inorganic Analysis	\$ 280.00	Annually	280
SOC Analysis	\$ 1,175.00	Annually	1,175
MBAS Analysis	\$ 85.00	Annually	85
Sludge Analysis	\$ 260.00	Annually	260
pH & Residual Chlorine	\$ 173.65	Annually	174
Completion of pH, Chlorine and QAP SOP's - Clerical	\$ 170.00	Annually	170
Copper/Lead Analysis	\$ 40.00	20 per Year	800
Completion of L & C State Form	\$ 1.00	20 per Year	20
Asbestos	\$ 150.00	Annually	150
Total Sampling/Water Testing Expense:			19,685
2018 Annual Report - Sampling/Water Testing Expense:			12,694
Total Sampling/Water Testing Expense Adjustment:			\$ 6,991

Excess Water Loss. 807 KAR 5:066, Section 6(3),<sup>29</sup> limits water loss to 15 percent for ratemaking purposes unless the Commission finds an alternative level reasonable. In the table below, Staff determined that Monroe District's test-year water loss was 18.56 percent, or 3.56 percentage points above the 15 percent allowable limit.

<sup>29</sup> Unaccounted-for water loss. Except for purchased water rate adjustments for water districts and water associations, and rate adjustments pursuant to KRS 278.023(4), for rate making purposes a utility's unaccounted-for water loss shall not exceed fifteen (15) percent of total water produced and purchased, excluding water used by a utility in its own operations. Upon application by a utility in a rate case filing or by separate filing, or upon motion by the commission, an alternative level of reasonable unaccounted-for water loss may be established by the commission. A utility proposing an alternative level shall have the burden of demonstrating that the alternative level is more reasonable than the level prescribed in this section.

Water Produced/Purchased	283,738,000
Water Sales - Staff's Billing Analysis	(209,921,031)
Water Sales - Sales for Resale	(4,885,480)
Fire Department	(14,973,000)
Other	(1,208,000)
	<u>(102,000)</u>
Unaccounted for Water Loss - Gallons	<u>52,648,489</u>
Percentage of Unaccounted for Water Loss	18.555%
	<u>-15.000%</u>
Percentage Water Loss in Excess of 15 Percent	<u>3.555%</u>

With the adjustments in the table below, Staff removes the cost of treating and pumping the excess water loss from Monroe District's test-year operations.

	Electricity	Chemicals
Allowable Purchases	\$ 181,570.00	\$ 130,328.00
Multiplied by: Water Rate per 1,000 Gallons	<u>-3.555%</u>	<u>-3.555%</u>
Pro Forma Purchased Water Expense	<u>\$ (6,455)</u>	<u>\$ (4,633)</u>

(E) Legal Fees. Monroe District reported a test-year contractual service – legal expense of \$14,905.<sup>30</sup> Upon review of the supporting test-year invoices, Staff determined that the legal fees reported as an expense in 2018 were for legal services that were provided in 2017 in conjunction with Case 2017-00070. Accordingly, Staff is reducing pro forma operating expenses by \$14,905 to remove the prior year legal fee expense.

(F) Depreciation. In its Application, Monroe District proposed to increase its test-year depreciation expense of \$611,104 by \$172,316.<sup>31</sup> Monroe District's adjustment reflects depreciation for: (1) the expansion of the newly constructed water treatment plant to include conventional treatment processes for redundancy purposes; (2) the addition of

<sup>30</sup> Application, ARF Form 1 - Attachment SAO-W- September 2011, Schedule of Adjusted Operations-Water Utility.

<sup>31</sup> *Id.*



equipment and facilities; (3) a new water intake and transmission line; and (4) a 600,000-gallon water storage tank.<sup>32</sup>

In reviewing the reasonableness of the depreciation lives used by water utilities, the Commission has historically relied upon the report published in 1979 by NARUC titled Depreciation Practices for Small Water Utilities (NARUC Study). When no evidence exists to support a specific life that is inside or outside the NARUC Study ranges, the Commission has historically used the mid-point of the NARUC Study ranges to depreciate a utility plant.

Upon its review of the depreciable lives used by Monroe District, Staff determined that the depreciation lives are at the midpoint of the NARUC Study range for each asset category and, therefore, are reasonable. Accordingly, Staff recommends that the Commission accept Monroe District's proposed adjustment to increase depreciation expense by \$172,316.

#### REVENUE REQUIREMENT

The Commission has historically applied a DSC method to calculate the revenue requirement of water districts and water associations. This method allows for recovery of: (1) cash-related pro forma operating expenses; (2) recovery of depreciation expense, a non-cash item, to provide working capital; (3) the average annual principal and interest payments on all long-term debts, and (4) working capital that is in addition to depreciation expense.

---

<sup>32</sup> *Id.*, References, E.

A comparison of Monroe District's and Staff's calculation of the revenue requirement and required revenue increase using the DSC method is shown below:

	Monroe District	Staff
Pro Forma Operation & Maintenance Expenses	\$ 1,562,110	\$ 1,280,282
Pro Forma Depreciation		783,420
Pro Forma Operating Expenses	1,562,110	2,063,702
Plus: Average Annual Debt Principal and Interest Payments	632,138	665,267
Debt Coverage Requirement	126,428	133,053
Total Revenue Requirement	2,320,676	2,862,022
Less: Other Operating Revenue	(74,105)	(74,105)
Non-operating Income	(20,160)	(20,160)
Interest Income	11,225	(11,225)
Revenue Required from Rates	2,237,636	2,756,532
Less: Normalized Revenues from Water Sales	(2,061,640)	(2,111,432)
Required Revenue Increase/(Decrease)	\$ 175,996	\$ 645,100
Percentage Increase	8.54%	30.55%

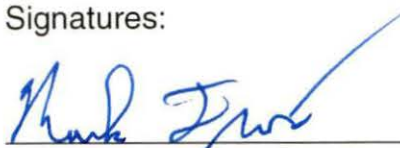
Average Annual Principal and Interest Payments. In calculating its revenue requirement, Monroe District used an average annual debt service of \$632,138 and claimed a 0.2X DSC of \$126,428. Using Monroe District's bond and loan amortization schedules, Staff calculated a three-year average debt service of \$665,267, as shown in the table below. Staff also used a DSC coverage of 0.2X or \$133,053.<sup>33</sup>

<sup>33</sup> \$665,267 (Three Year Average Debt Service) x 0.2 (Coverage) = \$133,053.

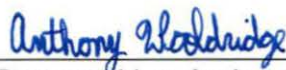
Year	2015 Series RD Bonds	2001 Series KRWA	2019 Series KIA	Principal & Interest
2020	\$ 15,608	\$ 171,194	\$ 476,202	\$ 663,004
2021	15,300	173,844	476,202	665,346
2022	15,479	175,769	476,202	667,450
Totals	<u>46,387</u>	<u>520,807</u>	<u>1,428,606</u>	<u>1,995,800</u>
3-Year Average	<u>\$ 15,462</u>	<u>\$ 173,602</u>	<u>\$ 476,202</u>	<u>\$ 665,267</u>

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

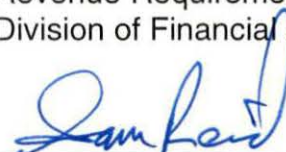
Signatures:

A handwritten signature in blue ink, appearing to read "Mark Frost", written over a horizontal line.

Prepared by: Mark Frost  
Revenue Requirements Branch  
Division of Financial Analysis

A handwritten signature in blue ink, appearing to read "Anthony Wooldridge", written over a horizontal line.

Prepared by: Anthony Wooldridge  
Revenue Requirements Branch  
Division of Financial Analysis

A handwritten signature in blue ink, appearing to read "Sam Reid", written over a horizontal line.

Prepared by: Sam Reid  
Rate Design Branch  
Division of Financial Analysis

# ATTACHMENT A

## ATTACHMENT TO A STAFF REPORT OF THE KENTUCKY PUBLIC SERVICE COMMISSION IN CASE NO. 2019-00293 DATED **JAN 09 2020**

### Staff's Pro Forma Income Statement

	Test-Year Actual Operations	Staff's Pro Forma Adjustments	Adj. Ref.	Staff's Pro Forma Operations
Operating Revenues:				
Revenue Water Sales:				
Revenue - Metered Water Sales	\$ 2,111,976	\$ (20,821)	(A)	\$ 2,091,155
Sales for Resale	20,277			20,277
Total Revenue Water Sales	2,132,253	(20,821)		2,111,432
Other Operating Revenues:				
Forfeited Discounts	74,105			74,105
Total Operating Revenues	2,206,358	(20,821)		2,185,537
Operating Expenses:				
Operation & Maintenance:				
Salaries & Wages - Employees	518,042	(35,164)	(B)	482,878
Salaries & Wages - Commissioners	6,000			6,000
Employee Pension & Benefits	182,114	(38,893)	(C)	143,221
Purchased Water	271,531	(271,531)	(D)	0
Purchased Power	141,240	33,875	(D)	175,115
Chemicals	91,525	34,170	(D)	125,695
Materials & Supplies	138,458			138,458
Contractual Services - Accounting	13,000			13,000
Contractual Services - Legal	14,905	(14,905)	(E)	0
Contractual Services - Water Testing	12,694	6,991	(D)	19,685
Contractual Services - Other	47,565			47,565
Transportation	21,854			21,854
Insurance	62,808			62,808
Bad Debt	7,818			7,818
Miscellaneous	36,185			36,185
Total Operation & Maintenance	1,565,739	(285,457)		1,280,282
Depreciation	611,104	172,316	(F)	783,420
Utility Operating Expenses	2,176,843	(113,141)		2,063,702
Net Utility Operating Income	29,515	92,320		121,835
Other Income & Deductions:				
Interest Income	11,225			11,225
Nonutility Income	20,160			20,160
Net Income Available for Debt Service	\$ 60,900	\$ 92,320		\$ 153,220

## ATTACHMENT B

ATTACHMENT TO A STAFF REPORT OF THE KENTUCKY PUBLIC SERVICE  
COMMISSION IN CASE NO. 2019-00293 DATED **JAN 09 2020**

### Monthly Rates

#### 5/8 x 3/4-Inch Meter

First	2,000	Gallons	\$ 28.98	Minimum Bill
Next	3,000	Gallons	12.15	per 1,000 Gallons
Next	5,000	Gallons	10.47	per 1,000 Gallons
All Over	10,000	Gallons	9.20	per 1,000 Gallons

#### 1-Inch Meter

First	5,000	Gallons	\$ 65.41	Minimum Bill
Next	5,000	Gallons	10.47	per 1,000 Gallons
All Over	10,000	Gallons	9.20	per 1,000 Gallons

#### 2-Inch Meters

First	20,000	Gallons	\$ 210.85	Minimum Bill
All Over	20,000	Gallons	9.20	per 1,000 Gallons

# ATTACHMENT C

## ATTACHMENT TO A STAFF REPORT OF THE KENTUCKY PUBLIC SERVICE COMMISSION IN CASE NO. 2019-00293 DATED JAN 09 2020

Billing Analysis: Monroe District  
Test Period: Calendar Year 2018

Meter Size	Bills	Gallons	Revenue
5/8 Inch	40,856	150,727,301	\$ 1,634,489
1 Inch	497	12,092,530	97,643
2 Inch	424	47,101,410	359,023
Totals	<u>41,777</u>	<u>209,921,241</u>	<u>\$ 2,091,155</u>

Revenue Table: 5/8-Inch Meter

	Bills	Gallons Sold	Present Rates	Revenue
First 2,000 Minimum Bill	40,856	65,143,470	\$ 22.15 minimum	\$ 904,960
Next 3,000 Gallons		47,929,811	\$ 9.28 per thousand	444,789
Next 5,000 Gallons		20,653,510	\$ 8.00 per thousand	165,226
Over 10,000 Gallons		17,000,510	\$ 7.03 per thousand	119,514
Totals	<u>40,856</u>	<u>150,727,301</u>		<u>\$ 1,634,489</u>

Revenue Table: 1-Inch Meter

	Bills	Gallons Sold	Present Rates	Revenue
First 5,000 Minimum Bill	497	1,927,830	\$ 49.99 minimum	\$ 24,845
Next 5,000 Gallons		1,381,920	\$ 8.00 per thousand	11,055
Over 10,000 Gallons		8,782,780	\$ 7.03 per thousand	61,743
Totals	<u>497</u>	<u>12,092,530</u>		<u>\$ 97,643</u>

Revenue Table: 2-Inch Meter

	Bills	Gallons Sold	Present Rates	Revenue
First 20,000 Minimum Bill	424	5,750,120	\$ 161.14 minimum	\$ 68,323
Over 20,000 Gallons		41,351,290	\$ 7.03 per thousand	290,700
Totals	<u>424</u>	<u>47,101,410</u>		<u>\$ 359,023</u>



\*Monroe County Water District  
205 Capp Harlan Road  
Tompkinsville, KY 42167

\*Robert Capps  
Manager  
Monroe County Water District  
205 Capp Harlan Road  
Tompkinsville, KY 42167