

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

APPLICATION OF ELKHORN WATER)	CASE NO.
DISTRICT FOR RATE ADJUSTMENT)	2018-00145
PURSUANT TO 807 KAR 5:076)	

NOTICE OF FILING OF STAFF REPORT

Notice is hereby given that, in accordance with the Commission's Order of September 12, 2018, 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 12, 2018 Order, Elkhorn 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.



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

DATED DEC 03 2018

cc: Parties of Record

STAFF REPORT
ON
ELKHORN WATER DISTRICT
CASE NO. 2018-00145

Elkhorn Water District (Elkhorn District), a water district organized pursuant to KRS Chapter 74, provides water service to approximately 588 residential customers residing in Franklin County, Kentucky.¹ On April 30, 2018, the Commission received Elkhorn District's application (Application) requesting to adjust its monthly water service rates pursuant to the procedures set forth in 807 KAR 5:076. By its letter of May 8, 2018, the Commission notified Elkhorn District of deficiencies in its Application. As of May 30, 2018, Elkhorn District had not filed its responses; therefore, the Commission issued a reminder letter.

On June 14, 2018, Elkhorn District filed the information necessary to cure five of the noted deficiencies and requested a deviation pursuant to 807 KAR 5:076, Section 4(1), from filing a detailed billing analysis showing its revenues from present and proposed rates from each customer class. On August 20, 2018, Elkhorn District filed the detailed billing analysis that was necessary to cure the remaining deficiency; its Application was accepted for filing on August 20, 2018. To ensure the orderly review of the Application, the Commission established a procedural schedule by Order dated September 12, 2018.

¹ *Annual Report of Elkhorn Water District to the Public Service Commission for the Calendar Year Ended December 31, 2017* ("2017 Annual Report") at 11, 12, and 48.

To comply with the requirements of 807 KAR 5:076, Section 9,² Elkhorn 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, 2017. Using its pro forma test-year operations, Elkhorn District determined that it could justify a revenue increase of \$10,881, or 3.56 percent, as shown in the table below.³ The rates requested by Elkhorn District would increase the monthly bill of a typical residential customer using 5,000 gallons per month by \$1.22, from \$34.39 to \$35.61, or approximately 3.56 percent.

Pro Forma Operating Expenses	\$ 301,010
Plus: Average Annual Debt Principal and Interest Payments	12,949
Debt Coverage Requirement	<u>2,590</u>
Total Revenue Requirement	316,549
Less: Interest Income	<u>(155)</u>
Revenue Required from Rates	316,394
Less: Normalized Revenues from Water Sales	<u>(305,513)</u>
Required Revenue Increase/(Decrease)	<u><u>\$ 10,881</u></u>
Percentage Increase	<u><u>3.56%</u></u>

On July 26, 2018, the Frankfort Electric and Water Plant Board (Frankfort) increased its wholesale water rate to \$2.84 per 1,000 gallons. The Commission, pursuant to 807 KAR 5:068, authorized Elkhorn District to increase its water rates in order to pass

² 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.

³ Application, ARF FORM 1 ATTACHMENT RR-DC – SEPTEMBER 2011, Revenue Requirement Calculation-Debt Service Coverage Method.

through the wholesale water rate increase of Frankfort.⁴ In its Application, Elkhorn District requested a 3.56 percent increase to its current rates. Applying that percentage increase across the board to the rates approved in Case No. 2018-00241 results in the rates set forth in Attachment A to this report. The rates set forth in Attachment A will produce \$322,664, an increase in revenues of \$11,134, or 3.58 percent, in additional revenues above the normalized revenues from rates of \$311,530.⁵ The rates in Attachment A would increase the monthly bill of a typical residential customer using 5,000 gallons per month by \$1.26, from \$34.94⁶ to \$36.20, or approximately 3.61 percent.

To determine the reasonableness of the rates requested by Elkhorn District, Staff performed a limited financial review of Elkhorn District's test-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.

Staff's findings are summarized in this report. Mark C. Frost and Mike Foley reviewed the calculation of Elkhorn District's Overall Revenue Requirement. Sam Reid reviewed Elkhorn District's reported revenues and rate design.

⁴ Case No. 2018-00241, *Purchased Water Adjustment Filing of Elkhorn Water District* (Ky. PSC Aug. 2, 2018).

⁵ Applying the water rates approved in Case No. 2018-00241 to Elkhorn District's billing analysis results in normalized revenues from water sales of \$311,530.

⁶ Average customer bill using the water rates approved in Case No. 2018-00241.

Summary of Findings

1. Overall Revenue Requirement and Required Revenue Increase. By applying an 88 percent operating ratio to Elkhorn District's pro forma operating expenses, Staff found Elkhorn District's overall revenue requirement to be \$334,547. A revenue increase of \$22,862, or 7.34 percent, is necessary to generate the overall revenue requirement Staff determined that Elkhorn District could justify. If Elkhorn District wishes to request that the Commission approve a revenue increase of this amount, it should do so in its written response to this report.

2. Water Service Rates. Elkhorn District proposed to increase its water service rates by approximately 3.56 percent across the board above current rates. Elkhorn 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. Staff finds that an across-the-board increase to all rate classes is the appropriate means to allocate the increased revenue requirement. The rates set forth in an Attachment B to this report are based upon the revenue requirement as calculated by Staff and will produce sufficient revenues from water sales to recover the \$334,392 Revenue Requirement from rates determined by Staff, an approximate 7.34 percent increase. These rates will increase a typical residential customer's monthly water bill from \$34.94 to \$37.52, an increase of \$2.58, or approximately 7.38 percent.

3. Depreciable Lives. In this report, Staff finds that an adjustment is warranted to the depreciable lives that are assigned to Distribution Reservoirs and Standpipes – Account No. 330 and Meters and Meter Installations – Account No. 334. Any depreciable

lives approved by the Commission in this preceding for ratemaking purposes should be used by Elkhorn District for all future accounting and reporting purposes. No adjustment to accumulated depreciation or retained earnings should be made to account for the retroactive cumulative effect of this change in accounting estimate.

Pro Forma Operating Statement

Elkhorn District's Pro Forma Operating Statement for the test year ended December 31, 2017, as determined by Staff, appears below.

	<u>2017 Annual Report</u>	<u>Pro Forma Adjustments</u>	<u>Adj. Ref.</u>	<u>Pro Forma Operations</u>
Operating Revenues:				
Revenues from Water Sales:				
Metered Water Sales:	\$ 305,513	\$ 6,017	(A)	\$ 311,530
Other Water Revenues:				
Other Water Revenues	<u>155</u>			<u>155</u>
Total Operating Revenues	<u>305,668</u>	<u>6,017</u>		<u>311,685</u>
Operating Expenses:				
Operation & Maintenance:				
Salaries & Wages - Commissioners	8,568			8,568
Purchased Water	165,826	9,332	(B)	175,158
Purchased Power	7,153	(74)	(B)	7,079
Chemicals	2,220			2,220
Contractual Services - Acct.	19,725	(9,038)	(C)	10,688
Contractual Services - Other	41,408	50	(D)	41,458
Rent Bld/Real Prop.	64			64
Insurance - Gen. Liability	4,316			4,316
Advertising	503			503
Miscellaneous	<u>31,023</u>			<u>31,023</u>
Total Operation & Maintenance	280,806	271		281,077
Depreciation	27,804	(15,479)	(E)	12,325
Amortization		<u>1,000</u>	(C)	<u>1,000</u>
Utility Operating Expenses	<u>308,610</u>	<u>(14,209)</u>		<u>294,402</u>
Net Utility Operating Income	<u>\$ (2,942)</u>	<u>\$ 20,226</u>		<u>\$ 17,284</u>

(A) Billing Analysis Adjustment. Elkhorn District provided a billing analysis showing the gallons of water billed to retail customers during the test year. Applying the

water service rates authorized by the Commission in Case No. 2018-00241 to the applicable water sales shown in the billing analysis provided in Elkhorn District's application, Staff determined that an adjustment of \$6,017 should be made to increase test-year revenues.

(B) Purchased Water. Elkhorn District reported a test-year purchased water expense of \$165,826 and a purchased power expense of \$7,157. Staff determined Elkhorn District's test-year purchased water expense should be increased by \$9,332,⁷ and purchased power expense decreased by \$74, as explained below.

Changes to Wholesale Purchase Water Rate. Frankfort increased its wholesale water rate from \$2.75 per 1,000 gallons⁸ to \$2.84 per 1,000 gallons⁹ on July 26, 2018. Staff is increasing test-year purchased water expense of \$165,826 by \$11,155 to account for Frankfort's wholesale rate increase. The pro forma purchased water expense of \$176,981, as calculated in the table below, is being used by Staff in the computation of the excess line loss.

Test-Year Gallons/1,000 Gallons	62,317,100
Multiplied by: Frankfort Wholesale Rate	<u>\$ 0.00284</u>
Pro Forma Purchased Water Expense	176,981
Add: Test-Year Cost	<u>(165,826)</u>
Pro Forma with PWA	<u><u>\$ 11,155</u></u>

⁷ \$11,155 (PWA Increase) - \$1,823 (Excessive Line Loss) = \$9,332.

⁸ \$2.55 (FRWP Rate per 1,000 gallons) + \$0.20 (Kentucky River Authority (KRA) Withdrawal fee per, 1,000 gallons) = \$2.75.

⁹ \$2.55 (FRWP Rate per 1,000 gallons) + \$0.29 (KRA Withdrawal fee per, 1,000 gallons) = \$2.84.

Excess Water Loss. 807 KAR 5:066, Section 6(3),¹⁰ limits water loss to 15 percent for ratemaking purposes unless an alternative level is found reasonable by the Commission. In the below table, Staff determined Elkhorn District’s test-year water loss was 16.03 percent, or 1.03 percentage above the 15 percent allowable limit.

Test-Year Water Purchases	62,317,100
Less: Volume Sold During the Test Year	(50,514,001)
System Flushing	<u>(1,814,000)</u>
Water Loss	9,989,099
Divide by: Total Water Purchased	<u>62,317,100</u>
Percent Lost	16.03%
Allowable Water Loss	<u>-15.00%</u>
Excess Water Loss Percentage	<u><u>1.03%</u></u>

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

	<u>Purchased Power</u>	<u>Purchased Water</u>
Pro Forma Subject to Water Loss Adjustment	\$ (7,153)	\$ (176,981)
Times: Water Loss in Excess of 15 Percent	<u>1.03%</u>	<u>1.03%</u>
Pro Forma Water Loss Adjustments	<u>\$ (74)</u>	<u>\$ (1,823)</u>

(C) Contractual Service – Accounting. Elkhorn District reported a test-year contractual service – accounting expense of \$19,725. Staff determined Elkhorn District’s

¹⁰ 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 ratemaking 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.

test-year contractual service – accounting expense should be decreased by \$9,038¹¹ as explained below.

Engineering. Upon its review of the general ledger and test-year invoices, Staff discovered that Elkhorn District recorded a payment to its engineer of \$8,438. Although the engineering invoice was paid in the test year, the engineering services were actually provided to Elkhorn District in calendar years 2014, 2015, and 2016. Recording the engineering payments as an expense in the year paid is considered “cash” accounting. The *Uniform System of Accounts (USoA) for Class A/B Water Districts and Associations* requires districts and association subject to Commission jurisdiction to use the accrual method of accounting.¹² To reflect accrual accounting, Staff is removing the prior period engineering fees of \$8,438 from test-year operating expenses.

Staff also noted in its review that Elkhorn District recorded payments of \$3,000 to its engineer for preparing and submitting Elkhorn District’s purchased water adjustment (PWA) applications in the test year. For ratemaking purposes, such an expenditure is a non-recurring cost that should be removed from the contractual service – accounting expense and amortized over its estimated useful life. To eliminate the non-recurring costs from test year operating expenses, Staff is reducing contractual service – accounting

¹¹ \$2,400 (Legal and Accounting) - \$11,438 (Engineering) = (\$9,038).

¹² USoA for Class A/B Water Districts and Associations at 36:

Monthly accounting using the accrual method is required. During the accounting period, certain amounts may have been earned although collection is not to be made until the subsequent period, and certain expenses may have been incurred, although payment is not to be made until a subsequent period. At the end of the accounting period, the revenues and expenses shall be recognized by charging the appropriate revenue or expense account and corresponding receivable or liability account.

expense by \$3,000. Operating expenses are being increased by \$1,000 to reflect amortizing the cost to file the PWA's over three years.

Legal and Accounting. During the test year, Elkhorn District paid its accountant and attorney monthly fees of \$400 each, which results in a combined annual cost of \$9,600.¹³ However, Elkhorn District only reported in contractual service – accounting expense payments to its attorney of \$4,000 and of \$3,200 to its accountant. Staff is increasing test year contractual service – accounting expense by \$2,400¹⁴ to reflect the actual annual cost of the routine legal and accounting services.

(D) Contractual Service – Other. Elkhorn District reported a test-year contractual service – other expense of \$41,408. Staff determined Elkhorn District's test-year contractual service – other expense should be increased by \$50¹⁵ as explained below.

Maintenance Fee. Elkhorn District's maintenance is performed by an outside contractor, Gatewood Water Service (Gatewood). In April 2017, Gatewood increased the monthly maintenance fee from \$1,500 to \$2,000. To reflect a full 12 months at the new fee, Staff is increasing contractual service – other expense by \$1,500.

Capital Expenditures. Upon its review of the general ledger and test-year invoices, Staff discovered that Elkhorn District had incorrectly expensed the \$900 cost to install a new meter pit and the \$550 cost to install a meter on the long side of the road. Both of these expenditures are considered capital and, therefore should be depreciated

¹³ \$800 (Combined Monthly Fee) x 12 (Months) = \$9,600.

¹⁴ \$9,600 (Annual Combined Expense) - \$7,200 (Reported Expense) = \$2,400.

¹⁵ \$1,500 (Maintenance Fee) - \$1,450 (Capital Expenditures) = \$50.

rather than expensed. Accordingly, Staff is eliminating the capital costs of \$1,450 from form test year contractual service – other expense. The discussion of the depreciation of the capital expenditure is in adjustment (E) Depreciation.

(E) Depreciation. Elkhorn District reported a test-year depreciation expense of \$27,804. Staff determined Elkhorn District’s test-year depreciation expense should be decreased by \$15,479 as shown in the table below. The detailed explanations of Staff’s three depreciation adjustments follow the table.

Staff's Changes to Depreciable Lives	\$ (2,216)
Removal of Fully Depreciated Asset	(13,297)
Depreciation on Capital Items that were Expensed	<u>34</u>
Total Depreciation Adjustment	<u>\$ (15,479)</u>

Change to Depreciable Lives. Elkhorn District submitted a depreciation schedule that directly corresponded to the amount of depreciation expense that was reported in the 2017 Annual Report. In reviewing the reasonableness of the depreciation lives used by water utilities, the Commission has historically relied upon the report published in 1979 by the National Association of Regulatory Utility Commissioners (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 ranges, the Commission has historically used the mid-point of the NARUC ranges to depreciate utility plant.

Upon its review of the reasonableness of the depreciable lives of each asset category in Elkhorn District’s depreciation schedule, Staff determined that only two asset categories are outside of the ranges in the NARUC Study. As shown in the table below, Staff recalculated pro forma depreciation expense for meters based on a 42.5-year life

and for storage tanks based on a 45-year life. The depreciation lives used by Staff represents the midpoint of the NARUC range for each asset category. Using the NARUC depreciation lives results in a depreciation expense reduction of \$2,216.

<u>Asset Category</u>	<u>Original Cost</u>	<u>Depreciable Life</u>	<u>Pro Forma Expense</u>	<u>Less: Test Year</u>	<u>Pro Forma Adjustment</u>
Storage Tanks	\$ 380,186	45.0	\$ 8,449	\$ (10,837)	\$ (2,388)
Customer Service (Meters & Installations)	76,996	42.5	1,812	(1,640)	172
Total	<u>\$ 457,182</u>		<u>\$ 10,261</u>	<u>\$ (12,477)</u>	<u>\$ (2,216)</u>

Fully Depreciated Asset. Elkhorn District’s depreciation schedule included depreciation expense of \$13,296 for an asset entitled “Pumps, Lines, Meters.” The in-service date of this asset was listed as October 10, 1975, and the asset was depreciated over a 40-year life. Based on the in-service date and 40-year depreciable life, Staff determined that this asset should have been fully depreciated in the calendar year 2015. Accordingly, Staff is reducing depreciation expense by \$13,297.

Capital Purchases. As previously mentioned, Elkhorn District had expensed the cost of a meter installation and the cost of a meter pit. Staff is increasing depreciation expenses by \$34 to reflect depreciating the capital expenditures of \$1,450 over a depreciable life of 42.5 years.

Overall Revenue Requirement and Required Revenue Increase

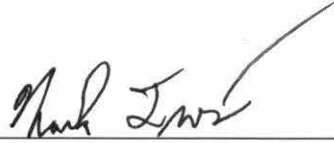
Elkhorn District proposes to use the DSC methodology to calculate its revenue requirement. The Commission has historically used the DSC methodology to determine the revenue requirement for water districts and water associations. This approach is used primarily because a bond ordinance or loan agreement requires the water district or association to maintain a predetermined DSC level. In this instance, Staff proposes to use the operating ratio method to calculate Elkhorn District’s revenue requirement. This

approach is generally used to determine a utility’s revenue requirement when no basis for a rate-of-return determination exists, the utility’s plant is funded fully or largely through contributions, or the DSC methodology fails to produce a revenue requirement sufficient to support the utility’s operations.

Using the operating ratio method, Staff determined that Elkhorn District requires an overall revenue requirement of \$334,547. As shown below, a revenue increase of \$22,862, or 7.34 percent, is necessary to generate the Overall Revenue Requirement.

Pro Forma Operating Expenses	\$ 294,402
Divide by: Operating Ratio	<u>88%</u>
Total Revenue Requirement	334,547
Less: Other Operating Revenue	<u>(155)</u>
Revenue Required from Rates	334,392
Less: Normalized Revenues from Water Sales	<u>(311,530)</u>
Required Revenue Increase/(Decrease)	<u>\$ 22,862</u>
Percentage Increase	<u>7.34%</u>

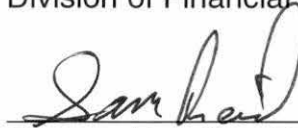
Signatures:



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



Prepared by: Mike Foley
Financial Analyst
Revenue Requirements Branch
Division of Financial Analysis



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

ATTACHMENT A

ATTACHMENT TO AN ORDER OF THE KENTUCKY PUBLIC SERVICE
COMMISSION IN CASE NO. 2018-00145 DATED **DEC 03 2018**

3.56% INCREASE TO RATES APPROVED IN PWA CASE NO. 2018-00241

5/8 x 3/4-Inch Meter

			<u>Monthly Rates</u>	
First	2,000	Gallons	\$ 16.52	Minimum Bill
Next	3,000	Gallons	6.56	per 1,000 Gallons
Next	5,000	Gallons	5.95	per 1,000 Gallons
All Over	10,000	Gallons	4.68	per 1,000 Gallons

1-Inch Meter

First	5,000	Gallons	\$ 36.18	Minimum Bill
Next	5,000	Gallons	5.95	per 1,000 Gallons
All Over	10,000	Gallons	4.68	per 1,000 Gallons

1 1/2-Inch Meter

First	10,000	Gallons	\$ 65.96	Minimum Bill
All Over	10,000	Gallons	4.68	per 1,000 Gallons

Mobile Home Parks

		<u>Monthly Minimum Bills</u>	
South Creek	15,000	Gallons	\$ 123.89
Elkhorn	76,000	Gallons	\$ 627.68
Capital	125,000	Gallons	\$1,032.37

Emergency Wholesale Rate

\$ 4.68 per 1,000 Gallons

ATTACHMENT B

ATTACHMENT TO AN ORDER OF THE KENTUCKY PUBLIC SERVICE
COMMISSION IN CASE NO. 2018-00145 DATED **DEC 03 2018**

RATES CALCULATED BY STAFF

5/8 x 3/4-Inch Meter

			<u>Monthly Rates</u>	
First	2,000	Gallons	\$ 17.12	Minimum Bill
Next	3,000	Gallons	6.80	per 1,000 Gallons
Next	5,000	Gallons	6.17	per 1,000 Gallons
All Over	10,000	Gallons	4.85	per 1,000 Gallons

1-Inch Meter

First	5,000	Gallons	\$ 37.52	Minimum Bill
Next	5,000	Gallons	6.17	per 1,000 Gallons
All Over	10,000	Gallons	4.85	per 1,000 Gallons

1 1/2-Inch Meter

First	10,000	Gallons	\$ 68.36	Minimum Bill
All Over	10,000	Gallons	4.85	per 1,000 Gallons

Mobile Home Parks

		<u>Monthly Minimum Bills</u>	
South Creek	15,000	Gallons	\$ 128.40
Elkhorn	76,000	Gallons	\$ 650.59
Capital	125,000	Gallons	\$1,070.05

Emergency Wholesale Rate

\$ 4.85 per 1,000 Gallons

*Elkhorn Water District
7165 US 127 North
P. O. Box 67
Frankfort, KY 40602

*Michael Dudgeon
Chairman
Elkhorn Water District
P. O. Box 67
Frankfort, KY 40602

*Honorable Warner A Broughman, III
Attorney At Law
Warner A. Broughman III & Associates
3161 Custer Drive
Lexington, KENTUCKY 40517