

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ALTERNATIVE RATE ADJUSTMENT FILING)
OF WOOD CREEK WATER DISTRICT) CASE NO. 2013-00170

NOTICE OF FILING OF COMMISSION STAFF REPORT

Notice is hereby given that, in accordance with the Commission's Order of June 20, 2013, the attached report, which contains Commission Staff's findings and recommendations regarding Wood Creek Water District's ("Wood Creek District") proposed rate adjustment, has been filed in the record.

Please note that pursuant to the Commission's Order of June 20, 2012, Wood Creek District is required, no later than August 5, 2013, to file with the Commission its written comments on and any objections to the findings and recommendations contained in the Report, any additional evidence for the Commission's consideration; and written notice as to whether this matter may be submitted for decision based upon the existing record without hearing.

Please further note that the Commission's Order of June 20, 2013 requires Wood Creek District in its response to the Report to state its position on whether the Commission should authorize the assessment of the higher rate that Commission Staff found Wood Creek District's financial condition would support and whether the Commission should require Wood Creek District to implement Commission Staff's recommended changes in Wood Creek District's depreciation accounting practices.



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DATED **JUL 22 2013**

cc: Parties of Record

STAFF REPORT
ON
WOOD CREEK WATER DISTRICT
CASE NO. 2013-00170

Wood Creek Water District ("Wood Creek District"), a water district organized pursuant to KRS Chapter 74, owns and operates sewage collection facilities in Laurel County, Kentucky, that serve 949 residential customers and 186 commercial customers.¹

Wood Creek District has applied to the Commission for an adjustment of wastewater rates pursuant to 807 KAR 5:076. In developing its proposed rates for wastewater service, Wood Creek District used the calendar year ending December 31, 2012 as its test year. Wood Creek District proposed rates that it estimated would generate additional revenues of \$123,962. These rates, which are set forth in Appendix A to this Report, would increase the monthly sewer bill of a customer who purchases 5,000 gallons of water through a 5/8-inch X 3/4inch meter from \$26.40 to \$33.74 or 32.9 percent.

Staff has performed a limited financial review of Wood Creek District's test-year operations to determine whether reported test-year operations were representative of normal operations. Known and measurable changes to test-year operations were identified and adjustments were made when their effects were deemed to be material. All insignificant or immaterial discrepancies were not pursued or addressed.

This report contains the findings of Staff's review. Mark Frost reviewed the pro forma income statement and the calculation of revenue requirement and is responsible for the sections of this report in which those issues are addressed. Eddie Beavers

¹ *Annual Report of Wood Creek Water District (Wastewater Division) to the Public Service Commission for the Calendar Year Ended December 31, 2012 ("2012 Annual Report")* at 1 and 8.

reviewed the billing analysis, reported revenues, and rate design and is responsible for the sections of this report regarding those issues.

Summary of Findings

1) Overall Revenue Requirement and Required Revenue Increase. Staff finds that, based upon adjusted test-year operations, Wood Creek District's overall revenue requirement is \$885,016 and its revenue requirement from wastewater service rates is \$878,937. A revenue increase of \$499,875 is necessary to generate the overall revenue requirement.

2) Billing Analysis, Reported Revenues and Rate Design. Wood Creek District's Billing Analysis contained an error for the 1-inch meter rates. The usage in the second step was mislabeled and should be 2,500 gallons. In its application, Wood Creek District stated that Revenue from Sales at Present Rates² is equal to \$376,351. The Billing Analysis at Present Rates, which Wood Creek District provided as a supplemental filing on May 20, 2013, however, states revenue of \$379,062. Staff recommends that the use of the revenue as calculated from the Billing Analysis at Present Rates of \$379,062. This action increases the revenue by \$2,711.

Wood Creek District proposes an across-the-board increase in rates of 33 percent. It has not performed a cost-of-service study. 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 cost-of-service study. Given this precedent, Staff finds that an across-the-board increase to all customer classes is the appropriate means to allocate the increased revenue requirement and should be used to establish Wood Creek District's rates. The rates set forth in Appendix B to this report are based upon

² See ARF Form Attachment RR-DC.

this methodology and will produce revenues from wastewater services of \$878,937. In contrast, Wood Creek District's proposed rates will produce revenues from wastewater of \$500,313.

Wood Creek District currently has customers who receive water service through a 3-inch water meter. Its rate schedules for wastewater service, however, do not reflect a rate for such customers. For such customers, Wood Creek District has been applying the rate for customers with 2-inch meters. In its application, Wood Creek District proposes to establish a wastewater service rate schedule expressly for customers who receive water service through a 3-inch water meter.

3) Depreciable Lives. Staff finds that the depreciable lives for Wood Creek District's wastewater assets should be adjusted for rate-making purposes and for accounting purposes. The recommended depreciable lives better match the expectancy of Wood Creek District's assets, will better match expenses to the revenues, and will minimize the erosion of Wood Creek District's equity. Staff further finds that no adjustment to accumulated depreciation and retained earnings should be made to account for the retroactive effect of this recommended change in accounting estimate.

4) Internal Controls. Although Wood Creek District maintains separate general ledgers for its water division and wastewater division, rate-making adjustments were necessary to properly allocate many test-year operating expenses shared by the divisions. To maintain its wastewater rates at lower levels, Wood Creek District has not allocated shared expenses to its wastewater division. Failure to properly allocate all shared operating expenses to the wastewater division results in cross-subsidization. Staff finds that Wood Creek District should allocate shared operating expenses using

reasonable allocation factors and methods and should document these factors and methods in written accounting policies that its Board of Commissioners formally adopts.

Pro Forma Operating Statement

Wood Creek District reported a Net Operating Loss of \$412,441 during the test year. Its only proposed adjustment to test-year operating expenses is a decrease of \$288,479 to the depreciation expense.

Wood Creek District's Pro Forma Operating Statement for the test-year ended December 31, 2012, as determined by Staff, appears in the table below.

	<u>Test-Year Operations</u>	<u>Pro Forma Adjustments</u>		<u>Pro Forma Operations</u>
Operating Revenues:				
Operating Revenues - Measured	\$ 376,351	\$ 2,711	(A)	\$ 379,062
Miscellaneous Sewage Revenues	6,068			6,068
	<u>382,419</u>	<u>2,711</u>		<u>385,130</u>
Operating Expenses:				
Operation & Maint. Exp:				
Fuel & Power	23,301	725	(B)	24,026
Chemicals	49,827			49,827
Misc Supplies & Exp - Collection	2,242			2,242
Maint. - Collection System	11,636			11,636
Maint. - Treatment & Disposal	56,819	(8,864)	(C)	47,955
Maint. - Other Plant Facilities	25,556			25,556
Administrative & General Salaries	7,346	31,264	(B)	38,610
Office Supplies & Other Expenses		14,625	(B)	14,625
Outside Services Emp.	229,665	2,672	(D)	232,337
Insurance		14,118	(E)	14,118
Transportation		17,724	(B)	17,724
	<u>406,392</u>	<u>72,264</u>		<u>478,656</u>
Total Operation & Maint. Exp.	406,392	72,264		478,656
Depreciation	388,479	(89,326)	(F)	299,153
Amortization		1,005	(G)	1,005
	<u>794,871</u>	<u>(17,062)</u>		<u>778,814</u>
Total Operating Expenses	794,871	(17,062)		778,814
Net Operating Income	<u>(412,452)</u>	<u>19,773</u>		<u>(393,684)</u>
Other Income:				
Interest & Dividend	11			11
Net Income	<u>\$ (412,441)</u>	<u>\$ 19,773</u>		<u>\$ (393,673)</u>

(A) Wastewater Service. Wood Creek District's 2012 billing analysis of customer water usage at current wastewater rates produces normalized revenues from wastewater service of \$379,062 for an increase of \$2,711.

(B) Shared Operating Expenses. In addition to its wastewater division, Wood Creek District operates West Laurel Water District ("West Laurel") and East Laurel Water Association ("East Laurel"). Wood Creek District used the number of customers served by each water utility to allocate shared operating expenses (i.e., administrative salaries, materials and supplies, and transportation expenses) between the three utilities. The table below shows the allocation of these shared costs.

	Totals	Wood Creek District	East Laurel	West Laurel
Customers	15,596	5,195	5,378	5,023
% of Total Customers	100.00%	33.30%	34.49%	32.21%
Salaries	\$ 523,631.87	\$ 174,369.41	\$ 180,600.63	\$ 168,661.83
Electric	12,141.50	4,043.12	4,187.60	3,910.78
Materials & Supplies	244,938.99	81,564.68	84,479.46	78,894.85
Transportation	296,847.87	98,850.34	102,382.83	95,614.70
Totals	<u>1,077,560.23</u>	<u>358,827.88</u>	<u>371,650.86</u>	<u>347,082.48</u>

Wood Creek District has not properly allocated the shared expenses between its water division and wastewater division. Given that the shared costs involved are partially driven by the number of customers served, Staff finds that shared costs should be allocated between the two divisions using the number of customers served.

To allocate shared expenses between Wood Creek District's water and sewer divisions, Staff divided the number of customers for each division by the sum of both divisions' customers to establish an allocation factor and then applied this factor to each shared expense. The calculations and resulting factors are shown below.

	Totals	Water	Sewer
Customers	6,330	5,195	1,135
% of Total Customers	100.00%	82.07%	17.93%
Salaries	\$ 174,369.41	\$ 143,104.97	\$ 31,264.44
Electric	4,043.12	3,318.19	724.93
Materials & Supplies	81,564.68	66,940.13	14,624.55
Transportation	98,850.34	81,126.47	17,723.87
Totals	358,827.55	294,490.58	64,337.97

Staff finds that, as a result of these calculations, test-year salaries should be increased by \$31,264; test year fuel and power expense should be increased by \$725; test year office supplies and other expenses should be increased by \$14,625; and transportation expenses of \$17,724 should be included in test-year expenses.

(C) Maintenance – Treatment and Disposal. During the test year a pump at a lift station broke, resulting in the station’s being flooded. Wood Creek District contends that the pump repair was not a typical repair resulting from normal wear and tear, but a non-recurring expense. Staff agrees with this assessment and finds that this nonrecurring expenditure should not be expensed but be amortized over three years. Listed below are the costs associated with the repair along, with the impact to the amortization expense, for a net decrease of \$8,864.

Vendor	Description	Amount
Straffer Pump & Supply	Pump Parts	\$ (6,142)
Allied	Pump Parts	(1,254)
Rite Way	Sludge	(5,900)
Adjustment to Remove Nonrecurring Expenditure		(13,296)
\$ 13,296	(Nonrecurring Expenditure) ÷ 3 (Years) =	4,432
Net Pro Forma Adjustment		(8,864)

(D) Outside Services Employed. Wood Creek District operates a sewage collection system. The city of London, Kentucky, (“London”) treats this sewage

pursuant to the provisions of a 2004 agreement. During the test year, London increased its rate for sewage treatment services from \$2.74 to \$2.94 per 1,000 gallons. In 2012, London processed 79,666,700 gallons of Wood Creek District's effluent. Staff finds that, applying the \$0.20 per 1,000 gallon increase to the gallons of test-year treated effluent results in increase in treatment expense of \$2,672.

(E) Insurance. For the test year, Wood Creek District's water division paid the premium for general liability insurance coverage for both divisions. To allocate the proper premium amount to the wastewater division, Staff used an allocation factor based on the net value of utility plant assets as shown in the table below:

Net Utility Plant in Service	Amount	Allocation Percentage
Wastewater Division	\$ 5,663,750	16.50%
Water Division	28,669,568	83.50%
Total	\$ 34,333,318	100.00%
General Liability Insurance	\$ 85,563	
Multiplied by: Allocation Factor	<u>16.50%</u>	
Pro Forma Adjustment	<u>\$ 14,118</u>	

(F) Depreciation. Wood Creek District reported a depreciation expense of \$388,479 for 2012 on assets dedicated to wastewater field operations. Wood Creek District reduced this depreciation expense by \$288,479 to reduce the wastewater division's revenue requirement. Wood Creek District provided no support for the reduction other than the reduction would reduce the utility's revenue requirement. As proposed adjustment is unsupported and is not documented, Staff finds that it should be rejected.

Staff is proposing to decrease the depreciation expense by \$89,326³ to account for: (1) Changes to the depreciable lives assigned to certain wastewater assets; (2) A full-year of depreciation for assets placed in service in 2012; and (3) Removal of depreciation for assets fully depreciated in 2013. A summary of Staff's review of the lives is found at Appendix C of this report. The following table is Staff's reduction to the depreciation expense.

	Depreciation Lives		UPIS	Depreciation Expense		
	District	Staff		Test-Period	Staff Pro Forma	Pro Forma Adjustment
Staff Revised Depreciation Lives:						
Structures	7	35	\$ 994,788.29	\$ 142,113	\$ 28,423	\$ (113,690)
Structures	20	35	285,174.91	14,259	8,148	(6,111)
Electric Pumping Equipmet	20	7	117,262.80	2,932	16,752	13,820
Service Lines - 56,264	40	10	140,660.00	3,517	14,066	10,549
Services	20	10	130,537.73	3,263	13,054	9,791
Partial Year Depreciation:						
Structures & Improvements	20		1,143.47	29	57	28
Collection Force Mains	40		2,771.96	35	69	34
Telemetry	10		2,980.00	149	298	149
Assets Fully Depreciated in 2013:						
Pumps	7		38,309.88			(2,736)
Services	10		23,192.00			(1,160)
Pro Forma Adjustment						(89,326)

(G) Amortization. Staff is increasing test-year operating expenses by \$1,005 to amortize over three years the \$3,017 cost of Wood Creek District's rate case application.

Calculation of Overall Revenue Requirement and Revenue Increase

Wood Creek District determined its overall revenue requirement to be \$506,392. This amount represents the sum of its operation and maintenance expenses and \$100,000 of reported test-year depreciation expense of \$388,479. Wood Creek District

³ Decrease Due to Change in Lives
Full-Year of Depreciation
Assets Fully Depreciated in 2013
Net Decrease

\$	(85,641)
	211
	(3,896)
\$	<u>(89,326)</u>

determined that an annual revenue increase of \$123,962 is needed to meet the overall requirement.⁴

Staff used the Operating Ratio Method to calculate Wood Creek District's revenue requirement. The Operating Ratio Method is generally accepted by the Commission to calculate the revenue requirement of a water district or water association when no basis for a rate-of-return determination exists, the utility's plant is fully or largely funded through contributions, or the utility has no outstanding long-term debts.⁵ This method allows recovery of operation and maintenance expenses to provide the cash necessary to fund the utility's operation and maintenance fund. Recovery of depreciation expense, a non-cash item, is allowed to provide working capital. Using the Operating Ratio Method, Staff determined the wastewater division's overall revenue requirement to be \$885,016 as shown below.

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Wood Creek District's Overall Revenue Requirement	\$	506,392
Less: Other Operating Revenue		(6,068)
Interest Income		(11)
Revenue Requirement from Waste Water Service		500,313
Less: Normalized Revenue - Wastewater Service		(376,351)
Revenue Increase to Meet Overall Revenue Requirement	\$	123,962
Percentage Increase		32.938%

⁵ The operating ratio is equal to the margin between the operating revenues and operating expenses authorized by the Commission. The margin is allowed to provide working capital above the amount provided through recovery of depreciation expense. The Commission has traditionally set the margin equal to 12 percent of operating revenues with adjustments made for certain "below-the-line" accounts. When no "below-the-line" accounts are reported, the formula appears as shown below.

Operating Revenues		100%
Less: Operating Expenses	-88%	
Net Operating Income	12%	

Cash Related Operating Expenses	\$ 478,656
Add: Depreciation & Amortization/Working Capital	<u>300,158</u>
Total Operating Expenses	778,814
Divided by: 88% Operating Ratio	<u>88%</u>
Overall Revenue Requirement	<u><u>\$ 885,016</u></u>

Staff determined that a revenue increase of \$499,875, or 132 percent, is necessary to generate the \$885,016 overall revenue requirement. These calculations are shown below.

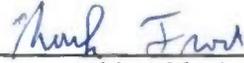
Overall Revenue Requirement	885,016
Less: Other Operating Revenue	(6,068)
Interest Income	<u>(11)</u>
Revenue Requirement from Waste Water Service	878,937
Less: Normalized Revenue - Wastewater Service	<u>(379,062)</u>
Revenue Increase to Meet Overall Revenue Requirement	<u>499,875</u>
Percentage Increase	<u><u>131.872%</u></u>

Staff's overall revenue requirement includes \$406,360 in total working capital,⁶ which far exceeds the \$100,000 sought by Wood Creek District. When allocated shared expenses are included in Wood Creek District's request, the working capital decreases from \$100,000 to \$27,736.⁷

⁶ Depreciation/Amortization Expense	\$ 300,158
Add: Net Income Provided by Operating Ratio	<u>106,202</u>
Total Working Capital	<u>\$ 406,360</u>

⁷ Revenue Requirement – Requested	\$ 506,392
Less: Staff Pro Forma operation & Maintenance Expense	<u>(478,656)</u>
Net Cash Available	<u>\$ 27,736</u>

Signatures



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APPENDIX A
 STAFF REPORT, CASE NO. 2013-00170
 WOOD CREEK DISTRICT'S REQUESTED RATES

Monthly Wastewater Rates

Wastewater Rates in addition
 to Minimum Bill

First	2,000	gallons	\$ 16.52	Minimum bill
Next	1,500	gallons	5.97	per 1,000 gallons
Next	1,500	gallons	5.53	per 1,000 gallons
Next	2,500	gallons	4.96	per 1,000 gallons
All Over	7,500	gallons	4.32	per 1,000 gallons

Minimum Bill for all Meters

5/8- x 3/4-Inch	First	2,000	gallons	\$ 16.52	Minimum bill
1-Inch	First	5,000	gallons	33.77	Minimum bill
2-Inch	First	20,000	gallons	100.17	Minimum bill
3-Inch	First	30,000	gallons	143.37	Minimum bill
6-Inch	First	100,000	gallons	445.77	Minimum bill

APPENDIX B
STAFF REPORT, CASE NO. 2013-00170
RATES TO PRODUCE STAFF'S RECOMMENDED REVENUE REQUIREMENT

Monthly Wastewater Rates

Wastewater Rates in addition
to Minimum Bill

First	2,000	gallons	\$ 28.77	Minimum bill
Next	1,500	gallons	10.40	per 1,000 gallons
Next	1,500	gallons	9.61	per 1,000 gallons
Next	2,500	gallons	8.64	per 1,000 gallons
All Over	7,500	gallons	4.53	per 1,000 gallons

Minimum Bill for all Meters

5/8- x 3/4-Inch	First	2,000	gallons	\$ 28.77	Minimum bill
1-Inch	First	5,000	gallons	58.79	Minimum bill
2-Inch	First	20,000	gallons	174.52	Minimum bill
3-Inch	First	30,000	gallons	249.82	Minimum bill
6-Inch	First	100,000	gallons	852.22	Minimum bill

APPENDIX C
 STAFF REPORT, CASE NO. 2013-00170
 RECOMMENDED AVERAGE SERVICE LIVES

Historically, the Commission has relied on Table 44, Average Service Lifetimes, Major Systems Components, Wastewater Systems, of the O&M Guide for the Support of Rural Water-Wastewater Systems by Commission on Rural Water, Chicago, Illinois, 1974, p 246-247, to evaluate the reasonableness of a utility's wastewater depreciation practices. This study outlines expected service life ranges for various asset groups designed, installed, and maintained in accordance with good water-works practices. Typically, an adjustment is made when the Commission finds that a utility is proposing to use a service life that falls outside of this range while service lives falling within these ranges are generally accepted.

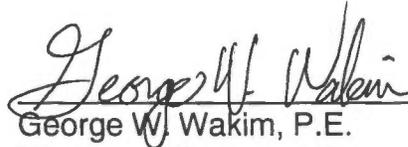
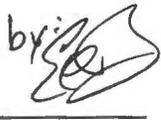
In the following table, Engineering staff has identified the account classifications for which the utility's current service lives are not consistent with the service lives contained in the O&M Guide. The table shows the utility's current and Engineering staff's recommendation for the estimated service lives based on a review of information contained in the record of this case.

Asset Classification	Current	Staff's Recommendation	O&M Guide
Asset 544, Pumps ^b	7	35	20-50
Asset 548, 56,264 Service Lines	40	10	10
Asset 591, Services	20	10	10
Asset 577, Electric Pumping Equipment*	20	35	20-50
Asset 592, Electric Pumping Equipment	20	7	7

^b Based on the review of the invoices provided by Wood Creek District to Staff during the review, it appears that the majority of the costs for assets 544 and 577 are directly associated with lift station structures that have an average service lifetime range of 20-50 years rather than lift station pumps that have a 7-year service lifetime. In this situation, the usage of the midpoint of this range (35 years) is reasonable and appropriate.

The utility appears to be utilizing service lives for assets 548, 591, and 592 outside the range recommended by O&M Guide. Absent any specific and verifiable evidence supporting alternative service lives, Engineering staff finds the service lives identified above which are within the O&M Guide as reasonable and appropriate.

Prepared June 27, 2013:

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