


COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

APPLICATION OF KNOTT COUNTY WATER)	CASE NO.
AND SEWER DISTRICT FOR AN ALTERNATIVE)	2019-00268
RATE ADJUSTMENT)	

NOTICE OF FILING OF COMMISSION STAFF REPORT

Notice is hereby given that, in accordance with the Commission's Orders of August 14, 2019 and November 5, 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 August 14, 2019 Order, Knott County Water and Sewer District is required to file written comments regarding the findings of Commission Staff no later than 14 days from the date of this report.

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

DATED NOV 20 2019

cc: Parties of Record

STAFF REPORT
ON
KNOTT COUNTY WATER AND SEWER DISTRICT
CASE NO. 2019-00268

Knott County Water and Sewer District (Knott District) is a water utility organized pursuant to KRS Chapter 74 that owns and operates a water distribution system through which it provides retail water service to approximately 2,969 retail customers, and five wholesale customers, that reside in Knott County, Kentucky.¹ Knott District also owns and operates a sewage collection system through which it provides service to approximately 168 customers in Knott County, Kentucky.² On July 31, 2019, Knott District filed an application (Application), pursuant to 807 KAR 5:076, requesting to increase its water service rates. To ensure the orderly review of the Application, the Commission established a procedural schedule by Order dated August 14, 2019. The Attorney General was granted intervention pursuant to an Order of August 21, 2019. Letcher County Water and Sewer District (Letcher District) and the city of Hindman (Hindman) separately requested motions to intervene; and were granted joint intervenor status on September 5, 2019. Pursuant to the procedural schedule set forth on August 14, 2019, the Attorney General, and Letcher District and Hindman filed two rounds of formal discovery. Staff issued one round of formal discovery on October 29, 2019. On

¹ *Annual Report of Knott County Water and Sewer District to the Public Service Commission for the Calendar Year Ended December 31, 2018 (Water Annual Report)* at 12 and 49.

² *Annual Report of Knott County Water and Sewer District to the Public Service Commission for the Calendar Year Ended December 31, 2018 (Sewer Annual Report)* at 9 and 25.

November 5, 2019, the Commission amended the procedural schedule to delay the issuance of the Staff Report to November 20, 2019.

To comply with the requirements of 807 KAR 5:076, Section 9, Knott District based its requested rates on a historical test period that coincides with the reporting period shown in its most recent Annual Report on file with the Commission at the time it filed the Application; the calendar year ended December 31, 2018.

Using its pro forma test-year operations, Knott District determined that it could justify a revenue increase of \$798,873, or 80.45 percent to its retail water customers, as shown in the table below.³ Knott District requested to divide its proposed rates into three phases, with the second phase to take effect one year after phase one and the third phase to take effect one year after the second phase takes effect. The phase one rates requested by Knott District would increase the monthly bill of a typical residential customer⁴ by \$5.76, from \$26.70 to \$32.46, or approximately 21.57 percent.⁵ The phase two rates requested by Knott District would increase the monthly bill of a typical residential customer by \$7.04 from \$32.46 to \$39.50, or approximately, 21.69 percent.⁶ The phase three rates requested by Knott District would increase the monthly bill of a typical residential customer by \$8.55, from \$39.50 to \$48.05, or approximately, 21.65 percent.⁷ This results in a total percentage increase of approximately 79.96 percent over three

³ Application, Attachment 5.

⁴ According to Knott District in its customer notice, a typical residential customer purchases 3,500 gallons of water per month through a 5/8-inch x 3/4-inch meter.

⁵ Application, Attachment 1.

⁶ *Id.*

⁷ *Id.*

years.⁸ In addition to its request to increase its retail water service rates, Knott District also proposed to increase its wholesale water rates from \$3.00 to \$3.55 per 1,000 gallons, an increase of approximately 18.33 percent.

Pro Forma Operating Expenses	\$ 3,072,185
Plus: Average Annual Principal and Interest Payments	60,735
Additional Working Capital	<u>12,147</u>
Overall Revenue Requirement	3,145,067
Less: Other Operating Revenue	(23,830)
Interest Income	(975)
Nonutility Income	(8,846)
Proposed Wholesale Sales Revenue	<u>(1,319,599)</u>
Revenue Required from Rates	1,791,817
Less: Revenue from Retail Sales at Present Rates	<u>(992,944)</u>
Required Revenue Increase	<u>\$ 798,873</u>
Percentage Increase	<u>80.45%</u>

To determine the reasonableness of the rates requested by Knott District, Staff performed a limited financial review of Knott 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 made when their effects were deemed material. Insignificant and immaterial discrepancies were not necessarily pursued or addressed.

This report summarizes Staff’s findings. William Foley and Ariel Miller reviewed the calculation of Knott District’s Overall Revenue Requirement. Jason Green reviewed Knott District’s reported revenues and rate design.

⁸ $(\$48.05 - \$26.70) / \$26.70 = 79.96$ percent.

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 that Knott District's Overall Revenue Requirement is \$2,995,278 and that a \$698,176 revenue increase, or 70.31 percent, to pro forma present rate revenues is necessary to generate the Overall Revenue Requirement.

2. Water Service Rates. Knott District included with its Application a cost-of-service study (COSS) in order to allocate the expenses to customer classes in proportion with the cost of providing service to each class. The rates in the COSS were developed following the commodity demand methodology that is recognized in the Manual M-1 that is published by the American Water Works Association. Through this method, Knott District allocated the Overall Revenue Requirement to Knott District's customer classes in proportion to the cost of providing service to those customer classes. This method recognizes that a utility must meet peak demand requirements as well as the customer's average water use. Knott District also proposes to increase its current wholesale water service rate by approximately 18.33 percent and has provided a COSS using the "inch-miles" method to allocate expenses to the wholesale customer. This method has been accepted by the Commission in past proceedings and is a reasonable method for allocating expenses to the wholesale customer in this case.

Staff accepted Knott District's proposed COSS and then made revisions to it based upon the adjustments made to the pro-forma expenses. Staff's calculations and resulting rates are shown in Appendix B. The rates set forth in Appendix A to this report are based upon the revenue requirement as calculated by Staff and will produce sufficient revenues

from water sales to recover the \$2,951,527 Revenue Requirement determined by Staff, an approximate 70.31 percent increase.⁹ Phase one rates will increase the monthly bill of a retail customer who uses 3,500 gallons of water per month from \$26.70 to \$31.84, an increase of \$5.14, or 19.25 percent. Phase two rates will increase the monthly bill of a retail customer who uses 3,500 gallons of water per month from the phase one rate of \$31.84 to \$37.98, an increase of \$6.14, or 19.28 percent. Phase three rates will increase the monthly bill of a retail customer who uses 3,500 gallons of water per month from the phase two rate of \$37.98 to \$45.44, an increase of \$7.46, or 19.64 percent.

PRO FORMA OPERATING STATEMENT

Knott District's Pro Forma Operating Statement for the test year ended December 31, 2018, for its water division, as determined by Staff, appears below.

⁹ Revenue Requirement less Other Operating Revenue, Interest income and Nonutility Income.

	Water Division			
	Test Year	Adjustment	(Ref.)	Pro Forma
Operating Revenues				
Total Metered Retail Sales	\$ 2,145,228	\$ (1,115,640)	(A)	
		(23,830)	(B)	
		(12,814)	(C)	\$ 992,944
Sales for Resale		1,115,640	(A)	1,115,640
Other Water Revenues				
Miscellaneous Service Revenues	23,300	(13,200)	(D)	
		2,794	(B)	12,894
Forfeited Discounts		21,036	(B)	21,036
Total Operating Revenues	\$ 2,168,528	(26,014)		\$ 2,142,514
Operating Expenses				
Operation and Maintenance Expenses				
Salaries and Wages - Employees	500,568	(3,960)	(E)	
		(10,240)	(O)	486,368
Salaries and Wages - Commissioners	30,200	(1,615)	(F)	28,585
Employee Pensions and Benefits	383,467	(50,514)	(G)	
		(9,258)	(H)	
		(100,967)	(I)	
		(6,523)	(O)	216,205
Purchased Water	11,869			11,869
Purchased Power	402,424	(7,478)	(J)	394,946
Chemicals	207,105	(32)	(O)	207,073
Materials and Supplies	97,455	(9,240)	(E)	88,215
Contractual Services	235,642	7,042	(K)	
		(3,697)	(O)	238,987
Rental of Equipment	3,705	(198)	(O)	3,507
Transportation Expenses	41,454			41,454
Insurance- Gen. Liab. & Workers Comp	59,570	(3,187)	(O)	56,383
Miscellaneous Expense	123,090	(52,875)	(L)	
		(1,789)	(O)	68,426
Total Operation and Maintenance Expenses	2,096,549	(254,531)		1,842,018
Taxes Other Than Income	40,007	(2,140)	(O)	37,867
Depreciation	1,171,466	(128,250)	(M)	
		(705)	(O)	1,042,511
Total Operating Expenses	3,308,022	(385,626)		2,922,396
Net Operating Income	(1,139,494)	359,612		(779,882)
Gain on Disposition of Property	7,248	(7,248)	(N)	-
Interest Income	975			975
Nonutility Income	8,846			8,846
Income Available to Service Debt	\$ (1,122,425)	\$ 352,364		\$ (770,061)

(A) Other Water Revenue. In its Application, Knott District reported that it had incorrectly allocated \$1,115,640 of wholesale sales revenue into Total Metered Retail Sales.¹⁰ Knott District proposed to correct this reporting error by decreasing Total Metered Retail Sales and increasing Sales for Resale. Staff agrees with the adjustment proposed by Knott District. Accordingly, Staff decreased Total Metered Retail Sales and increased Sales for Resale Revenues by \$1,115,640.

(B) Other Water Revenues. In its Application, Knott District reported that it had incorrectly classified \$23,830 of Other Water Revenues into Total Metered Retail Sales.¹¹ Knott District proposed to correct this reporting error by decreasing Total Metered Retail Sales and increasing both Miscellaneous Service Revenue and Forfeited Discounts. Staff agrees with the adjustment proposed by Knott District. Accordingly, Staff decreased Total Metered Retail Sales and increased Sales for Miscellaneous Service Revenue by \$2,794 and Forfeited Discounts by \$21,036.

(C) Billing Analysis Adjustment. Knott District provided a billing analysis showing the gallons of water billed to retail customers during the test year. Applying the water service rates that were in effect during the test year to the water sales shown in the billing analysis, Staff determined that a billing analysis adjustment is appropriate that decreases test-year revenues by \$12,814.

(D) Miscellaneous Service Revenues. In its Application, Knott District reported Miscellaneous Service Revenues of \$23,300.¹² Knott District proposed to decrease

¹⁰ Application, Attachment 5a, Adjustment A.

¹¹ *Id.* Adjustment B.

¹² *Id.* Adjustment D.

Miscellaneous Service Revenues by \$23,300 for tap fees installed in the test year. Upon Staff's review, it was determined that the actual amount of tap fees was \$13,200. The remaining \$10,100 of Miscellaneous Service Revenue was attributed to Connection/Turn-on fees collected during the test year when a new customer requested service, but a meter had previously been installed, in accordance with Knott District's tariff. Staff decreased Miscellaneous Service Revenue by \$13,200 to reflect the proper amount of tap fees collected during the test year.

(E) Expenses Related to Meter Installations. During the test year, Knott District installed 22 5/8" x 3/4" taps but did not capitalize the expenses for the tap installation. Based on interviews with Knott District employees, Staff determined that Knott District does not keep a separate record of the labor and material expenses required to install its 5/8" x 3/4" taps. Knott District proposed to reduce Salaries and Wages - Employees by \$6,990 and Materials, and Supplies by \$16,310, which represents the amount Knott District recorded as tap fees collected for the test year. Staff agrees with the methodology used by Knott District to reduce expenses but disagrees with the amount proposed. As explained in adjustment D above, the actual amount of tap fees collected was \$13,200. Therefore, using Knott District's percent allocation, Staff decreased Salaries and Wages - Employees by \$3,960, and Materials and Supplies by \$9,240, for a total adjustment of \$13,200.

(F) Salaries and Wages – Commissioners. Knott District's commissioners operate both the Water and Sewer divisions. Knott District allocates 100 percent of commissioner's wages to the Water District. Staff does not agree with this allocation employed by Knott District. Because Knott District's Board of Commissioners is

responsible for both the water and sewer divisions, a portion of the cost should be allocated to the sewer division. Using a number of customer allocation factors of both water and sewer customers, Staff determined that 5.35 percent,¹³ or \$1,615 of the expense should be allocated to the Sewer District. Therefore, Staff decreased Salaries and Wages - Commissioners by \$1,615.

(G) Employee Pensions and Benefits – Commissioners’ Benefits. Knott District’s Board of Commissioners consist of five members to whom Knott District provide health, dental, vision, and life insurance coverage during the test year totaling \$50,514.¹⁴

In Case No. 2003-00224,¹⁵ the Commission found that the members of a Board of Commissioners should be treated as part-time employees, as they generally attend only one board meeting per month and are not required to work 40 hours per week. The Commission denied rate recovery of the costs associated with health insurance, life insurance, and dental insurance provided to members of the district's Board of

¹³

	Number of Customers	Percentage of Total
Water Customers	2,974	94.65%
Sewer Customers	<u>168</u>	<u>5.35%</u>
Total	<u><u>3,142</u></u>	<u><u>100.00%</u></u>

¹⁴ Health Ins. \$46,727 + Vision Ins. \$616 + Dental Ins. \$3,123 + Life Ins. \$48 = \$50,514.

¹⁵ Case No. 2003-00224, *Application of Northern Kentucky Water District for (A) and Adjustment of Rates; (B) a Certificate of Public Convenience and Necessary for Improvements to Water Facilities if Necessary; and (C) Issuance of Bonds* (Ky. PSC June 14, 2004) at 11.

Commissioners because the district did not provide those benefits to other part-time employees.¹⁶

Pursuant to its employment policies, Knott District provides insurance benefits only to full-time employees. As the Commission considers each member of Knott District's Board of Commissioners as a part-time employee, Staff removed the cost of each member's health, dental, vision, and life insurance from Knott District's test-year operations. Therefore, Staff decreased Employee Pensions and Benefits by \$50,514.

(H) Employee Pensions and Benefits. Knott District reported test-year Employee Pensions and Benefits expense of \$115,014 for its full-time employees. Knott District currently pays 100 percent of the cost for single coverage health, vision, life, and dental policies, and limits employee contributions to a 20 percent maximum for all other health policies. Knott District currently has a contract with the Kentucky Employees' Health Plan (KEHP), which caps the amount that Knott District is able to recover from Employee contributions.

Staff notes that in recent Orders, the Commission has made ratemaking adjustments to reduce the cost of employee benefit packages paid by some utilities when certain aspects of those benefits packages were found to be unreasonable. The Commission is placing greater emphasis on evaluating employees' total compensation packages, including both salary and benefits programs for market and geographic competitiveness, and to ensure the development of a fair, just, and reasonable rate. The Commission has found in most cases 100 percent of employer-funded health care does

¹⁶ Case No. 2003-00224, *Application of Northern Kentucky Water District for (A) and Adjustment of Rates; (B) a Certificate of Public Convenience and Necessary for Improvements to Water Facilities if Necessary; and (C) Issuance of Bonds* (Ky. PSC June 14, 2004) at 11–12.

not meet those criteria. Factoring in for the preceding, Staff decreased employee pensions and benefits to match the amount contracted with KEHP, and dental insurance benefits by the national average employee contribution rate,¹⁷ which results in a net decrease of \$9,258 as shown in the calculation below.

Type of Premium	Employer Contributions	Times: Average Employee Contribution Rate	Monthly Premium Adjustment	Pro Forma Monthly Premium
Health Insurance	\$ 14,806	Various ¹⁸	\$ (6,762)	\$ 8,044
Life Insurance	16			16
Dental Insurance	1,309	60%	(785)	523
Vision Insurance	230			230
Total Pro Forma Monthly Premium				8,813
Times: 12 Months				<u>12</u>
Total Annual Pro Forma Premium				105,756
Less: Test Year				<u>(115,014)</u>
Adjustment				<u>\$ (9,258)</u>

(I) Retirement Expense Pursuant to GASB 68. Knott District provides pension benefits and post-retirement health care benefits to its employees by participating in the County Employee Retirement System (CERS). As a participating member, Knott District

¹⁷ Willis Benefits Benchmarking Survey, 2015
https://www.willis.com/documents/publications/Services/Employee_Benefits/Willis_Survey_011216_R1.pdf

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Policy Type	Contribution Percentage
Standard PPO - Single	11.30%
LivingWell CDHP - Single	6.97%
LivingWell PPO - Single	11.30%
LivingWell CDHP - Couple	22.84%
LivingWell PPO - Parent Plus	22.64%
LivingWell PPO - Cross Reference	17.97%
LivingWell PPO - Family	37.47%
LivingWell CDHP - Family	24.04%
Living Well Basic CDHP - Family	19.32%

is required to contribute a percentage of its employee wages to CERS. In the fiscal year, beginning July 1, 2019, the CERS contribution rate was 24.06 percent.¹⁹ The CERS pension expense Knott District reported in the test year conformed to the requirements of the Governmental Accounting Standards Board Statement No. 68 (GASB 68).

In its Application, Knott District proposed to decrease its Employee Pensions and Benefits Expense by \$100,967 to reflect the increase in employer contribution rates paid to CERS and to remove the effects of the journal entries made to conform to the requirements of GASB 68.²⁰

In Case No. 2016-00163,²¹ Staff discussed in great detail how reporting requirements for GASB 68 would affect a utility's income statement and balance sheet. In that proceeding, Staff found that the annual pension expense should be equal to the amount of a district's contributions to CERS, which historically have been fairly constant.²² Consistent with Staff's previous practice, Staff agrees with the adjustment proposed by Knott District. Accordingly, Staff decreased Employee Pensions and Benefits Expense by \$100,967.

(J) Purchased Power. During the test year, Knott District reported Purchased Power expense of \$402,424. Knott District directly assigns purchased power between the water division and the sewer division. However, during its review, Staff discovered that Knott District incorrectly assigned three purchased power accounts to the water

¹⁹ Kentucky Retirement Systems, Contribution Rates. (<https://kyret.ky.gov/Employers/Pages/Contribution-Rates.aspx>)

²⁰ Application, Attachment 5a, Adjustment f.

²¹ Case No. 2016-00163, *Alternative Rate Adjustment Filing of Marion County Water District* (PSC Ky. Aug. 11, 2016), Staff Report on Marion County Water District at 11–27.

²² *Id.* at 26.

division that should have been assigned to the sewer division. Accordingly, Staff decreased Purchased Power by \$7,478, the amount incorrectly assigned.

(K) Contractual Services – Purchased Power Contract. Currently Knott District is licensed by the Army Corps of Engineers (Corps of Engineers) to withdraw up to two million gallons of raw water per day (MGD) from Carr Creek Lake. The Corps of Engineers calculates the total amount billed to Knott District using a percentage estimate of the next year's expenses with a true-up mechanism. Due to fluctuating yearly expenses, the total bill to Knott District changes annually.

In its Application, Knott District requested to increase Contractual Services by \$69,556 to reflect an increase in the water withdrawal fees subsequent to the test year.²³ Presently, Knott District has contacted the Corps of Engineers with the intention of increasing the water withdrawal limit from two million gallons per day, to four million gallons per day. After discussions with the Corps of Engineers, Staff determined that the revised contract is still in the preliminary stages of development. Because this was not a known and measurable change as of the date of this Report, Staff did not make the adjustment to increase the water withdrawal fees as requested by Knott District. However, Staff believes that because of the variability of the amounts billed year over year, it is proper to calculate a five-year average of the historical amounts charged to Knott District to smooth its effect. Therefore, Staff calculated the five-year average of the amounts charged from the years 2015 to 2019 and increased pro forma expenses by \$7,042 as shown in the calculation below.

²³ Application, Attachment 5.

Year	Amount Paid
2019	\$ 48,556
2018	55,057
2017	84,056
2016	43,476
2015	<u>79,351</u>
Total	310,496
Divide by 5 years	<u>5</u>
Average	62,099
Less: Test year	<u>(55,057)</u>
Adjustment	<u>\$ 7,042</u>

(L) Miscellaneous Expenses – Bad Debt Expense. In its Application, Knott District reduced Miscellaneous Expense by \$52,785 as a result of its independent auditor writing off multiple years of bad debt balances from Accounts Receivable.²⁴ This entry was performed to clear past due accounts deemed uncollectable. Knott District's adjustment removes prior year's bad debt from the test year, and therefore, Staff agrees with Knott District's proposed decrease to Miscellaneous Expense and adjusted pro forma expenses by \$52,875.

(M) Depreciation Expense. In its Application, Knott District proposed to decrease its test-year Depreciation Expense of \$1,171,466 by \$128,250.²⁵ This adjustment was the result of Knott District's proposal to adjust the lives assigned to certain assets that were outside of the life ranges in accordance with the National

²⁴ Application, Attachment 5.

²⁵ *Id.*, Attachment 5b.

Association of Regulatory Utility Commissioners' (NARUC) publication titled Depreciation Practices for Small Utilities (NARUC Study), and to annualize Depreciation Expense for assets that were installed during the test year.

To evaluate the reasonableness of the depreciation practices of small water utilities, the Commission has historically relied upon the NARUC Study. Knott District proposed to adjust the lives of assets that were outside of the NARUC ranges to the mid-point of the depreciable life ranges. In this proceeding, Staff found no evidence to support depreciable lives that vary significantly from the mid-point of the NARUC ranges and, after further review of Knott District plant ledger, Staff agrees with Knott District's proposed decrease to Depreciation Expense of \$128,250.

(N) Gains on Disposition of Property. During the test year, Knott District disposed of a district vehicle and received a payment from the Kentucky Association of Counties for \$7,248. Gains from the disposal of property is not a routine transaction in the normal course of business and, therefore, should be removed from the test year. Staff agrees with Knott District's proposal to decrease Gains on the Disposition of Property and reduced pro forma income by \$7,248.

(O) Administrative Expense Allocation. Knott District allocates its operating expenses to its respective division. Knott District assigns allocation codes to each division. Water division accounts are assigned as WD and WT, and sewer division accounts are assigned as BC, BT, SC, and ST. There is also a separate account allocation code designated as AD, the code for various overhead and administrative functions. Knott District currently assigns all accounts allocated as AD to the water division. Staff disagrees with this methodology; since the company oversees both water

and sewer service, administrative and overhead expenses need to be allocated to both divisions. Therefore, Staff allocated these expenses proportionally based upon the number of customer allocation factors described in Item F above. Accordingly, Staff decreased Operating Expenses by \$28,511, the amount that should be allocated to the sewer division.

GL Account Number	General Ledger Account Name	Total Expense	Allocated to Water-94.65%	Allocated to Sewer-5.35%	Allocated to Account
5001-AD	Payroll-ADM	\$191,393	\$181,153	\$10,240	Salaries and Wages - Employees
5005-AD	Retirement- ADM	44,578	42,193	2,385	Employee Pensions and Benefits
5006-AD	Health Benefits- ADM	77,347	73,209	4,138	Employee Pensions and Benefits
5010-AD	Payroll Taxes-ADM	40,007	37,867	2,140	Taxes Other Than Income
5015-AD	Workers' Comp.-ADM	11,644	11,021	623	Insurance- Gen. Liab. & Workers Comp
5017-AD	Outside Services-ADM	32,102	30,385	1,717	Contractual Services
5019-AD	Random Drug Testing-ADM	450	426	24	Miscellaneous Expense
5021-AD	Maint./Repair Materials-ADM	183	173	10	Miscellaneous Expense
5022-AD	Operating Supplies-ADM	590	558	32	Chemicals
5033-AD	Professional Svcs.-Other-ADM	33,641	31,842	1,800	Contractual Services
5034-AD	Insurance-Prop/Liability-ADM	47,926	45,362	2,564	Insurance- Gen. Liab. & Workers Comp
5035-AD	Depreciation - ADM	13,173	12,468	705	Depreciation
5041-AD	Misc. Operational Costs - ADM	1,090	1,032	58	Miscellaneous Expense
6001-AD	Bank Charges/Fees - ADM	471	446	25	Miscellaneous Expense
6002-AD	Rents/Leases - ADM	3,705	3,507	198	Rental of Equipment
6005-AD	Training/CE - ADM	1,734	1,641	93	Miscellaneous Expense
6007-AD	Clothing - ADM	299	283	16	Miscellaneous Expense
6008-AD	Travel - ADM	549	520	29	Miscellaneous Expense
6009-AD	Maint. Support/Contracts-ADM	3,159	2,990	169	Contractual Services
6010-AD	Office Supplies - ADM	11,220	10,620	600	Miscellaneous Expense
6011-AD	Janitorial Supplies/Serv.-ADM	209	198	11	Contractual Services
6012-AD	Buildings & Grounds - ADM	23	22	1	Miscellaneous Expense
6013-AD	Telephone - ADM	3,107	2,940	166	Miscellaneous Expense
6014-AD	Cell Phones - ADM	2,652	2,510	142	Miscellaneous Expense
6015-AD	Postage - ADM	700	663	37	Miscellaneous Expense
6016-AD	Freight - ADM	130	123	7	Miscellaneous Expense
6018-AD	Prof./Association Dues - ADM	3,259	3,084	174	Miscellaneous Expense
6021-AD	Penalties/Fines - ADM	12	11	1	Miscellaneous Expense
6025-AD	Easements/Recording Fees-ADM	5,000	4,733	268	Miscellaneous Expense
6028-AD	Position Schedule Bond - ADM	2,560	2,423	137	Miscellaneous Expense
		<u>\$532,914</u>	<u>\$504,403</u>	<u>\$28,511</u>	

OVERALL REVENUE REQUIREMENT AND REQUIRED REVENUE INCREASE

The Commission has historically applied a DSC method to calculate the Overall 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;²⁶ (3) the average annual principal and interest payments on all long-term debts, and (4) working capital that is in addition to depreciation expense.

A comparison of Knott District's and Staff's calculations of the Overall Revenue Requirement and the Required Revenue Increase using the DSC method is shown below.

	Knott District	Staff	
Pro Forma Operating Expenses	\$ 3,072,185	\$2,922,396	
Plus: Average Annual Principal and Interest Payments	60,735	60,735	(1)
Additional Working Capital	<u>12,147</u>	<u>12,147</u>	(2)
Overall Revenue Requirement	3,145,067	2,995,278	
Less: Other Operating Revenue	(23,830)	(33,930)	
Interest Income	(975)	(975)	
Nonutility Income	(8,846)	(8,846)	
Proposed Wholesale Sales Revenue	<u>(1,319,599)</u>	<u>(1,260,407)</u>	(3)
Revenue Required from Rates	1,791,817	1,691,120	
Less: Revenue from Retail Sales at Present Rates	<u>(992,944)</u>	<u>(992,944)</u>	
Required Revenue Increase	<u>\$ 798,873</u>	<u>\$ 698,176</u>	
Percentage Increase	<u>80.45%</u>	<u>70.31%</u>	

²⁶ The Kentucky Supreme Court has held that the Commission must permit a water district to recover its depreciation expense through its rates for service to provide internal funds for renewing and replacing assets. *See Public Serv. Comm'n of Kentucky v. Dewitt Water Dist.*, 720 S.W.2d 725, 728 (Ky. 1986). Although a water district's lenders require that a small portion of the depreciation funds be deposited annually into a debt reserve/depreciation fund until the account's balance accumulates to a required threshold, neither the Commission nor the Court requires that revenues collected for depreciation be accounted for separately from the water district's general funds or that depreciation funds be used only for asset renewal and replacement. The Commission has recognized that the working capital provided through recovery of depreciation expense may be used for purposes other than renewal and replacement of assets. *See Case No. 2012-00309, Application of Southern Water and Sewer District for an Adjustment in Rates Pursuant to the Alternative Rate Filing Procedure for Small Utilities* (Ky. PSC Dec. 21, 2012).

(1) Average Annual Principal and Interest Payments. At the time of Staff's review, Knott District had two outstanding bonds payable to the U.S. Department of Agriculture, acting through Rural Development (RD) and one note payable to the Kentucky Infrastructure Authority (KIA). In its Application, Knott District requested recovery of the average annual principal and interest payments on its indebtedness based on a five-year average of the annual principal and interest payments for the years 2019 through 2023. Staff agrees with Knott District's calculation of its average annual principal and interest payments and has included its recovery in the revenue requirement.

(2) Additional Working Capital. The DSC method, as historically applied by the Commission, includes an allowance for additional working capital that is equal to the minimum net revenues required by a district's lenders that are above its average annual debt payments. Knott District requested recovery of an allowance for working capital that is equal to 120 percent of its average annual debt payments for its bonds payable to RD and the note payable to KIA at the time of its Application.

RD requires that Knott District charge rates that produce net revenues that are at least 120 percent of its average annual debt payments. Following the Commission's historic practice, Staff agrees with Knott District's calculation of additional working capital and has included it in the revenue requirement.

(3) Proposed Wholesale Sales Revenue. As explained in items (E) – (O) above, Staff adjusted Knott District's expected operating expenses. These adjustments directly affected the COSS that was filed with Knott District's Application. Using the pro forma operating expenses calculated above, Staff directly applied them to the COSS filed in Knott District's Application. This resulted in a wholesale rate of \$3.39 per 1,000 gallons

for its phase three rates; the rate proposed by Knott District. The new phase-in rates generated from the revised COSS results in a new proposed wholesale sales revenue of \$1,260,407, a decrease of \$59,192.

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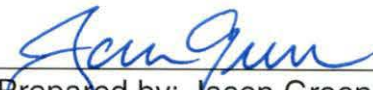
Signatures



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APPENDIX A

APPENDIX TO A STAFF REPORT OF THE KENTUCKY PUBLIC SERVICE
COMMISSION IN CASE NO. 2019-00268 DATED **NOV 20 2019**

Monthly Water Rates

Phase 1

5/8-3/4-Inch Meter

First	2,000	Gallons	\$21.54	Minimum bill
Next	8,000	Gallons	6.87	per 1,000 Gallons
Over	10,000	Gallons	5.51	per 1,000 Gallons

1-Inch Meter

First	5,000	Gallons	\$42.14	Minimum bill
Next	5,000	Gallons	6.87	per 1,000 Gallons
Over	10,000	Gallons	5.51	per 1,000 Gallons

2-Inch Meter

First	15,000	Gallons	\$104.01	Minimum bill
Over	15,000	Gallons	5.51	per 1,000 Gallons

3-Inch Meter

First	30,000	Gallons	\$186.59	Minimum bill
Over	30,000	Gallons	5.51	per 1,000 Gallons

4-Inch Meter

First	50,000	Gallons	\$296.70	Minimum bill
Over	50,000	Gallons	5.51	per 1,000 Gallons

6-Inch Meter

First	100,000	Gallons	\$571.98	Minimum bill
Over	100,000	Gallons	5.51	per 1,000 Gallons

Wholesale Rate

			3.39	per 1,000 Gallons
--	--	--	------	-------------------

Monthly Water Rates

Phase 2 – Effective one year after Phase 1

5/8-3/4-Inch Meter

First	2,000	Gallons	\$25.41	Minimum bill
Next	8,000	Gallons	8.38	per 1,000 Gallons
Over	10,000	Gallons	6.65	per 1,000 Gallons

1-Inch Meter

First	5,000	Gallons	\$50.55	Minimum bill
Next	5,000	Gallons	8.38	per 1,000 Gallons
Over	10,000	Gallons	6.65	per 1,000 Gallons

2-Inch Meter

First	15,000	Gallons	\$125.71	Minimum bill
Over	15,000	Gallons	6.65	per 1,000 Gallons

3-Inch Meter

First	30,000	Gallons	\$225.48	Minimum bill
Over	30,000	Gallons	6.65	per 1,000 Gallons

4-Inch Meter

First	50,000	Gallons	\$358.52	Minimum bill
Over	50,000	Gallons	6.65	per 1,000 Gallons

6-Inch Meter

First	100,000	Gallons	\$691.10	Minimum bill
Over	100,000	Gallons	6.65	per 1,000 Gallons

Wholesale Rate			3.39	per 1,000 Gallons
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Monthly Water Rates

Phase 3 - Effective one year after Phase 2

5/8-3/4-Inch Meter

First	2,000	Gallons	\$30.00	Minimum bill
Next	8,000	Gallons	10.29	per 1,000 Gallons
Over	10,000	Gallons	7.91	per 1,000 Gallons

1-Inch Meter

First	5,000	Gallons	\$60.87	Minimum bill
Next	5,000	Gallons	10.29	per 1,000 Gallons
Over	10,000	Gallons	7.91	per 1,000 Gallons

2-Inch Meter

First	15,000	Gallons	\$151.87	Minimum bill
Over	15,000	Gallons	7.91	per 1,000 Gallons

3-Inch Meter

First	30,000	Gallons	\$270.52	Minimum bill
Over	30,000	Gallons	7.91	per 1,000 Gallons

4-Inch Meter

First	50,000	Gallons	\$428.72	Minimum bill
Over	50,000	Gallons	7.91	per 1,000 Gallons

6-Inch Meter

First	100,000	Gallons	\$824.22	Minimum bill
Over	100,000	Gallons	7.91	per 1,000 Gallons

Wholesale Rate

3.39 per 1,000 Gallons

APPENDIX B

APPENDIX TO A STAFF REPORT OF THE KENTUCKY PUBLIC SERVICE COMMISSION IN CASE NO. 2019-00268 DATED **NOV 20 2019**

SYSTEM INFORMATION
Knott County Water & Sewer District

Schedule of All Mains and Jointly Used Mains

<u>Main Size</u>	<u>Total System</u>			<u>Joint Use</u>	
	<u>Length (feet)</u>	<u>Miles of Mains</u>	<u>Inch - Miles</u>	<u>Miles of Mains</u>	<u>Inch - Miles</u>
16	32,665	6.2	98.98	6.2	98.98
12	300,155	56.8	682.17	34.7	416.67
8	368,933	69.9	558.99	21.5	171.64
6	261,722	49.6	297.41		
4	151,385	28.7	114.69		
3	190,844	36.1	108.43		
2	53,164	10.1	20.14		
1	4,184	0.8	0.79		
Totals	1,363,052	258.2	1,881.61	62.4	687.29

Water Purchased, Sold and Used

	<u>Gallons</u> <u>x 1,000</u>	<u>Percent</u>
Water Produced	617,580	
Retail Sales	136,054	
Wholesale Sales	371,880	
Total Water Sold	507,934	
Water Used at WTP	7,980	1.29%
Water Used at WWTP	2,400	
System Flushing	31,300	5.07%
Fire Dept. & Other	11,259	
Line Losses	56,707	9.18%

WHOLESALE ALLOCATION FACTORS
Knott County Water & Sewer District

	<u>FACTOR</u>
Line Loss Percentage	0.0918
Plant Use Percentage	0.0129
Line Loss + Plant Use	0.1047
Joint Use Inch-miles	687.29
Total Inch-Miles	1,881.61
Water Sold - Wholesale	371,880
Water Sold - Total	507,934

	1				
Production Multiplier	-----	=			1.1170
	1 - 0.1047				

	687.29				
Joint Use Pipeline Ratio	-----	=			0.3653
	1,881.61				

Joint Share of Line Loss	0.0918	x	0.3653	=	0.0335
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Joint Share Line Loss + Plant Use	0.0335	+	0.0129	=	0.0465
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	1				
Wholesale Production Multiplier	-----	=			1.0487
	1 - 0.0465				

	1.0487		371,880.0		
Production Allocation Factor	-----	x	-----	=	0.6874
	1.1170		507,934.0		

	371,880.0				
Pipeline Transmission Factor	-----	x	0.3653	=	0.2674
	507,934.0				

	371,880.0				
Use Factor	-----	=			0.7321
	507,934.0				

WHOLESALE RATE COMPUTATION
Knott County Water & Sewer District

	<u>Proforma</u> <u>Expenses</u>	<u>Allocation</u> <u>Factor</u>	<u>Wholesale</u> <u>Allocation</u>	<u>Retail</u> <u>Allocation</u>
Salaries & Wages				
Water Production	128,328	0.6874	88,212	40,116
Trans./Distribution	170,212	0.2674	45,519	124,692
Customer Accts.	140,871		0	140,871
Admin & General	46,957	0.2674	12,558	34,399
Employee Benefits + Taxes				
Water Production	35,937	0.6874	24,703	11,234
Trans./Distribution	58,765	0.2674	15,715	43,049
Customer Accts.	119,527		0	119,527
Admin & General	39,843	0.2674	10,655	29,188
Salaries - Officers	28,585	0.6874	19,649	8,936
Purchased Water	11,869	0.6874	8,159	3,710
Purchased Power				
Water Production	202,737	0.6874	139,360	63,377
Trans./Distribution	192,209	0.2674	51,402	140,807
Chemicals				
Water Production	169,605	0.6874	116,585	53,020
Trans./Distribution	37,468	0.2674	10,020	27,448
Materials & Supplies				
Water Production	9,886	0.6874	6,796	3,091
Trans./Distribution	78,141	0.2674	20,897	57,244
Customer Accts.	139		0	139
Admin & General	47	0.2674	13	34
Contr. Services - Acct. & Legal	26,351	0.6874	18,113	8,237
Contr. Services - Water Testing	18,788	0.6874	12,915	5,873
Contr. Services - Other				
Water Production	135,505	0.6874	93,145	42,360
Trans./Distribution	30,568	0.2674	8,175	22,393
Customer Accts.	20,832		0	20,832
Admin & General	6,943	0.2674	1,857	5,087

WHOLESALE RATE COMPUTATION
Knott County Water & Sewer District
(Continued)

	<u>Proforma</u> <u>Expenses</u>	<u>Allocation</u> <u>Factor</u>	<u>Wholesale</u> <u>Allocation</u>	<u>Retail</u> <u>Allocation</u>
Rental of Equipment				
Customer Accts.	2,630		0	2,630
Admin & General	877	0.2674	234	642
Transportation Expense	41,454	0.2674	11,086	30,368
Insurance - Gen Liability	44,739	0.7321	32,755	11,984
Insurance - Worker's Comp.				
Water Production	3,072	0.6874	2,112	960
Trans./Distribution	4,075	0.2674	1,090	2,985
Customer Accts.	3,373		0	3,373
Admin & General	1,124	0.2674	301	824
Miscellaneous Expense				
Water Production	8,943	0.6874	6,147	2,796
Trans./Distribution	17,143	0.2674	4,584	12,558
Customer Accts.	18,874		0	18,874
Admin & General	23,467	0.7321	17,182	6,286
Total Operating Expenses	1,879,884		779,939	1,099,945
Depreciation Expense				
Water Production	361,127	0.6874	248,236	112,891
Trans. / Distribution	565,586	0.2674	151,254	414,332
Tanks & Reservoirs	71,928	0.7321	52,661	19,266
Admin & General	13,221	0.0671	887	12,334
Customer	30,649		0	30,649
Debt Service & Coverage				
Water Production	18,903	0.6874	12,994	5,909
Trans. / Distribution	53,978	0.2674	14,435	39,543
Total Revenue Required	2,995,276		1,260,407	1,734,870
Wholesale Gallons Sold (x 1,000)			371,880	
Wholesale Rate per 1,000 Gallons			\$3.39	

ALLOCATION OF OPERATION & MAINTENANCE EXPENSE - RETAIL

Knott County Water & Sewer District

	<u>Total</u>				<u>Admin. &</u>
	<u>Values</u>	<u>Commodity</u>	<u>Demand</u>	<u>Customer</u>	<u>General</u>
Salaries & Wages	340,079	20,058	144,750	140,871	34,399
Employee Benefits + Taxes	202,999	5,617	48,667	119,527	29,188
Salaries - Officers (A & G)	8,936				8,936
Purchased Water	3,710	3,710			
Purchased Power	204,184	204,184			
Chemicals	80,468	53,020	27,448		
Materials & Supplies	60,508	3,091	57,244	139	34
Contr. Services - Acct. & Legal	8,237				8,237
Contr. Services - Water Testing	5,873	5,873			
Contr. Services - Other	90,671	21,180	43,573	20,832	5,087
Rental of Equipment	3,273			2,630	642
Transportation Expense	30,368		30,368		
Insurance - Gen. Liability	11,984				11,984
Insurance - Workers Comp	8,142	480	3,465	3,373	824
Misc. Expense	40,514	1,398	13,956	18,874	6,286
Depreciation	589,472	66,079	480,411	30,649	12,334
Totals	1,689,418	384,690	849,883	336,895	117,950
Less Admin. & General	<u>117,950</u>				
Total w/o A & G	1,571,467				
Percentages w/o A & G	100.00%	24.48%	54.08%	21.44%	
Allocation of Admin. & General	117,950	28,874	63,790	25,287	
Total O & M Expense Allocations	1,689,418	413,564	913,673	362,182	

SUMMARY OF ALLOCATIONS - RETAIL
Knott County Water & Sewer District

	<u>Total</u>			
	<u>Values</u>	<u>Commodity</u>	<u>Demand</u>	<u>Customer</u>
Operation & Maintenance Expenses	1,689,418	413,564	913,673	362,182
Debt Service & Coverage	<u>45,452</u>	<u>2,955</u>	<u>42,497</u>	<u>-</u>
Total Expenses - Retail	1,734,870	416,518	956,170	362,182
Less:				
Forfeited Discounts	33,930			33,930
Miscellaneous Operating Revenue		-		
Non-operating Revenues	<u>9,821</u>	<u>9,821</u>	<u>-</u>	<u>-</u>
Revenue Required from Retail Rates	1,691,119	406,697	956,170	328,252

CALCULATION OF WATER RATES - RETAIL
Knott County Water & Sewer District

	<u>Total</u>	<u>First 2,000</u>	<u>Next 8,000</u>	<u>Over 10,000</u>
Actual Commodity Sales	123,916,600	53,627,260	48,956,060	21,333,280
Commodity Percentages	100.00%	43.28%	39.51%	17.22%
Demand Weighting Factor		2.00	1.50	1.00
Demand Weighted Sales	202,021,890	107,254,520	73,434,090	21,333,280
Demand Percentages		53.09%	36.35%	10.56%
Commodity Costs	406,697	176,006	160,675	70,016
Demand Costs	956,170	507,636	347,564	100,970
Customer Costs	<u>328,252</u>	<u>328,252</u>	-	-
Total Costs	1,691,119	1,011,893	508,239	170,987
No. of Bills or Gals. Sold		33,621	48,956	21,333
CALCULATED RATES		\$30.10	\$10.38	\$8.02
PROPOSED RATES		\$30.00	\$10.29	\$7.91
(adjusted per Billing Analysis to result in required revenue)				

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