

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

APPLICATION OF EAST PENDLETON COUNTY     )  
WATER DISTRICT FOR ALTERNATIVE RATE     ) CASE NO. 2013-00103  
ADJUSTMENT     )

NOTICE OF FILING OF COMMISSION STAFF REPORT

Notice is hereby given that, in accordance with the Commission's Order of May 13, 2013, the attached report, which contains Commission Staff's findings and recommendations regarding East Pendleton County Water District's proposed rate adjustment, has been filed in the record.

Please note that pursuant to the Commission's Order of May 13, 2013, East Pendleton County Water District is required, no later than July 12, 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 May 13, 2013 requires East Pendleton 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 East Pendleton District's financial condition would support and whether the

Commission should require East Pendleton District to implement Commission Staff's recommended changes in East Pendleton District's depreciation accounting practices.



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Jeff Derouen  
Executive Director  
Public Service Commission  
P.O. Box 615  
Frankfort, Kentucky 40602

DATED     **JUN 28 2013**    

cc: Parties of Record

Case No. 2013-00103

STAFF REPORT  
ON  
EAST PENDLETON WATER DISTRICT  
CASE NO. 2013-00103

East Pendleton Water District ("East Pendleton District") provides water service to approximately 2,083 customers residing in Bracken, Pendleton, Campbell, and Harrison counties.<sup>1</sup> It also provides wastewater service to approximately 50 customers.<sup>2</sup> On March 14, 2013, East Pendleton District tendered an application to the Commission for an adjustment of its water service rates pursuant to 807 KAR 5:076. As required by Section 3 of the regulation, East Pendleton District based its application on the test year ended December 31, 2011.<sup>3</sup> East Pendleton District proposed rates that it estimated would generate additional revenues of \$154,803.<sup>4</sup> These rates would increase the monthly cost of 5,000 gallons of water purchased through a 5/8-inch x 3/4-inch meter from \$43.79 to \$51.68, or 18 percent.

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<sup>1</sup> *Annual Report of East Pendleton County Water District (Water Division) to the Public Service Commission for the Calendar Year Ended December 31, 2012 ("2012 Water Annual Report")* at 5 and 27.

<sup>2</sup> *Annual Report of East Pendleton County Water District (Sewer Division) to the Public Service Commission for the Calendar Year Ended December 31, 2012* at 8.

<sup>3</sup> 807 KAR 5:076, Section 3 requires that the Commission make its decision based upon the utility's annual report for the immediate past year. At the time East Pendleton District submitted its application, the most recently filed report was for the year ended December 31, 2011.

<sup>4</sup> Water Sales from Billing Analysis shown in Application, Proposed Rates	\$1,006,188
Water Sales from Billing Analysis shown in Application, Present Rates	<u>\$ (851,386)</u>
East Pendleton's Anticipated Revenue Increase from Rate Adjustment	<u>\$ 154,803</u>

On May 13, 2013, the Commission accepted the application for filing, but directed that the reasonableness of East Pendleton District's proposed rates be determined using a 12-month historical test period ending December 31, 2012, which coincided with the reporting period of East Pendleton District's annual report for the immediate past year.

Staff has performed a limited financial review of East Pendleton District's operations for the test year ended December 31, 2012. The scope of the 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 to be material. All insignificant or immaterial discrepancies were not pursued and were not addressed.

This report contains the findings of Staff's review. Jack Scott Lawless reviewed the calculation of revenue requirements. Sam Reid reviewed the billing analysis, reported revenues, and rate design.

#### Summary of Findings

1) Overall Revenue Requirement and Required Revenue Increase. Based on the results of operations reported for 2012, Staff calculated East Pendleton District's overall revenue requirement to be \$1,096,547. A revenue increase of \$210,459 is necessary to generate this overall revenue requirement. If East Pendleton 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) Allocation of Revenue Requirements and Rate Design.

Staff's allocation of allowable expenses as determined by Staff's pro forma revenue requirement is found at Attachment A of this report. Commission Staff used Commodity-Demand method, a well-recognized methodology<sup>5</sup> which the Commission has generally accepted for rate-design purposes, to allocate allowable expenses to the various rate blocks.

3) Rates. East Pendleton District currently uses a three-step declining block rate design for its 5/8-inch and 1 1/4-inch meter sized customers and use a two-step declining block rate design for its 2-inch meter and 3-inch meter customers. Customers are classified by meter size, with minimum required-usage levels and minimum bills. Declining block volumetric rates are applied to usage above the minimum levels. East Pendleton District has one 2-inch meter customer and one 3-inch meter customer whose minimum bills contain the same usage volume of 100,000 gallons. The declining block volumetric rates are applied to usage above 100,000 gallons. When East Pendleton District began providing water service to these customers, its filed rate schedules failed to provide for rates for 2-inch and 3-inch meters. It therefore required each customer to execute a special contract that provided for a schedule of rates that differed from its filed rate schedules. East Pendleton District has since revised its filed rate schedules to provide a schedule of rates for 2-inch and 3-inch metered customers. The two customers in question are currently assessed rates under those rate schedules.

In its application, East Pendleton District proposes a mixed rate design. Customers served through 5/8-inch meter and 1 1/4-inch meter would continue to be

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<sup>5</sup> See American Water Works Association, *Principles of Water Rates, Fees, and Charges* (AWWA Manual M1) (5th ed. 2000) 57-59.

assessed rates based upon East Pendleton District's current rate design. While 2-inch and 3-inch meter customers would continue to be assessed a minimum charge based upon 100,000 gallon usage, they would be assessed a volumetric rate for all usage in excess of 100,000 gallons that is the same as the second declining block step for the smaller-meter customers. East Pendleton District offered no explanation for the proposed rate design change.

Minimum usage levels for larger meter sizes are typically set by demand ratios in comparison to a 5/8-inch meter. Staff finds that East Pendleton District's minimum usage levels for 1 1/4-inch, 2-inch, and 3-inch meters should be revised to reflect the differing demand ratios of the various meter sizes. This revision will promote fairness and equity to the utility's various classifications of customers, while recovering the costs associated with providing service to those classes of customers. The Commission has historically accepted declining block rate designs as a fair and reasonable rate structure to reflect differences in water and capacity use of different classes of customers.

The rates in Attachment B to this report reflect Staff's rate design revisions and are based on Staff's cost of services study. These rates will produce revenues from water sales of \$1,068,344 and will provide reasonable equity between customer classes by considering the demand characteristics of each class.

The rates in Attachment C reflect Staff's rate design revisions and will produce revenues from water sales of \$1,015,982. East Pendleton District's billing analysis for 2012 operations establishes that East Pendleton District's current rates will produce revenues of \$857,885 from water sales. East Pendleton District's proposed rates would produce \$1,015,982 in revenues from water sales.

4) Depreciable Lives. Staff finds that the depreciable lives for East Pendleton District's water assets should be adjusted for rate-making purposes and that these lives should be used for accounting purposes in all future reporting periods. These recommended depreciable lives better match the life expectancy of East Pendleton District's assets, will better match expenses to the revenues, and will minimize the erosion of East Pendleton 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.

5) Internal Controls. East Pendleton District maintains only one general ledger for its Water Division and Sewer Division wherein it records all transactions for both divisions. Separate accounting of all transactions for each division is maintained within the general ledger except for cash. Cash is commingled.

Separate cash accounts must be maintained and all cash transactions accounted for separately to comply with the Uniform System of Accounts ("USoA") applicable to East Pendleton District.<sup>6</sup> Staff finds that East Pendleton District should comply with the requirements of the USoA and separate the accounting for cash. Staff further recommends that East Pendleton District consider maintaining a separate general ledger for each division. While Staff does not recommend that the Commission require the use of separate ledgers, it finds that such practice would strengthen internal controls.

Rate-making adjustments were necessary to properly allocate many test-year transactions that were shared by the divisions. Staff finds that in future reporting

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<sup>6</sup> USoA for Water Districts and Associations, Accounting Instruction 15; USoA for Sewer Utilities, Accounting Instruction 13.

periods, East Pendleton District should allocate shared transactions using reasonable allocation factors and methods and should documented these factors and methods in written accounting policies and procedures that its Board of Commissioners formally approves.

Absent the recommended changes to internal controls, Staff finds that subsidization between the Water and Sewer Divisions may occur and go undetected.

#### Pro Forma Operating Statement

East Pendleton District's Pro Forma Operating Statement for the test-year ended December 31, 2012, as determined by Staff, appears in the table below.<sup>7</sup>

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<sup>7</sup> The *2012 Water Annual Report* is the source for amounts shown in the table. Staff has separated these amounts into operating expenses and administrative operating expenses to allocate expenses between the Water and Sewer Division.

	Test Year	Adjustments	Ref.	Pro Forma
Operating Revenues				
Sales of Water	\$ 857,656	\$ 229	(A)	\$857,885
Other Operating Revenue	25,468			25,468
<b>Total Operating Revenue</b>	<b>883,124</b>	<b>229</b>		<b>883,353</b>
Operating Expenses				
Field Operating Expenses				
Employee Wages, Benefits, and Payroll Taxes	274,556	(10,927)	(B)	263,629
Purchased Water	217,013			217,013
Purchased Power	28,705			28,705
Chemicals	228			228
Materials and Supplies	31,297	(17,158)	(C)	14,139
Transportation Expenses	21,166	(608)	(D)	20,558
Insurance -General Liability	12,858	(71)	(E)	12,787
Water Testing	1,290			1,290
Depreciation Expense	167,879	(40,339)	(F)	127,540
Administrative Operating Expenses				
Employee Wages, Benefits, and Payroll Taxes	168,452	(3,949)	(G)	164,503
Salaries and Wages - Officers	14,400	(338)	(G)	14,062
Office Utilities	3,618	(85)	(G)	3,534
Materials and Supplies	1,451	(34)	(G)	1,417
Contractual Services	18,865	(442)	(G)	18,423
Miscellaneous Expenses	24,506	(574)	(G)	23,932
Depreciation Expense	2,944	(69)	(G)	2,875
<b>Total Operation and Maintenance Expenses</b>	<b>989,228</b>	<b>(74,595)</b>		<b>914,634</b>
Amortization Expense	3,325	6,220	(H)	9,545
PSC Fee	1,554	(37)	(I)	1,517
<b>Total Operating Expenses</b>	<b>994,107</b>	<b>(68,412)</b>		<b>925,696</b>
Net Operating Income	(110,983)	68,641		(42,343)
Interest and Dividend Income	2,449			2,449
Gain on Disposition of Property	2,000	(1,714)	(J)	286
<b>Income Available to Service Debt</b>	<b>\$(106,534)</b>	<b>\$ 66,926</b>		<b>\$(39,608)</b>

(A) Water Sales. The utility's 2012 billing analysis of customer usage at current rates produces normalized revenues from water sales of \$857,885.

(B) Employee Wages, Benefits and Payroll Taxes. East Pendleton District reported \$274,556 for field employee wages and wage overheads. Staff reduced this

amount by \$10,927<sup>8</sup> to allocate a portion of the test-year expense to the Sewer Division and to capitalize the portion of the expense that was incurred to construct new water meter installations.

East Pendleton District has four full-time employees dedicated totally to field operations. One employee inspects the wastewater system five days per week. His daily inspections last approximately 30 minutes. These inspections are necessary to ensure that the plant is operating properly. East Pendleton District has retained a private contractor as the wastewater system's certified operator.

All test-year field employee wages and wage overheads were reported by the Water Division. The contract operator fees were reported by the Sewer Division. The portion of the field wages and wage overheads that is attributable to performance of the daily wastewater inspections should be allocated to the Sewer Division. Staff calculated this amount to be \$4,060 as shown below.

Wages and Wage Overheads for Field Employee that Performs Wastewater Inspections	\$ 65,746
Divide by: Hours Worked in Test Year	<u>2,105</u>
Hourly Rate	\$ 31.23
Times: 130 Hours (1/2 hour per day x 5 days per week x 52 weeks per year)	<u>130</u>
Allocation to Sewer Division	<u>\$ 4,060</u>

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Allocation to Sewer Division	\$ 4,060
Capitalize New Connections	<u>6,867</u>
Total	<u>\$ 10,927</u>

During the test year, East Pendleton District installed 23 new 5/8 inch x 3/4 inch meter connections with an estimated total cost of \$17,202.<sup>9</sup> These costs include wages, wage overheads, transportation costs, equipment costs, and materials and supplies. The USoA requires that these costs be capitalized.<sup>10</sup> East Pendleton District capitalized only \$3,468.<sup>11</sup> It reported the remaining costs in test-year expenses. This action resulted in a \$13,734 overstatement of expenses and an understatement of capital assets. Staff has removed half of this amount (\$6,867) from Employee Wages, Benefits, and Payroll Taxes expense and half from Materials and Supplies expense.<sup>12</sup> The total amount was added to the plant schedule and depreciated in pro forma operations.

(C) Materials and Supplies. Staff finds that, in addition to the \$6,867 decrease necessary to capitalize the cost of new meter connections, an additional \$10,291 decrease to this account is necessary to properly capitalize new water main design costs. The USoA requires that these fees be capitalized as part of the cost of the water

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<sup>9</sup> East Pendleton District does not utilize a work-order system to track the actual cost of constructing new plant. Absent such a system, the actual cost of the meter installations is unknown. The amount must be estimated. Staff estimated this amount to be \$17,202 by multiplying East Pendleton District's current tap fee of \$747.91 by the 23 new meter connections installed during 2012. Staff finds this method to produce a reasonable estimate of meter installation costs, since the tap fee represents East Pendleton District's average installation costs for a 5/8-inch x 3/4-inch meter connection.

<sup>10</sup> USoA, Accounting Instruction 19.

<sup>11</sup> On its 2012 Depreciation Schedule, East Pendleton District increased the Meter account and the Transponder account by \$1,745 and \$1,723, respectively, to account for a portion of the cost of the new meter connections.

<sup>12</sup> Ideally, the capitalization adjustment would be spread over all the expense accounts that included the costs of meter installations; for simplicity, the adjustment was split evenly between the wages account and the materials and supplies account. Use of this abbreviated treatment does not have a material effect on the results of Staff's analysis.

main and not expensed in the year incurred.<sup>13</sup> Accordingly, Staff removed these design costs from test-year expenses and added them to the plant schedule where they have been included in the calculation of pro forma depreciation expense. The total decrease to test-year Materials and Supplies expense is \$17,158.

(D) Transportation Expense. The Water Division reported all of East Pendleton District's test-year transportation expenses. An East Pendleton District employee performs a daily inspection of the wastewater treatment facility five days per week. The treatment facility is located approximately 2.5 miles from East Pendleton District's headquarters building. Travel is necessary from the headquarters building to the wastewater treatment facility to perform these inspections. Transportation expenses associated with this travel should be allocated to the Sewer Division.

Ideally, all transportation costs would be allocated between the Water Division and the Sewer Division based on the actual miles driven during the operation of each division; however, East Pendleton District does not maintain sufficient mileage records for this purpose. Absent these records, Staff performed an allocation by multiplying the estimated annual miles driven to operate the wastewater facilities (1,300 miles)<sup>14</sup> by the

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<sup>13</sup> USoA, Accounting Instruction 19(13).

<sup>14</sup>

Round Trip Mileage from Headquarters to Plant	5
Times: 5 Trips per Week x 52 Weeks	<u>260</u>
Annual Mileage	<u>1,300</u>

average mileage reimbursement rate for 2012 approved by the Commonwealth of Kentucky's Office of the Controller (\$0.4675).<sup>15</sup> This method results in the allocation of \$608<sup>16</sup> from the Water Division to the Sewer Division. The Water Division's test-year expense was decreased by \$608.

(E) General Liability Insurance. East Pendleton District's total test-year general liability insurance expense was \$12,858. The Water Division reported the entire amount. Staff allocated \$71 to the Sewer Division using an allocation factor calculated based on the original cost of utility plant in service assigned to each division.<sup>17</sup> The calculations are shown below.

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<sup>15</sup> The reimbursement rate is designed to include all costs of operating a vehicle, i.e., fuel, vehicle wear and tear, and insurance. It is adjusted quarterly to account for fluctuations in fuel prices.

Quarter, 2012	Rate
First	\$ 0.45
Second	0.48
Third	0.46
Fourth	<u>0.48</u>
Average	<u>\$ 0.4675</u>
Annual Mileage	1,300
Times: Average Rate	<u>\$ 0.4675</u>
Allocation to Sewer Division	<u>\$ 608</u>

<sup>16</sup>

<sup>17</sup> Shared plant was allocated between the divisions using the number-of-customer allocation factor.

	Directly Assigned Plant	Shared Plant	Total Plant	Allocation Factors	General Liability Insurance
Water Division	\$6,607,943	\$105,894	\$6,713,837	99.445%	\$12,787
Sewer Division	34,952	2,542	37,494	0.555%	71
Total	<u>\$6,642,895</u>	<u>\$108,436</u>	<u>\$6,751,331</u>	100.000%	<u>\$12,858</u>

(F) Depreciation Expense. East Pendleton District reported depreciation expense for 2012 on assets dedicated to water field operations in the amount of \$158,697. Staff decreased this amount by \$40,340<sup>18</sup> to account for:

1. changes to the depreciable lives assigned to certain water assets;
2. accrual of depreciation on assets capitalized by Staff; and
3. depreciation expense that East Pendleton District omitted from the amount reported for 2012.

East Pendleton District calculated depreciation expense for 2012 by dividing the plant's original cost by its estimated useful life. A summary of Staff's review of the lives is found at Attachment D of this report. Following the changes to the lives assigned to water mains and communication equipment discussed in Attachment D, Staff reduced test-year depreciation expense by \$43,915 as shown below.

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Decrease Due to Change in Lives	\$ (43,915)
Increase Due to Assets Capitalized by Staff	508
Increase Due to Test-Year Omission	<u>3,068</u>
Net Decrease	<u>\$ (40,340)</u>

	Depreciable Basis	Estimated Life	Pro Forma Depreciation Expense	Less: Test Year	Adjustment
Adjust Depreciable Lives:					
Account 343, Mains	\$ 1,729,109	62.5	\$ 27,666	\$(41,144)	\$ (13,478)
Account 390, Mains	3,695,989	62.5	59,136	(89,547)	(30,411)
Account 397, Communication Equipment	601	10	60	(86)	<u>(26)</u>
Total					<u>\$ (43,915)</u>

Staff capitalized costs incurred during the test year to construct new meter installations and to design new water mains. Depreciation for these assets is calculated below.

	Depreciable Basis	Estimated Life	Depreciation Expense
Plant Capitalized by Staff:			
Account 343, Mains	\$ 10,291	62.5	\$ 165
Account 347, Meter Installations	13,734	40	<u>343</u>
Total			<u>\$ 508</u>

On its 2012 Depreciation Schedule, East Pendleton District omitted from its test-year depreciation expense of \$3,018 for a new service vehicle and \$50 for new meters. Staff increased depreciation expense reported for 2012 by \$3,068 to properly include depreciation on these items.

(G) Administrative Operating Expenses. East Pendleton District incurred test-year administrative and general expenses that totaled \$234,236. The Water Division reported the entire amount. These expenses are primarily related to customer service and administrative activities for the Water and Sewer Divisions. A portion of these expenses, therefore, should be allocated to the Sewer Division. Staff has calculated allocation factors based on the number of customers served by each division. These allocation factors are shown below.

	Number of Customers	Allocation Factor
Water Division	2,083	97.6559%
Sewer Division	50	2.3441%
	<hr/>	
Total	2,133	100%

Staff finds that, by applying these factors, water expenses should be reduced by \$5,491, as detailed below, to remove test-year expenses reported by the Water Division that are allocable to the Sewer Division.

	Test Year	2.3441%
Employee Wages, Benefits, and Payroll Taxes	\$ 168,452	\$ (3,949)
Salaries and Wages - Officers	14,400	(338)
Office Utilities	3,618	(85)
Materials and Supplies	1,451	(34)
Contractual Services	18,865	(442)
Miscellaneous Expenses	24,506	(574)
Depreciation Expense	2,944	(69)
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	\$ 234,236	\$ (5,491)

(H) Amortization Expense. During the test year, East Pendleton District reported \$3,325 in account 407, Amortization Expense, for the amortization of debt issuance costs. Staff increased this amount by \$6,220<sup>19</sup> to remove the amortization of debt issuance costs and to include for the amortization of tank-painting costs.

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Remove Amortization of Debt Issuance Costs	\$	(3,325)
Amortize Tank Painting		<hr/> 9,545
Net Increase	\$	<hr/> 6,220

The USoA requires that amortization of debt issuance costs be reported in account 428, Amortization of Debt Discount and Expense.<sup>20</sup> This account is reported below-the-line and excluded from the calculation of Net Operating Income. Following the requirements of the USoA, Staff removed the test-year amount from account 407, Amortization Expense.

Staff increased test-year Amortization Expense by \$9,545 to account for the amortization of tank-painting costs that will be incurred subsequent to the end of the test year. On May 21, 2013, East Pendleton District's Board of Commissioners accepted a bid from Caldwell Tank, Inc. in the amount of \$190,900 to paint the elevated storage tank located on Highway 159.<sup>21</sup> The painting is expected to begin in July, 2013, and to be completed in August, 2013. East Pendleton District's General Manager stated that the refurbishment is expected to have a 20-year life. Staff increased test-year expenses by \$9,545<sup>22</sup> to recognize the tank painting cost over its anticipated life.

(I) PSC Fee. East Pendleton District's total PSC assessment for the test year was \$1,554 and was reported by the Water Division. The Sewer Division's portion was \$37. This amount was removed from the Water Division's expenses.

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<sup>20</sup> USoA at 86.

<sup>21</sup> While the accepted bid was the lowest of three bids received by East Pendleton District, it was significantly higher than expected. East Pendleton District originally estimated that the cost would be approximately \$160,000. See Case No. 2012-00505, *Application of East Pendleton County Water District For Authority to Enter Into a Loan Agreement with the Kentucky Infrastructure Authority* (Ky. PSC filed Jan. 7, 2013).

<sup>22</sup>

Cost of Tank Painting	\$	190,900
Amortize: 20 Years		<u>20</u>
Annual Recognition	<u>\$</u>	<u>9,545</u>

(J) Gain on Disposal of Asset. During the test-year, East Pendleton District recognized a \$2,000 gain on the sale of a service vehicle. Being an asset of a depreciable class, the USoA requires this gain be accounted for using the accumulated depreciation account.<sup>23</sup> Through this accounting treatment, the depreciable basis of the replacement asset is adjusted to include the amount of the gain. The gain would then be recognized as a component of depreciation expense recorded on the replacement asset in future periods.

In this case, Staff amortized the gain over the seven-year depreciable life assigned to the new service vehicle. This method has the same effect on revenue requirements as the method prescribed by the USoA. To account for the amortization, the amount of the gain recognized in the test-year was reduced by \$1,714.<sup>24</sup>

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<sup>23</sup> USoA at 42, Account 180.1. B.

<sup>24</sup>

Gain on Disposal of Property	\$ 2,000
Amortize: 7 Years	<u>7</u>
Annual Recognition	286
Less: Test Year	<u>(2,000)</u>
Adjustment	<u>\$ (1,714)</u>

Overall Revenue Requirement and Required Revenue Increase

East Pendleton District calculated its revenue requirement from water sales by adding its pro forma operating expenses and a three-year average of its principal and interest payments on its outstanding debts and then deducting revenues from non-water sales sources. This method provides revenues sufficient to pay operating expenses, meet required debt service payments, recover depreciation expense, and meet the requirements of East Pendleton District's bonded debt obligations.<sup>25</sup> Staff refers to this method as the Cash Needs Method.

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<sup>25</sup> East Pendleton District's bond resolutions require East Pendleton District to charge rates for water service that will produce a DSC ratio that is at least equal to 120 percent of the annual principal and interest payments on the water district's bonded debt plus the payments on all debts that are on par with its bonded debt. As shown below, the level of revenues requested by East Pendleton District will produce a DSC ratio of 175 percent when calculated using Staff's pro forma operations.

Water Sales Proposed by East Pendleton District	\$ 1,015,982
Plus: Other Operating Income	25,468
Interest and Dividend Income	2,449
Gain on Disposal of Assets	<u>286</u>
Gross Revenues	1,044,185
Less: Operation and Maintenance Expenses and Taxes	<u>(795,281)</u>
Net Revenues	248,904
Divide by: Maximum Annual Principal and Interest Payment, Occurs in 2014	<u>142,376</u>
Debt Service Coverage Ratio	<u>175%</u>

Recovery of Depreciation Expense, a noncash item, is included in the Cash-Needs Method to allow recovery of cash working capital that is necessary to provide internal funds to be used to construct new assets and to renew and replace existing assets. This cash working capital may also be used to offset decreases to operating income that may occur between general rate adjustments.<sup>26</sup>

Instead of the Cash-Needs Method, Staff applied the DSC Method. This method is historically accepted by the Commission to calculate the revenue requirement of a water district or a water association that has outstanding long-term indebtedness. The DSC Method includes all the components of the Cash-Needs Method, plus an additional amount for cash working capital. The additional cash working capital is based on the DSC ratio required by the utility's lenders.

As shown below, using the DSC Method, Staff calculated East Pendleton District's overall revenue requirement to be \$1,096,547 and determined that an annual revenue increase of \$210,459 is needed to meet this requirement.

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<sup>26</sup> 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 to be used for renewing and replacing assets. See *Public Serv. Comm'n of Kentucky v. Dewitt Water Dist.*, 720 S.W.2d 725, 728 (Ky.1986). Neither the Commission nor the Court requires that revenues collected for depreciation be accounted for separately from a 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, e.g., 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*, Case No. 2012-00309 (Ky. PSC Dec. 21, 2012).

Pro Forma Operating Expenses	\$ 925,695
Plus: Average Annual Debt Principal and Interest Payments	138,017
Additional Cash Working Capital	<u>32,834</u>
Overall Revenue Requirement	1,096,547
Less: Other Operating Revenues	(25,468)
Interest Income	(2,449)
Gain on Disposition of Property	<u>(286)</u>
Revenue Required from Rates	1,068,344
Less: Pro Forma Present Rate Revenue	<u>(857,885)</u>
Required Revenue Increase	<u>\$ 210,459</u>
Percentage Increase	<u>24.53%</u>

The average annual debt principal and interest payment of \$138,017 includes all payments due in the years 2013, 2014, and 2015 on all debts existing at the time of Staff's field work and a new Kentucky Infrastructure Authority ("KIA") loan that is expected to close in August, 2013.<sup>27</sup> The calculation is shown below.

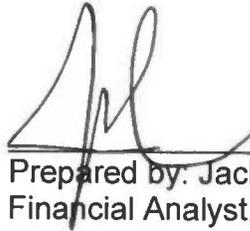
Year	Principal and Interest Payments				
	2013	2014	2015	Total	Average
1998 KIA Loan	\$ 18,186	\$ 17,400	\$ 16,704	\$ 52,290	\$ 17,430
1998 Bank of NY	68,643	71,730	69,690	210,063	70,021
2001 RD Bond	27,188	26,855	27,523	81,566	27,189
2006 RD Bond	15,863	15,891	15,911	47,665	15,888
2013 KIA Loan	1,467	10,500	10,500	22,467	7,489
Total	<u>\$ 131,347</u>	<u>\$ 142,376</u>	<u>\$ 140,328</u>	<u>\$ 414,051</u>	<u>\$ 138,017</u>

<sup>27</sup> This KIA loan was approved by the Commission in Case No. 2012-00505 (Ky. PSC Jan. 7, 2013). The loan is to be used for repainting an existing elevated storage facility. The original principal amount of the loan was expected to be equal to the estimated cost of the tank painting, \$160,000. The actual cost of the tank painting will be \$190,900. At the time of Staff's field work, East Pendleton District was considering whether or not to seek additional KIA loan funds to pay for the additional cost. If additional loan funds are sought by East Pendleton District and approved by the Kentucky Public Service Commission, an adjustment to the average annual debt payment would be appropriate.

The \$32,834 provision for additional cash working capital was calculated following the Commission's historic practice. First, the total DSC Requirement was calculated by multiplying the maximum annual debt principal and interest payment by 120 percent. Then, the average annual debt principal and interest payments were subtracted from the total DSC Requirement. The calculation is shown below.

Maximum Annual Principal and Interest Payments	\$ 142,376
Times: 120 Percent	<u>120%</u>
DSC Requirement	170,851
Less: Average Principal and Interest Payment	<u>(138,017)</u>
Additional Cash Working Capital	<u>\$ 32,834</u>

Signatures



Prepared by: Jack Scott Lawless, CPA  
 Financial Analyst, Water and Sewer  
 Revenue Requirements Branch  
 Division of Financial Analysis



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 Rate Analyst, Communications, Water  
 and Sewer Rate Design Branch  
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**ATTACHMENT A  
STAFF REPORT, CASE NO. 2013-00103  
EAST PENDLETON COUNTY WATER DISTRICT**

ALLOCATION OF PLANT VALUE				
	TOTAL	COMMODITY	DEMAND	CUSTOMER
Structures & Improvements	\$4,084,288		\$4,084,288	
Land & Land Rights	17,325		17,325	
Pumping Equipment	52,289		52,289	
Distribution Reservoirs & Standpipes	76,394		76,394	
Transmission & Distribution Mains	1,729,953		1,729,953	
Hydrants	6,019			\$6,019.00
Meters & Meter Installations	312,886			312,886.00
Services	95,335			95,335.00
Water Treatment Equipment	520		520	
<b>SUBTOTAL</b>	<b>\$6,375,009</b>	<b>\$0</b>	<b>\$5,960,769</b>	<b>\$414,240.00</b>
<b>PERCENT</b>	<b>100.00%</b>	<b>0</b>	<b>93.50%</b>	<b>6.50%</b>
General Plant (1)				
Organization	7,200		6,732.15	467.85
Transportation Equipment	116,579		109,003.84	7,575.16
Tools, Shop & Garage Equipment	14,752		13,793.43	958.57
Office Furniture	38,525		36,021.69	2,503.31
Power Operated Equipment	87,433		81,751.71	5,681.29
Communication Equipment	69,479		64,964.34	4,514.66
Other Plant and Misc. Equipment	7,109		6,647.07	461.93
<b>TOTAL GENERAL PLANT</b>	<b>341,077</b>		<b>318,914.25</b>	<b>22,162.75</b>
<b>TOTAL</b>	<b>\$6,716,086</b>	<b>\$0</b>	<b>\$6,279,683.25</b>	<b>\$436,402.75</b>
(1) General Plant allocated based on overall weighted allocation of all other plant.				
Note: Figures used were derived from 2012 annual report				

**ALLOCATION OF DEPRECIATION EXPENSE**

	<b>TOTAL</b>	<b>COMMODITY</b>	<b>DEMAND</b>	<b>CUSTOMER</b>
Structures & Improvements	\$1,059,266		\$1,059,266.00	
Pumping Equipment	31,508		31,508.00	
Distribution Reservoirs & Standpipes	74,544		74,544.00	
Water Treatment Equipment	520		520.00	
Meters & Meter Installations	206,546			\$206,546.00
Hydrants	6,370			\$6,370.00
Services	95,335			\$95,335.00
Transmission & Distribution Mains	1,256,099		1,256,099.00	
<b>SUBTOTAL</b>	<b>\$2,730,188</b>	<b>\$0.00</b>	<b>\$2,421,937.00</b>	<b>\$308,251.00</b>
<b>PERCENT</b>	<b>100.00%</b>	<b>0.00%</b>	<b>88.71%</b>	<b>11.29%</b>
Transportation Equipment	63,713		56,519.50	7,193.50
Tools, Shop & Garage Equipment	8,771		7,780.71	990.29
Office Furniture & Equipment	39,545		35,080.18	4,464.82
Power Operated Equipment	61,768		54,794.10	6,973.90
Communication Equipment	68,088		60,400.55	7,687.45
Other Plant and Misc. Equipment	5,508		4,886.12	621.88
<b>TOTAL DEPRECIATION</b>	<b>\$2,977,581.00</b>	<b>\$0.00</b>	<b>\$2,641,398.17</b>	<b>\$336,182.83</b>
Note: Figures used were derived from 2012 annual report				

ALLOCATION OF OPERATION AND MAINTENANCE EXPENSE				
	TOTAL	COMMODITY	DEMAND	CUSTOMER
Employee Wages, Benefits and Payroll Taxes	\$214,274		\$201,791	\$12,483
Manager-field wages, benefits and taxes	\$49,355		\$49,355	
Chemicals	228	228		
Admin. Emp. wages, benefits and taxes	115,148			115,148
Purchased Water	217,013	217,013		
Admin. Materials & Supplies	1,417			1,417
PSC Fee	1,517			1,517
Purchased Power	28,705	28,705		
Materials & Supplies	14,139		14,139	
<b>SUBTOTAL</b>	<b>\$641,796</b>	<b>\$245,946</b>	<b>\$265,285</b>	<b>\$130,565</b>
<b>LESS COMMODITY</b>	<b>-\$245,946</b>			
<b>SUBTOTAL</b>	<b>\$395,850</b>		<b>\$265,285</b>	<b>\$130,565</b>
<b>PERCENT</b>	<b>100.00%</b>		<b>67.02%</b>	<b>32.98%</b>
Insurance - Gen. Liability	12,787		8,569	4,217.59
Manager-admin. wages, benefits and taxes	49,355		33,076	16,278.98
Water Testing	1,290		865	425.49
Salaries and wages - Officers	14,062		9,424	4,638.13
Office Utilizes	3,534		2,368	1,165.64
Contractual Services - Other	18,423		12,346	6,076.54
Transportation Expense	20,558		13,777	6,780.74
Miscellaneous Expense	23,932		16,038	7,893.60
Amortization Expense	9,545		6,397	3,148.27
<b>TOTAL</b>	<b>\$795,282.00</b>	<b>\$245,946.00</b>	<b>\$368,146.02</b>	<b>\$181,189.98</b>

SUMMARY OF ALLOCATIONS				
	TOTAL	COMMODITY	DEMAND	CUSTOMER
Plant Percentages	100.00%		93.50%	6.50%
Available For Debt Service	\$170,851.00		\$159,749.32	\$11,101.68
Depreciation Percentages	100.00%		88.71%	11.29%
Total Depreciation	130,415.00		115,690.54	14,724.46
Total Operation & Maintenance	795,282.00	\$245,946.00	368,146.02	181,189.98
<b>REVENUE REQUIREMENT</b>	<b>\$1,096,548.00</b>			
<i>Less: Other Operating Revenue</i>	<i>-25,468.00</i>			<i>-25,468.00</i>
<i>Less: Interest Income</i>	<i>-2,735.00</i>			<i>-2,735.00</i>
<b>REVENUE REQUIRED FROM RATES</b>	<b>\$1,068,345.00</b>	<b>\$245,946.00</b>	<b>\$643,585.87</b>	<b>\$178,813.13</b>

CALCULATION OF WATER RATES				
	<b>TOTAL</b>	<b>FIRST 1,000</b>	<b>NEXT 99,000</b>	<b>OVER 100,000</b>
FROM BILLING ANALYSIS:				
COMMODITY PERCENTS		21.70%	73.06%	5.24%
<b>ACTUAL COMMODITY SALES</b>	91,787,402	19,920,377	67,057,046	4,809,979
PEAK DEMAND WEIGHTED FACTOR		2	1.5	1
PEAK DEMAND WEIGHTED SALES	145,236,302	39,840,754	100,585,569	4,809,979
<b>DEMAND PERCENTS</b>		27.43%	69.26%	3.31%
COMMODITY COSTS	\$245,946.00	\$53,377.01	\$179,680.56	\$12,888.43
DEMAND COSTS	\$643,585.87	\$176,546.40	\$445,725.00	\$21,314.47
CUSTOMER COSTS	\$178,813.13	\$178,813.13		
<b>TOTAL COSTS</b>	\$1,068,345.00	<b>\$408,736.54</b>	<b>\$625,405.57</b>	<b>\$34,202.89</b>
DIVIDE BY BILLS/GALLONS		22,192	67,057,046	4,809,979
<b>CALCULATED RATES</b>		<b>\$18.42</b>	<b>\$9.33</b>	<b>\$7.11</b>
		<b>FIRST 1,000</b>	<b>NEXT 99,000</b>	<b>OVER 100,000</b>

ATTACHMENT B  
STAFF REPORT, CASE NO. 2013-00103  
EAST PENDLETON COUNTY WATER DISTRICT  
(BASED ON COST OF SERVICE STUDY)

**Monthly Rates**

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

First	1,000 gallons	\$18.42 Minimum Bill
Next	99,000 gallons	9.33 per 1,000 gallons
Over	100,000 gallons	7.11 per 1,000 gallons

**1 1/4-Inch Meter**

First	10,000 gallons	\$102.39 Minimum Bill
Next	90,000 gallons	9.33 per 1,000 gallons
Over	100,000 gallons	7.11 per 1,000 gallons

**2-Inch Meter**

First	20,000 gallons	\$195.69 Minimum Bill
Next	80,000 gallons	9.33 per 1,000 gallons
Over	100,000 gallons	7.11 per 1,000 gallons

**3-Inch Meter**

First	30,000 gallons	\$288.99 Minimum Bill
Next	70,000 gallons	9.33 per 1,000 gallons
Over	100,000 gallons	7.11 per 1,000 gallons

ATTACHMENT C  
STAFF REPORT, CASE NO. 2013-00103  
EAST PENDLETON COUNTY WATER DISTRICT  
(BASED ON UTILITY'S REVENUE REQUEST)

**Monthly Rates**

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

First	1,000 gallons	\$21.00 Minimum Bill
Next	99,000 gallons	7.73 per 1,000 gallons
Over	100,000 gallons	6.57 per 1,000 gallons

**1 1/4-Inch Meter**

First	10,000 gallons	\$90.57 Minimum Bill
Next	90,000 gallons	7.73 per 1,000 gallons
Over	100,000 gallons	6.57 per 1,000 gallons

**2-Inch Meter**

First	20,000 gallons	\$167.87 Minimum Bill
Next	80,000 gallons	7.73 per 1,000 gallons
Over	100,000 gallons	6.57 per 1,000 gallons

**3-Inch Meter**

First	30,000 gallons	\$245.17 Minimum Bill
Next	70,000 gallons	7.73 per 1,000 gallons
Over	100,000 gallons	6.57 per 1,000 gallons

ATTACHMENT D  
 STAFF REPORT, CASE NO. 2013-00103  
 EAST PENDLETON COUNTY WATER DISTRICT  
 ENGINEERING DIVISION'S  
 ANALYSIS OF ASSET SERVICE LIVES

Historically, the Commission has relied on the National Association of Regulatory Utility Commissioners Study of Depreciation Practices for Small Water Utilities ("NARUC Study"), dated August 15, 1979, to evaluate the reasonableness of a utility's 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 NARUC Study. The table shows the utility's current and Engineering staff's recommended reasonable and appropriate service lives based on a review of information contained in the record of this case.

<b>Asset Classification</b>	<b>Current</b>	<b>Staff Recommended</b>	<b>NARUC Study</b>
Account 343	40-50	62.5	50-75
Account 397, Communication Equipment	7	10	10
Account 390	50	62.5	50-75

The utility appears to be utilizing service lives outside the range recommended by NARUC in the first two above-mentioned accounts 343 and 397. Account 390 appears to have several assets with service lives of 50 years. If these assets involve facilities related to transmission and distribution mains, the service lives should be treated similarly to Account 343 as noted in the table.

Absent any specific and verifiable evidence supporting alternative service lives, Engineering Staff finds that the midpoint of the range of service lives found in the NARUC Study for transmission and distribution mains should be considered as reasonable and appropriate. Engineering Staff further finds that the service life for Communication Equipment found in the NARUC Study as shown in the above table should be considered as reasonable and appropriate.

Prepared May 22, 2013

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 Manager, Water and Sewer Branch

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