

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

THE PETITION OF JACKSON COUNTY WATER     )  
ASSOCIATION FOR ADJUSTMENT OF RATES     ) CASE NO. 1999-417

O R D E R

On October 4, 1999, Jackson County Water Association ("Jackson County") submitted its application for Commission approval of proposed water rates. The application was considered filed on November 25, 1999, when all deficiencies were cured. Commission Staff ("Staff"), having performed a limited financial review of Jackson County's test period operations, has prepared the attached report containing Staff's findings and recommendations regarding the proposed rates. All parties should review the report carefully and submit any written comments on Staff's findings and recommendations or requests for a hearing or informal conference no later than 10 days from the date of this Order.

IT IS THEREFORE ORDERED that:

1. All parties shall, no later than 10 days from the date of this Order, submit their written comments on the attached Staff Report or request for a hearing or informal conference. If Jackson wishes to amend its application to reflect or to phase in the rates that will generate Staff's optimum revenue requirement, and that will differ from those in its application, it shall submit such amendment when filing its comments.
2. If Jackson County should choose to amend its application to reflect rates that differ from those in its application, Jackson shall notify its customers of the amended rate proposal in accordance with 807 KAR 5:011, Section 8.

3. If no request for a hearing or informal conference is received within 10 days from the date of this Order, this case shall stand submitted to the Commission for decision.

Done at Frankfort, Kentucky, this 2<sup>nd</sup> day of May, 2000.

By the Commission

ATTEST:

  
Executive Director

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

THE PETITION OF JACKSON COUNTY WATER )  
ASSOCIATION FOR ADJUSTMENT OF RATES ) CASE NO. 1999-417

STAFF REPORT

Prepared by: Karen S. Harrod, CPA  
Public Utilities Financial Analyst  
Water and Sewer Revenue  
Requirements Branch  
Division of Financial Analysis

Prepared by: Renee Curry  
Public Utilities Rate Analyst  
Communications, Water and  
Sewer Rate Design Branch  
Division of Financial Analysis

STAFF REPORT  
ON  
JACKSON COUNTY WATER ASSOCIATION  
CASE NO. 1999-417

On October 4, 1999, Jackson County Water Association ("Jackson County") submitted its application for Commission approval of proposed water rates. The application was considered filed on November 25, 1999, when all deficiencies were cured. In order to evaluate the requested increase, Commission Staff ("Staff") performed a limited financial review of Jackson County's test period operations, the year ended December 31, 1998.

The scope of Staff's review was limited to obtaining information as to whether the test period operating revenues and expenses were representative of normal operations. Insignificant or immaterial discrepancies were not pursued and are not addressed herein.

Karen Harrod, Scott Lawless, and Renee Curry, of the Commission's Division of Financial Analysis began, the review on November 16, 1999. Ms. Harrod is responsible for the preparation of this Staff Report except for the determination of normalized operating revenue and Attachments E, F, and G, which were prepared by Ms. Curry.

A schedule of Jackson County's proposed pro-forma operations is shown in Attachment A. Based on Staff's recommendations Jackson County's operating statement and revenue requirement would appear as set forth in Attachments B and C, respectively.

Jackson County's proposed rates would produce a revenue requirement of \$1,290,480,<sup>1</sup> or an increase of \$143,598 over test year revenues. This results in an increase over normalized test-year revenues from water sales of 13.26 percent. Based on Staff's recommended operations and a 1.1<sup>2</sup> Debt Service Requirement, Staff determined that Jackson County's minimum and optimum revenue requirement range is from \$1,074,558 to \$1,330,573, as shown in Attachment C.

The minimum revenue requirement of \$1,074,558 will permit Jackson County to meet its adjusted test-period operating expenses, excluding depreciation expense, and the minimum debt service requirements of its long-term debt instruments. The optimum revenue requirement of \$1,330,573 will allow Jackson County to meet its adjusted test-period operating expenses, including depreciation expense, and the minimum debt service requirements of its long-term debt instruments.

Since Jackson County's requested revenue requirement is within the acceptable range and produces a positive cash flow of \$215,922, as computed in Attachment D, Staff recommends that Jackson County's proposed revenue requirement be accepted.

Attachments E and F contain the discussion and workpapers with regard to Staff's cost of service study. The recommended rates, based on Staff's cost of service study, are shown on Sheet 11 of Attachment F and will achieve the requested revenue requirement of \$1,290,480. The rates shown on Sheet 8 of Attachment G will achieve the maximum revenue requirement of \$1,330,573 and are also calculated based on Staff's cost of service study.

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<sup>1</sup>Exhibit 14 of Exhibit 5 of Jackson County's Application.

<sup>2</sup>Exhibit 6 of Exhibit 5 of Jackson County's application.

The rate contained in Attachment F will achieve Staff's recommended level of revenue. Attachment H contains staff's recommended tariff for Jackson County.

Signatures

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Prepared by: Karen S. Harrod, CPA  
Public Utility Financial Analyst  
Water and Sewer Revenue  
Requirements Branch  
Division of Financial Analysis

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Prepared by: Renee Curry  
Public Utilities Rate Analyst  
Communications, Water and  
Sewer Rate Design Branch  
Division of Financial Analysis

ATTACHMENT A  
STAFF REPORT CASE NO. 99-417  
JACKSON COUNTY WATER ASSOCIATION - REQUESTED OPERATIONS

	Test Year per Annual Report	Proposed Adjustments	Proposed Test Year
Operating Revenues			
Metered Water Sales	1,008,743	186,347	1,195,090
Sales for Resale	25,101	6,294	31,395
Total Water Sales	1,033,844	192,641	1,226,485
Misc. Service Revenues	7,895	-	7,895
Total Operating Revenues	1,041,739	192,641	1,234,380
Operating Expenses			
Salaries & Wages - Employees	258,748	15,937	274,685
Employee Pensions & Benefits	41,428	13,280	54,708
Purchased Power	58,399	2,360	60,759
Chemicals	56,147	2,146	58,293
Materials & Supplies	122,152	1,000	123,152
Contractual Services -	5,995	-	5,995
Accounting			
Contractual Services - Legal	1,000	-	1,000
Contractual Services - Other	32,165	1,800	33,965
Transportation Expense	13,164	-	13,164
Insurance - Vehicle	3,648	-	3,648
Insurance - General Liability	3,648	-	3,648
Insurance - Worker's Comp.	7,269	-	7,269
Insurance - Other	2,158	-	2,158
Bad Debt Expense	12,480	600	13,080
Miscellaneous	42,101	-	42,101
Depreciation Expense	256,015	-	256,015
Amortization Exp. - Rate Case	-	2,000	2,000
Taxes other than Income	25,168	989	26,157
Total Operating Expenses	941,685	40,112	981,797
Utility Operating Income	100,054	152,529	252,583
Other Income			
Interest Income	46,757	-	46,757
Nonutility Income	9,008	-	9,008
Total Other Income	55,765	-	55,765
Income Available for Debt Service	155,819	152,529	308,348

ATTACHMENT B  
STAFF REPORT CASE NO. 99-417  
STAFF'S RECOMMENDED OPERATIONS

	Test Year per Annual Report	Staff Recommended Adjustments	Ref.	Staff Recommended Test Year
Operating Revenues				
Metered Water Sales	1,008,743	49,378	A	1,058,121
Sales for Resale	25,101			25,101
Total Water Sales	1,033,844	49,378		1,083,222
Misc. Service Revenues	7,895	-		7,895
Total Operating Revenues	1,041,739	49,378		1,091,117
Operating Expenses				
Salaries & Wages - Employees	258,748	27,489	B,F	286,237
Employee Pensions & Benefits	41,428	14,998	C	56,426
Purchased Power	58,399	2,360	D	60,759
Chemicals	56,147	2,146	E	58,293
Materials & Supplies	122,152	-	F	122,152
Contractual Services - Accounting	5,995	-		5,995
Contractual Services - Legal	1,000	(1,000)	G	-
Contractual Services - Other	32,165	1,560	F	33,725
Transportation Expense	13,164	-		13,164
Insurance - Vehicle	3,648	-		3,648
Insurance - General Liability	3,648	-		3,648
Insurance - Worker's Comp.	7,269	-		7,269
Insurance - Other	2,158	-		2,158
Bad Debt Expense	12,480	-	F	12,480
Miscellaneous	42,101	(2,821)	H	39,280
Depreciation Expense	256,015	-		256,015
Amortization Expense - Rate Case	-	-	I	-
Taxes other than Income	25,168	2,103	J	27,271
Total Operating Expenses	941,685	46,835		988,520
Utility Operating Income	100,054	2,543		102,597
Other Income				
Interest Income	46,757	-		46,757
Nonutility Income	9,008	-		9,008
Total Other Income	55,765	-		55,765
Income Available for Debt Service	155,819	2,543		158,362



ATTACHMENT B  
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STAFF'S RECOMMENDED OPERATIONS

(A) Operating Revenues – Water Sales

Jackson County's 1998 annual report showed annual revenue from water sales in the amount of \$1,033,844 and total operating revenue of \$1,041,739. Staff's billing analysis showed that Jackson County's total revenue from water sales for the 1998 test year was \$1,029,270, a decrease of \$4,574 from the reported amount. Staff then normalized rates to include 200 additional customers served by Jackson County and not included in the test year billing analysis. Based on an average monthly usage of 4,200 gallons and using test year rates, the additional customers will increase Jackson County's annual revenue by \$53,952<sup>3</sup>. These adjustments result in a net increase to revenues from water sales of \$49,378. For the purposes of this report, Jackson County's normalized revenue from water sales is \$1,083,222.

(B) Salaries & Wages

In its application Jackson proposed to increase test year salary expense by \$12,937 to a level of \$271,685. Based on the current salary levels of Jackson County's employees Staff calculated the current salary level to be \$286,237. An adjustment has been included to increase test year expense of \$258,748, by \$27,489.

Jackson County proposed an additional increase of \$3,000 to salary expense based on its increased level of customers. This adjustment has been excluded for rate-making purposes and is discussed in Item (F).

(C) Employee Pensions & Benefits Expense

For the test year Jackson County reported employee pensions and benefits expense of \$41,428 which it proposed to increase by \$13,280. Staff recommends a net

ATTACHMENT B  
STAFF REPORT CASE NO. 99-417  
STAFF'S RECOMMENDED OPERATIONS

increase of \$14,998 to include the current level of health insurance expense being incurred and to increase retirement expense based on the recommended increase in salaries & wages expense.

Current Annual Health Insurance Expense	\$ 45,660	
Less: Test Year Expense	<u>31,762</u>	
Recommended Increase in Health Insurance Exp.		\$ 13,898
Recommended Increase – Salaries & Wages	\$ 27,489	
Retirement paid by utility	<u>.04</u>	
Recommended Increase in Retirement Expense		<u>1,100</u>
Total Increase in Employee Pensions & Benefits Expense		<u>\$ 14,998</u>

(D) Purchased Power

Jackson County reported test year purchased power expense of \$58,399. It proposed to increase this expense by \$2,360 based on additional water treatment expense and repumping costs associated with serving 200<sup>4</sup> additional customers. Staff has reviewed the calculations in support of these adjustments and concurs that they should be included for rate-making purposes.

(E) Chemicals Expense

Jackson County reported test year chemicals expense of \$56,147. It proposed to increase this expense by \$2,146 based on additional water treatment expense associated with serving 200 additional customers. Staff has reviewed the calculations in support of this adjustment and recommends that it be included for rate-making purposes.

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<sup>3</sup> 200 Customers x \$22.48 x 12 Months = \$53,952.

<sup>4</sup>Per Application Rate Study, Exhibit 13.

ATTACHMENT B  
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STAFF'S RECOMMENDED OPERATIONS

(F) Customer Accounts Expense

In its application Jackson County proposed an adjustment to increase test year customer accounts expenses by \$6,400 based on additional costs to be incurred as a result of serving 200 additional customers. Staff has allocated this proposed increase to the following accounts, based on information provided in Jackson County's 1998 annual report.

Expense	Test Year Exp. Per Annual Rpt		Test Year # Customers		Cost per Customer		# New Customers		Proposed Increase
Salaries & Wages	54,943	÷	3,673		15	×	200		3,000
Materials & Supplies	16,923	÷	3,673		5	×	200		1,000
Contract Serv.-Other	32,165	÷	3,673		9	×	200		1,800
Bad Debt Expense	12,480	÷	3,673		3	×	200		600
Total	116,511				32				6,400

Customer accounts expense includes expenses for salaries and wages, materials and supplies, contract services – other (meter reading), and bad debt expense. It is Staff's opinion that, with the exception of meter reading, these expenses do not necessarily increase in direct proportion to an increase in customers. Accordingly, Staff recommends an adjustment be made to increase meter reading expense, calculated as follows:

Cost per meter	\$ .65
Number of new customers	<u>200</u>
Monthly Cost	\$ 130
	<u>12</u>
Annual Cost	<u>\$ 1,560</u>

ATTACHMENT B  
STAFF REPORT CASE NO. 99-417  
STAFF'S RECOMMENDED OPERATIONS

(G) Contractual Services – Legal

During the test year Jackson County paid legal expenses of \$1,000 for services performed during 1997. There were no legal expenses reported for the test period. Accordingly, Staff recommends an adjustment to eliminate legal expenses from test period operations.

(H) Miscellaneous Expenses

Jackson County reported test year miscellaneous expense of \$42,101. Staff recommends a net decrease to test year expense of \$2,821 based on the following adjustments:

Non-Recurring Charges

Out of State Travel to tour a Membrane	
Filter Water Treatment Plant	\$ ( 826)
Installation of cable service at plant	( 241)

Not allowed for Rate-making purposes

Snacks	( 498)
Christmas Hams & Bonuses	( 1,556)

Annualization Adjustment

Quarterly Copier Maintenance	
(Test year included only 3 qtrs. of expense)	<u>300</u>

Net Adjustment	<u><u>\$ (2,821)</u></u>
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(I) Amortization of Rate Case Expense

Jackson County proposed to include the amortization of rate case expenses totaling \$6,000 over a period of three years.<sup>5</sup> Staff concurs that this is an allowable and appropriate adjustment however, no invoices have been presented to support the

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<sup>5</sup> Application Rate Study, Exhibit 14.

ATTACHMENT B  
STAFF REPORT CASE NO. 99-417  
STAFF'S RECOMMENDED OPERATIONS

estimated expenses. Accordingly, the proposed adjustment has not been included in the determination of Jackson County's revenue requirement.

(J) Taxes other than Income

In its application Jackson County proposed to increase taxes other than income tax expense by \$989, based on its proposed increase to test year salary expense. Staff recommends an increase to this expense of \$2,103 based on the recommended increase to salaries and wages expense.

Recommended Salaries & Wages Increase	\$ 27,489
FICA Rate	<u>.0765</u>
Recommended Increase	<u>\$ 2,103</u>

ATTACHMENT C  
STAFF REPORT CASE NO. 99-417  
STAFF'S RECOMMENDED MINIMUM AND OPTIMUM REVENUE REQUIREMENT

	Staff Recommended Minimum (Excludes Depreciation)	Staff Recommended Optimum (Includes Depreciation)
Adjusted Operating Expenses	732,505	988,520
Avg. Annual Debt Service	310,957	310,957
.1 DSC	31,096	31,096
Total Revenue Requirement	1,074,558	1,330,573
Less:		
Normalized Operating Rev. from Water Sales	1,083,222	1,083,222
Misc. Service Revenues	7,895	7,895
Interest Income	46,757	46,757
Non-utility Income	9,008	9,008
Increase in Revenue from Water Sales	(72,324)	183,691
% Increase in Revenue from Water Sales	-6.68%	16.96%

ATTACHMENT D  
STAFF REPORT CASE NO. 99-417  
ANALYSIS OF CASH FLOW

Test Year Operating Revenues	\$ 1,091,117
Add: Recommended Revenue Increase	<u>143,598</u>
Recommended Total Operating Revenue	\$ 1,234,715
Add: Interest Income	46,757
Non-utility Income	9,008
Recommended Total Revenues	\$ 1,290,480
Less: Recommended Operating Expenses	988,520
Annual Debt Service	310,957
.1 Debt Service Coverage	<u>31,096</u>
Recommended Operating Income	\$ (40,093)
Add back: Depreciation Expense	<u>256,015</u>
Cash Flow	<u><u>\$ 215,922</u></u>

Current Rate Design. Jackson County's current retail rate design is a 5-step declining block schedule with usage increments of 1,000 gallons, 4,000 gallons, 5,000 gallons, 10,000 gallons, and over 20,000 gallons.

Jackson County submitted a proposal to reduce its 5-step declining block rate schedule to a 2-step declining block rate schedule with usage increments of 1,000 gallons and over 1,000 gallons. Jackson County's proposal would increase the minimum usage amount by 18.2 percent and increase the cost for usage of 100,000 gallons by 72.3 percent.

Jackson County has three wholesale customers, the City of McKee ("McKee"), Rockcastle County Water Association ("Rockcastle"), and the City of Beattyville ("Beattyville"). Jackson County has a flat per 1,000 gallon wholesale rate for each of its wholesale customers. Jackson County proposed to increase the rates of its wholesale customers as follows: McKee from \$1.10 to \$1.50; Rockcastle from \$1.48 to \$1.79; and Beattyville from \$1.28 to \$1.66.

Wholesale Rate. Jackson County filed a cost of service study allocating expenses to each wholesale customer. Commission Staff made adjustments to the study to reflect the usage obtained from its billing analysis and to reflect Sand Gap truck sales. Staff's cost of service study is shown at Attachment F.

The first step in preparing the cost of service study was to determine the wholesale rates. Commission Staff first determined the amount of water produced and sold shown at Sheet 1. Jackson County sold 12,289,100 gallons to McKee; 3,542,000 gallons to Rockcastle; and 3,989,000 gallons to Beattyville. Jackson County reported utility use of 8.06 percent and line loss of 6.04 percent. However based on Staff's billing



analysis and the inclusion of the Sand Gap truck sales, line loss has been adjusted to 3.90 percent.

Commission Staff then allocated the inch miles of line that were jointly used by Jackson County and each of its wholesale customers. The wholesale allocations factors shown at Sheet 2 were based on the ratio of sales to each wholesale customer to total sales and the ratio of total system miles of line to each wholesale customers jointly used miles of line. Water production factors of .0523 for McKee; .0151 for Rockcastle; and .0170 for Beattyville; and transmission factors of .0026 for McKee; .0021 for Rockcastle; and .0016 for Beattyville were determined to be the factors to be used in allocating costs to the wholesale customers.

Sheet 3 shows the allocation of depreciation.

Staff's allocation of wholesale costs (Sheet 4) shows the total costs of Jackson County, the allocation factors used to allocated each cost, and the dollar amount allocated to each wholesale customer. All of the wholesale costs are then subtracted from the total cost to determine the cost to be paid by the retail customers. The wholesale cost is then divided by the total gallons sold to each wholesale customer to determine the wholesale customer's rate. Based upon Staff's cost of service study, the rate for McKee should be \$1.47 per 1,000 gallons. The rate for Rockcastle should be \$1.79 per 1,000 gallons. The rate for Beattyville should be \$1.63 per 1,000 gallons.

Retail Rates. Jackson County filed a study setting out proposed rates for its retail customers. The first 1,000 gallon increment included all debt service coverage and depreciation expense. The over 1,000 gallon increment included all operation and maintenance costs. By including customer costs in the operation and maintenance

expense, fixed costs such as meter reading and billing and collecting were allocated on a per 1,000 gallon basis. In other words, customers who use 100,000 gallons would pay 100 times more postage expense than customers who use 1,000 gallons.

Commission Staff prepared a cost of service study for Jackson County's retail customers based on the commodity demand methodology as set out in the American Water Works Association's ("AWWA") Manual M-1. This study recognizes that a utility must be prepared for meeting peak demand requirements as well as the average water use needs. In other words, a system must be sized to meet the demand of the residential customers who tend to place a larger demand on the system than very large customers. The large consumers use water throughout the day and night and generally place a smaller demand on the system than residential customers who use water for a few hours each day.

The commodity demand method allocates costs into either commodity or customer functions. Commodity costs are those costs that vary directly with the quantity of water produced such as chemicals, purchased water, and purchased power. Demand costs are associated with providing facilities to meet the peak demands placed on the system. These costs include transmission and distribution costs. Customer costs are those associated directly with serving the customers regardless of the amount of water used. These costs include meter reading and billing and collecting.

Sheet 5 shows the allocation of expenses to the functional cost components. Administrative and general expenses are allocated to the cost components based on the subtotal of all other expenses, excluding commodity costs.

Once operating and maintenance expense has been allocated, all other expenses and income must be allocated to the functional categories. Sheet 6 is the allocation of expenses and other revenue based on Jackson County's revenue requirement (Sheet 5). Sheet 6 shows that \$276,162 should be collected from the commodity category, \$813,900 from the demand category, and \$103,815 from the customer category.

After costs have been allocated by function, a billing analysis must be reviewed to study the usage patterns of the customers of a utility. The usage patterns of Jackson County's retail customers are shown at Sheet 7.

Jackson County proposed to change its rate schedule to first 1,000 gallons and over 1,000 gallons. However, based on Jackson County's customers usage patterns, Staff proposes that the current rate schedule be changed to a 4-step declining block schedule with usage increments at first 2,000 gallons, next 18,000 gallons, next 30,000 gallons, and over 50,000 gallons. Staff is of the opinion that a 4-step rate schedule will alleviate some of the "rate shock" for the customers who use over 20,000 gallons who, based on the cost of service study, have not been paying their share of the costs.

Sheet 8 shows the calculations of the retail water rates, and Sheet 9 is a verification schedule showing that the rates produced by the cost of service study will in fact produce the correct amount of revenue. Sheet 10 is a comparison of Jackson County's current rates and the cost of service rates. This comparison shows that the customers with an average usage of 4,200 gallons will receive a slight increase of 0.89 percent while customers using over 20,000 gallons will receive significantly larger increases. However, it should be noted that 9 percent of Jackson County's total water

sales is over the 20,000 gallons usage increment and this increase would effect 1 percent of Jackson County's residential customers. Sheet 11 shows Staff's recommended rates.

Attachment G is a cost of service study for Jackson County Water Association performed in the same manner as the study at Attachment F. The only difference in this cost of service study is that it allows for full depreciation in the amount of \$256,015 and debt service in the amount of \$342,053. In Attachment F, depreciated was decreased by \$31,891 from \$256,015 to \$224,124 and debt service was decreased by \$8,202 from \$342,053 to \$333,851 in order to achieve the utility requested revenue.

Non-recurring Charges. Jackson County also proposed to increase and establish certain non-recurring charges. After reviewing Jackson County's cost justification for these non-recurring charges, Staff believes that the proposed charges should be approved. However, when reviewing Jackson County's tariff, Staff noted that its tariff was outdated and included several items that needed revisions such as incorrect language on interest to be paid on customer deposits. Staff has prepared a new tariff for Jackson County making several necessary revisions and including language for the non-recurring charges. Jackson County should review the tariff and make sure it is in agreement with Staff. In such case, Jackson County should file the tariff shown at Attachment H at the conclusion of this case.

ATTACHMENT F  
STAFF REPORT CASE NO. 99-417  
COST OF SERVICE STUDY

## **Cost of Service Study**

### **Utility Requested Revenue**

**Wholesale Rate Allocations      Sheet 1 - Sheet  
4**

**Retail Rate Allocations      Sheet 5 - Sheet  
8**

**Verification of Recommended Rates      Sheet 9**

**Comparison of Current & Cost of Service      Sheet 10  
Rates**

**Recommended Rates      Sheet 11**

ATTACHMENT F  
STAFF REPORT CASE NO. 99-417  
COST OF SERVICE STUDY

**Total Water Produced and Sold**

	<b>Gallons</b>	<b>Percent</b>
Sales to Retail	204,407,100	
Truck Sales	1,080,000	
Sales to Wholesale		
City of McKee	12,289,100	
Rockcastle Co Water Assoc	3,542,000	
City of Beatyville	3,989,000	
Total Water Produced and Purchased	288,801,000	
Total Sold	225,307,200	
Free Water	108,000	
Plant Use	28,850,200	
Utility Use	23,269,500	8.06%
Line Loss	11,266,100	3.90%

ATTACHMENT F  
STAFF REPORT CASE NO. 99-417  
COST OF SERVICE STUDY

## Wholesale Allocation Factors

		Multiplier
Plant Use Percentage	0.08	
Line Loss Percentage	0.04	
Joint Share of Plant Use & Line Loss	$1.0 \times .04 + .08$	0.12
Jackson Co Water Production Multiplier	$1/1-.12$	1.1364
Wholesale Inch Mile Ratio		
City of McKee	$58.8/1238.5$	0.0475
Rockcastle Co Water Assoc	$164.4/1238.5$	0.1327
City of Beattyville	$113.8/1238.5$	0.0919
Wholesale Share of Line Loss		
City of McKee	$.0475 \times .04 + .08$	0.0819
Rockcastle Co Water Assoc	$.1327 \times .04 + .08$	0.0853
City of Beattyville	$.0919 \times .04 + .08$	0.0837
Production Multiplier		
City of McKee	$1 / 1-.0819$	1.0892
Rockcastle Co Water Assoc	$1/1-.0853$	1.0933
City of Beattyville	$1/1-.0837$	1.0913
Production Allocation Factor		
City of McKee	$12,289,100/225,307,200 \times (1.0892/1.1364)$	0.0523
Rockcastle Co Water Assoc	$3,542,000/225,307,200 \times (1.0933/1.1364)$	0.0151
City of Beattyville	$3,989,000/225,307,200 \times (1.0913/1.1364)$	0.0170
Pipeline Transmission Factor		

ATTACHMENT F  
STAFF REPORT CASE NO. 99-417  
COST OF SERVICE STUDY

City of McKee	$(12,289,100/225,307,200) \times .0475$	0.0026
Rockcastle Co Water Assoc	$(3,542,000/225,307,200) \times .1327$	0.0021
City of Beattyville	$(3,989,000/225,307,200) \times .0919$	0.0016

**Allocation of  
Depreciation**

**Utility Requested  
Revenue**

		Percent	Redistributed General Plant	Depreciation by Function
Water Supply & Treatment	\$47,889	23.96%	\$5,805	\$53,694
Distribution Reservoirs	19,092	9.55%	2,314	21,406
Trans/Dist Mains	120,865	60.46%	14,648	135,513
Meters & Services	12,051	6.03%	1,460	13,511
General Plant	24,227			
<b>Total Depreciation</b>	<b>\$224,124</b>		<b>\$24,227</b>	<b>\$224,124</b>



Note: Total Depreciation reduced 12.46% to achieve utility revenue requirement.



ATTACHMENT F  
STAFF REPORT CASE NO. 99-417  
COST OF SERVICE STUDY

ATTACHMENT F  
STAFF REPORT CASE NO. 99-417  
COST OF SERVICE STUDY

**ALLOCATION OF OPERATION  
AND MAINTENANCE EXPENSES**

**Utility Requested Revenue**

	Total	McKee Allocation Factor	McKee	Rockcastle Allocation Factor	Rockcastle	Beattyville Allocation Factor	I
Salaries							
Supply/Treatment	\$74,476	0.0523	\$3,895	0.0151	\$1,125	0.0170	
Transmission/Distribution	115,642	0.0026	301	0.0021	243	0.0016	
Customer Accounts	60,780	0.0000	0	0.0000	0	0.0000	
Administrative/General	35,339	0.0026	92	0.0021	74	0.0016	
Employee Pension/Benefits							
Supply/Treatment	14,683	0.0523	768	0.0151	222	0.0170	
Transmission/Distribution	22,796	0.0026	59	0.0021	48	0.0016	
Customer Accounts	11,979	0.0000	0	0.0000	0	0.0000	
Administrative/General	6,968	0.0026	18	0.0021	15	0.0016	
Insurance - Worker's Comp							
Supply/Treatment	1,891	0.0523	99	0.0151	29	0.0170	
Transmission/Distribution	2,937	0.0026	8	0.0021	6	0.0016	
Customer Accounts	1,543	0.0000	0	0.0000	0	0.0000	
Administrative/General	898	0.0026	2	0.0021	2	0.0016	
Taxes other than Income - Payroll							
Supply/Treatment	6,102	0.0523	319	0.0151	92	0.0170	
Transmission/Distribution	9,475	0.0026	25	0.0021	20	0.0016	
Customer Accounts	4,979	0.0000	0	0.0000	0	0.0000	
Administrative/General	2,897	0.0026	8	0.0021	6	0.0016	
Purchased Power							
Supply/Treatment	36,070	0.0523	1,886	0.0151	545	0.0170	
Transmission/Distribution	24,689	0.0026	64	0.0021	52	0.0016	
Chemicals	58,293	0.0523	3,049	0.0151	880	0.0170	
Materials & Supplies							
Transmission/Distribution	105,229	0.0026	274	0.0021	221	0.0016	
Customer Accounts	16,923	0.0000	0	0.0000	0	0.0000	
Transportation Expense	13,164	0.0026	34	0.0021	28	0.0016	
Insurance							
Vehicle	3,648	0.0026	9	0.0021	8	0.0016	
General Liability	3,648	0.0026	9	0.0021	8	0.0016	
Other	2,158	0.0026	6	0.0021	5	0.0016	
Contractual Services							
Accounting	5,995	0.0026	16	0.0021	13	0.0016	
Other	33,725	0.0026	88	0.0021	71	0.0016	

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Bad Debt Expense	12,480	0.0000	0	0.0000	0	0.0000
Miscellaneous Expense						
Transmission/Distribution	10,956	0.0026	28	0.0021	23	0.0016
Administrative/General	28,324	0.0026	74	0.0021	59	0.0016
Taxes other than Income	\$3,818	0.0026	\$10	0.0021	\$8	0.0016
<b>Total Operation/Maintenance</b>	<b>\$732,505</b>		<b>\$11,141</b>		<b>\$3,803</b>	
Depreciation						
Supply/Treatment	53,694	0.0523	2,808	0.0151	811	0.0170
Dist Reservoirs & Standpipes	21,406	0.0026	56	0.0021	45	0.0016
Transmission/Distribution	135,513	0.0026	352	0.0021	285	0.0016
Meters & Services	13,511	0.0000	0	0.0000	0	0.0000
Debt Service						
Supply/Treatment	56,411	0.0523	2,950	0.0151	852	0.0170
Transmission/Distribution	255,440	0.0026	664	0.0021	536	0.0016
Meters & Services	22,000	0.0000	0	0.0000	0	0.0000
<b>Total - Utility Req Revenue</b>	<b>\$1,290,480</b>		<b>\$17,971</b>		<b>\$6,332</b>	
<b>Rate to Wholesale</b>			<b>\$1.47</b>		<b>\$1.79</b>	

Note: Depreciation reduced \$31,891 to achieve utility requested revenue.

Note: Debt Service reduced \$8,202 to achieve utility requested revenue.

Note: Rates to McKee and Beattyville each increased \$0.01 to obtain revenue required.

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**ALLOCATION OF RETAIL OPERATION AND MAINTENANCE EXPENSES**  
Utility Requested Revenue

	<b>Total</b>	<b>Commodity</b>	<b>Demand</b>	<b>Customer</b>
Salaries				
Supply/Treatment	\$68,190	\$68,190		
Transmission/Distribution	114,913		114,913	
Customer Accounts	60,780			60,780
Employee Pension/Benefits				
Supply/Treatment	13,443	13,443		
Transmission/Distribution	22,653		22,653	
Customer Accounts	11,979			11,979
Insurance - Worker's Comp				
Supply/Treatment	1,731	1,731		
Transmission/Distribution	2,918		2,918	
Customer Accounts	1,543			1,543
Taxes other than Income - Payroll				
Supply/Treatment	5,587	5,587		
Transmission/Distribution	9,415		9,415	
Customer Accounts	4,979			4,979
Purchased Power				
Supply/Treatment	33,026	33,026		
Transmission/Distribution	24,533		24,533	
Chemicals	53,373	53,373		
Materials & Supplies				
Transmission/Distribution	104,566		104,566	
Customer Accounts	16,923			16,923
Misc Expense- Trans/Distribution	10,887		10,887	
<b>Subtotal</b>	561,439	175,350	289,885	96,204
<b>Less Commodity</b>	(175,350)			
<b>Total</b>	\$386,089		\$289,885	\$96,204
<b>Percentages</b>	100.00%		75.08%	24.92%
<b>Administrative/General</b>				
Salaries	35,116		26,365	8,751
Employee Pension/Benefits	6,924		5,199	1,725
Insurance-Worker's Comp	893		670	223
Taxes other than Income - Payroll	2,878		2,161	717
Transportation Expense	13,081		9,821	3,260

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Insurance			0	0
Vehicle	3,625		2,722	903
General Liability	3,625		2,722	903
Other	2,144		1,610	534
Contractual Services			0	0
Accounting	5,956		4,472	1,484
Other	33,512		25,161	8,351
Bad Debt Expense	12,480		9,370	3,110
Miscellaneous Expense	28,146		21,132	7,014
Taxes other than Income	\$3,794		2,849	945
<b>Total Operation/Maintenance</b>	<b>\$713,613</b>	<b>175,350</b>	<b>404,139</b>	<b>134,124</b>
Depreciation				
Supply/Treatment	49,162	49,162		
Dist Reservoirs & Standpipes	21,271		21,271	
Transmission/Distribution	134,659		134,659	
Meters & Services	13,511			13,511
Debt Service				
Supply/Treatment	51,650	51,650		
Transmission/Distribution	253,831		253,831	
Meters & Services	22,000			22,000
<b>Total - Utility Request Revenue Required - Retail Rates</b>	<b>\$1,259,697</b>	<b>\$276,162</b>	<b>\$813,900</b>	<b>\$169,635</b>

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**ALLOCATION OF RETAIL COST OF SERVICE**  
**Utility Requested Revenue**

	<b>Total</b>	<b>Commodity</b>	<b>Demand</b>	<b>Customer</b>
Operation & Maintenance	\$713,613	\$175,350	\$404,139	\$134,124
Depreciation	218,603	49,162	155,930	13,511
Debt Service	327,481	51,650	253,831	22,000
General Water Service Cost-Retail	1,259,697	276,162	813,900	169,635
Less: Interest Income	(46,757)			(46,757)
Less: Nonutility Income	(9,008)			(9,008)
Less: Miscellaneous Service	(7,895)			(7,895)
Less: Truck Sales	(2,160)			(2,160)
<b>Revenue Required from Retail Rates</b>	1,193,877	276,162	813,900	103,815
Wholesale Revenue	30,783			
<b>Total Revenue Required from Rates</b>	\$1,224,660			

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**CALCULATION OF RETAIL WATER RATES**  
**Utility Requested Revenue**

	Total	First 2,000	Next 18,000	Next 30,000	Over 50,000
Actual Water Sales:					
Thousand Gallons	214,487,100	79,823,500	115,135,200	8,083,500	11,444,900
	100.00%	37.216%	53.679%	3.769%	5.336%
Weighted Sales for Demand:					
Thousand Gallons	374,118,739	159,647,000	192,275,784	10,751,055	11,444,900
Percent	100.00%	42.673%	51.394%	2.874%	3.059%
Allocation of Volumetric Costs:					
Commodity	\$276,162	\$102,776	\$148,241	\$10,409	\$14,736
Demand	813,900	347,316	418,296	23,391	24,897
Customer	103,815	103,815			
Total	\$1,193,877	\$553,907	\$566,537	\$33,800	\$39,633
Number of Bills		46,479			
<b>Proposed Rates</b>		<b>\$11.92</b>	<b>\$4.92</b>	<b>\$4.18</b>	<b>\$3.46</b>

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**VERIFICATION OF RATES**  
Utility Requested Revenue

	<b>Bills</b>	<b>Gallons</b>	<b>Rate</b>	<b>Revenue</b>
<b>5/8" x 3/4" Meters</b>				
First 2,000 gallons	46113		11.90	548,744.70
Next 18,000 gallons		110,939,300	4.90	543,602.57
Next 30,000 gallons		4,221,300	4.13	17,433.97
Over 50,000 gallons		686,800	3.40	2,335.12
<b>1" Meters</b>				
First 5,000 gallons	156		26.60	4,149.60
Next 15,000 gallons		968,300	4.90	4,744.67
Next 30,000 gallons		586,900	4.13	2,423.90
Over 50,000 gallons		136,200	3.40	463.08
<b>1 1/2" Meters</b>				
First 10,000 gallons	84		51.10	4,292.40
Next 10,000 gallons		583,700	4.90	2,860.13
Next 30,000 gallons		1,343,700	4.13	5,549.48
Over 50,000 gallons		3,529,800	3.40	12,001.32
<b>2" Meters</b>				
First 20,000 gallons	95		100.10	9,509.50
Next 30,000 gallons		1,211,600	4.13	5,003.91
Over 50,000 gallons		3,395,400	3.40	11,544.36
<b>3" Meters</b>				
First 30,000 gallons	12		141.40	1,696.80
Next 20,000 gallons		240,000	4.13	991.20
Over 50,000 gallons		1,374,700	3.40	4,673.98
<b>4" Meters</b>				
First 40,000 gallons	19		182.70	3,471.30
Next 10,000 gallons		120,000	4.13	495.60
Over 50,000 gallons		2,322,000	3.40	7,894.80
	46479			
<b>Revenue from Retail Rates</b>				<b>\$1,193,882.39</b>
<b>Wholesale Revenue</b>				
City of McKee		12,289,100	1.47	18,064.98
Rockcastle Co Water Assoc		3,542,000	1.79	6,340.18
City of Beattyville		3,989,000	1.63	6,502.07
<b>Total Revenue from Rates</b>				<b>1,224,789.62</b>



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Interest Income				46,757.00
Nonutility Income				9,008.00
Miscellaneous Service				7,895.00
Truck Sales				2,160.00
<b>Total Revenue</b>				<b>\$1,290,609.62</b>

Note: First 2,000 reduced \$0.02; Next 18,000 reduced \$0.02; Next 30,000 reduced \$0.05 and  
Over 50,000 reduced \$0.06 to obtain revenue requirement.

**COMPARISON OF RETAIL RATES**  
Utility Requested Revenue

Gallon Usage	Current Rates	Cost of Service Rates	Increase	Percentage
1000	\$10.00	\$11.90	\$1.90	19.00%
2000	13.90	11.90	-\$2.00	-14.39%
3000	17.80	16.80	-\$1.00	-5.62%
4000	21.70	21.70	\$0.00	0.00%
<b>4200</b>	<b>22.48</b>	<b>22.68</b>	<b>\$0.20</b>	<b>0.89%</b>
5000	25.60	26.60	\$1.00	3.91%
6000	28.75	31.50	\$2.75	9.57%
7000	31.90	36.40	\$4.50	14.11%
8000	35.05	41.30	\$6.25	17.83%
9000	38.20	46.20	\$8.00	20.94%
10000	41.35	51.10	\$9.75	23.58%
12000	46.45	60.90	\$14.45	31.11%
20000	66.85	100.10	\$33.25	49.74%
25000	76.35	120.75	\$44.40	58.15%
30000	85.85	141.40	\$55.55	64.71%
35000	95.35	162.05	\$66.70	69.95%
50000	123.85	224.00	\$100.15	80.86%
75000	171.35	309.00	\$137.65	80.33%
100000	218.85	394.00	\$175.15	80.03%
200000	408.85	734.00	\$325.15	79.53%

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300000	598.85	1,074.00	\$475.15	79.34%
500000	978.85	1,754.00	\$775.15	79.19%
1000000	1,928.85	3,454.00	\$1,525.15	79.07%

**Jackson County Water Association  
Recommended Rates  
Utility Requested Revenue**

**Monthly Water Rates**

**3/4 inch Meter**

First 2,000 gallons	\$11.90	per month
Next 18,000 gallons	4.90	per 1,000 gallons
Next 30,000 gallons	4.13	per 1,000 gallons
Over 50,000 gallons	3.40	per 1,000 gallons

**1 inch meter**

First 5,000 gallons	\$26.60	per month
Next 15,000 gallons	4.90	per 1,000 gallons
Next 30,000 gallons	4.13	per 1,000 gallons
Over 50,000 gallons	3.40	per 1,000 gallons

**1 1/2 inch meter**

First 10,000 gallons	\$51.10	per month
Next 10,000 gallons	4.90	per 1,000 gallons
Next 30,000 gallons	4.13	per 1,000 gallons
Over 50,000 gallons	3.40	per 1,000 gallons

**2 inch meter**

First 20,000 gallons	\$100.10	per month
Next 30,000 gallons	4.13	per 1,000 gallons
Over 50,000 gallons	3.40	per 1,000 gallons

**3 inch meter**

First 30,000 gallons	\$141.40	per month
Next 20,000 gallons	4.13	per 1,000 gallons
Over 50,000 gallons	3.40	per 1,000 gallons

**4 inch meter**

First 40,000 gallons	\$182.70	per month
Next 10,000 gallons	4.13	per 1,000 gallons
Over 50,000 gallons	3.40	per 1,000 gallons

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<b>Truck Sales</b>		
Sand Gap	\$2.00	per 1,000 gallons
<b>Wholesale</b>		
City of McKee	\$1.47	per 1,000 gallons
Rockcastle Co Water Association	\$1.79	per 1,000 gallons
City of Beatyville	\$1.63	per 1,000 gallons

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# **Cost of Service Study**

## **Staff Revenue Requirement**

<b>Wholesale Rate Allocations</b>	<b>Sheet 1 - Sheet 2</b>
<b>Retail Rate Allocations</b>	<b>Sheet 3 - Sheet 5</b>
<b>Verification of Recommended Rates</b>	<b>Sheet 6</b>
<b>Comparison of Current &amp; Cost of Service Rates</b>	<b>Sheet 7</b>
<b>Recommended Rates</b>	<b>Sheet 8</b>

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Allocation of Depreciation Staff Revenue Requirement				
		Percent	Redistributed General Plant	Depreciation by Function
Water Supply & Treatment	\$54,704	23.96%	\$6,631	\$61,335
Distribution Reservoirs	21,809	9.55%	2,643	24,452
Trans/Dist Mains	138,063	60.46%	16,732	154,795
Meters & Services	13,765	6.03%	1,669	15,434
General Plant	27,674			
<b>Total Depreciation</b>	\$256,015		\$27,675	\$256,016
Less General Plant	- \$27,674			
Depreciation	\$228,341			

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**ALLOCATION OF OPERATION AND MAINTENANCE EXPENSES**

**Staff Revenue Requirement**

	<b>Total</b>	<b>McKee Allocation Factor</b>	<b>McKee</b>	<b>Rockcastle Allocation Factor</b>	<b>Rock- castle</b>	<b>Beattyvil Allocation Factor</b>
Salaries						
Supply/Treatment	\$74,476	0.0523	\$3,895	0.0151	\$1,125	0.017
Transmission/Distribution	115,642	0.0026	301	0.0021	243	0.001
Customer Accounts	60,780	0.0000	0	0.0000	0	0.000
Administrative/General	35,339	0.0026	92	0.0021	74	0.001
Employee Pension/Benefits						
Supply/Treatment	14,683	0.0523	768	0.0151	222	0.017
Transmission/Distribution	22,796	0.0026	59	0.0021	48	0.001
Customer Accounts	11,979	0.0000	0	0.0000	0	0.000
Administrative/General	6,968	0.0026	18	0.0021	15	0.001
Insurance - Worker's Comp						
Supply/Treatment	1,891	0.0523	99	0.0151	29	0.017
Transmission/Distribution	2,937	0.0026	8	0.0021	6	0.001
Customer Accounts	1,543	0.0000	0	0.0000	0	0.000
Administrative/General	898	0.0026	2	0.0021	2	0.001
Taxes other than Income - Payroll						
Supply/Treatment	6,102	0.0523	319	0.0151	92	0.017
Transmission/Distribution	9,475	0.0026	25	0.0021	20	0.001
Customer Accounts	4,979	0.0000	0	0.0000	0	0.000
Administrative/General	2,897	0.0026	8	0.0021	6	0.001
Purchased Power						
Supply/Treatment	36,070	0.0523	1,886	0.0151	545	0.017
Transmission/Distribution	24,689	0.0026	64	0.0021	52	0.001
Chemicals	58,293	0.0523	3,049	0.0151	880	0.017
Materials & Supplies						
Transmission/Distribution	105,229	0.0026	274	0.0021	221	0.001
Customer Accounts	16,923	0.0000	0	0.0000	0	0.000
Transportation Expense	13,164	0.0026	34	0.0021	28	0.001
Insurance						
Vehicle	3,648	0.0026	9	0.0021	8	0.001

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General Liability	3,648	0.0026	9	0.0021	8	0.001
Other	2,158	0.0026	6	0.0021	5	0.001
Contractual Services						
Accounting	5,995	0.0026	16	0.0021	13	0.001
Other	33,725	0.0026	88	0.0021	71	0.001
Bad Debt Expense	12,480	0.0000	0	0.0000	0	0.000
Miscellaneous Expense						
Transmission/Distribution	10,956	0.0026	28	0.0021	23	0.001
Administrative/General	28,324	0.0026	74	0.0021	59	0.001
Taxes other than Income	\$3,818	0.0026	\$10	0.0021	\$8	0.001
<b>Total Operation/Maintenance</b>	<b>\$732,505</b>		<b>\$11,141</b>		<b>\$3,803</b>	
Depreciation						
Supply/Treatment	61,335	0.0523	3,208	0.0151	926	0.017
Dist Reservoirs & Standpipes	24,452	0.0026	64	0.0021	51	0.001
Transmission/Distribution	154,795	0.0026	402	0.0021	325	0.001
Meters & Services	15,433	0.0000	0	0.0000	0	0.000
Debt Service						
Supply/Treatment	57,797	0.0523	3,023	0.0151	873	0.017
Transmission/Distribution	261,716	0.0026	680	0.0021	550	0.001
Meters & Services	22,540	0.0000	0	0.0000	0	0.000
<b>Total - Utility Req Revenue</b>	<b>\$1,330,573</b>		<b>\$18,518</b>		<b>\$6,528</b>	
<b>Rate to Wholesale</b>			<b>\$1.51</b>		<b>\$1.85</b>	

Note: Rockcastle and Beattyville rate each increased \$0.01 to obtain revenue required.

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**ALLOCATION OF RETAIL OPERATION AND MAINTENANCE EXPENSES**  
**Staff Revenue Requirement**

	<b>Total</b>	<b>Commodity</b>	<b>Demand</b>	<b>Customer</b>
Salaries				
Supply/Treatment	\$68,190	\$68,190		
Transmission/Distribution	114,913		114,913	
Customer Accounts	60,780			60,780
Employee Pension/Benefits				
Supply/Treatment	13,443	13,443		
Transmission/Distribution	22,653		22,653	
Customer Accounts	11,979			11,979
Insurance - Worker's Comp				
Supply/Treatment	1,731	1,731		
Transmission/Distribution	2,918		2,918	
Customer Accounts	1,543			1,543
Taxes other than Income - Payroll				
Supply/Treatment	5,587	5,587		
Transmission/Distribution	9,415		9,415	
Customer Accounts	4,979			4,979
Purchased Power				
Supply/Treatment	33,026	33,026		
Transmission/Distribution	24,533		24,533	
Chemicals	53,373	53,373		
Materials & Supplies				
Transmission/Distribution	104,566		104,566	
Customer Accounts	16,923			16,923
Misc Expense-Trans/Distribution	10,887		10,887	
<b>Subtotal</b>	561,439	175,350	289,885	96,204
<b>Less Commodity</b>	(175,350)			
<b>Total</b>	\$386,089		\$289,885	\$96,204
<b>Percentages</b>	100.00%		75.08%	24.92%
<b>Administrative/General</b>				
Salaries	35,116		26,365	8,751
Employee Pension/Benefits	6,924		5,199	1,725
Insurance-Worker's Comp	893		670	223
Taxes other than Income -	2,878		2,161	717

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Payroll				
Transportation Expense	13,081		9,821	3,260
Insurance			0	0
Vehicle	3,625		2,722	903
General Liability	3,625		2,722	903
Other	2,144		1,610	534
Contractual Services			0	0
Accounting	5,956		4,472	1,484
Other	33,512		25,161	8,351
Bad Debt Expense	12,480		9,370	3,110
Miscellaneous Expense	28,146		21,132	7,014
Taxes other than Income	\$3,794		2,849	945
<b>Total Operation/Maintenance</b>	<b>\$713,613</b>	<b>175,350</b>	<b>404,139</b>	<b>134,124</b>
Depreciation				
Supply/Treatment	56,158	56,158		
Dist Reservoirs & Standpipes	24,298		24,298	
Transmission/Distribution	153,820		153,820	
Meters & Services	15,433			15,433
Debt Service				
Supply/Treatment	52,918	52,918		
Transmission/Distribution	260,067		260,067	
Meters & Services	22,540			22,540
<b>Total - Utility Request Revenue Required - Retail Rates</b>	<b>\$1,298,847</b>	<b>\$284,426</b>	<b>\$842,324</b>	<b>\$172,097</b>

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COST OF SERVICE STUDY

**ALLOCATION OF RETAIL COST OF SERVICE**  
**Staff Revenue Requirement**

	<b>Total</b>	<b>Commodity</b>	<b>Demand</b>	<b>Customer</b>
Operation & Maintenance	\$713,613	\$175,350	\$404,139	\$134,124
Depreciation	249,709	56,158	178,118	15,433
Debt Service	335,525	52,918	260,067	22,540
General Water Service Cost-Retail	1,298,847	284,426	842,324	172,097
Less: Interest Income	(46,757)			(46,757)
Less: Nonutility Income	(9,008)			(9,008)
Less: Miscellaneous Service	(7,895)			(7,895)
Less: Truck Sales	(2,160)			(2,160)
<b>Revenue Required from Retail Rates</b>	1,233,027	284,426	842,324	106,277
Wholesale Revenue	31,726			
<b>Total Revenue Required from Rates</b>	\$1,264,753			

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**CALCULATION OF RETAIL WATER RATES**  
**Staff Revenue Requirement**

	Total	First 2,000	Next 18,000	Next 30,000	Over 50,000
Actual Water Sales:					
Thousand Gallons	214,487,100	79,823,500	115,135,200	8,083,500	11,444,900
	100.00%	37.216%	53.679%	3.769%	5.336%
Weighted Sales for Demand:					
Thousand Gallons	374,118,739	159,647,000	192,275,784	10,751,055	11,444,900
Percent	100.00%	42.673%	51.394%	2.874%	3.059%
Allocation of Volumetric Costs:					
Commodity	\$284,426	\$105,852	\$152,677	\$10,720	\$15,177
Demand	842,324	359,445	432,904	24,208	25,767
Customer	106,277	106,277			
Total	\$1,233,027	\$571,574	\$585,581	\$34,928	\$40,944
Number of Bills		46,479			
<b>Proposed Rates</b>		<b>\$12.30</b>	<b>\$5.09</b>	<b>\$4.32</b>	<b>\$3.58</b>

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**VERIFICATION OF RATES**  
**Staff Revenue Requirement**

	<b>Bills</b>	<b>Gallons</b>	<b>Rate</b>	<b>Revenue</b>
<b>5/8" x 3/4" Meters</b>				
First 2,000 gallons	46113		12.28	566,267.64
Next 18,000 gallons		110,939,300	5.06	561,352.86
Next 30,000 gallons		4,221,300	4.30	18,151.59
Over 50,000 gallons		686,800	3.54	2,431.27
<b>1" Meters</b>				
First 5,000 gallons	156		27.46	4,283.76
Next 15,000 gallons		968,300	5.06	4,899.60
Next 30,000 gallons		586,900	4.30	2,523.67
Over 50,000 gallons		136,200	3.54	482.15
<b>1 1/2" Meters</b>				
First 10,000 gallons	84		52.76	4,431.84
Next 10,000 gallons		583,700	5.06	2,953.52
Next 30,000 gallons		1,343,700	4.30	5,777.91
Over 50,000 gallons		3,529,800	3.54	12,495.49
<b>2" Meters</b>				
First 20,000 gallons	95		103.36	9,819.20
Next 30,000 gallons		1,211,600	4.30	5,209.88
Over 50,000 gallons		3,395,400	3.54	12,019.72
<b>3" Meters</b>				
First 30,000 gallons	12		146.36	1,756.32
Next 20,000 gallons		240,000	4.30	1,032.00
Over 50,000 gallons		1,374,700	3.54	4,866.44
<b>4" Meters</b>				
First 40,000 gallons	19		189.36	3,597.84
Next 10,000 gallons		120,000	4.30	516.00
Over 50,000 gallons		2,322,000	3.54	8,219.88
	46479			
<b>Revenue from Retail Rates</b>				<b>\$1,233,088.58</b>
<b>Wholesale Revenue</b>				
City of McKee		12,289,100	\$1.51	18,556.54
Rockcastle Co Water Assoc		3,542,000	\$1.85	6,552.70
City of Beattyville		3,989,000	\$1.68	6,701.52

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<b>Total Revenue from Rates</b>				<b>1,264,899.34</b>
Interest Income				46,757.00
Nonutility Income				9,008.00
Miscellaneous Service				7,895.00
Truck Sales				2,160.00
<b>Total Revenue</b>				<b>\$1,330,719.34</b>

Note: First 2,000 reduced \$0.02; Next 18,000 reduced \$0.03; Next 30,000 reduced \$0.02 and

Next 50,000 reduced \$0.04 to obtain revenue requirement.

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**COMPARISON OF RETAIL RATES**

**Staff Revenue Requirement**

<b>Gallon Usage</b>	<b>Current Rates</b>	<b>Cost of Service Rates</b>	<b>Increase</b>	<b>Percentage</b>
1000	\$10.00	\$12.28	\$2.28	22.80%
2000	13.90	12.28	-\$1.62	-11.65%
3000	17.80	17.34	-\$0.46	-2.58%
4000	21.70	22.40	\$0.70	3.23%
<b>4200</b>	<b>22.48</b>	<b>23.41</b>	<b>\$0.93</b>	<b>4.14%</b>
5000	25.60	27.46	\$1.86	7.27%
6000	28.75	32.52	\$3.77	13.11%
7000	31.90	37.58	\$5.68	17.81%
8000	35.05	42.64	\$7.59	21.65%
9000	38.20	47.70	\$9.50	24.87%
10000	41.35	52.76	\$11.41	27.59%
12000	46.45	62.88	\$16.43	35.37%
20000	66.85	103.36	\$36.51	54.61%
25000	76.35	124.86	\$48.51	63.54%
30000	85.85	146.36	\$60.51	70.48%
35000	95.35	167.86	\$72.51	76.05%
50000	123.85	232.36	\$108.51	87.61%
75000	171.35	320.86	\$149.51	87.25%
100000	218.85	409.36	\$190.51	87.05%
200000	408.85	763.36	\$354.51	86.71%
300000	598.85	1,117.36	\$518.51	86.58%
500000	978.85	1,825.36	\$846.51	86.48%
1000000	1,928.85	3,595.36	\$1,666.51	86.40%

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**Jackson County Water Association  
Recommended Rates  
Staff Revenue Requirement**

**Monthly Water Rates**

<b><u>3/4 inch Meter</u></b>		
First 2,000 gallons	\$12.28	per month
Next 18,000 gallons	5.06	per 1,000 gallons
Next 30,000 gallons	4.30	per 1,000 gallons
Over 50,000 gallons	3.54	per 1,000 gallons
<b><u>1 inch meter</u></b>		
First 5,000 gallons	\$27.46	per month
Next 15,000 gallons	5.06	per 1,000 gallons
Next 30,000 gallons	4.30	per 1,000 gallons
Over 50,000 gallons	3.54	per 1,000 gallons
<b><u>1 1/2 inch meter</u></b>		
First 10,000 gallons	\$52.76	per month
Next 10,000 gallons	5.06	per 1,000 gallons
Next 30,000 gallons	4.30	per 1,000 gallons
Over 50,000 gallons	3.54	per 1,000 gallons
<b><u>2 inch meter</u></b>		
First 20,000 gallons	\$103.36	per month
Next 30,000 gallons	4.30	per 1,000 gallons
Over 50,000 gallons	3.54	per 1,000 gallons
<b><u>3 inch meter</u></b>		
First 30,000 gallons	\$146.36	per month
Next 20,000 gallons	4.30	per 1,000 gallons
Over 50,000 gallons	3.54	per 1,000 gallons
<b><u>4 inch meter</u></b>		
First 40,000 gallons	\$189.36	per month
Next 10,000 gallons	4.30	per 1,000 gallons
Over 50,000 gallons	3.54	per 1,000 gallons
<b><u>Truck Sales</u></b>		
Sand Gap	\$2.00	per 1,000 gallons
<b><u>Wholesale</u></b>		
City of McKee	\$1.51	per 1,000 gallons



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Rockcastle Co Water Association	\$1.85	per 1,000 gallons
City of Beatyville	\$1.68	per 1,000 gallons

# **Staff Recommended Tariff**