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June 21, 2011

RECEIVED

Jeff Derouen
Executive Director
Public Service Commission
211 Sower Blvd.
Frankfort, KY 40601

JUN 21 2011

**PUBLIC SERVICE
COMMISSION**

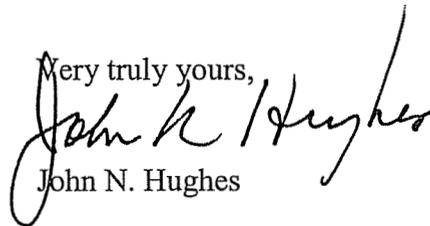
Re: Jackson County Water Association

Dear Mr. Derouen:

Attached is the proposed tariff for an increase in the water rate to Jackson County Water Association's wholesale customers. Also attached are: (1) the minutes of the Board meeting approving the increase and the mailing of the notice to the customers; (2) a copy of the notice of the increase; and (3) a copy of the cost of service study supporting the increase. The effective date of the increase is August 1, 2011.

The cost study calculates a rate of \$4.32 per 1000 gallons of water sold, however, the Association is only proposing to increase the rate to \$3.50 per 1000 gallons.

If there are any questions about this matter, please contact me.

Very truly yours,

John N. Hughes

Attorney for JCWA

Attachments

FOR Jackson County
Community, Town or City

P.S.C. KY. NO. _____

_____ SHEET NO. _____

CANCELLING P.S.C. KY. NO. _____

_____ SHEET NO. _____

Jackson County Water Association

(Name of Utility)

RATES AND CHARGES

Wholesale Water Rate:

Applicability: All wholesale waetr customers.

	CURRENT RATE	PROPOSED RATE
Eastern Rockcastle County Water Association:	\$2.66	\$3.50 per 1000 gallons
City of Beattyville	\$2.55	\$3.50 per 1000 gallons
City of McKee	\$2.39	\$3.50 per 1000 gallons
Estill County Water District No. 1	\$2.66	\$3.50 per 1000 gallons

Date of Issue: June 21, 2011

Date effective: August 1, 2011

Issued By: John Powell, Manager



REGULAR BOARD MEETING

JUNE 13, 2011

Board Members Present:

Howard Williams
Warren Lakes
Kenneth Moore
Dallas Cox
Ricky Joe Boggs
Emmitt Turner
George Purcell

Others Present:

John Powell
Eddie Brown
Vaughn Williams

The meeting was called to order by Howard Williams.

The minutes of the regular board meeting for May 2011 were read by John Powell.

Motion by Kenneth Moore second by Emmitt Turner to approve the minutes as read.

Vote unanimous.

Motion by Ricky Joe Boggs second by Dallas Cox to approve the bills for the month of May 2011. Vote unanimous

Motion by Emmitt Turner second by Warren Lakes to approve the expense report for the month of May 2011. Vote unanimous.

OLD BUSINESS

Howard told the Board that we had written a letter to Rural Development advising them what we had done to secure our bank accounts with repurchase agreements. Howard said that R.D. had replied verbally that they were satisfied with that arrangement.

At this time Eddie Brown gave an update on the tank and pump station project on Asbill Road. He told the Board that the project was almost ready to go to bid.

REGULAR BOARD MEETING

June 13, 2011

Page 2

Vaughn Williams gave a progress report on the transmission line and the pump station projects.

NEW BUSINESS

John told the Board that Eastern Rockcastle County Water Association had requested that the amount of water be increased from the current contract amount of 900,000 gallon per month to 1,200,000 gallons per month.

At this time there was a motion by Ricky Joe Boggs and second by Kenneth Moore to increase Eastern Rockcastle County Water Association's water purchase contract to 1,200,000 gallons per month. Vote unanimous.

At this time John showed the Board a notice that is to be sent to our wholesale customers notifying them of a wholesale rate increase. John said sending the notice is a Public Service requirement before we can increase their rates.

At this time there was a motion by Emmitt Turner and second by George Purcell to send the City of Beattyville, Estill County Water District No.1, the City of McKee, and Eastern Rockcastle County Water Association a notice of our intention to increase their wholesale rates. Vote unanimous.

Motion by Dallas Cox and second by George Purcell to adjourn the meeting. Vote unanimous.

Howard Williams – President

Date

Emmitt Turner – Secretary

Date

NOTICE

The Jackson County Water Association has filed a proposed rate schedule with the Public Service Commission which will increase the rate for wholesale water service provided as follows:

Customer	Current Rate	Proposed Rate	Percentage Increase
City of Beattyville	\$2.55	\$3.50	37.2%
Estill County Water District No.1	\$2.55	\$3.50	37.2%
City of McKee	\$2.39	\$3.50	43.5%
Eastern Rockcastle Water Association	\$2.66	\$3.50	31.6%

The proposed effective date is August 1, 2011.

Water passing through the meter on and after that date will be billed at \$3.50 per 1,000 gallons. At an average monthly usage of 500,000 gallons and 37.2% rate increase, this will amount to an approximate \$475 per month increase in water costs.

The rates contained in this notice are the rates proposed by Jackson County Water Association. However, the Public Service Commission may order rates to be charged that differ from the proposed rate contained in this notice that may be higher or lower than proposed.

Any corporation, association, or person with a substantial interest in the matter may by written request within thirty (30) days after publication or mailing of this notice of the proposed rate change request to intervene. Intervention may be granted beyond the thirty (30) day period for good cause shown. Any person who has been granted intervention by the Public Service Commission may obtain copies of the rate application and any other filings at the office of the Jackson County Water Association, US Highway 421 South, Tyner, KY 40486, John Powell, Manager, 606 287 7000, or by contacting the Public Service Commission at 211 Sower Boulevard in Frankfort, Kentucky; telephone 502-564-3940. Any person may examine the application or any filing by the Association at either of those locations.



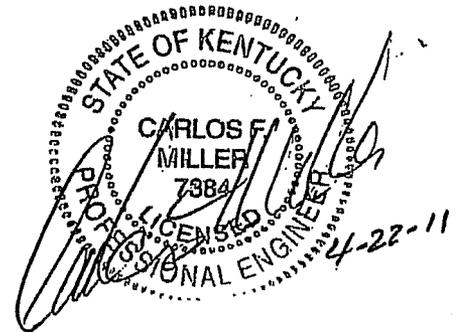
JACKSON COUNTY WATER ASSOCIATION
DETERMINATION OF WHOLESALE WATER RATE
FOR
SATELLITE UTILITIES

Prepared By:

KENVIRONS, INC.
452 VERSAILLES ROAD
FRANKFORT, KY 40601

PROJECT No. 2011062

APRIL, 2011



Kenvirons, Inc.

Civil & Environmental Engineering and Laboratory Services

RATE STUDY

The purpose of this rate study is to determine the wholesale water purchase rate from the Jackson County Water Association (JCWA) to the satellite utilities. JCWA serves all of Jackson County except the City of McKee. JCWA sells treated water, on a wholesale basis, to Eastern Rockcastle Water Association, Estill County and the cities of Beattyville and McKee. Sales to McKee supplement the City's water supply and sales to Beattyville serve a small cluster of county customers that the City could not serve through its existing system.

The wholesale rates are based on a cost of service methodology using average sales. Data is not available to incorporate a demand type analysis.

The determination of the rates is accomplished through the exhibits contained herein which are intended to be self explanatory.

1.0 COST OF SERVICE TO SATELLITE UTILITIES

A. GENERAL

Water rates to purchasing utilities should be developed in accordance with the following fundamental principle of rate making reported in the 1951 Ohio State Law Journal:

"The needed total annual revenue of a water or sewage works shall be contributed by users and nonusers (or users and properties) for whose use, need and benefit the facilities of the works are provided approximately in proportion to the cost of providing the use and the benefits of the works."

This study outlines the procedure for calculating the cost of service caused by the satellite utilities that purchase treated water from JCWA.

B. WATER RATE FORMULA FOR SATELLITE UTILITIES

The rate formula for water purchased by the satellite utilities is:

$$\frac{\text{Annual Cost of Water Service caused by the Utility in Dollars}}{\text{Annual Amount of Water Purchased by the Utility in 1,000 Gallons}}$$

The intent of the rate established by the formula is to recover all costs of service caused by the satellite utility, including the allocation of a proportionate share of operating expenses, debt service and depreciation on that part of the system that is used jointly by the satellite utility and other customers.

C. REQUIRED BASIC DATA

Calculation of the cost of water service requires basic financial data and data on water production and consumption. The following data are required:

1. Financial Data – Annual debt service requirements include existing bond issues and proposed 2011 bond issue maturities and interest. Operating expenses were obtained from the 2010 Annual Report. A detailed breakdown of depreciation by plant accounts for the test year was contained in the 2010 Annual Report.
2. District Water Purchased – The annual amount of water purchased by each satellite utility was obtained from the 2010 Annual Report. Water Purchases by McKee during 2010 were zero, therefore a 10 year average was used.
3. Water Produced – Water produced is the total annual quantity of filtered water produced by the JCWA treatment facility.

D. COST ALLOCATION FACTORS

1. Cost Allocation Factors – In order to determine the cost of service to each utility, the proportionate use of JCWA water facilities by the satellite utilities must be established and defined. Determining this proportion requires establishing the following kinds of proportional use factors:
 - a. Water Production Factor – The water production factor is used to allocate costs related to water production. This factor is based on two (2) parameters, namely system line loss and water plant use.

System line loss is allocated to the purchasing utilities in proportion to jointly used lines. The assumption is that leak potential is at pipe joints or that leaks occur around the circumference of the joints. Circumference is directly proportional to pipe diameter. The leak potential is also related to the number of pipe joints, which is directly proportional to the total length of pipeline in the system. The leak potential is therefore directly proportional to both length and diameter. The allocation method used is the inch (diameter) – mile (length) concept, which yields a weighted factor that is directly proportional to diameter and total length of jointly used system pipelines. It is understood that much line loss occurs through breaks or pipe splitting, but there is no practical method for the determination of this type of loss potential.

Treatment plant use is allocated in full because this percentage of treated water must be produced in excess of every gallon sold.

The derivation of the Water Production Factor is as follows:

$$WL = \frac{WP - WS}{WP} \quad \text{where } WL = \text{Line loss \& plant use (where applicable)}$$

WP = Water Produced
 WS = Water Sold

If WS = 1 gallon, then through algebraic transformation

$$WP = \frac{WS}{1 - WL}$$

WP is the water production multiplier yielding the amount of water that needs to be produced for each gallon sold.

If IM = Ratio of jointly used inch-miles to total inch-miles
 PU = Water Plant Use as a percentage
 SL = System line loss as a percentage

Then the general water production factor for the utility purchasing water from a utility that produces its water is as follows:

System Loss allocation = IM x SL

Plant Use allocation = PU

WL = IM x SL + PU

$$WP = \frac{1}{1 - (IM \times SL + PU)}$$

The Water Production Cost Allocation Factor (WPF) is determined as follows:

$$WPF = \frac{\text{Water Sold to Purch. Utility} \times WP \text{ for Purch. Utility}}{\text{Total Water Sold} \times WP \text{ for Selling Utility}}$$

- b. Use Factor – This factor reflects the purchaser's use of facilities other than water production facilities. It is computed as the ratio of water purchased using the facility to the total amount of water sold using the facility. This allocation is used relative to storage tanks, system booster pumping, etc.
- c. Transmission Factor – This factor allocates distribution system operating expenses in proportion to the amount of transmission system used by the purchasing utility. The factor has two (2) components. The first is the ratio of the length of transmission pipeline jointly used to the total length of pipeline in the system.

The second is the ratio of the water purchased by the satellite utility to total water purchased from the system. These two (2) components are multiplied together to compute the transmission factor. In a distribution system of relatively homogeneous pipe sizes, a ratio of pipeline lengths is sufficient. In a system with a significant variation of line sizes a more appropriate method is required namely, a ratio of inch-miles. The transmission factor is used to allocate broad categories of debt service, depreciation and operating expenses not included in a more refined breakdown. The inch-mile concept takes into consideration that virtually all such costs vary in direct proportion to size and length.

The allocation factors are developed and summarized in the various schedules included in this report.

2. Allocation of Debt Service (Fixed Charges) – Existing facilities constructed from the proceeds of the outstanding bond issues were studied and those which are jointly used by the JCWA and the satellite utilities were generally established.

The dollar amount of debt service to be allocated to each satellite utility was calculated as the sum of the debt service plus 10% debt service coverage for the portion in joint use multiplied by the appropriate use factor.

3. Allocation of Operation and Maintenance Expenses (Operating Revenue Deductions) – Allocation of operating expenses were accomplished in three (3) steps as follows:
 - a. Administrative and General Costs* are proportionately allocated to major expense categories:
 - 1) Power and pumping
 - 2) Water Supply and Treatment
 - 3) Transmission and distribution
 - 4) Customer accounts
 - b. Operating and maintenance costs for water production, pumping and transmission are proportionately allocated. Costs associated with customer accounting, metering and distribution pipeline, including labor, materials and supervision are assigned to JCWA only.
 - c. Expenses caused by jointly used facilities are multiplied by the appropriate allocation factor (water production factor, use factor, or

transmission factor) to determine the amounts allocated to each utility.

4. Data for Cost of Service – The data as adjusted and summarized is contained in the schedules contained in this report.
5. Total Cost of Service – The factors described in Paragraph D.1 are calculated in the various schedules contained herein.

Pipeline determined as "joint use" are shown in Exhibit 1. The differentiation for transmission mains in this study is 4 inches and larger. It was assumed that only transmission mains are jointly used to transmit the required quantities to the purchasing utilities. Smaller lines were used only where it was shown that distribution lines were the only connection. The lengths of pipelines were determined by scale measurements from the JCWA hydraulic model map.

The wholesale rate computations for the satellite utilities based on the 2010 financial data are shown in the exhibits contained herein.

EXHIBIT 1
JACKSON COUNTY WATER ASSOCIATION
SYSTEM PIPELINES

<u>Size</u>	<u>Total Pipelines</u>		<u>Satellite Utilities Jointly Used Pipelines</u>	
	<u>Length (miles)</u>	<u>Inch - Miles</u>	<u>Length (miles)</u>	<u>Inch-Miles</u>
12"	0.2	2.4	0.2	2.4
10"	6.9	69.0	4.5	45.0
8"	4.3	34.4	3.0	24.0
6"	82.7	496.2	30.6	183.6
4"	134.2	536.8	19.9	79.6
3"	91.8	275.4	---	---
	<u>319.4</u>	<u>1,414.2</u>	<u>58.2</u>	<u>334.6</u>

$$\text{Inch-Mile Ratio} = \frac{334.6}{1,414.2} = 0.2366$$

EXHIBIT 2
JACKSON COUNTY WATER ASSOCIATION
WATER STATISTICS

(Source: 2010 PSC Annual Report, page 58)

	<u>1,000 Gallons</u>	
1. <u>Total Water Produced</u>	344,553	
2. <u>Total Water Sold</u>		
	<u>Sold and Used</u>	<u>Percent (%)</u>
JCWA		
General Customers	214,065	
Fire Department	735	
Other	2,363	
Flushing	<u>21,330</u>	
TOTAL GENERAL CUSTOMER WATER	238,493	88.31
City of Beattyville	9,772	
City of McKee (10 yr. Average, Ex. 3)	2,213	
Estill County	490	
Eastern Rockcastle Water Assoc.	<u>12,359</u>	
Total Wholesale Purchases	24,834	
Flushing	<u>6,736</u>	
TOTAL SATELLITE UTILITIES WATER	31,570	11.69
TOTAL GALLONS SOLD & USED	270,063	
3. <u>Line Loss</u>		
Line Breaks	1,514	
Line Leaks	<u>48,068</u>	
	49,582	14.39 (1)
4. <u>Water Plant Use</u>	27,121	7.87 (2)
TOTAL WATER PRODUCED	<u>346,766</u> (3)	

(1) Item 3 ÷ Item 1

(2) Item 4 ÷ Item 1

(3) Includes McKee's ten (10) year average (Exhibit 3)

EXHIBIT 3

JACKSON COUNTY WATER ASSOCIATION

MCKEE WATER PURCHASES

<u>Year</u>	<u>1,000 Gallons</u>
2001	8,576
2002	0
2003	2,562
2004	0
2005	3,189
2006	228
2007	5,326
2008	499
2009	1,746
2010	0
Ten Year Total	22,126

Ten Year Annual Average = 2,213 Gallons

EXHIBIT 4

BREAKDOWN OF DEPRECIATION

TABLE 1

TOTAL ANNUAL DEPRECIATION

(Source: 2010 PSC Annual Report, pgs. 27 & 28)

<u>Plant Accounts</u>	<u>2010 Depreciation</u>	<u>Percent (%)</u>	<u>Redistributed General Plant</u>	<u>Depreciation by Function</u>
Water Supply & Treatment	209,055	42.20	25,961	235,016
District Reservoirs	23,547	4.75	2,922	26,469
T & D Mains	247,870	50.05	30,790	278,660
Meters & Services	14,877	3.00	1,845	16,722
General Plant	<u>61,518</u>	<u>---</u>	<u>---</u>	<u>---</u>
	556,867	100.00	61,518	556,867

TABLE 2

BREAKDOWN OF TRANSMISSION & DISTRIBUTION

<u>Plant Accounts</u>	<u>2010 Depreciation</u>	<u>Percent (%)</u>
Distribution Reservoirs	23,547	8.22
T & D Mains	247,870	86.58
Meters and Services	<u>14,877</u>	<u>5.20</u>
	286,294	100.00

EXHIBIT 5

DEBT SERVICE

<u>Bond Issue</u>	<u>Type of Plant</u>	<u>Annual Debt Service</u>	<u>Coverage</u>	<u>Total Debt Service Plus Coverage</u>
1972	WTP/System	\$18,962	\$1,896	\$20,858
1979	WTP/System	32,076	3,208	35,284
1986	System	8,894	889	9,783
1986	System	5,337	534	5,871
1991	WTP/System	72,012	7,201	79,213
1991	System	55,410	5,541	60,951
1996	System	113,915	11,392	125,307
2003	WTP	62,614	6,261	68,875
2003	WTP	37,996	3,796	41,752
2011	WTP	148,202	14,820	163,022
		\$555,378	\$55,538	\$610,916

BREAKDOWN OF DEBT SERVICE PLUS COVERAGE

<u>Bond Issue</u>	<u>Debt Service Plus Coverage</u>	<u>Raw Water Supply And Treatment</u>	<u>Transmission & Distribution</u>	
			<u>System</u>	<u>Meters & Services</u>
1972	Excluded – Paid Off in 2010	---	---	---
1979	\$35,284 ⁽¹⁾	\$8,454	\$25,435	\$1,395
1986	9,783 ⁽³⁾	---	9,274	509
1986	5,871 ⁽³⁾	---	5,566	305
1991	79,213 ⁽²⁾	38,062	39,011	2,140
1991	60,951 ⁽³⁾	---	57,782	3,169
1996	125,307 ⁽³⁾	---	118,791	6,516
2003	68,875	68,875	---	---
2003	41,752	41,752	---	---
2011	163,022 ⁽⁴⁾	163,022	---	---
	\$590,058	\$320,165	\$255,859	\$14,034

- (1) Breakdown according to Exhibit 4 percentages per July, 1999 Rate Study.
- (2) Actual percentage attributable to WTP (48.05%) and distribution system extensions (51.95%). Transmission & Distribution portion apportioned according to Table 2, Exhibit 4.
- (3) Apportioned according to Table 2, Exhibit 4.
- (4) Current project - \$3,598,000 Loan @ 2½% plus 10% coverage.

EXHIBIT 6

ADJUSTED OPERATING AND MAINTENANCE EXPENSES

<u>Function</u>	<u>2010 Annual Report</u>
Water Supply & Treatment	\$427,849 ⁽³⁾
Transmission & Distribution	387,477 ⁽³⁾
Customer Accounts	197,687
Administrative & General	<u>233,435</u>
	\$1,246,448

REALLOCATION OF ADMINISTRATIVE AND GENERAL EXPENSES

	<u>Adjusted Expenses</u>	<u>%</u>	<u>Reallocated A & G</u>	<u>Add Deductions</u>	<u>Total Expenses</u>
Water Supply & Treatment	\$232,716 ⁽¹⁾	30.26	\$70,637	\$195,133 ⁽¹⁾	\$498,486
Transmission & Distribution	338,632 ⁽²⁾	44.03	102,782	48,845 ⁽¹⁾	490,259
Customer Accounts	<u>197,687</u>	<u>25.71</u>	<u>60,016</u>	<u>—</u>	<u>257,703</u>
Administrative & General	\$769,035	100.00	\$233,435	\$243,978	\$1,246,448
	<u>233,435</u>				
	\$1,002,470				
Add ⁽¹⁾	195,133				
Add ⁽²⁾	<u>48,845</u>				
TOTAL EXPENSES	\$1,246,448				

⁽¹⁾ Deduct electrical power (\$118,307) + chemicals (\$76,826) = \$195,133
 \$422,849 - \$195,133 = \$232,716

⁽²⁾ Deduct electrical power (\$48,845)

⁽³⁾ The 2010 Annual Report reports the total Purchased Power (\$167,152 in Source of Supply when \$48,845 was attributable to Transmission and Distribution. The amount, \$48,845 was added to Transmission & Distribution and deducted from Source of Supply.

EXHIBIT 7

ALLOCATION FACTORS

- WPM = Water Production Multiplier
- WPF = Water Production Cost Allocation Factor
- WTF = Water Transmission Cost Allocation Factor

1. Jackson County Water Association

$$\text{Share of Line Loss \& Plant Use} = (1.0 \times .1439) + .0787 = .2226$$

$$\text{WPM} = \frac{1}{1 - .2226} = 1.2863$$

2. Wholesale Customers

$$\text{Share of Line Loss \& Plant Use} = (.2366 \times .1439) + .0787 = .1127$$

$$\text{WPM} = \frac{1}{1 - .1127} = 1.1270$$

$$\text{WPF} = \frac{1.1270}{1.2863} \times .1169^{(2)} = 0.1024$$

$$\text{WTF} = .2366 \times .1169 = .0277$$

(1) Inch-Mile Ratio (Ex. 1)

(2) Percentage of Sold Water (Ex. 2)

EXHIBIT 8

WHOLESALE RATE CALCULATION

	<u>Total cost</u>	<u>Allocation Factors</u>	<u>Allocation Cost</u>
1. Operating & Maintenance Expenses			
1.1 Supply & Treatment	\$498,486	.1024	\$51,045
1.2 Transmission & Distribution ⁽¹⁾	464,765	.0277	12,874
2. Debt Service Plus Coverage ⁽²⁾			
2.1 Supply & Treatment	\$320,165	.1024	\$32,785
2.2 Transmission & Distribution	255,859	.0277	7,087
3. Depreciation ⁽³⁾			
3.1 Supply & Treatment	\$235,016	.1024	\$24,066
3.2 Transmission & Distribution	305,129	.0277	<u>8,452</u>
			<u>\$136,309</u>

Wholesale Rate = \$136,309 ÷ 31,570 MG = \$4.32 per 1,000 Gallons ⁽⁴⁾

(1) Meters and Services deducted in accordance with Exhibit 4, Table 2.
 $\$490,259 - (\$490,259 \times .052) = \$464,765$

(2) Exhibit 5

(3) Exhibit 4

Transmission & Distribution exclusive of Meters and Services
 $(\$26,469 + \$278,660 = \$305,129)$.

(4) Rate does not include:

1. Depreciation and operating and maintenance expenses relative to current raw water pumping and transmission facilities project
2. Expense adjustments to the test year, i.e. increases in insurance coverage, salary increases, fuel costs, etc.