

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

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In the Matter of:

NOTICE BY MARROWBONE CREEK WATER )  
DISTRICT TO INCREASE ITS RATES )  
FOR WATER SERVICE; MOTION FOR )  
INTERIM RATE RELIEF; REQUEST FOR ) CASE NO. 8927  
INCLUSION IN SPECIAL DEMONSTRA- )  
TION PROJECT; AND REQUEST FOR )  
DEVIATION FROM COMMISSION RULES )

O R D E R

On October 27, 1983, Marrowbone Creek Water District ("Marrowbone") filed its notice with the Commission requesting a general adjustment of rates for water service and an interim rate adjustment pursuant to KRS 278.190(2). A hearing was held in the Commission's offices on December 8, 1983, for the purpose of determining Marrowbone's request for interim rate relief. On February 13, 1984, the Commission entered its Order allowing Marrowbone's request for interim rate relief of \$58,345. On April 6, 1984, a public hearing was held for the purpose of addressing Marrowbone's request for a general adjustment of its rates. The hearing was held at the Commission's offices in Frankfort, Kentucky. There were no intervenors in this proceeding. In this Order the Commission has granted Marrowbone's request for general rate relief in the amount of \$150,254 and has directed the implementation of a surcharge, as explained further in this Order.

### TEST PERIOD

Marrowbone has proposed and the Commission has accepted the 12 months ending December 31, 1982, as the test period in this proceeding.

### BACKGROUND

Construction of Marrowbone's system began in 1972 and the plant began operations in February of 1974. Due to a lack of income and continuing financial problems, Marrowbone closed down the water system in 1976. Later in that same year, the Commission approved an operating agreement whereby the Pike County Fiscal Court would operate Marrowbone until it could be put on a sound financial basis. Pike County terminated this agreement in 1982.

Soon after Pike County took over Marrowbone it was discovered that the system was not built to specifications, and that major reconstruction was necessary. A lawsuit was filed against the contractor, his bonding company and the design engineer. This lawsuit has not yet been resolved.

At the end of the test period in this proceeding, Marrowbone's unaccounted-for water was about 50 percent of the water it produced. Although this had been reduced to 37.5 percent by December 31, 1983, it was still well above the 15 percent generally allowed by the Commission for rate-making purposes. Marrowbone's engineer, Mr. Doug Griffin of Kenvirons, Inc., attributed a large part of this excessive percentage to persons

receiving water illegally and to unbilled water usage from approximately 150 meters which are inoperable.<sup>1</sup>

#### REVENUES AND EXPENSES

Marrowbone had an actual operating loss at the end of the test period of \$276,279. Marrowbone made several adjustments to its test period operations which lowered the operating loss to \$107,418. These adjustments exclude the \$32,610 in interest expense provided for in the debt service coverage allowed herein. The Commission is of the opinion that these adjustments are proper and has accepted them in total. The Commission has not made any further adjustments to Marrowbone's test period operations.

#### REVENUE REQUIREMENTS

Marrowbone has a debt service of \$35,697.<sup>2</sup> Marrowbone's adjusted test period operations result in a negative debt service coverage. The Commission is of the opinion that this is neither fair, just nor reasonable. The Commission is further of the opinion that a debt service coverage of 1.2X is fair, just and reasonable in that it will allow Marrowbone sufficient revenues to meet its operating expenses and provide for its debt service requirements. Therefore, the Commission will allow Marrowbone to increase its rates and charges by \$150,254<sup>3</sup> on an annual basis.

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<sup>1</sup> Transcript of Evidence, December 8, 1983, pages 44-59.

<sup>2</sup> \$3,087 principal and \$32,610 interest.

<sup>3</sup>  $1.2 \times \$35,697 = \$42,836 + \text{adjusted operating loss of } \$107,418 = \$150,254.$

### SURCHARGE

Due to the extraordinary problems resulting from construction deficiencies, inoperable meters and possible illegal users, the additional revenues granted herein will not provide sufficient funds to correct the situation presently faced by Marrowbone. The correction of these extraordinary problems requires the replacement of 150 inoperable meters, replacement of 100 10-year old plastic meters, the establishment of a leak detection and correction program, and the establishment of a meter testing program.

Marrowbone's engineer has testified that about 50 percent of the water produced by Marrowbone is accounted for as sales to customers and that Marrowbone has no accountability records for the remaining 50 percent. The engineer stated that most of Marrowbone's unaccounted-for water was caused by: water distribution system leakage, theft of water through illegal connections, inoperable water meters and inaccurate water meters. Further testimony described Marrowbone's need for correcting these problems and gave estimates of the costs for effective correction programs.

The reduction of unaccounted-for water to an acceptable level of 15 percent should be Marrowbone's highest operational priority. The short-term effect of this program will be an increase in the cost of water service for Marrowbone's customers. The long-term effect, however, should be a reduction of operating costs that will accrue to the customer's benefit in that operating

costs will decrease correspondingly with reductions in unaccounted-for water.

Marrowbone is of the opinion that water theft through illegal service connections represents a substantial amount of its unaccounted-for water and has estimated the cost of a program for the reduction of leakage and water theft to be \$20,000 per year. This program will require a 3-year period if reduction to a level of 15 percent is to be attained. The \$20,000 annual cost estimated by Marrowbone for this program appears to be reasonable.

The replacement of inoperable and inaccurate meters is essential to the success of Marrowbone's program for reduction of unaccounted-for water. The record shows that 150 meters are inoperable and, further, that about 100 meters are not accurately registering customer usage. These inaccurate meters have been in service since Marrowbone began operations. The Commission has determined that it will cost approximately \$80 per meter to replace the above 250 meters with new bronze meters for a total cost of \$20,000. Further, Marrowbone should establish a program for meter testing in accordance with the regulations of this Commission. The cost to test meters can range from \$18-20 per meter. Allowing a 5-year period to test 800 meters with some of the larger meters having to be tested on a yearly basis, the annual cost of this program was determined to be \$4,000, with a total program cost of \$20,000. The combined total cost of these programs is \$100,000.

The Commission is of the opinion that a surcharge designed to recover only the actual cost of the necessary corrective

programs is the appropriate means to provide funds for this purpose. In order to provide sufficient available funds for actual implementation of these programs within a reasonable time, the Commission has determined that the \$100,000 deemed necessary for completion of these programs should be collected at the rate of \$5.00 per month per customer until such time as a total of \$80,000 has been collected, and thereafter at a rate of \$1.65 per month per customer until an additional \$20,000 has been collected, after which the surcharge shall cease. The surcharge will take effect after Marrowbone gives its customers 20 days notice, such notice to be given within 10 days of the date of this Order.

The money collected via this surcharge should be placed in a special, interest-bearing escrow account, and quarterly reports (including copies of the bank account records) should be filed with the Commission showing the revenue collected, a description of what the money was spent for and a breakdown of these costs. This filing shall also include a report showing volume of water produced by Marrowbone, volume of water sold and the current level of unaccounted-for water.

#### RATE DESIGN

Marrowbone presently has a seven-step rate design for all customers, except Shelby Valley Water District, beginning with the first 2,000 gallons usage and ending with usage over 100,000 gallons. Prior to the Commission's Interim Order of February 13, 1984, Shelby Valley was billed on a two-step rate schedule with minimum usage of 1,000,000 gallons for which the minimum bill equated to the same amount per 1,000 gallons as the rate for the

second rate step. The Interim Order established a flat rate per 1,000 gallons.

Marrowbone proposed to change its rate design by combining and reducing the number of rate steps for its general customers and reducing the minimum usage for Shelby Valley to 100,000 gallons. It also proposed to establish minimum bills for customers served through meters larger than 5/8-inch x 3/4-inch; however, these minimum bills were based on the current rate structure rather than the proposed.

Customers with inoperable meters are now billed the minimum amount rather than on an estimated or average usage basis. In addition, Marrowbone feels many actual users are receiving service illegally through the lines of other customers and, thus, are not being billed.

The meter repair and replacement program discussed elsewhere in this Order will eliminate the revenue loss associated with the rendering of minimum bills to customers with inoperable meters; however, the Commission is of the opinion that the declining block rate designs currently in use and proposed by Marrowbone would provide an unfair advantage to persons either receiving or allowing others to receive water without separate metering in that more water would be billed at the lower rate blocks. Therefore, the Commission has determined that a monthly customer charge and a flat rate for all water used, based on fully allocated costs, would provide a more equitable recovery of the costs of service and simplify Marrowbone's billing procedure. Further, since the benefits of billing under the lower rate blocks

would be removed, the flat rate design should assist Marrowbone in locating users receiving service illegally through the lines of other customers.

Marrowbone also proposed to increase the service connection charge for 5/8-inch x 3/4-inch meters and to establish service connection charges for 1-inch through 6-inch meters. Cost data were provided for each meter size. The Commission is of the opinion that the cost data filed by Marrowbone adequately justify an increase in the service connection charge for 5/8-inch x 3/4-inch meters and also for the other meter sizes listed by Marrowbone. However, because of the fluctuation in costs for larger meters, the Commission is of the opinion that charges for meters larger than 1-inch should be the actual cost of materials and installation.

#### FINDINGS AND ORDERS

After considering the evidence of record and being advised, the Commission is of the opinion and finds that:

1. The change in rate design and the rates proposed by Marrowbone are unfair, unjust and unreasonable and should be denied.
2. The rates in Appendix A are the fair just and reasonable rates to be charged by Marrowbone.
3. Marrowbone should impose a surcharge as set out in Appendix A after providing 20 days notice in accordance with KRS 278.



4. The surcharge approved herein is subject to the restrictions and filing requirements set out in the body of this Order.

5. Marrowbone should establish a program for the detection and correction of distribution system leakage and water theft which will reduce the level of unaccounted-for water to 15 percent. The program should be completed within 3 years from the date of this Order.

6. Marrowbone should replace its 250 inoperable and inaccurate water meters. Marrowbone should complete this work within 1 year from the date of this Order.

7. Marrowbone should establish a program for meter testing to insure that no meter remains in service without testing for a period of time greater than specified by Commission regulations for meter testing. Initial testing of the approximately 800 meters mentioned herein should be completed within 5 years of the date of this Order.

8. The service connection charges proposed for 5/8-inch x 3/4-inch and 1-inch meters and fire hydrants are fair, just and reasonable and should be approved. Meters larger than 1-inch should be installed at cost.

9. Within 30 days of the date of this Order Marrowbone should file a copy of its revised rates and charges approved herein.

IT IS THEREFORE ORDERED that the change in rate design and the rates proposed by Marrowbone be and they hereby are denied.

IT IS FURTHER ORDERED that the rates and charges in Appendix A be and they hereby are approved for services rendered on and after the date of this Order.

IT IS FURTHER ORDERED that within 10 days of the date of this Order, Marrowbone shall notify its customers of the surcharge authorized herein as set out in Findings No. 3 and 4, and shall implement the surcharge 20 days from the date of the notice.

IT IS FURTHER ORDERED that Marrowbone shall establish a program for the detection and correction of distribution system leakage and water theft in accordance with Finding No. 5 herein.


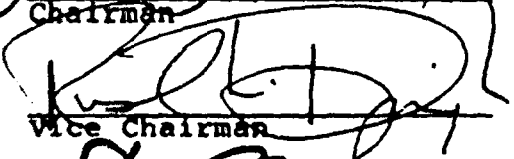

IT IS FURTHER ORDERED that Marrowbone shall replace all its water meters that are now inoperable or inaccurate within 1 year of the date of this Order.

IT IS FURTHER ORDERED that Marrowbone shall establish and maintain a program for meter testing in accordance with Commission regulations and shall complete initial testing in accordance with Finding No. 7 herein.

IT IS FURTHER ORDERED that within 30 days of the date of this Order, Marrowbone shall file its revised tariff sheets setting out the rates and charges approved herein.

Done at Frankfort, Kentucky, this 25th day of June, 1984.

PUBLIC SERVICE COMMISSION

  
Chairman  
  
Vice Chairman  
  
Commissioner

ATTEST:

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Secretary

APPENDIX A

APPENDIX TO AN ORDER OF THE PUBLIC SERVICE  
COMMISSION IN CASE NO. 8927 DATED 6/25/84

The following rates are prescribed for customers of Marrowbone Creek Water District. All other rates and charges not specifically mentioned herein shall remain the same as those in effect under authority of the Commission prior to the effective date of this Order.

General Customers\*

Customer Charge	\$6.00 per month
All Usage	2.10 per 1,000 gallons

Shelby Valley Water District\*

Customer Charge	\$6.00 per month
All Usage	1.40 per 1,000 gallons

\*A surcharge of \$5.00 per month shall be added to each customer's bill until such time as \$80,000 has been collected and \$1.65 per month until an additional \$20,000 has been collected, after which the surcharge shall cease.

Connection Fees

5/8-inch x 3/4-inch meter	\$ 312
1-inch meter	400
Meters larger than 1-inch	Actual Cost
Fire Hydrants	1,380