

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

\* \* \* \* \*

In the Matter of:

THE NOTICE BY LAKE VILLAGE WATER )  
ASSOCIATION, INC. OF A TARIFF )  
AMENDMENT ADJUSTING RATES; )  
NOTICE OF TARIFF AMENDMENT )  
IMPOSING A TEMPORARY SPECIAL RULE )  
TO LIMIT THE AVAILABILITY OF )  
WATER SERVICE CONNECTIONS; )  
APPLICATION FOR A CERTIFICATE OF )  
PUBLIC CONVENIENCE AND NECESSITY; )  
APPLICATION FOR AUTHORITY TO )  
ISSUE A PROMISSORY NOTE AND )  
MORTGAGE TO THE FARMERS HOME )  
ADMINISTRATION; AND APPLICATION )  
AND REQUEST THAT IT BE INCLUDED )  
IN THE DEMONSTRATION PROJECT TO )  
DEFINE EXCESSIVE WATER LOSS )

CASE NO. 9290

O R D E R

The Lake Village Water Association, Inc., ("Lake Village") filed its application on February 28, 1985, for approval of adjustments to its water service rates, authorization to construct a \$520,000 waterworks improvement project and approval of its plan of financing for this project. The entire project will be financed by a Farmers Home Administration ("FmHA") loan of \$520,000 scheduled for repayment over a period of 40 years at an interest rate of 9.75 percent per annum. The FmHA loan will be secured by a real estate mortgage and a pledge of water revenue.

The proposed construction will improve hydraulic flow and service reliability to customers north of Danville, Kentucky. Drawings and specifications for the proposed improvements as

prepared by Parrott, Ely & Hurt, of Lexington, Kentucky, ("Engineer") have been approved by the Division of Water of the Natural Resources and Environmental Protection Cabinet. Construction bids were received on November 19, 1985.

A hearing on Lake Village's proposed construction, financing and rates was held in the offices of the Public Service Commission, Frankfort, Kentucky, on June 13, 1985. There were no intervenors present and no protests were entered.

Lake Village requested rates which would produce an annual increase of \$73,524. In this Order, the Commission has allowed rates which will produce an annual increase of \$56,881 plus an additional \$12,285 annually for the next 3 years as a part of the Commission's Water Loss Demonstration Project.

#### COMMENTARY

Lake Village is a non-profit water utility engaged in the distribution and sale of water to approximately 1,134 customers in Boyle and Mercer counties, Kentucky.

#### TEST PERIOD

Lake Village proposed and the Commission has accepted the 12-month period ending December 31, 1984, as the test period in this matter.

#### REVENUES AND EXPENSES

Lake Village had a net operating loss of \$40,626 for the test period and proposed to adjust purchased water expense and depreciation expense for an adjusted net operating income of \$60,698. The Commission upon reviewing Lake Village's pro forma

revenues and expenses has made the following adjustments in order to reflect current operating conditions:

Operating Revenue

Lake Village received operating revenue from metered water sales of \$216,793 for the test period. Lake Village was permitted to increase the rates it could charge in Case No. 9416.<sup>1</sup> Therefore, the Commission has normalized test period operating revenue from metered water sales by \$32,665 to reflect the rates approved in Case No. 9416. This results in an adjusted test period revenue from metered water sales of \$249,458.

Purchased Water

Lake Village proposed a pro forma water expense of \$84,209 to reflect the addition of a second supplier, the City of Harrodsburg, Kentucky. Lake Village incurred a rate increase from its existing supplier, the City of Danville, effective August 1, 1985. Thus, the Commission has determined an adjusted test period level of purchased water expense in the amount of \$106,207 using Lake Village's Exhibit 6 and the higher rates as a basis for this adjustment.

Depreciation Expense

Lake Village proposed to remove from its pro forma income statement test period depreciation expense in the amount of \$31,609. It has been the practice of the Commission in previous decisions to compute depreciation expense for rate-making purposes

---

<sup>1</sup> Purchased Water Adjustment of Lake Village Water Association, entered November 4, 1985.

on the basis of original cost of the plant in service less contributions in aid of construction because a utility should not be allowed recovery of that portion of the plant which has been provided at zero cost.

Lake Village's actual test period depreciation expense in the amount of \$31,609 reflects depreciation on the total existing plant using a composite rate of approximately 3.11 percent.<sup>2</sup> The balance sheet filed by Lake Village shows contributions in aid of construction at the end of the test period to be \$288,385 which is approximately 28.3 percent of the total cost of the existing utility plant in service. Lake Village intends to replace a portion of its existing water lines during the proposed construction in an attempt to decrease its excessive water loss. At the hearing Mr. Harold D. Lanham, C.P.A. and accountant for Lake Village, was requested to supply the estimated cost of the utility plant which Lake Village planned to retire.<sup>3</sup> This information was provided in Lake Village's response dated July 11, 1985. In determining the pro forma depreciation expense, the Commission has taken the following in consideration: the depreciation rate applied by Lake Village on its existing system, excluded the depreciation associated with contributed property, excluded the depreciation associated with utility plant that Lake Village planned to retire and included depreciation from the proposed construction project. These adjustments result in an

---

<sup>2</sup>  $\$31,609 \div \$1,015,239 = 3.11\%$ .

<sup>3</sup> Transcript of Evidence ("T.E.") dated June 13, 1985, page 29.

allowable depreciation expense for rate-making purposes of \$37,272.<sup>4</sup>

Maintenance Expense

Lake Village incurred the following test period maintenance expenses: maintenance of service expense in the amount of \$5,897 and maintenance of meters expense in the amount of \$8,865. At the hearing Mr. Lanham stated that it was his opinion that the cost of both the installation and cost of new meters should be capitalized over the estimated useful life of the meters.<sup>5</sup> The Commission, concurs with Mr. Lanham since the new meters would benefit not only the current period, but future periods as well. Upon reviewing the analysis of these two accounts provided in the information supplied after the hearing, the Commission has determined that the following expenses and estimated lives are associated with the installation of the new meters:

<u>Item</u>	<u>Estimated Useful Life</u>	<u>Amount</u>
Maintenance of Service Expense	5 yr.	\$5,897
Maintenance of Meters Expense		
New Taps	20 yr.	\$4,336
Replacement	5 yr.	\$ 680

---

<sup>4</sup>	Total Existing Plant	\$1,018,239
	Less: Contributions in Aid of Construction	288,385
	Non-Contributed Existing Plant	<u>\$ 729,854</u>
	Add: Proposed Construction Project	520,000
	Less: Plant to be Retired	51,410
	Non-Contributed Proposed and Existing Plant	<u>\$1,198,444</u>
	Times: Composite Rate	<u>3.11%</u>
	Depreciation on Proposed and Existing Plant	
	Allowed for Rate-Making Purposes	<u><u>\$ 37,272</u></u>

<sup>5</sup> T.E., page 29.

Therefore, the Commission using the above analysis has reduced maintenance of service expense by \$5,897, reduced maintenance of meters expense by \$5,016 and increased depreciation by \$1,532 for a net reduction in operating expenses of \$9,381.

Therefore, Lake Village's test period operations have been adjusted as follows:

	Lake Village's Proposed Adjusted	Commission Adjustments	Commission Adjusted
Operating Revenue	\$219,930*	\$32,665	\$252,595
Operating Expenses	<u>159,232</u>	<u>49,889</u>	<u>209,121</u>
Operating Income	<u>\$ 60,698</u>	<u>\$ &lt;17,224 &gt;</u>	<u>\$ 43,474</u>

#### REVENUE REQUIREMENTS

Lake Village's annual debt service based on debt outstanding during the test period and debt proposed in this proceeding is \$88,391.<sup>6</sup> Lake Village's adjusted net operating income of \$43,474 plus interest income from operations of \$5,714 provides a debt service coverage ("DSC") of 0.56X. The Commission is of the opinion that this coverage is unfair, unjust and unreasonable. To achieve a DSC of 1.2X, which the Commission is of the opinion is the fair, just and reasonable coverage necessary for Lake Village to pay its operating expenses and to meet the requirements of its lenders, Lake Village would require a net

6

	Amount	Amortization Factor	Debt Service
Existing Bond	\$610,000	0.05929	\$36,167
Proposed Bond	\$520,000	0.10043	52,224
Total Debt Service			<u>\$88,391</u>

\* Includes Miscellaneous Service Revenues.

operating income of \$106,069. Accordingly, the Commission has determined that additional revenue of \$56,881 is necessary to provide the 1.2X DSC which will insure the financial stability of Lake Village.

Water Loss Demonstration Project

Lake Village requested that the Commission allow it to participate in the Commission's Water Loss Demonstration Project ("Demonstration") but did not exactly indicate what it intended to recover from inclusion in the Demonstration. At the hearing Lake Village's attorney, Mr. William L. Stevens, testified that the proposed construction project would only reduce Lake Village's water loss to approximately 24 percent and that no identifiable repairs were known at this time which could reduce the water loss any further.<sup>7</sup> Mr. Stevens went on to state that Lake Village was requesting the difference between the 15 percent water loss which is the maximum allowed by this Commission for rate-making purposes, and the projected 24 percent water loss.<sup>8</sup>

Considering that Lake Village is attempting to reduce its water loss from approximately 55 percent to 24 percent, the Commission is of the opinion that Lake Village is entitled to recapture the difference between the 15 percent water loss and 24 percent water loss over a period not to exceed 3 years. For the 9 percent water loss not recognized for rate-making purposes in the calculation of allowable test period water purchases in an earlier

---

<sup>7</sup> T.E., page 35.

<sup>8</sup> Ibid.

section of this Order, Lake Village is entitled to an additional \$12,285 annually under the conditions of the Demonstration.

Thus, the Commission has increased Lake Village's revenue requirement by \$12,285 annually to be applied as a surcharge for a period not to exceed 3 years. Lake Village, under the conditions of the Demonstration must account for all monies received and expended on a quarterly basis to reduce its excessive water loss. As soon as it becomes possible, Lake Village should identify the sources of the excessive water loss, estimate or prioritize the amount of water loss from each source, and submit to the Commission a detailed plan including a time schedule and targeted results. Furthermore, as part of the Demonstration, Lake Village is subject to rate design restrictions discussed elsewhere in this Order.

#### RATE DESIGN

Lake Village proposed a rate of \$2.10 per 1,000 gallons for all water sold between 5,000 and 10,000 gallons. A rate of \$2.65 per 1,000 gallons was proposed for all water sold in excess of 10,000 gallons. Lake Village stated that it had proposed an inverted rate design in order to provide additional revenue and to discourage the use of water so as not to exceed the limit set by the City of Danville, its wholesale supplier.

The Commission is of the opinion that once Lake Village connects to the City of Harrodsburg and completes its proposed construction which will result in a substantial decrease in its line loss it will not exceed the limits set by the City of Danville. The rates as set out in Appendix A are sufficient to



meet Lake Village's revenue requirement and an inverted rate design is not necessary to provide additional revenue at this time. Therefore, the proposal for an inverted rate design should be denied.

#### NEW CONNECTIONS

Lake Village proposed to impose a temporary special rule to limit the availability of water service connections until such time as its water loss percentage level has been reduced to the level acceptable to allow 100 percent pass through of the cost of purchasing water.

Lake Village has estimated that its water loss will decrease considerably once its excessive leaks are repaired and approximately 500 meters are replaced. The Commission is of the opinion that the proposed tariff to impose a temporary special rule to limit the availability of new service connections should be denied as filed. However, the Commission will grant a temporary rule to limit the availability of new water service connections, to be effective on and after the date of this Order. The rule should remain in effect until the proposed construction is completed or for a period not to exceed 6 months from the effective date of this Order. At such time Lake Village should file a new tariff deleting this special rule from its tariff in effect at that time.

#### FINDINGS AND ORDERS

The Commission, after consideration of the application and evidence of record and being advised, is of the opinion and finds that:

1. Public convenience and necessity require that the construction proposed in the application and record be performed and that a certificate of public convenience and necessity be granted.

2. The approved construction includes about 5.4 miles of water mains, a booster pumping station, a pressure reducing station, and miscellaneous appurtenances thereto. The low bids received for the proposed work totaled \$346,470, which will require about \$520,000 after allowances are made for fees, contingencies, and other indirect costs.

3. Lake Village should obtain approval from the Commission prior to performing any additional construction not expressly certificated by this Order.

4. Any deviations from the approved construction which could adversely affect service to any customer should be subject to prior approval of this Commission.

5. The proposed borrowing of \$520,000 is for lawful objects within the corporate purposes of Lake Village, is necessary and appropriate for and consistent with the proper performance of services to the public by Lake Village, and will not impair its ability to perform these services.

6. The financing secured by Lake Village for this project will be needed to pay for the work herein approved. Lake Village's financing plan should, therefore, be approved.

7. Lake Village should file with the Commission duly verified documentation which shows the total costs of construction

including all capitalized costs (engineering, legal, administrative, etc.) within 60 days of the date that construction is substantially completed. Said construction costs should be classified into appropriate plant accounts in accordance with the Uniform System of Accounts for Water Utilities prescribed by this Commission.

8. Lake Village's contract with its Engineer should require the provision of construction inspection under the general supervision of a professional engineer with a Kentucky registration in civil or mechanical engineering. The supervision and inspection should insure that the construction work is done in accordance with the contract drawings and specifications and in conformance with the best practices of the construction trades involved in the project.

9. Lake Village should require the Engineer to furnish a copy of the record drawings and a signed statement that the construction has been satisfactorily completed in accordance with the contract drawings and specifications within 60 days of the date of substantial completion of this construction.

10. Lake Village should file with the Commission a copy of all contractual agreements for the provision of services or the purchase of services which are subject to the approval of this Commission.

11. Lake Village should account for all monies received and expended under the terms of the Demonstration on a quarterly basis, and should submit a report of said accounting within 45 days of the close of a calendar quarter.

12. Lake Village should identify the sources of the excessive unaccounted-for water, estimate or prioritize the amount of water loss from each source, and submit to the Commission a detailed plan to reduce its excessive unaccounted-for water within 30 days from the date of this Order.

13. The duration of Lake Village's participation in the Water Loss Demonstration Project should be for a period not to exceed 3 years.

14. The rates proposed by Lake Village will produce revenues in excess of the revenues found reasonable herein and should be denied upon application of KRS 278.030.

15. The rates and charges in Appendix A are the fair, just and reasonable rates to be charged by Lake Village in that they should produce gross revenues from Lake Village's operations of \$327,475, including \$12,285 from the surcharge.

16. Lake Village's proposal for an inverted rate design should be denied.

17. Lake Village's proposed temporary special rule to limit the availability of new service connections should be approved as modified herein.

IT IS THEREFORE ORDERED THAT:

1. Lake Village be and it hereby is granted a certificate of public convenience and necessity to proceed with the waterworks improvements projects set forth in the drawings and specifications of record hereby approved.

2. Lake Village shall comply with all matters set out in Findings 3 through 10 as if the same were individually so ordered.

3. Lake Village shall publish a legal notice stating that the Commission has found its unaccounted-for water loss exceeds the amount allowed for rate-making purposes and has ordered the utility to begin immediate steps to reduce it and it shall also state that the surcharge will be added to each customer's bill for a period of 3 years or until the situation is improved.

4. Lake Village shall account for all monies received and expended under the terms of the Water Loss Demonstration Project on a quarterly basis and shall submit a report of said accounting within 45 days of the close of each calendar quarter.

5. Lake Village shall identify the sources of the excessive unaccounted-for water, estimate or prioritize the amount of water loss from each source, and submit to the Commission a detailed plan to reduce its excessive unaccounted-for water to include a time schedule and target results within 30 days from the date of this Order.

6. The duration of Lake Village's participation in the Water Loss Demonstration Project shall be for a period not to exceed 3 years.

7. The rates proposed by Lake Village be and they hereby are denied.

8. The rates and charges in Appendix A including the 3-year surcharge be and they hereby are approved as the fair, just and reasonable rates and charges to be charged by Lake Village for service rendered on and after the date of this Order.

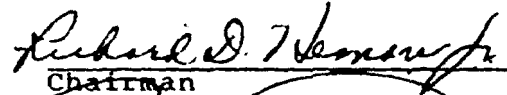
9. The surcharge approved herein shall be listed as a separate line item on each customer's bill.

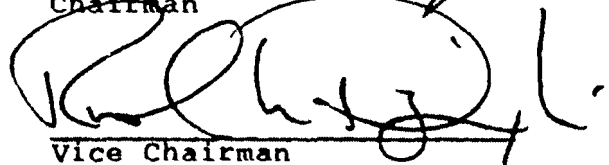
10. Lake Village's proposal for an inverted rate design is be denied.

11. Lake Village's proposed temporary special rule to limit the availability of new service connections is approved as modified herein at page 9.

Nothing contained herein shall be deemed a warranty of the Commonwealth of Kentucky, or any agency thereof, of the financing herein authorized.

Done at Frankfort, Kentucky, this 30th day of December, 1985.  
PUBLIC SERVICE COMMISSION

  
Chairman

  
Vice Chairman

  
Commissioner

ATTEST:

\_\_\_\_\_  
Secretary

APPENDIX A

APPENDIX TO AN ORDER OF THE KENTUCKY PUBLIC SERVICE  
COMMISSION IN CASE NO. 9290 DATED DECEMBER 30, 1985

The following rates and charges are prescribed for the customers in the area served by Lake Village Water Association. All other rates and charges not specifically mentioned herein shall remain the same as those in effect under authority of this Commission prior to the effective date of this Order.

RATES: Monthly

First 1,000 gallons	\$9.90 Minimum Bill
Next 2,000 gallons	3.50 per 1,000 gallons
Next 2,000 gallons	3.20 per 1,000 gallons
Next 5,000 gallons	2.90 per 1,000 gallons
Over 10,000 gallons	2.60 per 1,000 gallons

Water Loss Demonstration Project \$0.94 per bill\*

\* The water loss demonstration project surcharge shall remain in effect for a period not to exceed 3 years from the date of this Order.