

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

THE JOINT APPLICATION OF WARREN	)	
COUNTY WATER DISTRICT, SIMPSON	)	
COUNTY WATER DISTRICT, GRAYSON	)	CASE NO. 97-434
COUNTY WATER DISTRICT AND	)	
BUTLER COUNTY WATER SYSTEM,	)	
INC. FOR A DEVIATION FROM 807 KAR	)	
5:066 SECTION 16(1)	)	

O R D E R

On December 3 and 4, 1997, the Commission conducted a re-inspection of the water systems of Warren County Water District, Simpson County Water District, Grayson County Water District and Butler County Water System, Inc. A copy of this Meter Testing Investigation Report is attached hereto as Appendix A. In light of this inspection and being otherwise sufficiently advised, the Commission HEREBY ORDERS that:

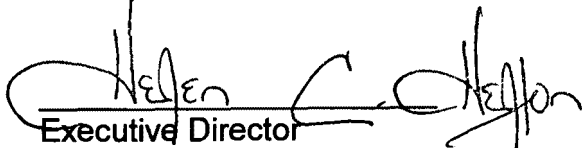
1. The December 3-4, 1997 Meter Testing Investigation Report shall be made a part of the record in this proceeding.
2. By no later than March 2, 1998, all parties shall file with the Commission any comments they may have to this report.
3. An informal conference shall be held on March 12, 1998 at 1:30 p.m., Eastern Standard Time, in Conference Room 1 of the Commission's offices at 730 Schenkel Lane, Frankfort, Kentucky.
4. A formal hearing shall be held on March 27, 1998 at 10:00 a.m., Eastern Standard Time, in Hearing Room 1 of the Commission's offices at 730 Schenkel Lane, Frankfort, Kentucky.

Done at Frankfort, Kentucky, this 28th day of January, 1998.

PUBLIC SERVICE COMMISSION

  
\_\_\_\_\_  
For the Commission

ATTEST:

  
\_\_\_\_\_  
Executive Director

AN APPENDIX TO AN ORDER OF THE KENTUCKY PUBLIC  
SERVICE COMMISSION IN CASE NO. 97-434 DATED 1/28/98

Commonwealth of Kentucky  
Public Service Commission

**METER TESTING INVESTIGATION REPORT**

Public Service Commission

vs

Warren County Water District, Simpson County Water District,  
Grayson County Water District and Butler County Water System, Inc.

On December 3 and 4, 1997, a re-inspection was made of the meter testing procedures in Warren County Water District, Simpson County Water District, Grayson County Water District and Butler County Water System, Inc. ("water systems") on the basis of an inspection made by Commission staff on July 31, 1997. The subject re-inspection was conducted by K. Michael Newton, Michael Nantz, Denis Hildenbrand, and Nicky Moore of the Commission staff with information provided by Mike Barnett of Warren County Water District. Warren County Water District operates and maintains by contract the water distribution systems of Warren, Simpson, Grayson, and the treatment plant/distribution system of Butler County. These water system's offices are located at the Warren County RECC building in Bowling Green, Kentucky.

**Investigation**

This investigation included the general inspection of all water meter records of the water systems which have been in service for ten (10) years or over without a meter test, an interview with utility personnel, and the removal of a sample group of water meters from all four water distribution systems for "as found" sample testing at the Commission's Meter Standards Laboratory.

On July 31, 1997, Nicky Moore conducted a periodic inspection of the water system's utility operations and its office procedures for compliance with the Kentucky Revised Statutes (KRS 278) and the Public Service Commission Regulations (807 KAR). This inspection noted all the water systems having two deficiencies, one of these deficiencies was as follows:

1. The utility(s) is not testing its meters periodically pursuant to 807 KAR 5:066 Sec. 16 (1).

The Commission staff had previously performed periodic inspections of these water systems on September 30, 1996 and December 14, 1995. During both of these inspections the Commission staff noted these water systems failure to correct the deficiency of testing water meters periodically pursuant to 807 KAR 5:066 Sec. 16(1). In addition, to the periodic inspections conducted by the Commission staff of the Water and Sewer Branch in 1995, 1996, and 1997, the Commission staff of the Meter Standards Laboratory conducted inspections of Warren County and Butler County Water System's meter test facilities on July 19-20, 1994 and July 21-22, 1994, respectively.

The Warren County and Butler County water systems are the only two water systems which have water meter test facilities. The Meter Standards Laboratory's inspection reports dated October 27, 1994, noted Warren County and Butler County's failure to test meters periodically pursuant to the Commission's regulations.

### History

On April 28, 1989, the water systems requested that the Commission allow them to deviate from the mandates of 807 KAR 5:066, Section 17(1).<sup>1</sup> That section required a water utility to remove all 5/8-inch water meters in its distribution system at least every five years and have them tested for accuracy. The water systems sought to have the testing period increased to every 15 years, arguing that water meter durability and accuracy had improved since the adoption of the regulation, and further contended that a cost-benefit analysis supported the deviation. The request for the deviation was denied on May 17, 1989. A petition for rehearing was filed, wherein the water systems sought a testing period of 13 years. A hearing on the matter was conducted on November 10, 1989, and the matter subsequently was held in abeyance pending a review of the regulation. Upon review, the Commission entered an order on January 31, 1992, which allowed the water systems to deviate from the five-year requirement and to conduct testing every ten years. The water systems then appealed this matter to the Franklin Circuit Court, which affirmed the Commission's order. The water systems continued the appeals procedure through the Commonwealth of Kentucky's Court of Appeals where the opinion and order of the Franklin Circuit Court were both affirmed. This decision by the Court of Appeals was rendered on July 28, 1995 at 10:00 am. The water systems continued to seek appeal of this ruling and filed a motion before the Supreme Court of Kentucky. On January 11, 1996, Chief Justice

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<sup>1</sup> The Commission's regulations of 807 KAR 5:066 were revised in 1992. This revision changed Section 17 (1) to Section 16 (1). The interval between tests for a 5/8-inch to 1-inch meter was changed to ten (10) years.

of the Supreme Court, Robert F. Stephens, entered an Order that denied the water systems discretionary review of this matter.

The water systems have been inspected by the Commission staff on four (4) separate occasions since the Court of Appeals' decision was rendered. Each of these inspections and subsequent inspection reports revealed that the water systems were not testing the water meters pursuant to the Commission's regulations. This investigation finds that the facts in Case No. 89-110 remain unchanged.

On October 17, 1997, the water systems filed an application with the Commission to deviate from 807 KAR 5:066 Section 16(1). This application was established as Case No. 97-434.

#### **Sample Testing**

On December 3 and 4, 1997, the Commission staff obtained a sample grouping of 23 water meters from the water systems. These water meters were listed on the water systems meter printout list as having been in service for ten (10) years or longer without a periodic test. The water meters were retrieved in the following manner; five (5) water meters from Butler Water System, Inc., Simpson County Water District, and Grayson County Water District, and eight (8) water meters were obtained from Warren County Water District. The water meters were taken to the Commission's Meter Standards Laboratory in Lexington and tested during the week of December 8 through 12, 1997. These water meters were tested in accordance with the Commission's regulations (807 KAR 5:066 Section 15). An "as found" meter test was performed on each of the (23) meters, the

results of these tests showed a failure rate of 20 of the water meters that were in-service, which is a failure rate of 87% of the meters tested. A further analysis of each test showed the low flow (1/4 g.p.m.) test exhibited a 74% failure rate, the intermediate flow (2 g.p.m.) test exhibited a 39% failure rate, and the high flow (15 g.p.m.) test exhibited a 30% failure rate. A copy of the results of these tests is attached as Exhibit A. A water meter failing one or more of the three flow rate tests is not allowed to go back into a customer's service in accordance with the Commission's regulations.

The number of water meters in service which had not been tested within the last ten (10) years varied with each of the water systems. Simpson County has a total of 2,555 1-inch to 5/8-inch water meters in service with 173 of these water meters not being tested within the ten (10) year time period according to the water system's meter records. Grayson County has a total of 4,154 1-inch to 5/8-inch water meters in service with 283 of these water meters not being tested within the ten (10) year period. Warren County has a total of 16,798 1-inch to 5/8-inch water meters in service with 2,376 of these water meters not being tested within the ten (10) year period. Butler County has a total of 3,713 1-inch to 5/8-inch water meters in service with 497 of these water meters not being tested within the ten (10) year period<sup>2</sup>. Therefore, the total number of 1-inch to 5/8-inch water meters in service at these water systems is 27,220. The number of water meters 1-inch to 5/8-inch

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<sup>2</sup> Rochester Water District was recently merged with Butler Water System, Inc.. The water meter test information from Rochester was not included in this information.

which have not had a test within the last ten (10) years is 3,329. The percentage of water meters not in compliance with Commission regulations and still in service is 12.23%.

### Conclusions

In accordance with 807 KAR 5:066, Section 16, each utility shall test periodically all water meters so that no meter will remain in service without test for a period longer than that specified in the Commission's regulations. This requires any 5/8-inch to 1-inch water meter to be periodically tested every ten (10) years. According to the water systems' records, a total of 3,329 water meters are in service longer than that specified by Commission regulations without a test.

In accordance with 807 KAR 5:066, Section 15, all meters tested in accordance with the rules of periodic tests shall be tested in the condition as found in the customer's service prior to any alteration or adjustment. This test shall consist of three (3) rates of flow in the minimum, intermediate and high flow range for this type of meter and meet the flow limits set for various cold water meters. The condition of twenty-three (23) water meters randomly removed from service in the water system's distribution system displayed a failure rate of 87% or twenty (20) water meters.

The water systems have failed to correct a deficiency and to bring the facilities into compliance with KRS 278 and the Commission's regulations. The water systems were notified by Commission staff in inspection reports dated December 14, 1995, September 30, 1996, and July 31, 1997 in regard to this deficiency.

The Public Service Commission considered the deviation raised by Warren County



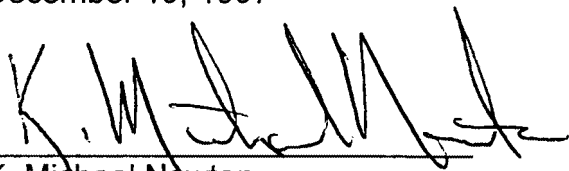
Water District, Simpson County Water District, Grayson County Water District, and Butler Water System, Inc. in its Case No. 89-110. The facts were fully developed at the hearing and this Commission entered its Order on January 31, 1992. A copy of that order is attached as Exhibit B. The water systems have exhausted this motion through the appeals procedure without relief.

### Recommendations

This investigation found the findings of fact in Case No. 89-110 to remain unchanged. The water systems should not be permitted to deviate from the Commission's meter testing requirements.

The failure of the water systems to correct the known deficiency and to bring the facility into compliance with KRS 278 and the Commission regulations (807 KAR) should be considered cause for enforcement proceedings to be initiated and penalties to be imposed pursuant to KRS 278.990.

Submitted,  
December 19, 1997

  
K. Michael Newton  
Utility Investigator

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KMN:aem

**KENTUCKY PUBLIC SERVICE COMMISSION  
METER STANDARDS LABORATORY  
METER TEST RESULTS**

UTILITY	SERIAL #	LOCATION	<u>"AS FOUND" RESULTS OF FLOW RATES</u>		
			LOW	MED.	HIGH
<u>Butler County W.A.</u>	219138676	A 3L19007	91.0%	101.0%	99.4%
	234066935	A 4B07039	53.0%	98.2%	98.6%
	234663614	A 4B03023	85.0%	101.0%	98.6%
	233890027	A 1B04050	3.0%	96.4%	96.7%
	234663679	A 2L13037	89.0%	101.2%	99.5%
<u>Simpson County W.D.</u>	200000066	A 4S31006	64.0%	98.8%	99.2%
	235945038	A 7S21033	91.0%	101.0%	98.3%
	222114783	A 4S65005	0.0%	96.0%	95.6%
	235945100	n/a	92.0%	97.0%	98.5%
	226753931	A 1S19019	86.0%	99.0%	96.5%
<u>Grayson County W.D.</u>	223880670	A 1G37026	81.0%	101.8%	99.2%
	234431724	A 1G36011	52.0%	98.7%	98.1%
	233889998	A 1G37013	93.0%	101.5%	100.0%
	236500716	A 2G05017	72.0%	99.1%	98.6%
	234346267	A 2G17017	89.0%	101.1%	99.1%
<u>Warren County W.D.</u>	224456741	A 1N28019	90.0%	102.5%	100.9%
	237905764	A 1N34002	17.3%	85.3%	94.8%
	238113026	A 1W16126	81.0%	96.0%	95.7%
	220543380	A 2N04197	76.0%	99.2%	99.1%
	218475973	A 2N06036	95.0%	101.9%	100.5%
	224456795	A 2W07001	89.0%	102.3%	100.0%
	220396409	A 4M11035	88.0%	102.4%	100.4%
	234346225	A 4M45028	74.0%	101.2%	99.5%

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

THE APPLICATION OF BUTLER COUNTY )	
WATER SYSTEM, INC., GRAYSON COUNTY )	
WATER SYSTEM, SIMPSON COUNTY WATER )	
DISTRICT, AND WARREN COUNTY WATER )	CASE NO. 89-110
DISTRICT FOR A DEVIATION FROM 807 )	
KAR 5:066, SECTION 17(1) REGARDING )	
METER TESTING )	

O R D E R

By letter received April 28, 1989, Butler County Water System, Inc., Grayson County Water District, Simpson County Water District, and Warren County Water District ("Water Systems") requested a deviation from 807 KAR 5:066, Section 17(1). This regulation requires a water utility to periodically test 5/8-inch water meters so that no meter remains in service without test for a period longer than 5 years. The Water Systems initially requested they be approved to utilize a testing interval of 15 years. The Water Systems request for deviation was denied by Order entered May 17, 1989. On June 6, 1989, the Water Systems filed a Petition for Rehearing in this matter. In their prefiled testimony the Water Systems advocated a testing interval of 14 years. By Order entered June 26, 1989, the Water Systems Petition for Rehearing was granted. A hearing was held in this matter on November 10, 1989. On April 10, 1990, the Commission entered an Order holding this matter in abeyance pending a review of the regulation by the Commission.

According to the evidence provided by the Water Systems on rehearing, the 5 year testing requirement for meters contained in 807 KAR 5:066, Section 17(1), is outdated due to advancements in manufacturing and materials technology. Meters in use by the Water Systems have 10 to 15 year manufacturers warranties which provide that the meters will maintain "repaired meter accuracy" for the entire warranty period.

The Water Systems initiated a cost-benefit comparison to determine the optimum interval for meter testing and found no revenue gain could be realized by testing and/or replacing meters until they are at least 10 years old, and the expense of testing and replacement is not offset by revenue gain until meters have been in service at least 14 years.

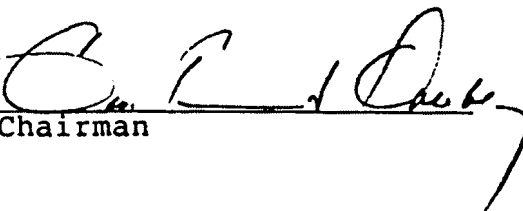
It should be noted, however, that the Commission's meter testing requirements ensure that water consumption is accurately measured so that the customer pays and the utility collects no more and no less for the service being rendered. In the Commission's opinion, a 10 year meter test interval will balance the interest of the customer in the accuracy of meters with the Water Systems' cost-benefit concerns. Based upon the record, specific circumstances of the Water Systems enumerated in the cost-benefit analysis, and being otherwise sufficiently advised, the Commission finds that a 10 year meter test interval is reasonable.

IT IS THEREFORE ORDERED that the Water Systems shall be allowed to deviate from 807 KAR 5:066, Section 17(1), by using a

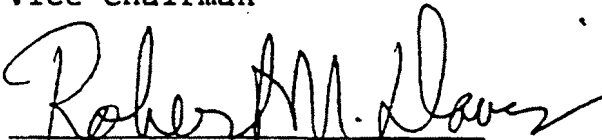
10 year periodic test interval for 5/8-inch water meters instead of the 5 year period therein specified.

Done at Frankfort, Kentucky, this 31st day of January, 1992.

PUBLIC SERVICE COMMISSION

  
Chairman

Vice Chairman

  
Commissioner

ATTEST:

  
Executive Director