

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC GRAVES COUNTY WATER	)	
DISTRICT'S UNACCOUNTED-FOR WATER	)	CASE NO.
LOSS REDUCTION PLAN, SURCHARGE, AND	)	2019-00347
MONITORING	)	

ORDER

On September 30, 2019, the Commission initiated this proceeding to monitor Graves County Water District's (Graves District) unaccounted-for water loss surcharge proceeds collection and expenses. The Commission authorized Graves District to collect a monthly surcharge of \$5 per customer, for 72 months for a total of \$1,721,600 to fund Graves District's water loss detection and repair program.<sup>1</sup> Among the requirements established by the Commission in this proceeding, Graves District must file an annual schedule of the estimated and actual progress of the water loss detection and repair program, and estimated and actual expenditures made with the surcharge proceeds, so that the Commission can evaluate whether adjustments to the program or surcharge are needed.<sup>2</sup> For the reasons discussed below the Commission finds that no change in the amount of the surcharge is warranted at this time. Further, the Commission finds that Graves District should record its surcharge billings, collections, and deposits using the

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<sup>1</sup> Case No. 2018-00429, *Application of Graves County Water District for an Alternative Rate Adjustment*, (Ky. PSC Sept. 30, 2019).

<sup>2</sup> Order (Ky. PSC Sept. 30, 2019) at ordering paragraph 12.

form provided as an Appendix to this Order and should include this form with the filing it makes on the fifteenth day of each month in the record of this proceeding.

### BACKGROUND

By Order dated February 4, 2021, the Commission accepted Graves District's first annual progress report, found no changes to the program were necessary, and ordered the next report to be filed on January 4, 2022. In December 2021, Graves County was hit by a series of tornados that caused significant damage, including damage to Graves District's managing entity and supplier, Mayfield Electric and Water Systems (MEWS). Graves District requested temporary suspension of its monthly reporting requirement, but the Commission denied that request. By Order dated December 29, 2021, the Commission granted Graves District an extension of time to file its November 2021 through January 2022 monthly reports and its annual progress report.

Graves District filed its second annual progress report of its water loss detection and repair program on March 2, 2022, and filed an errata to the report on April 14, 2022. Following review of the annual report and the errata, Commission Staff issued three requests for information to which Graves District filed timely and complete responses.<sup>3</sup>

### DISCUSSION AND FINDINGS

#### Second Annual Progress Report: Billings, Collections, and Deposits

The reporting period for which Graves District submitted its second annual progress report was October 1, 2020, to September 30, 2021. Graves District reported

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<sup>3</sup> Graves District's Response to Commission Staff's Second Request for Information (Response to Staff's Second Request) (filed Apr. 21, 2022); Graves District's Response to Commission Staff's Third Request for Information (Response to Staff's Third Request) (filed May 20, 2022); Graves District's Response to Commission Staff's Fourth Request for Information (Response to Staff's Fourth Request) (filed July 18, 2022).

that it collected \$289,740 in surcharge revenues during the review period.<sup>4</sup> This is an average of \$24,145 per month. In its water loss detection and repair proposal submitted to the Commission on August 19, 2019, in Case No. 2018-00429, Graves District predicted that annual surcharge revenues were expected to generate \$286,860 each year of the surcharge.<sup>5</sup> In its second annual progress report, Graves District stated that it now estimates annual surcharge revenue of \$289,740 (based on an average monthly number of 4,829 customers) and expects to reach the total authorized amount in 72.3 months.<sup>6</sup>

To assist Graves District in compiling monthly reports that reflect the total amount of surcharge billings, collections, and deposits, the Commission finds that Graves District should begin using the form attached to this Order as an Appendix, and submit the information required on the form every month with its surcharge monitoring monthly report.

#### Second Annual Progress Report: Expenditures

Graves District reported \$213,952 in total actual expenditures for the review period ending September 30, 2021.<sup>7</sup> The following is a breakdown of these expenditures:

- \$45,092 for establishment of District Metered Areas<sup>8</sup> (DMAs).

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<sup>4</sup> Second Annual Progress Report (filed Mar. 2, 2022) at 4.

<sup>5</sup> Case No. 2018-00429, *Application of Graves County Water District for an Alternative Rate Adjustment*, Supplemental Proposal of Graves County Water District (filed Aug. 19, 2019). This proposal was accepted by the Commission with certain modifications on September 30, 2019.

<sup>6</sup> Second Annual Progress Report at 5.

<sup>7</sup> Second Annual Progress Report at 6.

<sup>8</sup> See Case No. 2018-00429, *Application of Graves County Water District for an Alternative Rate Adjustment*, Graves County Water District Supplemental Proposal for Water Loss Detection and Repair Surcharge (filed Aug. 19, 2019). DMAs are a critical element of Graves District's water loss reduction plan. The plan filed on Dec. 20, 2019, in this proceeding and on Aug. 19, 2019, in Case No. 2018-00429 indicated that DMA meters would be installed through January 2022. A DMA is district metered area that uses a meter connected to MEWS's Automated Meter Infrastructure (AMI) to monitor water usage within a zone, allowing for quick identification of excessive water usage within the zone, or DMA.

- \$78,125 for lease of the hydro-excavator truck<sup>9</sup>
- \$0 for leak detection equipment
- \$83,917 for water loss detection
- \$6,818 for water loss repair.<sup>10</sup>

Establishment of DMAs Graves District's projected budget for year two of its program was \$403,237, which is significantly more than the actual expenditures. In explanation, Graves District stated that the average cost to establish a DMA was projected to be \$10,951, but that the actual average cost to establish a DMA was \$5,598.<sup>11</sup> The meters used to establish the DMAs cost less than projected, and the projected budget also included a 15 percent contingency that has proven to be unnecessary. By September 30, 2021, Graves District had 26 DMAs operational.<sup>12</sup> Graves District stated that it still plans to establish a total of 53 DMAs; to reach this goal, 27 additional DMAs must be established at a projected cost of \$151,146.<sup>13</sup> Graves District cited supply chain problems for its inability to have all 53 DMAs in place by the end of the reporting period.<sup>14</sup>

Water-loss Detection Graves District's proposal was to hire two part-time employees who would be dedicated to water loss and would work 20 hours a week. However, Graves District ultimately decided that one full-time person dedicated to water

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<sup>9</sup> Second Annual Progress Report at 7. The hydro-excavator truck has a monthly lease payment of \$6,510.39.

<sup>10</sup> Second Annual Progress Report at 6.

<sup>11</sup> Second Annual Progress Report at 6.

<sup>12</sup> Second Annual Progress Report at 6.

<sup>13</sup> Second Annual Progress Report at 7. This estimate is based on current meter cost. Any increase in meter cost will result in Graves District reducing the number of DMAs it will install.

<sup>14</sup> Second Annual Progress Report at 6-7.

loss would be more effective and ensure a greater level of expertise. MEWS hired a leak detection specialist in December 2019, but other MEWS employees continued to perform leak detection activity when necessary. Combined the specialist and the other MEWS employees expended 1,925 hours devoted to leak detection in 2021.<sup>15</sup> Most of the hours of leak detection were devoted to the former South Graves Water District and the former Consumers Water District.<sup>16</sup>

Hydro-Excavator Truck Graves District's proposal was to purchase a hydro-excavator truck.<sup>17</sup> In its first annual progress report, Graves District announced that it had "entered into an agreement to lease a hydro-excavator truck," and that the lease payment was \$6,510.39 a month, with an annual cost of the lease being \$78,125.<sup>18</sup> In its response to Staff's Third Request for Information, Graves District explained that it intends to purchase the truck at the end of the lease term or sooner, if finances permit.<sup>19</sup> If the truck is purchased at the end of the lease, the cost to purchase will be one dollar.<sup>20</sup> The lease was signed on January 13, 2020, by Joey Morrow, Chairman of Graves District's

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<sup>15</sup> Second Annual Progress Report at 2, 7-8 and Appendix B.

<sup>16</sup> Second Annual Progress Report at 8.

<sup>17</sup> Case No. 2018-00429, Graves County Water District Supplemental Proposal for Water Loss Detection and Repair Surcharge (filed Aug. 19, 2019) at 3. Graves District included an estimate from GapVax indicating the cost to purchase the truck was \$300,000 at Exhibit 3.

<sup>18</sup> First Annual Progress Report (filed Jan 4, 2021) at 6. See also February 2020 Monthly Activity Report (filed Mar. 13, 2020). The first mention of a lease appears on the February 2020 report, which simply reads, "Ck # 1501 Crossroads Bank-lease on hydro excavator."

<sup>19</sup> Response to Staff's Third Request, Item 1b.

<sup>20</sup> Response to Staff's Third Request, Item 1b.

Board of Commissioners and Kevin Lenard, MEWS Water Operations Manager, as Lessees and a representative of Republic First National Bank Corporation as Lessor.<sup>21</sup>

The Commission notes that Graves District did not seek Commission approval to enter into the five-year lease with option to purchase. Pursuant to KRS 278.300, public utilities in Kentucky must obtain Commission approval before issuing evidence of indebtedness. Depending on the terms of a lease, it may be considered an evidence of indebtedness. The exception to the general requirement of Commission approval is set forth in KRS 278.300(8), which provides that a utility may issue evidence of indebtedness without first obtaining Commission approval if the debt is for a proper purpose, not in violation of law, and is payable at a period of not more than two years. These loans may be renewed, but the aggregate period of such loans cannot exceed six years from the date of issue of the original note.

Here, the lease is for one year and automatically renews each year for a total term of 60 months or five years.<sup>22</sup> The amortization schedule is for a period of five years,<sup>23</sup> and as such, represents a five year financial obligation. The Commission cautions Graves District that it must obtain Commission approval to issue evidence of indebtedness, even if the indebtedness is to accomplish an action the Commission has approved. For example, if Graves District were to seek and be granted a Certificate of Public Convenience and Necessity (CPCN) to install new meters, it would still need to

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<sup>21</sup> Response to Staff's Third Request, Item 1a, Attachment 1 at 6.

<sup>22</sup> Response to Staff's Third Request, Item 1a, Attachment 1 at 9-10.

<sup>23</sup> Response to Staff's Third Request, Item 1b indicates the lease agreement is for six years; however, the supporting documentation included in Attachment 1 to the response to Item 1a indicates the lease period is 60 months, or five years.

request approval to issue an evidence of indebtedness if it borrowed money to purchase the meters. Although the day-to-day operations of Graves District are performed by MEWS, Graves District's commissioners are responsible for ensuring that Graves District complies with all Commission statutes, regulations, and Orders. The Commission exhorts Graves District to seek the assistance of competent legal counsel in the future when determining whether any potential action requires prior Commission approval. As a municipally owned utility MEWS is not subject to the Commission's jurisdiction and lacks the familiarity with Commission statutes and regulations to be relied upon to guide Graves District in matters involving the Commission.

Leak Detection Equipment Graves District purchased a Mikron-3 listening device during its first surcharge year at a cost of \$4,400.<sup>24</sup> Originally, Graves District proposed to purchase 20 noise logger devices and related equipment, but Graves District subsequently decided not to make those purchases.<sup>25</sup> Graves District made this decision because MEWS offered the use of its devices.<sup>26</sup> Graves District stated that once it establishes all of its DMAs, it will purchase the noise logger devices.<sup>27</sup> The Commission encourages Graves District to purchase its own equipment as presented in its plan as soon as practicable.

Leak Repair During the review period, Graves District repaired 18 leaks at a cost of \$6,817.52.<sup>28</sup> This is considerably below the estimated 87 leaks that Graves District

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<sup>24</sup> Second Annual Progress Report at 7.

<sup>25</sup> Second Annual Progress Report at 7.

<sup>26</sup> Response to Staff's Second Request, Item 9a.

<sup>27</sup> Response to Staff's Second Request, Item 9a.

<sup>28</sup> Second Annual Progress Report at 9.

expected to repair during this period.<sup>29</sup> Graves District stated that it had no explanation for the lower number of reported water leaks and that it is reviewing its records and procedures to determine whether any leaks were identified while routine maintenance was being conducted, and therefore, the cost to repair was incorrectly funded through operation and maintenance funds.<sup>30</sup> Graves District stated that it projects it will repair a greater number of leaks in the next reporting period and projects it will spend \$32,953 repairing leaks.<sup>31</sup>

The Commission finds that, as a component of its next annual progress report, Graves District will provide a report on the efforts it made to ensure that all repairs that should have been accounted for in the water loss reduction and leak repair program and billed to the surcharge fund were properly categorized as such. The Commission is interested in reviewing the actions taken by Graves District to ensure accurate reporting.

#### Water Loss Percentage

Graves District reported an overall water loss average percentage of 20.74 percent during this reporting period.<sup>32</sup> This a reduction from the 26.71 percent average water loss reported in the first reporting period across all of Graves District's service areas.<sup>33</sup> All but

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<sup>29</sup> Second Annual Report at 8-9. Graves District stated that it had originally expected to locate and repair 100 leaks during this reporting period. *See also* First Annual Progress Report at 7. In its first annual progress report Graves District reported repairing 68 leaks, but it expected it would have repaired 200 leaks in the first year. At the end of the first year, Graves District revised its expectations and indicated it expected to repair 87 leaks in each of the remaining years of the program. The total number of leaks expected to be detected and repairs over the life of the program remained at 500, but the expectations were adjusted to assume those leaks would be found and repaired at a consistent pace, rather than more leaks being repaired in the early years.

<sup>30</sup> Second Annual Progress Report at 9.

<sup>31</sup> Second Annual Progress Report at 9.

<sup>32</sup> Second Annual Progress Report at 9.

<sup>33</sup> Errata to Second Annual Progress report (filed Apr. 6, 2022).



two of Graves District's service areas reduced unaccounted-for water loss during the reporting period. The former Sedalia and Fancy Farm districts experienced an increase in water loss, but former Sedalia district continues to report water loss below 15 percent. Below are the water loss percentages for each of Graves District's service areas for the period of October 2020 through September 2021:<sup>34</sup>

- Consumers 18.57
- Fancy Farm 18.15
- Hardeman 5.74
- Hickory 15.35
- Sedalia 14.01
- South Graves 45.00
- Total Average 20.75

Graves District maintained it was still too early to draw any conclusions regarding the success of its water-loss detection and repair program, despite this being the second year of the program.<sup>35</sup>

### Projections and Goals

Graves District stated that it plans to finish establishing DMAs and to install pressure sensors and pressure release valve monitors and connect these devices to its monitoring network.<sup>36</sup> Graves District also stated that its examining predictive analysis software for use in establishing a long-term leak predictive analysis and response. The target date to establish system-wide water-loss monitoring remains December 1, 2026.<sup>37</sup>

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<sup>34</sup> Errata to Second Annual Progress Report.

<sup>35</sup> Second Annual Progress Report at 9.

<sup>36</sup> Second Annual Progress Report, Appendix A.

<sup>37</sup> Second Annual Progress Report, Appendix A.

Because Graves District is experiencing success in reducing its water loss percentage, the Commission finds that no changes in the surcharge amount or the program are necessary at this time. Graves District is encouraged to continue implementing its water loss reduction and leak repair plan as approved by the Commission in Case No. 2018-00429.

IT IS THEREFORE ORDERED that:

1. Graves District shall continue to implement the water loss detection and repair surcharge program as set forth in the Commission's September 30, 2019 Order in this proceeding.

2. Graves District shall file the surcharge billings, collections, and deposits worksheet attached to this Order as an Appendix with its monthly activity report each month.

3. Graves District shall file its next annual schedule of estimated and actual progress of the water loss detection and repair program and estimated and actual expenditures made with the surcharge proceeds, including a report of its efforts to ensure proper reporting of repairs to the surcharge program on or before March 1, 2023.

PUBLIC SERVICE COMMISSION

  
Chairman

\_\_\_\_\_  
Vice Chairman

  
Commissioner



ATTEST:

  
Executive Director

APPENDIX

APPENDIX TO AN ORDER OF THE KENTUCKY PUBLIC SERVICE  
COMMISSION IN CASE NO. 2019-00347 DATED DEC 27 2022

TWO PAGES TO FOLLOW

**Graves  
District  
Surcharge**

**Case No. 2019-00347**

**Selected Financial Information and Better / Worse (B / (W)) Performance**

A	B	C	D	E	F
				C - B	D - C
Month	Billings	Collections	Deposits	Collections B / (W) Billings	Deposits B / (W) Collections
2023					
January					
February					
March					
April					
May					
June					
July					
August					
September					
October					

November					
December					
Total	0.00	0.00	0.00	0.00	0.00

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