COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

ELECTRONIC FARMDALE WATER DISTRICT'S UNACCOUNTED-FOR WATER LOSS REDUCTION PLAN, SURCHARGE AND MONITORING	**)** **)** **)** **)**	**) CASE NO. 2020-00217**

NOTICE OF FILING

Pursuant to Ordering paragraph 1 of the Kentucky Public Service Commission's (the "Commission") February 10, 2023 Order in Case No. 2020-00217, Farmdale Water District ("Farmdale District") gives notice of filing its Qualified Infrastructure Improvement Plan ("QIIP").

Dated: February 29, 2024.

Respectfully submitted,

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CERTIFICATE OF SERVICE

In accordance with 807 KAR 5:001, Section 8, and the Public Service Commission's Order of July 22, 2021 in Case No. 2020-00085, I certify that this document was transmitted to the Public Service Commission on February 29, 2024, and that there are currently no parties that the Public Service Commission has excused from participation by electronic means in this proceeding.

Felisa S. Moore

Counsel for Farmdale Water District

QUALIFIED INFRASTRUCTURE IMPROVEMENT PLAN

AND

WATER LOSS REDUCTION PLAN

OF

FARMDALE WATER DISTRICT

Date: February 29, 2024

Qualified Infrastructure Improvement Plan

And

Water Loss Reduction Plan

STATEMENT AND PURPOSE

On July 7, 2020, the Public Service Commission (the "Commission") issued its decision in Case No. 2020-00021, in which it, among other things, authorized Farmdale Water District (the "District") to assess a monthly surcharge of $3.00 on each active meter for a period of 48 months, or until $380,000 has been assessed, whichever occurs first, to fund the District's unaccounted-for water loss reduction efforts. The Commission determined the use of a monthly surcharge assessed over a 48-month period was "a reasonable means of funding [the] District's unaccounted-for water loss reduction efforts."[1]

Assuming a customer base of 2,655 residential and commercial customers, the proposed surcharge will produce additional annual revenue of $95,000, or approximately $380,000, over the period the surcharge is assessed. This surcharge will be referred to herein as the "Water Loss Reduction Surcharge" and the funds collected as the "Surcharge Funds."

The Commission further directed the District to file a Qualified Infrastructure Improvement Plan ("QIIP") that provides a detailed spending plan for surcharge

[1] Case No. 2020-00021, Order of July 7, 2020, at 8.

proceeds. As of the filing date of this QIIP, the District has assessed a Water Loss Reduction Surcharge for 42 months and has collected an average of $7,621.40 in Surcharge Funds each month. For the remaining six (6) months the Water Loss Reduction Surcharge is assessed, the District is expected to collect an estimated $45,728.40 in Surcharge Funds, which will make a total of $365,827.00 collected, assuming the District continues to collect the average amount. To date, none of the Surcharge Funds have been expended.

On February 21, 2023, the District filed with the Commission an outline of its QIIP. The purpose behind this QIIP is to provide specific details of the District's undertakings to reduce its monthly water loss. As more fully set forth herein, there is more than a reasonable probability the District's expenditures will resolve the issues identified herein and will reduce the District's unaccounted-for water loss.

ASSESSMENT OF ISSUES

The District has used its best efforts to uncover and assess a number of factors which contribute, or has contributed to, its high water loss. A substantial contributing factor of the unaccounted-for water loss is the asbestos cement ("A.C.") water line which spans 34,600 linear feet. The A.C. water line is leaking and has contributed to the District's unaccounted-for water loss. Further, many of the District's water meters are defective and no longer read correctly. Slow reading, erratic reading, and non-functioning meters are a significant contribution to the District's high-water

loss. And lastly, the existing water line located along the bank of Benson Creek has ruptured twice in the last year because of floods. The rising waters in the creek "washes out" the bank and causes the pipe to separate because there is no solid ground to support the pipe. The water line needs to be moved to the other side of the road or a retaining wall needs to be built between the creek and the water line. The District has sought and expects to receive additional funds from other sources to address the issues outlined herein.

COMPLETED PROJECTS AND PURCHASES

1. The South Benson Project. The South Benson Project consisted of transferring customer services from the old 3-inch diameter water line, which runs alongside South Benson Road, to the newer 6-inch diameter water line which was constructed several years ago. For some unknown reason, the customers' service lines were never transferred to the 6-inch water line when it was installed. The old 3-inch line has had multiple leaks and continued to have leaks on a regular basis until this Project was completed. Approximately 18 customers were transferred from the 3-inch diameter water line to the 6-inch water line. Then, the 3-inch water line was cut, "capped," and abandoned. The South Benson Project has been the District's top priority for reducing its water loss for the past several years. Since this Project has been completed, the District has not had a single leak in this area of its system.

A portion of the South Benson Project was paid for with grant funds. The remaining **$10,000.00** was paid by the District from its unrestricted reserve funds. In addition, the District purchased a Line Locator (Ground Penetrating Radar) from C&S Solutions, Inc. for **$16,290.00**, paid HMB Professional Engineers, Inc. **$8,350.00** for Engineering Services associated with the South Benson Project, and paid Frankfort News Media, LLC **$220.00** for advertising the South Benson Project for construction bids. The District will be seeking approval from the Commission to reimburse itself from the Surcharge Funds in the amount of **$34,860.00** for the South Benson Project.

2. Zone Water Meters. The District currently has five (5) Zone Meters and three (3) Master Meters throughout the system. These Zone Meters and the Master Meters are read daily, and the readings are logged. Each daily reading is compared to the previous day to determine if there is a significant increase in usage. A significant increase in usage could be the result of a water leak. If there is a significant increase in usage, the District's personnel will search for possible leaks in the area served by that Zone Meter. Below is a list of the Zone Meters and the Master Meters:

- South Benson;
- Hwy 151;
- Green Wilson;

- Mills Lane;
- Lawrenceburg Road;
- Moss Lane (Master Meter);
- Tamworth Lane (Master Meter); and
- Evergreen (Master Meter)

3. Repair of Water Leaks. The District recently repaired two significant leaks that should greatly reduce the water loss. One repair reduced the daily reading on the Zone Meter by 50,000 gallons per day. The other leak was an abandoned water meter that the District was unaware of and had likely been leaking for years.

4. Removal of Inactive Meters. Each month the District replaces customer water meters that are not working or reading incorrectly. The District is preparing a list of inactive meters so they can be checked for leaks. All inactive meters are in the process of being pulled.

5. Maintenance of Log Detailing Repairs. The District maintains a log of all repairs made throughout the system. The log includes the following types of information:

- Location of leak;
- Type of leak;
- How the leak was fixed;
- Estimate of how many customers were without water; and

- Estimate of water loss.

6. Purchase of Equipment to Locate Leaks and Maintain System. The District has purchased several pieces of equipment to enable it to repair leaks and better maintain the water system. This equipment enables the District to repair leaks in a timely manner. In the past these repairs would have had to be performed by a contractor. Making these repairs "in-house" saves the District a significant amount of money. In addition, the repairs are done in a more timely manner. Equipment purchased includes the following:

Ground Penetrating Radar: (Line Locator)	$ 16,290
Mini-Excavator	$ 53,938
Truck	$ 14,187
Trailer	$ 7,100
Total:	**$ 91,515**

PROPOSED PROJECTS TO REDUCE WATER LOSS

The District's Board of Commissioners reviewed the recommendations made by the following entities and persons: (a) KRWA; (b) the previous Board of Commissioners; (c) its current Manager, Chris Ralph; and (d) its consulting engineer, Jeff Reynolds with HMB Engineers, for reducing its water loss. The Board

then compiled a list of completed and proposed projects to be included in its QIIP. The projects which have not yet been completed are described below.

1. Replacement of Asbestos Cement Water Line. The District has completed the design phase of a $2,458,000 water project that will replace and upgrade approximately 34,600 linear feet of asbestos cement ("A.C.") water line. Based on the history of breaks and leaks on the A.C. water line, the District believes this project will significantly reduce its water loss. The following roads are included in the project:

- Lawrenceburg Road;
- US 127;
- Jones Lane;
- Old Harrodsburg Road;
- Old Lawrenceburg Road;
- Ninevah Road; and
- Mulholland Road

The District has a Letter of Conditions from Rural Development whereby Rural Development will loan $2,458,000 to the District to construct this project. The District has obtained almost all the necessary easements. Because this process has taken so long and because of the steep increase in construction costs and materials over the past few years, the estimated cost of this project is now nearly double. The

District has explored two (2) options: (1) obtain grants or an additional loan; or (2) reduce the scope of the project. The District has been unable to obtain the necessary grant funds so it plans to reduce the scope of the project so it can be constructed with the available Rural Development loan.

2. Assign Customer Water Meters to Zone Meters. The District plans to assign existing customer water meters to Zone Meters. This will allow the District to compare the actual water sold in a zone to the reading on the Zone Meter, and in turn, will allow the District to determine the water loss in a particular zone.

Both KRWA and the District's consulting engineer have stressed the importance of assigning customer water meters to the applicable Zone Meters. Unfortunately, the District has 18-meter route books, and the meter routes do not completely correspond to a particular Zone Meter. Many of the Zones have meters in more than one meter route book. Therefore, it will take considerable time for the office staff and field staff to accomplish this task. To date, the District has been unable to complete this task.

3. The Benson Creek Project. The existing water line is located along the bank of Benson Creek, which is prone to flooding. The existing water line has "washed-out" twice in the past year. Because the system maps are inaccurate, the exact location of the existing water line is unknown. Therefore, the District has secured the services of the Frankfort Plant Board to locate the water line using a

hydro-excavator. The water line needs to be moved to the opposite side of the road or a concrete retaining wall needs to be constructed between the creek and the water line. The Franklin County Fiscal Court wants to protect the integrity of its county road. Therefore, the District has reached a cost-sharing agreement with the Franklin County Fiscal Court to construct a concrete retaining wall along a portion of Benson Creek. The retaining wall will protect the integrity of the water line and the county road. Construction of the retaining wall has been delayed because the Franklin County Road crews have been busy on another major project.

PROPOSED EXPENDITURES FOR METERS

In 2012 and 2013, Farmdale replaced all its existing meters with Sensus iPERL meters, which are AMR meters. This means they can be read electronically by driving a vehicle along the road where the meters are located. The meters had a 15-year pro-rated warranty. All these meters have been in the ground for over 10 years. Over the past few years, more and more of these meters have become unreliable for a variety of reasons. Some of them register "slow;" some have stopped registering any water usage whatsoever; some have erratic and unreliable readings; and some have completely stopped functioning. Many of the meters, however, still work properly.

During the past two (2) years, the District has intensified its efforts to have the meters tested for accuracy. Since the District does not have a certified test bench

nor a certified technician to test the meters, the meters must be shipped to other utilities or entities which are certified to test them. Since the summer of 2023, the District has utilized the Frankfort Plant Board to test the District's meters. The meters which test within the permissible ranges of accuracy are placed back into service. Other meters which are obviously not working, are sent back to Sensus and exchanged for another meter. Because the District has limited staff and because it has had so many line breaks and leaks, its staff have not been able to devote adequate time to "pulling" more meters for testing. Also, because the Frankfort Plant Board staff has other obligations, it can only test a limited number of meters per month.

Recently, the District has made the decision to shift away from the Sensus iPERL meters and replace all its meters with Sensus SRII meters as soon as it can afford to do so and as rapidly as the manufacturer can supply the meters. It is actively seeking grants to facilitate the purchase of larger numbers of meters. The District has approximately 2,900 meters in service, but not all of these are active. During the most recent billing period, the District had 2,757 active customers and 104 inactive accounts. In the past year, it has purchased and installed 106 new SRII meters. These were purchased in small batches of 15 to 30 meters at a time. The most recent purchase was for 19 meters at a cost of $174 each. At this price, 100 new meters will cost $17,400. The cost to purchase 500 meters is $87,000. The cost to purchase 1,000 meters will be $174,000. The District seeks to

use a substantial portion of the Surcharge Funds to purchase new Sensus SRII meters.

CONCLUSION

To date, the District has collected Surcharge Funds totaling **$313,331.51** (which includes interest earned on the account). **Not a single penny** of the Surcharge Funds has been spent. The District respectfully requests the Commission to accept this combined Qualified Infrastructure Improvement Plan and Water Loss Reduction Plan (the "Plan"). Once the Plan has been accepted, the District plans to file a motion to be reimbursed for the following: (a) the cost of the South Benson Project, which has been completed; (b) the equipment described above, which has already been purchased and placed into service; and (c) for the cost of the new Sensus SRII meters which have been purchased. The District will also request permission to use the remaining portion of the Surcharge Funds to purchase additional Sensus SRII meters.