

**UPDATED ANNUAL PROGRESS REPORT OF GARRISON QUINCY-KY-O-HEIGHTS WATER**  
**DISTRICT'S WATER LOSS DETECTION AND REPAIR PROGRAM**

On November 24, 2021, the Public Service Commission in Case No. 2021-00094 authorized Garrison Quincy-KY-O Heights (Garrison Water) to collect a monthly surcharge of \$1.73 per metered customer on and after January 1, 2022 and continuing for 48 months or until the total amount of the surcharge assessed equaled \$88,468.00, whichever occurred first, subject to certain conditions. These conditions included the submission of a yearly report containing a schedule of the estimated and actual progress of Garrison Water's water loss detection and repair program and the estimated and actual expenditures made with surcharge proceeds. The Public Service Commission indicated that this yearly report will be used to evaluate the need for prospective adjustment to the water loss detection and repair program and the authorized surcharge.

This report addresses Garrison Water's water loss and detection program for the period from January 1, 2022 to November 1, 2022. It compares the results of the program's first year to the schedule of the estimated and actual progress of the water loss detection and repair program, and estimated and actual expenditures made with surcharge proceeds, for the purpose of evaluating whether adjustments to the program or to the surcharge amount are required. Within the small timeframe and the amount of funds that has accumulated, no expenditures have occurred as of the filing of this report.

**Program Implementation**

In its Order of November 24, 2021, the Commission directed Garrison Water to submit an infrastructure improvement plan, including a comprehensive unaccounted-for water loss reduction plan that established priorities and a time schedule for eliminating each source of unaccounted-for water loss and provides a detailed spending plan for the proceeds of a surcharge. With assistance from Kentucky Rural Water Association (KRWA), Garrison Water completed and submitted that plan on March 23, 2022.

As advised by Public Service Commission Staff, Garrison Water has created a revised plan, including some new items and excluding some other original submitted plans. As stated, no expenditures has been made at this point due to the attempt to gain enough funds to initiate the work needing accomplished. The plan is as follows:

## **Leak Detection Equipment**

Garrison Water District currently has one listening device to assist in locating water leaks by listening to valves, meter, and hydrants or above the location of the water line. As with all electronic devices they will occasionally need to be repaired resulting in an absence of the device needed to help locate leaks. Garrison Water District as part of its infrastructure improvement plan would buy an additional listening device as this would allow for two employees to listen to more points in different areas as well as have a device to continue leak detection if one needed to be repaired. Garrison Water District is currently looking at different manufacturers of listening devices and estimated price is \$3,500.00.

A portable flow meter to measure gallons flowing through the water main is needed. The application of a portable flow meter is needed to assist in narrowing down the search area for listening device. The portable flow meter will save Garrison Water District in employee wages, water produced/purchased, electrical costs by narrowing the search area. The cost of a portable flow meter with needed accessories is \$8,500.00.

Along with the flow meter, access points will need installed to gain accessibility to the pipes when suspected leaks are on that particular section of line. Garrison Water estimates about 6 separate access points will be needed. These will consist of a 36 inch round corrugated dual walled pipe and a cast iron lid. This equipment required to gain the 6 access points would cost \$2,500.00.

One zone meter will need to be installed below our tank site. This meter will register the usage for 30% of the customers on this section of our system. This zone meter will allow Garrison Water District to read the meter daily to see large usage and focus its efforts in that zone. Currently, Garrison Water District does not have an estimated cost to install the zone meters.

## **Distribution System**

Garrison Water District has valves in the system that need to be evaluated to determine if they need to be replaced. Fully functioning valves will allow Garrison Water District to isolate more of its system for leak detection as well as less customer interruptions in the event of a water leak. A valve exerciser can be used to see if the valve is no longer operational. The cost to rent a valve exerciser is approximately \$500 per day. A total of at least 5 days would be needed to exercise any valve that is in question. Upon completion of the valve exercise, an evaluation of valves needing maintenance or replacement would be done. The overall cost estimate to exercise the valves would be \$2,500.00.

## **Bypass Meters**

Garrison water has acquired grant money from Round 1 Cleaner Water Program. Within the budgeted amount allowed, Garrison Water has purchased enough supplies to install ten (10) bypass meters on

some of our smaller sections of line to be used for leak detection. With shortages in our supply system, Garrison Water is still awaiting some of the equipment to be able to begin installation of these 10 bypass meter sets. This item is not part of the water loss surcharge but was advised by Public Service Commission Staff to include into our water loss report.

**Customer Meters**

In the allotted money, from the Round 1 Cleaner Water Grant, Garrison water has used a portion of that for meter replacement within our system. Garrison Water has an order in for 200 - 5/8" X 3/4" residential meters. Again, due to supply chain shortages, those meters are backordered for several more months. This money will not come from the water loss surcharge funds but was also advised by Public Service Commission Staff to include into our report.

**Summary of plan**

Garrison Water District’s water loss on average is above 15% the overage is approximately 30-40 gallons per minute. In a distribution system of over 100 miles of water main with 3 distribution employees consistently lowering the water loss below 15% is not a small task and will require time. The funds from the water loss surcharge will assist Garrison Water District in lowering its water loss along with additional investment in the infrastructure by Garrison Water District.

**Surcharge Revenue**

During the period of January 1, 2022 to December 31, 2022, Garrison Water collected \$20,173.05 in surcharge revenues. With the fluctuation of customers the billing and collection amount varied throughout the year. As shown in Table 1 below.

**TABLE 1**

Month Collected	Customers Billed	Customers Paid	Actual Collected
January 2022	1036	909	\$1,792.28
February 2022	1044	949	\$1,806.12
March 2022	1034	953	\$1,788.82
April 2022	1030	927	\$1,781.90
May 2022	1033	1021	\$1,787.09
June 2022	1033	966	\$1,787.09
July 2022	1041	997	\$1,800.93
August 2022	1040	927	\$1,797.47
September 2022	1049	988	\$1,814.77
October 2022	1044	1013	\$1,804.39
November 2022	1039	1023	\$1,797.47
December 2022	1041	989	\$1,800.93

## **Expenditures**

At this time Garrison Water has had no expenditures from the water loss surcharge account.

## **Conclusion**

Garrison Quincy-KY-O-Heights Water District will use the available revenue, upon the Public Service Commission's approval, to initiate the above listed items in order to reduce unaccounted-for water loss within our system. The water loss surcharge revenue, along with the Cleaner Water Round 1 funds will allow the funding and be an integral part to reduce unaccounted-for water loss. Over the past 12 months Garrison Water has reduced the water loss by 5%. It is estimated that another 5% will be reduced by the end of 2023.