

2023 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, 2023 to November 1, 2023. It compares the results of the program's 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.

During this report year, Garrison Water District has noticed a measureable change in water loss. At this time, we have reduced our water loss from 26.25% to 25%. Although our water loss has decreased, we did not achieve the 5% reduction that was estimated in our 2022 report. Some expenditures have been made and have proven useful in water loss detection.

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, some expenditures has been made and some improvement has been made. The plan is as follows:

Leak Detection Equipment

Garrison Water District has added one listening device to assist in locating water leaks by listening to valves, meter, and hydrants or above the location of the water line. The addition of this listening device has given us the opportunity to use 2 operators at the same time to make leak detection more time efficient.

A portable flow meter to measure gallons flowing through the water main has been purchased. The application of a portable flow meter is needed to assist in narrowing down the search area for listening device. The portable flow meter is yet to be used within the system. Training is being sought out to properly use this device. The gentleman that we were going to use for training has retired and we are actively seeking training from another entity.

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. Even though it is much needed we feel that we need to get our valves in better working order and access points installed to use when our training for the flow meter is complete.

Distribution System

Garrison Water District has 15-20 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. Garrison Water has received those parts and currently have installed 3 new bypass meter sets since we received the parts mid-2023. 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 District 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. 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.

Service Line

With funds from Cleaner Water Round 1 we were able to replace a troubled service line. This 300 foot long 1 inch line had been a repetitive problem due to the terrain it was in. We were able to get it replaced and installed into a casing pipe to ensure its longevity. Replacing this line has contributed to the water loss reduction for the year.

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, 2023 to November 1, 2023, Garrison Water collected \$17,351.05 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 2023	1041	988	\$1,710.68
February 2023	1035	1048	\$1,813.33
March 2023	1031	1016	\$1,757.15
April 2023	1021	1041	\$1,801.06
May 2023	1021	971	\$1,679.10
June 2023	1022	999	\$1,728.00
July 2023	1028	979	\$1,694.19
August 2023	1030	1018	\$1,761.37
September 2023	1043	1017	\$1,758.56
October 2023	1042	952	\$1,647.61
November 2023	NOT INCLUDED	IN THIS	REPORT
December 2023	NOT INCLUDED	IN THIS	REPORT

Expenditures

There were several expenditures that was approved and purchased this year. In April the District purchased a new Fisher XLT-30 Leak Detector in the amount of \$3,040.29. Also, there were purchases of a Badger Basic Portable Transit Ultrasonic Flow meter for \$7,910.00. Along with that we also purchased enough material and lids to have six access point basins to be installed in the system. The expense for the basin and lids came up to \$2,663.00. In all the total amount of expenditures was \$13,613.29 for the year of 2023.

Conclusion

With the new surcharge collections of 2024 along with the current balance of \$22,105.69, 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 remaining Cleaner Water Round 1 funds will allow the funding and be an integral part to reduce unaccounted-for water loss. The total amount received for 2023 as of the time of this report was \$17,351.05. Over the past 12 months Garrison Water has reduced the water loss by 1.5%. It is estimated that another 5% will be reduced by the end of 2024.