

Garrison-Quincy-KY-O-Heights Water District

Infrastructure Improvement Plan

In Case No. 2021-00094 Garrison-Quincy-KY-O-Heights Water District (Garrison Water District) was ordered to file with the Public Service Commission a comprehensive infrastructure improvement plan including a comprehensive unaccounted-for water loss reduction plan that establishes 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.

Leak Detection Equipment

Garrison Water District currently has one listening device to assist in locating water leaks by listening to valves, meter, hydrants or above the location of the water line. As with all electronic devices they will occasionally need to be repaired. 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 between \$2,500-\$3,500.

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 estimated cost of a portable flow meter is \$10,000.

Two zone meters will need to be installed at the Double A tanks. These tanks feed to separate sections of the system and 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 currently has approximately 15 miles of 3" 160 PSI PVC that needs to be replaced. The pipe over the years has become brittle and is the biggest concern for Garrison Water District. Additionally, 1.5 miles of the approximate 15 miles is of most concern. Currently Garrison Water District does not have an estimated cost to replace the PVC due to the rising cost of material.

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 customers interrupted 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.

Conclusion

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.