



SHAKER HEIGHTS

Memorandum

To: Members of Finance Committee

From: Ramona Lowery-Ferrell, Director of Public Works

cc: Mayor David E. Weiss
Chief Administrative Officer Matthew Carroll
Shannon Marlin, Public Works Building Superintendent

Date: January 20, 2026

Re: Backflow Preventer Inspection and Service Contract

The Cleveland Water Department's water distribution system provides water to the City of Cleveland and most of the communities around the Cleveland area. CWD draws its water from Lake Erie. CWD then filters, treats and tests the water before it enters the distribution system. This allows communities to conveniently receive reliable quality potable water for their use. Each of the Shaker Heights' city buildings receive their water supply from the Cleveland Water Department's distribution system.

There are many factors that help keep the water supply safe. One of these factors is water system integrity control. If pressure within the system reduces then water which is within buildings could flow backward and enter the distribution system. All commercial and industrial buildings are required by law to have a functioning backflow preventer valve. The backflow preventer stops water that is in the building from flowing back into the CWD system and taking any impurities with it. Commercial buildings also use backflow preventers on treated water loops, like boiler water heating loops, to keep chemically treated water from entering the building's potable water system. All of these backflow locations are designed and intended to keep the water supply and its users safe. By law, every backflow must be tested once each year to ensure that it is functioning properly. Any valves that fail testing must be repaired or replaced. The city's backflow preventer valves range in size from $\frac{3}{4}$ " to 6" in diameter. Valves that are over 2 $\frac{1}{2}$ " in diameter are considered large valves. In total, there are 31 backflow preventer valves in the City's different facilities.

The City issues multi-year Requests for Quotes to ensure reasonable rates for the Backflow Preventer Maintenance Program. The contracted backflow maintenance program provider for the 2024 – 2027 period is Brakefire Inc dba Silco Fire and Security.

Many of the city building's backflow preventer valves are coming to the end of their useful life. In 2024, the city spent \$4,612.50 to test the backflow preventer valves. Thirteen of 28 valves failed testing. Eleven of the 13 valves were able to be repaired, but two valves required replacement. The total for testing, repairs and replacement was \$30,214.50. The average price to repair a small valve is \$1,316.50 and for a large valve is \$7,122.50. The average price to replace a small valve is \$1,731.50 and for a large valve is \$15,352.00.

The testing cost remained the same for 2025, however 15 valves failed testing. Twelve valves were able to be repaired, but three valves needed replacement. The current costs of the 2025 backflow preventer valve repairs and replacements are \$43,259.00. There are additional valve repairs and replacements which will make the 2025 total \$62,188.00; this is over the \$50,000 threshold that would require formal competitive bidding.

Public Works presented our recommendation to Safety and Public Works on January 9, 2026 and there was unanimous support.

Council member Chengelis inquired about the typical service life of a backflow preventer valve. It was noted that many of the valves are over 10 years old, but several factors including water main breaks may affect the life of the valve.

Citizen member Hren asked if the work had been completed. No, the contract will need to be increased in order to finish the work.

We are requesting support from the Finance Committee to increase Brakefire Inc's contract from \$43,259.00 to \$62,188.00 for the 2025 Backflow Preventer Maintenance Program.