

Staff Report

Report To: Operations Committee
Report From: Lara Widdifield, Director of Public Works and Engineering
Meeting Date: November 21, 2024
Report Code: OP-24-044
Subject: In-sourcing of Licensed Plumbing Services

Recommendations:

THAT in consideration of Staff Report OP-24-044 respecting In-sourcing of Licensed Plumbing Services, the Operations Committee recommends that City Council supports the creation of a Licensed Plumber full-time permanent position within the Water-Wastewater Division.

Highlights:

- The potable water backflow/cross-connection prevention contract (Backflow Coordinator) position ends on December 31, 2024.
- As a licensed plumber, the Backflow Coordinator position has been frequently dispatched to repair plumbing-related issues throughout the corporation's facilities, totalling approximately 700 hours per year.
- The City's 61 backflow prevention devices must be tested and logged annually, equivalent to 120 hours of labour per year.
- The City's Backflow/cross-connection prevention Capital Project is ongoing, with roughly ¼ of the sites remaining to be completed.
- Historically, the City has employed private plumbing contractors for repairs, at an average cost of over \$68,000 annually (2018-2023).
- In-sourcing of licensed plumbing services will result in operational efficiencies and cost savings throughout the corporation.

Strategic Plan Alignment:

[Strategic Plan](#) Priority: Service Excellence.

Through timely and proactive maintenance of the City's plumbing assets and built-in access to an on-staff professional Plumber.

Climate and Environmental Implications:

This supports the objectives of the City's Corporate Climate Change Adaptation Plan by creating conditions to minimize health and safety risks.

Through:

- The reduction of frequency and duration of plumbing leaks, monitoring and testing of the City facility backflow prevention devices, in-house repair and replacement of fixtures, piping and equipment.
- Ongoing oversight of industrial-commercial-institutional backflow check valve assembly installations.
- Collaboration with other in-house resources.

Previous Report/Authority:

None.

Background:

- The potable water backflow/cross-connection prevention contract (Backflow Coordinator) position ends on December 31, 2024.
- The Backflow Coordinator position, as a licensed plumber, has been frequently leveraged to repair plumbing-related issues throughout the corporation's facilities, totalling just under 700 hours per year. In addition, the City owns 61 backflow prevention devices that must be tested and logged annually, equivalent to 120 hours of labour per year.
- The position is also responsible for the City's ongoing Backflow/cross-connection prevention Capital Project; roughly ¼ of the sites remain to be completed.
- Historically, the City has employed private plumbing contractors for repairs, at an average cost of over \$68,000 annually (2018-2023).
- The position would also be able to assist with the water meter replacement program.

Analysis:

The City initiated its backflow (also referred to as cross-connection) prevention program in 2022 with the recruitment of a Backflow Coordinator position. A mandatory qualification for the position is a licensed plumber certification to act as a qualified person to assess, install and inspect check valve assemblies in non-residential properties.

The backflow prevention program aims to prevent non-potable water within a building from being syphoned back into the municipal water system, compromising the safety of the water supply and endangering the population. Non-residential properties, also referred to as ICI (industrial-commercial-institutional), often have non-potable systems connected to their internal plumbing. For example, a fire suppression sprinkler system, cooling system, or chlorine, soap or other chemical dispensing such as in an automated wash system. Aside from obvious contaminants like soap or chemicals, water can sit stagnant in fire suppression lines for years. If there were ever a failure or unusual situation in the watermain network that caused reverse flow (negative pressure), this contaminated water could be drawn out of the private lines and into the watermains.

Over time, in addition to and between appointments for the backflow assembly installations, the Backflow Coordinator position has assisted with miscellaneous plumbing-related issues throughout the corporation, from small tasks such as replacing the washers in a leaking faucet to extensive boiler repairs and even washroom renovations. A list of key job categories is provided below.

Plumbing Key Job Categories:

- **Boiler Systems:** Installation, repair, maintenance
- **Washroom Renovations:** Fixture replacement, flush valves, urinals
- **Water Lines & Pumps:** Leaks and other repairs, installations
- **Sewage Treatment:** Relief valves, chemical feeds, pumps
- **Preventive Tasks:** Water meter replacements, backflow testing
- **Miscellaneous Repairs:** Leaks, sink repairs, pool systems

This amount of labour gradually increased over time as the convenience and cost-effectiveness of an in-house plumber became evident. The

following list demonstrates the labour time expended on interdepartmental plumbing calls since 2022.

In-house Plumbing Services Used by year in hours (and number of work orders/jobs)

2022: 68 (24 jobs)

2023: 692.5 (124 jobs)

2024: 540* (99 jobs)

*to November 5; extrapolated to year-end would be 648

In 2024, the Backflow Coordinator also installed a value of \$52,168 in water meters, most in conjunction with service calls to install backflow prevention devices.

The City is also responsible for 61 backflow prevention devices that must be tested and documented annually, equivalent to an additional 120 hours of labour per year.

Prior to the establishment of the Backflow Coordinator position, all plumbing services were contracted with private providers. From 2018 through 2023, the City paid 10 different contractors a total of \$31,000 to \$111,000 annually, with an average annual cost of \$68,000 over that time. It should be noted that the two lowest years were after the Backflow Coordinator's tenure began, which confirms that these were partial costs as some tasks were undertaken in-house. The following list demonstrates the contracted plumbing expenses since 2018.

Contracted Plumbing Service Expenses by year

2018: \$ 52,766.80

2019: \$ 77,669.89

2020: \$ 104,924.25

2021: \$ 111,028.61

2022: \$ 30,954.39

2023: \$ 31,895.44

Along with facility-related plumbing tasks, the Licensed Plumber position would continue with the Backflow Prevention project as there are properties yet to participate in the program. It is hoped that the remainder will be completed within the next year, either independently or in association with the water meter replacement project, as that

project also requires access to existing internal building plumbing. In order to achieve 100% participation by non-residential properties, legislation will likely be required; for example, a By-law that makes the installation of a backflow prevention device mandatory and reinforces it by outlining set fines for non-compliance. Staff intend to pursue this for Council's consideration at a later date.

Backflow Prevention Project Updates

- Number of Backflow preventers installed 2022-present: 305
- Backflow preventers identified in 2017 yet to be installed: 153
- 2017 estimated cost of installing the remaining 153 backflow preventers: \$186,600

- Total number of backflow prevention devices scheduled for annual testing in 2023- 2024: 431

- Total cost of the backflow prevention program YTD: \$474, 582
 - Total cost of material: \$269,528
 - Total cost of labour: \$202,054

Furthermore, it is critical to note that having a plumber on staff will allow myriad preventative maintenance activities to be undertaken, which should effectively increase the lifespan of the City's assets and decrease downtime. There is expected to be sufficient work to ensure full utilization of a Full-Time Equivalent staff position. The Job Description shall primarily consist of proactive and reactive plumbing maintenance, backflow prevention, assistance with water meter installation and service calls, and any other duties as assigned.

Staff recommend that in-sourcing of licensed plumbing services will result in operational efficiencies and cost savings throughout the corporation where these costs are charged.

Financial Implications:

Although a formal Job Evaluation would need to be undertaken per Corporate Policies and the applicable rate negotiated with CUPE Local 1189-01, the wage rate of the new Licensed Plumber position is anticipated to be in line with that of the current Backflow Coordinator position.

It should be noted that, including overhead, the proposed wage rate is approximately \$50 per hour which is considerably lower than the typical rates billed by plumbing contractors, especially under emergency call-out conditions. For illustrative purposes, a typical contracted plumbing invoice would include an initial service call charge of \$150-175 plus \$200 per hour after the first 30 minutes, plus separate charges for equipment, plus applicable tax. Materials have not been factored into this comparison, but it also would not be uncommon for a contractor to apply a markup on parts and materials, whereas an employee would not.

The Backflow Coordinator has been using a fully depreciated vehicle reallocated from another division where an available fleet unit exists. (For clarity, this refers to a vehicle that has been fully financially depreciated based on the service life established in the asset management plan, but is still able to pass safety inspection and is in satisfactory working order; this can often gain a few more years of useful life as the City has in-house mechanics). Therefore, there would be no additional mileage costs, but the ongoing need for this piece of the fleet must be acknowledged as the proposed position would often not be able to carpool with other work units.

As this would be a reallocation of Operating Budget funding from the Contractor Payments line item to the Wages and Benefits budget line, Staff anticipate no notable impact on the overall budget resulting from this report. The wages would be funded from both the water rates (backflow prevention, water meters) and from the tax levy (facility repairs and maintenance).

Communication Strategy:

The new position will require discussion with the Union on the implementation of the permanent position, and negotiation of an appropriate pay rate. The future posting, being unionized, is expected to be advertised internally prior to seeking external candidates.

Consultation:

- Manager of Water and Wastewater
- Manager of Corporate Services
- Manager of Human Resources
- Director of Corporate Services/Treasurer

Attachments:

None.

Recommended by:

Lara Widdifield, Director of Public Works and Engineering

Submission approved by:

Tim Simmonds, City Manager

For more information on this report, please contact Lara Widdifield, Director of Public Works and Engineering at lwiddifield@owensound.ca.