Staff Report

Report To: City Council

Report From: Michelle Palmer, Interim Director of Public Works and Engineering

Meeting Date: November 30, 2026

Report Code: OP-26-042

Subject: Project Update for CAP-26-0091 – Water Treatment Plant Filter Upgrade

Recommendations:

THAT in consideration of Staff Report OP-26-042 respecting a project update for the Water Treatment Plant filter upgrade (CAP-26-0091), City Council receives the report for information purposes.

Highlights:

- The City was awarded a grant through the Investing in Canadian Infrastructure (ICIP) Green Stream Program in 2022 for the Owen Sound Water Treatment Plant Filter Upgrade Project.
- The award of the construction tender for the Water Treatment Plant Filter Upgrade Project was approved by Council on September 25, 2023.
- The scope of work included the filter underdrain, media replacement, and mechanical equipment upgrades.
- Since its initiation, the project has experienced several design challenges and unforeseen conditions which have created delays and identified opportunities for improvement in project management.

Vision 2050 - Strategic Plan Alignment:

Strategic Plan Priority: Fostering Mutually Beneficial & Respectful Relationships - Establishing, reconciling, and continually nurturing relationships that result in mutual benefit, trust and shared understanding.

Previous Report/Authority:

CR-22-091 – Award of RFP-22-042 – Filter Equipment Preselection to Xylem Canada LP

CR-23-079 – Award of RFT-23-004 – Filter Upgrade, Water Treatment Plant (Construction)

OP-25-014 – Water Treatment Plant Filter Upgrade Project Update

Budget Amendment Decision - Water Treatment Plant Filter Upgrades (pages 23 to 26)

Background:

This capital project was originally identified to Council in 2019 to add an air scour system. The original scope of the project included:

1. Installation of an air scour system to improve filter performance. This includes blowers and related mechanical and electrical components.
2. Replacement of the underdrain system, which is at the end of its useful life and cannot physically support an air scour system.
3. Replacement of the filter media at the same time.

On July 19, 2021, a purchase order was issued to R.V Anderson Associates Limited to award RFP-21-029 for engineering consulting design and contract administration services.

In 2022, staff were notified of a successful grant application through the Investing in Canada Infrastructure (ICIP) Green Stream program. The maximum amount being funded by the Federal and Provincial governments was to be $2,841,900. Council approved By-law No. 2022-091 to enter into a Transfer Payment Agreement with the Province of Ontario for $2,841,900, representing 73 per cent of the project's eligible costs at that time.

On September 26, 2022, Council approved RFP-22-042 Filter Equipment Preselection to Xylem Canada LP. The intention was to procure the equipment so that design could begin, such that once the construction contract was awarded, there would be little delay waiting for the equipment to be delivered. A novation agreement transfers responsibility for payment and ownership of the equipment from the City to the contractor at the time of construction contract award, and the City assumes it again upon contract completion.

On September 25, 2023, Council approved the Award of Tender RFT-23-004 – Filter Upgrade, Water Treatment Plant (Construction) to North America Construction (1993) Ltd., the lowest compliant bid received.

Several construction and vendor-related delays occurred throughout the project, including electrical issues in the motor control centre, building entrance modifications (to bring the blower equipment into the building), filter backwash flow meter (as the existing flowmeter did not have sufficient accuracy to work with the specified equipment), and several programming challenges, which led to delays that impacted the schedule and the budget.

The project has now reached substantial completion with the commissioning of the final filter replacement.

Analysis and Options:

This complex construction project has reached substantial completion, and completing lessons learned to identify opportunities for improvement is critical to project close-out. That process is ongoing.

Budget Development

Capital project budgets are based on pricing at the time of identification of the project. With each five-year capital budget update to Council, project costs are refined based on actual market conditions. However, this project did not receive budget updates between identification and initiation. Additionally, the project budget did not include a contingency. Projects utilize change orders (contingency funding) when unforeseen conditions or changes are required to the scope of work, project timeline, or substitutions of materials and/or products. When the construction component of the project was awarded, a 3 per cent contingency was added. Typically, complex water and wastewater construction projects carry a 25 per cent contingency.

Project Scope and Timeline

At the time of preselecting filter underdrains, blowers, and filter media, it was indicated this would allow the City's engineering consultant to complete the design by the end of 2022, with construction to be completed within one year. However, the construction tender was not released until July 21, 2023.

During the design phase, it was determined that the scope of the project should be expanded to include HVAC improvements to prevent the air scour installation from worsening an existing mould situation, and to install new UV units that the City had already purchased.

When the construction contract was awarded, construction was expected to take 65 weeks, which would have placed substantial completion in January 2025. Throughout the project, regular updates were not provided to City staff leadership or Committee to ensure a shared understanding of the challenges being experienced and their impact on the substantial completion date.

Selection and Management of Vendors

For this project, the City used one consulting firm to handle both engineering design and contract administration. This has been a typical practice in municipal infrastructure projects because it avoids onboarding a secondary vendor (including competitively procuring those services), which can save time on the overall project. However, it can create conflicts when design challenges arise during construction. Municipalities are moving away from this practice by either bringing one component in-house or procuring them separately for complex construction projects.

Additionally, the City does not currently have a formal vendor performance program. Larger municipalities have increasingly implemented vendor performance management programs with formal evaluation criteria and consequences that affect future contracts.

Next Steps

As staff develop increased consistency and robustness in project management, several actions have been identified to address the challenges noted above. These actions include:

- projects will be reviewed during capital updates (annually) to ensure that updated costing has been evaluated and that an accurate contingency is in place;

- project status will be updated monthly; these statuses and related comments will be utilized by project sponsors to closely monitor project progress and enable them to support challenges in real time;
- regular updates will be brought to Committee throughout the life of a project; and
- implementation of standardized contracts for consulting and development of education for project leads to ensure they are well-versed in the contract requirements
- modification to future bid solicitation documents to clearly outline roles, responsibilities and expectations
- review of criteria for when to use a pre-qualification process and when to sperate components of the consulting into multiple contracts
- identifying best practice to inform the implementation of a formal vendor performance program.

These components will be brought forward and implemented under a previously planned 2027 initiative "Implement Project and Change Management Standardization". This initiative will focus on strengthening consistency, governance, accountability, and outcomes including improving clarity of roles and responsibilities for project leads and project sponsors.

Resource Alignment:

Financial Resources

The final approved budget for this project was $6,328,850 with grant funding of $2,841,900. As the project has reached substantial completion, the City is awaiting final payment certificates, and staff anticipate the project shall not exceed the approved budget.

Human Resources

Currently, staff with operational expertise manage capital projects for water and wastewater, in addition to core service activities. Having dedicated project management of complex construction projects is critical for success going forward.

Time and Scheduling

The original construction period targeted substantial completion by January 2025. By the date of this meeting (November 2026), the project has reached substantial completion.

Technology and Infrastructure

The City recently (in December 2025) implemented ProjectTeam, a project management software. The software increases project visibility for leadership and impacted staff. It has also enabled increased oversight of requested change orders and scheduling changes.

Climate and Environmental Impacts:

There are no anticipated climate or environmental impacts.

Communication and Engagement:

This report has been published with the agenda in advance of the meeting.

Report Developed in Consultation With:

Water Treatment Plant Superintendent

Purchasing and Claims Coordinator

Attachments:

None.

Submission approved by:
Tim Simmonds, City Manager

For more information on this report, please contact Michelle Palmer, Interim Director of Public Works and Engineering, at mpalmer@owensound.ca or 519-376-4440 ext. 1246.