



City of
Peterborough

To: Members of the General Committee

From: Cynthia Fletcher,
Commissioner of Infrastructure and Planning Services

Meeting Date: February 10, 2020

Subject: Report IPSES20-009
Creation of a Capital Project for IFAS Replacement and
Allocation of the 2020 Ontario Community Infrastructure
Fund

Purpose

A report to recommend the creation of a capital budget for the Integrated Fixed Film Activated Sludge Replacement project, inform Council of the recommended use of the 2020 Ontario Community Infrastructure Fund (OCIF) allocation and if the Investing in Canada Infrastructure Plan- Green Stream application is successful, enter into a transfer payment agreement with the province.

Recommendations

That Council approve the recommendations outlined in Report IPSES20-009 dated February 10, 2020, of the Commissioner of Infrastructure and Planning Services, as follows:

- a) That a \$3,560,000 Capital Project be created in the 2020 budget for the Integrated Fixed Film Activated Sludge Replacement (IFAS) Project funded as follows:
 - i) \$417,277 – Investing in Canada Infrastructure - Green Stream
 - ii) \$2,240,654 – 2020 Ontario Community Infrastructure Fund allocation
 - iii) \$902,069 – Wastewater Reserve Fund

- b) That if the Investing in Canada Infrastructure – Green Stream funding application is successful, the Mayor and Clerk be authorized to sign the Investing in Canada Infrastructure – Green Stream transfer payment agreement between Her Majesty the Queen in Right of Ontario and The Corporation of the City of Peterborough in a form acceptable to the Commissioner of Infrastructure and Planning Services and the City Solicitor.

Budget and Financial Implications

The remaining uncommitted balance of the WWRF is \$757,602, after the allocation to the IFAS project of \$902,069.

Background

Brief Description of the Work

The City of Peterborough's Wastewater Treatment Plant (WWTP) utilizes Integrated Fixed Film Activated Sludge (IFAS) media within the secondary treatment process. This media was evaluated during a comprehensive process audit in 2008 and the Plant capacity was re-rated to the current capacity of 68,200 m³/day from 60,000 m³/day. Use of the current capacity is 44,000 m³/day on average.

Failure of the IFAS Containment Structure, in 2018, has resulted in the WWTP being out of compliance on its ECA and is now operating at a reduced capacity. Corrosion of the containment structures has caused deterioration to the point of failure and loss of media, resulting in a de-rating of plant capacity to 63,800 m³/day.

The containment structure for Tank #2 failed on Oct 25, 2018. The remaining containment cages and structures are reaching the end of life. IFAS replacement is required to restore the plant's capabilities / capacity and restore performance and reliability.

The City must reinstate the full previous rated capacity (68,200 m³/day) using an IFAS process which meets with the MOECP's approval.

R.V. Anderson Engineering Consulting Services Retained

On September 18, 2019 through Report IPSES19-013, the Administrative Staff Committee, through its delegated authority as set out in Chart 1 d) i) of Appendix A of the City's Procurement By-law 18-084 awarded RFP P-012-19 for Consulting Services for Integrated Fixed Film Activated Sludge Replacement to R.V. Anderson Associates Limited. The consulting engagement includes the following:

- fully engineered study, complete with structural drawings and technical documents, that would accurately define the proposed IFAS to any Consultant and/or General Contractor, ("GC"), for purchase and/or installation.
- fully completed Invitation to Tender, ("ITT") document, using the City's template, for final review and posting by the City; an accurate (+/- five (5) percent) estimate to execute the proposal;
- full Project Administration costs to oversee the project from the time of ITT issuance to final commissioning.

Investing in Canada Infrastructure Plan (ICIP)– Green Stream

- On October 25, 2019 the first ICIP – Green Stream intake opened in Ontario. Municipal governments serving up to 100,000 residents are eligible for funding for critical water, wastewater and storm water rehabilitation and replacement projects focused on health and safety improvements. The City of Peterborough's cap for funding is \$417,277, shared by the federal and provincial governments.
- On January 22, 2020 an application for the ICIP – Green Stream was submitted for the IFAS project. The project must be complete by October 31, 2026. Successful applicants will be informed in winter 2020 and are required to obtain a municipal by-law to enter into a Transfer Payment Agreement with the provincial government.

Recognizing the constraints on the 2020 Budget and following the study by R.V. Anderson, staff were intending to introduce the IFAS project in the 2021 budget. When the Green Stream funding became available, staff reviewed eligible projects and proposed the IFAS project. Rationale for proposing this project included;

- There is a regulatory requirement for compliance; currently the City's system is non-compliant
- The project will be costly to fund solely through City funds
- The project benefits the City from a growth capacity and community resiliency perspective

Ontario Community Infrastructure Fund (OCIF) Formula-Based Component

As reported to City Council in Report CPFS14-025 dated September 2, 2014, Ontario announced the Ontario Community Infrastructure Fund (OCIF) which at the time was considered a predictable, annual, non-application based provincial funding source to support the revitalization and repair of roads, bridges, water and wastewater infrastructure and the development of asset management plans in small, rural and northern communities.

On July 4, 2016, Ontario launched the expanded OCIF. As part of this launch, the Province continued to provide support for municipal infrastructure projects by increasing the amount of stable, predictable formula-based funding. In addition to enhanced funding being provided through the expanded OCIF, the Province had updated the program design based on feedback from municipalities:

- Recipients may accumulate annual formula-based grants for up to five years to address larger priority infrastructure projects.
- Eligible expenditures have been expanded to include water and wastewater optimization activities, loan payments on new core infrastructure projects, and municipal staff time dedicated to asset management planning.
- Eligible expenditures have been clarified to include the construction of new core infrastructure to address an existing health or safety issue (e.g., connecting existing households on septic systems to wastewater infrastructure).

In March 2019, the Ministry of Infrastructure communicated plans to work with the Association of Municipalities Ontario and municipalities to review the design of the program. Because of the uncertainty of the funding under the new provincial government, an OCIF allocation was not included in the 2020 draft capital budget.

In January 2020, the Ministry of Infrastructure announced the City's 2020 OCIF allocation of \$2,240,654, with further comments regarding the review of the program design. The City's existing Transfer Payment Agreement allows for the transfer of funds without the necessity of a new by-law. Furthermore, the City may accumulate the formula-based grants for up to five years. For example, grant funding received in 2020 must be spent by December 31, 2024. Annual reporting will be required to forecast each year how the City plans on using the funding. Reports must also be submitted annually for each project specifying how the funds were spent.

IFAS Project Funding

R.V. Anderson provided a preliminary construction budget of \$3.56 million for the IFAS project, which includes a 25% project contingency. If the ICIP- Green Stream application is successful, staff propose the project be funded as follows:

\$ 417,277 – ICIP - Green Stream funding cap

\$2,240,654 – 2020 OCIF funding allocation

\$ 902,069 – Wastewater Reserve Fund

\$3,560,000 Total Construction Budget

Summary

The IFAS system at the Waste Water Treatment Plant needs to be replaced to ensure the City is in compliance with its ECA. Staff are recommending that a capital project is created in the 2020 Budget for the Integrated Fixed Film Activated Sludge Replacement project and, also, recommending the use of the 2020 Ontario Community Infrastructure Fund (OCIF) allocation for the project.

Submitted by,

Cynthia Fletcher
Commissioner of Infrastructure and Planning Services

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