



## MUNICIPALITY OF **West Elgin**

### Staff Report

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**Report To: Council Meeting**

**From: Magda Badura, CAO/Treasurer**

**Date: 2022-06-23**

**Subject: Rodney Wastewater Treatment Plant Refurbishment Project**

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#### **Recommendation:**

That West Elgin Council hereby receives the report from M. Badura, CAO/Treasurer re: Rodney Wastewater Treatment Plant Refurbishment Project;

And that, West Elgin council directs staff to transfer \$800,000 previously budgeted to lagoon dredging towards mechanical upgrades as part of the Rodney Wastewater Treatment Plant Refurbishment Project;

And That cost of lagoon dredging at the Rodney Wastewater Treatment Plant be covered by 2022 OCIF funding.

#### **Background:**

In 2019, through the Investing in Canada Infrastructure Program (ICIP), the Government of Canada designed to create long-term economic growth, build inclusive, sustainable and resilient communities and support a low-carbon economy.

Through ICIP, the federal government is providing \$11.8 billion in federal infrastructure funding to cost-share projects under the following four streams:

- Public Transit
- Green Infrastructure
- Community, Culture and Recreation
- Rural and Northern Communities

The Green stream includes up to \$7.12 billion in combined federal (\$2.85 billion), provincial (\$2.35 billion) and other partner (\$1.92 billion) funding over 10 years for projects across three federal sub-streams that advance outcomes associated with climate change mitigation, environmental quality and disaster mitigation.

The target funding was allocated to the Municipalities with a population of 100,000 or less. Indigenous communities in Ontario with a population of 100,000 or less; and Local Services Boards, Conservation Authorities and not-for-profit organizations that own water, wastewater and stormwater infrastructure and serve populations under 100,000.

In January-2020 grant application was submitted outlining number of deficiencies within the plant along with the list of objectives. The following items were included in the application process.

1. The replacement of the secondary clarifier.
2. Restoration of the storage lagoon by clean-out of wasted sludge storage.

3. Replace deteriorated equipment that is no longer functional and proven ineffective and inefficient.

The refurbishment of the Rodney Wastewater Treatment Plant was approved in the 2021 Capital Budget. The cost of the project was estimated to be \$2,355,000.00.

Unfortunately, Rodney Wastewater Treatment plant refurbishment project cannot be delayed any longer and the mechanical replacement must pass through certain execution sequence in order to maintain the operation of the plant with the minimum disturbance.

The following options are being considered:

1. Rodney WPCP does not have a redundant secondary clarifier tank, so the replacement of existing secondary clarifier mechanism requires a complete decommission of the clarification system and bypassing the influent to the lagoon.
2. The secondary clarifier replacement process might roughly take up to two months before the completion of the replacement and commissioning of the new mechanism.
3. The lagoon has the capacity to receive all plant influent during the replacement process and thus can be prepared ahead of time by starting to decant the lagoon and send the decant to the front end of the plant for treatment.
4. The existing screening system will be removed once the new screening system arrives on site and is ready for installation. The new screening system can be installed after the removal of the existing screen or during the replacement of the secondary clarifier mechanism while the influent is diverted to the lagoon. The existing screen is currently non-operational, and its removal will not affect the current plant operation. An arrangement is needed to divert the influent directly to the aeration tanks to allow for the installation of the new screen without disturbance, also it is recommended to arrange for the readiness of the power supply and electrical connection of the new screen before its installation.
5. The processes of removal of existing surface aerators and installation of the new aeration system will be conducted in one aeration tank while directing the flow to the other tank and redirect the flow to the first tank upon completion of installation and commissioning of the first tank. The aeration tanks would also require cleaning from all rags and sludge that have accumulated over the years at the bottom of the tanks.
6. Three air blowers will be supplied and installed in the exiting empty garage in the main building.

It is recommended to order the required secondary clarifier mechanism, air blowers, aeration piping, fine bubble diffusers, and the screen in the early stage of the project. Also, it is recommended to uninstall the existing FRP enclosures of the secondary clarifier and the screen unit before the receipt of the ordered equipment.

Cost estimates are based on the preliminary design and 2022 dollars. Construction cost is estimated to be \$1,914,800, for the lowest to \$3,350,900 for the highest.

Due to volatile market it is estimated that the mechanical replacement will not be completed with the budget outlined in the grant application and is recommended that \$800,000 previously allocated to lagoon dredging be transferred to cover the possible shortfall of mechanical replacement.

#### Future plans:

Request for Tender has been deferred to September 2022 in hopes to obtain better prices. Currently we are in a middle of a volatile market. Construction, products and materials are in high demand, which drive up costs, as well as other seasonal considerations which impact the project costs. In addition, custom materials, products or equipment become a challenge to procure in a busy marketplace. Limited funds and careful planning is required to eliminated a rush delivery on some materials that can come at a premium price.

#### **Financial Implications:**

Total eligible funding available through the ICIP Grant for the Municipality of West Elgin is \$2,355,000, of which the Federal Government provides 40% (\$942,000), Provincial Government provides 33.3% (\$784,921.50), and the Municipality is responsible for 26.7% of total eligible cost plus any project costs over-and-above this.

Rodney Sewage reserve balance as of Dec 31 2021 is \$256,969.66

OCIF Funding reserve balance as of Dec 31 2021 is \$831,592.75

It is recommended that OCIF Funding be used to cover the shortfall.

**Report Approval Details**

Document Title:	Rodney Sewage Refurbishment Project - 2022-22-Administration Finance.docx
Attachments:	<ul style="list-style-type: none"><li>- Basis of Design Report.pdf</li><li>- 20220525 - 215817 - West Elgin-Rodney WWTP Upgrades.pdf</li></ul>
Final Approval Date:	Jun 20, 2022

This report and all of its attachments were approved and signed as outlined below:

Jana Nethercott