



# Staff Report

## Infrastructure & Public Works

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**Report To:** Special Meeting of Council  
**Meeting Date:** September 21, 2017  
**Report Number:** CSPW.17.098 - REVISED  
**Subject:** Budget Increase Request for Clean Water and Wastewater Fund Projects  
**Prepared by:** Allison Kershaw, Manager of Water and Wastewater Services

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### A. Recommendations

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THAT Council receive Staff Report CSPW.17.098 entitled, "Budget Increase Request for Clean Water and Wastewater Fund Projects";

AND THAT Council approve increasing the budget by \$140,000 from \$360,000 to \$500,000 for the Thornbury Wastewater Treatment Plant and Thornbury Water Treatment Plant Roof Replacement project, with the additional funding coming from the Wastewater and Water Asset Replacement Reserve Fund at \$70,000 each;

AND THAT Council approve increasing the budget by \$140,000 from \$360,000 to \$500,000 for the Elgin and Moore Sewage Pumping Station Upgrades project, with the additional funding coming from the Wastewater Asset Replacement Reserve Fund;

AND THAT Council approve increasing the budget by \$440,000 from \$435,000 to \$875,000 for the Craigeith Wastewater Treatment Plant and Thornbury Wastewater Treatment Plant Ultra Violet Disinfection Unit Replacements, with the additional funding coming from the Wastewater Asset Replacement Reserve Fund; and,

AND THAT Council direct Staff to bring back a Staff Report once the Craigeith Wastewater Treatment Plant and Thornbury Wastewater Treatment Plant Ultra Violet Disinfection Unit Replacements tender is awarded to inform Council of final costs.

### B. Overview

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This report requests a \$140,000 increase to the existing Thornbury Water Treatment Plant (WTP) and Thornbury Wastewater Treatment Plant (Thornbury WWTP) Roof Replacements budget of \$360,000 to a total budget of \$500,000. This project has been granted funding from the Clean Water and Wastewater Fund (CWWF) in the amounts of \$180,000 from the Federal Government and \$90,000 from the Provincial Government.

Further, this report requests a \$140,000 increase to the existing Elgin and Moore Sewage Pumping Station (SPS) Upgrades budget of \$360,000 to a total budget of \$500,000. This project has been granted funding from the CWWF in the amounts of \$155,807 from the Federal Government and \$77,904 from the Provincial Government.

Finally, Staff requests a \$440,000 increase to the existing Craigeith WWTP and Thornbury WWTP budget of \$435,000 to a total budget of \$875,000. This project has been granted funding from the CWWF in the amounts of \$217,500 from the Federal Government and \$108,750 from the Provincial Government.

## **C. Background**

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### **Clean Water and Wastewater Fund**

The Clean Water and Wastewater Fund (CWWF) is a federal program designed to accelerate short-term community investments, while supporting the rehabilitation and modernization of drinking water, wastewater and stormwater infrastructure, and the planning and design of future facilities and upgrades to the existing systems. The Federal government is providing up to 50% funding and the Provincial government will invest up to 25% in these projects, with the Town covering the rest of the costs. In order to be eligible for the funding, the end dates of the projects cannot go beyond March 31, 2018, albeit there is opportunity to defer up to 40% of costs until after March 31, 2018, subject to application.

### **The Thornbury WWTP and Thornbury WTP Roof Replacement**

The roofs at the Thornbury WWTP and the Thornbury WTP facilities are in a poor state of repair and require immediate replacement. Three (3) out of the four (4) roofs are currently leaking on wastewater treatment equipment and Programmable Logistic Control (PLC) panels. The Town has tendered the project twice and failed to receive a tender that was within the budgeted amount both times.

### **Elgin and Moore SPS Upgrades**

The back-up generators at both the Elgin and Moore SPSs are aged and Staff are no longer able to get parts to keep them in a fit state of repair. The upgrade project will replace the existing back-up generators at both SPSs. These generators are essential to move sewage to the treatment facilities during power outages. If the SPSs experience a power outage, then the back-up generators are inoperable, there is a potential for sewage to backflow into residents' homes. All tenders received exceeded the Town's approved budget for this project.

## **Craigeith and Thornbury WWTPs UV Replacements**

The UV disinfection units at both the Craigeith and the Thornbury WWTP facilities provide a critical step in treating Town sewage. The Town is mandated to maintain the final effluent with an E.coli concentration below 100cfu/ml at all times, as per Ministry issued Environmental Compliance Approval. The UV disinfection units are required to meet this level. Currently, both of the units have reached the end of their useful lives and require replacement. Although Staff have not received bids for construction with this project yet, the Engineering Estimate came in significantly above the Town's budgeted amount. To prevent a delay in awarding a tender, Staff request an increase to the budgeted amount now.

### **Reasons for Budget Overages**

After reviewing the original estimates of the works for all CWWF projects indicated above, it appears as though Staff underestimated the costs associated with completing the works. Staff estimated the original budgets by contacting key equipment suppliers and including additional cost allowances for other equipment, engineering and installation. Staff suspect that with the availability of other work for contractors, constrained time lines, and tendering late in the construction season the Town has experienced inflated bid results.

Currently the Town has an opportunity to utilize the CWWF funding for these projects. If the funding was not available, these projects would still need to be completed in the next couple of years to protect Town infrastructure and ensure the Town is able to meet its compliance limits.

## **D. Analysis**

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These three projects have a significant portion paid for through grants from both the Federal (50%) and Provincial (25%) Governments through the Clean Water and Wastewater fund (CWWF). Although the projects have come in significantly over-budget staff are still recommending to proceed as all of these assets have reached the end of their useful lives and are essential for the Town to continue supplying clean water and properly treated wastewater.

Once Staff have awarded the UV Replacement tender a Staff Report will be brought back to Council to provide an update on the final figures.

## **E. The Blue Mountains Strategic Plan**

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Goal #5: Ensure Our Infrastructure is Sustainable

## **F. Environmental Impacts**

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Replacing the roofs at the Thornbury WWTP and WTP will ensure Town equipment is protected from the elements and able to meet mandated treatment requirements.

Upgrading Elgin and Moore SPSs will ensure continued ability to move sewage to the treatment facilities during power outages and prevent sewer back-ups in residents' homes.

Replacing the UV disinfection units at both the Craigleith and Thornbury WWTP will allow Staff maintain compliance with the Ministry issued Environment Compliance Approval in regards to E.coli, and prevent E.coli from entering local recreational waterways.

## **G. Financial Impact**

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With the news that the Town has been approved for the CWWF, Staff are recommending that additional Town funding be used to complete these projects as the Town will still be receiving \$830,000 through the grant for these projects. Staff will continue to work with CWWF officials to see if additional grant funding can help offset these budgets over-runs.

For the Water and Thornbury Wastewater Treatment Plant roofs, the original budget was \$360,000 with \$180,000 from the Federal grant, \$90,000 from the Provincial grant and \$40,000 from the Water and \$50,000 from the Wastewater Asset Replacement Reserve Fund. With the bid coming in above the \$360,000 Staff are recommending that the additional \$140,000 be funded \$70,000 from each of the Water and Wastewater Asset Replacement Reserve Fund.

For the Elgin and Moore Sewage Pumping Stations the original budget of \$360,000 was funded by \$155,807 Federal grant, \$77,904 Provincial Grant and \$126,289 from the Wastewater Asset Replacement Reserve Fund. With the bid being above the \$360,000 budget Staff are recommending that the budget be increased by \$140,000 with the funding coming from the same reserve fund.

With the Craigleith and Thornbury Wastewater Treatment Plant UV Replacements the original budget was \$435,000 with \$217,500 for Federal funding, \$108,750 of Provincial funding and \$108,750 of funding from the Wastewater Asset Replacement Reserve Fund. With the Engineering Estimate coming in well over-budget staff are recommending that the additional \$440,000 be funded from the Wastewater Asset Replacement Reserve Fund.

Although these projects did come in a combined \$720,000 over-budget Staff are still recommending to move forward with the projects as the Town will still receive the \$830,000 in grant funding that would have otherwise been funded from the reserve funds. An additional wrinkle is these projects must be at least 60% complete by March 31, 2018. Therefore, the Town does not have the luxury of waiting and re-tendering at a better time and still take advantage of the CWWF program.

**Chart 1: Total Costing Breakdown**

<b>Project</b>	<b>Original Budget</b>	<b>Engineering Costs</b>	<b>Tender Costs</b>	<b>Total Cost</b>	<b>Shortfall Amount</b>	<b>Revised Budget</b>	<b>Proposed Increase<sup>(2)</sup></b>
<b>WWTP &amp; WTP Roof Replacements</b>	\$360,000	\$24,600	\$470,300	\$494,900	\$134,900	\$500,000	\$140,000
<b>Elgin &amp; Moore SPS Upgrades</b>	\$360,000	\$61,300	\$408,100	\$469,400	\$109,400	\$500,000	\$140,000
<b>WWTPs UV Replacements</b>	\$435,000	\$40,000	\$812,000 <sup>(1)</sup>	\$852,000	\$417,000	\$875,000	\$440,000

Notes: (1) Engineering Estimate

(2) The proposed increase exceeds the expected shortfall to include a contingency allowance

## **H. In consultation with**

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Maurice Dempster, Wastewater Supervisor

Sam Dinsmore, Deputy Treasurer/Manager of Accounting and Budgets

Ruth Prince, Director of Finance and IT Services/Treasurer

## **I. Attached**

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None.

Respectfully submitted,

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Allison Kershaw  
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Director of Infrastructure and Public Works

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