Report to Council

Department:	Infrastructure Services
Division:	Environmental Services
Date:	April 2, 2024
Prepared by:	Kevin Girard, P.Eng., MBA Director, Infrastructure Services Kate Giurissevich, CPA, CA Director, Corporate Services/Treasurer
Report Number:	Environmental Services-2024-02
Subject:	Housing-Enabling Water Systems Fund
Number of Pages:	17

Recommendation(s)

That Environmental Services 2024-02 entitled, "Housing-Enabling Water Systems Fund Application" prepared by Kevin Girard, Director, Infrastructure Services and Kate Giurissevich, Director of Corporate Services dated April 2, 2024 be received, and

That Council approve Option 1 **or** Option 2 as outlined below:

Option #1: Proceed with Grant Application

That Council direct Administration to make an application to the Housing-Enabling Water Systems Fund for the design and construction of the Colchester Water Pollution Control Plant;

That Council appoint Stantec Consulting Ltd. to provide engineering design services in the amount of $2,143,065.60 (including non-refundable HST) to complete preliminary and detailed design of the Colchester Water Pollution Control Plant in accordance with the completed request under Section 22 of the Town of Essex Procurement By-Law 2129; and

That Council authorize the expenditure of $2,453,433.60 (including non-refundable HST) to complete the design of the Colchester Water Pollution Control Plant with funding of 16% from Ward 3 Wastewater Reserve and 84% from the Development Charges Reserves.

- OR -

Option 2: Do not proceed with Grant Application

That Council direct Administration to not submit the application for grant.

Purpose

In accordance with By-Law 1924 for the Delegation of Authority, Council approval is required to submit an application for grant funding. In addition, Council's approval is required to waive the requirements for proposals, tender and quotations for consulting and professional services under Section 22.02 of the Town's Procurement and Disposal of Goods and Services By-Law. Councils approval is also required for budget requests outside of the annual approved budget.

Background and Discussion

Housing-Enabling Water Systems Fund (HEWSF)

In November 2023, as part of the Building Faster Fund the Provincial Government announced the Housing-Enabling Water Systems Fund (HEWSF) to help achieve its goal to build 1.5 million homes by 2031. This grant is an investment from the Province of $200 million over 3 years to help municipalities repair, rehabilitate, and expand critical drinking water, wastewater and stormwater in an effort to promote growth and enable housing development. *As of March 21, 2024, this was increased by the Province by $625 million to a total of $825 million in available funding.* The objective the of grant is to:

- Enable growth and housing opportunities;
- Increase access to potable water; and
- Increase treatment and/or management of wastewater and stormwater.

The Province will fund a maximum of 73% (up to $35 million) with the municipality required to fund all remaining eligible project costs, or minimum of 27%. However, there is no information on how the funds will be disbursed, therefore, there is no way at this time to determine the amount of funding that may be offered to municipalities.

The project conditions set by the Province are:

- That construction cannot start before **September 30, 2024** and be completed by **March 31, 2027.**
- Project soft costs such as design are eligible back to April of 2023.
- Projects should enable housing.
- Project must have completed their Duty to Consult (DTC) and Environmental Assessments (EAs).
- Projects should be informed by the Town's Asset Management Plan.
- Buildings must meet or exceed applicable energy efficiency standards.
- Projects must meet or exceed the requirements of the highest published accessibility standards applicable.

Considering the criteria of the grant, the only project that would be applicable at this time is the expansion of the Colchester South Sewage Lagoon.

Colchester South Sewage Lagoon Expansion

On July 19, 2022, Council authorized Administration to complete an Environmental Assessment (EA) of the Colchester Sanitary System to address potential future residential growth in the Colchester and Lakeshore Residential Settlement Areas, namely the Colchester Bay

development along with multiple other subdivision development currently in the Planning stages of development.

On July 17, 2023, Council received and endorsed the results of the *"Colchester South Sewage Works Expansion – Schedule 'C' Municipal Class Environmental Assessment"* along with a presentation from the Engineering Consultant who completed the Environmental Study Report (ESR), Stantec Consulting. The report was finalized, and a Notice of Completion and subsequent 30-day public review process completed in December of 2023. A copy of the final report can be found on the Town's website at https://www.essex.ca/en/town-hall/publicationsplansandreports.aspx.

The recommendation from the ESR endorsed by Council was to replace the existing wastewater lagoon system with a Sequencing Batch Reactor (SBR) Facility, similar to the design and layout of the current Essex Wastewater Pollution Control Plant located on North Malden Road. The recommendation from the December 2023 EA is to make system conveyance upgrades and to construct Phase 1 (in blue) of the SBR facility displayed in Figure 1. In detail, this project includes the following:

- Upgrades to lift stations No. 2, 3, 5, 6, and 7 within the conveyance system.
- Upgrades to influent (main) pumpstation No. 1 at the lagoon site
- Construct a Sequencing Batch Reactor (SBR) wastewater treatment facility, including:
    - Construction of new headworks - Screening & Grit Building
    - Three (3) SBR tanks
    - Two (2) Aerated Sludge Holding Tanks
    - Blower Building
    - Ultraviolet (UV) disinfection building
    - Decommission lagoon cells into wetlands and wet weather flow attenuation pond

Figure 1: Colchester Lagoon Expansion Conceptual Design

As per Table 11.2 of the Colchester South Sewage Works Expansion EA (Table 1 herein), the estimated cost of the necessary upgrades to the Colchester Sanitary System to accommodate future growth was displayed as follows:

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Table 1: Opinion of Probable Capital Cost for Preferred Solution (Table 11.2)

Item	Description	Probable Cost
1	Pumping Station No. 1 Upgrades	$1,600,000
2	Pumping Station No.'s 2, 3, 5, 6, and 7 Upgrades	$3,000,000
3	Wastewater Treatment Facility • Screening and Grit Building • Blower Building • SBR (Three Tanks) • Aerated Sludge Holding Tank (Two Tanks) • U.V. Disinfection Building	$24,000,000
	Sub-total Construction Cost	$28,600,000
	Contingency Allowance (30%)	$8,600,000
	Engineering Allowance (15%)	$5,600,000
	TOTAL CAPITAL COST (excluding taxes)	$42,800,000

Application to the Housing-Enabling Water Systems Fund

For the first time in a long time, there is a water system fund available that the Town of Essex would be eligible for. Considering the cost of the plant proposed in Table 1, this is an opportunity to construct the expansion to the system that might otherwise not be built by the Town or may be too financially burdensome on the Town and the development community. Therefore, it is the recommendation of Administration to proceed with an application to the Housing-Enabling Water Systems Fund for the improvements to the Colchester Wastewater System.

As the Town's engineer of record on many water projects as well as the engineering consultant of the Colchester Sewage Works Expansion EA, the Town has engaged Stantec Consulting to discuss the possibility of constructing this project in accordance with the conditions of the HEWSF application. Through their experience, it was determined that to build a plant of this nature takes approximately 24 months. Considering the Essex Pollution Control Plant,

construction completed in June 2006, took approximately 22 months, this timeframe seems practical given its similarity in technologies, layout, and conceptual design. Since the HEWSF requires that projects are to be completed before March 31, 2027, this would mean that the detailed design, tendering, and award of the construction contract would need to be completed by April of 2025. The design of a facility of this nature is complex and is estimated to take minimum of sixteen (16) months, however, as an international consulting firm, Stantec Consulting has committed to pooling global resources to design this facility on an accelerated schedule within one (1) year, including all necessary permits, permissions from MECP, and other review agencies. **Therefore, in order to complete this project in accordance with the HEWSF, it would require the Town to sole source to Stantec Consulting to complete the design starting immediately in April 2024 at a cost of $2,143,065.60 including non-refundable HST, ahead of finding out whether we would be successful in our application to the fund.**

The proposed schedule drafted by the Town and Stantec is outlined in Table 2. It should be noted that this schedule does not include any contingency for major delays, however, it would be necessary in order to receive the full funding for this program.

Table 2: Project Schedule

Milestone	Description	Projected Date
Report to Council	Authorization to complete design and apply for HEWSF grant	April 2, 2024
Grant Application Due	**Submit Grant by**	**April 19, 2024**
Preliminary Design Initiation Meeting	Pre-Design Initiation Meeting	Early April 2024
Submission 1	Town Review of Draft Pre-Design Report, 30% Design Submission	May 2024
Submission 2	Permits and Approvals Application	June 2024
Submission 3	Final Pre-Design Report, 30% Design Submission	June 2024
Detailed Design Initiation Meeting	Detailed Design Initiation Meeting	June 2024
Announcement of Grant	**Province notifies if we were successful or not**	**est. July 2024**

Submission 4	Town Review of 60% Design Submission	September 2024
Submission 5	Town Review of 90% Design Submission	November 2024
Submission 6	Town Review of 100% Design Submission	Late December 2025
Submission 7	Submission of Tender Documents	Mid-January 2025
Tender Period	40 calendar days	February 2025
Tender Award	Report to Council	March 2025
Construction Start	Construction on Plant	April 2025
Construction Completion	Construction of Plant Completed	March 2027
Maintenance Period	1 year warrantee period completed	March 2028

In addition, the Town requested Stantec to provide a proposal to complete the contract administration and inspection services for the Town in order to be able to make a complete application to the HEWSF, which was provided at cost of $2,322,000 (not including HST). With this information, the total cost of the project that would be included in the application are shown in Table 3.

Table 3: Estimated Cost of the Project

Item	Description	Estimated Cost
1	Pumping Station No. 1 Upgrade	$ 1,600,000.00
2	Pumping Station No. 2, 3, 5, 6, 7	$ 3,000,000.00
3	Wastewater Treatment Facility - Screening and Grit Building - Blower Building - Three (3) SBR tanks - Two (2) Aerated Sludge Holding Tanks - UV Disinfection Building	$ 24,000,000.00
	Sub-Total Construction Cost	$ 28,600,000.00
	Contingency (25%)	$ 7,150,000.00
	Engineering Design	$ 2,106,000.00
	Miscellaneous Expenses	$ 305,000.00
	Engineering Contract Administration & Inspection	$2,322,000.00
	Total Cost	**$ 40,483,000.00**
	Total Construction Cost incl. net HST	**$ 41,195,500.80**

Benefit vs. Risk

This section has been prepared to present Council with the potential risks associated with the project and grant application.

Risk: The Town completes the design of the plant but doesn't receive the provincial funding.

- The project will sit "shovel-ready" until Council commits to the increase in debt and funding sources proposed in the Financial Impact Section
- Will make this project more desirable for other grant applications in the future.
- Spending the money on the design now will be less expensive than it will be in the future due to anticipated inflationary increases.
- The Town would be required to take on debt (approx. $1.9 million) which would be repaid through development charges as they are collected.

Risk/Benefit: The Town receives the full eligible funding from the province (73%).

- Council will have the option to review the terms of the agreement if we are successful in receiving any funding.
- If successful, Administration will make recommendations based on the proposed agreement from the province.
- The Town would then be required to fund the remaining 27% of the project which is broken down within the Financial Impact section
- Council still has the option to turn down funding when presented, however, the costs for design will have been incurred however there could be a negative political perception of refusing awarded grant money from both the local and upper tiers of government as well as the public.

Risk/Benefit: Billions needed in province-wide need for funding to accommodate growth, especially in light of changes to DC Act related to Bill 23.

- It's likely that funds will be disbursed to municipalities who provide the greatest potential for housing starts, which may be focused more on large cities, upper-tiers, joint applications, and municipalities in the GTA.
- Disbursement of funding could also be based on economic development growth in the region (i.e. Battery Plant, New International Bridge)

Risk/Benefit: The Town Builds the plant and growth stalls.

- Increased cost to operate the plant as opposed to the lagoon which would need to be incorporated into the Town's Existing Wastewater Rates.
- Development Charges reserve used for plant expansion expenses will take longer to recover. The Town would need to explore flexible payment arrangements in the case monies from Development Charges are not sufficient to cover the required payment. This could mean and increase in interest on the outstanding loan balance.
- SBR plant is more environmentally friendly (must meet more stringent effluent criteria) and helps protects the Town's drinking water source at the Harrow-Colchester Water Treatment Plant.
- An SBR plant will help to reduce phosphorus levels (cause of algal blooms and blue-green algae) in Lake Erie in accordance with the Western Basin of Lake Erie Collaborative Agreement signed by Ontario and Michigan in 2015.
- The Town's current lagoon system is aging and becoming less reliable and will require significant capital in the medium term (5-10 year) horizon.
- Building the plant will create a wet weather attenuation pond and upgrades to the liftstations which will reduce the risk of basement flooding in Colchester.

Financial Impact

As outlined within this report, to be eligible for the HEWSF, it is necessary to initiate the detailed design immediately and in advance of finding out if the Town had a successful grant

application. Therefore, this would require that Council authorize the single sourcing of Stantec Consulting in the amount of $2,143,065.60 including non-refundable HST plus an additional budget of $310,368.00 for miscellaneous expenses related to the project. This would require long-term debt borrowing by the Development Charge Reserve of approximately $1.9 million given that neither the Wastewater Reserve nor Development Charge Reserve has sufficient balance to fund the entirety of the expense. Which means there is an incidental interest cost to this expenditure as well of $229,867.84. The entire financial impact of proceeding with detailed design without having obtained the grant is described below in Table 4. It's important to note that this would be the 'sunk' costs associated with the engineering design of the project should the Town not be successful in obtaining the HEWSF monies.

Table 4: Sunk Costs if Application is Approved by Council

Option	Description	Estimated Cost including net HST	Source of Funding	Total Estimated Debt Required
Proceed with Application	Engineering Design & Miscellaneous Expenses	$2,453,433.60	84% Development Charges and 16% Wastewater Reserves	$1,947,445.27
	Internal Borrowing Interest on Long-term Debt (5-year loan)	$229,867.84		
Project Total		**$2,683,301.44**		

To see the complete picture of the grant application and the potential cost and funding impacts, Table 5 has been prepared to summarize the total costs and funding sources proposed for the project broken into two scenarios being either the grant is approved, or the grant is denied. Please note that the internal borrowing interest (financing costs) outlined in Table 4

have been removed from the Scenario 1 engineering design costs as a result of obtaining the grant. The Town's consultant Watson's and Associates identified that the Town portion can be covered by 84% Development Charges and 16% Wastewater Reserves.

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Table 5: Expenses and Funding for Grant Scenarios

SCENARIOS of Grant Outcome

	Description	Estimated Cost including net HST	Source	Total Estimated Debt Required
SCENARIO 1: Grant APPROVED	Engineering Design & Miscellaneous Expenses*	$2,453,433.60	73% Grant, 27% Town (84% Development Charges and 16% Wastewater Reserves)	$8,943,139.58
	Interest on Long-term Debt (10-year loan)	$2,168,750.03	100% Town (84% Development Charges and16% Wastewater Reserves)	
	Construction, Contingency, Permits, etc.	$38,742,067.20	73% Grant, 27% Town (84% Development Charges and 16% Wastewater Reserves)	
Project Total		**$43,364,250.83**		
Provincial Contribution		**$30,951,690.48**		
Town Contribution		**$12,412,560.40**		
SCENARIO 2: Grant DENIED	Engineering Design & Miscellaneous Expenses*	$2,453,433,60	84% Development Charges and 16% Wastewater Reserves	$40,402,951.42
	Interest on Long-term Debt (20-year loan)**	$22,630,769.95		
	Construction, Contingency, Permits, etc.**	$38,742,067.20		
Project Total		**$63,826,270.75**		
100% Town Contribution		**$63,826,270.75**		

* Would already be incurred as a result of the recommendation of this report

** Does not include any inflationary increases/decreases due to construction or financing

The two main funding sources of both scenarios include Development Charge Reserve and Wastewater Reserves. Development Charge Reserves are monies paid by developers or homebuilders on building permit issuance to the Town to fund the cost of growth-related

infrastructure. Wastewater Reserves are monies paid by users of the Wastewater System for the maintenance and renewal of that system. The overall principal for funding this project is a split of 84% from Development Charges as it is mainly to accommodate growth, and 16% from Wastewater Reserves as a portion of the project does improve existing infrastructure, as recommended by our consultant, Watson and Associates.

For Scenario 1, being successful in obtaining the grant, the grant would cover 73% of the design and construction costs with development charges funding approximately 23% and wastewater reserves 4%. Conceptually, the development charge for wastewater could be more than $6,000 per single residential unit, compared to the existing charge of $3,003.

For Scenario 2, without the grant, development charges would be required to fund 84% of the construction costs. Scenario 2 shifts most of the cost burden to developers, meaning that the Development Charge to be paid in Ward 3 will inherently increase substantially to cover this large, forecasted expenditure. Conceptually, the development charge for wastewater could be more than $25,000 per single residential unit, compared to the existing charge of $3,003. The remaining 16% would be funded through Water/Wastewater Reserves, which means an increase in rates would also be required to fund the plant expansion. This has been detailed below.

Debt Capacity

Should Council choose to proceed with the application of the grant, additional debt of approximately $1.9 million would be incurred as neither the Development Charge Reserve nor the Wastewater Reserve has sufficient available balance to fund the impacts of the project. In both Scenario 1 and 2, additional debt would be required as detailed in Table 5.

When additional debt is incurred, the Town must review its Annual Repayment Limit (ARL) which is issued annually by the Minister of Municipal Affairs and Housing (MMAH). The ARL defines what new debt payments and principal amounts the Town could take without seeking further Ministry approval. The 2024 ARL states that the Town could obtain up to $77 million in

new (external) debt under a 20-year term at 5%, which means that this new debt is within the ARL and would be permissible by MMAH. However, it is important to note that within Scenario 2, should the grant be denied, the Town would be using over half of the prescribed available debt capacity in the forecast range 2031-2041.

The Town should also review the MMAH Financial Indictors pertaining to new debt which defines the risk levels. In 2023, the Town had ***moderate risk*** for the Indicator "Debt Servicing Cost as a % of Revenue (DSC/Revenue)" which was at 6.3%. A projection was performed and in Scenario 1 the DSC/Revenue reaches up to 9.3% which would be ***moderate risk and an estimated total debt balance of approximately $29 million.*** Scenario 2, the DSC/Revenue reaches up to 7.5% which would be ***moderate risk and a total estimated debt balance of $48 million.*** *Note: all debt projections assume NO other debt is added in the forecast years.*

Operating/Rate Impacts

The Town is currently undergoing a study on its Water/Wastewater rates. This is done routinely to ensure that the fees charged are appropriate to cover current and expected operating and capital programs and requirements. The Consultant was able to prepare some preliminary rate impacts which have been detailed in Table 6.

There are operating expenditures that accompany the completion of the plant. These have been reflected in the proposed rate increase scenarios below.

Should the grant not be received, and expansion not considered, rate increases would still be required at 3%. This is due to inflationary impacts that were seen, mainly within the cost of chemicals as well as the OCWA contract. The Water Billing transition did not result in a rate increase.

Table 6: Scenarios for Ward 3&4 Wastewater Rates

Scenario	Current Monthly	Rate Impact 2027-2031	Estimated Town Average	Monthly $ increase/ household	Estimated County-wide Average

	Bill/ Household*		monthly bill/household*		monthly bill/ household*
Grant Approved	$76.95	9%	$83.87	$6.92	$65.21
Grant Denied- Expansion considered in 2031-2041		6%	$81.56	$4.61	
No expansion		3%	$79.25	$2.30	

** Based on 27m³ consumption.*

The projected material increases in expenses due to the payment of debt for the expansion and the operational impacts has essentially outpaced the growth (or new households) anticipated., which is the reason for the larger increase should the grant be received.

In situations such as this, without the potential of a grant, a rate increase should be incorporated into rates to address the future expansion, but the timing of the expansion would then be driven by the Development Community. Arrangements such as "front-end" financing could be considered where the interested developer(s) essentially prepays the development charge so that the infrastructure can be constructed, thus limiting the debt burden on the municipality, and ensuring that the growth is more certain.

Consultations

Doug Sweet, Chief Administrative Officer

Jackson Tang, Assistant Manger of Business Services

Link to Strategic Priorities

☒ Embrace asset management best practices to build, maintain, and continuously improve our municipally owned infrastructure.

☐ Leverage our Town's competitive advantages to promote jobs and economic investment.

☐ Take care of our natural environment and strengthen the sense of belonging to everyone who makes Essex "home".

☐ Deliver friendly customer service in an efficient, effective, and transparent manner while providing an exceptional working environment for our employees.

☐ Build corporate-level and community-level climate resilience through community engagement and partnership and corporate objectives.

Report Approval Details

Document Title:	Housing-Enabling Water Systems Fund Application - Environmental Services-2024-02.docx
Attachments:	- Procurement Section 22 - Design Services.pdf
Final Approval Date:	Mar 28, 2024

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

Kate Giurissevich, Director, Corporate Services - Mar 28, 2024 - 11:09 AM

Doug Sweet, Chief Administrative Officer - Mar 28, 2024 - 11:09 AM