

Municipality of Lakeshore – Report to Council

Operations

Engineering & Infrastructure



To: Mayor & Members of Council

From: Krystal Kalbol, P.Eng, Corporate Leader, Operations

Date: September 8, 2022

Subject: Sanitary Treatment Capacity Update - Comber & Stoney Point Lagoon Systems

Recommendation

Receive this report for information; and Direct Administration to notify the County of Essex that the Municipality of Lakeshore no longer supports the draft plan approval for the Tracey Estates Subdivision Phase 3 due to a lack of sewage capacity at the Comber lagoon, for the reasons described in the report presented at the September 13, 2022 Council meeting.

Background

Servicing of the eastern communities of Lakeshore with a conventional, updated sanitary system has been explored since the Municipality of Lakeshore's Water and Wastewater Masterplan (WWMP) was completed in 2008. The eastern communities of Lakeshore include Stoney Point, Comber, Lighthouse Cove and Rochester Place. The WWMP noted the existing servicing constraints and further identified a long-term servicing strategy to accommodate growth and replace the sewage lagoon form of sewage treatment.

The long-term servicing strategy for sanitary treatment included a new sewage treatment facility in Stoney Point (identified to be built just west of the existing lagoon) to accommodate sewage from Stoney Point, Comber, Lighthouse Cove and Rochester Place. Conveyance systems would also need to be installed to support this strategy.

An Environmental Study Report (ESR) was completed in November 2012 detailing the long-term strategy for sanitary treatment and associated conveyance. This was confirmed and continued to be identified in the WWMP Update (undertaken in 2018) as the preferred servicing strategy for the eastern communities.

Detailed design of the strategy was completed in 2019.

Although the Environmental Assessment and design was completed, none of the works were undertaken as funding was not allocated or received to support this project in its entirety. It is noted however, that future sewage works projects for the Eastern Communities are included in the Lakeshore Development Charges Study.

It should be noted that an update to the ESR will have to be completed as this report expires in 10 years (end of 2022). Administration recommends that this update should be initiated once the WWMP Update is completed (the process to update the WWMP has been initiated) and a funding model has been determined to support the plan. The population and growth projections for these communities would also need to be updated through this process, based on the County and Lakeshore Official Plan policies.

Currently, Stoney Point and Comber are serviced by sanitary conveyance systems, both treated by sanitary lagoon systems. It is the position of the Ministry of the Environment, Conservation and Parks (MECP) that sanitary lagoon systems are an outdated treatment method and the MECP is reluctant to support an expansion and/or upgrading the existing lagoons and noted that this would be considered a short-term solution.

Lighthouse Cove and Rochester Place are currently serviced by private septic treatment systems and therefore the flows have not been considered in this report. Discussion on providing sanitary servicing to Lighthouse Cove will be included in a future report to Council related to the Lighthouse Cove Secondary Plan.

More recently, Lakeshore has received interest in development in areas serviced by the existing lagoons in both Comber and Stoney Point. Parcels in both settlement areas zoned and planned for future development are shown in the attached maps. The purpose of this report is to provide an update regarding the existing lagoon capacity, to further confirm the constraints in the sanitary lagoon systems and to provide a recommendation on moving forward on subsequent development or building applications.

The details below outline the approved capacity and the existing flows of both lagoons and the relative service areas.

Comber Lagoon

The Comber settlement area is presently serviced by its own respective municipal wastewater collection system and a lagoon-based treatment system built in 1974. The Certificate of Approval (C of A) for the existing lagoon is for an approved capacity of 430 m³/d.

Table 1 shows the average annual flows (m³/d) for the Comber Lagoon and are further summarized in **Figure 1**.

Table 1: Average annual flows into the Comber Lagoon.

Year	Average Annual Flow (m ³ /d)
2019	412.1
2020	406.6
2021	409.9
*2022	436.0

*The 2022 flows include the months of January to June (shown in purple below). The 2022 flows are trending higher during the first half of 2022 compared to 2021.

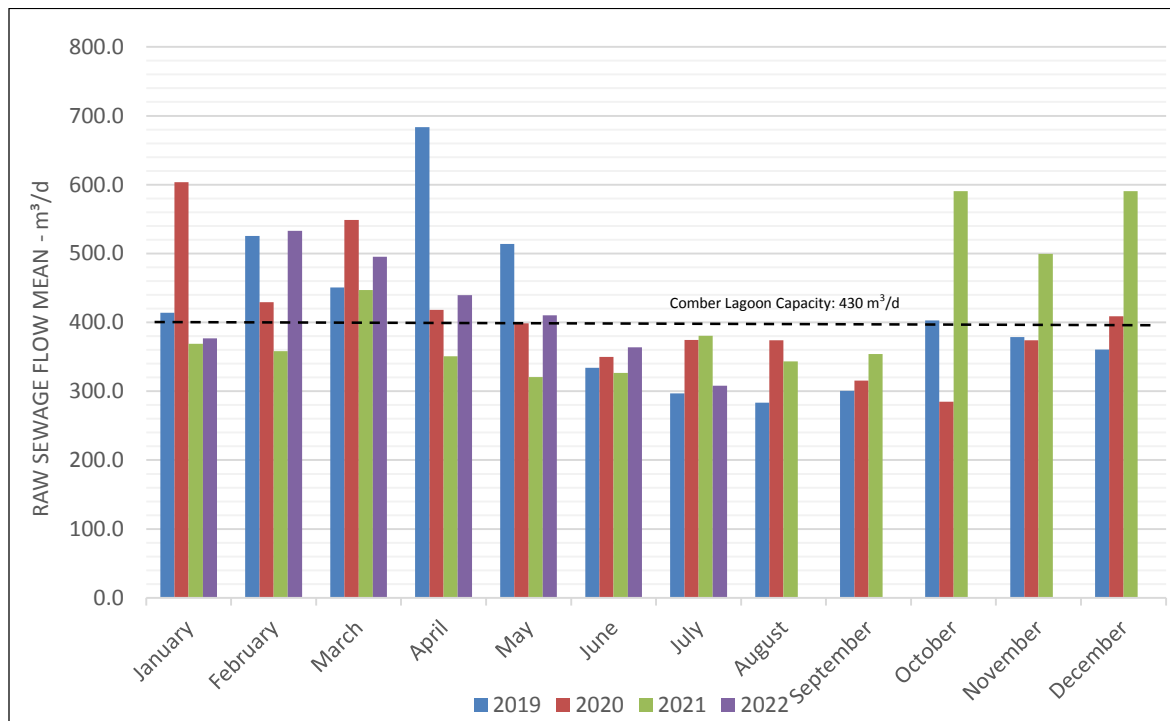


Figure 1: Comber raw sewage flow rate monthly mean

The average flow is 413 m³/d from January 2019 to June 2022 and is equivalent to 96.2% of the rated capacity.

Table 2 shows additional flows that have been approved that are currently not included in the above system flows.

Table 2: Additional estimated flows allocated to the Comber Lagoon.

Development	Estimated Average Domestic Flow (m ³ /d)	Status
Subdivision Phase 2	51.0	Constructed, lots serviced, homes currently being built, no contributory flows at this time

Considering the above the average flow is expected to be 464 m³/d equivalent to 107.9% of the rated capacity.

A further request to accommodate a subsequent development phase (Tracey Estates Phase 3 noted above) was reviewed in November 2021 and was expected to contribute an additional 41.9 m³/d. This was further reviewed once the remaining 2021 and 2022 flows became available. A third-party review of the rated capacity was also undertaken in July 2022 and has been appended for further information.

Based on the above subsequent request for Phase 3, this allocation will bring the total estimated average flow to 505.9 m³/d (over the approved capacity limit of the C of A) to 117.7%.

Administration will work with Developers to determine if there are any solutions to increase capacity of the sewage lagoon, and the Municipality will continue to investigate improvements to reduce sewage flows such as I and I work. However, in the meantime, it is recommended that Council direct Administration to advise the County of Essex, as the approval authority for plans of subdivision, that there is currently no sewage capacity for Phase 3 Tracey subdivision in Comber (Recommendation).

Stoney Point Lagoon

Stoney Point Lagoon area is presently serviced by their own respective Municipal wastewater collection system and lagoon-based treatment system built in 1978.

The C of A for the existing lagoon is for an approved capacity of **949 m³/d**.

Stoney Point Lagoon has been over capacity for several years, which was identified in the 2012 ESR.

Table 2 shows the average annual flows (m³/d) for the Stoney Point Lagoon and are further summarized in **Figure 2**.

Table 4: Average annual flows into the Stoney Point Lagoon.

Year*	Average Annual Flow (m ³ /d)
2019	1,438.2
2020	1,500.0
2021	1,017.2
*2022	970.4

*The 2022 flows include the months of January to June (shown in purple below). Flows are trending consistent during the first half of 2022 compared to 2021.

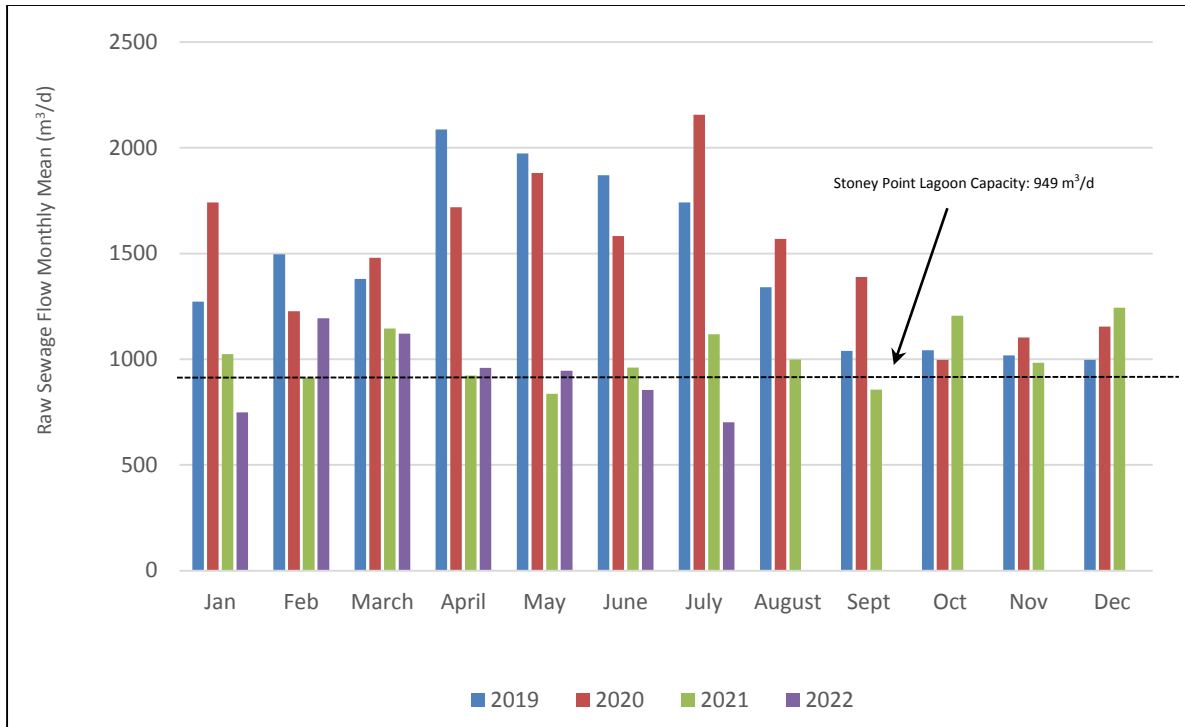


Figure 2: Stoney Point raw sewage flow rate monthly mean

The average flow is 1,231.5 m³/d from January 2019 to June 2022 and is equivalent to 129.8% of the rated capacity.

The Stoney Point Lagoon is operating significantly above capacity. The MECP has advised that it is not supportive of operating over capacity in this manner.

The MECP continues to work with the Municipality based on the understanding that a future long-term solution has been identified through the Water & Wastewater Master Plan Update, completion of an ESR to accommodate and further, in 2019 the design and drawings were completed.

Comments

The Municipality met with the MECP and with Ontario Clean Water Agency (OCWA) on May 19, 2021 and again on July 19, 2022. These meetings were held to discuss the concerns related to both lagoon systems (outdated treatment method) and potential options that the MECP would consider for capacity gain.

The MECP was not supportive of an interim solution to expand the existing systems or provide updates to the existing lagoons. It is the MECP's position that alternative long-term solutions should be explored during the planned WWWMP Update.

Based on the existing and committed flows, Administration is advising that acceptance of any additional flows to these systems cannot be accommodated or supported.

In addition, Administration is advising that any proposals that would increase the density on existing developed lots within the Stoney Point and Comber settlement/servicing area(s) should not be contemplated at this time.

Administration recommends that notice shall be provided to current owners of vacant land that development, including the issuance of building permits, cannot proceed until sanitary sewage becomes available.

The above noted comments are in line with Lakeshore's Official Plan based on the following:

Section 7.3.2 Servicing Allocation & Phasing of the Official Plan states:

"The following will be the policy of the Town:

- a. When unallocated servicing capacity does not exist for a proposed development, the Town will defer the processing of the planning application until capacity is available, or until a servicing agreement is in place to ensure that such capacity will be available to service the development within one year of the granting of the planning approval. Draft approved plans of subdivision may only proceed to registration if sufficient servicing capacity continues to exist."*

To be in conformity with the above noted policies of the Official Plan, Administration recommends suspending the processing of new planning applications and not issuing building permits for new developments, other than those exceptions noted in this report, until a long-term solution has been implemented.

Further, the Official Plan does permit individual private septic systems on an interim basis subject to a zoning by-law amendment.

Section 7.3.1.1. e) states:

"In order to ensure the efficient use of land and municipal services, development, including lot creation, on private servicing systems (water and/or sewage disposal) will generally not be permitted. However, exceptions will be considered in areas not serviced by municipal water and/or sewage services on the basis of a site-specific amendment to the Zoning By-law, and satisfaction of the following criteria:

- i) a water and sewage servicing master plan is in place to provide future municipal water and sewage systems to service the lands;*
- ii) the development of the land and accommodation of a private servicing system will not preclude the ultimate extension of municipal water and sewage systems to service the lands;*

iii) at such time as municipal water and/or sewage services become available, the landowner, at their expense, will be required to connect to municipal water and/or sewage services;..."

As mentioned in the Official Plan, site conditions must be able to support the use of a septic system, and the landowner must agree to connect to the municipal system when it is available. However, to date, landowners have not been interested in pursuing this option of an interim private septic system.

It should be further clarified that in situations where a building has been or will be demolished and replaced, that Administration will allow redevelopment, provided that there is no increase to the amount of sewage that is being generated.

Others Consulted

The MECP was consulted as part of this report.

Financial Impacts

There is no financial impact to this report, however there could potentially be decreased revenue from building permits in 2022 and in subsequent years and the resulting loss of potential tax assessment. This impact will be monitored by staff.

Administration will review and develop a funding strategy to accommodate the future long-term solution (wastewater treatment and collection system(s)) for growth in the eastern area of Lakeshore, including an update to the ESR, once the WWWMP Update is completed (currently underway).

Report Approval Details

Document Title:	Sanitary Treatment Capacity Update - Comber and Stoney Point Lagoon Systems.docx
Attachments:	
Final Approval Date:	Sep 8, 2022

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

Prepared by Krystal Kalbol

Approved by Tammie Ryall and Justin Rousseau