

**Class EA for Expansion of the Bayfield WWTF
October 24, 2020 Public Meeting**

QUESTIONS AND ANSWERS

Inflow & Infiltration Investigation

- Q1. The presentation indicates that a number of problems/issues were identified and the ones with the highest priority were dealt with. Is it possible to find out the total number of problems/issues that were identified, the number that were addressed/fixed and what was the criteria used to qualify the issue as a high priority.
- A. Maintenance Holes – 85 issues in approximately 270 MHs. 15 locations defined as higher priority (based on observed I-I). 11 were repaired in 2018. Mainline sewers – 9 locations designated for repair, the 3 worst (based on observed I-I) were repaired in 2020. Priority has been based on observed I-I. If there were potential structural problems that would have been a higher priority, there were not.
- Q2. My concern is how many, and when or if the non-high priority issues will become a problem to a point when they need to be addressed. And secondly are there any mitigating steps that could be done now to avoid any of these secondary issues from becoming high priority concerns.
- A. Anything that we have defined as a priority should be addressed as soon as feasible. Some increasing deterioration would be expected if no repairs are done.
- Q3. What are the factors that have led you to believe that the majority of the I-I defects of the system currently come from the private side of the system, rather than the public or commercial side of the system? It was not clear to me what facts were used to formulate this statement.
- A. Several points – (1) By default – we examined the entire municipal system and found few issues therefore must be from private side. (2) Using CCTV we saw numerous instances of clear water discharging from laterals (3) Smoke testing showed nothing from the municipal side (4) Flow metering shows pulses of higher flows after a rain event – flow pulses are a strong indication of sump pump connections.

Financing

- Q4. Will the increased cost for existing customers currently hooked up to the system (an increase of \$140.00 per year) be introduced regardless if there are upgrades to the WWTP. Or will they only be introduced if the upgrades to the system are introduced?
- A. This is up to Council. About 60% of the increase is directly related to rehab. The balance is related to forecasted increased operating costs for the new system.

- Q5. Of the remaining monies that are in the reserve funds that have been paid for by existing customers hooked up to the system, how much is needed to bring the WWTP up to grade for the existing users?
- A. There are two reserves; one for rehab raised through the rates and one for capital that has been charged to new development. The expectation is that the full amounts of each would be used. The final decision is up to Council.
- Q6. My point is that existing users who have bared the cost of the initial system and who have paid ongoing fees into a reserve for ongoing maintenance, should not be saddled with any of the additional expenses to build or upgrade a WWTP that would support new users. New users should pay for all additional up front and all additional ongoing costs going forward.
- A. This is again up to Council. The expectation is that the full cost of expansion including any financing costs would be charged to new development. Post expansion, the operating costs and future rehab costs would be shared equally across the entire system including users in the other Bluewater sewage systems (e.g. Hensall).
- Q7. Regarding the financing principles: you've indicated possible principles such as having only the benefitting properties pay for the expansion, or new customers only. Based on your Stage 1 roll-out plan having a \$6.7-9.8M projected cost, and estimated 530 residents who will benefit from Stage 1 expansion, what approximate cost are you assuming each household would pay?
- A. The final decision is up to Council but it is expected that the cost of expansion will be charged to new development as a Development Charge. There is already such a charge in place and being applied, however at this time we believe it will have to increase to something in the order of \$17,200 for a typical residential unit.
- Q8. The B.M. Ross estimate that sewage lagoon development charges for new builds and for new infill housing would be approximately \$17,200, does not include all of the other infrastructure costs that would have to assigned to new development. Since most community facilities, beaches and Main Street parking are at or close to capacity for the existing population base, the new costs for expanded facilities would logically be added to the development charges assigned to new builds. An analysis of current Bayfield mill rates shows that the village's property taxes are in the top quartile when compared to similar communities in Ontario. This high rate of taxes plus extraordinarily high new development charges could conceivably impede future development and invalidate projections. If growth is slower than projected, would existing residents be compelled to pay for the already imbedded sewage lagoon construction costs?
- A. The \$17,200 is an estimated value and only the sanitary sewage component of the Development Charge. If development proceeds slower than expected then interest costs will increase. It is normal that interest expenses are included in the Development Charge and are passed along to new development, not the existing community.

Project Timelines

- Q9. We're looking to better understand timelines of your items indicated in next steps. When are you looking to confirm financing options? When are you hoping to gain final approvals to proceed to implement the project? Assuming it's approved, how long until the project is completed and the properties would actually benefit from the expansion?
- A. It is anticipated that the project would be presented to Bluewater Council for final approval of the Class EA early in the New Year once all input has been received from residents following the public meeting. An outline of the financing approach would be presented in the EA report, but it will not be finalized until the project is ready for construction. Once the EA is finalized the project would move to the final design stage, which could take 4 to 5 months to complete. The design is then submitted to the Ministry of the Environment, Conservation and Parks (MECP) for approval, a process that can take a further 6 to 8 months. Once approved, the project would be tendered for construction. Construction could take a further 8 to 12 months. In total, the whole process could take 1 ½ to 2 years from the decision to proceed.
- Q10. You've indicated that Stage 1 of the proposed plan would unlock capacity to allow elimination of existing septic systems in cottage areas south as far as Glitter Bay Road. Did we read correctly that this Stage 1 is based on construction in 2021? Understanding proposed timing is crucial for us given we're currently developing plans to convert our own property from a holding tank to a weeping tile system, therefore the municipality's plans would greatly impact our own.
- A. Actual extension of the collection system to currently developed but un-serviced areas such as Glitter Bay is not part of the current proposal nor has extension been discussed with Council. The current proposal relates only to providing capacity in the treatment facility. As currently proposed there would be capacity constructed in Stage 1 to allow extension to Glitter Bay in Stage 1. The timing of actual extension would be subject to future review and approvals.
- Q11. The B.M. Ross projections and graphs worked from averages but since the community's population changes dramatically depending upon the season, were projections done based upon peak Inflows? Averages don't mean much when the population can vary from 500 to 7000 depending upon whether it is summer or winter.
- A. Peak and seasonal flow changes have been considered and will be evaluated further during the final design. The presentation uses averages because the treatment facility rating is expressed as an annual average value.
- Q12. My wife and I recently purchased a property on Glitter Bay Dr. that is currently on a septic system. So I read with great interest the plans for expansion of the wastewater treatment facility and the plans to include Glitter Bay Dr. as part of the system. In general, I would say that we have high interest in converting from septic to the municipal system and so are very supportive of the project. I would be interested in learning more about whether there is any further information or commentary that would be helpful from your perspective. I read the presentation that was recently given. I saw that the plans are to do the expansion sometime in

the next 5 years for a first phase and the next 10 years for the second phase. It also looked like costs to connect (for individual homeowners) would be approximately \$7-17K. Did I interpret the presentation correctly? Would Glitter Bay be considered part of the first 5 years or the second 5 years?

- A. With regards to the timing please see the response to Question 10 above. Regarding the cost, the \$17K is the currently projected cost per unit to provide treatment capacity. Any costs to actually extend service to currently un-serviced areas would be extra to this and has not yet been established.

Stormwater-related Questions

Q13. Since only new developments have holding ponds for street run-off, currently in Bayfield the run-off of street pollution, fertilizers and pesticides run directly into and pollutes the lake. Since it is likely the Municipality of Bluewater is going to be subject to much more stringent environmental controls in future, did B.M. Ross consider the impact of a possible redirection of street run-off into the sewers?

- A. No. There would need to be a significant change in Provincial Policy before the Municipality would ever consider directing storm drainage runoff into the sanitary collection system. A portion of the proposed additional treatment capacity is to address existing groundwater flows that are entering the collection system and being sent to the wastewater treatment plant. To purposely allow stormwater to enter the system would over-tax the collection system and create a need for treatment expansion that would be economically infeasible.

Q14. Today, after a rainstorm, I'm looking at a very brown river and a pollution plume that extends about a ¼ of a mile into the lake. Were E.coli counts done as part of the water quality analysis? I've been visiting Bayfield for almost 50 years and remember when children used to swim at the River Flats and the river quality appeared to be much better.

- A. A copy of the Water Quality Analysis will be included in the Environmental Study Report that is published at the conclusion of the Class EA process. E-coli counts in the river were collected as part of the study and were uniformly measured at less than 100 cfu/ 100ml (recreational swimming limit). E. coli concentrations are routinely (weekly) monitored at the wastewater treatment plant's discharge. During the April to November normal discharge period values are typically less than 10 cfu/100 ml.

Q15. You and I have informally discussed street run-off before and I'd forgotten but it is an interesting side question to sewage lagoon capacity. After the infiltration tests were done, there is a good idea of where that problem lies and that should be remedied but no one is talking about the road salt and fertilizers and weed killers that are being directed into the lake. Since the village has no holding ponds aside from the little rain garden beside Pioneer Park, to my layman's eyes, the only answer is to either create holding ponds, (I seem to remember you suggested some of the unopened right of ways) or redirect into the sewage system. I don't know if this subject will arise on Saturday but I'd be interested to learn if it has been considered.

- A. Similar to the answer to Question 14 above, current provincial policy would not permit stormwater runoff to be directed to the sanitary collection system so it is

very unlikely that that would be a possible outcome. The Municipality did complete a Stormwater Drainage Master Plan in 2016 for Bayfield. A copy is on the Bluewater website. Infiltration basins that are included in the Main Street reconstruction project, were identified through that report.

Treatment Alternatives

Q16. Was methane recapture or alternative natural energy sources considered when assessing operating costs?

A: No it was not. The Bayfield facility is a very small treatment plant even after expansion. Methane generation and capture is typically only practiced at much larger facilities. To construct and then operate such a system would add significantly to both the capital and operating costs.

Q17. Was there any consideration given to palletization of sewage sludge into fertilizer for resale?

A: No it was not. The answer is similar to the response regarding methane. The sludge or biosolids are applied to agricultural land when disposed and some credit for their agricultural value does reduce disposal costs somewhat.

Q18. Is B.M. Ross suggesting that the sewage lagoon discharge onto (into) a frozen river in winter?

A: The River does not completely freeze during the winter. Regardless, the system does not discharge during the winter now and there are no future plans to discharge from the lagoons in the winter. However the expansion will be achieved by means of a mechanical treatment facility operating parallel to the lagoon and the new facility will discharge year round.

Q19. What efforts (either by increased usage fees or moral suasion) have been employed by the Municipality to curb the daily increase in residential/commercial waste water since 2015 when daily waste water discharge began to exceed the WWTP daily capacity?

A: The Municipality is developing an information brochure aimed at curbing wasteful water use and encouraging residents to exchange aging, inefficient fixtures with more efficient units.

Q20. Was there any consideration given to municipal incentives to redirect sump pump flows or purchase low flush toilets?

A: The Municipality recently passed a by-law regarding discharge of sump pumps into the sanitary collection system and will ensure that potential problem areas within the community are advised of the new by-law. An incentive program is being investigated to exchange inefficient fixtures with low-flow alternatives.

Comment. We are listening to today's public WWTP discussion with great interest. Although we haven't registered to speak we would like to voice our support for either mechanical solution (SBR does however seem more practical). We believe also that your plan to proceed in stages is prudent as latter stages can be adjusted in

size and scope as real demand is observed over time. We also agree in principle with the funding model.