



WASTEWATER UPDATE

April 15, 2019

One of the benefits of being the last Summer Village to install the sewer system is that we had time to watch and to learn from the problems and issues encountered by other Villages.

To this end, your council has decided to have grinder pumps installed into on lot tanks instead of STEP effluent pump systems as we had previously chosen.

As we are sure you were aware the STEP system required a secondary tank on lot designed to house the pump. The options for homeowners were to install a large volume two compartment septic tank or if they had an existing holding tank a pump basin could be installed to achieve the same result. The installation of these pump basins was originally thought to be quite simple and inexpensive however we have come to learn from experience that it's not a simple process and if not done absolutely correctly will result in leaks and again as a result of that it is no longer a low cost option. These facts caused the council to start to look at options and what revealed itself was the best option was for us to go to a grinder pump system rather than the STEP system. As the grinder system does not require a secondary tank and the pump is installed into the existing holding tank or if a two-chamber tank exists it is installed into the primary tank, the system eliminated the secondary tank issues. The Village of Norris Beach, the Condos at VPL and the businesses at VPL, as well as the County of Wetaskiwin have also all opted to install grinder systems for various reasons.

Grinder pump systems like this are also currently being used almost exclusively by villages around Sylvan Lake meaning the system is very well represented and known to many contractors involved in system operations and maintenance which gives us

Reasons behind our decision:

1. Leaking Pump Basins

The fiberglass pump basins which are dug in and connected to the on lot existing holding tanks have shown a tendency to settle or shift and this causes a stress and misalignment on the connections which can result in sewage leaking undetected on residents lots. As the connection is buried and not visible these leaks could go undetected for an extended time period and once detected the potential cleanup could be quite extensive in that all the contaminated soils would need to be removed and hauled to a disposal site.

Other villages are now looking to discontinue use of these basins and are looking at using single chamber cement tanks as an alternative.

2. Cost Savings for homeowners by limiting on lot costs related to secondary tanks

The original cost estimate to purchase and install a pump basin was approximately \$2000 total. The installation contractors have now realized how critical and difficult it is to install the secondary tanks and have increased their cost to cover their increased costs so that now the cost to purchase and install a pump vault would be \$4500. However as now the additional tank would need to be concrete, additional cost of a cement tank and increased installation costs the cost to purchase and install would increase to approximately \$6500. We saw the opportunity to save a considerable amount of money for our

homeowners by going with grinder systems. As there is no need for a secondary tank the resulting real savings are potentially at least \$6500 for each affected lot owner.

3. Reduce homeowners' costs related to new tanks.

A result of using grinder pumps the need to install new two chamber tanks is no longer valid, this means that any homeowners with compliant holding or smaller capacity 2 compartment tanks that did not meet the previous volume specs no longer will have to install replacement tanks. This will be a considerable saving to anyone who fits this scenario. We do recognize that over the last few years numerous new tanks were installed in preparation for the coming sewer system and our spec at the time called for larger two compartment septic tanks. It is unfortunate that this cost saving opportunity is not available to those home owners, however the good news is that the tanks that were installed will work perfectly well with grinder system and there will be no additional costs to these owners as a result of the decision to install grinder pumps.

4. Decreased on lot excavation and disruption.

Not having to install secondary tanks will greatly decrease the size of the excavation on each lot as the only excavation will be a bell hole at the existing tank to tie in the sewer line drilled in from the main along the road.

Details:

The move to the grinder pump system will have no impact on the local line installations and on lot tie ins from a cost or serviceability standpoint. We have had engineering done to ensure the change will have no unintended consequences and our engineering firm have indicated that all changes are within the specifications and will sign off on change. The change will have the local line tie into existing tanks as would be done regardless of which system was being used. The only real change is the pump that will be installed now will be of a different type and will be installed in a different tank than the old system was planned. As far as operating costs for the system which would include line monitoring and maintenance including pumps etc. we see this as being a cost neutral as there are several saving opportunities (no in tank filters to clean yearly, no need to have primary tanks cleaned by vac truck) these should offset our need to increase flushing of main lines to reduce plugging risks.

Update.

Urban Dirt Works are currently progressing with mainline tie ins with installation of cc valves (curb cock valves) and directional drilling of the tie in lines to proximity of the on lot tanks. They will soon begin on lot excavations at the on lot tanks to tie in the line to the tanks, we have advised them that they must notify and discuss this phase of the project with each homeowner to ensure everyone is in agreement with the process and to ensure lots are left in acceptable condition when the work is completed. Urban Dirt Works will check tanks to ensure they meet the new specification and can discuss with you any issues and can hopefully answer any questions you have regarding tanks.

If you have any questions about the grinder pump system you should direct them to Gail Coleman at the Village Office as this part of the contract does not involve Urban Dirt Works

If you would more detail or have questions you can call or email Fraser Hubbard (Mayor) at (403) 235-6249 home or email hubbardf@shaw.ca