

Pigeon Lake Watershed Association
GUIDE TO SEWAGE HOLDING TANKS

Many summer villages and communities in the Pigeon Lake area have moved toward banning septic fields and grey water release systems. This paper presents ideas for action by Pigeon Lake area residents who have to make decisions on how to handle sewage on-site from the time their septic field is decommissioned until the time of hook-up to a local collection system (the Interim Period). While a community could put in place a local sewage collection system at any time and arrange for sewage hauling on a community scale, most communities will construct a collection system coinciding with the availability of a regional sewage pipeline and wastewater treatment facilities.

The configuration of the local collection system can impact the choice of on-site handling during the interim period. While the matter has not been fully studied for each community, the studies that have been performed and the general state of technology suggest that a small diameter “pressure” collection systems accepting filtered septic tank effluent or effluent from grinder pumps will be the most likely configuration of sewer lines in most communities. The following table summarizes the basic choices available for handling sewage on-site today in relation to a future local pressure collection system.

OPTION	DESCRIPTION	ANALYSIS
Keep Existing Septic Tank as Sewage Holding Tank during Interim Period	Turn off septic field to comply with local bans but use existing septic tank as sewage holding tank for interim period. May require re-plumbing for grey water system to be integrated to black water system. Effluent pump should be removed and alarm systems may need revision.	Very good choice if existing septic tank is watertight and large enough to keep sewage hauling from becoming too inconvenient and costly. No short term disruption to yard and plays the odds that septic tank with effluent pump may work with future collection system.
Install New Septic Tank Used as Holding Tank during Interim Period	Install a (2 or 3 compartment) septic tank sized to balance short term investment requirements and hauling costs during the interim period. Pre-plumb inside and outside the tank to minimize or eliminate site disruption during hookup to future collection system.	Very good choice if existing septic tank is not viable. Future hookup to collection system would use highly reliable and relatively inexpensive effluent pump. Plumbing inside the tank should avoid requirement for future entry; piping out to the edge of the property avoids future yard disruption.
Install Larger New Holding Tank	Install a holding tank as if there will never be a collection system. Sizing criteria would be based only on minimizing hauling frequency. Analyze grinder pumps and other choices if and when there’s a future decision to be made.	Initial higher costs may be offset by lower sewage hauling costs during interim period. Future cost for integrating grinder pumps or other effluent handling system may be high. Future yard disruption.

Best Practices

For all decision scenarios:

- 1) Understand local by-laws and state of municipal planning for future local collection systems
- 2) Obtain appropriate development permit and private sewage installation permit
- 3) Use an Installer certified with PSDS ticket (Private Sewage Disposal System) and member of AOWMA (Alberta Onsite Wastewater Management Association)
- 4) Tank citing issues include – elevations for proper plumbing from house sewer, accessibility by sewage hauler, protection from overhead loads (e.g. parking on tank no permitted), avoiding of tank being submerged in water table
- 5) Tank and installation must comply with Alberta Private Sewage System Standard of Practice
- 6) For buried infrastructure be especially aware of using high quality materials and components
- 7) One-piece concrete tanks are preferable to two-piece tanks
- 8) Integrated manhole riser or riser starter is desirable, minimize number of riser sections to grade

For new septic tanks:

- 1) Install septic tank pump hook-up kit (without the pump) so that future pump installation does not include entry into confined space/hazardous environment
- 2) Fitting at pump wall is optimal at 2", acceptable at 1 ½". Run 2" pipe to edge of property and mark for future connection to collection system
- 3) Sizing at 1500 gallons is optimal balance between minimizing total investment cost and minimizing interim hauling costs
- 4) Comply with pending changes to Alberta Private Sewage System Standard of Practice – insulate any part of tank less than 4 foot burial depth, provide insulated manhole cover weighing at least 65 lbs or with locking apparatus

Additional Information

County and Summer Village Offices

Alberta Municipal Affairs

Alberta Onsite Wastewater Management Association

Pigeon Lake Regional Sewage Commission

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