

Bolton Lakes Sewer Project

Low Pressure Sewers & Grinder Pumps

May 7, 2008



What Is a Grinder Pump?

Grinder pumps are small pumps equipped with cutter blades to grind up wastewater and pump it into a sewer pipe. The grinder pumps are situated in a cylindrical tank which is installed below ground with only the top of the pump chamber visible. There will be an individual grinder pump for each house in the Bolton Lakes Sewer Project, and for buildings with higher flows, duplex grinder pump stations (one tank with two pumps) will be used. A control panel will be mounted on the outside of the building served by the grinder pump.

What Is a Low Pressure Sewer?

Low pressure sewer systems consist of small diameter sewer mains into which grinder pumps pump wastewater. Because the system is pressurized, the low pressure sewer piping can follow the natural topography of the land, and the pipes are installed much shallower (about 4 to 5 feet deep) than gravity sewers.

A small diameter (1.25 inches) building service pipe will connect the grinder pump station to the low pressure sewer main. The service line will have two check valves in it to prevent backflow of wastewater, and a gate valve to isolate the service if needed.

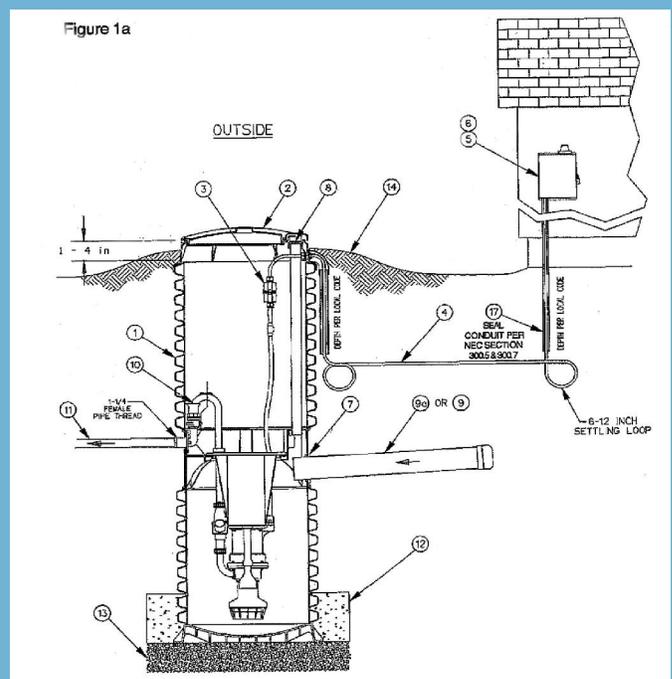
Why Are Low Pressure Sewers Being Used?

A low pressure sewer system will be used to serve the Bolton Lakes area because it will be significantly less disruptive and less expensive compared to a conventional gravity sewer system. Low pressure sewer systems use

much smaller diameter pipes than conventional gravity sewers, and combined with the shallower depths, this means the trenches needed to install the sewer pipes are less intrusive, and less costly.

Who Will Install the Grinder Pumps?

The Bolton Lakes Regional Water Pollution Control Authority (BLRWPCA) will be installing the grinder pumps and the service lines to the low pressure sewer lines in the streets as part of the sewer project. This approach (which is required by the DEP), means that the same models of grinder pumps will be used throughout the sewer system, and that sewer users will benefit from economies of scale in pump prices and that the grinder pumps will be eligible for grant and loan funding assistance.



Property owners will be responsible for hiring a contractor to re-route their building sewers from the septic tank into the grinder pump chamber and to abandon (crush and fill) their septic tanks.

Where Will the Grinder Pump Be Installed on My Property?

In general the grinder pumps will be located near your existing septic tank. The sewer pipe connecting your building plumbing to your septic tank will be reconfigured to flow into the grinder pump chamber.

Each existing building owner will be asked to complete a "Sewer Lateral Location Form". The owner is asked to provide a preferred location for the grinder pump and the service pipe connecting the grinder pump to the low pressure sewer pipe in the street. The design team will review these requests and accommodate them as much as possible, subject to review by the local health authority based upon the current regulations.

Who Will Maintain the Grinder Pumps?

The BLRWPCA will maintain the grinder pumps. They do not require much maintenance; you should expect an annual inspection visit. The BLRWPCA will have a service company under contract to respond to problems, should they occur. The grinder pump station is equipped with an alarm (audio and visual) which is part of the control panel, which will activate in the case of a malfunction.

Grinder Pump Agreement

A grinder pump agreement will be required for each property that has a grinder pump. The agreement will be between the BLRWPCA and the property owner to allow the BLRWPCA to install and maintain the grinder pump equipment on your property.

How Much Power Will the Pump Use?

Monthly power consumption of a grinder pump station is substantially less than that of most other major appliances. This cost, which is comparable to the operation of a 60-watt light bulb, will be borne by the property owner.

What Happens During Power Outages?

When the power goes out, the grinder pump will not operate. The grinder pump stations have capacity to provide wastewater storage for about 24 hours, assuming users carefully limit water use during power outages. For those on private wells (most of the Bolton Lakes sewer service area) your wells will not operate either, so wastewater is not generated either during the outage.



Do's and Don'ts of Grinder Pumps

It is inappropriate to place petroleum products such as fuels, paint thinner, or alcohol down toilets or drain lines. In addition, substances such as ashes, mud, hair, bacon or cooking grease could clog your system. Other items, such as string or rope could also impede the operation of the pump. Prior to going on vacation, run a cycle of clean water through the system to prevent the sewage left in the grinder pump basin from turning septic. These simple steps could keep your home free from sewer system failures or backups for years to come.

For More Information

Additional information is available on the BLRWPCA's website:

www.blrwPCA.com and sewer maps may be viewed at the Bolton Town Hall (Town Administrator's Office) and the Vernon Town Hall (WPCA Office).



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