

Creating a Sustainable Development with All-Terrain Sewer in Canada



Seven Lakes, Nova Scotia, Canada

Challenge

Create a sustainable development served by a central sewer system while preserving the natural environment.

Solution

The Penney Group chose the ALL-TERRAIN SEWER pressure sewer system from E/One to serve the development.

After spending almost six years to consolidate separate parcels into a contiguous 634-acre tract of mature forest touching seven different lakes -- and another four negotiating a development agreement with the regional government -- Penney Group embarked on a unique challenge: creating an open space conservation community restricted to only 634 moderately sized

and priced residences while leaving 60 percent of the pristine landscape undisturbed.

Houses at Seven Lakes are clustered together in "little villages" surrounding nature preserves with each homesite measuring one-quarter to three-quarters of an acre. Eventually, seven clusters (totaling 634 residences) of single-family homes, duplexes and four-plexus will be linked by trails for walking, hiking, and biking.

Septic systems and gravity sewer systems were also considered for wastewater disposal, but The Penney Group ultimately chose pressure sewer for several reasons:

1. First, Canadians are used to central sewer systems, and the idea of maintaining a septic tank was not appealing.
2. Home sites at Seven Lakes are of modest size with lots of trees, and septic systems often result in expansive lawns.
3. Constructing a gravity sewer system would have likely required removing acres of trees, and one of the goals of the project was to conserve as many trees as possible to keep a natural environment.

[Watch video: The Villages of Seven Lakes - It's all about Connection](#)

Result

Terrain was also not conducive to septic or gravity sewer systems: the area has a lot of bedrock, and frost heave is also a concern. Septic systems are often not a good choice for lake communities because of soil conditions. Gravity sewer systems would require many manholes and several pump stations. The pressure sewer mains follow the contour of the land, are located just below frost depth (approximately 5.5 ft), and can be insulated during installation if needed.