

# ETC Project Profile



**Engineering  
Technologies  
Canada Ltd.**

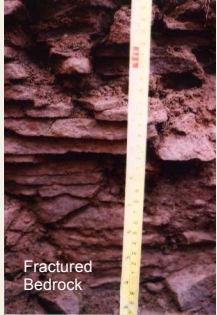
- Innovative Wastewater Management & Design
- Environmental Engineering
- Geotechnical Engineering

toll free 1-888-747-SOIL (7645)

[www.engtech.ca](http://www.engtech.ca)

## **On-site Wastewater Viability Study Stratford, Prince Edward Island**

Client: Town of Stratford, PEI



Considering its relatively short history, the Town of Stratford (Incorporated 1996) has been quick to tackle their environmental problems. This rapidly growing community had been experiencing problems with bacterial contamination of wells and failing septic systems. Consequently, groundwater quality, public health, and property values were being negatively impacted.

The Town had already established several proactive policies to address these problems caused by small lot sizes, shallow fractured bedrock and slowly permeable, glacial till soil. However, the Town faced continuing pressure to extend the centrally serviced area.

The Town of Stratford retained **Engineering Technologies Canada Ltd. (ETC)** to conduct an **On-Site Wastewater Viability Study** for the portion of the Town lying outside the centrally serviced area.

### **Going Beyond the Usual Maps and Data**

ETC prepared a Community Profile, which incorporated the Town's land use, population trends, sewers, on-site systems, and environmentally sensitive areas. This document provided background information on existing conditions in the Town relevant to the goal of developing a sustainable and cost effective plan for wastewater management.

ETC collected, combined and analyzed data sets from a wide range of sources. Stratford had in-house GIS data on its land parcels. Other information such as wetlands, rivers and lakes, soils, and contours were obtained from PEI Geographic Information Services. ETC consolidated and supplemented this data with information from a Sanitary Survey, local septic system installers, and third parties. ETC cross-referenced the soil maps to our files with site-specific test pit information, updating the map information in some cases. This merged information provided a comprehensive database for the subsequent viability assessment.

The viability for conventional on-site sewage disposal systems was determined for all building lots and was carried out using GIS software by performing queries using pre-determined viability criteria. The main criteria which resulted in a lot being classified as non-viable were: restrictive subsurface conditions, environmental concerns and small lot size.

### **ETC's Recommendations**

ETC concluded that 78% of the approximately 800 building lots in the study area could not be serviced sustainably with individual septic systems. The most appropriate and cost effective, off-site servicing solution was identified for each non-viable sub-area. Several innovative cluster treatment and land-based effluent disposal technologies were identified and evaluated. The study formed an integral part of the Town's new municipal servicing strategy which will see some areas serviced by:

- **septic tank effluent collection** and localized **cluster systems**.
- conventional central sewer collection to the existing treatment plant.
- septic systems built/maintained to a higher standard.

Robert Hughes, P. Eng, CAO of the Town stated that "We found ETC and the study team to be thorough and innovative in their approach. Their knowledge of alternative treatment systems and on-site septic systems was impressive and we were very satisfied with the study."

