
Study of Community Wastewater Disposal Alternatives for Westford's Town Center

The Town of Westford, Vermont received a grant from the Vermont Department of Environmental Conservation to hire the consultant team of Stone Environmental Inc. (Stone) Green Mountain Engineering (GME), and Yellow Wood Associates (YWA) to conduct a wastewater feasibility study for the Town Center zoning district, located along Route 128. The area includes 78 properties, most of which are developed with single-family residences. The entire study area covers about 1,000 acres.

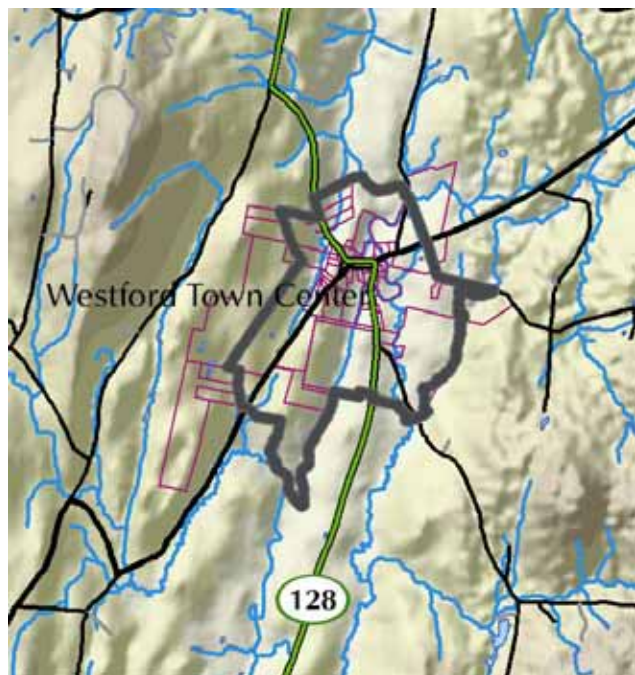
The Town Center's natural features pose both opportunities for and limits to the construction and successful operation of onsite wastewater disposal systems (often called "septic" or "onsite" systems). The closeness of the Browns River to many properties is an attractive natural feature that significantly limits where nearby onsite systems can be located. The soils that underlie the Town Center also pose significant limitations for onsite systems, including areas of shallow groundwater and shallow bedrock. Only about 7% (70 acres) of the soils are suitable for conventional on-site wastewater treatment systems. Properties in the Town Center are served by individual onsite water supplies, consisting of shallow springs or drilled wells. In order to protect the drinking water, no onsite systems can be constructed within a protective buffer zone surrounding each well or spring.

The Town Center's residences and amenities are all served by individual onsite systems. Information on the existing systems was gathered from Vermont Department of Environmental Conservation (DEC) Regional Office files, property owner survey questionnaires, interviews, and area site visits.

The consultant team conducted a needs assessment for the Town Center to determine whether each individual property could support an onsite system under the current local zoning ordinances and state wastewater disposal rules. This assessment combined spatial information, such as topography and soils, with local information like parcel boundaries, building footprint areas, locations of water supplies, and building uses, to determine what constraints each property might contain for onsite wastewater

treatment and disposal. The needs assessment results were confirmed by reviewing other sources of information collected during the study. This review resulted in an overall recommendation for each property of either maintaining and upgrading a system onsite, or connecting to an offsite solution. A recommendation for an "offsite solution" simply means that if a property's onsite system were to fail in the future, it might be difficult to build a replacement system that meets all the setbacks and separation distances required by the current zoning ordinance and State rules.

The needs assessment was completed using planning level data, and **no access to private property was requested or granted during the study**. Site-specific testing would be required to confirm the study's findings for an individual property or to build a new or replacement onsite system.



The Town Center zoning district, with the outlines of the parcels included in the needs analysis shown in purple.



Of the 78 parcels in the Town Center, there are 42 parcels that can support an onsite wastewater disposal system under the assumptions used in this project and under current zoning ordinances and State wastewater disposal rules. These parcels met all the environmental setbacks required by the Town and the state, as well as depth to groundwater and bedrock criteria. The analysis estimated that 36 parcels could not support an onsite wastewater disposal system. Of these parcels, 5 were constrained by only environmental setbacks and 19 parcels were constrained only by shallow groundwater. The remaining 12 parcels had a combination of setback and groundwater constraints. Although water supply setbacks had the greatest impact on onsite systems' suitability that was related to the area available on a parcel, many area-limited parcels also had shallow groundwater restrictions.

Parcels with both groundwater and available area limitations are clustered primarily in the immediate vicinity of the Town Common. Some form of small community system may be needed in the future to meet the needs of these properties. However, comparing the results of the GIS assessment to wastewater permits issued in the study area indicates that property owners are already taking steps to responsibly dispose of wastewater on their own properties.

Six areas were identified within the Town Center that appeared to have some potential as sites for community wastewater disposal systems. Upon closer investigation, however, all of the sites have significant limitations. Some sites have good soils for wastewater treatment but are located too close to the Browns River, while others require stream crossings that are prohibited by the Town's current zoning ordinance. The remaining site with good potential is located half a mile away from the Town Common and the route for the wastewater pipe would go through areas

of shallow bedrock, necessitating significant and expensive ledge removal.

In light of the limited feasibility that a community wastewater disposal solution could be designed at a cost that residents would find reasonable, several alternative strategies for managing wastewater and supporting the Town's land use goals in the Town Center zoning district are offered, specifically:

- Encourage the proper maintenance of existing wastewater treatment systems in the study area;
- Encourage creative solutions, like easements or water supply relocations, between neighboring landowners to solve problems related to available-area related restrictions; and
- Investigate sharing existing wastewater treatment capacity, both for Town owned properties and between individual landowners.

Even if a property was designated as "limited" in this study, property owners have options available to use advanced technology to upgrade their systems if they have problems in the future, to change the use of their property or to add a business, and even to subdivide a property, that were not available under the old wastewater regulations for Vermont. More information about these options is available in the final report for this study.



You can find out more about the study of wastewater alternatives for the Town Center! The final report is available for review at the Town Offices, and can also be downloaded from the Town's website:

<http://www.westfordvt.us/>