
Assessment of Decentralized Wastewater Options: A Survey of Needs, Capacity and Solutions for Historic Waitsfield Village and Irasville, Vermont

Executive Summary

Following a failed bond vote at Town Meeting in March 2008 for a proposed centralized wastewater collection, treatment, and dispersal system to serve Irasville, the Town of Waitsfield's Selectboard approved a request from the Planning Commission review alternative options for wastewater management in Waitsfield Village and Irasville. This request recognized that a centralized wastewater treatment solution was unlikely to move forward, but significant wastewater treatment and capacity challenges still existed in the two village areas.

The Town of Waitsfield's Planning Commission appointed a Wastewater Committee to undertake a decentralized wastewater study funded by a FY10 Municipal Planning Grant from the Vermont Department of Housing and Community Affairs (DHCA). Stone Environmental Inc. (Stone) was retained by the Committee using the grant funding to update an existing (2001) survey of property owners and consider decentralized wastewater treatment options for the Historic Waitsfield Village and Irasville areas, located along Vermont Route 100.

The overall goals of the study are to:

- Update the existing 2001 survey of water supply and wastewater treatment infrastructure;
- Re-evaluate wastewater treatment and dispersal capacity and needs in light of the municipal water project currently under construction; and
- Evaluate wastewater management options and develop a summary report.

This report provides information about current conditions, the range of wastewater treatment and capacity needs expressed in the survey, and an approach to meeting those expressed needs by providing targeted wastewater capacity with decentralized treatment systems where and when that capacity is needed.

The information gathered and updated from property owners during this study indicated that substantial wastewater treatment needs currently exist within Waitsfield Village and Irasville. Examples of current wastewater challenges, as described by respondents to the property owner survey, include:

- Periodic wastewater system malfunctions.
- Lack of wastewater capacity where desired by business owners to sustain and grow existing enterprises.

- Significant repair and replacement for failed or failing on-site wastewater systems, requiring owners to borrow funds and assume debt to cover repair and replacement costs.
- Lack of any strategic, community-level wastewater management support or potential solutions.

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The chief limitation on providing sufficient wastewater capacity for Waitsfield Village and Irasville is the proximity of wells and wellhead protection areas to on-site wastewater treatment and dispersal systems. The update of infrastructure mapping completed for this report, which includes recent wastewater system replacements or upgrades as well as an assessment of recent permits issued by the Vermont DEC, illustrated that in the absence of a municipal wastewater solution, several property owners have invested significant resources to replace their own on-lot infrastructure. However, in some cases, even these recently-replaced systems represent a “best fix” solution, with system components such as leach fields located too close to nearby potable water supply wells to meet full regulatory standards. In fact, the planning-level assessment of lot-by-lot wastewater treatment needs and capacity completed for this study indicated that nearly 50% of the developed properties in Waitsfield Village, and 25% of the parcels in Irasville, may not be able to replace their current on-site wastewater systems with a fully complying replacement system on the same lot in the future.

The Waitsfield Municipal Water Project, now under construction in Waitsfield Village and Irasville, is integral to the conversation regarding decentralized wastewater needs. A completed water system will eliminate many wellhead protection areas, and thus will directly increase the number of sites in the study area that can support on-site wastewater treatment and dispersal. The municipal water program will also address long-standing concerns regarding inadequate separation distances between water supply wells and onsite wastewater treatment systems, while also providing water supply capacity for fire protection. However, while the issues of water supply and appropriate wastewater treatment are inseparable, provision of a municipal water system will not fix existing outdated or undersized wastewater treatment infrastructure. In Waitsfield Village, the most significant limitations on wastewater capacity relate to the wellhead protection areas that will remain in force even after the municipal water project is complete. In Irasville, fewer wellhead protection areas will remain in force once the municipal water project is complete, but the underlying soils still present challenges for soil-based wastewater treatment—especially in the vicinity of Winter Park, the Skatium, and Fiddler’s Green.

Engineering, treatment technology, management, and funding approaches can all be developed to address wastewater needs and the challenges of soil conditions and remaining wellhead protection areas. The Town of Waitsfield now has the opportunity to consider re-purposing previously granted wastewater infrastructure funding to address these expressed needs and physical constraints.

In the final recommendations of this study, significant attention is given to funding options that would help provide loans for upgrades or replacements of decentralized systems. This study has identified a relevant and transferable precedent in Vermont for establishing a municipal program of long-term, low-interest revolving loan funds for property owners repairing and/or replacing decentralized wastewater infrastructure on private property. The precedent includes basic system management requirements and other legal protections to safeguard the public loan investments.

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Based on significant expressed and ongoing needs in the study area for improved wastewater management, an expressed desire for a broad variety of wastewater solutions, and the availability to Waitsfield of state and regional funding solutions, this study recommends establishment of a structured program that can provide incremental support for improved wastewater management to the community.

In summary, this study recommends that the Town of Waitsfield consider implementation of a revolving loan fund based on relevant Vermont precedent, and to proceed by first establishing a Wastewater Management District. This District would oversee a structure and process for directing existing EPA State and Tribal Assistance Grants, Clean Water State Revolving Loan Funds, and other available funding solutions, to support the provision of appropriately managed decentralized wastewater treatment and dispersal capacity in Waitsfield Village and Irasville.