H.375. An act related to permitting of ecological toilets and greywater systems

Testimony provided by Seth Jensen, Interim Director, Lamoille County Planning Commission

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As a brief introduction, my name is Seth Jensen. I am the Senior Planner and currently Interim Director of the Lamoille County Planning Commission. In addition, I have been a member of the Westford Planning Commission for the last ten years, including two years as Chair, and was the Chair of a committee exploring wastewater solutions for the Westford Town Center from 2006-2008.

I will focus my testimony on the opportunities and challenges created by use of ecological toilets from a community development and land use planning perspective, based on both my professional and volunteer experience. I will generally leave the technical details and science behind these systems to others with greater expertise in those areas.

I would like to begin by providing the Committee with an overview of how the clivus composting toilet system was used in the Barnes Camp Visitors Center. Barnes Camp is an historic logging camp located on Route 108 at the southern gateway to Smugglers Notch. Since 2011, I have served as the project manager to restore Barnes Camp as a Visitors Center for the Smugglers Notch State Park and Scenic Highway. The Visitors Center opened in the fall of 2014 and was recently awarded a Vermont Public Places Merit Award.

Simply put, without ecological toilet alternatives such as the clivus system, this project could not have occurred. Barnes Camp was located in a setting extremely unfavorable to a traditional onsite wastewater system. Barriers included a small lot, shallow soils, high water table, and proximity to surface waters. The nearest sewer main was more than a mile away. Expanding the sewer main was cost prohibitive ($1,000,000+), and would have opened Route 108 up to strip development which is counter to both the local and regional planning goals.

The clivus system at Barnes camp consists of two units capable of supporting a total of 200 visits per day. Barnes Camp joins two other facilities utilizing clivus systems in the Notch. I have included photos of the interior of the Barnes Camp restrooms to give you an idea of the physical appearance of the system. As you will see, it is an extremely well kept, attractive space, far from the dirt floored pit latrines that many people envision when they hear the phrase “composting toilet.”

As project manager, I was responsible for permitting use of the clivus system. ANR staff was extremely helpful in navigating this process. However, it was clear that while the current rules allow these systems, the process for doing so was less than clear. H.375 would address this in several ways. First, rather than “allowing” alternative wastewater treatment technologies, it would “encourage” them. While this seems like a minor semantic change, it sends a clear message that alternative systems are allowed and encouraged, not simply a last resort. H.375 also requires development of an “Ecological Toilet Best Practices Management Plan (ETBPMP).” This will add predictability to the permitting of ecological toilets by ensuring that both applicants and permitting officials know what will be expected and will ensure adequate maintenance of these systems.

The components of the clivus system are located in the basement of Barnes Camp *(see slide)* The clivus system at Barnes Camp is maintained by State Parks Staff. Wood shavings are added to the two digesters on a regular basis. Annually, the two large liquid storage tanks are pumped out, and the liquid is disposed of at a wastewater treatment plant. On a site with a leach field, this would not be necessary. Finally, each digester must be cleaned out every 6-7 years, depending on use. This involves removing the material from an Hi-VAC truck. Due to the fact that the digesters contain wood shavings, the

material cannot be brought to a wastewater treatment plant and must be disposed of in a landfill. This is the most expensive piece of maintaining the system.

I'd now like to shift the focus to how ecological toilets may help to meet other statewide planning goals and objectives. For many years, Vermont has made focusing development into existing villages and downtowns a priority. Especially in rural areas, vibrant villages are critical to achieving other statewide objectives. A village development pattern can reduce watershed wide impervious surfaces by allowing use of shared parking and other transportation infrastructure. Creating local opportunities for goods and services reduces the distance rural residents must drive and encourages multimodal transportation options such as walking, biking, and transit, potentially reducing carbon emissions related to transportation. Finally, villages can be the key to creating employment opportunities in the most rural areas of Vermont.

However, development of many villages is hampered by lack of wastewater infrastructure. I have included slides illustrating the extent of this problem in two communities – my home town of Westford and the Town of Wolcott, a community in which I have recently spent a great deal of time professionally. Both communities have undertaken assessments of current wastewater treatment conditions and potential options. In both Towns, the potential for new, onsite systems is limited by many of the same issues that limited wastewater at Barnes Camp: small lot sizes, shallow soils, high water table, and proximity to surface waters. These studies also identified potential sites for community wastewater systems. However, in both cases, these options are likely not feasible without outside financial support. This is a story repeated again and again throughout rural Vermont.

My experience is that few community members identify infrastructure such as community wastewater treatment as a top concern or priority. However, they do identify local employment opportunities, senior housing options, recreational opportunities for youth, and community gathering spaces such as cafés as needs and priorities. None of these things can happen without addressing wastewater. If properly applied, ecological toilets and greywater systems may help to address this barrier. As with Barnes Camp, use of these technologies may allow redevelopment of existing lots and buildings within Villages by reducing the amount of land area needed for on-site wastewater treatment, potentially allowing more diverse uses within these areas. An obvious, potential concern with this application is ensuring proper management of these systems. H.375 addresses this by requiring applicants to adhere to Best Practice Management Plans for both ecological toilets and graywater systems. This will be especially important in village settings.

One concern that some planners have raised regarding these systems is that they could open remote areas to development that cannot currently be developed due to lack of sufficient soils for onsite wastewater treatment – specifically steep, remote hillsides. My personal opinion is that we are better off focusing our arguments on why development should be limited in these areas on issues such as emergency access, risks of erosion caused by development of steep slopes, loss of floodwater attenuation, and forest fragmentation. Focusing on wastewater when there is proven technology that works in these settings ultimately undermines the efficacy of the planning process and dilutes sound arguments for protecting our remote hillsides. Relying on wastewater as the principal argument for limiting development in these areas also leaves a community vulnerable in the event that a developer locates a vein of suitable soils, or is willing to undertake the expense of extending sewer infrastructure (which, given the nature of second home luxury lots in some settings, is not inconceivable). Finally, disallowing use of alternative systems in remote settings also disallows them in our villages, the very areas where we wish to focus new development.

Thank you for this opportunity. I am happy to answer any questions you may have.