



Vermont Village Wastewater Solutions Initiative

<https://dec.vermont.gov/village-wastewater>

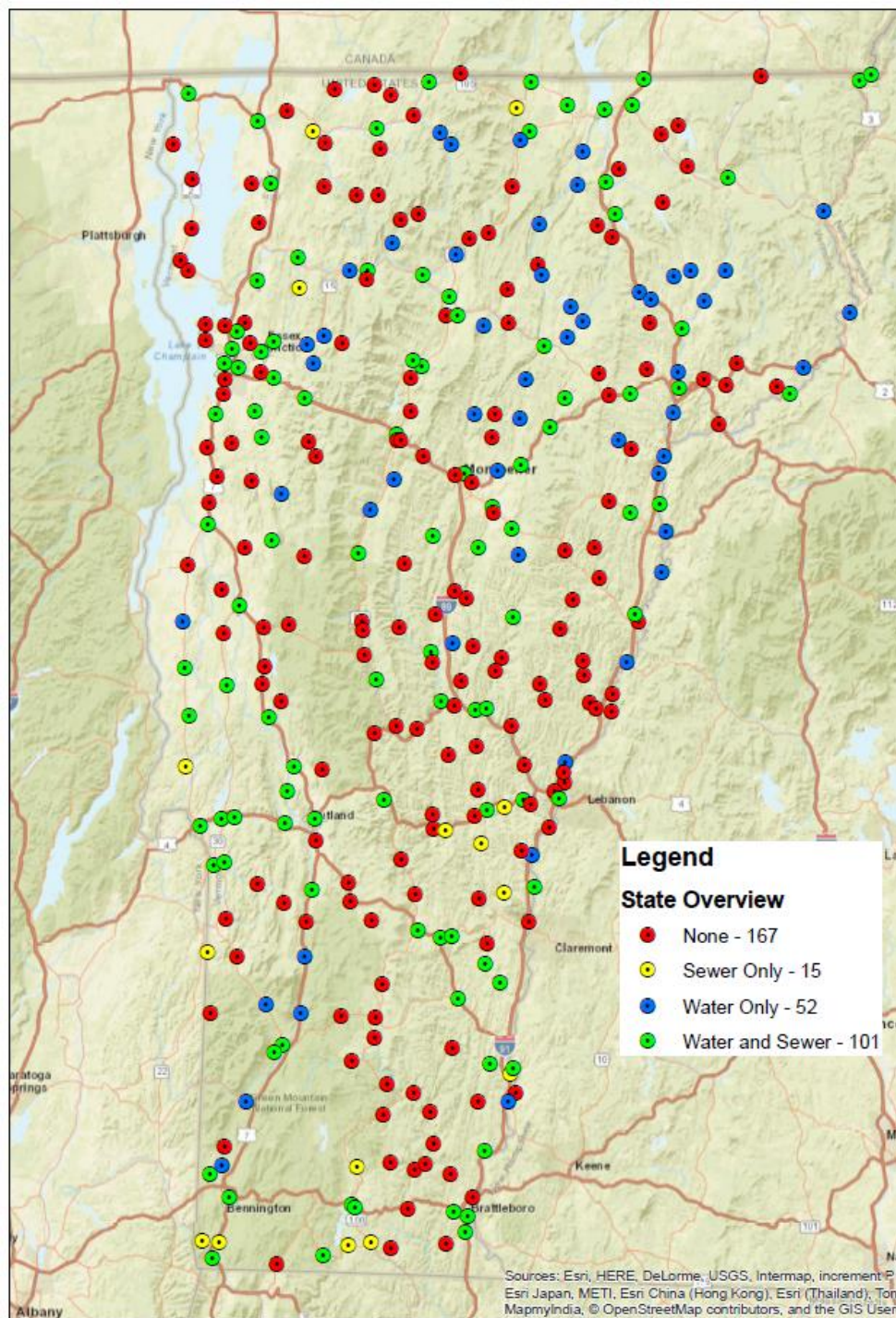
Lynnette Whitney Claudon, PE

Village Wastewater Solutions Initiative Committee

- DEC, ACCD, VDH, RCAP Solutions, USDA-RD, RPCs
- NBRC Grant to DEC
 - Feasibility Studies for: East & West Burke, & Wolcott villages
 - Report to examine internal & external processes & barriers
- Website
- Regular Meetings
 - Networking to more effectively use existing resources
 - Strategize with funding groups to find gap funding
- Committee Workbook
- Capacity Feedback Session
- Funding Forum (on hold for COVID)

Half of Vermont's Villages Lack Sewage Treatment Facilities

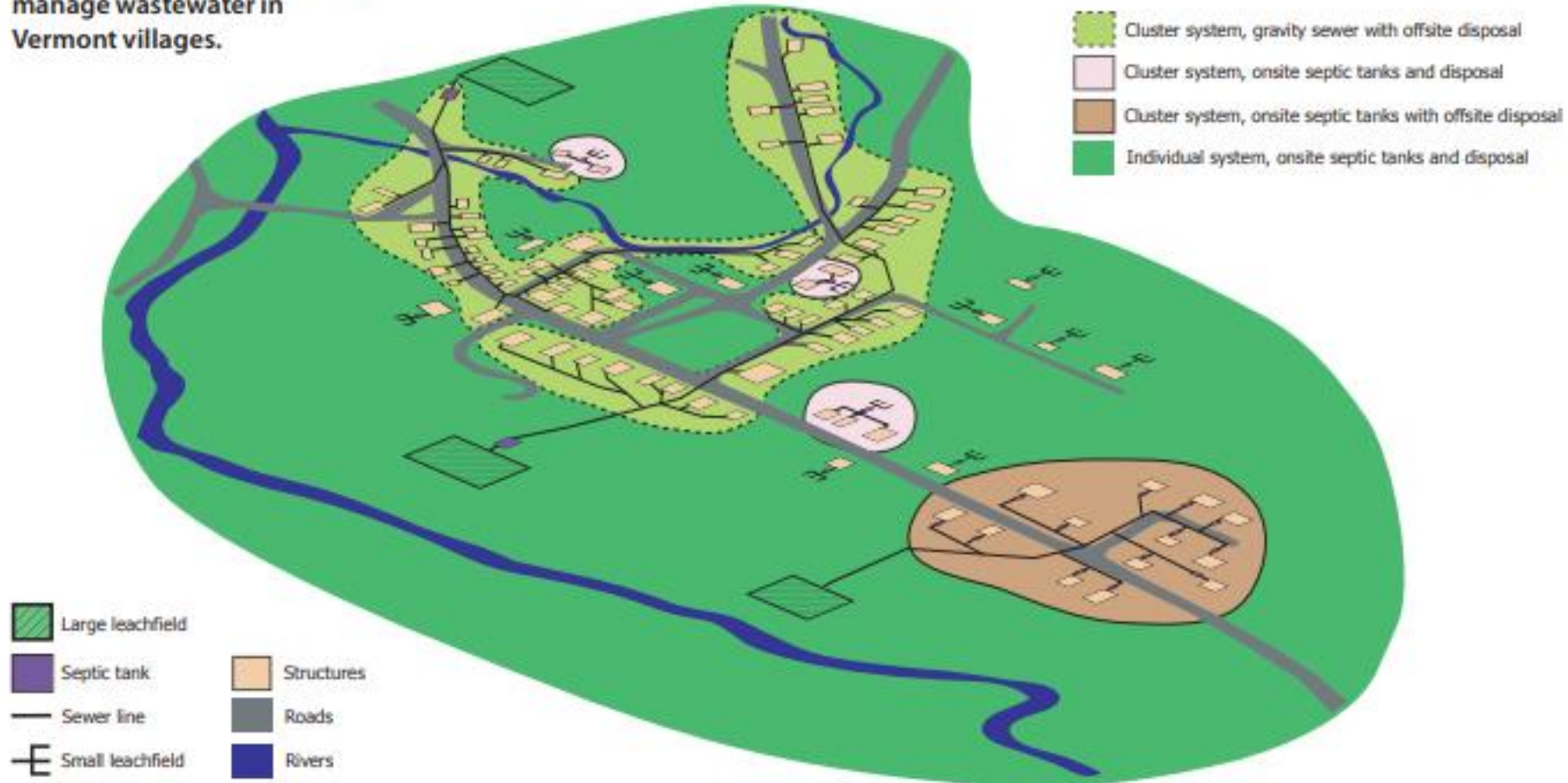
- Most are close to rivers, streams, or lakes
- Limits opportunities for redevelopment
- Hard to establish water-intensive businesses like food processing, restaurants and breweries.



Sewage Solutions – Likely to be Decentralized

Multiple ▪ Small-Scale ▪ Incremental ▪ In-Ground Disposal

A variety of collection and treatment solutions can be used to manage wastewater in Vermont villages.



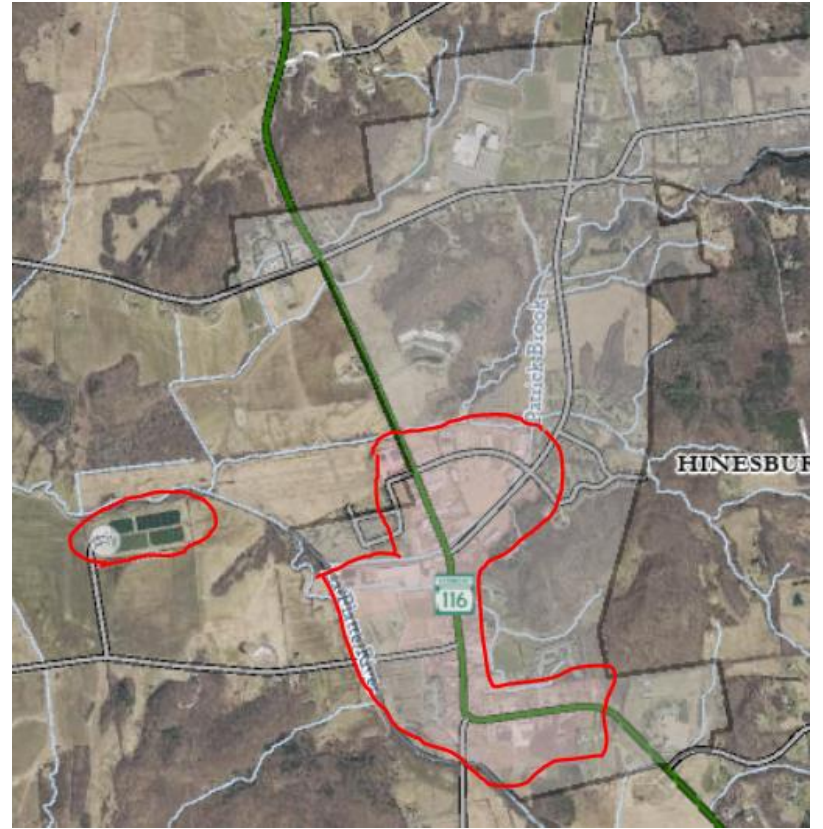
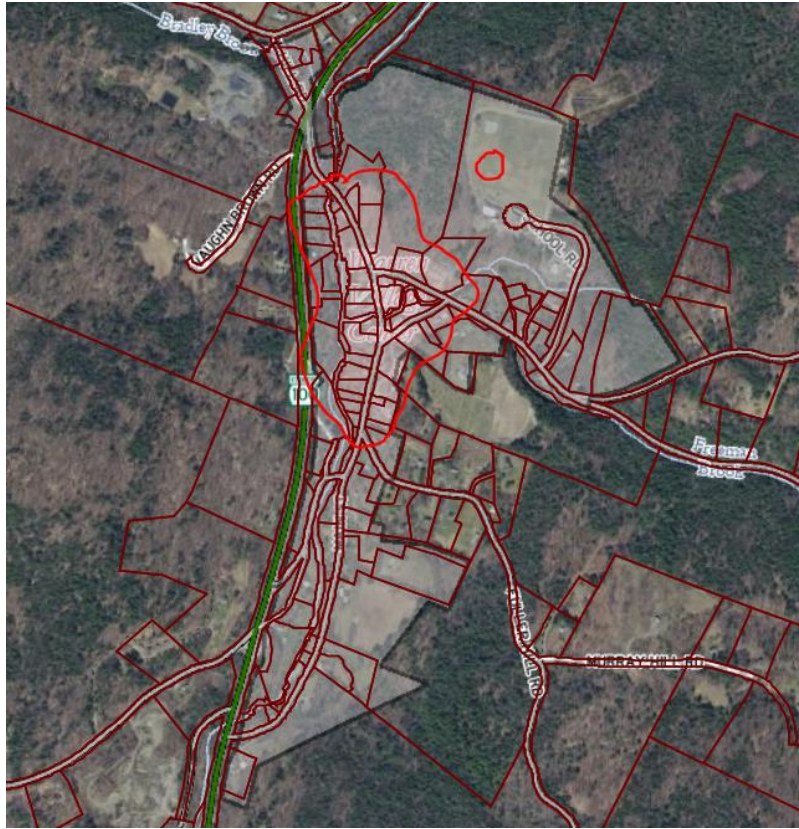
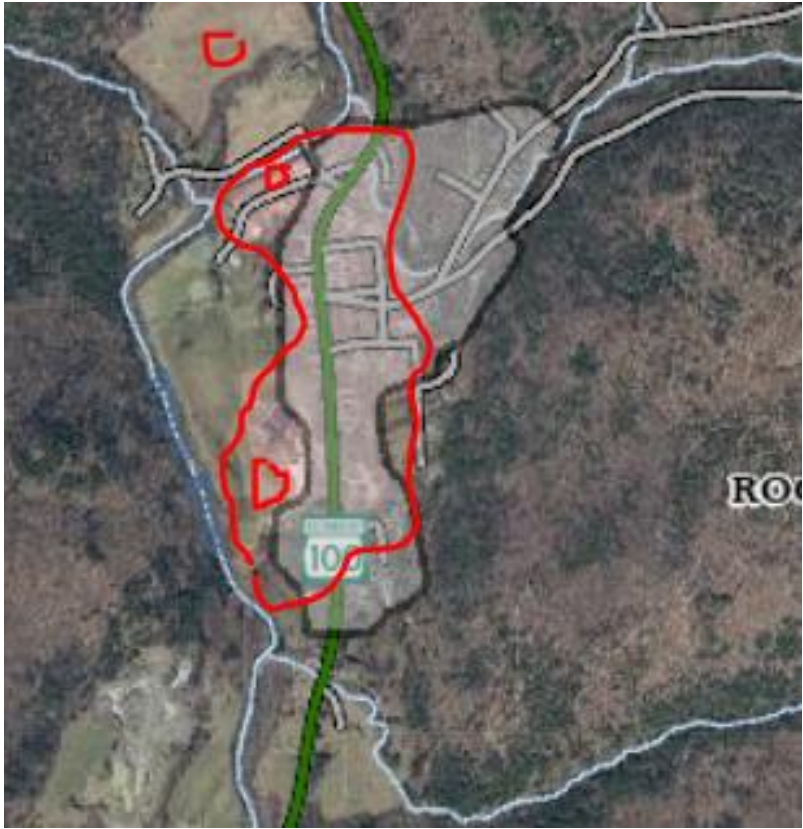
Keys to Successful Projects

- **Strong Wastewater Committee** – Villages that moved forward with projects most often had engaged committees and public input
- **Visioning** – Villages that moved forward with projects most often had completed complementary economic and planning studies
- **Capacity** – Villages with installed systems had a part time or fulltime employee to run or manage the system (operation & admin)
- **Funding** – Villages that moved forward with projects most often had grant funding in addition to loan funding
- **Affordability** – Villages that moved forward found user rates that were affordable to rate payers

Affordability

Affordability = Single Family User Rate/ Median Household Income

- Village areas tend to have lower income residents than the overall town, so an income survey can be used to establish a lower MHI for a specific service area
- 1.5% to 2.0% has historically been considered to be affordable for wastewater utilities based on an US EPA Study on CSO Communities



Service Areas & Designated Centers

Schedules and Timing

- Feasibility Level Planning / Preliminary Engineering Report (1-3 years)
- Environmental Review (2-6 months)
- Test Pits and Site Analysis, Initial Capacity Analysis (1-3 years)
- Bond Vote (months – years)
- Land Acquisition (months – years)
- Final Design & Permitting (months – year)
- Construction Loan Application (2-3 months)
- Construction (May include phasing) (1-3 years)
- Repayment Starts

Total: 5- 13 years, or 20+ years with gaps in funding

Westford

- \$3.3M Total Project Cost
- \$15K Engineering Planning Advance
- ~\$18K Municipal Planning Grant
- \$300K land purchase
- Remainder CWSRF Loan, Westford is not USDA-RD Eligible, MHI = \$91K



	100% Loan	65% Loan	50% Loan
Equivalent User Rate	\$1,638/ year 1.7%	\$1,180/year 1.3%	\$754/year 0.8%

Montgomery – Stercus Committee

- 192 total connections in two villages
- Project Cost ~ \$11.8M
- Funding Package
 - USDA-RD Grant: ~\$6M
 - USDA-RD Loan: ~\$5M
 - PPG Grant \$30k
 - CWSRF Loan Subsidy \$0.25M
 - NBRC ~ \$0.5M
- Loan amount is too high to be affordable by user repayments alone: \$1,450/year 3.4% of \$42,212
- Town considering other options: impact fees, local option tax, sewer benefit assessment, and mini-TIF

2003 Warren, Vermont

- Community Decentralized Wastewater System
 - 10 individual system refurbishments
 - 1 cluster system with 3 properties
 - 78 properties to a large shared system
 - Alternative treatment at school
- 2020 User Fees: **\$1180/year**

Project Element	Estimated Cost	EPA Demo Grant
Needs Assessment-Facilities Plan	\$462,000	\$300,300
Final Design	\$386,200	\$267,400
Construction	\$2,585,070	\$293,900
Construction Engineering Services	\$448,630	\$189,000
Existing System Capital Payback	\$305,300	\$198,400
Other Services	\$140,100	\$0
EPA Demo Only	\$334,700	\$251,000
Total	\$4,662,000	\$1,500,000

Table 1: Warren Total Project Costs

Source	Amount
EPA Demonstration Grant	\$1,500,000
EPA State & Tribal Assistance Grant (STAG)	\$1,301,000
Vermont State Pollution Abatement Grant / Match	\$930,000
Local Share - SRF Loan	\$791,000
Local Share - Town Meeting Allocations/Match	\$140,000
Total	\$4,662,000

Table 2: Warren Total Project Funding Summary



2016 Brownsville, Vermont

- Ascutney Mountain Ski Area was going bankrupt
- Purchased Ascutney mountain sewer system with CWSRF loan
- Irene damaged village septic systems
- Constructed village collection system & refurbished mountain sewer
- Debt repayment split between grand list & user fees
- User Fees: **\$865/year**
- **5 years in development**

2018 Rochester, Vermont

- Has 3 community soil-based system sites & 1 reserve site
- Originally built in 1970's for 66,150 gpd to end straight pipes
- Rebuilding disposal field 2018
- Maintaining a vital village area
- User Fees: **\$340/year**

Summary of Financial Status – FY2017	
Average annual single family home bill	\$340
Annual amount billed	\$55,377
Current long-term outstanding debt*	\$649,642
Current annual debt payment (through 2040)*	\$54,060
Current annual operation and maintenance costs	\$58,476
Annual dedicated reserve contribution	\$0 to \$4,000

*Debt service is financed by the entire Town tax base.

Step	Costs	Funding Source
Planning	\$11,068	CWSRF
Design	\$35,996	CWSRF
Construction	\$463,072	CWSRF
Other	\$11,000	CWSRF
Total	\$499,000	\$249,500



Grafton Villages Pump Out Program

Sewer feasibility study indicated a construction cost ranging from \$3-4M

Town created a septic tank pump out ordinance for the village areas

User Cost: Approximately **\$285** every five years.

Owners must submit proof of pump out to the Town.

Town still concerned with ability to grow or redevelop village properties with small lots.

Benefits of Community Wastewater Systems



Management System for Septage Pumping



Improvements in water quality



Lessened public health risks



May allow for infill development



May allow for economic development



Sustainable environmentally and economically

Community Struggles

- How to ask the least income people to subsidize additional capacity for businesses?
- How to address culture of debt aversion?
- How address vacancy issues when there is no wastewater capacity?
- How to build hope in the communities that things can improve?
- How to develop affordable, walkable housing?
- How to make all of the funding sources and investment actions align?