

Village of Rhinebeck Evaluates Composting Program Options and Launches Pilot



Challenge

The Village of Rhinebeck wanted help understanding their options for implementing a compost program.

Solution

- Stakeholder engagement was facilitated by NYSP21
- Food waste volumes were estimated based on a target population
- Five composting alternatives were researched and compared
- A composting feasibility study summarizing the Village's abilities to implement a program was developed

Results

- A goal statement for the compost program was created and documented.
- Two composting options stood out, meeting many of the Village's requirements, including affordability.
- The Village launched a food scrap composting pilot in partnership with a local compost/hauling company.

Village of Rhinebeck

The Village of Rhinebeck (the Village) is a community of approximately 2,500 residents located in the Hudson Valley region of New York State. Through the efforts of their Climate Smart Communities Task Force the Village leadership and community members have undertaken efforts to reduce their environmental footprint and greenhouse gas emissions.

Challenge

As part of their climate smart efforts, the Village has been interested in implementing a composting program for several years, but was unable to do so. Hence, the Village requested assistance from New York State Pollution Prevention Institute (NYSP21) to assess the feasibility of launching several composting options, so that an informed decision could be made about which to implement.

Solutions

NYSP21 worked with the Village to establish a goal statement, gather data to understand past and existing food waste-related initiatives, and estimate food waste generated in the Village. NYSP21 also helped the Village assess alternative composting options, benchmark financial structures of existing programs, and engage with interested stakeholders. To determine the

“Working with NYSP21 on the feasibility study gave the Village Board the data-driven approach we needed because we don’t have that expertise in-house. The process gave our volunteer Compost Subcommittee clarity and focus—critical to our community engagement efforts in launching the pilot.”

Trustee Vanessa Bertozzi
Environmental Specialist, Village of Rhinebeck

feasibility of the Village's compost options, NYSP2I evaluated five types of compost options: in-vessel, aerated static pile (ASP), windrow, three-bay, and third party. The assessment considered several factors when comparing these five options in terms of their feasibility for meeting the needs of the Village, including their cost, whether or not they were appropriately sized, what the level of access to finished compost would be, and what types of food scraps each alternative could reliably accept. NYSP2I also evaluated the GHG impact of third party (off-site) composting to see how the impacts of transportation would affect the overall benefit of composting.

Results

The study revealed several feasible options for implementing a compost program within the Village. The alternatives ranged in average cost, with aerated static pile (ASP) composting being the least expensive and in-vessel being the most costly option. However, it was also determined that there was opportunity to control the costs associated with any of the options to bring them into range with the others. While each option could accept all types of food scraps at their optimal operational size, ASP, in-vessel, and third-party composting would be able to do so at the size expected for the Village pilot program (approximately 1.7 ton/week). Of these, ASP and third-party were found to be the easiest to scale when and if the pilot expands to include more households or businesses.

Through the financial benchmarking of similar type food scrap composting programs, NYSP2I found that public-private partnerships were the most common type of structure utilized by municipalities, and that drop-off collection sites rather than curbside collection offered a way to control costs while getting a program started if participation rates or grant funds are not yet secured.

The GHG analysis determined that, should the Village choose to use a local third party composter, the GHG emissions associated with transportation to that third party will not outweigh the GHG emissions reduction inherent to composting those food scraps (Figure 1).

The results of the assessment were summarized in a public-facing feasibility study which the Village posted to their municipal website. Using the information provided through this project, the Village decided to move forward with a food scraps composting pilot program in partnership with The O Zone, a local compost and food scraps hauling company.

Since the project close out, the Village Compost pilot solicitation garnered over 100 applicants, reaching its target for household participation. The food scrap collection pilot is expected to run for 6 months.

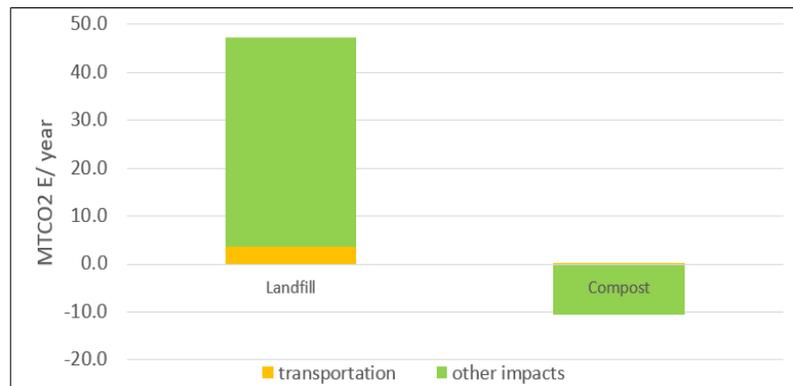


Figure 1: Greenhouse gas impacts of landfilling and composting 88 ton of food waste

Key assumptions: Pilot program composts 1.7 tons/week food scraps; Distance to landfill = 255 miles; Distance to compost = 14 miles

Partners



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