



Northeast Kingdom Residential Food Scrap Drop-Off Pilot Project

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Northeast Kingdom Residential Food Scrap Drop-Off Pilot Case Study
Highfields Center for Composting
Prepared by: Nate Clark

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Introduction

The Northeast Kingdom Residential Food Scrap Drop-Off pilot was a collaborative effort between Highfields Center for Composting (HCC) and the Northeast Kingdom Waste Management District (NEKWMD). The purpose of this pilot project was to provide residents within the NEKWMD an easy, convenient method for recycling food scraps that did not involve processing the material at their own residence. This pilot creates a replicable model for residential food scrap drop-offs at waste district transfer stations.

Background Information

The Northeast Kingdom Residential Food Scrap Drop-Off pilot was carried out in the Northeast Kingdom (NEK) of Vermont, the northeast corner of the state that includes 55 towns and unincorporated areas spanning Caledonia, Essex, and Orleans counties. According to the USDA Rural Development website, “This region of Vermont [NEK] is the most isolated and sparsely populated,” and thus, “it has consistently been the most economically distressed.” (USDA, 2012). The residential food scrap drop-off pilot program targeted towns that have a population less than 2,500, and are at least eighty percent below the Nonmetropolitan Median Household Income level. This pilot program also serviced additional towns without these target demographics. For these reasons, the Northeast Kingdom Residential Food Scrap Drop-Off was a great candidate for a pilot project supported by HCC’s USDA Rural Development Grant.

The NEKWMD oversees transfer station facilities in twenty-seven towns throughout the Northeast Kingdom, and from those, seven facilities were selected to be residential food scrap drop-off locations for this pilot. After initial assessment of the success of this program, the NEKWMD will implement food scrap drop-offs at additional transfer stations around the district.



The Derby Recycling Center residential food scrap drop-off location.

Materials and Methods

The seven transfer station facilities that were chosen to be residential food scrap drop-off locations for this pilot were: Brownington/Evansville Recycling Center; Derby Recycling Center; Sheffield/Wheelock Transfer Station; Lyndon Recycling Center; Groton/Ryegate Transfer Station; Glover Recycling Center; and Newport Town Recycling Center. At every residential food scrap drop-off location, a 48-gallon tote(s) was stationed for the collection of food scraps, as well as informational signage that indicated the program, where the tote could be found at the location, and what materials could and could not be placed within the collection tote. The number of totes provided to a transfer station facility was dependent on the volume of food scraps that facility was expected to receive. Each drop-off location was also provided a tote for sawdust storage. Sawdust is an

effective medium for capping totes after food scraps have been dumped, thus reducing smell, stagnant liquid, and the presence of vectors like flies and rodents.

Participants were expected to provide contact information upon signing up for the program, with the intention being to track number of active participants, frequency of participation, and other factors such as contamination and customer satisfaction. Each participant received a 5-gallon collection bucket; a “Residential Food Scrap Drop-Off Quick-Start Guide” that explained the program and how to successfully participate; and an informational pamphlet/magnet that gave directions on how to properly separate food scraps. “NEK Residential Food Scrap Drop-Off” video was also developed to supplement the informational materials provided to participants, and to provide additional background information on the intentions of the program.



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The five-gallon bucket and informational material that each program participant received.

HCC’s primary responsibilities for this pilot project were to: develop all outreach materials, including the “Residential Food Scrap Drop-Off Guide”, the “NEK Residential Food Scrap Drop-Off” video, and any other marketing materials; package all participant material, including the 5-gallon collection buckets; provide training to transfer station attendants on how to effectively implement the drop-off program; and communicate regularly with participants on matters such as the status of the program and the volume of food scraps being diverted. The NEKWMD’s primary responsibilities for this pilot project were to: coordinate with HCC to ensure transfer station attendants received proper training to effectively implement the program; collect the 48-gallon tote(s) at each drop-off location and bring them to the agreed upon compost facility for processing; collect data on the number of 48-gallon tote(s) picked up from a drop-off location each week; and monitor participants via the tracking sheets that HCC developed and provided.

Food waste from NEK transfer stations is hauled by the NEKWMD to a small-scale local composter in Burke. Terrence and Nicole Lapointe of Wise Worm Compost process food scraps from the residential drop-offs as well as food scraps from area businesses and schools. Wise Worm Compost has been operational since 2009 and they continue to expand composting operations and work with HCC to develop their compost infrastructure and techniques. Wise Worm uses about 80% of the compost on their vegetable garden to grow crops for themselves and 6-8 CSA members. They also sell some of their vegetables to a local deli and ski resort. The compost that doesn’t end up on their garden is either sold or traded to fellow gardeners.

Outcomes and Results

The Northeast Kingdom Residential Food Scrap Drop-Off pilot project was successfully implemented at the seven transfer station facilities from July 2013 through November 2013, and remains operational. Two or three additional NEKWMD facilities will join the program in the coming months, increasing the available number of drop-off locations, and in turn the number of participants in the program.

A deviation from the original project plan did occur during the roll out of the program. Participant tracking sheets were not available at five of the seven drop-off locations. At the two locations that did have tracking sheets, contact information was taken from only a partial number of participants. Thus, participants received program materials (i.e. 5-gallon bucket; Quick-Start Guide; etc.) without giving contact information in return. As a result, cumulative data on the number of active participants and the frequency of participation has not been collected, and weekly communication with participants did not occur. The ability to collect data from all participants over the course of the program was also hindered due to the failure to collect contact information. That being said, NEKWMD and HCC did develop evaluation metrics to assess the effectiveness of the program.

The NEKWMD collected data on the total amount of food scraps collected from the seven drop-off locations over the course of the pilot period for the NEK Residential Food Scrap Drop-Off program. This data was collected from July 26, 2013, to November 1, 2013. The total amount of food scraps collected from the seven drop-off locations was **14,860 lbs of food scraps**. Based on calculations from the Close the Loop Vermont Strategic Plan (2012), if each participant that received a bucket (250 buckets), brought all of their food scraps from their household on a weekly basis (~8 lbs of food scraps/household/week), then the total volume of food scraps collected from the seven drop-off locations would have been 28,000 lbs of food scraps over the course of the pilot period. This means that the NEK Residential Food Scrap Drop-Off program was successful at collecting *about 53 percent*, or just over half, of the total estimated amount of food scraps generated by participants in the program. Although this percentage shows significant room for improvement, it is likely the number (53%) would be higher if more accurate data was collected on number of active participants and frequency of participation.

Two separate surveys were developed by HCC to gather quantitative data on the program.

Survey One. The first survey was designed to assess transfer station attendants' opinions on the program. Three attendants from three different transfer station facilities responded to the survey (n=3). Significant findings are below:

I encountered the following challenges as a result of the NEK Residential Food Scrap Drop-Off program.

Odor	Time Required	Customer Relations	Management/Tracking of Participants	None	Other
0 (0%)	0 (0%)	0 (0%)	0 (0%)	3 (100%)	0 (0%)

I would recommend a residential food scrap drop-off type program to employees of other transfer stations in Vermont.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
0 (0%)	0 (0%)	0 (0%)	1 (33.3%)	2 (66.6%)

Additional Comment:

“A lot of people ask about 1-gallon buckets. I think more people would participate if 1-gallon buckets were offered in addition to 5-gallon buckets.”

Survey Two. A second survey was designed to assess participants’ opinions on the program. Twelve participants responded to the survey (n=12). Significant findings are below:

I participate in the NEK Residential Food Scrap Drop-Off program:

Every Week	Every Other Week	Monthly	As needed	Other
6 (50%)	0 (0%)	0 (0%)	3 (25%)	3 (25%)

Please select all of the benefits that you associate with the NEK Residential Food Scrap Drop-Off program (Select all that apply):

Saves Money	Saves Time	Easy Method of Recycling Food Scraps	Convenient Method of Recycling Food Scraps	Effective Method of Recycling Food Scraps	Other (please explain):
2	3	8	8	8	4

Selected Comments: “Keeps food out of the waste stream.” “Keeps food out of my garbage; makes less garbage; keeps the kitchen smelling better.”

I am satisfied with the 5-gallon bucket provided to me to collect food scraps.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
0 (0%)	0 (0%)	0 (0%)	6 (50%)	6 (50%)

Overall, I am satisfied with the NEK Residential Food Scrap Drop-Off program.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
0 (0%)	0 (0%)	0 (0%)	9 (75%)	3 (25%)

Additional Comment:

“I am concerned that because there is no place at the drop off to rinse our bucket, I will not be able to continue recycling throughout the winter. We turn off all outdoor faucets through winter as I’m sure many do! Have you considered either having a rinse station there or perhaps a swap bucket—take one, leave one...just a thought. Thanks!”

In addition to surveys, HCC also conducted an in-depth interview with Paul Tomasi, Director of NEKWMD, and Marcus Berry, Outreach Coordinator for NEKWMD. Significant excerpts from the interview are below:

“Definitely say this [NEK Residential Drop-Off program] was an effective method of collecting food scraps from residents in the NEKWMD. I know that the volume of food scraps processed from this particular facility [Lyndonville Transfer Station] increased, maybe even doubled. All we had to do was put the bins there.”—Paul Tomasi

“A lesson learned would be to have utilized the tracking sheets at the onset of the program. When you hand a participant a bucket—that is the opportunity to ask for something [contact information] in return.”—Paul Tomasi

“Participants are surprised and happy about winter composting. In the winter, smaller, at-home compost piles freeze, thus home composters are excited they can continue to divert food scraps through the winter months.”—Marcus Berry

“Participants also comment on the lack of hassle associated with diverting food scraps through the drop-off program. Some people compost just for waste diversion, not for the gardening benefits [i.e. production of soil amendment]. Participants are happy to be rid of bear and raccoon issues.”—Paul Tomasi

“The buckets [NEK 5-gallon buckets], people really like the buckets. We receive more comments on the buckets than any other aspect of the NEK Residential Drop-Off program.”—Paul Tomasi

“Well within five years, and hopefully sooner, we will have food waste collection at every facility throughout the Northeast Kingdom Waste Management District. My guess is we will have most facilities collecting food waste in the next two years (which will require re-permitting some facilities). We plan to use the food scrap drop-off program as a way to accomplish this.”—Paul Tomasi

Challenges and Areas of Improvement

1. The failure to utilize the participant tracking sheets to collect contact information from participants when the program materials were distributed is certainly an area of improvement for this pilot project. Compiling participant contact information would have enabled communication with participants and increased data gathering over the course of the pilot period. *Anyone attempting to replicate this pilot project should ensure tracking of participants is included in the scope of work.*
2. Some of the residential drop-off locations ran out of buckets to provide participants. Although each drop-off location was provided an adequate number of buckets, program implementers did not account for the amount of interest in the program, and also buckets were given out to participants without collecting contact information from them.

Conclusion

Highfields Center for Composting (HCC) and the Northeast Kingdom Waste Management District (NEKWMD) believe that the Northeast Kingdom Residential Food Scrap Drop-Off program was successful at its intended purpose to provide an easy, convenient method for recycling food scraps to residents of rural regions with low population density, without processing the material on their own property. It is therefore the recommendation of both partners that this pilot project be replicated in similar geographical areas as an effective strategy to collect and recycle food scraps.

As more education and outreach are provided to NEK schools, businesses and communities, word will spread about the residential drop-off locations and participant use is expected to increase.

Works Cited

United States Department of Agriculture. (2012, February 8). Northeast Kingdom REAP Zone. Retrieved from USDA Rural Development website:
<http://www.rurdev.usda.gov/BCP-EZEC-REAP-NEK.html>