

## Rural/Small Town Organics Management Case Study Hamilton and Wenham Massachusetts Curbside Composting Program

### **Background**

Hamilton is a rural-suburban town in Essex County in eastern Massachusetts. The town has a population of 7,764. Wenham, also in Essex County, has a population of 4,875. The towns are in close proximity and have implemented several joint solid waste management programs.

Hamilton's [Public Works Department](#) provides information on solid waste disposal and recycling. News about Wenham's solid waste and reduction programs is posted on the [Town's website](#). Curbside collection of solid waste and recycling in both towns is provided by Hiltz Waste Disposal, Inc., a private hauler.



Photo courtesy of MassDEP

In April 2006, the Town of Hamilton began a concerted effort to enforce the Massachusetts state law prohibiting disposal of designated recyclables. The "Waste Ban Enforcement program" directed the Town's trash hauler to leave behind any visible recyclables that were placed in garbage containers instead of in recycling bins. As a result, annual trash tonnage in the Town was reduced from 3,226 tons (1.22 tons per household served or TPH) to 2,833 tons (1.07 TPH)<sup>1</sup>.

In March 2008, Gretel Clark, the chairwoman of a newly formed Hamilton Recycling Committee, helped to initiate a waste reduction program with a modified "volume-based rate" that limited residential (free) trash collection to one, 35-gallon container per week, with a charge for any additional generation.<sup>2</sup> Unlimited amounts of recyclable materials could be placed at the curb at no cost. The program was implemented in Wenham in 2009. The new waste reduction program helped reduce waste by 30 percent and saved the town of Hamilton an estimated \$70,000 in the first year of the waste reduction program.<sup>3</sup>

The success of the waste reduction efforts helped to convince the Hamilton Recycling Committee to take on organics composting (food scraps and yard trimmings) as another opportunity to reduce waste.

### **Planning and Program Description**

Curbside organics collection in both Hamilton and Wenham was an outgrowth of Hamilton's "Waste Reduction Program," a volunteer citizen-led project. An additional factor that worked in the favor of this program was the location of a compost facility (Brick Ends Farm) in Hamilton willing to accept food scraps. The Towns also had the full support of the Massachusetts Department of Environmental Protection (MassDEP).

In 2009, a curbside composting pilot involving 74 households was started in Hamilton. Hauling of the organics was provided at no cost by New England Solid Waste with processing of the organics, also at no cost for the pilot, provided by Brick Ends Farm. The pilot ran for an eight week period during February and March of 2009.

<sup>1</sup> Massachusetts Department of Environmental Protection, "Town of Hamilton 'Three-Sort' Program" Case Study, January 2013.

<sup>2</sup> Residents must purchase bags for additional disposal of trash.

<sup>3</sup> Steve Landwehr. "[Role models for recycling - In Hamilton, family of 10 fills one trash barrel a week](#)" SalemNews.com, October 1, 2009.

The program was expanded to more than 600 households with a second pilot in both Hamilton and Wenham in 2010.

The first pilot was free for participants. However, for the second pilot, participants paid \$75 for collection once a week for a year and \$29 for a kitchen collection bucket and a green curbside cart with wheels and a latched lid. The first 500 households to sign-up for the program received free collection carts and buckets, through a \$7,000 grant awarded to Hamilton by MassDEP and private donations.



Town Volunteers ready collection cart distribution  
(Photo: Hamilton Wenham Chronicle)

The Hamilton Recycling Committee working along with a Wenham resident gained participation for the organics recycling pilots by organizing volunteer neighborhood captains to promote the program and signing up participants at public events for the better part of a year.

Survey results from the pilots showed that the average amount of organic materials diverted each week per household came to 10-12 pounds—almost a third of the 27 pounds of solid waste produced per week by the average household in Hamilton during that time. Pilot participants also responded that they would like to see the program continue, even if they had to pay for it.<sup>4</sup>

In June 2010, MassDEP presented Hamilton and Wenham with the “Leaders in Innovation” award in recognition of their efforts to promote composting, recycling, and waste prevention. Later that year, Gretel Clark received MassRecycle’s Recycler of the Year award, in recognition of her work in getting and keeping the program going. Brick Ends was nominated for the Green Binnie award in the business category.

Based on the success of the pilot and positive participant feedback, the Committee decided to expand the pilot throughout the town. The Town’s solid waste and recycling hauler (Hiltz) proposed a town-wide “three-sort service” with little cost increase above the current solid waste and recycling program. Hiltz proposed to use one split-body truck to collect both the recyclables (single-stream) and organics weekly and a second truck with an automated arm to collect the trash every other week, replacing the weekly trash and bi-weekly recycling trucks used previously<sup>5</sup>.

Beginning in April 2012, the Town of Hamilton began weekly curbside pick-up organic waste from all households. The Town issued one 13-gallon compost collection container and one kitchen counter collection container to each household. Finished compost was available free for all participating residents of both pilots and eventually for all residents of both towns. With only nine months of the new program, Hamilton’s trash was reduced by 30% to 0.48 TPH<sup>6</sup>.

<sup>4</sup> Interview of Gretel Clark, [Harvest Power Blog](#), December 8, 2010.

<sup>5</sup> Trash contained in overflow bags can be placed at the curb for collection on alternate weeks.

<sup>6</sup> MassDEP. See Case Study, above.

### **Acceptable Materials and Program Participants**

Materials include all food scraps, including meat and bones, soiled paper (paper towels, pizza boxes, etc.), house plants, yard and grass clippings, and litter box material.

The Hamilton and Wenham organics recycling programs are open to all residents. Area schools are also being recruited to participate.

### **Cost/Funding**

Hamilton's first Recycling Committee began a Waste Reduction Program for residents that limited (free) trash disposal to one barrel per week, with a charge for any additional amounts. Unlimited amounts of recyclable material were collected. The Program provided an incentive to residents to reduce their solid waste through recycling and later through the Town's composting program.

Financing the household collection containers and determining the hauler and processor fees were initial challenges in the pilot organics recycling programs. MassDEP provided a grant of \$7,000 which covered a little less than half the cost of the collection containers (curbside and kitchen/counter top containers). Additional funding was provided by Brick Ends Farm and New England Solid Waste, along with some individual donors in Town. For the first pilot, New England Solid Waste waived hauling fees and Brick Ends Farm waived processing fees. Participants in the second pilot paid \$75 for a year of weekly compost collection and \$29 for a counter top collector and a 13-gallon green curbside bin to cover the costs of the program.

In 2012, curbside organics collection was initiated for all residents in Hamilton and Wenham at no cost for weekly collection. Hiltz Disposal provides weekly collection of both organics and recyclables with a split body truck. Trash collection for Hamilton residents, limited to one free 35-gallon container, is offered every other week. Additional trash must be contained in an official "overflow bag" (\$1.75 for 33-gallon bag, available at two local retailers). Revenues from bag sales are deposited into a Trash Enterprise Account.

To implement the new program, the Town procured and distributed 2,703 standardized 35-gallon carts for trash. The Town also purchased, with the help of a MassDEP grant, the 13-gallon wheeled food scrap collection carts. The carts were distributed by the hauler.

Moving trash collection to every other week allowed the Town to offer weekly collection of organics and recyclables with only a minimal increase in hauling charges. The use of the split-truck for collection of organics and recyclables and an automatic cart collection system for trash has proven to be cost-effective for both the hauler and the Town. The hauler (Hiltz) pays Brick End Farm \$40 per ton for processing the organics,<sup>7</sup> compared to \$70/ton tipping fee for trash delivered to a disposal facility. Brick End Farm offers free grade #1 screened compost to program participants.



Town officials & Recycling Committee members gather at Brick Ends Farm to promote the organics program (Photo: Hamilton Wenham Chronicle)

<sup>7</sup> Hiltz bills the town directly for collection and processing.

### ***Outreach and Education***

Outreach methods for the curbside organics program have been multifaceted:

- News media press releases and letters to the editor
- Door-to-door brochure distribution
- Multiple presentations to Boards of Selectmen
- Presentations to citizen organizations
- Support of local organizations, including Hamilton Wenham GREEN, a local nonprofit organization working for sustainable communities
- Recruiting volunteer “Neighborhood Captains” to distribute promotional “Dear Neighbor” letters and flyers at public events and to solicit participants for the first program pilot
- Creating a Hamilton “Trash Hot Line.” The Hot Line proved very successful for addressing citizen concerns and speaking with “angry residents,” without burdening the Town’s DPW
- “Pinned” participant locations on a large map of each town to show the level of participation in the early pilot programs
- The dozens of volunteer Neighborhood Captains. See Attachment A for program promotional fliers
- With the roll-out of the weekly organics and recyclables collection and bi-weekly trash collection program, a full-color, an 8-page information booklet was developed and printed by the town (with a MassDEP grant) and delivered with the new trash and food waste carts

### ***Equipment and Collection***

Organics collected in the Hamilton curbside composting program is taken to [Brick Ends Farm](#), a 130-acre farm located in Hamilton, Massachusetts, owned and operated by Peter Britton. Brick Ends Farm was one of the first farms to register with the Massachusetts Department of Food and Agriculture for food waste composting in the 1980s. The initial goal of the operation was to restore fertility on their farmland. The company markets bulk organic garden compost, compost tea, garden soil, and compost to farmers and lawn and garden centers throughout Maine, Massachusetts, and New Hampshire.



[Brick Ends Farm](#)

[Hiltz Disposal](#) provides curbside collection of organics and recyclables with a split-body truck on a weekly basis for organics and recyclables.

## **Results & Impacts**

- At the end of the initial Hamilton pilot program, the 74 participants were surveyed. Results indicated that the average amount of organic waste diverted per household was 10 to 12 pounds per week – a significant level compared to the 27 pounds of solid waste produced per week by the average household in Hamilton at that time.<sup>8</sup>
- Program participants are currently averaging 9 to 12 pounds per week per household of organic waste.<sup>9</sup>
- By paying the \$40 per ton tipping fee for organics instead of the \$70 for solid waste, the Town cut disposal costs by 15% to 25%.<sup>10</sup>
- The Hamilton-Wenham programs support community gardening by keeping the compost local and giving back free compost for participants.
- Gretel Clark of Hamilton was named the 2010 State Recycler of the Year in recognition of her efforts to start a curbside compost recycling program in Hamilton and Wenham.
- Solid waste curbside pickup is now done bi-weekly in Hamilton, with weekly curbside collection of recyclables and organics, providing significant cost savings to the Town and providing additional incentives for residents to divert recyclables and organics.
- Since town-wide implementation of organics and switching to every other week trash collection, Hamilton's solid waste tonnage has decreased 32%; in Wenham by 18% (Wenham provides trash, recycling, and organics collection weekly). Annual per household solid waste tonnage in Hamilton is down to 0.48 tons per household and in Wenham down to 0.60 tons per household. Tons of recycled materials increased in Hamilton by 27% and in Wenham by 9%.<sup>11</sup>
- On a per household basis, 251 tons of organics were collected in one year in Hamilton, and 178 tons in Wenham. About half of the residents in each Town are participating in the curbside organics program. However, Hamilton's residents, on a per household basis, are composting almost 50% more organic waste than Wenham's residents. One assumption is that by taking away weekly solid waste pick up, residents are more likely to want to get rid of "that smelly stuff" on a weekly basis in their green compost bin<sup>12</sup>.
- Savings realized by Hamilton because of its reduced solid waste tonnage fees came to \$40,600, while Wenham saved \$12,000<sup>13</sup>.
- In the fall of 2011, the Town of Ipswich (population 13,175) began a curbside "Food Waste Plus" program modeled after the composting initiative in neighboring Hamilton and Wenham. Residents received a special bin to put to the curb once a week with kitchen scraps and other degradable materials, which is trucked to Brick Ends Farm in Hamilton and composted. Participants pay \$100 for the year and receive free compost for their yards and gardens in return from Brick Ends Farm.

## **Lessons Learned**

- Both Hamilton and Wenham are semi-rural towns with a significant portion of residents doing backyard composting, so many residents did not want to pay for curbside collection of organics in the pilots.
- Working with the Boards of Selectmen proved to be a challenge at times. It is critical to "get the ear of the decision makers" in town and to get their support for a program, however it is not always easy. Lining up this type of support will go a long way when it comes to broader outreach and public participation in the program. Signing up households to participate in pilot programs in order to convince town officials that the program was attainable and would save the town money was essential for program success.

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<sup>8</sup> Gretel Clark, Presentation. MassRecycle's 2012 Recycling & Organics Conference & Trade Show.

<sup>9</sup> By Lucy R. Sprague Frederiksen. "[The sweet smell of compost and success.](#)" Hamilton-Wenham Chronicle. October 31, 2010.

<sup>10</sup> Vince Bond. "[Composting may be the key to zero-waste initiatives.](#)" *Waste and Recycling News*. April 24, 2012.

<sup>11</sup> Conversation with Gretel Clark, August 2013.

<sup>12</sup> Ibid.

<sup>13</sup> Ibid.

- Financing the household collection containers and determining the hauler and processor fees were initial challenges in the pilot collection. An unexpected hurdle impacted the program when state funds were not available in time to initiate the scheduled pilot. The Towns' financial situation did not allow for funding the effort and the savings from the Waste Reduction Programs in both Towns went into general funds and were not available. The pilot implementation was delayed; however the state grant funding did come through, along with additional support from town donors and from the hauler and processor. In addition, with negotiations between the Hamilton Recycling Committee, Brick Ends Farm (the composter) and New England Solid Waste (the hauler), hauling and processing fees were waived for the initial pilot.
- When the Hamilton Recycling Committee began discussing adding the Town of Wenham to the food scrap collection it added another depth to the scope of the project. It was important to determine Wenham's commitment to support and participate in the project.
- Starting an organics program, since it's so new and unique to residents requires a high level of excitement and enthusiasm in order to gain the necessary participation in the program. Having dedicated volunteers on the town Recycling Committees and also instituting the volunteer Neighborhood Captains program really helped to increase public awareness and enthusiasm for the program.
- Educating participants about what is acceptable, understanding how easy it is to separate food scraps into the kitchen collection bucket (instead of the trash container), and overcoming the "yuck" factor was a challenge. The Hamilton Recycling Committee set up a hotline (as an extension of the Town Hall number) and messages were listened to regularly so that participants could get answers to concerns or questions. This "one-on-one" communication was important for gaining participant support for the program.
- Having a local composting operation and a committed, local hauler of organics was vital to the success of the program. It's important that program staff, volunteers, and town officials recognize the crucial role that the hauler and processor play in organics collection and go the extra step to work with both the hauler and processor to ensure program success. The synergy between having a hauler willing to put the time and effort into organics collection and a processor within a reasonable transport distance is essential for program implementation, controlling costs, and long-term sustainability.
- Keeping a small committee of volunteers focused and motivated in the early stages of developing a program can be difficult, especially given the demands of work and family. Reaffirming the importance of the work and all the benefits to implementing a program with such a magnitude as organics collection is crucial for keeping volunteers focused and engaged. A lot of publicity, public awareness outreach, media outreach, community activism, and town official endorsement are important for gaining program participants. The demonstration effect cannot be undervalued as well. Seeing the green curbside collection containers out on collection day really helps to get other households around the neighborhood onboard.

### **Conclusion**

Hamilton and Wenham's curbside organics program demonstrates a model of synergy between a dedicated group of volunteers, local haulers willing to collect curbside organics, including food scraps, and a processor willing to undertake composting of food scraps. The volunteer Recycling Committees were able to prove to decision makers that the program could be successful and save the towns money, thus gaining town official support.

The Hamilton Recycling Committee undertook all of the necessary steps to undertake a pilot organics collection program. First, overcoming the initial hurdle of arranging for hauling and processing, by initiating meetings with a local hauler and processor. Successfully negotiating with both the hauler and the processor to not only provide the services, but to do so at no charge for the initial pilot, contributed to the pilot's success and eventual town-wide adoption.

The dedication and support of both New England Solid Waste and Brick Ends Farm in the pilot organics programs shows leadership and foresight in advancing food scrap diversion around Essex County. Hiltz Disposal's willingness to also collect organics and provide curbside collection of both organics and recyclables with a split-body truck presented a cost-effective collection option for both Hamilton and Wenham. These three companies exemplify the important role that haulers and processors need to take to make organics diversion, especially food scrap diversion, a reality.

Town officials in Hamilton and Wenham, while initially reluctant to commit limited town funds for the curbside organics program, were convinced after the success of the pilot and evident cost savings that expanding the program throughout the towns was economically sustainable.

Hamilton's leadership in limiting curbside trash collection to every other week is another progressive model for the cost-effective implementation of organics recycling.

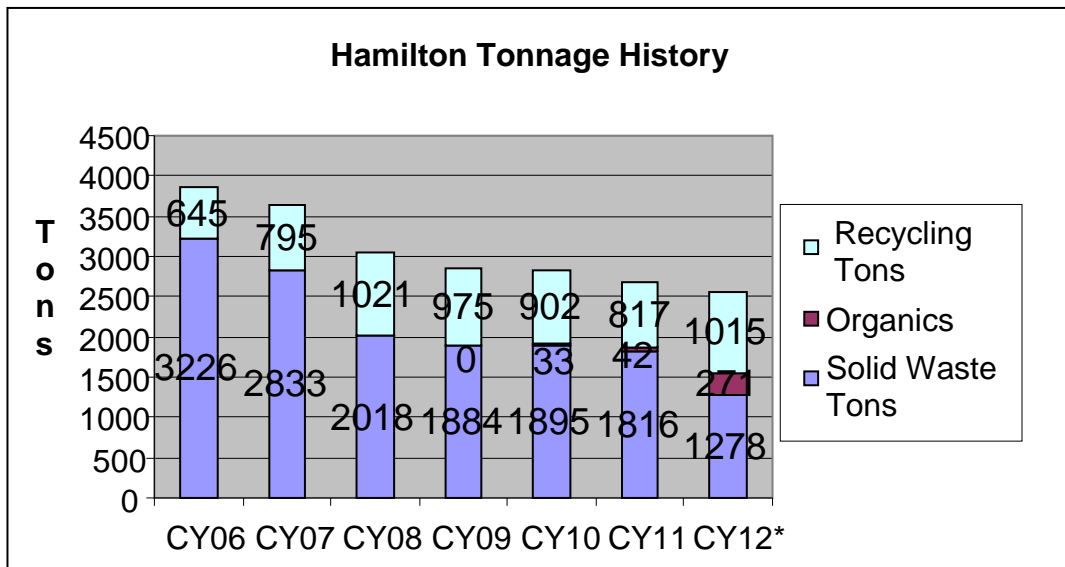
The promotion and media outreach conducted by the Hamilton Recycling Committee was clearly effective in gaining resident support for the program and gaining positive publicity for the towns and their model organics diversion efforts.

Appreciation goes to Gretel Clark, Chair of the Hamilton Recycling Committee for her dedication and contribution to this case study.

For more information, visit the Town of Hamilton's Organic Waste Program website at: [http://www.hamiltonma.gov/Pages/HamiltonMA\\_PublicWorks/organic](http://www.hamiltonma.gov/Pages/HamiltonMA_PublicWorks/organic).

The Northeast Recycling Council (NERC) is a non-profit organization that conducts research, hands-on projects, training, and outreach on issues associated with source reduction, recycling, composting, environmentally preferable purchasing, and decreasing the toxicity of the solid waste stream.

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Courtesy of Massachusetts Department of Environmental Protection, "Town of Hamilton 'Three-Sort' Program" Case Study, January 2013.