



case study

Town of Framingham School Organics Diversion & Reusable Tray Program

The Town of Framingham was awarded a Sustainable Materials Recovery Program Municipal (SMRP) Grant in October 2010 from the Massachusetts Department of Environmental Protection (MassDEP) to establish a School Organics Diversion and Reusable Tray Program at four elementary schools. The two goals for this program were to switch from disposable foam trays and plastic utensils to installing dish washing machines and using reusable trays and silverware; and establish organics diversion and composting programs for the cafeteria food waste.

Program Overview

- The Town of Framingham was awarded a SMRP grant for up to \$32,100 to establish the program in two phases over two years. Framingham provided matching grant funds totaling \$39,995.
- Phase One of the program was launched at Barbieri Elementary and involved diverting food waste for composting (January 2011) and installing a dish washing machine (September 2011). Lunchtime food waste is separated in the cafeteria and stored under refrigeration in 35-gallon wheeled carts, then collected by the Framingham Department of Public Works Solid Waste Division for transportation to WeCare Environmental, LLC in Marlborough, MA.
- Phase Two of the program entailed implementing reusable trays and silverware in the cafeterias of McCarthy Elementary (January 2012), Woodrow Wilson Elementary (February 2012), and Brophy Elementary (December 2012).
- The program's second goal of establishing a permanent food waste composting program was achieved only at Barbieri Elementary School within the two-year program timeframe.

Implementation

- Kickoff meetings were held with staff and faculty involved with aspects of the program at each school, and educational campaigns were held at each school to inform students about the new lunchtime routine.
- Refrigeration unit at Barbieri was upgraded for organics storage. Separated food waste must be stored in a separate refrigeration unit until it is removed from the school. Because Framingham is only able to collect food waste containers once weekly, Barbieri Elementary was the only school able to meet this Framingham Board of Health requirement. The three other schools in the Program do not have enough available space to install additional refrigeration units, so they are currently unable to permanently institute food waste composting.
- Cart tipper was installed on Public Works refuse packer for weekly organics collection.
- Student participation and efforts to appropriately separate reusable dishes and silverware from trash was monitored at all four schools and organics diversion was monitored at Barbieri.
- Program progress and potential improvements were continuously discussed with cafeteria staff, custodians and principals at each school.
- Environmental impacts and cost effectiveness of implementing the dish washing machines and organics collection at the program schools was assessed.

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Challenges

- Significant losses of silverware at the implementation has resulted in purchasing over 2,400 pieces of silverware. Silverware losses tended to decrease over time, as students became more acclimated to the new routine. Silverware losses are also lower when at least one adult is able to dedicate his/her efforts to the waste sorting areas in the cafeterias.
- For most meals served in the cafeterias, sliced fruit and vegetables are served in pre-portioned plastic cups and the students have access to individual ketchup and ranch dressing packets. These items, combined with milk cartons, are still observed every week in the organics diverted from Barbieri. This issue is manageable through a combination of adult oversight and reminders to students about appropriate waste separation.
- Prior to the conversion to reusable trays and silverware, students would simply drop their polystyrene tray, plastic utensils and any residual food waste into a trash container. With the new program established, an increase in food scraps on the floor around the containers has been observed as the students tap, flick, and scrape food off the reusable trays into the trash or compost containers.

Results

Waste Reduction in 24 Months

- Eliminated the use of 3.9 tons of polystyrene trays and plastic utensils
- 12.7 tons organic food waste composted at Barbieri

Financial Results

- For all four schools, first year operational costs for reusable trays and silverware were lower than operational costs for disposable alternatives

Other Positive Outcomes

- Avoided disposal of 16.6 tons of foam trays, plastic utensils, and organic waste, resulting in a reduction of 17 tons of carbon equivalent (CO₂E)

For more information:

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