



InSinkErator® | City of Boston
FOOD WASTE DISPOSER DEMONSTRATION
P R O J E C T

How Food Waste Disposers
Can Benefit Municipalities

A collaboration between the City of Boston and InSinkErator demonstrated how in-sink food waste disposers reduced the amount of food waste residents threw away in the trash, helping the City to achieve its environmental goals while saving money. This document provides a review of the project conducted from 2012 to 2014 in the Thomas Atkins Residence, an apartment complex in the Roxbury neighborhood.

The primary objective was to measure the reduction in food waste from homes that use an in-sink food waste disposer to manage food scraps. Using that data, estimates could be made regarding the potential for increased production of biogas from food scraps managed as a liquid, and the reduction in greenhouse gas emissions by diverting food scraps from disposal as trash. The City also wanted to assess whether the expanded use of disposers could improve the quality of life of city residents through reduction in waste that had to be set out for collection.

THE PROJECT

The City of Boston, in partnership with InSinkErator, assessed the efficacy of household in-sink food waste disposers as a tool for diverting food scraps from disposal by using the disposer to convert food scraps into a liquid slurry for transport via existing sewers to Boston's Deer Island wastewater treatment plant.

City officials and InSinkErator members of the project team selected the building in which to stage the project. The building was largely composed of Spanish-speaking families that ate the majority of meals at home, and 48 households agreed to have a new food waste disposer installed. Over the following year, those households received outreach efforts including flyers and phone calls in which they were asked to participate in project surveys, and to use their new disposers to handle as much of their food waste as possible.

Residents' satisfaction, as well as the amount of food waste discarded, was measured before and after professional installation of disposers.

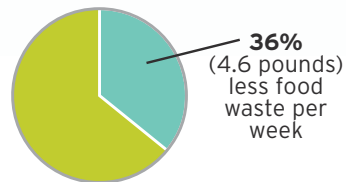
METHODOLOGY

Two types of analyses were conducted over the course of the project: waste audits intended to quantify the diversion of food scraps from other means of disposal, and surveys of project participants to assess the messages and methods of outreach, and personal responses to the overall project, handled by New Ecology, Inc.

Waste audits were conducted by Mid Atlantic Solid Waste Consultants (MSW), which has worked with cities across the country for waste characterization and program planning needs. The audits were conducted before the new disposers were installed and again approximately eight months later.

RESULTS OF THE WASTE COMPOSITION AUDITS

- Pounds of *food* disposed in the garbage per household decreased from 12.7 pounds per week to 8.1 pounds –a reduction of 36%.
- Within the garbage stream, overall *food* decreased about 6 percent, from 29.4% to 23.8%. See Fig. 1.



RESIDENT BEHAVIOR AND SATISFACTION

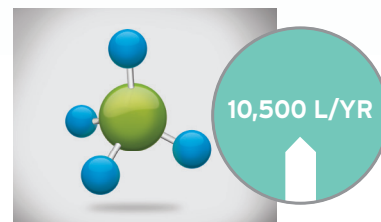
The evaluation of the survey responses found that food waste disposers were regarded as highly effective tools for managing household organics.

- **Participants were overwhelmingly happy with their new disposer.**
Participants reported that it reduced the trash, made cleaning the kitchen easier, reduced odors and smells in the house and neighborhood, and pests associated with trash collection.
- **As a tool of convenience, disposer usage was high.**
Residents reported that they *almost always* use the disposer when preparing and cleaning up after meals.
- **Most participants reported using their disposer aggressively.**
Most put *more than half or nearly all* food scraps that were previously disposed of in the trash down the disposer.
- **Participants were satisfied and most did not have any problems with the disposer.**
Overall, respondents were *very satisfied* with the disposer and reported that they *did not have any problems* with it.
- **The disposer provided benefits beyond reduced trash.**
Reducing trash was the most common perceived benefit among participants; as highly valued were a clean kitchen and fewer odors in the kitchen. Many saw disposer use as *good for the environment*.

EXTRAPOLATION OF PROJECT RESULTS

If the entire City of Boston utilized food waste disposers in homes and apartments in ways similar to the target areas, the potential benefits to the City could include:

- Total annual residential food waste diversion from landfills and incinerators
- Annual offset of GHG emissions equivalent 28 million+ auto miles
- Increased total methane production from anaerobic digestion



NEXT STEPS

Based on results, the City and InSinkErator are engaged in ongoing discussions about using food waste disposers to increase the diversion of food scraps from households.

Following the Boston project conclusion, the City of Philadelphia amended its building code to mandate disposer installations in new building and significant remodels.



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