



June 21, 2000

Mr. Steven Tilney  
Interim Recycling Coordinator  
City of Philadelphia Streets Department  
Recycling Office  
Room 780 MSB  
1401 JFK Boulevard  
Philadelphia, PA 19102

**Subject:** Conducting a Food Waste Composting Seminar for Philadelphia Businesses and Institutions

Dear Steve:

This letter is to provide the City of Philadelphia with the summary of activities undertaken by R.W. Beck in developing and assisting in conducting a workshop on food waste composting aimed at Philadelphia Businesses and Institutions. The goal of the workshop was to educate entities that generate significant amounts of food waste about the benefits of food waste composting to: (1) generate a valuable product; and (2) reduce waste management costs by diverting materials from the waste stream.

## **WASTE NOT, WANT NOT: FOOD WASTE COMPOSTING FOR BUSINESSES AND INSTITUTIONS**

In developing a workshop on food waste composting, the key factors to be addressed included:

- Determining the goals and objectives
- Determining the target audience
- Developing an agenda that would deliver the appropriate message to the target audience
- Identifying appropriate presenters to deliver the message
- Managing logistical details, including:
  - Site arrangements/contacts
  - Speaker arrangements/contacts
  - Preparation of workshop materials
  - Registration
  - Conduct of the workshop
  - Follow up/evaluation

What follows is a description of the process outlined above.

## **DETERMINING GOALS AND OBJECTIVES**

The City of Philadelphia estimates that it generates approximately 1.5 million tons of waste each year, of which approximately 8.6 percent, or 129,000 tons, is food waste. Currently, little of this waste is being recycled. In late 1997, the Commonwealth of Pennsylvania raised the bar on recycling, increasing its goal to 35 percent by 2003. In order to reach this new goal, most recycling programs will need not only to increase recycling of materials that are currently being diverted from the waste stream, but will need to look at some of the “non-traditional” materials that are generated in quantity, such as food waste.

In working with the City, it was determined that the goal should be to boost food waste composting in settings where diversion of this material could both help the City in reaching the 35 percent goal and benefit businesses and institutions that implement programs. To do this, the City would need to educate these entities about the benefits of food waste composting. While potential composters could be told that food waste composting is an environmentally sound, responsible method of managing this waste, it would need to be demonstrated that this activity can be readily accomplished in City settings and at low cost, or potentially even result in avoided cost—money not spent for disposal or additional “pulls” to remove waste from a facility. A workshop would need to communicate this information, and preferably persons who have managed successful food waste composting programs should deliver the message.

## **DETERMINING THE TARGET AUDIENCE**

There are hundreds, if not thousands, of commercial and institutional settings that generate food waste. These include, but certainly are not limited to: (1) universities and other educational institutions; (2) hospitals; (3) prisons; (4) farmers markets and food distribution centers; (5) grocery stores; (6) restaurants; (7) hotels. It was determined that the focus should be on facilities that generate very large quantities of food waste that are likely to benefit from removing this material from the waste stream, and that may have some space to establish composting on site.

Pennsylvania regulations require a permit for food waste composting operations that involve transport of materials from other locations to a central composting site. Smaller facilities are not likely to have sufficient space to compost on site, nor enough material to justify the cost to manage their own site. Pennsylvania is currently host to only two sites that manage food waste at a central facility, and these sites are not readily accessible to accept these materials from City sources at a cost that a small operation could afford.

Beck staff made some suggestions concerning the target audience, and the City made the final decision concerning businesses and institutions to be invited. Approximately 75 facilities were targeted, including the area universities, hospitals, prisons, food distribution centers, larger grocery chains, and larger hotels.

Beck developed a registration flyer to be mailed to targeted businesses and institutions. Philadelphia program personnel managed the actual mailing. A copy of the flyer is included as Attachment 1.

#### DETERMINING AN AGENDA

The most important issue was to develop a program that could be presented in a day, because most targeted facilities will not have personnel that could afford more time away. Therefore, the program could not be actual training in all facets of food waste composting, but an introduction and overview.

After researching what types of programs have been done elsewhere, particularly programs that have been given by the Cornell Waste Management Institute, the following areas were identified to be covered in the program: (1) an overview of food waste composting—why, what, and who should consider it; (2) statutory and regulatory issues; (3) food waste composting methods/technologies; (4) the composting process, including collection, transportation, operation and costs; (5) markets/end uses; and (6) case studies. These topics would give the target audience a good flavor of what is needed and what to expect.

A copy of the agenda is included as Attachment 2.

#### IDENTIFYING PRESENTERS

It was believed that the presenters, for the most part, should have “hands-on” experience with managing food waste composting operations. Philadelphia program personnel and Beck performed research on the Internet and spoke to representatives from the Pennsylvania Department of Environmental Protection (DEP), the U.S. Environmental Protection Agency (EPA), the Pennsylvania Composting Association (PACA), and manufacturers of composting equipment to identify potential presenters. Once there was a list, it was determined that the presenters should represent a range of different operations. Several persons were targeted and contacted concerning their participation.

The presenters selected include representatives that each are able to address one or more of the topics on the agenda, as well as the targeted facilities. They include: (1) the manager of a system that conducts food waste composting in multiple facilities; (2) the manager of a hotel/restaurant operation; (3) a representative from a company that assists a range of facilities with food waste composting; (4) a representative from a government facility that manages waste from several county operations; and (5) a representative from DEP. A speaker biography list is included as Attachment 3.

#### LOGISTICS

While the substantive information that is provided to the workshop attendees is the most important issue in conducting a successful program, it is a better experience for all involved if the logistical aspects of the program run smoothly. These arrangements included the following:

**Site arrangements/contacts**—A representative from the Philadelphia Recycling Office managed all contacts with the facility, including parking, food, audio/visual equipment, etc. This made the most sense because of proximity to the site and knowledge of the City.

**Speaker arrangements/contacts**—Beck managed all the speaker contacts, including inviting the presenters, providing them with all the information needed for travel and reimbursement, providing them with the agenda and discussing the program, and collecting biographies to be presented to attendees and to use for introductions.

**Preparation of Materials**—Beck was responsible for preparing all handouts to participants, including the final agenda, speaker biographies, and an evaluation form.

**Registration**—A representative of the Philadelphia Recycling Office staffed the registration table and checked off attendees as they arrived and gave them workshop materials. A list of the attendees is included as Attachment 4.

**Conduct of the workshop**—Beck facilitated the workshop, introducing presenters, monitoring for time, moderating for questions, and performing all other activities required to help the session run smoothly. The workshop flowed well and was completed ahead of schedule.

**Follow up/evaluation**—Beck prepared an evaluation form to solicit information from the attendees about their experience. This feedback is designed to help in future programs. A copy of the evaluation form is included as Attachment 5. Attendees were asked to rank each portion of the workshop on a scale of one to five, with one being the lowest and five being the highest. A summary of the results is as follows:

TABLE 1  
WASTE NOT, WANT NOT: FOOD WASTE COMPOSTING FOR BUSINESSES AND INSTITUTIONS  
EVALUATION RESULTS

| Question | 1 | 2 | 3 | 4  | 5 | Totals | Average |
|----------|---|---|---|----|---|--------|---------|
| 1        |   |   | 2 | 7  | 5 | 14     | 4.21    |
| 2        |   |   | 1 | 7  | 6 | 14     | 4.36    |
| 3        |   |   |   | 7  | 5 | 12     | 4.42    |
| 4a       |   | 1 | 2 | 9  | 2 | 13     | 4.15    |
| 4b       |   |   | 7 | 6  | 1 | 14     | 3.57    |
| 4c       |   |   | 2 | 8  | 4 | 14     | 4.14    |
| 4d       |   |   | 1 | 11 | 2 | 14     | 4.07    |
| 4e       |   | 1 | 6 | 5  | 2 | 13     | 3.85    |
| 4f       |   | 1 | 5 | 6  |   | 11     | 3.73    |
| 4g       |   |   | 3 | 5  | 6 | 14     | 4.21    |
| 4h       |   |   | 3 | 8  | 3 | 14     | 4.00    |
| 4i       |   |   | 4 | 6  |   | 10     | 3.60    |

As indicated by the results above, all segments of the workshop were ranked above average, with most ranked at greater than four.

There were several open-ended questions as well. These questions, along with some comments received, are listed below:

- What part of this program did you find most helpful/useful?
  - Case studies (2)
  - Prison and hotel case studies
  - Prison and government discussion
  - Availability of composting resources and information
  - Food waste composting process (3)
  - Need for cost justification
  - The different ways to compost/machines (2)
  - Regulatory issues
- What part of this program did you find least helpful/useful?
  - Not enough people
  - Statutory/regulatory issues
  - University case study
  - Pictures of barges and moving garbage
- What would you have liked to learn that you did not learn at this workshop?
  - More resource information
  - How/where to get composting units for specific areas
  - More about markets
  - Small businesses to discuss plans
  - Some terminology about recycling
  - Copies of state regulation
  - How to recycle other products
  - How to start grass roots projects
- Other comments
  - Have coffee at start and lunch a bit later
  - Advertise more thoroughly

It would have been difficult to address most issues more thoroughly in a one-day workshop. Most of the responses would be helpful to consider in any future efforts, but some (such as how to recycle other products) are not really pertinent and certainly would not be addressed at a future workshop.

## CONCLUSIONS

- The workshop was successfully conducted.
- Attendees responded favorably to the presentation, indicating that the topic was timely and of value to participants.

## RECOMMENDATIONS

- The City of Philadelphia should actively promote food waste composting among its businesses and institutions.
- The City should work with interested businesses and institutions to establish “demonstration sites” in the sense that these facilities are willing to have other facilities observe their systems and share what they learn from operations. The City could apply for Section 902 funding to establish food waste composting operations in public facilities, and could use these facilities as demonstration sites if no private facilities are available.

Diverting at least a portion of the estimated 8.6 percent of Philadelphia’s waste stream that is thought to be food waste could contribute significantly to boosting the City’s recycling rate and helping to achieve the 35 percent goal.

Sincerely,  
R.W. BECK, INC.

Sandra L. Strauss  
Environmental Analyst

Cc: Kathleen Kilbane, SWANA  
Carl Hursh, DEP  
Debbie Miller, R.W. Beck