

Strategies to Increase Food Waste Recycling in the Greater Boston Area

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Prepared by the Center for Ecological Technology (CET)
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About the Center for Ecological Technology (CET)

A non-profit (501c3) organization established in 1976, CET works as a catalyst for changing practices that adversely impact the natural ecology of the Earth. Working with local industry, government and residents, CET demonstrates and promotes practical applications of sustainable technologies, providing affordable solutions that serve the entire community. Over the past 24 years, CET has directly served thousands of residents throughout Western Massachusetts and New England and has worked closely with local and state governments, non-profit organizations, businesses and farms.

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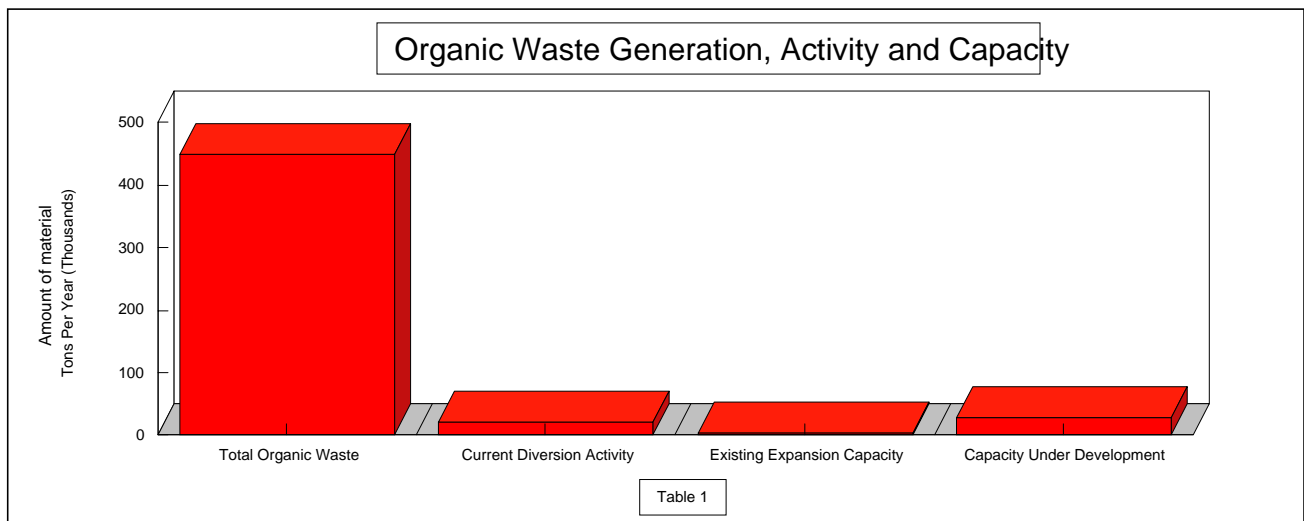
Executive Summary

This report summarizes the first step in a process designed to strengthen the infrastructure needed to increase diversion of food and other commercially generated organic waste materials in greater Boston (Route 495) and Massachusetts as a whole. Efforts recommended in this report target each sector of the organics recycling industry and focus on developing the additional processing capacity needed to increase opportunities for organics recycling.

In Spring 1999, CET conducted an inventory of existing and potential food waste processing capacity in the greater Boston area and held a focus group with industry members to identify needs and recommended next steps to help grow the organics recycling industry in Massachusetts.

Approximately 280,000-620,000 tons of food waste are generated from all sources each year in the greater Boston area. Diversion of food waste represents an excellent opportunity to increase the State recycling rate, foster economic development, address existing disposal capacity issues and benefit the environment by conserving valuable resources.

Currently, only a small portion of this material is being diverted from disposal. A limited amount of additional capacity (existing or under development) was also identified (see Table 1).



In addition, several potential operations representing an additional increase in capacity were identified, but were not sufficiently developed to be quantifiable. Due to the limited scope of the project, the inventory may be missing information on some processors.

Using the estimated numbers that we were able to develop within the scope of this project, it is clear that a large amount of additional food waste processing capacity is needed. A significant amount of interest and opportunity has been identified, but existing barriers limit successful growth of the organics recycling industry.

Efforts recommended to increase diversion include:

Education/Outreach: perform targeted outreach to each industry sector, compile and distribute information on existing and potential diversion opportunities

Regulations: clarify existing regulations, consider promulgation of Compost Facility Regulations (310 CMR 20.00), streamline and increase consistency of permitting and enforcement process

Advocacy: form task force and create strategic plan, create or redefine State advocacy role

Funding: provide grant or other funding opportunities to address specific barriers

Infrastructure Development/Technical Assistance: assist currently interested parties, develop multi-business RFPs for organic recycling services

Strategies to Increase Food Waste Recycling in the Greater Boston Area

Project Purpose

The Strategic Plan to Promote the Use of Recyclable Materials in Massachusetts (1998, Dorn and Associates for the Chelsea Center for Recycling and Economic Development (CCFRED)) identified food waste as a high priority material for intervention to increase diversion for recycling. This report and related work represent the first step in a process designed to strengthen the infrastructure needed to increase diversion of food and other commercially generated organic waste materials in greater Boston (Route 495) and Massachusetts as a whole.

Summary of Results

CET conducted an inventory of existing and potential food waste processing (food banks, animal feed, composting) capacity in the greater Boston area. Processors were targeted for inclusion in an inventory survey using the best available information on their existence and current activities. CET also convened a focus group with industry members to identify opportunities/motivating factors, barriers and recommended next steps to help grow the organics recycling industry in Massachusetts. The results of this work and recommended strategies to increase food waste diversion are outlined in this report.

Food Waste Diversion Capacity Analysis

The results of the food waste diversion capacity analysis are presented in summary in Table 2 and further described below.

Diversion Strategy	Existing Activity	Existing Additional Capacity	Quantifiable Capacity Under Development	Total
Food Donations	8,000 TPY	3,350 TPY	0 TPY	11,350 TPY
Direct Animal Feed	not available	not available	not available	not available
Manufactured Animal Feed	not available	not available	19,500 TPY	19,500 TPY
Composting	12,000 TPY	175 TPY	9,100 TPY	21,275 TPY
TOTAL	20,000 TPY	3,525 TPY	28,600 TPY	52,125 TPY

Table 2.

Food Banks

Two related food donations programs were identified in the Greater Boston area. Serving over 917 caregiving programs, the Greater Boston Food Bank (GBFB) distributed over 8000 tons of food during 1998 including fresh produce, fish, dairy, grains and canned goods. The largest of the local supermarket chains are GBFB's largest donors. Second Helping, a program sponsored by Boston College Alumni and operated by GBFB, serves as a food rescue program distributing prepared meals from hotels and restaurants to shelters and kitchens. Second Helping has identified a large untapped reservoir of prepared meals available for redistribution to the hungry.

A recent survey conducted by Second Harvest (a GBFB affiliate) shows that Boston area programs report a need for an additional 64.5 tons of food per week (3354 tons per year). This need is tempered, however, by transportation and storage limitations and the appropriateness of the food donations. Several items would help increase GBFB's capacity to handle donated food including increased warehouse space, warehouse space at drop-off sites, equipment (trucks, racks, forklifts) and operational support to provide staffing for increased collection, transportation and handling. In addition, promotion of GBFB to food waste generators is needed to increase awareness of the program and subsequent donations of appropriate materials.

As with any food management service, waste is also created through donated food that cannot be served. GBFB is currently exploring compost alternatives to its current disposal of significant yearly tonnage. To date, the most significant barrier is an inability to identify a compost site/operator with adequate capacity.

Animal Feed

Direct Feeding

Pig farmers practicing garbage feeding are required to obtain a license from the Massachusetts Department of Food and Agriculture (DFA) and the USDA when meat or eggs are contained in or have been associated with the food waste materials. According to DFA, twelve pig farms are currently licensed as garbage feeders within the four counties of Greater Boston (Essex, Middlesex, Suffolk and Norfolk). These farms are managing 2,113 swine and as registered "garbage feeders" are licensed to feed food waste to their herds after cooking the collected scraps.

There are additional pig farms that use vegetables, grains or bakery food wastes and are not required to obtain a license. According to the National Agricultural Statistics Service, in 1997 (most recent available information by county) there were a total of 5385 pigs at 79 farms in the four Greater Boston counties. No tracking system is currently in place that can be used to directly estimate the amount of food waste being diverted to the unlicensed farms, which represent approximately 60% of the total pig population. In addition, it is fairly common practice for dairy or cattle farms to feed food waste to their herds at varying times of the year.

Quantifying the amount of food waste being diverted by direct feeding and potential expansion capacity would require an extensive survey (including site visits) in cooperation with DFA. A more effective use of resources would be to perform outreach to the industry to identify operations interested in receiving additional materials and to promote them as appropriate.

Manufactured Feed

The survey did not identify any existing feed manufacturing facilities in greater Boston, although it is almost certain that at least some food manufacturing wastes generated at the largest plants are being diverted to feed manufacturing facilities outside of the state. One facility under development was identified and would represent additional capacity of 19,500 tons per year of certain types of food manufacturing wastes, assuming existing siting issues are resolved with local officials. Another developer is currently seeking a site after a previous unsuccessful attempt.

Composting

This survey identified 23 commercial or agricultural compost operations located within route 495, including the Northshore, Southshore and Cape Cod. Of these 23, our findings show that six are composting commercially-generated food waste. The other operations handle leaves and yard waste, sewage sludge and/or paper mill wastes.

Of the six operations composting commercially-generated food waste, one operation is conducted in an enclosed building at a sewage treatment plant, while the remaining five are open-air windrow designs located on farms or nurseries.

While on-site composting at institutions and businesses was not investigated for this study, it should be noted that these operations exist currently and are a viable option for some waste generators.

Material Types

The type of waste being composted falls into five categories:

- fish processing waste
- gelatin
- vegetative residuals from food manufacturers
- produce waste from wholesale markets
- restaurant food prep and plate scrap wastes

Two of the sites compost only produce waste, while the other operations typically handle a combination of the other listed materials. Tip fees charged to handle waste materials ranged widely from \$16 to \$50 per ton. Product prices showed a spread of \$15-25 per cubic yard.

Capacity

Existing compost sites currently accepting food waste - The six existing compost operations that accept food waste are composting a total of 12,358 tons per year with very little room for immediate expansion (see Table 3). This survey shows that the current infrastructure can only handle an additional 176 tons per year. One site currently handling food waste is considering a significant expansion.

Compost Sites Currently Composting Food Waste

Composting Facility I.D. #	Material Types Processed	Amounts (tons/yr)	Barriers to composting more food waste	Current Capacity (tons/yr)	Total Capacity (tons/yr)	Excess Capacity
1	Produce	420	Site space limitations-full capacity	420	420	0
2	Gelatin	3500	Food waste tip fees are too low.	3500	3500	0
7	Gelatin	5000	Site space limitations.	5000	5000	0
18	Fish processing waste	360	Site space limitations.	1410	1410	0
	Vegetative food manuf. waste	1050				
21	Fish processing waste	602	Regulatory tonnage limits/permit costs.	1118	1294	176
	Restaurant kitchen waste	516				
22	Produce (wholesale) market waste	910	Other business activities are currently a higher priority.	910	910	0
TOTAL		12358		12358	12534	176

Table 3.

Existing compost sites not currently accepting food waste - Five existing operations have expressed an interest in expanding their material base to include food waste and the remaining twelve operations are not interested. The three most commonly reported barriers facing existing compost operations not currently accepting food waste but interested in doing so appeared to be a combination of:

- lack of available feedstock - difficulty identifying food waste sources and in creating workable collection logistics and economics
- regulatory tonnage limits - some sites operating under conditional exemptions have adequate capacity to compost food waste, but tonnage limits are viewed as too restrictive and reducing profitability

- permit fees - permit fees are perceived as too high, particularly those associated with site assignment

Compost sites under development - One composting facility scheduled to be operational within the next 3-4 months represents additional capacity of 9,100 tons per year. One developer is currently seeking a site in Boston. In addition, an effort is underway to develop an in-vessel composting operation serving the Chinatown area.

Food Waste Generation and Potential Financial Benefits

While the scope of this study was limited to evaluating the current status of food waste management within greater Boston, it is helpful to compare processing capacity within the context of organic waste generation rates.

Large-scale commercial generators fall into a number of categories including:

- Retail supermarkets
- Restaurants & hotels
- Institutions: hospitals, schools, prisons
- Food manufacturers
- Agricultural operations

Due to number of waste generators and lack of current tracking and industry estimates on waste rates, researchers would have to conduct a detailed survey to obtain an accurate picture of food waste totals for each of these generators. Using EPA and USDA figures, approximately 280,000-620,000 tons of food waste are generated from all sources (including residential) each year in the greater Boston area. Although these figures constitute a large range, they are so much greater than identified existing and developing processing capacity that a more accurate quantification does not seem necessary at this time.

Estimated Supermarket Generation and Savings

Given prior experience with several supermarket compost programs in Western Massachusetts and estimated figures provided by the Food Marketing Institute and several related studies, it is possible to make some estimates for supermarket generation rates in Greater Boston. Comparing annual sales data (from the Griffin Report) to actual diversion rates in Massachusetts, the large chain supermarkets located within route 495 generate approximately 39,000 tons per year of compostable waste. This figure includes both food waste and nonrecyclable waxed corrugated cardboard.

If these supermarkets (representing 70% market share) were to divert this waste from disposal to composting, compost operators could capture an estimated \$1.4 million dollars in annual tip fee revenue (at reported average \$39/ton composting tip fee). Supermarket chains would also benefit. Due to lower tip fees, these businesses could save an estimated \$1.2 million in annual disposal tip fees (at reported average \$71/ton disposal tip fee). A portion of these savings would be lost to extra collection costs incurred. It should be noted that for the foreseeable future, regional disposal tip fees are expected to continue to rise and that savings could increase over time.

Supermarkets diverting food and waxed corrugated cardboard to composting in Western Massachusetts have experienced overall waste disposal cost savings of 8-25 %. These savings are in addition to those created through existing food diversion to human and animal feeding options. Savings in dollar figures range widely from \$600 - \$10,000 per year per store location, depending on several factors including sales and trash volumes, pre-existing diversion programs and participation level.

Commercial Organic Waste Recycling Roundtable - Identified Barriers, Opportunities, Recommended Next Steps

CET and project partners held a meeting attended by approximately 70 members of the organics recycling industry including waste generators, haulers, processors (including existing and potential compost and animal feed manufacturing operations), end-product users and the financial business community. Participants identified top opportunities/motivating factors, barriers and priority recommended next steps to help grow the organics recycling industry in Massachusetts.

A great amount of interest and opportunity for increasing food waste diversion was expressed by participants. Evaluations of the event were very positive, with participants indicating that networking opportunities at the event had already created some new activity including exploration of potential partnerships between haulers and operators of existing or potential sites. Evaluations also stressed a strong concern that follow-up efforts take place in order to address the issues identified and capitalize on the momentum gained during the session.

Below is a summary of the input of meeting participants. Each industry sector (generators, haulers, processors) shares some opportunities or barriers with other sectors while some issues are unique to an individual sector. For space and clarity issues, they are grouped together. A more detailed 8 page summary of the meeting, 17 page transcription of focus group notes as well as an attendee list are available from CET or DEP.

Opportunities/Motivating Factors

A variety of opportunities and motivating factors for increased organics diversion identified by participants are listed below. As the focus of this report is not on the overall policy argument for food waste diversion, items dealing with important environmental and societal benefits are not included in this summary, although many participants communicated that these are important to them.

- Disposal capacity is limited and increasingly expensive

- A large amount of food waste is available for capture

- There is currently a huge demand for finished compost (e.g. 400,000 yards for six Boston projects over next year)

- Food waste diversion creates economic development/job creation/business opportunities

- Proven technologies with good management practice can be successful

- Good publicity is available to businesses that divert food waste from disposal

- Food waste processors may present sites for the hauler that are closer than disposal sites

- Food waste collection can create a niche opportunity for a hauler

- New biodegradable products have been developed and may help alleviate some separation and collection problems

- Compost tip fees can be more stable and are generally equal or lower than disposal tip fees

Barriers

Participants identified many barriers to increased food waste diversion, including the following:

- Lack of availability of hauling and processing
- Lack of permitted sites overall and in close proximity to generators
- Source separation takes extra labor and space and a change of mindset
- Low-quality feedstocks with plastic or other contamination can raise costs and lower marketability of finished product
- Lack of self policing at sites creates negative reputation for industry
- Public resistance to processing sites ("NIMBY" sentiments)
- Lack of final composting regulations and inconsistency of permitting and enforcement between regions
- Lack of land available for composting sites, new or expansions
- Difficulty in obtaining financing
- Lack of ability to get into long-term agreements for supply
- Lack of leadership and vision from the State
- Need for State to take more proactive role in finding and permitting sites
- Consolidation of hauling industry and resulting lack of financial incentive for vertically integrated companies to haul to alternative disposal sites
- Difficulty in handling materials - wet, heavy, odorous

Next steps recommended in group discussions

Participants identified a long list of potential actions to increase food waste diversion. Those that participants considered the highest priority are listed below.

- Perform education to all sectors to encourage organics recycling
- Promulgate/streamline the MA composting regulations; protect good and compliant compost operators; create one-stop shopping for DEP permits; make enforcement consistent with a central person taking leadership (sludge model)
- Provide funding to encourage organics recycling - grants, Pay as You Throw (PAYT), tax or disposal credits
- Create an organics recycling advocate position in State government to advocate for sites including shepherding permits and finding financing; and/or increase State staff and resources
- Develop/dedicate an organization to facilitate infrastructure development; create partnerships within the organics chain and promote/facilitate projects in Eastern MA
- Create a standardized Best Management Practice (BMP) for compost production
- Create a compost operator's certification program
- Create a coalition/task force with a defined timeline to create a compost strategic plan including an annual statewide meeting for review
- Raise the comfort level between processors and generators by inventorying waste byproducts, issuing RFP's for feedstocks, inventorying sites and certifying operators
- Form a composting association with all sectors represented

Recommended Strategies to Increase Diversion of Commercial Food Waste

This section outlines the recommendations of the project partners. These recommendations are based upon the work summarized above, project partner experience and a cursory review of the success of existing efforts in other states, including California, Florida, Iowa, Kansas, Maine, New York, North Carolina, Ohio and Texas. The recommendations focus on actions that are practical, achievable and likely to have a significant impact. For initiatives taken on by project partners, an advisory group of industry and government representatives would help focus project work over the coming year.

The hierarchy for food waste diversion is generally agreed to as follows:

- food banks/related programs
- direct animal feed
- manufactured animal feed
- composting
- disposal

The hierarchy generally takes into account both the highest use for the material from a resource conservation and/or social perspective as well as the likely relative net cost of the processing options. Limitations posed by the type, quantity, quality and location of a particular food waste material will often eliminate the possibility of one or more of the diversion options in the hierarchy. For example, if food waste is not in a form that is edible for people or animals, than those strategies are not viable options.

The recommendations are summarized in Table 4.

Education/Outreach

Targeted outreach

Outreach targeted to each sector (generators, haulers, processors, end-users) should be performed by CET, CCFRED and others through trade associations and related networks including the Massachusetts Food Association, National Solid Waste Management Association, Massachusetts Farm Bureau Federation and Massachusetts Nurserymen and Landscapers Association. The overall purpose of the outreach would be to increase awareness of the benefits of organic waste recycling and the current efforts to increase activity, and to identify interested parties for inclusion in those efforts.

As soon as possible, lists of available and potential opportunities for food waste recycling should be distributed to each sector as appropriate. Information on existing and potential food waste compost sites and on food bank needs has been collected and is ready for refinement, formatting and distribution. Outreach should also target direct animal feeding operations to identify those needing more food waste and to determine opportunities and barriers for increased diversion. Where appropriate, operations seeking additional materials could be included in distributed lists. The results of successful recycling efforts and grant projects should also be distributed, including any data on types and quantities of materials available or wanted in a specific area.

<u>Category</u>	<u>Desired Outcome</u>	<u>Recommended Action Steps</u>	<u>Who</u>	<u>By when</u>
Education/Outreach	Increase awareness and interest in all sectors	Perform outreach through trade associations - MFA, NSWMA, etc	CET/CCFRED	Fall 1999
		Compile and distribute list of available and potential food waste diversion opportunities	CET/CCFRED	Fall 1999
		Form statewide Organics Recycling Association/group	?	?
Regulations	Address industry concerns about unpromulgated regs	Clarify and communicate status and intention of current regulatory structure	DEP	Winter 1999
		Obtain industry input on additional needs, consider promulgation or other actions	DEP	Winter 1999
	Streamline permitting process	Create application kit, train personnel	DEP	Winter 1999
Advocacy	State play a stronger role in supporting the industry	Form organics recycling SWAC subcommittee and create strategic plan	DEP	Fall/Winter 1999
		Reorganize current efforts to more fully incorporate advocacy function into operations	DEP/CCFRED	Spring 2000
Funding	Provide incentive for new organics recycling activity	Seek industry input to prioritize funding needs	CET/DEP	Fall 1999
		Create/modify existing grants program or other financial incentives	DEP/CCFRED/Industry Groups	Summer 2000
Infrastructure/Facility	Increase participation by waste generators and haulers	Explore possibility and develop mechanism for joint food industry RFP	CET, MFA, NSWMA	Winter 1999

Development and	Increase number of available diversion opportunities/sites	for food waste recycling	other interested parties	
Technical Assistance		Issue joint food industry RFP or other mechanism as determined		Summer 2000
		Assist current interested new and expansion sites with permitting,	DEP, CET	Fall 1999
		finding financing, sourcing feedstocks, developing contracts		and on-going
		Assist current interested generators and haulers with developing connections to sites		

CET - Center for Ecological Technology CCFRED - Chelsea Center for Recycling and Economic Development DEP- Department of Environmental Protection

MFA - Massachusetts Food Association NSWMA - Northeast Solid Waste Management Association

Table 4.

Outreach efforts should also include end product use. Information on finished compost available or wanted should be gathered through project activities and distributed to appropriate participants. A Best Management Practices on Compost Use in the Green Industries, recently published by UMass Extension and CET, could be revised and updated and distributed widely for use as a marketing/education tool for companies that sell compost. Several industry representatives have agreed to participate in this effort.

Compost or Organic Recycling Industry Organization

Formation of a composting or organic waste recycling industry association should be considered to help improve community and regulatory relations and strengthen the industry as a whole. The association could industry-certify sites and/or finished products and create and encourage Best Management Practices for siting and operations. The association could also provide networking opportunities and potentially serve as a more cohesive and high-profile voice for the industry concerning public relations, regulatory and other issues.

Based on industry input, due to limited resources and the amount of work required to start this type of organization, this activity would be considered a more longterm goal relative to more readily achievable items. Questions include what the best vehicle is to create such an organization in Massachusetts including who should facilitate its creation, where should it be housed (i.e. in an existing organization like MassRecycle or as a new entity, with or without affiliation with the U.S. Composting Council), and how to best achieve broad membership from all involved sectors (these association typically consist

primarily of processors). CET and project partners can act as a central point of contact for interested entities and help to bring them together in the event that other resources are available to form the organization. For example, industry members or interested organizations may decide to pursue this activity on their own initiative with time and/or financial resources contributed by founding members.

Regulations

A structured process to address industry concerns about regulations and the permitting process is recommended. Concerning regulations, DEP should first internally clarify the current intention and implementation practice of the regulations, including applicable sections of the revised site assignment regulations, as soon as possible. Next, DEP should hold a meeting this Winter with interested industry members to communicate the status and intention of the current regulatory structure. With input from industry and other interested parties, it should then determine if promulgation of the Compost Facility Regulations (310 CMR 20.00) that are currently "in park" is needed to more fully address industry concerns, and/or if other measures including guidance documents are required.

Concerning permitting and enforcement, DEP should take the following steps to help streamline the process. First, enhance customer service by creating an application information kit with step by step instructions and appropriate contact information. Second, provide training to appropriate Boston and Regional personnel to help ensure uniform practices and implementation across the State. In addition, a single point of contact for the entire State (the one-stop shopping approach) could be adopted, similar to the biosolids infrastructure currently in place at DEP.

Advocacy

Industry members agreed that there is a need for a stronger State role in supporting the industry. DEP should convene an Organic Waste Recycling Subcommittee of its Solid Waste Advisory Committee. With input from the subcommittee and the results of this report, DEP should create a strategic plan for organics recycling to help guide, communicate and evaluate its efforts in the coming years.

The State should consider, with advisory committee input, reorganizing or refocussing current efforts to more fully incorporate the advocacy function into its operations. CCFRED should identify additional opportunities to further support organics recycling industry growth.

Funding

DEP, CCFRED and industry groups should allocate grant resources to help grow the organics recycling industry. Grants could be offered through existing DEP mechanisms including the Recycling Industry Reimbursement Credit (RIRC) Program, Technical Assistance Grants through municipal sponsors and the Master Service Agreement for Recycling Consultants. Funding could be offered through existing CCFRED mechanisms including grant programs for Research, Testing, New Product Development and Community Economic Development. In addition, CCFRED could provide interns through its ReTERN Program to interested industry members.

CET and DEP should obtain further input from the industry and other interested parties regarding the best use of available funds. Mechanisms for obtaining input could include a one-time meeting with industry representatives and accepting written suggestions from those not able to attend. This meeting could be scheduled and promoted in conjunction with the regulations meeting recommended above.

Ideas for potential grant-funded projects include:

- a food waste generation density mapping pilot project for a specific geographic area to determine that tool's usefulness in facilitating increased diversion and the most effective scale/level of detail
- a comparative analysis of compost made from mixed and source separated streams, to help determine future levels of source separation
- a feasibility and economic analysis of an alternative waste management set-up for supermarkets including on-site shredding of waxed corrugated cardboard for mixing with food waste at waste generator locations and an additional small compactor for residual trash
- production of sector specific educational/marketing materials (generators, haulers, processors, end-users) including food bank, animal feed and composting options
- purchase or lease of food donation program equipment or warehouse space
- compost operator training at community colleges

Infrastructure/Facility Development and Technical Assistance

Short-term assistance

A significant amount of start-up activity and potential interest in organics recycling was identified through project activities. In the short-term, DEP and CET should assist current interested new and expansion food waste recycling sites with permitting, finding financing, sourcing feedstocks and developing contracts and other help as requested. Assistance should also be provided to current interested waste generators and haulers in developing connections to sites and developing collection systems and employee training programs. These efforts will capitalize on current momentum and will help overcome barriers related to lack of information, contacts and technical expertise.

Long-term infrastructure development

Many of the identified barriers cannot be overcome through short-term technical assistance and facilitation. These include difficulty in siting and financing new operations and inefficiencies in the economics of collection from dispersed waste generator locations. To address these issues, CET should work with industry and state representatives to explore and, if determined feasible, develop and implement a joint RFP process for multiple businesses generating food waste to obtain organic waste recycling services. The MFA is willing to convene exploratory meetings with CET and others to further define the issues and develop a process.

A joint RFP would have several advantages including commitments of a large quantity of organic waste to an expanding or new facility looking for financing and efficient collection of multiple waste generators on a single route. A joint RFP could also face some challenges to be overcome including currently existing waste management contracts and possible antitrust issues. However, in the absence of organic waste bans or other regulatory mechanisms, it may be difficult to overcome identified barriers through efforts of individual interested parties.