

PHASE I

CITY PROVISION OF COMMERCIAL COMPOSTING SERVICES

Program Evolution from Current System

- This program would utilize daily, including Saturday, year-round City collection programs by offering food waste collection services to businesses that use curbside and curb-cart trash programs provided by the City or private hauler. Participation would be voluntary for DDA businesses, as well as for those participants, downtown or elsewhere, who elect to haul their own food waste to the City Compost Site and pay the required tip fee.

Program Description

- **City Role:** City provision of commercial food waste services at the curb, dumpster or loading dock using city crews as contracted service provider. Comprehensive service includes technical assistance and support along with on-line web tools for setting up service, submitting "plan" and annual reporting/performance tracking.
- **Ordinance Role:** Ordinance and rules/regulations describe commercial food waste requirements that include a phased approach for compliance (e.g. 2 years education/notice and voluntary program before full implementation required).
- **Compost Site Role:** All materials would be taken to the City Compost Site until a 10% food waste by volume limit is reached (see below). For self-haul participants, a tip fee would provide revenue, helping to off-set program costs.
 - Compost Site would grind and mix material with leaves and yardwaste and process all material in outdoor turned-windrows on existing pad with existing equipment. Compost would be sold in bulk or in bags.
 - Implementation of an on-site or off-site bagging, marketing and sales operation, City or contracted service, is recommended.
 - Pilot of an in-vessel aerobic compost system as a partnership with program participant such as UofM or large food store is recommended to process organic material not appropriate for outdoor turned-windrow processing such as animal bedding and plate scrapings including meat and dairy, or to handle volumes beyond what the City Compost Site can accommodate. Existing outdoor site can accommodate a total of 3,800 tons of food waste per year at full capacity (expected in year 2011), when adhering to a City-recommended 10% by volume food waste limit. 3,800 tons is one-half to one-third of what would be expected with full participation from City restaurants and food stores. With current 12,000 tons/year yardwaste throughputs, site can accommodate 1,900 tons/year food waste.
- **Budget:** City's annual budget cycle establishes program goals and projected expenses (designated smaller sealed truck with or without cart wash, crew, administrative support, bagging equipment and operation, etc.)

User Experience of Program

- Commercial establishment receives notice of program at time of container set-outs (in-person visit, email, mail notice, flyer, etc.) and will be able to immediately sign up for program (at time of on-site visit), receive carts (sizable to size of establishment), etc.
- Outreach materials (hard copy, email pdfs and web) provide information on how to set up in-building bag and outdoor container system, assign a single point of contact composting champion, order bags and containers, flyers, posters, etc. and establish internal procedures for staff or custodial contractor.
- Continued email support provided through automated outreach/support/technical reminders, with linkage to web page supporting system.
- Potential for City program to support cost of biodegradable plastic bags or wax-lined paper bags to participating commercial establishment and reward high levels of diversion.
- Acceptable materials would include:
 - coffee grounds and filter
 - paper bags and newspapers
 - waxed boxes and waxed-lined paper bags
 - pre-approved biodegradable plastic bags
 - uncooked produce scraps such as fruit & vegetable peels, apple cores, corncobs, husks, salad greens
 - other non-animal or dairy based food wastes such as bread, bagels, muffins, donuts
- Unacceptable material would include:
 - plate scrapings
 - meat, fish, bones, oils
 - milk, cheese, yogurt or sauces
- Materials to test and/or gather more information:
 - pesticide residue on organics from florists
 - egg shells
 - animal bedding would require a pilot and MDEQ's approval

User Experience of Program Costs

- Program participants are offered the service at same cost as trash service under the following conditions: 1) they must generate a minimum of two tons per month of food waste; 2) they must have adequate space for the collection containers; 3) they must be serviceable by the collection vehicle; and 4) they must wash their own containers if City's truck does not include a cart wash.
- Container and bag costs for in-building material handling (e.g. \$0.25 per bag).
- Custodial service (if used) may or may not increase fees.

How Program Could Actually Be Paid For

- Some of costs covered through City millage.
- Some of costs covered from sales of finished compost, bulk and bagged.
- Some of costs covered through self-haul tip-fees at Compost Site (\$17.50-\$25 per ton)

- Remaining costs could be covered with one of the following:
 - City could subsidize cost of bags through a trash surcharge or Pay-As-You-Throw system.
 - hauler licensing fees based on number/size of commercial trash accounts
 - composting surcharge (e.g. Act 69 surcharge approved by voters)
 - state grant (if "penny plan" or "disposal surcharge" approved by legislature)

Program Pros and Cons

Pros

- increased resource recovery
- decreased hauling expenses (of waste to landfills)
- no increase in cost to participants/possible savings compared to private hauler cost
- availability of educational materials and support
- provision of collection containers and/or bags
- recovery of funding costs through sale of product
- potential to gain experience with PAYT system

Cons

- limit of participants with current site volume restrictions
- collection service area limited to DDA district
- limit on acceptable materials
- potential need to wash own containers
- New sealed organics-designated truck @ \$120,000-\$150,000 plus driver

PHASE II

CITY ORDINANCE REQUIRING COMMERCIAL COMPOSTING

Note this approach would only be feasible if the City's Compost Site capacity was expanded to accommodate a **minimum** of 6,000 tons per year of food waste processing. Materials accepted would be extended to plate scrapings, meat and dairy and an in-vessel system would need to be implemented to speed up the composting process, and minimize the potential for odors and vermin. Several 1,600 tons/year in-vessel systems could be installed throughout the City to minimize collection costs and to encourage local use of the finished compost.

PHASE III

CITY ORDINANCE REQUIRING EXPANDED COMMERCIAL COMPOSTING

Note this approach would involve a larger centralized in-vessel system or anaerobic digester that produces biogas and/or compost. Materials accepted would include all the vegetative and meat & dairy materials in Phases I and II, plus FOGs (Fats, oils and greases), animal bedding, cat litter, etc. Waste water sludge, or biosolids, could also be evaluated as an acceptable material. Grants are available for both FOGs and biogas production.