

Composting Research

Small Programs

City:	Denver, CO
Population:	610,345 in 2009
Contacts:	Charlotte Pitt, Program Manager for Denver Recycles, (720) 913-1311.
Program Name:	Green Cart
Players:	City of Denver's Department of Solid Waste , A1 Organics, commercial waste haulers.
Compost Operator:	A1 Organics, private compost facility operator.
Political climate:	Supported because does not increase taxes (user fee).
Support:	Yes. City council supports.
Barriers:	Don't have control over budget, which is tied to General Fund. Pilot was originally free, but when grant ran out they had to start charging for composting service. Denver doesn't have any fees for waste disposal. Don't have any control over commercial solid waste and recycling fees.
Lessons:	Cart vendor (Rehig Pacific) donated half of carts. Households with higher income & more education were the quickest to sign up. Fees changed customer base to most dedicated. Got grant in Aug 2008, took 2-3 months for planning, prep and education, started collecting in Nov 2008, had all participants signed up by mid-Dec 2008.
Opposition:	No. City council supports although hasn't provided funding.
Champion?	No. Initiative came from department which saw organics as large part of waste stream, especially during fall.
Process:	Windrows in controlled conditions.
Final product:	Bagged retail and bulk.
Customers:	Farmers and Pioneer Sand and Gravel (a retail store which sells to residents).
Budget:	\$500,000 for pilot?
Type:	residential
Start:	October/November 2008.
Mandatory:	voluntary
Coverage:	3,3000 homes, from 8 neighborhoods throughout city. (Not as efficient.)
Collection:	City has one truck that picks up curbside five days a week and takes directly to compost operator's (A1 Organics) transfer site.
Consolidation:	A1 Organics grinds everything (90% yard debris, 10% food waste) at transfer site in city as a way to reduce volume (by 3:1). It then transports the ground compost 25 miles to their facility in Keenesburg, Colorado (45 min).
Volume:	Average 24 lb/household/cart in winter & summer 18lb/household/cart. Was 1,000 tons lower than last year, due to implimentation of fee. (Lost some customers, while gained others.)
Diversion:	
Future plans:	Laid out 5 year plan to roll out residential program. They are ready to ramp up, just need cost of capital expenditure. Currently, the Dept. of Solid Waste doesn't have control over commercial waste or recycling, both which are free markets. Denver's comprehensive plan is trying to get more control over those areas to incentivize composting.
Promotion & Education:	Asked for email at sign-up (66% volunteer). Email info & promotions. Use SurveyMonkey (an online survey tool) to track satisfaction and efficiency. Can always have more education. They did a good job of inviting a lot of people to participate and rolling out the program.
Alternative:	City already hauling trash; would be less expansive for city to add composting service than contract with a private hauler.
Incentives:	Deeply discounted give aways (e.g., \$30/truck, free Christmas Tree mulch).

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City:	Dubuque, IA
Population:	57,222 in 2008
Contacts:	Paul Schultz, Resource Management Coordinator, (563) 599-1752, pschultz@cityofdubuque.org.
Program Name:	Food Scrap Curbside Collection (aka Green Cart)
Players:	Public Works - Dubuque Metropolitan Area Solid Waste Agency (DMASWA), Department of Natural Resources (DNR). (John Deere went Zero Waste and has private collector that delivers to DMASWA's compost operating facility.)
Compost Operator:	Public Works - DMASWA
Political climate:	Reduce volume of landfilled items by 50% in 5 years - organics is a major strategy.
Support:	Yes, from Green Dubuque and Rocky Coorhouse (non-profits), who contacted city council and build community support.
Barriers:	State regulations limit to 2 tons/wk of food material w/yard debris. Currently petition to increase to 10 tons/month. Located near a creek, to expand need to seek approval from DNR regarding leachant detection.
Lessons:	Previously low quality, now STA-certified compost. For department - BioCycle articles, Bob Gedert developed 50% diversion strategy for Dubuque last April. EPA's food composting webinars to get key players understanding science. Need to position program - why doing it (e.g., climate change, zero waste, conserve landfill, soil amendment). Pilot and program must run smoothly - no odors, no rodents, high quality product.
Opposition:	None.
Champion?	Yes, Paul and Department of Natural Resources (DNR) did an analysis of the cost which showed no barriers.
Process:	Longer, low tech process. Landscape companies, grass cutters and residents can drop off yard waste. Have public compost sale that is announced to the public 6 times/yr for \$10/cubic yard; \$20/ton.
Final product:	Sold as bulk compost to retailers who then sell bagged or in bulk.
Customers:	Previously sold to individuals, now focusing on businesses that can sell, bulk or bagged.
Budget:	Doesn't use general funds, only enterprise funds, therefore taxes are not an issue.
Type:	Residential. (John Deere is sole commercial entity, has private compost collector.)
Start:	2006
Mandatory:	Voluntary
Coverage:	City-wide, but only 200 customers: primarily residential, few restaurants, schools, fast food, religious house.
Collection:	Public Works (DMASWA) co-collection w/yard debris curbside. April-Nov pick up every day week, winter pick up is only one day per week. Don't allow compostable bags (plugged up teeth on row turning equipment) or cutlerly (filter is not fine enough). Do allow compostable clamshells. One private hauler picks up John Deere food scraps (expensive). Landscape companies, grass cutters and residents can also bring in.
Consolidation:	No, brought directly to composting site.
Volume:	80-100 tons/yr. (state limits to a max. of 2 tons/week)
Diversion:	80-100 tons/yr. (state limits to a max. of 2 tons/week)
Future plans:	Hoping for thinner bags to increase participation and 10 tons/month. Convert waste water treatment to anarobic digestion (currently incinerating). Ban organics. Thinking of offering customers that participate in city's composting (or backyard) program every other week garbage pick up for a reduced trash bill \$1.50/month (vs. \$11.09/month for garbage & recycling).
Promotion & Education:	Cost of disposing compostable is minimal, only composting container (Norsman system) & scrap bin (2 gallon kitchen catcher) because truck is already there. Spend a little on education. Paul & DNR were overly cautious with original pricing, which was later brought down from \$3.35 to \$.50.
Alternative:	Previously a lower-quality compost and only collected for part of the year. Made more sense to continue year-round (e.g., especially for schools).
Incentives:	Compost is inexpensive for city to operate (only cost of containers, truck is already there) and to buy finished product (\$10/cubic yard; \$20/ton).

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Small Programs

City:	Burlington, VT
Population:	38,889 in 2000
Contacts:	Dan Goossen, Compost Operations Manager, (802) 373-4001, dan@intervalecompost.net.
Program Name:	Intervale
Players:	CSWD, All Cycle, other private haulers.
Compost Operator:	Chittigan Solid Waste District (CSWD), county government.
Political climate:	Leaf and yard waste ban in 1987. County mandated to reduce solid waste.
Support:	Long term program; agricultural heritage and culture; progressive community values local economy.
Barriers:	Manual composting process susceptible to elements. Legal issues & expenses (e.g., storage). Upfront capital investment for more modern system/structure.
Lessons:	Not only game in town, high quality product (i.e., longer curing time, better screening). Plan out tipping fees to incentivize composting, flow control and franchising, customer service for upset customers if pick up is missed.
Opposition:	No.
Champion?	Yes, knowledgeable, excited person to answer early questions.
Process:	Small-scale, low-tech: outdoor, uncovered windrows; manually turned w/excavator.
Final product:	Sold in bags and in bulk.
Customers:	Landscape firms, residents, garden centers, farmers, job sites.
Budget:	\$1 million/yr (operating)* Relocating facility. Also high due to state regulations, litigation: off-site storage, special equipment to protect
Type:	Residential & commercial.
Start:	1987
Mandatory:	Voluntary
Coverage:	City-wide (predominantly in city, drop off center in country).
Collection:	Residents can drop off food scraps & yard waste for free. Private (uncontracted) hauler, AllCycle, picks up food scraps from restaurants and institutions and tips for lower fee than landfills. (Two other private haulers.) Landscape firms and horse farms drop off yard waste for a fee.
Consolidation:	Yes, there are transfer facilities in rural areas of the county, which are brought to the composting facility. However, food scraps from Burlington are taken directly to the composting facility.
Volume:	13-14,000 wet tons/yr
Diversion:	about 10-25%
Future plans:	Move into new higher tech facility; mandate organics recycling.
Promotion & Education:	Residents have high awareness about the connection between soil amendment and composting. County is required to reduce solid waste in landfills.
Alternative:	N/A, moving towards more efficient technology.
Incentives:	High quality product (spends a longer time curing, better screening/filtering).