



Residential Source Separated Organics Collection Tool Kit

Developed by Georgia, Department of Community Affairs
and Georgia Recycling Coalition
Funded by EPA Region 4

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Georgia Department of Community Affairs and
Georgia Recycling Coalition

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Section 1 Introduction

In 2009, more than 90 cities in the United States offered separate curbside collection for source separated organics (SSO) from residents (*U.S. Residential Food Waste Collection and Composting*, BioCycle, December 2009). The number of communities with SSO curbside programs was over double that reported in 2007. However, few of these communities are located in the southeast. In an effort to increase diversion of organics in the southeast, EPA Region 4 provide a grant to the Georgia Department of Community Affairs, administered by the Georgia Recycling Coalition, to provide guidance and tools for local governments to evaluate the feasibility of residential curbside collection of SSO.

The primary tool developed under this grant include an Excel® based Residential SSO Collection Performance Model to estimate the diversion, operational, and cost impact of implementing a residential SSO collection program in their community. This Tool Kit includes the following items that accompany the Residential SSO Collection Performance Model to offer local governments a full complement of resources to evaluate and, if deemed feasible, to implement, a SSO collection program in their community.

- Section 2: A User Guide (also embedded in the Residential SSO Collection Performance Model) to assist local governments with using the tool.
- Section 3: A summary of residential SSO collection programs across the United States (also embedded in the Residential SSO Collection Performance Model).
- Section 4: The Residential SSO Collection Performance Model results for three sample communities.
- Section 5: Sample implementation plan for a residential SSO curbside program.
- Section 6: Sample customer surveys for a residential SSO curbside program.
- Section 7: Sample fact sheets and public information documents for a residential SSO curbside program.
- Section 8: Sample reporting documents for a residential SSO curbside program.
- Section 9: Containers and vehicles for residential SSO collection in the southeast.
- Section 10: Links to information regarding organics processing facilities in EPA Region 4.
- Section 11: Waste composition studies from States in EPA Region 4.

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Section 2

Residential SSO Collection Performance Model User Guide

Residential Source Separated Organics Collection Performance Model - User Guide

Developed for Georgia Department of Community Affairs and Georgia Recycling Coalition

Funded by EPA Region 4

Developed by SAIC Energy, Environment & Infrastructure, LLC

The Residential SSO Collection Performance Model contains both inputs (data to be entered by the user) and outputs (results calculated based on the inputs). **Users must enter assumptions for each input requested.** For many input cells, a drop-down menu with options is provided, and will appear when the user clicks on the green input cell. If a cell is highlighted red, an error has occurred and the user must modify the input. Inputs, outputs, and errors are identified as follows:

	Input
	Output
	Error

The following defined terms are used in the Residential SSO Collection Performance Model.

Corrugated Cardboard -- Old Corrugated Cardboard (OCC), Kraft paper, Kraft linerboard, containerboard cartons, and shipping boxes with corrugated paper medium (excludes wax or plastic-coated boxes). Includes Kraft paper bags.

Curbside program -- Residential SSO Collection Program where residents set-out materials at the curb for collection by a hauler.

Food Scraps -- is any food substance, raw or cooked, which is discarded, or intended or required to be discarded. Food wastes are the organic residues generated by the handling, storage, sale, preparation, cooking, and serving of foods.

Magazine/Glossy -- magazines and catalogs printed on glossy, coated paper stock.

Mixed (Other Recyclable) Paper -- low-grade recyclable paper. Includes phone books, text books, other books and catalogs with ground wood paper, construction paper, junk mail, polycoated cartons and aseptic packages, blue prints and glossy, coated paper (except magazines and catalogs).

Newspaper -- printed and unprinted ground wood newsprint. Newspaper includes glossy paper inserts included with the newspaper.

Non-Recyclable Paper -- low-grade non-recyclable paper. Includes tissue paper, napkins, paper towels, paper plates, paper food cartons, cigarette packages, waxed paper, wax or plastic coated corrugated boxes, coated FAX paper, and carbon paper whether or not they are contaminated with fluids or food. Includes all other grades of paper if substantially contaminated with fluids or food scraps, including pizza boxes.

Other Organics -- organic materials, excluding diapers and textiles, not otherwise categorized, such as natural fibers, manure, cork, hemp rope, wicker products, saw dust, and lint.

Paperboard -- paperboard and boxboard such as that used for cereal and tissue boxes.

Source Separated Organics (SSO) -- includes the following materials separated by the generator from other municipal solid waste: yard trimmings; vegetative and non-vegetative food scraps; uncontaminated scrap wood; and compostable, non-recyclable paper.

Yard Trimmings -- grass clippings, leaves, garden trimmings, and brush up to 4 inches in diameter. Excludes yard trimmings generated from FEMA declared disasters.

Wood (Non-C&D) -- any painted or unpainted wood product not from construction, demolition, or renovation. Includes furniture, toys, pencils, chopsticks, and other miscellaneous items.

Please print this worksheet then select the following link.

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To return to Curbside Program Disposed Refuse Overview Worksheet, please select the following link.

[Return to Curbside Program Disposed Refuse Overview Worksheet](#)

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Section 3

Summary of Residential SSO Collection Programs

	Hennepin Co, MN	Cedar Rapids, IA	City of San Mateo, CA	City of Boulder, CO	State College, PA	Olympia, WA	Cambridge, MA
General							
Curbside / Drop-off	Curbside	Curbside	Curbside	Curbside	Curbside	Curbside	Drop-off
Program Start Date	2003	1999	2011	2008	2010	2008	2008
Total Households	502,000	38,000	26,000	42,600	3,600	20,700	45,000
Households with Access	NA	38,000	26,000	42,600 ³	649	13,500	45,000
Participating Households	5,000	38,000 ¹	26,000	NA	480	6,800	500 ²
Participation Rate	NA	100.0%	100.0%	NA	74.0%	50.4%	1.1%
Materials Accepted							
Fruits/Vegetables	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Dairy	Yes	No	Yes	Yes	No ⁴	Yes	Yes
Meat	Yes	No	Yes	Yes	No ⁴	Yes	Yes
Yard Trimmings	No	Yes	Yes	Yes	No leaves and grass	Yes	No
Compostable Paper	Yes	No	Yes	Yes	Yes	Yes	Yes
Compostable Cups and Utensils	Yes	No	Yes	Yes	Yes (excludes cutlery)	NA	No
Compostable Bags	Yes	No	Yes	Yes	Yes	NA	NA

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	Hennepin Co, MN	Cedar Rapids, IA	City of San Mateo, CA	City of Boulder, CO	State College, PA	Olympia, WA	Cambridge, MA
Other	Waxed OCC, polycoated paper cartons	Plain paper plates, napkins & paper towels, dryer lint	Waxed OCC	Waxed OCC	NA	Waxed OCC, polycoated paper cartons	
Equipment							
Collection Vehicle	Fully and Semi-automated	Fully-automated	Fully-automated	NA	Semi-automated		NA
Number of Routes	NA	NA	6	NA	1	NA	NA
Size of Carts (gallons)	30-32 typically	96	96	32 minimum	35 with insert to reduce to 20	35-95	68
Cost per Cart	\$ 25.00	\$40.23	NA	NA	\$ 58.00	NA	NA
Kitchen Food Scrap Bins Provided?	No ⁵	No	Yes	No	Yes	No	No
Cost per Food Scrap Bin	NA	NA	\$3.00	NA	\$3.00	NA	NA
Collection Frequency, Quantity, and Fees Charged							
Collection Frequency	1x per week	1x per week	1x per week	Every other week	1x per week	Every other week	1x per week (2x in summer)
Tons Collected	3,500	14,000-16,000	NA	NA	93	NA	54
Fee per household per month	\$3.50-\$5.00	Included in Solid Waste Fee	Included in Solid Waste Fee	NA	NA	\$ 7.72	NA
Processing							
Technology	Aerated static pile	Windrows	Windrows		Windrows		Windrows and In-vessel

Summary of Residential SSO Collection Programs

	Hennepin Co, MN	Cedar Rapids, IA	City of San Mateo, CA	City of Boulder, CO	State College, PA	Olympia, WA	Cambridge, MA
Fee per Ton	\$15.00	\$18.00	NA	NA	NA	NA	Included in Collection Cost
Revenues from Sale of Compost	NA	Free compost for residents	NA	NA	\$13/cy or \$3/bag bag (2 cy) = \$69,644 in 2010	NA	NA
Link to website	6	7	8	9	10	11	12

1. Residential SSO collection is included in the base service for Cedar Rapids, IA and San Mateo, CA.
2. The number of participating households for Cambridge, MA is based upon households that signed up for the program upon the start date; however, the program no longer requires households to sign up for the program.
3. Residential SSO collection is included in the base service for Boulder, CO. Households that sign up for the base service receive residential SSO collection.
4. The Residential SSO collection program for State College, PA is being amended to include dairy and meats to be accepted materials.
5. Kitchen food scrap bins were provided by Hennepin County, MN as part of the 1st pilot program. Food scrap bins are no longer provided as part of the program.
6. <http://hennepin.us/portal/site/HennepinUS/menuitem.b1ab75471750e40fa01dfb47ccf06498/?vgnnextoid=80105b40aabb4210VgnVCM10000049114689RCRD>
7. <http://www.cedar-rapids.org/resident-resources/utilities/solidwaste/yardwaste/Pages/default.aspx>
8. <http://www.ci.sanmateo.ca.us/index.aspx?nid=2076>
9. http://www.bouldercolorado.gov/index.php?option=com_content&view=article&id=2932&Itemid=930
10. <http://www.statecollegepa.us/index.aspx?nid=1322>
11. <http://olympiawa.gov/en/city-utilities/garbage-and-recycling/at-home.aspx>
12. <http://www.ci.cambridge.ma.us/theworks/ourservices/recyclingandtrash/faqrecyclingandrubbish/compostingquestions/organicsdropofffaq.aspx>

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Section 4

Residential SSO Collection Performance Model Results for Sample Communities

This section presents results from the Residential SSO Collection Performance Model based on hypothetical residential SSO collection programs for Athens-Clarke County, City of Dublin and Laurens County.

	Athens-Clarke County	City of Dublin	Laurens County
Total Households	9,800	5,500	15,868
Households with Access	9,800	4,584	15,868
Curbside vs. Drop-off	Curbside	Curbside	Drop-off
Vehicle	Rear Loader with Tippers	Rear Loader with Tippers	NA
Frequency	Every Week	Every Week	72 collections per year
Current Separate Yard Trimmings Collection	Yes	Yes	NA
Total Tons	1,800.0	2,156.9	NA
Total Tons by Households with Access	1,800.0	2,156.9	NA
Future Yard Trimmings Collection	Continued to be Collected Separately	Continued to be Collected Separately	NA
Total Tons	5,200.0	4,439.1	5,057.5
Total Tons by Households with Access	5,200.0	3,699.8	5,057.5

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	Athens-Clarke County	City of Dublin	Laurens County
Will Yard Trimmings disposed as Refuse be accepted by SSO collection Program?	Yes	Yes	NA
Materials to be targeted	Fruits, Vegetables and Bakery, Other Food Scraps, and Non-Recyclable Paper	Fruits, Vegetables and Bakery, Other Food Scraps, Non-Recyclable Paper and Other Organics	Fruits, Vegetables and Bakery, Other Food Scraps, Non-Recyclable Paper and Other Organics
Refuse Composition	Fruits, Vegetables and Bakery 7.5% Other Food Scraps 5.9% Non-Recyclable Paper 10.7% Yard Trimmings 2.1%	Fruits, Vegetables and Bakery 7.5% Other Food Scraps 5.9% Non-Recyclable Paper 5.4% Yard Trimmings 2.1% Other Organics 1.3%	Fruits, Vegetables and Bakery 7.5% Other Food Scraps 5.9% Non-Recyclable Paper 5.4% Yard Trimmings 2.1% Other Organics 1.3%
Participation Rate	69.0%	50.0%	NA
Capture Rate	Other Organics 50.0%	Other Organics 75.0%	Overall 25.0%
Collection Provider	Municipal Collection	Municipal Collection	Municipal Collection
Participating Households per Route	750	767	NA
Personnel	Driver – 1 (\$34,000) Collector – 2 (\$30,000)	Driver – 1 (\$34,000) Collector – 2 (\$30,000)	Driver – 1 (\$34,000)
Equipment	Vehicle – 1 (\$150,000, 0%, 10 years) Carts – 10,780 (\$55, 0%, 10 years)	Vehicle – 1 (\$185,000, 0%, 10 years) Carts – 5,042 (\$55, 0%, 10 years)	Dumpsters – 19 (\$500, 0%, 10 years)
O&M	\$20,000	\$20,000	\$0
Annual Fuel Costs	\$24,375	NA	\$19,200
Processing Costs	\$1,841 (102 tons at \$18.00 per unit cost)	\$2,310 (308 tons at \$7.50 per unit cost)	\$6,316 (842 tons at \$7.50 per unit cost)
Other Costs	\$0	\$0	\$0
Revenues and Savings	Disposal Costs \$4,295 (102 tons at \$42.00 per unit savings) Mulch Revenues NA	Disposal Costs \$10,549 (308 tons at \$34.00 per unit savings) Other Revenues NA	Disposal Costs \$28,630 (842 tons at \$34.00 per unit savings) Other Revenues \$280

Residential SSO Collection Performance Model Results for Sample Communities

	Athens-Clarke County	City of Dublin	Laurens County
Projected Disposed Refuse Collected by SSO collection Program	102 tons	308 tons	842 tons
Projected Disposed Yard Trimmings Collected by SSO collection Program	0 tons	0 tons	NA
Total Annual Costs	\$214,506	\$162,541	\$406,066
Total Annual Revenues/Savings	\$4,295	\$10,549	\$28,910
Monthly Cost per Household	\$1.79	\$2.30	\$0.29
Monthly Cost per Household with Access	\$1.79	\$2.76	\$0.29
Monthly Cost per Participating Household	\$2.59	\$5.53	NA

Section 5 Sample Implementation Plan

Phase/Task Description	Month																		Stakeholders Involved	Estimated Cost
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
Planning Phase	X	X	X	X	X	X	X	X	X											
Conduct waste characterization study, actual sort or desktop to estimate quantity of targeted organics disposed ¹																			City staff/ Consultant	\$30,000 for desktop study; \$200,000 for 2-season sort.
Conduct additional research (e.g., review collection and disposal data, audit routes to identify quantities, participation rates, size of setouts, etc.) ²																			City staff Private haulers, if applicable	No additional cost if City staff. Hauler may charge if not in contract.
Introduce potential program and seek approval of concept from senior management and elected officials ³																			City staff City leaders	No additional cost
Identify whether ordinance change required. If so, draft revision and begin submittal process																			City staff or legal counsel, City Council	No additional cost

Section 5

Phase/Task Description	Month																		Stakeholders Involved	Estimated Cost
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
Conduct a residential survey to assess likelihood of participation in SSO collection program and barriers to be addressed ⁴																			City staff/ Consultant	\$0 - \$45,000
Identify current or potential processing capacity for materials to be collected. ⁵																			City staff	No additional cost
If applicable, develop and issue RFP for compost/SSO processing services. Evaluate responses, ensure adequacy of capacity, etc.																			City staff	No additional cost
If private haulers collect yard trimmings, work with them to identify ability to accept SSOs, concerns, suggestions. If under contract, assess feasibility of renegotiating to take SSO																			City staff	No additional cost
If City crews collect yard trimmings, identify and evaluate operational changes and associated net costs, equipment needs, etc. to take SSO																			City staff	No additional cost
Develop a preliminary cost-benefit analysis of program ⁶																			City staff	No additional cost

Phase/Task Description	Month																		Stakeholders Involved	Estimated Cost
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
Brief public officials about SSO options, cost and benefit estimates, and environmental benefits. Gather feedback																			City staff Public officials	No additional cost
Consider options for rolling out: conduct pilot study, phase in by region, start citywide?																			City staff	No additional cost
Order/purchase required carts and collection vehicles, bags, if applicable ⁷																			City staff	\$160,000 - \$180,000 per rear-load vehicle \$215,000 - \$240,000 per automated side load vehicle \$40 - \$60 per cart
Develop education and outreach plan and begin developing materials ⁸																			City staff	\$2 - \$4 per household for education and outreach
Review proposals and negotiate contract with organics processor(s), if private. If public processing, ensure facility is permitted and operationally prepared to handle SSO																			City staff Private processors, if applicable Processing facility staff, if applicable	Processing cost estimated at \$70 - \$80 per ton for windrow composting

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Phase/Task Description	Month																		Stakeholders Involved	Estimated Cost
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
Analyze collection bids and, if appropriate, negotiate contract with haulers to collect and deliver SSO to processing facility(ies) ⁹																			City staff Private haulers	Collection cost estimated at \$3.50 - \$7.50 per household per month.
Finalize phase-in approach ¹⁰																			City staff Haulers Processor(s)	No additional cost
Develop/update program information including web site ¹¹																			City solid waste, IT, communications staff, neighborhood associations media outlets	No additional cost, unless outsourced
If your program will include the use of specialized bags, work with manufacturers to design, manufacture the bags. Approve a sample well before program implementation																			City staff Bag manufacturer	No additional cost if residents pay for their own bags
If applicable, develop plan to distribute bags (door-to-door, retailers, City Hall, etc.)																			City staff Retailers	No additional cost

Phase/Task Description	Month																		Stakeholders Involved	Estimated Cost
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
Pilot Program⁽¹²⁾									X	X	X									
Conduct education and outreach efforts in pilot program area																			City staff, media reps (as appropriate), neighborhood associations	Cost depends upon media outlets utilized
Train enforcement staff																			City staff	Additional cost if enforcement staff added
Distribute carts with education/outreach materials in pilot program area																			City staff and/or hauler(s)	No additional cost if done by City staff – may be additional cost if done by hauler or contractor
Implement pilot program																			City staff Hauler Processor	No additional cost
Audit pilot program routes ¹³																			City staff Hauler	No additional cost
Audit processing facility(ies) ¹⁴																			City staff Processor(s)	No additional cost
Survey pilot program households ¹⁵																			City staff	No additional cost
Citywide Implementation													X	X	X	X	X	X		
Revise program details and/or education and outreach materials based on results of pilot program																			City staff	Depends on outcome

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Phase/Task Description	Month																		Stakeholders Involved	Estimated Cost
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
Provide enforcement staff with enhanced training, if needed, based on pilot results																			City staff	Depends on outcome
If using private hauler(s) or processor(s), meet to discuss program refinements based on pilot results																			City staff Hauler(s) Processor(s)	No additional cost
Launch final education and outreach efforts																			City staff	Cost dependent upon education and outreach methods selected.
Distribute carts (with education and outreach materials)																			City staff Haulers, if in contract	No additional cost
Ensure bags are properly distributed at retail outlets, if applicable																			City staff Retailers	No additional cost
Implement program																			City staff Haulers Processor	No additional cost
Post-Implementation ¹⁶																				
Conduct collection audit																			City staff	No additional cost
Conduct processing audit																			City staff	No additional cost
Consider implementing post implementation survey																			City staff	No additional cost

Phase/Task Description	Month																		Stakeholders Involved	Estimated Cost
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
Monitor results, including quantity, recycling rate, etc.																			City staff	No additional cost
Conduct ongoing education and outreach ¹⁷																			City staff Neighborhood associations Media outlets, as selected.	Cost dependent upon education and outreach methods selected.

Table Notes:

1. This schedule assumes no more than a two-season study. A four-season study would require approximately 14 months, to include adequate time for report writeup and finalization. A four-season waste characterization study can cost \$250,000 to \$400,000 depending upon the number of samples.
2. Route audits can be helpful in identifying the appropriateness of the size of carts, as well as yard trimming collection participation rates. If many households have out-of-cart yard trimming setouts, this might lead your community to consider biodegradable bags for yard trimmings, along with carts for food scraps and whatever portion of yard trimmings can fit in the cart.
3. Ideally, your community will meet several times with the mayor or mayor's staff and City Council. Community leaders should have an understanding of the potential costs and benefits of the program, and conceptually understand the existing recycling/sustainability goals (state or local) that the program will help your community reach.
4. A sample survey is included in Section E of this Tool Kit.
5. It is assumed that adequate processing capacity exists, either in the public or private sector. If additional organics processing capacity needs to be added, plan additional time for public meetings, permit acquisition, construction, etc.
6. Preliminary cost benefit analysis should identify net increases in costs, including processing costs, increased collection costs, as well as decreased garbage collection and disposal costs. These will likely be refined as equipment purchases are negotiated, etc.
7. Cost ranges are planning-level only. Vehicle costs vary significantly depending upon capacity and options selected. In general, automated collection vehicles are more costly relative to a manual-collection vehicle of similar capacity. Cart pricing varies significantly based upon transportation costs, number of carts ordered, and size of carts. It is suggested that an extra 15 percent of carts be ordered for extras and replacement. The Residential SSO Collection Model can help users determine the number of vehicles needed
8. An education and outreach plan should include media outlets to be used for pilot study, and plans for full-scale implementation, and/or any phased-in approached. Consider the following low-cost options: web site, e-alerts, newspaper, radio, and cable television PSAs, newspaper announcements, utility bill inserts, public meetings and public events, as well as working through neighborhood associations and community contacts to disseminate information in newsletters, emails, and meetings. Additional outlets for consideration include radio ads, television ads, bus ads, newspaper and other publication advertisements, bus shelter ads and bus advertisements. However, it is important to ensure that the media outlets utilized target the households impacted, and

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do not span an overly broad geographic area, or citizens will be confused. If carts are distributed, include clear, complete information about the program with the cart. Some communities have haulers/city crews disseminate door hangers to distribute new program information.

9. Costs will vary depending upon whether the community already has a separate yard trimmings collection program in place. In some communities, a contract may be negotiated that includes all services – garbage, recycling, and source-separated organics. The incremental cost to add food scraps to yard trimmings may be relatively low. There may be an additional time lag if a new contract is negotiated, and it does not start until the prior contract ends.
10. Most communities select a pilot program area that is representative of the community at large, and comprises no more than 25 percent of the total number of households to be served. Small communities may choose to implement the program Citywide without first conducting a pilot program.
11. Consider including on the web site an interactive map where residents can enter their address to see their collection day, a printable brochure or “How To” Guide about the SSO program, and an explanation of why the City is implementing the program. Include contact information where the web site user can turn for more information. Be sure to print the program web address on all education and outreach materials.
12. It is assumed, in this schedule, that a three-month pilot program is implemented in months 10, 11 and 12. Some smaller communities may decide not to implement a pilot program, but to implement citywide at once. Larger communities may extend their pilot program for up to six months or longer, until they feel comfortable with the program.
13. Auditing pilot program routes will help understand whether residents are clear on how to participate in the program, if cart sizes/bags are adequate, etc.
14. Auditing the processing facility will provide information regarding the degree to which residents are preparing their source-separated organics as instructed. Information obtained from the audits may be used to edit some education and outreach tools.
15. Pilot program households could be surveyed about their level of participation, barriers to participation, etc. Findings may help your community improve education and outreach efforts, or improve the design of the program. A sample post-pilot survey is provided in Section E of this Tool Kit.
16. It is assumed that all post-implementation activities would extend beyond month 18.
17. Education and outreach efforts that might be conducted post-implementation include updating the program web site (or web page), reminders in the local newspaper, meetings with neighborhood associations or providing outreach materials for inclusion in neighborhood newsletters, and outreach at public events.

Section 6 Sample Customer Surveys

Pre-Pilot Survey Cover Letter

Dear Resident,

(Enter name of local government) is striving to become a “best in class” city, and sees environmental sustainability as a key element to achieving “best in class” status. To that end, (enter name of local government) is considering an exciting new program to recycle residential organic waste. Organic waste, such as food scraps and yard trimmings, can be turned into valuable resources to fertilize and amend soil. If this program is implemented City(or County) wide, we estimate that an additional 14 percent of the solid waste generated by residents could be diverted from landfills.

To assist us in planning a program that works for you, we request that you participate in the following survey about organic waste generation and management in your household. Your household’s information will not be shared, except in summary format.

If you have any questions about the survey or our future plans, please call (enter phone number) or email (enter e-mail address).

Thank you in advance for participating in our source-separated organics survey.

Sincerely,

_____ (name)

_____ (title)

Pre-Pilot Survey

- 1) Please indicate the type of home you live in:
 - a. Single-family home (include condominiums and townhomes, but not apartments)
 - b. Multi-family home with fewer than five units
 - c. Multi-family home with greater than five units

- 2) How many people live in your household? _____

- 3) How many meals per week, on average, do you prepare at home? _____

- 4) Do you currently participate in the City's curbside recycling program regularly (at least every other week)?
 - Yes
 - No

- 5) If not, why not? (check all that apply)
 - I don't know how to participate
 - I don't have time to prepare recyclables
 - I do not have a recycling container
 - I find it inconvenient to bring recyclables to the curb (or recycling container, for multi-family residents)
 - Other _____

- 6) What motivates you to recycle? (Check all that apply)
 - It frees up space in my garbage container(s)
 - It's good for the environment
 - It puts materials to good use
 - It reduces the cost of my garbage collection
 - Other: _____

- 7) What quantity of garbage (to be disposed) do you generate weekly?
 - a. Size of container: _____gallons
 - b. Number of containers set out per week: _____
 - c. On average, each container is _____% full.

8) How do you manage **yard trimmings** from your residence (grass trimmings, leaves, and brush)?

For each management option, indicate how much of your yard trimmings you manage this way.

	None (0%-10%)	Some (10-40%)	About Half (40-60%)	Most (60-95%)	All (95 - 100%)
Compost at home	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Leave yard trimmings/leaves in woods, on lawn, or other areas of yard to decompose	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Set yard trimmings at curb for City's yard waste collection	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Take yard trimmings to drop-off site/transfer station for recycling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hauled away by yard maintenance business.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

9) If you answered “other” regarding managing **yard trimmings** in Question 8, how do you manage them? _____

10) If you take **yard trimmings** to a drop-off site/transfer station for processing, please indicate how many trips you make each season, and approximately how many 32-gallon bags (or equivalent) you deliver, on average, each trip.

	Spring	Fall	Summer	Winter
Number of Trips in Season				
Average Number of 32-Gallon Bags per Trip				

Section 6

11) How do you manage **vegetative food scraps** from your residence? For each management option, indicate how much of your vegetative food scraps you manage this way.

	None (0%-10%)	Some (10-40%)	About Half (40-60%)	Most (60-95%)	All (95-100%)
Throw away in the garbage with other household waste.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Throw away in the garbage, but separately from other household waste.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Throw away in garbage disposal.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Compost vegetative food scraps at home.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

12) If you answered “other” in question 11, please indicate how you manage **vegetative food scraps**: _____

13) How do you manage **meat and dairy food scraps** from your residence? For each management option, indicate how much of your **meat and dairy food scraps** you manage this way.

	None (0%-10%)	Some (10-40%)	About Half (40-60%)	Most (60-95%)	All (95-100%)
Throw away in the garbage with other household waste.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Throw away in the garbage, but separately from other household waste.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Throw away in garbage disposal.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Compost meat and dairy food scraps at home.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

14) If you answered “other” in question 13 please indicate how you manage **meat and dairy food scraps**: _____

15) If the City were to implement a source separated compost program for all organics, including food scraps, would you participate?

- Yes
- No
- Not Sure

16) If you answered “No” or “Not Sure” in Question 15, please indicate your concerns: (check all that apply)

- Lack of time for separating organic waste
 - Lack of space for storing separated organic waste
 - Concerns about cleaning storage container
 - Odors from separated organic waste
 - General public health issues, like food borne illness
 - Household pests attracted to organic waste stored indoors
 - Pests and animals attracted to organic waste stored outdoors
 - I am currently composting food waste
 - I am currently putting food waste in my garbage disposal unit in the sink
 - I do not see any benefits of separating organic waste
 - Other:
-

17) If you were to participate in the source separated organics program, how often do you think you would need the other household garbage to be collected?

- Weekly
- Every other week
- Monthly
- Other: _____

18) In which quadrant of the City do you live? ([City map](#) is available online)

- Northeast (Collection day is Monday)
- Southeast (Collection day is Tuesday)
- Southwest (Collection day is Wednesday)
- Northwest (Collection day is Thursday)

19) Do you own your own home?

- Yes
- No

20) What range describes your family annual income?

- Less than \$10,000
- \$10,000 to \$24,000
- \$25,000 to \$49,000
- \$50,000 to \$74,000
- \$75,000 to \$99,999
- \$100,000 or greater

21) What is the highest level of education you or another adult in the household has completed?

- Some high school
- High school graduate
- Some college
- Bachelor's Degree
- Master's Degree
- Doctoral Degree
- Other

22) How did you learn about this survey? (check all that apply)

- Newspaper
- Word of mouth
- Radio
- City press release
- City Web site
- Other: _____

23) Please let us know if you have any comments, concerns or suggestions about the City's waste management practices. _____

Thank you again for participating in this survey.

Post-Pilot Survey Cover Letter

Dear Resident,

Your neighborhood was recently selected to participate in a source-separated organics collection pilot program. The (enter City/County name) strives to become a “best in class” city, and believes achieving environmental sustainability is critical to achieving “best in class” status. Toward that end, (enter City/County name) is considering implementing a source-separated organics collection program Citywide. The pilot program was being conducted to learn about program operations and residents’ attitudes and behaviors regarding source-separated organics.

We would greatly appreciate your providing feedback via this brief survey about the pilot program in order that we can improve the program, as needed, before it is launched Citywide. Thank you in advance for your feedback, and your participation in the pilot program.

If you have any questions about the survey or our future plans, please call (enter phone number) or email (enter e-mail).

Sincerely,

_____ (name)

_____ (title)

Post-Pilot Survey

1) Did you participate in the source separated organics collection pilot program?

- Yes (Skip to Question 3)
- No

2) If you answered “No” to Question 1, please indicate why you did not participate: (check all that apply)

- I did not receive information on the program.
- I was confused about the program.
- I do not have time to separate organics.
- I use a garbage disposal for my organics.
- I compost my organics in my backyard.
- I do not generate organics.
- I am concerned about odors
- I am concerned about vectors and vermin (animals and insects).
- I am concerned that separating my food waste may have health impacts.
- Other _____

3) If you answered “Yes” to Question 2, please indicate the extent to which you included the following types of organics generated in your household in the source-separated collection program:

	Do Not Generate	None (0–10%)	Some (10–40%)	About Half (40–60%)	Most (60–95%)	All (95–100%)
Kitchen scraps (e.g. from meal preparation)	<input type="radio"/>					
Plate scrapings	<input type="radio"/>					
Spoilage (e.g., food that has gone bad)	<input type="radio"/>					
Yard trimmings	<input type="radio"/>					
Pet waste	<input type="radio"/>					
Food-soiled paper/cardboard	<input type="radio"/>					
Other	<input type="radio"/>					

- 4) If you answered “other” in Question 3, what additional type of organic waste did you separate and include in the program? _____

- 5) If you did not include all of the organics generated in your household in the program, please indicate reasons you did not include all organics in the collection program: (check all that apply)
- I backyard compost.
 - I use a garbage disposal for some of my organics.
 - I have a yard maintenance company haul yard trimmings away.
 - I leave some organic waste in the woods/on yard/on street.
 - I am concerned about odors.
 - I am concerned about vectors and vermin (animals and insects).
 - I am concerned about health issues.
 - I am too busy to separate out all organics.
 - I was uncertain what I could include.
 - Other: _____
- 6) If you answered “other” regarding why you did not include some organics in the program on Question 5, please indicate the other reason(s) for not including them. _____

- 7) Did you receive the informational material and (enter other containers, etc. provided) from the (City/County)?
- Yes
 - No
 - Do not know
- 8) Did you use the material provided?
- Yes
 - No
 - Do not know

9) Overall, how satisfied were you with the source-separated organics collection service you received? (please circle)

1	2	3	4	5
Very	Somewhat	Neutral	Satisfied	Very
Unsatisfied	Unsatisfied			Satisfied

10) How likely would you be to continue participating in the program in the future? (please circle)

1	2	3	4	5
Will Not	Unlikely to	Don't Know	Likely to	Certain to
Participate	Participate		Participate	Participate

11) In which quadrant of the City do you live? ([City map](#) is available online)

- a. Northeast (Collection day is Monday)
- b. Southeast (Collection day is Tuesday)
- c. Southwest (Collection day is Wednesday)
- d. Northwest (Collection day is Thursday)

12) Please provide us with any suggestions you might have to improve the program: _____

**Thank you again for your participation in the pilot program,
and in this follow-up survey.**

Section 7

Sample Fact Sheet and Public Information Documents

Sample Fact Sheet

This Fact Sheet included presumes a certain type of SSO Collection Program. The City, County, and other local governments across Georgia may choose different features than those represented here. For example, meat and dairy may not be included or carts may not be provided. The Fact Sheet is an *example* of the types of questions that a local government may want to answer in print and online to educate residents about the program.

Sample Fact Sheet for Source Separated Organics Program

The (City/County name) is implementing a residential source separated program for the collection of food scraps, which will be able to be collected separately from regular household garbage and composted, along with yard trimmings, into soil-enriching compost. This program, if fully utilized, will help ((City/County name) reduce the amount of waste disposed by about 14 percent. Similar programs have been successfully implemented in other cities. We are excited to offer this program to our residents, and appreciate your participation.

Q: Why is (City/County name) implementing this program?

A: The City can reduce garbage disposal costs by with full participation in this program. We see environmental sustainability as key to becoming a “best in class” city.

Q: What can be included in the program?

A: Residents are encouraged to include all food scraps. This includes meat and dairy, which are often not recommended for inclusion in backyard composting. Also, plate scrapings and spoiled food should be included – not just kitchen food scraps from food preparation. Food-soiled paper and cardboard (if not wax-coated) can also be included. Pet waste may also be included in the program.

Q: What cannot be included in the program?

A: Grease and oil cannot be included in your source-separated organics. Also, please be sure to keep contaminants out – such as non-paper food packaging made of plastic, glass, and foil. These materials can damage the processor’s equipment and impact the quality of the compost.

Q: What about odors?

A: Source separated organics will be collected weekly, as garbage is currently, so the program should not cause odor issues.

Q: What about animals and insects?

A: We ask that you place your food scraps in the cart, along with yard trimmings. If you generate more yard trimmings than will fit in the cart, please place those (but not food scraps) in a biodegradable bag beside your yard waste cart on setout day.

Q: When will source separated organics be collected?

A: On the same day as your garbage and recyclables are currently collected.

Q: What if I set out my organics in plastic bags instead of the container provided?

A: Your hauler will not collect your cart. Please only use the specified biodegradable bags.

Sample Introduction Letter for Pilot Source Separated Organics Program

August 4, 2011

Subject: **Residential Source Separated Organics Collection Pilot Project**

Dear (City/County) Resident:

The (City/County) is striving to become a “best in class” city. Our (City/County) has initiated many sustainability initiatives which are critical to reaching this status. Responsibly managing the waste we generate is an important way we can all contribute to the (City/County’s) sustainability.

I am pleased to announce that your household has been selected to participate in an exciting new environmentally friendly pilot collection program – the Residential Source Separated Organics Program Pilot. You will receive a rolling cart in which to place these materials within the next month.

The Residential Source Separated Organics Collection Pilot will be offered in your neighborhood from August 1 to December 1, 2012. This Pilot will help us test the feasibility of providing this new service that allows residents to include food scraps and pet waste in their yard trimmings carts, thus reducing the amount of garbage generated for disposal each week.

This pilot project is being funded and coordinated by the (City/County Department of Solid Waste). You will be receiving information about the program, as well as a new yard trimmings cart the week of July 25 – 31. Please review the instructions included with your new collection containers. Staff is committed to making this collection Pilot work for customers. Throughout the duration of the Pilot, staff will be available to answer questions, accept comments, and respond to any concerns you might have. Please call the source separated organics (SSO) hotline at (enter phone number) or email at (enter e-mail)

Thank you in advance for participating in this program. I look forward to a successful Source Separated Organics Collection Pilot Project, and appreciate your efforts to help make (City/County name) a more sustainable (City/County)

Sincerely,

Mayor

Sample Introduction Letter for (City/County)-Wide Source Separated Organics Program

August 4, 2011

Subject: **Residential Source Separated Organics Collection Project**

Dear (City/County) Resident:

The (City/County) is striving to become a “best in class” (City/County), implementing many sustainability initiatives which are critical to reaching this status. Responsibly managing the waste we generate is an important way we can all contribute to the (City/County’s) sustainability.

I am pleased to announce that the (City/County) is introducing an exciting new environmentally friendly program – the Residential Source Separated Organics Collection Program on December 1, 2012. This program will allow you to put organic materials, such as yard trimmings and food scraps in the organics cart, thus reducing the amount of garbage generated for disposal each week.

You will be receiving information about the program, as well as a new cart to store these materials the week of November 21 – 25. Please review the instructions included with your new collection containers. Staff is committed to making this collection program work for customers. Staff are available to answer questions, accept comments, and respond to any concerns you might have. Please call the source separated organics (SSO) hotline at (enter your phone number) or email at (enter your e-mail).

Thank you in advance for participating in this program. I look forward to a successful outcome, and appreciate your efforts to help make (name of City or County) a more sustainable (City/County).

Sincerely,

Mayor

Links to Samples of Public Education and Information Regarding Residential SSO Collection Programs

Alameda County, California (www.StopWaste.Org)

General Information about Residential Curbside Food Scrap Collection and Links to Additional Outreach Materials (including those for municipalities within Alameda County)

<http://www.stopwaste.org/home/index.asp?page=528>

Barrington, Illinois

General Information on residential curbside composting program on Solid Waste Association of Northern Cook County web site.

<http://www.swancc.org/foodwastefaq.html>

Berkeley, California

General information about how to prepare food scraps for curbside collection.

http://www.ci.berkeley.ca.us/ContentDisplay.aspx?id=5606#FOOD_SCRAPS

Boulder, Colorado

General information on residential recycling and composting programs.

http://www.bouldercolorado.gov/index.php?option=com_content&task=view&id=1324&Itemid=450

In-depth information on residential recycling and composting programs

http://www.bouldercolorado.gov/files/411_on_curbside_compost.pdf

Cambridge, Massachusetts

General information about residential drop-off program for food scraps.

<http://www.cambridgema.gov/theworks/ourservices/recyclingandtrash/faqrecyclinganddrubbish/compostingquestions/organicsdropofffaq.aspx>

Hutchinson, Minnesota

General information about residential curbside food scrap collection program.

<http://www.ci.hutchinson.mn.us/composting.html#curbside>

King County, Washington

General information about residential curbside food scraps collection program.

<http://your.kingcounty.gov/solidwaste/garbage-recycling/food-collection.asp>

Livermore, California

Pamphlet on how to prepare food scraps for curbside collection.

<http://www.stopwaste.org/docs/livermore.pdf>

Portland, Oregon

Announcement of new residential curbside food scrap collection program.

<http://www.portlandonline.com/bps/index.cfm?c=52380>

General information about residential curbside food scraps collection program.

<http://www.portlandonline.com/bps/index.cfm?c=52380&a=359549>

San Francisco, California

General information of residential curbside compost program on hauler website. Includes a compost flyer in Spanish and Chinese.

<http://sunsetscavenger.com/residentialCompost.htm>

Section 8
Sample Reporting Documents

Sample Hauler Reporting Documents for a SSO Curbside Program

Section I. Company Information

Corporate Name	
Hauler Permit ID Number	
Business Name (DBA)	
Street Address	
City, State, Zip	
Contact Name	
Contact Phone Number	
Fax Number	
Contact E-Mail Address	
Business License Nbr.	

Reporting Period: From _____ to _____

Section II. Account and Tonnage Collected Information

CUSTOMER TYPE	COMPOSTED MATERIALS			
	Source Separated Organics		Yard Trimmings Only	
	# Customers	Tons Collected	# Customers	Tons Collected
Single-Family Residential				
Multi-Family Residential				
Commercial/Industrial/Institutional				
TOTAL				

Section III. Destination

RECEIVING FACILITIES (Indicate facility name and location)	FACILITY TYPE (MSW landfill, transfer station, C&D landfill, inert landfill, organics processing facility, other)	Tons of Source Separated Organics Collected	Tons of Yard Trimmings Only Collected
TOTAL			

Organics processing facilities include wood grinding facilities and composting facilities.
Please identify "other"

Section 9

Collection Vehicles and Containers

Collection Vehicles

Generally, the options for residential SSO collection vehicles are similar to those used to collect municipal solid waste, as indicated in the Table below. The vehicles selected must be compatible with containers/carts used by residents and otherwise take into account the needs of waste generators (size constraints, weight constraints, etc.). Some vehicle types are available with split bodies, which allow for the collection of two separate waste streams at one stop.

Typical Vehicle Types Used to Collection SSOs

Vehicle Type	Typical Price Range	Considerations
Rear-loading vehicle	\$160,000 - \$180,000	<ul style="list-style-type: none"> ▪ Compatible with both manual and semi-automated collection ▪ Compatible with bags, carts (if tippers used) or cans ▪ Flexible use – can often be used to collect other types of materials ▪ No swinging arm that may get hit on wires, trees ▪ Collector has opportunity to visually inspect contents before tipping into vehicle ▪ Compatible with brush piles ▪ Less efficient collection ▪ Workers must exit vehicle to collect – can increase injuries, make job less appealing
Automated side-loading vehicle	\$200,000 - \$215,000	<ul style="list-style-type: none"> ▪ Compatible with carts. ▪ Relatively efficient collection ▪ Workers can collect from inside vehicle, decreasing risk of injury and making job more appealing ▪ Typically not compatible with bags or cans. ▪ Not compatible with brush piles
Front-loading vehicle	\$180,000 - \$200,000	<ul style="list-style-type: none"> ▪ Compatible with dumpsters and compactors of various sizes ▪ Not generally compatible with bags, cans and carts (unless they are first tipped into the front-loading vehicle) ▪ Hydraulic lift requires overhead clearance ▪ Tipping process is relatively slow, not designed for large numbers of small-scale waste generators ▪ Not compatible with loose brush piles

Collection Containers

Many communities use wheeled lidded carts for the collection of source separated organics. However, because source separated organics can be heavier than municipal solid waste and because they are only a fraction of a resident's total waste, SSO containers are typically smaller than the 65 to 95 gallon size used for residential municipal solid waste. Some communities promote the use of biodegradable bags, either in lieu of carts or to put into resident-owned cans.

Some communities distribute containers, or pails, to keep inside to store small amounts of food waste in the kitchen before transporting to an outdoor cart or can. Some local governments allow the use of biodegradable liners in kitchen pails while others may encourage residents to use biodegradable/compostable containers (such as cartons, aseptic containers or cardboard ice cream containers) as containers for their compostable kitchen scraps.

Some considerations when selecting appropriate containers include:

- The type of vehicle to be used;
- Residential space limitations
- Frequency of collection;
- Weight limitation of containers;
- Types, weight, and volume of material expected; and
- Environmental factors (freezing temperatures, wind, hills, overhead trees and utility lines, etc.).

The Table below summarizes container types, approximate costs, and typical features of these containers.

Typical Exterior and Interior SSO Collection Containers

Container Type	Approximate Cost	Typical Features
Curbside Collection Can	\$30 - \$35	<ul style="list-style-type: none"> ▪ Purchased by homeowner ▪ Easy to replace ▪ Can be bulky/cumbersome to move, especially if SSO are dense ▪ Compatible with manual collection only.
Wheeled Curbside Collection Cart	\$40 - \$60	<ul style="list-style-type: none"> ▪ Compatible with automatic or semi-automatic collection ▪ Typically available in 36-, 64-, and 96-gallon sizes. However, most SSO programs use 12-, 36- or 64- gallons as 96-gallon becomes too heavy. ▪ Usually purchased by local government or hauler. Some communities have residents pay for cart initially, or pay for extra cart. ▪ Can have an RFID tag to identify household to which assigned. ▪ Many local governments also purchase a service contract ▪ Can be customized to have local government seal, etc. ▪ Some have special venting for SSOs. ▪ Many are aerated (either on the lid or at the bottom) to increase airflow
Curbside Collection Bags	\$0.50 - \$2.50	<ul style="list-style-type: none"> ▪ Some programs allow SSO to be placed in biodegradable or compostable bags ▪ Bags may be made of Kraft paper or biodegradable or compostable plastic ▪ Not all Kraft bags may will hold up to food waste with high moisture content, however two-ply Kraft bags are available which have wet strength. ▪ In many communities bags must be approved by the local government – to ensure acceptability by composting facility ▪ Typically bags are placed inside carts or cans. ▪ Can be compatible with all types of collection, depending on whether cart or can used. Alone, only compatible with manual collection.
Kitchen Pails 	\$3.00 - \$5.00	<ul style="list-style-type: none"> ▪ Often provided at no charge to residents. ▪ Usually 1 – 2 gallons in size ▪ Some have a sealable lid to mitigate odors and insects. ▪ Some communities advise residents to use their own “containers” such as compostable cartons, aseptic containers, or ice cream containers.
Kitchen Pail Liners <small>Source: www.norsemanplastics.com</small>		<ul style="list-style-type: none"> ▪ Some programs allow liners, others do not. ▪ Options for lining include: biodegradable plastic, newspaper, or brown paper bags.

Sources for Collection Containers

Note: Listing herein does not constitute an endorsement for the products below.

Bag and Tag – Supplier of paper and plastic bags for yard trimmings and food waste
<http://bagandtag.com/paper-yard-waste-bags.html>

Bio-Bag – manufacturer of compostable bags
<http://www.biobagusa.com/>

Busch Systems – manufacturer of kitchen compost containers
www.buschsystems.com/

Eco-Products – retailer of compostable/biodegradable bags
<http://www.ecoproducts.com/>

Natur-Tec – manufacturer of compostable plastic bags
http://www.natur-tec.com/pdf/Natur-Tec_General_Product_Sheet.pdf

Norseman Environmental Products – manufacturer of carts and countertop containers
www.norsemanplastics.com/

Otto Environmental Systems – manufacturer of carts and kitchen compost containers
www.otto-usa.com/en/default.php

Rehrig Pacific – manufacturer of carts and countertop containers
www.rehrigpacific.com/products/rollout_carts_61d.aspx

SSI-Schaefer – manufacturer of carts
www.ssi-schaefer.ca/WR/WRproAP.html

Toter – manufacturer of carts
www.toter.com

Webster, Inc. – manufacturer of compostable bags
<http://www.websterindustries.com/>

Section 10 Organics Processing Facilities in EPA Region 4

The following links identify the organics processing facilities in EPA Region 4. In addition, this section identifies the State agency to contact for assistance with identifying organics processing facilities.

Alabama

ADEM Solid Waste Branch

(334) 271-7764

<http://www.adem.state.al.us/programs/land/default.cnt>

Florida

Department of Environmental Protection Division of Waste Management

(850) 245-8705

http://appprod.dep.state.fl.us/WWW_WACS/Reports/SW_Facility_Inventory_srch.asp

Georgia

Environmental Protection Division

(404)657-5947

http://www.georgiaepd.org/Documents/swp_map02.html

Kentucky

Department for Environmental Protection Division of Waste Management

(502) 564-6716

<http://waste.ky.gov/Pages/default.aspx>

Mississippi

Department of Environmental Quality Solid Waste Policy, Planning, and Grants Branch

(601)961-5171

http://www.deq.state.ms.us/MDEQ.nsf/page/SW_General_Solid_Waste_Guidance?OpenDocument

2011 is located at

[http://www.deq.state.ms.us/MDEQ.nsf/pdf/SW_ActiveFacilityListing/\\$File/ActiveFacilityListing.pdf?OpenElement](http://www.deq.state.ms.us/MDEQ.nsf/pdf/SW_ActiveFacilityListing/$File/ActiveFacilityListing.pdf?OpenElement)

North Carolina

Division of Waste Management

(919)508-8400

<http://portal.ncdenr.org/web/wm/sw/facilitylist>

South Carolina

South Carolina Department of Health and Environmental Control Land and Waste Management

(803) 896-4000

http://www.scdhec.gov/environment/lwm/Databases/MSWM/Mine-SW_search.htm

Tennessee

Department of Environment & Conservation Solid Waste Management

(615) 532-0780

<http://www.tn.gov/environment/swm/pdf/swfacilities.pdf>

Section 11

State Waste Composition Studies in EPA Region 4

In order to gain a better understanding of the potential diversion that could be achieved through a residential SSO collection program, the following links to federal, state, and local waste composition data are provided.

U.S. EPA Waste Composition Study

Municipal Solid Waste in the U.S. – Facts and Figures (2009)

<http://www.epa.gov/osw/nonhaz/municipal/msw99.htm>

Municipal Solid Waste in the U.S. – Report (2009)

<http://www.epa.gov/osw/nonhaz/municipal/pubs/msw2009rpt.pdf>

Georgia Statewide Waste Composition Study (2005)

<http://www.dca.state.ga.us/development/EnvironmentalManagement/publications/GeorgiaMSWCharacterizationStudy.pdf>

Florida Statewide Waste Composition Computer Model (2003)

http://www.dep.state.fl.us/waste/quick_topics/publications/shw/recycling/InnovativeGrants/IGyear3/finalreports/WasteCalcFinalReport.pdf

Orange County, NC Waste Sort Results (2010)

http://orangecountync.gov/recycling/documents/WasteSort2010/Multifamily_composition.pdf

http://www.orangecountync.gov/recycling/documents/WasteSort2010/Residential_composition.pdf

South Carolina Annual Report (2010)

<http://www.scdhec.gov/environment/lwm/recycle/pubs/section3.pdf>

Tennessee Statewide Waste Characterization Study (2008)

<http://www.tn.gov/environment/swm/pdf/swspfin1.pdf>

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