### Food Scrap Curbside Collection Pilot Summary Report

October 2011

#### Background

In 2007, City Council adopted the Portland Recycles! Plan (PR! Plan) that directed implementation of new residential recycling and composting programs. Phase I of the PR! Plan expanded the materials recyclable at the curb and brought residents their blue and green roll carts. The second phase identified in the PR! Plan introduced weekly curbside food scrap collection and every-other-week (EOW) curbside garbage collection.

On May 3, 2010, the City of Portland began piloting this new curbside collection service for 2,000 households in four areas of the city. The main purpose of the pilot was to learn what worked and what didn't in order to improve upon the program before rolling it out citywide as well as gather data to help determine rates for the new program.

#### Food Scrap Curbside Collection Pilot Overview

- Food scraps (including grains/breads/meat/bones/dairy) collected in green Portland Composts! roll cart, commingled with yard debris. Residents received kitchen pails to collect and transfer food scraps to green cart.
- Green Portland Composts! roll cart moved from every-other-week (EOW) collection to weekly.
- Garbage moved to EOW collection schedule, although customers that desired weekly garbage pickup could elect to pay for that level of service for double the monthly rate.
- Half the participants in the pilot received EOW recycling collection to test feasibility. Rates decreased by about \$2 for those customers who received EOW recycling service.
- Rates for those customers who stayed in the same container size with the new standard service (weekly yard debris/food scraps, weekly recycling, EOW garbage) did not increase.

#### Benefits

- Compostable food and food-soiled paper account for almost 30 percent of Portland residents' garbage by weight (approximately 30,000 tons of unnecessary garbage every year or over 30 lbs per household per month).
- Composting food instead of landfilling it produces a valuable agricultural product for healthier soils and gardens.
- In the landfill, food breaks down and produces methane, a potent greenhouse gas that causes climate change. According to the U.S. Environmental Protection Agency, each ton of food waste diverted from landfill prevents the release of methane equivalent to approximately one ton of CO2 emissions. A fully implemented residential food scrap collection program in Portland could prevent up to 22,000 tons per year of CO2 equivalent emissions.
- EOW garbage collection means fewer trucks in neighborhoods, reduced emissions from those trucks, lower rates, and a more efficient waste collection system overall.

#### **Pilot Areas**

The four pilot areas were chosen based on:



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- Demographics—the areas were representative of their general geographies to facilitate testing outreach and messaging on diverse populations.
- Geography—the areas were spread out around the city, including one east of I-205 and one in NE, SW, and close-in SE.
- Service areas of the four haulers that volunteered to help with the initial rollout.

The four neighborhoods are (see Appendix for map):

- Richmond (hauled by Arrow)
- Roseway (hauled by Heiberg)
- Hazelwood / Centennial (hauled by Waste Management)
- Arnold Creek (hauled by Allied Waste)

#### **Outreach to Pilot Households**

The second week of April 2010, pilot households received an official letter on City of Portland letterhead via U.S. mail telling them that they were part of a pilot program and their system was changing. The letter included two colorful inserts with FAQs and program information.

The next touch point was a cart tag delivered by the four garbage and recycling companies that serviced the pilot routes. The cart tag was placed on the garbage or green Portland Composts! roll cart during the third week of April 2010 to alert pilot residents that their service would be changing beginning May 3, 2010.

The week before the rollout, participating pilot customers received a tool kit that included a guide to their new recycling and garbage system, a collection schedule, and a handy magnet. The tool kit was delivered in a 2-gallon kitchen pail for collecting food scraps during meal preparation and clean-up.

Online outreach included a webpage with detailed FAQs, a customer feedback form, and an online "e-schedule" that allowed customers to find their collection schedule by typing in an address. Trained customer service representatives provided assistance to pilot customers who called the Garbage and Recycling hotline. At the launch of the program, Master Recyclers went door-to-door canvassing the pilot areas to answer questions and make sure participants received all materials.

The City of Portland stayed in touch with pilot households during the course of the pilot program by way of two newsletters. The first, delivered in November 2010, gave pilot households more detail about what materials are allowed in the green Portland Composts! roll cart. The second newsletter was delivered in April 2011 and provided pilot households with an update on the timeline for the citywide rollout as well as some of the data points the City was gleaning from the pilot evaluation.

#### Pilot Evaluation

As mentioned earlier, the main purpose of the pilot was to learn from it. The City wanted to learn:

- what parts of the program worked and what didn't in order to improve the program prior to rolling it out citywide
- how pilot customer behavior changed during the pilot
- operational information to help determine program rates
- best practices for communicating program changes and reaching out to customers



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- Customer surveys & focus groups—customer attitudes and behaviors about the program and the pilot
- Waste characterization—food scrap diversion and contamination rates
- Container weights and volume estimates
- Labor costs— On-route and off-route driver labor hours
- Set outs & load weights
- Service levels— How customers respond to EOW service (by changing can size and/or service frequency)
- Visual survey/field observations—including presence of food in green cart

### Pilot Results

The pilot program proved to be a great success. A few highlights (see Appendix for more information):

- Over 75 percent of pilot survey respondents indicated they were participating regularly
- 87 percent of pilot survey respondents said they were satisfied with their curbside collection service
- Almost half of the food scraps generated in the pilot area are being diverted into the green roll cart for composting
- Garbage collected in the pilot areas has dropped by 30 percent
- Just 7 percent of pilot survey respondents reported increasing the size of their garbage container
- On pick-up day, just 60 percent of garbage containers set out at the curb in pilot areas were completely full

### Lessons Learned

While the pilot customers loved having weekly yard debris and food scrap collection, some were not as enthusiastic about every-other-week garbage. About 20 percent of the initial customer phone calls and emails related to every-other-week garbage. After a year, the vast majority of pilot households had adjusted and were satisfied with the new program. City staff learned that acknowledging the magnitude of the change to people's expectations and habits and helping them through the transition was very important.

Despite the fact that the data showed no decrease in the capture rate for commingled material in the pilot areas with every-other-week recycling collection, the City of Portland decided to maintain weekly recycling collection in the new citywide curbside collection service that began October 31, 2011.

Another change from the pilot is the way that once-a-month collection is handled. Currently, almost 9 percent of residential customers get their garbage collected once a month, often the first week of the month. On an every-other-week collection schedule, once-a-month pilot customers waited sometimes up to six weeks between pick ups. For the citywide program, collection occurs every four weeks, meaning previous once-a-month customers now receive 13 garbage pick ups each year, in addition to weekly yard debris and food scrap collection.

Finally, in the pilot program, there was an option for weekly garbage collection at double the monthly rate. An option for weekly garbage is not available with the citywide program. Very



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#### Conclusion

The Food Scrap Curbside Collection Pilot successfully tested a new curbside collection service that provides additional services to Portland residents while also increasing diversion from the landfill, reducing greenhouse gas emissions, and creating a useful agricultural product. The pilot showed that the new curbside collection service is feasible and effective and resulted in a satisfied customer base. On August 17, 2011 Portland's City Council unanimously adopted rates for a new curbside collection service based on the results of the Food Scrap Curbside Collection Pilot, and the new program took effect on October 31, 2011.



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### APPENDIX

### Map 1: Pilot area locations



### Customer Survey (charts 1-6)

A survey was mailed to all 2,000 pilot households in April of 2011. Pilot residents could mail the survey back postagepaid or fill it out online. BPS received 391 responses, or almost a 20 percent response rate.



### Chart 2: Satisfaction with service elements



## Chart 3: Frequency of food scraps collection

n=391



# Chart 4: Actions taken to keep pail and roll cart clean

n=391



### Chart 5: Actions taken since beginning of food scraps collection began



# Chart 6: Agree/disagree statements

	Strongly agree		Somewhat agree	Don't know/ no esponse	Somewhat disagree	Strongly disagree			
Increased size of container would make every two week garbage collection easier			17%	11%	12%		4	3%	
Not willing to pay \$5 per month for larger garbage container	-		59%			10%	9%	8%	14%
Harder in winter to participate	9%	9%	15%	17%			50%		
\$5 per bag acceptable fee for extra garbage	17%		19%	15%	6 159	6		33%	
C	0% 2		0%	40%	60	)%	8	0%	1009

### Chart 7: Available capacity in garbage containers

The data on this graph are an average of two sets of data collected by Community Environmental Services (CES) at Portland State University. The first dataset was gathered between July and September 2010 and the second set October through December 2010. CES staff developed a walking route of about 100 homes in each of the seven pilot sub-areas. On collection day, the team gathered data on the containers set out at the curb before the collection vehicles arrived.



### Chart 8: Garbage collected in pilot areas

Periodically during the course of the pilot, BPS asked the garbage and recycling companies servicing the pilot to report the weight of each load of garbage from the pilot areas that they dropped off at the transfer station. They also tracked this data during the month of April 2010, before the pilot began in May. In order to control for changes in the economy or other external factors that can influence garbage generation, the same data was gathered for three "control" areas adjacent to the pilot areas during June and October of 2010.



### Chart 9: Waste characterization study

Periodically during the course of the pilot, BPS contractor Green Solutions took samples from the loads of garbage, recycling, and composting from the pilot areas. The samples were sorted and weighed. Samples were also taken from garbage and recycling loads only in the pilot area in April 2010 as well as the three adjacent control areas in June and October 2010.

