

**Curbside Collection  
Of  
Source-Separated Organics  
in the  
City of Wayzata**

**Final Report – Phase 1**

Project Partners:

- City of Wayzata
- Randy's Sanitation
- NRG Processing Solutions
- Hennepin County
- Solid Waste Management Coordinating Board

January 2005

## **INTRODUCTION**

In late 2004, the Wayzata pilot project began Phase 2. This grant report pertains only to Phase 1 of the project. Findings and lessons learned in the first phase of the project are documented in this report, however, since the pilot is ongoing, final conclusions and recommendations have not been reached.

When the pilot in Wayzata began, it was not apparent that there would be a second phase. However, by late 2003 it became clear that a longer pilot period would be needed to figure out how to minimize the cost of curbside organics collection in Wayzata. Phase 1 was critical for testing a variety of educational approaches and fine-tuning the logistics of collecting and transferring Wayzata's organics. Phase 2 will be critical for determining how to minimize the cost of an ongoing curbside organics program.

## **PURPOSE & GOALS**

The City of Wayzata entered into this pilot project to explore the feasibility of establishing a curbside source-separated organics (SSO) collection program. One objective of the project was to test new SSO separation and collection methods. For example, a key difference from other pilot projects is that yard waste was not commingled with the SSO. Wayzata has its own successful municipal yard waste site and did not want its residents getting out of the habit of using that site. Another key project design element was the use of a split body truck by the City's contracted waste hauler, Randy's Sanitation, which would allow one driver to pick up both garbage and SSO at the same time.

The project was designed to evaluate how to effectively educate residents to separate the organic portion of their trash and how to economically collect the organics that were separated. Anticipated outcomes of this project were to determine: the affordability of using a split body truck for collection, the average quantity of SSO set out by Wayzata residents on a weekly and monthly basis, average set out and participation rates, and the feasibility of establishing a permanent curbside SSO program in Wayzata.

## **PROJECT DESCRIPTION**

The City of Wayzata is piloting a citywide, curbside residential organics collection and composting program. Food waste and non-recyclable, soiled paper are being collected separately for composting.

The following items are accepted for composting.

- All food scraps – including meat & bones
- Soiled & non-recyclable paper products
  - Napkins, paper towels, tissues
  - Paper plates, cups, food containers, pizza boxes
  - Paper milk and juice cartons
  - Paper bags and waxed paper
  - Waxed cardboard

- Coffee filters and tea bags
- Other compostable items
  - Paper vacuum bags
  - Dryer lint
  - House plants

The following items are NOT accepted for composting.

- All plastics
  - Utensils
  - Baggies, wrapping film, bags
  - Cups and containers
  - Foam trays, plates, bowls, packing material, etc.
  - Condiment packets, chip bags, candy wrappers
- Recyclable materials
  - Bottles
  - Cans and scrap metal

Key collaborators on this project are:

- Residents;
- City of Wayzata;
- Randy's Sanitation;
- NRG Processing Solutions;
- SWMCB; and
- Hennepin County.

On April 7, 2003, weekly curbside collection of SSO was implemented citywide. Prior to the first pickup, all 1,252 households in the city received a 38-gallon cart, kitchen bucket, and 3-month supply of biodegradable bags for collecting their SSO. After Randy's Sanitation collects the SSO, the material is brought to the Hennepin County Recycling Center and Transfer Station in Brooklyn Park for inspection to ensure that non-biodegradable contaminants are below threshold levels. After the material is inspected, it is transported by Hennepin County to the NRG SSO composting facility in Empire Township in Dakota County.

Starting on day one, the SSO collected from Wayzata's curbside program has been very clean. To date, all material sent to NRG has been composted. The amount of material collected weekly is typically between 1.5 - 2 tons. During Phase 1, which spanned from April 2003 through August 2004, 137 tons of SSO were collected. The average weekly set out rate<sup>1</sup> for SSO ranged from 22% to 32%. The lowest weekly set out rate was 20%, and the highest was 35%. Monthly participation<sup>2</sup> has ranged from 42% to 48%, although participation figures were not available for all months. The participation rate for the entirety of Phase 1 was 74%, which means 74%, or 927, of the households in Wayzata set out SSO at least once during Phase 1. One hundred fifty-seven (157) households have opted out of the curbside SSO service, and 77 households have reduced their level of trash service -- at a lower monthly cost --, as a result of being able to divert organics out of their trash cart. For more detailed information about set out and participation rates, see Appendix 1.

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<sup>1</sup> A weekly set out rate indicates how many households set out their material on a given week.

<sup>2</sup> A participation rate indicates how many households set out their material at least once in a given period of time, e.g., weekly, monthly, quarterly, etc.

Because the weekly amount of SSO being collected was less than expected, the split truck was used only in the first week of the project. Presently, a separate truck is being used to collect SSO. With a substantially disproportionate amount of trash to SSO being collected, a split body truck requires several more trips to the transfer station than running two separate trucks. Using separate trucks to collect trash and SSO results in lower collection costs and reduced environmental impact from reduced trips to Brooklyn Park.

Educational and promotional activities were a big part of Phase 1 and will continue to receive a lot of attention in Phase 2. Educational/promotional activities in Phase 1 included direct mailings, cart hangers, articles in community newspapers, lawn signs, formation of a neighborhood advisory group for peer-to-peer education, local cable access programs, and displays at local establishments, and booths at community events.

## **TIMELINE OF PROJECT ACTIVITIES**

Phase 1 of this pilot ended on August 31, 2004. See the timeline below for more details on Phase 1 activities.

### Prep time: Summer 2002 through February 2003

- County staff approaches City staff about Organic pilot project. Several meetings with County staff, City staff and Randy's Sanitation
- Grant written Fall of 2002
- County Board approval Fall 2002
- City Council approval in Dec. 2002

### March 2003 – May 2003: “Get Started” Goal of 25% participation

- Bay Window article introducing Pilot Project
- Last week in March – Brown Organic Carts, green kitchen buckets and educational material distributed to every Wayzata resident
- Articles in both local newspapers
- 2 cable TV programs

### June 2003-August 2003: “Spread the Word” Goal of 50% Participation

- Organize Neighborhood Coordinators – Ongoing
- Distribute cart hangers with soft message -June 9<sup>th</sup>
- Display at Lunds - Ongoing
- Local newspaper article on \$300 winner – June 16
- City website – Ongoing
- Lawn signs – 6 signs June 14<sup>th</sup>, 56 signs June 28

### September 2003 – April 2004: “Do Your Part” Goal is 75% Participation

- 1<sup>st</sup> Organic Buzz newsletter, Cable TV programs, Bay Window article, Community survey
- ORGANICS booth at James J. Hill Days – handouts, testimonials, enlarged map of participants & non-participants, display, quiz, etc.

- Audited waste stream: identified recyclable paper/fiber as most common organic/recyclable that is still in the waste stream. Incorporated information in educational material.

#### May 2004 - First Year Celebration:

- Saturday May 22, 2004 10:00 a.m. to 1:00 p.m. Speakers @ 10:30 p.m.
- Bulk mailing, VIP invitation, cable TV and newspaper article out this week
- Post color flyers around town this weekend
- Gave out free compost and flowers.
- City and County officials gave speeches which were taped and later broadcast on cable
- Information tables were set-up with volunteer coordinators for:
  - Organic quiz contest, free bags, kitchen buckets - Neighborhood coordinators
  - Limbo contest – County staff
  - Garbage containers w/ prices – Randy’s Sanitation
  - Master Gardener – Henn Cty
  - County’s waste management system & problem wastes – County staff

#### July '04 - April '05 “How Low Can We Go?” :

- July 14<sup>th</sup>: Bay Window article summarizing first year results and announcing County Board grant extension to June 2005
- Last week in July: residents of Hollybrook town homes received a letter from Don Engebretson encouraging them to participate in the Organics program
- Week of August 2: All Wayzata residents with garbage service received a letter from the Organics neighborhood coordinators encouraging them to participate in the Organics program (Inspired by D. Engebretson)
- August 2: 2<sup>nd</sup> cart hangers created and distributed
- August 3: National Night-Out – neighborhood coordinators got out to as many neighborhood parties as possible to get the word out
  - kids activities: coloring contests, quiz, etc.

### **FINDINGS AND LESSONS LEARNED**

- The average weekly set out rate and monthly participation rates exceeded initial project goals.
- The average monthly generation of MSW dropped from 88 tons per month to 81 tons per month, an 8% reduction.
- Not a single load of SSO collected was rejected by the composting facility! Contamination levels remained within acceptable levels throughout Phase 1. This success created the opportunity to focus on a Phase 2. If the loads could not be kept clean, there would be no need reason to expend the resources necessary to determine how to minimize the cost of an ongoing program.
- The variety of promotional and educational activities appears to have been effective. The loads have remained clean, and the set out and participation rates continue to be high.

- The primary cost for Wayzata's SSO collection program is labor to collect and transport the SSO from the residents to the transfer station. Tipping fees, taxes, etc. play a minor role. This will likely be the case for any residential curbside collection program that collects relatively small amounts of SSO. The tax exemption alone is not enough to offset the added hauling costs. However, the recently reduced county tipping fee for SSO will provide additional financial incentive. As the quantity per load increases, so do the cost savings from the reduced tipping fee.
- The split-truck could not be cost-effectively used, as had been hoped, which would have allowed one driver to collect MSW and SSO at the same time. The split body truck allows for a 60/40 split of a load, but the actual break down of MSW to SSO being collected was closer to 90/10. The end result was a lot of air being hauled to the transfer station, which resulted in increased truck trips and increased collection/hauling costs. The use of the split body truck was terminated after the first week of the pilot.
- Phase 1 costs included an additional cost for drive-up service. Approximately 200 residents pay an extra monthly fee for drive up garbage service, which requires a separate, smaller truck. In Phase 1, SSO collection was offered to drive up customers at no additional cost. However, average weekly set out was low amongst this group – about 15% -- that resulted in small quantities of SSO collected at a high cost SSO collection service will not be offered to drive up customers in Phase 2.
- Weekly cash prizes encouraged weekly set out of small amounts of SSO by residents, rather than as needed pick-up. This behavior increased hauler's collection costs in Phase 1 by an unknown amount. Getting residents to set out their SSO on an as needed basis may lower the city's overall collection costs for SSO.
- One of the most effective communication tools was the network of neighborhood coordinators. The coordinators encouraged their neighbors to participate through word of mouth communication and one-on-one encounters with fellow Wayzata residents. They were also a vital resource for providing regular feedback, staffing local events, and adding a grassroots element to the project (rather than city and county staff always representing the project).
- Recovering SSO is currently inherently more expensive than recovering recyclables due to incentive of no tipping fee for recyclables and recycling subsidy (SCORE funding) provided by Hennepin County grant is not available for SSO. (SSO tipping fee during Phase 1 was the same as the MSW tipping fee)
- Purchasing compostable bags from a local retailer was more popular among residents than originally anticipated. After the initial free supply of compostable bags was distributed to residents, the bags were made available for purchase at the local Lund's grocery store. Initially, the store had difficulty meeting supply with demand – bags were not on the shelves on several occasions – due to distribution and storage problems. Because more bags were being sold than were appearing in the SSO loads, it is likely that residents from adjacent cities were buying them for their own use even though they can't participate in the Wayzata pilot project. These problems have been worked out for the most part, but order filling, distribution and customer service continue to be issues in the nascent compostable bag industry. Complaints were received about the bags leaking and generally being of poor quality. These issues were difficult to verify or quantify. However, a new bag that has better wet strength has been introduced for Phase 2.

- More recycling (40 tons a month) than SSO (8 tons a month) was diverted from MSW. It is assumed that everyone has recyclables but some Wayzata residents claim to not generate any SSO.
- Definition of “Organic” was confusing to some people, while others seemed to have a difficult time adapting to the new way to sort their waste. Interestingly, some residents claimed that separating organics was too confusing, although they admitted to consistently participating in the curbside recycling program which required sorting material into five categories.
- Many residents are very supportive and appreciative of the Organics pilot project.

## NEXT STEPS

When the pilot in Wayzata began, it was not apparent that there would be a second phase. However, by late 2003 it became clear that a longer pilot period would be needed to figure out how to minimize the cost of curbside organics collection in Wayzata. Phase 1 was critical for testing a variety of educational approaches and fine-tuning the logistics of collecting and transferring Wayzata’s organics. Phase 2 will be critical for determining how to minimize the cost of an ongoing curbside organics program. In Summer 2004, the Hennepin County Board of Commissioners approved grant funding to support Phase 2 of Wayzata’s pilot project.

The purpose of Phase 2 is to give city staff additional time to work with the project’s primary collaborators (Wayzata resident neighborhood coordinators, Hennepin County, and Randy’s Sanitation) to minimize the eventual SSO user fee that will need to be added to the residents’ utility bills in order to finance the cost of SSO collection on an ongoing basis. City staff was concerned that a cost/benefit analysis of Phase 1 would be premature and would calculate an artificially high monthly user fee. Thus, the city is proposing to carry out the following in Phase 2.

- **Increase resident awareness about, and participation in recycling & organics:** Increase organic and recycling tonnage and reduce MSW tonnage through additional promotional efforts. Specifically, the city will use regional/local TV and newspaper coverage of the one year results, implement a general marketing campaign “**How Low Can We Go?**” which will encourage Wayzata residents to work together toward a community goal of lowering the MSW tons processed each month and a narrow campaign targeting residents who are not participating in the organics program and who are likely not participating in the city’s recycling program either, i.e., condo owners and residents with 90 gallon garbage service level.
- **Minimize costs for a residential organic collection:** specifically, lower the hauler’s collection/hauling costs by eliminating the subsidy for drive-up SSO collection; eliminating cash prizes that encouraged residents to put out their SSO cart on a weekly basis, rather than on an as needed basis; determine if every other week SSO collection is feasible, perhaps in non-summer months; and research having a portion of the collected SSO processed locally, rather than being transported to the transfer station.

- **Search for ongoing revenue sources:** Hennepin County, Metropolitan Council and State of Minnesota may be interested in providing an ongoing financial incentive for local governments to offer residential SSO collection programs similar to recycling programs.

Phase 2 will run from September 2004 to Summer or Fall 2005. There will be a three month evaluation period to conduct a cost/benefit analysis, negotiate a long-term collection contract, and calculate the necessary monthly user fee to finance an SSO collection program. The expected outcome is the Wayzata City Council would vote by Fall 2005 on whether the pilot project should end or become a permanent service provided to Wayzata residents.

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## PROJECT BUDGET

See the table below for revenue and expenditure details. It should be noted that 45% of the project budget was devoted to start up costs. Focusing on the ongoing operational expenses, the monthly collection cost per household, including drive up service, was \$3.86. When drive up service is excluded (which will be the case in Phase 2), the monthly collection cost per household was \$3.47.

	<u>Phase I</u>
<b>Revenues:</b>	
Initial Phase I Organics grant - Henn. Cty & SWMCB	131,871
<b>Final Phase I Organics grant - Henn. Cty &amp; SWMCB</b>	<u>14,773</u>
<b>Total Revenues</b>	146,644
<b>Expenditures:</b>	
<b>Start-up:</b>	
Compostable bags	12,234
Legal fees	409
Cash prizes (ended March, 2004)	4,700
Organic carts	<u>50,121</u>
Total start-up expenditures	67,464
<b>On-going:</b>	
Promotion/survey - design/printing/etc.	13,014
Randy's collection: drive-up service (ended March, 2004)	8,236
Randy's collection: curbside service	55,203
Tipping fees	5,383
Miscellaneous	<u>334</u>
Total on-going expenditures	82,170
 Total expenditures	 <u>149,634</u>
 <b>Grant less expenditures</b>	  (2,990)
 <b><u>In-kind contributions (estimates)</u></b>	
- City Department Heads - project management	\$ 30,000
- Administrative staff - answering resident questions	12,500
- City newsletter/cable TV	10,000
- Neighborhood coordinators - attend meetings, word-of-mouth, ...	<u>22,500</u>
Total City matching funds	\$ 75,000

## APPENDIX 1

## Set Out, Participation, & SSO Collected

Month	Avg. Wkly. Set Out Rate	Participation Rate	Tons	Comments
Apr '03	26%		6.7	
May	30%		6.3	
Jun	32%	47%	10.2	1 <sup>st</sup> cart hanger
Jul	32%	46%	8.7	Lawn signs distributed
Aug	31%	44%	8.7	
Sep	30%	48%	10.2	
Oct	29%	42%	6.9	
Nov	27%		9	
Dec	26%		9.2	
Jan '04	25%		6.9	
Feb	22%		5.7	
Mar	23%		8.3	Ended cash prizes
Apr	25%		6.3	Stopped drive up service
May	27%		7.3	
Jun	26%		10.4	
Jul	28%		6.8	2 <sup>nd</sup> cart hanger
Aug	27%		9.5	
<b>Total Tons</b>			137.2	
<b>Phase 1 Partic.</b>		74%		