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# Recycle the Bag Pilot Project

Final Report  
October 2008



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## Executive Summary

### *Project plan*

The objective of the Recycle the Bag pilot was to test the feasibility of a curbside plastic bag recycling program. The 5,000 households from the existing Single Stream Recycling pilot areas were chosen to participate in the four month Recycle the Bag pilot. Cycled Plastics, a local recycling company, agreed to accept the material collected from the pilot and provide data to Solid Waste Services. To keep plastic bags separate from regular recyclables, each pilot customer was issued a blue five-gallon bucket into which tied plastic bag bundles were placed on recycling set-out days. Operations crews collected bag bundles and delivered the material to Cycled Plastics, where it was processed into pellets that were sold to bag manufacturers.

### *Findings*

The average plastic bag set-out rate over the pilot period was low at 25.1%. Operations crews collected 7,793 pounds of material, which has a current market value of \$1,170. The total cost of the pilot was \$34,835. There was a high return rate on the post-pilot survey. Over 87% of respondents indicated that they were aware that various Austin retailers have onsite collection containers for recycling plastic bags.

### *Conclusion*

The results of this pilot were low participation as well as a low volume of plastic bags recycled. Since there was no cost benefit demonstrated, Solid Waste Services will not be continuing curbside plastic bag recycling. The department will continue to promote community-wide use of reusable shopping bags and to inform Austin residents about plastic bag recycling options at retail stores. Additionally, Cycled Plastics welcomes the public to drop off plastic bags to be recycled at their Austin facility located at 10200 McKalla Place, suite 100.

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## **Introduction**

### ***Why plastic bags are problematic***

Solid Waste Services does not recycle plastic bags, dry cleaner bags or plastic newspaper sleeves. These items become tangled on the sort line at the Material Recovery Facility, creating maintenance issues and equipment downtime.

Public awareness of the problems that plastic bags can create, such as litter, is on the rise around the country. Solid Waste Services conducted a survey on Austin residents' opinions and habits pertaining to plastic bags in June, 2007. Of the respondents, 60% felt that plastic bags are a significant source of litter in Austin and around 67% rated plastic bags as a medium to serious waste issue in Austin.

### ***Current alternatives for plastic bags***

Several grocers and retail stores in the Austin area have onsite plastic bag recycling centers in their stores, including H-E-B, Central Market, Randalls, Wal-Mart and Whole Foods. Also, schools often have organized plastic bag recycling projects. Cycled Plastics allows the public to drop off plastic bags to be recycled at their Austin facility located at 10200 McKalla Place, suite 100.

## **Project Plan**

### ***Pilot objectives***

The objective of the Recycle the Bag pilot was to test the feasibility of a curbside plastic bag recycling program. Staff designed the pilot to return the following information:

- the level of customer participation during the pilot;
- the yield of material from the project;
- the quality of the material collected;
- the cost of curbside collection of plastic bags.

### ***Pilot areas***

The 5,000 households from the Single Stream Recycling pilot areas were chosen to participate in the Recycle the Bag pilot. These particular areas are aggregately representative of Austin's demographics. Customers in these areas have continued receiving biweekly Single Stream Recycling collection up through the present. Locations of the pilot areas are:

**Monday area-** This area is found southwest from the intersection of Mopac and US 290. It is located just north of William Cannon Drive and McCarty Lane and south of Monterey Oaks Boulevard. US 290 is the northern border and Mopac is the eastern border.

**Tuesday area-** This area is found south of US 290 or Ben White Boulevard, west of S. 1st Street and north of Stassney Lane. The western boundary consists of railroad tracks.

**Wednesday area-** This area is located north of the intersection of US 183 and Mopac. US 183 is the western boundary, Mopac is the eastern boundary and Duval Road is the northern boundary.

**Thursday area-** This area is located east of the intersection of IH-35 and US 183. There are several streets that act as borders. Rundberg Lane, Dessau Road and Ferguson Lane are the

northern borders. Sansom Road is the eastern border, US 290 and US 183 are the southern borders and IH-35 is the western border.

**Friday area-** This area is found east of IH-35, south of Manor Road, west of Alexander Avenue and north of E. 14<sup>th</sup> Street.

*(See map of pilot areas at the end of this report.)*

### **Timeline**

The Recycle the Bag pilot ran from May 12, 2008, through August 22, 2008. Staff felt that four months would be a sufficient time period for crews and residents to adjust to the program and for optimum participation to occur.

### **Partnership with Cycled Plastics**

Cycled Plastics, a local recycling company that processes plastics into pellets which are then sold and remanufactured into consumer products, agreed to take the material collected from the pilot. In exchange for the material, Cycled Plastics agreed to provide Solid Waste Services with data on the weight of bags received at their facility and information on the composition and condition of the incoming material. Acceptable materials included plastic retail bags of all colors and sizes, dry cleaner bags (with all tickets and staples removed), plastic newspaper sleeves and produce bags. All materials were required to be free of drawstrings, receipts, liquids and food residue.

### **Collection**

To keep plastic bags separate from recyclables set out in the Single Stream Recycling carts, it was necessary to provide designated collection containers for the plastic bags. Staff decided to issue each pilot customer a blue five-gallon plastic bucket into which tied plastic bag bundles could be placed. The blue buckets were chosen to be easily identified by collection crews and also to have adequate capacity for large bag bundles. Holes were drilled toward the bottoms of the buckets to help drain any water that might collect in the containers on rainy days. On recycling collection days, customers placed their buckets at the curb alongside their recycling carts. Solid Waste Services' crews collected bag bundles from the buckets and delivered the bags to Cycled Plastics. Customer participation in the pilot was entirely voluntary, and there was no minimum quantity of bags or minimum frequency of participation required.

*(See photographs of set-outs at the end of this report.)*

### **Public Education**

Pilot participants received the following materials:

- A "Start Saving Your Plastic Shopping Bags!" postcard mailed two months prior to the beginning of the pilot. This postcard contained basic information about the upcoming pilot and the types of bags that would be accepted so that customers would be prepared to begin participating as soon as the pilot began.
- A blue five-gallon plastic bucket with an enclosed participation guidelines card delivered in early May. The guidelines card contained complete set-out instructions as well as a pilot collection calendar.
- A follow-up "Are you ready to recycle your plastic bags?" postcard mailed in early June. This postcard informed customers that they should have received their

buckets and participation guidelines and reminded them of the types of plastic bags that were acceptable.

- A final postcard with a detachable postage-free survey mailed in late August. This postcard also reminded customers that the pilot was over.

*(See pilot participant education materials at the end of this report.)*

## **Findings**

### **Participation**

The average plastic bag set-out rate over the pilot period was 25.1%. For comparison, the average bi-weekly set-out rate of regular Single Stream recyclables in these areas is 70-80%.

*(See details on set-out by date and week at the end of this report.)*

### **Yield, quality and market value of material collected**

Over the course of the pilot, Solid Waste Services collected 7,793 pounds of plastic bags, a weight equivalent to approximately 708,500 shopping bags of .91mm thickness. The majority of the pilot material received by Cycled Plastics was HDPE (high-density polyethylene) grocery bags. The makeup was roughly 80% HDPE bags, 15% LDPE (low-density polyethylene) bags and 5% paper contamination. Some of the loads came in wet and had to be dried before processing, but the material was generally clean and dry. Cycled Plastics processed the bags into pellets, which were sold to bag manufacturers. The current market value for this type of material is around \$.12-\$.15/lb, bringing the value of the 7,793 pounds of material collected during the pilot period to roughly \$1,170.

### **Project costs**

The total cost for the pilot was \$34,835.

*(See financial analysis of the pilot at the end of this report.)*

### **Survey results**

The return rate on the post-pilot survey was 22%. This was a strong response, considering that the standard return rate on customer surveys is around 5%. Almost 90% of respondents recycled plastic bags at least once during the pilot, and the majority felt that curbside pick-up of the bags once every two weeks was the appropriate collection frequency. Over 87% of respondents were aware that various Austin retailers have onsite collection containers for recycling plastic bags.

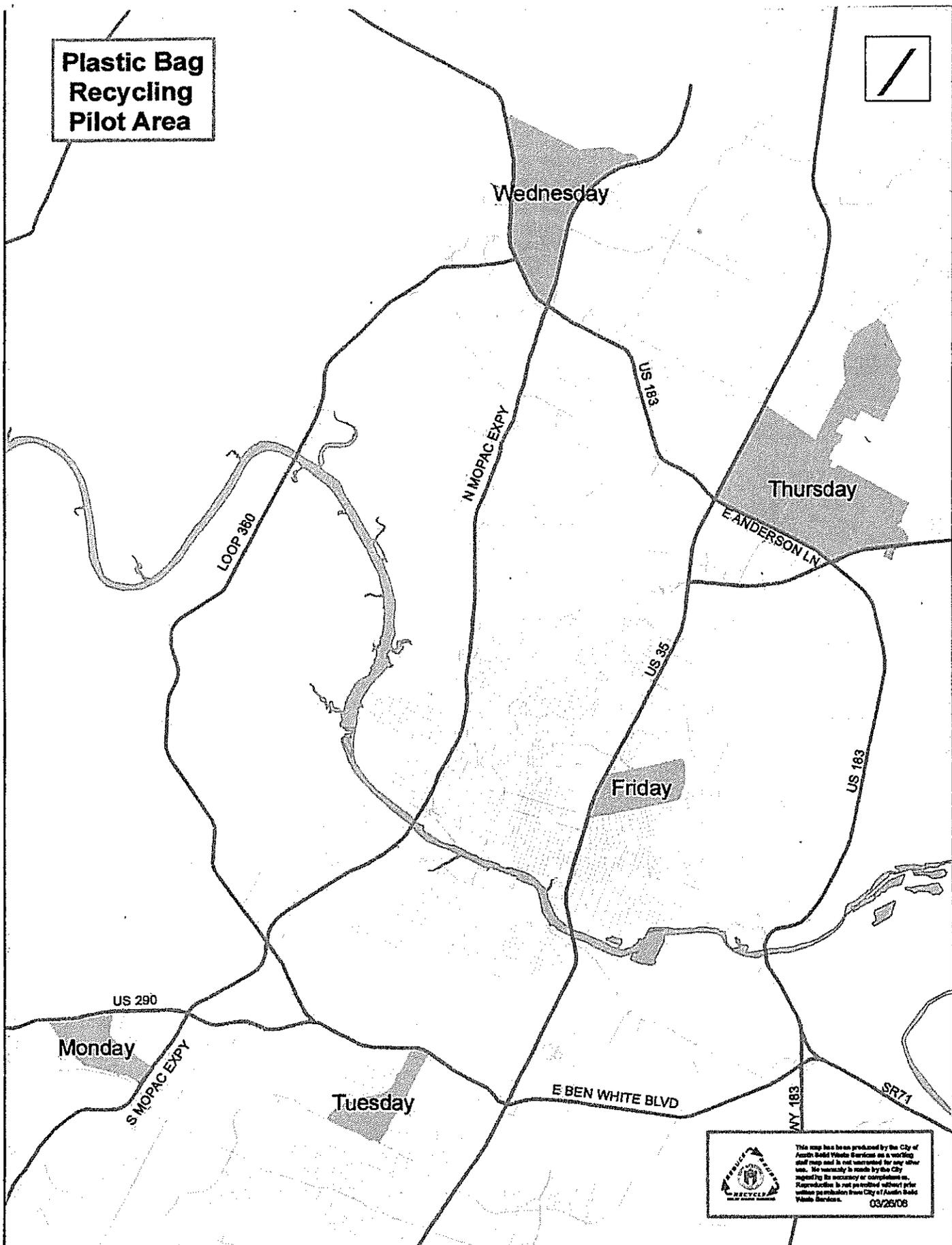
*(See full survey results at the end of this report.)*

## **Conclusion**

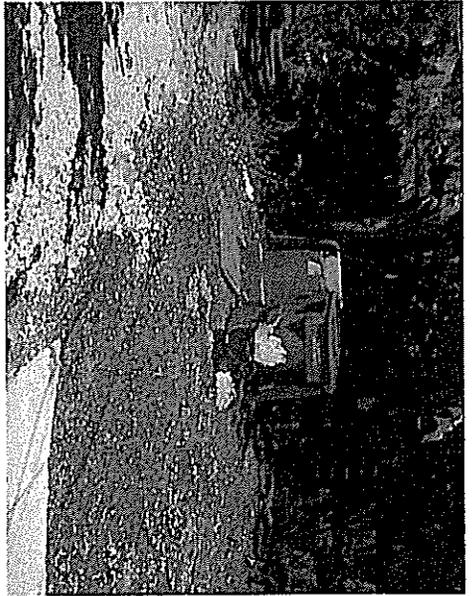
The Recycle the Bag pilot showed no cost benefit for curbside collection of plastic bags. The cost to collect this material was high and the average biweekly yield of plastic bags per household was only .19 pounds. As evidenced by some of the set-out photographs included at the end of this report, contamination in the collection buckets was fairly common. Additionally, the market value of the material collected was low compared to

the collection costs. Residents are aware of recycling options for plastic bags, as indicated by survey results. Solid Waste Services will continue to promote community-wide use of reusable shopping bags and to inform Austin residents about plastic bag recycling options at retail stores. Additionally, Cycled Plastics welcomes the public to drop off plastic bags to be recycled at their Austin facility located at 10200 McKalla Place, suite 100.

**Plastic Bag  
Recycling  
Pilot Area**



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# Start Saving Your Plastic Shopping Bags!

The City of Austin's Solid Waste Services (SWS) Department has selected your neighborhood to participate in a four month pilot project starting in May 2008. This pilot will test the feasibility of city-wide curbside collection of plastic bags. During the pilot, you will be able to recycle plastic bags at the curb by setting them out in a blue collection bucket provided by SWS. All the details on how to participate will arrive when your bucket is delivered.

You can get ready by saving your plastic bags. Simply remove all receipts, tickets and staples and store your bags in a clean, dry place.

## Start saving these types of bags:

Plastic retail bags of all colors and sizes

Dry cleaner bags. No tickets or staples

Plastic newspaper sleeves

Produce bags

**NO** drawstrings, receipts, liquids, or food residue

Thank You! We will deliver your blue bucket and details about the plastic bag recycling pilot in April.

For more information call 512-974-1945.



# Are you ready to recycle your plastic bags?

The plastic bag recycling pilot project began the week of **May 12**. By now, you should have received a blue collection bucket with a participation guidelines card inside.

Please call 512-974-1945 if you did not receive a bucket and a guidelines card. We'll get your materials to you as soon as possible.

## Plastic bag recycling guidelines:

Plastic retail bags of all colors and sizes

Dry cleaner bags—no tickets or staples

Plastic newspaper sleeves

Produce bags

**No** drawstrings, receipts, liquids or food residue





# RECICLAJE DE BOLSAS PLÁSTICAS

## PROGRAMA PILOTO DE 4 MESES

Las bolsas plásticas se recogerán cada dos semanas en su día regular de reciclaje. Simplemente ponga todas sus bolsas plásticas adentro de otra bolsa plástica. Amárrela y póngala en su cubeta azul de colecta. Ponga su cubeta al lado de su basurero de reciclaje en el bordillo para las 6:30 a.m. Asegúrese que la cubeta esté visible desde la calle. Durante el piloto, su reciclaje será recogido por dos diferentes camiones.

### Recicle:

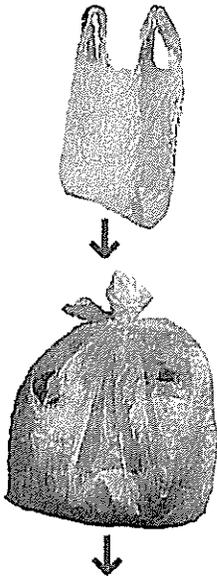
#### Bolsas plásticas

*Sugerencia:* Todos los tamaños y colores son aceptables. No incluya cuerdas, líquidos o residuos de comida.

**Bolsas de Lavandería /Tintorería**  
*Sugerencia:* Quite boletos y grampas.

**Bolsas de Comestibles**  
*Sugerencia:* No incluya líquidos o residuos de comida.

#### Bolsas del periódico



(ponga la cubeta azul cerca de su basurero de reciclaje)

### BOLSAS PLÁSTICAS Reciclaje Piloto Semanas de Colecta (Marcadas en amarillo)

MAYO 2008

D	L	M	M	J	V	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

JUNIO 2008

D	L	M	M	J	V	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

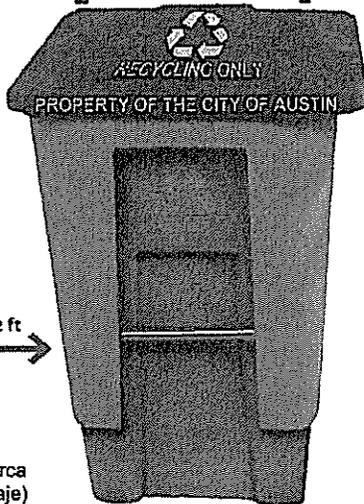
JULIO 2008

D	L	M	M	J	V	S
	1	2	3	4	5	
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

AGOSTO 2008

D	L	M	M	J	V	S
				1	2	
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

Reciclaje piloto termina  
¡Gracias por Reciclar!



Para más Información llame al Departamento de Servicios de Desechos Sólidos de la Ciudad de Austin  
**974-1945**



# PLASTIC BAG RECYCLING

## 4 MONTH PILOT PROGRAM

Plastic bags will be collected every other week on your regular recycling day. Simply stuff all your plastic bags into another plastic bag. Tie it up and drop it into your blue collection bucket. Please place your bucket next to your recycling cart at the curb by 6:30 a.m. Make sure the bucket is visible from the street. During the pilot, your recycling setouts will be collected by two different trucks.

### Recycle:

#### Plastic retail bags

*Tip:* All sizes and colors are OK. No drawstrings, liquid or food residue.

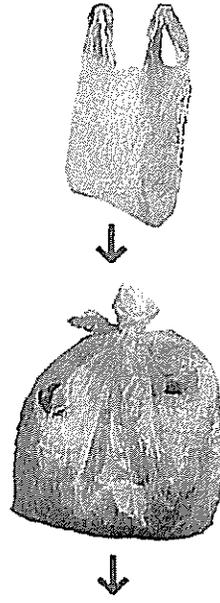
#### Dry Cleaner bags

*Tip:* Remove tickets and staples.

#### Produce bags

*Tip:* No liquid or food residue.

#### Plastic newspaper sleeves



(set blue bucket close to your recycling cart)

### PLASTIC BAG Recycling Pilot Collection Weeks (Marked in yellow)

MAY 2008

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

JUNE 2008

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

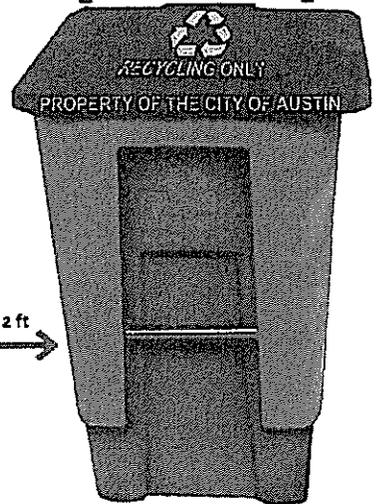
JULY 2008

S	M	T	W	T	F	S
	1	2	3	4	5	
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

AUGUST 2008

S	M	T	W	T	F	S
				1	2	
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

Recycling pilot ends.  
Thanks for Recycling!

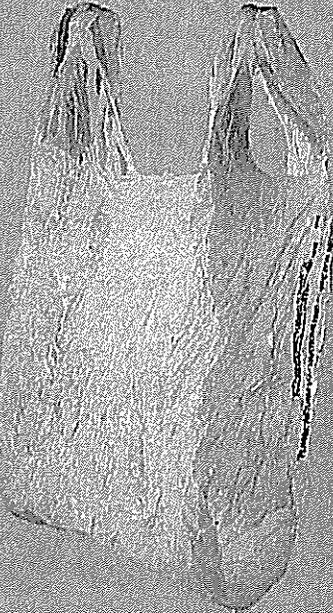


For more Information please call the City of Austin Solid Waste Services Department at  
**974-1945**

# PLASTIC BAG RECYCLING PILOT ENDED FRIDAY, AUG. 22

The City of Austin wants to know what you thought about the Plastic Bag Recycling Pilot Program. Please fill out the attached survey and return it by detaching it and dropping the postage-paid card in the mail.

For a list of stores that recycle plastic bags, visit [austinrecycles.com](http://austinrecycles.com) and click on the link "how to recycle plastic bags."



## Your Opinion Counts!

Thank you for your participation in our Plastic Bag Recycling Pilot Program. The plastic bag pilot ended on Friday, Aug. 22.

Choose one answer for each of the following questions:

- 1 What is your recycling pick up day?  
 Mon.  Tues.  Wed.  Thurs.  Fri.
- 2 Did you receive a guidelines card and a blue plastic bucket in early May?  
 YES  NO
- 3 Were the guidelines for participation clear?  
 YES  NO
- 4 How many times did you set out plastic bags during the pilot?  
 none  once  2-4 times  4 or more times
- 5 Please select **one response** from those below. I found that plastic bag collection...  
 once every two weeks **was the right frequency.**  
 once every two weeks **was not frequent enough.**  
 once every two weeks **was too frequent.**  
 Not applicable. I did not participate in the plastic bag collection pilot.
- 6 Please select **one response** from those below:  
 **Each time** I set out plastic bags in my bucket, the **bags were collected** on my recycling day.  
 **On at least one occasion**, I set out plastic bags in my bucket and **the bags were not collected** on my recycling day.  
 Not applicable. I did not participate in the plastic bag collection pilot.
- 7 Are you aware that various Austin retailers have onsite collection containers for recycling plastic bags?  
 YES  NO

Visit [austinrecycles.com](http://austinrecycles.com) for more options.

Pilot Program- Plastic Bags

Date (week 1)	# Miles	# Hours	# Operators	Lbs	# Homes	Participation # Homes	% of Participation
12-May	79	8	2	604	1007	296	29.39%
13-May	44	4.5	2	227	925	240	25.95%
14-May	65	4.5	2	559	1143	575	50.31%
15-May	60	4.5	2	350	875	295	33.71%
16-May	45	5	1	90	969	198	20.43%
<b>Weekly Totals</b>	<b>293</b>	<b>26.5</b>		<b>1830</b>	<b>4919</b>	<b>1604</b>	<b>32.61%</b>
Date (week 2)	# Miles	# Hours	# Operators	Lbs	# Homes	Participation # Homes	% of Participation
26-May	60	6.5	2	169	1007	50	4.97%
27-May	45	6.5	2	190	939	90	9.58%
28-May	62	6.5	2	313	1149	311	27.07%
29-May	76	6	1	244	886	171	19.30%
30-May	42	5	2	111	1003	87	8.67%
<b>Weekly Totals</b>	<b>285</b>	<b>30.5</b>		<b>1027</b>	<b>4984</b>	<b>709</b>	<b>14.23%</b>
Date (week 3)	# Miles	# Hours	# Operators	Lbs	# Homes	Participation # Homes	% of Participation
9-Jun	48	6.75	2	171	1007	173	17.18%
10-Jun	40	6	2	163	939	159	16.93%
11-Jun	60	6.75	2	272	1149	259	22.54%
12-Jun	51	5.75	2	150	886	192	21.67%
13-Jun	49	5	2	81	1003	104	10.37%
<b>Weekly Totals</b>	<b>248</b>	<b>30.25</b>		<b>837</b>	<b>4984</b>	<b>887</b>	<b>17.80%</b>
Date (week 4)	# Miles	# Hours	# Operators	Lbs	# Homes	Participation # Homes	% of Participation
23-Jun	60	6.5	2	153	1121	93	8.30%
24-Jun	40	6.5	2	127	932	101	10.84%
25-Jun	60	7	2	258	1144	485	42.40%
26-Jun	49	5	2	152	889	260	29.25%
27-Jun	57	4.75	2	65	1062	112	10.55%
<b>Weekly Totals</b>	<b>266</b>	<b>29.75</b>		<b>755</b>	<b>5148</b>	<b>1051</b>	<b>20.42%</b>

Pilot Program Plastic Bags

Date (week 5)	# Miles	# Hours	# Operators	Lbs	# Homes	Participation # Homes	% of Participation
7-Jul	55	6.5	1	191	1121	306	27.30%
8-Jul	45	6.5	2	126	932	219	23.50%
9-Jul	60	7	2	278	1144	638	55.77%
10-Jul	50	5	2	184	889	354	39.82%
11-Jul	55	6	2	81	1062	126	11.86%
<b>Weekly Totals</b>	<b>265</b>	<b>31</b>		<b>860</b>	<b>5148</b>	<b>1643</b>	<b>31.92%</b>
Date (week 6)	# Miles	# Hours	# Operators	Lbs	# Homes	Participation # Homes	% of Participation
21-Jul	57	7	2	169	1121	324	28.90%
22-Jul	45	6.5	1	127	932	216	23.18%
23-Jul	63	7	2	266	1144	526	45.98%
24-Jul	58	7	1	155	889	318	35.77%
25-Jul	55	7	1	55	1062	129	12.15%
<b>Weekly Totals</b>	<b>278</b>	<b>34.5</b>		<b>772</b>	<b>5148</b>	<b>1513</b>	<b>29.39%</b>
Date (week 7)	# Miles	# Hours	# Operators	Lbs	# Homes	Participation # Homes	% of Participation
4-Aug	60	7	1	107	1121	218	19.45%
5-Aug	47	6.5	1	132	932	243	26.07%
6-Aug	60	7	1	247	1144	463	40.47%
7-Aug	55	8	1	151	889	294	33.07%
8-Aug	57	8	1	76	1062	128	12.05%
<b>Weekly Totals</b>	<b>279</b>	<b>36.5</b>		<b>713</b>	<b>5148</b>	<b>1346</b>	<b>26.15%</b>
Date (week 8)	# Miles	# Hours	# Operators	Lbs	# Homes	Participation # Homes	% of Participation
18-Aug	70	8	1	201	1121	306	27.30%
19-Aug	50	8	1	195	932	286	30.69%
20-Aug	64	8	1	380	1144	481	42.05%
21-Aug	55	8	1	152	889	268	30.15%
22-Aug	65	9	1	71	1062	121	11.39%
<b>Weekly Totals</b>	<b>304</b>	<b>41</b>		<b>999</b>	<b>5148</b>	<b>1462</b>	<b>28.40%</b>

# Financial Analysis of Plastic Bag Pilot

Pilot Conducted May 12 - August 22, 2008

## Pilot Area (8 Week Period)

Factor	Analysis	Comment
Households Serviced	5,000	
Frequency of Collection	2	per Month
Number of Crews	1	
Number of Full Time Employees (FTE)	2	
Average Hours on Route	36	per Crew per Week
Total Number of Collection Buckets	5,000	
Total Number of Tons Collected	3.9	
Tons Collected per Crew per Hour	0	
Number of Trucks Used	1	
Gallons Used	278	Diesel Fuel
Total Miles Traveled	2,218	
Miles Per Gallon per Truck	8	
Total Diesel Gallons Used	277	34.6 Gallon per Day Used
Weight per 1000 Bags (lbs)	11	.91mm According To Vendor
Approximate Number of Bags Collected	708,455	.91mm (Same Size Assumed)
Average Bags Collected per Day	17,711	.91mm (Same Size Assumed)
Average Bags Collected per Week	88,557	.91mm (Same Size Assumed)
Average Participation Rate	25	
Total Pilot Cost	\$ 34,835	
Labor	\$ 6,227	3 FTEs includes salary and benefits
Truck Maintenance	\$ 2,600	at \$1,300 / Month
Fuel	\$ 973	at \$3.50/Gallon
Printing & Mailing	\$ 3,758	
Collection Buckets	\$ 17,600	at \$3.52/Bucket (5-gallon)
Bucket Delivery	\$ 3,677	Includes Fuel, Labor and Equipment
Revenues	\$ -	No Revenue - Went To Cycled Plastics During Pilot

## Citywide Program - Design Based On Pilot Information

Factor	Analysis	Comment
Households to be Serviced	176,866	
Frequency of Collection	2	per Month
Number of Service Days per Year	120	
Average Hours per Day	8	
Total Routes Required	18	5000 Houses per Route
Average Hours per Work Week	36	

## Fleet Requirement (Citywide)

Factor	Analysis	Comment
Collection Fleet Requirements	23	11-Cubic Yard (CY) Rear Loaders
Proposed Fleet Size	25	11-CY Rear Loaders + 2-Pickups (PU)
Trucks Needed per Day	18	
Extra Trucks Needed per Day	5	Needed for back-up
Supervisor Trucks	2	Pickups
Miles per Gallon (Rear Loaders)	8	
Estimated Fuel (Gallons per Year)	30,024	Diesel Fuel
Cost per Gallon	\$ 3.50	Cost Varies

## Personnel Requirements (Citywide)

Factor	Analysis	Comment
Crew Size per Route	2	
Number of Routes Citywide	18	
Collection Operators Needed Daily	44	
Extra Operators Needed (extraboard)	6	Extra personnel needed for absences
Total Number of Operators Needed Daily	50	2 per Route
Supervisor Personnel Needed	4	2-Crew Leaders and 2-Supervisors No Extra
Total FTE	54	Includes Extraboard

<b>Projected Expenditures (Citywide)</b>		
<b>Factor</b>	<b>Analysis</b>	<b>Comment</b>
Estimated Tons Collected	35	per Year
Collection Buckets (\$1/Bucket)	\$ 176,866	1 per home; doesn't include extra or delivery costs
Equipment Acquisition Cost	\$ 455,000	Annual Debt Service \$2.6M at 6% for 7 Years
Maintenance Costs	\$ 390,000	
Annual Fuel Cost	\$ 105,084	Variable
Collection Operator (FTE) Costs	\$ 1,648,728	Includes salary and benefits
Supervisor Costs	\$ 218,545	Includes salary and benefits
<b>Estimated Cost per Year</b>	<b>\$ 2,994,223</b>	For Citywide service
<b>Projected Revenues (Citywide)</b>		
<b>Factor</b>	<b>Analysis</b>	<b>Comment</b>
Estimated Tons Collected	35	per Year
Projected Revenue at \$0.15/lbs	\$ 10,530	Based on \$0.15/lbs Received for Recycling Bins
Project Cost To Landfill	\$ 983	At \$28/Ton For Disposal
Projected Landfill Cost Avoidance	\$ 9,547	
<b>Net Program Savings (Costs)</b>		
<b>Factor</b>	<b>Analysis</b>	<b>Comment</b>
Estimated Tons Collected	35	
Total Cost per Year	\$ 2,994,223	
Projected Revenue at \$0.15/lbs	\$ 10,530	Based on \$0.15/lbs Received for Recycling Bins
Projected Landfill Cost Avoidance	\$ 983	At \$28/Ton For Disposal
Net Costs per Year	\$ 2,982,710	
<b>Additional Cost</b>	<b>\$ 1.41</b>	per Household per Month
<b>Landfill Diversion (Citywide)</b>		
<b>Factor</b>	<b>Analysis</b>	<b>Comment</b>
Landfill Annually by System (Tons)	165,000	
Estimated Ton per Year	140	
Percent of Landfill Diversion	0.085	
<b>Emissions Analysis Citywide (Diesel)</b>		
<b>Factor</b>	<b>Analysis</b>	<b>Comment</b>
Estimated Diesel Gal Citywide/Year	30,024	
CO2	126,695	Pounds Added To The Environment
Nox	775	Pounds Added To The Environment
Sox	32	Pounds Added To The Environment
CO	633	Pounds Added To The Environment
VOC	81	Pounds Added To The Environment
PM10	27	Pounds Added To The Environment
Vehicles Added to Austin Traffic	25	Vehicles Added To Austin's Traffic
<b>Summary Of Citywide Program Implementation</b>		
<b>Factor</b>	<b>Analysis</b>	<b>Comment</b>
Total Cost to Recycle per Year	\$ 2,994,223	
Total Projected Revenue at \$0.15/lbs	\$ 10,530	Based on \$0.15/lbs Received for Recycling Bins
Projected Landfill Cost Avoidance	\$ 983	At \$28/Ton For Disposal
Net Cost To Recycle	\$ 2,982,710	
Percent of Landfill Diversion	0.085	Citywide
Increase To Austin's CO2 per Year	126,695	Pounds Added To The Environment
<b>Additional Cost to Recycle Plastic Bags</b>	<b>\$ 1.41</b>	per Household per Month

## Recycle the Bag Post-Pilot Survey Results

**Response rate:** There were 1,092 complete surveys mailed back, leading to a 21.8% response rate. The response was not evenly balanced by service day. Response was heavy from the Wednesday service area and light from the Friday service area.

1) What is your recycling pick up day?

Monday 17.9% of total respondents  
Tuesday 21.3% of total respondents  
Wednesday 31.5% of total respondents  
Thursday 19.3% of total respondents  
Friday 10.0% of total respondents

2) Did you receive a guidelines card and a blue plastic bucket in early May?

98.4% Yes  
1.6% No

3) Were the guidelines for participation clear?

97.3% Yes  
1.2% No  
1.5% Not Applicable

4) How many times did you set out plastic bags during the pilot?

10.2% none  
5.3% once  
30.0% 2-4 times  
54.5% 4 or more times

5) I found that plastic bag collection...

68.4% once every two weeks was the right frequency.  
2.6% once every two weeks was not frequent enough.  
18.7% once every two weeks was too frequent.  
10.3% Not applicable. I did not participate in the plastic bag collection pilot.

6) Please select one response from those below:

84.0% Each time I set out plastic bags in my bucket, the bags were collected on my recycling day.  
5.7% On at least one occasion, I set out plastic bags in my bucket and the bags were not collected on my recycling day.  
10.3% Not applicable. I did not participate in the plastic bag collection pilot.

7) Are you aware that various Austin retailers have onsite collection containers for recycling plastic bags?

87.5% Yes  
12.5% No

Presented to the Solid Waste Advisory Commission on October 8, 2008