



CITY OF SEATTLE

Michael McGinn, Mayor



2010 Recycling Rate Report

City of Seattle 2010 Recycling Rate Report

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INTRODUCTION

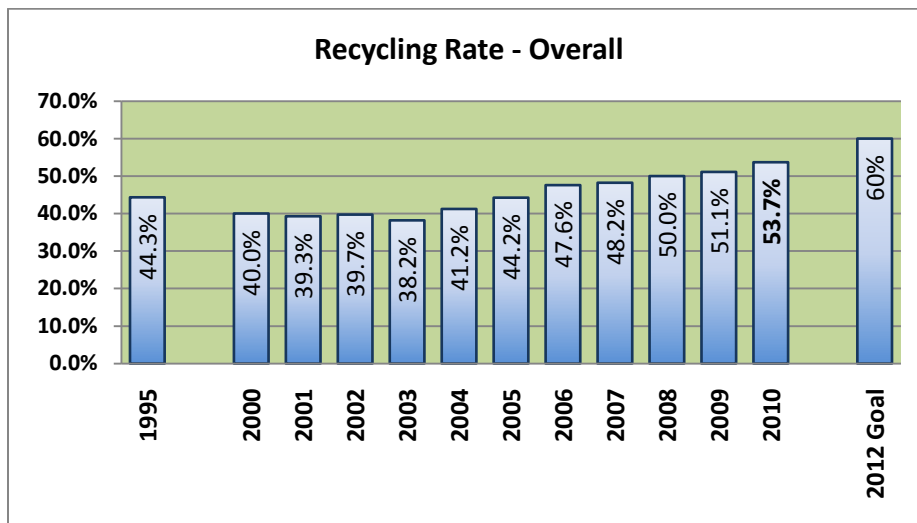
SCOPE OF THE REPORT

This is the fourth annual recycling report for the City of Seattle, as called for by the 2007 Seattle City Council Resolution 30990.

“SPU will report to Council by July 1 of each year on the previous year’s progress toward recycling goals, as well as further steps to be taken to meet goals in the current and upcoming years.”

The Resolution set Seattle’s goal to reach 60% recycling of municipal solid waste (MSW) by the year 2012, and 70% by 2025. In 2010, Seattle recycled 53.7% of its MSW, an increase of 2.6 percentage points over 2009. This is the largest increase in the recycling rate since 2006. The recycling rate has risen 15.5 percentage points since the 2003 low of 38.2%.

Figure 1 MSW Overall Recycling Rate Progress

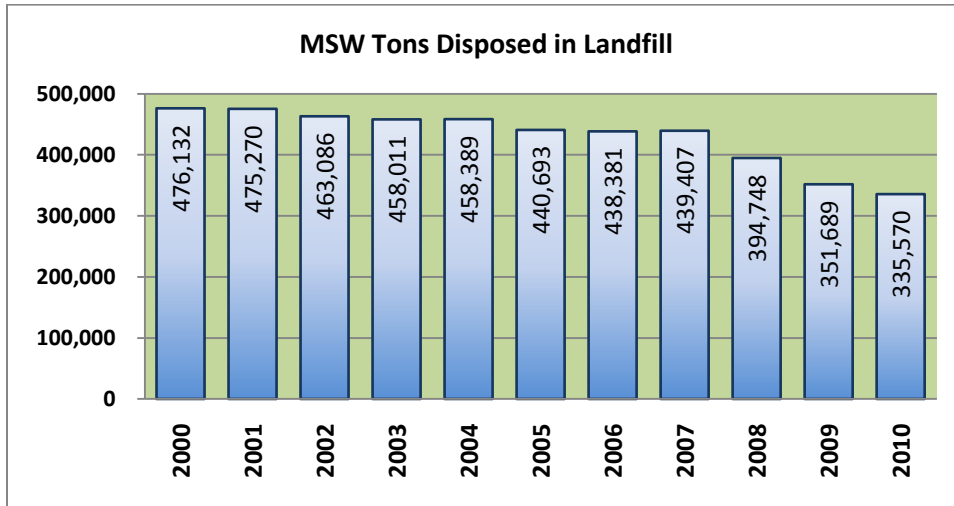


Four different sectors contribute to the overall MSW rate: single family residential, multi family residential, self haul, and commercial. After a brief review of how Seattle calculates its recycling rate, the report’s first section describes the recycling results of each sector. Sector descriptions also include new strategies and changes to existing programs implement to increase the recycling.

The second section covers the non-MSW areas addressing construction and demolition debris, and waste prevention that has programs active in all sectors.

The final section summarizes Seattle’s progress toward another solid waste goal set by Resolution 30990, to reduce total MSW tons disposed by one percent each year. Tons disposed in 2010 dropped 4.6% compared to 2009.

Figure 2 MSW Tons Disposed in Landfill



Lists of references and links for further information are at the end of this report. Comments on the report from the Seattle Solid Waste Advisory Committee are attached, as required by the Resolution 30990.

ABOUT THE RECYCLING RATE

THE MSW RECYCLING RATE CALCULATION

Seattle's recycling rate is the percentage of municipal solid waste (MSW) diverted from the landfill by reuse, recycling and composting.

Seattle's MSW includes:

- Organics managed onsite by Seattle residents (yard debris and food scraps)
- All garbage, organics, and recyclables that businesses and residents set out for collection
- All garbage, organics, and recyclables hauled to the city's recycling and disposal stations for reuse, recycling or composting

Seattle's 60% goal combines separate goals for each of the four primary MSW sectors: single family residential, multi family residential, self haul, and commercial. The specific recycling goals for each sector are different since waste stream materials, opportunities to recycle, and likelihood of participation vary between the sectors.

The MSW recycling goal excludes construction and demolition (C&D) material. Seattle does not currently have a C&D recycling goal, but we expect to set a C&D goal during the solid waste management plan update currently underway. C&D tons disposed and recycled are counted separately in the C&D stream.

The MSW goal also excludes other special wastes. Moderate Risk Waste (MRW) includes household hazardous waste (HHW) like garden pesticides, and small quantity generator waste (SQGW) like solvents used at a small business. The Local Hazardous Waste Management Program (LHWMP) manages Seattle's moderate risk waste. The LHWMP is a joint program supported and implemented by Seattle, King County, Public Health - Seattle & King County, and the Suburban Cities Association. The Seattle Municipal Code prohibits disposal of HHW and SQGW in the garbage.

Further, the recycling goal does not include other special categories of waste such as: biomedical wastes, biosolids, asbestos, petroleum contaminated soils, and Dangerous Waste (generally industrial), which state regulations exclude from MSW.

UPDATING PRIOR YEAR RECYCLING RATES

2009 recycling figures presented in last year's report remain unchanged, as did the numbers for 2008. 2007 figures were updated for the 2008 report due to late reporting from the commercial sector. Future annual reports will include updated numbers for the prior year if needed.

OTHER NUMBERS ADJUSTMENTS

Prior years' reports incorporated other adjustments to the recycling rate calculations. In the report for 2008, the recycling rate calculation stopped counting "beneficial use" as recycling. The report for 2009 incorporated increased contamination for the residential sector. This report for 2010 contains no such adjustments.

ACTION PLANNING BACKGROUND

In 1998, the Seattle City Council adopted Seattle's Solid Waste Plan *On the Path to Sustainability*. It set a policy framework for the city focused on sustainability and stewardship, and established the goal of eliminating the maximum possible amount of waste as a guiding principle. It also identified programmatic goals and programs to achieve these goals. The 2004 Plan Amendment renewed Seattle's commitment to these policies and goals. The 2011-12 plan revision currently underway contains further recommendations for recycling programs and goals.

In 2007, Seattle Public Utilities (SPU) and the Seattle City Council jointly conducted the *Seattle Solid Waste Recycling, Waste Reduction, and Facilities Opportunities* ("zero waste") study. This study examined whether there were still other methods that Seattle could use to reduce the amount of solid waste and divert more from landfill disposal.

Following the 2007 study, the Mayor and council adopted Resolution 30990 (the "zero waste resolution"). This resolution re-committed the city to its 60% recycling goal, to be achieved by the year 2012. It also set a longer-term goal of 70% recycling by the year 2025, and outlined some additional actions and strategies for achieving these goals. Many actions are accomplished or well underway. Funding constraints have limited achievement in some areas.

SPU requested funding for Resolution 30990's actions in the rate and budget proposals before the Seattle City Council in 2008, and again in 2009 during the 2010 budget update process. However, to keep the collection service rate increase as low as possible, some program plans were scaled down, delayed or dropped. Individual sector discussions include descriptions of specific areas where program actions changed compared to prior plans.

PROGRESS AND ACTIONS

OVERALL MSW PERFORMANCE

In 2010, Seattle's MSW recycling increased from 51.1% to 53.7%, an increase of 2.6 percentage points. This marks the seventh straight year of continuous recycling rate growth since 2003. Recycling rates rose in all sectors except self haul.

Table 1 Recycling Rates All MSW Sectors 2000-2010

Year	Residential			Self Haul	Commercial	Overall
	Single Family	Multi Family	Res Total			
2000	58.0%	17.8%	47.8%	17.2%	41.6%	40.0%
2001	57.0%	22.0%	48.5%	17.8%	39.6%	39.3%
2002	57.5%	21.5%	48.3%	18.1%	40.7%	39.7%
2003	57.5%	22.2%	48.4%	18.1%	37.3%	38.2%
2004	58.9%	22.2%	49.4%	18.8%	42.5%	41.2%
2005	61.4%	25.2%	52.1%	19.2%	46.6%	44.2%
2006	64.0%	26.3%	54.3%	18.8%	51.7%	47.6%
2007	64.8%	27.6%	55.1%	19.2%	52.5%	48.2%
2008	65.4%	28.3%	55.9%	18.4%	54.7%	50.0%
2009	68.7%	27.0%	58.4%	16.7%	54.9%	51.1%
2010	70.3%	29.6%	60.3%	13.5%	58.9%	53.7%
2012 Goal	70.0%	37.0%	60.0%	39.0%	63.0%	60.0%

Overall, Seattle generated 5,044 more total MSW tons in 2010 than in 2009. However, recycling grew by 21,163 tons, and disposal dropped by 16,119 tons.

Table 2 Tons MSW Overall 2000-2010

Tons of Municipal Solid Waste (MSW) - Overall				
Year	Generated	Disposed	Recycled	Recycle Rate
2000	793,842	476,132	317,710	40.0%
2001	782,809	475,270	307,539	39.3%
2002	768,346	463,086	305,260	39.7%
2003	741,094	458,011	283,083	38.2%
2004	780,044	458,389	321,655	41.2%
2005	790,457	440,693	349,763	44.2%
2006	836,499	438,381	398,118	47.6%
2007	848,759	439,407	409,352	48.2%
2008	789,608	394,748	394,860	50.0%
2009	719,424	351,689	367,735	51.1%
2010	724,468	335,570	388,898	53.7%

MSW SECTOR PERFORMANCE AND ACTIONS

RESIDENTIAL – SINGLE FAMILY

The single family sector includes households on “can” (or cart) garbage service (as opposed to dumpsters). These are mostly single family, and duplex to 4-plex households. They set out garbage (disposal), recycling and organics (yard and food) for collection at the curb. They also compost some food and yard waste at their homes.

In 2010, the single family sector reached its **highest ever recycling rate** and **exceeded its long-standing 70% goal**. Recycling increased 1.6 percentage points to 70.3%.

2010 also saw a 0.7% increase in total generated tons, continuing the 2009 upswing after the dip in 2008. Nonetheless, total single family generation in 2010 was still 3,644 tons lower than the 2007 high.

Recycled tons increased by 4,389 (3.0%), and disposed tons decreased by 2,920 (-4.3%).

Figure 3 Recycling Rate - Single Family

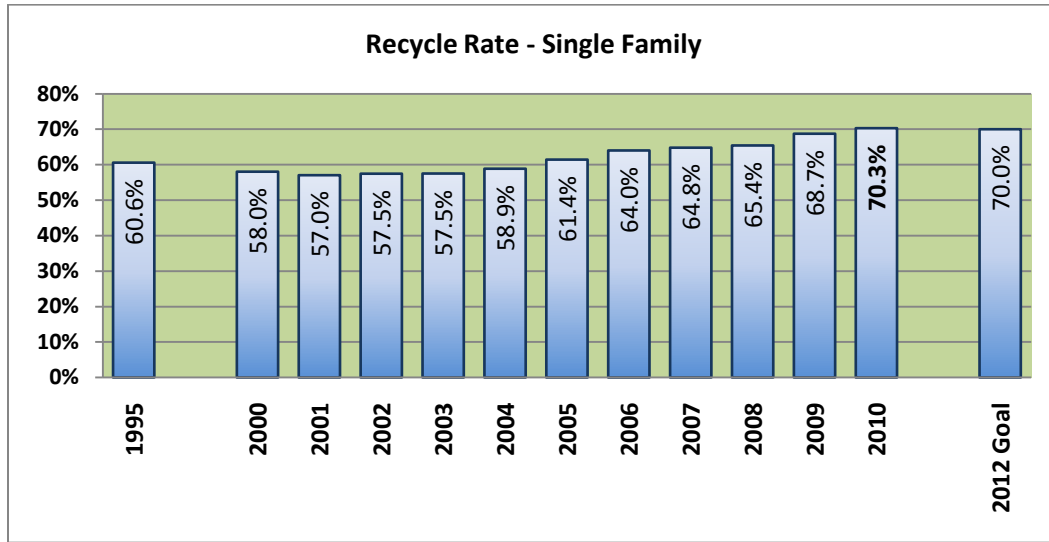


Table 3 Tons - Single Family 2000-2010

Tons - Single Family				
Year	Generated	Disposed	Recycled	Recycle Rate
2000	208,468	87,499	120,969	58.0%
2001	211,982	91,072	120,910	57.0%
2002	206,474	87,834	118,640	57.5%
2003	205,748	87,426	118,322	57.5%
2004	209,132	86,029	123,103	58.9%
2005	208,675	80,478	128,197	61.4%
2006	216,946	78,078	138,868	64.0%
2007	220,128	77,494	142,634	64.8%
2008	213,889	73,961	139,928	65.4%
2009	215,015	67,229	147,786	68.7%
2010	216,484	64,309	152,175	70.3%

SELECTED STATISTICS – SINGLE FAMILY

- Organics (food and yard waste) collection saw yet another increase over the large 2009 increase when food and yard waste collection increased from every other week to weekly. At the same time, organics service sign-up became mandatory for all single family residents (unless exempted for backyard composting). Also, organics service expanded in 2009 to include non-vegetative (meat and dairy) food. These changes led to increased food waste composting, driving organics collection from 11,200 tons in 2009 to almost 35,000 tons in 2010.
- By first quarter 2011, more than 94% of single family accounts had curbside organics service. Qualified exemptions made up another 4.6% of accounts.

- The increase in organics diversion likely comes from customers setting out food and yard waste for collection rather than back yard composting or self-hauling to the transfer station.
- Single family households set out almost 57,600 tons of curbside recyclables (not including organics) in 2010, a decrease in the total volume of recyclables collected for the second year in a row. This continues the drop between 2009 (58,600 tons) and 2008 (62,000 tons). Two factors explain the decrease. First, in 2009 recycling composition studies showed an increase in contamination (garbage in the recycling bin). The new contamination rate is higher (6.28% compared to 2.1%), thus fewer tons that can be counted as recycled. The drop in recycling tons is also due to the recession, which affects the generation of both recyclables and of garbage.
- Tons disposed dropped by more than 4% compared to 2009, following the 9% drop from 2008 to 2009. The continued drop was due to new organics diversion and to the recession.

PROGRAM HIGHLIGHTS – SINGLE FAMILY

The effects of the 2009 changes to the new collections and processing contracts continued to ramp up through 2010. Highlights include:

- Key findings from SPU’s **2010 Home Organics Waste Management Survey** shows some notable shifts in how customers manage food and yard waste. More take advantage of the curbside organics service, and compost less in their yards. Compared to the previous home organics survey in 2005:
 - Three times as many people use the organics cart as their main method of disposing food waste (up to 72% from 25%)
 - 3% more customers take yard waste to the curb
 - 7% fewer customers compost in their backyards
 - 3% fewer customers grasscycle
 - On a seven-point scale, 91% of customers positively rate the city’s food and yard waste collection service a five or above.
- Changes to the 2009 subscription fees (**rates**) continued to provide **incentives** for customers to reduce garbage, by making organics service a lower cost choice. In fact, more customers than expected signed up for a smaller garbage can, and more customers than expected stayed with larger organics carts in 2009.
- The city continued curbside **electronics** and **waste motor oil** collection recycling programs. For a \$20 fee, city collectors pick up certain electronics at the curb by appointment. Residents also have the option to drop off a more limited range of electronics at no cost at private sites authorized by E-Cycle Washington. Residents may put out a limited amount of properly contained waste motor oil on their collection day. Note: electronics and waste motor oil are actually tabulated in the commercial sector.
- Since the 2009 collections changes **more paper, plastic and metal items can be recycled**, such as aluminum foil, all coated papers such as hot drink cups, and nearly all plastics including, deli trays, cold drink cups and plastic plant pots. All recyclable materials, including glass bottles and cans, now go in the “co-mingled” recycling cart—no more separating.

SPU had hoped to increase resources (inspectors) devoted to **enforcement** of the disposal ban (recycling and yard waste cannot go in the garbage) in 2009-10. However, budget constraints could not accommodate this increase. In 2010, SPU’s plan to redirect existing resources to enforcement resulted in

more enforcement in the multi family sector. SPU plans to direct more enforcement to the single family sector by 2012.

Education efforts in 2010 continued to reinforce and build on the big 2009 effort surrounding the new collection contracts transition, although on a much reduced level. In 2011, SPU will expand its **outreach to immigrant communities** in partnership with Seattle City Light's "Powerful Neighborhoods" program.

Budget constraints forced an added years' delay for studying **mandatory organics composting** (or "ban against putting food waste in the garbage") for the single family sector, pushing the planning f into 2010. Instead of studying this ban independently, SPU folded it into the recycling potential analysis of programs for the update to the draft Seattle Solid Waste Management Plan revision. The draft plan will be out for stakeholder review in summer 2011.

A pilot project to study changing garbage collection frequency to **every other week** (organics would remain weekly) was also deferred to 2011. It has now been deferred to 2012. As with mandatory organics composting, SPU folded some basic analysis of this option into the recycling potential program analysis for the update to the Solid Waste Management Plan.

Possible steps to help increase recycling performance continue to include:

- More education to reduce contamination of recyclables
- Increased enforcement of recycling disposal bans
- More curbside organics education
- Banning food waste from garbage containers

These approaches appear in more detail in the draft Solid Waste Management Plan revision.

RESIDENTIAL – MULTI FAMILY

The multi family sector includes apartment and condominium buildings. These buildings contain five or more units and generally use dumpsters instead of tote carts for garbage. Material collected includes garbage, recycling, and food and yard waste.

In 2010, recycling in the multi family sector rose 2.6 percentage points to its highest ever rate of 29.6%. This represents a 10% proportional increase – a notable turnaround, especially since this sector's recycling rate decreased in 2009.

In 2010, total multi family generated tons also saw a reversal, increasing 151 tons as opposed the 3,699-ton decrease between 2008 and 2009. Disposed tons continued their year-over-year drop from 2007's high.

Figure 4 Recycling Rate - Multi Family

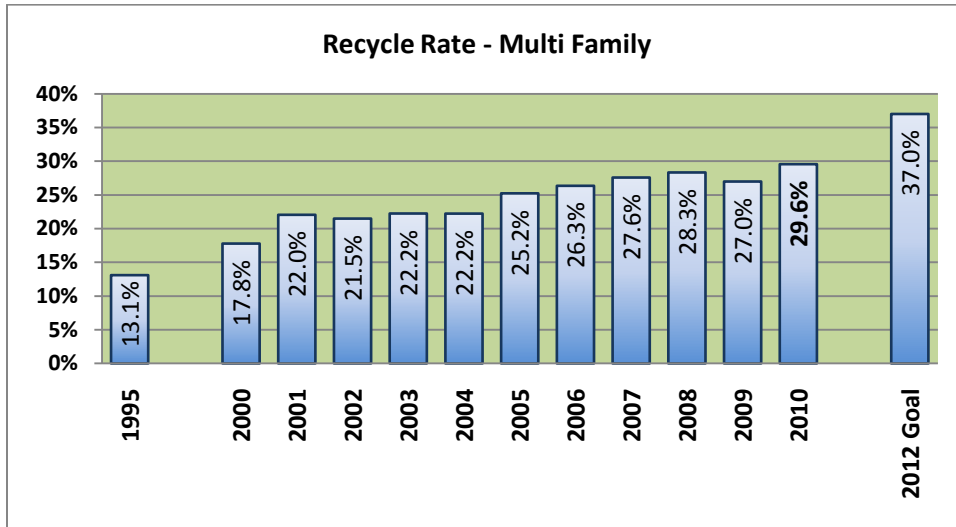


Table 4 Tons - Multi Family 2000-2010

Tons - Multi Family				
Year	Generated	Disposed	Recycled	Recycle Rate
2000	70,944	58,333	12,611	17.8%
2001	68,611	53,487	15,124	22.0%
2002	70,144	55,076	15,068	21.5%
2003	72,149	56,106	16,043	22.2%
2004	72,640	56,498	16,142	22.2%
2005	72,325	54,080	18,245	25.2%
2006	75,545	55,643	19,903	26.3%
2007	77,108	55,847	21,261	27.6%
2008	74,223	53,199	21,024	28.3%
2009	70,524	51,497	19,028	27.0%
2010	70,675	49,788	20,887	29.6%

SELECTED STATISTICS – MULTI FAMILY

- SPU has about 7,500 apartment and condo buildings on garbage service. About 3,900 of them are signed up for organics service. The buildings may choose between the same organics carts used for single family accounts, or organics-only dumpsters.
- The 1,859-ton increase in multi family recycling and organics composting drove the 2010 total generation increase. Food waste collection more than doubled to about 319 tons.

- The 2010 waste composition study found a substantial increase in contamination in multi family recycling containers compared to the 2004 study. The 2009 and 2010 recycling rates were adjusted accordingly.
- To reach its sector goal, the multi family curbside recycling rate needs to increase from approximately 29.6% to 37%. This goal had not factored in include as recyclable. As part of the comprehensive planning process, SPU is looking at changing the goal for this sector to include food waste.

PROGRAM HIGHLIGHTS – MULTI FAMILY

Finding ways to **increase organics collection** continues as the main programmatic focus for the multi family sector. Targeted outreach continued in 2010, including single-focus mailers, participation recruitment, and a re-worked on-site stewards program. SPU developed these strategies based on findings from the food waste pilots conducted 2008-2009. In 2010, recruitment efforts attracted 233 new Friends of Recycling and Composting (FORC). FORCs function as on-site steward who provide information and education to their fellow tenants on proper disposal and recycling methods. As a next step, all multi family buildings are required to sign up for organics collection service beginning September 2011.

A recommendation to prohibit all compostable organics from multi family garbage is in the draft Seattle Solid Waste Management Plan. This prohibition, or disposal “ban,” was analyzed with other program ideas in the Recycling Potential Assessment (RPA) modeling for the plan revision.

Other recommended steps to help increase recycling in this sector include:

- More education to reduce recycling contamination and increase recycling participation
- Increase frequency and intensity of monitoring for the ban on the disposal of recyclables in garbage containers
- Resident education for organics separation, including incentives for equipment needed to handle the material (compostable bags and kitchen containers, for example).

SELF HAUL

The self haul sector includes material brought (or “self hauled”) by residents, businesses and governmental agencies to the two city-owned recycling and disposal (transfer) stations. It does not include the material transferred by Seattle’s contracted collection haulers. Recycling in the self haul sector includes organics (food and yard waste, clean wood), appliances and metals, and other recyclable material.

In 2010, the self haul sector recycling rate fell 3.2 percentage points compared to 2009, continuing the trend in annual decreases since 2007. Compared to the high in 2007, the 2010 self haul recycling rate dropped 5.7 percentage points (for a 29.9% proportional drop).

Figure 5 Recycling Rate - Self Haul

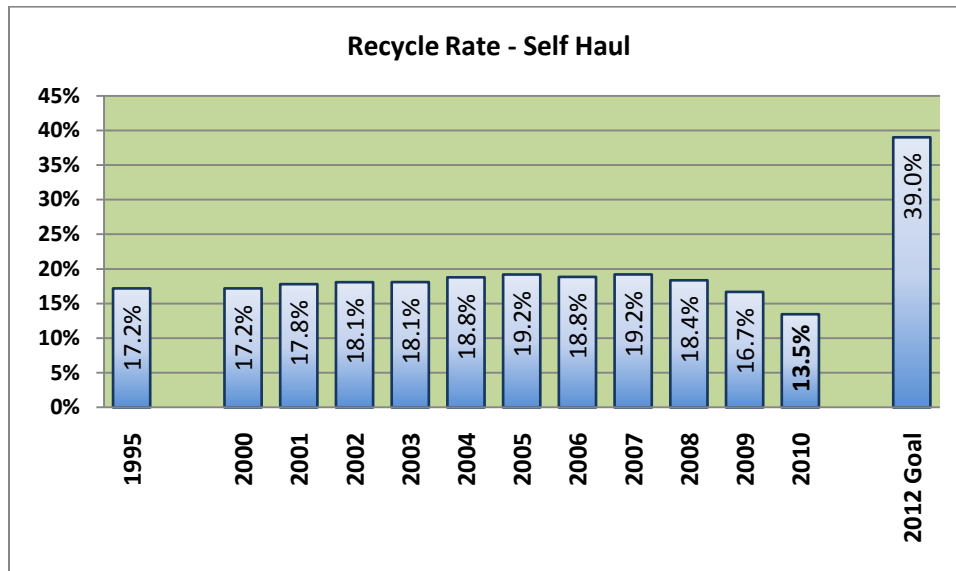


Table 5 Tons - Self Haul 2000-2010

Tons - Self Haul				
Year	Generated	Disposed	Recycled	Recycle Rate
2000	123,024	101,883	21,141	17.2%
2001	124,453	102,305	22,148	17.8%
2002	125,710	102,981	22,729	18.1%
2003	123,597	101,232	22,365	18.1%
2004	122,819	99,750	23,069	18.8%
2005	124,364	100,499	23,865	19.2%
2006	127,444	103,429	24,015	18.8%
2007	132,545	107,098	25,447	19.2%
2008	111,229	90,814	20,415	18.4%
2009	97,893	81,565	16,328	16.7%
2010	91,618	79,293	12,325	13.5%

SELECTED STATISTICS – SELF HAUL

Looking deeper into the numbers offers some possible explanations for self haul recycling decreases.

- Since 2007, self haul yard waste (organics) has dropped by 46% (from 14,247 tons to 7,682 tons). This drop is likely due to two factors. First, because of the recession there may be less demand for landscape and yard care services. Second, homeowners may be making greater use of their food and yard waste curbside collection service. In 2009 it became mandatory for all single family customers to

sign up for food and yard waste collection. At the same time, food and yard waste collection increased from every other week to weekly service.

- Compared to 2007, recycling decreased by 58% (from 11,200 tons to 4,643 tons), whereas self haul garbage tons decreased by 26%. Since the bulk of drop-off recycling is metals, mostly appliances, the decrease in appliance tons may be a result of less purchasing in general, as well as the overall drop in economic activity.
- Self haul trips to the stations also continued to decrease--by 9% or 22,835 fewer trips in 2010 compared to 2009.

PROGRAM HIGHLIGHTS – SELF HAUL

A 2008 study explored strategies to **reduce self haul vehicle trips** to the city-owned transfer stations. As a result, SPU updated key web pages to highlight alternatives to self haul, such as bulky-item pickup, extra garbage set outs and use of larger organics (food and yard) carts. In addition, the stations now have web cameras where customers can look at live pictures of the wait lines before deciding to make the trip. Reducing trips and shortening the lines reduces street congestion around the stations.

SPU plans to pursue other programs to reduce trips to the stations, such as redirecting large loads of construction and demolition debris (C&D). A package of C&D programs is recommended in the draft Seattle Solid Waste Management Plan revision. The private transfer stations can take large loads of C&D, particularly from self-unloading trucks, but not small loads delivered by homeowners who unload by hand.

SPU does not expect to see significant recycling rate increases until the **station rebuilds** are complete. SPU expects completion of the first phase of the south rebuild in 2012, with the replacement of both stations completed by 2014. Separated recycling and reuse drop-off areas ahead of the scale will provide easier access for self haul customers.

SPU had hoped to increase self-haul C&D recycling, and self haul recycling performance, by including C&D sorting capacity at the new South Recycling and Disposal Station (SRDS). This plan dropped to reduce construction costs. However, a smaller-scale sorting function is recommended in the draft Seattle Solid Waste Management Plan revision.

When evaluating the self haul sector, there is a **measurement** nuance to keep in mind. Commercial businesses and large institutions (for example, the Seattle Housing Authority (SHA) and the University of Washington) bring the bulk of the total material self hauled to the transfer stations. If they increase recycling separation, they can usually take their recycling directly to processors. The increased recycling is then credited to the commercial recycling rate (or residential sector in the case of SHA), not the self haul sector. Another way to gauge progress in this sector would be by measuring a decline in the amount of recyclables in the garbage as assessed by periodic waste sorts.

Recommendations to increase recycling in this and all sectors are in the draft Seattle Solid Waste Management Plan revision out for stakeholder review in summer 2011. In addition to the C&D recommendations, the report recommends to working with select larger self haulers to help them discover their potential for more recycling and waste reduction.

COMMERCIAL

The commercial sector includes garbage, recyclables and compostable materials collected from commercial businesses.

The commercial sector's recycling rate increased 4.0% percentage points to its **highest ever rate 54.9%**. This sector's recycling rate is up 21.6 percentage points since hitting a low in 2003.

Total generated tons reversed the 2009 drop by rising nearly 10,000 tons in 2010. However, recycled tons grew by about 19,000 tons and disposal dropped 9,218 tons. Compared to 2007, disposed tons are down by 28.5%

Figure 6 Recycling Rate - Commercial

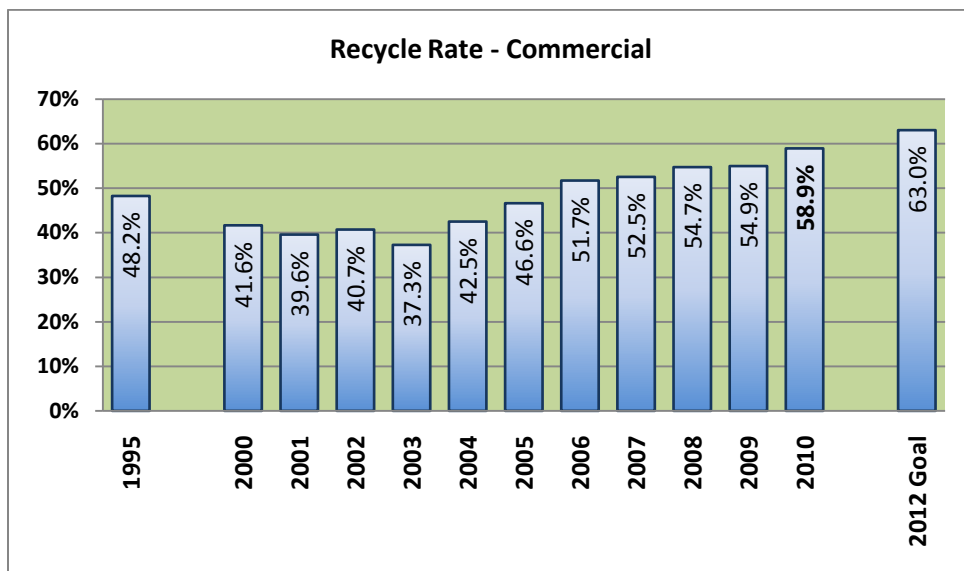


Table 6 Tons - Commercial 2000-2010

Tons - Commercial				
Year	Generated	Disposed	Recycled	Recycle Rate
2000	391,406	228,417	162,989	41.6%
2001	377,927	228,405	149,522	39.6%
2002	366,224	217,195	149,029	40.7%
2003	339,844	213,247	126,597	37.3%
2004	375,739	216,112	159,627	42.5%
2005	385,093	205,637	179,456	46.6%
2006	416,564	201,231	215,333	51.7%
2007	418,979	198,968	220,011	52.5%
2008	390,267	176,774	213,493	54.7%
2009	335,992	151,398	184,593	54.9%
2010	345,692	142,180	203,511	58.9%

SELECTED STATISTICS - COMMERCIAL

- Commercial paper recycling altogether grew 29%, or about 24,700 tons. Markets for paper were very strong in 2010, particularly for cardboard where the average price increased 31% compared to 2009.
- Commercial food waste diversion increased by more than 3,000 tons--to a total of 44,000 tons. In addition to kitchen scraps and food leftovers, this figure includes fats, grease and oils collected for rendering, and cooking oil and grease picked up for the manufacture of biodiesel.
- Business food waste customers are increasing: 584 in 2007, 1,090 in 2008, and 1,350 in 2009, with another 469 in 2010 for a total of 1,819. Private food waste collection companies produced most of these new customers.
- Recyclable materials with notable decreases include container glass, electronics and yard waste.
- Reported electronics collected for recycling in 2010 dropped by about 29%, in contrast to when they more than doubled from 2008 to 2009 (to more than 11,200 tons). The state's E-Cycle Washington electronics collection system gathers and reports its program data, but it is difficult to separate the tons dropped off by residents from tons from commercial sources. Therefore, all electronics are tabulated in the commercial sector.

PROGRAM HIGHLIGHTS - COMMERCIAL

SPU completed an evaluation of the **Clear Alley Program (CAP)** in 2010, about a year after the program began. The (CAP) began on March 30, 2009 in downtown Seattle. The main goal of the program is to eliminate "cover" (dumpsters) for uncivil behavior in alleys. Customers either manage their containers on private property or subscribe to pre-purchased bag service. In the evaluation, CAP stakeholders gave generally positive feedback and included recommendations for minor improvements. There are presently no plans to expand the program to other districts. However, individual businesses may voluntarily sign up for pre-paid bag service.

A study on a special "**heavy**" **garbage rate** was deferred to the 2011-2012 rate proposal study done 2009-2010. The idea was to charge higher garbage rate to commercial customers whose waste is heavier than average, on the assumption organics (food wastes) in the garbage cause the higher weight. The higher garbage rate would serve as an incentive to sign up for lower cost organics service. The rate and fee study recommended that SPU not proceed with a heavy rate.

In 2010, following the 2009 ban on expanded polystyrene (EPS, sometimes called Styrofoam) **food service containers**, SPU worked with quick-serve restaurants, food courts and others to implement the July 1, 2010 requirement that all single-use food service packaging be either recyclable or compostable. By the end of the year, the vast majority of restaurants and grocery stores using throw-away packaging had made at least some efforts toward compliance with the regulations.

The **Food+** program provides technical assistance and signage for food service collection bins. SPU developed the signage and made it available free of charge through the Resource Venture website, www.resourceventure.org. The signage has met with broad industry acceptance, resulting in a consistent look that customers can recognize in many different quick-serve restaurants.

SPU increased outreach activities to help restaurants develop in-store sorting and collection systems. With these systems, customers can sort compostable food service products (along with their leftover

food) into bins for food waste collection. Though the Food+program focuses on the changeover of single-use food service packaging to environmentally friendly materials, the program's work with restaurants has helped increase the number of businesses signed up for organics collection. Half the city's restaurants now have organics collection service, according to SPU.

As a result of two years work with stakeholders, SPU learned of some aspects of the single-use food container regulations that needed to be more clear or expanded. Thus, SPU introduced, and the Council passed **Ordinance 123307** in May 2010. The ordinance makes clear that quick-serve restaurants and food courts are responsible for providing discard bins for compostables and recyclables in the areas where customers are served. They are also responsible for ensuring that the collected materials go to a proper processor.

The ordinance responds to restaurant industry needs by requiring landlords to provide collection services as needed by their restaurant tenants. It also allows SPU to issue administrative rules that would allow restaurants to push out the start date for required serve-ware in certain cases, such as where the alternate products don't perform to industry standard or can't be recycled through normal processing.

In 2011-12, SPU is collecting data for the periodic **waste sort** for the commercial sector. The report will come out in late 2012. Waste sorts itemize by weight what materials are being put in the garbage by different MSW sectors.

In 2010, SPU continued the **commercial enforcement** strategy modified in 2008. SPU's inspector checks garbage loads for recyclables at the transfer stations and works back to the source of the material. In the 2009-10 budget process, SPU proposed to add resources for commercial enforcement but budget constraints prevented this addition.

SPU had also hoped to maintain support for **education** and **customer-requested business audits**. This service, provided by Resource Venture on behalf of SPU, but was significantly reduced in 2009 and 2010 due to budget constraints. In 2010, SPU focused remaining Resource Venture resources on increasing food waste diversion in the commercial sector. The collection contractors, CleanScapes and Waste Management, in addition to Cedar Grove Composting, also worked directly with customers to promote organics and recyclables collection.

Recommended actions to increase this sector's recycling are in the draft Seattle Solid Waste Management Plan revision. They include:

- Increasing enforcement of the ban on disposing recyclables in the garbage
- Continuing Food+ education and enforcement efforts regarding sorting requirements for compostables and food service recyclables
- Plastic film recycling
- Banning the disposal of organics

OTHER PROGRAM AREAS – NON-MSW

CONSTRUCTION AND DEMOLITION DEBRIS (C&D)

The C&D sector is comprised of C&D materials (sometimes called “CDL” – construction, demolition, and land clearing debris) which are not mixed with MSW. These materials are collected by a firm under contract with the city for C&D, or are self hauled to private facilities. Smaller amounts of C&D materials mixed with MSW, and delivered to the SPU’s transfer stations, are counted as MSW and not included in the measure of C&D recycling and disposal.

SPU has been working to develop a methodology for calculating a C&D recycling rate—a key step for C&D program planning. A 2007 study set the groundwork for the methodology. Because of this progress, SPU is developing C&D program plans and recycling goals to include, for the first time, in Seattle’s Solid Waste Management Plan (revisions currently underway).

The hierarchy of C&D materials that SPU tracks includes:

Recycling. Wastes separated for recycling or reuse.

Beneficial Use – not recycled or reused, but used for some other purpose like industrial boiler fuel. Counted as disposal in the recycling rate, and counted as diverted in the diversion rate.

Alternative Daily Cover (ADC) and Industrial Waste Stabilizer (IWS) –ADC covers the active face of a landfill instead of soil. IWS provides structure in specialized landfills. Counted as disposal in the recycling rate.

Disposal – material permanently placed in a landfill.

Also for the first time we are able to present annual C&D recycling figures. Before we reported only disposed tons. In addition to the recycling rate, for C&D we calculate the “**diversion**” rate, the sum of recycling and beneficial use.

Figure 7 C&D Recycling and Diversion Rate

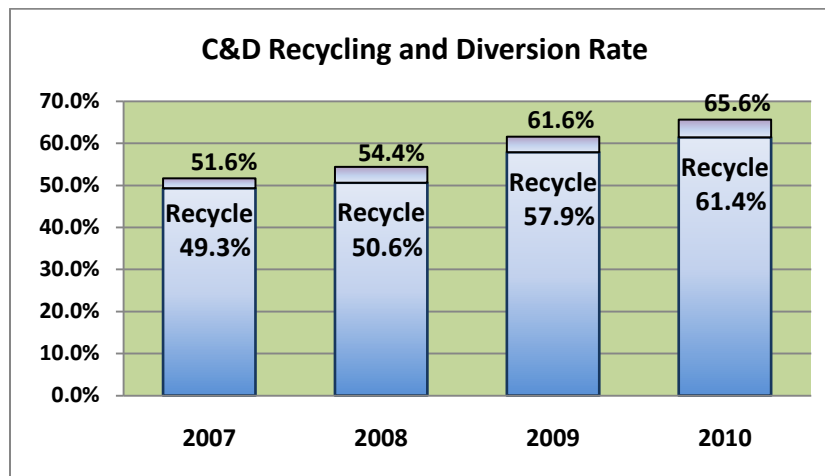


Table 7 Tons - C&D

Construction & Demolition Debris Tons						
Year	Total Generated	Disposed*	Recycled	Beneficial Use	Recycle Rate	Diversion Rate
2007	415,801	201,156	204,907	9,738	49.3%	51.6%
2008	397,052	181,240	200,851	14,961	50.6%	54.4%
2009	281,081	108,071	162,648	10,362	57.9%	61.6%
2010	281,919	96,946	173,109	11,864	61.4%	65.6%

*Includes ADC and IWS

Note the 2009 C&D disposed tons number is higher than in last year’s annual recycling report. The new number reflects a correction to double counting some residuals from a C&D processing facility.

In general, C&D generation correlates closely with economic and building activity cycles

PROGRAM HIGHLIGHTS – C&D

Joint Planning Committee: Since 2007, SPU and the Department of Planning and Development (DPD) have been working together to address the C&D action items called for in Seattle City Council Resolution 30990. In 2010, the committee recommended a package of programs to enhance the level of C&D recycling. The proposals included:

- Banning the disposal of asphalt paving, bricks and concrete (ABC)
- Certifying construction and demolition recycling facilities
- Requiring DPD applicants to recycle and report on a minimum amount of waste before getting their Certificate of Occupancy

Stakeholder Feedback: SPU conducted a series of interviews with construction contractors, processors and haulers on these recommendations in late 2010. The response was mixed.

New Disposal Ban on Asphalt Paving, Bricks and Concrete (ABC): In early 2010, the City Council approved an ordinance that bans the disposal of ABC from job site containers and from disposal at private and public transfer stations. This ban takes effect January 1, 2012 with active enforcement beginning 2013. SPU will educate contractors about the ban in 2012.

New C&D Program Evaluation: SPU evaluated program options for C&D based on the 2010 stakeholder input and SPU’s Recycling Potential Assessment (RPA) model. The RPA is an econometric model that estimates how much material might be recovered by new programs and combinations of programs. All of the new programs included some level of facility certification. The recommended package is in the draft Solid Waste Management Plan revision. SPU will conduct a series of workshops and presentations around these C&D proposals along with the general stakeholder plan review.

The recommended package is mainly a sequence of disposal bans on certain C&D materials that have adequate end markets now or are likely to in the immediate future. These include:

- Metal and cardboard
- Carpet
- Clean wood and gypsum
- Plastic film
- Tear-off asphalt roofing shingles

Deconstruction activities have also been a joint effort with DPD. Deconstruction, or building salvage, involves carefully taking a structure apart, saving building materials for reuse. Activities include:

- Continuing pilot deconstruction projects that started in 2010, with three single family homes, and includes collecting data on salvage and recycling collected from those houses.
- Permit changes that started in 2009 allow builders to obtain a deconstruction permit, allowing them to begin deconstruction before the building permit is issued. This resulted in 10 single family homes deconstructed with salvage by the end of 2010.
- Preliminary investigation of a grading system for salvaged dimension lumber to improve marketability of these materials. A 2009 study on deconstruction options identified dimension lumber as the highest value material available for salvage.

WASTE PREVENTION

PROGRAM HIGHLIGHTS – WASTE PREVENTION

PRODUCT STEWARDSHIP AND MARKET DEVELOPMENT

In 2010, the Seattle City Council passed legislation aimed at reducing the delivery of unwanted yellow pages **phone books**. In May 2011, SPU launched an internet database, which allows people to opt-out of receiving yellow pages and junk mail. The database works for residents living outside of Seattle as well. By the end of May 2011, nearly 30,000 households and businesses signed up and opted out of more than 185,400 yellow pages deliveries. This represents more than 150 tons of paper waste prevention.

SPU continues to support the Northwest Product Stewardship Council (**NWPSC**), although at a reduced level compared to 2008, due to budget constraints. Examples of 2010 support and accomplishments build on prior year work and include:

- City support for state product stewardship legislation addressing mercury-containing lighting (fluorescent bulbs and tubes) and medicines. State bill ESSB 5543 requiring producers to provide end-of-life management for mercury containing lighting passed in 2010. The medicine take-back bill did not pass and support building will continue.
- Participation in policy development for state-level product stewardship legislation, covering: paint; producer-paid secure medicine return; printed paper and packaging; and possible changes to existing law that would add additional electronic products to the E-Cycle Washington program.
- Study of possible City of Seattle product stewardship regulation for waste prevention and recycling of problem products in MSW and C&D waste.

- Monitoring of state-level product stewardship legislation proposed by others that would involve producers in end-of-life management of medical sharps.

Although electronics are now being managed through the new state program, Seattle continues to support, in conjunction with King County, the **Take-It-Back-Network** (TIBN). One major focus of the TIBN is expanding take-back sites for mercury-containing (fluorescent) lights. These sites will be needed to take back mercury lighting products until the 2010 legislation takes effect in January 2013.

SPU continues to encourage the use of **reusable shopping bags** as one of its waste reduction efforts following voter rejection of a “green fee” on disposable shopping bags in 2009. The bags handed out through city programs are targeted mainly to low-income residents.

SPU staff is working on market development for the recycling of plastic film from commercial and industrial sources, a material listed in SPU’s **problem product** study. Problem products are those that are under-recycled or difficult to recycle. Following the 2007 study of disposable shopping bags and disposable food service products, SPU completed a second study in 2009. The study made a special effort to identify problem products suitable for product stewardship strategies. SPU presented a slate of problem product program recommendations stemming from the 2009 study to the Seattle City Council. Limited funding prevents the utility from tackling more products at this time. When resources become available, additional products targeted for market development and other strategies include:

- “Styrofoam” block foam from packaging and roofing insulation
- Medical sharps, if no state action is taken by 2012
- Textiles

The new state law requiring a producer paid program for collection and safe processing of mercury-containing lighting products (see above discussion about NWPSC) removed one of the most hazardous products on the study list and made City of Seattle action unnecessary. SPU’s strong support of product stewardship through the NWPSC provides a clear benefit to Seattle and beyond.

Notwithstanding budget cuts that forced reduced effort, SPU’s **market development** activities continue on several fronts:

- Alliance with King County Link-Up to support asphalt shingle, urban wood waste and gypsum wallboard recycling. A major pilot project using recycled asphalt shingles in hot-mix asphalt paving was completed in the summer of 2009 thanks to collaboration with the King County Department of Transportation. Testing continued in 2010.
- While firm numbers are not yet available, it appears carpet diversion increased in 2010. Two new companies have opened depots for carpet collection in the Puget Sound area, and demand for recycled nylon has increased. Meanwhile, SPU continues to play a role in the update of the Carpet America Recycling Effort memorandum of understanding between the industry and government agencies. About 296 tons of carpet are being disposed of annually in Seattle’s MSW.
- Support for the Seattle-King County Industrial Ecology Roundtable, an intergovernmental-private sector organization established in 2007, is part of SPU’s efforts to maximize waste capture as feedstock for other products.
- Participation in By-Product Synergy’s regional member exchanges. Wood waste and gypsum market development work was suspended due to budget cuts.

The Food+ program description in the Commercial sector section of this report notes increased diversion of food waste from quick-serve restaurants, by converting to recyclable and compostable service ware. This program stems from the **ban on expanded polystyrene (EPS) foam service ware** that began in 2008. Reducing the use of EPS reduces the release of this material into the environment as litter, where it becomes a problem for drainage systems and marine life.

ORGANICS PREVENTION

Backyard composting remains the least expensive way to remove organics from the waste stream. Backyard composting numbers are estimated based on a survey done every five years. SPU released the 2010 Home Organics Waste Management Survey based on data collected in 2009. The survey indicates that home composting dropped from 41% to 30%, with an increase in use of curbside organics collection (82% to 85%).

The driver behind this change is the 2009 requirement that all single family customers subscribe to curbside organics service or participate in backyard composting. Residents are likely switching to the curbside program due to the convenience of putting the material at the curb compared with composting it in their backyards. This has increased total organics diversion but SPU will continue to promote backyard composting since that has the lowest environmental impact and lowest cost.

The investments made by the **edible food waste** recovery program and Lean Path technical assistance to commercial kitchens programs continued to provide benefits in 2010, even though the Lean Path program ended in 2009. SPU received reports of continuing food waste prevention by Swedish Hospital (extended to all four campuses), Seattle University, and Northwest Hospital. Altogether, they reported 33 tons of prevented food waste, up from the 21 tons reported in 2009. A highlight of this effort is the institutional change that continues without SPU funding.

OTHER WASTE PREVENTION ACTIONS

SPU estimates 106 tons of reusable clothing and household items were diverted to reuse in 2010, up from 75 tons in 2009. Beginning in May 2008 a **reusable materials diversion** program was launched at the city's North Recycling & Disposal Station. This program, which focuses on building material salvage but also diverts other items, is a partnership with private companies who collect and resell the materials. In addition to the building materials, other reusable materials diverted from self-haul customers prior to disposal include furniture, bicycles, tools and other materials. The program expanded to the South Recycling and Disposal Station in January 2009. The tons diverted by this program are reported by the private companies and thus counted in the commercial sector.

Although funding for the PaperCuts program did not continue into 2010, the city continued to **reduce paper use**. The city reduced use by 122 tons in 2010, up from 99 tons in 2009 (a 36% reduction from our 2004 baseline). We expect the city department switch to paperless paystubs will yield another jump in results in 2011. A highlight of this change is that it did not require SPU funding. The reduced paper consumption, plus continued use of 100% post-consumer recycled paper, eliminates about 400 tons of carbon dioxide (CO₂) equivalents (greenhouse gases). The city paper reduction committee continued to work on measures for additional savings: reducing default margins in Microsoft Word documents, and increasing the number of and access to multifunction printers.

Resource Venture (as noted in the Commercial sector discussion) continues to provide **advice on waste reduction and recycling for commercial accounts**, including PaperCuts. However, 2009-10 budget constraints significantly reduced this program.

The **Waste Prevention and Recycling Community Matching Fund** was suspended 2010 due to budget cuts. The program was restored for 2011 and supports increased organics diversion in schools.

While most **green building** activities relate to construction and demolition debris (C&D), SPU also supports a broader range of efforts, mostly by partnering in programs with DPD and King County. For instance, in cooperation with DPD, SPU offers a broad array of technical assistance programs for the building industry and do-it-yourself residential remodelers. In 2009, SPU started working with the SHA on the Yesler-Terrace large-scale redevelopment. SPU is tracking plans for organics management, and deconstruction and salvage during construction.

The **Green Purchasing** program includes activities furthering the city's commitment to environmentally preferable purchasing, including environmental best practices, climate initiatives, toxin reduction, and other environmentally sustainable considerations in acquisition of city goods and services. Highlights of ongoing green purchasing initiatives include:

- Green Office Fair
- Vendor education days
- Green purchasing speaking engagements
- Green servers – that reduce cooling needs
- Large scale printing – requiring 100% recycled paper
- Bio-based lubricants
- EPEAT for imaging equipment
- Office Depot “green” criteria
- Green Seal standard update – for janitorial products
- Green Fleets Initiative
- Paperless utility billing
- Green Seal application
- Social responsibility – an integrated, complementary strategy for green and social responsible purchasing

OTHER RECYCLING ACTIONS

PARKS OUTDOOR OPEN SPACE RECYCLING

In 2010, the Department of Parks and Recreation placed open space recycling collection cans in parks citywide. Collection cans are strategically sited based on lessons learned during a 2008 pilot project. Targeted materials include aluminum cans, and plastic and glass beverage containers.

State law requires recycling at large events. SPU is working with event promoters to ensure that their food vendors comply with the regulation that single-use food ware and packaging be either compostable or recyclable and collected for proper processing.

PUBLIC PLACE RECYCLING

The public place recycling program pairs street side litter cans with beverage container recycling cans in commercial areas throughout the city. About half of all street side litter cans are paired with a recycling can.

TOTAL DISPOSED

This section addresses the Resolution 30990 goals set for total waste disposed (landfilled). Specifically:

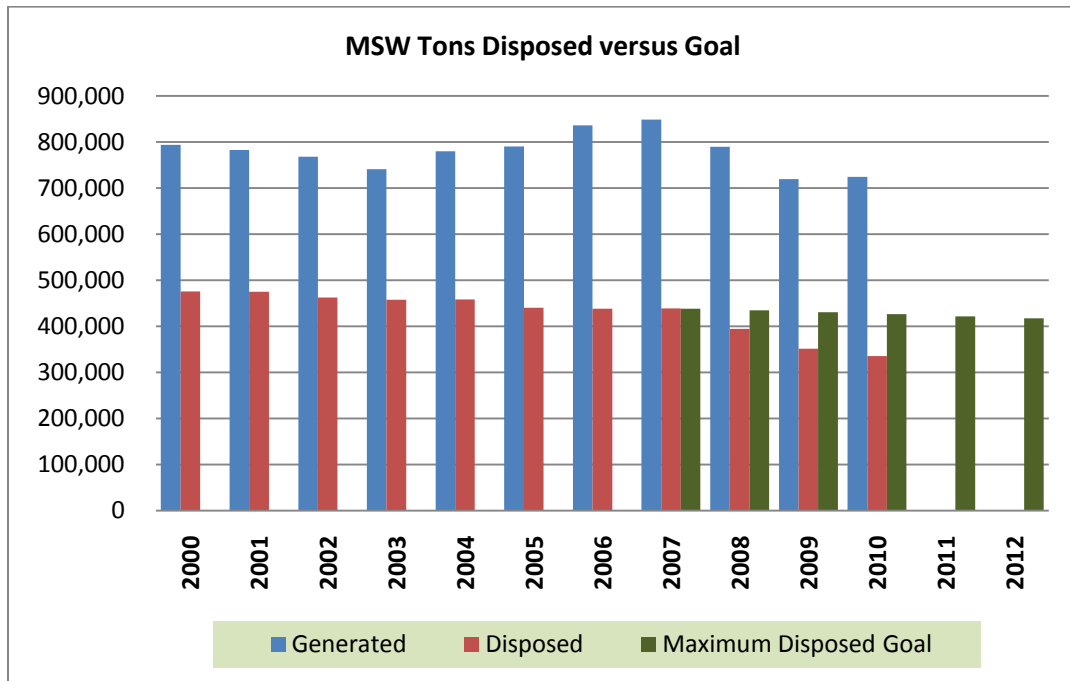
- The city will not dispose of any more total solid waste in future years than went to the landfill in 2006 (438,000 tons MSW), and;
- For the next five years, the city will reduce the amount of solid waste disposed by at least 1% per year (2008 – 2012).

Seattle disposed 16,119 fewer tons in 2010 compared to 2009, a 4.6% decrease. Compared to 2007 (when generation peaked), disposed tons are down more than 23%, or 103,837 annual tons.

Table 8 MSW Tons Change Generated & Disposed

MSW Tons - Overall Change from Prior Year				
Year	Generated	Percent Change	Disposed	Percent Change
2000	793,842	NA	476,132	NA
2001	782,809	-1.4%	475,270	-0.2%
2002	768,346	-1.8%	463,086	-2.6%
2003	741,094	-3.5%	458,011	-1.1%
2004	780,044	5.3%	458,389	0.1%
2005	790,457	1.3%	440,693	-3.9%
2006	836,499	5.8%	438,381	-0.5%
2007	848,759	1.5%	439,407	0.2%
2008	789,608	-7.0%	394,748	-10.2%
2009	719,424	-8.9%	351,689	-10.9%
2010	724,468	0.7%	335,570	-4.6%

Figure 8 MSW Tons Disposed Compared to Goal



We anticipate that further growth in our recycling and waste reduction programs will reduce MSW tons disposed. However, this effect can be muddled by factors in the overall economy that also drive MSW tons generated. We suspect that a good share of the sizable drop seen since 2007 is due to the economic downturn. For example, an analysis looking the decline in commercial tons between 2004 and 2009 indicated that about half the decline in tons disposed was due to factors related to the economy and about half due to new programs.

CONCLUSION

We congratulate all the households in Seattle’s single family sector for meeting and exceeding their recycling goal, the multi family households for increasing their recycling, and the commercial sector for making impressive gains in one year. All of these are remarkable achievements and demonstrate Seattle citizen and business commitment to environmentally responsible solid waste management.

Recycling continues to be a sound investment by the city as well as a key part of our climate action strategy.

FURTHER INFORMATION

More detailed sector and historical information may be found on SPU's web site at [www.seattle.gov/util/About SPU](http://www.seattle.gov/util/About_SPU), including reports and studies on:

- Waste composition
- Construction, demolition and land-clearing debris (C&D or CDL)
- Garbage disposed by sector by month
- Recycling composition
- Organics programs
- Residential recycling
- Recycling market and Seattle recycling value
- Seattle's solid waste plan