Seattle Public Utilities

2016 Recycling Rate Report

July 1, 2017

1. INTRODUCTION

This City of Seattle 2016 Recycling Rate Report describes how the City's recycling rate is calculated and Seattle's recycling program planning background. Section 2 – *Recycling Rates,* presents the overall 2016 recycling rate results, as well as the individual results for each solid waste "sector," i.e., Single-family Residential, Multifamily Residential, City Transfer Station Self-Haul, Commercial, and Construction and Demolition. Section 3 – *Waste Prevention and Product Stewardship*, describes waste prevention activities that may touch on these individual sectors. Section 4 - *Recycling & Waste Prevention Activities for 2017*, lays out recycling and waste prevention activities for 2017. The Report concludes with references and links for further information. Comments on the Report from the Seattle Solid Waste Advisory Committee (SWAC) are included as Attachment A – *Letter from SWAC*, as required by Seattle City Council Resolution 30990.

1.1 SCOPE OF THE REPORT

This is the tenth 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."*

Resolution 30990 set Seattle's goal to reach 60% recycling of Municipal Solid Waste (MSW) by the year 2012, and 70% by 2025.

In February 2013, the City Council adopted revised recycling goals by adopting "Seattle's Solid Waste Plan 2011 Revision." The revised goals for MSW are to**:** recycle 60% by the year 2015, and to **recycle 70% by 2022**. Further, for the first-time Seattle set a goal to recycle **70% of construction and demolition debris by the year 2020.**

Four sectors contribute to the overall MSW rate: Single-family Residential, Multifamily Residential, Self-haul, and Commercial. Recycling goals for each sector are shown in the following *Table 1 – Sector-specific Recycling Goals*.

Table 1
Sector-specific Recycling Goals

SECTOR	2022 GOAL
Single-family Residential	83%
Multifamily Residential	54%
Self-haul	46%
Commercial	75%
Overall	70%

In **2016**, Seattle recycled 58.8% of its MSW, an increase of 0.8% over 2015. The recycling rate has risen 20.6% since the 2003 low of 38.2%.

1.2 About The Recycling Rate

Seattle's recycling rate is based on weight, and is the percentage of MSW diverted from the landfill by reuse, recycling, and composting.

Seattle's MSW includes:

- Organics (e.g., yard debris, food scraps, and compostable paper/packaging) managed on-site by Seattle residents;
- All garbage, organics, and recyclables that businesses and residents set out for collection; and,
- All garbage, organics, and recyclables self-hauled to the City's recycling and disposal transfer stations.

Seattle's 70% recycling goal combines separate recycling goals for each of the four primary MSW sectors: Single-family Residential, Multifamily Residential, Self-haul, and Commercial. The specific recycling goals for each sector are included above in Table 1 – *Sector-specific Recycling Goals*, and are different since waste stream materials, opportunities to recycle, and likelihood of participation vary among the sectors.

The MSW recycling goal excludes construction and demolition (C&D) material. C&D disposed and recycled tons are counted separately in the C&D stream, and Seattle has a separate recycling goal for C&D. Also, a large portion of recycled metals (such as car bodies) never enter Seattle's MSW or C&D systems, and therefore aren't included in the recycling rate calculations. The City does include in the recycling rate calculations the metals collected at the curb and at Seattle's transfer stations.

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 Sound 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.

1.3 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 Seattle City Council adopted the 2011 Revision to the Plan in February 2013, and the Plan was approved by Washington Department of Ecology in June 2013.

2. RECYCLING RATES

This section first presents recycling rates for MSW: overall, single-family residential, multifamily residential, self-haul, and commercial. Following the MSW sectors, the section goes on to present the results for C&D, which is tracked separately from MSW.

2.1 OVERALL MSW RECYCLING PERFORMANCE

In 2016, Seattle's MSW recycling increased from 58.0% to 58.8%, an increase of 0.8%. This marks the 13th straight year of continuous recycling rate growth since 2003, and continues Seattle's progress towards achieving the City's 2022 recycling goal of 70%.

Table 2
Recycling Rates All MSW Sectors 2000-2016

Year	Single-family	Multifamily	Res Total	Self-haul	Commercial	Overall
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%
2011	70.5%	28.7%	60.2%	13.1%	61.4%	55.4%
2012	71.1%	32.2%	61.0%	12.5%	61.4%	55.7%
2013	70.8%	34.3%	60.9%	12.2%	62.9%	56.2%
2014	71.1%	34.6%	60.9%	10.6%	62.2%	57.1%
2015	74.3%	36.8%	63.9%	10.4%	62.3%	58.0%
2016	**74.0%**	**38.5%**	**64%**	**10.9%**	**64.0%**	**58.8%**
2022 Goal	**83%**	**54%**	**75%**	**46%**	**75%**	**70%**

Overall, Seattle generated 27,060 more total MSW tons in 2016 than in 2015. This can be linked directly to increased population and economic activities. Recycling grew by 21,435 tons, and disposal increased by 5,825 tons.

Table 3
Tons MSW Overall 2000-2016

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%
2011	715,996	319,341	396,655	55.4%
2012	713,803	315,966	397,837	55.7%
2013	724,383	317,258	407,125	56.2%
2014	721,269	309,515	411,754	57.1%
2015	720,904	302,467	418,437	58.0%
2016	**747,964**	**308,292**	**439,672**	**58.8%**

The City needs an 11.2% increase in its recycling rate to achieve its 2022 recycling rate goal of 70%. In terms of 2016 tons, 83,900 more tons would have needed to be recycled for the City to reach its 2022 recycling goal.

2.2 TOTAL MSW DISPOSED

This section addresses the active Resolution 30990 (2007) goal for total MSW waste disposed (i.e., 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)."*

In 2016, Seattle disposed of 308,292 tons of MSW, which is 29.7% fewer tons compared to 2006. Compared to 2015, there was an increase of 5,825 tons of MSW disposed by Seattle in 2016. Table 4 - MSW Tons Change – Overall Generated & Disposed, below shows the percentage change in MSW tonnage generated and disposed year-to-year dating back to 2000.

Table 4
MSW Tons Change – Overall Generated & Disposed

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%
2011	715,996	-1.2%	319,341	-4.8%
2012	713,803	-0.3%	315,966	-1.1%
2013	724,838	1.5%	317,258	0.4%
2014	721,269	-0.4%	309,515	-2.4%
2015	720,904	-0.1%	302,467	-2.3%
2016	**747,964**	**3.8%**	**308,292**	**1.9%**

Recycling and waste prevention programs help to divert MSW tons from the landfill. However, the impact of recycling and waste prevention programs can be overshadowed by other factors in the economy that also drive MSW tons generated. A good share of the sizable drop after 2007 is suspected to be due to the economic downturn; just as much of the recent increase can be attributed to the economic recovery and population growth seen in the City.

2.3 Single-family Residential Recycling Performance

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

In 2016, the recycling rate for the Single-family Residential sector decreased by 0.3 percentage points to 74.0%; however, the actual tonnage of materials recycled increased by 1,638 tons (1.1%). The decrease in the recycling rate for this sector is due to the Single-family Residential sector overall MSW generation for 2016 increasing by 3,272 total tons (1.6%), with overall disposed tons increasing more rapidly than recycling tons, with disposed tons increasing by 1,538 (2.8%).

Table 5
Tons Single-family 2000-2016

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%
2011	212,861	62,779	150,082	70.5%
2012	211,030	60,906	150,124	71.1%
2013	206,592	60,291	146,301	70.8%
2014	206,992	59,772	147,220	71.1%
2015	204,397	52,529	151,868	74.3%
2016	**207,669**	**54,067**	**153,506**	**74.0%**

The Single-family Residential sector must increase recycling by 9% to achieve the sector-specific recycling rate goal of 83% by 2022. In terms of 2016 tons, 18,860 more tons would have needed to be recycled for this sector to have hit its 2022 recycling goal in 2016.

2016 Program Highlights – Single-family

- Direct mailed to all 320,000 Seattle households, plus launched electronic and social media outreach featuring food waste and recycling opportunities.

- Targeted media partnerships, including two extensive 8-week campaigns with television and radio spots in mainstream and ethnic outlets in multiple languages, bus advertising, and ethnic print ads and feature stories.

- Reached out to over 20,000 new Seattle residents with information about food waste recycling, a voucher for a free kitchen food waste collection bucket, and a coupon for compostable food waste bags. The voucher redemption was available at seven Customer Service Centers.

- Redesigned the "*Where Does It Go*" flyer to include more information about acceptable curbside materials and disposal methods for Seattle's most frequently asked about items.

- Provided technical assistance to 10 summer meal program sites that provide free meals and snacks to children to maximize collection of food waste for recycling. Taught 440 summer meal program children how to sort their waste.

- Provided outreach and education to over 5,000 residents at community events and festivals, including events ranging from community dinners, to farmer's markets, to neighborhood street fairs.

- Provided food waste composting and recycling outreach and education to over 2,500 residents through SPU's Environmental Justice and Social Equity partnership with El Centro de la Raza, Asian Counseling Referral services, Chinese Information Services, and ECOSS, working with the City's partner organizations to ensure outreach was designed and implemented to be culturally appropriate and relevant.

2.4 Multifamily Residential Recycling Performance

The Multifamily Residential sector includes apartment and condominium buildings. These buildings contain five or more units and generally use dumpsters instead of cans or carts for garbage. Material collected includes garbage, recycling, and organics (yard and food waste).

In 2016, recycling in the Multifamily Residential sector continued its trend of gains by rising 1.7% to 38.5%, setting a record high for the fifth year in a row. The improvement was likely due to increased diversion of food waste and compostable paper.

Total generation of MSW for the Multifamily Residential sector increased 2,431 tons (3%). There was an increase in tons collected for recycling of 2,206 (7.1%), and while the number of tons collected for disposal also increased, it was at a significantly lower rate, increasing only 225 tons (0.45%).

Table 6
Tons Multifamily 2000-2016

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%
2011	70,145	49,993	20,152	28.7%
2012	74,532	50,497	24,035	32.2%
2013	76,970	50,547	26,423	34.3%
2014	80,189	52,439	27,750	34.6%
2015	78,278	49,443	28,835	36.8%
2016	**80,709**	**49,668**	**31,041**	**38.5%**

The Multifamily Residential sector needs a 15.5% increase to achieve its sector-specific recycling goal of 54% by 2022. In terms of 2016 tons, 12,542 more tons would have needed to be recycled for this sector to have hit its 2022 recycling goal in 2016.

2016 Program Highlights – Multifamily

- Provided technical assistance on recycling services and container placement to 222 of the largest apartments and condos, serving 53,000 residents. Trained 650 multifamily residents or community members during 29 education presentations.
- Trained 75 new *Friends of Recycling & Composting* volunteers on recycling program services.
- Delivered 5,678 free kitchen food waste collection buckets to multifamily residents through their property manager or during 52 staffed events.
- Responded to 2,137 recycling education messages/calls and supported 415 buildings with educational resources and program information.
- Obtained customer feedback from 457 multifamily residents and property managers in five different languages (i.e., Chinese, English, Somali, Spanish, and Vietnamese) on the barriers to participating in the food waste collection programs.

2.5 SELF-HAUL

The Self-haul sector includes material brought (or "self-hauled") by residents, businesses, and governmental agencies to one of the two City-owned transfer stations, including the North Transfer Station, which re-opened in November 2016 after being completely rebuilt. It does not include the material delivered by the City's contracted collection haulers to the transfer stations.

Recycling in the self-haul sector includes organics (yard and food waste, and clean wood), appliances and metals, and other recyclable material. Seattle's self-haul recycling count does not include recycling and organics self-hauled by customers to other facilities, such as Rainier Wood Recyclers and Seattle Iron & Metal. Materials self-hauled to a private recycling facility, such as these, will only be captured by this Report if that facility submits a recycling report. Facilities located in Seattle are required to submit recycling reports; however, facilities outside Seattle are only required to submit a recycling report if they are a certified mixed C&D recycling facility. Thus, it is possible that materials are being self-hauled to facilities outside of Seattle's reach, and these materials are not captured within the City's recycling rate calculation. In addition, over the past couple of years, recyclable materials have been self-hauled outside of the City to King County's Shoreline Transfer Station while the North Transfer Station was rebuilt. These materials are also not accounted for in Seattle's recycling rate; however, with the new North Transfer Station opened for operation, this material will begin to be recaptured in next year's Report.

In 2016, the Self-haul sector recycling rate increased by 0.5%, marking the first increase in the Self-haul recycling rate since 2007. Total generation of MSW for the Self-haul sector increased 5,843 tons (7.9%). Disposal increased by 4,815 tons (7.3%), and Recycling increased 1,028 tons (12.7%). Since 2007, total MSW coming to the transfer station via self-haul has dropped from 132,544 tons to 73,836 tons, or 58,709 tons (44.3%). Much of this can be attributed to the rebuilding of both transfers stations over the last decade.

Table 7
Tons Self-Haul 2000-2016

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%
2011	81,776	71,033	10,743	13.1%
2012	80,568	70,474	10,094	12.5%
2013	84,341	74,019	10,322	12.2%
2014	64,681	57,847	6,834	10.6%
2015	67,993	60,938	7,055	10.4%
2016	**73,836**	**65,753**	**8,083**	**10.9%**

The Self-haul sector needs a 35.1% increase to achieve its sector-specific recycling goal of 46% by 2022. In terms of 2016 tons, 25,882 more tons would have needed to be recycled for this sector to have hit its 2022 recycling goal in 2016.

Seattle does not expect to see a significant self-haul recycling rate increases until Seattle's solid waste facility improvements are complete. The new North Transfer Station opened in November 2016 with a new dedicated *Recycling & Reuse Drop-off Center*. However, separate reuse and recycling drop-off at the South Transfer Station will not be in place until the completion of the South Transfer Station's Phase 2 Project, currently scheduled for 2021.

2016 Program Highlights – Self-Haul

- Opened North Transfer Station to customers in late November 2016. During the rebuild all Seattle self-haul customers were directed to take their materials to the new South Transfer Station. However, customers often used the King County's Shoreline Transfer Station north of Seattle and other disposal and recycling options. With the opening of the new North Transfer Station many of those customers are expected to once again start using a conveniently located City transfer station facility.

- Opened the *Recycling & Reuse Drop-off Center* at the new North Transfer Station, which provides an opportunity for customers to drop-off certain recyclables for free before they cross the scale. The facility will also receive reusable materials that will be resold at another location once the currently underway selection process for the reuse vendor has been completed.

- Developed a separate drop-off area for C&D materials banned from landfill disposal and mattresses at the South Transfer Station.

- Initiated the design phase for the reconfiguration of the original South Transfer Station. The new facilities will include retaining the Household Hazardous Waste facility, a Recycling & Reuse facility similar to that developed for North Transfer Station, trailer parking to support the new South Transfer Station, crew facilities, 2.5 acres held for future Solid Waste needs, and space for a new vactor decant facility for SPU's Drainage and Wastewater Utility.

2.6 COMMERCIAL

The Commercial sector includes garbage, recyclables, and organic materials collected from businesses.

In 2016, the Commercial sector's recycling rate increased by 1.7% to 64%. Much of this increase is most likely attributable to the increase in organics collection. Total generation of MSW for the Commercial sector increased for the third year in a row, up 3,767 tons (1%). The tons collected for recycling rose by 16,562 tons (6.7%), while disposal decreased by 753 tons (-0.54%). Compared to 2007, total generated tons of MSW have decreased by 45,175 tons (10.8%%).

Table 8
Tons Commercial 2000-2016

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%
2011	351,214	135,536	215,678	61.4%
2012	347,673	134,089	213,584	61.4%
2013	356,480	132,401	224,079	62.9%
2014	369,407	139,457	229,950	62.2%
2015	370,237	139,557	230,680	62.3%
2016	**373,804**	**138,804**	**247,042**	**64.0%**

The Commercial sector needs a 11% increase to achieve its sector-specific recycling goal of 75%. In terms of 2016 tons, 33,311 more tons would have needed to be recycled for this sector to have hit its 2022 recycling goal in 2016.

2016 Program Highlights – Commercial

- Continued the growth in commercial food waste diversion with approximately 9,000 new tons of commercial food waste diverted in 2016.
- Provided technical assistance to over 1,000 businesses for food waste diversion and food packaging education by SPU's staff contacts, Seattle's Green Business assistance, collection contract field staff, and ethnic community partners.
- Provided recycling education and outreach at 14 business community events or tradeshows.
- Supported public food and recycling diversion at special events.
- Provided technical on-site assistance to 250 ethnic businesses with in-language support in Vietnamese, Ethiopian, Somali, Korean, and Spanish, as well as translated printed materials.
- Mailed welcome letters providing information on the City's recycling and food waste composting requirements to 700 new businesses.

2.7 Construction & Demolition Debris

The Construction and Demolition Debris (C&D) sector is comprised of construction, demolition, and land-clearing materials that are typically self-hauled by construction contractors or a third-party drop box service to private recycling facilities for sorting or to private transfer stations operated by Waste Management or Republic Services for disposal. Non-recyclable C&D drop box service for disposal (i.e., garbage) from job sites in Seattle is provided by Waste Management under contract with the City. Smaller amounts of C&D materials mixed with MSW, and delivered by contractors to Seattle's transfer stations, are counted as self-haul MSW and included in the calculation of the Self-haul recycling rate, not the C&D recycling rate described in this section. C&D generation correlates closely with economic and building activity cycles and has increased significantly over the past three years. This increased generation is reflected in the tonnages captured below in *Table 9 - Tons Construction & Demolition Debris 2007-2016*.

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

- *Recycling* – Material separated for recycling and reuse or salvage.
- *Beneficial Use* – Material not recycled or reused, but used for some other purpose, such as unpainted and untreated wood used as hog fuel for a pulp and paper mill.
- *Alternative Daily Cover (ADC)* – Material counted as disposed (not beneficial use) when calculating the recycling rate. ADC covers the active face of a landfill instead of using soil cover.
- *Disposed* – Material permanently placed in a landfill.

In addition to the Recycling Rate, Seattle calculates a "*Diversion Rate*" for C&D, which is the sum of recycling and beneficial use.

The 2008-2015 C&D generation and disposal numbers have been revised to account for a corrected calculation of monthly disposal statistics from the private transfer stations. In addition, the 2015 C&D recycling rate increased over what was reported in the 2015 Recycling Rate Report due to new information obtained from a major concrete recycler who receives aggregate materials from Seattle job sites not previously reported. C&D generation for 2015, however, may still be underestimated since many source separated recyclers located outside of Seattle do not

track and report inbound materials from Seattle separately from materials coming in from King County at large.

Table 9
Tons Construction & Demolition Debris 2007-2016

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	397,053	181,241	200,851	14,961	50.6%	54.4%
2009	288,550	115,446	162,742	10,362	56.4%	60.0%
2010	288,967	98,309	178,794	11,864	61.9%	66.0%
2011	359,390	118,216	227,049	14,125	63.2%	67.1%
2012	371,962	129,383	224,060	18,519	60.2%	65.2%
2013	386,200	127,040	234,982	24,178	60.8%	67.1%
2014	485,242	128,024	317,331	39,887	65.4%	73.6%
2015	439,055	118,514	280,205	40,336	63.8%	73.0%
2016	**532,126**	**146,139**	**339,478**	**46,509**	**63.8%**	**72.5%**

*Includes ADC and non-recyclable processing residuals from recycling operations

C&D generation in 2016 increased significantly over 2015, where underreporting of recycling by source separated recyclers is suspected. Generation in 2016 was also higher than in all previous years that Seattle has been tracking C&D recycling and disposal at the private transfer stations and recyclers. Disposal at the private transfer stations also increased significantly and the closure in May 2016 of CDL Recycle, a local mixed C&D processor, may be a factor. The amount of C&D in 2016 reported as being recycled also increased over all previous years.

In 2016, the C&D sector's recycling rate remained the same as 2015, at 63.8%. The C&D sector has continued to maintain a diversion rate from landfill disposal in the range of 72-73%; however, the sector's recycling goal of 70% by 2020 is stated in terms of materials sent to recycling end markets and not "beneficial use" end markets, such as clean wood to hog and boiler fuel. The C&D sector needs a 6.2% increase to achieve its sector-specific recycling goal of 70%. In terms of 2016 tons, 32,992 more tons would have needed to be sent to recycling end markets, such as the salvaging of clean wood for reuse or composting or the processing of tear-off asphalt shingles for hot mix paving applications, to have hit the C&D recycling goal in 2016.

2016 Program Highlights – C&D

- Supported King County's adoption of basic policies for C&D management like Seattle's, which includes targeted landfill disposal bans on the same set of commodities, a facility "designation" program requiring monthly reporting and residual sampling, and regional code collaboration with the suburban cities to encourage building codes requiring waste diversion reporting.

- Worked with King County to continue the C&D processing facility residuals sampling program as part of the City "certification" and County "designation" process for C&D recyclers who receive mixed C&D materials for sorting. The number of participating facilities increased from five in 2015 to eight in 2016, with two others in the region potentially interested in the process. These mixed C&D recycling operations are visited quarterly by a consultant to ensure that what is being sent to landfill disposal does not contain targeted recyclable materials.

- Adjusted to the closing in May 2016 of the *CDL Recycle* sorting facility in the Georgetown neighborhood of Seattle. Fortunately, the parent company had acquired a recycling facility in Renton that absorbed some of the C&D material output from Seattle job sites. A new mixed C&D sorting facility on a similar scale to *CDL Recycle*, but operated by a different company, opened in south Seattle by September 2016.

- Continued to oversee the improvement of waste diversion reporting by C&D projects from 60% in 2015 to 63% in 2016, with the assistance of Seattle Department of Construction and Inspection, as well as automated notifications and reminders to building permit holders. Reports are required after completion for projects with a value over $30,000. Around 5,500 construction projects reports were submitted from 2014 - 2016.

- Worked with the Seattle Department of Construction and Inspections, which amended the Building Code so that Waste Diversion Plans (WDP) for most new construction and alteration projects were no longer required as part of the permit application process due to the WDP occurring too early in the project process before a contractor had even been chosen. The requirement for a Salvage Assessment for whole building and major remodel demolition projects was retained as part of the permit application package.

- Continued to work with King County to provide outreach to trade associations, architecture firms, and construction companies on construction recycling requirements for the City and County, the facility certification programs, and waste diversion plans and reports.

3. WASTE PREVENTION & PRODUCT STEWARDSHIP

Seattle's waste prevention program goals are to reduce waste volumes from residential households and businesses and to reduce toxics in goods purchased by people, institutions, and businesses. Wherever possible, Seattle seeks to quantify results, and reflects these results in the MSW recycling rate. In the future, the hope is to quantify additional waste prevention efforts and quantify related social benefits in addition to tonnage. Product stewardship programs engage producers of products and packaging to reduce waste through improvements in design and labeling and by taking responsibility for financing the collection and processing of their own products. These programs often include reduction, reuse, and recycling elements.

2016 Program Highlights – Waste Prevention & Product Stewardship

- Provided status report to Council on the Bag Ban Requirements implementation. Developed an ordinance passed by Council to make the $0.05 large paper bag fee permanent, restrict green and brown tinting of plastic bags to compostable bags, and ban use of misleading terms such as "degradable" on bags (effective July 2017).

- Began a partnership with Seattle Public Schools, EPA Region 10, and emergency food system providers to assess opportunities for recovering edible food from school lunches.

- Participated as a member of the Washington Organics Contamination Reduction Work Group to identify sources, causes, and solutions regarding compost contamination. The Work Group developed best management practices related to bags and packaging that would reduce contamination.

- Coordinated with the manufacturer-financed E-Cycle WA program, which collected approximately 1,825 tons of televisions, computers, laptops, and monitors within Seattle. Additional tons were salvaged by E-cycle collectors for refurbishment, resale, and reuse.

- Educated 300 residents on food waste prevention through film screenings, classes, and grocery store outreach that are credited with preventing nine tons of apples from entering the waste stream through a partnership with City Fruit.

- Sponsored the Garden Hotline, which received 7,369 public contacts, including Hotline staffing or teaching at 115 community events and classes.

- Updated the Junk Mail Opt-out Service outreach to reflect a range of free opt-out services available to residents, educating residents through social media and a bill insert newsletter.

- Tracked Master Composter/Soil Builder Volunteers, where they provided 1,096 hours contacting 8,580 residents. Recruited and trained 35 new volunteers from across Seattle.

- Tracked the manufacturer-financed Light Recycle Washington program, which collected approximately 111,000 mercury containing fluorescent tubes, compact fluorescent lamps, and other mercury-containing bulbs totaling 52,339 lbs (26.17 tons) from within Seattle. As moderate risk waste, mercury lighting is not included in the recycling report calculations.

- Sponsored three demonstration projects for on-site food waste processing or treatment, featuring technologies such as the WISErg Food Harvester (Pike Place Market and Columbia City PCC) and the Impact Bioenergy micro-anaerobic digester (Fremont Brewing Company's Ballard site). Final reports on all three demonstration projects with monitoring data are available.

- Engaged with industry organizations and individual companies, including Sustainable Packaging Coalition, PAC Next, Biodegradable Products Institute, and the Food Packaging Institute to address packaging design, labeling, tinting, recyclability, and compostability issues.

- Conducted Integrated Pest Management training attended by 217 landscape professionals, which reached 16 Spanish-speaking landscape professionals in targeted trainings.

- Supported several product stewardship efforts, including the development of King County's Secure Medicine Return Program, which is financed and provided by pharmaceutical companies; the monitoring of existing stewardship programs for electronics and mercury lighting; and, policy proposals for stewardship for photovoltaic modules and paint.

- Solicited industry interest and proposals for collecting reusable household goods at the Recycling & Reuse Drop-off Center at the North Transfer Station.

- Worked closely with the Sustainable Packaging Coalition, a national coalition of local government and industry stakeholders on the development of the How-to-Compost labeling system for packaging.

- Continued to build public awareness about *Threadcycle*, the opportunity to recycle damaged textiles when donating used clothing with nine textile collection partners (non-profit and for-profit). Expanded outreach to Spanish speakers at community events, via posters at shops, laundromats, and other locations, and through Spanish-language social media and radio interviews.

4. RECYCLING & WASTE PREVENTION ACTIVITIES FOR 2017

The following Table 10 includes the 2017 recycling and waste prevention activities that are underway or planned to help close the gap between the City's long-term recycling goals and current performance. Future activities will be informed based on success of current and planned activities and included in the 2017 Recycling Rate Report.

Table 10
Recycling & Waste Prevention Activities 2017

Sector	Target/Program	Activities/Description
Combined Residential (Single-family & Multifamily)	**Food Waste Prevention**	• Complete the development of Food Waste Prevention program materials, marketing plan, new outreach materials, and website upgrade. • Implement on-going community engagement and outreach activities, and develop community partnerships. • Determine steps for implementing actions in the Racial Equity Tool Kit. • Begin the trans-creation of outreach materials for one culture/language • Develop and implement plan for engaging with African American community. • Establish and continue local, regional, and national partnerships and collaborations to develop food waste prevention pilots and programs for Seattle, including EPA's *Food: Too Good To Waste* program. • Partner with large employers to reach new and young residents with educational messaging.
	Garden Hotline	• Reach 8,000 residents via calls, emails, walk-ins, and presentations. • Staff 50+ outreach events and classes, with at least 25% in communities of color, immigrant, and economically disadvantaged populations. • Employ community liaisons to guide and assist the Hotline direct outreach to underserved populations. • Provide access to yard care videos via the Hotline.
	Community Grants	• Establish grants program to incubate and support community-based waste prevention and reuse projects.
	Textiles Reuse & Recycling	• Relaunch *Threadcycle* Campaign in partnership with King County. • Develop/execute Recicla Mas Spanish language outreach plan related to textiles. • Identify needs, opportunities, and potential partnerships to advance waste prevention of clothing.
	Master Composter/ Soil Builders (Volunteer Outreach)	• Train diverse pool of 30+ new volunteers. • Guide and support outreach by volunteers, with goals of 1,000 volunteer outreach hours, and 8,000 contacts. • Promote Spring Natural Lawn Care through web, newsletters, and Garden Hotline.
	Compost Market Development	• Collaborate with Washington Organics Recycling Council and Washington Organics Contamination Reduction Work Group to advance organics issues and resolve challenges at local, state, and regional levels. • Maintain *Soils for Salmon* and *Building Soil* websites trainings and technical support. • Target Central/South/SW Seattle for compost distributions.

Sector	Target/Program	Activities/Description
		• Support Pacific Coast Collaborative inquiry into role of compost/organics in soil carbon sequestration.
	General Educational, Outreach, & Technical Assistance	• Direct mail recycling/composting guide to all residents, and welcome guide to new residents. • Launch new "*Where Does it Go"* web/phone tool and other easy to access resources. • Trans-created materials to better serve English-as-a-Second-Language speakers. • Provide neighborhood collection events for items not collected curbside. • Target contamination via trainings and in-language outreach for diverse residents.
	North Transfer Station Recycling & Reuse Drop-off Center	• Establish contract for collecting reusable household goods at the Recycling & Reuse Drop-off Center at North Transfer Station. • Oversee initial startup, review effectiveness, and document lessons learned to use in South Transfer Station Phase 2 project.
	Service Quality	• Direct mail guidelines of how to report lack of or poor service.
Single-family Residential	**General Education & Outreach**	• Develop in-language outreach for diverse residents. • Develop trans-created new materials and decals for distribution to 1 culture.
Multifamily Residential	**Food Waste Prevention & Recycling**	• Direct site assistance for 210 large or underperforming buildings to boost food waste diversion • Property manager training and site visits. Provide tools and strategies to reduce barriers and increase resident access.
	General Education, Outreach, & Technical Assistance	• Provide targeted site visits and inspections though staff, consultants, community organization, and haulers, focusing on composting and recycling requirements.
Commercial	**Organics & Food Waste Prevention & Recycling**	• Help ethnic food service businesses comply with recycling, food waste separation, bag, foam, and service ware requirements. • Begin the trans-create materials in one culture/language. • Provide technical assistance to 250+ ethnic food service businesses. • Establish and continue local, regional and national partnerships and collaborations to develop commercial sector food waste prevention and rescue pilots and programs for Seattle, including work with local food banks and services and the Pacific Coast Collaborative.
	Green Schools	• Pilot food prevention, rescue, and recovery with Seattle Public Schools. • Continue support of Washington Green Schools to provide teacher training and certify schools.
	Packaging & Service Ware	• Update rule related to compostable food service ware. • Launch new bag ordinance requirements. • Work with stakeholders to develop future actions on food service ware.
	General Education, Outreach, & Technical Assistance	• Launch new *EnviroStars* Regional Green Business program. • Provide recycling and composting technical assistance for events. • Conduct outreach and education through mailings and attending business trade shows and events. • Provide targeted geographic and ethnic site visits and inspections through staff, consultants, community organization, and haulers, focusing on composting and recycling requirements, food packaging requirements, foam ban, and bag requirements. • Review recycling and food waste collection support structure for Key Accounts.

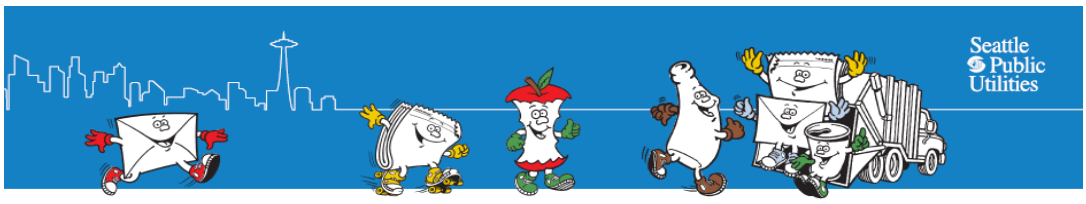
Sector	Target/Program	Activities/Description
Construction & Demolition	**Disposal Bans**	• Delay bans on carpet, plastic film wrap, and tear-off asphalt shingles while viable reuse or recycling options are explored and developed. • Explore ability to deploy field staff to conduct inspections at job sites to ensure disposal ban compliance.
	Reporting Requirements	• Update rules to include revisions to the Facility Certification Program and the Waste Diversion Reporting requirement.
All	**Product Stewardship & Take-back Programs**	• Support Junk Mail and Phone Book Opt-out programs. • Participate in Product Stewardship Institute Phone Book Advisory Committee to develop tool kit for more effective opt-out actions, and continue to promote options. • Explore with King County the potential *for Take It Back Network* expansion to include paint. • Promote the manufacturer-provided King County Secure Medicine Return program that will launch collection sites in Seattle in 2017. As moderate risk waste, pharmaceuticals are not included in the recycling report calculations. • Work with WRAP program to encourage retail take-back of plastic bags and films. • Work with the Sustainable Packaging Coalition and other trade organizations to improve packaging design and labeling to support recycling and composting of relevant packaging.
	Waste Prevention & Recycling	• Establish new commercial and residential immigrant and refugee community engagement, and Trans-creation (culturally appropriate translation) contracts.

5. CONCLUSION

Seattle has once again set an all-time high recycling rate. Disposal is staying low, even as the region experiences record-breaking population and economic growth. This is a remarkable achievement. Nonetheless, Seattle has much more to do to achieve the 2022 recycling goals. Seattle's continued commitment to environmentally responsible solid waste management will get us there.

Please see Seattle's Solid Waste Plan for more background on recycling planning. More detailed sector and historical information may be found on Seattle's web site at Solid Waste Reports--Seattle Public Utilities, including: Prior annual recycling reports; composition studies by sector/garbage/recycling; quarterly and yearly tons for garbage, recycling, organics, and C&D; recycling market and Seattle recycling value; and, surveys.

Recycling continues to be a sound investment by Seattle, as well as a key part of Seattle's climate action strategy.



Attachment A
Letter from SWAC

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City of Seattle
Seattle Public Utilities
Solid Waste Advisory Committee

June 19, 2017

Councilmember Lisa Herbold
Chair, Civil Rights, Utilities, Economic Development & Arts
PO Box 34025
Seattle, WA 98124-4025

Dear Councilmember Herbold and Committee Members,

In June 2017, Seattle Solid Waste Advisory Committee (SWAC) members had the opportunity to review Seattle Public Utilities' (SPU) Draft of the 2016 Annual Recycling Rate Report. Though recycling rates have increased each year for more than a decade, Seattle still needs to take significant steps toward reaching its goal of 70% diversion by 2022, achieving 58.8% at the end of 2016. SWAC strongly supports continuing to push for this goal.

The City needs an 11.2% increase in its recycling rate to achieve its 2022 recycling rate goal of 70%. To achieve this goal, SWAC members recommend continued focus in the multifamily and commercial sectors and increased efforts on waste prevention. SWAC would also like to see SPU take a leadership role in building cross-jurisdictional collaboration and consistency in recycling messaging. This effort is essential for continued success in SPU's outreach and education efforts as well as the region's.

Seattle is growing, with an average of 1,000 new residents arriving every month. The construction cranes from the development of large-scale multifamily complexes and downtown office buildings continue to sprinkle the skyline. As a result, continued investment in these two sectors, as well as in new programs and new ideas will be paramount in helping SPU reach its future goals.

The multifamily sector was a primary focus of SPU in 2016, with an emphasis on continued education and outreach for tenants and property managers as well as data collection of the current waste and recycling infrastructures in existing complexes. These efforts proved successful as the 2016 diversion rate for the multifamily sector is at 38.5%, an increase of 1.7% from last year. However, there is still work to be done with an estimated 2.6% increase in diversion needed every year for multifamily to reach its sector-specific goal of 54% by 2022. The waste and recycling infrastructure data that SPU gathered in 2016 is leading the way to help understand barriers to recycling in the multifamily sector and SWAC would like to see ongoing investments in this effort continue. SWAC believes that the continued investment in research and data collection as well as the development of outreach and compliance programs is an effective way to understand the complexities of the multifamily sector and will help build and support successful recycling programs in multifamily complexes.

The 2016 diversion rate for the commercial sector is 64%, an increase of 1.7% from last year. Like the multifamily sector, the commercial sector is growing and to see a continuous increase in diversion (the commercial sector needs a 9% increase to reach its 2022 sector-specific goal of 73%) there needs to be ongoing support of educational outreach and compliance programs for new and existing businesses. Main points of emphasis should include the new Plastic Bag requirements that go into effect July 1, the food waste ordinance, and recycling and composting best practices. Even if businesses have these programs in place, it is essential they continue to re-evaluate and improve their systems for optimal performance and compliance.

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SWAC also recommends that SPU continue to focus on waste prevention. This effort has been started through the development and support of programs such as Love Food, Stop Waste, Threadcycle and the Junk Mail Opt Out Service. We recommend the continuation of these programs and the establishment of similar campaigns as necessary and worthwhile investments in sustainable waste practices in Seattle.

Additionally, the recycling industry is changing. Although recycling volumes are increasing, the overall tonnage of recyclable material being diverted has not followed the same pattern. That is because packaging materials are becoming lighter and the increase volume of recyclables being collected is not being captured by how we currently measure our recycling rate. SWAC strongly urges SPU to take into consideration the changing shifts in the recycling industry to determine if we are utilizing the appropriate metrics. In addition to weight, are there other metrics or goals we should be considering to help identify and quantify our waste diversion success? Although this would be a large undertaking, SWAC feels it is an important aspect to consider when planning programs and setting future recycling goals.

Finally, in its attempts to reach all Seattle residents, SPU has put a great deal of effort into planning equitable outreach and programs, which will involve creating tools such as transcreated signage and increasing communication with people of color and people for whom English is a second language. They have worked to develop an equity toolkit that helps to guide the development of new programs and ensure an equitable social impact. SWAC commends SPU for its commitment and efforts to better engage the entirety of its customer base. We encourage SPU to continue to be a leader in its efforts to increase equity in city policies and programs.

Thank you for considering our comments and we look forward to providing additional feedback upon your request.

Sincerely,

Holly Griffith: Chair
Quinn Apuzzo: Vice Chair
Emily Newcomer: Secretary

SWAC/CDWAC/WSAC is a Community Advisory Committee to Seattle Public Utilities whose members are appointed by the SPU Director. It is administered and staffed by SPU. This letter reflects the opinions of Committee Members, independent of SPU.

Cc: Bruce Harrell, Chair, Seattle City Council
Sego Jackson, Strategic Advisor, Waste Prevention & Product Stewardship
Sheryl Shapiro, Program Manager, Community Advisory Committees