



2022 Waste Prevention & Recycling Report

Introduction

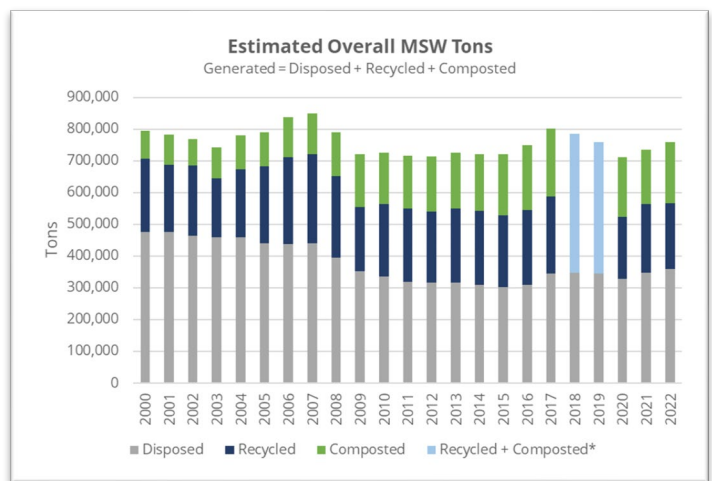
Seattle Public Utilities (SPU) reports to the City Council [annually](#) on the previous year's progress preventing and reducing waste. The annual *Waste Prevention & Recycling Report* is due to City Council on October 1, per [Resolution 32082 \(2023\)](#). The [Solid Waste Advisory Committee \(SWAC\)](#), an advisory body mandated by [RCW 70A.205.110](#) to provide recommendations and informed advice to SPU about solid waste management issues, comments on the annual report. The SWAC's comments appear in a letter to the City Council at the end of this report. Key solid waste results from 2022 appear below, with additional details starting on page 4. Data tables with annual tonnage results by customer sector begin on page 12.

Key results

Seattle's 2022 *Waste Prevention & Recycling Report* shows how municipal solid waste (MSW), and construction and demolition (C&D) debris generation and disposal changed with the end of the COVID-19 Public Health Emergency. In 2022, Seattle saw continued economic recovery and more workers returning to their worksites. The following sections highlight key results for MSW generation and disposal and C&D debris.

Municipal solid waste (MSW) generation

- **Overall MSW generation continued to increase two years after hitting a low during 2020, at the height of COVID-19-related restrictions (3.4% or 25,000 tons).** A dramatic 13.8% (23,400 tons) increase in composted MSW tons, driven almost entirely by the commercial sector, accounted for most of the increase in MSW generation overall.
- **On a sector-by-sector basis, MSW generation increased from 2021 to 2022 in all sectors but single-family, where it declined.** MSW generation increased in the commercial sector (6.3%; 20,000 tons) and declined 1% (2,100 tons) in the single-family sector as more people returned to worksites.



Notes for this chart appear on page 4.

Municipal solid waste (MSW) includes all the garbage, composting, and recyclables that Seattle customers set out for collection or haul to a City transfer station. It includes some materials and items that need special handling, such as old refrigerators and tires.

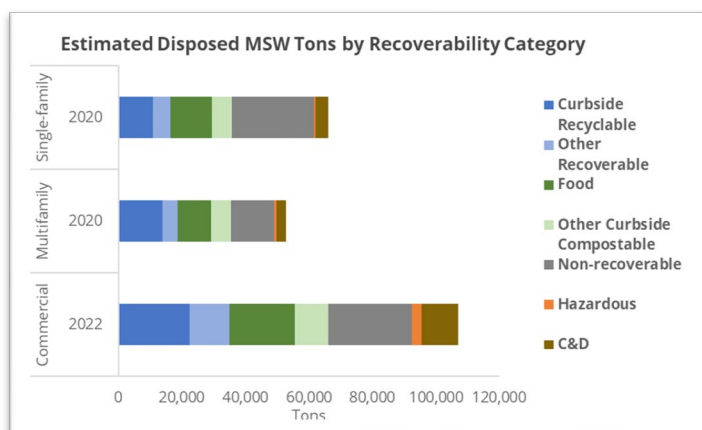
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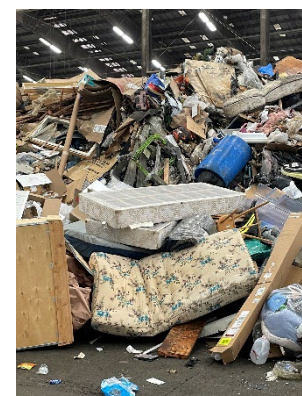
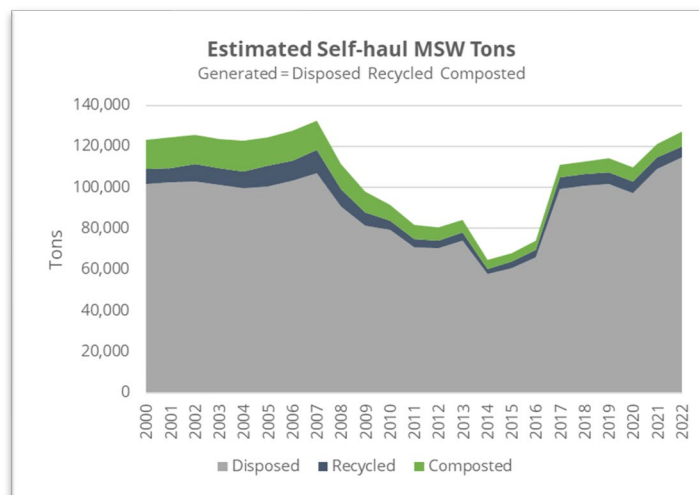
Municipal solid waste (MSW) disposal

- **Disposed MSW tons reached a 14-year high.** Customers landfilled approximately 358,300 tons in 2022, up 3.1% (or 10,700 tons) from 2021, the most material disposed since 2008. More than half of the increase (54%, or 5,800 tons) in disposed waste came from the self-haul sector.
- **Material disposal at the City's transfer stations increased to a 23-year high.** Self-haul disposal rose more than in any other customer sector, 5.3% (5,800 tons), to reach a 23-year high of 114,842 tons. Except for 2020, when the transfer stations briefly limited hours of operation during the COVID-19 Public Health Emergency, self-haul disposal has trended upward since 2015.
- Recent [studies](#) SPU conducted on the composition of single-family, multifamily, and commercial disposed MSW reveal opportunities for waste prevention and diversion. The [studies](#) showed that recoverable recyclable and compostable materials comprise most of disposed MSW, or garbage. Food waste represented the largest share of any single recoverable material headed to the landfill in both the single-family and commercial sectors. SPU considers preventing and reducing organics in the garbage, especially [food waste](#), a top priority.

Food waste presents a sizable waste reduction opportunity



Self-haul disposal reached a 23-year high



Disposed waste at the North Transfer Station, 2022.

Construction and demolition (C&D) debris

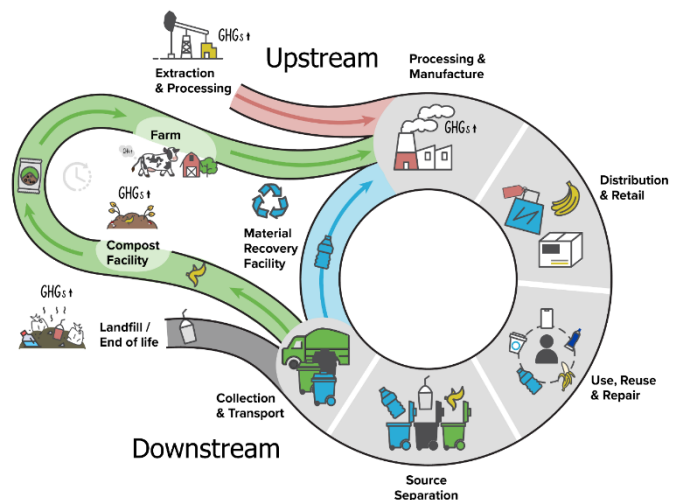
- During a busy year of mergers and acquisitions in the C&D debris industry, the amount of self-reported C&D debris tonnage declined for the second straight year. According to data self-reported to SPU by C&D debris collection, processing, and disposal vendors, C&D debris generation decreased for the second year in a row, down 84,555 tons (18.6%) from 2021 levels. The decline could represent underreporting of C&D sector activities due to significant consolidation of the regional C&D debris collection and recycling industry in 2021-22.

About Seattle's solid waste metrics

Historically, recycle rate goals have driven Seattle's solid waste program. However, as SPU learns more and more about the life cycle impacts of materials (from extraction of raw materials to manufacturing, distribution, use, and end of life), the City seeks to eliminate waste and toxins, prevent pollution, reduce carbon emissions, and conserve natural resources as far "upstream" as possible. Seattle gets closer to Zero Waste by producing and using less, not just recycling more. That's why Seattle's comprehensive solid waste management plan, [2022 Solid Waste Plan Update: Moving Upstream to Zero Waste](#), emphasizes waste prevention for the greatest environmental impact.

Like other leaders in the solid waste industry, Seattle is rethinking longstanding solid waste goals and working to develop new ways of measuring climate, policy, and programmatic impacts, especially in waste prevention. That's why, in 2023, SPU started researching and evaluating the metrics proposed in the 2022 Plan Update. These metrics are described in the graphic below.

SPU looks at the life cycle of materials and products to eliminate waste as far upstream as possible



Source: Seattle Public Utilities.

How does Seattle propose to measure success?



Measure recycling performance through capture rates, or the amount of recyclable materials sorted for recycling divided by the total amount of recyclable materials generated



Standardize measurement of residential and nonresidential waste generation and disposal in a landfill



Develop new targets for limits on and/or reductions in overall waste generation and disposal in a landfill



Determine how to measure reductions in food waste



Research options to measure environmental, social, and economic benefits of avoided or prevented waste

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**Seattle
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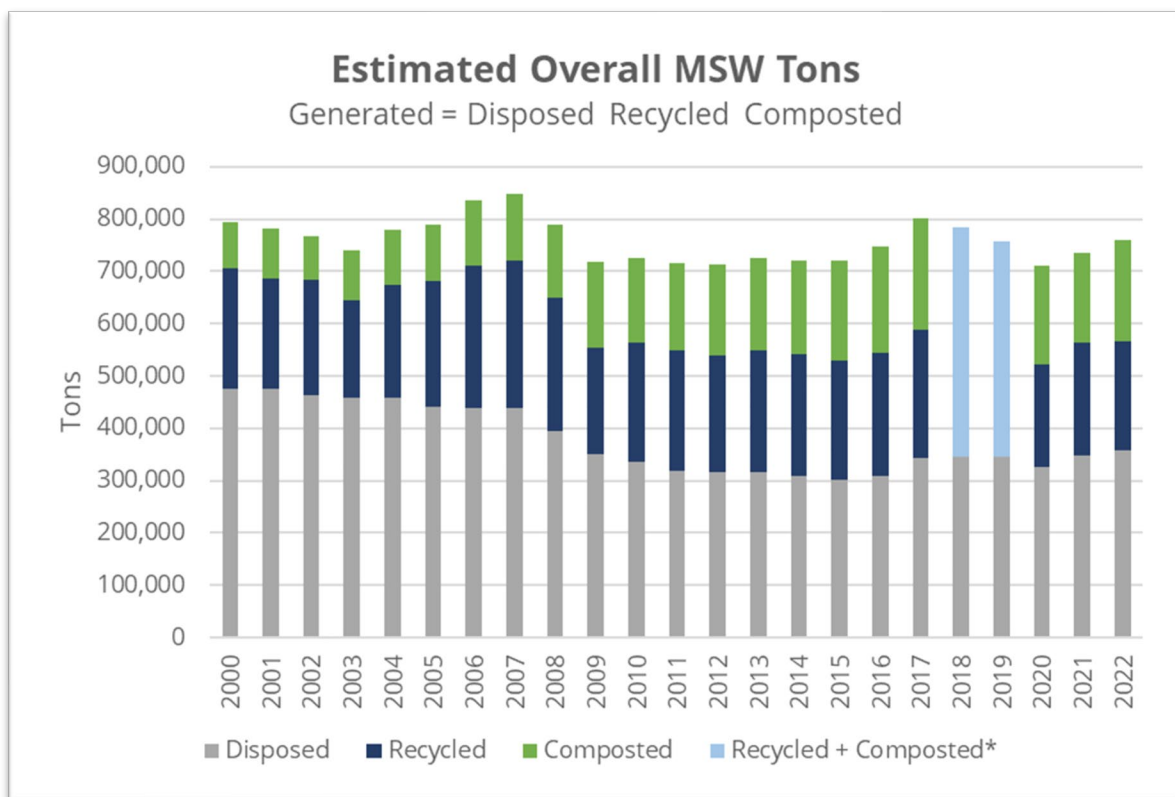
Results details

Estimated overall MSW

- Overall MSW generation continued to increase after hitting a low during the peak of COVID-19 restrictions in 2020, increasing 3.4% (25,000 tons) from 2021 to 2022. MSW generation increased from 2021 to 2022 in all sectors but single-family, where it declined after the COVID-19 Public Health Emergency.
- A dramatic 13.8% (23,400 tons) gain in composted MSW tons, driven almost entirely by a recovering commercial sector, accounted for most of the increase in MSW generation overall.
- Increased disposal comprised the rest of the gains in MSW generation (10,700 tons). In 2022, customers landfilled approximately 358,300 tons, up 3.1% from 2021, and the most material disposed since 2008. The self-haul sector contributed more than half of the increase (54%, or 5,800 tons) in disposed waste and threw away about a third of disposed MSW overall (32%).

About the results

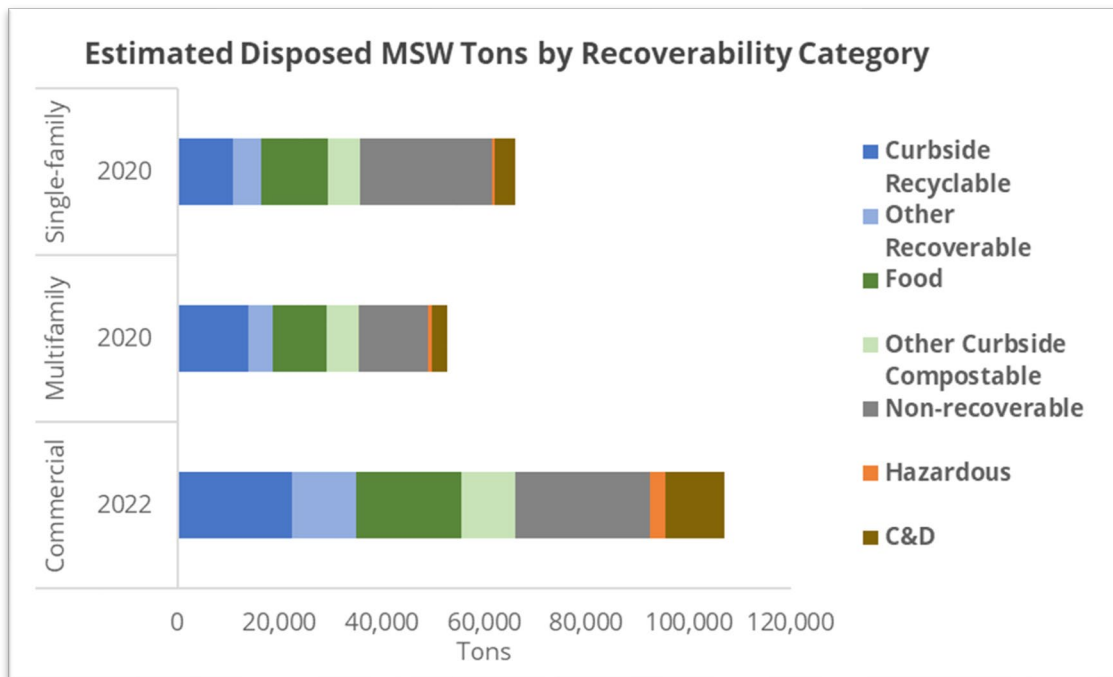
- Percentages may not add up to 100% due to rounding.
- The **recycle rate** is the estimated percentage of municipal solid waste (MSW) diverted from landfill by recycling, composting, and some reuse.
- To estimate some of the commercial and construction and demolition (C&D) debris tonnages, SPU relies on commercial and C&D debris recyclers to [report annually their recycling activities](#), per Seattle Municipal Code, 6.250.



Notes:

- 1) *SPU used an econometric regression analysis to estimate the open market portion of commercial diversion (recycled and composted) overall in 2018 and 2019 due to poor response rates of mandatory recycler reporting (Seattle Municipal Code 6.250). As such, a breakdown of recycled versus composted tonnage is not available for those years.
- 2) In 2022, SPU adjusted commercial recycling and commercial composting estimates for 2021 after conducting additional quality checks.

- Recent [studies](#) SPU conducted on the composition of single-family, multifamily, and commercial disposed waste indicate that most disposed MSW (i.e., garbage) consisted of recoverable materials (i.e., recyclable or compostable materials). Organics represented the largest share of recoverable materials headed for landfill in both the single-family and commercial sectors even though the City collects organic waste for composting and prohibits it from disposal in the garbage. With organics in the garbage contributing [the most greenhouse gas emission from landfills](#), SPU has several efforts underway to [prevent and reduce organics waste](#), especially [food waste](#).



Source: Seattle Public Utilities.

Estimated Disposed MSW (Tons and Percentage) by Customer Sector and Recoverability Category

		Single-family 2020		Multifamily 2020		Commercial 2022	
		Tons	% of tons	Tons	% of tons	Tons	% of tons
Curbside recyclable		10,933	16.5%	13,982	26.5%	22,345	20.9%
Other recoverable		5,410	8.2%	4,695	8.9%	12,701	11.9%
Organics	Food	13,041	19.7%	10,552	20.0%	20,590	19.3%
	Other curbside compostable (organics except for food)	6,455	9.8%	6,237	11.8%	10,506	9.8%
Hazardous		463	0.7%	1,001	1.9%	2,909	2.7%
Construction and demolition (C&D) debris		4,100	6.2%	2,801	5.3%	11,517	10.8%
Nonrecoverable (garbage)		25,759	38.9%	13,451	25.5%	26,350	24.6%

Source: Seattle Public Utilities.

Estimated MSW by sector

Estimated commercial MSW



43.7% of
generated MSW*



32.7% of
disposed MSW



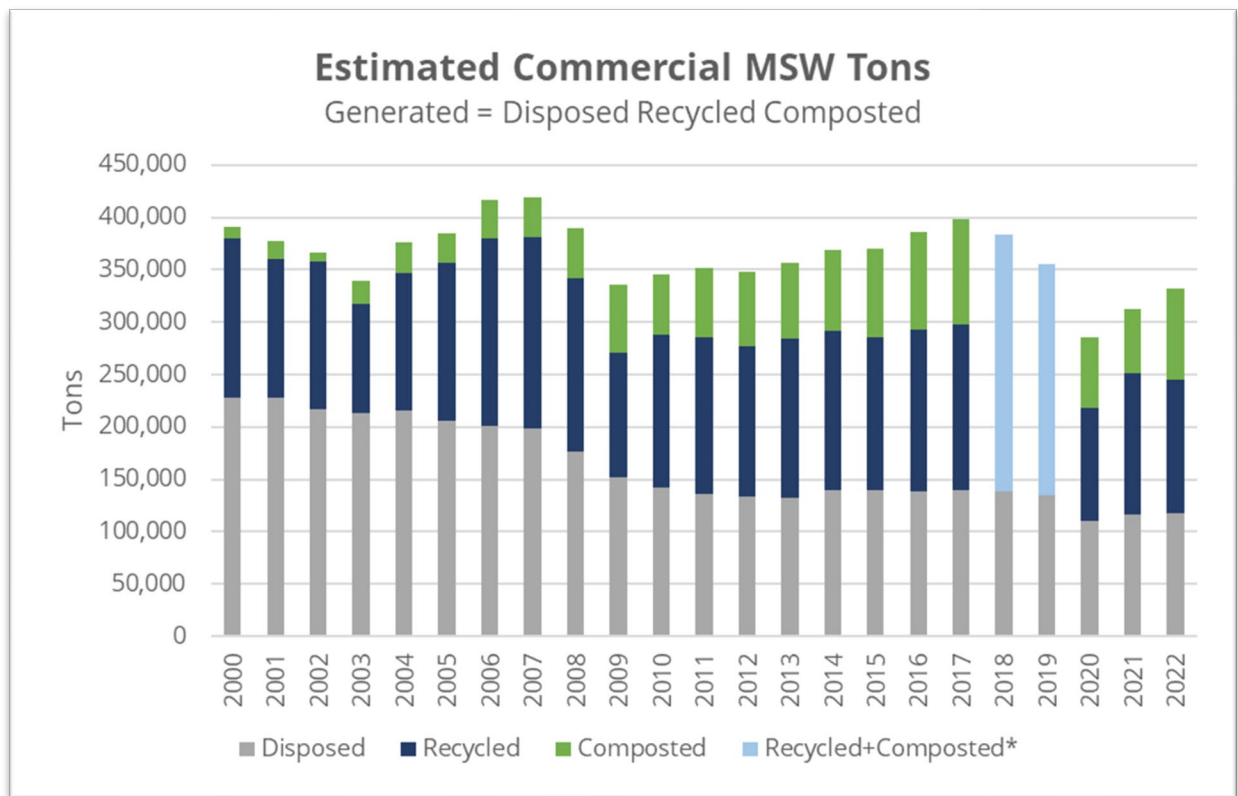
61.7% of recycled
MSW



44.9% of
composted MSW

*This graphic has been designed using resources from Flaticon.com

- After hitting a low during Governor Inslee's Stay Home, Stay Healthy Order in 2020, commercial MSW generation increased for the second straight year, growing 6.3% (20,000 tons) from 2021 to 332,000 tons in 2022. A dramatic 40.6% increase in commercial composted MSW tons drove most of the increase in commercial MSW generation.
- Despite the surge of compostable materials, commercial MSW generation remained well-below pre-COVID-19 Public Health Emergency levels. In fact, commercial MSW tons registered at their third lowest level of the past 23 years.



Notes:

- 1) *SPU used an econometric regression analysis to estimate the open market portion of commercial diversion (recycled + composted) overall in 2018 and 2019 due to poor response rates of mandatory recycler reporting (Seattle Municipal Code 6.250). As such, a breakdown of recycled versus composted tonnage is not available for those years.
- 2) In 2022, SPU adjusted commercial recycling and commercial composting estimates for 2021 after conducting additional quality checks.

Estimated self-haul MSW



16.7% of
generated MSW*



32.1% of
disposed MSW



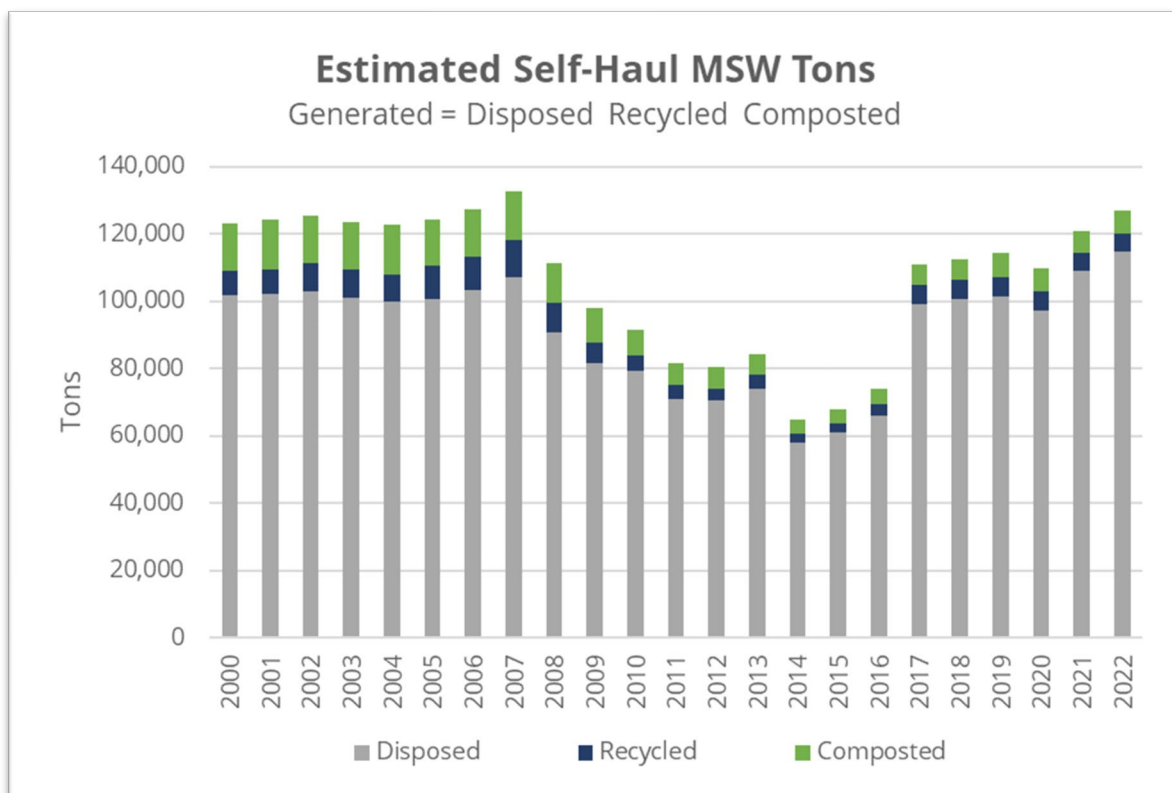
2.5% of recycled
MSW



3.7% of
composted MSW

**This graphic has been designed using resources from Flaticon.com*

- Disposed tons of waste “self-hauled” directly to the City’s two transfer stations reached a 23-year all-time high.
- The amount of material self-hauled to the transfer stations by a mix of residential and nonresidential (e.g., businesses, nonprofits, and institutions) customers increased about 6,100 tons (5.0%) to 127,100 tons, contributing more than half of the increase (54%, or 5,800 tons) in overall disposed waste. As has been the case for about the last nine (9) years, about 90% of that waste went to landfill.
- Except for in 2020, when the transfer stations briefly limited hours of operation during the height of COVID-19-related restrictions, self-haul disposal has trended upward since 2015. Notably, relative to other transfer stations in the region, Seattle has historically had a higher weight threshold for its minimum transfer station fee, charges a lower per ton fee, does not limit construction and demolition debris to small loads, and does not check customer identification to confirm Seattle residency.
- To better understand waste self-hauled to the transfer stations, the City is conducting a waste composition study of self-haul materials in 2023 and will have a report ready in 2024. The study will examine what materials customers are disposing of at the transfer stations and which customers use the stations. SPU last conducted a [self-haul waste composition study](#) in 2017-2018.



Estimated single-family MSW



28.1% of
generated MSW*



19.0% of
disposed MSW



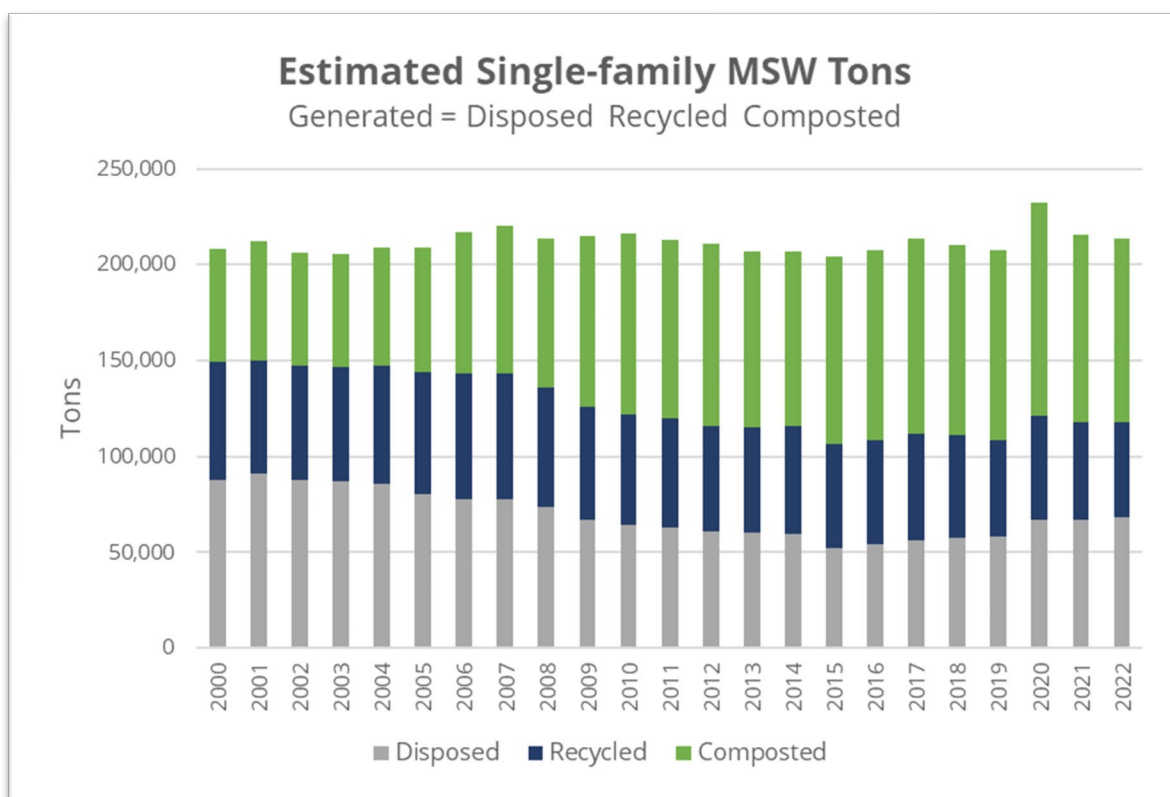
24.1% of recycled
MSW



49.4% of
composted MSW

**This graphic has been designed using resources from Flaticon.com*

- Waste generation levels for single-family households fell again slightly, down 1.0% or 2,200 tons. 2022 marks the second year that single-family waste generation declined after reaching its highest point during the height of COVID-19-related restrictions in 2020.
- Even so, single-family waste levels, as a share of overall MSW, remained slightly elevated in 2022 compared to pre-pandemic. This could be due, at least in part, to the relatively high numbers of Seattle workers continuing to telecommute at least some of the time after the COVID-19 Public Health Emergency.¹



¹ Balk, Gene. "Only one major city ranks higher than Seattle for remote work." *Seattle Times*, 15 September 2022.
<https://www.seattletimes.com/seattlenews/onlyonemajorcityrankshigherthanseattleforremotework/>.

Estimated multifamily MSW



11.4% of
generated MSW*



16.3% of
disposed MSW



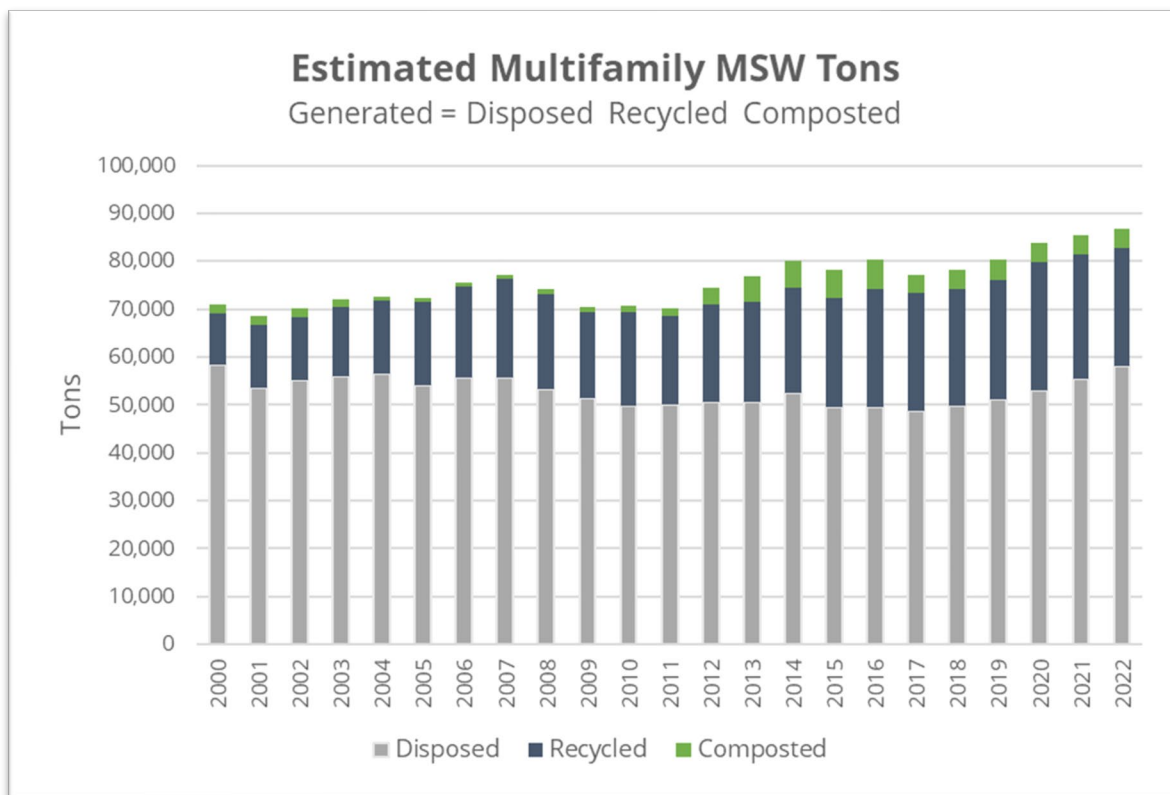
11.8% of recycled
MSW



2.0% of
composted MSW

**This graphic has been designed using resources from Flaticon.com*

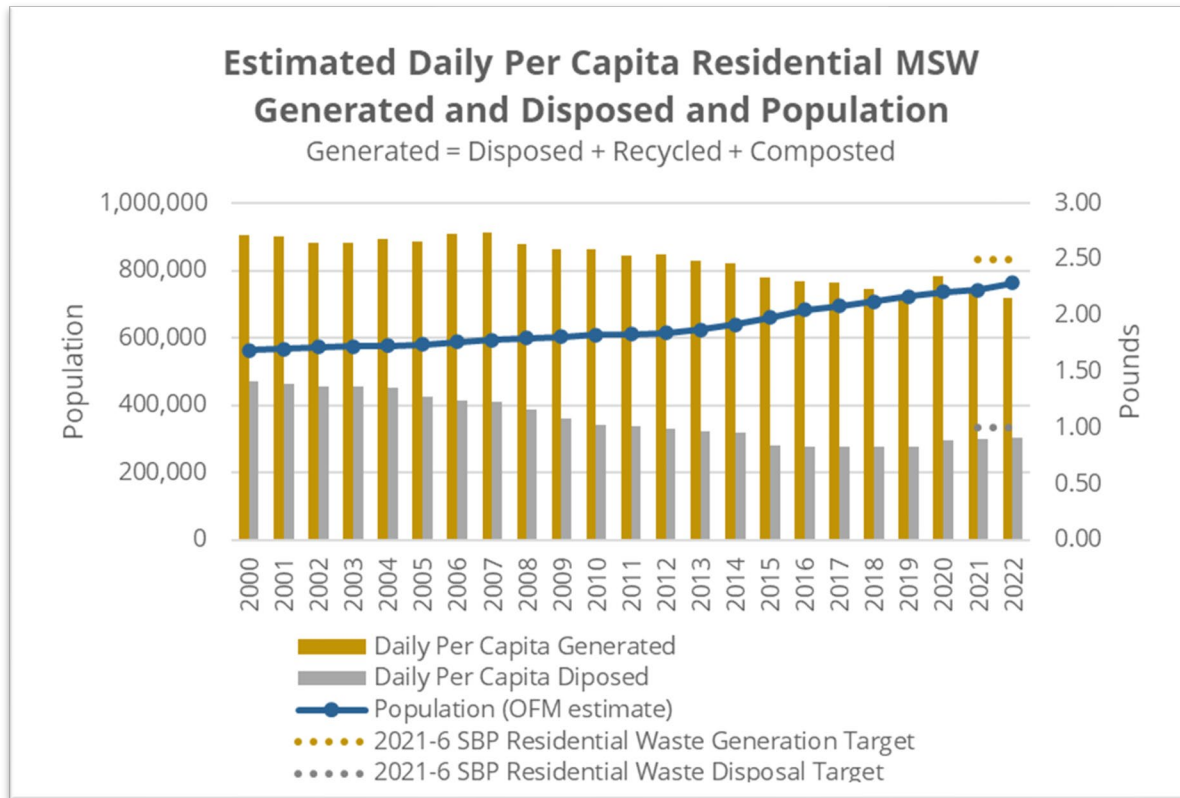
- As the population living in multifamily dwellings has increased, so too has multifamily waste generation. In 2022, multifamily households broke their own record for MSW generation, creating more waste (86,700 tons) than in the past 22 years. Disposal increased 4.8% (2,700 tons) and composted tons increased 5.2% (195 tons), while recycling declined (5.5% or 1,400 tons).
- Notably, multifamily MSW generation has grown steadily since 2017, without peaking during the height of the COVID-19 lockdown in 2020 like the single-family sector or reaching low points during the COVID-19 Public Health Emergency like the commercial and self-haul sectors.
- However, relative to other customer sectors, multifamily residents continued to make the least waste of any MSW sector, contributing only 11.4% to the overall generated MSW and 16.3% of the overall disposed MSW.



Estimated residential MSW (single-family and multifamily)

- As the population continued to grow and the decline in single-family MSW generation (2,100 tons) outweighed gains in multifamily MSW generation (1,400 tons), daily per person residential MSW generation decreased to 2.16 pounds per day. Since 2013, the City has met its target of no more than 2.5 pounds of residential waste generated per person per day.
- Population and disposal grew at about the same rate in 2022, so daily per person residential waste disposal remained consistent with 2021 levels at 0.91 pounds. The City's target for residential per person disposal is no more than 1 pound per person per day.

- Long-term trends show residential disposal declining over time despite significant population growth. As detailed in recent articles, “[A Triple Win](#)” in *Resource Recycling*² and “[Seattle’s Winning Strategy for Managing Organics](#)” in *BioCycle*³, Seattle has achieved long-term declines in residential disposal due to strategic implementation of Zero Waste incentives, programs, and regulations.



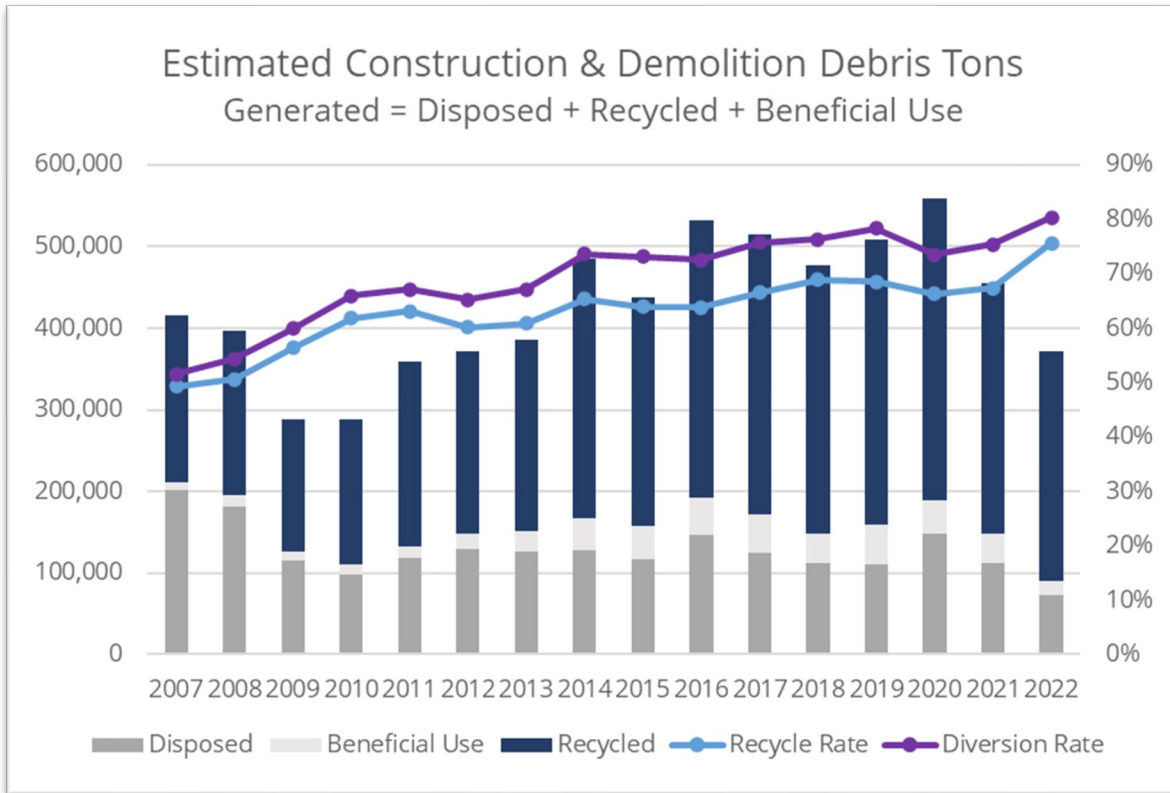
Estimated construction and demolition (C&D) debris

- According to data self-reported to the City by construction and demolition debris collection, processing, and disposal vendors, C&D debris generation fell for a second straight year after reaching an all-time high in 2020.⁴
- The decline could represent underreporting of C&D sector activities due to significant consolidation of the regional construction and demolition debris collection and recycling industry in 2021-22. For instance, several C&D debris companies that operated in 2022 but were bought out or closed prior to the end of the year did not submit annual recycler reporting to SPU in 2023.

² Morris, Jeffrey. “A Triple Win.” *Resource Recycling*, 2020 April, <https://resourcerecycling.com/recycling/2020/05/14/atriplewin/>.

³ Morris, Jeffrey. “Seattle’s Winning Strategy for Managing Organics.” *BioCycle*, 2020 May, <https://www.biocycle.net/seattleswinningstrategymanagingorganics/>.

⁴ Per Seattle Municipal Code 6.250, Seattle requires recycling collectors and processors to report their recycling activities to obtain a [Recycler License](#) that allows them to operate in the City. SPU verifies data reported by C&D recyclers against monthly reports sent by [Qualified Facilities](#).



Notes:

- 1) SPU estimates C&D debris disposal and beneficial use tons based on C&D companies' self-reporting via the [Qualified Facilities Monthly Report](#) and the [Annual Recycling and Reuse Report](#).
- 2) SPU estimates C&D debris recycled tons based on C&D companies' self-reporting in the [Annual Recycling and Reuse Report](#).
- 3) In 2020, SPU updated disposal estimates for 2018 and 2019 following additional data analysis.
- 4) In 2022, SPU updated disposal estimates for 2021 after finding and correcting a calculation error.

Data tables - Annual tonnages by customer sector

The following sections include data tables with annual tonnages by customer sector. The tables include MSW tonnage by sector for the years 2000-2022 and C&D debris tonnage for the years 2007-2022.

Estimated overall MSW

Estimated Overall MSW Tons, 2000-2022

Year	Generated	Disposed	Recycled	Composted	Recycle Rate
2000	793,842	476,132	230,939	86,771	40.0%
2001	782,974	475,270	211,591	96,113	39.3%
2002	768,462	462,996	221,381	84,085	39.8%
2003	741,337	458,011	186,439	96,888	38.2%
2004	780,346	458,405	215,369	106,572	41.3%
2005	790,456	440,694	241,896	107,867	44.2%
2006	836,499	438,381	272,578	125,540	47.6%
2007	848,759	439,407	280,515	128,838	48.2%
2008	789,688	394,828	255,842	139,017	50.0%
2009	719,424	351,689	201,814	165,921	51.1%
2010	724,469	335,570	227,204	161,694	53.7%
2011	715,996	319,341	229,828	166,826	55.4%
2012	713,821	315,983	222,713	175,125	55.7%
2013	724,385	317,259	232,281	174,845	56.2%
2014	721,270	309,515	232,587	179,168	57.1%
2015	720,705	302,467	226,337	191,901	58.0%
2016	748,051	308,379	236,555	203,118	58.8%
2017	800,380	343,922	243,936	212,522	57.0%
2018	785,223	346,322	NA	NA	55.9%
2019	757,466	345,559	NA	NA	54.4%
2020	711,619	327,114	195,220	189,285	54.0%
2021	734,420	347,549	216,960	169,912	52.7%
2022	759,357	358,268	207,798	193,291	52.8%

Estimated commercial MSW

Estimated Commercial MSW Tons, 2000-2022

Year	Generated	Disposed	Recycled ¹	Composted ¹	Recycle Rate
2000	391,406	228,417	150,949	12,040	41.6%
2001	377,927	228,405	132,095	17,427	39.6%
2002	366,224	217,195	140,475	8,554	40.7%
2003	339,844	213,247	104,450	22,147	37.3%
2004	375,739	216,112	130,345	29,282	42.5%
2005	385,093	205,637	150,817	28,639	46.6%
2006	416,564	201,231	178,309	37,023	51.7%
2007	418,979	198,968	182,694	37,317	52.5%
2008	390,267	176,774	165,432	48,060	54.7%
2009	335,992	151,398	119,051	65,542	54.9%
2010	345,692	142,180	145,450	58,061	58.9%
2011	351,214	135,536	150,102	65,576	61.4%
2012	347,673	134,089	143,296	70,288	61.4%
2013	356,480	132,401	152,340	71,739	62.9%
2014	369,407	139,457	151,982	77,967	62.2%
2015	370,037	139,557	146,256	84,224	62.3%
2016	385,846	138,804	153,871	93,171	64.0%
2017	398,422	139,317	158,480	100,626	65.0%
2018	384,139	138,009	NA	NA	64.1%
2019	355,453	134,686	NA	NA	62.1%
2020	286,036	109,891	108,190	67,955	61.6%
2021	312,420	115,869	134,847	61,704	62.9%
2022	331,984	117,061	128,146	86,777	64.7%

Notes:

- 1) *SPU used an econometric regression analysis to estimate the open market portion of commercial diversion (recycled + composted) overall in 2018 and 2019 due to poor response rates of mandatory recycler reporting (Seattle Municipal Code 6.250). As such, a breakdown of recycled versus composted tonnage is not available for those years.
- 2) In 2022, SPU adjusted commercial recycling and commercial composting estimates for 2021 after conducting additional quality checks.

Estimated self-haul MSW

Estimated Self-haul MSW Tons, 2000-2022

Year	Generated	Disposed	Recycled	Composted	Recycle Rate
2000	123,024	101,883	7,109	14,032	17.2%
2001	124,453	102,305	7,114	15,034	17.8%
2002	125,620	102,891	8,363	14,366	18.1%
2003	123,597	101,232	8,209	14,156	18.1%
2004	122,835	99,766	8,164	14,905	18.8%
2005	124,364	100,499	9,940	13,925	19.2%
2006	127,444	103,429	9,738	14,277	18.8%
2007	132,545	107,098	11,200	14,247	19.2%
2008	111,309	90,894	8,522	11,893	18.3%
2009	97,893	81,565	6,179	10,149	16.7%
2010	91,618	79,293	4,643	7,682	13.5%
2011	81,776	71,033	3,949	6,794	13.1%
2012	80,568	70,474	3,501	6,593	12.5%
2013	84,341	74,019	4,032	6,290	12.2%
2014	64,681	57,847	2,635	4,199	10.6%
2015	67,993	60,938	2,888	4,167	10.4%
2016	73,923	65,840	3,693	4,390	10.9%
2017	111,098	99,290	5,681	6,127	10.6%
2018	112,550	100,827	5,595	6,127	10.4%
2019	114,234	101,506	5,771	6,957	11.1%
2020	109,844	97,320	5,744	6,780	11.4%
2021	121,007	109,046	5,448	6,513	9.9%
2022	127,096	114,842	5,107	7,147	9.6%

Estimated single-family MSW

Estimated Single-family MSW Tons, 2000-2022

Year	Generated	Disposed	Recycled	Composted	Recycle Rate
2000	208,468	87,499	61,972	58,997	58.0%
2001	211,982	91,072	59,107	61,803	57.0%
2002	206,474	87,834	59,200	59,440	57.5%
2003	205,748	87,426	59,433	58,889	57.5%
2004	209,132	86,029	61,474	61,629	58.9%
2005	208,675	80,478	63,715	64,482	61.4%
2006	216,946	78,078	65,371	73,496	64.0%
2007	220,128	77,494	66,121	76,513	64.8%
2008	213,889	73,961	61,956	77,972	65.4%
2009	215,015	67,229	58,786	89,000	68.7%
2010	216,484	64,309	57,578	94,597	70.3%
2011	212,861	62,779	57,234	92,848	70.5%
2012	211,030	60,906	55,317	94,807	71.1%
2013	206,603	60,302	55,023	91,278	70.8%
2014	206,992	59,772	56,065	91,155	71.1%
2015	204,397	52,529	54,314	97,554	74.3%
2016	207,804	54,298	54,213	99,293	73.9%
2017	213,709	56,541	55,123	102,045	73.5%
2018	210,289	57,725	53,582	98,982	72.5%
2019	207,538	58,191	50,505	98,842	72.0%
2020	232,038	66,877	54,433	110,728	71.2%
2021	215,678	67,073	50,677	97,928	68.9%
2022	213,512	68,131	49,976	95,405	68.1%

Estimated multifamily MSW

Estimated Multifamily MSW Tons, 2000-2022

Year	Generated	Disposed	Recycled	Composted	Recycle Rate
2000	70,944	58,333	10,909	1,702	17.8%
2001	68,611	53,487	13,275	1,849	22.0%
2002	70,144	55,076	13,343	1,725	21.5%
2003	72,149	56,106	14,347	1,696	22.2%
2004	72,640	56,498	15,386	756	22.2%
2005	72,325	54,080	17,424	821	25.2%
2006	75,545	55,643	19,159	743	26.3%
2007	77,108	55,847	20,501	760	27.6%
2008	74,223	53,199	19,932	1,092	28.3%
2009	70,524	51,497	17,798	1,230	27.0%
2010	70,675	49,788	19,532	1,355	29.6%
2011	70,145	49,993	18,544	1,608	28.7%
2012	74,549	50,514	20,599	3,437	32.2%
2013	76,960	50,537	20,886	5,538	34.3%
2014	80,189	52,439	21,905	5,845	34.6%
2015	78,278	49,443	22,880	5,956	36.8%
2016	80,478	49,437	24,778	6,263	38.6%
2017 ¹	77,150	48,773	24,652	3,725	36.8%
2018	78,245	49,760	24,520	3,965	36.4%
2019	80,241	51,176	24,802	4,250	36.2%
2020	83,701	53,026	26,853	3,822	36.6%
2021	85,316	55,561	25,988	3,767	34.9%
2022	86,765	58,234	24,569	3,962	32.9%

Notes:

- 1) Before 2017, the combined residential (single-family and multifamily) composted tonnage was measured and then attributed to either the single-family or multifamily sector based on estimates. Starting in 2017, composted tonnage data by individual residential sector became available. The adjustment in calculation methodology likely explains the shift in the recycling rate in 2017.

Estimated residential MSW (single-family and multifamily)

Estimated Residential MSW Tons, Population, and Pounds Per Person Rates, 2000-2022

Year	Tons			Population estimate ¹	Pounds per person per day	
	Generated	Disposed	Recycled and Composted		Generated	Disposed
2000	279,412	145,832	133,580	563,376	2.72	1.42
2001	280,593	144,559	136,034	567,491	2.71	1.40
2002	276,618	142,910	133,708	572,854	2.65	1.37
2003	277,897	143,532	134,365	574,530	2.65	1.37
2004	281,772	142,527	139,245	576,906	2.68	1.35
2005	281,000	134,557	146,442	579,779	2.66	1.27
2006	292,491	133,721	158,770	587,755	2.73	1.25
2007	297,235	133,341	163,895	594,339	2.74	1.23
2008	288,112	127,160	160,952	599,055	2.64	1.16
2009	285,539	118,725	166,814	603,155	2.59	1.08
2010	287,159	114,097	173,062	608,660	2.59	1.03
2011	283,006	112,772	170,234	611,249	2.54	1.01
2012	285,579	111,420	174,159	614,283	2.55	0.99
2013	283,563	110,839	172,724	624,045	2.49	0.97
2014	287,182	112,211	174,971	638,784	2.46	0.96
2015	282,675	101,972	180,703	660,908	2.34	0.85
2016	288,282	103,735	184,547	684,136	2.31	0.83
2017	290,859	105,315	185,544	694,513	2.29	0.83
2018	288,534	107,485	181,049	707,555	2.23	0.83
2019	287,779	109,367	178,412	724,144	2.18	0.83
2020	315,739	119,903	195,836	737,015	2.35	0.89
2021	300,994	122,634	178,360	742,400	2.22	0.91
2022	300,277	126,365	173,912	762,500	2.16	0.91

Notes:

- 1) SPU uses April 1 population estimates provided by the Washington State Office of Financial Management (OFM). For this report, SPU updated the population estimates for 2010-2020 using OFM's Intercensal Estimates of April 1 Population and Housing, 2010-2020: https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fofm.wa.gov%2Fsites%2Fdefault%2Ffiles%2Fpublic%2Fdataresearch%2Fpop%2Fapril1%2Fseries%2Fofm_april1_intercensal_estimates_2010_2020.xlsx&wdOrigin=BROWSELINK.
- 2) Current (2022) April 1 population estimates from OFM appear on the City of Seattle's website: <https://seattlecitygis.maps.arcgis.com/apps/dashboards/c8cfcb827e564623a6fa3af6360141fe>.

Estimated construction and demolition (C&D) debris

Estimated Construction & Demolition Debris Tons, 2007-2022

Year	Generated	Disposed ¹	Recycled ²	Beneficial Use ¹	Recycle Rate	Diversion Rate
2007	415,801	201,156	204,907	9,738	49.3%	51.6%
2008	397,052	181,241	200,851	14,961	50.6%	54.4%
2009	288,551	115,446	162,742	10,362	56.4%	60.0%
2010	288,957	98,309	178,794	11,854	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	437,883	117,343	280,205	40,336	64.0%	73.2%
2016	532,126	146,139	339,478	46,509	63.8%	72.5%
2017	514,858	125,074	342,755	47,029	66.6%	75.7%
2018 ³	476,433	112,900	328,568	34,965	69.0%	76.3%
2019 ³	507,793	110,275	348,032	49,486	68.5%	78.3%
2020 ⁴	559,575	148,209	370,942	40,424	66.3%	73.5%
2021	455,800	111,998	307,050	36,752	67.4%	75.4%
2022	371,246	72,837	280,909	17,500	75.7%	80.4%

Notes:

- 1) SPU estimates C&D debris disposal and beneficial use tons based on C&D companies' self-reporting via the [Qualified Facilities Monthly Report](#) and the [Annual Recycling and Reuse Report](#).
- 2) SPU estimates C&D debris recycled tons based on C&D companies' self-reporting in the [Annual Recycling and Reuse Report](#).
- 3) In 2020, SPU updated disposal estimates for 2018 and 2019 following additional data analysis.
- 4) In 2022, SPU updated disposal estimates for 2021 after finding and correcting a calculation error.

Solid Waste Advisory Committee comment letter

September 28, 2023

Councilmember Alex Pedersen
Chair, Transportation and Seattle Public Utilities Committee
PO Box 34025
Seattle, WA 98124-4025

Dear Councilmember Pedersen and Committee Members,

In September 2023, the Seattle Public Utilities (SPU) Solid Waste Advisory Committee (SWAC) had the opportunity to review a draft of SPU's 2022 Annual Waste Prevention & Recycling (WP&R) Report.

The City of Seattle continues to grow in population as the community returns to "life as usual" post-pandemic. In 2022, municipal solid waste (MSW) increased in all sectors except the single-family sector. With the "new norms" settling in post-pandemic, we see new opportunities to work with the community to reduce overall MSW generation and focus more on reuse.

Throughout the report, we see increases in waste generation for all sectors. We encourage the City of Seattle to continue to look for opportunities to increase access to composting and recycling for all customers and look for additional methods of outreach to educate residents on "What Goes Where". Based on the overall waste composition data on recoverable MSW, we see the biggest opportunity to reduce waste with curbside recyclables and food waste. SWAC sees this as an opportunity to increase SPU's waste diversion and keep more materials out of the landfill.

We noted that the 2022 WP&R report does not include details on legislative, Community Engagement, Extended Producer Reporting (ERP), and Diversity, Equity, and Inclusion (DEI) activities as have been outlined in previous years. This information could help to align strategies and decisions based on the community's involvement with MSW. We look forward to hearing more from SPU on these initiatives in the years to come.

The SWAC reviewed the 2022 WP&R report as a group, and our comments and recommendations can be found below.

Commercial MSW

With more residents spending time in Seattle and spending time away from home post-pandemic, there was another increase in the commercial MSW generation of 6.3% from last year. Although there was an increase in MSW generated and disposed in this sector, there was a drastic 40% increase in commercial composted tonnage. The overall tonnage generated and disposed of by businesses remains below pre-pandemic levels.

To sustain these lower levels of generation and disposal, SWAC sees an opportunity for SPU to conduct a study on how commercial sector customers can sustain reduced levels of generation and develop programs and support for these best practices. We also recommend further analyzing commercial sector data based on business type. This may provide a better understanding of the generation of each sub-sector and help inform tailored outreach solutions.

Single-Family MSW

Single-family households reduced overall MSW generated in 2022 by 1% from the previous year. This sector saw a slight increase in the MSW disposed in the landfill while recycled and composted MSW decreased.

With more Seattle residents working from home or in hybrid positions, SWAC sees the single-family household as an area of opportunity for continued education and outreach. In the Estimated Disposed MSW Tons by Recoverability Category data, we see opportunities for further education focused on keeping curbside recyclables and food waste out of garbage containers. Providing targeted outreach for these items and additional resources for single-family residents to help identify recyclable items could support a reduction in overall landfill disposal.

Self-Haul MSW

MSW generated by the self-haul sector continues to increase year over year. In 2022, there was an increase of disposed and composted tonnage, however, the recycled tonnage decreased. SWAC strongly supports SPU's initiative to complete a waste composition study of self-hauled materials to better understand how the transfer station is being used by the community and the types of materials that are being disposed of. We hope that this study will generate findings that will allow SPU to offer additional recycling and reuse options. SWAC looks forward to reviewing the findings of this report in 2024.

Multifamily MSW

In 2022, the multifamily sector increased overall waste generation by roughly 84,000 tons from the prior year. The main contributors to this increase were landfill disposal and compost, which grew 4.8% and 5.2% respectively. Even with the overall increases in MSW generated in 2022, this sector continues to generate the lowest level of waste compared to the single-family and commercial sectors. We continue to see the recycling tonnage decline in 2022 by 5.5% from last year's generation.

With more residents moving to Seattle, it is expected to see an increase in the overall waste generated in the multifamily sector. SWAC encourages SPU to continue to offer programs that increase access to compost and recycling at multifamily sites in an effort to increase waste diversion within this sector. We also encourage SPU to continue to work with new buildings to develop accessible waste solutions for all residents and seek additional opportunities to offer this same level of access for existing buildings.

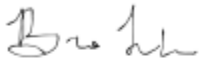
Construction & Demolition Debris (C&D)

Tonnage within the Construction & Demolition sector decreased significantly from 2021 to 2022. With many C&D recycling companies closing or being bought out, it is concluded that the reduction in tonnage reported is likely due to these businesses not submitting reports prior to closing their operation.

SWAC encourages SPU to develop reporting standards in support of obtaining access to real-time data on materials that are disposed of at these facilities. We also encourage SPU to continue to strengthen the Salvage Assessment requirement to encourage reuse and salvaging over disposal.

Thank you for considering our comments and recommendations.

Sincerely,

A handwritten signature in cursive script, appearing to read "Brie Kuhn".

Brie Kuhn, Chair, SWAC

SWAC is one of Seattle Public Utilities' Community Advisory Committees. Its members are appointed by the SPU CEO/General Manager. It is administered and staffed by SPU. This letter reflects the opinions of Committee Members, independent of SPU.

Cc:

Andrew Lee, General Manager/CEO, Seattle Public Utilities
Jeff Fowler, Deputy Director, Solid Waste Line of Business
Bob Hennessey, SPU City Council Liaison

Stephanie Schwenger, Solid & Hazardous Waste Lead Planner
Quinn Apuzzo, SWAC Coordinator