



Lane County Supplement to the 2023 Oregon Waste Composition Studies

March 5, 2026



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Table of contents

2023 Oregon Solid Waste Composition Lane County Supplement..... 4

Disposal study..... 5

Disposed waste results..... 7

Inbound recycling study 9

 What is acceptable in commingled recycling 11

Methodology..... 11

Acknowledgements 12

Abbreviations used in this report:

FSW = Food Serviceware

USCL – Uniform Statewide Collection List, defined in Oregon Revised Statues 459A.914

2023 Oregon Solid Waste Composition Lane County Supplement

March 5, 2026

The Oregon Waste Composition Study for 2023 is a state-wide study of the composition of municipal solid waste generated in Oregon across disposal, inbound commingled recycling, and outbound recycling commodities and waste streams after being sorted at commingled recycling processing facilities. To supplement the statewide emphasis of the study, Lane County, Marion County, Deschutes County, and Metro all participated in and contributed to the study to obtain more detailed information about the wastes within each of their respective jurisdictions. Lane County contributed samples to both the disposed waste composition study, and the inbound commingled recycling composition study recycling studies.

This report is a supplement to the overall 2023 Oregon Waste Composition Study report. Aspects such as study methodology and statewide results will be covered briefly here and will be presented in more detail in the overall 2023 statewide study report. This supplement concentrates on the results from the Lane County samples, as well as present quantity information for the Lane County wastes.

The disposal study was conducted by obtaining samples of disposed waste directly from route trucks, drop boxes, self-haul vehicles, and residue from mixed solid waste processing facilities, sorting the waste into different material categories, weighing each component, and then combining these results with disposal tonnage reported by landfills and energy recovery facilities to determine the total amount of each material being disposed that was generated in Oregon. Similar methodology was used for the inbound commingled recycling study, with the large majority of samples coming from recycling route trucks and relatively few from depots or separate loads from individual businesses. The total amount of commingled recycling collected in each jurisdiction was derived from Oregon's annual material recovery survey.

Disposal study

The statewide disposal composition study includes municipal solid waste and construction and demolition debris disposed at landfills, transfer stations, and incinerators in Oregon, or transported out-of-state for disposal. The study excluded whole loads of sewage sludge, industrial waste, inert rock, dirt, asphalt, and similar material specified in Oregon Revised Statutes 459A.010 (3)(d), matching the waste streams that are excluded from counting in Oregon’s annual material recovery survey. The intent of the Lane County disposal study was to determine the composition of Lane County waste going to Short Mountain Landfill, the Delta Sand and Gravel Landfill, and the county’s transfer stations by sampling the relevant points of disposal in Lane County in proportion to the amount of each waste stream directly received at each facility listed in Table 1. Sampling was conducted during the months of March, June, September, and December of 2023.

Lane County participated by paying to have 90 additional disposal site samples collected and sorted from within the county. DEQ also contributed samples in addition to those that would have been taken for the statewide study, with a goal of obtaining at least 150 samples from Lane County. Table 1 summarizes the number of samples from each facility across the various load types (substreams). Nearly half of the samples were collected from Short Mountain Landfill, representing a mix of substreams. Seventy-three of the 150 samples represented the self-haul substream, predominantly from transfer stations.

Table 1. Number of samples collected for each waste substream and waste facility

Location	Residential Route Truck	Mixed Route Truck	Commercial Route Truck	Compacting Drop Box	Loose Drop Box	Self Haul	Mixed Solid Waste Processing	Total
Short Mtn Landfill	13	13	6	6	20	12	3	73
Glenwood TS	0	0	0	0	0	33	0	33
Florence TS	2	1	0	1	1	6	0	11
Cottage Grove TS	0	0	0	0	0	6	0	6
Veneta TS	1	0	0	0	0	6	0	7
Cottage Grove Garbage	1	0	0	0	0	0	0	1
EcoSort	0	0	1	0	0	0	8	9
Delta Sand & Gravel	0	0	0	0	0	10	0	10
Total	17	14	7	7	21	73	11	150

Tables 2 and 3 summarize Lane County waste reported quarterly to DEQ throughout 2023 by facility, source, and substream. DEQ collected samples of waste directly unloaded at Lane County facilities, but for logistical reasons it was not practical to collect samples of waste unloaded directly at the out-of-county Coffin Butte Landfill or Browns Island Landfill. The total waste going directly to these facilities was 4,456 tons, mainly from Junction City, representing about 1.5% of Lane County’s total waste. Although DEQ did not collect samples at these two landfills, tonnage for each substream was included in Table 3 and in the calculations of overall Lane County waste composition. Short Mountain Landfill reported 88% of the solid waste disposed of in 2023, but all of the transfer station waste disposed at Short Mountain was sampled at the transfer stations instead of at the landfill. Route and self-haul substreams made up 45% and 31% of the 2023 total tonnage, respectively. The tonnages for each substream in Table 3 are DEQ’s best estimate based on available data.

Table 2: 2023 Quarterly tons of Lane County waste disposed by facility as reported to DEQ

Facility	Source	Q1 2023	Q2 2023	Q3 2023	Q4 2023	Total
Browns Island Demo Landfill	Self-haul	5	2	5	0	12
Delta Sand & Gravel Demo Landfill	Self-haul	2,858	3,700	3,686	2,143	12,387
Coffin Butte Landfill	Hauler compacted	1,152	1,182	1,145	711	4,190
Coffin Butte Landfill	Hauler Uncompacted	78	40	85	0	203
Coffin Butte Landfill	Self-haul	4	9	17	21	51
EcoSort to Dry Creek Landfill	Mainly route trucks	0	0	3,538	10,058	13,596
Short Mountain Landfill	Hauler compacted	27,748	29,740	25,780	23,738	107,005
Short Mountain Landfill	Hauler Uncompacted	7,094	7,091	6,027	5,054	25,267
Short Mountain Landfill	Self-haul	2,676	2,889	2,834	2,691	11,089
Short Mountain Landfill	Transfer Stations	27,822	31,030	32,235	26,687	117,775
EcoSort To Georgia Pacific Juno	Route trucks	2,417	1,290	1,395	436	5,537
Total		71,853	76,973	76,746	71,539	297,112

Table 3: Tons of Lane County waste disposed by substream and quarter.

Substream	Q1 2023	Q2 2023	Q3 2023	Q4 2023	Total
Route	32,229	33,468	33,579	35,204	134,479
<i>Residential Route</i>	15,445	16,039	16,092	16,871	64,447
<i>Commercial Route</i>	6,519	6,770	6,793	7,121	27,203
<i>Mixed Route</i>	10,264	10,659	10,694	11,212	42,829
Compacting drop box	2,250	2,194	1,778	2,210	8,432
Loose drop box	7,223	7,173	6,403	5,785	26,585
Self-haul	20,554	25,546	26,001	20,321	92,422
Mixed waste processing residue	9,597	8,593	8,985	8,019	35,194
Total	71,853	76,973	76,746	71,539	297,112

Disposed waste results

The [Oregon Waste Composition Studies page](#) on the DEQ website includes a link to the file [A04-Lane-2023Semifinal-WC2023.xlsx](#), which contains the disposed waste composition results for Lane County, as well as results for the different substreams of waste listed Table 3 above for the County. Table 4 below gives a summary of those results for the county as a whole. Table 4 does not include tires from Lane County that go to tire processors and are chipped and landfilled en masse.

The results shown here are the results of composition as measured in the field, which means that absorbent materials such as paper or light thin materials such as film plastic and aluminum foil include not only the material itself, but also water absorbed into the material and sticky materials such as food waste contaminating the material. In the past, DEQ has produced contamination correction factors to determine the “clean, dry” weight of materials as opposed to the “dirty, wet” weight of materials as measured in the field. DEQ did not do this contamination correction work in this study except for work on rigid plastics. The Excel file on the website is labelled “Semifinal” because DEQ intends to do additional work applying contamination correction factors from the past studies to come up with a better estimate of the clean, dry weight of materials disposed. Although the file is labelled “semifinal” the field results themselves are final.

Table 4: Summary of Lane County disposed waste composition

Material	Field Results Percent (90% conf. interval)	Field Results Tons (90% conf. interval)	# present / # samples
Total paper	14.05% (12.74 - 15.38%)	41,754 (37,845 - 45,690)	120/ 150
Printing, packaging, and FSW Paper	10.36% (9.19 - 11.58%)	30,792 (27,295 - 34,393)	117/ 150
Printing and writing paper	2.11% (1.66 - 2.62%)	6,260 (4,933 - 7,785)	93/ 150
Cardboard/Brown bags	4.25% (3.63 - 4.86%)	12,619 (10,789 - 14,451)	109/ 150
Other paper packaging, FSW	4.01% (3.35 - 4.81%)	11,913 (9,962 - 14,294)	105/ 150
Paper products	3.69% (3.24 - 4.18%)	10,963 (9,620 - 12,407)	97/ 150
<i>All recyclable paper</i>	<i>8.84% (7.70 - 10.03%)</i>	<i>26,278 (22,888 - 29,814)</i>	<i>115/ 150</i>
<i>All nonrecyclable paper</i>	<i>5.21% (4.60 - 5.82%)</i>	<i>15,476 (13,679 - 17,289)</i>	<i>105/ 150</i>
Total plastic	11.73% (10.56 - 13.04%)	34,859 (31,367 - 38,746)	133/ 150
Rigid plastic containers (RPCs)	2.05% (1.73 - 2.37%)	6,101 (5,142 - 7,053)	105/ 150
Other Rigid Plastic Packaging, FSW	1.34% (0.86 - 2.01%)	3,971 (2,555 - 5,968)	104/ 150
Rigid Plastic Products Excluding FSW	3.68% (2.94 - 4.51%)	10,935 (8,732 - 13,386)	113/ 150
Recyclable polyethylene film	1.18% (0.97 - 1.39%)	3,494 (2,894 - 4,143)	110/ 150
Nonrecyclable plastic film	3.49% (2.87 - 4.24%)	10,358 (8,531 - 12,606)	107/ 150
Yard Debris	4.17% (2.57 - 5.79%)	12,377 (7,645 - 17,213)	67/ 150
Leaves and grass	1.33% (0.58 - 2.21%)	3,958 (1,726 - 6,576)	28/ 150
All Prunings and Stumps	2.83% (1.65 - 4.11%)	8,418 (4,911 - 12,212)	58/ 150
All Wood	19.15% (16.38 - 22.07%)	56,896 (48,680 - 65,563)	137/ 150
Clean Lumber & Hogged Fuel	9.54% (7.80 - 11.50%)	28,331 (23,166 - 34,173)	106/ 150
Painted & Treated Lumber	4.29% (2.97 - 5.70%)	12,754 (8,812 - 16,928)	65/ 150
Wood pallets, crates	2.20% (1.01 - 3.45%)	6,539 (2,996 - 10,263)	53/ 150
Wood furniture + other products	2.55% (1.48 - 3.75%)	7,567 (4,399 - 11,150)	65/ 150
Mixed wood/materials	2.67% (1.55 - 3.79%)	7,939 (4,597 - 11,251)	37/ 150
All Food	9.29% (7.91 - 10.79%)	27,593 (23,489 - 32,066)	82/ 150
All edible food	6.60% (5.52 - 7.71%)	19,598 (16,398 - 22,911)	80/ 150
All non-edible food	2.69% (2.15 - 3.25%)	7,995 (6,400 - 9,657)	60/ 150
Tires	0.39% (0.08 - 0.76%)	1,164 (245 - 2,252)	7/ 150
Other rubber products	0.80% (0.39 - 1.24%)	2,373 (1,162 - 3,673)	49/ 150
Disposable diapers	2.04% (1.58 - 2.56%)	6,050 (4,692 - 7,600)	40/ 150
Carpet, Rugs, Carpet Pads	3.02% (1.62 - 4.73%)	8,982 (4,825 - 14,064)	31/ 150
Textiles and mixed materials	3.55% (2.75 - 4.38%)	10,559 (8,166 - 13,014)	100/ 150
Asphalt roofing & tarpaper	4.39% (2.65 - 6.35%)	13,052 (7,866 - 18,856)	34/ 150
Furniture + mattresses	1.66% (0.69 - 2.74%)	4,922 (2,057 - 8,147)	11/ 150
Other carbon-containing materials	1.86% (1.36 - 2.44%)	5,524 (4,038 - 7,236)	92/ 150
Glass	1.58% (1.14 - 2.06%)	4,693 (3,399 - 6,113)	74/ 150
Glass containers	0.69% (0.52 - 0.89%)	2,043 (1,549 - 2,656)	57/ 150
Nonrecyclable glass	0.89% (0.51 - 1.32%)	2,649 (1,511 - 3,931)	50/ 150
Metal	5.96% (4.67 - 7.29%)	17,703 (13,879 - 21,672)	124/ 150

Aluminum	0.42% (0.28 - 0.63%)	1,255 (826 - 1,882)	92/ 150
Other nonferrous metal	0.26% (0.17 - 0.35%)	765 (494 - 1,049)	57/ 150
Steel (tinned) cans	0.44% (0.35 - 0.52%)	1,293 (1,054 - 1,534)	58/ 150
Other ferrous metal	2.07% (1.49 - 2.72%)	6,136 (4,419 - 8,085)	101/ 150
Mixed ferrous/non-ferrous	0.34% (0.07 - 0.66%)	1,004 (197 - 1,966)	9/ 150
Mixed metal/materials	2.44% (1.42 - 3.52%)	7,250 (4,228 - 10,473)	73/ 150
Electronics + small appliances	1.05% (0.68 - 1.46%)	3,116 (2,035 - 4,333)	40/ 150
Rock, dirt, litter	9.64% (7.60 - 11.81%)	28,641 (22,592 - 35,102)	88/ 150
Gypsum wallboard	3.06% (1.63 - 4.62%)	9,098 (4,853 - 13,719)	35/ 150
Other miscellaneous inorganics	1.01% (0.61 - 1.49%)	2,986 (1,808 - 4,426)	61/ 150
Total medical waste	0.93% (0.40 - 1.52%)	2,752 (1,202 - 4,503)	18/ 150
Hazardous materials	0.68% (0.29 - 1.18%)	2,019 (869 - 3,499)	56/ 150

Inbound recycling study

The Oregon Waste Composition Study for 2023 also includes a statewide study of the composition of inbound commingled recyclable material going to recycling facilities. Lane County participated by paying to have 26 additional inbound recycling samples collected and sorted from within the county, in addition to the 24 samples DEQ was planning to do in Lane County for the statewide study, bringing the total to 50. The study included commingled recycling received at commingled recycling processing facilities in proportion to the amount of commingled recycling unloaded by collection vehicles at each facility. Table 5 summarizes the number of samples from each facility across the various load types (substreams).

Table 5: Number of Lane County inbound recycling samples collected by substream and facility

Location	Residential Route Truck	Mixed Route Truck	Commercial Route Truck	Total
EcoSort	16	4	9	29
International Paper	9	2	9	20
County Transfer & Recycling	1	0	0	1
Total	26	6	18	50

Sampling for the inbound recycling study was conducted at the sites listed in Table 5 during the months of March, June, September, and December of 2023. Lane County collectors reported a total 30,567 of inbound commingled recycling tons on their annual material recovery survey forms for 2023.

Table 6: Composition of commingled recycling from Lane County route trucks

Material	Percent	95% conf. interval	Tons	95% conf. interval
Cardboard	58.72%	(53.07-64.50%)	17,950	(16,222-19,714)
Other cart-acceptable paper	22.95%	(18.99-27.00%)	7,016	(5,803-8,254)
Plastic Bottles 6 oz to 5 gallons	2.77%	(2.12-3.46%)	847	(648-1,058)
Plastic tubs, pails: cart-acceptable	0.50%	(0.25-0.86%)	154	(77-263)
Aluminum beverage cans	0.31%	(0.21-0.42%)	95	(65-129)
Aluminum foil, pet food cans *	0.12%	(0.07-0.17%)	36	(23-52)
Other aluminum: cart-acceptable	0.02%	(0.00-0.03%)	5	(1-10)
Tinned cans excluding aerosols	1.80%	(1.44-2.17%)	549	(440-662)
Other scrap metal cart-acceptable	0.24%	(0.13-0.37%)	73	(41-112)
Paper not cart-acceptable	3.75%	(2.18-6.29%)	1,147	(667-1,923)
Rigid plastic not cart-acceptable	2.12%	(1.64-2.65%)	648	(500-810)
Film plastic	1.14%	(0.81-1.55%)	348	(249-473)
Empty aerosol cans	0.02%	(0.01-0.03%)	6	(2-10)
Other scrap metal not cart-acceptable	0.70%	(0.18-1.48%)	215	(54-453)
All glass	1.14%	(0.70-1.70%)	350	(215-520)
Food, yard debris, and wood	1.24%	(0.64-2.14%)	379	(194-656)
Disposable diapers	0.18%	(0.03-0.38%)	54	(9-115)
Cloth textiles	0.64%	(0.24-1.18%)	197	(74-361)
Other non-hazardous nonrecyclables	0.26%	(0.16-0.37%)	78	(49-112)
Medical waste	0.00%		0	
Sharps	0.00%		0	
All batteries	0.01%	(0.00-0.01%)	2	(1-4)
All other hazardous materials	0.00%		0	
Bagged garbage	1.36%	(0.75-2.09%)	415	(229-639)
All acceptable in cart (USCL)	87.38%	(84.29-90.00%)	26,708	(25,766-27,511)
All acceptable in cart (2023 list)	87.61%	(84.52-90.23%)	26,781	(25,836-27,579)
All not acceptable in cart (USCL)	12.62%	(10.00-15.70%)	3,859	(3,056-4,799)
All not acceptable in cart (2023 list)	12.39%	(9.77-15.47%)	3,786	(2,987-4,730)

Contaminant rows are shaded gray

* Aluminum foil and foil-form containers were cart-acceptable (Metro) in 2023 but not on the USCL, but aluminum pet food cans are on both lists. Lacking data, half this category was included in "cart acceptable" and the other half not acceptable.

Empty aerosol cans were acceptable on the 2023 but not on the USCL list

Only shredded paper in plastic bags was listed as not acceptable in 2023, but all shredded paper is not on the USCL list.

Table 6 gives a summary of the composition of commingled recycling collected in Lane County in 2023. Full results for Lane County samples are located in the tab labelled "04LaneCounty" of the [Inbound Commingled Recycling Study Results](#) file available on the on the [DEQ waste composition study webpage](#).

What is acceptable in commingled recycling

During field work for the commingled recycling study, the crew used the Metro definition of what materials are acceptable in commingled recycling when sorting each load, with one exception – scrap metal was considered acceptable only if items weighed less than 10 pounds and were less than 18 inches long. The standard Metro had used for years was that scrap metal up to 30 pounds or 30 inches long would be acceptable. DEQ used the Metro list as DEQ believed it would be very close in definition to the Uniform Statewide Collection List which, at the time, had not been defined under Oregon's Recycling Modernization Act.

After field work was completed, Oregon finalized what materials are on the uniform statewide collection list and thus would be acceptable in commingled recycling. Generally, the USCL is very similar to the 2023 list DEQ used mainly based on Metro's acceptable materials list, but there were some differences, and DEQ made the following adjustments as an approximation to what are contaminants under the USCL:

- All shredded paper and all empty aerosol cans were reclassified as contaminants.
- For the category of aluminum pet cans and aluminum foil and foil-formed containers, DEQ did not have data on what percentage was cans vs. foil, but estimated that each made up a substantial share, assigning 50% as acceptable (the pet food cans) and 50% contamination (the foil).
- There were differences in the smallest size of rigid plastic containers that would be acceptable in commingled recycling.

In Table 6, DEQ estimates the contamination rate using the USCL definition of acceptable material as well as the original definition (referred to as the 2023 list).

Methodology

The general methodology for the Oregon Waste Composition Study involves the following steps:

1. **Select samples:** The selection protocol was designed to accurately represent all of the municipal solid waste being disposed and recycled from Oregon, or in this case, from

Lane County. The definition for solid waste included in this study was taken from [Oregon's material recovery survey and calculation of Oregon and wasteshed material recovery rates](#). In the disposal study, DEQ selected loads being directly disposed at landfills, transfer stations, and solid waste incinerators. In the inbound recycling study, DEQ selected loads inbound to recycling facilities.

2. **Sort and weigh materials:** Sorted the selected load into categories of materials specified in the document [Material Categories for the 2023 Waste Composition Study](#) and then weighed each material category. The disposal study included 152 categories, and the inbound commingled recycling study included 88 categories.
3. **Determine substream compositions:** Used the sorted sample weight data to determine the composition of different substreams of wastes, such as residential and commercial route truck garbage, loose drop box garbage, and self-haul garbage. For the Lane County inbound recycling study all samples were analyzed as a single substream because reliable independent information as to the quantity of commingled recycling collected in residential, commercial, or mixed route trucks was not available.
4. **Compile composition:** Combined the different substream compositions to produce the overall composition for Oregon or for the specific jurisdiction.

The goal of the study was to provide the most precise estimate of waste composition for Lane County and the state, and the composition of the different substreams, given the total budget of the study. To achieve this, the disposal study oversampled self-haul and drop box substreams relative their total portion of Lane County's solid waste, for two reasons:

- Self-haul and drop box samples are far more variable than samples from route trucks, since they represent waste from only a single family or business, whereas route trucks mix wastes from many different generators.
- Self-haul and drop box truck samples are usually much easier and cheaper to sort than route truck samples, and so more samples could be collected and sorted for the same amount of money.

When combining the substreams to produce the overall Lane County waste composition, each substream was weighted by the total tons in that substream.

The methodology for the inbound commingled recycling study was very similar to that used in the disposed waste composition study and is described in more detail in Appendix A of the report [2023 Oregon Inbound Commingled Recycling Composition Study](#).

Acknowledgements

All field work for the 2023 Oregon Waste Composition Study was conducted by Sky Valley Associates ("the contractor") under contract to the Oregon Department of Environmental Quality

(DEQ). Cascadia Consulting also helped with the aspects of field work for both disposal and inbound recycling sampling.

This study would not have been possible without substantial assistance from the recycling facilities and collection service providers who provided space in their facilities for the sort crews, assistance in capturing samples, data on their recycling routes or the recycling trucks unloading at their facilities, and much more in in-kind support for the study.

Lane County, including Jeffrey Orlandini and Angie Marzano, provided extensive information on disposal at Lane County facilities including copies of the entire Lane County disposal transaction database for the larger facilities for 2023. Lane County also provided support with sampling at the Short Mountain Landfill and at the transfer stations.

DEQ greatly appreciates the assistance that all the facilities and their operators and staff provided, plus the assistance of the collection service providers for the study. Names listed below show their affiliation as of the time field work was done. DEQ does not have the names of everyone who helped at each facility or company as much was done behind the scenes, but those DEQ worked with who provided significant help and information include:

- Short Mountain Landfill, Glenwood Receiving Station, Florence Transfer Station, Veneta Transfer Station – Jeff Orlandini, Tim Cogswell
- EcoSort, Springfield – Aaron Donley, Brian White, Chris Kjar, Amanda Cone
- International Paper, Springfield - Travis StClair, Carey Parson, Dan Huss, Lester Beagley
- Sanipac – Patrick Haugen
- Apex Disposal – Sam Miller, Alishia
- Royal Refuse – Josh Burnett
- Cottage Grove Garbage Service
- Ecosystems Transfer and Recycling
- Delta Sand and Gravel – Shawn Leatham
- County Transfer + Recycling, Florence – Brian Enochian

Peter Spendelow and Daniel Redick authored this report, and Peter performed most of the logistical arrangements for coordinating with disposal sites and for sample selection and was also responsible for all data analysis. Gretchen Sandau and Eric Boone assisted with sample selection and logistics in the study.