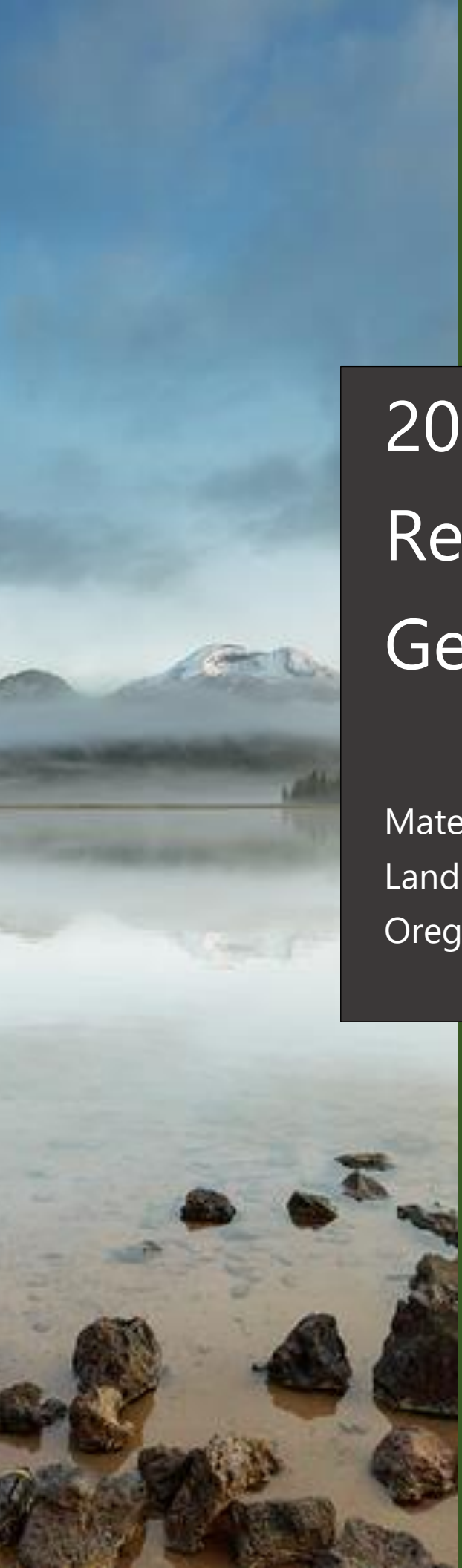

May 2024

2022 Oregon Material Recovery and Waste Generation Rates Report

Materials Management Program
Land Quality Division
Oregon Department of Environmental Quality

This document was prepared by
Oregon Department of Environmental Quality
Materials Management Program
700 NE Multnomah Street, Portland Oregon, 97232

Contact: Michelle Shepperd
Phone: 503-229-6724
www.oregon.gov/deq

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800-452-4011 | TTY: 711 | deqinfo@deq.oregon.gov

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Acknowledgments

The Oregon Department of Environmental Quality's Materials Management Program conducted the 30th annual Oregon Material Recovery Survey for calendar year 2022. DEQ extends its appreciation to industry representatives, collection service providers, local governments, and landfill administrators and staff for providing recovery and disposal data for 2022 and working with DEQ staff to complete this report. The survey team also thanks DEQ personnel who contributed to the accuracy and integrity of the information contained in this report:

Michelle Shepperd, Camilla Picollo, Peter Spendelow, Martin Brown, Materials Management, DEQ Headquarters

This report provides one of the most complete and accurate collections of state-level disposal and recycling data in the country.

Executive Summary

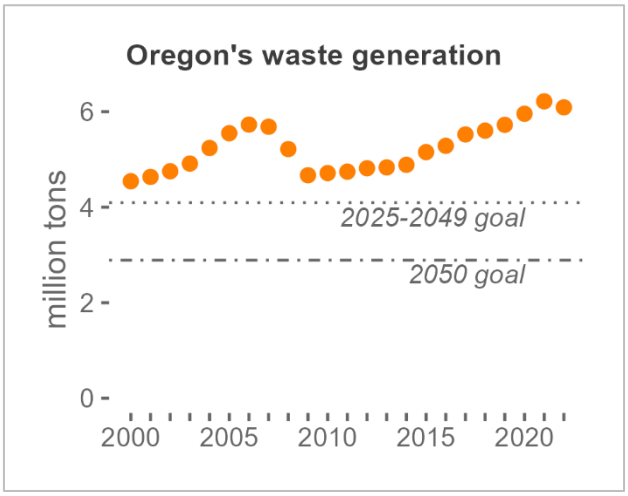
The Oregon Department of Environmental Quality's Materials Management program takes a holistic view of environmental impacts of materials. It considers the impacts that occur across the full life cycle of materials, including resource extraction, design and production, use, and end-of-life management, including solid waste disposal and recovery.

This report details how Oregon manages materials at the end of their useful lives, via disposal and recovery.

- Disposal refers to all materials placed in landfills and many materials burned in incinerators.
- Recovery refers to recycling, composting and some incineration with energy recovery.
- Generation is the sum of disposal and recovery and represents the total tonnage of the waste stream.
- The recovery rate is the percentage of generation recovered.

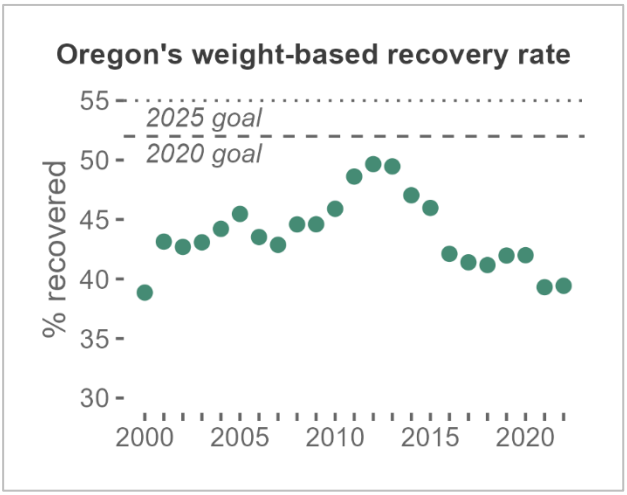
In 2022, people in Oregon:

- Generated 6,091,756 tons of waste, down 6.2 percent from 2021;
- Disposed of 3,690,946 tons into landfills and incinerators, down 8.8 percent from 2021; and
- Recovered 2,400,810 tons of material, down 1.8 percent from 2021.
- The weight-based recovery rate is 39.4 percent, an increase of nearly two percent from 37.7 percent in 2021.



The absolute tons of waste generated and disposed in 2022 declined from 2021 due to many large and destructive wildfires that destroyed more than 6,000 structures in late 2020 and 2021. DEQ estimates that about 383,000 tons of fire debris, excluding asbestos-containing debris, were disposed in 2021. In contrast, wildfires in 2022 only destroyed two structures and generated very little fire debris for disposal. If the wildfire debris was excluded from 2021 disposal, then 2022 disposal would have been 27,368 tons higher than in 2021, generation would have been only 16,203 tons lower instead of nearly 400,000 tons lower, and the recovery rate would have dropped from 40 percent in 2021 to 39.4 percent in 2022, instead of rising nearly two percent.

The total recovered tons decreased nearly 44,000 tons in 2022 when compared to 2021. Materials showing the biggest increases in recovery were scrap metal (+63,645 tons) and tires (+6,985 tons). While organics (-68,569 tons) and cardboard (-18,726 tons) recovery decreased. Lead acid batteries showed a decrease of 5,593 tons and plastics saw a decrease of 5,000 tons when compared to 2021.

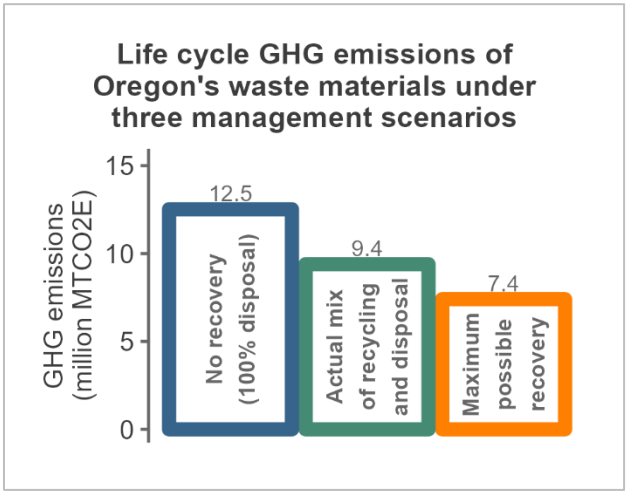


State goals for solid waste:

Waste generation continues to fail to meet the goal set for 2009-2024 by the Oregon Legislature. Weight-based recovery rates are lower than the legislated goals set for 2020 and 2025.

Recovery and environmental impacts:

Recovery via recycling and other means has environmental value. DEQ estimates that in 2022, material recovery reduced greenhouse gas emissions by 3.1 million metric tons of carbon dioxide equivalents, compared to a scenario where all waste was disposed. Another 2.0 million MTCO2E in reductions are possible if recovery rates could be raised in an optimal fashion for reducing greenhouse gas emissions.



Even with maximized recovery, the GHG impacts of materials in the waste system would be considerable, around 7.4 million MTCO2E. For context, Oregon's total emissions from all sources exceeded 60 million MTCO2E in 2018.

Thus recovery presents an opportunity for environmental impact reductions, but only a limited one. To achieve deeper reductions in the environmental impacts of materials and waste, DEQ and its partners will need to take actions across the entire materials life cycle, such as redesigning products and reducing overall materials use.

Table of contents

Introduction and purpose

This report describes results and methodology for Oregon's Material Recovery Survey for the calendar year 2022. Material recovery includes all materials collected for recycling or composting, and, for a subset of materials, incineration with energy recovery. Each year, the Oregon Department of Environmental Quality compiles data on municipal post-consumer waste recovery. DEQ sends a survey to all collection service providers and private recycling companies that handle materials for recycling, composting and energy recovery. Survey data is combined with data gathered from quarterly and annual disposal site reporting forms. Together, recovery and disposal numbers make up the amount of waste generated by people in Oregon each year.

$$\frac{\textbf{Total Recovered}}{\textbf{Total Generated}} = \textbf{Recovery Rate}$$

$$\frac{\textbf{2,400,810 tons}}{\textbf{(Total Recovered + Total Disposed)}\quad \textbf{6,091,756 tons}} = \textbf{39.4\%}$$

DEQ uses this information to estimate energy savings and greenhouse gas reductions, two important environmental benefits from material recovery. Additionally, this information allows DEQ to calculate material recovery rates and waste generation values. The recovery rate is the percentage of the total waste generated in Oregon that is recycled, composted, or recovered for energy. Waste generation is the amount of waste recovered plus the amount of waste disposed. Recovery, disposal, and generation data, as well as recovery rates, are calculated for the state and for each of Oregon's 35 individual wastesheds[1].

[1] A "wasteshed" is defined in Oregon law as being an area of the state that shares a common solid waste disposal system, or an appropriate area in which to develop a common recycling system. For the most part, individual Oregon counties are designated as wastesheds. Three exceptions are that:

The greater Portland tri-county area, consisting of Clackamas, Multnomah and Washington Counties, is designated as the Metro wasteshed.

Milton-Freewater, a city within Umatilla County, is designated as a separate wasteshed.

For most cities such as Albany that have populations in two counties, the entire city was included in the wasteshed that included the larger portion of the city population. The exception is Salem, where most of Salem is in the Marion Wasteshed, but West Salem is included in the Polk Wasteshed.

Individual wastesheds also use this information to implement and improve their waste prevention and material recovery programs.

This is the 31st year that DEQ has used the survey to gather this data. The 1991 Oregon Legislature enacted requirements (see Oregon Revised Statute 459A) for this annual survey and set goals for state and local recovery rates. These recovery goals were amended by the Legislature in 2001, and then again in 2015. Wasteshed goals range from 15 percent (Lake Wasteshed) to 64 percent (Metro and Marion Wastesheds) by 2025. The statewide recovery goals are 52 percent recovery by 2020 and 55 percent recovery by 2025.

In 2001, the Legislature also established statewide goals for reducing waste generation. These goals were revised by the Legislature in 2015. The waste generation goals require that the generation of solid waste in the years 2025 to 2049 be 15 percent below the amount of solid waste generated in 2012, and for 2050 and beyond, the generation goal is 40 percent less than the waste generated in 2012.

Requirement to report

Oregon law requires that all publicly and privately operated recycling and material recovery operations complete a Material Recovery Survey form. This includes landfills, local recycling collectors, private recycling collection companies and depots, transfer stations, material recovery facilities, composters, local governments, and any other operation that handles post-consumer recoverable materials. One exception, due to the difficulty of separating post-consumer scrap metal from commercial and industrial scrap metal, are companies handling only scrap metal. These companies are not required to report on privately obtained post-consumer scrap metal, but many do report on a voluntary basis.

The survey requires that companies report all recyclable materials they handle, including the amount of each material collected, the county of origin, the company they received any transfers from, and where or to whom the materials were marketed.

Oregon law further requires DEQ to keep confidential the information reported by private recyclers. This includes customer lists and specific amounts and types of materials collected or marketed by individual companies. For private recyclers, only aggregated information may be released to the public.

Materials included in the analysis

Oregon's analysis of the environmental benefits from material recovery and the recovery rates includes only post-consumer materials generated in Oregon for recycling, composting or energy

recovery. Per Oregon's recycling law (ORS 459A.010 (3)(a)), waste from manufacturing and industrial processes (pre-consumer materials), reconditioned and reused materials, material that can be disposed of as clean fill without being put in a landfill such as brick and concrete, and waste originating out of state (but handled in Oregon) are excluded. Some scrap metals, including discarded vehicles or parts of vehicles and metal derived from major demolition activities handled by scrap metal dealers, are also excluded. Scrap metal collected at disposal sites by collection service providers, at community recycling depots or through municipally sponsored collections events counts as recovered material.

The first Material Recovery Survey for the 1992 calendar year included 30 types of materials. Since then, some new materials have been added and other materials consolidated, so that the survey now contains 33 types of material. The major materials for 2022 are:

- Yard Debris
- Metals – Tinned cans, aluminum, and other scrap metals
- Cardboard
- Wood Waste
- Paper Fiber – Other paper fiber (combined high-grade paper, newsprint and mixed scrap paper) not including cardboard
- Container Glass
- Food Waste – Residential and commercial food waste
- Other – Including tires, used motor oil, antifreeze, batteries of all types, gypsum, asphalt roofing materials, textiles, paint, and animal waste and grease
- Plastic – Rigid plastic containers, plastic film, other plastics and composite plastics (including carpet pad)
- Electronics

A complete list of materials recovered is included in Table 8, at the end of this report.

Recovery and reductions in environmental impacts

Summary of analytical results

Oregon's recovery activity in 2022 can be associated with:

- 3.1 million metric tons carbon dioxide equivalents of reductions in greenhouse gas emissions; and
- 39 trillion British thermal units of savings in energy demand.

These savings in energy and greenhouse gas impacts are similar to the values reported for 2020 (38 trillion BTU and 3.2 MMTCO2E).

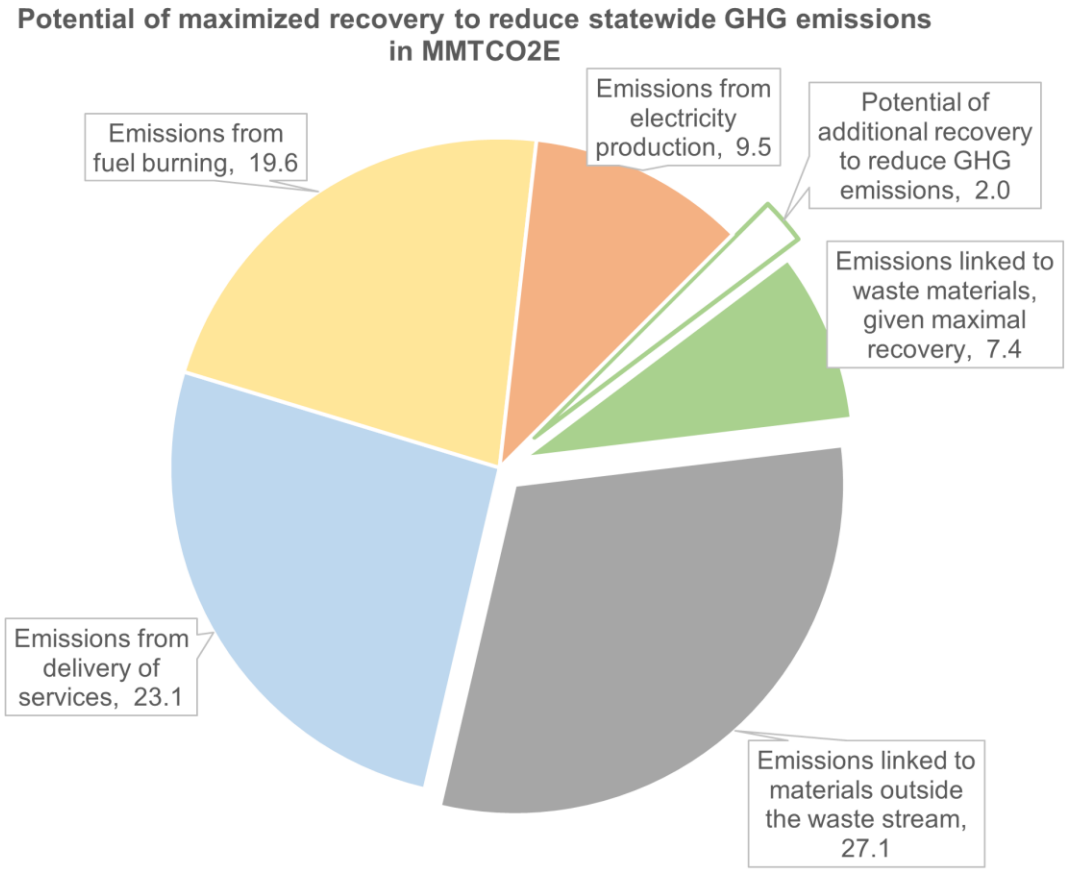
If recovery could be increased from its current rate (about 39 percent by weight) to rate corresponding with a maximum reduction in greenhouse gas emissions (about 65 percent by weight), it can be estimated that:

- GHG emissions would decline an additional 2.0 MMTCO2E; and
- Energy expenditures would decline an additional 40 trillion BTU.

Such savings must be placed within the context of the state's total environmental impacts.

- Oregon's total GHG emissions are more than 60 MMTCO2E. A recent DEQ report lists yearly totals as 66.2 MMTCO2E, from a sector-based method, and 88.7 MMTCO2E, from a consumption-based method.
- Oregon's overall direct energy expenditures are around 1,015 trillion BTU per year, in a recent Oregon Department of Energy report.

The pie chart on the following page combines results from the consumption-based emissions inventory with estimates of the impacts of waste. It shows that while increased recovery does present an opportunity for environmental impact reductions, the opportunity is limited. Increased recovery, by itself, cannot provide the sizeable decreases in impacts anticipated by the state's greenhouse gas reduction goals (Oregon Revised Statute 468A.205), or the *2050 Vision*. Achieving greater reductions in environmental impacts of materials will require other materials management strategies, such as the redesign of products and reduced material use.

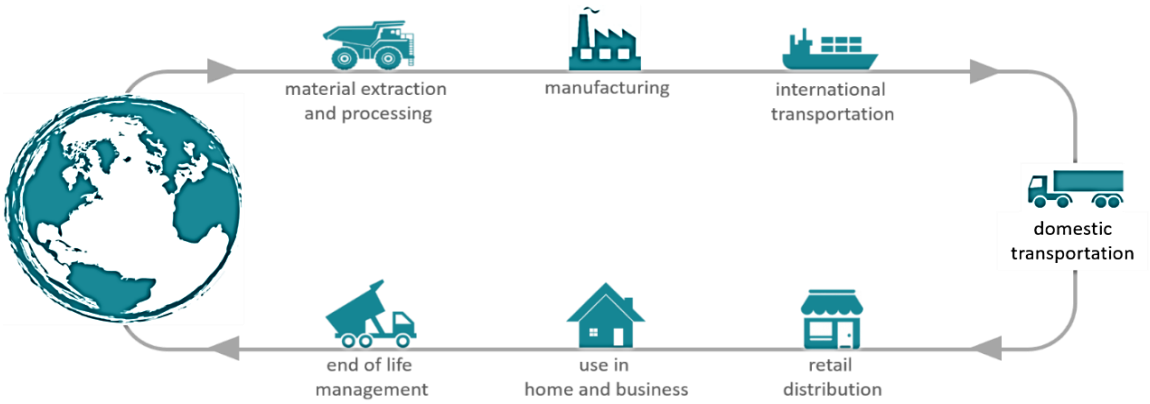


Sources of GHG emissions in Oregon, in MMTCO2E, according to the state's consumption-based inventory, combined with results from a life cycle assessment of the solid waste stream. The impact of materials (in green) already includes the current benefits of recovery. Additional recovery (above current levels) offers 2.0 MMTCO2E in possible further impact reductions. The remaining GHG impacts of materials are either not preventable by recovery (7.4 MMTCO2E), or not represented by the solid waste stream at all (27.1 MMTCO2E).

Understanding impact reductions

All products and materials can be seen within the context of the materials life cycle. Everything people touch or use has been created somehow—usually via "extraction" from the earth or soil, followed by production, distribution, consumption, and use, and "end-of-life" processes such as disposal or recycling. Environmental impacts occur at every stage of this life cycle. For example, extracting ore or operating a farm uses machinery that emits GHGs and expends energy. The sum of impacts associated with the materials life cycle are called the "life cycle impacts."

The Materials Life Cycle



Recovery activities such as recycling and composting also create impacts. For example, recycling trucks emit GHGs and expend energy as they collect material, as does processing collected recyclables to create new products.

Nonetheless environmental benefits can be associated with recycling and other recovery activities.

DEQ assumes, as is conventional in the field of life cycle assessment, that use of recovered materials prevents production from newly extracted material, or otherwise prevents some undesired environmental impact. For example, production of a metric ton of glass from recycled sources may save about 300 kg of GHG emissions, *compared to the emissions of production from newly extracted material*.[2] Similarly, while aerobic composting does lead to CO_2 emissions,

[2] David A. Turner, Ian D. Williams, and Simon Kemp, "Greenhouse Gas Emission Factors for Recycling of Source-Segregated Waste Materials," *Resources, Conservation and Recycling* 105, Part A (December 2015): 186–97, https://doi.org/10.1016/j.resconrec.2015.10.026.

composting may still represent a savings *compared to the methane emissions that could result from disposal in a landfill*.[3]

Accordingly, impact reductions or savings are not direct measurements, but *projections* of how impacts could differ if materials had been managed differently at end-of-life.[4]

It is important to note that these impacts may occur over multiple years and may occur in areas outside of Oregon. Though we associate the materials in the waste stream with a particular place (Oregon) and time (for example, 2022), the life cycle impacts of those materials are not always so localized. An item recycled in 2022 in Oregon may have been created in another state or country in a different year. An item disposed in 2022 may decay in a landfill, but slowly over a period of many years. Environmental impacts, and savings, are spread out over time and space.

Methodological details, in brief

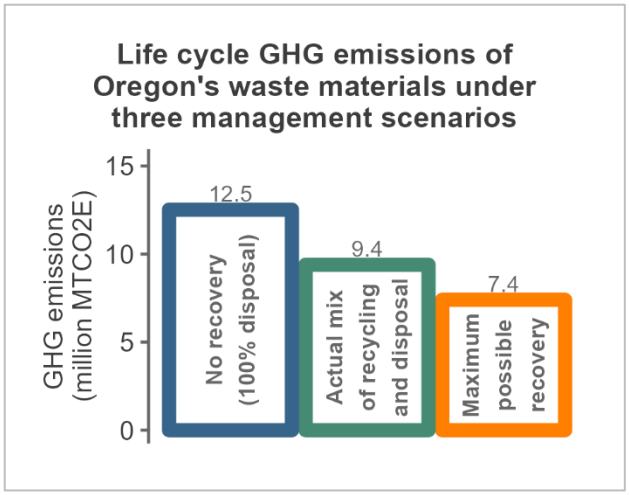
DEQ calculates impact reductions through a multi-step process. First, it characterizes Oregon's solid waste stream, which includes both disposed and recovered materials, by weight and end-of-life disposition (for example, recycling, composting, or landfilling). Next, it links those weights to impact factors that convert weights into environmental impacts for both production processes and end-of-life dispositions. Appropriate credits are given for recovery activities when it can be presumed that recovery has prevented some other, greater environmental impact, as described earlier. Then it sums life cycle impacts for three possible management scenarios:

- Actual: the life cycle impact of materials in the solid waste stream, given the current mix of recovery and disposal.
- No recovery: the life cycle impact of materials in the solid waste stream if no recovery had taken place and all materials had been disposed.
- Maximum possible recovery: the life cycle impact of materials in the solid waste stream, if all materials were recovered in the fashion that reduced total life cycle GHG emissions the most.

[3] US EPA, "Organic Materials Chapters [Documentation for Greenhouse Gas Emission and Energy Factors Used in the Waste Reduction Model (WARM)]," February 2016, www.epa.gov/sites/production/files/2016-03/documents/warm_v14_organic_materials.pdf.

[4] The assumptions behind such projections are important to note. Such calculations, including DEQ's, presume that demand for materials is unaltered by the presence of recycled materials, and that collected recyclables actually replace newly extracted materials at a high rate, often 1:1. Authors such as Zink and Geyer question both these assumptions – see doi://10.1111/jiec.12545 and doi://10.1111/jiec.12355 .

Note that in all scenarios, the weights of materials are the same. The scenarios differ only in the end-of-life dispositions of those materials. The *maximum possible recovery* scenario assumes that recovery has been maximized in the way that produces the lowest total life cycle greenhouse gas impacts, which corresponds to a recovery rate of about 64 percent by weight. (The figure is less than 100 percent because some materials have no realistic recycling path, and for others recycling does not reduce greenhouse gas emissions.)



Finally, impact reductions or savings are calculated as differences between the scenarios. The currently realized savings are the difference between the *no recovery* impact and the *actual* impact. The additional savings, which might be realized by maximizing recovery, are the difference between the *actual* impact and the *maximum possible recovery* impact.

For example, the currently realized GHG savings of 3.1 MMTCO2E, and the additional potential savings of 2.0 MMTCO2E, were calculated by comparing life cycle emissions for the three scenarios, totaling 12.5, 9.4, and 7.4 MMTCO2E.

The weight data describing Oregon's waste stream comes from several sources.

- Quantities and dispositions of recovered materials come from DEQ's Material Recovery Survey for 2022.
- Quantities of disposed materials are derived by combining the total amount of material disposed in Oregon in 2022, from DEQ's disposal records, and the Waste Composition Study for 2016-2017, which lists proportions of disposed waste in various material categories.

Impact factors come from Oregon DEQ's Waste Impact Calculator model. This is a change from reports representing years up to and including 2019, which drew impact factors from EPA's WARM model. The Waste Impact Calculator was created by Oregon DEQ specifically to match assumptions appropriate to Oregon and was independently reviewed by Dr. Christoph Koffler of the life cycle consulting firm Sphera. The WIC model, its documentation, and Koffler's review are available on github.

For further information about how DEQ calculates impact reductions contact Martin Brown at 503-229-5502.

Recovery rates

The recovery rate is the percentage of total waste generation that is recovered. DEQ calculates both the statewide recovery rate and a recovery rate for each of the 35 individual wastesheds in the state.

2022 statewide recovery rate

In 2022, the state recovered 2,400,810 tons of material. This represented 39.4 percent of the municipal post-consumer waste stream, well below the statewide goal of 52 percent recovery by the year 2020. Recovered tons decreased by 1.8 percent from the previous year surveyed, 2021.

From 1992 through 2005, tons of material recovered increased regularly each year. From 2006 through 2009, recovered tons declined even though recovery rates were steady, as declining consumption of newspapers and magazines, followed by a general decline in overall consumption due to the recession, reduced the amount of material available to be recovered. In 2010, Oregon experienced an increase in recovery, as the economy gradually recovered from the recession. Recovery rates peaked in 2012 at close to 50 percent, but then fell, leveling off at about 42 percent in 2016 and

Oregon State Recovered Tons and Recovery Rates

Year	Tons Recovered	Tons Disposed	Calculated Rate[5]
1992	839,679	2,263,099	27.1
1993	974,685	2,280,513	29.9
1994	1,118,912	2,312,669	32.6
1995	1,257,204	2,362,146	34.7
1996	1,338,259	2,497,170	34.9
1997	1,462,114	2,633,017	35.7
1998	1,604,985	2,695,903	37.3
1999	1,626,271	2,788,699	36.8
2000	1,765,817	2,778,463	38.9
2001	1,999,085	2,635,072	43.1
2002	2,029,261	2,723,365	42.7
2003	2,116,880	2,796,787	43.1
2004	2,317,064	2,923,462	44.2
2005	2,523,367	3,026,457	45.5
2006	2,494,050	3,235,828	43.5
2007	2,437,569	3,248,126	42.9
2008	2,326,146	2,890,503	44.6
2009	2,082,631	2,586,721	44.6
2010	2,163,957	2,550,509	45.9
2011	2,306,124	2,437,767	48.6
2012	2,391,490	2,424,833	49.7
2013	2,390,859	2,442,827	49.5
2014	2,307,269	2,580,933	47.2
2015	2,369,080	2,784,467	46.0
2016	2,225,950	3,059,745	42.1
2017	2,286,969	3,237,214	41.4
2018	2,307,545	3,295,468	41.2
2019	2,402,756	3,322,349	42.0
2020	2,501,960	3,453,570[1]	42.0
2021	2,444,380[1]	4,046,936	37.7[1]
2022	2,400,810	3,690,946	39.4

[1] These tonnage figures are corrected from previous published values.

[5] Between 2001 and 2015, Oregon's law specified that "credits" be provided towards the statewide recovery goal for jurisdictions that promoted programs for home composting and for material reuse - programs for which recovery is difficult to measure directly. At the state level, these credits added about 3.6 to 3.8 percent to the statewide recovery rate in those years. Changes in legislation in 2015 eliminated the recovery credits, and so they have been dropped from this table.

remaining at that level through 2020 before dropping again in 2021. In 2022 cardboard recovery saw its first substantial decrease of 18,726 tons since 2017 and scrap metal increased 63,645 tons over 2021 levels. Paper fibers continue to decrease setting another record low of 160,722 tons recovered and container glass saw a decrease of 1,546 tons from 2021.

Disposal tonnage: Impact of wildfires on recent disposal

A total of 3,690,946 tons of municipal post-consumer waste from Oregon were disposed in 2022. This is a decrease of 8.8 percent from 2021. Per-capita disposal was 1,724 pounds for 2022, a 13.9 percent increase above the 1992 figure of 1,513 pounds.

Although total disposal decreased by nearly nine percent in 2022 when compared to 2021, this decrease was likely due to the huge impact of wildfires in late 2020 and in 2021 creating massive amounts of fire debris from burned structures. In contrast, although there were also wildfires in 2022, very few structures were burned, creating a smaller amount of fire debris when compared to the hundreds of thousands of tons of fire debris disposed in 2021. Comparing 2020 to 2022, disposal increased an average of 3.4 percent per year over that two-year period. This is close to the average of 4.3 percent increase in disposal from 2012 to 2022, and so the underlying increase in disposal has not changed much in 2022.

The *2021 Oregon Material Recovery and Waste Generation Rates Report* includes a section estimating the total amount of fire debris disposed in each wasteshed in 2021. These estimates were made by comparing the excess tons disposed in each wasteshed to the tons disposed the previous year, for those quarters of the year where large amounts of fire debris were being disposed. Although the estimated tons of fire debris in each wasteshed closely correlated to the number of structures burned, they were likely an overestimate because they did not consider the underlying increase in disposal of other wastes in 2021 compared to 2020.

Here, DEQ is updating those 2021 estimates based on two sources of data:

1. Excess tons disposed - DEQ compared the disposal of waste in 2021 to the average of the disposal in 2020 and 2022, only for those waste streams that included most of the fire debris (leaving out, for example, garbage from residential and commercial garbage route trucks and compacting drop boxes). It was clear that the excess tons disposed in 2021 correlated closely with the number of structures destroyed by fire in the impacted counties.
2. Reports from Landfills - DEQ requested affected landfills for their data on disposed fire debris in 2021. Three landfills received the majority of the fire debris disposed in 2021: Dry Creek Landfill in Jackson County (also receiving fire debris from Klamath County), Short Mountain Landfill in Lane County, and Coffin Butte Landfill in Benton County (also receiving fire debris from Marion, Lincoln, and Linn Counties.) Both Dry Creek Landfill and Short

Mountain Landfill were able to provide their official fire debris records by wasteshed and by quarter. Since Coffin Butte was not able to break out their total fire debris by wasteshed, estimates were made based on the spikes in disposal of the affected waste streams in 2021 from each county. Dry Creek Landfill also reported fire-related asbestos disposal, but those numbers were not included here as asbestos waste is not a "counting waste" and thus not included in the disposal numbers in this report.

The table below shows DEQ's estimates of fire debris disposed in each wasteshed in 2021.

Estimated fire debris disposed, 2021

Wasteshed	Excess tons	Tons reported by landfill*	Average	Total tons disposed	Tons without fire debris	Fires
Jackson	211,411	220,341	215,876	437,251	221,375	Almeda Drive and South Obenchain Fires, more than 3,000 structures destroyed.
Klamath (Q3, Q4)	12,707	5,307	9,007	88,223	79,216	Bootleg Fire in 2021, put out by Aug. 2021; 408 structures and 342 vehicles destroyed.
Lane	53,910	44,145	49,027	341,663	292,636	Holiday Farm Fire, 768 structures destroyed.
Lincoln	13,248	11,636	12,442	64,134	51,692	Echo Mountain Complex fire, 293 structures destroyed.
Marion	102,104	89,680	95,892	425,320	329,428	Lionshead and Beachie Creek Fires, 1,603 structures destroyed in multiple counties, mainly Marion.
Linn	1,186	1,042	1,114	111,890	110,776	Beachie Creek fire in the Santiam Valley (Mill City & more)
Total	394,566	372,151	383,358			

- Coffin Butte Landfill reported 102,375.5 tons of fire debris disposed in 2021 but could not provide a breakdown by county. For this table, we used the excess tons for Lincoln, Marion, and Linn wastesheds to allocate by wasteshed the 102,375.5 tons reported by the landfill.

There was a very strong correlation between the number of structures reported destroyed by fires in each county and the excess disposal reported by those counties in the quarters following the fire, with a correlation coefficient of greater than 99 percent.

The large amount of fire debris in 2021 negatively impacted the recovery rates for the affected wastesheds and for the state as a whole. The table below shows 2021 recovery rates both including and not including the fire debris.

2021 recovery rates with and without fire debris

Wasteshed	Recovered tons 2021	Total tons disposed 2021	Tons without fire debris	2021 Recovery Rate	2021 Recovery rate without fire debris
Jackson	103,404	437,251	221,375	19.1%	31.8%
Klamath	21,203	88,223	79,216	19.4%	21.1%
Lane	337,438	341,663	292,636	49.7%	53.6%
Lincoln	24,902	64,134	51,692	28.0%	32.5%
Marion	290,247	425,320	329,428	40.6%	46.8%
Linn	74,775	111,890	110,776	40.1%	40.3%
Statewide total	2,444,380	4,046,936	3,663,578	37.7%	40.0%

In contrast to 2021, much smaller amounts of fire debris were landfilled in 2022 as the wildfires destroyed very few structures that year. There is no need to adjust 2022 tonnage numbers for wildfire impacts.

Total tons disposed added to total tons recovered equaled 6,091,756 tons of waste generated in 2022 (see Waste Generation on page 26). Total generation decreased 6.2 percent, with per-capita generation decreasing 6.5 percent from 2021 levels. Again though, these decreases were mainly due to the large amount of fire debris disposed in 2021 but not in 2022.

How DEQ calculates the statewide recovery rate

DEQ combines information about quantities of material collected from privately-operated recycling and material recovery facilities with recovery information from collection service

providers and disposal site collections, in a manner that eliminates double counting of material that is passed on from collectors through processors to end-users. This determines the total weight of material recovered.

Next, DEQ adds the total weight of material recovered to the total weight of material disposed, obtained from disposal site reports. This sum is the total weight of material generated. The total weight of material recovered is divided by the total weight generated. This results in the calculated recovery rate.

How DEQ calculates individual wasteshed recovery rates

The total weight of material recovered is allocated to the wasteshed of origin. Direct collectors of materials are the primary and best information source for the collected materials' wasteshed of origin. When information from direct collectors is not available, or when a survey respondent does not know the wasteshed of origin for the collected materials, DEQ uses information from the companies receiving materials from the collectors in order to allocate material back to wastesheds. Material is allocated back to wastesheds based on population in rare cases when survey respondents and market information is insufficient.

DEQ also uses information from disposal site reporting forms to determine the total weight of material disposed to the wasteshed of origin. For each wasteshed, total weight of material disposed is added to total weight of materials recovered to ascertain the amount of waste generated in the wasteshed. The total weight of material recovered is divided by the total weight generated to determine the calculated recovery rate for each wasteshed.

Marion county adjustment

As home to the state’s only municipal waste-to-energy incinerator, Marion County’s recovery and disposal tonnages are revised each year to include certain wastes burned for energy as recovered, as directed by the 2001 Legislature. For 2022, two materials that could be counted toward the recovery rate when burned for energy were wood waste and yard debris. In 2022, 12,140 tons of these materials burned for energy in the county’s incinerator were counted as recovered instead of disposed. Marion County also recovered 6,502 tons of scrap metal from the incinerator ash. DEQ subtracted the scrap metal tonnage from the Marion County disposed tons so that the same tons would not be counted as being both disposed and recycled.

Wasteshed recovery rates

Oregon has 35 individual wastesheds, each with its own recovery rate and goal. Based on the new goals established by Senate Bill 263, seven wastesheds are already at or above their goal for 2025.

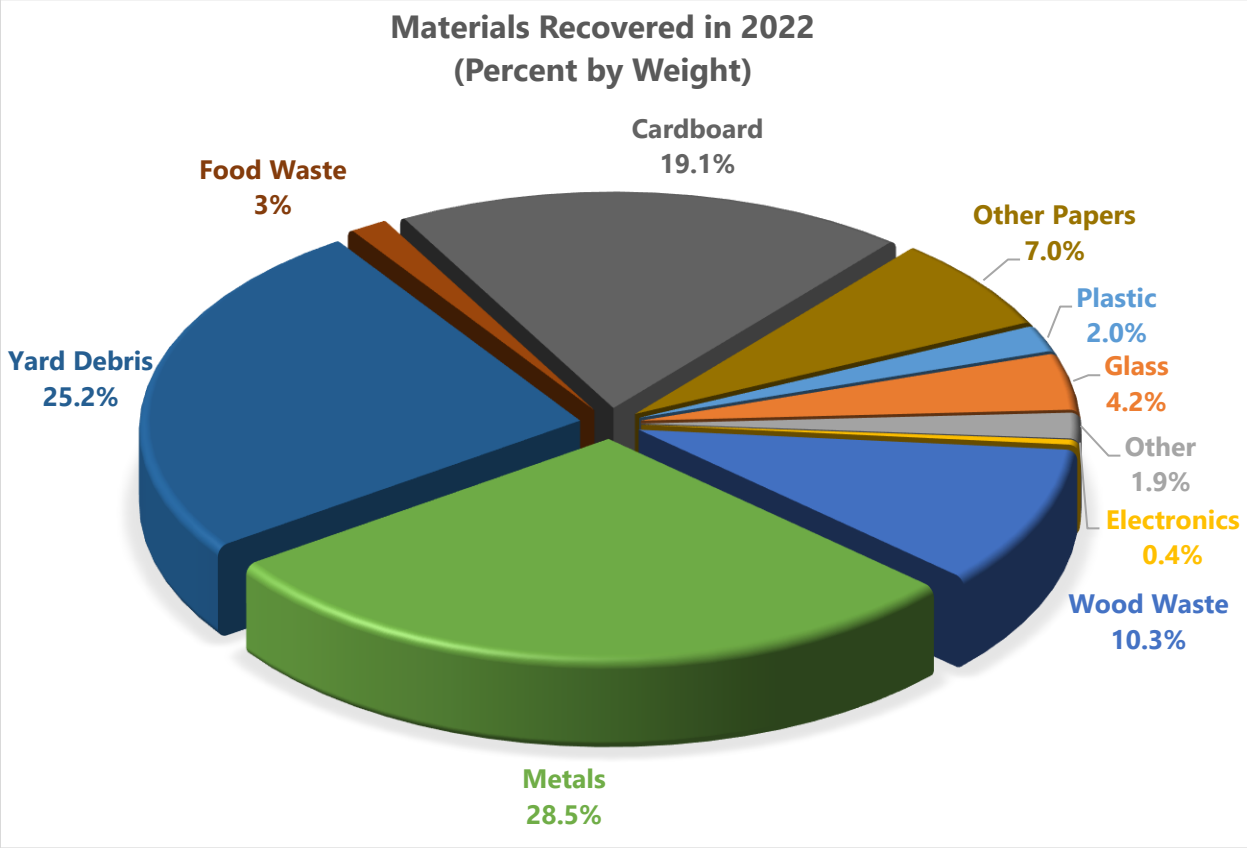
The Survey Report Tables listed on page 33 of this report show 2022 recovery rates for each wasteshed (Table 1), tons of materials recovered in 2022 by wasteshed (Table 2), and tons of solid waste disposed by wasteshed in 2022 (Table 3).

For a historical look at recovery, disposal, and generation data in Oregon, see Survey Report Tables 4, 5, 6 and 7, which provide the most recent and updated recovery rates, recovered material tons, disposal tons, and tons of solid waste generated each year since the Material Recovery Survey began in 1992.

Materials recovered

Oregon's material recovery rate for 2022 includes materials that were recycled, composted (including yard debris, food waste and some wood waste), and burned for energy (including tires, fuels, oil-based paint, used oil, wood waste and some yard debris). Sixty-four percent of the material recovered was recycled, 25 percent was composted, and 11 percent was burned for energy.

The chart below shows major categories of materials recovered in 2022 and the percentage of total recovery (by weight) for each category. Specific materials included in these categories are listed on page four.



Factors affecting material recovery in 2022

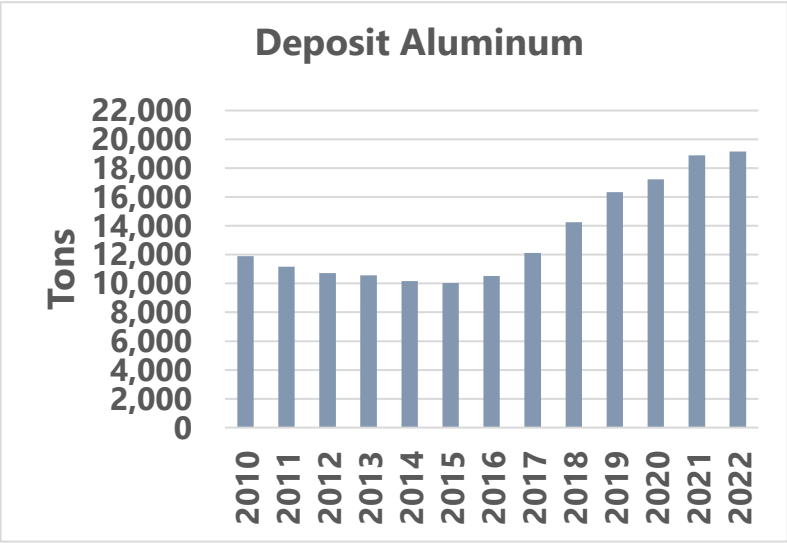
For the most part, recent trends continued in 2022. The recycling of printing and writing paper continued to decrease, continuing a decade-long slide with less printing and writing paper collected each year. The sale of newspaper and magazines has fallen drastically since 2008. A DEQ study of residential curbside recycling in 2004/2005 found that newspaper made up 42 percent of the material that households putout at the curb for recycling. A soon-to-be published

DEQ study of commingled recycling found that in 2023, newsprint made up only a little more than three percent of the residential curbside commingled mix in the Metro area. Magazines have also fallen, from about 11 percent in the 2004/2005 study to 4.7 percent in the Metro-area residential commingled recycling in 2023. Cardboard, on the other hand, has increased in residential recycling, from 15 percent of the curbside residential material in 2004/2005 to 43 percent in the Metro area in 2023. Some of the increase in cardboard on a percentage basis is simply due to the drop in newspaper, magazines, and other printing and writing paper, but the absolute amount of cardboard has also increased in residential recycling, as households receive much more cardboard through mail-order than they did in the past.

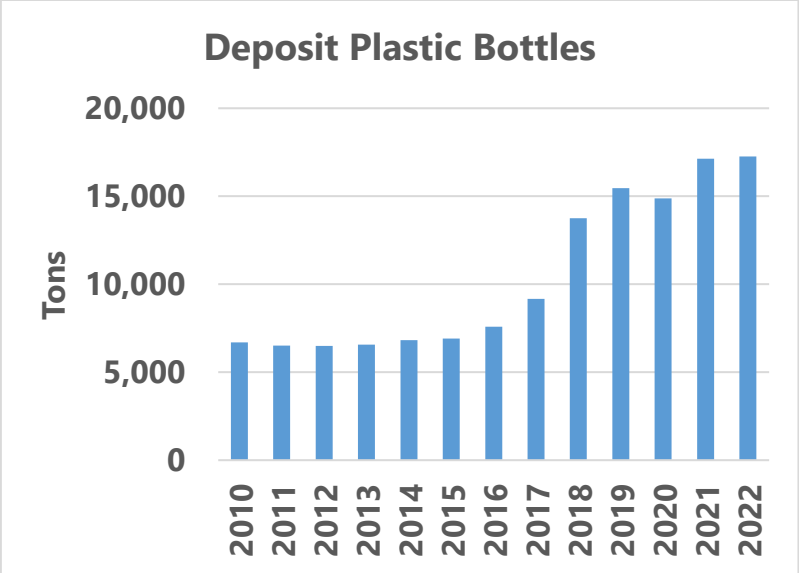
Cardboard recycled tonnage overall showed a small drop in 2022 when compared to 2021, slightly reversing recent trends, but still is about as high as it was in 2020.

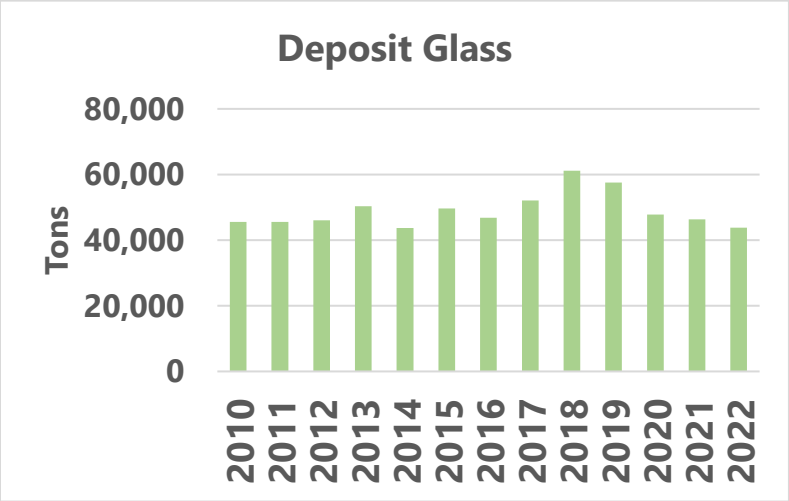
The recycling tonnage of all three categories of plastics: rigid plastic containers, other rigid plastics, and film plastics, fell in 2022. The tonnage of rigid plastic containers fell about 2,000 tons from the all-time high in 2021, but still is higher than the average tons recycled over the previous decade. Other rigid plastics and film plastics are not included in any curbside or commingled recycling program in Oregon, and so most of the recycling of these materials is done through commercial or private programs or some drop-off recycling. Both film plastics and other rigid plastics had huge drops in recycling tonnage in 2017/2018 when China banned the importation of these materials, resulting in a global decrease in the market price paid for recycling. The price for film plastic has since increased to nearly where it was in 2016, but the tons of film plastic fell by 29 percent from 2021 levels, dropping to a level not seen since 2004, despite the increase in price for film plastic in 2022 according to RecyclingMarkets.net. The tonnage of other rigid plastics also remained low.

Beverage container recycling under the Bottle Bill also continued recent trends. The tonnage of aluminum and plastic under the Bottle Bill reached new all-time highs, more than recovering from the drop in recycling in 2020 caused by stores being allowed to refuse accepting back containers much of that year due to the pandemic. Bottle Bill glass tons recycled, on the other



hand, continued to fall as the sales of beverages in glass containers dropped another 12 percent in 2022 according to data gathered by the Oregon Liquor and Cannabis Commission.





As seen in the graphs, the tonnage of beverage containers recycled took big steps up following the doubling of the refund value of containers to 10 cents in April 2017 and the addition of juices, teas, sports drinks, and many other beverages as of January 1, 2018. There was a brief drop in 2020 due to the Covid-19 pandemic, but redemption rates have since rebounded. These data agree closely with the OLCC data on beverage container sales and redemptions, which showed that redemptions in 2022 were 85.5 percent of sales, nearly as high as the recent high of 85.8 percent in 2019 before the pandemic.

Increases in recycling tonnage since 2017 under the Bottle Bill come from two sources:

- More containers being redeemed instead of being disposed or littered, and
- Containers being redeemed instead of being placed out for curbside collection or recycled at depots.

Moving containers from disposal or litter clearly has major environmental benefits. However, even moving containers from depots or on-route collection also results in a greater tonnage of material recycled, as Bottle Bill recycling is much less contaminated than is true for materials collected commingled, resulting in a higher yield of material actually recycled into new products or packaging.

Year to year changes in material collected

Electronics. Electronics recovery saw a decrease of 10 percent in 2022 compared to 2021.

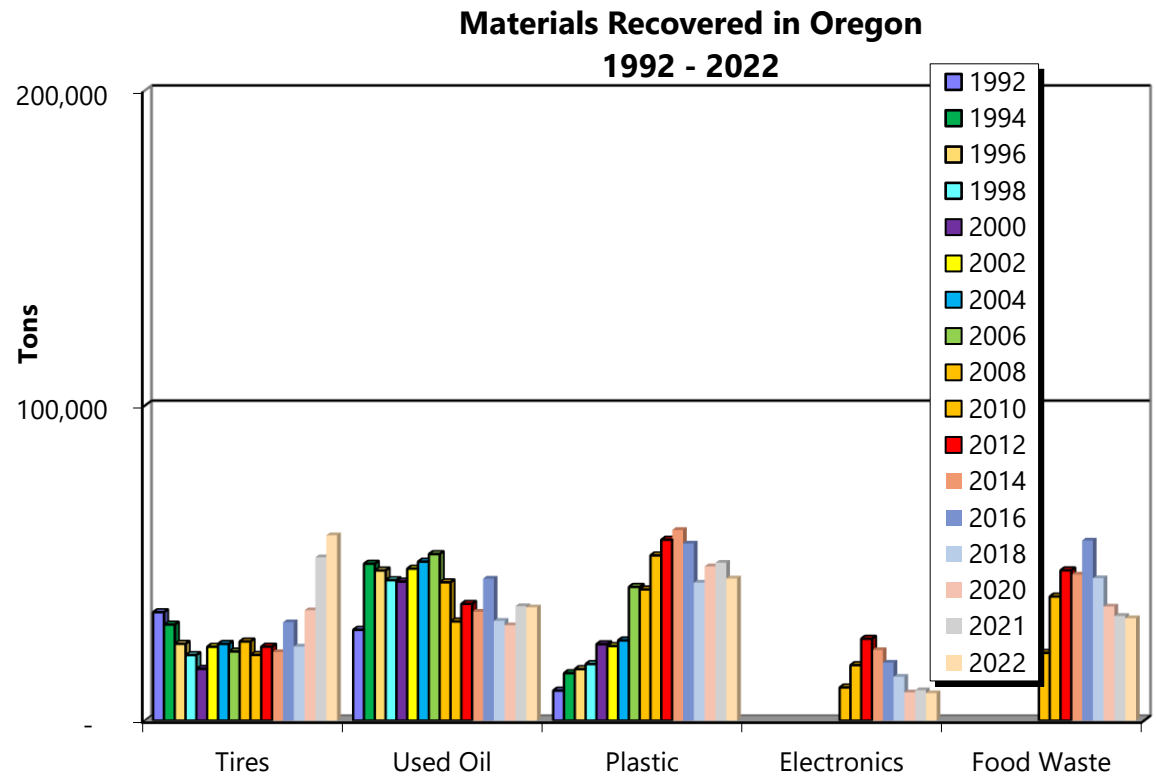
Paper (including cardboard). There was an overall decrease in recovery for paper fibers by five percent in 2022; printing, writing and other papers continued their decline by seven percent, a decrease of 12,205 tons from 2021. Cardboard recovery saw a decrease by 18,726 tons, four percent down from 2021. It's possible the cardboard decrease is connected to supply chain issues brought on by the peak of inflation during 2022.

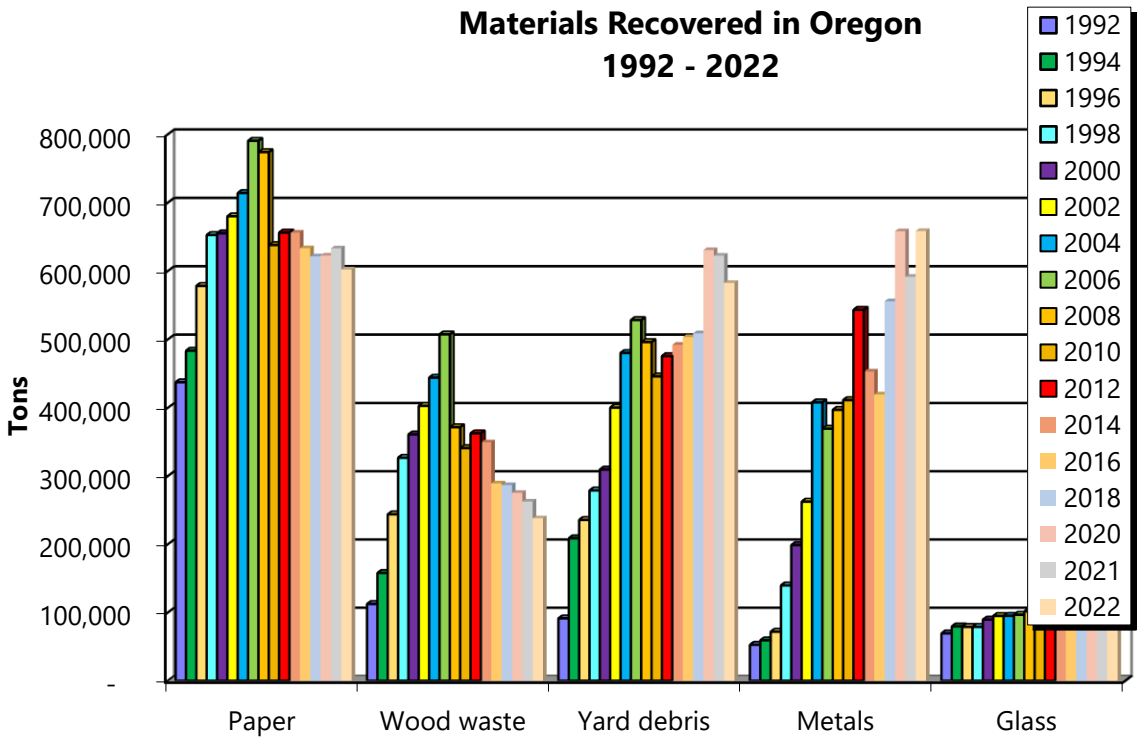
Plastics. A total of 29,445 tons of rigid plastic containers were collected for recycling in 2022, compared to 31,519 tons in 2021. Plastic Film decreased by 2,886 tons, from 10,036 tons in 2021 to 7,151 tons in 2022.

Metals. The total amount of metals increased by 11 percent in 2022 compared to 2021. Scrap metals saw an increase of 12 percent. Tinned cans continued to decrease by 220 tons in 2022 from 5,983 tons in 2021, while aluminum saw a nearly 10 percent increase to 39,855 tons in 2022.

Organics. The total recovery of organics (which includes animal waste/grease, wood waste, yard debris, and food waste) decreased by seven percent in 2022. There was a decrease of 39,851 tons of yard debris compared to 2021; and a continued decrease in animal waste/grease recovered by nearly 19 percent from 2021.

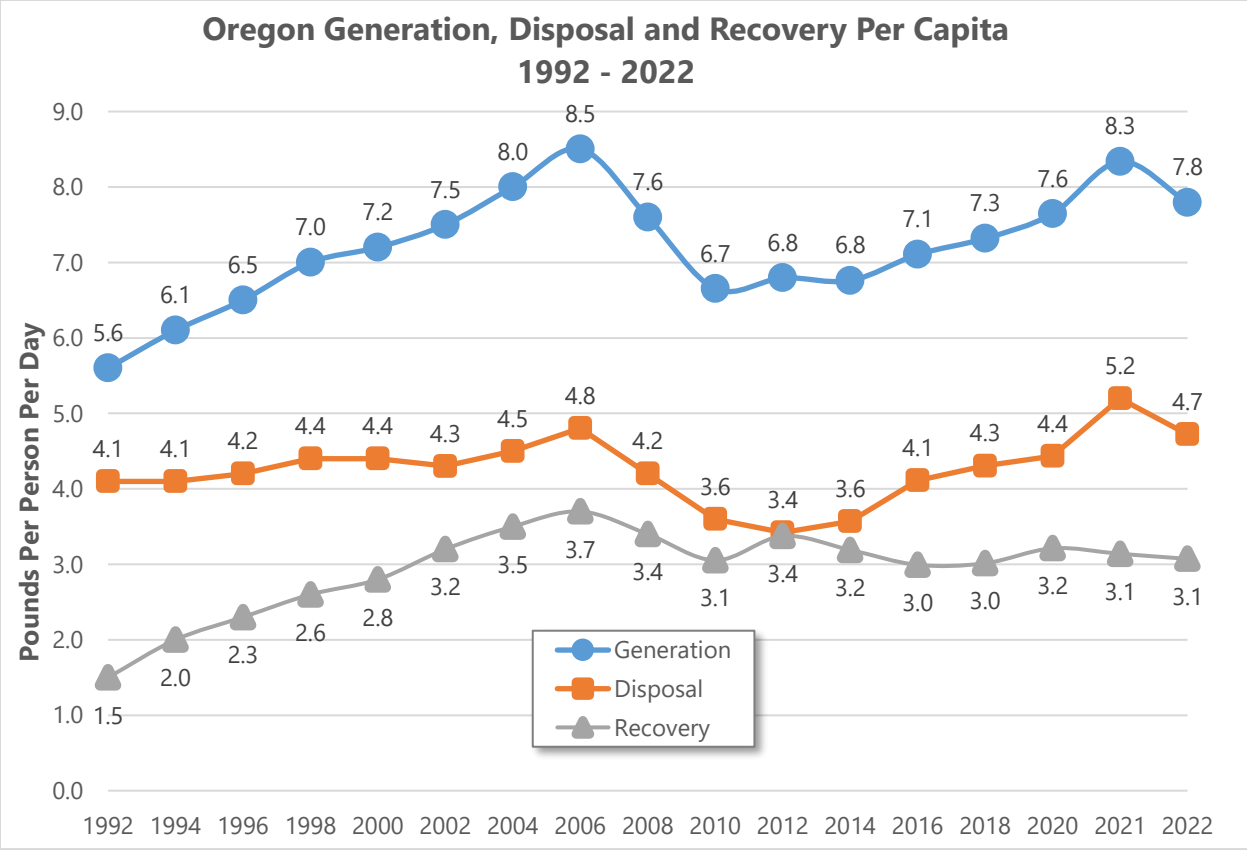
The following charts compare the materials recovered over the past three decades.


Materials Recovered in Oregon
1992 - 2022
Tons
200,000
100,000
-
Tires
Used Oil
Plastic
Electronics
Food Waste
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020
2021
2022


Materials Recovered in Oregon
1992 - 2022
Tons
800,000
700,000
600,000
500,000
400,000
300,000
200,000
100,000
-
Paper
Wood waste
Yard debris
Metals
Glass
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020
2021
2022

Waste generation

Changes in the total amount of municipal solid waste generated (materials recovered plus waste disposed) in Oregon over time tell an interesting story. From 1992 to 2006, total waste generation increased every year, often steeply. Waste generation then declined slightly in 2007 and sharply in both 2008 and 2009, coinciding with the economic recession. Between 2009 and 2014, waste generation started growing again, but at a very slow pace, averaging less than one percent increase per year. In 2022 Oregon generated 6,091,756 tons of municipal solid waste, a decrease of 6.2 percent from 2021. This equates to per-capita generation of 2,845 pounds per person (7.8 pounds per day), a 6.5 percent decrease from 3,043 pounds per person (8.0 pounds per day) in 2021. Although total waste generation in 2022 was still an increase (+361,877 tons) from its peak in 2006, it was only an increase of six percent in total waste generation between 2006 and 2022 and turned out to be an eight percent decrease in the per-capita amount. This decrease in waste generation is likely because there weren't any significant disasters similar to the wildfires in late 2020.



Note: Some years within the chart above have been hidden for readability.

The following table shows the disposition of the municipal solid waste generated in Oregon in 2022. See Table 9 for individual wasteshed dispositions.

Disposition of Waste Generated in Oregon in 2022	
Disposition	**Percent by weight**
Disposed*	60.6
Recycled	25.3
Composted	9.9
Recovered for Energy*	4.2

*For the Marion County's waste-to-energy facility only the portion of waste that counts toward the county's and state's recovery rates is included here in "recovered for energy" (see Marion County Adjustments on page 18). Other wastes burned at the facility are counted here as disposed.

Discussion

In 2015, Oregon adopted new statutory goals of 52 percent recovery by 2020 and 55 percent by 2025. Oregon did not meet the 2020 goal, as its 2022 recovery rate was 39.4 percent, and its 2021 rate 37.7 percent.

Several historical factors contributed to lower-than-anticipated recovery.

- In 2015, DEQ did not anticipate the closure of the paper mill that by far was the largest user of post-consumer wood waste as a fuel, nor the discontinuance of the use of wood by other mills, strongly impacting the ability to recover and use wood.
- Similarly, DEQ did not anticipate that Oregon and the world would experience disruptions in the markets for most plastics and for mixed paper, as China, the largest importer of recyclable material in the world, restricted the importation of these materials and has banned the importation of unsorted paper and all unprocessed post-consumer plastics in 2018.

Such disruptions motivated a new law, the *Plastics Pollution and Recycling Modernization Act*, which took effect Jan. 1, 2022, and will significantly affect recycling operations starting July 2025. The law has numerous aims and expands the concept of successful recycling beyond the weight-based generation and recovery rates described in this report. The law's goals include making recycling easier for the public to use, expanding access to recycling services, upgrading recycling facilities, and reducing social and environmental harms. In 2025 and beyond, this report may look substantially different.

Adjustments to reports from previous years

DEQ continues to review and use survey data even after publishing the final report each year. Occasionally, we encounter and correct errors in previously reported results. Thus, tonnages published in this report for previous years may not match the tonnages originally reported for that year.

DEQ made the following adjustments for the 2022 report:

- An adjustment was made to wasteshed allocations for lead acid batteries reported for the 2021 and 2020 survey period.
- A correction to recovered tonnage of some materials reported by a recycler was made to the 2021 survey period, due to some double counts discovered.

DEQ corrected data in previous years, for the following reasons:

- A correction to food waste and yard debris tons recovered in the Metro Wasteshed in 2020 was made due to a formula calculation error.
- A correction to recovered tonnage of some materials reported by a recycler was made to the 2020 survey period, due to some double counts discovered.
- A correction to animal waste/grease tons reported in 2020 and 2019 was made due to a conversion rate error used by the recycler.
- A correction was made to a landfill for allocated tire disposal in 2020.
- A correction to food waste reported in 2019 as recovered was revised to "reuse," removing those tons from the total recovered for 2019.
- A correction to disposal tonnage, the non-reporting of some disposal tons going out-of-state and the misreporting of counting solid waste tons was made to the 2019 survey period.
- A correction to disposal tonnage, the non-reporting of some disposal tons going out-of-state – was made to the 2018 survey period.
- A correction to recovered tonnage of some materials reported by a recycler was made to the 2017 survey period, due to some double counts discovered.

- Based on the recyclers reporting in 2018, some materials were not reported due to unknown markets. These materials will be revised during the 2019 reporting period.
- A correction to recovered tonnage of cardboard was made to the 2017 survey period, due to a double count discovered.
- A revision was made to the breakdown of food waste and yard debris mix from the curbside tons collected and composted. Prior to 2018 reporting, the breakdown was 90 percent yard debris and 10 percent food waste; the revised breakdown is split between metro area collections (89.3 percent yard debris, 9.5 percent food waste and 1.2 percent solid waste) and non-metro area collections (94.1 percent yard debris, 4.8 percent food waste and 1.2 percent solid waste). This breakdown revision resulted in an overall increase of yard debris and an overall decrease in food waste; as well as a slight decrease in overall organic tons by accounting for the 1.2 percent solid waste.
- A significant correction to disposal for several wastesheds, increased the total tons disposed in Oregon and dropped the recovery rate from 42.8 percent to 42.1 percent for 2017. This also resulted in the publishing of a revised 2017 report in March 2019.
- A correction to recovered tonnage of yard debris was made to the 2015 and 2016 survey period, due to a double count discovered.
- A correction was made to some asphalt roofing tons that were found to be used as alternative daily cover at a local landfill but that had been reported as recovered. "Alternative daily cover" - material used to cover garbage daily at a landfill instead of using soil, is considered to be a form of disposal rather than recovery. This correction was made to 2015 and 2016 data.
- The yard debris and asphalt roofing corrections resulted in adjustments to the previous year's recovery rates; the recovery rate for 2015 dropped from 46.2 to 46.0 percent, the recovery rate for 2016 dropped from 42.6 to 42.2 percent.
- A correction to recovered tonnage of yard waste was made to the 2015 survey period, a reporting facility for 2016 sent in a missing 2015 report.
- In 2016 a correction was made to some "plastic other" and "plastic film" incorrectly converted to tons from pounds, this increased the total recovered for both materials.
- A couple of 2015 disposal reports were revised. This adjustment increased disposal tonnage for 2015, which dropped the state recovery rate from 46.5 percent to 46.2 percent for 2015.
- A correction to recovered tonnage of wood waste in two wastesheds was made to survey years 2014 and 2013, as some tonnage was determined to be pre-consumer material.
- Adjustments were made to 2014 and 2013 animal waste/grease collection amounts, as well as correctly identifying wastesheds of origin, based on revised reporting by an end-user.
- Disposal tonnage was reported for the wrong wasteshed. This adjustment increased disposal tonnage for 2014 for one wasteshed; which changed the wasteshed rate of the two wastesheds involved. This did not affect the state's recovery rate.

- An error in reporting was discovered by one of the recycling processors; a large amount of newspaper was double counted in the previously published 2004 results. The paper was counted both at the processing facility and at the paper mill.
- An enforcement action carried out by Metro showed that most of the brick reported as being recycled by one facility was falsely reported. DEQ subsequently decided that brick more closely resembled other inert materials such as cement and asphalt. Since these are not counted toward the recovery rate, brick was removed from all previous recovery tonnages.
- New information showed that corrections needed to be made to tonnages for roofing and non-container glass in 2003 and 2004, as well as other minor adjustments in other categories.
- Field visits showed that some plastic for 2005 had been reported as 'Plastic Other' and that this material was actually 'Rigid Plastic Containers.' The 2005 numbers have been adjusted for this change, along with a few other minor adjustments.
- Field visits and continued investigation showed that previously reported 'Wood Waste' collections for 2006 were actually collected in three years – 2004, 2005 and 2006. These years are now correct.
- The 2006 and 2007 plastics numbers were adjusted between grades of "Rigid Plastic Containers," "Plastic Other," and "Plastic Film." This may have led to small changes in the recovered tonnages for these materials.
- Investigation of disposal numbers at two landfills led to deductions in the amount of SW disposed – these were really Industrial Waste, non-counting for the purposes of this survey.
- Some changes were made in 2006 and 2007 to disposition of materials. Changes were made to composted, burned for energy recovery and disposed amounts.
- Adjustments were made to the 2007 collection amounts, correctly identifying the wasteshed of origin.
- For 2006 and 2007, some non-counting slaughterhouse material was deleted from the recovered tonnage.
- Sawdust material from manufacturing was deleted for 2006 and 2007.
- Beginning with 2006, material previously identified as "CD – Construction and Demolition" was separated out into individual materials.
- Textiles previously counted were determined to be re-used, which does not count for recovery. 2006, 2007, 2010 and 2011 recovered tonnage was decreased.
- Some gypsum sent for disposal was included in the 2006 and 2007 tonnage – this was removed.
- Bottle Bill materials, container glass and aluminum had better reporting for 2009, and DEQ made some adjustments to those materials for 2008.

- Municipal solid wastes from another landfill were determined to be industrial and were deleted from the 2007 and 2008 counting tonnages.
- Minor disposal adjustments were made to two wastesheds for 2006 data with incorrectly reported county of origin.
- Yard debris numbers contained a large double counting for the Metro region – the correction caused a decrease in recovered tons
- Some roofing material was deleted - it was determined to be industrial material.
- Added in disposal tonnages for 2009 and 2010 for material sent out of state for disposal.
- Corrected the disposition methods for food waste and yard debris in 2011.
- Fixed the disposal tonnages originally recorded for the incorrect wasteshed in 2011.
- An error in food waste reporting discovered by DEQ showed a large amount of food waste was double counted in the 2011 and 2012 reports. The food waste was counted both by the composting facility and by the recycling collectors.
- More accurate reporting identified corrections needed in tonnages for used oil, antifreeze, solvents and used oil filters in 2011 and 2012.
- Adjustments were made to 2013 and 2012 collection amounts, as well as correctly identifying wastesheds of origin.
- Municipal solid waste from one landfill was reported incorrectly as out-of-state waste, this adjustment increased the "counting" disposal tonnage for 2013. This in turn adjusted the state recovery rate from 54 percent for 2013 to 53.4 percent.

2022 survey report tables

List of data tables one through nine used for this report.

Table 1: Wasteshed Recovery Rates, 2022

Table 2: Amount Recovered in 2022 by Wasteshed

Table 3: Solid Waste Disposed in 2022 by Wasteshed

Table 4: Oregon Calculated Recovery Rates by Wasteshed, 1992-2022

Table 5: Oregon Amount Recovered by Wasteshed, 1992-2022

Table 6: Oregon Solid Waste Disposed by Wasteshed, 1992-2022

Table 7: Oregon Solid Waste Generated by Wasteshed, 1992-2022

Table 8: Oregon Materials Recovered, 1992-2022

Table 9: Disposition of Recovered Materials, 2022

Table 1: Wasteshed Recovery Rates, 2022

Wasteshed	Tons Disposed	Tons Recovered	Tons Generated	Calculated Recovery Rate[1]	SB 263 Goal[3] 2025
Baker	14,071	3,187	17,258	**18.5%**	25%
Benton	71,811	32,968	104,779	**31.5%**	44%
Clatsop	41,703	20,091	61,795	**32.5%**	53%
Columbia	32,798	9,341	42,140	**22.2%**	45%
Coos	58,991	18,082	77,073	**23.5%**	30%
Crook	27,786	11,311	39,097	**28.9%**	20%
Curry	22,099	5,936	28,036	**21.2%**	30%
Deschutes	225,929	84,413	310,342	**27.2%**	45%
Douglas	103,451	25,416	128,867	**19.7%**	34%
Gilliam	2,920	763	3,683	**20.7%**	25%
Grant	4,699	979	5,677	**17.2%**	25%
Harney	4,884	1,010	5,894	**17.1%**	25%
Hood River	25,932	9,033	34,966	**25.8%**	35%
Jackson	229,268	111,201	340,470	**32.7%**	25%
Jefferson	20,838	6,625	27,463	**24.1%**	32%
Josephine	85,396	34,187	119,583	**28.6%**	20%
Klamath	75,473	20,071	95,544	**21.0%**	20%
Lake	5,807	630	6,437	**9.8%**	15%
Lane	284,399	319,447	603,846	**52.9%**	63%
Lincoln	45,509	20,328	65,837	**30.9%**	37%
Linn	108,287	85,953	194,241	**44.3%**	45%
Malheur	24,852	6,641	31,493	**21.1%**	25%
Marion[2]	333,431	291,952	625,383	**46.7%**	64%
Metro	1,457,079	1,139,010	2,596,089	**43.9%**	64%
Milton Freewater	5,395	1,276	6,671	**19.1%**	25%
Morrow	23,152	4,922	28,073	**17.5%**	20%
Polk	55,725	34,935	90,660	**38.5%**	48%
Sherman	1,298	396	1,694	**23.4%**	20%
Tillamook	32,496	12,238	44,734	**27.4%**	37%
Umatilla	96,225	24,806	121,031	**20.5%**	20%
Union	20,956	7,864	28,820	**27.3%**	25%
Wallowa	5,093	1,683	6,776	**24.8%**	25%
Wasco	22,401	6,924	29,325	**23.6%**	35%
Wheeler	461	88	549	**16.0%**	20%
Yamhill	120,329	47,100	167,429	**28.1%**	45%
Oregon Totals	3,690,946	2,400,810	6,091,756	**39.4%**	

[1] The recovery rate is calculated using the following formula:
1) Tons Disposed + Tons Recovered = Total Tons Generated
2) Tons Recovered / Total Generated = Calculated Recovery Rate

[2] The Marion County disposal and recovery rates reflect 18,642 tons of recyclable materials burned for energy in 2022 (per ORS 459A.010(3)(f)(B)).

[3] ORS 459A.010(6).

Table 2: Amount Recovered in 2022 by Wasteshed

Wasteshed	2022 Tons Recovered	2022 Pounds Per Capita	2022 Wasteshed Population
Baker	3,187	372	17,148
Benton	32,968	763	86,374
Clatsop	20,091	957	41,971
Columbia	9,341	351	53,156
Coos	18,082	555	65,112
Crook	11,311	865	26,162
Curry	5,936	497	23,897
Deschutes	84,413	813	207,561
Douglas	25,416	455	111,716
Gilliam	763	737	2,071
Grant	979	267	7,337
Harney	1,010	264	7,640
Hood River	9,033	756	23,894
Jackson	111,201	993	224,013
Jefferson	6,625	522	25,404
Josephine	34,187	771	88,695
Klamath	20,071	567	70,848
Lake	630	153	8,246
Lane	319,447	1,664	383,958
Lincoln	20,328	796	51,090
Linn	85,953	1,222	140,678
Malheur	6,641	414	32,095
Marion*	291,952	1,676	348,352
Metro	1,139,010	1,231	1,849,881
Milton Freewater	1,276	318	8,040
Morrow	4,922	799	12,315
Polk	34,935	779	89,672
Sherman	396	409	1,938
Tillamook	12,238	878	27,868
Umatilla	24,806	686	72,361
Union	7,864	590	26,673
Wallowa	1,683	446	7,541
Wasco	6,924	517	26,794
Wheeler	88	122	1,436
Yamhill	47,100	857	109,914
OREGON TOTALS	**2,400,810**	**1,121**	**4,281,851**

Source for population data is the Center for Population Research and Census, Portland State University, published April 2023. Wastesheds populations are not the same as County populations for the Wastesheds of Benton, Linn, Marion, Metro, Milton-Freewater, Polk, Umatilla, and Yamhill (see OAR 340-090-0050)

*Includes certain Marion County recyclable materials burned for energy (per ORS 459A.010(3)(f)(B)).

Table 3: Solid Waste Disposed in 2022 by Wasteshed

Wasteshed	2022 Tons Disposed	2022 Pounds Per Capita	2022 Wasteshed Population
Baker	14,071	1,641	17,148
Benton	71,811	1,663	86,374
Clatsop	41,703	1,987	41,971
Columbia	32,798	1,234	53,156
Coos	58,991	1,812	65,112
Crook	27,786	2,124	26,162
Curry	22,099	1,850	23,897
Deschutes	225,929	2,177	207,561
Douglas	103,451	1,852	111,716
Gilliam	2,920	2,819	2,071
Grant	4,699	1,281	7,337
Harney	4,884	1,279	7,640
Hood River	25,932	2,171	23,894
Jackson	229,268	2,047	224,013
Jefferson	20,838	1,641	25,404
Josephine	85,396	1,926	88,695
Klamath	75,473	2,131	70,848
Lake	5,807	1,408	8,246
Lane	284,399	1,481	383,958
Lincoln	45,509	1,782	51,090
Linn	108,287	1,540	140,678
Malheur	24,852	1,549	32,095
Marion*	333,431	1,914	348,352
Metro	1,457,079	1,575	1,849,881
Milton Freewater	5,395	1,342	8,040
Morrow	23,152	3,760	12,315
Polk	55,725	1,243	89,672
Sherman	1,298	1,339	1,938
Tillamook	32,496	2,332	27,868
Umatilla	96,225	2,660	72,361
Union	20,956	1,571	26,673
Wallowa	5,093	1,351	7,541
Wasco	22,401	1,672	26,794
Wheeler	461	642	1,436
Yamhill	120,329	2,190	109,914
OREGON TOTALS	**3,690,946**	**1,724**	**4,281,851**

Source for population data is the Center for Population Research and Census, Portland State University, published April 2023. Wastesheds populations are not the same as County populations for the Wastesheds of Benton, Linn, Marion, Metro, Milton-Freewater, Polk, Umatilla, and Yamhill (see OAR 340-090-0050).

*Includes certain Marion County recyclable materials burned for energy (per ORS 459A.010(3)(f)(B)).

Table 4: Oregon Calculated Recovery Rates by Wasteshed, 1992-2022

Wasteshed	1992 Rate	1993 Rate	1994 Rate	1995 Rate	1996 Rate	1997 Calc. Rate*	1998 Calc. Rate*	1999 Calc. Rate*	2000 Calc. Rate*	2001 Calc. Rate*	2002 Calc. Rate*	2003 Calc. Rate*	2004 Calc. Rate*	2005 Calc. Rate*	2006 Calc. Rate*	2007 Calc. Rate*	2008 Calc. Rate*	2009 Calc. Rate*	2010 Calc. Rate*	2011 Calc. Rate*	2012 Calc. Rate*	2013 Calc. Rate*	2014 Calc. Rate*	2015 Calc. Rate*	2016 Calc. Rate*	2017 Calc. Rate*	2018 Calc. Rate*	2019 Calc. Rate*	2020 Calc. Rate*	2021 Calc. Rate*	2022 Calc. Rate*
Baker	10.0%	14.0%	17.0%	22.0%	25.0%	19.0%	19.0%	18.0%	18.0%	24.0%	20.5%	21.9%	19.9%	22.8%	16.8%	21.9%	20.6%	26.3%	21.7%	22.4%	23.2%	22.7%	28.4%	26.2%	20.0%	17.4%	16.4%	16.2%	19.5%	19.1%	18.5%
Benton	27.0%	30.0%	36.0%	35.0%	37.0%	41.0%	41.0%	35.0%	35.0%	41.0%	41.0%	39.0%	43.0%	40.0%	36.2%	38.9%	41.1%	37.9%	38.4%	38.3%	41.4%	41.5%	37.3%	35.3%	35.5%	34.0%	35.1%	35.5%	39.3%	34.4%	31.5%
Clatsop	19.0%	22.0%	20.0%	19.0%	20.0%	23.0%	22.0%	24.0%	25.0%	28.0%	25.2%	28.7%	30.6%	38.9%	33.9%	34.0%	36.5%	36.0%	36.0%	38.7%	39.9%	44.3%	37.8%	39.5%	37.8%	41.8%	41.5%	35.9%	36.8%	31.2%	32.5%
Columbia	34.0%	28.0%	22.0%	27.0%	22.0%	28.0%	29.0%	25.0%	31.0%	38.0%	33.8%	37.9%	30.9%	32.0%	30.5%	28.5%	29.9%	32.1%	35.8%	35.3%	33.3%	34.7%	28.6%	31.0%	32.5%	23.8%	24.4%	25.3%	24.4%	24.3%	22.2%
Coos	21.0%	20.0%	23.0%	28.0%	29.0%	28.0%	27.0%	22.0%	23.0%	23.0%	25.5%	21.1%	21.2%	22.9%	20.8%	19.7%	22.3%	23.0%	35.0%	47.7%	43.7%	40.3%	38.3%	23.5%	22.5%	22.4%	19.8%	23.2%	21.1%	21.0%	23.5%
Crook	16.0%	23.0%	19.0%	30.0%	23.0%	15.0%	14.0%	23.0%	27.0%	37.0%	26.8%	14.4%	21.4%	20.5%	25.6%	25.1%	33.2%	31.6%	33.6%	31.5%	34.6%	30.5%	26.1%	20.9%	20.6%	23.1%	19.7%	22.1%	22.2%	22.1%	28.9%
Curry	21.0%	25.0%	27.0%	31.0%	35.0%	33.0%	29.0%	27.0%	41.0%	39.0%	36.0%	25.1%	25.2%	15.0%	18.1%	23.7%	21.0%	19.8%	20.4%	27.2%	25.3%	22.8%	26.6%	24.1%	26.6%	21.4%	24.2%	22.9%	24.3%	20.3%	21.2%
Deschutes	15.0%	18.0%	24.0%	22.0%	23.0%	25.0%	32.0%	25.0%	31.0%	29.0%	26.6%	28.4%	26.8%	28.0%	27.0%	29.8%	31.1%	39.1%	35.1%	39.3%	38.8%	38.2%	35.8%	36.6%	33.0%	31.7%	31.6%	31.5%	33.2%	28.4%	27.2%
Douglas	26.0%	23.0%	23.0%	24.0%	26.0%	29.0%	30.0%	26.0%	26.0%	30.0%	29.0%	29.1%	31.2%	24.6%	23.7%	25.8%	34.4%	28.7%	35.9%	42.9%	41.0%	37.4%	32.8%	30.3%	27.0%	28.6%	28.2%	25.8%	30.7%	27.8%	19.7%
Gilliam	17.0%	6.0%	15.0%	20.0%	19.0%	21.0%	18.0%	15.0%	14.0%	13.0%	19.7%	10.4%	11.3%	6.7%	8.5%	12.9%	14.4%	27.0%	20.9%	18.0%	44.2%	41.8%	17.6%	35.4%	13.7%	14.8%	7.1%	10.4%	13.7%	13.2%	20.7%
Grant	18.0%	14.0%	16.0%	19.0%	16.0%	15.0%	16.0%	18.0%	19.0%	19.0%	18.0%	15.7%	19.3%	28.2%	21.2%	24.2%	25.1%	22.4%	22.1%	25.0%	21.5%	28.8%	18.4%	24.5%	27.4%	17.2%	16.3%	16.5%	17.4%	17.4%	17.2%
Harney	18.0%	21.0%	20.0%	34.0%	24.0%	21.0%	34.0%	34.0%	20.0%	27.0%	27.6%	27.3%	21.3%	26.8%	28.0%	25.2%	33.8%	23.6%	26.2%	31.1%	28.4%	27.3%	27.6%	21.8%	22.3%	23.7%	18.7%	15.3%	18.3%	19.2%	17.1%
Hood River	16.0%	24.0%	26.0%	16.0%	17.0%	17.0%	17.0%	19.0%	18.0%	30.0%	33.7%	35.3%	37.2%	36.1%	33.1%	29.5%	28.2%	29.3%	26.5%	34.4%	31.4%	32.2%	28.1%	29.5%	26.9%	21.9%	23.9%	24.4%	24.6%	23.4%	25.8%
Jackson	15.0%	19.0%	35.0%	33.0%	34.0%	34.0%	34.0%	29.0%	28.0%	32.0%	36.4%	32.2%	31.3%	31.7%	33.7%	30.4%	32.3%	35.6%	42.0%	41.6%	43.3%	43.1%	40.9%	37.2%	38.6%	35.0%	33.0%	38.3%	34.2%	19.1%	32.7%
Jefferson	21.0%	16.0%	18.0%	22.0%	24.0%	33.0%	33.0%	21.0%	27.0%	27.0%	20.7%	22.9%	34.0%	33.1%	27.7%	36.2%	33.7%	30.7%	41.3%	47.2%	44.8%	41.6%	33.2%	24.6%	31.6%	25.9%	22.3%	17.1%	19.8%	20.0%	24.1%
Josephine	14.0%	19.0%	27.0%	34.0%	38.0%	37.0%	41.0%	42.0%	33.0%	34.0%	36.8%	34.9%	37.4%	36.8%	38.9%	34.3%	38.9%	37.6%	40.1%	49.0%	49.9%	46.0%	40.3%	34.5%	35.4%	35.2%	31.7%	28.7%	34.8%	31.6%	28.6%
Klamath	13.0%	12.0%	17.0%	18.0%	15.0%	16.0%	17.0%	15.0%	18.0%	31.0%	30.4%	23.0%	31.0%	37.3%	33.6%	34.8%	45.4%	32.9%	29.2%	28.1%	33.1%	29.9%	30.9%	22.3%	25.6%	23.4%	20.5%	20.6%	21.9%	19.4%	21.0%
Lake	6.0%	6.0%	9.0%	8.0%	7.0%	6.0%	8.0%	11.0%	8.0%	11.0%	10.8%	25.1%	25.0%	14.7%	19.4%	21.8%	34.5%	25.1%	27.2%	28.5%	26.8%	26.3%	16.7%	12.5%	12.1%	8.6%	10.7%	6.4%	6.7%	9.0%	9.8%
Lane	19.0%	28.0%	32.0%	32.0%	39.0%	39.0%	40.0%	41.0%	46.0%	46.0%	43.9%	46.0%	45.0%	47.7%	46.9%	46.3%	46.4%	46.1%	51.2%	55.5%	54.7%	50.9%	53.1%	50.4%	50.0%	52.4%	53.8%	55.1%	53.9%	49.7%	52.9%
Lincoln	20.0%	20.0%	21.0%	19.0%	16.0%	19.0%	20.0%	19.0%	23.0%	28.0%	27.2%	28.0%	29.1%	33.3%	26.3%	27.6%	30.8%	29.4%	32.6%	32.4%	35.9%	29.2%	32.1%	31.2%	26.3%	22.6%	24.1%	27.2%	25.2%	28.0%	30.9%
Linn	15.0%	27.0%	29.0%	30.0%	32.0%	33.0%	31.0%	33.0%	29.0%	34.0%	38.5%	34.1%	44.0%	43.3%	40.5%	37.4%	41.3%	40.5%	43.8%	49.2%	45.0%	44.0%	42.4%	39.3%	38.0%	36.9%	40.1%	42.2%	46.1%	40.1%	44.3%
Malheur	19.0%	15.0%	12.0%	15.0%	20.0%	19.0%	22.0%	24.0%	25.0%	26.0%	26.9%	25.8%	26.7%	24.8%	22.8%	22.6%	21.9%	18.9%	23.3%	20.9%	27.3%	27.8%	24.7%	24.2%	26.4%	22.6%	16.5%	18.5%	16.9%	20.9%	21.1%
Marion	26.0%	27.0%	27.0%	29.0%	28.0%	28.0%	30.0%	32.0%	38.0%	**50%	**50.9%	**47.0%	**47.4%	**49.6%	**51.9%	**50.4%	**52.4%	**52.2%	**50.1%	**54.7%	**54.4%	**55.2%	**53.8%	**52.2%	**49.4%	**48.3%	**49.7%	**47.7%	**48.4%	**40.6%	**46.7%
Metro	35.0%	37.0%	39.0%	42.0%	41.0%	42.0%	43.0%	43.0%	45.0%	49.0%	47.5%	50.1%	51.0%	52.6%	49.6%	48.9%	50.2%	50.4%	51.9%	53.3%	56.3%	57.0%	53.6%	53.0%	46.9%	46.1%	45.4%	46.1%	46.5%	44.2%	43.9%
Milton Freewater	16.0%	13.0%	13.0%	22.0%	21.0%	20.0%	19.0%	18.0%	21.0%	21.0%	23.9%	25.1%	24.2%	29.5%	32.8%	30.8%	43.0%	34.9%	35.3%	37.9%	27.0%	41.2%	39.0%	40.1%	28.8%	35.2%	17.6%	14.4%	23.4%	29.7%	19.1%
Morrow	11.0%	16.0%	13.0%	12.0%	13.0%	17.0%	17.0%	20.0%	15.0%	16.0%	15.7%	19.7%	19.7%	14.0%	21.5%	26.4%	24.8%	23.2%	22.0%	23.2%	25.1%	18.3%	20.9%	21.1%	24.4%	21.4%	22.0%	15.6%	13.7%	16.2%	17.5%
Polk	20.0%	25.0%	24.0%	23.0%	19.0%	24.0%	26.0%	29.0%	33.0%	39.0%	38.4%	42.8%	44.1%	50.1%	47.9%	46.4%	47.0%	45.9%	45.6%	47.7%	44.2%	43.6%	46.0%	45.1%	45.9%	47.3%	41.5%	47.3%	46.4%	39.4%	38.5%
Sherman	24.0%	17.0%	20.0%	20.0%	21.0%	11.0%	16.0%	24.0%	17.0%	15.0%	13.5%	16.1%	25.8%	15.9%	18.5%	16.4%	14.8%	14.3%	11.5%	13.9%	21.9%	14.2%	15.9%	15.9%	11.8%	11.1%	13.5%	6.6%	10.2%	26.7%	23.4%
Tillamook	31.0%	27.0%	28.0%	27.0%	26.0%	26.0%	26.0%	28.0%	26.0%	28.0%	27.7%	26.6%	38.8%	36.9%	33.4%	30.6%	31.5%	29.1%	31.2%	33.7%	33.0%	31.9%	29.6%	28.9%	26.1%	27.8%	27.8%	25.7%	30.1%	32.9%	27.4%
Umatilla	14.0%	15.0%	15.0%	19.0%	20.0%	25.0%	24.0%	25.0%	26.0%	28.0%	35.3%	33.5%	35.9%	36.5%	35.0%	36.5%	37.9%	31.7%	29.3%	29.3%	31.1%	28.6%	28.1%	29.5%	25.0%	26.9%	29.7%	36.2%	28.3%	31.2%	20.5%
Union	16.0%	19.0%	21.0%	30.0%	26.0%	29.0%	27.0%	24.0%	22.0%	22.0%	27.6%	25.8%	27.4%	27.4%	33.7%	31.5%	29.8%	29.3%	28.6%	30.7%	30.5%	30.4%	25.2%	24.8%	25.1%	22.0%	26.9%	27.2%	26.9%	25.8%	27.3%
Wallowa	6.0%	8.0%	11.0%	18.0%	11.0%	16.0%	16.0%	19.0%	21.0%	19.0%	19.3%	15.6%	18.4%	19.5%	22.2%	27.4%	24.1%	23.5%	19.4%	23.5%	22.4%	23.7%	26.6%	22.4%	27.0%	24.3%	21.4%	21.8%	17.5%	28.4%	24.8%
Wasco	25.0%	23.0%	26.0%	29.0%	30.0%	29.0%	31.0%	34.0%	34.0%	26.0%	28.3%	30.8%	24.6%	24.1%	18.8%	23.0%	23.4%	32.7%	28.0%	31.3%	27.8%	32.0%	28.0%	28.1%	26.6%	19.6%	19.2%	16.6%	14.8%	21.7%	23.6%
Wheeler	7.0%	8.0%	11.0%	24.0%	20.0%	20.0%	25.0%	18.0%	14.0%	13.0%	25.2%	26.9%	15.8%	34.3%	23.9%	26.9%	27.1%	20.0%	8.1%	12.9%	8.8%	8.7%	7.3%	15.6%	12.8%	17.5%	26.0%	15.3%	16.5%	14.4%	16.0%
Yamhill	19.0%	22.0%	25.0%	30.0%	35.0%	25.0%	31.0%	36.0%	44.0%	49.0%	54.4%	42.3%	50.2%	44.6%	39.0%	35.7%	35.6%	39.7%	34.2%	40.2%	32.8%	38.1%	37.1%	38.3%	29.9%	28.7%	29.9%	35.3%	35.8%	30.2%	28.1%
OREGON TOTALS	**27.1%**	**29.9%**	**32.6%**	**34.7%**	**34.9%**	**35.7%**	**37.3%**	**36.8%**	**38.9%**	**43.1%**	**42.7%**	**43.1%**	**44.2%**	**45.5%**	**43.5%**	**42.9%**	**44.6%**	**44.6%**	**45.9%**	**48.6%**	**49.7%**	**49.5%**	**47.2%**	**46.0%**	**42.1%**	**41.4%**	**41.2%**	**42.0%**	**42.0%**	**37.7%**	**39.4%**

*does not include 2% credits
**does include certain Marion County recyclable materials burned for energy

Table 5: Oregon Amount Recovered by Wasteshed, 1992-2022

Wasteshed	1992 Rvd (tons)	Per Capita (lbs.)	1996 Rvd (tons)	Per Capita (lbs.)	2000 Rvd (tons)	Per Capita (lbs.)	2006 Rvd (tons)	Per Capita (lbs.)	2012 Rvd (tons)	Per Capita (lbs.)	2014 Rvd (tons)	Per Capita (lbs.)	2016 Rvd (tons)	Per Capita (lbs.)	2018 Rvd (tons)	Per Capita (lbs.)	2020 Rvd (tons)	Per Capita (lbs.)	2021 Rvd (tons)	Per Capita (lbs.)	2022 Rvd (tons)	Per Capita (lbs.)	Change in Per Capita 2022-2021
Baker	982	124	3,644	438	2,849	340	2,782	338	3,200	395	4,071	499	3,111	377	2,624	313	3,386	400	3,333	395	3,187	372	-6.0%
Benton	21,480	626	30,352	830	28,488	779	35,728	921	38,226	955	33,959	832	34,311	820	35,072	819	39,470	914	35,226	832	32,968	763	-8.3%
Clatsop	5,148	300	7,118	403	10,586	593	19,576	1,057	19,465	1,047	19,025	1,015	20,671	1,082	24,448	1,247	20,593	1,044	19,411	937	20,091	957	2.2%
Columbia	7,894	407	6,258	302	10,361	474	12,940	551	12,703	511	10,273	410	13,781	543	10,448	403	11,056	415	11,463	432	9,341	351	-18.7%
Coos	10,035	323	14,972	472	11,754	374	13,364	425	31,613	1,005	26,190	833	13,215	418	12,603	398	14,781	467	15,521	476	18,082	555	16.6%
Crook	1,581	206	3,156	363	5,215	540	7,075	577	6,328	613	5,209	501	5,302	491	5,618	495	7,342	626	7,449	585	11,311	865	47.9%
Curry	2,863	288	6,011	572	10,387	980	4,830	452	5,557	499	5,748	514	6,989	618	6,445	562	6,478	563	5,652	478	5,936	497	4.0%
Deschutes	12,858	305	30,222	605	49,993	858	69,443	910	72,065	900	72,965	877	79,754	903	83,501	884	98,504	1,000	87,139	857	84,413	813	-5.1%
Douglas	29,467	614	30,945	621	31,390	625	31,980	616	50,342	931	36,263	663	27,725	502	33,227	595	41,786	743	35,146	629	25,416	455	-27.7%
Gilliam	177	205	284	306	266	280	225	239	1,684	1,773	488	495	358	361	301	303	353	355	373	365	763	737	101.6%
Grant	911	232	687	171	791	199	1,055	277	954	256	838	226	1,457	393	827	224	946	259	960	266	979	267	0.5%
Harney	600	171	678	188	806	212	1,165	304	1,414	387	1,360	374	1,156	316	1,057	286	1,131	311	1,241	329	1,010	264	-19.7%
Hood River	1,855	212	3,333	345	3,403	332	9,200	862	7,785	681	6,701	565	7,437	601	7,217	570	7,559	590	7,648	640	9,033	756	18.1%
Jackson	17,134	221	60,292	707	63,872	701	92,807	935	108,893	1,064	108,992	1,046	110,456	1,033	96,171	877	115,755	1,037	103,404	924	111,201	993	7.5%
Jefferson	1,269	170	2,667	307	3,661	382	5,506	514	8,244	752	5,400	486	6,161	541	4,612	391	4,140	343	4,728	380	6,625	522	37.3%
Josephine	7,826	239	21,688	600	26,534	698	42,005	1,036	48,567	1,173	39,387	948	38,476	909	37,385	865	46,849	1,082	43,623	983	34,187	771	-21.6%
Klamath	8,827	301	11,171	360	14,070	440	36,650	1,120	23,432	702	22,134	662	20,055	595	17,442	513	18,989	558	21,203	607	20,071	567	-6.7%
Lake	269	74	601	161	369	99	1,360	361	1,843	465	1,145	287	897	224	773	191	425	105	568	139	630	153	10.0%
Lane	72,072	493	153,843	992	216,532	1,337	248,599	1,463	268,429	1,516	264,472	1,474	258,326	1,412	318,395	1,698	331,136	1,737	337,438	1,764	319,447	1,664	-5.7%
Lincoln	6,886	338	7,823	352	12,192	547	18,030	810	22,104	955	19,940	850	17,012	713	18,516	768	18,403	762	24,902	978	20,328	796	-18.7%
Linn	17,232	352	33,201	634	33,830	623	60,754	1,057	65,299	1,045	60,159	947	60,100	923	74,440	1,113	93,476	1,376	74,775	1,068	85,953	1,222	14.4%
Malheur	3,283	237	4,808	319	7,212	454	6,862	433	7,470	476	6,621	421	7,973	503	5,170	324	5,367	334	6,636	415	6,641	414	-0.2%
Marion	55,834	462	85,731	645	134,032	937	264,168	1,724	228,708	1,428	238,422	1,463	237,132	1,421	262,576	1,527	270,386	1,550	290,247	1,673	291,952	1,676	0.2%
Metro	514,747	825	752,470	1,106	970,850	1,338	1,337,848	1,705	1,222,024	1,461	1,182,294	1,377	1,116,644	1,255	1,108,975	1,206	1,179,512	1,257	1,136,080	1,228	1,139,010	1,231	0.3%
Milton Freewater	908	323	1,186	392	1,317	406	2,612	793	1,615	419	2,674	683	1,884	472	1,147	284	1,523	374	2,242	557	1,276	318	-43.0%
Morrow	930	227	842	181	1,428	257	2,874	474	3,680	651	4,047	702	5,635	960	5,384	906	5,847	912	5,584	884	4,922	799	-9.6%
Polk	4,873	187	6,787	237	18,000	581	38,074	1,155	30,505	805	34,580	899	39,522	1,002	35,979	886	44,774	1,080	36,339	826	34,935	779	-5.7%
Sherman	270	278	264	275	217	223	232	249	319	362	219	246	164	182	193	216	142	158	447	469	396	409	-12.8%
Tillamook	4,518	406	5,246	438	6,174	508	12,554	983	10,606	838	9,078	713	9,331	720	10,890	825	13,158	992	15,868	1,149	12,238	878	-23.5%
Umatilla	6,641	236	12,454	414	20,115	625	35,495	1,082	28,990	835	26,990	766	24,283	676	33,575	924	36,704	1,001	41,651	1,149	24,806	686	-40.4%
Union	2,525	210	5,203	419	5,062	412	7,518	599	7,991	611	6,350	480	6,916	517	6,979	519	7,101	529	6,983	531	7,864	590	11.0%
Wallowa	433	119	503	135	1,219	336	1,431	401	923	263	904	256	1,513	424	1,386	386	1,304	364	2,123	571	1,683	446	-21.9%
Wasco	5,443	485	7,519	648	9,194	771	5,131	426	6,688	525	7,062	541	7,025	526	5,437	400	5,022	368	6,125	461	6,924	517	12.1%
Wheeler	59	82	185	226	100	129	161	206	37	52	29	40	55	74	132	182	76	106	74	102	88	122	19.7%
Yamhill	11,850	338	26,116	663	53,548	1,242	64,017	1,386	43,787	864	43,277	837	41,124	777	38,600	713	48,488	886	52,780	967	47,100	857	-11.4%
OREGON TOTALS	**839,679**	**562**	**1,338,259**	**825**	**1,765,817**	**1,028**	**2,494,050**	**1,352**	**2,391,490**	**1,232**	**2,307,269**	**1,164**	**2,225,950**	**1,092**	**2,307,545**	**1,100**	**2,501,960**	**1,172**	**2,444,380**	**1,146**	**2,400,810**	**1,121**	**-2.13%**
change in total from previous year			6.45%		8.58%		-1.16%		3.70%		-3.50%		-6.04%		0.90%		4.13%		-2.30%		-1.78%		
change in per capita from previous year				4.40%		7.25%		-2.74%		3.04%		-4.59%		-7.48%		-0.40%		3.36%		-2.27%		-2.13%	

Data from some years is not shown due to page formatting. Please contact DEQ directly for data from these years.

Certain recoverable materials in mixed waste burned at the waste-to-energy facility in Brooks are excluded from Marion County and Statewide recovery in years prior to 2001 but included in 2001 and subsequent years (per ORS 459A.010(3)(f)(B)).

Table 6: Oregon Solid Waste Disposed by Wasteshed, 1992-2022

Wasteshed	1992 Disposed (tons)	Per Capita (lbs.)	1996 Disposed (tons)	Per Capita (lbs.)	2000 Disposed (tons)	Per Capita (lbs.)	2006 Disposed (tons)	Per Capita (lbs.)	2012 Disposed (tons)	Per Capita (lbs.)	2014 Disposed (tons)	Per Capita (lbs.)	2016 Disposed (tons)	Per Capita (lbs.)	2018 Disposed (tons)	Per Capita (lbs.)	2020 Disposed (tons)	Per Capita (lbs.)	2021 Disposed (tons)	Per Capita (lbs.)	2022 Disposed (tons)	Per Capita (lbs.)	Change in Per Capita 2022-2021
Baker	8,419	1,062	10,897	1,310	12,617	1,507	13,770	1,672	10,610	1,309	10,251	1,256	12,432	1,506	13,420	1,601	13,940	1,649	14,129	1,676	14,071	1,641	-2.09%
Benton	58,761	1,713	50,840	1,390	53,835	1,472	62,940	1,622	54,062	1,351	57,050	1,398	62,440	1,492	64,847	1,514	60,970	1,412	67,055	1,584	71,811	1,663	4.96%
Clatsop	22,263	1,299	28,671	1,623	31,489	1,764	38,125	2,058	29,291	1,575	31,314	1,670	34,076	1,783	34,442	1,757	35,336	1,791	42,832	2,068	41,703	1,987	-3.90%
Columbia	15,131	780	22,650	1,095	23,201	1,062	29,541	1,258	25,400	1,023	25,697	1,026	28,657	1,128	32,377	1,248	34,178	1,283	35,779	1,350	32,798	1,234	-8.58%
Coos	37,596	1,211	36,436	1,148	39,329	1,253	50,868	1,617	40,733	1,295	42,222	1,343	45,468	1,439	51,175	1,618	55,199	1,744	58,344	1,791	58,991	1,812	1.17%
Crook	8,378	1,091	10,646	1,224	13,841	1,434	20,566	1,677	11,978	1,160	14,736	1,418	20,409	1,891	22,966	2,023	25,800	2,201	26,257	2,061	27,786	2,124	3.08%
Curry	10,555	1,062	11,121	1,059	14,644	1,382	21,834	2,044	16,419	1,473	15,885	1,421	19,279	1,706	20,212	1,764	20,177	1,754	22,134	1,871	22,099	1,850	-1.14%
Deschutes	72,529	1,720	103,397	2,070	111,013	1,904	188,146	2,466	113,611	1,419	130,956	1,574	161,645	1,830	180,640	1,912	197,979	2,010	220,125	2,165	225,929	2,177	0.57%
Douglas	85,040	1,772	87,325	1,751	89,451	1,780	103,061	1,985	72,583	1,342	74,219	1,357	75,069	1,360	84,736	1,517	94,397	1,678	91,146	1,632	103,451	1,852	13.48%
Gilliam	872	1,008	1,176	1,271	1,663	1,751	2,429	2,577	2,126	2,238	2,285	2,314	2,247	2,270	3,946	3,976	2,218	2,229	2,451	2,404	2,920	2,819	17.28%
Grant	4,178	1,063	3,492	869	3,441	866	3,918	1,027	3,473	932	3,730	1,005	3,868	1,044	4,256	1,150	4,490	1,228	4,552	1,260	4,699	1,281	1.66%
Harney	2,650	756	2,126	591	3,160	832	2,999	782	3,563	974	3,576	984	4,036	1,103	4,582	1,242	5,046	1,386	5,230	1,388	4,884	1,279	-7.87%
Hood River	9,959	1,139	16,016	1,659	15,741	1,536	18,620	1,745	17,046	1,490	17,175	1,448	20,187	1,632	23,004	1,818	23,190	1,809	25,000	2,093	25,932	2,171	3.71%
Jackson	98,002	1,265	115,011	1,348	165,129	1,813	182,404	1,837	142,338	1,391	157,217	1,509	176,022	1,647	195,218	1,781	222,255	1,991	437,251	3,907	229,268	2,047	-47.61%
Jefferson	4,813	645	8,380	965	9,889	1,033	14,385	1,344	10,148	925	10,883	980	13,351	1,172	16,036	1,361	16,816	1,395	18,916	1,520	20,838	1,641	7.93%
Josephine	47,687	1,457	35,873	992	54,033	1,421	66,105	1,630	48,812	1,179	58,277	1,402	70,229	1,659	80,597	1,866	87,625	2,025	94,497	2,130	85,396	1,926	-9.60%
Klamath	57,247	1,950	66,874	2,153	64,619	2,023	72,315	2,210	47,284	1,417	49,603	1,483	58,298	1,730	67,513	1,987	67,803	1,992	88,223	2,527	75,473	2,131	-15.69%
Lake	4,364	1,196	7,468	2,002	4,057	1,089	5,651	1,499	5,025	1,269	5,698	1,426	6,496	1,621	6,467	1,594	5,955	1,475	5,770	1,411	5,807	1,408	-0.20%
Lane	302,695	2,072	239,310	1,542	256,205	1,582	281,347	1,656	222,486	1,256	233,477	1,301	258,136	1,411	273,549	1,458	283,708	1,488	341,663	1,786	284,399	1,481	-17.04%
Lincoln	27,601	1,355	42,443	1,908	40,406	1,812	50,537	2,270	39,388	1,702	42,098	1,796	47,787	2,002	58,189	2,414	54,616	2,261	64,134	2,520	45,509	1,782	-29.30%
Linn	94,644	1,931	69,506	1,328	83,701	1,540	89,163	1,551	79,746	1,276	81,869	1,289	97,894	1,504	111,314	1,665	109,439	1,612	111,890	1,598	108,287	1,540	-3.68%
Malheur	13,815	996	18,776	1,246	21,338	1,344	23,292	1,468	19,920	1,269	20,201	1,284	22,205	1,401	26,136	1,637	26,438	1,647	25,096	1,569	24,852	1,549	-1.28%
Marion	158,109	1,307	219,182	1,648	222,098	1,552	245,214	1,600	191,947	1,199	204,991	1,258	243,107	1,457	266,140	1,548	287,996	1,651	425,320	2,452	333,431	1,914	-21.92%
Metro	945,634	1,516	1,097,246	1,613	1,207,348	1,663	1,356,955	1,730	946,915	1,132	1,022,371	1,190	1,266,283	1,423	1,331,557	1,448	1,358,070	1,448	1,433,959	1,549	1,457,079	1,575	1.68%
Milton Freewater	4,642	1,649	4,332	1,431	5,029	1,549	5,349	1,625	4,367	1,133	4,189	1,069	4,670	1,169	5,366	1,329	4,985	1,223	5,297	1,316	5,395	1,342	2.00%
Morrow	7,221	1,763	5,883	1,264	8,253	1,487	10,506	1,733	10,976	1,943	15,285	2,653	17,477	2,976	19,095	3,213	36,964	5,764	28,848	4,566	23,152	3,760	-17.66%
Polk	19,036	729	28,655	1,000	37,322	1,204	41,453	1,257	38,564	1,018	40,516	1,054	46,533	1,180	50,788	1,251	51,686	1,247	55,921	1,271	55,725	1,243	-2.22%
Sherman	876	903	987	1,028	1,031	1,057	1,021	1,095	1,135	1,286	1,160	1,300	1,219	1,358	1,233	1,382	1,246	1,388	1,228	1,287	1,298	1,339	4.03%
Tillamook	9,940	893	15,212	1,271	17,807	1,466	24,988	1,958	21,556	1,704	21,590	1,695	26,403	2,037	28,233	2,139	30,550	2,303	32,416	2,347	32,496	2,332	-0.61%
Umatilla	41,059	1,461	51,388	1,709	57,952	1,801	65,980	2,011	64,341	1,854	69,030	1,958	72,808	2,025	79,503	2,187	92,834	2,531	91,730	2,532	96,225	2,660	5.06%
Union	12,866	1,069	14,676	1,181	18,311	1,492	14,801	1,179	18,237	1,393	18,872	1,425	20,643	1,544	18,993	1,413	19,300	1,438	20,083	1,528	20,956	1,571	2.87%
Wallowa	6,801	1,876	4,024	1,076	4,655	1,284	5,009	1,403	3,197	912	2,495	706	4,091	1,146	5,105	1,423	6,150	1,718	5,340	1,437	5,093	1,351	-6.01%
Wasco	16,760	1,494	17,480	1,508	18,118	1,519	22,089	1,835	17,368	1,363	18,175	1,392	19,419	1,455	22,910	1,685	28,878	2,116	22,128	1,665	22,401	1,672	0.43%
Wheeler	758	1,053	763	930	596	769	512	655	384	540	368	511	371	507	376	519	387	537	440	605	461	642	6.22%
Yamhill	52,199	1,490	48,909	1,241	67,141	1,558	99,934	2,163	89,805	1,771	73,473	1,422	96,488	1,823	90,547	1,672	86,950	1,588	121,752	2,230	120,329	2,190	-1.82%
Rounding adj.																							
OREGON TOTALS	**2,263,099**	**1,513**	**2,497,170**	**1,539**	**2,778,463**	**1,617**	**3,235,828**	**1,754**	**2,424,833**	**1,249**	**2,580,933**	**1,303**	**3,059,745**	**1,501**	**3,295,468**	**1,571**	**3,453,570**	**1,618**	**4,046,936**	**1,897**	**3,690,946**	**1,724**	**-9.12%**
change in total from previous year			5.72%		-0.37%		6.92%		-0.53%		5.65%		9.89%		1.80%		3.95%		17.18%		-8.80%		
change in per capita from previous year				3.68%		-1.62%		5.21%		-1.18%		4.49%		8.20%		0.48%		3.18%		17.22%		-9.12%	

*includes flood debris

Data from some years is not shown due to page formatting. Please contact DEQ directly for data from these years.

Certain recoverable materials in mixed waste burned at the waste-to-energy facility in Brooks are included in Marion County and Statewide disposal in years prior to 2001 but excluded in 2001 and subsequent years (per ORS 459A.010(3)(f)(B)).

Table 7: Oregon Solid Waste Generated by Wasteshed, 1992-2022

Wasteshed	1992 Generated (tons)	Per Capita (lbs.)	1996 Generated (tons)	Per Capita (lbs.)	2000 Generated (tons)	Per Capita (lbs.)	2006 Generated (tons)	Per Capita (lbs.)	2012 Generated (tons)	Per Capita (lbs.)	2014 Generated (tons)	Per Capita (lbs.)	2016 Generated (tons)	Per Capita (lbs.)	2018 Generated (tons)	Per Capita (lbs.)	2020 Generated (tons)	Per Capita (lbs.)	2021 Generated (tons)	Per Capita (lbs.)	2022 Generated (tons)	Per Capita (lbs.)	Change in Per Capita 2022-2021
Baker	9,401	1,186	14,540	1,748	15,466	1,847	16,552	2,010	13,810	1,704	14,322	1,755	15,543	1,883	16,044	1,914	17,326	2,049	17,462	2,071	17,258	2,013	-2.83%
Benton	80,241	2,339	81,192	2,220	82,323	2,250	98,668	2,543	92,288	2,307	91,009	2,231	96,751	2,313	99,919	2,333	100,440	2,326	102,281	2,416	104,779	2,426	0.40%
Clatsop	27,411	1,600	35,789	2,027	42,075	2,357	57,701	3,115	48,757	2,622	50,339	2,685	54,747	2,864	58,889	3,005	55,929	2,835	62,243	3,005	61,795	2,945	-2.01%
Columbia	23,025	1,187	28,908	1,397	33,562	1,536	42,482	1,809	38,103	1,534	35,970	1,437	42,438	1,671	42,825	1,650	45,234	1,698	47,243	1,782	42,140	1,586	-11.04%
Coos	47,631	1,534	51,409	1,620	51,083	1,627	64,232	2,042	72,346	2,301	68,412	2,175	58,682	1,857	63,778	2,016	69,980	2,211	73,865	2,267	77,073	2,367	4.41%
Crook	9,959	1,297	13,802	1,586	19,056	1,975	27,642	2,254	18,305	1,773	19,945	1,920	25,711	2,383	28,583	2,517	33,143	2,828	33,705	2,645	39,097	2,989	12.98%
Curry	13,418	1,350	17,132	1,632	25,031	2,361	26,663	2,496	21,977	1,971	21,633	1,935	26,268	2,325	26,656	2,327	26,655	2,317	27,785	2,349	28,036	2,346	-0.09%
Deschutes	85,387	2,025	133,618	2,676	161,006	2,762	257,589	3,376	185,676	2,319	203,921	2,451	241,400	2,733	264,142	2,795	296,483	3,010	307,264	3,021	310,342	2,990	-1.03%
Douglas	114,507	2,386	118,269	2,372	120,841	2,405	135,041	2,602	122,925	2,272	110,482	2,020	102,795	1,862	117,963	2,111	136,183	2,420	126,291	2,261	128,867	2,307	2.02%
Gilliam	1,049	1,213	1,459	1,577	1,929	2,031	2,654	2,816	3,810	4,011	2,774	2,809	2,605	2,631	4,247	4,279	2,571	2,584	2,823	2,769	3,683	3,556	28.41%
Grant	5,089	1,295	4,179	1,040	4,232	1,065	4,973	1,304	4,427	1,189	4,568	1,230	5,325	1,437	5,083	1,374	5,436	1,486	5,511	1,525	5,677	1,548	1.45%
Harney	3,249	927	2,804	779	3,966	1,044	4,163	1,086	4,977	1,361	4,936	1,359	5,191	1,418	5,638	1,528	6,178	1,697	6,471	1,717	5,894	1,543	-10.14%
Hood River	11,814	1,352	19,349	2,004	19,144	1,868	27,820	2,608	24,831	2,171	23,876	2,012	27,624	2,234	30,220	2,388	30,749	2,399	32,647	2,733	34,966	2,927	7.07%
Jackson	115,135	1,486	175,303	2,054	229,001	2,514	275,210	2,771	251,230	2,455	266,209	2,555	286,479	2,680	291,389	2,659	338,009	3,028	540,656	4,831	340,470	3,040	-37.08%
Jefferson	6,082	815	11,047	1,272	13,550	1,415	19,892	1,858	18,393	1,677	16,284	1,467	19,512	1,712	20,648	1,753	20,956	1,739	23,644	1,900	27,463	2,162	13.80%
Josephine	55,513	1,696	57,560	1,592	80,567	2,119	108,110	2,665	97,379	2,353	97,664	2,350	108,705	2,568	117,983	2,731	134,475	3,107	138,120	3,113	119,583	2,697	-13.39%
Klamath	66,074	2,251	78,044	2,512	78,689	2,463	108,965	3,329	70,715	2,119	71,737	2,144	78,353	2,325	84,955	2,500	86,792	2,550	109,426	3,134	95,544	2,697	-13.95%
Lake	4,633	1,269	8,069	2,163	4,426	1,188	7,011	1,860	6,868	1,734	6,844	1,713	7,394	1,845	7,240	1,784	6,380	1,580	6,338	1,550	6,437	1,561	0.71%
Lane	374,767	2,565	393,153	2,534	472,737	2,919	529,946	3,120	490,915	2,772	497,949	2,776	516,462	2,823	591,945	3,156	614,844	3,224	679,101	3,549	603,846	3,145	-11.39%
Lincoln	34,487	1,693	50,266	2,259	52,598	2,359	68,566	3,080	61,492	2,657	62,038	2,646	64,799	2,715	76,704	3,182	73,019	3,023	89,036	3,498	65,837	2,577	-26.33%
Linn	111,875	2,282	102,707	1,962	117,531	2,163	149,917	2,608	145,045	2,320	142,028	2,235	157,994	2,428	185,753	2,778	202,916	2,988	186,665	2,666	194,241	2,761	3.57%
Malheur	17,098	1,233	23,583	1,565	28,550	1,798	30,155	1,901	27,390	1,745	26,822	1,705	30,177	1,904	31,307	1,961	31,805	1,981	31,732	1,984	31,493	1,963	-1.06%
Marion	213,943	1,768	304,913	2,293	356,130	2,489	509,383	3,324	420,655	2,627	443,413	2,721	480,239	2,878	528,716	3,075	558,381	3,201	715,567	4,125	625,383	3,591	-12.96%
Metro	1,460,380	2,341	1,849,716	2,719	2,178,198	3,001	2,694,802	3,435	2,168,939	2,593	2,204,665	2,567	2,382,926	2,679	2,440,532	2,654	2,537,582	2,705	2,570,040	2,777	2,596,089	2,807	1.08%
Milton Freewater	5,551	1,972	5,518	1,823	6,346	1,954	7,961	2,418	5,982	1,551	6,863	1,752	6,555	1,641	6,513	1,613	6,508	1,597	7,539	1,872	6,671	1,660	-11.37%
Morrow	8,151	1,990	6,725	1,445	9,681	1,744	13,380	2,207	14,656	2,594	19,333	3,355	23,112	3,936	24,479	4,119	42,810	6,676	34,432	5,450	28,073	4,559	-16.35%
Polk	23,909	916	35,442	1,237	55,322	1,785	79,527	2,412	69,068	1,823	75,095	1,953	86,055	2,182	86,768	2,137	96,460	2,327	92,260	2,097	90,660	2,022	-3.57%
Sherman	1,146	1,181	1,252	1,304	1,248	1,280	1,254	1,344	1,454	1,647	1,379	1,545	1,383	1,541	1,426	1,598	1,388	1,546	1,675	1,756	1,694	1,747	-0.46%
Tillamook	14,458	1,300	20,458	1,709	23,981	1,974	37,542	2,941	32,162	2,542	30,669	2,407	35,735	2,757	39,124	2,964	43,708	3,295	48,284	3,495	44,734	3,210	-8.15%
Umatilla	47,700	1,698	63,843	2,123	78,067	2,426	101,475	3,094	93,331	2,689	96,020	2,724	97,091	2,701	113,078	3,111	129,538	3,532	133,381	3,681	121,031	3,345	-9.12%
Union	15,391	1,279	19,879	1,599	23,373	1,904	22,319	1,778	26,228	2,004	25,222	1,905	27,559	2,061	25,972	1,932	26,401	1,967	27,066	2,059	28,820	2,161	4.97%
Wallowa	7,234	1,996	4,528	1,211	5,874	1,620	6,440	1,804	4,121	1,175	3,399	962	5,605	1,570	6,491	1,809	7,453	2,082	7,463	2,008	6,776	1,797	-10.51%
Wasco	22,202	1,980	24,999	2,156	27,312	2,290	27,220	2,262	24,057	1,888	25,237	1,933	26,443	1,981	28,348	2,084	33,900	2,484	28,254	2,126	29,325	2,189	2.96%
Wheeler	817	1,135	948	1,156	696	898	673	860	422	592	397	551	426	582	508	701	463	643	514	707	549	764	8.16%
Yamhill	64,049	1,829	75,024	1,904	120,689	2,800	163,951	3,549	133,592	2,635	116,749	2,259	137,612	2,600	129,148	2,385	135,438	2,474	174,532	3,197	167,429	3,047	-4.71%
OREGON TOTALS	**3,102,776**	**2,075**	**3,835,427**	**2,364**	**4,544,280**	**2,645**	**5,729,878**	**3,105**	**4,816,323**	**2,481**	**4,888,202**	**2,467**	**5,285,695**	**2,593**	**5,603,013**	**2,671**	**5,955,530**	**2,791**	**6,491,317**	**3,043**	**6,091,756**	**2,845**	**-6.49%**
change in total from previous year			5.97%		2.93%		3.24%		1.53%		1.13%		2.56%		1.43%		4.02%		9.00%		-6.16%		
change in per capita from previous year				3.93%		1.65%		1.59%		0.87%		0.00%		0.99%		0.12%		3.25%		9.03%		-6.49%	

Data from some years is not shown due to page formatting. Please contact DEQ directly for data from these years.

Table 8: Oregon Materials Recovered, 1992-2022

Material Type	1992 Tons	1996 Tons	2000 Tons	2006 Tons	2012 Tons	2013 Tons	2014 Tons	2015 Tons	2016 Tons	2017 Tons	2018 Tons	2019 Tons	2020 Tons	2021 Tons	2022 Tons
Container glass	69,284	77,231	87,889	95,946	107,042	106,840	106,853	110,101	107,238	119,561	117,824	113,052	98,589	97,927	96,381
Other glass	41	1,557	1,578	673	21	28	32	186	232	1	-	1,531	661	808	136
Total glass	**69,325**	**78,788**	**89,467**	**96,619**	**107,062**	**106,868**	**106,885**	**110,287**	**107,470**	**119,562**	**117,824**	**114,583**	**99,250**	**98,735**	**96,517**
Aluminum	18,245	17,815	18,209	21,521	23,733	23,176	21,318	19,310	21,566	25,499	30,582	33,861	33,778	36,410	39,855
Scrap metal	26,927	45,271	165,728	339,723	511,026	477,097	422,845	408,326	389,347	444,487	516,128	567,616	617,256	549,075	612,720
Tinned cans/aluminum			14,779	-	-	-	-	-	-	-	-	-	-	-	-
Tinned cans	7,400	8,635	-	8,399	8,398	8,944	8,747	8,327	8,363	9,611	8,844	10,450	6,963	5,983	5,763
Aerosol cans	0	0	-	1	0	1	2	1	1	1	1	1	-	0	0
Total metals	**52,572**	**71,722**	**198,716**	**369,644**	**543,158**	**509,217**	**452,912**	**435,963**	**419,276**	**479,599**	**555,556**	**611,927**	**657,997**	**591,468**	**658,338**
Cardboard/kraft paper	204,729	304,093	310,776	440,813	356,906	361,735	375,097	409,082	365,903	403,392	403,133	415,560	443,030	460,041	441,315
Paper Fiber[b]	-	-	-	-	299,224	299,004	280,888	274,318	267,205	249,753	218,052	193,626	179,400	172,928	160,723
High-grade paper[b]	67,077	49,298	54,358	47,324	-	-	-	-	-	-	-	-	-	-	-
Magazines	11,246	17,250	8,375	-	-	-	-	-	-	-	-	-	-	-	-
Phone books[1]	-	3,103	2,881	-	-	-	-	-	-	-	-	-	-	-	-
Mixed waste paper[b]	24,012	53,771	91,559	39,347	-	-	-	-	-	-	-	-	-	-	-
Newspaper[b]	130,181	141,412	187,108	263,193	-	-	-	-	-	-	-	-	-	-	-
Fiber-based fuel		9,235	-	-	-	-	-	-	-	-	-	-	-	-	-
Total papers	**437,245**	**578,161**	**655,057**	**790,677**	**656,130**	**660,739**	**655,985**	**683,400**	**633,109**	**653,145**	**621,185**	**609,185**	**622,429**	**632,969**	**602,038**
#1 PET beverage	3,329	5,803	-	-	-	-	-	-	-	-	-	-	-	-	-
#1 other	58	-	-	-	-	-	-	-	-	-	-	-	-	-	-
#2 milk jugs	1,940	3,049	-	-	-	-	-	-	-	-	-	-	-	-	-
#2 other	1,841	1,331	-	-	-	-	-	-	-	-	-	-	-	-	-
#3 PVC	25	144	-	-	-	-	-	-	-	-	-	-	-	-	-
#4 LDPE	1,196	2,501	-	-	-	-	-	-	-	-	-	-	-	-	-
#5	360	283	-	-	-	-	-	-	-	-	-	-	-	-	-
#6	471	430	-	-	-	-	-	-	-	-	-	-	-	-	-
Composite plastic	-	1,077	863	2,004	2,311	2,222	2,426	2,346	2,369	1,305	1,182	715	685	1,185	1,438
Mixed plastic	300	1,708	-	-	-	-	-	-	-	-	-	-	-	-	-
Other plastic (P7)	-	12	-	-	-	-	-	-	-	-	-	-	-	-	-
Plastic bottles[2]			-	-	-	1	-	-	-	-	-	-	-	-	-
Plastic film			3,969	11,594	14,886	14,583	14,831	13,680	15,873	14,755	9,025	8,170	9,736	10,036	7,151
Plastic other			3,718	9,426	10,720	9,562	12,507	13,348	13,232	8,761	7,691	8,010	7,327	7,336	7,041
Rigid plastic containers			15,672	19,439	29,485	28,740	30,692	24,613	24,697	29,773	25,856	29,857	31,165	31,519	29,445
Total plastic	**9,520**	**16,338**	**24,222**	**42,463**	**57,401**	**55,107**	**60,455**	**53,988**	**56,171**	**54,593**	**43,754**	**46,752**	**48,913**	**50,076**	**45,074**
Antifreeze	5	52	424	3,085	2,598	2,680	2,719	2,916	2,472	2,545	2,676	2,366	2,480	2,018	2,466
C & D -- roofing[f]			25,162	10,072	18,223	15,895	18,568	21,410	19,769	18,661	14,047	9,219	25	30	25
Carpeting -- used			919	-	1,837	1,409	1,355	654	0	-	-	-	-	-	-
Diesel				151	33	32	33	34	33	-	-	-	-	-	-
Electronics			617	6,345	25,957	21,929	22,344	20,696	18,349	15,513	13,881	11,752	8,920	9,630	8,674
Fluorescent lamps	-	7	21	453	662	600	422	172	364	343	374	311	278	269	524

Table 8: Oregon Materials Recovered, 1992-2022 (Continued)

Material Type	1992 Tons	1996 Tons	2000 Tons	2006 Tons	2012 Tons	2013 Tons	2014 Tons	2015 Tons	2016 Tons	2017 Tons	2018 Tons	2019 Tons	2020 Tons	2021 Tons	2022 Tons
Gypsum wallboard	3,695	9,419	5,300	4,174	5,025	4,057	3,819	3,630	4,225	3,862	5,823	8,460	6,185	8,573	5,485
Household Haz Waste			14	143	338	323	246	276	326	273	264	276	289	285	237
Alkaline batteries				-	-	-	-	-	-	-	-	-	-	-	-
Mixed batteries				120	436	375	301	259	333	172	265	360	254	433	228
Lead acid batteries[3]	176	559	1,184	15,509	14,036	14,637	12,562	16,750	17,537	16,758	14,674	19,667	22,052	20,550	14,957
Lithium batteries				-	-	-	-	-	-	-	-	-	-	-	-
NiCad batteries			-	-	-	-	-	-	-	-	-	-	-	-	-
Old broken crayons	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Paint[5]	120	489	555	1,434	3,396	3,652	3,826	4,414	4,263	4,201	4,623	3,506	3,483	3,744	4,067
Porcelain	-	5	-	307	551	960	1,071	840	366	85	258	201	565	533	294
Rubber tire buffings[4]	-	2,935	-	-	-	-	-	-	-	-	-	-	-	-	-
Scrap film (X-ray)	42	68	21	-	-	-	-	-	-	-	-	-	-	-	-
Solvents[5]	16	110	188	261	444	369	480	454	457	475	450	280	111	80	82
Textiles		508	4,033	1,819	872	948	1,157	1,186	1,054	681	811	317	207	197	318
Tires[5]	34,392	24,360	16,420	21,931	23,470	30,326	21,711	27,793	31,175	30,504	23,471	29,820	34,995	51,793	58,778
Used Motor Oil[5]	28,796	47,632	44,114	52,837	37,032	35,544	34,516	34,103	45,015	25,916	31,644	33,582	30,216	36,284	35,909
Total other	**67,243**	**86,145**	**98,969**	**118,640**	**134,909**	**133,736**	**125,129**	**135,586**	**145,739**	**119,989**	**113,260**	**120,116**	**110,060**	**134,420**	**132,043**
Animal waste/grease	-	22,957	25,670	15,928	7,148	7,621	10,491	13,009	15,002	10,923	14,875	13,226	21,470	18,750	15,273
Food waste	-	5,000	3,486	12,430	47,665	50,143	46,289	41,991	57,118	48,276	45,174	35,157	36,182	33,186	32,457
Wood waste[5]	112,425	243,773	360,819	503,967	362,448	387,196	349,139	375,462	289,022	299,359	286,541	296,312	275,187	262,384	237,871
Yard debris[5]	91,348	235,562	309,407	543,683	475,578	480,238	492,035	519,561	503,171	501,528	508,708	555,494	630,473	622,228	582,377
Total organics	**203,773**	**507,292**	**699,382**	**1,076,008**	**892,839**	**925,198**	**897,954**	**950,024**	**864,312**	**860,086**	**855,298**	**900,189**	**963,311**	**936,547**	**867,978**
Adj. rounding/unspecified		2	1												
OREGON TOTALS	**839,678**	**1,338,446**	**1,765,814**	**2,494,050**	**2,391,499**	**2,390,865**	**2,299,320**	**2,369,248**	**2,226,077**	**2,286,974**	**2,306,877**	**2,402,753**	**2,501,960**	**2,444,216**	**2,401,988**

[1]Phone books included in mixed waste paper in 1992, 1993 and 2001 and subsequent years.

[2]About 900 tons of plastic bottles was included with mixed plastics in the 1995 survey.

[3]Includes only batteries collected at household hazardous waste collection events until 2001.

[4]From 1998 rubber tire buffings were included with tires.

[5]Includes Marion Co. materials in 2001 and subsequent years burned for energy.

[6]In 2007 and subsequent years, Mixed Waste Paper, Hi Grade & Newspaper was combined into Paper Fiber

[7]Asphalt Roofing was included as burned for energy only in years 2001-2006

Data from some years is not shown due to page formatting. Please contact DEQ directly for data from these years.

Table 9: Disposition of Recovered Materials, 2022

Wasteshed	Total Recovered	Recycled	% of Total	Energy Recovery	% of Total	Compost	% of Total	Stock
Baker	3,187	1,986	62%	186	6%	1,015	32%	-
Benton	32,968	20,460	62%	612	2%	11,897	36%	-
Clatsop	20,091	13,334	66%	5,740	29%	1,017	5%	-
Columbia	9,341	7,925	85%	137	1%	1,279	14%	-
Coos	18,082	17,924	99%	132	1%	27	0%	-
Crook	11,311	9,666	85%	1,183	10%	462	4%	-
Curry	5,936	5,755	97%	181	3%	-	0%	-
Deschutes	84,413	54,677	65%	5,054	6%	24,682	29%	-
Douglas	25,416	22,190	87%	2,745	11%	481	2%	-
Gilliam	763	699	92%	63	8%	-	0%	1
Grant	979	924	94%	52	5%	3	0%	1
Harney	1,010	948	94%	62	6%	-	0%	-
Hood River	9,033	6,212	69%	218	2%	2,586	29%	17
Jackson	111,201	70,825	64%	19,775	18%	20,601	19%	-
Jefferson	6,625	6,296	95%	266	4%	63	1%	-
Josephine	34,187	17,250	50%	10,480	31%	6,456	19%	-
Klamath	20,071	15,811	79%	3,168	16%	1,092	5%	-
Lake	630	628	100%	2	0%	-	0%	-
Lane	319,447	173,402	54%	65,743	21%	80,302	25%	-
Lincoln	20,328	14,031	69%	178	1%	6,119	30%	-
Linn	85,953	67,985	79%	1,160	1%	16,808	20%	-
Malheur	6,641	5,800	87%	180	3%	661	10%	-
Marion	291,952	179,912	62%	49,467	17%	62,573	21%	-
Metro	1,139,018	737,951	65%	77,748	7%	323,118	28%	201
Milton Freewater	1,276	1,150	90%	13	1%	113	9%	-
Morrow	4,922	4,877	99%	44	1%	-	0%	-
Polk	34,935	20,902	60%	5,811	17%	8,222	24%	-
Sherman	396	390	98%	5	1%	-	0%	1
Tillamook	12,238	10,424	85%	424	3%	1,371	11%	19
Umatilla	24,806	22,241	90%	2,364	10%	196	1%	5
Union	7,864	5,052	64%	137	2%	2,675	34%	-
Wallowa	1,683	659	39%	11	1%	1,000	59%	14
Wasco	6,924	5,066	73%	220	3%	1,619	23%	19
Wheeler	88	85	97%	1	2%	-	0%	1
Yamhill	47,100	19,376	41%	385	1%	27,338	58%	-
Total	**2,400,817**	**1,542,812**	**64%**	**253,948**	**11%**	**603,777**	**25%**	**281**