# 2018 Oregon Material Recovery and Waste Generation Rates Report

**By:**

**Materials Management Program**
**Land Quality Division**
**Oregon Department of Environmental Quality**

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DEQ is a leader in restoring, maintaining and enhancing the quality of Oregon's air, land and water.

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**Department of Environmental Quality**

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# Acknowledgments

The Oregon Department of Environmental Quality's Materials Management Program conducted the 27th annual Oregon Material Recovery Survey for calendar year 2018. DEQ extends its appreciation to industry representatives, collection service providers, local governments, and landfill administrators and staff for providing recovery and disposal data for 2018, 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:

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

DEQ can provide documents in an alternate format or in a language other than English upon request. Call DEQ at 800-452-4011 or email deqinfo@deq.state.or.us.

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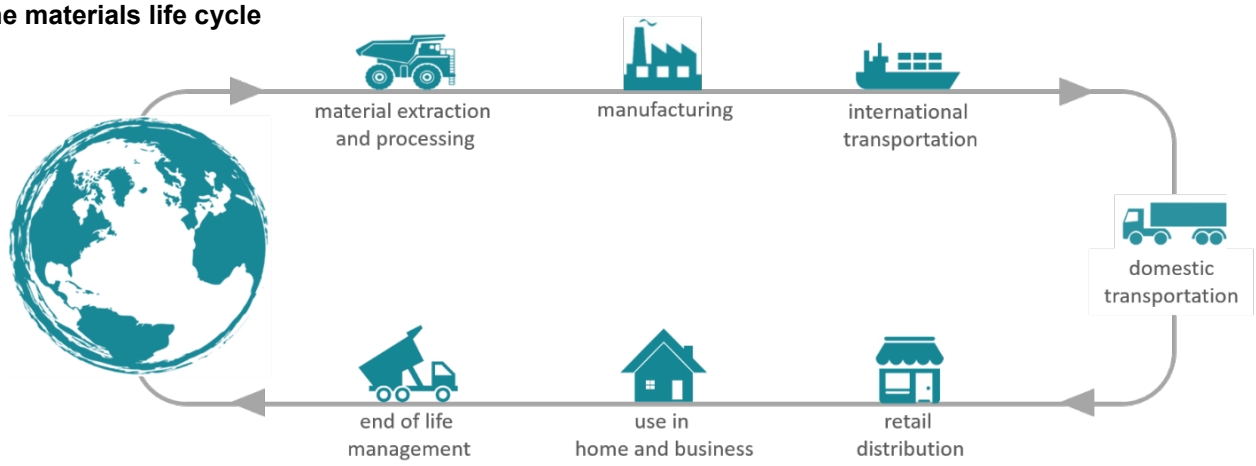
# Executive summary

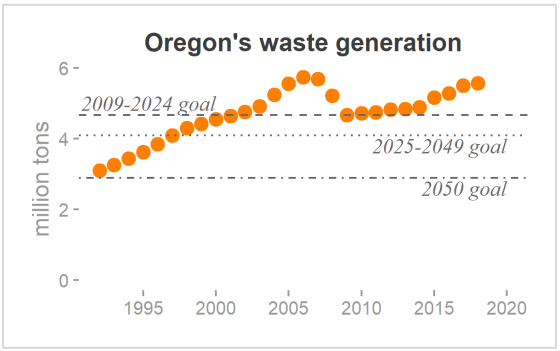
Oregon DEQ's Materials Management program takes a holistic view of environmental impacts of materials. It considers the impacts that occur across the full life cycle of materials, including resource extraction, design and production, use, and end-of-life management, including solid waste disposal and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

**The materials life cycle**



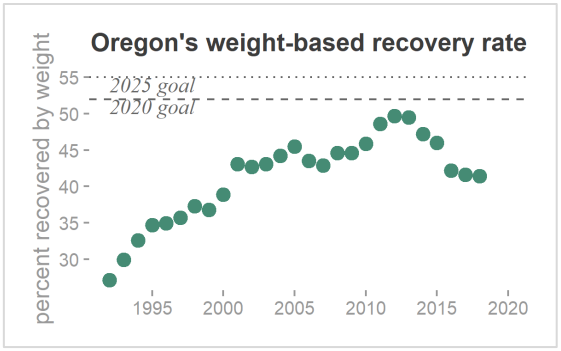

This report focuses on how Oregon manages materials at the end of their useful lives, via disposal and recovery.

- *Disposal* refers to all materials placed in landfills and many materials burned in incinerators.
- *Recovery* refers to recycling, composting and some incineration for 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 2018 people in Oregon:**

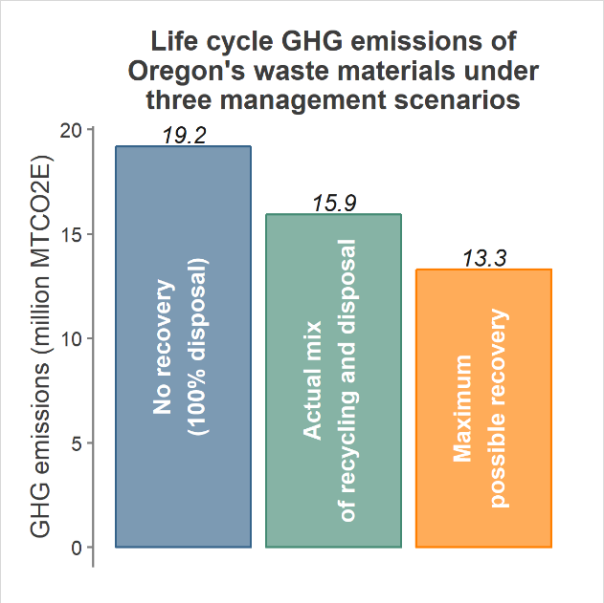
- Generated 5,652,826 tons of waste, up 2.9 percent from 2017;
- Disposed of 3,345,503 tons into landfills and incinerators, up 4.3 percent from 2017; and
- Recovered 2,307,322 tons of material, 40.8 percent of the waste generated. This is a 0.9 percent decrease from 2017's 41.6 percent.




The rise in generation was likely the result of a busy economy with abundant construction activity and purchasing of consumer goods. There was an increase in plastic, glass, and aluminum recycled under Oregon's Bottle Bill compared to 2017 and earlier, as the Bottle Bill expanded to cover juices, teas, and many other beverages in 2018. However, although Bottle Bill plastic recycling increased, total plastic recycling fell in 2018, in response to bans by China and other Asian marketplaces on importing waste plastic, a precipitous drop in the price of recycled plastic, and reductions in the types of plastics collected by many curbside collection programs. There was also a notable increase in tonnage of other scrap metal recovered, but overall, the weight-based recovery rate remained lower than its peak levels earlier in the decade.

**State goals for solid waste:**
Waste generation remained too high above the goal set for 2009-2024 by the Oregon legislature. The weight-based recovery rates have consistently failed to reach legislated goals set for 2020 and 2025.

**Recovery and environmental impacts:**
Recovery via recycling and other means has environmental value. DEQ estimates that in 2018, recovery reduced greenhouse gas emissions by 3.3 million metric tons of $CO_2$ equivalents, compared to a scenario where all waste was disposed. Another 2.6 million MTCO2E in reductions are possible, if recovery rates could be raised to the maximum possible level.




However, even with maximized recovery, the GHG impacts of materials in the waste system would be considerable, at around 13.3 million MTCO2E. Oregon's total GHG emissions from all sources exceeded 60 million MTCO2E in 2018.

Recovery does present 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, for example, by redesigning products and reducing overall materials use.

# Introduction and purpose

This report describes results and methodology for Oregon's Material Recovery Survey for calendar year 2018. "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.

$$\frac{\textbf{\textit{Total Recovered}}\ \textbf{2,307,322 tons}}{\textbf{\textit{Total Generated}}\ \textbf{(Total Recovered + Total Disposed)}\ \textbf{5,652,826 tons}} = \textbf{\textit{Recovery Rate}}\ \textbf{40.8\%}$$

DEQ uses this information to estimate energy savings and greenhouse gas reductions, two important environmental benefits from material recovery. DEQ also uses it to calculate material recovery rates and waste generation. 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.

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

This is the 27th year that DEQ has used the survey to gather this data. The 1991 Oregon Legislature enacted requirements 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 (effective 2016). 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 (Oregon Revised Statute 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 2018 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
- Other – Including tires, used motor oil, antifreeze, batteries of all types, gypsum, asphalt roofing materials, textiles, paint, and animal waste and grease
- Container Glass
- Plastic – Rigid plastic containers, plastic film, other plastics and composite plastic (including carpet pad)
- Food Waste – Residential and commercial food waste
- 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 2018 can be associated with:

- 3.3 million metric tons $CO_2$ equivalents of reductions in greenhouse gas emissions; and
- 30 trillion British thermal units of savings in energy expenditures.

These savings in energy and greenhouse gas impacts are very similar to the values reported for 2017 (31 trillion BTU and 3.2 MMTCO2E).

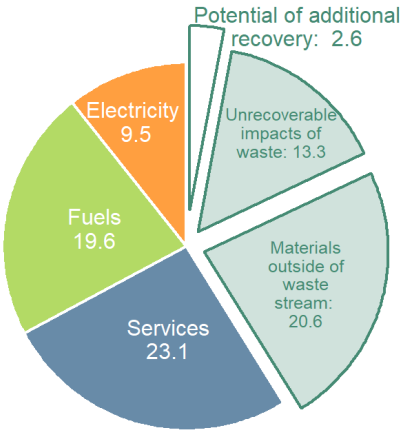
If recovery could be increased from its current rate (about 41 percent by weight) to the currently conceivable maximum rate (about 90 percent by weight), it can be calculated that:

- GHG emissions would decline an additional 2.6 MMTCO2E; and
- Energy expenditures would decline an additional 33 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[1] gives recent yearly totals as 66.2 MMTCO2E, from a sector-based method, and 88.7 MMTCO2E, from a consumption-based method. The consumption-based results are illustrated at right.
- Oregon's overall direct energy expenditures are nearly 977 trillion BTU per year, in a recent Oregon Department of Energy report.[2]

**Potential of maximized recovery to reduce statewide emissions**




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 dark green) already includes the current benefits of recovery. Additional recovery (above current levels) offers 2.6 MMTCO2E in possible further impact reductions. The remaining GHG impacts of materials are either not preventable by recovery (13.3 MMTCO2E), or not represented by the solid waste stream at all (20.6 MMTCO2E).

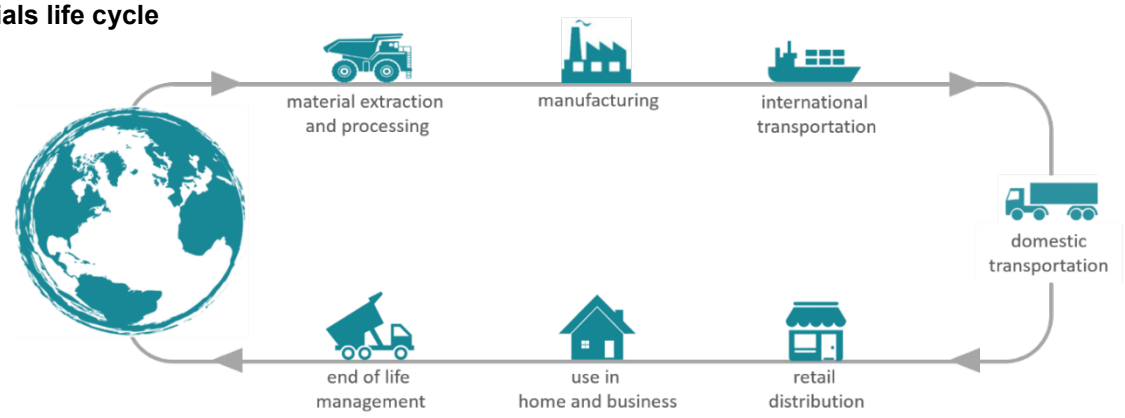
While increased recovery does present an opportunity for environmental impact reductions, the opportunity is limited. Increased recovery, by itself, cannot provide the sizeable decreases in impacts anticipated by the state's greenhouse gas reduction goals (ORS 468A.205), or the *2050 Vision*.[3] Achieving greater reductions in environmental impacts of materials will require other materials management strategies, such as the redesign of products and waste prevention.

[1] Oregon DEQ, "Oregon's Greenhouse Gas Emissions through 2015: An Assessment of Oregon's Sector-Based and Consumption-Based Greenhouse Gas Emissions," May 2018, www.oregon.gov/deq/FilterDocs/OregonGHGreport.pdf.
[2] Oregon Department of Energy, "Biennial Energy Report 2018," November 2018, www.oregon.gov/energy/Data-and-Reports/Documents/2018-Biennial-Energy-Report.PDF.
[3] Oregon DEQ, "Materials Management in Oregon: 2050 Vision and Framework for Action," 2012, www.oregon.gov/deq/FilterDocs/MManagementOR.pdf.

# 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 total 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.

Where, then, do the "impact reductions" or "savings" associated with recovery come from?

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*.[4] Similarly, while aerobic composting does lead to $CO_2$ emissions, composting may still represent a savings *compared to the methane emissions that could result from disposal in a landfill*.[5]

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.[6]

It is important to note that these impacts may occur spread over time instead of in a single year, 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, 2018), the life cycle impacts of those materials are not always so localized. An item recycled in 2018 in Oregon may have been created in another state or country in a different year. An item

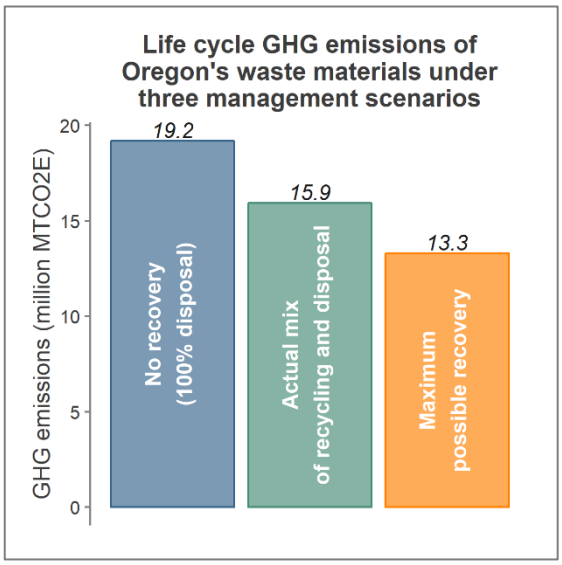
[4] David A. Turner, Ian D. Williams, and Simon Kemp, "Greenhouse Gas Emission Factors for Recycling of Source-Segregated Waste Materials," *Resources, Conservation and Recycling* 105, Part A (December 2015): 186–97, https://doi.org/10.1016/j.resconrec.2015.10.026.
[5] US EPA, "Organic Materials Chapters [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.
[6] 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 .

disposed in 2018 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 recoverable materials had in fact been recovered.




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 about 90 percent of the solid waste stream is recovered. The figure is 90 percent, not 100 percent, because approximately 10 percent of the solid waste stream, by weight, consists of materials which have no currently viable recovery disposition.

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 3.3 MMTCO2E, and the additional potential savings of 2.6 MMTCO2E, were calculated by comparing life cycle emissions for the three scenarios, totaling 19.2, 15.9, and 13.3 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 2018.
- Quantities of disposed materials are derived by combining the total amount of material disposed in Oregon in 2018, from DEQ's disposal records, and the Waste Composition Study[7] for 2016/17, which describes the proportions of disposed waste in various material categories.

Impact factors are copied from the EPA's WARM model,[8] version 14, with the following exceptions. DEQ staff modified WARM's impact factors for wood waste and yard debris based on their own research and analyses. For uncommon materials appearing in Oregon's waste stream that are not covered by WARM, weighted averages of WARM's impact factors were used.

[7] Oregon DEQ, "Statewide 2016 Waste Composition Study: Excel Results Files Updated June 20, 2018 [Sheet P16TOT]," 2018, www.oregon.gov/deq/FilterDocs/A01-StatewideWCS16.xlsx.
[8] US EPA, *Warm Version 14*, 2016, www.epa.gov/sites/production/files/2016-04/warm_v14.xls.

For further information about how DEQ calculates impact reductions contact Martin Brown of Oregon DEQ at 503-229-5502, or brown.martin@deq.state.or.us.

# 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.

## 2018 statewide recovery rate

In 2018, the state recovered 2,307,322 tons of material. This represented 40.8 percent of the municipal post-consumer waste stream, well below the statewide goal of 52 percent recovery by the year 2020. Recovered tons increased by 0.9 percent from the previous year surveyed, 2017.

From 1992 through 2005, tons of material recovered increased regularly each year. From 2006 through 2009, recovered tons declined even though recovery rates were fairly flat, 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 saw an increase in recovery, as the economy gradually recovered from the recession. In 2018 cardboard recovery saw a very small decrease of only 255 tons and scrap metal increased nearly 72,000 tons over 2017 levels. A record high of 4,600 tons of Paint was recovered in 2018; while paper fibers saw a record low of 218,000 tons.

A total of 3,345,503 tons of municipal post-consumer waste from Oregon were disposed in 2018. With an increase of 4.3 percent from 2017, this marks 2018 as the new peak in disposal. Per-capita disposal was 1,595 pounds per year, surpassing the 1992 figure of 1,513 pounds, but still staying below the 2007 per capita disposal of 1,734 pounds per year.

**Oregon State Recovered Tons and Recovery Rates**

| Year | Tons Recovered | Tons Disposed | Calculated Rate[9] |
|---|---|---|---|
| 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 | 2,523,808 | 46.2 |
| 2011 | 2,306,124 | 2,437,767 | 48.6 |
| 2012 | 2,391,490 | 2,424,833 | 49.7 |
| 2013 | 2,390,859[1] | 2,513,404[1] | 48.8[1] |
| 2014 | 2,307,269[1] | 2,634,653[1] | 46.7[1] |
| 2015 | 2,369,080[1] | 2,784,467[1] | 46.0[1] |
| 2016 | 2,225,943[1] | 3,050,432 | 42.2[1] |
| 2017 | 2,286,969[1] | 3,207,448[1] | 41.6[1] |
| 2018 | 2,307,322 | 3,345,503 | 40.8 |

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

Total tons disposed added to total tons recovered equaled 5,652,826 tons of total waste generated in 2018 (see Waste Generation on page 12). Total generation rose by 2.9 percent, with per-capita generation increasing by 1.5 percent from 2017 levels.

Waste recovery increased 0.9 percent (+20,353 tons) and disposal increased 4.3 percent (+138,055 tons), resulting in the increase in generation (+158,408 tons). Although waste generation has increased steadily since 2010, moving us away from our waste generation goals, total generation in 2018 was still 77,053 tons less than it was at its peak in 2006. This is a drop of 1.3 percent in waste generation between 2006 and 2018, or 13.2 percent if measured on a per-capita basis.

[9] 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.

# 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 2018, the five materials that could be counted toward the recovery rate when burned for energy were wood, yard debris, used motor oil, fuels, and paint. In 2018, 14,863 tons of these materials burned for energy in the county's incinerator were counted as recovered instead of disposed. DEQ obtained this tonnage by multiplying the quantity of non-industrial, in-county, counting solid waste processed at the facility by the percentage that those six materials make up of Marion County's municipal solid waste disposal stream. Marion County also recovered 7,554 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[10], each with its own recovery rate and goal. Based on the new goals established by Senate Bill 263, eight wastesheds are already at or above their goal for 2025.

[10] 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.

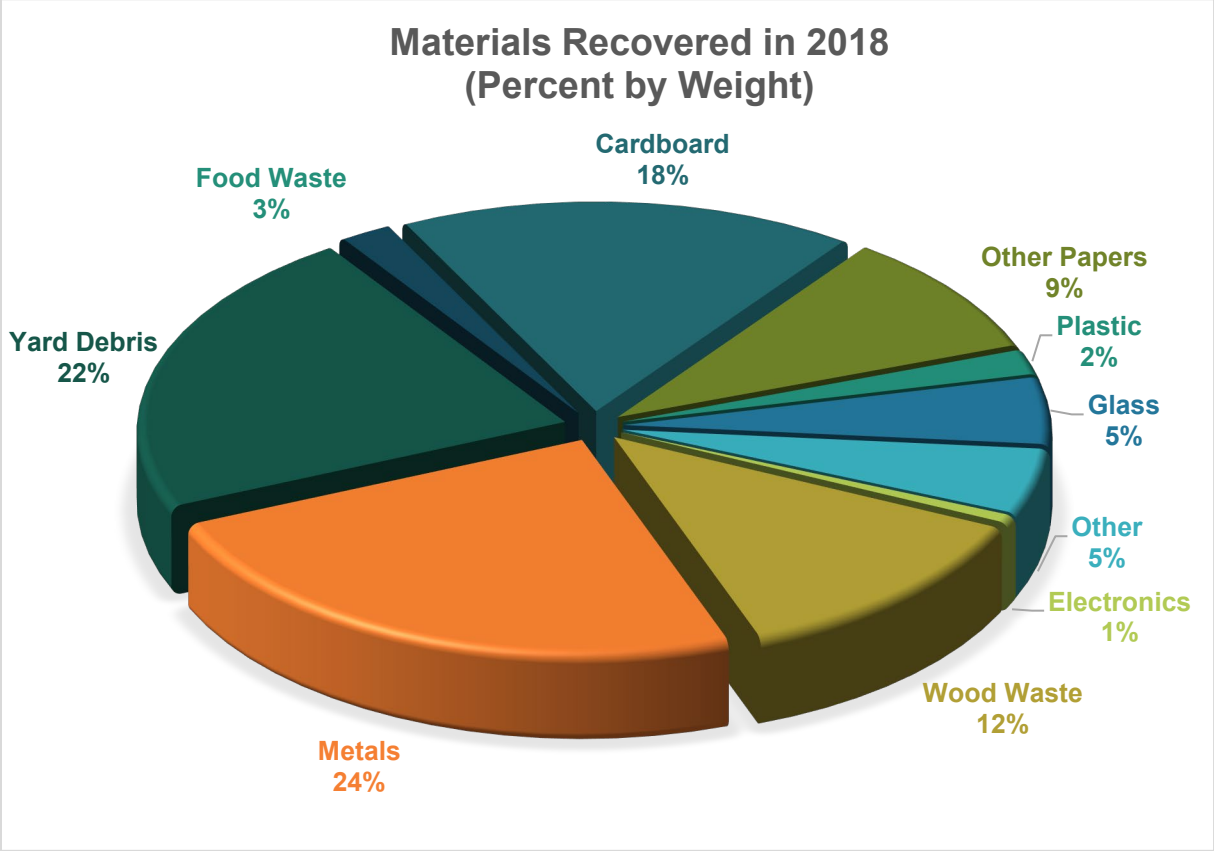
The Survey Report Tables listed on page 21 of this report show 2018 recovery rates for each wasteshed (Table 1), tons of materials recovered in 2018 by wasteshed (Table 2), and tons of solid waste disposed by wasteshed in 2018 (Table 3).

For a historical look at recovery, disposal and generation data in Oregon, see Survey Report Tables 4, 5, 6 and 7, which provide the 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 2018 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, 23 percent was composted and 13 percent was burned for energy.

The chart below shows major categories of materials recovered in 2018 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 2018

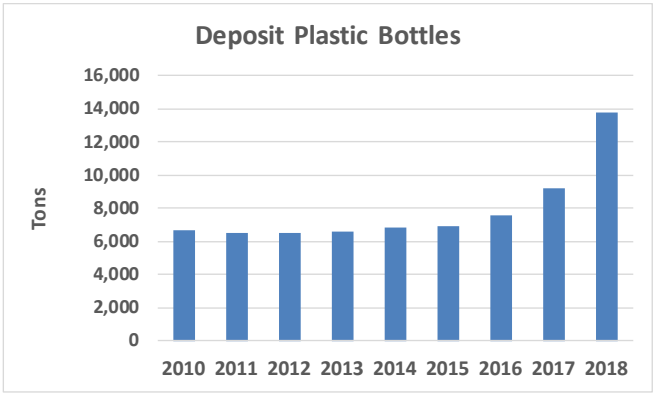
Several material recovery programs saw major changes in 2018, both by design and due to external factors. These include:

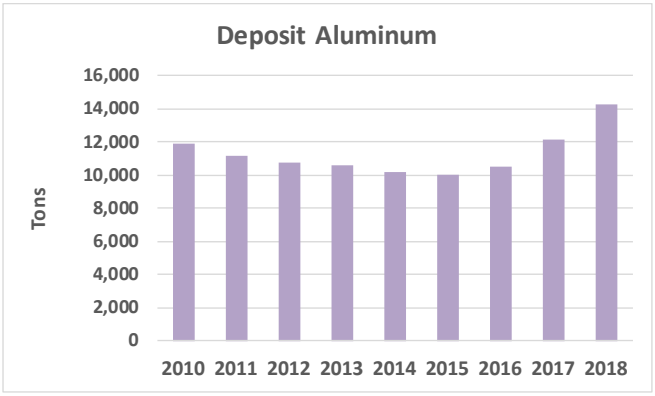
- Expansion of Oregon's beverage container redemption law ("Bottle Bill") to cover juices, teas, sports drinks, and all other beverages except wine, liquor, milk, and milk substitutes.
- Strong import restrictions by China in 2017 followed by complete bans on post-consumer plastics and unsorted paper in 2018, caused major disruption in recycling markets throughout the world, and had large impacts on Oregon's curbside recycling programs.

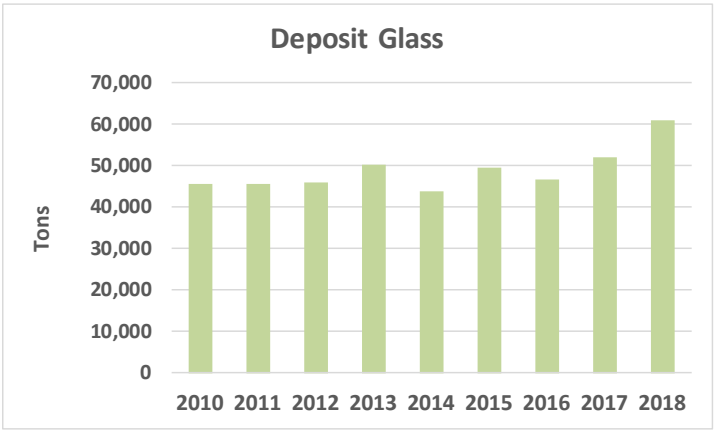
## Bottle Bill expansion and refund value increase

For a number of years prior to 2017, the redemption rate for beverage containers under Oregon's Bottle Bill had been steadily declining, in part due to the declining value of the then-nickel deposit value. Based on legislation passed in 2011, the declining redemption rate, and action by the Oregon Liquor Control Commission in 2016, the refund value for beverage containers increased to 10 cents as of April 1, 2017, leading to a quick increase in redemption rates. The calendar year 2018 was the first full year of recycling data under the increased redemption

value, and also saw an expansion of the Bottle Bill to cover the other beverages mentioned above. The result was record-high tonnage of plastic, aluminum, and glass collected under the Bottle Bill, as shown in the following three bar charts:




Plastic in particular increased in 2018, as many of the containers used for juice, tea, and sports drinks are made of plastic. Some of this additional recycling resulted from people now redeeming containers that they previously would have thrown away, but some likely came from people redeeming containers that previously were recycled under curbside or other collection programs, representing a shift in recycling rather than new recycling.

## Impact of China's import bans and 2017-18 recycling market disruption

China implemented a ban on importation of mixed recyclables including almost all post-consumer plastics starting in 2018. Many other Asian countries then took similar steps, strongly limiting the markets for plastics and mixed paper. With the disappearance of markets for these materials, the price of plastic and paper for recycling dropped precipitously, and instead of being paid for commingled recyclable materials, on-route collection companies were having to pay to have their materials accepted by the commingled recycling processing facilities.

Prior to 2017, China's recyclers would accept material with high levels of contaminants. After China's government banned the importation of these materials, Oregon's recycling processors had to clean their materials to much higher standards in order to sell them to domestic paper mills or plastics processors. As a result, they had to reduce the number of tons of materials they processed each hour, to spend more time cleaning each ton. This forced some processors to limit the amount of material they could take in each day. The result was that for a period, some recycling collectors were unable to find any processing facilities that would accept all their material. These collectors were in a bind, since many had no place to store the recyclables they were collecting each day.

## Disposal concurrences

Although Oregon's law generally prohibits the disposal of recyclable material, disposal could be allowed if there is no market for the material collected or if the costs to recycle the material is prohibitively expensive.

Responding to the market disruptions of 2017, DEQ worked with recyclers and local governments to develop a process whereby collectors or processors could provide information to DEQ to demonstrate that either there is no recycler willing to accept their material, or that the cost of recycling the material is so high that it no longer meets the definition of "recyclable material" in Oregon's statute. If the collector or processor submitted information on their attempts to market the material and the costs involved, DEQ would evaluate that information and then potentially concur if the submitted material demonstrated that DEQ could not require it to be recycled under Oregon's statue.

DEQ concurred that eight companies could dispose of 4,775 tons of material originally collected for recycling in 2017, and with 18 companies for disposal of 10,202 tons in 2018. Concurrences ended in 2019 after the disposal of 1,448 tons of material by six companies. The large majority of this material was commingled recyclables, with some mixed scrap paper and small amounts of separated plastic also included in the total tons disposed. This compares to about 377,000 tons of commingled tons collected and processed in 2017, and about 340,000 tons collected and processed in 2018. The table below shows the approximate tons of each material disposed through concurrences in 2018, had that material been accepted and processed at a material recovery facility. The percentages used to break out individual materials are based on aggregate sorting percentages from Oregon's commingled recycling processors.

**Approximate composition of materials disposed through concurrences**

| Material | 2017 | 2018 | 2019 |
|---|---|---|---|
| Cardboard | 1,362 | 2,507 | 419 |
| Other paper | 2,420 | 5,679 | 724 |
| Rigid Plastic | 239 | 566 | 74 |
| Tinned cans | 94 | 174 | 29 |
| Aluminum | 13 | 25 | 4 |
| Other scrap metal | 72 | 132 | 22 |
| Plastic film* | 39 | 71 | 12 |
| Glass in commingled* | 100 | 183 | 31 |
| Residue to be disposed | 435 | 865 | 133 |
| Total | 4,775 | 10,202 | 1,448 |

*Neither of these two materials belong in Oregon's residential commingled recycling carts and bins, but some processors separated them out for recycling while others left them in the residue to be disposed. All figures are in short tons.

## Changes in material collected

With the difficulty in marketing mixed plastics and much higher cost of providing recycling processing and marketing all materials, many Oregon public recycling programs scaled back the materials collected in their programs, eliminating some of the more costly materials. There were no changes in collection in the Metro area, Clatsop and Deschutes counties, and the city of Ashland, but in many other cities and counties, materials such as plastic tubs, pails, and flower pots were dropped, and a few programs also dropped some or all types of plastic bottles. In much of southwest Oregon, programs also cut back on mixed paper collection, limiting collection of papers to just cardboard and newspaper. These cutbacks resulted in significantly less collection of materials from households and businesses in 2018.

**Plastics.** The low price for paper and plastic also resulted in declines in private sector recycling. Film plastic prices were particularly hard-hit, curtailing many private recycling efforts. Only 9,025 tons of film plastic were collected for recycling in 2018, compared to 14,755 tons in 2017. Rigid plastic containers were also greatly affected, both in public and private recycling programs. In spite of the increase of nearly 4,600 tons of plastic bottles under the Bottle Bill between 2017 and 2018, the total tons of rigid plastic containers recycled decreased by nearly 4,000 tons, from 29,773 tons in 2017 down to 25,856 tons in 2018.

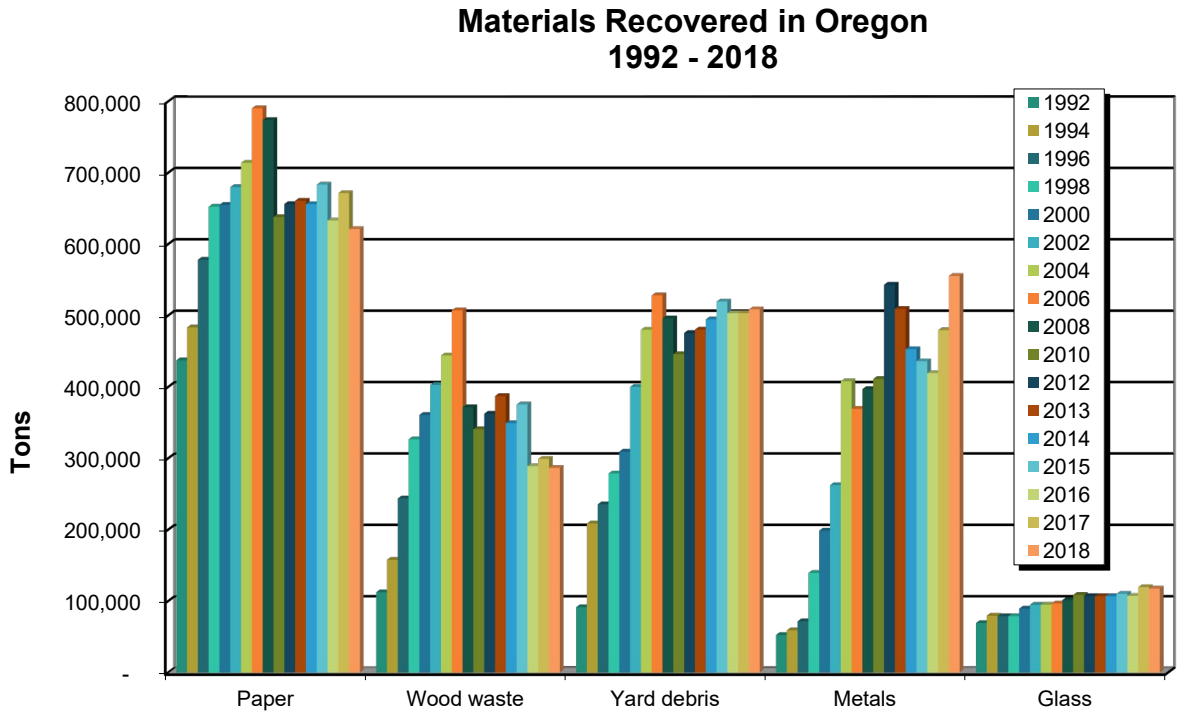
**Paper (including cardboard).** In 2018, tons of cardboard recycled decreased by only 255 tons (less than 0.1 percent) compared to 2017. In contrast, printing, writing, and other paper tons recycled declined by nearly 13 percent, continuing a long-term decline as the use of electronics for news and communication increases. Part of this decline in other paper recycling also was caused by the market disruptions and low price of mixed paper for recycling, as well as some loss from concurrence disposal and changes in materials collected for certain programs.

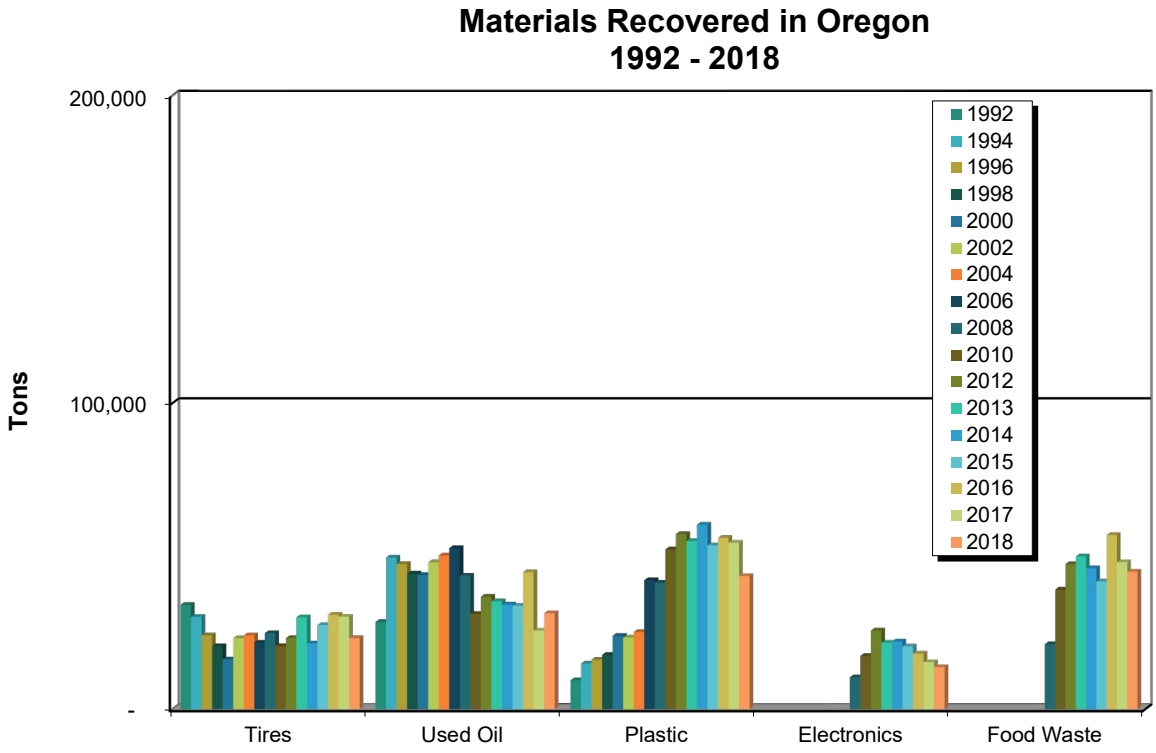
**Metals.** The total amount of scrap metal increased by more than 16 percent in 2018 compared to 2017. This increase may be due to scrap metal prices continuing to rise in 2018. Tinned cans saw a decrease of eight percent.

**Electronics.** Electronics recovery continued its decline showing a decrease of over ten percent in 2018 compared to 2017. This is still partially due to the decrease in the number of cathode ray tube monitors and TVs returned for recycling as lighter flat-screen devices replace the heavier CRT devices.

**Organics.** The total recovery of organics (which includes animal waste/grease, wood waste, yard debris, and food waste) decreased less than one percent in 2018. This decrease may mostly be due to the new food waste/yard debris curbside mix breakdown that attributed 1.2 percent to solid waste.

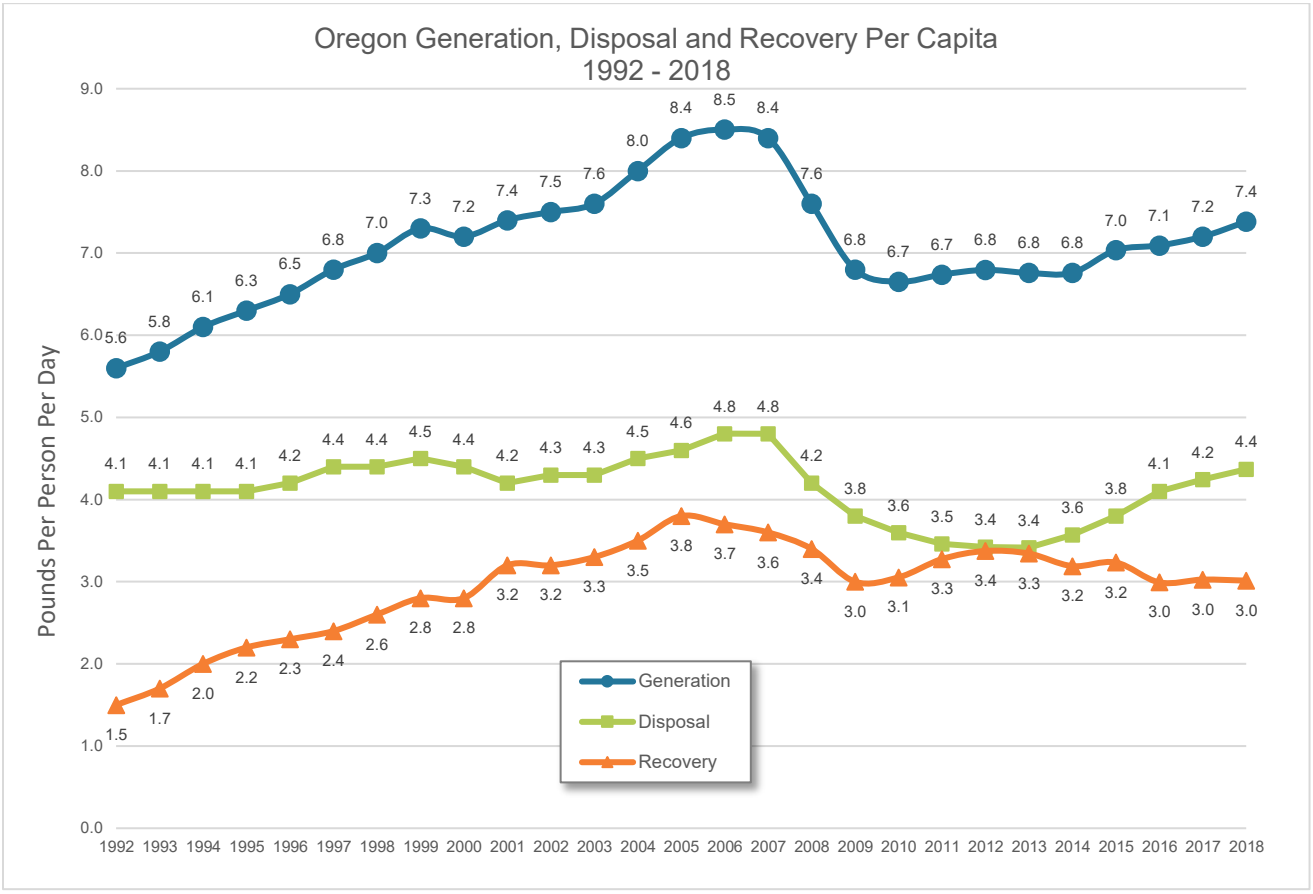
The following charts compare the materials recovered over the past 27 years.


Materials Recovered in Oregon
1992 - 2018
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
2013
2014
2015
2016
2017
2018


Materials Recovered in Oregon
1992 - 2018
Tons
200,000
100,000
-
Tires
Used Oil
Plastic
Electronics
Food Waste
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2013
2014
2015
2016
2017
2018

# 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 2018 Oregon generated 5,652,826 tons of municipal solid waste, an increase of 2.9 percent over 2017. This equates to per-capita generation of 2,695 pounds per person (7.4 pounds per day), a 1.5 percent increase from 2,654 pounds per person (7.2 pounds per day) in 2017. In 2018, the state missed both its goals for no increase in per-capita and total waste generation. Still, total waste generation in 2018 was well below (77,053 tons less) its peak in 2006. This is a drop of 1.3 percent in total waste generation between 2006 and 2018, or a 13.2 percent drop in the per-capita amount.




Generation can be seen as a crude measure of consumption, and for many materials, the environmental impacts of production (the corollary of consumption) are many times higher than the impacts of disposal. For example, EPA has estimated that roughly 40 percent of the country's greenhouse gas emissions are associated with the production and transportation of goods[11]. The leveling off of waste generation in 2006, the sharp decline in 2007 through 2009, and lack of restoration to pre-recession levels since then suggests that some of the changes in waste generation that occurred during the last recession may be long-lasting, and that the reduction in use of materials is not temporary. Reduction in materials use would, in turn, likely result in a reduction of greenhouse gas emissions associated with all stages of the life cycle of materials. Many other adverse environmental impacts associated with materials likely also decreased.

[11] Figure ES-1of *Opportunities to Reduce Greenhouse Gas Emissions through Materials and Land Management Practices.* US Environmental Protection Agency, Sept. 2009.

The following table shows the disposition of the municipal solid waste generated in Oregon in 2018. See Table 9 for individual wasteshed dispositions.

| Disposition of Waste Generated in Oregon in 2018 | |
|---|---|
| **Disposition** | **Percent by weight** |
| Disposed* | 59.2 |
| Recycled | 26.3 |
| Composted | 9.3 |
| Recovered for Energy* | 5.3 |

*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 10). Other wastes burned at the facility are counted here as disposed.

# Discussion

The energy savings and greenhouse gas reductions associated with materials recovered for recycling, composting and energy recovery in 2018 were notable. Energy savings were 30 trillion BTUs, and reductions in GHGs were 3.3 MMTCO2E. There is potential for further savings via recovery. If recovery were increased to the maximum possible level using current technology, another 33 trillion BTUs and 2.6 MMTCO2E in savings might be realized.

These numbers should be viewed in the context of Oregon's total environmental impacts. Oregon's total yearly energy expenditure is about 977 trillion BTUs, and Oregon's total yearly GHG emissions are 66.2 or 88.7 million metrics tons, depending on analytical method. Recovery can reduce impacts, but it cannot reduce them on the scale of the changes anticipated by state goals such as the *2050 Vision*.

Greater impact reductions should be achievable by other materials management strategies, such as reducing the generation of waste in the first place. Unfortunately, overall waste generation in 2018 increased. This likely indicates an overall increase in the use (and production) of materials, with associated increases in emissions across all stages of their life cycle.

In 2015, Oregon adopted new statutory goals of 52 percent recovery by 2020 and 55 percent by 2025. At the time these goals were adopted, we 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. Though much less impactful from the perspective of tonnages of material recycled, we also 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, has restricted the importation of these materials and has banned the importation of unsorted paper and all post-consumer plastics in 2018.

Despite these challenges, Oregon recovered 2,307,322 tons of material for recycling, composting and energy recovery in 2018, giving a recovery rate of 40.8 percent, a decrease of the 41.6 percent revised rate in 2017. Other anticipated changes in products and packaging are likely to make it even harder to achieve the state's goals in 2020 and 2025, as products and packaging become increasingly difficult to recycle due to such factors as substituting light-weight non-recyclable packaging for heavier recyclable packaging. Although these changes may make achieving a weight-based recovery goal more difficult, they can often lead to environmental benefits since less material is needed for the packaging, resulting in less energy use and greenhouse gases produced and even less solid waste generated and disposed.

# 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 2018 report:

- 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.

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

- 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.

# 2018 survey report tables

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

# Table 1: Wasteshed Recovery Rates, 2018

| Wasteshed | Tons Disposed | Tons Recovered | Tons Generated | Calculated Recovery Rate[1] | SB 263 Goal[3] 2025 |
|---|---|---|---|---|---|
| Baker | 13,419.8 | 2,623.9 | 16,043.7 | **16.4%** | 25% |
| Benton | 64,164.8 | 35,072.6 | 99,237.4 | **35.3%** | 44% |
| Clatsop | 36,783.7 | 24,442.8 | 61,226.5 | **39.9%** | 53% |
| Columbia | 32,375.6 | 10,442.8 | 42,818.4 | **24.4%** | 45% |
| Coos | 51,175.1 | 12,603.4 | 63,778.5 | **19.8%** | 30% |
| Crook | 22,949.2 | 5,617.9 | 28,567.2 | **19.7%** | 20% |
| Curry | 20,133.2 | 6,443.9 | 26,577.1 | **24.2%** | 30% |
| Deschutes | 179,991.2 | 83,472.4 | 263,463.6 | **31.7%** | 45% |
| Douglas | 84,735.6 | 33,216.1 | 117,951.6 | **28.2%** | 34% |
| Gilliam | 3,945.9 | 300.9 | 4,246.8 | **7.1%** | 25% |
| Grant | 4,256.0 | 826.8 | 5,082.8 | **16.3%** | 25% |
| Harney | 4,581.7 | 1,056.5 | 5,638.1 | **18.7%** | 25% |
| Hood River | 23,003.7 | 7,213.7 | 30,217.4 | **23.9%** | 35% |
| Jackson | 195,192.2 | 96,147.4 | 291,339.5 | **33.0%** | 25% |
| Jefferson | 16,036.4 | 4,609.7 | 20,646.1 | **22.3%** | 32% |
| Josephine | 80,597.4 | 37,385.7 | 117,983.0 | **31.7%** | 20% |
| Klamath | 67,381.5 | 17,442.4 | 84,823.9 | **20.6%** | 20% |
| Lake | 6,466.7 | 773.7 | 7,240.4 | **10.7%** | 15% |
| Lane | 273,542.8 | 318,391.8 | 591,934.6 | **53.8%** | 63% |
| Lincoln | 58,083.7 | 18,511.0 | 76,594.7 | **24.2%** | 37% |
| Linn | 110,533.9 | 74,441.9 | 184,975.8 | **40.2%** | 45% |
| Malheur | 26,136.3 | 5,216.1 | 31,352.5 | **16.6%** | 25% |
| Marion[2] | 264,972.7 | 262,552.0 | 527,524.8 | **49.8%** | 64% |
| Metro | 1,373,607.9 | 1,108,856.9 | 2,482,464.8 | **44.7%** | 64% |
| Milton-Freewater | 1,764.9 | 1,146.8 | 2,911.7 | **39.4%** | 25% |
| Morrow | 19,095.2 | 5,383.3 | 24,478.6 | **22.0%** | 20% |
| Polk | 50,788.5 | 35,971.8 | 86,760.2 | **41.5%** | 48% |
| Sherman | 1,233.2 | 193.1 | 1,426.3 | **13.5%** | 20% |
| Tillamook | 28,233.2 | 10,857.6 | 39,090.8 | **27.8%** | 37% |
| Umatilla | 83,103.8 | 33,571.8 | 116,675.6 | **28.8%** | 20% |
| Union | 18,944.1 | 6,978.8 | 25,922.9 | **26.9%** | 25% |
| Wallowa | 5,104.9 | 1,385.7 | 6,490.6 | **21.3%** | 25% |
| Wasco | 22,910.4 | 5,434.5 | 28,345.0 | **19.2%** | 35% |
| Wheeler | 376.1 | 138.2 | 514.2 | **26.9%** | 20% |
| Yamhill | 99,882.0 | 38,598.5 | 138,480.5 | **27.9%** | 45% |
| **OR Totals** | 3,345,503 | 2,307,322 | 5,652,826 | **40.8%** | |

[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 14,863.22 tons of recyclable materials burned for energy in 2018
(per ORS 459A.010(3)(f)(B)).

# Table 2: Amount Recovered in 2018 by Wasteshed

| Wasteshed | 2018 Tons Recovered | 2018 Pounds Per Capita | 2018 Wasteshed Population |
|---|---|---|---|
| Baker | 2,624 | 313 | 16,765 |
| Benton | 35,073 | 819 | 85,645 |
| Clatsop | 24,443 | 1,247 | 39,200 |
| Columbia | 10,443 | 402 | 51,900 |
| Coos | 12,603 | 398 | 63,275 |
| Crook | 5,618 | 495 | 22,710 |
| Curry | 6,444 | 562 | 22,915 |
| Deschutes | 83,472 | 883 | 188,980 |
| Douglas | 33,216 | 595 | 111,735 |
| Gilliam | 301 | 303 | 1,985 |
| Grant | 827 | 223 | 7,400 |
| Harney | 1,056 | 286 | 7,380 |
| Hood River | 7,214 | 570 | 25,310 |
| Jackson | 96,147 | 877 | 219,200 |
| Jefferson | 4,610 | 391 | 23,560 |
| Josephine | 37,386 | 865 | 86,395 |
| Klamath | 17,442 | 513 | 67,960 |
| Lake | 774 | 191 | 8,115 |
| Lane | 318,392 | 1,698 | 375,120 |
| Lincoln | 18,511 | 768 | 48,210 |
| Linn | 74,442 | 1,113 | 133,718 |
| Malheur | 5,216 | 327 | 31,925 |
| Marion* | 262,552 | 1,527 | 343,837 |
| Metro | 1,108,857 | 1,206 | 1,839,005 |
| Milton-Freewater | 1,147 | 284 | 8,077 |
| Morrow | 5,383 | 906 | 11,885 |
| Polk | 35,972 | 886 | 81,215 |
| Sherman | 193 | 216 | 1,785 |
| Tillamook | 10,858 | 823 | 26,395 |
| Umatilla | 33,572 | 924 | 72,689 |
| Union | 6,979 | 519 | 26,885 |
| Wallowa | 1,386 | 386 | 7,175 |
| Wasco | 5,435 | 400 | 27,200 |
| Wheeler | 138 | 191 | 1,450 |
| Yamhill | 38,599 | 713 | 108,300 |
| **OREGON TOTALS** | **2,307,322** | **1,100** | **4,195,300** |

Source for population data is the Center for Population Research and Census, Portland State University, published April 2019. 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 2018 by Wasteshed

| Wasteshed | 2018 Tons Disposed | 2018 Pounds Per Capita | 2018 Wasteshed Population |
|---|---|---|---|
| Baker | 13,420 | 1,601 | 16,765 |
| Benton | 64,165 | 1,498 | 85,645 |
| Clatsop | 36,784 | 1,877 | 39,200 |
| Columbia | 32,376 | 1,248 | 51,900 |
| Coos | 51,175 | 1,618 | 63,275 |
| Crook | 22,949 | 2,021 | 22,710 |
| Curry | 20,133 | 1,757 | 22,915 |
| Deschutes | 179,991 | 1,905 | 188,980 |
| Douglas | 84,736 | 1,517 | 111,735 |
| Gilliam | 3,946 | 3,976 | 1,985 |
| Grant | 4,256 | 1,150 | 7,400 |
| Harney | 4,582 | 1,242 | 7,380 |
| Hood River | 23,004 | 1,818 | 25,310 |
| Jackson | 195,192 | 1,781 | 219,200 |
| Jefferson | 16,036 | 1,361 | 23,560 |
| Josephine | 80,597 | 1,866 | 86,395 |
| Klamath | 67,382 | 1,983 | 67,960 |
| Lake | 6,467 | 1,594 | 8,115 |
| Lane | 273,543 | 1,458 | 375,120 |
| Lincoln | 58,084 | 2,410 | 48,210 |
| Linn | 110,534 | 1,653 | 133,718 |
| Malheur | 26,136 | 1,637 | 31,925 |
| Marion* | 264,973 | 1,541 | 343,837 |
| Metro | 1,373,608 | 1,494 | 1,839,005 |
| Milton-Freewater | 1,765 | 437 | 8,077 |
| Morrow | 19,095 | 3,213 | 11,885 |
| Polk | 50,788 | 1,251 | 81,215 |
| Sherman | 1,233 | 1,382 | 1,785 |
| Tillamook | 28,233 | 2,139 | 26,395 |
| Umatilla | 83,104 | 2,287 | 72,689 |
| Union | 18,944 | 1,409 | 26,885 |
| Wallowa | 5,105 | 1,423 | 7,175 |
| Wasco | 22,910 | 1,685 | 27,200 |
| Wheeler | 376 | 519 | 1,450 |
| Yamhill | 99,882 | 1,845 | 108,300 |
| **OREGON TOTALS** | **3,345,503** | **1,595** | **4,195,300** |

Source for population data is the Center for Population Research and Census, Portland State University, published April 2019. 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).

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

## Table 4: Oregon Calculated Recovery Rates by Wasteshed, 1992-2018

| 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* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Baker | 10% | 14% | 17% | 22% | 25% | 19% | 19% | 18% | 18% | 24% | 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% |
| Benton | 27% | 30% | 36% | 35% | 37% | 41% | 41% | 35% | 35% | 41% | 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% | 35.6% | 34.0% | 35.3% |
| Clatsop | 19% | 22% | 20% | 19% | 20% | 23% | 22% | 24% | 25% | 28% | 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% | 39.9% |
| Columbia | 34% | 28% | 22% | 27% | 22% | 28% | 29% | 25% | 31% | 38% | 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% | 23.9% | 24.4% |
| Coos | 21% | 20% | 23% | 28% | 29% | 28% | 27% | 22% | 23% | 23% | 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% |
| Crook | 16% | 23% | 19% | 30% | 23% | 15% | 14% | 23% | 27% | 37% | 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% | 20.7% | 23.1% | 19.7% |
| Curry | 21% | 25% | 27% | 31% | 35% | 33% | 29% | 27% | 41% | 39% | 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% | 26.7% | 21.5% | 24.2% |
| Deschutes | 15% | 18% | 24% | 22% | 23% | 25% | 32% | 25% | 31% | 29% | 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% | 33.1% | 31.8% | 31.7% |
| Douglas | 26% | 23% | 23% | 24% | 26% | 29% | 30% | 26% | 26% | 30% | 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% |
| Gilliam | 17% | 6% | 15% | 20% | 19% | 21% | 18% | 15% | 14% | 13% | 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% |
| Grant | 18% | 14% | 16% | 19% | 16% | 15% | 16% | 18% | 19% | 19% | 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% |
| Harney | 18% | 21% | 20% | 34% | 24% | 21% | 34% | 34% | 20% | 27% | 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% |
| Hood River | 16% | 24% | 26% | 16% | 17% | 17% | 17% | 19% | 18% | 30% | 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% |
| Jackson | 15% | 19% | 35% | 33% | 34% | 34% | 34% | 29% | 28% | 32% | 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% |
| Jefferson | 21% | 16% | 18% | 22% | 24% | 33% | 33% | 21% | 27% | 27% | 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% |
| Josephine | 14% | 19% | 27% | 34% | 38% | 37% | 41% | 42% | 33% | 34% | 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% |
| Klamath | 13% | 12% | 17% | 18% | 15% | 16% | 17% | 15% | 18% | 31% | 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% | 25.7% | 23.5% | 20.6% |
| Lake | 6% | 6% | 9% | 8% | 7% | 6% | 8% | 11% | 8% | 11% | 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% |
| Lane | 19% | 28% | 32% | 32% | 39% | 39% | 40% | 41% | 46% | 46% | 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% |
| Lincoln | 20% | 20% | 21% | 19% | 16% | 19% | 20% | 19% | 23% | 28% | 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% | 24.2% |
| Linn | 15% | 27% | 29% | 30% | 32% | 33% | 31% | 33% | 29% | 34% | 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% | 38.2% | 36.9% | 40.2% |
| Malheur | 19% | 15% | 12% | 15% | 20% | 19% | 22% | 24% | 25% | 26% | 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% | 16.6% |
| Marion | 26% | 27% | 27% | 29% | 28% | 28% | 30% | 32% | 38% | **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% | **48.8% | **49.7% |
| Metro | 35% | 37% | 39% | 42% | 41% | 42% | 43% | 43% | 45% | 49% | 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% | 47.0% | 46.6% | 44.7% |
| Milton-Freewater | 16% | 13% | 13% | 22% | 21% | 20% | 19% | 18% | 21% | 21% | 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% | 28.7% | 35.2% | 39.4% |
| Morrow | 11% | 16% | 13% | 12% | 13% | 17% | 17% | 20% | 15% | 16% | 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% |
| Polk | 20% | 25% | 24% | 23% | 19% | 24% | 26% | 29% | 33% | 39% | 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% |
| Sherman | 24% | 17% | 20% | 20% | 21% | 11% | 16% | 24% | 17% | 15% | 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% | 11.5% | 11.1% | 13.5% |
| Tillamook | 31% | 27% | 28% | 27% | 26% | 26% | 26% | 28% | 26% | 28% | 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% |
| Umatilla | 14% | 15% | 15% | 19% | 20% | 25% | 24% | 25% | 26% | 28% | 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% | 28.8% |
| Union | 16% | 19% | 21% | 30% | 26% | 29% | 27% | 24% | 22% | 22% | 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% | 22.1% | 26.9% |
| Wallowa | 6% | 8% | 11% | 18% | 11% | 16% | 16% | 19% | 21% | 19% | 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% | 21.3% |
| Wasco | 25% | 23% | 26% | 29% | 30% | 29% | 31% | 34% | 34% | 26% | 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% | 26.2% | 19.6% | 19.2% |
| Wheeler | 7% | 8% | 11% | 24% | 20% | 20% | 25% | 18% | 14% | 13% | 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% | 26.9% |
| Yamhill | 19% | 22% | 25% | 30% | 35% | 25% | 31% | 36% | 44% | 49% | 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% | 30.0% | 28.9% | 27.9% |
| **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%** | **42.2%** | **41.6%** | **40.8%** |

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

## Table 5: Oregon Amount Recovered by Wasteshed, 1992-2018

| Wasteshed | 1992 Rvd (tons) | Per Capita (lbs.) | 1996 Rvd (tons) | Per Capita (lbs.) | 1999 Rvd (tons) | Per Capita (lbs.) | 2001 Rvd (tons) | Per Capita (lbs.) | 2007 Rvd (tons) | Per Capita (lbs.) | 2009 Rvd (tons) | Per Capita (lbs.) | 2011 Rvd (tons) | Per Capita (lbs.) | 2012 Rvd (tons) | Per Capita (lbs.) | 2013 Rvd (tons) | Per Capita (lbs.) | 2014 Rvd (tons) | Per Capita (lbs.) | 2015 Rvd (tons) | Per Capita (lbs.) | 2016 Rvd (tons) | Per Capita (lbs.) | 2017 Rvd (tons) | Per Capita (lbs.) | 2018 Rvd (tons) | Per Capita (lbs.) | Change in Per Capita 2018-17 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Baker | 982 | 124 | 3,644 | 438 | 2,792 | 334 | 3,488 | 418 | 3,565 | 434 | 4,067 | 494 | 3,402 | 420 | 3,200 | 395 | 3,325 | 408 | 4,071 | 499 | 4,122 | 502 | 3,111 | 377 | 2,957 | 353 | 2,624 | 313 | -11.4% |
| Benton | 21,480 | 626 | 30,352 | 830 | 29,992 | 821 | 35,609 | 966 | 36,292 | 922 | 31,438 | 789 | 33,775 | 852 | 38,226 | 955 | 37,953 | 939 | 33,959 | 832 | 33,394 | 807 | 34,311 | 820 | 32,591 | 768 | 35,073 | 819 | 6.6% |
| Clatsop | 5,148 | 300 | 7,118 | 403 | 10,333 | 581 | 11,999 | 669 | 19,029 | 1,017 | 17,584 | 929 | 18,366 | 989 | 19,465 | 1,047 | 23,013 | 1,235 | 19,025 | 1,015 | 20,973 | 1,111 | 20,671 | 1,082 | 23,962 | 1,235 | 24,443 | 1,247 | 1.0% |
| Columbia | 7,894 | 407 | 6,258 | 302 | 7,732 | 357 | 14,050 | 634 | 13,647 | 574 | 12,001 | 496 | 13,386 | 539 | 12,703 | 511 | 13,254 | 532 | 10,273 | 410 | 11,730 | 466 | 13,786 | 543 | 10,032 | 391 | 10,443 | 402 | 3.0% |
| Coos | 10,035 | 323 | 14,972 | 472 | 11,068 | 352 | 11,075 | 352 | 12,162 | 386 | 12,666 | 402 | 36,368 | 1,155 | 31,613 | 1,005 | 27,146 | 864 | 26,190 | 833 | 13,024 | 414 | 13,215 | 418 | 14,030 | 443 | 12,603 | 398 | -10.1% |
| Crook | 1,581 | 206 | 3,156 | 363 | 4,177 | 442 | 7,040 | 709 | 7,004 | 541 | 6,273 | 462 | 7,535 | 723 | 6,328 | 613 | 6,182 | 598 | 5,209 | 501 | 4,459 | 423 | 5,302 | 491 | 6,189 | 560 | 5,618 | 495 | -11.6% |
| Curry | 2,863 | 288 | 6,011 | 572 | 5,720 | 542 | 9,464 | 878 | 6,632 | 618 | 4,223 | 396 | 6,235 | 558 | 5,557 | 499 | 4,798 | 430 | 5,748 | 514 | 5,424 | 483 | 6,989 | 618 | 5,548 | 487 | 6,444 | 562 | 15.6% |
| Deschutes | 12,858 | 305 | 30,222 | 605 | 36,537 | 647 | 49,459 | 810 | 75,346 | 937 | 75,362 | 883 | 72,635 | 914 | 72,065 | 900 | 74,062 | 911 | 72,965 | 877 | 83,271 | 975 | 79,755 | 903 | 84,809 | 927 | 83,472 | 883 | -4.7% |
| Douglas | 29,467 | 614 | 30,945 | 621 | 30,878 | 615 | 38,983 | 770 | 36,158 | 691 | 30,846 | 585 | 55,220 | 1,025 | 50,342 | 931 | 42,333 | 778 | 36,263 | 663 | 32,335 | 588 | 27,725 | 502 | 31,635 | 569 | 33,216 | 595 | 4.5% |
| Gilliam | 177 | 205 | 284 | 306 | 263 | 275 | 252 | 265 | 301 | 319 | 768 | 815 | 462 | 491 | 1,684 | 1,773 | 1,395 | 1,434 | 488 | 495 | 1,070 | 1,084 | 358 | 361 | 354 | 355 | 301 | 303 | -14.6% |
| Grant | 911 | 232 | 687 | 171 | 734 | 185 | 897 | 230 | 1,342 | 354 | 1,098 | 292 | 1,338 | 359 | 954 | 256 | 1,386 | 373 | 838 | 226 | 1,235 | 332 | 1,457 | 393 | 852 | 230 | 827 | 223 | -2.8% |
| Harney | 600 | 171 | 678 | 188 | 1,703 | 452 | 1,076 | 283 | 1,203 | 313 | 944 | 245 | 1,327 | 360 | 1,414 | 387 | 1,307 | 360 | 1,360 | 374 | 1,084 | 297 | 1,156 | 316 | 1,285 | 349 | 1,056 | 286 | -18.0% |
| Hood River | 1,855 | 212 | 3,333 | 345 | 3,696 | 365 | 6,517 | 633 | 8,365 | 779 | 7,466 | 687 | 9,541 | 843 | 7,785 | 681 | 7,847 | 674 | 6,701 | 565 | 7,783 | 642 | 7,437 | 601 | 6,502 | 517 | 7,214 | 570 | 10.2% |
| Jackson | 17,134 | 221 | 60,292 | 707 | 60,638 | 675 | 71,666 | 776 | 80,422 | 795 | 79,275 | 766 | 99,579 | 977 | 108,893 | 1,064 | 105,705 | 1,025 | 108,992 | 1,046 | 97,326 | 923 | 110,460 | 1,033 | 101,570 | 937 | 96,147 | 877 | -6.3% |
| Jefferson | 1,269 | 170 | 2,667 | 307 | 2,693 | 288 | 3,963 | 409 | 8,132 | 738 | 4,475 | 394 | 8,641 | 791 | 8,244 | 752 | 7,305 | 663 | 5,400 | 486 | 4,046 | 361 | 6,161 | 541 | 5,296 | 457 | 4,610 | 391 | -14.3% |
| Josephine | 7,826 | 239 | 21,688 | 600 | 30,928 | 822 | 25,556 | 665 | 32,943 | 800 | 29,510 | 705 | 47,045 | 1,136 | 48,567 | 1,173 | 43,614 | 1,053 | 39,387 | 948 | 32,725 | 782 | 38,476 | 909 | 41,783 | 976 | 37,386 | 865 | -11.3% |
| Klamath | 8,827 | 301 | 11,171 | 360 | 11,447 | 360 | 21,617 | 673 | 34,502 | 1,048 | 26,256 | 791 | 20,751 | 623 | 23,432 | 702 | 19,793 | 593 | 22,134 | 662 | 15,183 | 452 | 20,055 | 595 | 18,157 | 536 | 17,442 | 513 | -4.3% |
| Lake | 269 | 74 | 601 | 161 | 410 | 111 | 643 | 171 | 1,691 | 447 | 1,754 | 461 | 2,656 | 674 | 1,843 | 465 | 2,177 | 548 | 1,145 | 287 | 847 | 211 | 897 | 224 | 606 | 149 | 774 | 191 | 27.8% |
| Lane | 72,072 | 493 | 153,843 | 992 | 180,383 | 1,124 | 206,010 | 1,264 | 237,578 | 1,385 | 190,877 | 1,098 | 269,100 | 1,524 | 268,429 | 1,516 | 229,818 | 1,291 | 264,472 | 1,474 | 242,830 | 1,341 | 258,360 | 1,412 | 302,490 | 1,632 | 318,392 | 1,698 | 4.0% |
| Lincoln | 6,886 | 338 | 7,823 | 352 | 9,912 | 445 | 15,128 | 678 | 20,035 | 898 | 17,010 | 761 | 18,520 | 803 | 22,104 | 955 | 16,915 | 727 | 19,940 | 850 | 19,827 | 840 | 17,012 | 713 | 14,868 | 620 | 18,511 | 768 | 23.9% |
| Linn | 17,232 | 352 | 33,201 | 634 | 35,776 | 664 | 36,510 | 670 | 51,543 | 888 | 56,125 | 950 | 76,150 | 1,226 | 65,299 | 1,045 | 61,833 | 983 | 60,159 | 947 | 59,426 | 926 | 60,100 | 923 | 62,465 | 947 | 74,442 | 1,113 | 17.6% |
| Malheur | 3,283 | 237 | 4,808 | 319 | 6,538 | 417 | 7,204 | 450 | 7,045 | 446 | 4,909 | 310 | 5,309 | 338 | 7,470 | 476 | 7,699 | 490 | 6,621 | 421 | 6,703 | 426 | 7,973 | 503 | 6,791 | 426 | 5,216 | 327 | -23.4% |
| Marion | 55,834 | 462 | 85,731 | 645 | 109,639 | 778 | 191,817 | 1,331 | 251,673 | 1,619 | 218,787 | 1,376 | 235,584 | 1,482 | 228,708 | 1,428 | 232,540 | 1,441 | 238,422 | 1,463 | 240,544 | 1,460 | 237,150 | 1,421 | 248,038 | 1,463 | 262,552 | 1,527 | 4.4% |
| Metro | 514,747 | 825 | 752,470 | 1,106 | 932,889 | 1,304 | 1,097,409 | 1,496 | 1,325,112 | 1,663 | 1,106,279 | 1,356 | 1,122,542 | 1,355 | 1,222,024 | 1,461 | 1,278,987 | 1,510 | 1,182,294 | 1,377 | 1,285,248 | 1,473 | 1,116,712 | 1,255 | 1,116,870 | 1,233 | 1,108,857 | 1,206 | -2.2% |
| Milton-Freew. | 908 | 323 | 1,186 | 392 | 1,191 | 390 | 1,344 | 410 | 2,351 | 718 | 2,319 | 640 | 2,567 | 670 | 1,615 | 419 | 3,103 | 797 | 2,674 | 683 | 2,846 | 719 | 1,884 | 472 | 1,375 | 341 | 1,147 | 284 | -16.8% |
| Morrow | 930 | 227 | 842 | 181 | 1,446 | 270 | 1,364 | 245 | 3,967 | 643 | 3,548 | 566 | 3,269 | 580 | 3,680 | 651 | 2,944 | 515 | 4,047 | 702 | 4,466 | 768 | 5,635 | 960 | 5,989 | 1,007 | 5,383 | 906 | -10.1% |
| Polk | 4,873 | 187 | 6,787 | 237 | 15,429 | 432 | 22,550 | 717 | 33,838 | 1,013 | 32,201 | 946 | 34,439 | 917 | 30,505 | 805 | 29,953 | 786 | 34,580 | 899 | 35,114 | 904 | 39,526 | 1,002 | 45,872 | 1,145 | 35,972 | 886 | -22.6% |
| Sherman | 270 | 278 | 264 | 275 | 348 | 360 | 234 | 246 | 239 | 258 | 204 | 222 | 194 | 220 | 319 | 362 | 181 | 203 | 219 | 246 | 251 | 281 | 158 | 176 | 151 | 168 | 193 | 216 | 28.9% |
| Tillamook | 4,518 | 406 | 5,246 | 438 | 6,930 | 572 | 7,113 | 578 | 11,435 | 885 | 9,271 | 710 | 10,407 | 824 | 10,606 | 838 | 9,698 | 764 | 9,078 | 713 | 9,424 | 734 | 9,331 | 720 | 10,504 | 803 | 10,858 | 823 | 2.5% |
| Umatilla | 6,641 | 236 | 12,454 | 414 | 18,947 | 595 | 23,097 | 718 | 38,402 | 1,169 | 30,306 | 930 | 27,610 | 801 | 28,990 | 835 | 26,066 | 744 | 26,990 | 766 | 29,813 | 837 | 24,276 | 675 | 28,955 | 799 | 33,572 | 924 | 15.6% |
| Union | 2,525 | 210 | 5,203 | 419 | 5,358 | 436 | 5,578 | 454 | 9,180 | 727 | 7,119 | 559 | 7,823 | 602 | 7,991 | 611 | 8,031 | 610 | 6,350 | 480 | 6,691 | 503 | 6,916 | 517 | 6,375 | 474 | 6,979 | 519 | 9.5% |
| Wallowa | 433 | 119 | 503 | 135 | 1,131 | 311 | 1,045 | 294 | 1,767 | 496 | 1,211 | 341 | 954 | 273 | 923 | 263 | 1,058 | 300 | 904 | 256 | 1,122 | 316 | 1,513 | 424 | 1,425 | 396 | 1,386 | 386 | -2.5% |
| Wasco | 5,443 | 485 | 7,519 | 648 | 9,692 | 818 | 6,240 | 517 | 6,650 | 551 | 9,236 | 762 | 7,682 | 607 | 6,688 | 525 | 8,158 | 632 | 7,062 | 541 | 6,863 | 520 | 6,892 | 516 | 5,416 | 400 | 5,435 | 400 | 0.0% |
| Wheeler | 59 | 82 | 185 | 226 | 80 | 102 | 67 | 86 | 204 | 260 | 102 | 129 | 62 | 86 | 37 | 52 | 45 | 63 | 29 | 40 | 77 | 107 | 55 | 74 | 80 | 108 | 138 | 191 | 75.8% |
| Yamhill | 11,850 | 338 | 26,116 | 663 | 38,842 | 919 | 63,021 | 1,447 | 57,816 | 1,233 | 47,122 | 982 | 45,653 | 907 | 43,787 | 864 | 51,237 | 1,002 | 43,277 | 837 | 47,808 | 915 | 41,125 | 777 | 41,147 | 768 | 38,599 | 713 | -7.2% |
| **OR. TOTALS** | **839,679** | **562** | **1,338,259** | **825** | **1,626,271** | **958** | **1,999,085** | **1,152** | **2,437,569** | **1,302** | **2,082,631** | **1,089** | **2,306,124** | **1,196** | **2,391,490** | **1,232** | **2,390,859** | **1,220** | **2,307,269** | **1,164** | **2,369,080** | **1,180** | **2,225,943** | **1,092** | **2,286,969** | **1,105** | **2,307,322** | **1,100** | **-0.41%** |
| change in total from previous year | | | 6.45% | | 1.33% | | 13.21% | | -2.26% | | -10.47% | | 6.57% | | 3.70% | | -0.03% | | -3.50% | | 2.68% | | -6.04% | | -3.47% | | 0.89% | | |
| change in per capita from previous year | | | | 4.40% | | 0.03% | | 12.06% | | -3.70% | | -11.23% | | 6.01% | | 3.04% | | -0.97% | | -4.59% | | 1.41% | | -7.48% | | -6.43% | | -0.41% | |

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, 1992-2018

| Wasteshed | 1992 Disposed (tons) | Per Capita (lbs.) | 1996 Disposed (tons) | Per Capita (lbs.) | 1999 Disposed (tons) | Per Capita (lbs.) | 2001 Disposed (tons) | Per Capita (lbs.) | 2007 Disposed (tons) | Per Capita (lbs.) | 2009 Disposed (tons) | Per Capita (lbs.) | 2011 Disposed (tons) | Per Capita (lbs.) | 2012 Disposed (tons) | Per Capita (lbs.) | 2013 Disposed (tons) | Per Capita (lbs.) | 2014 Disposed (tons) | Per Capita (lbs.) | 2015 Disposed (tons) | Per Capita (lbs.) | 2016 Disposed (tons) | Per Capita (lbs.) | 2017 Disposed (tons) | Per Capita (lbs.) | 2018 Disposed (tons) | Per Capita (lbs.) | Change in Per Capita 2018-17 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Baker | 8,419 | 1,062 | 10,897 | 1,310 | 12,602 | 1,507 | 11,317 | 1,355 | 12,730 | 1,549 | 11,391 | 1,385 | 11,926 | 1,471 | 10,610 | 1,309 | 11,309 | 1,389 | 10,251 | 1,256 | 11,585 | 1,411 | 12,432 | 1,506 | 14,078 | 1,681 | 13,420 | 1,601 | -4.76% |
| Benton | 58,761 | 1,713 | 50,840 | 1,390 | 54,675 | 1,497 | 51,577 | 1,399 | 57,109 | 1,451 | 51,470 | 1,292 | 54,525 | 1,375 | 54,062 | 1,351 | 53,516 | 1,324 | 57,050 | 1,398 | 61,331 | 1,483 | 61,999 | 1,482 | 63,214 | 1,490 | 64,165 | 1,498 | 0.57% |
| Clatsop | 22,263 | 1,299 | 28,671 | 1,623 | 32,047 | 1,801 | 31,318 | 1,747 | 36,874 | 1,970 | 31,293 | 1,654 | 29,266 | 1,576 | 29,291 | 1,575 | 28,969 | 1,555 | 31,314 | 1,670 | 32,170 | 1,704 | 34,076 | 1,783 | 33,381 | 1,720 | 36,784 | 1,877 | 9.12% |
| Columbia | 15,131 | 780 | 22,650 | 1,095 | 23,519 | 1,087 | 23,197 | 1,047 | 34,317* | 1,443* | 25,365 | 1,048 | 24,614 | 992 | 25,400 | 1,023 | 24,970 | 1,002 | 25,697 | 1,026 | 26,130 | 1,037 | 28,657 | 1,128 | 31,937 | 1,244 | 32,376 | 1,248 | 0.29% |
| Coos | 37,596 | 1,211 | 36,436 | 1,148 | 39,302 | 1,250 | 37,711 | 1,198 | 49,459 | 1,569 | 42,305 | 1,342 | 39,987 | 1,270 | 40,733 | 1,295 | 40,287 | 1,282 | 42,222 | 1,343 | 42,362 | 1,345 | 45,445 | 1,438 | 48,728 | 1,539 | 51,175 | 1,618 | 5.08% |
| Crook | 8,378 | 1,091 | 10,646 | 1,224 | 14,034 | 1,486 | 11,872 | 1,196 | 20,867 | 1,612 | 13,566 | 998 | 16,415 | 1,574 | 11,978 | 1,160 | 14,082 | 1,361 | 14,736 | 1,418 | 16,902 | 1,603 | 20,340 | 1,885 | 20,558 | 1,860 | 22,949 | 2,021 | 8.66% |
| Curry | 10,555 | 1,062 | 11,121 | 1,059 | 15,210 | 1,440 | 14,996 | 1,392 | 21,404 | 1,993 | 17,093 | 1,602 | 16,661 | 1,492 | 16,419 | 1,473 | 16,289 | 1,461 | 15,885 | 1,421 | 17,103 | 1,522 | 19,222 | 1,701 | 20,287 | 1,779 | 20,133 | 1,757 | -1.24% |
| Deschutes | 72,529 | 1,720 | 103,397 | 2,070 | 111,141 | 1,968 | 120,334 | 1,972 | 177,543 | 2,208 | 117,292 | 1,374 | 112,751 | 1,419 | 113,611 | 1,419 | 119,682 | 1,473 | 130,956 | 1,574 | 144,067 | 1,688 | 161,087 | 1,824 | 182,110 | 1,991 | 179,991 | 1,905 | -4.33% |
| Douglas | 85,040 | 1,772 | 87,325 | 1,751 | 86,354 | 1,721 | 90,379 | 1,786 | 103,772 | 1,983 | 76,578 | 1,453 | 73,716 | 1,368 | 72,583 | 1,342 | 70,763 | 1,300 | 74,219 | 1,357 | 74,436 | 1,354 | 75,054 | 1,360 | 79,114 | 1,423 | 84,736 | 1,517 | 6.57% |
| Gilliam | 872 | 1,008 | 1,176 | 1,271 | 1,446 | 1,514 | 1,622 | 1,707 | 2,026 | 2,150 | 2,074 | 2,201 | 2,108 | 2,243 | 2,126 | 2,238 | 1,943 | 1,998 | 2,285 | 2,314 | 1,955 | 1,980 | 2,247 | 2,270 | 2,038 | 2,043 | 3,946 | 3,976 | 94.59% |
| Grant | 4,178 | 1,063 | 3,492 | 869 | 3,375 | 849 | 3,790 | 972 | 4,205 | 1,109 | 3,798 | 1,010 | 4,010 | 1,076 | 3,473 | 932 | 3,421 | 920 | 3,730 | 1,005 | 3,809 | 1,025 | 3,868 | 1,044 | 4,089 | 1,103 | 4,256 | 1,150 | 4.30% |
| Harney | 2,650 | 756 | 2,126 | 591 | 3,299 | 875 | 2,892 | 761 | 3,578 | 932 | 3,058 | 793 | 3,043 | 825 | 3,563 | 974 | 3,484 | 960 | 3,576 | 984 | 3,886 | 1,065 | 4,036 | 1,103 | 4,137 | 1,124 | 4,582 | 1,242 | 10.45% |
| Hood River | 9,959 | 1,139 | 16,016 | 1,659 | 16,021 | 1,583 | 15,397 | 1,495 | 19,965 | 1,860 | 17,972 | 1,655 | 18,221 | 1,611 | 17,046 | 1,490 | 16,530 | 1,419 | 17,175 | 1,448 | 18,607 | 1,535 | 20,187 | 1,632 | 23,135 | 1,840 | 23,004 | 1,818 | -1.21% |
| Jackson | 98,002 | 1,265 | 115,011 | 1,348 | 151,523 | 1,687 | 152,562 | 1,652 | 184,062 | 1,820 | 143,484 | 1,386 | 139,973 | 1,373 | 142,338 | 1,391 | 139,677 | 1,354 | 157,217 | 1,509 | 164,031 | 1,555 | 175,856 | 1,645 | 188,627 | 1,739 | 195,192 | 1,781 | 2.39% |
| Jefferson | 4,813 | 645 | 8,380 | 965 | 9,870 | 1,054 | 10,929 | 1,127 | 14,248 | 1,294 | 10,118 | 891 | 9,714 | 889 | 10,148 | 925 | 10,250 | 930 | 10,883 | 980 | 12,394 | 1,104 | 13,348 | 1,171 | 15,157 | 1,307 | 16,036 | 1,361 | 4.14% |
| Josephine | 47,687 | 1,457 | 35,873 | 992 | 42,449 | 1,129 | 50,436 | 1,313 | 63,004 | 1,529 | 49,054 | 1,173 | 49,130 | 1,186 | 48,812 | 1,179 | 51,156 | 1,235 | 58,277 | 1,402 | 62,132 | 1,484 | 70,076 | 1,655 | 76,898 | 1,796 | 80,597 | 1,866 | 3.91% |
| Klamath | 57,247 | 1,950 | 66,874 | 2,153 | 65,045 | 2,048 | 48,182 | 1,501 | 64,641 | 1,964 | 53,652 | 1,617 | 53,361 | 1,603 | 47,284 | 1,417 | 46,506 | 1,392 | 49,603 | 1,483 | 52,858 | 1,575 | 58,112 | 1,724 | 59,154 | 1,748 | 67,382 | 1,983 | 13.46% |
| Lake | 4,364 | 1,196 | 7,468 | 2,002 | 3,321 | 895 | 5,120 | 1,365 | 6,051 | 1,600 | 5,244 | 1,380 | 6,773 | 1,718 | 5,025 | 1,269 | 6,110 | 1,539 | 5,698 | 1,426 | 5,926 | 1,480 | 6,496 | 1,621 | 6,428 | 1,583 | 6,467 | 1,594 | 0.67% |
| Lane | 302,695 | 2,072 | 239,310 | 1,542 | 263,180 | 1,640 | 240,984 | 1,479 | 275,032 | 1,603 | 223,028 | 1,283 | 215,728 | 1,222 | 222,486 | 1,256 | 221,532 | 1,244 | 233,477 | 1,301 | 239,016 | 1,320 | 258,041 | 1,410 | 274,805 | 1,483 | 273,543 | 1,458 | -1.66% |
| Lincoln | 27,601 | 1,355 | 42,443 | 1,908 | 40,984 | 1,842 | 38,835 | 1,740 | 52,580 | 2,356 | 40,801 | 1,826 | 38,810 | 1,682 | 39,388 | 1,702 | 40,968 | 1,760 | 42,098 | 1,796 | 43,698 | 1,851 | 47,700 | 1,999 | 50,903 | 2,123 | 58,084 | 2,410 | 13.52% |
| Linn | 94,644 | 1,931 | 69,506 | 1,328 | 71,818 | 1,332 | 70,471 | 1,294 | 86,370 | 1,488 | 82,520 | 1,397 | 78,919 | 1,270 | 79,746 | 1,276 | 78,590 | 1,249 | 81,869 | 1,289 | 91,837 | 1,431 | 97,379 | 1,496 | 106,750 | 1,618 | 110,534 | 1,653 | 2.16% |
| Malheur | 13,815 | 996 | 18,776 | 1,246 | 20,844 | 1,330 | 20,995 | 1,312 | 24,152 | 1,528 | 21,134 | 1,333 | 20,176 | 1,283 | 19,920 | 1,269 | 20,043 | 1,275 | 20,201 | 1,284 | 20,956 | 1,331 | 22,205 | 1,401 | 23,262 | 1,461 | 26,136 | 1,637 | 12.08% |
| Marion | 158,109 | 1,307 | 219,182 | 1,648 | 230,271 | 1,635 | 194,190 | 1,347 | 247,331 | 1,591 | 200,420 | 1,261 | 195,332 | 1,229 | 191,947 | 1,199 | 193,571 | 1,200 | 204,991 | 1,258 | 220,237 | 1,336 | 243,107 | 1,457 | 263,789 | 1,556 | 264,973 | 1,541 | -0.96% |
| Metro | 945,634 | 1,516 | 1,097,246 | 1,613 | 1,240,433 | 1,734 | 1,151,339 | 1,569 | 1,385,870 | 1,740 | 1,088,580 | 1,334 | 977,769 | 1,180 | 946,915 | 1,132 | 963,041 | 1,137 | 1,022,371 | 1,190 | 1,138,552 | 1,305 | 1,259,663 | 1,416 | 1,281,034 | 1,414 | 1,373,608 | 1,494 | 5.64% |
| Milton-Freew. | 4,642 | 1,649 | 4,332 | 1,431 | 5,383 | 1,762 | 5,024 | 1,532 | 5,280 | 1,612 | 4,321 | 1,193 | 4,051 | 1,058 | 4,367 | 1,133 | 4,429 | 1,137 | 4,189 | 1,069 | 4,242 | 1,072 | 4,670 | 1,169 | 2,527 | 628 | 1,765 | 437 | -30.39% |
| Morrow | 7,221 | 1,763 | 5,883 | 1,264 | 5,930 | 1,105 | 7,394 | 1,326 | 11,024 | 1,788 | 11,777 | 1,878 | 10,885 | 1,932 | 10,976 | 1,943 | 13,146 | 2,301 | 15,285 | 2,653 | 16,661 | 2,865 | 17,477 | 2,976 | 22,055 | 3,710 | 19,095 | 3,213 | -13.38% |
| Polk | 19,036 | 729 | 28,655 | 1,000 | 38,163 | 1,068 | 34,914 | 1,110 | 39,129 | 1,172 | 37,985 | 1,116 | 37,817 | 1,007 | 38,564 | 1,018 | 38,774 | 1,017 | 40,516 | 1,054 | 42,734 | 1,100 | 46,533 | 1,180 | 51,177 | 1,277 | 50,788 | 1,251 | -2.08% |
| Sherman | 876 | 903 | 987 | 1,028 | 1,109 | 1,149 | 1,306 | 1,375 | 1,219 | 1,314 | 1,222 | 1,335 | 1,203 | 1,363 | 1,135 | 1,286 | 1,091 | 1,226 | 1,160 | 1,300 | 1,330 | 1,486 | 1,219 | 1,358 | 1,213 | 1,347 | 1,233 | 1,382 | 2.54% |
| Tillamook | 9,940 | 893 | 15,212 | 1,271 | 17,446 | 1,441 | 18,324 | 1,490 | 25,952 | 2,008 | 22,600 | 1,730 | 20,559 | 1,628 | 21,556 | 1,704 | 20,712 | 1,632 | 21,590 | 1,695 | 23,130 | 1,801 | 26,403 | 2,037 | 27,325 | 2,088 | 28,233 | 2,139 | 2.46% |
| Umatilla | 41,059 | 1,461 | 51,388 | 1,709 | 57,420 | 1,802 | 59,854 | 1,861 | 66,763 | 2,033 | 65,260 | 2,002 | 67,354 | 1,955 | 64,341 | 1,854 | 65,129 | 1,858 | 69,030 | 1,958 | 71,374 | 2,004 | 72,808 | 2,025 | 78,725 | 2,173 | 83,104 | 2,287 | 5.22% |
| Union | 12,866 | 1,069 | 14,676 | 1,181 | 16,547 | 1,346 | 20,051 | 1,633 | 19,923 | 1,578 | 17,207 | 1,351 | 17,785 | 1,369 | 18,237 | 1,393 | 18,425 | 1,400 | 18,872 | 1,425 | 20,289 | 1,524 | 20,625 | 1,542 | 22,504 | 1,673 | 18,944 | 1,409 | -15.77% |
| Wallowa | 6,801 | 1,876 | 4,024 | 1,076 | 4,861 | 1,339 | 4,393 | 1,237 | 4,692 | 1,316 | 3,953 | 1,114 | 3,250 | 929 | 3,197 | 912 | 3,402 | 966 | 2,495 | 706 | 3,881 | 1,093 | 4,091 | 1,146 | 4,434 | 1,232 | 5,105 | 1,423 | 15.46% |
| Wasco | 16,760 | 1,494 | 17,480 | 1,508 | 18,727 | 1,580 | 17,884 | 1,481 | 22,250 | 1,845 | 19,033 | 1,571 | 17,005 | 1,344 | 17,368 | 1,363 | 17,324 | 1,342 | 18,175 | 1,392 | 17,527 | 1,329 | 19,419 | 1,455 | 22,233 | 1,641 | 22,910 | 1,685 | 2.67% |
| Wheeler | 758 | 1,053 | 763 | 930 | 360 | 461 | 461 | 595 | 555 | 707 | 409 | 517 | 417 | 582 | 384 | 540 | 468 | 655 | 368 | 511 | 418 | 579 | 371 | 507 | 378 | 511 | 376 | 519 | 1.45% |
| Yamhill | 52,199 | 1,490 | 48,909 | 1,241 | 69,994 | 1,656 | 65,022 | 1,493 | 104,150 | 2,221 | 71,663 | 1,493 | 64,513 | 1,281 | 89,805 | 1,771 | 83,241 | 1,628 | 73,473 | 1,422 | 76,900 | 1,472 | 96,181 | 1,817 | 101,265 | 1,890 | 99,882 | 1,845 | -2.39% |
| Rounding adj. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **OR. TOTALS** | **2,263,099** | **1,513** | **2,497,170** | **1,539** | **2,788,699** | **1,644** | **2,635,072** | **1,518** | **3,248,126** | **1,734** | **2,586,721** | **1,353** | **2,437,767** | **1,264** | **2,424,833** | **1,249** | **2,442,827** | **1,247** | **2,580,933** | **1,303** | **2,784,467** | **1,387** | **3,050,432** | **1,497** | **3,207,448** | **1,549** | **3,345,503** | **1,595** | **2.96%** |
| change in total from previous year | | | 5.72% | | 3.44% | | -5.16% | | 0.38% | | -10.51% | | -4.42% | | -0.53% | | 0.74% | | 5.65% | | 7.89% | | 9.55% | | 5.15% | | 4.30% | | |
| change in per capita from previous year | | | | 3.68% | | 2.12% | | -6.12% | | -1.09% | | -11.27% | | -4.92% | | -1.18% | | -0.16% | | 4.49% | | 6.48% | | 7.87% | | 3.50% | | 2.96% |

*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, 1992-2018

| Wasteshed | 1992 Generated (tons) | Per Capita (lbs.) | 1996 Generated (tons) | Per Capita (lbs.) | 1999 Generated (tons) | Per Capita (lbs.) | 2001 Generated (tons) | Per Capita (lbs.) | 2007 Generated (tons) | Per Capita (lbs.) | 2009 Generated (tons) | Per Capita (lbs.) | 2011 Generated (tons) | Per Capita (lbs.) | 2012 Generated (tons) | Per Capita (lbs.) | 2013 Generated (tons) | Per Capita (lbs.) | 2014 Generated (tons) | Per Capita (lbs.) | 2015 Generated (tons) | Per Capita (lbs.) | 2016 Generated (tons) | Per Capita (lbs.) | 2017 Generated (tons) | Per Capita (lbs.) | 2018 Generated (tons) | Per Capita (lbs.) | Change in Per Capita 2018-17 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Baker | 9,401 | 1,186 | 14,540 | 1,748 | 15,395 | 1,841 | 14,805 | 1,773 | 16,295 | 1,983 | 15,457 | 1,879 | 15,328 | 1,891 | 13,810 | 1,704 | 14,634 | 1,798 | 14,322 | 1,755 | 15,707 | 1,913 | 15,543 | 1,883 | 17,035 | 2,034 | 16,044 | 1,914 | -5.90% |
| Benton | 80,241 | 2,339 | 81,192 | 2,220 | 84,668 | 2,318 | 87,186 | 2,365 | 93,400 | 2,374 | 82,908 | 2,081 | 88,300 | 2,227 | 92,288 | 2,307 | 91,469 | 2,264 | 91,009 | 2,231 | 94,724 | 2,290 | 96,311 | 2,302 | 95,805 | 2,258 | 99,237 | 2,317 | 2.63% |
| Clatsop | 27,411 | 1,600 | 35,789 | 2,027 | 42,380 | 2,382 | 43,317 | 2,416 | 55,903 | 2,986 | 48,877 | 2,583 | 47,632 | 2,565 | 48,757 | 2,622 | 51,982 | 2,789 | 50,339 | 2,685 | 53,143 | 2,816 | 54,747 | 2,864 | 57,344 | 2,954 | 61,226 | 3,124 | 5.74% |
| Columbia | 23,025 | 1,187 | 28,908 | 1,397 | 31,251 | 1,444 | 37,247 | 1,681 | 47,964 | 2,017 | 37,366 | 1,544 | 38,000 | 1,531 | 38,103 | 1,534 | 38,224 | 1,534 | 35,970 | 1,437 | 37,860 | 1,503 | 42,442 | 1,671 | 41,969 | 1,635 | 42,818 | 1,650 | 0.93% |
| Coos | 47,631 | 1,534 | 51,409 | 1,620 | 50,370 | 1,603 | 48,786 | 1,550 | 61,621 | 1,955 | 54,971 | 1,743 | 76,354 | 2,425 | 72,346 | 2,301 | 67,432 | 2,145 | 68,412 | 2,175 | 55,386 | 1,759 | 58,660 | 1,857 | 62,757 | 1,983 | 63,779 | 2,016 | 1.68% |
| Crook | 9,959 | 1,297 | 13,802 | 1,586 | 18,211 | 1,928 | 18,912 | 1,905 | 27,871 | 2,153 | 19,839 | 1,460 | 23,950 | 2,297 | 18,305 | 1,773 | 20,263 | 1,959 | 19,945 | 1,920 | 21,361 | 2,026 | 25,642 | 2,376 | 26,747 | 2,420 | 28,567 | 2,516 | 3.96% |
| Curry | 13,418 | 1,350 | 17,132 | 1,632 | 20,930 | 1,982 | 24,460 | 2,270 | 28,036 | 2,611 | 21,317 | 1,998 | 22,896 | 2,050 | 21,977 | 1,971 | 21,087 | 1,891 | 21,633 | 1,935 | 22,526 | 2,005 | 26,211 | 2,320 | 25,835 | 2,266 | 26,577 | 2,320 | 2.38% |
| Deschutes | 85,387 | 2,025 | 133,618 | 2,676 | 147,678 | 2,615 | 169,793 | 2,782 | 252,889 | 3,145 | 192,654 | 2,257 | 185,386 | 2,334 | 185,676 | 2,319 | 193,744 | 2,384 | 203,921 | 2,451 | 227,338 | 2,663 | 240,842 | 2,727 | 266,920 | 2,918 | 263,464 | 2,788 | -4.45% |
| Douglas | 114,507 | 2,386 | 118,269 | 2,372 | 117,232 | 2,337 | 129,362 | 2,556 | 139,929 | 2,674 | 107,424 | 2,039 | 128,936 | 2,392 | 122,925 | 2,272 | 113,095 | 2,078 | 110,482 | 2,020 | 106,771 | 1,943 | 102,779 | 1,862 | 110,749 | 1,992 | 117,952 | 2,111 | 5.97% |
| Gilliam | 1,049 | 1,213 | 1,459 | 1,577 | 1,708 | 1,789 | 1,874 | 1,972 | 2,327 | 2,469 | 2,842 | 3,015 | 2,570 | 2,734 | 3,810 | 4,011 | 3,338 | 3,432 | 2,774 | 2,809 | 3,026 | 3,064 | 2,605 | 2,631 | 2,392 | 2,398 | 4,247 | 4,279 | 78.43% |
| Grant | 5,089 | 1,295 | 4,179 | 1,040 | 4,109 | 1,034 | 4,687 | 1,202 | 5,546 | 1,463 | 4,896 | 1,301 | 5,347 | 1,436 | 4,427 | 1,189 | 4,807 | 1,293 | 4,568 | 1,230 | 5,043 | 1,358 | 5,324 | 1,437 | 4,941 | 1,333 | 5,083 | 1,374 | 3.08% |
| Harney | 3,249 | 927 | 2,804 | 779 | 5,002 | 1,327 | 3,968 | 1,044 | 4,782 | 1,245 | 4,002 | 1,038 | 4,370 | 1,185 | 4,977 | 1,361 | 4,791 | 1,320 | 4,936 | 1,359 | 4,970 | 1,363 | 5,191 | 1,418 | 5,422 | 1,473 | 5,638 | 1,528 | 3.71% |
| Hood River | 11,814 | 1,352 | 19,349 | 2,004 | 19,717 | 1,948 | 21,914 | 2,128 | 28,330 | 2,639 | 25,438 | 2,342 | 27,761 | 2,454 | 24,831 | 2,171 | 24,377 | 2,093 | 23,876 | 2,012 | 26,389 | 2,177 | 27,625 | 2,234 | 29,637 | 2,357 | 30,217 | 2,388 | 1.29% |
| Jackson | 115,135 | 1,486 | 175,303 | 2,054 | 212,160 | 2,362 | 224,228 | 2,428 | 264,484 | 2,615 | 222,759 | 2,152 | 239,552 | 2,349 | 251,230 | 2,455 | 245,382 | 2,379 | 266,209 | 2,555 | 261,357 | 2,478 | 286,316 | 2,679 | 290,197 | 2,676 | 291,340 | 2,658 | -0.66% |
| Jefferson | 6,082 | 815 | 11,047 | 1,272 | 12,563 | 1,342 | 14,892 | 1,536 | 22,380 | 2,032 | 14,593 | 1,285 | 18,356 | 1,681 | 18,393 | 1,677 | 17,554 | 1,593 | 16,284 | 1,467 | 16,440 | 1,465 | 19,509 | 1,712 | 20,453 | 1,764 | 20,646 | 1,753 | -0.64% |
| Josephine | 55,513 | 1,696 | 57,560 | 1,592 | 73,377 | 1,951 | 75,992 | 1,978 | 95,947 | 2,329 | 78,564 | 1,878 | 96,175 | 2,323 | 97,379 | 2,353 | 94,770 | 2,289 | 97,664 | 2,350 | 94,857 | 2,266 | 108,552 | 2,564 | 118,681 | 2,771 | 117,983 | 2,731 | -1.45% |
| Klamath | 66,074 | 2,251 | 78,044 | 2,512 | 76,492 | 2,408 | 69,799 | 2,174 | 99,143 | 3,013 | 79,908 | 2,409 | 74,112 | 2,226 | 70,715 | 2,119 | 66,299 | 1,985 | 71,737 | 2,144 | 68,042 | 2,028 | 78,167 | 2,319 | 77,310 | 2,284 | 84,824 | 2,496 | 9.28% |
| Lake | 4,633 | 1,269 | 8,069 | 2,163 | 3,731 | 1,006 | 5,763 | 1,536 | 7,742 | 2,047 | 6,998 | 1,841 | 9,428 | 2,391 | 6,868 | 1,734 | 8,287 | 2,087 | 6,844 | 1,713 | 6,773 | 1,691 | 7,394 | 1,845 | 7,034 | 1,732 | 7,240 | 1,784 | 3.00% |
| Lane | 374,767 | 2,565 | 393,153 | 2,534 | 443,563 | 2,764 | 446,994 | 2,743 | 512,611 | 2,988 | 413,905 | 2,381 | 484,827 | 2,746 | 490,915 | 2,772 | 451,350 | 2,535 | 497,949 | 2,776 | 481,845 | 2,661 | 516,401 | 2,822 | 577,295 | 3,115 | 591,935 | 3,156 | 1.30% |
| Lincoln | 34,487 | 1,693 | 50,266 | 2,259 | 50,896 | 2,287 | 53,963 | 2,418 | 72,615 | 3,254 | 57,810 | 2,587 | 57,331 | 2,484 | 61,492 | 2,657 | 57,883 | 2,486 | 62,038 | 2,646 | 63,525 | 2,690 | 64,713 | 2,711 | 65,771 | 2,743 | 76,595 | 3,178 | 15.85% |
| Linn | 111,875 | 2,282 | 102,707 | 1,962 | 107,593 | 1,996 | 106,981 | 1,964 | 137,913 | 2,375 | 138,645 | 2,347 | 155,069 | 2,496 | 145,045 | 2,320 | 140,423 | 2,232 | 142,028 | 2,235 | 151,264 | 2,358 | 157,480 | 2,420 | 169,215 | 2,565 | 184,976 | 2,767 | 7.85% |
| Malheur | 17,098 | 1,233 | 23,583 | 1,565 | 27,383 | 1,747 | 28,199 | 1,762 | 31,197 | 1,973 | 26,044 | 1,642 | 25,485 | 1,621 | 27,390 | 1,745 | 27,742 | 1,765 | 26,822 | 1,705 | 27,660 | 1,757 | 30,177 | 1,904 | 30,053 | 1,887 | 31,352 | 1,964 | 4.06% |
| Marion | 213,943 | 1,768 | 304,913 | 2,293 | 339,910 | 2,413 | 386,007 | 2,678 | 499,004 | 3,210 | 419,207 | 2,637 | 430,916 | 2,711 | 420,655 | 2,627 | 426,111 | 2,641 | 443,413 | 2,721 | 460,780 | 2,796 | 480,258 | 2,878 | 511,827 | 3,020 | 527,525 | 3,068 | 1.62% |
| Metro | 1,460,380 | 2,341 | 1,849,716 | 2,719 | 2,173,322 | 3,038 | 2,248,748 | 3,065 | 2,710,982 | 3,403 | 2,194,860 | 2,690 | 2,100,311 | 2,535 | 2,168,939 | 2,593 | 2,242,027 | 2,648 | 2,204,665 | 2,567 | 2,423,800 | 2,777 | 2,376,376 | 2,671 | 2,397,904 | 2,647 | 2,482,465 | 2,700 | 2.00% |
| Milton-Freew. | 5,551 | 1,972 | 5,518 | 1,823 | 6,574 | 2,152 | 6,368 | 1,942 | 7,631 | 2,330 | 6,640 | 1,834 | 6,618 | 1,728 | 5,982 | 1,551 | 7,533 | 1,934 | 6,863 | 1,752 | 7,088 | 1,791 | 6,554 | 1,641 | 3,901 | 969 | 2,912 | 721 | -25.61% |
| Morrow | 8,151 | 1,990 | 6,725 | 1,445 | 7,375 | 1,375 | 8,758 | 1,571 | 14,992 | 2,431 | 15,325 | 2,444 | 14,154 | 2,512 | 14,656 | 2,594 | 16,090 | 2,817 | 19,333 | 3,355 | 21,126 | 3,633 | 23,112 | 3,936 | 28,044 | 4,717 | 24,479 | 4,119 | -12.68% |
| Polk | 23,909 | 916 | 35,442 | 1,237 | 53,592 | 1,499 | 57,464 | 1,827 | 72,967 | 2,185 | 70,186 | 2,062 | 72,256 | 1,924 | 69,068 | 1,823 | 68,726 | 1,803 | 75,095 | 1,953 | 77,848 | 2,003 | 86,059 | 2,183 | 97,049 | 2,422 | 86,760 | 2,137 | -11.80% |
| Sherman | 1,146 | 1,181 | 1,252 | 1,304 | 1,456 | 1,509 | 1,540 | 1,621 | 1,458 | 1,572 | 1,425 | 1,558 | 1,397 | 1,583 | 1,454 | 1,647 | 1,271 | 1,429 | 1,379 | 1,545 | 1,582 | 1,767 | 1,378 | 1,535 | 1,364 | 1,515 | 1,426 | 1,598 | 5.46% |
| Tillamook | 14,458 | 1,300 | 20,458 | 1,709 | 24,376 | 2,013 | 25,437 | 2,068 | 37,387 | 2,893 | 31,870 | 2,439 | 30,967 | 2,452 | 32,162 | 2,542 | 30,410 | 2,397 | 30,669 | 2,407 | 32,554 | 2,534 | 35,735 | 2,757 | 37,829 | 2,890 | 39,091 | 2,962 | 2.47% |
| Umatilla | 47,700 | 1,698 | 63,843 | 2,123 | 76,367 | 2,397 | 82,951 | 2,579 | 105,165 | 3,202 | 95,566 | 2,932 | 94,964 | 2,756 | 93,331 | 2,689 | 91,195 | 2,602 | 96,020 | 2,724 | 101,186 | 2,841 | 97,084 | 2,701 | 107,680 | 2,973 | 116,676 | 3,210 | 8.00% |
| Union | 15,391 | 1,279 | 19,879 | 1,599 | 21,904 | 1,782 | 25,629 | 2,087 | 29,102 | 2,305 | 24,327 | 1,910 | 25,607 | 1,971 | 26,228 | 2,004 | 26,456 | 2,010 | 25,222 | 1,905 | 26,979 | 2,027 | 27,541 | 2,059 | 28,880 | 2,147 | 25,923 | 1,928 | -10.19% |
| Wallowa | 7,234 | 1,996 | 4,528 | 1,211 | 5,991 | 1,650 | 5,438 | 1,531 | 6,459 | 1,812 | 5,164 | 1,455 | 4,204 | 1,202 | 4,121 | 1,175 | 4,460 | 1,266 | 3,399 | 962 | 5,004 | 1,409 | 5,605 | 1,570 | 5,858 | 1,628 | 6,491 | 1,809 | 11.10% |
| Wasco | 22,202 | 1,980 | 24,999 | 2,156 | 28,419 | 2,398 | 24,124 | 1,998 | 28,900 | 2,396 | 28,269 | 2,333 | 24,687 | 1,952 | 24,057 | 1,888 | 25,482 | 1,975 | 25,237 | 1,933 | 24,390 | 1,850 | 26,311 | 1,971 | 27,649 | 2,041 | 28,345 | 2,084 | 2.14% |
| Wheeler | 817 | 1,135 | 948 | 1,156 | 439 | 562 | 528 | 681 | 759 | 967 | 512 | 646 | 479 | 668 | 422 | 592 | 513 | 718 | 397 | 551 | 495 | 686 | 426 | 582 | 459 | 620 | 514 | 709 | 14.45% |
| Yamhill | 64,049 | 1,829 | 75,024 | 1,904 | 108,836 | 2,574 | 128,043 | 2,940 | 161,965 | 3,453 | 118,785 | 2,475 | 110,166 | 2,188 | 133,592 | 2,635 | 134,478 | 2,630 | 116,749 | 2,259 | 124,708 | 2,387 | 137,306 | 2,594 | 142,412 | 2,658 | 138,480 | 2,557 | -3.78% |
| **OR. TOTALS** | **3,102,776** | **2,075** | **3,835,427** | **2,364** | **4,414,967** | **2,602** | **4,634,157** | **2,670** | **5,685,695** | **3,036** | **4,669,352** | **2,442** | **4,743,891** | **2,459** | **4,816,323** | **2,481** | **4,833,686** | **2,467** | **4,888,202** | **2,467** | **5,153,547** | **2,568** | **5,276,375** | **2,589** | **5,494,418** | **2,654** | **5,652,826** | **2,695** | **1.55%** |
| change in total from previous year | | | 5.84% | | 2.65% | | 1.98% | | -0.77% | | -10.49% | | 0.62% | | 1.53% | | 0.36% | | 1.13% | | 5.43% | | 2.38% | | 4.13% | | 2.88% | | |
| change in per capita from previous year | | | | 3.81% | | 1.34% | | 0.95% | | -2.23% | | -11.25% | | 0.09% | | 0.87% | | -0.56% | | 0.00% | | 4.09% | | 0.81% | | 2.50% | | 1.55% | |

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, 1992-2018

| Material Type | 1992 Tons | 1996 Tons | 1999 Tons | 2001 Tons | 2007 Tons | 2009 Tons | 2011 Tons | 2012 Tons | 2013 Tons | 2014 Tons | 2015 Tons | 2016 Tons | 2017 Tons | 2018 Tons |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Container glass | 69,284 | 77,231 | 80,194 | 83,240 | 96,926 | 108,084 | 114,982 | 107,042 | 106,840 | 106,853 | 110,101 | 107,100 | 119,562 | 117,572 |
| Other glass | 41 | 1,557 | 1,476 | 9,530 | 901 | 709 | 840 | 21 | 28 | 32 | 186 | 232 | 1 | - |
| **Total glass** | **69,325** | **78,788** | **81,670** | **92,770** | **97,827** | **108,793** | **115,822** | **107,062** | **106,868** | **106,885** | **110,287** | **107,333** | **119,562** | **117,572** |
| Aluminum | 18,245 | 17,815 | 21,046 | 20,511 | 26,932 | 30,673 | 19,985 | 23,733 | 23,176 | 21,318 | 19,310 | 21,566 | 25,499 | 30,583 |
| Scrap metal | 26,927 | 45,271 | 141,653 | 223,623 | 361,152 | 332,781 | 550,158 | 511,026 | 477,097 | 422,845 | 408,326 | 389,347 | 444,487 | 516,109 |
| Tinned cans/aluminum | | | | 23,387 | - | - | - | - | - | - | - | - | - | - |
| Tinned cans | 7,400 | 8,635 | 8,407 | - | 10,174 | 9,003 | 9,298 | 8,398 | 8,944 | 8,747 | 8,327 | 8,363 | 9,611 | 8,844 |
| Aerosol cans | 0 | 0 | 7 | - | 1 | 1 | 1 | 0 | 1 | 2 | 1 | 1 | 1 | 1 |
| **Total metals** | **52,572** | **71,722** | **171,114** | **267,521** | **398,260** | **372,458** | **579,442** | **543,158** | **509,217** | **452,912** | **435,963** | **419,276** | **479,599** | **555,537** |
| Cardboard/kraft paper | 204,729 | 304,093 | 305,138 | 332,876 | 444,449 | 367,536 | 320,162 | 356,906 | 361,735 | 375,097 | 409,082 | 365,903 | 403,392 | 403,136 |
| Paper Fiber[6] | - | - | | - | 348,250 | 259,626 | 277,353 | 299,224 | 299,004 | 280,888 | 274,318 | 267,205 | 249,753 | 218,052 |
| High-grade paper[6] | 67,077 | 49,298 | 56,035 | 62,185 | - | - | - | - | - | - | - | - | - | - |
| Magazines | 11,246 | 17,250 | 13,988 | - | - | - | - | - | - | - | - | - | - | - |
| Phone books[1] | - | 3,103 | 2,841 | - | - | - | - | - | - | - | - | - | - | - |
| Mixed waste paper[6] | 24,012 | 53,771 | 75,764 | 81,418 | - | - | - | - | - | - | - | - | - | - |
| Newspaper[6] | 130,181 | 141,412 | 183,710 | 203,021 | - | - | - | - | - | - | - | - | - | - |
| Fiber-based fuel | | 9,235 | - | - | - | - | - | - | - | - | - | - | - | - |
| **Total papers** | **437,245** | **578,161** | **637,476** | **679,499** | **792,699** | **627,162** | **597,515** | **656,130** | **660,739** | **655,985** | **683,400** | **633,109** | **653,145** | **621,189** |
| #1 PET beverage | 3,329 | 5,803 | 4,840 | - | - | - | - | - | - | - | - | - | - | - |
| #1 other | 58 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| #2 milk jugs | 1,940 | 3,049 | 1,088 | - | - | - | - | - | - | - | - | - | - | - |
| #2 other | 1,841 | 1,331 | 852 | - | - | - | - | - | - | - | - | - | - | - |
| #3 PVC | 25 | 144 | 2 | - | - | - | - | - | - | - | - | - | - | - |
| #4 LDPE | 1,196 | 2,501 | 1,418 | - | - | - | - | - | - | - | - | - | - | - |
| #5 | 360 | 283 | 1,093 | - | - | - | - | - | - | - | - | - | - | - |
| #6 | 471 | 430 | 227 | 102 | - | - | - | - | - | - | - | - | - | - |
| Composite plastic | - | 1,077 | 1,357 | 1,095 | 1,539 | 1,823 | 2,594 | 2,311 | 2,222 | 2,426 | 2,346 | 2,369 | 1,305 | 1,182 |
| Mixed plastic | 300 | 1,708 | 7,344 | - | - | - | - | - | - | - | - | - | - | - |
| Other plastic (P7) | - | 12 | 1 | - | - | - | - | - | - | - | - | - | - | - |
| Plastic bottles[2] | | | | - | - | - | - | - | 1 | - | - | - | - | - |
| Plastic film | | | | 4,825 | 9,625 | 11,327 | 11,747 | 14,886 | 14,583 | 14,831 | 13,680 | 15,873 | 14,755 | 9,025 |
| Plastic other | | | | 2,005 | 9,500 | 9,299 | 10,167 | 10,720 | 9,562 | 12,507 | 13,348 | 13,232 | 8,761 | 7,691 |
| Rigid plastic containers | | | | 16,352 | 21,990 | 23,377 | 30,100 | 29,485 | 28,740 | 30,692 | 24,613 | 24,697 | 29,773 | 25,856 |
| **Total plastic** | **9,520** | **16,338** | **18,222** | **24,380** | **42,655** | **45,826** | **54,608** | **57,401** | **55,107** | **60,455** | **53,988** | **56,171** | **54,593** | **43,754** |
| Antifreeze | 5 | 52 | 317 | 1,864 | 2,683 | 2,515 | 3,060 | 2,598 | 2,680 | 2,719 | 2,916 | 2,472 | 2,545 | 2,676 |
| C & D -- roofing[7] | | | 6,933 | 28,904 | 5,980 | 7,830 | 12,998 | 18,223 | 15,895 | 18,568 | 21,410 | 19,769 | 18,661 | 14,047 |
| Carpeting -- used | | | 361 | 1,064 | 645 | 515 | 1,807 | 1,837 | 1,409 | 1,355 | 654 | 0 | - | - |
| Diesel | | | | | 156 | 145 | 32 | 33 | 32 | 33 | 34 | 33 | - | - |
| Electronics | | | | 1,640 | 9,813 | 15,174 | 19,586 | 25,957 | 21,929 | 22,344 | 20,696 | 18,349 | 15,513 | 13,881 |
| Fluorescent lamps | - | 7 | 22 | 267 | 514 | 400 | 673 | 662 | 600 | 422 | 172 | 364 | 343 | 374 |
| Gypsum wallboard | 3,695 | 9,419 | 8,345 | 13,164 | 2,655 | 3,338 | 3,364 | 5,025 | 4,057 | 3,819 | 3,630 | 4,225 | 3,862 | 5,823 |
| Household Haz Waste | | | | 12 | 157 | 436 | 295 | 338 | 323 | 246 | 276 | 326 | 273 | 264 |
| Alkaline batteries | | | | 4 | - | - | - | - | - | - | - | - | - | - |
| Mixed batteries | | | | | 204 | 218 | 336 | 436 | 375 | 301 | 259 | 333 | 172 | 265 |
| Lead acid batteries[3] | 176 | 559 | 974 | 10,134 | 12,906 | 13,794 | 14,467 | 14,036 | 14,637 | 12,562 | 16,750 | 17,537 | 16,758 | 14,674 |
| NiCad batteries | | | 13 | 18 | - | - | - | - | - | - | - | - | - | - |
| Paint[5] | 120 | 489 | 556 | 1,403 | 1,730 | 1,308 | 3,015 | 3,396 | 3,652 | 3,826 | 4,414 | 4,263 | 4,201 | 4,623 |
| Porcelain | - | 5 | 9 | 483 | 1,258 | 590 | 203 | 551 | 960 | 1,071 | 840 | 366 | 85 | 258 |
| Rubber tire buffings[4] | - | 2,935 | - | - | - | - | - | - | - | - | - | - | - | - |
| Scrap film (X-ray) | 42 | 68 | 19 | - | - | - | - | - | - | - | - | - | - | - |
| Solvents[5] | 16 | 110 | 227 | 248 | 274 | 237 | 406 | 444 | 369 | 480 | 454 | 457 | 475 | 450 |
| Textiles | | 508 | 2,661 | 3,762 | 1,519 | 958 | 232 | 872 | 948 | 1,157 | 1,186 | 1,054 | 681 | 816 |
| Tires[5] | 34,392 | 24,360 | 22,804 | 17,339 | 20,045 | 23,264 | 23,361 | 23,470 | 30,326 | 21,711 | 27,793 | 31,175 | 30,504 | 23,471 |
| Used Motor Oil[5] | 28,796 | 47,632 | 33,664 | 45,675 | 43,123 | 40,513 | 30,052 | 37,032 | 35,544 | 34,516 | 34,103 | 45,015 | 25,916 | 31,645 |
| **Total other** | **67,243** | **86,145** | **76,903** | **125,979** | **103,662** | **111,235** | **113,885** | **134,909** | **133,736** | **125,129** | **135,586** | **145,739** | **119,989** | **113,267** |
| Animal waste/grease | - | 22,957 | 19,315 | 26,226 | 13,783 | 12,853 | 7,680 | 7,148 | 7,621 | 10,491 | 13,009 | 15,002 | 10,923 | 15,541 |
| Food waste | - | 5,000 | 2,458 | 9,685 | 16,407 | 21,949 | 42,741 | 47,665 | 50,143 | 46,289 | 41,991 | 57,118 | 48,276 | 45,174 |
| Wood waste[5] | 112,425 | 243,773 | 335,861 | 424,569 | 460,896 | 307,005 | 368,356 | 362,448 | 387,196 | 349,139 | 375,462 | 289,022 | 299,359 | 286,561 |
| Yard debris[5] | 91,348 | 235,562 | 283,440 | 348,472 | 511,380 | 475,351 | 426,095 | 475,578 | 480,238 | 492,035 | 519,561 | 503,171 | 501,528 | 508,709 |
| **Total organics** | **203,773** | **507,292** | **641,074** | **808,951** | **1,002,466** | **817,157** | **844,872** | **892,839** | **925,198** | **897,954** | **950,024** | **864,312** | **860,086** | **855,985** |
| Adj. rounding/unspecified | | 2 | | (1) | | | | | | | | | | |
| **OREGON TOTALS** | **839,678** | **1,338,446** | **1,626,458** | **1,999,099** | **2,437,569** | **2,082,631** | **2,306,144** | **2,391,499** | **2,390,865** | **2,299,320** | **2,369,248** | **2,225,940** | **2,286,974** | **2,307,303** |

[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, 2018

| Wasteshed | Total Recovered | Recycled | % of Total | Energy Recovery | % of Total | Compost | % of Total | Stock |
|---|---|---|---|---|---|---|---|---|
| Baker | 2,624 | 1,672 | 64% | 72 | 3% | 875 | 33% | 5 |
| Benton | 35,073 | 21,122 | 60% | 19 | 0% | 13,932 | 40% | 0 |
| Clatsop | 24,443 | 14,866 | 61% | 8,985 | 37% | 591 | 2% | 0 |
| Columbia | 10,443 | 9,343 | 89% | 13 | 0% | 1,086 | 10% | 0 |
| Coos | 12,603 | 12,494 | 99% | 24 | 0% | 86 | 1% | 0 |
| Crook | 5,618 | 4,832 | 86% | 8 | 0% | 778 | 14% | 0 |
| Curry | 6,444 | 6,393 | 99% | 34 | 1% | 17 | 0% | 0 |
| Deschutes | 83,472 | 54,705 | 66% | 9,193 | 11% | 19,574 | 23% | 0 |
| Douglas | 33,216 | 22,590 | 68% | 8,923 | 27% | 1,703 | 5% | 0 |
| Gilliam | 301 | 299 | 100% | - | 0% | - | 0% | 1 |
| Grant | 827 | 815 | 99% | 11 | 1% | - | 0% | 0 |
| Harney | 1,056 | 1,039 | 98% | 17 | 2% | - | 0% | 0 |
| Hood River | 7,214 | 6,227 | 86% | 18 | 0% | 950 | 13% | 19 |
| Jackson | 96,147 | 45,383 | 47% | 25,700 | 27% | 25,064 | 26% | 0 |
| Jefferson | 4,610 | 4,501 | 98% | 101 | 2% | 1 | 0% | 7 |
| Josephine | 37,386 | 20,208 | 54% | 3,843 | 10% | 13,335 | 36% | 0 |
| Klamath | 17,442 | 13,030 | 75% | 2,208 | 13% | 2,204 | 13% | 0 |
| Lake | 774 | 476 | 62% | 2 | 0% | 265 | 34% | 30 |
| Lane | 318,392 | 185,995 | 58% | 48,229 | 15% | 84,156 | 26% | 12 |
| Lincoln | 18,511 | 12,178 | 66% | 3,376 | 18% | 2,956 | 16% | 0 |
| Linn | 74,442 | 60,217 | 81% | 533 | 1% | 13,692 | 18% | 0 |
| Malheur | 5,216 | 4,849 | 93% | 48 | 1% | 267 | 5% | 52 |
| Marion | 262,552 | 148,446 | 57% | 55,669 | 21% | 58,437 | 22% | 0 |
| Metro | 1,108,858 | 739,334 | 67% | 117,084 | 11% | 252,361 | 23% | 80 |
| Milton-Freewater | 1,147 | 984 | 86% | 31 | 3% | 132 | 11% | 0 |
| Morrow | 5,383 | 5,028 | 93% | 347 | 6% | - | 0% | 8 |
| Polk | 35,972 | 19,052 | 53% | 7,724 | 21% | 9,196 | 26% | 0 |
| Sherman | 193 | 190 | 98% | 2 | 1% | - | 0% | 1 |
| Tillamook | 10,858 | 9,236 | 85% | 429 | 4% | 1,092 | 10% | 100 |
| Umatilla | 33,572 | 29,640 | 88% | 2,713 | 8% | 1,174 | 3% | 45 |
| Union | 6,979 | 4,395 | 63% | 969 | 14% | 1,594 | 23% | 20 |
| Wallowa | 1,386 | 638 | 46% | 12 | 1% | 700 | 51% | 35 |
| Wasco | 5,435 | 4,558 | 84% | 10 | 0% | 846 | 16% | 20 |
| Wheeler | 138 | 120 | 87% | 4 | 3% | - | 0% | 14 |
| Yamhill | 38,599 | 20,271 | 53% | 1,350 | 3% | 16,977 | 44% | 0 |
| **Total** | **2,307,324** | **1,485,130** | **64%** | **297,702** | **13%** | **524,041** | **23%** | **451** |