



State of Oregon
Department of
Environmental
Quality

2010 Oregon Material Recovery and Waste Generation Rates Report

By: Land Quality Division
Solid Waste Policy and Program Development
Oregon Department of Environmental Quality

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Executive Summary

This is the Oregon Department of Environmental Quality’s 19th annual report on post-consumer (residential and commercial) material recovery and waste generation in Oregon. DEQ estimates energy savings and greenhouse gas benefits from waste recovery. DEQ also analyzes detailed survey and disposal reports for 2010 to compute recovery and waste reduction amounts.

Energy savings and greenhouse gas reduction

When materials are recovered, industry can create new products with significantly less energy and lower greenhouse gas emissions compared to using virgin materials.

Energy savings for 2010 from recycling and energy recovery:
 Approximately 32 trillion BTU – the equivalent of 258,000,000 gallons of gasoline, or roughly 3.0 percent of total energy used (2010) by all sectors of the economy in Oregon.

Greenhouse gas reductions in 2010 from recycling, composting and energy recovery:
 Approximately 3 million metric tons of carbon dioxide equivalents – the equal to tailpipe emissions from 620,000 "average" passenger cars, or roughly 4.3 percent of all greenhouse gas emissions statewide (2010).

The amount of greenhouse gas reductions from material recovery – and particularly recycling - continues to be significant. Recycling cardboard produced the greatest benefit, with emissions reductions of nearly 1.1 million metric tons of CO2 equivalent, followed by other paper, with more than 600,000 metric tons, and scrap metal and aluminum with more than 500,000 metric tons of CO2 equivalent each.

2010 statewide recovery, disposal and generation

Oregon recovered 2,170,243 tons, or 50.0 percent, of the municipal post-consumer waste¹ stream in 2010. (To see individual watershed rates, go to Survey Report Table 1.) This is a nearly 1.5 percent increase over the 2009 rate of 48.3 percent, and represents the achievement of a significant goal.

Generation is the sum of all discards that are either disposed or recovered. Total disposal in 2010 equals 2,515,646 tons, and that added with total tons recovered equals 4,685,889 tons of waste generated. This is a less than one half of one percent increase in generation since 2009. In 2010, Oregon came very close to achieving its goal of no annual increase in total waste generation.

2010 waste generation equates to 2,442 pounds per person per year, compared to 2,441 pounds per person per year in 2009; 2010 saw a tiny increase (0.05 percent) over 2009. This reflects previous trends and shows that for four years in a row, Oregon has essentially met its goal of no increase in per capita waste generation.

Continued low levels of waste generation correspond with the current economic situation. In hard times, people tend to buy (and discard) less material. However, for parts of the equation, recovery and disposal, disposal fell while recovery rose in 2010. This supports the state’s goals, which call for increasing recovery rates and decreasing total waste generation.

$\frac{\textit{Total Recovered}}{\textit{Total Generated}} = \textit{Recovery Rate}$	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;"> <p>2010 OR Rate 50.0%</p> </div>
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¹ Municipal post-consumer waste includes residential and business material recycled, waste composted, waste burned for energy recovery, and disposed materials. It excludes industrial materials.

Individual wastesheds

There are 35 individual wastesheds, each with its own recovery rate and goal. Twenty-one of these increased their recovery rates from 2009 to 2010. And, 25 wastesheds' rates are still higher than their 2009 recovery rate goals.

Materials recovered in 2010:

The following are percents of the total material recovered, not individual recovery rates for individual materials. DEQ does not calculate rates by material.

- Paper (includes cardboard) – 29 percent
- Yard debris – 21 percent
- Metals – 19 percent
- Wood waste – 16 percent
- Other – 5 percent
- Glass – 5 percent
- Plastics – 2 percent
- Other organics – 2 percent
- Electronics – 1 percent

Conclusion

The energy savings and greenhouse gas reduction benefits of composting, energy recovery and recycling are sizable. Reducing these upstream impacts, through waste prevention, can lead to even greater benefits, given the large natural resource, energy and environmental impacts associated with production of many manufactured goods.

In 2010, Oregon met its 2009 recovery rate goal of 50 percent, a 1.7 percent increase from 48.3 percent in 2009. The potential exists to increase recovery even further. Increasing food waste composting and diverting more organics from disposal are two areas that are beginning to show larger gains in recovery.

Total waste generation in 2010 stayed below 5 million tons for the second straight year. Per-capita waste generation stayed the same, suggesting that Oregonians are keeping their use of materials, and production of discards, at a steady level, a contrast to the yearly increases seen for most of the period 1992 - 2006.

Introduction and Purpose

This report describes the results and methodology of Oregon’s 2010 Material Recovery and Waste Generation Survey. Each year, the Department of Environmental Quality compiles data on post-consumer waste recovery. A survey is sent to all collection service providers and private recycling companies who handle materials for recycling, composting and energy recovery. This survey data are combined with data gathered from disposal sites from quarterly or annual reporting forms. Together, recovery and disposal numbers make up the amount of waste generated by Oregonians each year.

Recovery information allows DEQ to determine energy savings and greenhouse gas reductions, two important environmental benefits. DEQ also calculates a recovery rate: The percentage of the total waste generated that is recovered in recycling, composting or energy recovery. Recovery, disposal, and generation data, as well as recovery rates, are calculated both on a statewide basis and for each of 35 individual wastesheds.

<p><i>Total Recovered</i> 2,088,265 tons</p> <hr style="width: 50%; margin: 0 auto;"/> <p><i>Total Generated</i> (=Total Recovered + Total Disposed) 4,671,845</p>	<p>= <i>Recovery Rate</i></p>	<p>2010 OR Rate 50.0%</p>
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This is the nineteenth year that DEQ sent the survey out and gathered this data. The 1991 Oregon Legislature enacted requirements for this annual survey and set goals for the recycling rate. The state goal is 50 percent recovery by 2010. Individual wastesheds have recovery goals for 2010 ranging from 10 percent for Lake County to 64 percent for Metro. In addition, the 2001 Oregon Legislature established waste generation goals for the State. These waste generation goals are:

- For the calendar year 2005 and subsequent years, no annual increase in **per capita** municipal solid waste generation; and
- For the calendar year 2009 and subsequent years, no annual increase in **total** municipal solid waste generation.

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, local governments and any other operation that handles post-consumer recyclable materials. Because of the difficulty of separating post-consumer scrap metal from commercial and industrial scrap metal, those companies handling scrap metal are not required to report on privately obtained post-consumer scrap metal, but many do report on a voluntary basis.

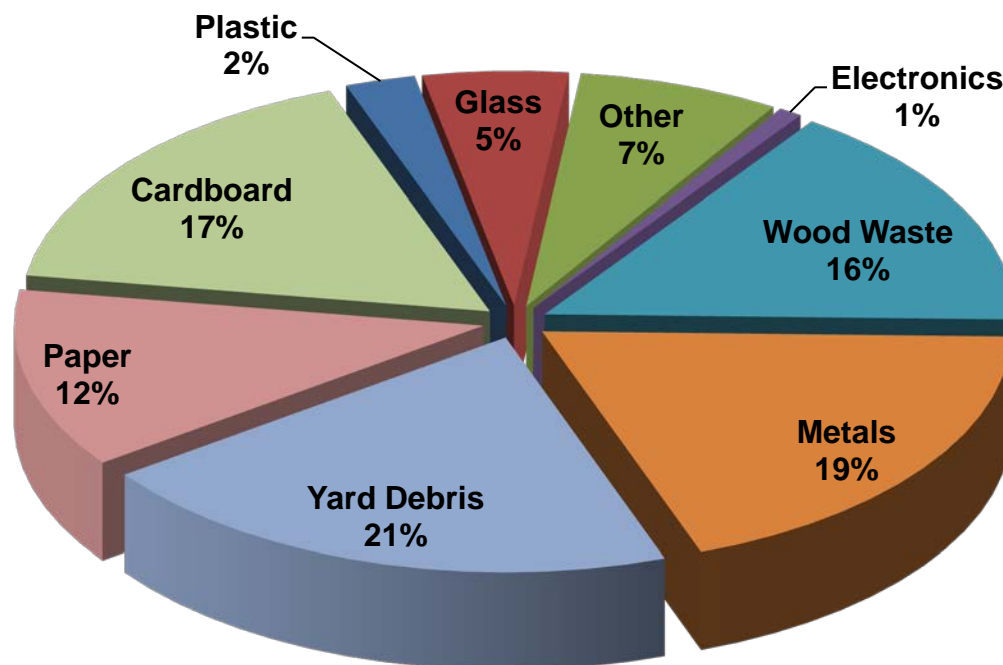
The survey requires that companies report all the recyclable materials they handle, including the amount collected, the county of origin, the company they received any transfers from, and where the materials are marketed.

Oregon law further requires DEQ to keep confidential that information reported by private recyclers. This includes customer lists or specific amounts and types of materials collected or marketed by individual companies. 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 Oregon post-consumer materials collected for recycling, composting, or energy recovery. Waste from manufacturing and industrial processes (pre-consumer materials), reconditioned and reused materials, inert materials 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.

Materials Recovered in 2010



The first Material Recovery Survey for the 1992 calendar year included 24 types of materials; the 2010 survey contains 33 materials.

The major materials included in 2010 are:

- **Paper** – Paper fiber (combined high-grade paper, newsprint, and mixed waste paper).
- **Cardboard**
- **Plastic** – Rigid plastic containers, plastic film, other plastics, and composite plastic (including carpet pad).
- **Glass** – Container glass and other glass such as windowpanes and ceramics.
- **Electronics**
- **Wood Waste**
- **Metals** – Tinned Cans, aluminum, and other scrap metals
- **Yard Debris**
- **Food Waste**
- **Other** – Tires, used motor oil, batteries of all types, gypsum, asphalt roofing materials, textiles and paint/solvents

Energy Savings and Greenhouse Gas Reduction

DEQ uses the results of the Material Recovery Survey to estimate the energy savings resulting from recycling and counting energy recovery, as well as reductions in greenhouse gases associated with recycling, composting, and counting energy recovery.

Energy

When recycled materials replace virgin feedstock in manufacturing, energy savings are significant. Making aluminum from old beverage containers uses 93 percent less energy than making aluminum from bauxite. Newsprint made from old newspapers requires 46 percent less energy than making newsprint from wood. While the energy conservation benefits of recycling have long been recognized, quantifying these estimates can be difficult. The US Environmental Protection Agency developed a model using methodology to estimate the amount of per ton energy savings for recycling for a wide variety of materials.²

DEQ applies these estimates to the results of the 2010 survey for tons recycled and, for the first time, recovered for energy via energy recovery that counts towards the state's recovery rate (composting is not included.) Material categories from Oregon's survey do not perfectly align with EPA's material categories, so some assumptions were made in classifying materials. Additionally, EPA's model is based on national averages, which may not be representative of Oregon's recycling and energy recovery markets. The use of EPA's model does allow for a **rough** estimate of the energy saved from materials recycled and recovered for energy by Oregonians. Energy recovery includes the conversion of certain wastes to energy via processes such as thermal conversion to electricity, direct combustion for heat, and pyrolysis of waste plastics into synthetic fuels. DEQ estimates that recycling by Oregon households and businesses in 2010 (counting only wastes generated in Oregon, not those generated elsewhere and shipped to Oregon for recycling) led to energy savings of approximately 29 trillion British thermal units (BTUs). The energy produced by energy recovery saved an estimated additional 3 trillion BTUs.

To put the energy savings number into context, total energy use in Oregon across all sectors (transportation, electricity, heating, industry) in 2009 was 279 million BTUs per capita. If per capita use remained constant through 2010, then the energy savings from recycling and counting energy recovery equates to a 3.0 percent offset of total energy use. This can also be expressed as equivalent to approximately 258 million gallons of gasoline saved in 2010. These comparisons are not perfect. Many of Oregon's recyclable materials are exported to other states or countries, so the energy conservation benefits occur elsewhere. The actual energy saved by recycling includes a mix of not only gasoline and other liquid fossil fuels, but also coal, hydroelectric, nuclear, and wood. Nonetheless, the energy savings from recycling, and to a lesser extent, energy recovery in Oregon is significant.

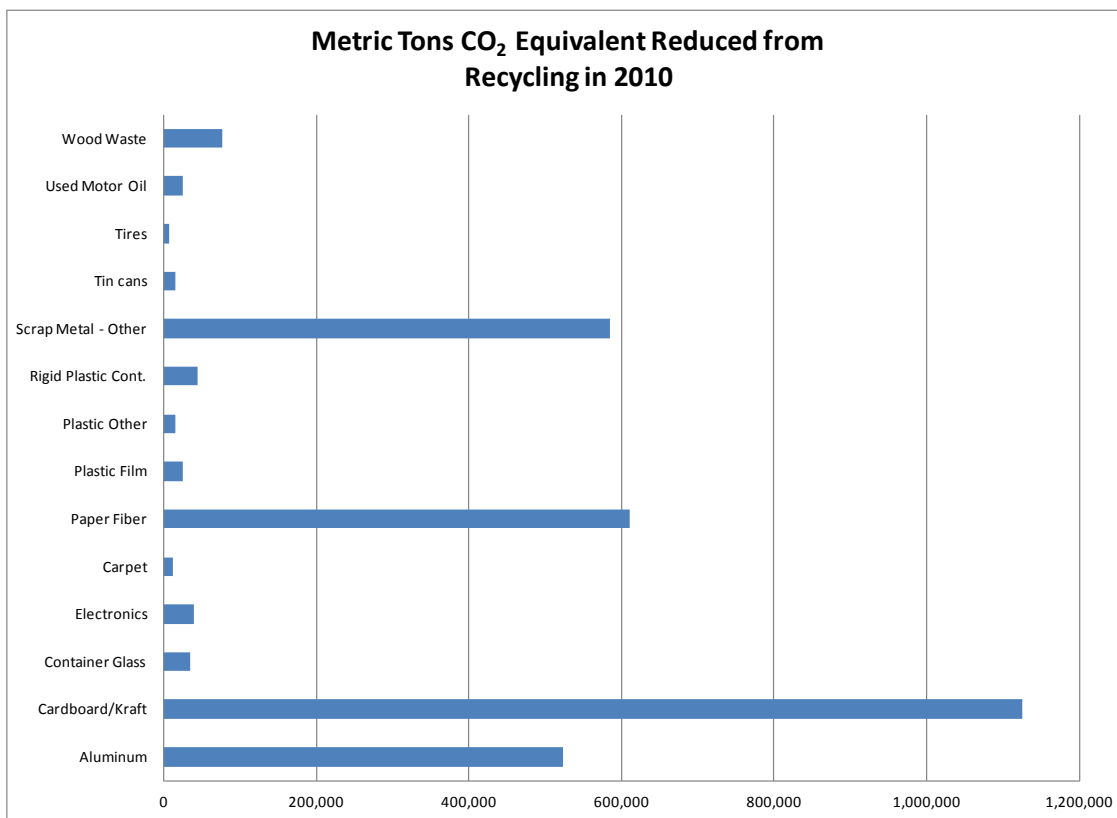
Greenhouse Gases

The US EPA also publishes greenhouse emission factors allowing for the estimation of the greenhouse gas benefits due to recycling, composting and "counting" energy recovery. These calculations are relatively involved and utilize emissions inventory work started in 2004 on behalf of the Governor's Advisory Group on Global Warming, and updated periodically. The greenhouse gas benefits include a variety of emissions, carbon sinks, and emission offsets, which vary by material, management method, and the likely disposal site if the materials were not recovered. Major categories of sinks and offsets include increased carbon storage in forests when recycled paper displaces wood fiber, reductions in fossil fuel use due to the energy savings of recycling, and reductions in methane emissions at landfills.

² The methodology for obtaining these estimates changed several times since 2005. Comparisons should not be made between the results for 2010 and previous years.

Net greenhouse gas reductions associated with materials recycled, composted, and burned for energy in 2010 are estimated at 3 million metric tons of carbon dioxide equivalents. This includes only materials that are counted in the Material Recovery Survey and excludes any materials that are generated in other states and shipped to Oregon for handling. An interesting effect of using EPA’s published emission factors and Oregon landfill data for comparison is that composting yard debris is shown to add, rather than reduce, greenhouse gas emissions. This is a small amount, and other benefits of composting outweigh this shortfall. Further, EPA’s emission factors for yard debris composting vs. landfilling are believed to contain significant uncertainty, and are the topic of considerable discussion and research.

The net greenhouse gas emissions for Oregon in 2010 (based on an average of 2006 - 2008 per-capita emissions and applying that average to Oregon’s 2010 population), using conventional accounting principles, are projected at 68.9 million metric tons of carbon dioxide equivalents. Thus, recycling, composting, and **counting** energy recovery provide a greenhouse gas offset or “credit” corresponding to 4.3 percent of net statewide emissions (from all sources). Most of the benefit is a result of recycling activities, as opposed to composting or energy recovery. In fact, composting and energy recovery, in total, are believed to slightly increase overall emissions of greenhouse gases.



Comparing recovery-related greenhouse gas reductions (3 million metric tons) with statewide emissions (68.9 million metric tons) is potentially misleading because the emission reductions from materials recycled and composted in 2010 occur over multiple years, while the estimated emissions of 68.9 million metric tons are “same-year” (2010) emissions. The reductions are spread over multiple years because they include avoided methane emissions from slow decay in landfills, as well as an increase in long-term carbon sequestration in forests and agricultural soils treated with compost. However, just as some of the greenhouse gas benefit from recycling and composting in 2010 will actually occur in subsequent years, some of the greenhouse gas benefit counted for previous years actually occurred in 2010.

Another way to look at the greenhouse gas reductions is to express emission reductions in terms of **average cars**. Using data from the EPA, Oregon Department of Transportation, and Oregon Department of Energy, DEQ estimates that 3 million metric tons of carbon dioxide equivalents is comparable to the greenhouse

gas benefit of eliminating tailpipe emissions from approximately 620,000 “average” passenger cars (out of the state’s stock of 3.2 million registered passenger vehicles). As with energy savings, the greenhouse gas benefit of recycling is significant. Not generating waste in the first place likely produces even greater greenhouse gas and energy benefits; but these are not estimated here.

Recovery Rates

Oregon met its recovery rate goal (set for 2009) in 2010 of 50 percent. This rate is determined by using the total recovered tons as a percentage of total waste generation. It is determined for the state as a whole and for each of the 35 individual wastesheds in the state. The 2001 Legislature set state and watershed recovery rate goals for 2009. (See Survey Report Table 1, P 15.) The state 2009 recovery rate goal includes credits.

2010 Statewide Recovery Rate

The state of Oregon recovered 2,170,243 tons of material or 50.0 percent of the municipal post-consumer waste stream in 2010. This rate is 1.7 percent higher than the 48.3 percent rate of 2009. The increase in recovered tons is 4.2 percent, the first increase since 2005 when recovered tons began to drop.

The three components of the recovery rate calculation, recovered tons, disposed tons, and generated tons (the sum of recovered tons plus disposed tons) rose and fell in a manner that reflects the economy.

It also shows increased consumer awareness with smarter consumption and materials management patterns. Generation remained the same while disposal fell and recovery rose. Total disposed was 2,515,646 tons in 2010 and that added with total recovered equals 4,685,889 tons of total waste generated in 2010.

How the Statewide Recovery Rate Is Calculated

Information about the quantities of material collected from privately-operated recycling and material recovery facilities is combined with recovery information from collection service providers and disposal site collections. This determines the total weight of material recovered.

Next, the total weight of material recovered is added to the total weight of material disposed obtained from disposal site reports. This determines 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**.

The method of calculating the **total recovery rate** for the state was changed by the 2001 Legislature to include the 2 percent reuse and residential composting credits earned by wastesheds. This statutory change requires a more complex series of calculations to determine the total recovery rate.

Oregon Recovered Tons and Recovery Rates

Year	Tons	Calculated Rate	Total Rate*
1992	839,679	27.1	-
1993	974,685	29.9	-
1994	1,118,912	32.6	-
1995	1,257,204	34.7	-
1996	1,338,259	34.9	-
1997	1,462,114	35.7	-
1998	1,604,985	37.3	-
1999	1,626,271	36.8	-
2000	1,765,817	38.9	-
2001	1,999,085	43.1	46.8
2002	2,029,261	42.7	46.3
2003	2,116,880	43.1	46.8
2004	2,317,064 ¹	44.2	48.0
2005	2,523,367 ¹	45.5	49.2
2006	2,494,050 ¹	43.5	47.3
2007	2,437,569 ¹	42.9	46.6
2008	2,326,146 ¹	44.6	48.2
2009	2,082,631 ¹	44.6	48.3
2010	2,170,243	46.3	50.0

* These rates are including the addition of any two percent credit allowances enacted by the 2001 Legislature

¹- These tonnage figures are corrected from the published values – see P.11

The statewide total recovery rate is derived by first estimating what is called “adjusted recovery” for each watershed. The calculation of adjusted recovery involves calculating the tonnage that would be recovered if the 2 percent credits earned for reuse and residential composting were included in each watershed’s calculated recovery rate, holding disposal tonnage as a constant. For watersheds where no 2 percent credits were obtained, adjusted recovery is equal to calculated recovery. For watersheds with recovery credits, adjusted recovery is higher than calculated recovery because adjusted recovery includes the tonnage attributed to reuse and residential backyard composting.

To obtain the statewide total recovery rate, the adjusted recoveries for all watersheds are summed together to equal a statewide adjusted recovery amount. This is then added to the actual statewide disposal tonnage to get a new estimate of waste generation (adjusted generation). The statewide total recovery rate is then calculated by dividing the adjusted recovery by the adjusted generation.

Individual Watersheds

The total weight of material recovered is broken down by watershed of origin. Direct collectors of materials are the primary and best source of information for the collected materials' watershed of origin. When information from direct collectors is not available, or when a survey respondent does not know the watershed of origin for the collected materials, the markets' and end users' estimates are the secondary method used to allocate material back to watersheds. In rare cases, material is allocated back to watersheds using population when survey respondents and market information cannot accurately estimate watershed of origin.

The total weight of material disposed is also broken down by watershed enabling a determination of individual watershed waste generation amounts. The total weight of material recovered is divided by the total weight generated. For each watershed, this results in an individual **calculated recovery rate**.

Recovery credits for waste prevention, reuse, and residential composting are then added to the **calculated recovery rate** in order to obtain the **total recovery rate**. The total recovery rate is used for determining whether watersheds are achieving their recovery goals. Each watershed must apply for these credits as part of their annual Opportunity to Recycle Report submitted to DEQ Technical Assistance staff. The applications are reviewed against statutory standards for each of the three types of credits and a determination is made. A watershed may warrant zero to three recovery credits for an additional 0-6 percent added to the calculated recovery rate.

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. In 2010, 12,899 tons of waste burned for energy in the county’s waste-to-energy incinerator were counted as recovered instead of disposed. This result was obtained by multiplying the quantity of non-industrial, in-county, **counting** solid waste processed at the facility by waste composition percentages³. The six materials that may be counted towards the recovery rate when burned for energy are: Wood, yard waste, tires, used motor oil, fuels, and oil-based paint.

Recovery Credits.

Since 1997, watersheds have been eligible to add 2 percent credits toward their recovery rates if they certify that they implemented programs in waste prevention, residential composting, or reuse (one 2 percent credit for each program, for a potential total of 6 percent).

Nineteen watersheds received at least one 2 percent credit in 2010.

Baker	2%	Hood River	6%	Linn	6%	Tillamook	6%
Benton	6%	Jackson	6%	Marion	6%	Union	2%
Columbia	2%	Josephine	4%	Metro	6%	Wasco	6%
Deschutes	6%	Lane	6%	Polk	2%	Yamhill	6%
Douglas	6%	Lincoln	2%	Sherman	6%		

³ The percentages are from the 2009-10 Marion County waste composition study.

Wasteshed Recovery Rates.

Twenty-one of the 35 wastesheds have total recovery rates in 2010 that are greater than their 2009 rates, as compared to twenty-five wastesheds having total recovery rates in 2008 that were less than their 2007 rates. This reversal points up the increased helps to highlight that recovery tonnages increased throughout the state. Disposal tonnages also decreased, but not as much as recovery.

To measure progress toward the statewide recovery goals, each wasteshed set 2005 and 2009 goals, which were incorporated into Oregon Revised Statute 459A.010. (Wasteshed recovery rates existed in statute for 1995, but were replaced by the 2001 Legislature with the goals for 2005 and 2009.) Twenty-five wastesheds still have higher recovery rates than their 2009 recovery rate goals, the DEQ's chief measurement tool. These 2009 goals may be updated by DEQ's current broad based Materials Management analysis.

Survey Report Table 1 shows a breakdown of 2010 recovery rates by wasteshed, and Survey Report Table 2 gives the amount of materials recovered in 2010 by wasteshed. Survey Report Table 3 shows the amount of solid waste disposed by wasteshed in 2010. For a historical look at recovery, disposal, and generation data in Oregon, Survey Report Tables 4, 5, 6, and 7 give the recovery rates, recovered material amounts, disposal tonnages, and amounts of solid waste generated in the previous years since the Material Recovery Survey began in 1992.

Materials Recovered

2010 recovery includes materials recycled, burned for energy (including tires, fuels, oil-based paint, used oil, wood waste, and some yard debris), and composted (including yard debris, food waste, and some wood waste). By category, 62.7 percent of the material recovered in Oregon was recycled, 16.3 percent was burned for energy, and 21.0 percent was composted.

Metals. The total amount of recovered metals, after dropping 6 percentage points last year, rose by 11.6 percent. Most areas of the state showed increased metals collections roughly corresponding to an increase in prices paid at the recyclers.

Paper (including cardboard). Last year, paper fibers showed large drops correlating to the steep fall in recycling markets that occurred in late 2008 and into the first part of 2009. In 2010, papers showed a small increase in recovery tons of 1.7 percent.

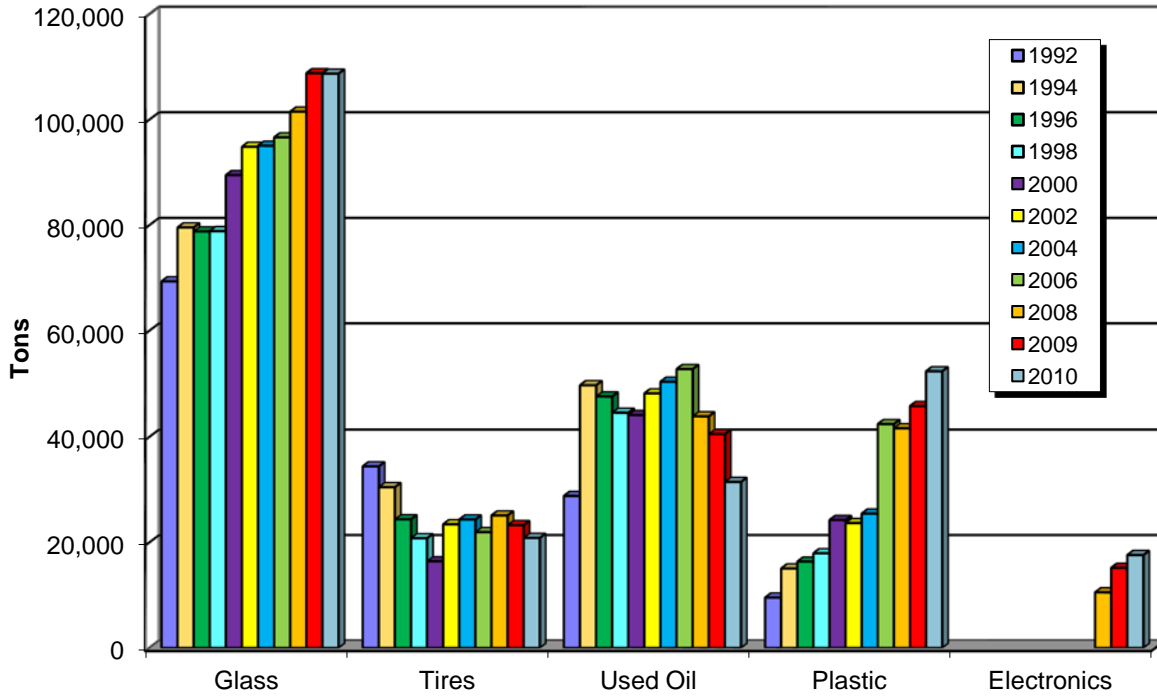
Plastic. Total plastics recycling increased slightly over 10 percent in 2009 and an additional increase of 14.4 percent for 2010. Rigid plastic containers continued to show the largest increase of 22.3 percent. This likely shows the effect of including water bottles in the Bottle Bill materials – those containers that have a return deposit assigned to them.

Glass. Glass recovery stayed constant. This shows a correlation to demand – new recycled glass markets planned for Oregon may increase the amount used for recycled glass products.

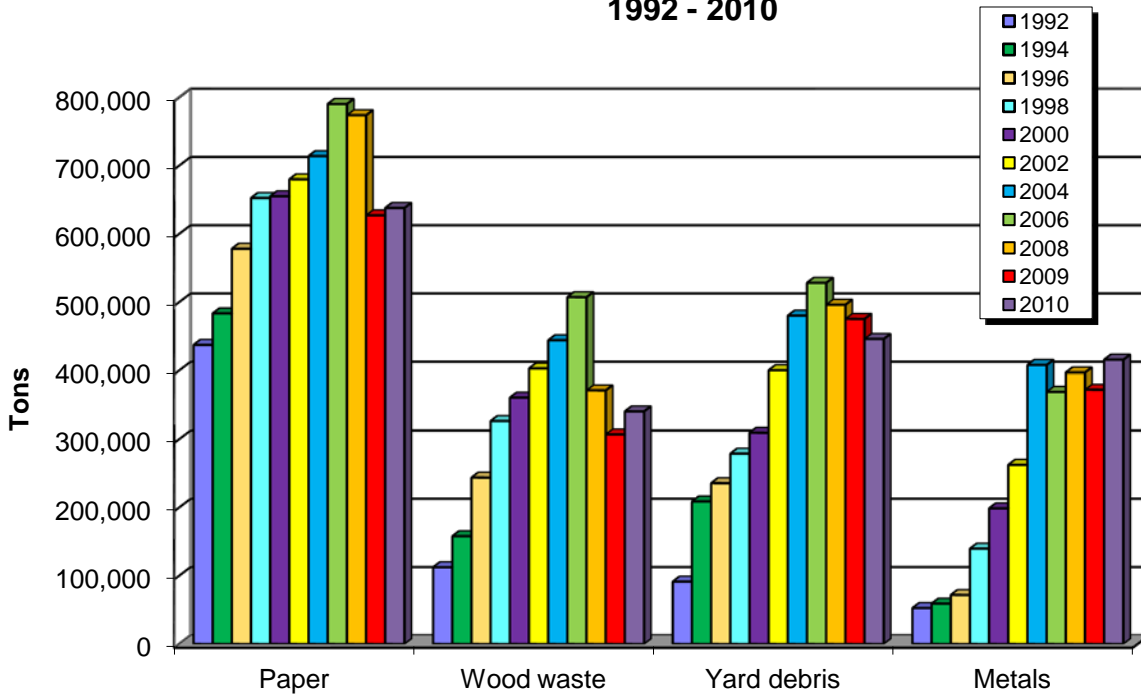
Electronics. This material showed a 16 percent increase in total tons recovered in 2010. The increase is due to the Oregon E-Cycles program and the electronics landfill ban.

Organics. The amount of recovered organic material (food, yard and wood wastes) increased 3 percent in 2010. The largest increase was for food waste at nearly 80 percent, reflecting the increase in the number of food waste collection programs developing in Oregon.

Materials Recovered in Oregon
1992 - 2010



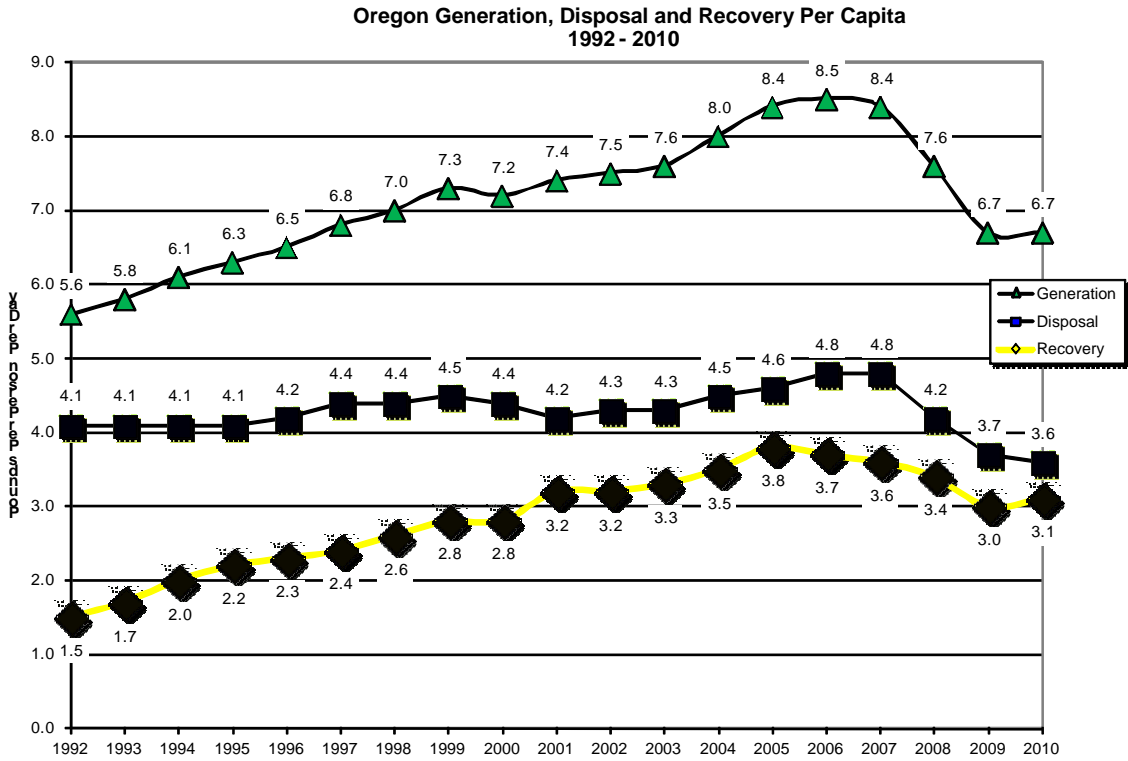
Materials Recovered in Oregon
1992 - 2010



Waste Generation

Survey results show that the total amount of municipal solid waste generated (materials recovered plus waste disposed) in Oregon stayed nearly constant from 2009 to 2010. Total waste generation shows a slight increase of 0.46 percent from the previous year. The unmoving amount of total generation could correlate to the current economic situation. In hard times, people tend to buy and discard less material. It could also indicate that people are more intentional about generating less waste.

Total waste generation for 2010 equates to 2,442 pounds per person per year (6.7 pounds per day), compared to 2,441 pounds per person per year (6.7 pounds per day) in 2009. The state’s 2005 waste generation goal states that there should be no annual increase in per capita municipal solid waste generation in 2005 and subsequent years. As is shown in the chart below, Oregon had been meeting that goal since 2007. The state’s 2009 waste generation goal states that there should also be no annual increase in total municipal solid waste generation in 2009 and subsequent years. Oregon did not meet that more challenging goal in 2010. Meeting that goal in the face of rising population would require a corresponding decrease in per-capita generation.



Environmentally, the relative stasis in both total and per capita waste generation in the last year is a positive development. Generation is 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, recent analysis by the US EPA suggests that roughly 40 percent of the country’s greenhouse gas emissions are associated with the production and transportation of goods. The leveling off of waste generation in 2007, then the decline in 2008 and 2009, and the lack of any significant increase this year likely indicates a reduction in use of materials. This could indicate reductions of emissions in greenhouse gases associated with all stages of the life cycle of materials. Many other environmental impacts associated with materials have likely also decreased.

2010 Disposition of Total Waste Generated

Disposed*	53.7 percent
Recycled	29.1 percent
Composted	9.7 percent
Recovered for Energy*	7.5 percent

*For the Marion County waste-to-energy incinerator, "Recovered for Energy" includes the portion of waste that counts toward the county's and state's recovery rates (see discussion above). Other wastes are counted as "Disposed".

Conclusion

The energy savings and greenhouse gas reductions from materials recovered in 2010 are significant and compares to nearly 216 million gallons of gasoline or nearly three percent of Oregon's total 2010 energy use. The greenhouse gas reductions from material recovery in 2010 were approximately 3.0 million metric tons of CO₂ equivalents. Composting, energy recovery, and recycling contribute to the benefits, but even larger benefits come from reducing the generation of waste in the first place. The benefits from using less virgin materials, using less energy for manufacturing and transportation and preventing end of life disposal costs are large. These benefits contribute even more to helping the environment, but estimates of what is not generated due to waste prevention are hard to calculate and cannot be included in this report.

Oregon met its 2009 recovery rate goal of 50 percent with its hitting the exact rate of 50.0 percent, a small increase from 48.3 percent in 2010. The efforts of many hard working people and successful programs in the Oregon materials recovery area shows this pay off in recovery gains and added benefits of increased recovery of more and different materials. Food waste composting and diverting other organics from disposal are showing increased recovery tonnages gains, and we expect that trend to continue.

Total waste generation in 2010 stayed below 5 million tons for the second year in a row, after topping that figure for five straight years, with per capita waste generation essentially flat. As a rough proxy for consumption, the fact that waste generation has remained well below pre-recession highs suggests that Oregonians are still buying and consuming less. Individuals and businesses are also making changes that may help to keep waste generation at lower levels even after the economy improves. Given the large natural resource and environmental impacts associated with production of many manufactured goods, continued effort is needed to help Oregonians do a better job in reducing, reusing, and recycling.

Oregon solid waste disposal and recycling companies and DEQ worked together to provide this annual calculation of the generation, recovery, and disposal of solid waste in Oregon in 2010. This is one of the most complete and accurate collections of disposal and recycling data in the country.

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

- 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 the 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 watershed 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 and 2007 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 some adjustments were made 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 watersheds for 2006 data with incorrectly reported county of origin.

DEQ made the following adjustments for the 2010 report:

- 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

2010 Survey Report Tables

Table 1: Wasteshed Recovery Rates, 2010

Wasteshed	Tons Disposed	Tons Recovered	Tons Generated	Calculated Recovery Rate ¹	Recovery Credits ²			Total Recovery Rate	HB 3744 Goal ⁵ 2009
					Prevention	Reuse	Residential Composting		
Baker	13,692.6	3,793.4	17,486.0	21.7%			2%	23.7%	25%
Benton	50,474.7	32,911.6	83,386.3	39.5%	2%	2%	2%	45.5%	50%
Clatsop	31,036.3	17,467.8	48,504.1	36.0%				36.0%	25%
Columbia	24,616.1	13,703.8	38,319.9	35.8%	2%			37.8%	32%
Coos	34,574.2	22,600.4	57,174.6	39.5%				39.5%	30%
Crook	13,860.0	7,006.7	20,866.7	33.6%				33.6%	20%
Curry	16,982.3	4,349.3	21,331.6	20.4%				20.4%	30%
Deschutes	115,029.8	62,082.8	177,112.6	35.1%	2%	2%	2%	41.1%	45%
Douglas	75,047.2	42,215.5	117,262.7	36.0%	2%	2%	2%	42.0%	40%
Gilliam	2,254.6	881.0	3,135.6	28.1%				28.1%	20%
Grant	3,895.8	1,104.8	5,000.6	22.1%				22.1%	19%
Harney	3,152.7	1,122.0	4,274.6	26.2%				26.2%	40%
Hood River	17,782.3	6,391.9	24,174.1	26.4%	2%	2%	2%	32.4%	25%
Jackson	141,765.1	102,924.6	244,689.7	42.1%	2%	2%	2%	48.1%	40%
Jefferson	10,387.4	7,303.0	17,690.4	41.3%				41.3%	25%
Josephine	49,268.5	33,108.8	82,377.3	40.2%		2%	2%	44.2%	38%
Klamath	49,933.2	20,576.0	70,509.2	29.2%				29.2%	20%
Lake	5,925.2	2,214.6	8,139.8	27.2%				27.2%	10%
Lane	225,987.8	238,891.4	464,879.2	51.4%	2%	2%	2%	57.4%	54%
Lincoln	38,932.0	18,809.1	57,741.1	32.6%			2%	34.6%	20%
Linn	80,588.5	62,976.1	143,564.7	43.9%	2%	2%	2%	49.9%	40%
Malheur	20,713.3	6,289.2	27,002.5	23.3%				23.3%	22%
Marion ⁴	205,923.4	207,793.6	413,717.0	50.2%	2%	2%	2%	56.2%	54%
Metro	1,029,314.0	1,112,741.9	2,142,055.9	51.9%	2%	2%	2%	57.9%	64%
Milton-Freewater	5,898.9	2,215.9	8,114.8	27.3%				27.3%	25%
Morrow	10,734.2	3,020.2	13,754.4	22.0%				22.0%	20%
Polk	39,552.0	33,107.5	72,659.5	45.6%	2%			47.6%	35%
Sherman	1,190.2	154.1	1,344.3	11.5%	2%	2%	2%	17.5%	20%
Tillamook	22,373.0	10,147.5	32,520.4	31.2%	2%	2%	2%	37.2%	30%
Umatilla	66,345.2	27,609.0	93,954.1	29.4%				29.4%	20%
Union	17,841.1	7,159.7	25,000.8	28.6%			2%	30.6%	25%
Wallowa	2,990.0	718.8	3,708.9	19.4%				19.4%	20%
Wasco	18,196.3	7,079.3	25,275.6	28.0%	2%	2%	2%	34.0%	35%
Wheeler	427.3	37.6	464.9	8.1%				8.1%	20%
Yamhill**	68,961.4	49,734.1	118,695.5	41.9%	2%	2%	2%	47.9%	45%
OR Totals³	2,515,646	2,170,243	4,685,889	46.3%				50.0%	

**Yamhill tons disposed estimated value at time of publication

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

3) Calculated Recovery Rate + Recovery Credits = Total Recovery Rate

² Legislation enacted in 1997 allows each wasteshed to apply for 2% credits toward the recovery rate for certified programs in waste prevention, home composting, and reuse. A 2001 amendment allows for greater than 2% for residential composting if quantitatively verified.

³ The total recovery rate for Oregon includes recovery credits for reuse and residential composting weighted by the recovery and generation of those wastesheds receiving credits (ORS 459A.010(4)(i)).

⁴ The Marion County disposal and recovery rates reflect 12,899.47 tons of recyclable materials burned for energy in 2009 (per ORS 459A.010(3)(f)(B)).

⁵ ORS 459A.010(6).

Table 2: Amount Recovered in 2010 by Wasteshed

Wasteshed	2010 Tons Recovered	2010 Pounds Per Capita	2010 Wasteshed Population
Baker	3,793	469	16,185
Benton	32,912	832	79,148
Clatsop	17,468	942	37,070
Columbia	13,704	554	49,430
Coos	22,600	717	63,035
Crook	7,007	667	21,020
Curry	4,349	389	22,355
Deschutes	62,083	786	157,905
Douglas	42,215	784	107,690
Gilliam	881	942	1,870
Grant	1,105	296	7,460
Harney	1,122	301	7,445
Hood River	6,392	571	22,385
Jackson	102,925	1,012	203,340
Jefferson	7,303	672	21,750
Josephine	33,109	800	82,775
Klamath	20,576	619	66,505
Lake	2,215	561	7,890
Lane	238,891	1,357	352,010
Lincoln	18,809	815	46,135
Linn	62,976	1,019	123,652
Malheur	6,289	401	31,345
Marion*	207,794	1,317	315,675
Metro	1,112,742	1,353	1,644,635
Milton-Freewater	2,216	583	7,600
Morrow	3,020	541	11,175
Polk	33,107	887	74,650
Sherman	154	175	1,765
Tillamook	10,147	803	25,260
Umatilla	27,609	807	68,400
Union	7,160	555	25,810
Wallowa	719	205	7,005
Wasco	7,079	561	25,235
Wheeler	38	52	1,440
Yamhill	49,734	992	100,250
OREGON TOTALS	2,170,243	1,131	3,837,300

Source for population data is the Center for Population Research and Census, Portland State University, published May 17, 2011. Westesheds 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 2010 by Wasteshed

Wasteshed	2010 Tons Disposed	2010 Pounds Per Capita	2010 Wasteshed Population
Baker	13,693	1,692	16,185
Benton	50,475	1,275	79,148
Clatsop	31,036	1,674	37,070
Columbia	24,616	996	49,430
Coos	34,574	1,097	63,035
Crook	13,860	1,319	21,020
Curry	16,982	1,519	22,355
Deschutes	115,030	1,457	157,905
Douglas	75,047	1,394	107,690
Gilliam	2,255	2,411	1,870
Grant	3,896	1,044	7,460
Harney	3,153	847	7,445
Hood River	17,782	1,589	22,385
Jackson	141,765	1,394	203,340
Jefferson	10,387	955	21,750
Josephine	49,268	1,190	82,775
Klamath	49,933	1,502	66,505
Lake	5,925	1,502	7,890
Lane	225,988	1,284	352,010
Lincoln	38,932	1,688	46,135
Linn	80,589	1,303	123,652
Malheur	20,713	1,322	31,345
Marion*	205,923	1,305	315,675
Metro	1,029,314	1,252	1,644,635
Milton-Freewater	5,899	1,552	7,600
Morrow	10,734	1,921	11,175
Polk	39,552	1,060	74,650
Sherman	1,190	1,349	1,765
Tillamook	22,373	1,771	25,260
Umatilla	66,345	1,940	68,400
Union	17,841	1,382	25,810
Wallowa	2,990	854	7,005
Wasco	18,196	1,442	25,235
Wheeler	427	593	1,440
Yamhill**	68,961	1,376	100,250
OREGON TOTALS	2,515,646	1,311	3,837,300

Source for population data is the Center for Population Research and Census, Portland State University, published May 17, 2011. 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, 1992-2010

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*
Baker	10%	14%	17%	22%	25%	19%	19%	18%	18%	24%	21%	22%	20%	23%	17%	22%	21%	26%	22%
Benton	27%	30%	36%	35%	37%	41%	41%	35%	35%	41%	41%	39%	43%	40%	36%	39%	41%	38%	39%
Clatsop	19%	22%	20%	19%	20%	23%	22%	24%	25%	28%	25%	29%	31%	39%	34%	34%	36%	36%	36%
Columbia	34%	28%	22%	27%	22%	28%	29%	25%	31%	38%	34%	38%	31%	32%	30%	28%	30%	32%	36%
Coos	21%	20%	23%	28%	29%	28%	27%	22%	23%	23%	26%	21%	21%	23%	21%	20%	22%	24%	40%
Crook	16%	23%	19%	30%	23%	15%	14%	23%	27%	37%	27%	14%	21%	21%	26%	25%	33%	32%	34%
Curry	21%	25%	27%	31%	35%	33%	29%	27%	41%	39%	36%	25%	25%	15%	18%	24%	21%	20%	20%
Deschutes	15%	18%	24%	22%	23%	25%	32%	25%	31%	29%	27%	28%	27%	28%	27%	30%	31%	39%	35%
Douglas	26%	23%	23%	24%	26%	29%	30%	26%	26%	30%	29%	29%	31%	25%	24%	26%	34%	29%	36%
Gilliam	17%	6%	15%	20%	19%	21%	18%	15%	14%	13%	20%	10%	11%	7%	8%	13%	14%	27%	28%
Grant	18%	14%	16%	19%	16%	15%	16%	18%	19%	19%	18%	16%	19%	28%	21%	24%	25%	22%	22%
Harney	18%	21%	20%	34%	24%	21%	34%	34%	20%	27%	28%	27%	21%	27%	28%	25%	34%	24%	26%
Hood River	16%	24%	26%	16%	17%	17%	17%	19%	18%	30%	34%	35%	37%	36%	33%	30%	28%	29%	26%
Jackson	15%	19%	35%	33%	34%	34%	34%	29%	28%	32%	36%	32%	31%	32%	34%	30%	32%	36%	42%
Jefferson	21%	16%	18%	22%	24%	33%	33%	21%	27%	27%	21%	23%	34%	33%	28%	36%	34%	31%	41%
Josephine	14%	19%	27%	34%	38%	37%	41%	42%	33%	34%	37%	35%	37%	37%	39%	34%	39%	38%	40%
Klamath	13%	12%	17%	18%	15%	16%	17%	15%	18%	31%	30%	23%	31%	37%	34%	35%	45%	33%	29%
Lake	6%	6%	9%	8%	7%	6%	8%	11%	8%	11%	11%	25%	25%	15%	19%	22%	35%	25%	27%
Lane	19%	28%	32%	32%	39%	39%	40%	41%	46%	46%	44%	46%	45%	48%	47%	46%	46%	46%	51%
Lincoln	20%	20%	21%	19%	16%	19%	20%	19%	23%	28%	27%	28%	29%	33%	26%	28%	31%	29%	33%
Linn	15%	27%	29%	30%	32%	33%	31%	33%	29%	34%	38%	34%	44%	43%	41%	37%	41%	40%	44%
Malheur	19%	15%	12%	15%	20%	19%	22%	24%	25%	26%	27%	26%	27%	25%	23%	23%	22%	19%	23%
Marion	26%	27%	27%	29%	28%	28%	30%	32%	38%	**50%	**51%	**47%	**47%	**50%	**52%	**50%	**52%	**52%	**50%
Metro	35%	37%	39%	42%	41%	42%	43%	43%	45%	49%	47%	50%	51%	53%	50%	49%	50%	50%	52%
Milton-Freewater	16%	13%	13%	22%	21%	20%	19%	18%	21%	21%	24%	25%	24%	30%	33%	31%	43%	35%	27%
Morrow	11%	16%	13%	12%	13%	17%	17%	20%	15%	16%	16%	20%	20%	14%	21%	26%	25%	23%	22%
Polk	20%	25%	24%	23%	19%	24%	26%	29%	33%	39%	38%	43%	44%	50%	48%	46%	47%	46%	46%
Sherman	24%	17%	20%	20%	21%	11%	16%	24%	17%	15%	14%	16%	26%	16%	19%	16%	15%	14%	11%
Tillamook	31%	27%	28%	27%	26%	26%	26%	28%	26%	28%	28%	27%	39%	37%	33%	31%	32%	29%	31%
Umatilla	14%	15%	15%	19%	20%	25%	24%	25%	26%	28%	35%	33%	36%	36%	35%	36%	38%	32%	29%
Union	16%	19%	21%	30%	26%	29%	27%	24%	22%	22%	28%	26%	27%	27%	34%	32%	30%	29%	29%
Wallowa	6%	8%	11%	18%	11%	16%	16%	19%	21%	19%	19%	16%	18%	19%	22%	27%	24%	23%	19%
Wasco	25%	23%	26%	29%	30%	29%	31%	34%	34%	26%	28%	31%	25%	24%	19%	23%	23%	33%	28%
Wheeler	7%	8%	11%	24%	20%	20%	25%	18%	14%	13%	25%	27%	16%	34%	24%	27%	27%	20%	8%
Yamhill	19%	22%	25%	30%	35%	25%	31%	36%	44%	49%	54%	42%	50%	45%	39%	36%	36%	40%	42%
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%	46.3%

*does not include 2% credits

**does include certain Marion County recyclable materials burned for energy

Table 5: Oregon Amount Recovered by Wasteshed, 1992-2010

Wasteshed	1992 Rvd (tons)	Per Capita (lbs.)	1994 Rvd (tons)	Per Capita (lbs.)	1996 Rvd (tons)	Per Capita (lbs.)	1998 Rvd (tons)	Per Capita (lbs.)	2000 Rvd (tons)	Per Capita (lbs.)	2001 Rvd (tons)	Per Capita (lbs.)	2002 Rvd (tons)	Per Capita (lbs.)	2003 Rvd (tons)	Per Capita (lbs.)	2004 Rvd (tons)	Per Capita (lbs.)	2005 Rvd (tons)	Per Capita (lbs.)	2006 Rvd (tons)	Per Capita (lbs.)	2007 Rvd (tons)	Per Capita (lbs.)	2008 Rvd (tons)	Per Capita (lbs.)	2009 Rvd (tons)	Per Capita (lbs.)	2010 Rvd (tons)	Per Capita (lbs.)	Change in Per Capita 2010-09
Baker	982	124	1,659	202	3,644	438	2,934	349	2,849	340	3,488	418	3,375	404	3,533	428	3,016	364	3,756	455	2,782	338	3,565	434	3,366	409	4,067	494	3,793	469	-5.2%
Benton	21,480	626	24,054	676	30,352	830	31,957	865	28,488	779	35,609	966	36,427	978	34,366	923	42,092	1,115	38,852	1,017	35,728	921	36,292	922	38,210	966	31,438	789	32,912	832	5.4%
Clatsop	5,148	300	7,125	405	7,118	403	8,512	478	10,586	593	11,999	669	11,370	630	13,425	740	14,739	810	22,706	1,239	19,576	1,057	19,029	1,017	20,984	1,113	17,584	929	17,468	942	1.4%
Columbia	7,894	407	5,233	262	6,258	302	9,252	433	10,361	474	14,050	634	11,831	531	14,758	656	11,360	498	13,209	572	12,940	551	13,647	574	12,968	539	12,001	496	13,704	554	11.8%
Coos	10,035	323	11,522	364	14,972	472	13,905	440	11,754	374	11,075	352	13,825	441	11,614	369	12,446	397	13,826	441	13,364	425	12,162	386	13,529	428	12,666	402	22,600	717	78.5%
Crook	1,581	206	1,554	189	3,156	363	2,267	247	5,215	540	7,040	709	6,175	611	2,829	279	4,617	447	4,817	423	7,075	577	7,004	541	7,871	586	6,273	462	7,007	667	44.4%
Curry	2,863	288	4,212	407	6,011	572	4,905	466	10,387	980	9,464	878	10,099	951	6,838	648	3,992	377	4,830	452	6,632	618	5,161	480	4,223	396	4,223	396	4,349	389	-1.7%
Deschutes	12,858	305	30,411	663	30,222	605	48,309	898	49,993	858	49,459	810	46,857	741	53,550	821	55,395	818	62,503	871	69,443	910	75,346	937	64,276	770	75,362	883	62,083	786	-10.9%
Douglas	29,467	614	27,418	562	30,945	621	37,476	746	31,390	625	38,983	770	35,009	691	36,007	707	35,009	691	33,960	660	31,980	616	36,158	691	44,082	838	30,846	585	42,215	784	33.9%
Gilliam	177	205	199	222	284	306	295	314	266	280	252	265	370	389	272	287	266	280	159	168	225	239	301	319	370	393	768	815	881	942	15.7%
Grant	911	232	872	219	687	171	610	150	791	199	897	230	947	244	731	191	954	246	1,665	433	1,055	277	1,342	354	1,325	352	1,098	292	1,105	296	1.5%
Harney	600	171	648	179	678	188	921	248	806	212	1,076	283	1,099	289	1,034	283	820	214	4,830	377	1,165	304	1,203	313	1,573	408	944	245	1,122	301	23.2%
Hood River	1,855	212	3,308	360	3,333	345	3,112	313	3,403	332	6,517	633	7,986	781	8,842	863	9,961	946	9,775	923	9,200	862	8,365	779	7,479	692	7,466	687	6,392	571	-16.9%
Jackson	17,134	221	57,705	706	60,292	707	71,544	810	63,872	701	71,666	776	88,855	947	83,585	884	83,826	877	85,192	876	92,807	935	80,422	795	76,330	744	79,275	766	102,925	1,012	32.2%
Jefferson	1,269	170	1,838	225	2,667	307	4,339	472	3,661	382	3,963	409	3,061	308	3,075	309	6,404	632	6,772	657	5,506	514	8,132	738	6,217	554	4,475	394	7,303	672	70.4%
Josephine	7,826	239	12,462	359	21,688	600	28,020	753	26,534	698	25,556	665	32,644	841	31,345	800	36,526	929	36,554	918	42,005	1,036	32,943	800	35,957	863	29,510	705	33,109	800	13.4%
Klamath	8,827	301	11,950	394	11,171	360	13,111	415	14,070	440	21,617	673	25,246	782	17,636	546	27,328	843	38,476	1,183	36,650	1,120	34,502	1,048	48,819	1,475	26,256	791	20,576	619	-21.8%
Lake	269	74	597	160	601	161	553	150	369	99	643	171	585	157	1,650	446	1,629	434	1,020	272	1,360	361	1,691	447	2,950	778	1,754	461	2,215	561	21.6%
Lane	72,072	493	118,788	788	153,843	992	171,708	1,077	216,532	1,337	206,010	1,264	202,262	1,233	218,368	1,326	213,033	1,278	243,261	1,448	248,599	1,463	237,578	1,385	217,537	1,258	190,877	1,098	238,891	1,357	23.6%
Lincoln	6,886	338	8,665	404	7,823	352	10,416	465	12,192	547	15,128	678	15,162	678	15,799	702	17,785	801	22,974	1,035	18,030	810	20,035	898	21,355	955	17,010	761	18,809	815	7.1%
Linn	17,232	352	25,213	500	33,201	634	34,631	647	33,830	623	36,510	670	44,739	817	38,884	700	57,999	1,029	62,504	1,099	60,754	1,057	51,543	888	54,219	924	56,125	950	62,976	1,019	7.2%
Malheur	3,283	237	2,142	149	4,808	319	5,662	364	7,212	454	7,204	450	8,138	509	7,297	456	7,886	495	7,492	471	6,862	433	7,045	446	6,437	406	4,909	310	6,289	401	29.6%
Marion	55,834	462	72,009	566	85,731	645	104,053	752	134,032	937	191,817	1,331	205,041	1,410	187,275	1,267	203,346	1,364	238,914	1,582	264,168	1,724	251,673	1,619	239,441	1,522	218,787	1,376	207,794	1,317	-4.3%
Metro	514,747	825	635,869	976	752,470	1,106	912,018	1,294	970,850	1,338	1,097,409	1,496	1,053,618	1,420	1,188,457	1,580	1,283,273	1,686	1,402,299	1,817	1,337,848	1,705	1,325,112	1,663	1,234,180	1,529	1,106,279	1,356	1,112,742	1,353	-0.2%
Milton-Freew.	908	323	744	254	1,186	392	1,310	403	1,317	406	1,344	410	1,641	509	1,771	545	1,879	578	2,167	663	2,612	793	2,351	718	3,598	994	2,319	640	2,216	583	-9.0%
Morrow	930	227	822	188	842	181	1,227	242	1,428	257	1,364	245	1,608	286	1,941	330	2,245	382	1,477	247	2,874	474	3,967	643	3,868	620	3,548	566	3,020	541	-4.5%
Polk	4,873	187	7,604	276	6,787	237	13,195	438	18,000	581	22,550	717	23,785	758	28,009	885	32,517	1,012	40,116	1,235	38,074	1,155	33,838	1,013	34,828	1,032	32,201	946	33,107	887	-6.3%
Sherman	270	278	202	207	264	275	210	219	217	223	234	246	243	263	239	251	432	455	182	194	232	249	239	258	256	278	204	222	154	175	-21.5%
Tillamook	4,518	406	5,157	447	5,246	438	5,372	446	6,174	508	7,113	578	7,052	573	7,087	569	13,202	1,058	12,551	996	12,554	983	11,435	885	11,994	921	9,271	710	10,147	803	13.2%
Umatilla	6,641	236	8,537	292	12,454	414	16,949	549	20,115	625	23,097	718	33,428	1,036	31,496	975	36,467	1,109	33,083	1,005	35,495	1,082	38,402	1,169	40,616	1,247	30,306	930	27,609	807	-13.2%
Union	2,525	210	4,329	348	5,203	419	5,848	474	5,062	412	5,578	454	7,253	590	6,779	550	7,504	604	7,328	587	7,518	599	9,180	727	8,102	639	7,119	559	7,160	555	-0.8%
Wallowa	433	119	841	225	503	135	847	231	1,219	336	1,045	294	1,325	371	1,005	281	1,160	324	1,287	361	1,431	401	1,767	496	1,339	376	1,211	341	719	205	-39.8%
Wasco	5,443	485	5,751	504	7,519	648	8,154	697	9,194	771	6,240	517	7,249	610	8,046	683	6,180	517	6,785	567	5,131	426	6,650	551	6,545	542	9,236	762	7,079	561	-26.4%
Wheeler	59	82	98	124	185	226	119	152	100	129	67	86	167	216	187	242	109	141	236	305	161	206	204	260	166	211	102	129	38	52	-59.5%
Yamhill	11,850	338	19,374	524	26,116	663	31,244	752	53,548	1,242	63,021	1,447	80,791	1,832	49,150	1,106	71,656	1,594	62,327	1,370	64,017	1,386	57,816	1,233	50,200	1,056	47,122	982	49,734	992	1.0%
OR. TOTALS	839,679	562	1,118,912	717	1,338,259	825	1,604,985	958	1,765,817	1,028	1,999,085	1,152	2,029,261	1,158	2,116,880	1,195	2,317,064	1,294	2,523,367	1,390	2,494,050	1,352	2,437,569	1,302	2,326,146	1,227	2,082,631	1,089	2,170,243	1,131	3.83%

change in total from previous year 14.80% 12.56% 6.45% 9.77% 8.20% 8.58% 7.25% 13.21% 12.06% 1.51% 4.32% 9.46% 8.9% -1.16% -2.74% -2.26% -3.70% -4.57% -10.47% 4.21% 3.83%

change in per capita from previous year 12.56% 4.40% 8.20% 7.25% 12.06% 0.52% 3.23% 8.20% 7.4%

Data from 1993, 1995, 1997 and 1999 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 7: Oregon Solid Waste Generated by Wasteshed, 1992-2010

Wasteshed	1992 Generated (tons)	Per Capita (lbs.)	1994 Generated (tons)	Per Capita (lbs.)	1996 Generated (tons)	Per Capita (lbs.)	1998 Generated (tons)	Per Capita (lbs.)	2000 Generated (tons)	Per Capita (lbs.)	2001 Generated (tons)	Per Capita (lbs.)	2002 Generated (tons)	Per Capita (lbs.)	2003 Generated (tons)	Per Capita (lbs.)	2004 Generated (tons)	Per Capita (lbs.)	2005 Generated (tons)	Per Capita (lbs.)	2006 Generated (tons)	Per Capita (lbs.)	2007 Generated (tons)	Per Capita (lbs.)	2008 Generated (tons)	Per Capita (lbs.)	2009 Generated (tons)	Per Capita (lbs.)	2010 Generated (tons)	Per Capita (lbs.)	Change in Per Capita 2010-09
Baker	9,401	1,186	9,911	1,207	14,540	1,748	15,310	1,820	15,466	1,847	14,805	1,773	16,422	1,967	16,123	1,954	15,138	1,829	16,490	1,999	16,552	2,010	16,295	1,983	16,339	1,986	15,457	1,879	17,486	2,161	14.98%
Benton	80,241	2,339	67,640	1,900	81,192	2,220	77,508	2,099	82,323	2,250	87,186	2,365	88,803	2,383	88,227	2,370	97,941	2,593	97,174	2,544	98,668	2,543	93,400	2,374	92,885	2,347	82,908	2,081	83,386	2,107	1.23%
Clatsop	27,411	1,600	35,063	1,992	35,789	2,027	39,228	2,204	42,075	2,357	43,317	2,416	45,115	2,499	46,825	2,580	48,230	2,650	58,423	3,189	57,701	3,115	55,903	2,986	57,513	3,051	48,900	2,585	48,504	2,617	1.25%
Columbia	23,025	1,187	23,547	1,181	28,908	1,397	32,256	1,511	33,562	1,536	37,247	1,681	34,961	1,568	38,891	1,728	36,779	1,611	41,291	1,787	42,482	1,809	47,964	2,017	43,381	1,804	37,366	1,544	38,320	1,550	0.44%
Coos	47,631	1,534	50,536	1,598	51,409	1,620	51,339	1,624	51,083	1,627	48,786	1,550	54,174	1,729	55,133	1,750	58,825	1,876	60,259	1,922	64,232	2,042	61,621	1,955	60,794	1,924	52,038	1,650	57,175	1,814	9.92%
Crook	9,959	1,297	8,175	993	13,802	1,586	16,499	1,799	19,056	1,975	18,912	1,905	23,082	2,285	19,705	1,941	21,537	2,086	23,455	2,060	27,642	2,254	27,871	2,153	23,697	1,765	19,839	1,460	20,867	1,985	36.03%
Curry	13,418	1,350	15,490	1,496	17,132	1,632	17,169	1,633	25,031	2,361	24,460	2,270	28,086	2,643	27,210	2,579	27,794	2,628	26,574	2,508	26,663	2,496	28,036	2,611	24,631	2,290	21,317	1,998	21,332	1,908	-4.47%
Deschutes	85,387	2,025	129,210	2,818	133,618	2,676	149,622	2,783	161,006	2,762	169,793	2,782	176,464	2,790	188,785	2,893	206,889	3,055	223,211	3,111	257,589	3,376	252,889	3,145	206,676	2,475	192,654	2,257	177,113	2,243	-0.61%
Douglas	114,507	2,386	120,984	2,479	118,269	2,372	123,845	2,464	120,841	2,405	129,362	2,556	120,657	2,382	123,906	2,434	134,691	2,632	137,793	2,678	135,041	2,602	139,929	2,674	128,246	2,437	107,424	2,039	117,263	2,178	6.83%
Gilliam	1,049	1,213	1,328	1,476	1,459	1,577	1,615	1,718	1,929	2,031	1,874	1,972	1,877	1,976	2,629	2,768	2,348	2,471	2,377	2,515	2,654	2,816	2,327	2,469	2,567	2,725	2,842	3,015	3,136	3,354	11.21%
Grant	5,089	1,295	5,501	1,384	4,179	1,040	3,784	932	4,232	1,065	4,687	1,202	5,248	1,354	4,670	1,221	4,942	1,275	5,898	1,535	4,973	1,304	5,546	1,463	5,269	1,400	4,896	1,301	5,001	1,341	3.02%
Harney	3,249	927	3,227	893	17,132	1,632	17,169	1,633	25,031	2,361	24,460	2,270	28,086	2,643	27,210	2,579	27,794	2,628	26,574	2,508	26,663	2,496	28,036	2,611	24,631	2,290	21,317	1,998	21,332	1,908	-4.47%
Hood River	11,814	1,352	12,817	1,395	19,349	2,004	18,043	1,815	19,144	1,868	21,914	2,128	23,696	2,317	25,071	2,446	26,742	2,541	27,107	2,560	27,820	2,608	28,330	2,639	26,514	2,452	25,438	2,342	24,174	2,160	-7.77%
Jackson	115,135	1,486	166,517	2,037	175,303	2,054	207,881	2,355	229,001	2,514	224,228	2,428	244,148	2,603	259,747	2,747	268,180	2,805	268,735	2,763	275,210	2,771	264,484	2,615	235,967	2,299	222,759	2,152	244,690	2,407	11.83%
Jefferson	6,082	815	10,218	1,251	11,047	1,272	13,048	1,418	13,550	1,415	14,892	1,536	14,804	1,492	13,433	1,350	18,840	1,861	20,451	1,986	19,892	1,858	22,380	2,032	18,460	1,644	14,593	1,285	17,690	1,627	26.60%
Josephine	55,513	1,696	46,861	1,351	57,560	1,592	68,538	1,842	80,567	2,119	75,992	1,978	88,715	2,285	89,937	2,296	97,738	2,487	99,328	2,494	108,110	2,665	95,947	2,329	92,402	2,219	78,564	1,878	82,377	1,990	5.98%
Klamath	66,074	2,251	71,448	2,358	78,044	2,512	75,714	2,394	78,689	2,463	69,799	2,174	83,048	2,573	76,532	2,369	88,027	2,717	103,214	3,173	108,965	3,329	99,143	3,013	107,559	3,251	79,908	2,409	70,509	2,120	-11.97%
Lake	4,633	1,269	6,456	1,735	8,069	2,163	6,914	1,874	4,426	1,188	5,763	1,536	5,418	1,454	6,520	1,739	6,952	1,853	7,011	1,860	7,742	2,047	8,549	2,047	8,549	2,047	6,998	1,841	8,140	2,063	12.05%
Lane	374,767	2,565	370,116	2,456	393,153	2,534	433,666	2,721	472,737	2,919	446,994	2,743	460,732	2,808	474,573	2,881	473,892	2,843	509,990	3,035	529,946	3,120	512,611	2,988	468,797	2,711	413,905	2,381	464,879	2,641	10.94%
Lincoln	34,487	1,693	41,432	1,930	50,266	2,259	51,543	2,299	52,598	2,359	53,963	2,418	55,837	2,498	56,354	2,505	61,048	2,750	68,988	3,107	68,566	3,080	72,615	3,254	69,231	3,097	57,810	2,587	57,741	2,503	-3.23%
Linn	111,875	2,282	88,292	1,750	102,707	1,962	110,438	2,064	117,531	2,163	106,981	1,964	116,309	2,123	114,069	2,053	131,779	2,338	144,268	2,536	149,917	2,608	137,913	2,375	131,181	2,236	138,645	2,347	143,565	2,322	-1.08%
Malheur	17,098	1,233	18,091	1,258	23,583	1,565	25,714	1,652	28,550	1,798	28,199	1,762	30,217	1,889	28,303	1,769	29,541	1,855	30,226	1,901	30,155	1,901	31,197	1,973	29,445	1,859	26,044	1,642	27,002	1,723	4.92%
Marion	213,943	1,768	267,999	2,106	304,913	2,293	341,219	2,466	356,130	2,489	386,007	2,678	402,741	2,770	398,785	2,697	428,776	2,875	481,723	3,191	509,383	3,324	499,004	3,210	456,613	2,902	419,207	2,637	413,717	2,621	-0.59%
Metro	1,460,380	2,341	1,613,599	2,478	1,849,716	2,719	2,108,504	2,991	2,178,198	3,001	2,248,748	3,065	2,219,380	2,991	2,374,200	3,157	2,517,960	3,308	2,666,020	3,454	2,694,802	3,435	2,710,982	3,403	2,457,886	3,045	2,194,860	2,690	2,142,056	2,605	-3.18%
Milton-Freew.	5,551	1,972	5,814	1,983	5,518	1,823	6,896	2,122	6,346	1,954	6,368	1,942	6,876	2,132	7,051	2,170	7,767	2,390	7,335	2,243	7,961	2,418	7,631	2,330	8,368	2,312	6,640	1,834	8,115	2,135	16.46%
Morrow	8,151	1,990	6,507	1,486	6,725	1,445	7,120	1,406	9,681	1,744	8,758	1,571	10,229	1,818	9,834	1,674	11,396	1,940	10,530	1,763	13,380	2,207	14,992	2,431	15,618	2,502	15,325	2,444	13,754	2,462	0.71%
Polk	23,909	916	31,794	1,153	35,442	1,237	49,985	1,659	55,322	1,785	57,464	1,827	61,886	1,973	65,411	2,067	73,818	2,298	80,085	2,466	79,527	2,412	72,967	2,185	74,168	2,197	70,186	2,062	72,660	1,947	-5.61%
Sherman	1,146	1,181	1,006	1,032	1,252	1,304	1,302	1,356	1,248	1,280	1,540	1,621	1,795	1,940	1,482	1,560	1,676	1,765	1,143	1,216	1,254	1,344	1,458	1,572	1,734	1,882	1,425	1,558	1,344	1,523	-2.20%
Tillamook	14,458	1,300	18,645	1,614	20,458	1,709	20,435	1,695	23,981	1,974	25,437	2,068	25,458	2,070	26,625	2,139	34,015	2,727	33,987	2,697	37,542	2,941	37,387	2,893	38,040	2,920	31,870	2,439	32,520	2,575	5.55%
Umatilla	47,700	1,698	55,811	1,908	63,843	2,123	69,433	2,249	78,067	2,426	82,951	2,579	94,570	2,930	94,026	2,911	101,445	3,086	90,705	2,755	101,475	3,094	105,165	3,202	107,218	3,292	95,566	2,932	93,954	2,747	-6.30%
Union	15,391	1,279	20,339	1,635	19,879	1,599	21,458	1,740	23,373	1,904	25,629	2,087	26,318	2,140	26,288	2,133	27,404	2,206	26,729	2,143	22,319	1,778	29,102	2,305	27,157	2,142	24,327	1,910	25,001	1,937	1.42%
Wallowa	7,234	1,996	7,945	2,130	4,528	1,211	5,373	1,464	5,874	1,620	6,867	1,921	6,461	1,807	6,294	1,760	6														

Table 8: Oregon Materials Recovered, 1992-2010

Material Type	1992 Tons	1994 Tons	1996 Tons	1998 Tons	2000 Tons	2001 Tons	2002 Tons	2003 Tons	2004 Tons	2005 Tons	2006 Tons	2007 Tons	2008 Tons	2009 Tons	2010 Tons
Container glass	69,284	73,512	77,231	78,492	87,889	83,240	90,476	89,199	92,204	94,670	95,946	96,926	100,496	108,083.714	107,830
Other glass	41	6,030	1,557	365	1,578	9,530	4,358	4,052	2,827	106	673	901	999	709	867
Total glass	69,325	79,542	78,788	78,857	89,467	92,770	94,833	93,251	95,030	94,776	96,619	97,827	101,496	108,793	108,697
Aluminum	18,245	16,805	17,815	16,734	18,209	20,511	17,428	14,671	17,871	20,453	21,521	26,932	32,888	30,673	38,495
Scrap metal	26,927	33,699	45,271	114,084	165,728	223,623	228,723	261,119	375,464	477,513	339,723	361,152	354,908	332,781	368,249
Tinned cans/aluminum				14,779	23,387	16,240	11,616	14,575	0	0	0	0	0	0	0
Tinned cans	7,400	8,557	8,635	8,745	0	0	0	0	0	8,719	8,399	10,174	9,177	9,003	8,890
Aerosol cans	0	0	0	8	0	0	0	0	1	1	1	1	1	1	0.4
Total metals	52,572	59,061	71,722	139,570	198,716	267,521	262,390	287,406	407,910	506,686	369,644	398,260	396,975	372,458	415,634
Cardboard/kraft paper	204,729	251,559	304,093	321,501	310,776	332,876	381,027	388,427	368,668	392,774	440,813	444,449	429,703	367,536.277	368,602
Paper Fiber ⁵	0	0	0	0	0	0	0	0	0	0	0	348,250	344,119	259,625.629	269,353
High-grade paper ⁶	67,077	35,401	49,298	69,449	54,358	62,185	41,659	57,418	56,307	39,847	47,324	0	0	0	0
Magazines	11,246	11,911	17,250	26,342	8,375	0	0	0	0	0	0	0	0	0	0
Phone books ¹	0	1,799	3,103	2,368	2,881	0	0	0	0	0	0	0	0	0	0
Mixed waste paper ⁶	24,012	38,770	53,771	78,863	91,559	81,418	46,203	51,553	28,820	29,147	39,347	0	0	0	0
Newspaper ⁵	130,181	143,911	141,412	154,014	187,108	203,021	211,082	235,959	260,151	268,585	263,193	0	0	0	0
Fiber-based fuel			9,235	0	0	0	0	0	0	0	0	0	0	0	0
Total papers	437,245	483,352	578,161	652,536	655,057	679,499	679,971	733,357	713,946	730,353	790,677	792,699	773,822	627,162	637,956
#1 PET beverage	3,329	4,392	5,803	5,142	0	0	0	0	0	0	0	0	0	0	0
#1 other	58	0	0	0	0	0	0	0	0	0	0	0	0	0	0
#2 milk jugs	1,940	4,289	3,049	2,361	0	0	0	0	0	0	0	0	0	0	0
#2 other	1,841	976	1,331	572	0	0	0	0	0	0	0	0	0	0	0
#3 PVC	25	5	144	1	0	0	0	0	0	0	0	0	0	0	0
#4 LDPE	1,196	3,843	2,501	988	0	0	0	0	0	0	0	0	0	0	0
#5	360	157	283	51	0	0	0	0	0	0	0	0	0	0	0
#6	471	292	430	280	0	102	0	0	0	0	0	0	0	0	0
Composite plastic	0	497	1,077	2,364	863	1,095	723	745	272	370	2,004	1,539	1,784	1,823	1,964
Mixed plastic	300	584	1,708	6,173	0	0	0	0	0	0	0	0	0	0	0
Other plastic (P7)	0	13	12	1	0	0	0	0	0	0	0	0	0	0	0
Plastic bottles ²															
Plastic film					3,969	4,825	6,724	6,927	6,581	11,297	11,594	9,625	10,739	11,327	12,839
Plastic other					3,718	2,005	3,771	3,365	4,287	8,193	9,426	9,500	9,302	9,299	9,019
Rigid plastic containers					15,672	16,352	12,430	15,211	14,297	16,047	19,439	21,990	19,790	23,376.793	28,599
Total plastic	9,520	15,049	16,338	17,933	24,222	24,380	23,647	26,248	25,437	35,907	42,463	42,655	41,615	45,826	52,421
Antifreeze	5	11	52	188	424	1,864	2,181	1,387	2,307	2,871	3,085	2,683	2,720	2,515	6,762
C & D -- roofing ⁷				5,914	25,162	28,904	19,846	20,159	9,770	11,852	10,072	5,980	3,885	7,829.882	15,803
Carpeting -- used				304	919	1,064	540	355	696	784	0	645	300	515	1,641
Diesel							20	0	9	16	151	156	152	145	33
Electronics					617	1,640	2,216	2,023	3,350	3,790	6,345	9,813	10,513	15,174	17,587
Fluorescent lamps	0	15	7	91	21	267	263	312	232	374	453	514	451	400	620
Gypsum wallboard	3,695	6,726	9,419	8,501	5,300	13,164	3,781	5,209	3,891	3,121	4,174	2,655	3,126	3,338	3,261
Household Haz Waste					14	12	105	92	28	106	143	157	305	436	452
Alkaline batteries					4	26	44	0	0	0	0	0	0	0	0
Mixed batteries								75	154	120	204	188	218	244	
Lead acid batteries ³	176	417	559	739	1,184	10,134	12,614	6,673	18,483	12,861	15,509	12,906	14,602	13,794	15,305
Lithium batteries							1	0	1	0	0	0	0	0	0
NiCad batteries				9	0	18	32	17	27	0	0	0	0	0	0
Old broken crayons	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Paint ⁴	120	153	489	298	555	1,403	1,586	1,972	1,958	2,366	1,434	1,730	1,141	1,308	1,931
Porcelain	0	13	5	5	0	483	694	254	8	227	307	1,258	553	590	327
Rubber tire buffings ⁴	0	2,698	2,935	0	0	0	0	0	0	0	0	0	0	0	0
Scrap film (X-ray)	42	58	68	36	21	0	0	74	0	0	0	0	0	0	0
Solvents ⁵	16	6	110	290	188	248	223	217	249	280	261	274	526	237	312
Textiles			508	3,198	4,033	3,762	4,527	4,279	4,370	3,620	1,819	1,519	1,244	958	936
Tires ⁵	34,392	30,454	24,360	20,782	16,420	17,339	23,423	20,432	24,315	27,293	21,931	20,045	25,091	23,264	20,834
Used Motor Oil ⁵	28,796	49,769	47,632	44,567	44,114	45,675	48,225	43,580	50,439	55,466	52,837	43,123	43,871	40,513	31,443
Total other	67,243	90,320	86,145	84,920	98,969	125,979	120,302	107,080	120,207	125,181	118,640	103,662	108,668	111,235	117,489
Animal waste/grease	0	22,986	22,957	22,897	25,670	26,226	32,805	30,160	17,392	22,537	15,928	13,783	14,512	12,853	11,907
Food waste	0	2,000	5,000	3,590	3,486	9,685	12,339	14,937	13,008	9,644	12,430	16,407	21,475	21,949	39,402
Wood waste ⁵	112,425	157,881	243,773	326,688	360,819	424,569	402,799	420,889	444,017	449,791	503,967	460,896	371,531	307,004.664	340,794
Yard debris ⁵	91,348	208,722	235,562	278,750	309,407	348,472	400,174	403,552	480,117	548,493	543,683	511,380	496,052	475,550.761	445,944
Total organics	203,773	391,589	507,292	631,925	699,382	808,951	848,117	869,538	954,533	1,030,465	1,076,008	1,002,466	903,570	817,157	838,047
Adj. rounding/unspecified			2	1	1	-1	0	0	0	0	0	0	0	0	0
OREGON TOTALS	839,678	1,118,913	1,338,446	1,605,741	1,765,814	1,999,099	2,029,261	2,116,880	2,317,064	2,523,367	2,494,050	2,437,569	2,326,146	2,082,631	2,170,243

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

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

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

⁴From 1998 rubber tire buffings were included with tires.

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

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

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

Data from 1993, 1995, 1997 and 1999 is not shown due to page formatting. Please contact DEQ directly for data from these years.

Table 9: Disposition of Recovered Materials, 2010

Wasteshed	Total Recovered	Recycled	% of Total	Energy Recovery	% of Total	Compost	% of Total	Stock
Baker	3,793	2,870	76%	139	4%	756	20%	28
Benton	32,912	19,042	58%	1,349	4%	12,502	38%	19
Clatsop	17,468	8,984	51%	6,462	37%	2,014	12%	8
Columbia	13,704	8,769	64%	1,129	8%	3,792	28%	14
Coos	22,600	14,058	62%	7,364	33%	1,149	5%	29
Crook	7,007	5,213	74%	1,369	20%	417	6%	7
Curry	4,349	4,137	95%	201	5%	3	0%	8
Deschutes	62,083	46,740	75%	3,996	6%	11,315	18%	32
Douglas	42,215	28,705	68%	12,642	30%	838	2%	30
Gilliam	881	819	93%	60	7%	0	0%	3
Grant	1,105	1,020	92%	60	5%	0	0%	25
Harney	1,122	995	89%	49	4%	66	6%	11
Hood River	6,392	5,676	89%	244	4%	440	7%	32
Jackson	102,925	62,067	60%	20,484	20%	20,337	20%	36
Jefferson	7,303	6,819	93%	138	2%	342	5%	4
Josephine	33,109	19,401	59%	3,884	12%	9,786	30%	38
Klamath	20,576	14,753	72%	4,276	21%	1,472	7%	74
Lake	2,215	2,087	94%	33	1%	87	4%	8
Lane	238,891	138,879	58%	45,203	19%	54,692	23%	117
Lincoln	18,809	12,015	64%	6,642	35%	138	1%	14
Linn	62,976	37,501	60%	13,082	21%	12,364	20%	29
Malheur	6,289	5,687	90%	459	7%	109	2%	34
Marion	207,794	120,721	58%	34,343	17%	52,646	25%	84
Metro	1,112,742	696,412	63%	175,752	16%	239,322	22%	1,255
Milton-Freewater	2,216	1,523	69%	149	7%	541	24%	2
Morrow	3,020	2,991	99%	29	1%	0	0%	1
Polk	33,108	25,159	76%	749	2%	7,183	22%	16
Sherman	154	147	95%	5	3%	0	0%	3
Tillamook	10,147	8,378	83%	1,623	16%	141	1%	5
Umatilla	27,609	22,952	83%	3,740	14%	901	3%	16
Union	7,160	4,648	65%	671	9%	1,836	26%	4
Wallowa	719	491	68%	16	2%	116	16%	95
Wasco	7,079	5,772	82%	337	5%	932	13%	39
Wheeler	38	21	57%	11	28%	0	0%	6
Yamhill	49,734	23,416	47%	6,816	14%	19,479	39%	23
Total	2,170,243	1,358,867	63%	353,508	16%	455,722	21%	2,146

Appendix I: Methodology

Data Sources

In 2010, DEQ collected recycling and disposal data from:

- 243 private companies handling recycled materials, including buy-back centers, intermediate processors, material recovery facilities, yard debris composting facilities, beer and soft drink distributors, and end users
- 174 collection service providers
- 10 scrap metal dealers
- 38 disposal sites handling municipal and construction and demolition wastes.

Data Collection and Management

Recyclers and collection service providers who directly collect material in each county were surveyed. However, since it is not practical to identify and survey each individual generator of recyclable materials (such as all the retail stores in the state), DEQ also surveyed material processors and end users. Survey recipients were asked to return the completed surveys to DEQ by February 28, 2011. Metro-area and individual county watershed collection service provider forms were reviewed by Metro and local government staff for completeness and accuracy before being forwarded to DEQ. As surveys were received, DEQ staff checked the data for completeness, and in many instances, verified information by calling the survey respondent. Once approved, the data was entered into a database, and a number of quality control checks were performed. The two most important checks were:

Comparing information from different sources. For example, often collectors report sending more material to recyclers (or end users) than the recyclers report receiving. This issue is usually resolved by calling the receiving recycler or both the recycler and the collector to determine the source of the discrepancy. When a discrepancy cannot be resolved by talking to the involved recyclers and collectors, the information provided by the end user is used in most cases.

Examining per capita recycling calculations for unlikely results. For example, occasionally more material is reported as recovered than would be expected in a county, based on estimates using population. This issue is resolved by determining which survey respondents reported collecting or handling the material for the county in question, looking for unlikely results in their reports, and calling the involved recyclers and collectors. Problems in the units of measurement used sometimes cause these anomalies.

Quality of Data

This is the nineteenth year DEQ has collected recovery and waste generation rate data. Many companies who report have set up their own record-keeping mechanisms to help them provide complete, accurate, and timely data. However, each year DEQ staff encounter problems with reported data that need to be resolved. For example, the 2010 surveys included instances of materials being improperly reported as **recycled** rather than **disposed**, and numerous of double counts by multiple branches of the same company. Other errors in reporting include composted materials and material burned for energy reported as **recycled**. Some reporters provided good data on materials they have traditionally handled, but failed to report on new additions, such as scrap electronics. Other companies did not include data for all facilities they operate or failed to submit a survey form.

Double Counting of Materials

The processing and handling chain for each recyclable material is varied and complex – it can involve multiple companies handling the same material. In addition, DEQ determines recovery rates for individual watersheds as well as the state as a whole. The potential for double counting of materials in this process is a

major issue. For example, companies collecting materials, processors who purchase the materials from the collectors, and markets and end users of materials are all surveyed and report on the same materials. Having information on where each collector or recycler sells their material allows DEQ to eliminate the double counting of that material. DEQ's database is designed to track materials transferred from collector to recycler, collector to collector, or recycler to recycler, accounting for each material a company sold to an intermediate processor, while at the same time keeping track of the county of origin for that material. Thus, no matter where a material is ultimately recycled, composted, or burned for energy, DEQ can give proper credit to the wasteshed of origin.

Commingled Collection

Many areas of Oregon collected commingled recyclable materials. A dual stream system is used – glass is kept separate from the other mixed materials. This material is sent to processors or material recovery facilities. These were asked to complete an additional commingled survey form. The added information details the individual materials that are sorted out of the commingled collection material mix.

DEQ combines the received commingled amounts into one type – Commingled All. The MRF receipt and sorting data is used to apply back to the companies that collect and transfer commingled materials to the MRFs. The individual materials sorted from the Commingled All collections are allocated back to the collecting wasteshed. These allocations are based on sorting estimates of for individual materials. All areas sending materials to one processor receive the same sorting percentage allocation which may not exactly match the actual collections percentages of their commingled mix. The sorted data integrity is “homogenized” and so a bit weakened. To further complicate material tracking, some commingled materials now pass through a transfer operation in-between the collection service provider and MRF. The difficulty in identifying specific materials in mixes is an unfortunate outcome of collecting and transferring recyclables in commingled packs. However, the volume of collected materials is greatly increased by this collection method.

Disposal Data

Information on disposal tonnage comes from annual or quarterly reports filed with DEQ by disposal sites for fee collection purposes. Disposal sites report **counting** waste by county and this amount is used in the recovery rate calculation.⁴ “Counting” waste includes municipal solid waste as well as construction and demolition wastes such as wood waste, asphalt roofing, carpet pad, upholstery foam, and gypsum wallboard. Also included in the counting disposal tonnage is animal waste and grease and tires. The following **non-counting waste** is excluded from this survey: industrial waste from manufacturing processes; sewage sludge; asbestos; petroleum-contaminated soil; and inert waste (full loads only) such as rock and gravel, dirt, concrete, brick, and asphalt paving.

⁴The Yamhill County disposal display is an estimated amount. The quarterly disposal reports showed an unexplained drop in municipal solid waste disposed. DEQ estimated the 2010 amount by using the 2009 disposal amount and reducing it by the same percentage that the entire state's disposed amount fell. DEQ continues to investigate this and will correct the Yamhill disposal tonnage as soon as possible.

Appendix II: Respondents to the 2010 Material Recovery Survey

PRIVATE RECYCLING Survey Respondents

A&P RECYCLING
The Dalles, OR

ACCESS INFORMATION MANAGEMENT
Eugene, OR

ADVANCED M & D SALES
Portland, OR

AGRIPLAS INC
Keizer, OR

ALBERTSONS DISTRIBUTION CENTER
Portland, OR

ALLWOOD RECYCLING
Fairview, OR

AMERICAN RAG AND METAL
Portland, OR

ANKMAR, LLC
Sweet Home, OR

ARMSTRONG WORLD IND INC
St Helens, OR

ASH GROVE CEMENT
Durkee, OR

ASTORIA LIONS CLUB
Astoria, OR

ASTORIA WAREHOUSING
Astoria, OR

BAKER COMMODITIES
Seattle, WA

BAR 7A TRUCKING
Redmond, OR

BATTERY SYSTEMS OF MEDFORD
Medford, OR

BEAVER BARK, INC
Scappoose, OR

BEND METRO PARKS & RECREATION DIST
Bend, OR

BEST BUY IN TOWN
Hillsboro, OR

BIO-MASS-ONE, LP
White City, OR

BLUE GOOSE RECYCLING
Weston, OR

BLUE HERON NEWSPRINT CO
Oregon City, OR

BOISE CASCADE
St. Helens, OR

BON APPETIT MGMT CO
Portland, OR

BRING RECYCLING
Eugene, OR

BUREAU OF LAND MANAGEMENT
Vale, OR

CALBAG METALS CO
Portland, OR

CAROTHERS TIRE
Hillsboro, OR

CASCADE AUTO RECYCLERS
Grants Pass, OR

CHERRY CITY METALS
Salem, OR

CINTAS DOCUMENT MANAGEMENT
Portland, OR

CITY OF COTTAGE GROVE
Cottage Grove, OR

CITY OF EUGENE
Eugene, OR

CITY OF FLORENCE
Florence, OR

CITY OF GRANTS PASS
Grants Pass, OR

CITY OF KLAMATH FALLS
Klamath Falls, OR

CITY OF PORTLAND
Portland, OR

CITY OF THE DALLES
The Dalles, OR

CITY RECYCLE, LLC
Portland, OR

CLACKAMAS COMPOST
Tualatin, OR

CLATSOP DISTRIBUTING CO
Astoria, OR

CLAYTON WARD CO
Kennewick, WA

CLAYTON WARD CO
Salem, OR

CLEAN IT UP MARK
Portland, OR

COLUMBIA COUNTY SOLID WASTE
St. Helens, OR

COLUMBIA GORGE PRESS
Hood River, OR

COLUMBIA RECYCLING PDX
Portland, OR

COMPOST OREGON
Aumsville, OR

COMPUTER DRIVE CONNECTION Cornelius, OR	ENVIRONMENTAL PROTECTION SERVICES INC Brooks, OR	GOODWILL INDUSTRIES Eugene, OR
CONAGRA FOODS Boardman, OR	ENVIRONMENTALLY CONSCIOUS RECYCLING Portland, OR	GOODWILL INDUSTRIES Portland, OR
D & R DIETRICH & SONS, INC Vancouver, WA	EPSON Hillsboro, OR	GORGE SECURITY SHRED Hood River, OR
D.A.D.S. RECYCLING Vernonia, OR	ERICKSON'S SENTRY MARKET Burns, OR	GOSPEL RESCUE MISSION Grants Pass, OR
DAISHOWA AMERICA (NIPPON IND) Port Angeles, WA	ETECH Hillsboro, OR	GRAF PAPER SALVAGE Portland, OR
DARLING INTERNATIONAL Boise, ID	EUGENE MISSION Eugene, OR	GREENWAY RECYCLING Portland, OR
DARLING INTERNATIONAL Tacoma, WA	EXIDE TECHNOLOGIES Portland, OR	GRIMMS FUEL CO Tualatin, OR
DENNIS CARLIN HAULING Woodburn, OR	FAR WEST FIBERS Portland, OR	HANKE'S RECYCLING Portland, OR
DENTON PLASTICS INC Portland, OR	FRED MEYER Clackamas, OR	HI-SCHOOL PHARMACY Vancouver, WA
DEPARTMENT OF ENVIRONMENTAL QUALITY Portland, OR	FRED MEYER Portland, OR	HILTON FUEL Central Point, OR
DUFUR LIONS CLUB Dufur, OR	FREE GEEK Portland, OR	HINES NURSERY Forest Grove, OR
EARTH CYCLE Grants Pass, OR	FULL SAIL BREWERY Hood River, OR	HOOD RIVER COUNTY Hood River, OR
EAST OREGON PLASTICS Baker City, OR	GARDNER ENTERPRISES INC John Day, OR	HOOD RIVER LIONS Hood River, OR
EC RESTAURANT SERVICES Harrisburg, OR	GARTEN FOUNDATION Salem, OR	HOOKER CREEK CO Bend, OR
ECHANIS DISTRIBUTING CO Ontario, OR	GARY GRUNER CHEVROLET Madras, OR	INTERNATIONAL PAPER Beaverton, OR
ECOSORT Eugene, OR	GEORGIA PACIFIC CORP Halsey, OR	INTERNATIONAL PAPER Eugene, OR
ECS REGENESYS Medford, OR	GEORGIA PACIFIC CORP Toledo, OR	INTERSTATE PLASTICS Vancouver, WA
EMERALD SERVICES Tacoma, WA	GODFREY & YEAGER EXCAVATING Coos Bay, OR	IRAS SALES & SERVICE Madras, OR
ENVIRONMENTAL FIBERS INTERNATIONAL Portland, OR	GOING GREEN RECYCLING Roseburg, OR	IRON MOUNTAIN Portland, OR

JEFFERSON AVENUE RECYCLERS LaGrande, OR	MERLIN PLASTICS Delta, BC	OREGON RECYCLING SYSTEMS Portland, OR
JOHNSON CONTROLS Canby, OR	METRO Portland, OR	OWENS ILLINOIS GLASS CONTAINER INC Portland, OR
K&S RECOVERY Aloha, OR	MIC TOTAL RECYCLE Forest Grove, OR	OWYHEE DISTRIBUTING CO INC Nyssa, OR
KB RECYCLING Canby, OR	MONROVIA NURSERY Dayton, OR	P & E DISTRIBUTING CO Baker City, OR
KE MCKAYS Gold Beach, OR	MORROW COUNTY PUBLIC WORKS Lexington, OR	PACIFIC DISC INC (PACIFIC RUBBER) Toledo, OR
KINGSLEY AIR FIELD Klamath Falls, OR	MYERS CONTAINER CORPORATION Portland, OR	PACIFIC PALLET Eugene, OR
KIWANIS CLUB Tillamook, OR	NATURES NEEDS North Plains, OR	PAINT CARE Clackamas, OR
KNEZ BUILDING MATERIALS Clackamas, OR	NEXT STEP RECYCLING Eugene, OR	PALLET DOCTOR Cornelius, OR
LAKESIDE RECLAMATION Beaverton, OR	NORPAC Longview, WA	PAPER CHASE RECYCLING Portland, OR
LAKIN TIRES WEST INC Santa Fe Springs, CA	NORTHWEST ENVIRONMENTAL & RECYCLING INC Cornelius, OR	PENDLETON BOTTLING CO Pendleton, OR
LANE FOREST PRODUCTS Eugene, OR	NORTHWEST GREENLANDS McMinnville, OR	PEPSI COLA BOTTLING CO Corvallis, OR
LAURELWOOD FARMS Gearhart, OR	NORTHWEST POLYMERS Molalla, OR	PEPSI COLA BOTTLING CO Klamath Falls, OR
LES SCHWAB WAREHOUSE CENTER Prineville, OR	NORTHWEST WOOD AND FIBRE RECOVERY INC Troutdale, OR	PEPSI COLA BOTTLING CO La Grande, OR
LIFESPAN TECHNOLOGY RECYCLING Denver, CO	OAK LEAF ENTERPRISES Central Point, OR	PEPSI COLA BOTTLING CO Medford, OR
MARION RESOURCE FACILITY Brooks, OR	OIL RE-REFINING INC Portland, OR	PEPSI COLA BOTTLING CO The Dalles, OR
MARKET OF CHOICE Eugene, OR	ON TO TECHNOLOGY Bend, OR	PHILIP SERVICES CORPORATION Kent, WA
MCFARLANES BARK INC Milwaukie, OR	OREGON BEVERAGE RECYCLING CO-OP Portland, OR	POLK COUNTY Dallas, OR
MCGOVERN METALS Roseburg, OR	OREGON COMPUTER RECYCLING, INC Warrenton, OR	PORT OF BROOKINGS Brookings, OR
MCKENZIE RECYCLING Eugene, OR	OREGON PALLET Salem, OR	

PORTLAND HABILITATION CENTER INC Portland, OR	RITE AID Wilsonville, OR	SUPERVALU Tacoma, WA
PRIDE Sherwood, OR	ROGUE MATERIAL RECOVERY Central Point, OR	TAYLORMADE PRODUCTS INC Scappoose, OR
PRINCES AUTOMOTIVE Madras, OR	ROSAUER'S SUPER MARKET Hood River, OR	TECHNOLOGY CONSERVATION GROUP INC Portland, OR
PROVIDENCE MEDICAL CENTER Portland, OR	S & H LOGGING Tualatin, OR	THERMO FLUIDS INC Clackamas, OR
QUALITY COMPOST Milton-Freewater, OR	SAFETY KLEEN Elgin, IL	TILLAMOOK COUNTY CREAMERY ASSOCIATION Tillamook, OR
QUANTUM RESOURCES Beaverton, OR	SAFEWAY DISTRIBUTION CENTER Clackamas, OR	TIRE DISPOSAL Molalla, OR
QUICK STOP RECYCLING Portland, OR	SCHNITZER INDUSTRIES Portland, OR	TIRE DISPOSAL & RECOVERY (KRIDER) Prineville, OR
QWEST DEX Lone Tree, CO	SCIENTIFIC DEVELOPMENT INC Eugene, OR	TIRE DISPOSAL & RECYCLING INC Portland, OR
RB RECYCLING Portland, OR	SEAPORT INTERNATIONAL Issaquah, WA	TOTAL RECLAIM INC (ECOLIGHTS NW) Seattle, WA
RB RUBBER McMinnville, OR	SHRED-IT Tualatin, OR	TRAIL'S END RECOVERY Warrenton, OR
REACH INC Klamath Falls, OR	SMURFIT-STONE RECYCLING Portland, OR	TREX COMPANY Winchester, VA
RECALL Kent, WA	SOUTHERN OREGON COMPOST Grants Pass, OR	TUALATIN VALLEY WASTE RECOVERY Hillsboro, OR
RECHARGEABLE BATTERY RECYCLING CORP Atlanta, GA	SP NEWSPRINT CO Newberg, OR	UNIFIED WESTERN GROCERS Milwaukie, OR
RECOLOGY OREGON MATERIAL RECOVERY Portland, OR	SP RECYCLING CORP Clackamas, OR	VAN DUSEN BEVERAGES Astoria, OR
RECYCLE AMERICA Troutdale, OR	SPARC ENTERPRISES Grants Pass, OR	VEOLIA ES ENVIRONMENTAL Vancouver, WA
REKLAIM TECHNOLOGIES Boardman, OR	ST VINCENT DEPAUL Eugene, OR	WALLA WALLA RECYCLING Walla Walla, WA
RESCO PLASTICS INC Coos Bay, OR	ST VINCENT DEPAUL The Dalles, OR	WAL-MART STORES Bentonville, AR
RETRONICS Portland, OR	STAPLES Framingham, MA	WASTE CONTROL RECYCLING Kelso, WA
REXIUS FOREST BY- PRODUCTS Eugene, OR	STAR OF HOPE RECYCLING Coos Bay, OR	WASTE MANAGEMENT
RIMROCK RECYCLING Burns, OR	STRATEGIC MATERIALS, INC San Leandro, CA	
	STRUT The Dalles, OR	

LAMP TRACKER
Phoenix, AZ

WASTE RECOVERY
WEST
Portland, OR

WASTE XPRESS
Portland, OR

WEST UNION
GARDENS
Hillsboro, OR

WEST VANCOUVER
MATERIAL
RECOVERY FAC
Vancouver, WA

WESTERN OREGON
UNIVERSITY
Monmouth, OR

WESTERN PULP
PRODUCTS
Corvallis, OR

WESTERN
RECYCLING
Boise, ID

WHITE CITY
RECYCLERS
White City, OR

WILLAMETTE
LANDSCAPE SUPPLY
COMPOST FACILITY
Salem, OR

WILLAMETTE
RESOURCES
Wilsonville, OR

WINCO
Woodburn, OR

WOOD WASTE
MANAGEMENT
Portland, OR

WOODCO FUEL
Aloha, OR

WRIGHT
CHEVROLET
Fossil, OR

YAMHILL CO SOLID
WASTE
MANAGEMENT
McMinnville, OR

YAQUINA
RECYCLING
Newport, OR

BURCHAMS METALS
Albany, OR

CLYDE & REBECCA
REDMAN
Irrigon, OR

DAVIS RS
RECYCLING
STATION
Clackamas, OR

HAMILTON METALS
Klamath Falls, OR

METRO METALS
NORTHWEST
Portland, OR

PACIFIC RECYCLING
Eugene, OR

RBBG, INC
Parkdale, OR

RIVERGATE -
CALBAG LLC
Portland, OR

SWIFT &
MCCORMICK
Redmond, OR

THE STEEL
RECYCLERS
Roseburg, OR

WINTERS SALVAGE
Tigard, OR

**COLLECTION
SERVICE
PROVIDER
Survey Respondents**

ALLIED WASTE OF
ALBANY LEBANON
Albany, OR

ALLIED WASTE OF
CORVALLIS
Corvallis, OR

ALLIED WASTE OF
DALLAS
Dallas, OR

ALLIED WASTE OF
GRANTS PASS
Grants Pass, OR

ALLIED WASTE OF
MARION COUNTY
Woodburn, OR

ALLIED WASTE OF
SALEM
Salem, OR

BAKER SANITARY
SERVICE
Baker City, OR

BEAVER HILL
INCINERATOR &
DISPOSAL SITE
Coquille, OR

BEND GARBAGE &
RECYCLING CO
Bend, OR

BRANDTS SANITARY
SERVICE
Monmouth, OR

C & B SANITARY
SERVICE
Burns, OR

CART'M
Manzanita, OR

CASCADE
RECYCLING
COMPANY
Bend, OR

CENTRAL COAST
DISPOSAL
Florence, OR

CITY OF CANNON
BEACH
Cannon Beach, OR

CITY OF ELGIN
Elgin, OR

CITY OF HAINES
Haines, OR

CITY OF JUNCTION
CITY
Junction City, OR

CITY OF LONG
CREEK
Long Creek, OR

CITY OF MILTON
FREEWATER
Milton Freewater, OR

CITY OF MONUMENT
Monument, OR

CITY SANITARY &
RECYCLING
McMinnville, OR

CITY SANITARY
SERVICE
Tillamook, OR

CLARKS DISPOSAL
John Day, OR

COBURG SANITARY
SERVICE, INC
Coburg, OR

**SCRAP METAL
Survey Respondents**

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CONDON TRANSFER STATION Condon, OR	INC St. Helens, OR	LES SANITARY SERVICE Coos Bay, OR
CONFEDERATED TRIBES OF THE WARM SPRINGS Warm Springs, OR	EUGENE DROP BOX Eugene, OR	LINCOLN COUNTY SOLID WASTE DISTRICT Newport, OR
COOS BAY SANITARY SERVICE Coos Bay, OR	FINLEY BUTTES LANDFILL Boardman, OR	LORENS SANITATION SERVICE Keizer, OR
COTTAGE GROVE GARBAGE SERVICE, INC Cottage Grove, OR	HIGH COUNTRY DISPOSAL Redmond, OR	MADRAS SANITARY SERVICE Madras, OR
COUNTRYSIDE DISPOSAL SERVICE Junction City, OR	HOLLIDAY ENTERPRISES Prineville, OR	MALHEUR COUNTY ENVIRONMENTAL HEALTH Vale, OR
COUNTY TRANSFER & RECYCLING Elmira, OR	HOOD RIVER GARBAGE, RECYCLE & TRANSFER Hood River, OR	MARION COUNTY PUBLIC WORKS - ENV SERV Salem, OR
CROOK COUNTY LANDFILL Prineville, OR	HORIZON PROJECT INC Milton Freewater, OR	MARION RECYCLING CENTER INC Salem, OR
CROOKED RIVER SANITARY Terrebonne, OR	HUMBERT REFUSE & RECYCLING (RAHN'S) Milton Freewater, OR	MCKENZIE DISPOSAL SERVICE LLC Walterville, OR
CURRY TRANSFER & RECYCLING Brookings, OR	JEFFERSON COUNTY PUBLIC WORKS DEPARTMENT Madras, OR	MEL'S SANITARY SERVICE Tygh Valley, OR
D & O GARBAGE SERVICE INC Salem, OR	JOSEPHINE COUNTY RECYCLING & TRANSFER Grants Pass, OR	MID OREGON RECYCLING Bend, OR
DAHL & DAHL INC, RECYCLING & TRANSFER Waldport, OR	KLAMATH COUNTY SOLID WASTE MANAGEMENT Klamath Falls, OR	NESTUCCA VALLEY SANITARY Hebo, OR
DESCHUTES RECYCLING Bend, OR	KLAMATH DISPOSAL Klamath Falls, OR	NORTH BEND SANITATION North Bend, OR
DESCHUTES TRANSFER CO Bend, OR	KNOTT LANDFILL Bend, OR	NORTH LINCOLN SANITARY SERVICE Lincoln City, OR
DON G AVERILL RECYCLING INC Tillamook, OR	LAKE COUNTY ROAD DEPARTMENT Lakeview, OR	NORTH MARION RECYCLING & DISPOSAL Keizer, OR
DOUGLAS COUNTY PUBLIC WORKS DEPARTMENT Roseburg, OR	LAKEVIEW SANITATION Lakeview, OR	OAKRIDGE SANI-HAUL INC Oakridge, OR
ECOSYSTEMS TRANSFER & RECYCLING Veneta, OR	LANE APEX DISPOSAL Eugene, OR	OCEANSIDE SANITARY SERVICE Tillamook, OR
ENVIRONMENTAL WASTE SYSTEMS	LANE COUNTY SOLID WASTE DIVISION Eugene, OR	

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ONTARIO SANITARY SERVICE INC Ontario, OR	SOUTHERN OREGON SANITATION Eagle Point, OR	NEWBERG Newberg, OR
OREGON WASTE SYSTEMS INC Arlington, OR	SOUTHERN OREGON SANITATION INC Grants Pass, OR	WASTE MANAGEMENT OF COLUMBIA COUNTY St. Helens, OR
PACIFIC SANITATION Salem, OR	STAR GARBAGE SERVICE Eugene, OR	WASTE PRO (CITY GARBAGE SERVICE) La Grande, OR
PENDLETON SANITARY SERVICE, INC Pendleton, OR	SUBURBAN GARBAGE SERVICE Salem, OR	WEST COAST RECYCLING AND TRANSFER Coos Bay, OR
PINE VALLEY RECYCLING COMMITTEE Baker City, OR	SUNRISE ENTERPRISES Roseburg, OR	WESTERN OREGON WASTE McMinnville, OR
R-SANITARY SERVICE Garibaldi, OR	SUTHERLIN SANITARY SERVICE Sutherlin, OR	WHEELER COUNTY COURT Fossil, OR
RECOLOGY ASHLAND SANITARY SERVICE Ashland, OR	SWEET HOME SANITATION SERVICE Sweet Home, OR	WILDERNESS GARBAGE & RECYCLING SERVICE La Pine, OR
REGIONAL DISPOSAL CO Seattle, WA	THE DALLES DISPOSAL SERVICE The Dalles, OR	WINSTON SANITARY SERVICE Winston, OR
RIVERSIDE TRANSPORT SERVICE Arlington, OR	THOMPSONS SANITARY SERVICE Newport, OR	
ROGUE DISPOSAL & RECYCLING, INC Central Point, OR	TOLEDO RECYCLING AND TRANSFER Toledo, OR	METRO COLLECTION SERVICE PROVIDER Survey Respondents
ROSEBURG DISPOSAL CO Roseburg, OR	TRIBAL ENVIRONMENTAL RECOVERY FACILITY Pendleton, OR	AGG ENTERPRISES INC Portland, OR
ROYAL REFUSE SERVICE Eugene, OR	VALLEY LANDFILLS INC Corvallis, OR	ALLIED WASTE OF CLACKAMAS AND WASHINGTON Wilsonville, OR
RYAN MILLER & SONS DISPOSAL SERVICE Heppner, OR	VALLEY RECYCLING AND DISPOSAL, INC Salem, OR	ALLIED WASTE OF LAKE OSWEGO Lake Oswego, OR
S & S DISPOSAL Nyssa, OR	WADSWORTH GARBAGE DISPOSAL SERVICE Coquille, OR	ALLIED WASTE OF PORTLAND Portland, OR
SANIPAC INC Eugene, OR	WALLOWA COUNTY PUBLIC WORKS Enterprise, OR	ALOHA GARBAGE CO Aloha, OR
SANITARY DISPOSAL INC Hermiston, OR	WASCO COUNTY LANDFILL The Dalles, OR	AMERICAN PROPERTY MANAGEMENT Portland, OR
SOURCE RECYCLING Albany, OR	WASTE MANAGEMENT -	ARROW SANITARY (WASTE

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CONNECTIONS) Portland, OR	GRUETTER SANITARY SERVICE Portland, OR	SANDY TRANSFER STATION Sandy, OR
BLISS SANITARY SERVICE Boring, OR	HEIBERG GARBAGE SERVICE Portland, OR	SUNSET GARBAGE COLLECTION INC Portland, OR
CANBY DISPOSAL CO Canby, OR	HILLSBORO GARBAGE DISPOSAL Hillsboro, OR	SWATCO SANITARY SERVICE Banks, OR
CITY OF ROSES DROP BOX SERVICE Portland, OR	HOFFMANN SANITATION Portland, OR	TWELVE MILE DISPOSAL SERVICE Corbett, OR
CITY SANITARY SERVICE Portland, OR	HOODVIEW DISPOSAL & RECYCLING Canby, OR	VALLEY GARBAGE & RECYCLING, INC Beaverton, OR
CLACKAMAS GARBAGE CO Milwaukie, OR	HOUSING AUTHORITY OF PORTLAND Portland, OR	VALLEY WEST REFUSE DISPOSAL INC Aloha, OR
CLOUDBURST RECYCLING Portland, OR	LEHL DISPOSAL INC Canby, OR	WACKER DAVE SANITARY Boring, OR
CORNELIUS DISPOSAL SERVICE Cornelius, OR	MOLALLA SANITARY Oregon City, OR	WALKER DAN DISPOSAL SERVICE Estacada, OR
CROWN POINT REFUSE INC Corbett, OR	MULTNOMAH COUNTY DROP BOX SERVICE Portland, OR	WALKER GARBAGE SERVICE Portland, OR
DEINES, MEL SANITARY SERVICE INC Milwaukie, OR	OAK GROVE DISPOSAL CO INC Milwaukie, OR	WASHINGTON COUNTY DROP BOX Hillsboro, OR
DEYOUNG SANITARY SERVICE Portland, OR	ON SITE DEMOLITION Portland, OR	WASTE MANAGEMENT INC Portland, OR
ECKERT SANITARY SERVICE INC Portland, OR	OREGON CITY GARBAGE CO Oregon City, OR	WASTE MANAGEMENT OF WASHINGTON COUNTY Portland, OR
ELMERS SANITARY SERVICE Portland, OR	PAPASADERO JF & SONS Portland, OR	WEISENFLUH, J & R SANITARY SERVICE Portland, OR
FLANNERY'S DROP BOX SERVICE Fairview, OR	PORTLAND DISPOSAL & RECYCLING Portland, OR	WEITZELS GARBAGE SERVICE & RECYCLING Portland, OR
GARBARINO DISPOSAL SERVICE INC North Plains, OR	PRIDE DISPOSAL Sherwood, OR	WEST LINN REFUSE & RECYCLING INC Canby, OR
GLADSTONE DISPOSAL CO INC Oregon City, OR	RIVER CITY ENVIRONMENTAL Portland, OR	WEST SLOPE GARBAGE SERVICE Portland, OR
GRESHAM SANITARY SERVICE INC Gresham, OR	ROCKWOOD SOLID WASTE INC Gresham, OR	WICHITA SANITARY SERVICE Gladstone, OR

WOODFEATHERS,
INC. Beaverton, OR

**DISPOSAL SITE
Survey Respondents**

ANT FLAT LANDFILL
Enterprise, OR

BAKER SANITARY
LANDFILL
Baker City, OR

BEAVER HILL
INCINERATOR &
DISPOSAL SITE
Coquille, OR

BROWNS ISLAND
DEMOLITION
LANDFILL
Salem, OR

BURNS/HINES
Burns, OR

CHEMULT DISPOSAL
SITE
Klamath Falls, OR

COFFIN BUTTE
SANITARY
LANDFILL
Corvallis, OR

COLUMBIA RIDGE
LANDFILL &
RECYCLING
Arlington, OR

CROOK COUNTY
LANDFILL
Prineville, OR

DELTA SAND &
GRAVEL
DEMOLITION
LANDFILL
Eugene, OR

DIAMOND DISPOSAL
SITE
Burns, OR

DREWSEY DISPOSAL
SITE
Burns, OR

DRY CREEK
DISPOSAL SITE
Medford, OR

ENERGY RECOVERY
FACILITY
Salem, OR

FIELDS DISPOSAL
SITE
Burns, OR

FINLEY BUTTES
LANDFILL
Boardman, OR

FRENCHGLEN
DISPOSAL SITE
Burns, OR

HAINES LANDFILL
Haines, OR

HILLSBORO
LANDFILL
Hillsboro, OR

HUMBERT
SANITARY
LANDFILL
Milton-Freewater, OR

JOE NEY DISPOSAL
SITE
Coquille, OR

KLAMATH FALLS
LANDFILL
Klamath Falls, OR

KNOTT LANDFILL
Bend, OR

LAKE COUNTY
ROAD DEPARTMENT
Lakeview, OR

LARUE SANITARY
Halfway, OR

LYTLE BOULEVARD
LANDFILL
Vale, OR

MILTON-
FREEWATER
LANDFILL
Milton-Freewater, OR

ONTARIO SANITARY
SERVICE INC
Ontario, OR

PRAIRIE CITY
LANDFILL
Prairie City, OR

REGIONAL
DISPOSAL
COMPANY
Seattle, WA

REGIONAL TIRE
RECOVERY AND
DISPOSAL
Prineville, OR

RILEY DISPOSAL
SITE
Burns, OR

RIVERBEND
SANITARY
LANDFILL
McMinnville, OR

ROSEBURG
LANDFILL
Roseburg, OR

SALEM AIRPORT
DISPOSAL SITE
Salem, OR

SHORT MOUNTAIN
LANDFILL
Eugene, OR

TIRE DISPOSAL
Molalla, OR

WASCO COUNTY
LANDFILL
The Dalles, OR