

2008 Oregon Material Recovery and Waste Generation Rates Report



State of Oregon
Department of
Environmental
Quality

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

September 2009



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Acknowledgments

The Department of Environmental Quality's (DEQ) Solid Waste Policy and Program Development Section conducted the 17th annual Oregon Material Recovery Survey for calendar year 2008. DEQ extends its appreciation to industry representatives, collection service providers, and landfill administrators and staff for providing recovery and disposal data for 2008 and to the Metro staff for their work on the survey. Survey staff also thanks DEQ personnel who contributed to the accuracy and integrity of the information contained in this report:

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Executive Summary

This is the Oregon Department of Environmental Quality’s (DEQ) seventeenth annual report on progress in meeting Oregon material recovery and waste generation goals. DEQ analyzes detailed survey and disposal reports for 2008 to compute recovery and waste reduction amounts. DEQ also estimates energy savings and greenhouse gas benefits from waste recovery.

Energy Savings and Greenhouse Gas Reduction

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

Energy savings for 2008 from recycling -

Approximately 30 trillion BTU – the equivalent of 243,000,000 gallons of gasoline, or roughly 2.7 percent of total energy used (2008) by all sectors of the economy in Oregon.

Greenhouse gas reductions in 2008 from recycling, composting and energy recovery -

Approximately 3.3 million metric tons of carbon dioxide equivalents – the equivalent of tailpipe emissions from 660,000 "average" passenger cars, or roughly 4.6 percent of all greenhouse gas emissions statewide (2008).

<i>Total Recovered</i>	=	<i>Recovery Rate</i>
<hr style="width: 50%; margin: 0 auto;"/> <i>Total Generated</i>		2008 OR Rate 48.2%

The amount of greenhouse gas reductions from recovery is significant. Recycling, in particular, is an important tool to reduce greenhouse gas emissions. Recycling cardboard produces the greatest benefit with nearly 1.32 million ton of CO2 equivalent, followed by paper with a little more than 800,000 tons, scrap metal with 550,000 tons and aluminum with 448,000 tons.

2008 Statewide Recovery, Disposal and Generation

Oregon recovered 2,330,509 tons, or 48.2 percent of the municipal post-consumer waste¹ stream in 2008. (To see the individual wasteshed rates, please go to Table 1.) This is an increase of 1.7 percent from the 2007 rate of 46.5 percent. Generation is the sum of all discards that are either disposed or recovered. Total disposal in 2008 equals 2,903,138 tons, and that added with total tons recovered equals 5,233,647 tons of waste generated. This is an 8.2 percent decrease in generation since 2007.

For the first time Oregon is meeting its per capita waste generation goal of no annual increase over the 2005 amount. Per capita waste generation fell by 9.3 percent. This decline equates to even greater greenhouse gas reductions and energy savings. The state also is nearing its recovery rate goal of 50 percent by 2009.

2008 waste generation equates to 2,761 pounds per person per year, compared to 3,045 pounds per person per year in 2007. This decrease correlates to the current economic situation. In hard times, people tend to buy (and discard) less material. Both recovery and disposal tonnages fell in 2008. Since disposal decreased more than recovery, the recovery rate went up while total waste generation went down. This mirrors the state’s goals, which call for increasing recovery rates and decreasing waste generation.

Individual Wastesheds

There are 35 individual wastesheds, each with its own recovery rate. Twenty-seven of these increased recovery rates in 2008, with only eight showing a decrease. The wastesheds have recovery rate goals for 2009. As of 2008, twenty were already meeting their goals.

¹ Municipal post-consumer waste include residential and business recycled, composed, burned for energy recovery and disposed materials. It excludes industrial materials.

Materials Recovered

Materials recovered in 2008 include:

- Electronics – 1 percent
- Plastics – 2 percent
- Glass – 4 percent
- Other – 6 percent

- Paper – 15 percent
- Wood Waste – 16 percent
- Metals – 17 percent
- Cardboard – 18 percent
- Yard Debris 21 percent

Introduction and Purpose

This report describes the results and methodology of Oregon’s 2008 Material Recovery and Waste Generation Survey. Each year, the Department of Environmental Quality compiles data on post-consumer recycling. The survey is sent to all collection service providers and private recycling companies who handle such material. They provide detailed information on materials collected and marketed for recycling, composting, or energy recovery. This survey data is 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> 2,330,509 tons</p>	= <i>Recovery Rate</i>
<hr/> <p><i>Total Generated</i> (=Total Recovered + Total Disposed) 5,233,647</p>	<div style="border: 1px solid black; padding: 5px;"> <p>2008 OR Rate 48.2%</p> </div>

This is the seventeenth 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, with a target date of the year 2009 for achieving this goal. Individual wastesheds have recovery goals for 2009 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

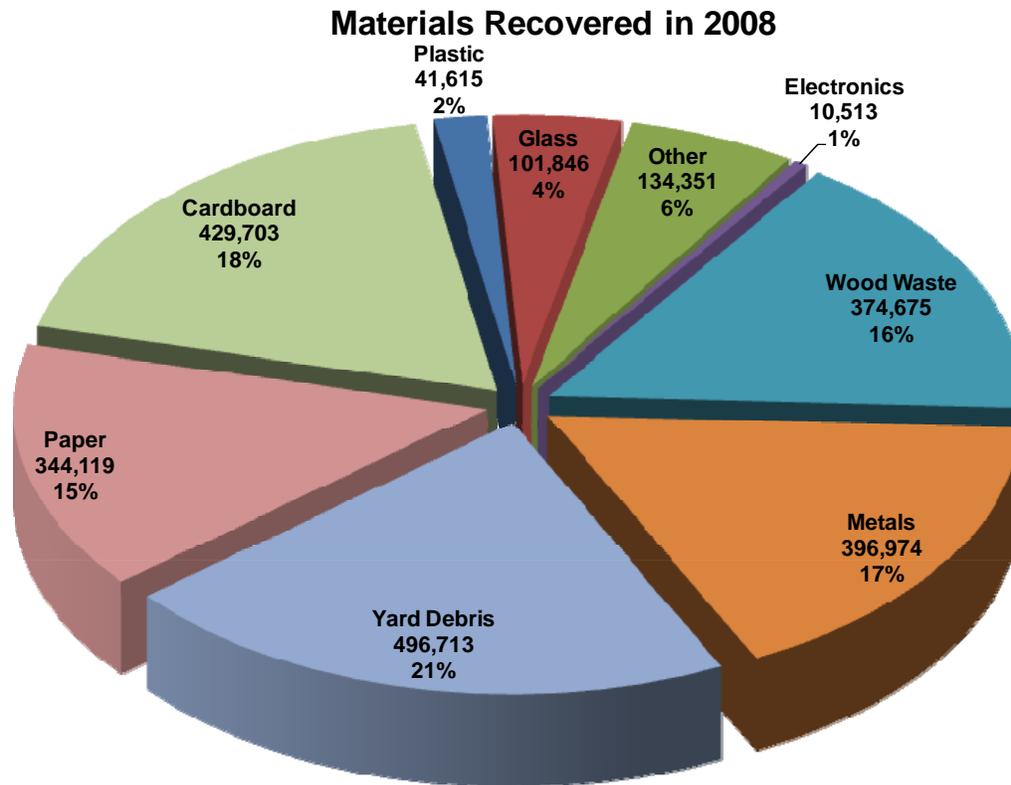
Oregon law requires that all publicly and privately operated recycling and material recovery operations complete a Material Recovery Survey form or be subject to enforcement action. This includes landfills, local recycling collectors, private recycling collection companies and depots, transfer stations, 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.



The first Material Recovery Survey for the 1992 calendar year included 24 types of materials; the 2008 survey contains 33 materials.

The major materials included in 2008 are:

- **Paper** – Paper fiber (combined high-grade paper, newsprint, and mixed waste paper).
- **Cardboard**
- **Plastic** – Rigid plastic containers (#1, PET, #2 HDPE milk jugs and #2 HDPE other), plastic film (#4 LDPE), other plastics (#5 polypropylene and #6 polystyrene) and composite plastic (including carpet pad).
- **Glass** – Container glass and other glass such as windowpanes and ceramics.
- **Other** – Tires, used motor oil, batteries of all types, gypsum, asphalt roofing materials, food waste, animal waste & grease, textiles and paint/solvents
- **Electronics**
- **Wood Waste**
- **Metals** – Tinned Cans, aluminum, and other scrap metals
- **Yard Debris**

Energy Savings and Greenhouse Gas Reduction

DEQ uses the results of the Material Recovery Survey to estimate the energy savings resulting from recycling, as well as reductions in greenhouse gasses 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 (EPA) developed a model utilizing methodology to estimate the amount of per ton energy savings of recycling for a wide variety of materials.²

DEQ applies these estimates to the results of the 2008 survey for only those tons recycled (energy recovery and composting are 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 markets. Regardless, the use of EPA's model allows for a **rough** estimate of the energy saved from materials recycled by Oregonians. DEQ estimates that recycling by Oregon households and businesses in 2008 (counting only wastes generated in Oregon, not those generated elsewhere and shipped to Oregon for recycling) led to energy savings of approximately 30 trillion British thermal units (BTUs).

To put the energy savings number into context, total energy use in Oregon across all sectors (transportation, electricity, heating, industry) in 2008 was 1,112 trillion BTUs. If per capita use remained constant through 2008, then the energy savings from recycling alone equates to a 2.7 percent offset of total energy use. This can also be expressed as equivalent to 243 million gallons of gasoline saved in 2008. 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. However, the energy savings from recycling in Oregon is significant.

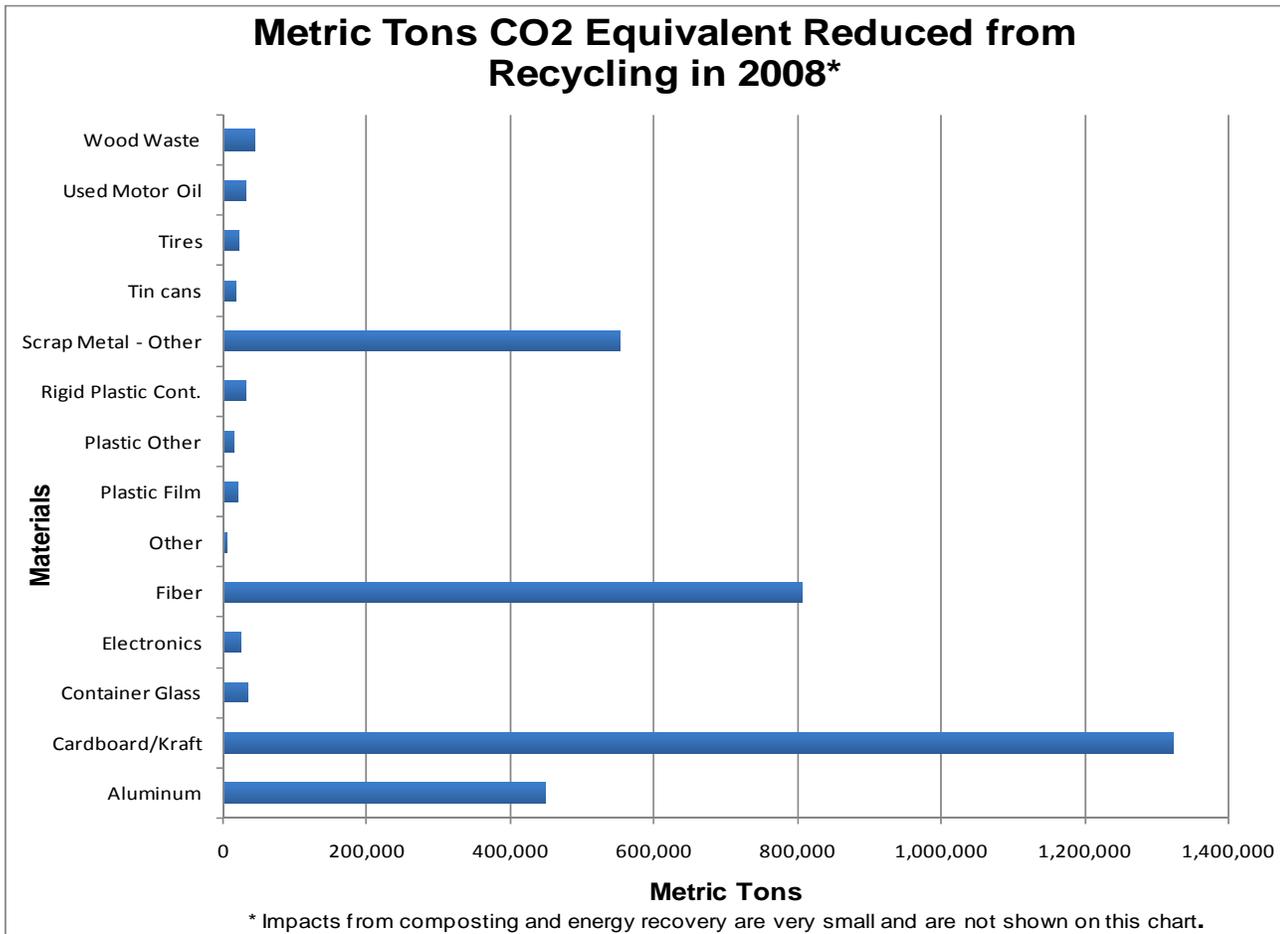
Greenhouse Gases

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.

Net greenhouse gas reductions associated with materials recycled, composted, and burned for energy in 2008 are estimated at 3.3 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 save, greenhouse gas emissions. This is a small amount, and other benefits of composting outweigh this shortfall.

² The methodology for obtaining these estimates changed since 2005. Comparisons should not be made between the results for 2008 and the years before 2006.

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 2008 (based on an estimate of 2005 emissions and projections for 2015), using conventional accounting principles, are estimated at 71.8 million metric tons of carbon dioxide equivalents. Thus, recycling, composting, and **counting** energy recovery provide a greenhouse gas offset or “credit” corresponding to 4.6 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.

Comparing recovery-related greenhouse gas reductions (3.3 million metric tons) with statewide emissions (71.8 million metric tons) is potentially misleading because the emission offsets from materials recycled and composted in 2008 occur over multiple years, while the estimated emissions of 71.8 tons are “same-year” (2008) emissions. The offsets 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 forest and agricultural soils treated with compost. However, just as some of the greenhouse gas benefit from recycling and composting in 2008 will actually occur in subsequent years, some of the greenhouse gas benefit counted for previous years actually occurred in 2008.

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 3.3 million metric tons of carbon dioxide equivalents is comparable to the greenhouse gas benefit of removing approximately 660,000 “average” passenger cars from the state’s stock of 3.2 million registered passenger vehicles. As with energy savings, the greenhouse gas benefit of recycling, composting, and energy recovery is significant. Not generating waste in the first place likely produces even greater greenhouse gas and energy benefits; but they cannot be measured here.

Recovery Rates

DEQ uses total recovered tons as a percentage of total waste generation to determine a recovery rate. This is determined for the state as a whole and for each of the 35 individual watershed in the state. The 2001 Legislature set state and watershed recovery rate goals for 2009 (see Table 1.) The state 2009 recovery rate goal (including credits) is 50 percent.

2008 Statewide Recovery Rate

The state of Oregon recovered 2,330,509 tons of material or 44.5 percent of the municipal post-consumer waste stream in 2008. This rate shows a small increase over the 42.8 percent calculated rate of 2007. The components of this calculation, recovered tons, disposed tons and generated tons (the sum of recovered tons plus disposed tons) decreased since 2007. Total disposed was 2,903,138 tons in 2008 and that added with total recovered equals 5,233,647 tons of total waste generated in 2008.

2008 waste generation shows a decrease of 8.2 percent from the previous year. This decrease correlates to the current economic situation. In hard times, people tend to buy and discard less material. Both recovery and disposal tonnages fell in 2008. Since disposal decreased more than recovery, the recovery rate increased while total waste generation decreased.

2008 waste generation equates to 2,761 pounds per person per year (7.56 pounds per day), compared to 3,045 pounds per person per year (8.34 pounds per day) in 2007, an unprecedented decrease of 9.3 percent.

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 two percent reuse and residential composting credits earned by watersheds. This statutory change requires a more complex series of calculations to determine the total recovery rate.

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

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	2,478,822 ¹	43.4%	47.2%
2007	2,437,569 ¹	42.8%	46.5%
2008	2,330,509	44.5%	48.2%

* 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 two percent credits for reuse and residential composting were included in each watershed's calculated recovery rate, holding disposal tonnage as a constant. For watersheds where no two 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. Material is allocated back to watersheds using population only 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 or not watersheds are achieving their recovery goals.

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 2008, 19,595 tons of waste burned for energy in the county's waste-to-energy incinerator was 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 two percent credits toward their recovery rates if they certify that they implemented programs in waste prevention, residential composting, or reuse (one two percent credit for each program, for a potential total of six percent).

Eighteen watersheds received at least one two percent credit in 2008.

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

³ The percentages are from the 2007 Marion County waste composition study.

Wasteshed Recovery Rates.

Twenty-seven of the 35 wastesheds had total recovery rates in 2008 that were equal to or greater than their 2007 rates. To measure progress toward the statewide recovery goals, each wasteshed set 2005 and 2009 goals; these were incorporated into Oregon Revised Statute 459A.010. (Wasteshed recovery rates existed in statute for 1995, but these were replaced by the 2001 Legislature with the goals for 2005 and 2009.) Twenty wastesheds are already meeting their 2009 recovery rate goals.

Table 1 shows a breakdown of 2008 recovery rates by wasteshed, and Table 2 gives the amount of materials recovered in 2008 by wasteshed. Table 3 shows the amount of solid waste disposed by wasteshed in 2008. For a historical look at recovery, disposal, and generation data in Oregon, 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

2008 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, 61.0 percent of the material recovered in Oregon was recycled, 22.1 percent was burned for energy, and 16.9 percent was composted.

Metals. The total amount of recovered metals dropped a fraction of a percentage point. The increase in aluminum was offset by a decrease in tinned cans and scrap metal.

Paper. For the second year in a row, paper recovery stayed about the same. Changes in individual paper grades are not tracked since 2006. In 2007, DEQ changed paper reporting to a combined number for high grade, mixed waste paper and newsprint. With new machinery at the sorting facilities and the paper mills, the distinction in paper grades is less defined.

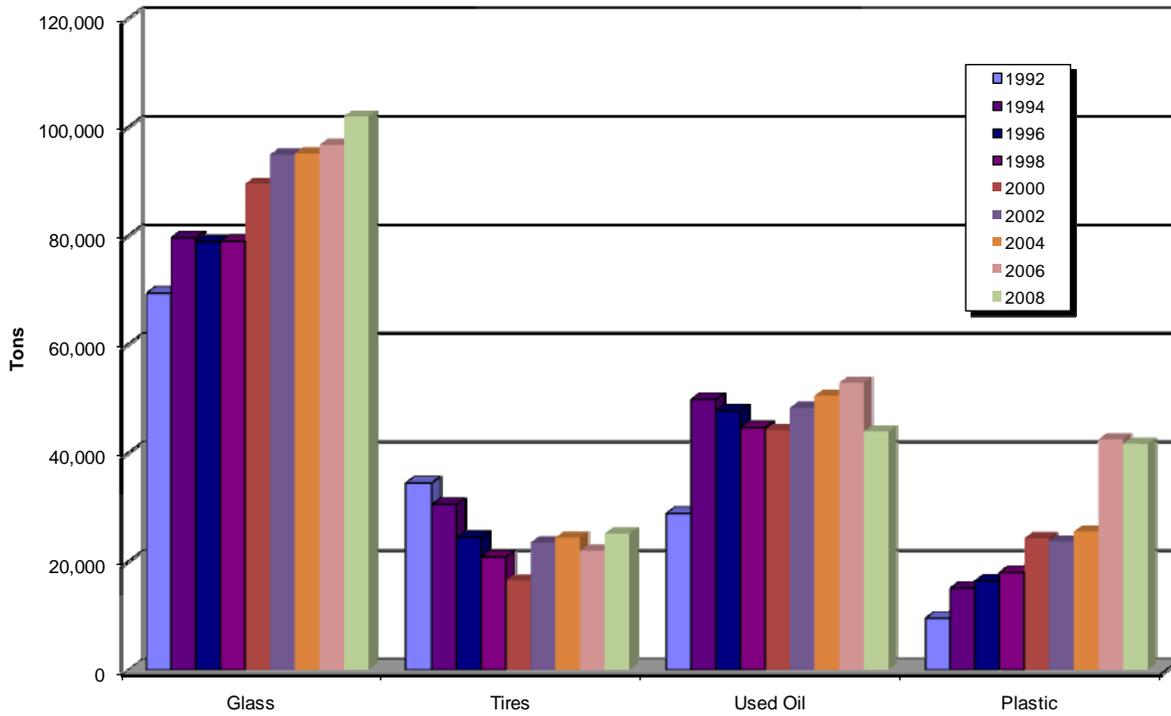
Plastic. Total plastics recycling stayed nearly the same since last year, showing a tiny decrease.

Glass. Glass recovery rose nearly four percent, the largest increase in recent years. This may be due to increased accuracy in reported numbers or may be a temporary fluctuation.

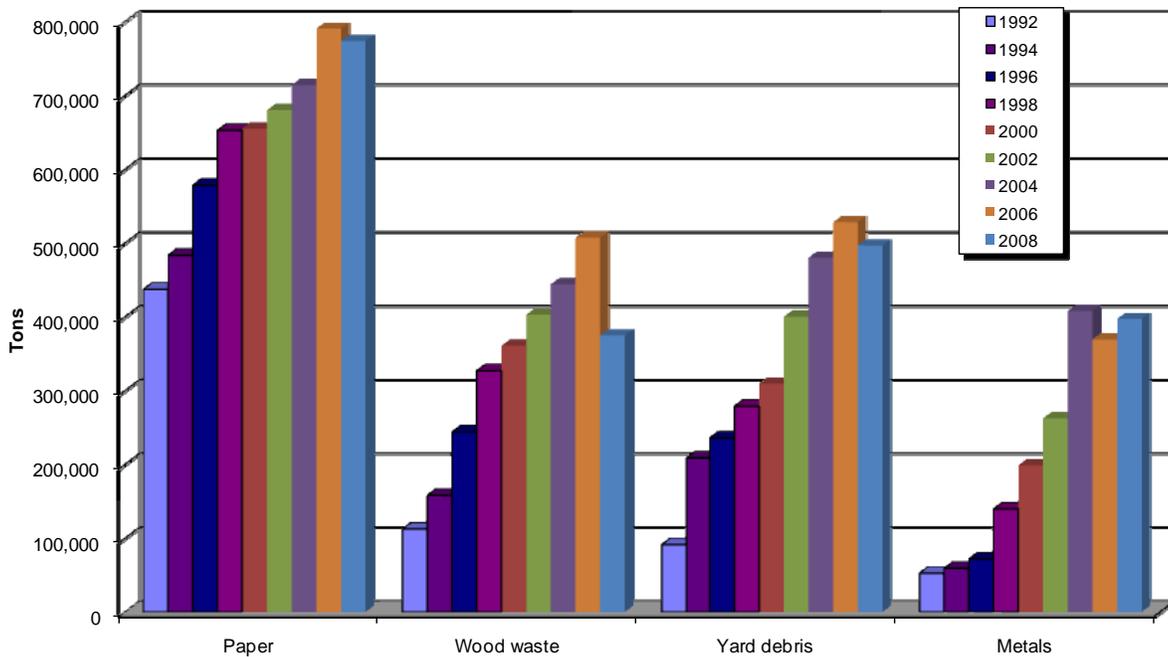
Electronics. This material showed seven percent increase. The increase is due to more emphasis being placed on increasing the opportunities for recovery for electronics and companies gearing up for the Oregon E-Cycles program, which began in 2009.

Organics. The amount of recovered organic material (food, yard and wood wastes) decreased 11 percent in 2008. Collection of these materials is down, a likely effect of the economic downturn.

**Materials Recovered in Oregon
1992 - 2008**



**Materials Recovered in Oregon
1992 - 2008**

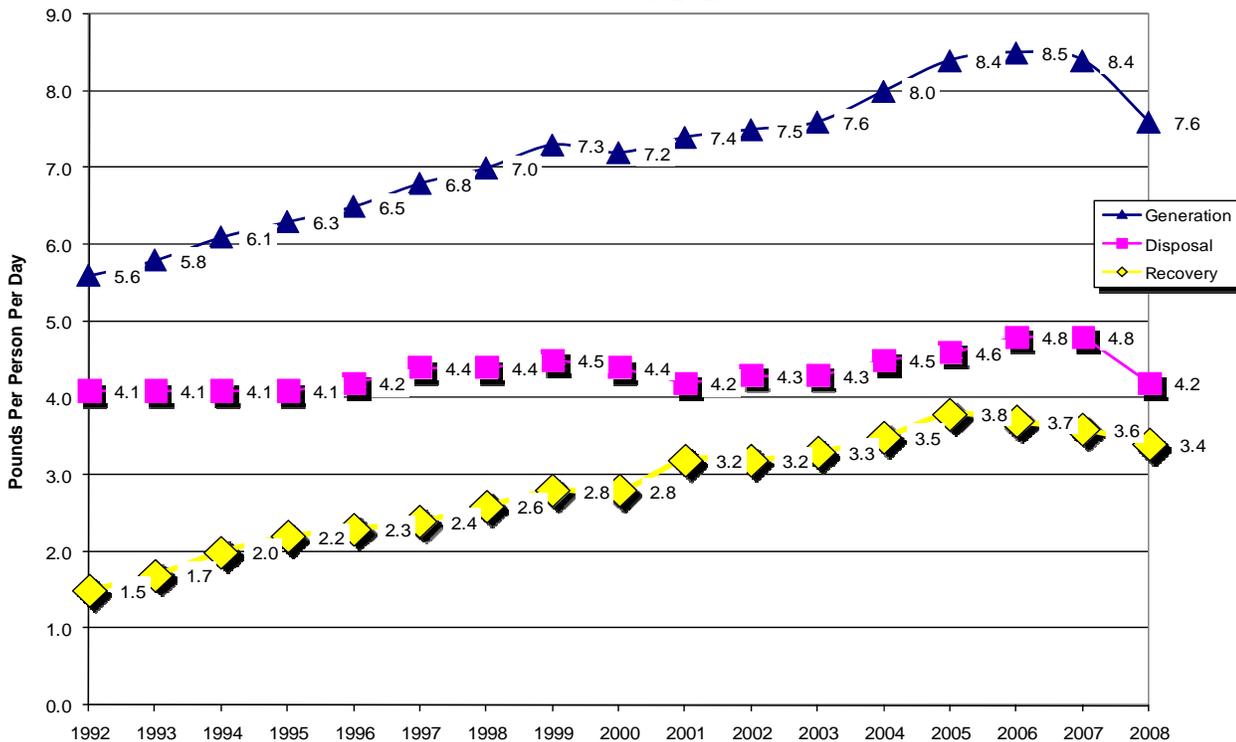


Waste Generation

Survey results show that the total amount of municipal solid waste generated (materials recovered plus waste disposed) in Oregon decreased for the second year in a row. Per capita waste generation dropped 9.3 percent from 2007 to 2008. The state 2005 waste generation goal states that beginning in 2005 there should be no annual increase in per capita municipal solid waste generation. As is shown in the chart below, Oregon met that goal in 2008.

Environmentally, the decline in both total and per capita waste generation 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 half of the country’s greenhouse gas emissions are associated with the production and transportation of goods. The leveling off of waste generation in 2007 and 2008 may indicate a leveling off in the emissions of unwanted greenhouse gases in all stages of the life cycle of materials. Further research is needed to evaluate this hypothesis.

**Oregon Generation, Disposal and Recovery Per Capita
1992 - 2008**



2008 Disposition of Total Waste Generated

Disposed*	55.5 percent
Recycled	27.2 percent
Composted	7.5 percent
Recovered for Energy*	9.8 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 2008 are significant and compare to nearly 243 million gallons of gasoline or nearly three percent of Oregon's total 2008 energy use. The greenhouse gas reductions from material recovery in 2008 were 3.3 million metric tons of CO₂ equivalents. Composting, energy recovery and recycling contribute to the benefits, but even larger benefits come from reducing waste generation.

Oregon is nearing its 2009 recovery rate goal of 50 percent with its 2008 rate of 48.2 percent, an increase from 46.5 percent in 2007. Total waste generation in 2008 topped 5 million tons for the fifth year in a row, with per capita waste generation declining 9.3 percent, to 2,761 pounds per person. As a rough proxy for consumption, this drop in per capita waste generation suggests that Oregonians are buying and using less. While some of this decline is due to the sluggish economy, individuals and businesses are also making changes that may help to keep waste generation on 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 work together to provide this annual recovery rate calculation which gives a reliable estimate of the generation, recovery, and disposal of solid waste in Oregon in 2008. 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 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 wasteshed of origin.
- For 2006 and 2007, some non-counting slaughterhouse material was deleted from the recovered tonnage.
- Sawdust material from manufacturing was deleted for 2006 and 2007.
- Beginning with 2006, material previously identified as "CD – Construction and Demolition" was separated out into individual materials.
- Textiles previously counted were determined to be re-used, which does not count for recovery. 2006 and 2007 recovered tonnage was decreased.
- Some gypsum sent for disposal was included in the 2006 and 2007 tonnage – this was removed.

2008 Survey Report Tables

Table 1: Wasteshed Recovery Rates, 2008

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	12,972.6	3,365.8	16,338.3	20.6%			2%	22.6%	25%
Benton	54,674.9	38,083.4	92,758.3	41.1%	2%	2%	2%	47.1%	50%
Clatsop	36,529.3	23,885.9	60,415.2	39.5%				39.5%	25%
Columbia	30,412.4	12,969.5	43,381.9	29.9%				29.9%	32%
Coos	47,265.6	13,454.8	60,720.4	22.2%				22.2%	30%
Crook	15,826.9	7,849.3	23,676.2	33.2%				33.2%	20%
Curry	19,469.6	5,119.2	24,588.8	20.8%	2%	2%		24.8%	30%
Deschutes	142,399.7	65,115.8	207,515.4	31.4%	2%	2%	2%	37.4%	45%
Douglas	84,164.3	43,923.8	128,088.1	34.3%	2%	2%	2%	40.3%	40%
Gilliam	2,196.8	371.1	2,567.9	14.5%				14.5%	20%
Grant	3,949.2	1,324.6	5,273.8	25.1%				25.1%	19%
Harney	3,079.8	1,562.9	4,642.8	33.7%				33.7%	40%
Hood River	19,035.1	7,411.5	26,446.6	28.0%	2%	2%	2%	34.0%	25%
Jackson	159,636.5	76,326.3	235,962.7	32.3%	2%	2%	2%	38.3%	40%
Jefferson	12,243.1	6,216.6	18,459.7	33.7%				33.7%	25%
Josephine	56,444.8	35,957.6	92,402.3	38.9%	2%	2%	2%	44.9%	38%
Klamath	58,740.0	48,816.6	107,556.6	45.4%				45.4%	20%
Lake	5,599.4	2,949.6	8,549.0	34.5%				34.5%	10%
Lane	251,260.0	217,197.7	468,457.7	46.4%	2%	2%	2%	52.4%	54%
Lincoln	47,876.1	21,401.0	69,277.0	30.9%				30.9%	20%
Linn	76,961.1	54,166.6	131,127.7	41.3%	2%	2%	2%	47.3%	40%
Malheur	23,008.0	6,436.8	29,444.8	21.9%				21.9%	22%
Marion ⁴	217,172.2	239,442.2	456,614.4	52.4%	2%	2%	2%	58.4%	54%
Metro	1,198,916.3	1,235,603.3	2,434,519.6	50.8%	2%	2%	2%	56.8%	64%
Milton-Freewater	4,770.0	3,598.3	8,368.2	43.0%				43.0%	25%
Morrow	11,763.2	3,868.4	15,631.6	24.7%				24.7%	20%
Polk	39,339.9	34,827.9	74,167.8	47.0%	2%		2%	51.0%	35%
Sherman	1,478.3	256.9	1,735.2	14.8%	2%			16.8%	20%
Tillamook	26,046.2	11,993.2	38,039.4	31.5%				31.5%	30%
Umatilla	66,679.4	40,615.1	107,294.5	37.9%				37.9%	20%
Union	19,055.4	8,101.5	27,157.0	29.8%			2%	31.8%	25%
Wallowa	4,220.5	1,338.6	5,559.1	24.1%				24.1%	20%
Wasco	21,387.4	6,595.6	27,983.0	23.6%	2%			25.6%	35%
Wheeler	445.6	166.1	611.7	27.2%				27.2%	20%
Yamhill	128,118.3	50,195.8	178,314.1	28.2%	2%	2%	2%	34.2%	45%
OR Totals³	2,903,138	2,330,509	5,233,647	44.5%				48.2%	

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 19,595 tons of recyclable materials burned for energy in 2008 (per ORS 459A.010(3)(f)(B)).

⁵ ORS 459A.010(6).

Table 2: Amount Recovered in 2008 by Wasteshed

Wasteshed	2008 Tons Recovered	2008 Pounds Per Capita	2008 Wasteshed Population
Baker	3,366	409	16,457
Benton	38,083	962	79,139
Clatsop	23,886	1,267	37,696
Columbia	12,969	539	48,094
Coos	13,455	426	63,210
Crook	7,849	585	26,845
Curry	5,119	476	21,510
Deschutes	65,116	780	167,017
Douglas	43,924	835	105,241
Gilliam	371	394	1,884
Grant	1,325	352	7,528
Harney	1,563	406	7,705
Hood River	7,412	685	21,625
Jackson	76,326	744	205,304
Jefferson	6,217	554	22,450
Josephine	35,958	863	83,288
Klamath	48,817	1,475	66,179
Lake	2,950	778	7,585
Lane	217,198	1,256	345,878
Lincoln	21,401	957	44,713
Linn	54,167	923	117,359
Malheur	6,437	406	31,676
Marion*	239,442	1,522	314,672
Metro	1235603.322	1,531	1,614,468
Milton-Freewater	3,598	994	7,238
Morrow	3,868	620	12,484
Polk	34827.864	1,032	67,515
Sherman	257	279	1,843
Tillamook	11,993	921	26,058
Umatilla	40,615	1,247	65,140
Union	8,102	639	25,361
Wallowa	1,339	376	7,113
Wasco	6,596	546	24,169
Wheeler	166	211	1,573
Yamhill	50,196	1,056	95,043
OREGON TOTALS	2,330,509	1,229	3,791,060

Source for population data is the Center for Population Research and Census, Portland State University, published April 1, 2009. 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 2008 by Wasteshed

Wasteshed	2008 Tons Disposed	2008 Pounds Per Capita	2008 Wasteshed Population
Baker	12,973	1,577	16,457
Benton	54,675	1,382	79,139
Clatsop	36,529	1,938	37,696
Columbia	30,412	1,265	48,094
Coos	47,266	1,496	63,210
Crook	15,827	1,179	26,845
Curry	19,470	1,810	21,510
Deschutes	142,400	1,705	167,017
Douglas	84,164	1,599	105,241
Gilliam	2,197	2,333	1,884
Grant	3,949	1,049	7,528
Harney	3,080	799	7,705
Hood River	19,035	1,760	21,625
Jackson	159,636	1,555	205,304
Jefferson	12,243	1,091	22,450
Josephine	56,445	1,355	83,288
Klamath	58,740	1,775	66,179
Lake	5,599	1,476	7,585
Lane	251,260	1,453	345,878
Lincoln	47,876	2,141	44,713
Linn	76,961	1,312	117,359
Malheur	23,008	1,453	31,676
Marion*	217,172	1,380	314,672
Metro	1,198,916	1,485	1,614,468
Milton-Freewater	4,770	1,318	7,238
Morrow	11,763	1,885	12,484
Polk	39,340	1,165	67,515
Sherman	1,478	1,604	1,843
Tillamook	26,046	1,999	26,058
Umatilla	66,679	2,047	65,140
Union	19,055	1,503	25,361
Wallowa	4,221	1,187	7,113
Wasco	21,387	1,770	24,169
Wheeler	446	567	1,573
Yamhill	128,118	2,696	95,043
OREGON TOTALS	2,903,138	1,532	3,791,060

Source for population data is the Center for Population Research and Census, Portland State University, published April 1, 2009. Westsheds 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, 1992-2008

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*
Baker	10%	14%	17%	22%	25%	19%	19%	18%	18%	24%	21%	22%	20%	23%	17%	22%	21%
Benton	27%	30%	36%	35%	37%	41%	41%	35%	35%	41%	41%	39%	43%	40%	36%	39%	41%
Clatsop	19%	22%	20%	19%	20%	23%	22%	24%	25%	28%	25%	29%	31%	39%	34%	34%	40%
Columbia	34%	28%	22%	27%	22%	28%	29%	25%	31%	38%	34%	38%	31%	32%	30%	28%	30%
Coos	21%	20%	23%	28%	29%	28%	27%	22%	23%	23%	26%	21%	21%	23%	21%	20%	22%
Crook	16%	23%	19%	30%	23%	15%	14%	23%	27%	37%	27%	14%	21%	21%	26%	25%	33%
Curry	21%	25%	27%	31%	35%	33%	29%	27%	41%	39%	36%	25%	25%	15%	18%	24%	21%
Deschutes	15%	18%	24%	22%	23%	25%	32%	25%	31%	29%	27%	28%	27%	28%	27%	30%	31%
Douglas	26%	23%	23%	24%	26%	29%	30%	26%	26%	30%	29%	29%	31%	25%	24%	26%	34%
Gilliam	17%	6%	15%	20%	19%	21%	18%	15%	14%	13%	20%	10%	11%	7%	8%	13%	14%
Grant	18%	14%	16%	19%	16%	15%	16%	18%	19%	19%	18%	16%	19%	28%	21%	24%	25%
Harney	18%	21%	20%	34%	24%	21%	34%	34%	20%	27%	28%	27%	21%	27%	28%	25%	34%
Hood River	16%	24%	26%	16%	17%	17%	17%	19%	18%	30%	34%	35%	37%	36%	33%	30%	28%
Jackson	15%	19%	35%	33%	34%	34%	34%	29%	28%	32%	36%	32%	31%	32%	34%	30%	32%
Jefferson	21%	16%	18%	22%	24%	33%	33%	21%	27%	27%	21%	23%	34%	33%	28%	36%	34%
Josephine	14%	19%	27%	34%	38%	37%	41%	42%	33%	34%	37%	35%	37%	37%	39%	34%	39%
Klamath	13%	12%	17%	18%	15%	16%	17%	15%	18%	31%	30%	23%	31%	37%	34%	35%	45%
Lake	6%	6%	9%	8%	7%	6%	8%	11%	8%	11%	11%	25%	25%	15%	19%	22%	35%
Lane	19%	28%	32%	32%	39%	39%	40%	41%	46%	46%	44%	46%	45%	48%	47%	46%	46%
Lincoln	20%	20%	21%	19%	16%	19%	20%	19%	23%	28%	27%	28%	29%	33%	26%	28%	31%
Linn	15%	27%	29%	30%	32%	33%	31%	33%	29%	34%	38%	34%	44%	43%	41%	37%	41%
Malheur	19%	15%	12%	15%	20%	19%	22%	24%	25%	26%	27%	26%	27%	25%	23%	23%	22%
Marion	26%	27%	27%	29%	28%	28%	30%	32%	38%	**50%	**51%	**47%	**47%	**50%	**51%	**52%	**52%
Metro	35%	37%	39%	42%	41%	42%	43%	43%	45%	49%	47%	50%	51%	53%	49%	49%	51%
Milton-Freewater	16%	13%	13%	22%	21%	20%	19%	18%	21%	21%	24%	25%	24%	30%	33%	31%	43%
Morrow	11%	16%	13%	12%	13%	17%	17%	20%	15%	16%	16%	20%	20%	14%	21%	26%	25%
Polk	20%	25%	24%	23%	19%	24%	26%	29%	33%	39%	38%	43%	44%	50%	48%	46%	47%
Sherman	24%	17%	20%	20%	21%	11%	16%	24%	17%	15%	14%	16%	26%	16%	19%	16%	15%
Tillamook	31%	27%	28%	27%	26%	26%	26%	28%	26%	28%	28%	27%	39%	37%	33%	31%	32%
Umatilla	14%	15%	15%	19%	20%	25%	24%	25%	26%	28%	35%	33%	36%	36%	35%	36%	38%
Union	16%	19%	21%	30%	26%	29%	27%	24%	22%	22%	28%	26%	27%	27%	34%	32%	30%
Wallowa	6%	8%	11%	18%	11%	16%	16%	19%	21%	19%	19%	16%	18%	19%	22%	27%	24%
Wasco	25%	23%	26%	29%	30%	29%	31%	34%	34%	26%	28%	31%	25%	24%	19%	23%	24%
Wheeler	7%	8%	11%	24%	20%	20%	25%	18%	14%	13%	25%	27%	16%	34%	24%	27%	27%
Yamhill	19%	22%	25%	30%	35%	25%	31%	36%	44%	49%	54%	42%	50%	45%	39%	31%	28%
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%	43.4%	42.8%	44.5%

*does not include 2% credits

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

Table 5: Oregon Amount Recovered by Wasteshed, 1992-2008

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.)	Change in Per Capita 2008-07	
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	-5.72%	
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	38,083	962	4.36%	
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	23,886	1,267	24.67%	
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	12,934	551	13,647	574	12,969	539	-6.01%	
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	13,455	426	10.35%	
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	7,849	585	8.06%	
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	7,003	662	3,992	377	4,830	452	6,632	618	5,119	476	-22.94%	
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	65,116	780	-16.79%	
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	42,007	821	33,960	660	31,980	616	36,158	691	43,924	835	20.83%	
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	371	394	23.54%	
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	-0.60%	
Harney	600	171	648	179	678	188	921	248	806	212	1,076	283	1,099	289	1,034	283	820	214	1,149	300	1,165	304	1,203	313	1,563	406	29.46%	
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	7,412	685	-12.03%	
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	76,326	744	-6.48%	
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	-24.98%	
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	35,958	863	7.98%	
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	48,817	1,475	40.71%	
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	73.97%	
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	248,550	1,463	237,578	1,385	217,198	1,256	-9.30%	
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	21,401	957	6.62%	
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	54,167	923	3.98%	
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	-8.79%	
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	259,257	1,692	251,673	1,619	239,442	1,522	-6.01%	
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	1,327,586	1,692	1,325,112	1,663	1,235,603	1,531	-7.97%	
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	38.53%	
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	-3.65%	
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	1.81%	
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	257	279	8.21%	
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	11,993	921	4.03%	
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	40,615	1,247	6.66%	
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	-12.13%	
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	-24.05%	
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	6,596	546	-0.99%	
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	-18.91%	
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	50,196	1,056	-14.31%	
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	2,478,822	1,343	2,437,569	1,302	2,330,509	1,229	-5.54%	
change in total from previous year			14.80%		6.45%		9.77%		8.58%		13.21%		1.51%		4.32%		9.46%		8.9%		-1.77%		-1.66%		-4.39%			
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%		-3.34%		-3.11%		-5.54%			

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 6: Oregon Solid Waste Disposed by Wastshed, 1992-2008

Wastshed	1992 Disposed (tons)	Per Capita (lbs.)	1994 Disposed (tons)	Per Capita (lbs.)	1996 Disposed (tons)	Per Capita (lbs.)	1998 Disposed (tons)	Per Capita (lbs.)	2000 Disposed (tons)	Per Capita (lbs.)	2001 Disposed (tons)	Per Capita (lbs.)	2002 Disposed (tons)	Per Capita (lbs.)	2003 Disposed (tons)	Per Capita (lbs.)	2004 Disposed (tons)	Per Capita (lbs.)	2005 Disposed (tons)	Per Capita (lbs.)	2006 Disposed (tons)	Per Capita (lbs.)	2007 Disposed (tons)	Per Capita (lbs.)	2008 Disposed (tons)	Per Capita (lbs.)	Change in Per Capita 2008-07
Baker	8,419	1,062	8,253	1,005	10,897	1,310	12,376	1,472	12,617	1,507	11,317	1,355	13,047	1,563	12,590	1,526	12,122	1,465	12,734	1,543	13,770	1,672	12,730	1,549	12,973	1,577	1.77%
Benton	58,761	1,713	43,586	1,224	50,840	1,390	45,551	1,234	53,835	1,472	51,577	1,399	52,377	1,406	53,861	1,447	55,849	1,479	58,322	1,527	62,940	1,622	57,109	1,451	54,675	1,382	-4.79%
Clatsop	22,263	1,299	27,939	1,587	28,671	1,623	30,716	1,726	31,489	1,764	31,318	1,747	33,745	1,870	33,400	1,840	33,492	1,840	35,717	1,950	38,125	2,058	36,874	1,970	36,529	1,938	-1.61%
Columbia	15,131	780	18,314	918	22,650	1,095	23,004	1,078	23,201	1,062	23,197	1,047	23,130	1,037	24,133	1,073	25,420	1,114	28,082	1,215	29,541	1,258	34,317	1,443	30,412	1,265	-12.35%
Coos	37,596	1,211	39,014	1,234	36,436	1,148	37,434	1,184	39,329	1,253	37,711	1,198	40,349	1,288	43,520	1,382	46,378	1,479	46,433	1,481	50,868	1,617	49,459	1,569	47,266	1,496	-4.68%
Crook	8,378	1,091	6,621	805	10,646	1,224	14,232	1,552	13,841	1,434	11,872	1,196	16,907	1,674	16,877	1,663	16,920	1,639	18,638	1,637	20,566	1,677	20,956	1,619	15,827	1,179	-27.18%
Curry	10,555	1,062	11,278	1,089	11,121	1,059	12,264	1,166	14,644	1,382	14,996	1,392	17,986	1,693	20,372	1,931	20,791	1,966	22,582	2,131	21,834	2,044	21,404	1,993	19,470	1,810	-9.19%
Deschutes	72,529	1,720	98,801	2,155	103,397	2,070	101,313	1,884	111,013	1,904	120,334	1,972	129,607	2,049	135,235	2,073	151,494	2,237	160,708	2,240	188,146	2,466	177,593	2,209	142,400	1,705	-22.80%
Douglas	85,040	1,772	93,566	1,917	87,325	1,751	86,369	1,718	89,451	1,780	90,379	1,786	85,648	1,691	87,899	1,727	92,684	1,811	103,833	2,018	103,061	1,985	103,772	1,983	84,164	1,599	-19.33%
Gilliam	872	1,008	1,128	1,254	1,176	1,271	1,320	1,405	1,663	1,751	1,622	1,707	1,508	1,587	2,357	2,481	2,082	2,192	2,217	2,346	2,429	2,577	2,026	2,150	2,197	2,333	8.50%
Grant	4,178	1,063	4,629	1,165	3,492	869	3,174	782	3,441	866	3,790	972	4,301	1,110	3,939	1,030	3,987	1,029	4,233	1,102	3,918	1,027	4,211	1,111	3,949	1,049	-5.57%
Harney	2,650	756	2,579	713	2,126	591	1,794	484	3,160	832	2,892	761	2,889	760	2,748	753	3,039	794	3,139	819	2,999	782	3,578	932	3,080	799	-14.21%
Hood River	9,959	1,139	9,509	1,035	16,016	1,659	14,931	1,502	15,741	1,536	15,397	1,495	15,710	1,536	16,229	1,583	16,780	1,594	17,332	1,637	18,620	1,745	19,965	1,860	19,035	1,760	-5.34%
Jackson	98,002	1,265	108,813	1,331	115,011	1,348	136,337	1,544	165,129	1,813	152,562	1,652	155,293	1,656	176,162	1,863	184,353	1,928	183,543	1,887	182,404	1,837	184,062	1,820	159,636	1,555	-14.54%
Jefferson	4,813	645	8,380	1,026	8,380	965	8,709	947	8,709	1,033	10,929	1,127	11,744	1,183	10,358	1,041	12,436	1,228	13,680	1,328	14,385	1,344	14,348	1,303	12,243	1,091	-16.27%
Josephine	47,687	1,457	34,399	991	35,873	992	40,518	1,089	54,033	1,421	50,436	1,313	56,070	1,444	58,593	1,496	61,211	1,558	62,774	1,576	66,105	1,630	63,004	1,529	56,445	1,355	-11.38%
Klamath	57,247	1,950	59,498	1,964	66,874	2,153	62,603	1,980	64,619	2,023	48,182	1,501	57,802	1,791	58,897	1,823	60,699	1,873	64,739	1,990	72,315	2,210	64,641	1,964	58,740	1,775	-9.63%
Lake	4,364	1,196	5,859	1,575	7,468	2,002	6,361	1,724	4,057	1,089	5,120	1,365	4,833	1,297	4,925	1,331	4,891	1,304	5,932	1,581	5,651	1,499	6,051	1,600	5,599	1,476	-7.71%
Lane	302,695	2,072	251,328	1,668	239,310	1,542	261,958	1,644	256,205	1,582	240,984	1,479	258,470	1,575	256,204	1,556	260,859	1,565	266,729	1,587	278,318	1,638	275,032	1,603	251,260	1,453	-9.37%
Lincoln	27,601	1,355	32,766	1,526	42,443	1,908	41,127	1,834	40,406	1,812	38,835	1,740	40,675	1,820	40,555	1,802	43,263	1,949	46,014	2,072	50,537	2,270	52,580	2,356	47,876	2,141	-9.12%
Linn	94,644	1,931	63,079	1,251	69,506	1,328	75,807	1,417	83,701	1,540	70,471	1,294	71,571	1,307	75,185	1,353	73,780	1,309	81,764	1,437	89,163	1,551	86,370	1,488	76,961	1,312	-11.84%
Malheur	13,815	996	15,948	1,109	18,776	1,246	20,052	1,288	21,338	1,344	20,995	1,312	22,079	1,380	21,007	1,313	21,656	1,360	22,734	1,430	23,292	1,468	24,152	1,528	23,008	1,453	-4.91%
Marion	158,109	1,307	195,990	1,540	219,182	1,648	237,166	1,714	222,098	1,552	194,190	1,347	197,699	1,360	211,510	1,430	225,430	1,512	242,809	1,608	245,150	1,600	247,331	1,591	217,172	1,380	-13.25%
Metro	945,634	1,516	977,730	1,501	1,097,246	1,613	1,196,486	1,697	1,207,348	1,663	1,151,339	1,569	1,165,762	1,571	1,185,743	1,577	1,234,687	1,622	1,263,721	1,637	1,357,394	1,730	1,374,548	1,725	1,198,916	1,485	-13.92%
Milton-Freew.	4,642	1,649	5,070	1,729	4,332	1,431	5,586	1,719	5,029	1,549	5,024	1,532	5,235	1,623	5,280	1,625	5,888	1,812	5,168	1,580	5,349	1,625	5,280	1,612	4,770	1,318	-18.24%
Morrow	7,221	1,763	5,685	1,298	5,883	1,264	5,893	1,164	8,253	1,487	7,394	1,326	8,620	1,532	7,893	1,344	9,152	1,558	9,053	1,516	10,506	1,733	11,041	1,790	11,763	1,885	5.27%
Polk	19,036	729	24,190	877	28,655	1,000	36,790	1,221	37,322	1,204	34,914	1,110	38,102	1,215	37,402	1,182	41,300	1,286	39,969	1,231	41,453	1,257	39,129	1,172	39,340	1,165	-0.55%
Sherman	876	903	804	825	987	1,028	1,092	1,138	1,031	1,057	1,306	1,375	1,552	1,677	1,243	1,308	1,244	1,310	961	1,022	1,021	1,095	1,219	1,314	1,478	1,604	22.09%
Tillamook	9,940	893	13,488	1,168	15,212	1,271	15,063	1,249	17,807	1,466	18,324	1,490	18,405	1,496	19,538	1,569	20,813	1,668	21,437	1,701	24,988	1,958	25,952	2,008	26,046	1,999	-0.46%
Umatilla	41,059	1,461	47,273	1,616	51,388	1,709	52,484	1,700	57,952	1,801	59,854	1,861	61,143	1,894	62,530	1,936	64,978	1,977	67,622	1,750	65,980	2,011	66,860	2,035	66,679	2,047	0.58%
Union	12,866	1,069	16,010	1,287	14,676	1,181	15,610	1,266	18,311	1,492	20,051	1,633	19,065	1,550	19,509	1,583	19,900	1,602	19,401	1,555	14,801	1,179	19,923	1,578	19,055	1,503	-4.77%
Wallowa	6,801	1,876	7,104	1,905	4,024	1,076	4,526	1,233	4,655	1,284	4,393	1,237	5,542	1,550	5,456	1,526	5,134	1,436	5,323	1,493	5,009	1,403	4,692	1,316	4,221	1,187	-9.84%
Wasco	16,760	1,494	16,145	1,415	17,480	1,508	17,997	1,538	18,118	1,519	17,884	1,481	18,387	1,548	18,120	1,539	18,983	1,589	21,354	1,784	22,089	1,835	22,250	1,845	21,387	1,770	-4.05%
Wheeler	758	1,053	763	972	763	930	359	458	596	769	461	595	497	641	509	657	583	752	453	584	512	655	555	707	446	567	-19.84%
Yamhill	52,199	1,490	57,130	1,546	48,909	1,241	68,901	1,659	67,141	1,558	65,022	1,493	67,617	1,533	67,010	1,508	71,183	1,583	77,313	1,699	99,934	2,163	131,051	2,794	128,118	2,696	-3.51%
Rounding adj.																											
OR. TOTALS	2,263,099	1,513	2,312,669	1,483	2,497,170	1,539	2,695,903	1,609	2,778,463	1,617	2,635,072	1,518	2,723,365	1,554	2,796,787	1,579	2,923,462	1,632	3,026,457	1,667	3,233,174	1,752	3,264,065	1,743	2,903,138	1,532	-12.59%

change in total from previous year 1.41% 5.72% 2.39% -0.37% -5.16% 3.35% 2.70% 4.53% 3.52% 6.83% 0.96% -11.06%

change in per capita from previous year -0.57% 3.68% 0.92% -1.62% -6.12% 2.37% 1.63% 3.33% 2.13% 5.12% -0.53% -12.13%

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 included in Marion County and Statewide disposal in years prior to 2001 but excluded in 2001 and subsequent years (per ORS 459A.010(3)(f)(B)).

Table 7: Oregon Solid Waste Generated by Wasteshed, 1992-2008

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.)	Change in Per Capita 2008-07
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	16,338	1,986	0.13%
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	92,758	2,344	-1.24%
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	60,415	3,205	7.34%
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	42,475	1,809	47,964	2,017	43,382	1,804	-10.55%
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	60,720	1,921	-1.71%
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	27,960	2,160	23,676	1,764	-18.35%
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	24,589	2,286	-12.44%
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	252,939	3,146	207,515	2,485	-21.01%
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	2,673	128,088	2,434	-8.95%
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	2,568	2,727	10.44%
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	5,553	1,465	5,274	1,401	-4.37%
Harney	3,249	927	3,227	893	2,804	779	2,715	732	3,966	1,044	3,968	1,044	3,989	1,050	3,782	1,036	3,859	1,009	4,288	1,119	4,163	1,086	4,782	1,245	4,643	1,205	-3.22%
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	26,447	2,446	-7.31%
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	235,963	2,299	-12.08%
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	22,480	2,041	18,460	1,644	-19.42%
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	-4.73%
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	107,557	3,250	7.89%
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	6,575	1,777	6,520	1,739	6,952	1,853	7,011	1,860	7,742	2,047	8,549	2,254	10.13%
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	526,868	3,102	512,611	2,988	468,458	2,709	-9.34%
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	69,277	3,099	-4.77%
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	131,128	2,235	-5.93%
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	-5.79%
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	504,407	3,292	499,004	3,210	456,614	2,902	-9.60%
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	2,684,979	3,422	2,699,660	3,389	2,434,520	3,016	-11.00%
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	-0.75%
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	15,008	2,433	15,632	2,504	2.91%
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	0.55%
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	1,735	1,883	19.82%
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	38,039	2,920	0.91%
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	105,262	3,205	107,294	3,294	2.80%
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	-7.09%
Wallowa	7,234	1,996	7,945	2,130	4,528	1,211	5,373	1,464	5,874	1,620	5,438	1,531	6,867	1,921	6,461	1,807	6,294	1,760	6,610	1,854	6,440	1,804	6,459	1,812	5,559	1,563	-13.73%
Wasco	22,202	1,980	21,897	1,919	24,999	2,156	26,151	2,234	27,312	2,290	24,124	1,998	25,636	2,159	26,166	2,222	25,162	2,106	28,138	2,351	27,220	2,262	28,900	2,396	27,983	2,316	-3.35%
Wheeler	817	1,135	861	1,097	948	1,156	696	898	696	898	528	681	665	857	696	898	692	893	689	889	673	860	759	967	612	778	19.59%
Yamhill	64,049	1,829	76,504	2,070	75,024	1,904	100,144	2,411	120,689	2,800	128,043	2,940	148,408	3,365	116,159	2,614	142,839	3,177	139,640	3,068	163,951	3,549	188,867	4,027	178,314	3,752	-6.82%
OR. TOTALS	3,102,776	2,075	3,431,581	2,200	3,835,427	2,364	4,300,887	2,568	4,544,280	2,645	4,634,157	2,670	4,752,627	2,712	4,913,666	2,775	5,240,525	2,926	5,549,824	3,057	5,711,996	3,096	5,701,634	3,045	5,233,647	2,761	-9.31%

change in total from previous year 5.42% 5.84% 5.02% 2.93% 1.98% 2.56% 3.39% 6.65% 5.90% 2.92% -0.18% -8.21%

change in per capita from previous year 3.36% 3.81% 3.52% 1.65% 0.95% 1.57% 2.32% 5.43% 4.48% 1.27% -1.65% -9.31%

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

Table 8: Oregon Materials Recovered, 1992-2008

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
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	100,846
Other glass	41	6,030	1,557	365	1,578	9,530	4,358	4,052	2,827	106	673	901	999
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	101,846
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
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
Tinned cans/aluminum					14,779	23,387	16,240	11,616	14,575	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
Aerosol cans	0	0	0	8	0	0	0	0	1	1	1	1	1
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
Cardboard/kraft paper	204,729	251,559	304,093	321,501	310,776	332,876	381,027	388,427	368,668	392,774	440,816	444,449	429,703
Paper Fiber ⁶	0	0	0	0	0	0	0	0	0	0	0	348,250	344,119
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
Magazines	11,246	11,911	17,250	26,342	8,375	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
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
Newspaper ⁶	130,181	143,911	141,412	154,014	187,108	203,021	211,082	235,959	260,151	268,585	263,189	0	0
Fiber-based fuel			9,235	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	790,675	792,699	773,822
#1 PET beverage	3,329	4,392	5,803	5,142	0	0	0	0	0	0	0	0	0
#1 other	58	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
#2 other	1,841	976	1,331	572	0	0	0	0	0	0	0	0	0
#3 PVC	25	5	144	1	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
#5	360	157	283	51	0	0	0	0	0	0	0	0	0
#6	471	292	430	280	0	102	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
Mixed plastic	300	584	1,708	6,173	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
Plastic bottles ²					0	0	0	0	0	0	0	0	0
Plastic film					3,969	4,825	6,724	6,927	6,581	11,297	11,594	9,625	10,739
Plastic other					3,718	2,005	3,771	3,365	4,287	8,193	9,426	9,500	9,302
Rigid plastic containers					15,672	16,352	12,430	15,211	14,297	16,047	19,440	21,990	19,790
Total plastic	9,520	15,049	16,338	17,933	24,222	24,380	23,647	26,248	25,437	35,907	42,464	42,655	41,615
Antifreeze	5	11	52	188	424	1,864	2,181	1,387	2,307	2,871	3,085	2,683	2,720
C & D -- roofing ⁷				5,914	25,162	28,904	19,846	20,159	9,770	11,852	10,072	5,980	4,094
Carpeting -- used				304	919	1,064	540	355	696	784	0	645	300
Diesel						20	0	9	16	151	156	156	152
Electronics					617	1,640	2,216	2,023	3,350	3,790	6,345	9,813	10,513
Fluorescent lamps	0	15	7	91	21	267	263	312	232	374	453	514	451
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
Household Haz Waste					14	12	105	92	28	106	143	157	305
Alkaline batteries					4	26	44	0	0	0	0	0	0
Mixed batteries								75	154	120	204	188	
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
Lithium batteries							1	0	1	0	0	0	0
NiCad batteries				9	0	18	32	17	27	0	0	0	0
Old broken crayons	0	1	0	0	0	0	0	0	0	0	0	0	0
Paint ⁵	120	153	489	298	555	1,403	1,586	1,972	1,958	2,366	1,434	1,730	1,141
Porcelain	0	13	5	5	0	483	694	254	8	227	307	1,258	553
Rubber tire buffings ⁴	0	2,698	2,935	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
Solvents ⁵	16	6	110	290	188	248	223	217	249	280	261	274	526
Textiles			508	3,198	4,033	3,762	4,527	4,279	4,370	3,620	1,819	1,519	1,244
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
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
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	108,876
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
Food waste	0	2,000	5,000	3,590	3,486	9,685	12,339	14,937	13,008	9,644	12,380	16,407	21,475
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	374,675
Yard debris ⁵	91,348	208,722	235,562	278,750	309,407	348,472	400,174	403,552	480,117	548,493	528,504	511,380	496,713
Total organics	203,773	391,589	507,292	631,925	699,382	808,951	848,117	869,538	954,533	1,030,465	1,060,780	1,002,466	907,375
Adj. rounding/unspecified			2	2	1	-1	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	2,478,822	2,437,569	2,330,509

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, 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, 2008

Wasteshed	Total Recovered	Recycled	% of Total	Energy Recovery	% of Total	Compost	% of Total	Stock
Baker	3,366	2,397	71%	134	4%	834	25%	0
Benton	38,083	25,010	66%	6,279	16%	6,795	18%	0
Clatsop	23,886	10,812	45%	10,386	43%	2,689	11%	0
Columbia	12,969	10,156	78%	334	3%	2,480	19%	0
Coos	13,455	9,926	74%	3,283	24%	246	2%	0
Crook	7,849	4,866	62%	1,332	17%	1,650	21%	1
Curry	5,119	4,896	96%	224	4%	0	0%	0
Deschutes	65,116	42,316	65%	6,229	10%	16,570	25%	0
Douglas	43,924	26,411	60%	16,180	37%	1,332	3%	0
Gilliam	371	314	85%	57	15%	0	0%	0
Grant	1,325	946	71%	25	2%	0	0%	354
Harney	1,563	1,444	92%	32	2%	61	4%	27
Hood River	7,412	5,731	77%	717	10%	963	13%	0
Jackson	76,326	49,933	65%	12,399	16%	13,995	18%	0
Jefferson	6,217	5,623	90%	306	5%	288	5%	0
Josephine	35,958	17,195	48%	8,842	25%	9,921	28%	0
Klamath	48,817	39,930	82%	7,240	15%	1,647	3%	0
Lake	2,954	2,844	96%	23	1%	81	3%	6
Lane	217,198	113,188	52%	58,034	27%	45,976	21%	0
Lincoln	21,401	11,242	53%	10,040	47%	119	1%	0
Linn	54,167	36,161	67%	12,138	22%	5,868	11%	0
Malheur	6,437	5,954	93%	325	5%	157	2%	0
Marion	239,442	144,683	60%	45,471	19%	49,288	21%	0
Metro	1,235,603	734,037	59%	298,213	24%	203,330	16%	24
Milton-Freewater	3,598	2,624	73%	131	4%	818	23%	26
Morrow	3,868	3,585	93%	242	6%	0	0%	41
Polk	34,828	27,754	80%	1,659	5%	5,414	16%	0
Sherman	257	248	96%	9	4%	0	0%	0
Tillamook	11,993	10,549	88%	1,295	11%	150	1%	0
Umatilla	40,615	35,131	86%	4,568	11%	862	2%	53
Union	8,102	5,473	68%	879	11%	1,749	22%	0
Wallowa	1,339	1,181	88%	25	2%	111	8%	21
Wasco	6,596	5,469	83%	931	14%	196	3%	0
Wheeler	166	136	82%	5	3%	0	0%	25
Yamhill	50,191	23,685	47%	6,544	13%	19,962	40%	0
Total	2,330,509	1,421,849	61%	514,530	22%	393,552	17%	578

Appendix I: Methodology

Data Sources

In 2008, DEQ collected recycling and disposal data from:

- 263 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
- 178 collection service providers
- 11 scrap metal dealers
- 40 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, 2009. 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 seventeenth 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 encounters problems with reported data that need to be resolved. For example, the 2008 surveys included examples of materials being improperly reported as **disposed** rather than **recycled**, and numerous examples of double counting 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 – at times involving 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

To account for the growing number of commingled material collection programs being offered in this state, the 2008 surveys of collection service providers allowed reporting of commingled collection packs. Companies were asked to report their collections based on the following type of materials in their commingled packs:

- Paper only
- Containers only - no glass
- Containers only including glass
- Paper and containers - no glass
- Paper and containers including glass

Those processors or material recovery facilities (MRFs) that received the commingled packs reported by the collection service providers were asked to complete an additional commingled survey form. These provide detailed identification of the individual materials that are sorted out of the commingled collection material mix.

DEQ then combined the received commingled amounts into one type – Commingled All. These were tracked to the individual MRFs. Their data was used to apply back to the reported packs the individual materials sorted from the Commingled All collections. Since these allocations are based on estimates of recovery percentages for individual materials, the data integrity has been weakened. It is harder to quantify the individual materials for the 2008 report. Some homogenization takes place with the combining of the Commingled All collections from many sources and their sorting at any one facility. 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.

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. "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.

Appendix II: Respondents to the 2008 Material Recovery Survey

**PRIVATE RECYCLING
Survey Respondents**

4R RECYCLING
Burns, OR

A&P RECYCLING
The Dalles, OR

ADVANCED M & D
SALES
Portland, OR

AGRIPLAS INC
Keizer, OR

ALBERTSONS
DISTRIBUTION CENTER
Portland, OR

ALCOA RECYCLING
Alcoa, TN

ALLWOOD RECYCLING
Fairview, OR

AMERICAN RAG AND
METAL
Portland, OR

ANHEUSER-BUSCH
Hayward, CA

ANKMAR, LLC
Sweet Home, OR

ARMSTRONG WORLD
IND INC
St Helens, OR

ASH GROVE CEMENT
Portland, 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

BELLA ORGANIC LLC
Clackamas, OR

BEND METRO PARKS &
RECREATION DIST
Bend, OR

BEST BUY IN TOWN
Hillsboro, OR

BEVERAGE RECYCLERS
OF OREGON
Eugene, 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

BRING RECYCLING
Eugene, OR

BUREAU OF LAND
MANAGEMENT
Vale, OR

CALBAG METALS CO
Portland, OR

CAROTHERS TIRE
Hillsboro, OR

CARPET PAD
RECYCLING
Portland, OR

CASCADE AUTO
RECYCLERS
Grants Pass, OR

CDI VAULTS
Eugene, OR

CENTRAL OREGON
RECYCLING
Bend, OR

CENTRAL WASTE OIL
HAULERS
Bend, OR

CHERRY CITY METALS
Salem, OR

CINTAS DOCUMENT
MANAGEMENT
Portland, OR

CITY OF EUGENE
Eugene, 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 BASIN LLC
Pasco, WA

COLUMBIA
DISTRIBUTING
Portland OR

COLUMBIA GORGE
PRESS
Hood River, OR

COLUMBIA RECYCLING
PDX
Portland, OR

COMPOST OREGON Aumsville, OR	ECOSORT Eugene, OR	Madras, OR
COMPUTER DRIVE CONNECTION Cornelius, OR	ECS REGENESYS Medford, OR	GEORGIA PACIFIC Halsey, OR
CONTAINER RECOVERY INC Portland, OR	EMERALD SERVICES Tacoma, WA	GEORGIA PACIFIC CORP Toledo, OR
D & R DIETRICH & SONS, INC Vancouver, WA	ENVIRONMENTAL FIBERS INTERNATIONAL Portland, OR	GOLD RIVER DISTRIBUTING CO INC Medford, OR
D.A.D.S. RECYCLING Vernonia, OR	ENVIRONMENTAL PROTECTION SERVICES INC Brooks, OR	GOODWILL INDUSTRIES Eugene, OR
DAISHOWA AMERICA (NIPPON IND) Port Angeles, WA	ENVIRONMENTALLY CONSCIOUS RECYCLING Portland, OR	GOODWILL INDUSTRIES Portland, OR
DARLING INTERNATIONAL Boise, ID	EPSON Hillsboro, OR	GOSPEL RESCUE MISSION Grants Pass, OR
DARLING INTERNATIONAL Tacoma, WA	ERICKSONS SENTRY MARKET Burns, OR	GRAF PAPER SALVAGE Portland, OR
DENNIS CARLIN HAULING Woodburn, OR	ETECH Hillsboro, OR	GREENWALL INDUSTRIES Portland, OR
DENTON PLASTICS INC Portland, OR	EUGENE MISSION Eugene, OR	GREENWAY RECYCLING Portland, OR
DEPARTMENT OF ENVIRONMENTAL QUALITY Portland, OR	EXIDE TECHNOLOGIES Portland, OR	GRIMMS FUEL CO Tualatin, OR
DON & LARRYS INC La Grande, OR	FAR WEST FIBERS Portland, OR	HANKE'S RECYCLING Portland, OR
DOUGLAS COUNTY BOTTLING CO Roseburg, OR	FRED LEA DISTRIBUTING Salem, OR	HIGH DESERT BEVERAGE DISTRIBUTORS LLC Bend, OR
DUFUR LIONS CLUB Dufur, OR	FRED MEYER Clackamas, OR	HINES NURSERY Forest Grove, OR
EARTH CYCLE Grants Pass, OR	FRED MEYER Portland, OR	HI-SCHOOL PHARMACY Vancouver, WA
EARTH PROTECTION SERVICES Sheridan, WY	FREE GEEK Portland, OR	HOOD RIVER COUNTY Hood River, OR
EC RESTAURANT SERVICES Harrisburg, OR	FULL SAIL BREWERY Hood River, OR	HOOD RIVER LIONS Hood River, OR
ECHANIS DISTRIBUTING CO Ontario, OR	FUN BEVERAGE Newport, OR	INDUSTRIAL OILS Klamath Falls, OR
ECONOMY APPLIANCE RECYCLERS Medford, OR	GARDNER ENTERPRISES INC John Day, OR	INTERNATIONAL PAPER Beaverton and Eugene, OR
	GARRIS ENVIRONMENTAL SERVICES CORP White City, OR	IRAS SALES & SERVICE Madras, OR
	GARTEN FOUNDATION Salem, OR	IRON MOUNTAIN Portland, OR
	GARY GRUNER CHEVROLET	JEFFERSON AVENUE RECYCLERS LaGrande, OR
		JOHNSON CONTROLS Canby, OR

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K&S RECOVERY
Aloha, OR

KB RECYCLING
Canby, OR

KE MCKAYS
Gold Beach, OR

KEYSTONE
AUTOMOTIVE
INDUSTRIES, INC
Vancouver, WA

KINGSLEY AIR FIELD
Klamath Falls, OR

KIWANIS CLUB
Tillamook, OR

KNEZ BUILDING
MATERIALS
Clackamas, OR

LAKESIDE
RECLAMATION
Beaverton, OR

LAKEVIEW
DISTRIBUTING
Lakeview, OR

LAKIN TIRES WEST INC
Santa Fe Springs, CA

LAMB-WESTON INC
Boardman, OR

LANE FOREST
PRODUCTS
Eugene, OR

LAURELWOOD FARMS
Gearhart, OR

LEGACY HEALTH
SYSTEMS
Portland, OR

LES SCHWAB
WAREHOUSE CENTER
Prineville, OR

LIFESPAN TECHNOLOGY
RECYCLING
San Diego, CA

MARION RESOURCE
FACILITY
Brooks, OR

MARKET OF CHOICE
Eugene, OR

MCFARLANES BARK INC
Milwaukie, OR

MCGOVERN METALS
Roseburg, OR

MCKENZIE RECYCLING
Eugene, OR

MERLIN PLASTICS
Delta, BC

METRO
Portland, OR

MIC TOTAL RECYCLE
Forest Grove, OR

MID COLUMBIA
DISTRIBUTORS INC
Hood River, OR

MONROVIA NURSERY
Dayton, OR

MOUNT HOOD
BEVERAGE CO
Portland, OR

MYERS CONTAINER
CORPORATION
Portland, OR

NATURES NEEDS
Portland, OR

NEXT STEP RECYCLING
Eugene, OR

NORPAC
Longview, WA

NORTHWEST
ENVIRONMENTAL &
RECYCLING INC
Cornelius, OR

NORTHWEST
GREENLANDS
McMinnville, OR

NORTHWEST POLYMERS
Molalla, OR

NORTHWEST WOOD AND
FIBRE RECOVERY INC
Troutdale, OR

OAK LEAF ENTERPRISES
Central Point, OR

OIL RE-REFINING INC
Portland, OR

ONYX ELECTRONICS
RECYCLING
Vancouver, WA

OREGON COMPUTER
RECYCLING, INC
Warrenton, OR

OREGON PALLET
Salem, OR

OREGON PROCESSING &
RECOVERY CENTER
Portland, OR

OREGON RECYCLING
SYSTEMS
Portland, OR

OWENS ILLINOIS GLASS
CONTAINER INC
Portland, OR

OWYHEE DISTRIBUTING
CO INC
Nyssa, OR

P & E DISTRIBUTING CO
Baker City, OR

PACIFIC DISC INC
(PACIFIC RUBBER)
Toledo, OR

PACIFIC LAND
CLEARING
Portland, OR

PACIFIC PALLET
Eugene, OR

PAPER CHASE
RECYCLING
Portland, OR

PC PLASTICS
Portland, OR

PENDLETON BOTTLING
CO
Pendleton, OR

PEPSI COLA 7 UP
BOTTLING CO
Bend, OR

PEPSI COLA BOTTLING
CO
Corvallis, OR

PEPSI COLA BOTTLING
CO
Eugene, OR

PEPSI COLA BOTTLING
CO
Klamath Falls, OR

PEPSI COLA BOTTLING
CO
La Grande, OR

PEPSI COLA BOTTLING
CO
Medford, OR

PEPSI COLA BOTTLING
CO
Roseburg, OR

PEPSI COLA BOTTLING
CO
The Dalles, OR

PHILIP SERVICES
CORPORATION
Kent, WA

POLK COUNTY
Dallas, OR

PORT OF BROOKINGS
Brookings, OR

PORTLAND
HABILITATION CENTER
INC
Portland, OR

PORTLAND RECYCLING
TEAM INC
Portland, OR

PRIDE
Sherwood, OR

PRINCES AUTOMOTIVE
Madras, OR

PROVIDENCE MEDICAL
CENTER
Portland, OR

QUALITY COMPOST
Milton-Freewater, OR

QUANTUM RESOURCES
Beaverton, OR

QWEST DEX
Englewood, CO

RB RECYCLING
Portland, OR

RB RUBBER
McMinnville, OR

RECALL
Kent, WA

RECHARGEABLE
BATTERY RECYCLING
CORP
Atlanta, GA

RECYCLE AMERICA
Troutdale, OR

RED BARN RECYCLING
Portland, OR

RESCO PLASTICS INC
Coos Bay, OR

RETRONICS
Portland, OR

REXIUS FOREST BY-
PRODUCTS
Eugene, OR

RITE AID
Wilsonville, OR

ROGUE MATERIAL
RECOVERY
Central Point, OR

ROSAUER'S SUPER
MARKET
Hood River, OR

RSR CORPORATION
Dallas, TX

S & H LOGGING
Tualatin, OR

SAFETY KLEEN
Elgin, IL

SAFEWAY
DISTRIBUTION CENTER
Clackamas, OR

SCHNITZER INDUSTRIES
Portland, OR

SCIENTIFIC
DEVELOPMENT INC
Eugene, OR

SEAPORT
INTERNATIONAL
Issaquah, WA

SHRED-IT
Tualatin, OR

SIMPLY MARVELOUS
RECYCLING
Hillsboro, OR

SMURFIT-STONE
RECYCLING
Portland, OR

SOUTHERN OREGON
COMPOST
Grants Pass, OR

SP NEWSPRINT CO
Newberg, OR

SP RECYCLING CORP
Clackamas, OR

SPARC ENTERPRISES
Grants Pass, OR

ST VINCENT DEPAUL
Eugene, OR

ST VINCENT DEPAUL
The Dalles, OR

STAPLES
Framingham, MA

STAR OF HOPE
RECYCLING
Coos Bay, OR

STILLWATERS
RECYCLING
Corvallis, OR

STRATEGIC MATERIALS,
INC
Hayward, CA

STRUT
The Dalles, OR

TAYLORMADE
PRODUCTS INC
Scappoose, OR

TECHNOLOGY
CONSERVATION GROUP
INC
Lecanto, FL

TEGRANT
Wilsonville, OR

THE RECYCLING
PROFESSIONALS INC
West Linn, OR

THERMO FLUIDS INC
Clackamas, OR

TILLAMOOK COUNTY
CREAMERY
ASSOCIATION
Tillamook, OR

TIRE DISPOSAL
Molalla, OR

TIRE DISPOSAL &
RECOVERY (KRIDER)
Prineville, OR

TIRE DISPOSAL &
RECYCLING INC
Portland, OR

TOTAL RECLAIM INC
(ECOLIGHTS NW)
Seattle, WA

TRAIL'S END RECOVERY
Warrenton, OR

TREX COMPANY
Winchester, VA

TUALATIN VALLEY
WASTE RECOVERY
Hillsboro, OR

UNIFIED WESTERN
GROCERS
Milwaukie, OR

VAN DUSEN BEVERAGES
Astoria, OR

WALLA WALLA
RECYCLING
Walla Walla, WA

WAL-MART STORES
Bentonville, AR

WARM SPRINGS
COMPOSITE PRODUCTS
Warm Springs, OR

WASTE CONTROL
RECYCLING
Kelso, WA

WASTE RECOVERY WEST Portland, OR	CLYDE & REBECCA REDMAN Irrigon, OR	BEAVER HILL INCINERATOR & DISPOSAL SITE Coquille, OR
WASTE XPRESS Portland, OR	DAVIS RS RECYCLING STATION Clackamas, OR	BEND GARBAGE & RECYCLING CO Bend, OR
WEST COAST GROCERS Tacoma, WA	EUGENE ALUMINUM & BRASS FOUNDRY Eugene, OR	BRANDTS SANITARY SERVICE Monmouth, OR
WEST UNION GARDENS Hillsboro, OR	HAMILTON METALS Klamath Falls, OR	C & B SANITARY SERVICE Burns, OR
WEST VANCOUVER MATERIAL RECOVERY FAC Vancouver, WA	METRO METALS NORTHWEST Portland, OR	CARTM Manzanita, OR
WESTERN BEVERAGE CO Eugene, OR	RBBG, INC Parkdale, OR	CASCADE RECYCLING COMPANY Bend, OR
WESTERN BEVERAGE CO Medford, OR	RIVERGATE SCRAP METALS Portland, OR	CENTRAL COAST DISPOSAL Florence, OR
WESTERN BEVERAGE CO Salem, OR	SWIFT & MCCORMICK Redmond, OR	CITY OF CANNON BEACH Cannon Beach, OR
WESTERN OREGON UNIVERSITY Monmouth, OR	THOMAS RICHARD SCRAP METAL The Dalles, OR	CITY OF ELGIN Elgin, OR
WESTERN PULP PRODUCTS Corvallis, OR	WINTERS SALVAGE Tigard, OR	CITY OF HAINES Haines, OR
WESTERN RECYCLING Boise, ID		CITY OF HUNTINGTON Huntington, OR
WHITE CITY RECYCLERS White City, OR	COLLECTION SERVICE PROVIDER Survey Respondents	CITY OF JUNCTION CITY Junction City, OR
WILLAMETTE LANDSCAPE SUPPLY COMPOST FACILITY Salem, OR	ALLIED WASTE OF ALBANY LEBANON Albany, OR	CITY OF MILTON FREEWATER Milton Freewater, OR
WILLAMETTE RESOURCES Wilsonville, OR	ALLIED WASTE OF CORVALLIS Corvallis, OR	CITY OF MONUMENT Monument, OR
WINCO Woodburn, OR	ALLIED WASTE OF DALLAS Dallas, OR	CITY OF SISTERS Sisters, OR
WOOD WASTE MANAGEMENT Portland, OR	ALLIED WASTE OF GRANTS PASS Grants Pass, OR	CITY SANITARY & RECYCLING McMinnville, OR
WOODCO FUEL Aloha, OR	ALLIED WASTE OF MARION COUNTY Woodburn, OR	CITY SANITARY SERVICE Tillamook, OR
WRIGHT CHEVROLET Fossil, OR	ALLIED WASTE OF SALEM Salem, OR	CLARKS DISPOSAL John Day, OR
YAQUINA RECYCLING Newport, OR	ASHLAND SANITARY & RECYCLING SERVICE Ashland, OR	COBURG SANITARY SERVICE, INC Coburg, OR
SCRAP METAL Survey Respondents	BAKER SANITARY SERVICE Baker City, OR	CONFEDERATED TRIBES OF THE WARM SPRINGS Warm Springs, OR
BURCHAMS METALS Albany, OR		

COOS BAY SANITARY
SERVICE
Coos Bay, OR

COTTAGE GROVE
GARBAGE SERVICE, INC
Cottage Grove, OR

COUNTRYSIDE
DISPOSAL SERVICE
Junction City, OR

COUNTY TRANSFER &
RECYCLING
Elmira, OR

CROOK COUNTY
LANDFILL
Prineville, OR

CROOKED RIVER
SANITARY
Terrebonne, OR

CURRY TRANSFER &
RECYCLING
Brookings, OR

D & O GARBAGE
SERVICE INC
Salem, OR

DAHL & DAHL INC,
RECYCLING &
TRANSFER
Waldport, OR

DESCHUTES RECYCLING
Bend, OR

DESCHUTES TRANSFER
CO
Bend, OR

DON G AVERILL
RECYCLING INC
Tillamook, OR

DOUGLAS COUNTY
PUBLIC WORKS
DEPARTMENT
Roseburg, OR

ECOSYSTEMS TRANSFER
& RECYCLING
Veneta, OR

ENVIRONMENTAL
WASTE SYSTEMS INC
St Helens, OR

FINLEY BUTTES
LANDFILL
Boardman, OR

HIGH COUNTRY
DISPOSAL
Redmond, OR

HOOD RIVER GARBG,
RECY AND TRANSFER
Hood River, OR

HORIZON PROJECT INC
Milton Freewater, OR

HUMBERT REFUSE &
RECYCLING (RAHN'S)
Milton Freewater, OR

JEFFERSON COUNTY
PUBLIC WORKS
DEPARTMENT
Madras, OR

JOSEPHINE COUNTY
RECYCLING &
TRANSFER
Grants Pass, OR

KLAMATH COUNTY
SOLID WASTE
MANAGEMENT
Klamath Falls, OR

KLAMATH DISPOSAL
Klamath Falls, OR

KNOTT LANDFILL
Bend, OR

LAKE COUNTY ROAD
DEPARTMENT
Lakeview, OR

LAKEVIEW SANITATION
Lakeview, OR

LANE APEX DISPOSAL
Eugene, OR

LANE COUNTY SOLID
WASTE DIVISION
Eugene, OR

LES SANITARY SERVICE
Coos Bay, OR

LINCOLN COUNTY SOLID
WASTE DISTRICT
Newport, OR

LORENS SANITATION
SERVICE
Keizer, OR

MADRAS SANITARY
SERVICE
Madras, OR

MALHEUR COUNTY
ENVIRONMENTAL
HEALTH
Vale, OR

MARION COUNTY
PUBLIC WORKS - ENV
SERV
Salem, OR

MARION RECYCLING
CENTER INC
Salem, OR

MCKENZIE DISPOSAL
SERVICE LLC
Walterville, OR

MEL'S SANITARY
SERVICE
Tygh Valley, OR

MID OREGON
RECYCLING
Bend, OR

NESTUCCA VALLEY
SANITARY
Hebo, OR

NEWBERG GARBAGE &
RECYCLING
Newberg, OR

NORTH BEND
SANITATION
North Bend, OR

NORTH LINCOLN
SANITARY SERVICE
Lincoln City, OR

NORTH MARION
RECYCLING & DISPOSAL
Keizer, OR

OAKRIDGE SANI-HAUL
INC
Oakridge, OR

ONTARIO SANITARY
SERVICE INC
Ontario, OR

OREGON WASTE
SYSTEMS INC
Arlington, OR

P & J DISPOSAL
Creswell, OR

PACIFIC SANITATION
Salem, OR

PENDLETON SANITARY
SERVICE, INC
Pendleton, OR

PINE VALLEY
RECYCLING COMMITTEE
Baker City, OR

PRINEVILLE DISPOSAL
INC
Prineville, OR

R-SANITARY SERVICE
Garibaldi, OR

RAINIER SANITARY
SERVICE
Rainier, OR

ROGUE DISPOSAL &
RECYCLING, INC
Central Point, OR

ROSEBURG DISPOSAL
CO
Roseburg, OR

ROYAL REFUSE SERVICE
Eugene, OR

RYAN MILLER & SONS
DISPOSAL SERVICE
Heppner, OR

SANIPAC INC
Eugene, OR

SANITARY DISPOSAL
INC
Hermiston, OR

SOURCE RECYCLING
Albany, OR

SOUTHERN OREGON
SANITATION
Eagle Point, OR

SOUTHERN OREGON
SANITATION INC
Grants Pass, OR

STAR GARBAGE
SERVICE
Eugene, OR

SUBURBAN GARBAGE
SERVICE
Salem, OR

SUNRISE ENTERPRISES
Roseburg, OR

SUTHERLIN SANITARY
SERVICE
Sutherlin, OR

SWEET HOME
SANITATION SERVICE
Sweet Home, OR

THE DALLES DISPOSAL
SERVICE
The Dalles, OR

THE PRAIRIE CITY
RECYCLING TEAM
Prairie City, OR

THOMPSONS SANITARY
SERVICE
Newport, OR

TOLEDO RECYCLING
AND TRANSFER
Toledo, OR

UMATILLA INDIAN
RESERVATION
Pendleton, OR

VALLEY LANDFILLS INC
Corvallis, OR

VALLEY RECYCLING
AND DISPOSAL, INC
Salem, OR

WADSWORTH GARBAGE
DISPOSAL SERVICE
Coquille, OR

WALLOWA COUNTY
PUBLIC WORKS
Enterprise, OR

WASCO COUNTY
LANDFILL
The Dalles, OR

WASTE MANAGEMENT
OF COLUMBIA COUNTY
St Helens, OR

WASTE PRO (CITY
GARBAGE SERVICE)
La Grande, OR

WEST COAST
RECYCLING AND
TRANSFER
Coos Bay, OR

WESTERN OREGON
WASTE
McMinnville, OR

WHEELER COUNTY
COURT
Fossil, OR

WILDERNESS GARBAGE
& RECYCLING SERVICE
La Pine, OR

WINSTON SANITARY
SERVICE
Winston, OR

**METRO COLLECTION
SERVICE PROVIDER
Survey Respondents**

A-1 DISPOSAL SERVICE
Portland, OR

AGG ENTERPRISES INC
Portland, OR

ALLIED WASTE OF
CLACKAMAS AND
WASHINGTON
Wilsonville, OR

ALLIED WASTE OF LAKE
OSWEGO
Lake Oswego, OR

ALLIED WASTE OF
PORTLAND
Portland, OR

ALOHA GARBAGE CO
Aloha, OR

AMERICAN PROPERTY
MANAGEMENT
Portland, OR

ARROW SANITARY
(WASTE CONNECTIONS)
Portland, OR

BLISS SANITARY
SERVICE
Boring, OR

CANBY DISPOSAL CO
Canby, OR

CITY OF ROSES DROP
BOX SERVICE
Portland, OR

CITY SANITARY
SERVICE
Portland, OR

CLACKAMAS GARBAGE
CO
Milwaukie, OR

CLOUDBURST
RECYCLING
Portland, OR

CORNELIUS DISPOSAL
SERVICE
Cornelius, OR

CROWN POINT REFUSE
INC
Corbett, OR

DEINES BROTHERS
Portland, OR

DEINES, MEL SANITARY
SERVICE INC
Milwaukie, OR

DEYOUNG SANITARY
SERVICE
Portland, OR

DUNTHORPE SANITARY
SERVICE INC
Lake Oswego, OR

ECKERT SANITARY
SERVICE INC
Portland, OR

ELMERS SANITARY
SERVICE
Portland, OR

FLANNERY'S DROP BOX
SERVICE
Fairview, OR

GARBARINO DISPOSAL
SERVICE INC
North Plains, OR

GLADSTONE DISPOSAL
CO INC
Oregon City, OR

GRESHAM SANITARY
SERVICE INC
Gresham, OR

GRUETTER SANITARY
SERVICE
Portland, OR

HEIBERG GARBAGE
SERVICE
Portland, OR

HILLSBORO GARBAGE
DISPOSAL
Hillsboro, OR

HOFFMANN SANITATION
Portland, OR

HOODVIEW DISPOSAL &
RECYCLING
Canby, OR

HOUSING AUTHORITY
OF PORTLAND
Portland, OR

LEHL DISPOSAL INC
Canby, OR

MOLALLA SANITARY
Oregon City, OR

MULTNOMAH COUNTY
DROP BOX SERVICE
Portland, OR

OAK GROVE DISPOSAL
CO INC
Milwaukie, OR

ON SITE DEMOLITION
Portland, OR

OREGON CITY GARBAGE
CO
Oregon City, OR

PAPASADERO JF & SONS
Portland, OR

PORTLAND DISPOSAL &
RECYCLING
Portland, OR

PRIDE DISPOSAL
Sherwood, OR

RIVER CITY
ENVIRONMENTAL
Portland, OR

ROCKWOOD SOLID
WASTE INC
Gresham, OR

SANDY TRANSFER
STATION
Sandy, OR

SUNSET GARBAGE
COLLECTION INC
Portland, OR

SWATCO SANITARY
SERVICE
Banks, OR

THE TRASHMASTERS
Portland, OR

TRASHCO
Portland, OR

TWELVE MILE DISPOSAL
SERVICE
Corbett, OR

VALLEY GARBAGE &
RECYCLING, INC
Beaverton, OR

VALLEY WEST REFUSE
DISPOSAL INC
Aloha, OR

VOGEL BROTHERS INC
Gresham, OR

WACKER DAVE
SANITARY
Boring, OR

WALKER DAN DISPOSAL
SERVICE
Estacada, OR

WALKER GARBAGE
SERVICE
Portland, OR

WASHINGTON COUNTY
DROP BOX
Hillsboro, OR

WASTE MANAGEMENT
INC
Portland, OR

WASTE MANAGEMENT
OF WASHINGTON
COUNTY
Portland, OR

WEISENFLUH, J & R
SANITARY SERVICE
Portland, OR

WEITZEL GARBAGE
SERVICE & RECYCLING
Portland, OR

WEST LINN REFUSE &
RECYCLING INC
Canby, OR

WEST SLOPE GARBAGE
SERVICE
Portland, 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

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FINLEY BUTTES
LANDFILL
Vancouver, WA

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

LAKESIDE
RECLAMATION
Beaverton, 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