

# 2007 Oregon Material Recovery and Waste Generation Rates Report

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Quality



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# State of Oregon

## 2007 Material Recovery and Waste Generation Rates

### INTRODUCTION AND PURPOSE

This report describes the methodology and results of the State of Oregon 2007 Material Recovery and Waste Generation Survey, which is compiled each year by the Oregon DEQ's Solid Waste Program. Every year DEQ requires private recycling companies and collection service providers who handle post-consumer recycled materials to complete a survey form providing data on materials collected for recycling, composting, or energy recovery. Data on disposed tonnage comes from quarterly or annual disposal fee report forms submitted by regulated waste handling companies and disposal sites. Together, recovery and disposal data are used to calculate total waste generation.

The Material Recovery Survey was mandated by the 1991 Legislature, which initially set a statewide 50% material recovery goal by the year 2000. The deadline for meeting this 50% recovery goal was extended to the year 2009 by the 2001 Legislature, which also created an interim goal of 45% recovery by 2005. In addition, the 2001 Legislature established waste generation goals for the State. The 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.

**Wasteshed Rates.** To measure progress toward the statewide recovery goals, each wasteshed set 2005 and 2009 state recovery goals; these were incorporated into Oregon Revised Statute 459A.010. (Wasteshed recovery goals existed in statute for 1995, but these were replaced by the 2001 Legislature with goals for 2005 and 2009.) Wastesheds are comparable to counties except for the Metro wasteshed, which includes Clackamas, Multnomah, and Washington counties, and the City of Milton-Freewater, which is its own wasteshed. Table 1 shows the 2007 rates and the goals for each wasteshed.

### 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. Because of the difficulty of separating post-consumer scrap metal from commercial and industrial scrap metal, scrap metal dealers are not required to report on privately-obtained post-consumer scrap metal, but many do report on a voluntary basis.

Oregon's collection service providers and private recycling companies must report on all the recyclable materials they handle, including the amount collected, county of origin of each material, and where materials are marketed.

Oregon law further requires DEQ to keep the information reported by private recyclers on the Material Recovery Survey confidential, including customer lists or specific amounts and types of material collected or marketed by individual companies. Only aggregate information can be released to the public.

### Materials Included in the Material Recovery Survey

Oregon's recovery rate includes only 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 out-of-state waste disposed of in Oregon are excluded. Some scrap metal, including discarded vehicles or parts of vehicles and metal derived from major

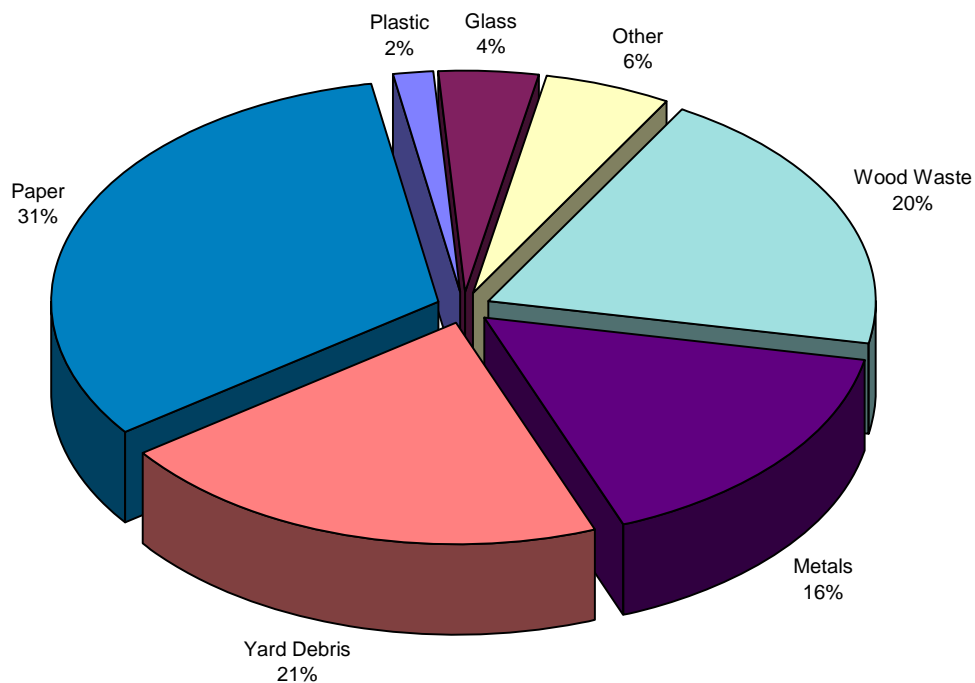
demolitions activities handled by scrap metal dealers, also are excluded. Scrap metal collected at disposal sites, by collection service providers, at community recycling depots, or through municipally-sponsored collection events counts as recovered material. The recovery rate includes materials composted and some materials burned for energy recovery.

The first Material Recovery Survey in 1992 included 24 types of materials; the 2007 survey contains 35 materials.

The major materials included in 2007 are:

- **Paper** — Corrugated cardboard and paper fiber (includes high-grade paper, newspaper, and mixed waste paper).
- **Plastic** — Rigid plastic containers (includes #1 PET, #2 HDPE milk jugs and #2 HDPE other), plastic film (includes #4 LDPE), other plastics (includes #5 polypropylene and #6 polystyrene), and composite plastic (includes carpet pad).
- **Glass** — Container glass and other glass, such as windshield glass and ceramics.
- **Metals** — Tinned cans, aluminum, other scrap metals.
- **Organics** — Wood waste, yard debris, food waste, animal waste.
- **Other** — Tires, used motor oil, batteries, electronics, gypsum, asphalt roofing materials, textiles, and paint/solvents.

**Materials Recovered in 2007**



## RECOVERY RATES

### 2007 Statewide Recovery Rate

The state of Oregon recovered 2,458,041 tons, or 43.0% of the actual total "counting" (municipal) waste stream in 2007. This is a small decrease in tons recovered from 2006 and the calculated total recovery rate decreased from 43.6% of the total waste stream. The decrease in recovered tonnages and rates may be explained by a number of reasons.

1. Much of the decrease was in yard debris and wood waste. This may be explained with some of these factors: a) Employment in the construction industry peaked in July 2007 and began to slow by the end of the year, leading to less wood waste recovery; b) Yard waste generation is a function of weather, which fluctuates year-to-year; and c) The data for these are more variable because they are derived more from volume estimates, unlike traditionally recyclables which are typically weighed.
2. At the same time, overall waste generation fell, meaning fewer materials were available for recycling. Compounding this is that the waste stream is slowly becoming more difficult to recycle. Consumption of some high volume, easier to recycle commodities (such as newspaper) has declined while increases have occurred among some types of goods that are harder to recycle, such as consumer products.

The 2007 recovered tonnage translates to 1,313 pounds per person per year (3.60 pounds per day) compared to 1,352 pounds per person per year in 2006 (3.73 pounds per day).

The state of Oregon total adjusted recovery rate, including 2% credit calculations, was 46.7%. It is a decrease from the total rate in 2006. And, it is still less than the statutory mandated 2009 goal of 50% statewide recovery.

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 <sup>1</sup>	44.2%	48.0
2005	2,523,367 <sup>1</sup>	45.5%	49.2
2006	2,495,344 <sup>1</sup>	43.6%	47.3
<b>2007</b>	<b>2,458,041</b>	<b>43.0%</b>	<b>46.7</b>

\* These rates are including the addition of any 2% credit allowances enacted by the 2001 Legislature

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

## How Wasteshed Recovery Rates Are Calculated

The formula for determining recovery rates is:

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

$$\text{Amt. Disposed}^3 + \text{Amt. Recovered} = \text{Total Generated}$$

For each wasteshed, 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.

Direct collectors of materials are the primary and best source of information for the collected materials' county of origin. This information is used whenever it is available. When information from direct collectors is not available, or when a survey respondent does not know the county of origin for the collected materials, the markets' and end users' estimates are the secondary method used to allocate material back to counties. Material is allocated back to wastesheds based on population only when survey respondents cannot accurately estimate county of origin.

Next, the total weight of material recovered is added to the total weight of material disposed. This determines the total weight of material generated. The total weight of material recovered is divided by the total weight generated. For each wasteshed, this results in a **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 the purpose of determining whether or not wastesheds are achieving their recovery goals.

**Marion County adjustment.** As home to the state's only waste-to-energy facility, 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 2007, 20,378.8 tons of waste burned for energy in the county's waste-to-energy facility was counted as recovered instead of disposed. This result was calculated by multiplying the quantity of non-industrial, in-county, **counting** solid waste processed at the facility by waste composition percentages<sup>4</sup>. 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, wastesheds have been eligible to add 2% credits toward their recovery rates if they certify that they implemented programs in waste prevention, residential composting, or reuse (one 2% credit for each program, for a potential total of 6%).

Seventeen wastesheds received at least one 2% credit in 2007.

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

<sup>3</sup> The Amount Disposed includes municipal solid waste and excludes industrial process waste, asbestos, sludge, petroleum contaminated soil, and full loads of inert material, such as rock, if a record is kept at the disposal site.

<sup>4</sup> The percentages are from the 2007 Marion County waste composition study.

## How the Statewide Recovery Rates Are Calculated

For the state as a whole, the **calculated recovery rate** is simply the total tonnage recovered statewide divided by the total tonnage generated statewide.

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

The statewide total recovery rate is derived by first estimating what is called “adjusted recovery” for each wasteshed. (The calculation of adjusted recovery involves calculating the tonnage that would be recovered if the 2% credits for reuse and residential composting were included in each wasteshed’s calculated recovery rate, holding disposal tonnage as a constant.) For wastesheds where no 2% credits have been obtained, adjusted recovery is equal to calculated recovery. For wastesheds 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 wastesheds are summed together to equal a statewide adjusted recovery. This is then added to actual state wide disposal for a new estimate of waste generation (adjusted generation). The statewide total recovery rate is then calculated by dividing adjusted recovery by adjusted generation.

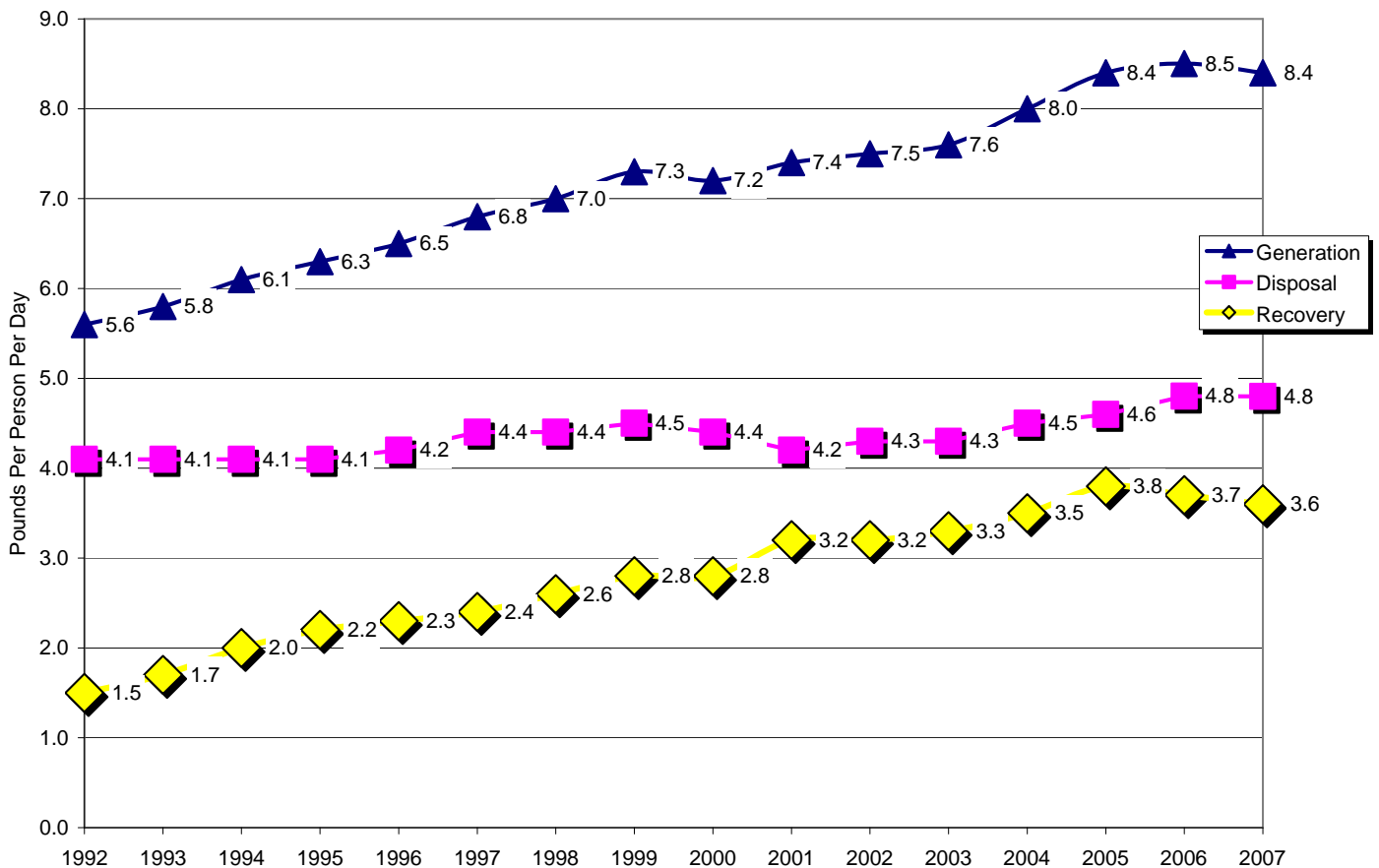
## 2007 Statewide Waste Generation Rates

Survey results show that the total amount of municipal solid waste generated (waste disposed plus materials recovered) decreased for the first time since 1992. (That was the year that DEQ began this annual survey process). Per capita waste generation also dropped from 3,104 pounds per person to 3,055 pounds per person.

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) is many times higher than the impacts of disposal. For example, recent analysis by the US EPA suggests that roughly half of the country’s GHG emissions are associated with the production and transportation of goods. The leveling off of waste generation in 2007 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.

<b>MSW Generated (tons)</b>	<b>MSW Per Capita/Year (lbs.)</b>	<b>MSW Per Capita/Day (lbs.)</b>
<b>1992</b> – 3,102,776	2,075	5.7
<b>1993</b> – 3,255,196	2,128	5.8
<b>1994</b> – 3,431,581	2,200	6.0
<b>1995</b> – 3,623,705	2,277	6.2
<b>1996</b> – 3,835,427	2,364	6.5
<b>1997</b> – 4,095,131	2,480	6.8
<b>1998</b> – 4,300,887	2,568	7.0
<b>1999</b> – 4,414,967	2,602	7.1
<b>2000</b> – 4,544,280	2,645	7.2
<b>2001</b> – 4,643,157	2,676	7.3
<b>2002</b> – 4,772,537	2,724	7.5
<b>2003</b> – 4,913,666	2,775	7.6
<b>2004</b> – 5,240,525	2,926	8.0
<b>2005</b> – 5,549,824	3,057	8.4
<b>2006</b> - 5,728,518	3,104	8.5
<b>2007</b> – <b>5,722,100</b>	<b>3,055</b>	<b>8.4</b>

Oregon Generation, Disposal, and Recovery Per Capita  
1992 - 2007



### 2007 Disposition of Total Waste Generated

Disposed*	56.2%
Recycled	25.8%
Composted	11.4%
Recovered for Energy*	6.6%

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

### Wasteshed (County) Recovery Rates

Eighteen of the thirty-five wastesheds had total recovery rates in 2007 that were equal to or greater than their 2006 rates. And twenty wastesheds are already meeting their 2009 recovery rate goals. Table 1 shows a breakdown of 2007 recovery rates by wasteshed, and Table 2 gives the amount of materials recovered in 2007 by wasteshed. Table 3 shows the amounts of solid waste disposed by wasteshed in 2007. 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 previous years.

## Disposal

The amount of municipal solid waste disposed in Oregon in 2007 was 3,264,059 tons (see Tables 3 and 6) or 1,743 pounds per person per year, based on a statewide population of 3,745,455. This translates to 4.8 pounds of municipal solid waste disposed per person per day, showing no real increase over 2006.

The total amount of material disposed increased by only 30,884 tons from 2006 to 2007. With the increase in population, this means that the per capita disposal actually fell 9 pounds per person or just under 1% between 2006 and 2007. This is not as insignificant as it may appear. For years, the per capita disposal amounts have risen drastically. This first year of decreasing per capita disposal represents a potential shift in Oregon towards real sustainability.

## Per Capita Data

Wasteshed recovery rates alone do not always provide the detailed information needed to determine how waste is managed in a county. Per capita disposal and recovery rates are also useful measures. For example, low disposal rates may reflect a low generation rate or an increase in waste disposed outside of permitted disposal sites which is not measured and counted for this study.

DEQ staff use per capita generation rates to determine trends in waste generation and opportunities to increase waste prevention and reuse in order to meet the waste generation goals established by the 2001 Legislature.

## Materials Recovered

2007 recovery includes materials recycled, burned for energy recovery (tires, fuels, oil-based paint, used oil, wood waste, and some yard debris), and composted (yard debris, food waste, and some wood waste). By category, 62.6% of the material recovered in Oregon was recycled, 20.1% was burned for energy recovery, and 17.3% was composted.

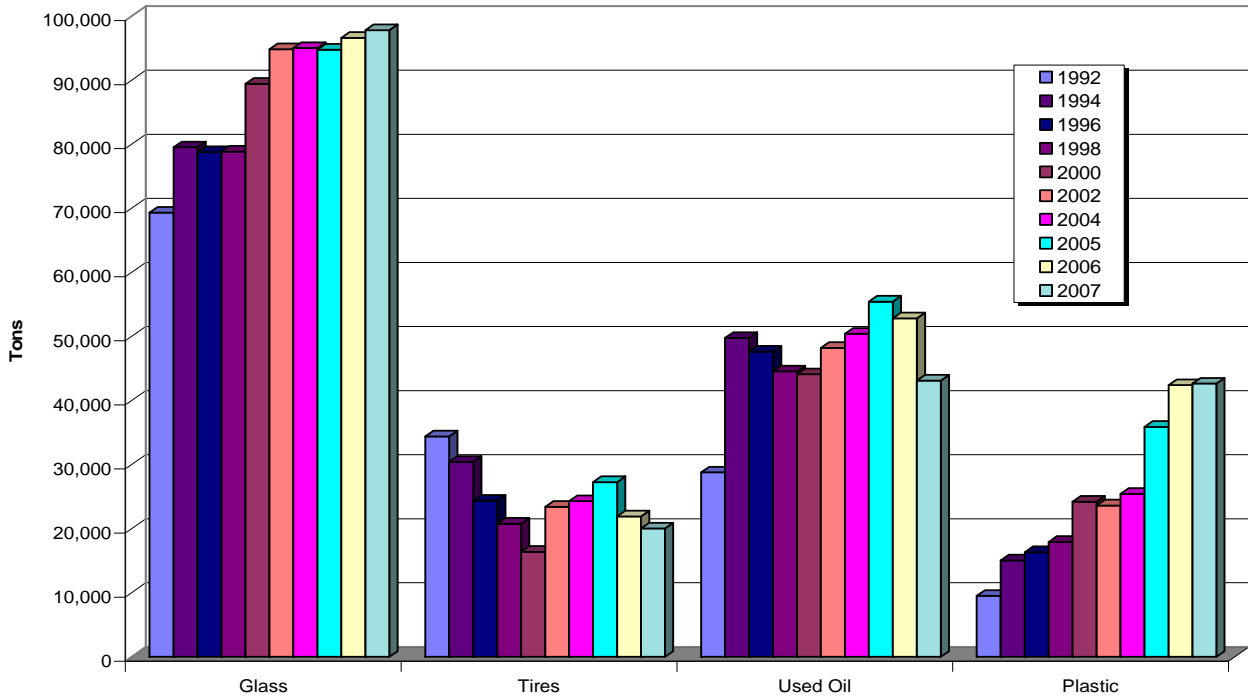
**Metals.** The reported amount of recovered scrap metal rose 7.75% in 2007 – which is a nearly 25% increase in tinned cans and aluminum, but only about a 6% increase for scrap metal – a material that makes up the bulk of the weight of recycled metals.

**Papers.** Overall, paper recovery was about the same with the paper grades all staying the same. Changes in individual paper grades are less meaningful than in previous years since DEQ has combined Hi Grade, Mixed Waste Paper and Newsprint into one grade – Paper Fiber. With new machinery at the sorting facilities and the paper mills, the distinction in paper grades is less defined or important.

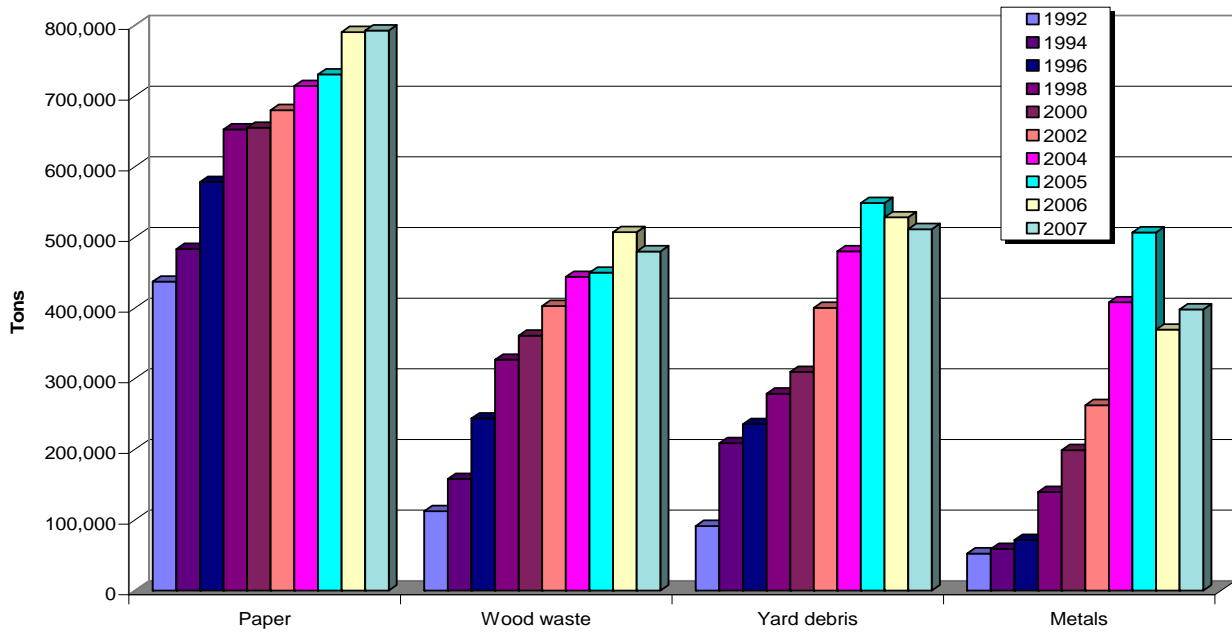
**Organics.** The amount of organic materials (food, yard, and wood wastes) recovered decreased approximately 5%. Some confusion between collectors and end markets about whether incoming material was yard debris or wood waste continues to contribute to the fluctuations in the tonnage attributed to each material, but the overall collection of both materials is down.

**Plastics.** Rigid plastic containers showed a good 13.1% increase in 2007. Film plastic and composite plastic showed decreases, with other plastic items such as toys, plastic furniture, 55-gallon drums, and other large items remaining constant. The result is that total plastic recovered was about the same since 2006.

**Materials Recovered in Oregon  
1992 - 2007**



**Materials Recovered in Oregon  
1992 - 2007**



## 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 gases associated with recycling, composting, and **counting** energy recovery. This estimation process has been used for the last five years and is proving to be helpful in demonstrating how recycling is reducing energy use and slowing global warming and the climate change crisis we face.

**Energy.** When recycled materials replace virgin feedstocks in manufacturing, energy savings are significant. Making aluminum from old beverage containers uses 93% less energy than making aluminum from bauxite, for example. Newsprint made from old newspapers requires 46% less energy than making newsprint from wood. While the energy conservation benefits of recycling have long been recognized, quantifying these estimates has been difficult. That changed when the US EPA's Office of Solid Waste and Emergency Response published estimates of the per ton energy savings of recycling for a wide variety of materials<sup>5</sup>.

DEQ applied these estimates to the results of the 2007 survey for only those tons recycled (energy recovery is not included). Material categories from Oregon's survey do not perfectly align with EPA's material categories, so some assumptions have been made in classifying materials. Further, EPA's estimates are based on national averages, which may not be representative of where Oregon's recyclables are sent. The use of EPA's estimates do allow for a rough estimate of the energy saved from materials recycled by Oregonians. DEQ estimates that recycling by Oregon households and businesses in 2007 (counting only wastes generated in Oregon, not those generated elsewhere and shipped to Oregon for recycling) led to energy savings of roughly 30 trillion British thermal units (BTUs).

To put the energy savings number in context, total energy use in Oregon across all sectors (transportation, electricity, heating, industry) in 2005 was estimated at 1,096 trillion BTUs. If per capita use remained constant through 2007, then the energy savings from recycling in 2007 equates to a 2.7% offset of total energy use. Alternatively, the 30 trillion BTU savings can be expressed as equivalent to 241 million gallons of gasoline saved in 2007. These comparisons are not perfect. Many of Oregon's recyclables are exported to other states or countries, so the energy conservation benefits occur elsewhere. The energy saved by recycling includes a mix not only of gasoline and other liquid fossil fuels but also coal, hydroelectric, nuclear, and wood. However, the energy savings from recycling in Oregon is significant.

Energy saved by Oregon manufacturers using recycled materials sourced from other states are not included in these estimates.

**Greenhouse Gases.** Similar to energy, greenhouse gas emission factors published by the U.S. EPA allow for an estimate of the greenhouse gas benefit from recycling, composting, and "counting" energy recovery. These calculations are relatively involved and utilize emissions inventory work conducted in 2004 on behalf of the Governor's Advisory Group on Global Warming. The greenhouse gas benefits of recycling, composting, and energy recovery include a variety of emissions, carbon sinks, and emission offsets, which vary by material, management method, and the likely disposal site if the materials weren't 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 from landfills.

Net greenhouse gas reductions associated with materials recycled, composted, and burned for energy in 2007 are estimated at 3.6 million metric tons of carbon dioxide equivalent. This includes only materials that are counted toward the state's recovery rate and excludes any materials that are generated in other states but shipped to Oregon for recycling.

As a comparison, net greenhouse gas emissions for Oregon for 2007 (based on an estimate of 2005 emissions and projections for 2015) are estimated at 71.2 million metric tons of carbon dioxide equivalent. As such, recycling, composting, and **counting** energy recovery provide a greenhouse gas offset or "credit"

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<sup>5</sup> The methodology for obtaining these estimates changed since 2005. Comparisons should not be made between the results for 2007 and years before 2006.

equivalent to 5.1% 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 (3.6 million metric tons) with statewide emissions (71.2 million metric tons) is potentially misleading because the emission offsets from materials recycled and composted in 2007 occur over multiple years, while the estimated emissions of 71.2 million metric tons are “same-year” (2007) 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 forests and agricultural soils treated with compost. However, just as some of the greenhouse gas benefit from recycling and composting in 2007 will actually occur in subsequent years, some of the greenhouse gas benefit from recycling and composting in previous years actually occurred in 2007.

Another way of thinking about greenhouse gas reductions is to express emission offsets in terms of **average cars**. Using data from the EPA, Oregon Department of Transportation, and Oregon Department of Energy, DEQ estimates that the 3.6 million metric tons of carbon dioxide equivalent is comparable to the greenhouse gas benefit of removing 770,000 “average” passenger cars from the state’s stock of 3,312,202 registered passenger vehicles. As with energy savings, the greenhouse gas benefit of recycling, composting, and energy recovery is significant.

## CONCLUSION

The statewide recovery rate for 2007 was 46.7%, a decrease from 47.3% in 2006. Despite the slight decrease in recovered materials, waste disposal grew only because population increased; per capita disposal showed a slight drop. The amount of waste disposed per capita fell less than 1% between 2006 and 2007..

Total waste generation in 2007 topped 5 million tons for the fourth year in a row, with per capita waste generation declining by a modest 1.6%, to 3,055 pounds per person. As a rough proxy for consumption, the near static per capita waste generation suggests that Oregonians are still, on average, buying and using large quantities of goods. Given the large natural resource and environmental impacts associated with production of many manufactured goods (relative to disposal), continued effort is needed to help Oregonians do a better job in reducing, reusing, and recycling.

While a decrease in the state wide recovered material tonnage is discouraging, the decrease is small. Overall, the trend is more like a plateau effect. Oregon still has effective recycling programs. Oregonians concerned about protecting the environment need to increase the existing high levels of recycling and composting, while turning attention to a much more significant issue: consumption, the process that ultimately underlies many large environmental impacts.

Oregon solid waste disposal and recycling companies and DEQ devote considerable time and money to the annual recovery rate calculation. Because of this commitment, Oregonians have a solid estimate of the generation, recovery, and disposal of solid waste in Oregon in 2007. They also have one of the most complete and accurate sets 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. A number of corrections have been made 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. Those years were corrected.
- The 2006 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.

**Table 1: Wasteshed Recovery Rates, 2007**

Wasteshed	Tons Disposed	Tons Recovered	Tons Generated	Calculated Recovery Rate <sup>1</sup>	Recovery Credits <sup>2</sup>			Total Recovery Rate	HB 3744 Goal <sup>5</sup> 2009
					Prevention	Reuse	Residential Composting		
Baker	12,730.0	3,673.3	16,403.4	22.4%			2%	24.4%	25%
Benton	57,108.6	36,677.3	93,785.9	39.1%	2%	2%	2%	45.1%	50%
Clatsop	36,873.7	19,025.7	55,899.4	34.0%			2%	36.0%	25%
Columbia	34,317.1	13,863.0	48,180.1	28.8%				28.8%	32%
Coos	49,458.8	12,357.1	61,815.9	20.0%				20.0%	30%
Crook	20,955.8	7,003.9	27,959.7	25.1%				25.1%	20%
Curry	21,404.0	6,632.1	28,036.1	23.7%	2%	2%	2%	29.7%	30%
Deschutes	177,592.9	75,825.4	253,418.3	29.9%	2%	2%	2%	35.9%	45%
Douglas	103,765.5	36,579.0	140,344.5	26.1%	2%	2%	2%	32.1%	40%
Gilliam	2,026.2	300.6	2,326.8	12.9%				12.9%	20%
Grant	4,210.8	1,341.6	5,552.5	24.2%				24.2%	19%
Harney	3,578.2	1,413.9	4,992.1	28.3%				28.3%	40%
Hood River	19,965.1	8,475.8	28,440.9	29.8%		2%	2%	33.8%	25%
Jackson	184,062.2	82,226.5	266,288.7	30.9%	2%	2%	2%	36.9%	40%
Jefferson	14,348.2	8,444.4	22,792.6	37.0%				37.0%	25%
Josephine	63,004.4	31,276.3	94,280.8	33.2%	2%	2%	2%	39.2%	38%
Klamath	64,640.7	34,711.4	99,352.0	34.9%				34.9%	20%
Lake	6,050.7	1,799.0	7,849.7	22.9%				22.9%	10%
Lane	275,032.2	243,804.6	518,836.9	47.0%	2%	2%	2%	53.0%	54%
Lincoln	52,580.1	20,061.5	72,641.6	27.6%			2%	29.6%	20%
Linn	86,369.9	51,877.0	138,246.9	37.5%	2%	2%	2%	43.5%	40%
Malheur	24,152.5	7,043.1	31,195.6	22.6%				22.6%	22%
Marion <sup>4</sup>	247,331.1	252,555.3	499,886.4	50.5%	2%	2%	2%	56.5%	54%
Metro	1,374,547.8	1,334,179.0	2,708,726.8	49.3%	2%	2%	2%	55.3%	64%
Milton-Freewater	5,279.9	2,363.9	7,643.8	30.9%				30.9%	25%
Morrow	11,040.9	3,967.2	15,008.0	26.4%				26.4%	20%
Polk	39,129.1	34,076.7	73,205.8	46.5%	2%		2%	50.5%	35%
Sherman	1,218.7	238.9	1,457.6	16.4%				16.4%	20%
Tillamook	25,952.2	11,503.7	37,455.9	30.7%				30.7%	30%
Umatilla	66,860.4	38,545.5	105,405.9	36.6%				36.6%	20%
Union	19,922.5	9,280.3	29,202.8	31.8%			2%	33.8%	25%
Wallowa	4,692.4	1,874.8	6,567.2	28.5%				28.5%	20%
Wasco	22,250.1	6,811.2	29,061.3	23.4%				23.4%	35%
Wheeler	554.9	204.5	759.4	26.9%				26.9%	20%
Yamhill	131,051.4	58,027.0	189,078.4	30.7%	2%	2%	2%	36.7%	45%
<b>OR Totals<sup>3</sup></b>	<b>3,264,059</b>	<b>2,458,041</b>	<b>5,722,100</b>	<b>43.0%</b>				<b>46.7%</b>	

<sup>1</sup> 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

<sup>2</sup> 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.

<sup>3</sup> 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))

<sup>4</sup> The Marion County disposal and recovery rates reflect 11,451 tons of recyclable materials burned for energy in 2005 (per ORS 459A.010(3)(f)(B)).

<sup>5</sup> ORS 459A.010(6).

**Table 2: Amount Recovered in 2007 by Wasteshed**

<b>Wasteshed</b>	<b>2007 Tons Recovered</b>	<b>2007 Pounds Per Capita</b>	<b>2007 Wasteshed Population</b>
Baker	3,673	447	16,435
Benton	36,677	932	78,701
Clatsop	19,026	1,016	37,440
Columbia	13,863	583	47,565
Coos	12,357	392	63,050
Crook	7,004	541	25,885
Curry	6,632	618	21,475
Deschutes	75,825	943	160,810
Douglas	36,579	699	104,675
Gilliam	301	319	1,885
Grant	1,342	354	7,580
Harney	1,414	368	7,680
Hood River	8,476	790	21,470
Jackson	82,227	813	202,310
Jefferson	8,444	767	22,030
Josephine	31,276	759	82,390
Klamath	34,711	1,055	65,815
Lake	1,799	476	7,565
Lane	243,805	1,421	343,140
Lincoln	20,062	899	44,630
Linn	51,877	894	116,117
Malheur	7,043	445	31,620
Marion*	252,555	1,625	310,872
Metro	1,334,179	1,675	1,593,370
Milton-Freewater	2,364	722	6,550
Morrow	3,967	643	12,335
Polk	34,077	1,020	66,785
Sherman	239	258	1,855
Tillamook	11,504	890	25,845
Umatilla	38,546	1,173	65,695
Union	9,280	735	25,250
Wallowa	1,875	526	7,130
Wasco	6,811	565	24,125
Wheeler	204	260	1,570
Yamhill	58,027	1,237	93,805
<b>OREGON TOTALS</b>	<b>2,458,041</b>	<b>1,313</b>	<b>3,745,455</b>

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

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

**Table 3: Solid Waste Disposed in 2007 by Wasteshed**

<b>Wasteshed</b>	<b>2007 Tons Disposed</b>	<b>2007 Pounds Per Capita</b>	<b>2007 Wasteshed Population</b>
Baker	12,730	1,549	16,435
Benton	57,109	1,451	78,701
Clatsop	36,874	1,970	37,440
Columbia	34,317	1,443	47,565
Coos	49,459	1,569	63,050
Crook	20,956	1,619	25,885
Curry	21,404	1,993	21,475
Deschutes	177,593	2,209	160,810
Douglas	103,766	1,983	104,675
Gilliam	2,026	2,150	1,885
Grant	4,211	1,111	7,580
Harney	3,578	932	7,680
Hood River	19,965	1,860	21,470
Jackson	184,062	1,820	202,310
Jefferson	14,348	1,303	22,030
Josephine	63,004	1,529	82,390
Klamath	64,641	1,964	65,815
Lake	6,051	1,600	7,565
Lane	275,032	1,603	343,140
Lincoln	52,580	2,356	44,630
Linn	86,370	1,488	116,117
Malheur	24,152	1,528	31,620
Marion*	247,331	1,591	310,872
Metro	1,374,548	1,725	1,593,370
Milton-Freewater	5,280	1,612	6,550
Morrow	11,041	1,790	12,335
Polk	39,129	1,172	66,785
Sherman	1,219	1,314	1,855
Tillamook	25,952	2,008	25,845
Umatilla	66,860	2,035	65,695
Union	19,923	1,578	25,250
Wallowa	4,692	1,316	7,130
Wasco	22,250	1,845	24,125
Wheeler	555	707	1,570
Yamhill	131,051	2,794	93,805
<b>OREGON TOTALS</b>	<b>3,264,059</b>	<b>1,743</b>	<b>3,745,455</b>

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

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

**Table 4: Oregon Calculated Recovery Rates by Wasteshed, 1992-2007**

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*
Baker	10%	14%	17%	22%	25%	19%	19%	18%	18%	24%	21%	22%	20%	23%	17%	22%
Benton	27%	30%	36%	35%	37%	41%	41%	35%	35%	41%	41%	39%	43%	40%	37%	39%
Clatsop	19%	22%	20%	19%	20%	23%	22%	24%	25%	28%	25%	29%	31%	39%	34%	34%
Columbia	34%	28%	22%	27%	22%	28%	29%	25%	31%	38%	34%	38%	31%	32%	30%	29%
Coos	21%	20%	23%	28%	29%	28%	27%	22%	23%	23%	26%	21%	21%	23%	21%	20%
Crook	16%	23%	19%	30%	23%	15%	14%	23%	27%	37%	27%	14%	21%	21%	26%	25%
Curry	21%	25%	27%	31%	35%	33%	29%	27%	41%	39%	36%	25%	25%	15%	18%	24%
Deschutes	15%	18%	24%	22%	23%	25%	32%	25%	31%	29%	27%	28%	27%	28%	27%	30%
Douglas	26%	23%	23%	24%	26%	29%	30%	26%	26%	30%	29%	29%	31%	25%	24%	26%
Gilliam	17%	6%	15%	20%	19%	21%	18%	15%	14%	13%	20%	10%	11%	7%	8%	13%
Grant	18%	14%	16%	19%	16%	15%	16%	18%	19%	19%	18%	16%	19%	28%	21%	24%
Harney	18%	21%	20%	34%	24%	21%	34%	34%	20%	27%	28%	27%	21%	27%	28%	28%
Hood River	16%	24%	26%	16%	17%	17%	17%	19%	18%	30%	34%	35%	37%	36%	33%	30%
Jackson	15%	19%	35%	33%	34%	34%	34%	29%	28%	32%	36%	32%	31%	32%	34%	31%
Jefferson	21%	16%	18%	22%	24%	33%	33%	21%	27%	27%	21%	23%	34%	33%	28%	37%
Josephine	14%	19%	27%	34%	38%	37%	41%	42%	33%	34%	37%	35%	37%	37%	39%	33%
Klamath	13%	12%	17%	18%	15%	16%	17%	15%	18%	31%	30%	23%	31%	37%	34%	35%
Lake	6%	6%	9%	8%	7%	6%	8%	11%	8%	11%	11%	25%	25%	15%	19%	23%
Lane	19%	28%	32%	32%	39%	39%	40%	41%	46%	46%	44%	46%	45%	48%	48%	47%
Lincoln	20%	20%	21%	19%	16%	19%	20%	19%	23%	28%	27%	28%	29%	33%	26%	28%
Linn	15%	27%	29%	30%	32%	33%	31%	33%	29%	34%	38%	34%	44%	43%	41%	38%
Malheur	19%	15%	12%	15%	20%	19%	22%	24%	25%	26%	27%	26%	27%	25%	23%	23%
Marion	26%	27%	27%	29%	28%	28%	30%	32%	38%	**50%	**51%	**47%	**47%	**50%	**52%	**52%
Metro	35%	37%	39%	42%	41%	42%	43%	43%	45%	49%	47%	50%	51%	53%	50%	49%
Milton-Freewater	16%	13%	13%	22%	21%	20%	19%	18%	21%	21%	24%	25%	24%	30%	33%	31%
Morrow	11%	16%	13%	12%	13%	17%	17%	20%	15%	16%	16%	20%	20%	14%	21%	26%
Polk	20%	25%	24%	23%	19%	24%	26%	29%	33%	39%	38%	43%	44%	50%	48%	47%
Sherman	24%	17%	20%	20%	21%	11%	16%	24%	17%	15%	14%	16%	26%	16%	19%	16%
Tillamook	31%	27%	28%	27%	26%	26%	26%	28%	26%	28%	28%	27%	39%	37%	34%	31%
Umatilla	14%	15%	15%	19%	20%	25%	24%	25%	26%	28%	35%	33%	36%	36%	35%	37%
Union	16%	19%	21%	30%	26%	29%	27%	24%	22%	22%	28%	26%	27%	27%	34%	32%
Wallowa	6%	8%	11%	18%	11%	16%	16%	19%	21%	19%	19%	16%	18%	19%	22%	29%
Wasco	25%	23%	26%	29%	30%	29%	31%	34%	34%	26%	28%	31%	25%	24%	19%	23%
Wheeler	7%	8%	11%	24%	20%	20%	25%	18%	14%	13%	25%	27%	16%	34%	24%	27%
Yamhill	19%	22%	25%	30%	35%	25%	31%	36%	44%	49%	54%	42%	50%	45%	40%	31%
<b>OREGON TOTALS</b>	<b>27.1%</b>	<b>29.9%</b>	<b>32.6%</b>	<b>34.7%</b>	<b>34.9%</b>	<b>35.7%</b>	<b>37.3%</b>	<b>36.8%</b>	<b>38.9%</b>	<b>43.1%</b>	<b>42.7%</b>	<b>43.1%</b>	<b>44.2%</b>	<b>45.5%</b>	<b>43.6%</b>	<b>43.0%</b>

\*does not include 2% credits

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

**Table 5: Oregon Amount Recovered by Wasteshed, 1992-2007**

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.)	Change in Per Capita 2007-06
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	2,783	338	3,673	447	32.26%
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	36,220	934	36,677	932	-0.17%
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	19,586	1,057	19,026	1,016	-3.89%
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	12,961	552	13,863	583	5.61%
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	13,370	425	12,357	392	-7.79%
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	-6.21%
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	36.62%
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	69,717	914	75,825	943	3.22%
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	31,984	616	36,579	699	13.43%
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	33.56%
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	27.96%
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	1,166	304	1,414	368	21.10%
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	9,316	873	8,476	790	-9.59%
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	92,814	935	82,227	813	-13.03%
Jefferson	1,269	170	1,838	225	2,667	307	4,339	472	3,963	382	3,963	409	3,061	308	3,075	309	6,404	632	6,772	657	5,525	516	8,444	767	48.54%
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	42,009	1,036	31,276	759	-26.69%
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	36,652	1,120	34,711	1,055	-5.81%
Lake	269	74	597	160	601	161	553	150	369	99	643	171	585	157	1,650	446	1,629	434	1,020	272	1,361	361	1,799	476	31.73%
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	253,386	1,492	243,805	1,421	-4.73%
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	18,033	810	20,062	899	10.97%
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	60,808	1,058	51,877	894	-15.52%
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	6,863	433	7,043	445	2.96%
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	261,184	1,704	252,555	1,625	-4.67%
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	1,334,476	1,701	1,334,179	1,675	-1.54%
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	2,611	793	2,364	722	-9.00%
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	2,876	474	3,967	643	35.60%
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	38,246	1,160	34,077	1,020	-12.02%
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	3.41%
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	12,695	995	11,504	890	-10.49%
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	35,499	1,082	38,546	1,173	8.43%
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	7,521	599	9,280	735	22.71%
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	1,433	401	1,875	526	31.03%
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	5,244	436	6,811	565	29.58%
Wheeler	59	82	98	124	185	226	119	152	100	129	67	86	187	216	109	141	109	141	236	305	161	206	204	260	26.49%
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	65,425	1,416	58,027	1,237	-12.64%
<b>OR. TOTALS</b>	<b>839,679</b>	<b>562</b>	<b>1,118,912</b>	<b>717</b>	<b>1,338,259</b>	<b>825</b>	<b>1,604,985</b>	<b>958</b>	<b>1,765,817</b>	<b>1,028</b>	<b>1,999,085</b>	<b>1,152</b>	<b>2,029,261</b>	<b>1,158</b>	<b>2,116,880</b>	<b>1,195</b>	<b>2,317,064</b>	<b>1,294</b>	<b>2,523,367</b>	<b>1,390</b>	<b>2,495,344</b>	<b>1,352</b>	<b>2,458,041</b>	<b>1,313</b>	<b>-2.94%</b>

change in total from previous year 14.80% 6.45% 9.77% 8.58% 13.21% 1.51% 4.32% 9.46% 8.9% -1.11% -1.49%

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% -2.69% -2.94%

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 Wasteshed, 1992-2007**

Wasteshed	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.)	Change in Per Capita 2007-06	
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	-7.35%	
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	-10.55%	
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	-4.30%	
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	14.70%	
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	-2.99%	
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	-3.46%	
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	-2.47%	
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	-10.42%	
Douglas	85,400	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	103,766	1,983	-0.14%	
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	-16.59%	
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	8.18%	
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	19.17%	
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	6.55%	
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	-0.93%	
Jefferson	4,813	645	8,380	1,026	8,380	965	8,709	947	9,889	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	-3.06%	
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	-6.15%	
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	-11.10%	
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	6.71%	
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	-2.16%	
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	3.79%	
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	-4.08%	
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	4.04%	
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	-0.54%	
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	-0.27%	
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	-0.77%	
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	3.30%	
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	-6.79%	
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	19.96%	
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	2.59%	
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	57,622	1,750	65,980	2,011	66,860	2,035	1.20%	
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	33.86%	
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	-6.19%	
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	0.50%	
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	8.00%	
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	29.17%	
Rounding adj.																										
<b>OR. TOTALS</b>	<b>2,263,099</b>	<b>1,513</b>	<b>2,312,669</b>	<b>1,483</b>	<b>2,497,170</b>	<b>1,539</b>	<b>2,695,903</b>	<b>1,609</b>	<b>2,778,463</b>	<b>1,617</b>	<b>2,635,072</b>	<b>1,518</b>	<b>2,723,365</b>	<b>1,554</b>	<b>2,796,787</b>	<b>1,579</b>	<b>2,923,462</b>	<b>1,632</b>	<b>3,026,457</b>	<b>1,667</b>	<b>3,233,174</b>	<b>1,752</b>	<b>3,264,059</b>	<b>1,743</b>	<b>-0.53%</b>	

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%

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%

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, 1992-2007**

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.)	Change in Per Capita 2007-06
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	16,553	2,010	16,403	1,996	-0.69%
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	99,160	2,556	93,786	2,383	-6.76%
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	57,711	3,116	55,899	2,986	-4.16%
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	42,503	1,810	48,180	2,026	11.93%
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	64,237	2,042	61,816	1,961	-3.99%
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	-4.16%
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	4.61%
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	257,863	3,379	253,418	3,152	-6.73%
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	135,044	2,602	140,345	2,682	3.07%
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	-12.33%
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	5,552	1,465	12.38%
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	4,165	1,086	4,992	1,300	19.71%
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	27,936	2,619	28,441	2,649	1.17%
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	275,218	2,771	266,289	2,632	-5.01%
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	19,910	1,860	22,793	2,069	11.26%
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	108,114	2,665	94,281	2,289	-14.13%
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	108,967	3,330	99,352	3,019	-9.32%
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	7,013	1,860	7,850	2,075	11.57%
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	531,704	3,130	518,837	3,024	-3.39%
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	68,570	3,080	72,642	3,255	5.68%
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	149,971	2,609	138,247	2,381	-8.72%
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	30,156	1,901	31,196	1,973	3.79%
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	506,334	3,304	499,886	3,216	-2.67%
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	2,691,870	3,431	2,708,727	3,400	-0.90%
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	7,644	2,334	-3.47%
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	13,382	2,207	15,008	2,433	10.24%
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	79,700	2,417	73,206	2,192	-9.30%
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	16.90%
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	37,683	2,952	37,456	2,899	-1.82%
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	101,479	3,094	105,406	3,209	3.73%
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	22,322	1,778	29,203	2,313	30.10%
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	6,442	1,804	6,567	1,842	2.09%
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	27,333	2,271	29,061	2,409	6.08%
Wheeler	817	1,135	861	1,097	948	1,156	478	608	696	898	528	681	665	857	696	898	692	893	689	889	673	860	759	967	12.43%
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	165,360	3,579	189,078	4,031	12.63%
<b>OR. TOTALS</b>	<b>3,102,776</b>	<b>2,075</b>	<b>3,431,581</b>	<b>2,200</b>	<b>3,835,427</b>	<b>2,364</b>	<b>4,300,887</b>	<b>2,568</b>	<b>4,544,280</b>	<b>2,645</b>	<b>4,634,157</b>	<b>2,670</b>	<b>4,752,627</b>	<b>2,712</b>	<b>4,913,666</b>	<b>2,775</b>	<b>5,240,525</b>	<b>2,926</b>	<b>5,549,824</b>	<b>3,057</b>	<b>5,728,518</b>	<b>3,104</b>	<b>5,722,100</b>	<b>3,055</b>	<b>-1.58%</b>

change in total from previous year

change in per capita from previous year

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

5.42%	5.84%	5.02%	2.93%	1.98%	2.56%	3.39%	6.65%	5.90%	3.22%	-0.11%
3.36%	3.81%	3.52%	1.65%	0.95%	1.57%	2.32%	5.43%	4.48%	1.57%	-1.58%

**Table 8: Oregon Materials Recovered, 1992-2007**

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
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
Other glass	41	6,030	1,557	365	1,578	9,530	4,358	4,052	2,827	106	673	901
<b>Total glass</b>	<b>69,325</b>	<b>79,542</b>	<b>78,788</b>	<b>78,857</b>	<b>89,467</b>	<b>92,770</b>	<b>94,833</b>	<b>93,251</b>	<b>95,030</b>	<b>94,776</b>	<b>96,619</b>	<b>97,827</b>
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
Scrap metal	26,927	33,699	45,271	114,084	165,728	223,623	228,723	261,119	375,464	477,513	339,361	360,775
Tinned cans/aluminum					14,779	23,387	16,240	11,616	14,575	0	0	0
Tinned cans	7,400	8,557	8,635	8,745	0	0	0	0	0	8,719	8,398	10,174
Aerosol cans	0	0	0	8	0	0	0	0	1	1	1	1
<b>Total metals</b>	<b>52,572</b>	<b>59,061</b>	<b>71,722</b>	<b>139,570</b>	<b>198,716</b>	<b>267,521</b>	<b>262,390</b>	<b>287,406</b>	<b>407,910</b>	<b>506,686</b>	<b>369,281</b>	<b>397,882</b>
Cardboard/kraft paper	204,729	251,559	304,093	321,501	310,776	332,876	381,027	388,427	368,668	392,774	440,790	444,449
Paper Fiber <sup>1</sup>	0	0	0	0	0	0	0	0	0	0	0	348,055
High-grade paper <sup>6</sup>	67,077	35,401	49,298	69,449	54,358	62,185	41,659	57,418	56,307	39,847	47,324	0
Magazines	11,246	11,911	17,250	26,342	8,375	0	0	0	0	0	0	0
Phone books <sup>1</sup>	0	1,799	3,103	2,368	2,881	0	0	0	0	0	0	0
Mixed waste paper <sup>6</sup>	24,012	38,770	53,771	78,863	91,559	81,418	46,203	51,553	28,820	29,147	39,056	0
Newspaper <sup>6</sup>	130,181	143,911	141,412	154,014	187,108	203,021	211,082	235,959	260,151	268,585	263,174	0
Fiber-based fuel			9,235	0	0	0	0	0	0	0	0	0
<b>Total papers</b>	<b>437,245</b>	<b>483,352</b>	<b>578,161</b>	<b>652,536</b>	<b>655,057</b>	<b>679,499</b>	<b>679,971</b>	<b>733,357</b>	<b>713,946</b>	<b>730,353</b>	<b>790,343</b>	<b>792,505</b>
#1 PET beverage	3,329	4,392	5,803	5,142	0	0	0	0	0	0	0	0
#1 other	58	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
#2 other	1,841	976	1,331	572	0	0	0	0	0	0	0	0
#3 PVC	25	5	144	1	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
#5	360	157	283	51	0	0	0	0	0	0	0	0
#6	471	292	430	280	0	102	0	0	0	0	0	0
Composite plastic	0	497	1,077	2,364	863	1,095	723	745	272	370	1,954	1,539
Mixed plastic	300	584	1,708	6,173	0	0	0	0	0	0	0	0
Other plastic (P7)	0	13	12	1	0	0	0	0	0	0	0	0
Plastic bottles <sup>2</sup>					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
Plastic other					3,718	2,005	3,771	3,365	4,287	8,193	9,426	9,501
Rigid plastic containers					15,672	16,352	12,430	15,211	14,297	16,047	19,439	21,990
<b>Total plastic</b>	<b>9,520</b>	<b>15,049</b>	<b>16,338</b>	<b>17,933</b>	<b>24,222</b>	<b>24,380</b>	<b>23,647</b>	<b>26,248</b>	<b>25,437</b>	<b>35,907</b>	<b>42,413</b>	<b>42,656</b>
Antifreeze	5	11	52	188	424	1,864	2,181	1,387	2,307	2,871	3,085	2,683
C & D -- roofing <sup>7</sup>				5,914	25,162	28,904	19,846	20,159	9,770	11,852	11,725	7,187
Carpeting -- used			304		919	1,064	540	355	696	784	0	645
Diesel							20	0	9	16	151	156
Electronics					617	1,640	2,216	2,023	3,350	3,790	6,345	9,813
Fluorescent lamps	0	15	7	91	21	267	263	312	232	374	453	514
Gypsum wallboard	3,695	6,726	9,419	8,501	5,300	13,164	3,781	5,209	3,891	3,121	5,386	2,614
Household Haz Waste					14	12	105	92	28	106	143	118
Alkaline batteries						4	26	44	0	0	0	0
Mixed batteries								75	154	120	204	
Lead acid batteries <sup>3</sup>	176	417	559	739	1,184	10,134	12,614	6,673	18,483	12,861	15,509	12,906
Lithium batteries							1	0	1	0	0	0
NiCad batteries				9	0	18	32	17	27	0	0	0
Old broken crayons	0	1	0	0	0	0	0	0	0	0	0	0
Paint <sup>5</sup>	120	153	489	298	555	1,403	1,586	1,972	1,958	2,366	1,434	1,730
Porcelain	0	13	5	5	0	483	694	254	8	227	307	1,258
Rubber tire buffings <sup>4</sup>	0	2,698	2,935	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
Solvents <sup>5</sup>	16	6	110	290	188	248	223	217	249	280	261	274
Textiles			508	3,198	4,033	3,762	4,527	4,279	4,370	3,620	2,378	2,408
Tires <sub>s</sub>	34,392	30,454	24,360	20,782	16,420	17,339	23,423	20,432	24,315	27,293	21,930	20,045
Used Motor Oil <sup>5</sup>	28,796	49,769	47,632	44,567	44,114	45,675	48,225	43,580	50,439	55,466	52,837	43,123
<b>Total other</b>	<b>67,243</b>	<b>90,320</b>	<b>86,145</b>	<b>84,920</b>	<b>98,969</b>	<b>125,979</b>	<b>120,302</b>	<b>107,080</b>	<b>120,207</b>	<b>125,181</b>	<b>122,063</b>	<b>105,677</b>
Animal waste/grease	0	22,986	22,957	22,897	25,670	26,226	32,805	30,160	17,392	22,537	20,922	13,783
Food waste	0	2,000	5,000	3,590	3,486	9,685	12,339	14,937	13,008	9,644	18,252	16,407
Wood waste <sup>5</sup>	112,425	157,881	243,773	326,688	360,819	424,569	402,799	420,889	444,017	449,791	507,236	479,924
Yard debris <sup>5</sup>	91,348	208,722	235,562	278,570	309,407	348,472	400,174	403,552	480,117	548,493	528,215	511,380
<b>Total organics</b>	<b>203,773</b>	<b>391,589</b>	<b>507,292</b>	<b>631,925</b>	<b>699,382</b>	<b>808,951</b>	<b>848,117</b>	<b>869,538</b>	<b>954,533</b>	<b>1,030,465</b>	<b>1,074,626</b>	<b>1,021,494</b>
Adj. rounding/unspecified			2		1	-1	0	0				
<b>OREGON TOTALS</b>	<b>839,678</b>	<b>1,118,913</b>	<b>1,338,446</b>	<b>1,605,741</b>	<b>1,765,814</b>	<b>1,999,099</b>	<b>2,029,261</b>	<b>2,116,880</b>	<b>2,317,064</b>	<b>2,523,367</b>	<b>2,495,344</b>	<b>2,458,040</b>

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

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

<sup>3</sup>Includes only batteries collected at household hazardous waste collection events until 2001.

<sup>4</sup>From 1998 rubber tire buffings were included with tires.

<sup>5</sup>Includes Marion Co. materials in 2001 and subsequent years burned for energy.

<sup>6</sup>In 2007, Mixed Waste Paper, Hi Grade & Newspaper was combined into Paper Fiber

<sup>7</sup>Asphalt 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, 2007**

Wasteshed	Total Recovered	Recycled	% of Total	Energy Recovery	% of Total	Compost	% of Total	Stock
Baker	3,673	2,747	75%	214	6%	712	19%	0
Benton	36,677	24,283	66%	1,714	5%	10,680	29%	0
Clatsop	19,026	10,964	58%	6,418	34%	1,643	9%	0
Columbia	13,863	10,581	76%	200	1%	3,082	22%	0
Coos	12,357	10,269	83%	1,971	16%	106	1%	12
Crook	7,004	6,147	88%	63	1%	794	11%	0
Curry	6,632	6,550	99%	42	1%	40	1%	0
Deschutes	75,825	45,697	60%	3,339	4%	26,790	35%	0
Douglas	36,579	20,894	57%	14,598	40%	1,011	3%	77
Gilliam	301	293	97%	4	1%	0	0%	4
Grant	1,342	1,241	92%	73	5%	0	0%	28
Harney	1,414	1,344	95%	24	2%	26	2%	20
Hood River	8,476	6,862	81%	61	1%	1,507	18%	46
Jackson	82,227	47,632	58%	18,222	22%	16,373	20%	0
Jefferson	8,444	8,421	100%	27	0%	-5	0%	1
Josephine	31,276	18,454	59%	9,583	31%	3,239	10%	0
Klamath	34,711	30,084	87%	4,194	12%	433	1%	0
Lake	1,799	1,729	96%	21	1%	46	3%	3
Lane	243,805	142,975	59%	61,517	25%	39,313	16%	0
Lincoln	20,062	11,759	59%	8,249	41%	53	0%	0
Linn	51,877	36,551	70%	3,421	7%	11,904	23%	0
Malheur	7,043	6,096	87%	319	5%	216	3%	412
Marion	252,555	142,283	56%	48,847	19%	61,420	24%	5
Metro	1,334,179	822,129	62%	302,556	23%	209,494	16%	0
Milton-Freewater	2,364	2,098	89%	55	2%	136	6%	75
Morrow	3,967	3,888	98%	61	2%	0	0%	18
Polk	34,077	25,007	73%	839	2%	8,231	24%	0
Sherman	239	228	95%	7	3%	0	0%	4
Tillamook	11,504	10,740	93%	713	6%	50	0%	0
Umatilla	38,546	36,611	95%	1,138	3%	751	2%	45
Union	9,280	7,403	80%	250	3%	1,628	18%	0
Wallowa	1,875	1,767	94%	25	1%	82	4%	0
Wasco	6,811	6,231	91%	99	1%	424	6%	57
Wheeler	204	123	60%	19	9%	0	0%	63
Yamhill	58,027	27,694	48%	5,459	9%	24,874	43%	0
<b>Total</b>	<b>2,458,041</b>	<b>1,537,775</b>		<b>494,345</b>		<b>425,054</b>		<b>867</b>

# Appendix I: Methodology

## Data Sources

In 2007 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
- 190 collection service providers
- 11 scrap metal dealers
- 37 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, 2008. 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 sixteenth 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 2007 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 watershed of origin.

**Commingled collection.** To account for the growing number of commingled material collection programs being offered in this state, the 2007 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 2007 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 2007 Material Recovery Survey

### PRIVATE RECYCLING Survey Respondents

4 R RECYCLING Burns, OR	BATTERY SYSTEMS OF MEDFORD Medford, OR	CINTAS DOCUMENT MANAGEMENT Portland, OR	D.A.D.S. RECYCLING Vernonia, OR
A & P RECYCLING The Dalles, OR	BEAVER BARK, INC Scappoose, OR	CITY OF EUGENE Eugene, OR	DAISHOWA AMERICA (NIPPON IND) Port Angeles, WA
ADVANCED M & D SALES Portland, OR	BEST BUY IN TOWN Hillsboro, OR	CITY OF GRANTS PASS Grants Pass, OR	DARLING INTERNATIONAL Boise, ID
AGRIPLAS INC Keizer, OR	BEVERAGE RECYCLERS OF OREGON Eugene, OR	CITY OF KLAMATH FALLS Klamath Falls, OR	DARLING INTERNATIONAL Tacoma, WA
ALBERTSONS DISTRIBUTION CENTER Portland, OR	BIO-MASS-ONE, LP White City, OR	CITY OF PORTLAND Portland, OR	DENNIS CARLIN HAULING Woodburn, OR
ALCOA RECYCLING Alcoa, TN	BLUE GOOSE RECYCLING Weston, OR	CITY OF THE DALLES The Dalles, OR	DENTON PLASTICS INC Portland, OR
ALLWOOD RECYCLING Fairview, OR	BLUE HERON NEWSPRINT CO Oregon City, OR	CITY RECYCLE, LLC Portland, OR	DEPARTMENT OF ENVIRONMENTAL QUALITY Portland, OR
AMERICAN APPLIANCE RECYCLERS White City, OR	BOISE CASCADE St Helens, OR	CLACKAMAS COMPOST Tualatin, OR	CLATSOP DISTRIBUTING CO Astoria, OR
AMERICAN COMPOST & RECYCLING Portland, OR	BON APPETIT MANAGEMENT CO Portland, OR	CLAYTON WARD CO Kennewick, WA	DON & LARRYS INC La Grande, OR
AMERICAN RAG AND METAL Portland, OR	BRING RECYCLING Eugene, OR	CLAYTON WARD CO Salem, OR	DON G. AVERILL RECYCLING, INC Tillamook, OR
AMG RESOURCES Seattle, WA	BUREAU OF LAND MANAGEMENT Vale, OR	CLEAN IT UP MARK Portland, OR	DOUGLAS COUNTY BOTTLING CO Roseburg, OR
ANHEUSER-BUSCH Hayward, CA	CALBAG METALS CO Portland, OR	COLUMBIA BASIN LLC Pasco, WA	DUFUR LIONS CLUB Dufur, OR
ANKMAR, LLC Sweet Home, OR	CAROTHERS TIRE Hillsboro, OR	COLUMBIA DISTRIBUTING Portland, OR	E-WASTE SOLUTIONS Clackamas, OR
ARMSTRONG WORLD IND INC St Helens, OR	CARPET PAD RECYCLING Portland, OR	COLUMBIA GORGE PRESS Hood River, OR	EARTH CYCLE Grants Pass, OR
ASH GROVE CEMENT Portland, OR	CASCADE AUTO RECYCLERS Grants Pass, OR	COMPOST OREGON Aumsville, OR	EARTH PROTECTION SERVICES Sheridan, WY
ASTORIA LIONS CLUB Astoria, OR	CDI VAULTS Eugene, OR	COMPUTER DRIVE CONNECTION Cornelius, OR	EAST COUNTY RECYCLING Portland, OR
ASTORIA WAREHOUSING Astoria, OR	CENTRAL OREGON RECYCLING Bend, OR	CONTAINER RECOVERY INC Portland, OR	EC RESTAURANT SERVICES Harrisburg, OR
BAKER COMMODITIES Seattle, WA	CENTRAL WASTE OIL HAULERS Bend, OR	CRONK RODNEY J TRUCKING Eugene, OR	ECHANIS DISTRIBUTING CO Ontario, OR
BAR 7A TRUCKING Redmond, OR	CHERRY CITY METALS Salem, OR	D & R DIETRICH & SONS, INC Vancouver, WA	ECONOMY APPLIANCE RECYCLERS Medford, OR

ECOSORT Eugene, OR	SERVICES CORP White City, OR	JEFFERSON AVENUE RECYCLERS LaGrande, OR	MARKET OF CHOICE Eugene, OR
ECS REGENESYS Medford, OR	GARTEN FOUNDATION Salem, OR	JOHNSON CONTROLS Canby, OR	MCFARLANES BARK INC Milwaukie, OR
ELECTRO SCRAP, LLC Eagle Point, OR	GEORGIA PACIFIC Halsey, OR	KB RECYCLING Canby, OR	MCGOVERN METALS Roseburg, OR
EMERALD SERVICES Tacoma, WA	GEORGIA PACIFIC CORP Toledo, OR	KE MCKAYS Gold Beach, OR	MCKENZIE RECYCLING Eugene, OR
ENVIRONMENTAL FIBERS INTERNATIONAL Portland, OR	GOLD RIVER DISTRIBUTING CO INC Medford, OR	KEYSTONE AUTOMOTIVE INDUSTRIES, INC Vancouver ,WA	MERLIN PLASTICS Delta, BC
ENVIRONMENTAL LOGISTICS COMPANY Molalla, OR	GOODWILL INDUSTRIES Eugene, OR	KINGSLEY AIR FIELD Klamath Falls, OR	METRO Portland, OR
ENVIRONMENTAL PROTECTION SERVICES INC Brooks, OR	GOODWILL INDUSTRIES Portland, OR	KIWANIS CLUB Tillamook, OR	MID COLUMBIA DISTRIBUTORS INC Hood River, OR
EPSON Hillsboro, OR	GOSPEL RESCUE MISSION Grants Pass, OR	KNEZ BUILDING MATERIALS Clackamas, OR	MONITORS AND MORE Roseburg, OR
ERICKSONS SENTRY MARKET Burns, OR	GRAF PAPER SALVAGE Portland, OR	LAKESIDE RECLAMATION Beaverton, OR	MONROVIA NURSERY Dayton, OR
ETECH Hillsboro, OR	GREENWAY RECYCLING Portland, OR	LAKEVIEW DISTRIBUTING Lakeview, OR	MOUNT HOOD BEVERAGE CO Portland, OR
EUGENE MISSION Eugene, OR	GRIMMS FUEL CO Tualatin, OR	LAKIN TIRES WEST INC Santa Fe Springs, CA	MYERS CONTAINER CORPORATION Portland, OR
EXIDE TECHNOLOGIES Portland, OR	HANKE'S RECYCLING Portland, OR	LAMB-WESTON INC Boardman, OR	NATURES NEEDS Portland, OR
FAR WEST FIBERS Portland, OR	HIGH DESERT BEVERAGE DISTRIBUTORS LLC Bend, OR	LANE FOREST PRODUCTS Eugene, OR	NEXT STEP RECYCLING Eugene, OR
FERGUSON HIDES & RECYCLING Burns, OR	HINES NURSERY Forest Grove, OR	LAURELWOOD FARMS Gearhart, OR	NORTHWEST ENVIRONMENTAL & RECYCLING INC Cornelius, OR
FRED LEA DISTRIBUTING Salem, OR	HI-SCHOOL PHARMACY Vancouver, WA	LEGACY HEALTH SYSTEMS Portland, OR	NORTHWEST GREENLANDS McMinnville, OR
FRED MEYER Clackamas, OR	HOOD RIVER COUNTY Hood River, OR	LES SCHWAB WAREHOUSE CENTER Prineville, OR	NORTHWEST POLYMERS Molalla, OR
FRED MEYER Portland, OR	HOOD RIVER LIONS Hood River, OR	LIFESPAN TECHNOLOGY RECYCLING San Diego, CA	NORTHWEST WOOD AND FIBRE RECOVERY INC Troutdale, OR
FREE GEEK Portland, OR	INDUSTRIAL OILS Klamath Falls, OR	LYLE HENSLEY TRUCKING Langlois, OR	OAK LEAF ENTERPRISES Central Point, OR
FULL SAIL BREWERY Hood River, OR	INNOVATIVE FIBER RESOURCES Gresham, OR	MARION RESOURCE FACILITY Brooks, OR	OIL RE-REFINING INC Portland, OR
FUN BEVERAGE Newport, OR	INTECHRA Gahanna, OH	MARKET FIBERS Vancouver, WA	ONYX ELECTRONICS RECYCLING Vancouver, WA
GARDNER ENTERPRISES INC John Day, OR	INTERTSATE PLASTICS Vancouver, WA		
GARRIS ENVIRONMENTAL	IRAS SALES & SERVICE Madras, OR		
	IRON MOUNTAIN Portland, OR		

OREGON COMPUTER RECYCLING, INC Warrenton, OR	PEPSI COLA BOTTLING CO Roseburg, OR	RETRONICS Portland, OR	STAPLES Framingham, MA
OREGON PALLET Salem, OR	PEPSI COLA BOTTLING CO The Dalles, OR	REXIUS FOREST BY-PRODUCTS Eugene, OR	STAR OF HOPE RECYCLING Coos Bay, OR
OREGON PROCESSING & RECOVERY CENTER Portland, OR	PHILIP SERVICES CORPORATION Kent, WA	RITE AID Wilsonville, OR	STILLWATERS RECYCLING Corvallis, OR
OREGON RECYCLING SYSTEMS Portland, OR	POLK COUNTY Dallas, OR	ROGUE MATERIAL RECOVERY Central Point, OR	STRATEGIC MATERIALS, INC Hayward, CA
OWENS ILLINOIS GLASS CONTAINER INC Portland, OR	PORT OF BROOKINGS Brookings, OR	RON MCDONALD CHEVROLET OLDSMOBILE Madras, OR	STRUT The Dalles, OR
OWYHEE DISTRIBUTING CO INC Nyssa, OR	PORTLAND HABILITATION CENTER INC Portland, OR	ROSAUER'S SUPER MARKET Hood River, OR	TAYLORMADE PRODUCTS INC Scappoose, OR
P & E DISTRIBUTING CO Baker City, OR	PORTLAND RECYCLING TEAM INC Portland, OR	S & H LOGGING Tualatin, OR	TECHNOLOGY CONSERVATION GROUP INC Lecanto, FL
PACIFIC DISC INC (PACIFIC RUBBER) Toledo, OR	PRIDE Sherwood, OR	SAFETY KLEEN Elgin, IL	TEGRANT Wilsonville, OR
PACIFIC LAND CLEARING Portland, OR	PRINCES AUTOMOTIVE Madras, OR	SAFeway DISTRIBUTION CENTER Clackamas, OR	THE RECYCLING PROFESSIONALS INC West Linn, OR
PACIFIC PALLET Eugene, OR	PRINEVILLE MOTOR SUPPLY Prineville, OR	SCHNITZER INDUSTRIES Portland, OR	THERMO FLUIDS INC Clackamas, OR
PAPER CHASE RECYCLING Portland, OR	PROVIDENCE MEDICAL CENTER Portland, OR	SCIENTIFIC DEVELOPMENT INC Eugene, OR	TILLAMOOK COUNTY CREAMERY ASSOCIATION Tillamook, OR
PC PLASTICS Portland, OR	QUANTUM RESOURCES Beaverton, OR	SEAPORT INTERNATIONAL Issaquah, WA	TIRE DISPOSAL Molalla, OR
PENDLETON BOTTLING CO Pendleton, OR	QWEST DEX Englewood, CO	SHRED-IT Tualatin, OR	TIRE DISPOSAL & RECOVERY (KRIDER) Prineville, OR
PEPSI COLA 7 UP BOTTLING CO Bend, OR	R2 PALLET Beaver Creek, OR	SIMPLY MARVELOUS RECYCLING Hillsboro, OR	TIRE DISPOSAL & RECYCLING INC Portland, OR
PEPSI COLA BOTTLING CO Corvallis, OR	RB RECYCLING Portland, OR	SMURFIT-STONE RECYCLING Portland, OR	TOTAL RECLAIM INC (ECOLIGHTS NW) Seattle, WA
PEPSI COLA BOTTLING CO Eugene, OR	RB RUBBER McMinnville, OR	SP NEWSPRINT CO Newberg, OR	TRAIL'S END RECOVERY Warrenton, OR
PEPSI COLA BOTTLING CO Klamath Falls, OR	RECALL Kent, WA	SP RECYCLING CORP Clackamas, OR	TREX COMPANY Winchester, VA
PEPSI COLA BOTTLING CO La Grande, OR	RECHARGEABLE BATTERY RECYCLING CORP Atlanta, GA	SPARC ENTERPRISES Grants Pass, OR	TUALATIN VALLEY WASTE RECOVERY Hillsboro, OR
PEPSI COLA BOTTLING CO Medford, OR	RECYCLE AMERICA Troutdale, OR	ST VINCENT DEPAUL Bend, OR	UNIFIED WESTERN GROCERS Milwaukie, OR
	RED BARN RECYCLING Portland, OR	ST VINCENT DEPAUL Eugene, OR	
	RESCO PLASTICS INC Coos Bay, OR	ST VINCENT DEPAUL The Dalles, 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

WASTE XPRESS  
Portland, OR

WEST COAST GROCERS  
Tacoma, WA

WEST UNION GARDENS  
Hillsboro, OR

WEST VANCOUVER  
MATERIAL RECOVERY  
FAC  
Vancouver, WA

WESTERN BEVERAGE  
CO  
Eugene, OR

WESTERN BEVERAGE  
CO  
Medford, OR

WESTERN BEVERAGE  
CO  
Salem, OR

WESTERN OREGON  
UNIVERSITY  
Monmouth, OR

WESTERN PULP  
PRODUCTS  
Corvallis, OR

WESTERN RECYCLING  
Boise, ID

WEVCO BIODIESEL  
PRODUCTS  
Portland, OR

WEYERHAEUSER  
PAPER FIBERS  
Beaverton, OR

WILLAMETTE  
RESOURCES  
Wilsonville, OR

WINCO  
Woodburn, OR

WOOD WASTE  
MANAGEMENT  
Portland, OR

WRIGHT CHEVROLET  
Fossil, OR

YAMHILL COUNTY  
SOLID WASTE  
MANAGEMENT  
McMinnville, OR

YAQUINA RECYCLING  
Newport, OR

**SCRAP METAL  
Survey Respondents**

BURCHAMS METALS  
Albany, OR

CLYDE & REBECCA  
REDMAN  
Irrigon, OR

DAVIS RS RECYCLING  
STATION  
Clackamas, OR

EUGENE ALUMINUM &  
BRASS FOUNDRY  
Eugene, OR

HAMILTON METALS  
Klamath Falls, OR

METRO METALS  
NORTHWEST  
Portland, OR

RBBG, INC  
Parkdale, OR

RIVERGATE SCRAP  
METALS  
Portland, OR

STEEL OUTLET, INC  
Roseburg, OR

SWIFT & MCCORMICK  
Redmond, OR

THOMAS RICHARD  
SCRAP METAL  
The Dalles, OR

**COLLECTION SERVICE  
PROVIDER  
Survey Respondents**

ALLIED WASTE OF  
ALBANY LEBANON  
Albany, OR

ALLIED WASTE OF  
CORVALLIS  
Corvallis, OR

ALLIED WASTE OF  
DALLAS  
Dallas, OR

ALLIED WASTE OF  
GRANTS PASS  
Grants Pass, OR

ALLIED WASTE OF  
MARION COUNTY  
Woodburn, OR

ALLIED WASTE OF  
SALEM  
Salem, OR

ASHLAND SANITARY &  
RECYCLING SERVICE  
Ashland, OR

BAKER SANITARY  
SERVICE  
Baker City, OR

BEAVER HILL  
INCINERATOR &  
DISPOSAL SITE  
Coquille, OR

BEND GARBAGE &  
RECYCLING CO  
Bend, OR

BRANDTS SANITARY  
SERVICE  
Monmouth, OR

C & B SANITARY  
SERVICE  
Burns, OR

CART'M  
Manzanita, OR

CASCADE RECYCLING  
COMPANY  
Bend, OR

CENTRAL COAST  
DISPOSAL  
Florence, OR

CITY OF CANNON  
BEACH  
Cannon Beach, OR

CITY OF ELGIN  
Elgin, OR

CITY OF HAINES  
Haines, OR

CITY OF HUNTINGTON  
Huntington, OR

CITY OF JUNCTION CITY  
Junction City, OR

CITY OF LONG CREEK  
Long Creek, OR

CITY OF MILTON  
FREEWATER  
Milton Freewater, OR

CITY OF MONUMENT  
Monument, OR

CITY OF SISTERS  
Sisters, OR

CITY SANITARY &  
RECYCLING  
McMinnville, OR

CITY SANITARY  
SERVICE  
Tillamook, OR

CLARKS DISPOSAL  
John Day, OR

COBURG SANITARY  
SERVICE, INC  
Coburg, OR

CONFEDERATED  
TRIBES OF THE WARM  
SPRINGS  
Warm Springs, 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	LANE APEX DISPOSAL Eugene, OR	OREGON WASTE SYSTEMS INC Arlington, OR	SUBURBAN GARBAGE SERVICE Salem, OR
DESCHUTES TRANSFER CO Bend, OR	LANE COUNTY SOLID WASTE DIVISION Eugene, OR	P & J DISPOSAL Creswell, OR	SUNRISE ENTERPRISES Roseburg, OR
DOUGLAS COUNTY PUBLIC WORKS DEPARTMENT Roseburg, OR	LES SANITARY SERVICE Coos Bay, OR	PACIFIC SANITATION Salem, OR	SUTHERLIN SANITARY SERVICE Sutherlin, OR
ECOSYSTEMS TRANSFER & RECYCLING Veneta, OR	LINCOLN COUNTY SOLID WASTE DISTRICT Newport, OR	PENDLETON SANITARY SERVICE, INC Pendleton, OR	SWEET HOME SANITATION SERVICE Sweet Home, OR
ENVIRONMENTAL WASTE SYSTEMS INC St Helens, OR	LORENS SANITATION SERVICE Keizer, OR	PINE VALLEY RECYCLING COMMITTEE Baker City, OR	THE DALLES DISPOSAL SERVICE The Dalles, OR
FINLEY BUTTES LANDFILL Boardman, OR	MADRAS SANITARY SERVICE Madras, OR	PRINEVILLE DISPOSAL INC Prineville, OR	THE PRAIRIE CITY RECYCLING TEAM Prairie City, OR
HIGH COUNTRY DISPOSAL Redmond, OR	MALHEUR COUNTY ENVIRONMENTAL HEALTH Vale, OR	R-SANITARY SERVICE Garibaldi, OR	THOMPSONS SANITARY SERVICE Newport, OR
HOOD RIVER GARBG, RECY AND TRANSFER Hood River, OR	MARION COUNTY PUBLIC WORKS - ENV SERV Salem, OR	RAHN SANITARY SERVICE Enterprise, OR	TILLAMOOK COUNTY PUBLIC WORKS DEPARTMENT Tillamook, OR
HORIZON PROJECT INC Milton Freewater, OR	MARION RECYCLING CENTER INC Salem, OR	RAINIER SANITARY SERVICE Rainier, OR	TOLEDO RECYCLING AND TRANSFER Toledo, OR
HORNING BROTHERS SANITARY SERVICE Reedsport, OR	MCKENZIE DISPOSAL SERVICE LLC Walterville, OR	RIMROCK RECYCLING Hines, OR	UMATILLA INDIAN RESERVATION Pendleton, OR
HUMBERT REFUSE & RECYCLING (RAHN'S) Milton Freewater, OR	MEL'S SANITARY SERVICE Tygh Valley, OR	ROGUE DISPOSAL & RECYCLING, INC Central Point, OR	VALLEY LANDFILLS INC Corvallis, OR
JEFFERSON COUNTY PUBLIC WORKS DEPARTMENT Madras, OR	MID OREGON RECYCLING Bend, OR	ROSEBURG DISPOSAL CO Roseburg, OR	VALLEY RECYCLING AND DISPOSAL, INC Salem, OR
JOSEPHINE COUNTY RECYCLING & TRANSFER Grants Pass, OR	NEWBERG GARBAGE & RECYCLING Newberg, OR	ROYAL REFUSE SERVICE Eugene, OR	WADSWORTH GARBAGE DISPOSAL SERVICE Coquille, OR
KLAMATH COUNTY SOLID WASTE MANAGEMENT Klamath Falls, OR	NORTH BEND SANITATION North Bend, OR	SANIPAC INC Eugene, OR	WASCO COUNTY LANDFILL The Dalles, OR
KLAMATH DISPOSAL Klamath Falls, OR	NORTH LINCOLN SANITARY SERVICE Lincoln City, OR	SANITARY DISPOSAL INC Hermiston, OR	WASTE MANAGEMENT OF COLUMBIA COUNTY St Helens, OR
KNOTT LANDFILL Bend, OR	NORTH MARION RECYCLING & DISPOSAL Keizer, OR	SOURCE RECYCLING Albany, OR	WASTE PRO (CITY GARBAGE SERVICE) La Grande, OR
LAKE COUNTY ROAD DEPARTMENT Lakeview, OR	OAKRIDGE SANI-HAUL INC Oakridge, OR	SOUTHERN OREGON SANITATION Eagle Point, OR	WEST COAST RECYCLING AND TRANSFER Coos Bay, OR
LAKEVIEW SANITATION Lakeview, OR	ONTARIO SANITARY SERVICE INC Ontario, OR	SOUTHERN OREGON SANITATION INC Grants Pass, OR	WESTERN OREGON WASTE McMinnville, OR
		STAR GARBAGE SERVICE Eugene, 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 BEAR BOX CO  
Portland, OR

A-1 DISPOSAL SERVICE  
Portland, OR

AGG ENTERPRISES INC  
Portland, OR

ALBERTA SANITARY SERVICE  
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

ARGAY DISPOSAL SERVICE  
Milwaukie, OR

ARMSTRONG DISPOSAL CORP  
Portland, OR

ARROW SANITARY (WASTE CONNECTIONS)  
Portland, OR

B & J GARBAGE CO  
Canby, OR

BLISS SANITARY SERVICE  
Boring, OR

BRUMMELL CONSTRUCTION  
Portland, 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

DAVES SANITARY SERVICE  
Vancouver, WA

DEINES BROTHERS  
Portland, OR

DEINES, MEL SANITARY SERVICE INC  
Milwaukie, OR

DEYOUNG SANITARY SERVICE  
Portland, OR

DUNTHORPE SANITARY SERVICE INC  
Lake Oswego, OR

EASTSIDE RECYCLING DISTRICT  
Portland, 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

INTERSTATE DROP BOX SERVICE  
Ridgefield, WA

LEHL DISPOSAL INC  
Canby, OR

MOLALLA SANITARY  
Oregon City, OR

MULTNOMAH COUNTY DROP BOX SERVICE  
Portland, OR

OAK GROVE DISPOSAL CO INC  
Milwaukie, OR

OREGON CITY GARBAGE CO  
Oregon City, OR

PAPASADERO JF & SONS  
Portland, OR

PORTLAND DISPOSAL & RECYCLING  
Portland, OR

PRIDE DISPOSAL  
Sherwood, 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

TROUDT BROTHERS  
Portland, OR

TRS DISPOSAL  
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

WALKER PETER & SON  
Gresham, 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

WESTSIDE RECYCLING  
DISTRICT  
Vancouver, WA

WICHITA SANITARY  
SERVICE  
Gladstone, OR

WOODFEATHERS, INC.  
Beaverton, OR

**DISPOSAL SITE  
Survey Respondents**

ANT FLAT LANDFILL  
Enterprise, OR

BAKER SANITARY  
LANDFILL  
Baker City, OR

BEAVER HILL  
INCINERATOR &  
DISPOSAL SITE  
Coquille, OR

BROWNS ISLAND  
DEMOLITION LANDFILL  
Salem, OR

BURNS/HINES  
Burns, OR

CHEMULT DISPOSAL  
SITE  
Klamath Falls, OR

COFFIN BUTTE  
SANITARY LANDFILL  
Corvallis, OR

COLUMBIA RIDGE  
LANDFILL & RECYCLING  
Arlington, OR

CROOK COUNTY  
LANDFILL  
Prineville, OR

DELTA SAND & GRAVEL  
DEMOLITION LANDFILL  
Eugene, OR

DIAMOND DISPOSAL  
SITE  
Burns, OR

DREWSEY DISPOSAL  
SITE  
Burns, OR

DRY CREEK DISPOSAL  
SITE  
Medford, OR

ENERGY RECOVERY  
FACILITY  
Salem, OR

FIELDS DISPOSAL SITE  
Burns, OR

FINLEY BUTTES  
LANDFILL  
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

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

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## Appendix III: Survey Forms

# 2007 Oregon Material Recovery Survey

## INDIVIDUAL MATERIAL COLLECTION REPORT

Oregon law (ORS 459A.050(6)&(8)) requires all businesses that handle recyclable materials to fill out this form. Failure to report in a timely manner, or submission of incomplete or inaccurate reports may result in an enforcement action and possible civil penalties.

If you require assistance completing this form, contact Mary Fritzmann-Smith: 503-229-5409, toll-free in Oregon: 1-800-452-4011 x5409, or via email: [fritzmannsmith.mary@deq.state.or.us](mailto:fritzmannsmith.mary@deq.state.or.us).

Material	ID Code
	1

<b>A Beginning Inventory: January 1, 2007</b>	<i>If none, enter zero.</i>	2
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<b>B INCOMING: Material Source</b>	<u>DIRECT</u>	<u>INDIRECT</u>		<u>TOTAL</u>
	Amount YOU collected from offices, schools, restaurants, grocery stores, etc.	Material you collected from other recycling companies.	Company Name <b>**REQUIRED**</b>	Amount
OREGON COUNTY or CITY				
				3
				4
				5
				6
				7
				8
				9
				10
				11
				12
				13
				14
				15
				16
				17
				18
				19
				20
				21
				22
				23
				24
				25
				26
				27
				28

<b>Subtotal:</b>	<i>Add lines 2 through 28</i>	29
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Additional Oregon County Totals, If Any	<i>Total from additional sheet</i>	30
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<b>Total Tons Sorted from Commingled Mix</b>	<i>Lines 18-25 of Commingled Collection Worksheet</i>	31
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<b>Total Tons Collected From Outside of Oregon</b>		32
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<b>Total Tons Collected in 2007</b>	<i>Add lines 29 through 32; carry over to back side, line 34</i>	33
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\*\*\*\*\* **CONTINUE TO BACK SIDE** \*\*\*\*\*

# 2007 Material Recovery Survey (Continued)

Material	ID Code
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**C Incoming Total** *Carried over from line 33 (Page 1)* 34

**D OUTGOING: Material Sold/Shipped/Transferred/Used** (Circle "C" if Composted, "E" if Burned for Energy Recovery, or "R" if Recycled.)

COMPANY NAME	LOCATION (City/State)				Tons/Gallons
		C	E	R	35
		C	E	R	36
		C	E	R	37
		C	E	R	38
		C	E	R	39
		C	E	R	40
		C	E	R	41
		C	E	R	42
		C	E	R	43

**Subtotal** *Lines 35 through 43* 44

**E OUTGOING: Material Exported To Out-Of-Country Markets**

		C	E	R	45
		C	E	R	46
		C	E	R	47
		C	E	R	48

Total Tons Sold to Additional Companies, If Any *Please Attach Separate Sheet* 49

**Total Tons Used By Your Company To Make A Product** 50

**F OUTGOING: Material Disposed/Shrinkage/Other** (Circle "S" if Shrinkage, "D" if Disposed, or "Other".)

		D	S	Other	51
		D	S	Other	52
		D	S	Other	53

**Total Outgoing Tons In 2007** *Add lines 44 through 53* 54

**G Ending Inventory: December 31, 2007** *Subtract line 54 from line 34* 55

**H Does this form balance? If not, please explain:**

**I Comments**

**J** I CERTIFY that I am familiar with the information contained in this report and that to the best of my knowledge such information is true, complete, and accurate. **Failure to provide complete and accurate information required by this survey and OAR 340-090-0100(5) may result in civil penalties pursuant to ORS 459.995.**

NAME (PRINT) \_\_\_\_\_ SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

TELEPHONE \_\_\_\_\_ TITLE \_\_\_\_\_

**CONFIDENTIALITY OF INFORMATION.**

ORS 459A.050 (7) states, "Information collected under subsection (6) of this section, as it relates specifically to the entity's customer lists or specific amounts and types of materials collected or marketed, shall be maintained as confidential by the Department and exempt from disclosure under ORS 192.410 to 192.505. The Department may use and disclose such information in aggregated form."

Mail to: Oregon DEQ, SWPPD - 8th Floor, Attn: Mary  
Fritzmans-Smith, 811 SW Sixth Avenue, Portland, OR  
97204.

Email electronic file to:  
[fritzmansmith.mary@deq.state.or.us](mailto:fritzmansmith.mary@deq.state.or.us)





# 2007 Material Recovery Survey (Continued)

Material	ID Code
----------	---------

<b>IV Incoming Total</b>	<i>Total unsorted mix (Page 1)</i>	28
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**V OUTGOING: Material Sold/Shipped/Transferred/Used** (Circle "C" if Composted, "E" if Burned for Energy Recovery, or "R" if Recycled.)

COMPANY NAME	LOCATION (City/State)				Tons/Gallons
		C	E	R	29
		C	E	R	30
		C	E	R	31
		C	E	R	32
		C	E	R	33
		C	E	R	34
		C	E	R	35
		C	E	R	36
		C	E	R	37

<b>Subtotal</b>	<i>Lines 31 through 41</i>	38
-----------------	----------------------------	----

**VI OUTGOING: Material Exported To Out-Of-Country Markets**

		C	E	R	39
		C	E	R	40
		C	E	R	41
		C	E	R	42

Total Tons Sold to Additional Companies, If Any *Please Attach Separate Sheet* 43

<b>Total Tons Used By Your Company To Make A Product</b>					44
--	--	--	--	--	----

**VII OUTGOING: Material Disposed/Shrinkage/Other** (Circle "S" if Shrinkage, "D" if Disposed, or "Other".)

		D	S	Other	45
		D	S	Other	46
		D	S	Other	47

<b>Total Outgoing Tons In 2007</b>	<i>Add lines 42 through 51</i>	48
------------------------------------	--------------------------------	----

<b>VIII Ending Inventory: December 31, 2007</b>	<i>Subtract line 52 from line 30</i>	49
---	--------------------------------------	----

**IX** Does this form balance? If not, please explain:

**X** Comments

**XI** I CERTIFY that I am familiar with the information contained in this report and that to the best of my knowledge such information is true, complete, and accurate. **Failure to provide complete and accurate information required by this survey and OAR 340-090-0100(5) may result in civil penalties pursuant to ORS 459.995.**

NAME (PRINT)	SIGNATURE	DATE
TELEPHONE	TITLE	

**CONFIDENTIALITY OF INFORMATION**

ORS 459A.050 (7) states, "Information collected under subsection (6) of this section, as it relates specifically to the entity's customer lists or specific amounts and types of materials collected or marketed, shall be maintained as confidential by the Department and exempt from disclosure under ORS 192.410 to 192.505. The Department may use and disclose such information in aggregated form."

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Fritzmansmith, 811 SW Sixth Avenue, Portland, OR  
97204.

Email electronic file to:  
[fritzmansmith.mary@deq.state.or.us](mailto:fritzmansmith.mary@deq.state.or.us)



# 2007 RECYCLING COLLECTOR SURVEY

Company/Collector Name \_\_\_\_\_

Wasteshed \_\_\_\_\_



## A. POST-CONSUMER MATERIALS HANDLED IN 2007 (Single Wasteshed)

*Use a separate page 1 for each wasteshed.*

**INSTRUCTIONS:** For each post-consumer material handled in 2007, record the amount obtained by each of the following collection methods. In columns (A)-(F) record the amount collected by your company. In column (G), record the amount received from other companies; list each company from which you received material. If material is received from multiple wastesheds, the totals reported (column H1) for each wasteshed should, when added together, equal the total reported in column (H2) on page 2. If material is collected in only one wasteshed, (H1) will = (H2)

Materials <small>(See Recovered Materials Definitions on Attachment A)</small>	Amount Collected: Only by Your Company						Amt Received From Other Companies	(G) <b>**REQUIRED**</b> Company Names	(H1) Total Amount Collected / Handled in This Wasteshed (A) thru (G)
	(A) On-Route Residential	(B) On-Route Commercial	(C) Disposal Sites & Transfer Stn	(D) Multi-Family	(E) Other Depots Special Event	(F) Construction & Demolition			
<b>COMMINGLED</b> Containers Only & Glass      Tons									
Containers Only - No Glass      Tons									
Papers & Containers & Glass      Tons									
Papers & Containers - No Glass      Tons									
<b>PAPER FIBERS</b> Newspaper / Mags. (ONP)      Tons									
Cardboard / Kraft (OCC)      Tons									
Office Pack / HI Grade (HI)      Tons									
Mixed Papers Only (MWP)      Tons									
<b>NON-FIBER</b> Film Plastics (PF)      Tons									
Plastic Bottles & Containers (RPC)      Tons									
Other Plastics (PO) [kind _____]      Tons									
Container Glass (GL)      Tons									
Aluminum (AL)      Tons									
"Tinned" Steel Cans (TC)      Tons									
Scrap Metal (SCM)      Tons									
Lead Acid Batteries (LAB)      Units / Tons									
Tires (TIR)      Units / Tons									
Used Motor Oil (OIL)      Gallons / Tons									
Electronics: Covered Devices (EL CV)      Tons									
Electronics: Other (EL OT)      Tons									
Asphalt Roofing (RF)      Tons									
<b>ORGANICS</b> Food Waste (FW)      Tons									
Wood / Lumber (WW)      Tons / CuYd									
Compacted Yard Debris (YD)      Tons / CuYd									
Uncompacted Yard Debris (YD)      Tons / CuYd									
<b>OTHER</b> Other _____      Tons									
Other _____      Tons									

## 2007 RECYCLING COLLECTOR SURVEY

### B. TOTAL POST-CONSUMER MATERIALS SOLD, DELIVERED AND/OR USED IN 2007 (All wastesheds)

**INSTRUCTIONS:** This table is used to determine the total amount of each post-consumer material you sold, delivered and/or used on-site in 2007 by adjusting column (H2), "Total Amount Collected /Handled" in all wastesheds for changes in inventory (ending inventory minus beginning inventory). This table covers all wastesheds from which material is collected or obtained. In column (H2) below, if material is collected in multiple wastesheds, add together each wasteshed's column (H1) on page 1. If material is collected in only one wasteshed, (H1) will = (H2). For columns (I) & (J), if no inventory, enter zero. For column (I), "Beginning Inventory Jan. 1, 2007", use the "Ending Inventory Dec. 31, 2006" (from last year's form). In column (K) for each material, add (H2) to (I) and subtract (J). Note: Do not record inventory for yard debris or wood waste; the amount collected will be counted as recovered without regard to inventory.

MATERIAL	Unit of Measure (Circle One)	(H2) Total Amount Collected/Handled in All Wastesheds 2007	+	(I) Beginning Inventory Jan. 1, 2007	-	(J) Ending Inventory Dec. 31, 2007	=	(K) Total Sold, Delivered and/or Used on Site 2007 (H2) + (I) - (J) =
Containers Only & Glass	Tons	_____	+	( _____ )	-	_____	=	_____
Containers Only - No Glass	Tons	_____	+	( _____ )	-	_____	=	_____
Papers & Containers & Glass	Tons	_____	+	( _____ )	-	_____	=	_____
Papers & Containers - No Glass	Tons	_____	+	( _____ )	-	_____	=	_____
Newspaper / Mags. (ONP)	Tons	_____	+	( _____ )	-	_____	=	_____
Cardboard / Kraft (OCC)	Tons	_____	+	( _____ )	-	_____	=	_____
Office Pack / HI Grade (HI)	Tons	_____	+	( _____ )	-	_____	=	_____
Mixed Papers Only (MWP)	Tons	_____	+	( _____ )	-	_____	=	_____
Film Plastics (PF)	Tons	_____	+	( _____ )	-	_____	=	_____
Plastic Bottles & Containers (RPC)	Tons	_____	+	( _____ )	-	_____	=	_____
Other Plastics (PO) [kind _____]	Tons	_____	+	( _____ )	-	_____	=	_____
Container Glass (GL)	Tons	_____	+	( _____ )	-	_____	=	_____
Aluminum (AL)	Tons	_____	+	( _____ )	-	_____	=	_____
"Tinned" Steel Cans (TC)	Tons	_____	+	( _____ )	-	_____	=	_____
Scrap Metal (SCM)	Tons	_____	+	( _____ )	-	_____	=	_____
Lead Acid Batteries (LAB)	Units / Tons	_____	+	( _____ )	-	_____	=	_____
Tires (TIR)	Units / Tons	_____	+	( _____ )	-	_____	=	_____
Used Motor Oil (OIL)	Gallons / Tons	_____	+	( _____ )	-	_____	=	_____
Electronics: Covered Devices (EL CV)	Tons	_____	+	( _____ )	-	_____	=	_____
Electronics: Other (EL OT)	Tons	_____	+	( _____ )	-	_____	=	_____
Asphalt Roofing (RF)	Tons	_____	+	( _____ )	-	_____	=	_____
Food Waste (FW)	Tons	_____	+	( _____ )	-	_____	=	_____
Wood / Lumber (WW)	Tons / CuYd	_____	+	( 0 _____ )	-	( 0 _____ )	=	_____
Compacted Yard Debris (YD)	Tons / CuYd	_____	+	( 0 _____ )	-	( 0 _____ )	=	_____
Uncompacted Yard Debris (YD)	Tons / CuYd	_____	+	( 0 _____ )	-	( 0 _____ )	=	_____
Other _____	Tons	_____	+	( _____ )	-	_____	=	_____
Other _____	Tons	_____	+	( _____ )	-	_____	=	_____

## 2007 RECYCLING COLLECTOR SURVEY

Company: \_\_\_\_\_

### C. TOTAL POST-CONSUMER MARKETING INFORMATION 2007 (All Wastesheds)

**INSTRUCTIONS:** This table is used to track the statewide movement of material to end use markets. This information is necessary to help DEQ avoid double-counting or under-counting materials. This table covers all wastesheds from which material is collected or obtained. Total up all material sold, delivered, or used by your company and record in "Amount Sold, Delivered or Used" column. *Please be consistent when reporting units of measure.* In the last two columns list the name and city of each company to which material is sold or delivered or used in 2007. **Note:** 1) For each material, use a separate line for each recycler to whom material was sold, delivered or used by in 2007. The total of these entries should equal the amount recorded on page 2, column (K). 2) Use the rows marked "other" on page 5 if you need more lines or if you handled materials not listed on this survey. 3) If your company used a recovered material (example - used oil was burned in your shop heater), list your company as the company to which material was sold, delivered or used 4) If requested, your response to this portion of the survey will be held as confidential business information. See the bottom of page 5 for further detail.

MATERIAL	Amount Sold, Delivered or Used (Total Amt. Should = Column (K), page 2)	Unit of Measure	Company Name Material Sold, Delivered or Used	Company Location City, State
Containers Only & Glass	a.	Tons		
	b.	Tons		
	Total Amt. = a+b			
Containers Only - No Glass	a.	Tons		
	b.	Tons		
	Total Amt. = a+b			
Paper & Containers & Glass	a.	Tons		
	b.	Tons		
	Total Amt. = a+b			
Paper & Containers - No Glass	a.	Tons		
	b.	Tons		
	Total Amt. = a+b			
Newspaper & Magazines (ONP)	a.	Tons		
	b.	Tons		
	Total Amt. = a+b			
Cardboard/Kraft (OCC)	a.	Tons		
	b.	Tons		
	Total Amt. = a+b			
Office Pack/HiGrade (HI)	a.	Tons		
	b.	Tons		
	Total Amt. = a+b			
Mixed Papers Only (MWP)	a.	Tons		
	b.	Tons		
	Total Amt. = a+b			
Film Plastics (PF)	a.	Tons		
	b.	Tons		
	Total Amt. = a+b			

## 2007 RECYCLING COLLECTOR SURVEY

### C. cont'd: POST-CONSUMER MARKETING INFORMATION 2007 (All Wastesheds)

MATERIAL	Amount Sold, Delivered or Used (Total Amt. Should = Column (K), Page 2)	Unit of Measure (Circle One)	Company Name Material Sold, Delivered or Used	Company Location City, State	Circle "C" if Composted, or "E" if Burned for Energy Recovery
Plastic Bottles & Containers (RPC)	a.	Tons			
	b.	Tons			
	Total Amt. = a+b				
Other Plastics (PO)	a.	Tons			
	b.	Tons			
	Total Amt. = a+b				
Container Glass (GL)	a.	Tons			
	b.	Tons			
	Total Amt. = a+b				
Aluminum (AL)	a.	Tons			
	b.	Tons			
	Total Amt. = a+b				
"Tinned" Steel Cans (TC)	a.	Tons			
	b.	Tons			
	Total Amt. = a+b				
Scrap Metal (SCM)	a.	Tons			
	b.	Tons			
	Total Amt. = a+b				
Lead Acid Batteries (LAB)	a.	Units / Tons			
	b.	Units / Tons			
	Total Amt. = a+b				
Tires (TIR)	a.	Units / Tons			C E
	b.	Units / Tons			C E
	Total Amt. = a+b				
Used Motor Oil (OIL)	a.	Gallons / Tons			C E
	b.	Gallons / Tons			C E
	Total Amt. = a+b				
Electronics: Covered Devices (EL CV)	a.	Tons			
	b.	Tons			
	Total Amt. = a+b				

## 2007 RECYCLING COLLECTOR SURVEY

### C. cont'd: POST-CONSUMER MARKETING INFORMATION 2007 (All Wastesheds)

MATERIAL	Amount Sold, Delivered or Used (Total Amt. Should = Column (K), Page 2)	Unit of Measure (Circle One)	Company Name Material Sold, Delivered or Used	Company Location City, State	Circle "C" if Composted, or "E" if Burned for Energy Recovery
Electronics: Other (EL OT)  Total Amt. = a+b	a.	Tons			
	b.	Tons			
Asphalt Roofing (RF)  Total Amt. = a+b	a.	Tons			
	b.	Tons			
Food Wastem (FW)  Total Amt. = a+b	a.	Tons			C E
	b.	Tons			C E
Wood / Lumber (WW)  Total Amt. = a+b	a.	Tons / CuYd			C E
	b.	Tons / CuYd			C E
Compacted Yard Debris (YD)  Total Amt. = a+b	a.	Tons / CuYd			C E
	b.	Tons / CuYd			C E
Uncompacted Yard Debris (YD)  Total Amt. = a+b	a.	Tons / CuYd			C E
	b.	Tons / CuYd			C E
Other  Total Amt. = a+b	a.	Tons			
	b.	Tons			
Other  Total Amt. = a+b	a.	Tons			
	b.	Tons			

**Confidentiality:** You may return Part C (pages 3-5, "Total Post-Consumer Marketing Information") of this survey directly to DEQ rather than to the wasteshed representative if you prefer to limit access to this information. To limit access to only DEQ staff, write on these pages "confidential business information" and return by Wednesday, February 28, 2008 to Michelle Shepperd, DEQ, 811 SW 6th Ave., Portland, OR 97204. Parts A & B & D of this survey must be returned directly to your wasteshed representative (county) for inclusion in the annual recycling report. Please notify your wasteshed representative if you return this form directly to DEQ.

### D. OUT-OF-STATE SOLID WASTE DISPOSAL

If you disposed of solid waste (residential, commercial, construction or demolition) out-of-state that was collected in the wasteshed, please indicate the total amount, type disposed during calendar year 2007, and where you shipped it.

Type of Waste (be specific; i.e. tires)	Tons	Shipped To

# MUNICIPAL SOLID WASTE DISPOSAL FACILITIES

(Receiving 1,000 Tons or Less Per Year)

## Solid Waste Disposal Report/Fee Calculation

Mail to:  
Dept. of Environmental Quality  
Business Office  
811 SW Sixth Ave.  
Portland, OR 97204

For DEQ use only:  
Date Rec'd \_\_\_\_\_  
Amount Rec'd \_\_\_\_\_  
Check No. \_\_\_\_\_

Facility Name \_\_\_\_\_

SW Permit No. \_\_\_\_\_

### REPORTING PERIOD

January 1 - December 31, 2007

**Report and fees are due to DEQ by January 31, 2008**

### INSTRUCTIONS FOR COMPLETING THIS FORM

This form is for self-payment of DEQ solid waste **permit fees** (\$200.00 Solid Waste Permit and Registration Compliance Fee plus \$.09/ton 1991 Recycling Act Fee), as well as solid waste **disposal fees** (\$.81/ton) and the **Orphan Site Account fee** (\$.13/ton). Please report on this form all waste disposed at the facility in 2007. See page 4 for more details and an explanation of types of waste included. *Complete pages 2 and 3 of this form first.* Record the weight (if scales used) or volume of *all* in-state waste and out-of-state waste for the reporting period. If your solid waste permit does not require you to monitor and report amount of waste received, estimate population served by allocating the population between in-state and out-of-state. Compute tonnage by assuming one ton of waste per person per year. *Calculation of the fees must be made on this form, even if you also submit reporting information on your own forms.*

Use TOTAL TONS from pages 2 and 3 of this form to perform the calculations below.

Total In-State Solid Waste: # of Tons (from page 2, step 3 or 4)	_____	+		
Total Out-of-State Waste: # of Tons (from page 3, step 6 or 7)	_____	+		
Total "Counting" Waste Tires: # of Tons (from page 3, step 8)	_____	=		
<b>Total Tons Received In Reporting Period:</b>	_____	X	\$ .81/ton	= _____
			.13/ton	= _____
			.09/ton	= _____
Solid Waste Permit and Registration Compliance Fee			\$	200.00
			<b>TOTAL PAYMENT = \$</b>	_____

I CERTIFY that I am familiar with the information contained in this report and that to the best of my knowledge such information is true, complete and accurate.

NAME (PRINT) \_\_\_\_\_ SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

TELEPHONE \_\_\_\_\_ TITLE \_\_\_\_\_

**SPECIFIED WASTES:** If your site is authorized by the Department to receive "cleanup materials contaminated with hazardous substances," you must, on a quarterly basis, report the source, type, quantity, and date of waste received. Please attach to this form. (Include specified wastes as part of the amounts entered on this form.)

# IN-STATE SOLID WASTE DISPOSAL WORKSHEET

	COUNTY	WASTE COLLECTION SERVICE PROVIDERS		PRIVATE VEHICLES	TRANSER STATIONS SW PROCESSING FACILITIES	
		COMPACTED	UNCOMPACTED	UNCOMPACTED		
<b>1</b> "Counting" Resid/Comm/Const. & Demolition SW by County						Indicate measurement by circling cubic yards (Yd) or tons (T). Attach separate sheet for additional counties.  By county accuracy is important. However, estimates may be used.
		Yd T	Yd T	Yd T	Yd T	
		Yd T	Yd T	Yd T	Yd T	
		Yd T	Yd T	Yd T	Yd T	
	Additional Counties From Attached Sheet	Yd T	Yd T	Yd T	Yd T	
	Subtotal: In-State Counting Waste	T	T	T	T	
<b>2</b> "Non-Counting" Waste	Contaminated Cleanup Material	T	Yd T	Yd T	Yd T	See page 4 for definition of "Counting" and "Non-counting" waste.  <b>LINE TOTAL</b> (Add Across)
	Asbestos	Yd T	Yd T	Yd T	Yd T	
	Industrial Waste (Includes Industrial woodwaste)	Yd T	Yd T	Yd T	Yd T	
	Rubble, Rock, Asphalt, etc.	Yd T	Yd T	Yd T	Yd T	
	Other (Specify)	Yd T	Yd T	Yd T	Yd T	
<b>1+2</b>	Total: In-State "Counting" & "Non-counting" Waste	T	T	T	T	T

<b>3</b>	If quantities above not recorded in tons, convert to equivalent tonnage. <b>Put total of Tonnage column in 3B below.</b> <span style="float: right;">Put result in 3A below.</span>					
		<b>Cubic Yards</b>			<b>Tonnage</b>	
	Domestic Solid Waste	_____	Total compacted cu. yd.	X .35 =	_____	T
	Domestic Solid Waste	_____	Total uncompactd cu. yd.	X .15 =	_____	T
	Contaminated Cleanup Material	_____	Total uncompactd cu. yd.	X 1.20 =	_____	T
	Asbestos	_____	Total uncompactd cu. yd.	X .25 =	_____	T
	Industrial Waste	_____	Total compacted cu. yd.	X .35 =	_____	T
	Industrial Waste	_____	Total uncompactd cu. yd.	X .15 =	_____	T
	Rubble, Rock, Asphalt, etc.	_____	Total uncompactd cu. yd.	X 1.25 =	_____	T
	Other (Specify) _____	_____	Total uncompactd cu. yd.	X ____ =	_____	T
Recycled Materials		Subtracted from Total Tonnage		-	_____	T
		<b>TOTAL (add down)</b>			T	Put result in 3B below.

<b>3</b>	<b>Total In-State SW Equivalent Tons</b>	_____	+	_____	=	
<b>4</b>	Population = _____ X 1 ton annually/ person	3A		3B	=	

# OUT-OF-STATE SOLID WASTE DISPOSAL WORKSHEET

		WASTE COLLECTION SERVICE PROVIDERS		PRIVATE VEHICLES	TRANSFER STATIONS SW PROCESSING FACILITIES			
		COMPACTED	UNCOMPACTED	UNCOMPACTED				
5	Resid/Comm/Const/Demo/Industrial SW	Yd T	Yd T	Yd T	Yd T	Yd T		
	Contaminated Cleanup Material	Yd T	Yd T	Yd T	Yd T	Yd T		
	Asbestos	Yd T	Yd T	Yd T	Yd T	Yd T	<b>LINE TOTAL</b> (Add Across)	
	Out-of-State Totals (Tons only)	T	T	T	T	T	T	
								Put result in 6A below.
6	If quantities above not recorded in tons, convert to equivalent tonnage. <b>Put total of Tonnage column in 6B below.</b>							
		Cubic Yards				Tonnage		
	Domestic Solid Waste	_____ Total compacted cu. yd.			X	.35 =	_____ T	
	Domestic Solid Waste	_____ Total uncompactd cu. yd.			X	.15 =	_____ T	
	Contaminated Cleanup Material	_____ Total uncompactd cu. yd.			X	1.20 =	_____ T	
	Asbestos	_____ Total uncompactd cu. yd.			X	.25 =	_____ T	
Recycled Materials	Subtracted from Total tonnages				-	_____ T		
						TOTAL (add down)	_____ T	Put result in 6B below.
6 or 7	Total Out-of-State SW Equivalent Tons		_____	+	_____	=		
	Population =	_____ X 1 ton	_____ annually/ person		_____	=		

## 8. "COUNTING" WASTE TIRES AND TIRE SHREDS

Includes oversize tires and tires that are chipped or shredded for the purpose of disposal.  
*(Tire shreds that contain steel fragments that are residual from tire recovery operations are considered "Non-counting" industrial waste. Report this on Page 2, Step 2 or Page 3, Step 5.)*

County of Origin	Tons
<b>Total</b>	

## EXPLANATION OF TYPES OF WASTE INCLUDED

**SOLID WASTE PER TON DISPOSAL ("TIPPING") FEES.** ORS 459A.110 and 459A.115, and ORS 340-097-0120 require each solid waste disposal site that receives domestic solid waste (except transfer stations, material recovery facilities, solid waste treatment facilities and composting facilities) to submit a total solid waste disposal fee of 81 cents per ton (\$.50/ton plus \$.31/ton) for all in-state and out-of-state domestic solid waste received. ORS 459.236 and OAR 340-097-0120 also require such sites to submit a fee of \$.13/ton for remedial action under the Orphan Site Account.

"Domestic Solid Waste" includes, but is not limited to, residential, commercial and institutional wastes, as defined in ORS 459A.100; but the term does **not** include: sewage sludge or septic tank and cesspool pumpings, or waste received at an ash monofill from an energy recovery facility.

For the purpose of assessing the above fees, "Domestic Solid Waste" does not include: Approved alternate daily cover material.

**DO NOT INCLUDE ON THIS FORM SOURCE SEPARATED RECYCLABLE MATERIAL OR MATERIAL RECOVERED AT THE DISPOSAL SITE.** If the tonnage reported in sections 1, 2, or 5 include materials that were later pulled from the waste for recovery - enter the tonnage recovered from the mixed waste in Section 3 and/or 6.

**SOLID WASTE PERMIT FEES. ORS 459.235 AND OAR 340-097-0110 THROUGH -0120** require solid waste disposal sites to pay a Solid Waste Permit and Registration Compliance Fee and a 1991 Recycling Act permit fee. The Permit Compliance fee is \$200 per year for landfills receiving 1,000 tons or less of solid waste per year. The 1991 Recycling Act permit fee is \$.09/ton for all facility types.

**INSTRUCTIONS FOR PAGE 2.** This form requests reports of the quantities of "counting" waste and "non-counting" waste received at your facility. This breakdown will help DEQ calculate more accurately the amount of solid waste disposed of for each county. "Counting" waste "counts" toward the solid waste disposal rate and must be reported by county of origin. The disposal rate is then used to calculate the county *material recovery rate*. Certain waste ("non-counting" waste) may, by law, be excluded from the disposal rate; if you record this waste separately, please list it in Part 2 of this form. **INCLUDE BOTH "COUNTING" AND "NON-COUNTING" WASTE IN YOUR TOTAL TONNAGE FOR FEE CALCULATION PURPOSES.**

**"Counting" Resid./Comm./Construction and Demolition SW by County.** "Counting" waste includes residential and commercial domestic solid waste; construction and demolition waste, such as lumber and wood, drywall (gypsum), glass, roofing material and similar materials. Report amounts of "counting" waste for the previous calendar quarter by county in **Part 1**. If you do not track "non-counting waste" (see below) separately, count all waste as "counting".

**"Non-counting" waste.** "Non-counting" waste is not reported by county. "Non-counting" wastes are:

Asbestos

Contaminated cleanup material

"Industrial" woodwaste: Slash from logging and sawmills, major landclearing debris

Residual tire shreds: Tire shred or chips that contain steel fragments that are residual from tire recovery operations

Rubble, rock, asphalt, etc.: Soil, dirt, concrete rubble and blocks, bricks, gravel, ash, major metal demolition debris

**Other** industrial waste: Waste generated by industrial or manufacturing processes

**Other** wastes: Please specify type of waste on the line provided and contact DEQ to determine a conversion factor if you do not weigh the waste.



December 2007





## ATTACHMENT B



## MEASUREMENT STANDARDS AND REPORTING GUIDELINES

<u>Material</u>	<u>Volume/Count</u>	<u>Weight (Tons)</u>	<u>Weight (Pounds)</u>
Aluminum cans	Case(24),12 oz(32 cans = 1lb)	.0004	.750
Aluminum cans	1 full store collection bag	.009	18
Aluminum cans, whole	1 cubic yard	.031	50-74
Aluminum cans, compacted	1 cubic yard	0.125-0.215	250-430
Ferrous cans, whole	1 cubic yard	.075	150
Ferrous cans, flattened	1 cubic yard	.425	850
Beer bottles (refillable)	Case (24 bottles)	.006	12
Beer bottles	Case (24), 22 oz	.0112	22.5
Glass, whole bottles	Case (24), 12 oz.	.008	16
Glass, whole bottles	Case (24), 16 oz.	.0125	25
Glass, whole bottles	Case (12), 40 oz.	.0112	22.5
Glass, whole bottles	1 cubic yard	.400	600-1,000
Glass, semi-crushed	1 cubic yard	.700	1,000-1,800
PET soda bottles	Case (24), 20 oz	.0013	2.5
PET bottles (water)	Case (15), 1.5 liter	.0007	1.4
PET soda bottles, whole, loose	1 cubic yard	.018	30-40
PET soda bottles, whole, loose	Gaylord <sup>1</sup>	.023	40-53
PET soda bottles, baled	30" x 62"	.250	515
PET soda bottles, granulated	Gaylord	.360	700-750
Film, baled	30" x 42" x 48"	.550	1,100
HDPE milk jugs, whole, loose	6-7 gallon jugs	.0005	1
HDPE milk jugs, baled	32" x 60"	.225	400-500
HDPE (mixed), granulated	Gaylord	.450	800-1,000
Newsprint, loose	1 cubic yard	.29	360-800
Newsprint, compacted	1 cubic yard	.43	720-1,000
Corrugated cardboard, loose	1 cubic yard	.15	300
Corrugated cardboard, baled	1 cubic yard	.55	1,000-1,200
HI-Grade Paper-stacked/uncom	1 cubic yard	0.188-0.233	375-465
HI-Grade Paper-stacked/comp	1 cubic yard	0.378-0.463	755-925
Mixed Waste Paper-uncompact	1 cubic yard	0.055-0.19	110-380
Mixed Waste Paper-compacted	1 cubic yard	0.305-0.378	610-755
Milk cartons	1 cubic yard	.022	45
Grass clippings	1 cubic yard	.475	400-1,500 <sup>2</sup>
Leaves	1 cubic yard	.1875	250-500

<sup>1</sup>Gaylord size most commonly used: 40" X 48" x 36"

<sup>2</sup>Yard waste densities are especially variable between communities and in different seasons because of differences in types of foliage, moisture, and humidity. The 1,500 density factor for grass is based on program experience in Minnesota.



## ATTACHMENT B



## MEASUREMENT STANDARDS AND REPORTING GUIDELINES

<u>Material</u>	<u>Volume/Count</u>	<u>Weight (Tons)</u>	<u>Weight (Pounds)</u>
Yard debris, loose	1 cubic yard	.125	250 <sup>3</sup>
Yard debris, compacted	1 cubic yard	.32	640
Wood collected at landfills	1 cubic yard	.125	250
Wood chips, green	1 cubic yard	.236	472.97
Wood chips, dry	1 cubic yard	.121	243.25
Wood, cord	1 cubic yard	.25	500
Wood pallet	1	.0125	25
Christmas trees	1 cubic yard (loose)	.06	30
Sawdust, wet	1 cubic yard	.265	530
Sawdust, dry	1 cubic yard	.1375	275
Gypsum	1 cubic yard	.31	620
Lead acid battery	1	.018	35.9
Used motor oil	1 gallon	.0037	7.4
Oil filters	1 drum, crushed	.35	700
Oil filters	1 drum, uncrushed	.087	175
Oil filters	1 gallon	.0025	5
Tire- passenger car	1	.0117	23.4
Tire- truck, light	1	.0175	35
Tire- semi	1	.0525	105
Fluorescent tubes	4-foot tube	.00036	.72
Paint	1 gallon	.005	10
Solvents	1 gallon	.0042	8.42
Antifreeze	1 gallon	.0042	8.42
Appliances:			
Stove	1	.075	150
Dryer	1	.062	125
Washer	1	.075	150
Refrigerator	1	.125	250
Dishwasher	1	.062	125
Electronics			
TV CRT < 19 inch	1	.021	41
TV CRT > 19 inch	1	.037	73
TV Flat Panel	1	.015	29
Desktop Computer	1	.011	22
Portable Computer	1	.004	7
CRT Monitor	1	.02	40
Flat Panel Monitor	1	.012	24

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<sup>3</sup>Uncompacted yard debris varies a great deal in weight. The figure of 250 pounds per cubic yard may be high for a lot of uncompacted yard debris. Loose piles may weigh as little as 100 pounds per cubic yard. Use your best judgment in using these conversions (100 pounds per cubic yard = .05 tons a cubic yard).