2007 Recycling Summary

This summary is a review of all recycled materials diverted from Montana landfills in 2007. The data presented in this summary on total recycled materials was obtained by reviewing permit renewal applications from all state licensed solid waste management facilities including landfills, transfer facilities, compost operations and resource recovery facilities. Data from non-licensed recycling organizations businesses and end processors was obtained through voluntary participation in the 2007 Montana Recycling Survey. (* Important to note that 5 major participants did not report recycling numbers for the 2007 survey)

In the United States, we generated approximately 254 million tons of MSW in 2007. Excluding composting, the amount of MSW recycled increased to 63.3 million tons, an increase of 1.9 million tons from 2006. MSW generation in 2007 per person per day was 4.62 pounds. The recycling rate per person per day for 2007 is 1.54 pounds. In Montana we generated 1.4 million tons of MSW in 2007 and based on 2007 Census population figures of 957,861 Montanan’s generated 1.51 pounds of MSW and recycled .3 pounds per person per day.

<table>
<thead>
<tr>
<th>Summary of Data</th>
<th>Total Tons</th>
<th>Percentage of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solid Waste Generated</td>
<td>1,455,595</td>
<td>100%</td>
</tr>
<tr>
<td>Landfilled Waste:</td>
<td>1,188,584</td>
<td>82.1%</td>
</tr>
<tr>
<td>Incinerated Waste:</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Recycled Commodities</td>
<td>182,064</td>
<td>12.6%</td>
</tr>
<tr>
<td>Other Materials:</td>
<td>84,947</td>
<td>5.9%</td>
</tr>
<tr>
<td>Total Diversion Rate:</td>
<td>267,011</td>
<td>18.34</td>
</tr>
</tbody>
</table>
The EPA’s recyclable commodities list was used to determine the recycling rate list.

Commodities list is as follows:
- Aluminum Cans
- Steel Cans
- Mixed Metals
- Ferrous Scrap Metal
- Plastics
- Paper
- Corrugated Cardboard
- Glass

Other Materials
- Food Scrap
- Fly Ash
- Organics
- Mixed Recyclables
- Carpet
- Sewage Sludge
- Yard Trimmings
- Construction/Demolition
- Batteries
- Other Recyclables
- Electronics
- Household Hazardous Waste

This data has been used with conjunction with the National Recycling Coalition’s Environmental Benefits Calculator. The calculator generates estimates of environmental benefits based on the number of tons of specified materials recycled, landfilled and incinerated in Montana. The calculator yields detailed information in the following areas:

- Reductions in Greenhouse Gas Emissions through Recycling
- Energy Savings from Recycling
- Life Cycle Stage Comparisons
- Air Emissions and Waterborne Wastes
- Select National Resource Savings
- Number of Trees Saved

**Review of Montana Recycled Materials Converted by Environmental Benefits Calculator**

Reductions in Greenhouse Gas Emissions through Recycling
Greenhouse Gas Emissions Associated with Recycling  -142,325
Greenhouse Gas If All Landfilled  5,309
Net Greenhouse Gas Emissions from Recycling Compared To Landfilled  -147,634
Greenhouse Gas Reduction in Passenger Cars Equivalent  -111,399

**Energy Savings from Recycling**

Net Energy from Recycling Compared to Disposal (millions BTU)  -5,382,627
Energy Savings in Per Household Equivalent  -51,166

**Life Cycle Stage Comparisons**

Energy Used During Recycling and Processing (millions BTU)  146,613
Energy Used Waste Collection and Landfill  54,586
Energy Used During Waste Collection, Processing and Incineration  190,352
Energy Used for State’s Average Mix of Landfill  54,586

**Air Emissions and Waterborne Wastes**

Reduced Emissions Due to Recycling (tons)  217,080.0
AIR EMISSIONS
Reduced Emissions Due to Recycling (tons)  808.2
WATERBORNE WASTES
Total (Excluding CO2 and Methane)  4,934.6

**Select National Resource Savings**

Total Tons Resources Saved  199,433

**Number of Trees Saved**
From recycling newsprint, mixed paper and office paper 197,176.

In summary, there are many ways to express the resource savings that recycling effects. Even when considering energy used to recycle, the savings in resources rationalizes the value of recycling. As Montana recycling statistics increase, the efficiency will only become more evident. For more information on recycling visit the DEQ website at: www.deq.mt.gov/recycle/index.asp

Recycling Rates for the State of Montana

<table>
<thead>
<tr>
<th>Year</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>15.0%</td>
</tr>
<tr>
<td>2004</td>
<td>15.0%</td>
</tr>
<tr>
<td>2005</td>
<td>18.7%</td>
</tr>
<tr>
<td>2006</td>
<td>18.6%</td>
</tr>
</tbody>
</table>

State Government’s Recycling Efforts

From January 1, 2006 thru October 31, 2006 the totals are as follows:

Cardboard - 35,674 pounds  
Newspaper - 73,581 pounds  
Office Pack - 338,241 pounds  
Phone books - 2,476 pounds  
Magazines - 1174 pounds  
Aluminum - 172 pounds

Note:

Prices for all recycled materials tend to follow expansions and contractions in overall demand for manufactured goods. At the same time, specific trends in each industry be it paper, cardboard, steel, aluminum, or plastics can push prices for the different recycled materials in opposite directions. These factors combined with the many market development projects and continued education throughout the state, have helped to make recycling the new buzz word.