

Washington's 2008 Recycling Shows Results

Recycling in Washington continues to result in important environmental and economic gains. Recycling is more than a way to manage wastes. It is an important way to reduce the harmful environmental effects of industrial activities - and a thriving recycling system creates jobs.

Recycling saves energy and reduces greenhouse gas emissions

Using recycled material to make paper, plastics, glass, and metal products saves energy. Collecting, processing, and transporting recycled materials typically uses less energy than extracting, refining, transporting, and processing raw materials.

Using recycled material to manufacture new products takes less energy than manufacturing products from new materials. This results in reduced greenhouse gas (GHG) emissions. The 6.8 million tons of material collected for recycling in Washington in 2008:

- Saved energy equivalent to about 1 billion gallons of gasoline. This is equivalent to conserving over 127 trillion British thermal units (BTUs) of energy, or about a third of all energy used by Washington businesses annually.¹
- Prevented 3 million tons of GHG emissions – about 900 pounds per person. This is similar to keeping almost 2 million cars off the road each year – half of the passenger cars in Washington.²

Recycling conserves natural resources and creates green jobs

Recycling reduces harmful environmental effects of mining and logging. Supplying industry with recycled materials, instead of virgin resources from forests and mines, conserves these scarce resources. Using recycled materials rather than virgin resources also diverts jobs into the green economy. Washington defines green jobs as those in the primary industries of a green economy that promote environmental protection and energy independence.

- In 2008, Washington recycling programs supplied industry with 6.8 million tons of recycled commodities such as metals, plastics, paper, glass, wood, and construction and demolition scrap.
- Recycling over one million tons of scrap metal in 2008, Washington avoided mining and processing two tons of limestone, iron ore, and coal.³
- In 2008, Washington State firms employed at least 4,456 people in green jobs, involving collection, hauling, transport, processing, or remanufacture of recyclable materials.⁴

¹ Environmental Protection Agency (EPA) Waste Reduction Model (WaRM): http://epa.gov/climatechange/wycd/waste/calculators/WaRM_home.html. Energy use information from Energy Information Administration: http://www.eia.doe.gov/emeu/states/seds_updates.html.

² GHG emissions measured in metric tons carbon equivalent (MTCE); EPA WaRM; Washington Department of Licensing; EPA Emission Facts.

³ Northeast Recycling Council (NERC) Environmental Benefits Calculator: http://www.nerc.org/documents/environmental_benefits_calculator.html; Steel Recycling Institute.

⁴ Government jobs excluded. 2008 Washington State Green Economy Jobs, Washington State Employment Security Department.

Recycling lessens emissions of air and water pollutants

Recycling keeps materials out of landfills where they can contaminate groundwater systems and generate greenhouse gases, reduces the amount of pollution entering the air and water, and keeps materials out of incinerators which can pollute the air and create ash residue. Twenty-seven different types of air and water pollutants are reduced when we use recycled instead of virgin resources to manufacture products.⁵

Energy & Greenhouse Gas Savings by Recycling in Washington (2008)⁶

Recycled Material	Tons Recycled ⁷	BTUs Saved (millions)	GHGs Avoided (MTCE)
Aluminum Cans	12,842	2,658,142	47,882
Steel Cans	10,526	216,121	5,276
Glass	94,077	253,195	8,208
HDPE	7,742	398,481	3,050
LDPE	14,040	794,331	6,698
PET	9,827	524,741	4,267
Corrugated Cardboard	569,688	8,896,343	449,098
Mixed Paper	373,309	8,210,658	332,705
Newspaper	282,981	4,825,364	132,161
High-Grade Paper	57,929	616,769	58,338
Wood ⁸	713,394	4,757,079	75,099
Yard Trimmings	667,159	73,094	34,738
Food Scraps	176,447	3,185	25,329
Other Organics	163,577	2,953	2,673
Mixed Metals	1,151,293	89,177,990	1,711,493
Mixed Plastics	11,245	599,640	4,813
Landclearing Debris	310,834	456,908	51,105
Carpet	3,297	349,969	6,529
Computers/Electronics	17,265	759,683	10,870
Concrete/Asphalt	1,510,051	1,015,919	20,191
Tires ⁹	58,305	2,734,974	25,445
Subtotal	6,215,828	127,325,539	3,015,968
Other Recycling	576,769	Data not available for all material categories	
Total	6,792,597		

More information

Beyond Waste program:

<http://www.ecy.wa.gov/beyondwaste/>.

Contact

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Special accommodations:

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⁵ NERC Environmental Benefits Calculator.

⁶ Washington Department of Ecology's 2008 Recycling Survey: <http://www.ecy.wa.gov/programs/swfa/solidwastedata/>. Savings are relative to energy required and GHGs emitted during production of products using virgin materials; EPA WaRM.

⁷ For this analysis, recycling includes composting and burning for energy.

⁸ Includes reused and recycled dimensional lumber, recycled wood and wood burned for energy recovery (EPA WaRM).

⁹ Tire emissions data available for retreads and fuel uses only (EPA WaRM).