

Washington's 2010 Recycling Produces 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 results in reduced greenhouse gas (GHG) emissions. The 8.4 million tons of material collected for recycling in Washington in 2010:

- Saved energy equivalent to about 1.3 billion gallons of gasoline. This is equivalent to conserving over 160 trillion British thermal units (BTUs) of energy, or enough to power 1.5 million homes for a year (over half the households in Washington).¹
- Prevented 3.1 million tons of GHG emissions – about 918 pounds per person. This is similar to keeping 2.1 million cars off the road each year – almost 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 also moves 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 2010, Washington recycling programs supplied industry with 8.4 million tons of recycled commodities such as metals, plastics, paper, glass, wood, and construction and demolition scrap.
- Recycling over 1.4 million tons of scrap metal in 2010, Washington avoided mining and processing over two million tons of limestone, iron ore, and coal.³
- In 2008, Washington State firms employed an estimated 4,456 people in green jobs, involving collection, hauling, transport, processing, or remanufacture of recyclable materials.⁴ 2009 showed an increase in estimated green jobs despite the economic recession.⁵

¹ Environmental Protection Agency (EPA) Waste Reduction Model (WaRM): http://epa.gov/climatechange/wywd/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.

⁵ 2009 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 that 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.⁶

Energy & Greenhouse Gas Savings by Recycling in Washington (2010)⁷

Recycled Material	Tons Recycled ⁸	BTUs Saved (millions)	GHGs Avoided (MTCE)
Aluminum Cans	13,655	2,828,068	50,885
Steel Cans	15,059	311,095	7,592
Glass	115,518	325,402	10,388
Plastics ⁹	64,409	3,463,454	27,464
Corrugated Cardboard	471,478	7,421,861	331,665
Mixed Paper ¹⁰	607,644	11,096,605	417,345
Wood ¹¹	1,194,253	8,210,507	-82,474
Yard Trimmings	873,859	238,321	-9,718
Food Scraps	181,256	72,892	28,002
Other Organics	284,620	30,594	24,473
Mixed Metals	1,504,816	116,750,442	2,239,120
Landclearing Debris	281,053	404,453	-62,716
Carpet	3,867	375,060	7,664
Computers/Electronics	25,569	797,010	16,147
Construction & Demolition Debris ¹²	2,253,965	4,451,527	86,021
Tires	55,731	2,876,798	14,414
Subtotal	7,946,752	159,654,089	3,106,272
Other Recycling	424,233	Data not available for all material categories	
Total	8,370,985		

More information

Beyond Waste program:

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

Contact

Gretchen Newman 360-407-6097 or

gretchen.newman@ecy.wa.gov

Special accommodations:

To ask about the availability of this document in a version for the visually impaired call the Waste 2 Resources Program at (360) 407-6900. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.

⁶ NERC Environmental Benefits Calculator.

⁷ Washington Department of Ecology's 2010 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.

⁸ For this analysis, recycling includes composting and burning for energy.

⁹ Includes HDPE, LDPE, PET, and mixed plastics (EPA WaRM).

¹⁰ Includes mixed paper, newspaper, and high-grade paper (EPA WaRM).

¹¹ Includes reused and recycled dimensional lumber, recycled wood and wood burned for energy recovery (EPA WaRM).

¹² Includes fly ash, concrete/asphalt, asphalt shingles, and gypsum/drywall (EPA WaRM).