

State of Montana

2016 Recycling and Waste Diversion Summary



Montana’s Integrated Waste Management Plan

The Montana Integrated Waste Management Act (75-10-803 MCA), directs Montana to reduce the volume of solid waste that is disposed of in landfills. The Act requires a written plan for managing wastes in accordance with the Act.

The Act describes a strategy for integrated solid waste management and sets targets to encourage increasing rates of recycling and diversion in Montana. The next target rate of 22% is set for calendar year 2016.

The integrated solid waste management strategy is based on a hierarchy of prioritized approaches to managing waste. These approaches, in order of priority, are:

1. **Source Reduction** (aka Waste Reduction),
2. **Reuse,**
3. **Recycling,**
4. **Composting, and**
5. **Landfilling.**

The Montana Department of Environmental Quality (DEQ) assists communities, solid waste facilities, and residents with waste reduction strategies. During the past ten years, DEQ has tracked - to the best of our ability - materials diverted from the waste stream for reuse, recycling or composting. The amounts reported during the past ten years show that the following amounts of waste were collected for recycling or diverted from Montana’s landfills:

Calendar Year	Recycled/Diverted	Calendar Year	Recycled/Diverted
2003	15.0%	2009	19.1%
2004	15.0%	2010	19.7%
2005	18.7%	2011	19.4%
2006	18.6%	2012	21.9%
2007	18.3%	2013	15.9%
2008	19.6%	2014	22.2%
2015	17.6%	2016	17.1%

Benefits of Recycling

Recycling generates significant economic benefits for communities. Recycling employs workers from a range of skill levels in a variety of jobs from materials handling, processing, and shipping; to highly-technical and high-quality product manufacturing. The drive to more efficiently process recycled materials, and to develop new products and markets, spurs innovation which is a key to long-term economic growth. Investment in recycling companies and equipment filters through the local economy and contributes to economic growth.

Equally important are the social and environmental benefits of recycling. Recycling promotes a more sustainable use of natural resources. Recycling activities across the state promote community development while conserving public resources. Landfills last longer and fewer new ones are necessary. Pollution is prevented, energy is saved, and less greenhouse gas is emitted.

The National Recycling Coalition’s (NRC) Environmental Benefits Calculator computed that the following benefits were achieved by the materials diverted from Montana landfills in 2016:

- Greenhouse gas was reduced by the equivalent of 227,784 passenger cars being removed from the roads.
- A total of 9.99 million BTUs were saved by recycling.
- 120,072 trees were saved by the recycling of newsprint, mixed paper, and office paper.

In addition the following *natural resource* savings were calculated:

Natural Resources Saved	
2012 Ferrous Steel Recycled	41,285 tons
Iron ore saved per ton steel recycled – 2,500 lbs.	
Coal saved per ton steel recycled – 1,400 lbs.	
Limestone saved per ton steel recycled – 120 lbs.	
Iron ore saved	51,606 Tons
Coal saved	28,899 Tons
Limestone saved	2,477 Tons

As demonstrated by the results of the NRC calculations, there are numerous ways to express resource savings through recycling. Recycling saves energy otherwise used to mine and process raw materials. As Montana recycling statistics increase, the energy efficiencies become more evident. View the NRC calculator at: <http://www.crra.com/nrcfiles/calculator/coverletter.html>

2016 Recycling and Waste Diversion Summary

The data used for the 2016 Summary was collected from the Annual License Renewal applications completed by solid waste management facilities licensed to operate in Montana. Licensed facilities include landfills, transfer facilities, compost operations, and recyclers. Part of the renewal process is the completion of a waste diversion and recycling form.

Non-licensed solid waste facilities include some small recycling operations, end processors, and brokers. Recycling information from these non-licensed facilities is obtained through an annual survey. Response to the survey is *voluntary*, and it’s important to note that several businesses chose *not* to divulge their 2016 recycling information. In addition, the information from some retail stores — particularly “big box” stores that recycle cardboard and plastic — is not included because this information is not currently available on a state level. Consequently, the recycling numbers reported are clearly more conservative than the amounts actually recycled.

The materials diverted from Montana landfills are sorted into two categories for reporting purposes — “Recycled Commodities” that are collected for recycling, and “Other Recycled or Diverted.” The materials contained in each category are listed below:

Recyclable Commodities

- Office paper, mixed paper, newspaper, magazines, catalogs, telephone directories
- Corrugated cardboard, chipboard or boxboard
- Plastic
- Glass
- Aluminum Cans
- Ferrous scrap metal, mixed metals, steel cans, white goods

Other Recyclable or Diverted

- Organic material: yard and landscape waste, manure, agriculture wastes, sewage sludge, animal highway mortalities (composted by MDT)
- Carpet, textiles
- Fly ash
- Aggregate
- Construction/demolition debris
- Electronic waste, batteries
- Automotive fluids, waste vegetable oil

Montana’s Recycling Data

According to the data received; 1,803,435 tons of Municipal Solid Waste (MSW) was generated in Montana during 2016. Of this amount, 1,430,414 tons were landfilled and 373,021 tons were either collected for recycling, or diverted from the waste stream. It’s interesting to note that the ***tonnage landfilled in 2016 increased by 268,200 tons*** when compared to 2015, and the amount ***recycled/diverted in 2016 increased by 45,174 tons*** when compared to 2015.

The US Census Bureau estimates the 2012 population of Montana to be 1,005,141 residents. (<http://quickfacts.census.gov/qfd/states/30000.html>). Using MSW and population data, the following averaged rates have been calculated for calendar year 2012.

- Montanans generated 8.8 pounds/person/day of solid waste,
- Montanans landfilled 6.9 pounds/person/day of solid waste, and
- Montanans recycled/diverted 1.9 pounds/person/day of commodities from the solid waste stream.

On a national level, the Environmental Protection Agency (EPA) reports that on average, Americans recycled and composted 1.53 pounds of our individual waste generation of 4.40 pounds per person per day. The EPA 2011 report can be viewed at: http://www.epa.gov/epawaste/nonhaz/municipal/pubs/MSWcharacterization_508_053113_fs.pdf.

Table 1 sorts into three categories the waste that was generated in Montana during 2012 – waste that was landfilled, commodities that were recycled, and material that was recycled or diverted in some manner from the waste stream (e.g., composting).

Table I.

2016 Montana Data

	Tons	Percentage
Total Amount of Solid Waste Landfilled	1803,435	82.9%
Tons Collected for Recycling	373,021	
Tons of Other Recycled/Diverted		
Total Amount Collected for Recycling and/or Diverted	373,021	17.1%
Total Solid Waste Generated in MT	2,176,457	100%

Summary

Recycling in Montana is effectively working and shows consistency even through the tough economic climate of the past few years. As both public demand and recycling infrastructure increases, the recycling/diversion rate should also increase. However, to meet the goal of 22% recycling/diversion for 2016; Montana's citizens, state and local governments, and the private sector must further develop and expand partnerships to improve the collection, storage, and transportation of recycled/diverted commodities. For more information on recycling, and to read case studies about DEQ's recycling/diversion projects, visit the DEQ website at www.recycle.mt.gov.