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Community-wide Solid Waste Reduction & Recycling Report for 2010

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In 1999, Fort Collins' City Council adopted a resolution for the community to reach a diversion goal of 50% by 2010. Staff in the Natural Resources Department (NRD) has reviewed collective data for 2010 and established that a community-wide waste diversion rate of 43% was reached.

The most significant observation was a 19% drop in the tons of garbage collected in Fort Collins, a decrease of 30,000 tons compared to 2009. (At the same time, recycling volumes grew about 1% - by 1,005 tons.) The City's information corresponds to national trends during the economic recession of 2008-10, when landfill managers throughout the country, including Larimer County Landfill, received approximately 20% less material for disposal at their facilities. A correlation between landfill volumes and economic conditions has been long recognized in the trash industry. During recessions, people buy fewer goods and make existing products last longer, thereby creating less waste.

In Fort Collins, citizens who took advantage of pay-as-you-throw trash rates were able to increase their waste diversion as well as save on their trash bills. In addition, with decent prices being paid for recyclable commodities like steel, more people were likely to take scrap metal to buy-back centers to make a little money. Finally, the development industry, normally a large contributor of construction and demolition (C&D) debris, was sluggish. As the economy improves, trash volumes may also rebound unless peoples' new-found habits of frugality are maintained.

2010 Raw Data and Sources

Total landfill tons	129,867
Total diversion (recycling) tons	76,698
Diversion rate	37%
Diversion rate w/ source reduction factor of 6% ¹	43%

Methodology

The City collects data directly from licensed trash haulers and recycling companies (listed in Appendix A) for volumes of garbage and volumes of recyclables, and uses Environmental Protection Agency (EPA) classifications for discarded materials², which excludes many industrially-generated wastes. For

¹ Source reduction attributed to pay-as-you-throw, or variable, trash rates: 6% is based on nationally-researched data for waste that didn't need to go to landfills for disposal because it was never generated at all.

² EPA's MSW recycled materials classification list includes: paper, cardboard, plastic, glass, metals, electronics, yard waste, food scraps, batteries, tires, commingled containers, textiles and Styrofoam.

instance, while the City notes the amount of asphalt and concrete recycled into road-base by the Streets Department (over 85,000 tons in 2010), as industrial material these tons are not factored into the community waste diversion calculation.

The mathematical formula used by City to calculate waste diversion rate is based on EPA's methodology³ for municipal solid waste (MSW) diversion:

$$\frac{\text{Total MSW Recycled}}{\text{Total MSW Generated (MSW Recycled + MSW Disposed)}} \times 100$$

Amendments to the PAYT ordinance went into effect in 2010 that require haulers to now report trash volumes by weight. Since then, Larimer County Landfill installed three in-ground scales for customers to use, which will allow haulers to easily and routinely track their tonnages. This represents a significant improvement to the accuracy of MSW data - it is no longer necessary to convert yardage to weight-based measurements⁴. The increased accuracy due to scale weights will be reflected in the 2011 reports.

2010 Enhancements to Waste Diversion & Recycling

The City Council adopted a requirement (2009) for the licensed haulers in Fort Collins to provide larger recycling containers to residential customers upon request. Haulers were given the option of charging a refundable advance deposit for lidded "poly-cart" containers to replace the small, open-topped tubs that were previously available. Customers' selections for larger recycling container size must also be documented as part of the City's reporting requirements. As of 2010, nearly 55% of curbside recyclers in Fort Collins moved up to one of the poly-carts.

Distribution of Recycling Service Levels:

- 45.5% = 18-gal. tubs
- 36.5% = 65-gal. carts
- 18.4% = 95-gal. carts

Another new PAYT provision requires haulers to report on the number of customers at each level of service for trash. As of 2010, the City now has baseline data for measuring households' progress in "down-sizing" their residential garbage service subscriptions over time.

Distribution of Trash Service Levels:

- 33.2% = one-can per week or less service
- 36.2% = two-can per week service
- 30.6% = three-can per week⁵ service

³ <http://www.epa.gov/osw/conserves/tools/recmeas/docs/guide.pdf>

⁴ We do, however, continue to apply EPA weight conversion coefficients for certain recyclable material categories, such as wood debris, which are often measured in yardage by voluntarily reporting facilities.

⁵ Three-can service equates to a 95-gallon cart.

Other Initiatives

Citizens increasingly express interest in diverting more organics from landfill disposal, as evidenced in 2010 by the emergence of two companies in Fort Collins that offer food scrap collection and composting. With 25-30% of Larimer County Landfill's space being consumed by organic material⁶, there are large gains to be made in waste diversion, especially by certain types of businesses such as restaurants and groceries. A limiting factor is the distance (60 miles each way) to transport loads to the nearest permitted composting facility that accepts food scraps. As a demonstration project, the City of Fort Collins piloted a small, in-vessel composting system using manufactured equipment known as Earth Tubs. Five "client" restaurants and City buildings have been collecting food scraps that are made into compost, which is then used as a soil amendment in flower pots that decorate the Old Town area.

In addition to composting initiatives, an RFP to examine and characterize the waste stream and its potential for additional diversion, including waste to energy opportunities, will be released in the near future.

As a result of the KFCG citizens' initiative, new funding became available in 2011 for staffing, including a .5 FTE in the City's waste reduction and recycling program. Among other duties, the new position will create and implement strategies to enhance recycling by the commercial sector and by multi-family residents of Fort Collins. The new FTE, Caroline Mitchell, recently started her job and her efforts will gather steam this year and next.

Increased attention is also being directed internally to waste diversion by the municipal operations of the City, with a goal of halving the organization's waste stream. An important consideration has been to develop greater composting capability for plant and tree trimmings generated by parks, cemeteries, urban forestry, and streets maintenance work. In 2010, for instance, the Forestry Department used industrial grinding equipment to process tree branches and trunks into mulch; 1,625 tons were produced for use in landscaping applications. Compared to 2006, Forestry has successfully reduced the amount of wood waste it takes to the landfill for disposal by 96% (diseased woody material is still required by law to be buried).

Conclusions

A community-wide waste diversion rate of 43% stands as the City's final calculation for 2010, including both residential and commercial sectors. We are unable to find a peer city in this part of the country with which to compare Fort Collins' overall diversion rate. Many municipalities only report residential waste diversion, since that information is often readily available. The City of Loveland, for instance, has documented an admirable 54% residential waste diversion rate. However, since Fort Collins' haulers do not collect residential waste separately from their commercial customer route, it is not possible for us to make a reasonable comparison with Loveland's residential-only data.

⁶ 2007 Larimer County Landfill Waste Characterization citation

The most recent (2008-09) data collected by the Colorado Department of Public Health and the Environment⁷ show Colorado's citizens averaged 1.9 pounds of recycling and 7.6 pounds of trash per day, a total 9.5 pounds of "discards". Based on a population total of 144,000⁸, in 2010 it appears the citizens of Fort Collins generated 15% less discarded material than their counterparts in other parts of the state, with 3.0 pounds of recycling and 5.1 pounds of landfill waste per day.

For more information, please contact Susie Gordon, Sr. Environmental Planner (sgordon@fcgov.com) or Caroline Mitchell, Environmental Planner (cmitchell@fcgov.com).

⁷ 2009 Annual Report to the Colorado General Assembly on the Status of the Solid Waste and Material Management Program in Colorado (<http://www.cdphe.state.co.us/hm/sw/100201legrpt.pdf>).

⁸ <http://www.fcgov.com/advanceplanning/trends.php>

APPENDIX A

Reporting Sources – Trash

- Trash hauler reports (2x / yr); source: NRD, hauler reports per ordinance for commercial and residentially-generated trash
- CSU (annual); voluntary source: CSU facilities department
- % Larimer County Landfill citizen self-haul (annual); voluntary source: Larimer County Solid Waste Department
- Fort Collins municipal self-haul (annual); source: Larimer County Solid Waste Department

Reporting Sources – Recycling

- Trash hauler reports (2x / yr); source: NRD, hauler reports per ordinance for recycling
- Trash hauler reports (2x / yr); voluntary source: NRD, hauler reports for composting
- CSU (annual); voluntary source: CSU facilities department
- Hageman Earth Cycle (annual); voluntary source: Hageman Earth Cycle
- Recycling companies (annual); voluntary sources including but not limited to: Waste-Not Recycling; Professional Document Management; National Recycling; Aragon Iron & Metal; Colorado Iron & Metal
- Fort Collins municipal operations wood waste recycling (annual); source: NRD
- Rivendell Recycling Center (annual); source: NRD (as reported by recycling vendor, currently National Recycling)
- Larimer Recycling Drop-Off (annual); voluntary source: Larimer County Solid Waste Department