

# City of Columbia Landfill

The City of Columbia Landfill is located in Boone County, approximately 5 miles northeast of Columbia, MO. It is owned and operated by the City of Columbia. The disposal facility covers 107 acres and is permitted to accept all municipal solid waste (MSW) and some Other wastes such as asbestos, contaminated soils and waste water treatment sludge. The City of Columbia operates a fleet of collection vehicles which collects all of the residential and most of the commercial and industrial waste within the City of Columbia. The City also operates a state of the art composting facility at the same location.

The City of Columbia Landfill accepted 122,892 tons in 1996, 181,147 tons in 1997 and 125,867 tons in 1998. The landfill operation was observed from Monday October 19<sup>th</sup> through Friday October 23<sup>rd</sup>, 1998. The weather was sunny and fair for the entire week. Observation took place from 4 AM till 5 PM on the above dates. During the five-day observation period 470 trucks, delivered 1,791 tons of waste to the landfill. The landfill staff felt the material received during the observation period was typical of material received year round. They occasionally receive small quantities of asbestos and contaminated soil but those quantities are statistically nil.

All loads could be classified visually, without any driver data.

## The Total Waste Stream - 1,791 tons

The total waste stream was overwhelmingly Municipal Solid Waste (MSW). The source of the MSW portion is primarily residential, institutional, and light commercial waste. Most of the MSW was delivered to the landfill in City of Columbia trucks.

Total waste received during the observation period was 1,791 tons. The components of the waste stream were estimated as they were unloaded. These components are listed below.

### Waste Stream Components

<b>MSW</b>	<b>Const.</b>	<b>Demo</b>	<b>Industrial</b>	<b>Other</b>
58%	7%	14%	18%	3%
1035 tons	133 tons	246 tons	325 tons	52 tons

## Municipal Solid Waste - 1,035 Tons

Municipal Solid Waste (MSW) accounted for 58% of the total waste stream. MSW materials were not estimated during the observation period because the items are very small and normally contained within plastic bags. However, the City of Columbia and the University of Missouri

conducted four seasonal waste sorts of MSW at the landfill in 1996. The materials were sorted and recorded by weight. Further details are available through the City of Columbia Sanitation Department.

The total MSW received during the observation period was 1,035 tons. The average percentage of each major material category found in the 1996 waste sorts was applied to the tonnage received during the observation period and is displayed below.

### Municipal Solid Waste Components

Paper	Glass	Metals	Plastics	Organics	Inorganics
41.6%	3.7%	5.3%	12.5%	28.2%	8.7%
431 tons	38 tons	55 tons	129 tons	292 tons	90 tons

### Construction Waste - 133 Tons

About 7.4% of the total waste received was from new construction sources. Construction waste loads are typically transported to the landfill in open top roll-off containers, dump trucks, or open trailers. Only two roll-off trucks delivered construction waste during the observation period. One was primarily masonry materials (bricks, concrete blocks, and gravel). The other was a combination of wood dry wall and cardboard.

Total construction waste received during the observation period was 133 tons. The materials within the construction waste stream were estimated as they were unloaded. These estimated materials are listed below.

### Construction Waste Components

Wood	Dry Wall	Masonry	Metal	Plas.	Cardbrd	Other
53%	18%	5%	3%	3%	9%	10%
71 tons	24 tons	6 tons	4 tons	4 tons	12 tons	13 tons

### Demolition Waste - 246 Tons

About 13.7% of the total waste was from demolition sources. Demolition waste loads are usually transported to the landfill in open top roll-off containers, dump trucks, or open trailers. However at this landfill most demolition materials were received in the transfer trailers and those materials were estimated and recorded as part of the demolition component. Most roofing waste loads were delivered to the landfill by independent contractors and were not mixed with other materials. The remaining demolition loads contained more mixed materials. The other category was primarily insulation board from roof tear-offs.

Total demolition waste received during the observation period was 246 tons. The materials within the demolition waste stream were estimated as they were unloaded. These estimated materials are listed on the next page.

### The Demolition Waste Component

Wood	Dry Wall	Roof	Masonry	Metal	Carpet	Other
30%	9%	27%	22%	3%	2%	7%
74 tons	21 tons	67 tons	53 tons	8 tons	6 tons	17 tons

## Industrial Waste - 325 Tons

About 18.1% of the total waste was from industrial sources. The overwhelming majority of industrial waste was delivered in open top roll offs, or compactor units and in most cases it was delivered in City of Columbia trucks. Cardboard came from a variety of manufacturers. Most wood was in the form of pallets and crates.

Total industrial waste received during the observation period was 325 tons. The materials within the industrial waste component were estimated as they were unloaded. These estimated materials are listed below.

### The Industrial Waste Component

Cardbrd	Paper	Food	Metal	Wood	Plas.	Tex.	Rbr.	Other
29%	6%	8%	1%	17%	26%	1%	4%	9%
95 tons	21 tons	26 tons	2 tons	54 tons	83 tons	4 tons	11 tons	30 tons

## Other Waste - 52 Tons

Other wastes were defined as waste which did not fit into one of the above categories or was handled differently at the landfill (i.e. soil-like materials used for daily cover, asbestos, etc.). Bulky items were the only other waste observed. They include furniture, mattresses, appliances, bicycles, etc. Most of these bulky items were received in self-haul vehicles. The "other" waste was mainly organic materials (hay and straw) which were mixed with animal manure and under DNR regulations could not be composted.

Total other waste received during the observation period was 52 tons. The materials within the other waste stream were estimated as they were unloaded. These estimated materials are listed below.

### The Other Waste Component

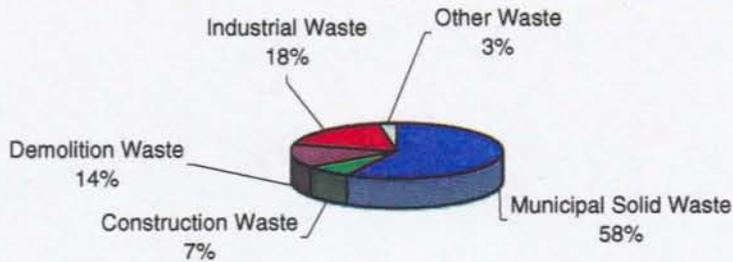
Bulky Items	Other
60%	40%
31 tons	21 tons

# CITY OF COLUMBIA LANDFILL 125,867 TONS IN 1998

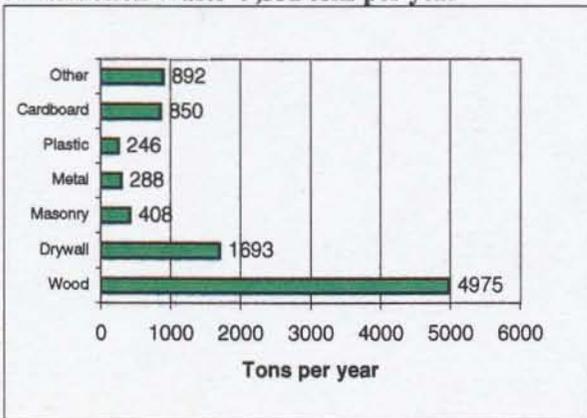
MATERIAL	Tons received during observation period	Percent of each material received	Estimated tonnage received in 1998 based on observation
<b>MSW Component</b>			
Paper	431 Tons	24.1%	30,285 Tons
Glass	38.3 Tons	2.1%	2,691 Tons
Metals	54.9 Tons	3.1%	3,858 Tons
Plastics	129 Tons	7.2%	9,064 Tons
Organics	292 Tons	16.3%	20,518 Tons
Inorganics	90 Tons	5.0%	6,324 Tons
<b>TOTAL MSW</b>	<b>1035 Tons</b>	<b>57.8%</b>	<b>72,739 Tons</b>
<b>Construction Waste</b>			
Wood	71 Tons	4.0%	4,975 Tons
Dry Wall	24 Tons	1.3%	1,693 Tons
Masonry	6 Tons	0.3%	408 Tons
Metal	4 Tons	0.2%	288 Tons
Plastic	4 Tons	0.2%	246 Tons
Cardboard	12 Tons	0.7%	850 Tons
Other	13 Tons	0.7%	892 Tons
<b>TOTAL CONSTRUCTION</b>	<b>133 Tons</b>	<b>7.4%</b>	<b>9,352 Tons</b>
<b>Demolition Waste</b>			
Wood	74 Tons	4.1%	5,200 Tons
Dry Wall	21 Tons	1.1%	1,440 Tons
Roofing	67 Tons	3.8%	4,722 Tons
Masonry	53 Tons	3.0%	3,724 Tons
Metal	8 Tons	0.5%	576 Tons
Carpet	6 Tons	0.3%	415 Tons
Other	17 Tons	1.0%	1,209 Tons
<b>TOTAL DEMOLITION</b>	<b>246 Tons</b>	<b>13.7%</b>	<b>17,285 Tons</b>
<b>Industrial Waste</b>			
Cardboard	95 Tons	5.3%	6,682 Tons
Paper	21 Tons	1.2%	1,462 Tons
Food	26 Tons	1.4%	1,806 Tons
Metal	2 Tons	0.1%	155 Tons
Wood	54 Tons	3.0%	3,787 Tons
Plastic	83 Tons	4.6%	5,818 Tons
Textiles	4 Tons	0.2%	253 Tons
Rubber	11 Tons	0.6%	752 Tons
Other	30 Tons	1.7%	2,101 Tons
<b>TOTAL INDUSTRIAL</b>	<b>325 Tons</b>	<b>18.1%</b>	<b>22,815 Tons</b>
<b>Other wastes</b>			
Bulky Items	31 Tons	1.7%	2,185 Tons
Soil and Inert Materials	0 Tons	0.0%	- Tons
Asbestos	0 Tons	0.0%	- Tons
Other	21 Tons	1.2%	1,490 Tons
<b>TOTAL OTHER WASTE</b>	<b>52 Tons</b>	<b>2.9%</b>	<b>3,675 Tons</b>
<b>TOTAL WASTE STREAM</b>	<b>1791 Tons</b>	<b>100%</b>	<b>125,867 Tons</b>

# The City of Columbia Landfill

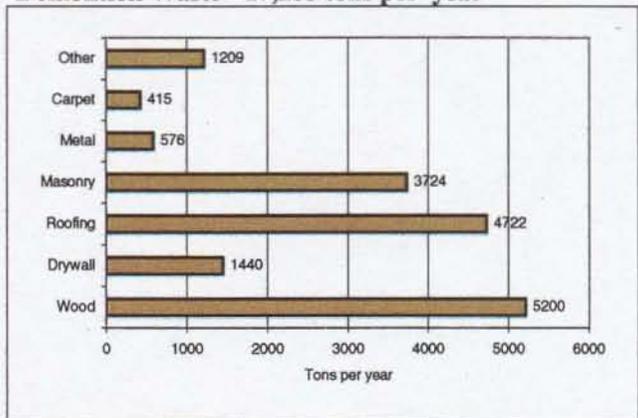
## Total Waste Component - 125,867 tons per year



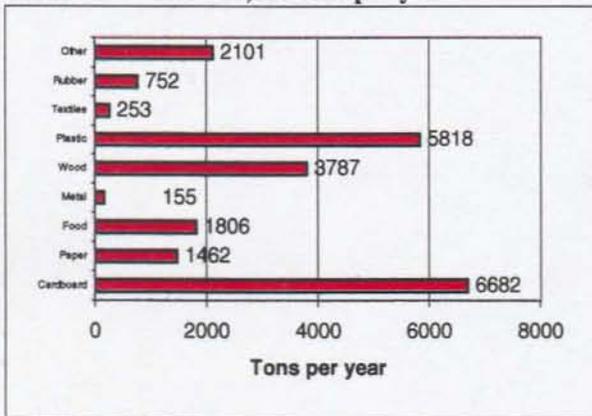
## Construction Waste - 9,352 tons per year



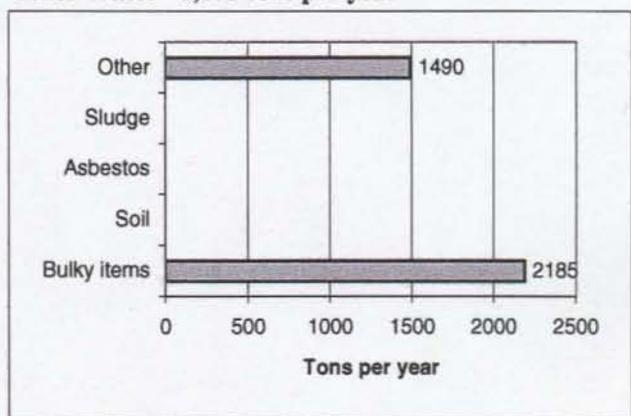
## Demolition Waste - 17,285 tons per year



## Industrial Waste - 22,815 tons per year



## Other Waste - 3,675 tons per year



## Columbia Waste Components vs Small Metro and State Averages

