

Summary

The Missouri Solid Waste Composition Study was a three-year project to understand the characteristics and composition of solid waste entering transfer stations and landfills in Missouri.

Phase I examined Municipal Solid Waste (MSW) in 19 of the state's 20 solid waste management districts. During this two year activity, 140,581 pounds of residential and commercial MSW was hand sorted into 6 major material categories, 26 minor material categories, and 16 potentially hazardous categories. The results were recorded by weight and volume. Those results are explained on pages 93-122.

Phase II examined the non-MSW waste components at 14 landfills throughout Missouri. Waste loads deposited at these 14 landfills were observed for a one-week period at each facility. The waste was subjectively analyzed and recorded into one of five solid waste components (MSW, construction, demolition, industrial, and "other"). A further visual examination of each load was made and the percentage of each major material was estimated. Those estimated percentages were then applied to the weight of each load to determine the weight of each material. The results of each of the solid waste components (other than MSW) are explained on pages 123-138.

There were some minor differences found between disposal facilities examined in Phase I (see the chart on page 109). However during Phase II there was considerable difference in the waste composition of the landfills observed. Some of these differences could be explained through demographic similarities of the areas surrounding the landfills. The landfills were grouped by population demographics into three categories (large metropolitan landfills, small metropolitan landfills, and rural landfills). Results based on these groupings are explained on pages 139-166.

The table on page 168 lists the solid waste components and materials by landfill type and total for Missouri.

The charts on page 169 depicts the total solid waste components, the MSW component, and the construction component, in both tons per year and percent of the total.

The charts on page 171 depict the demolition waste components, the industrial waste components, and the "other" waste components, in both tons per year and percent of the total.

The charts on page 173 depict the tonnage for each solid waste material within each waste component, and the combined materials from all waste components.

MISSOURI SOLID WASTE COMPONENTS

MATERIAL	Large Metro		Small Metro		Rural		All MO. Landfills	
	Pct.	Estimated Tonnage*	Pct.	Estimated Tonnage**	Pct.	Estimated Tonnage***	Pct.	Estimated Tonnage
Municipal Solid Waste								
Paper	18.5%	482,802	15.1%	52,408	30.0%	457,956	22.1%	993,166
Glass	2.9%	75,390	1.8%	6,255	4.5%	68,848	3.4%	150,493
Metals	3.4%	89,892	2.3%	7,866	5.8%	88,243	4.1%	186,001
Plastics	7.2%	187,745	4.7%	16,158	12.0%	182,669	8.6%	386,572
Organics	15.3%	400,524	10.6%	36,951	25.7%	391,527	18.5%	829,002
Inorganics	2.4%	62,767	2.5%	8,582	3.6%	55,543	2.8%	126,892
TOTAL MSW	49.8%	1,301,140	36.9%	128,322	81.6%	1,244,785	59.6%	2,674,247
Construction Waste								
Wood	3.8%	100,208	2.4%	8,253	0.3%	4,447	2.5%	112,908
Dry Wall	1.7%	45,467	3.1%	10,753	0.2%	2,630	1.3%	58,850
Masonry	1.2%	31,772	0.8%	2,837	0.1%	1,681	0.8%	36,290
Metal	0.1%	2,485	0.1%	476	0.0%	305	0.1%	3,266
Plastic	0.3%	9,002	0.1%	411	0.0%	195	0.2%	9,608
Cardboard	0.7%	18,925	0.3%	1,113	0.0%	740	0.5%	20,778
Other	0.4%	11,662	0.3%	950	0.1%	1,109	0.3%	13,721
TOTAL CONSTRUCTION	8.4%	219,520	5.0%	17,500	0.7%	11,172	5.5%	248,192
Demolition Waste								
Wood	5.2%	136,045	8.6%	29,980	1.8%	26,827	4.3%	192,852
Dry Wall	1.0%	27,392	1.0%	3,471	0.6%	8,413	0.9%	39,276
Roofing	3.6%	93,866	3.8%	13,155	2.0%	30,096	3.1%	137,117
Masonry	4.7%	123,924	3.5%	12,100	0.4%	5,770	3.2%	141,794
Metal	0.6%	16,651	0.3%	1,073	0.1%	2,265	0.4%	19,989
Carpet	0.6%	15,779	0.6%	2,188	0.4%	5,843	0.5%	23,810
Other	0.8%	21,961	0.5%	1,653	0.2%	3,027	0.6%	26,641
TOTAL DEMOLITION	16.7%	436,426	18.3%	63,620	5.4%	82,241	13.0%	582,287
Industrial Waste								
Cardboard	3.3%	87,000	4.1%	14,397	1.1%	16,662	2.6%	118,059
Paper	0.9%	23,025	1.8%	6,149	1.0%	15,761	1.0%	44,935
Food	1.4%	37,333	5.7%	19,698	0.6%	8,691	1.5%	65,722
Metal	0.1%	1,414	0.6%	2,110	0.2%	3,216	0.2%	6,740
Wood	2.8%	72,612	3.4%	11,741	1.0%	14,960	2.2%	99,313
Plastic	0.9%	23,926	2.5%	8,703	1.1%	17,363	1.1%	49,992
Textiles	0.1%	2,496	0.1%	253	0.6%	8,516	0.3%	11,265
Rubber	0.5%	12,507	0.2%	752	0.7%	10,261	0.5%	23,520
Other	0.9%	24,438	2.8%	9,844	4.9%	74,629	2.4%	108,911
TOTAL INDUSTRIAL	10.9%	284,752	21.2%	73,546	11.1%	170,060	11.8%	528,358
Special Wastes								
Bulky Items	1.6%	41,096	1.5%	5,071	1.0%	14,616	1.4%	60,783
Soil and Inert Materials	9.8%	257,316	16.2%	56,290	0.0%	-	7.0%	313,606
Asbestos	1.3%	33,826	0.4%	1,369	0.1%	1,250	0.8%	36,445
Other	1.5%	40,038	0.4%	1,490	0.1%	2,270	1.0%	43,798
TOTAL SPECIAL	14.2%	372,275	18.5%	64,321	1.2%	18,137	10.1%	454,733
TOTAL WASTE STREAM	100%	2,614,920	100%	347,309	100%	1,526,394	100%	4,488,623

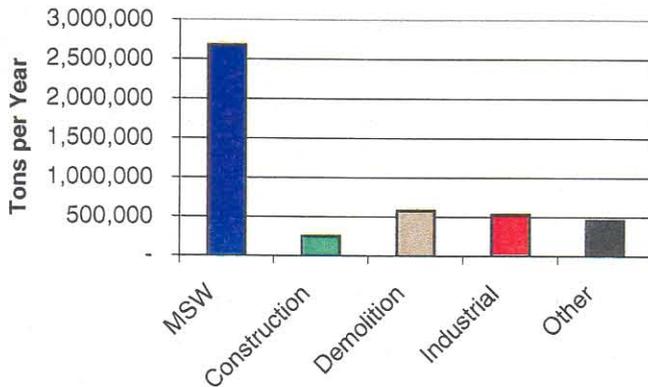
* Based on observation data from 5 sanitary and 2 C&D landfills, plus weighted average for Lee's Summit

** Based on observation data from 2 landfills, plus the weighted average for Springfield.

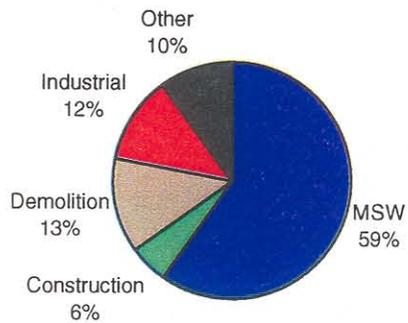
*** Based on observation data from 5 landfills, plus the weighted average from 14 sanitary and 2 C&D rural landfills

MISSOURI SOLID WASTE COMPONENTS

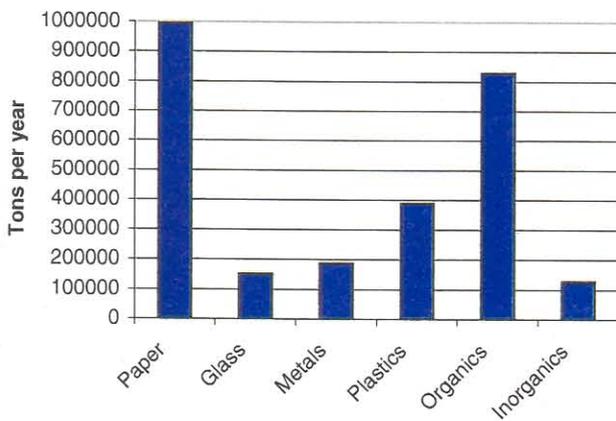
Solid Waste Components
4,488,623 Tons per Year



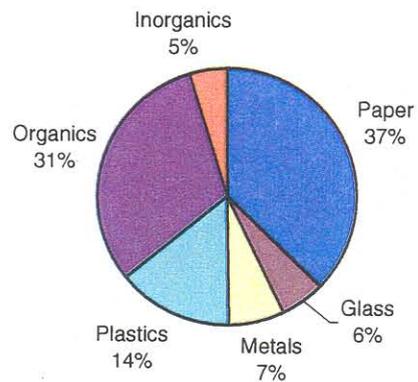
Solid Waste Composition



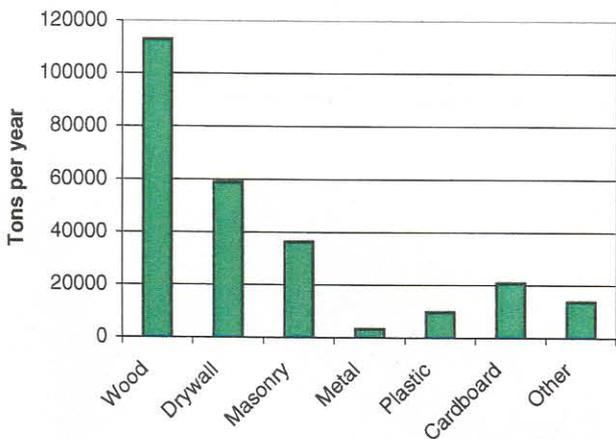
Materials in the MSW Component -
2,674,247 Tons per Year



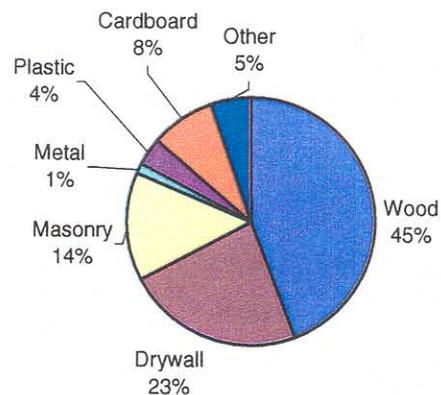
MSW Composition



Waste Materials in the Construction Waste Component -
248,192 Tons per Year

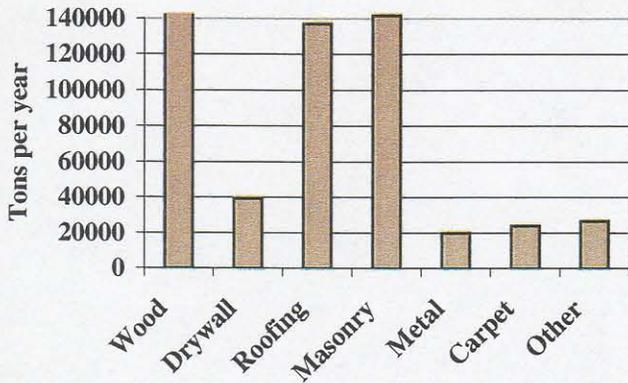


Construction Waste Composition

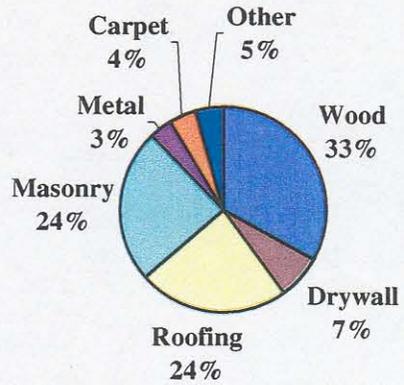


MISSOURI SOLID WASTE COMPONENTS

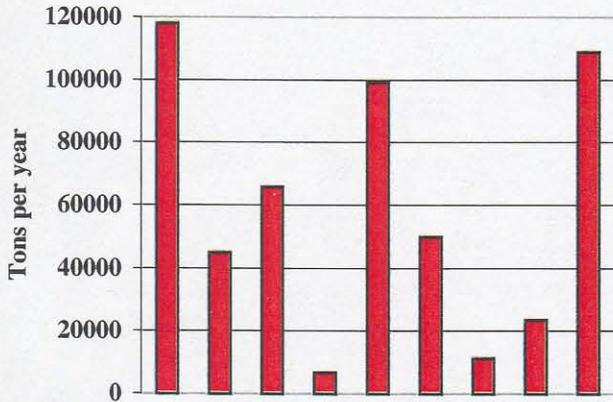
Waste Materials in the Demolition Waste Component - 436,426



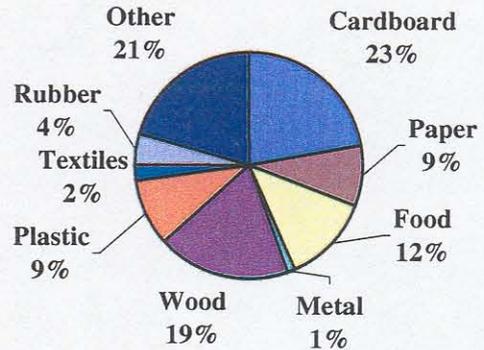
Demolition Waste Composition



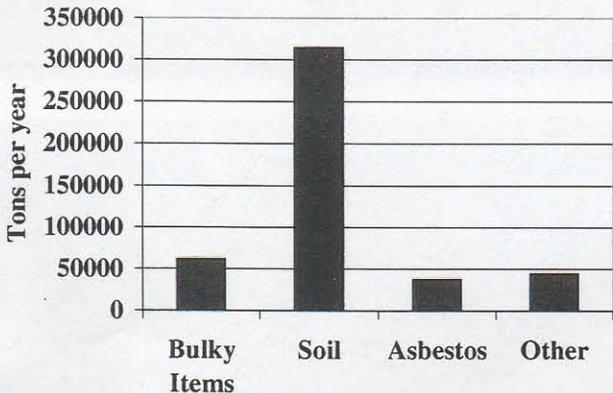
Waste Materials in the Industrial Waste Component - 528,358 Tons per Year



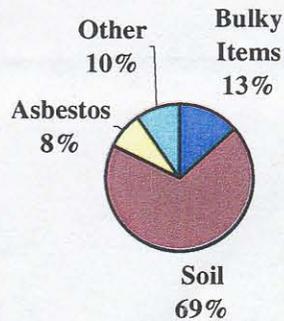
Industrial Waste Composition



Waste Materials in the "Other" Waste Component - 454,733 tons per Year

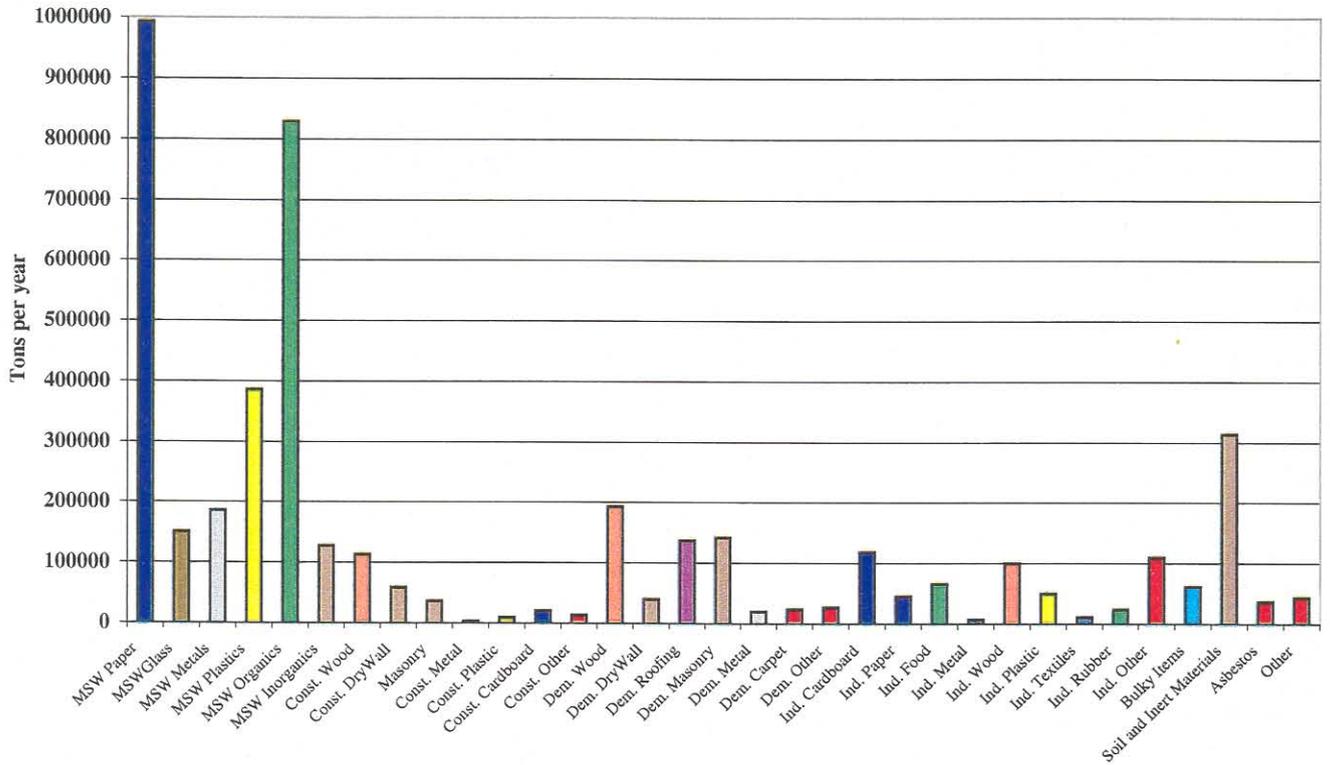


Other Waste Composition



MISSOURI SOLID WASTE COMPONENTS

Materials in the Missouri Solid Waste - 4,488,623 Tons per year



Combined Materials from all Waste Components - 4,488,623 Tons per Year

