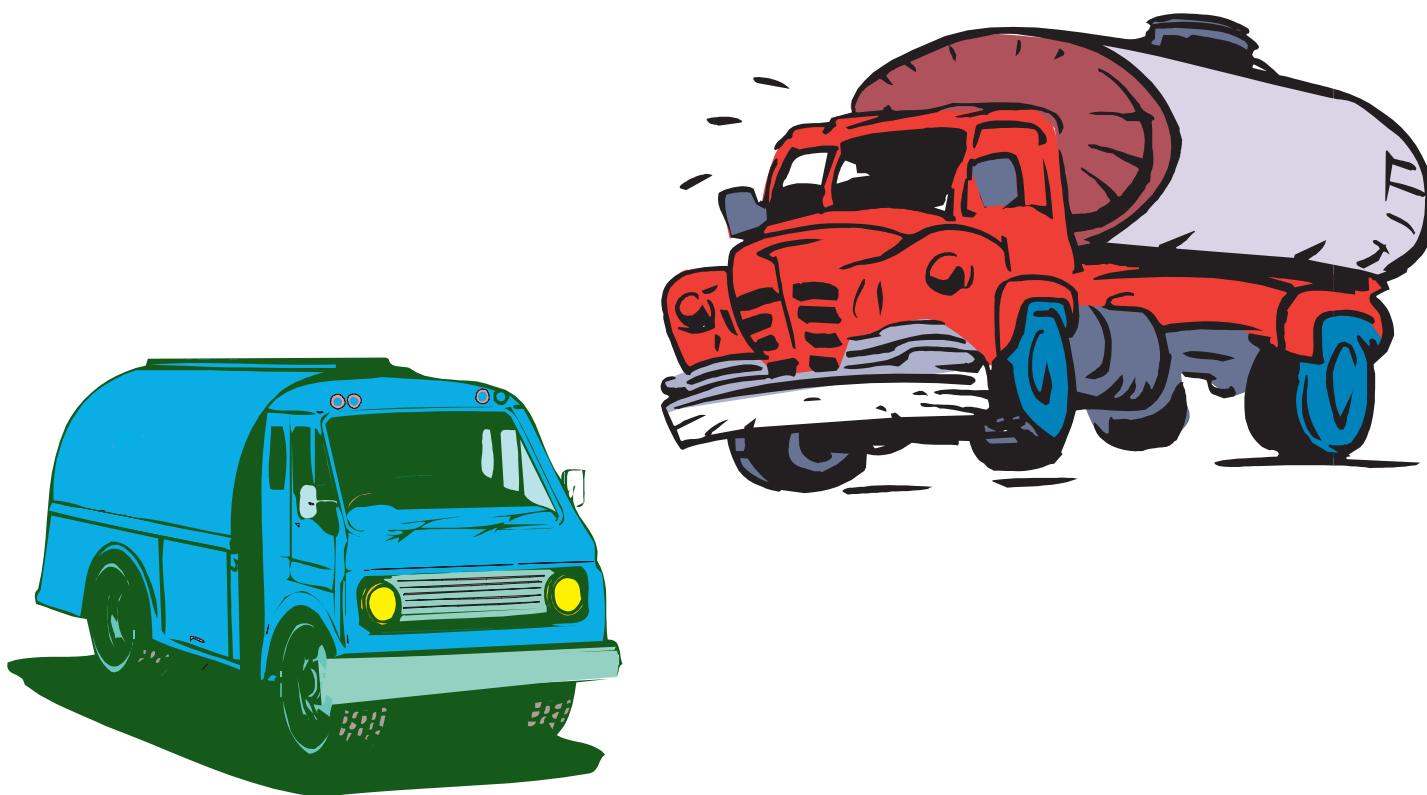


Interstate Hazardous Waste Movements Similar to MSW

By Edward W. Repa, Ph.D.



**NATIONAL SOLID WASTES
MANAGEMENT ASSOCIATION**

4301 Connecticut Avenue, NW
Suite 300
Washington, DC 20008
800-424-2869
www.nswma.org

Introduction

Since the late 1980s, many states have been concerned with the amount of municipal solid waste (MSW) they receive from out-of-state sources. These states feel that they are being dumped upon and ask why should we have to dispose of wastes that we did not generate? However, as recent data from the Congressional Research Service (2002) shows, all states but one (Hawaii) rely on another state to manage some part of the MSW they generate. New data released by the U.S. Environmental Protection Agency (EPA) in October 2003 shows a similar dependence on other states for the proper treatment or disposal of hazardous wastes.

The EPA report, *The National Biennial RCRA Hazardous Waste Report (Based on 2001 Data)*, provides data regarding the generation, management, and final disposition of hazardous wastes regulated under the Resource Conservation and Recovery Act of 1976 (RCRA). As used in the report, RCRA hazardous waste refers to the solid waste assigned a federal hazardous waste code and excludes wastes not regulated under federal regulations even if those waste are designated hazardous by a state.

Hazardous Waste Generation

For 2001, the amount of RCRA hazardous waste generated was 40.82 million tons (Table 1). Texas generated almost 19 percent of the total followed by Louisiana (9.5%), New York (8.7%) and Kentucky (6.6%). South Dakota generated the least amount of hazardous waste of any state at 950 tons. The amount of hazardous waste generated in the U.S. in 2001 was about 10 percent of the total amount of MSW (386.8 million tons).

Hazardous Waste Exports

Of the total hazardous waste generated, 4.15 million tons was shipped to another state or jurisdiction for treatment and disposal. This represents 10.2 percent of the hazardous waste generated. More than half (55%) of the hazardous waste exported to another state for treatment or disposal came from nine states (Alabama, Arizona, California, Illinois, Indiana, Michigan, New Jersey, Ohio, and Texas). California exported the largest quantity at 422,670 tons (10.7%), while the remaining eight states exported less than 300,000 tons but more than 200,000 tons each. All 50 states, Guam, Navajo Nation, and Trust Territories exported some portion of the hazardous waste they generated.

The percent of MSW exported when compared to that generated in 2001 (8.9%) (Table 2) was almost identical to the percent of hazardous waste exported (10.2%) in 2001. Two states (Illinois and New Jersey) with the largest hazardous waste exports also had the highest municipal solid waste exports.

Hazardous Waste Imports

Imports of hazardous waste were slightly less than exports at 4.01 million tons. This represents slightly less than 10 percent

of the hazardous waste generated. Some 56 percent of the hazardous waste imported went to 8 states including Illinois, Indiana, Michigan, Missouri, Ohio, Pennsylvania, South Carolina, and Texas. Five of these states (Illinois, Indiana, Michigan, Ohio, and Texas) were also the highest exporters. Ohio imported the largest amount of hazardous waste at 508,836 tons (12.7%) and Michigan was the second largest importer at 394,064 tons (9.8%). Ten states or territories (Alaska, District of Columbia, Guam, Hawaii, Montana, Navajo Nation, New Hampshire, Trust Territories, Virgin Islands, and Wyoming) did not import hazardous waste for treatment or disposal.

As with exports, the percent of hazardous waste imported (9.8%) was nearly identical to the percent of MSW imported in 2001 (9.7%). Five of the states (Illinois, Indiana, Michigan, Ohio, and Pennsylvania) with the highest hazardous waste imports also had the highest MSW imports in 2001.

Net Imports and Exports

Nationally, states and U.S. territories export more hazardous waste than they import. Explanations of where the unaccounted 0.14 million tons of exported hazardous waste was treated or disposed of was not provided in EPA's report. This hazardous waste was probably sent out of the country (i.e., Canada) for treatment or disposal.

Three states had net exports (exports minus imports) greater than 100,000 tons. California was the largest net exporter shipping 417,990 tons, followed by Alabama (135,522 tons) and Kentucky (116,206 tons). None of these states had the highest net exports of MSW.

Conversely, four states had net imports (imports minus exports) greater than 100,000 tons. Ohio was the largest net importer accepting 210,914 tons, followed by Michigan (193,965 tons), Missouri (160,906 tons), and South Carolina (104,679 tons). Both Ohio and Michigan were among the largest net importers of MSW in 2001.

Conclusion

The latest data show that all states import and/or export RCRA hazardous wastes to ensure proper treatment and disposal. Similar to MSW, the facilities that manage hazardous waste are fewer than in the past and may not be located in the states where the waste is generated. Therefore, hazardous wastes like MSW must travel longer distances and across state lines to ensure environmentally protective management. As the data shows, the management of wastes, both hazardous and MSW, is intrinsically connected to the national and state economies and like other goods and services should not be restricted by federal or state laws.

Table 1. 2001 Interstate Hazardous Waste Shipments (tons)

State	Hazardous Waste Generated	Exported	Largest Quantity Exported To	Imported	Largest Quantity Imported From	Net (E-I)
AL	1,569,675	251,866	MO (40%)	116,344	GA (27%)	135,522
AK	5,094	3,979	WA (66%)	0	---	3,979
AZ	96,544	26,501	CA (29%)	26,303	CA (75%)	198
AR	857,910	237,892	IL (16%)	194,250	TX (23%)	43,642
CA	807,297	442,670	NV (66%)	24,680	OR (35%)	417,990
CO	66,791	22,355	NE (19%)	3,969	ID (23%)	18,386
CT	62,524	64,073	NY (24%)	18,716	MA (49%)	45,357
DE	17,512	16,729	PA (38%)	3,109	NJ (76%)	13,620
DC	2,113	2,111	PA (77%)	0	---	2,111
FL	400,107	54,992	TN (28%)	4,040	PR (22%)	50,952
GA	760,043	106,512	AL (30%)	12,663	FL (33%)	93,849
Guam	412	331	WA (51%)	0	---	331
HI	464,857	656	FL (20%)	0	---	656
ID	214,409	2,990	UT (23%)	88,159	OR (27%)	-85,169
IL	1,412,100	226,966	IN (24%)	213,804	IA (14%)	13,162
IN	1,127,542	220,788	OH (46%)	244,748	OH (24%)	-23,960
IA	47,147	44,625	IL (72%)	215	IL (100%)	44,410
KS	1,571,587	42,643	OK (59%)	19,846	AR (27%)	22,797
KY	2,686,583	159,565	IL (23%)	43,359	TX (12%)	116,206
LA	3,883,563	96,818	TX (63%)	168,484	TX (51%)	-71,666
ME	6,168	5,171	MA (36%)	568	MA (74%)	4,603
MD	17,577	10,499	NJ (77%)	49,885	PR (25%)	-39,386
MA	1,121,752	32,524	NJ (34%)	13,282	NH (17%)	19,242
MI	649,207	200,099	OH (41%)	394,064	OH (39%)	-193,965
MN	1,662,632	45,415	IL (38%)	117,638	IL (60%)	-72,223
MS	2,165,734	35,905	TX (26%)	67,090	AL (47%)	-31,185
MO	101,782	45,525	IL (21%)	206,431	IL (22%)	-160,906
MT	6,877	6,437	IL (27%)	0	---	6,437
Navajo Nation	188	186	UT (100%)	0	---	186
NE	31,382	25,774	ID (55%)	123,018	CA (31%)	-97,244
NV	277,258	4,433	CA (24%)	49,862	CA (59%)	-45,429
NH	12,269	12,273	NJ (22%)	0	---	12,273
NJ	586,210	220,698	PA (45%)	189,772	NY (29%)	30,926
NM	962,808	7,029	TX (63%)	824	ID (79%)	6,205
NY	3,534,261	118,471	NJ (45%)	113,706	NJ (28%)	4,765
NC	329,721	79,607	SC (39%)	14,611	SC (44%)	64,996
ND	574,614	3,221	TX (46%)	220	MT (42%)	3,001
OH	1,889,067	297,922	MI (35%)	508,836	IN (16%)	-210,914
OK	887,643	25,303	TX (39%)	60,801	KS (27%)	-35,498
OR	49,945	40,430	ID (56%)	33,822	WA (94%)	6,608
PA	398,403	193,473	OH (39%)	250,273	NJ (36%)	-56,800
PR	176,555	69,973	SC (40%)	81	FL (59%)	69,892
RI	9,435	8,275	PA (35%)	4,700	MA (56%)	3,575
SC	142,510	101,542	OH (47%)	206,221	PR (15%)	-104,679
SD	950	1,254	MN (27%)	86	MN (56%)	1,168
TN	629,834	35,588	AR (24%)	29,993	AL (10%)	5,595
TX	7,555,402	200,953	LA (35%)	220,000	LA (30%)	-19,047
Trust Territories	8,999	418	CA (99%)	0	---	418
UT	88,664	36,515	ID (42%)	35,677	CA (42%)	838
VT	4,099	4,334	NJ (26%)	122	NH (64%)	4,212
VI	1,971	1,990	TX (74%)	0	---	1,990
VA	209,447	44,299	NJ (26%)	28,188	NJ (33%)	16,111
WA	240,795	54,770	OR (51%)	12,817	OR (28%)	41,953
WV	101,195	42,451	OH (47%)	7,474	TX (69%)	34,977
WI	294,754	106,914	IL (34%)	84,999	IL (47%)	21,915
WY	37,566	1,836	UT (34%)	0	---	1,836
Totals	40,821,484	4,146,569		4,007,750		138,819

Table 2. Municipal Solid Waste Imports and Exports by States

State	Generated (10 ⁶ t/yr)	Imports (10 ⁶ t/yr)	Percent Imports of Generation	Exports (10 ⁶ t/yr)	Percent Exports of Generation	Net (Imports- Exports)
AL	5.3	0.382	7.2	0.108	0.2	0.274
AK	0.687	0.000	0.0	0.030	4.4	-0.030
AZ	5.2	0.260	5.0	Neg.	>0.1	0.260
AR	1.7*	0.013	0.8	0.091	5.4	-0.078
CA	68	0.029	>0.1	0.746	1.1	-0.718
CO	7.2	Neg.	>0.1	Neg.	>0.1	Neg.
CT	3.2	0.076	2.4	0.732	22.9	-0.656
DE	0.830	0.000	0.0	0.084	10.1	-0.084
DC	0.630	Neg.	>0.1	0.961	152.5	-0.961
FL	16.7	0.000	0.0	0.519	3.1	-0.519
GA	12.8	0.964	7.5	0.350	2.7	0.614
HI	1.8	0.000	0.0	0.000	0.0	0.000
ID	0.794	0.013	1.6	0.134	16.9	-0.121
IL	15.1	1.441	9.5	3.085	20.4	-1.644
IN	5.5	1.457	26.5	0.927	16.9	0.529
IA	3.9**	0.506	13.0	0.391	10.0	0.115
KS	2.3	0.637	27.7	0.053	2.3	0.584
KY	5.2	0.701	13.5	0.275	5.3	0.426
LA	3.9*	Neg.	>0.1	0.104	2.7	-0.104
ME	1.7	0.165	9.7	0.051	3.0	0.114
MD	4.4*	0.040	0.9	2.081	47.3	-2.041
MA	8	0.067	0.8	1.015	12.7	-0.948
MI	16.1	3.598	22.3	0.146	0.9	3.451
MN	5.6	0.000	0.0	0.672	12.0	-0.672
MS	4.4	0.466	10.6	0.075	1.7	0.392
MO	6.1	0.178	2.9	1.671	27.4	-1.493
MT	1	0.034	3.4	Neg.	>0.1	0.034
NE	2*	0.123	6.2	0.018	0.9	0.105
NV	3.3	0.533	16.2	0.005	0.2	0.527
NH	1.4	0.250	17.9	0.057	4.1	0.193
NJ	9.2	0.892	9.7	5.431	59.0	-4.539
NM	3.1	0.750	24.2	Neg.	>0.1	0.750
NY	29.7	0.840	2.8	7.493	25.2	-6.653
NC	9.8*	0.022	0.2	0.901	9.2	-0.879
ND	0.540	0.103	19.1	0.015	2.8	0.088
OH	14	1.989	14.2	0.987	7.1	1.002
OK	3.6*	0.125	3.5	0.020	0.6	0.105
ON	10.8	0.000	0.0	1.976	18.3	-1.976
OR	4.5	1.302	28.9	0.019	0.4	1.282
PA	14.1	10.666	75.6	0.577	4.1	10.090
RI	1.1*	Neg.	>0.1	0.122	11.1	-0.122
SC	10	0.579	5.8	0.102	1.0	0.478
SD	0.480	0.001	0.2	0.002	0.4	-0.001
TN	6	0.329	5.5	0.304	5.1	0.025
TX	28**	0.034	0.1	0.519	1.9	-0.485
UT	2.5	0.006	0.2	0.001	>0.1	0.005
VT	0.557	0.000	0.0	0.122	21.9	-0.122
VA	10.8*	4.099	38.0	0.047	0.4	4.051
WA	7.1	0.116	1.6	0.950	13.4	-0.833
WV	1.3	0.200	15.4	0.332	25.5	-0.132
WI	4.3	1.107	25.7	0.205	4.8	0.902
WY	0.568	Neg.	>0.1	Neg.	>0.1	Neg.
Total/Avg.	386.786	35.093	9.1	34.506	8.9	

1. Waste News (8/5/02 & 8/19/02): *MSW disposed of per year, **MSW disposed of per year + C&D.
2. Congressional Research Service (2002).