

Environmental Trends in the State of Missouri

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By Michael P. Kelsay

Center for Economic Information, University of Missouri-Kansas City

Summary

Environmental regulation and management of municipal solid waste and hazardous waste has moved aggressively in the State of Missouri since 1990. Since 1991, municipal solid waste disposal has declined each year. The State of Missouri has made substantial strides in hazardous waste management since the original Capacity Assurance Plan was submitted in 1989 as required by Section 104(c)(9) of CERCLA. Since 1988, Missouri has substantially reduced recurrent hazardous waste generation and has moved from a net exporter to a net importer of hazardous waste. In addition to solid and hazardous waste management efforts, the State of Missouri has implemented selected tax preferences, fees, and taxes to encourage waste minimization, source reduction, and fund program initiatives in environmental areas.

Proactive Solid Waste Management

Environmental regulation and municipal solid waste management is proactive in Missouri . . .

With passage of the Missouri Solid Waste Management Law in 1990, municipal solid waste management has taken a multi-pronged approach by creating multi-county solid waste management districts, promoting resource recovery and innovative waste management technologies, public education programs, and implementing tax preferences, fees, and taxes to fund program initiatives. Solid Waste Management Districts (SWMDs) were formed within the State in order to encourage regional city and county cooperation in proper solid waste management. Each solid waste management district is required to (1) prepare a solid waste management plan for the district, (2) establish an educational program to inform the public about sound municipal solid waste management practices, (3) adopt procedures to minimize the introduction of small quantities of hazardous waste, including household hazardous waste, into the solid waste stream, and (4) assure adequate disposal capacity in the State. Map 1 depicts the 20 solid waste management districts in the State of Missouri.

Map 1: SOLID WASTE MANAGEMENT DISTRICTS IN MISSOURI
SWMD.xls

The implementation of Resource Conservation and Recovery Act (RCRA) Subtitle D standards in 1991, setting forth more stringent criteria for sanitary landfill operations, along with the push toward regionalization of waste sheds, has significantly reduced the number of sanitary landfills in the State of Missouri. The number of sanitary landfills has declined from 74 in 1991 to 29 by 1996, according to the Missouri Department of Natural Resources (MDNR).

The disposal of solid waste is concentrated in two SWMDs containing both major Metropolitan Areas (MSAs) in Missouri. In 1991, the Mid-America Region Council SWMD which includes the Kansas City MSA accounted for 13.3% of disposal volume while the St Louis-Jefferson SWMD which includes the St. Louis MSA accounted for 46.1% of disposal volume, according to MDNR; in 1995, these SWMDs accounted for 15.5% and 41.5% of disposal volume, respectively.

Chart 1: Disposal of Municipal Solid Waste in Missouri, 1991-1995

State of Missouri

Disposal of MSW, 1991-1995

Source: State of Missouri Department of Natural Resources, Solid Waste Management Program, 1996

Chart 1 summarizes the 5 year trend for solid waste disposal in Missouri. In 1991, disposal at Missouri landfills and transfer stations was 5.27 million tons and declined to 4.50 million tons by 1995, representing a 14.6% decrease in disposal volumes during the reporting period.

Fees and Taxes

Implementation of fees and taxes to fund environmental initiatives . . .

Beginning October, 1990, the State of Missouri implemented a series of fees and taxes on the disposal of municipal solid waste. Each operator of a sanitary landfill or a transfer station must collect \$1.50 per ton of solid waste accepted and each operator of a solid waste demolition landfill must collect \$1.00 per ton of solid waste accepted; these funds are placed in the "solid waste management fund " to support waste management initiatives. Beginning October, 1992, the charges are adjusted annually by the same percentage increase in general price level as measured by the Consumer Price Index for all Urban Consumers (CPI-U).

For fiscal years 1992-97, one million dollars from the fund is earmarked for initiatives that encourage the development of markets for recovered materials; beginning in 1998, 10 percent of funds, not to exceed one million dollars, are earmarked for such purposes. Up to 15 percent of funds are to be used to administer the management of household hazardous waste and to develop an education program and plan for the collection of household hazardous waste on a statewide basis by January 1, 2000. The remaining funds are to be made available according to the following criteria: (1) up to 10 percent for programs to minimize illegal solid waste disposal, (2) up to 15 percent to administer grant programs, and (3) at least 50 percent are allocated, upon appropriation, to participating cities, counties, and districts through grants and loans. The remaining funds are to be used to provide grant and/or loans for solid waste management projects that encourage waste reduction and recycling efforts.

Chart 2: Revenue from Disposal Fees in Missouri, 1991-95

State of Missouri

Revenue from Disposal Fees, 1991-1995

Source: State of Missouri Department of Natural Resources, Solid Waste Management Program, 1996

Chart 2 summarizes the 5 year trend in revenues assessed for the disposal of municipal solid waste which are earmarked to fund these environmental initiatives. Revenues peaked at \$8.48 million in 1991 and declined to \$7.09 million by 1995 (adjusted to 1995 constant dollars), representing a 16.4% decrease in revenues during the reporting period.

Hazardous Waste Management

Recurrent hazardous waste generation has dramatically decreased in Missouri . . .

Section 104(c)(9) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act (SARA) of 1986 provided that the State, beginning in 1989, would develop a Capacity Assurance Plan (CAP) which would assure the availability of capacity to manage hazardous waste generated within the State. The CAP provided a system for analyzing waste generation data, capacity use, waste minimization, disposal, and analyzing the export of hazardous waste to other states.

Caution is urged in examining the decline in recurrent generation from state fiscal year 1988 through state fiscal year 1991. During this period, recurrent generation volumes were derived from fee and tax billings on hazardous waste generators. A more reliable source of recurrent generation can be obtained from the Biennial Reporting System filed with the Environmental Protection Agency. Beginning with the 1993 Hazardous Waste Capacity Assurance Plan for Missouri, the State began reporting recurrent generation as reflected in the biennial data base.

In 1991, recurrent generation was 237,641 tons, according to the 1993 Hazardous Waste Capacity Assurance Plan for Missouri. Energy recovery-liquids, fuel blending, and hazardous wastewaters and sludge treatment accounted for 79.7% of commercial hazardous waste management demand at Missouri's 22 commercial facilities. Energy recovery-liquids accounted for 57.1% of total hazardous waste management in Missouri; this is attributable to four cement kilns (Continental Cement, Holnan/Safety Kleen, Lone Star Industries, Inc., and Continental Cement which burn hazardous waste. Hazardous wastewaters and sludges treatment and fuel blending accounted for 12.2% and 10.4% of management demand in 1991, respectively.

Chart 3: Recurrent Hazardous Waste Generation in Missouri: SFY88-SFY91

State of Missouri

Hazardous Waste Generation: SFY88-91

Source: Missouri Department of Natural Resources, Hazardous Waste Program: 1992 Capacity Assurance Program

Chart 3 summarizes the 4 year trend of recurrent hazardous waste generation from SFY88-91, according to the 1992 Capacity Assurance Plan Update for Missouri. Recurrent generation was 366,351 tons in SFY88 and had declined to 173,056 tons by SFY91, representing a 52.8% decrease during the reporting period.

The State of Missouri has changed its fee and tax structure in order to provide incentives for waste minimization, reduction, and funding of hazardous waste programs. The fee and tax structure is comprised of four elements: (1) commercial inspection fees (2) generator fees, (3) land disposal fees, and (4) a category tax. Yearly inspection fees are based upon the volume of hazardous waste accepted and range from \$9,000- \$12,000 annually. The generator fee is \$1 per ton generated up to a maximum of \$10,000 annually. In order to discourage landfilling and deepwell injection as a management method, every hazardous waste generator must pay a fee of \$25 per ton annually on all hazardous waste which is disposed of by landfilling or deepwell injection and \$2 per ton for all other hazardous waste transported offsite. In addition, all hazardous waste landfills must collect a tax equal to 2 percent of the gross fees charged a generator for disposal at a landfill. Lastly, every generator must pay a category tax based upon the volume of hazardous waste generated and the management method utilized, with the maximum set at \$50,000 annually for each company. In SFY95, category taxes accounted for 70% of \$2.13 million in revenues collected.

Hazardous Waste Imports & Exports

Missouri is now a net importer of hazardous waste . . .

Missouri's aggressive approach in waste minimization initiatives and the additional commercial capacity added during the 1990's has resulted in the State moving from a net exporter to a net importer of hazardous waste.

Chart 4: Imports and Exports of Hazardous Waste in Missouri: SFY88-SFY91

State of Missouri

Imports and Exports: SFY88-91

Source: Missouri Department of Natural Resources, Hazardous Waste Program, 1992 Capacity Assurance Program

Chart 4 summarizes the trend in imports and exports over the period SFY88-91. Exports of hazardous waste have declined from 111,203 tons to 93,342 tons during the reporting period, representing a 16% decrease. Imports of hazardous waste have increased from 83,892 tons to 134,269 tons during the period, representing a 60% increase. The 1991 Biennial Reporting Data Base suggests this trend has continued; in calendar year 1991, exports decreased to 84,883 tons while imports rose dramatically to 189,838 tons.