



# Missouri Waste Diversion Status Report For Calendar Year 2006

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Solid Waste Management Program

## INTRODUCTION

The Missouri Department of Natural Resources Solid Waste Management Program (SWMP) has been collecting data on waste since 1990 in order to assess progress in the state's waste diversion efforts, as established in Senate Bill 530 (1990). This bill contained legislation pertaining to landfill permitting requirements, set state-wide goals for solid waste recovery and reduction (40 percent reduction in solid waste disposal by January 1, 1998), banned certain items from Missouri landfills, set up a solid waste management fund and provided for the development of Solid Waste Management Districts. In the past 16 years, the department and Missouri's 20 Solid Waste Management Districts have helped to create and sustain recycling services across the state.

## DISCUSSION

**What is waste diversion?** Waste diversion can be defined as the act of preventing garbage from being disposed of in a landfill by reducing the amount of materials that are used or bought, by reusing products, recycling items, or composting. During calendar year 2006 Missourians generated approximately 12.5 million tons of waste, 44 percent of which was diverted and put to good use instead of being buried in landfills. This figure was down from 46 percent in 2005 but still exceeded the state's 40 percent goal. Some of the drop may be attributed to the increase of storm debris placed in landfills due to severe storms Missouri experienced in 2006.

Also in 2006, the department estimates that 1.20 tons of waste was landfilled per person in the state. This is up slightly from 1.13 tons per person in 2005. The estimated amount of trash generated statewide has also increased from 12.1 million tons a year ago, to 12.5 million tons in 2006.

Waste diversion has many important aspects, including conservation of natural resources, reducing pollution, development of greener technologies, avoiding the cost of waste disposal in landfills and incinerators and saving energy. Waste diversion by recycling provides benefits at every stage of the life cycle of a consumer product – from the mining of raw materials through use and final disposal.

Today, one of the main reasons waste diversion is important is its potential to help prevent global climate change. By diverting waste from landfills the amount of methane produced by landfill sites is reduced. Methane is a harmful greenhouse gas and a major contributor to global climate change. Also, diverting waste by recycling products rather than producing them from virgin materials produces less carbon dioxide and other greenhouse gases during the manufacturing process.

When comparing the nation's recycling and reuse industry to industries providing an alternative to recycling and reuse (i.e. waste management and mining) or preferred industries that are often targeted for economic development support, studies show that the recycling and reuse industry is a significant part of the whole industrial picture. The diversion industry provides large numbers of jobs that, on average, pay above the national average wage. Data collected for a U.S. Recycling Economic Information Study indicates that waste generation continues to grow, however, despite the fact that more discards are disposed of than recycled it is not surprising that the recycling and reuse industry is larger than the waste management industry. This is

because recycling and reuse are inherently value-adding whereas disposal is not, and value-adding processes support jobs and economic activity.<sup>1</sup> Studies have also shown that waste generation increases during boom times as consumers buy more goods, produce more packaging waste and throw away more worn-out products.

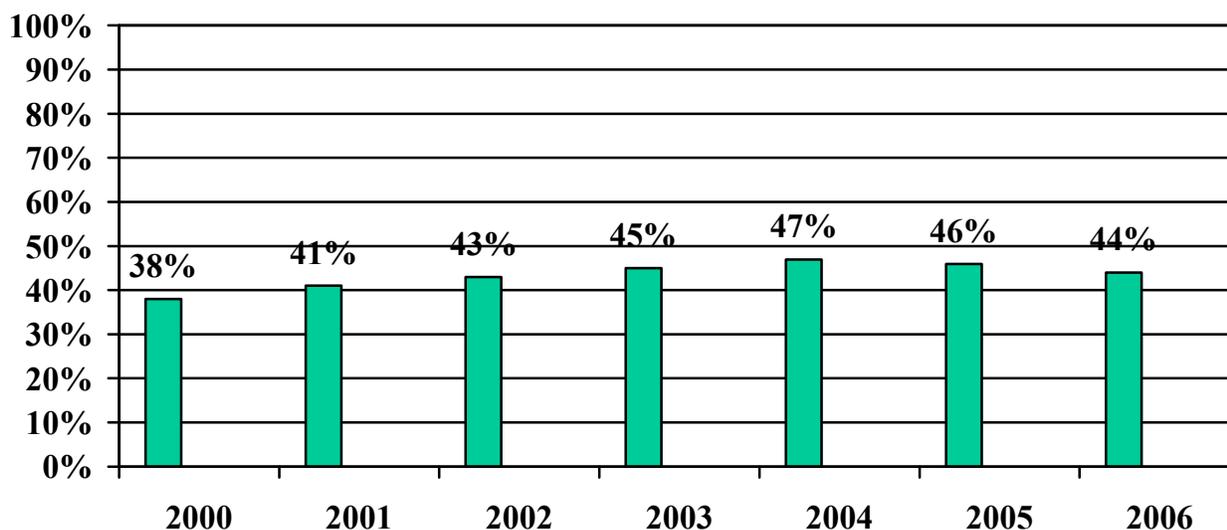


Table 1

Table 1 represents the volume of waste diverted from the waste stream for calendar years 2000-2006.

Over the last six years the per capita disposal has increased from 1.14 tons per person per year in 2000 to 1.20 tons per person per year in 2006 (see Table 2). This is not a significant increase, however past studies have indicated that a robust economy can drive an increase in personal consumption expenditures, resulting in an increase in waste generation and disposal. It is interesting to note the comparison of Missouri's per capita disposal to the eight surrounding states (Arkansas, Illinois, Iowa, Kansas, Kentucky, Nebraska, Oklahoma, Tennessee). As shown in Table 3, Missouri ranks 3<sup>rd</sup> in waste generation, 3<sup>rd</sup> in per capita recycling, and is tied with three other states in 2<sup>nd</sup> place for per capita disposal, as indicated by data collected for calendar year 2004 and published in the April 2006 issue of *BioCycle Magazine, The State of Garbage in America* report.

<sup>1</sup> U.S. Recycling Economic Information Study-prepared for the National Recycling Coalition by R.W. Beck, Inc. July 2001

### Daily Per Capita Generation/Diversion/Disposal

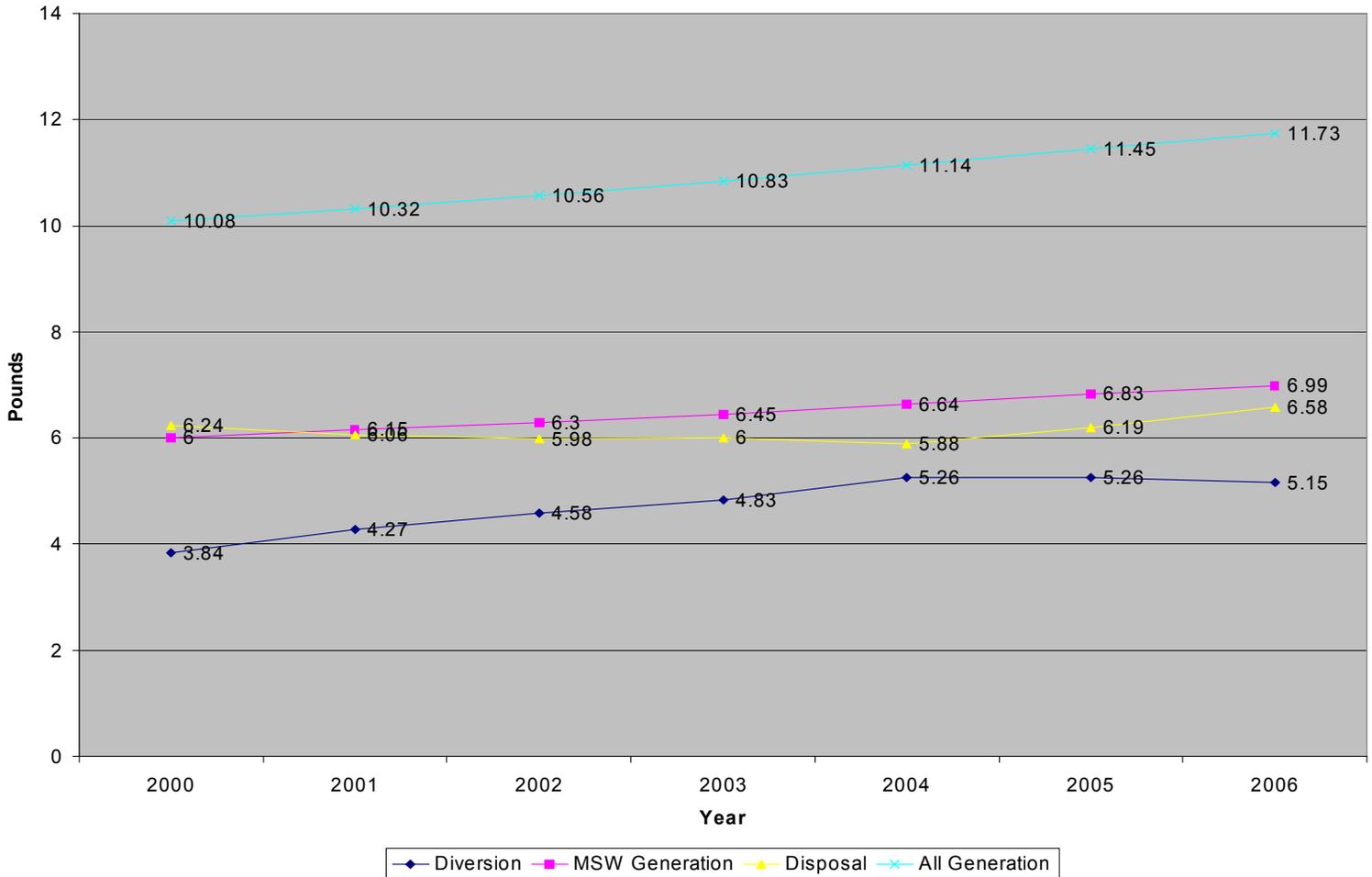


Table 2

State	Calendar Year 2004 Population	Waste Generation (tons)	Per Capita Disposal (tons)	Per Capita Recycling Percentage
Arkansas	2,752,629	2,826,602*	1.0	19.7%
Illinois	12,713,634	40,363,746	1.9	37.7%
Iowa	2,954,451	3,780,556	1.3	39.6%
Kansas	2,735,502	3,239,092	1.4	19.0%
Kentucky	4,145,922	6,212,770	1.4	22.4%
Missouri	5,754,618	11,703,455	1.4	38.9%
Nebraska	1,747,214	2,466,972*	1.4	15.4%
Oklahoma	3,523,553	5,297,137	1.3	3.8%
Tennessee	5,900,962	12,928,999	1.9	42.2%

Table 3

\*estimated numbers –actual numbers were not reported

Table 3 includes data from the April 2006 issue of BioCycle Magazine, *The State of Garbage in America* report. Data is representative of calendar year 2004 unless otherwise indicated.

## CONCLUSION

Current solid waste statistics show that Missouri continues to make progress in its diversion efforts, however much remains to be done to divert waste flow through continued education in reduction, reuse and recycling. More Missourians now have recycling and composting services in their communities, providing the public a convenient and affordable alternative to disposal. Although many communities have recycling and composting services available there are still components of the waste stream that need to be addressed, such as paper products, food waste and construction/demolition debris. Even though progress is being made the citizens of Missouri must continue to strive to increase the diversion rate in the state by increasing their efforts to reduce, reuse and recycle, and seek alternative uses for those everyday items that currently find their way to the landfills. This can have the beneficial effect of reducing greenhouse gas production, a major contributor to global warming.