

# U.S. Solid Waste Trends

## *Solid Waste Management Factsheet No. 21*

In 1996, 209.7 million tons, or 4.3 pounds per person per day, of municipal solid waste (MSW) were generated, a compared to 211.5 million tons in 1995. After materials recovery for recycling and composting, discards were 3.2 pounds per person per day.

Recovery of materials for recycling and composting was estimated to be 27 percent of MSW generated in 1996, up from 17 percent in 1990, continuing the impressive growth of recent years. Combustion facilities managed 17 percent of total generation, and the remaining 56 percent of the municipal solid waste stream was sent to landfills or otherwise disposed of.

### SOLID WASTE DESTINATIONS

Method	Quantity (million tons)	Percent of Generation
Recycling/composting	57	27
Combustion	36	17
Landfilling	116	56

Between 1990 and 1996, recovery of materials for recycling and composting increased from 33 million tons to 45 million tons, an increase of 73 percent. Recovery of paper and paper-board reached 41 percent, accounting for over half of the MSW recovered. Next highest was the nearly 11 million tons of yard waste composted. The percent of yard waste composted (38 percent) has nearly doubled since 1992.

The percentage of MSW discards landfilled continues to decline due to increased recovery for recycling and composting. In 1985, 83 percent of MSW was landfilled compared to 56 percent landfilled in 1996. Even with this reduction, landfilling continues to be the single most predominant waste management method.

Paper and paperboard products are the largest component of MSW by weight (38 percent of generation) and yard trimmings are the second largest with (13 percent of generation). Five of the remaining materials in MSW-glass, metals, plastics, wood and food wastes-range between 5 and 10 percent each (by weight) of total MSW generated. Other materials in MSW include rubber and leather, textiles, and miscellaneous wastes, totaling approximately 10 percent of MSW in 1996.

Recovery for recycling remained at relatively low levels (9 to 10 percent of MSW generation) well into the decade of the 1980s. In the late 1980s, people nationwide realized that new approaches to solid waste management were needed, and recovery for recycling and composting began to increase. Recovery rates have increased from 13 percent in 1988 to 17 percent in 1990 to 22 percent in 1993 to 27 percent in 1996.

### Future Trends

In 1995 (based on 1993 data) EPA projected that, for the first time, the per capita generation rate would decrease by the year 2000 to 4.3 pounds per person per day. That level was actually

attained in 1996. That decrease occurred, in part, because of source reduction efforts, including diversion of yard waste from the solid waste management system through backyard composting, leaving grass clippings on lawns, and other source reduction activities such as reduced packaging.

Even with significant source reduction efforts, generation of MSW is projected to increase to 218 million tons in 2000. However, discards to combustion facilities or landfills are projected to decline, assuming an expected greater than 30 percent recovery rate through recycling and composting.

Recovery for recycling and composting has increased from approximately 7 percent of MSW generated in 1960 to 27 percent in 1996, with much of the growth happening over the past ten years. The per capita generation of yard trimmings is, however, projected to continue to decline if current source reduction activities continue.

Combustors handled an estimated 30 percent of MSW generated in 1960, mostly through incinerators with no energy recovery and no air pollution controls. In the 1960s and 1970s, combustion dropped steadily, reaching a low of less than 10 percent by 1980, then increasing to approximately 16 percent of MSW in 1990, and remaining around that level (17 percent) into 1996. All major new facilities have energy recovery and are designed to meet air pollution standards. Tonnage of MSW combusted will increase only slightly by the year 2000.

Landfill use fluctuates with changes in the use of alternative solid waste management methods. Recovery for recycling and composting at a 30 to 35 percent in 2000, combined with projected source reduction efforts would reduce total national discards of MSW after recovery to below 1996 levels. In 1995 EPA estimated that adding projected combustion levels to recycling and composting levels would lower landfill tonnage to 118 million tons in 2000 compared to 129 million tons in 1993. However, landfill tonnage has already dropped to 116 million tons and is expected to continue to decrease.

Source: "Characterization of Municipal Solid Waste in the United State, 1997 Update," EPA

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