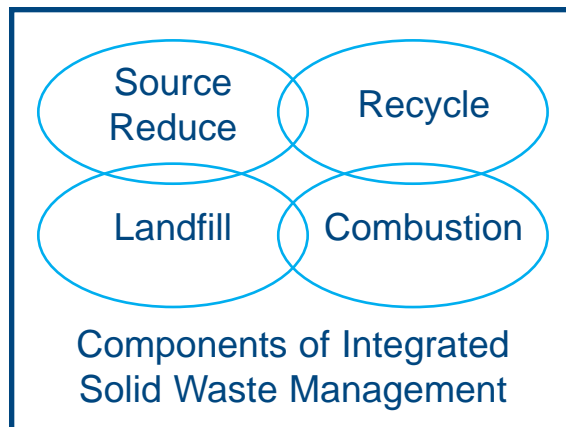




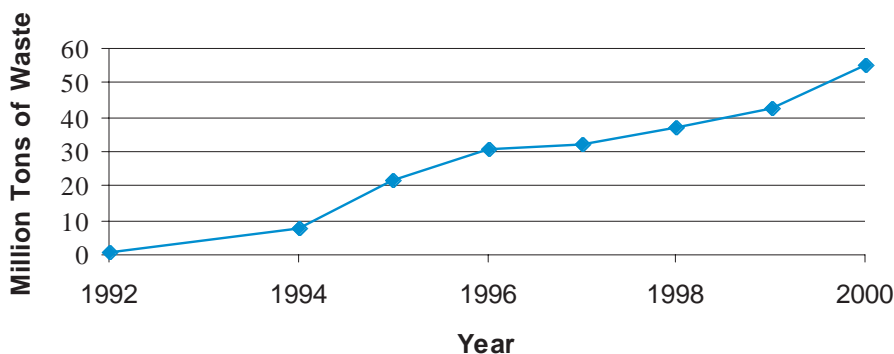
MUNICIPAL SOLID WASTE MANAGEMENT

More than fifteen years ago, the U.S. Environmental Protection Agency (EPA) was promoting the use of integrated solid waste management for municipal solid waste (MSW). The idea behind integrated solid waste management was that a combination of approaches could be used to handle portions of the waste stream that complemented each other. Source reduction, recycling, incineration, and landfilling could all have positive impacts on the local municipal waste management systems so that human health and the environment were protected. The selection by a community of the best combination of these options would be determined by an individual community's needs including the amount and composition of the MSW, cost, environmental consideration, infrastructure, practicality, political realities, and the community's goals. There is not a universal, step-by-step method for selecting and developing integrated solid waste management components and systems. However, EPA and others are making great strides in the development of life cycle models that allow communities to evaluate and compare the costs and environmental burdens of integrated approaches in a scientific manner.



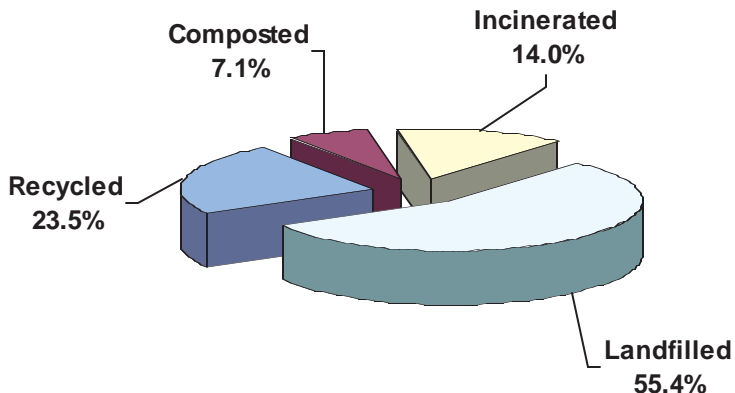
According to EPA latest data (2000), more than 55 million tons of municipal solid waste (MSW) was prevented from entering the wastestream. The amount of waste reduced has steadily increased since 1992 when only 0.6 million tons was reduced or reused. Of the 55 million tons prevented in 2000, almost half (25 million tons) came from organic material materials, particularly yard trimmings. The next largest component prevented was containers and packages (28%) followed by non-durable goods such as newspapers and clothing (17%) and durable goods such as appliances, furniture, and tires (10%). The following figure depicts the amount of source reduction/reuse over time.

Source Reduction from 1992 to 2000



After reducing the amount of waste generated, MSW is primarily managed using three methods: recycling, incinerating, and landfilling. According to EPA's most recent data (2003), 72.3 million tons (30.6%) was recycled and composted, 33.1 million tons (14.0%) was incinerated, and 130.8 million tons (55.4%) was landfilled. The following figure shows how MSW was managed in 2003.

Management of Municipal Solid Waste in 2003



The amount and management of MSW has changed significantly since EPA started collecting data. Only 88.1 million tons of MSW was generated in 1960. Of this amount, 5.6 million tons (6%) was recovered, 27.0 million tons (31%) was incinerated, and 55.5 million tons (63%) was landfilled. None of the MSW generated in 1960 was composted. Recovery rates continued to rise each year with recycling rates increasing by almost 900 percent and composting rates increasing by some 300 percent. Incineration rates have remained relatively constant from 1960 to 2003, with 1980 representing the lowest year at 13.7 million tons. The amount of MSW landfilled increased from 55.5 million tons in 1960 to a high of 131.8 million tons in 1999. After 1999, the amount of MSW landfilled declined slightly to 128.3 in 2001. The following figure shows MSW management from 1960 to 2003.

Management of MSW, 1960 to 2003

