

Solid Waste and Recycling

Background

A solid waste is defined in New Jersey's Solid Waste Regulations¹ as any garbage, refuse, sludge, or any other waste material that is not exempted pursuant to these regulations. The definition includes a wide variety of materials that have served or can no longer serve their original intended use that are discarded or intended to be discarded, accumulated in lieu of being discarded, or burned for energy recovery. Solid waste includes residential, commercial, and institutional solid waste generated within a community, which is termed municipal solid waste, or MSW. Solid waste also includes bulky waste, such as tree trunks, auto bodies, demolition or construction materials, appliances, furniture and drums. Certain solid wastes are classified as hazardous wastes, and are subject to specific management requirements.² Certain other materials are exempted from the solid waste definition pursuant to New Jersey's Recycling Regulations.³

Historically, solid waste was disposed of with relatively unsophisticated methods, including the use of local dumps where waste often was stored for long periods of time in the open air and periodic open burning was practiced to reduce volume. At one time, New Jersey had more than 400 landfills. Many of these were small, privately operated sites, and some were poorly managed. In addition to dumps, waste was incinerated, both at relatively large central facilities and at numerous small facilities such as apartment houses. This incineration was essentially uncontrolled; no technology was used to minimize emissions of particles, acid gases or other pollutants.

With the advent of new pollution-control laws, the practice of waste disposal changed. New Jersey began regulating the handling of solid and



hazardous waste in 1970. At that time and up until the early 1980s, New Jersey received large amounts of waste from other states; it is estimated that more

than 12 million tons of waste per year, much of it from New York and Pennsylvania, were deposited in New Jersey. By the late 1980s, state regulations required the closing of many landfills and incinerators, causing the amount of waste disposed of in New Jersey to decline to less than 6 million tons per year. In the late 1980s and early 1990s, a new generation of MSW incinerators featured greatly improved emissions controls. During this period, new, state-of-the-art landfills replaced older facilities. Also, by the mid-1990s, due to the New Jersey Statewide Mandatory Source Separation and Recycling Act of 1987, recycling of many items, including glass and metal containers and many types of paper, increased substantially.

Today, the DEP's solid waste management regulations include environmental controls for waste management practices; planning and financing of facilities and systems for waste reduction; recycling; resource recovery, destruction and disposal; and economic regulation and integrity review of the entities involved in waste management. New Jersey's hazardous waste management regulations parallel the federal hazardous waste regulations that were established through the Resource Conservation and Recovery Act of 1976 and the Hazardous and Solid Waste Amendments of 1984. They provide for the identification of waste classified as hazardous; the registration of hazardous waste generators, transporters, and treatment, storage and disposal facilities; the establishment of the cradle-to-grave manifest tracking system for all hazardous waste shipments; as well as environmental controls on hazardous waste management facilities.

The DEP receives information from disposal facilities on the amounts of wastes disposed, and from municipalities on the amounts of materials recycled. Additional data are also collected from industry sources.

Goals

The DEP has consistently sought to lower the amount of waste generated per person in the state and to increase recycling rates to as much as 50 percent of the municipal waste stream. It encourages the collection and proper disposal of abandoned or illegally dumped scrap tires, which are potential breeding sites for mosquitoes, and seeks to establish a market development policy and product

stewardship principles for used electronic parts from computers, televisions, and other electronic devices.

Discarded motor vehicles represent a significant portion of the metals waste that is recycled for use by iron and steel manufacturing facilities. Some of these vehicles have mercury-containing switches that contaminate the recycled metals; this mercury can be released when the metals are melted to make new products. Mercury is a well-known pollutant that accumulates in fish and can harm public health. The DEP supported the Mercury Switch Removal Act of 2005, which became effective March 23, 2005. This law requires manufacturers of motor vehicles sold in New Jersey to develop and implement a plan to remove mercury-containing switches from end-of-life vehicles. The Department has approved the auto manufacturers' plan and implementation is underway. The law also requires all vehicle and scrap recyclers to remove mercury switches before end-of-life-vehicles are crushed or shredded.

Status and Trends

In 2010, New Jersey generated 22 million tons of solid waste and recycled 13.3 million tons, 60.5 percent of the total amount generated. This recycled material includes not only glass, cans, plastic and newspapers from municipal waste, but also scrap iron, concrete, wood and other items from commercial waste. In 2010, the 8.7 million tons of solid waste that were not recycled were disposed of in the following manner: 2.1 million tons (25 percent of the disposed total) incinerated in state, 3.3 million tons (38 percent of the disposed

total) landfilled in New Jersey, and 3.2 million tons (37 percent of the disposed total) landfilled out of state.

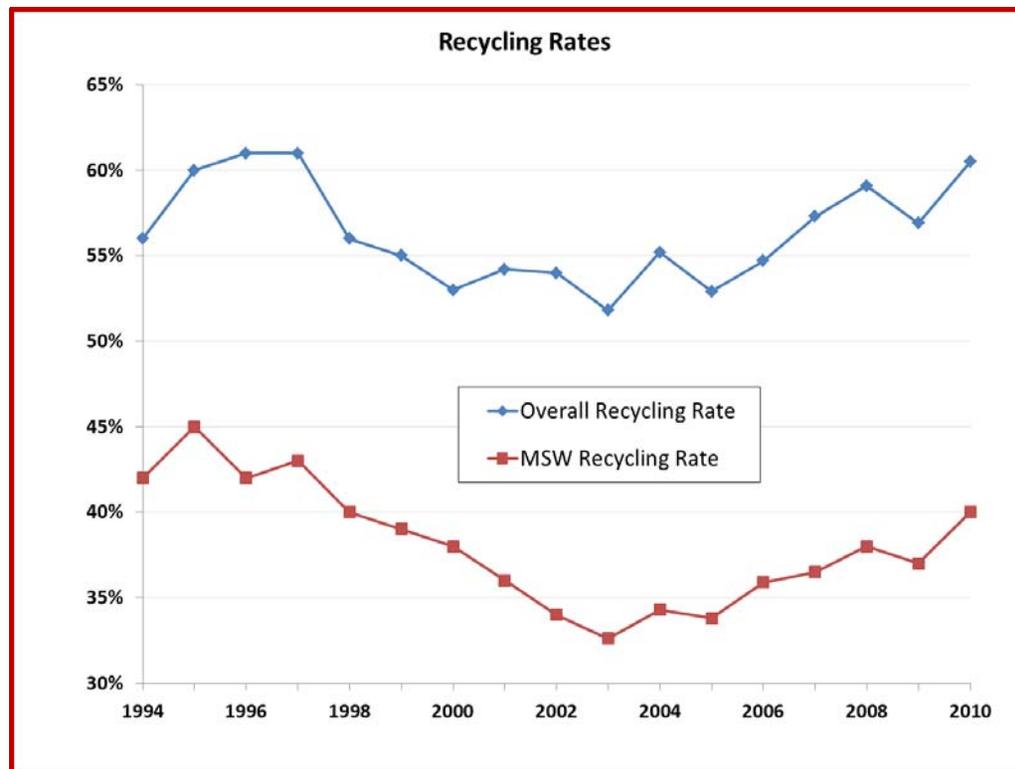
In the early 1990s, New Jersey established a goal of recycling 60 percent of the total waste stream. At that time, many county and municipal recycling programs were collecting plastics, tin and bimetals cans, white goods (e.g. refrigerators), used motor oils, yard waste, and other materials, and the DEP was confident that a recycling goal of 65 percent of the total waste stream could be achieved. Recently, the overall recycling rate has improved to approximately 60 percent (see Recycling Rates figure).

A major factor in the decline in recycling rate from the late-90s until recently was a 1997 federal court decision that led to the deregulation of the solid waste system in the state, which had given counties control over their waste

flow and had enabled them to fund significant recycling programs. The cessation of a state tax that supported the provision of grant monies to local recycling programs also led to less promotion of recycling.

However, in 2008, the Recycling Enhancement Act was passed. This law assesses a tax of three dollars per ton of waste, and funnels 60 percent of this back to the municipalities and a percentage to the counties as well. These funds are used to promote recycling. Today, New Jersey's recycling rate is back to levels not seen since 1998.

There has been a general long-term trend of increasing amounts of solid waste generated per person. Unless an increasing percentage of this waste is



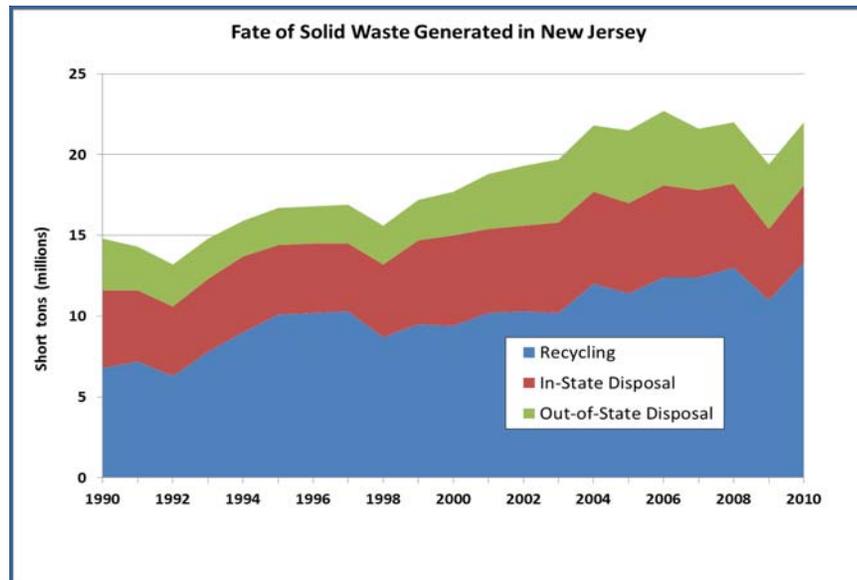
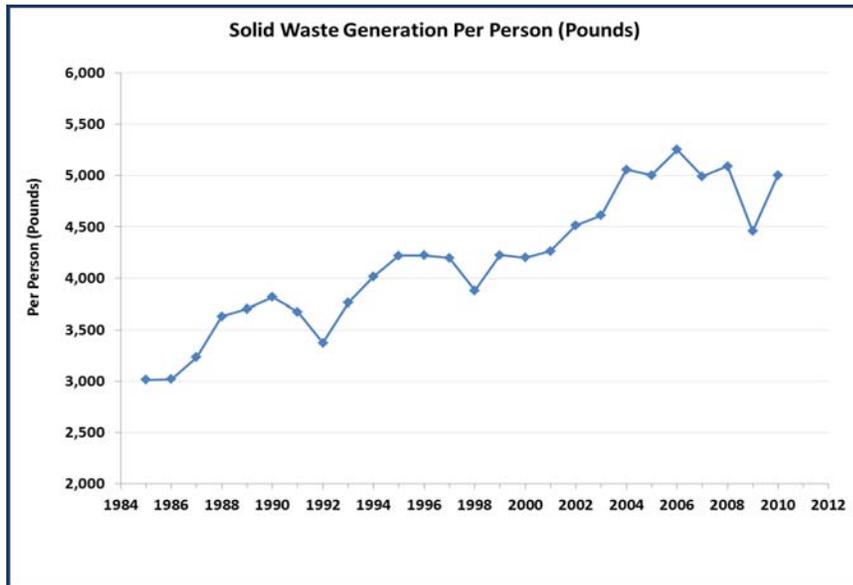
recycled, this trend means that more waste must be disposed of in landfills or incinerators. (See figures below)

Outlook and Implications

On January 14, 2008 the Governor signed the Recycling Enhancement Act into law. This legislation reestablishes a source of funding for recycling in New Jersey through a \$3.00 per ton tax on solid waste accepted for disposal or transfer at in-state solid waste facilities. Solid waste being transported out of state, either directly or by railroad, is also subject to the new recycling tax. In such cases, the solid waste collector is responsible for paying the tax. The reestablishment of a funding source for recycling is especially significant, as inadequate funding has been considered one of the key reasons behind New Jersey's declining recycling rates, which have dropped precipitously over the past decade. The Recycling Enhancement Act calls for 60% of the recycling tax fund to be used for recycling tonnage grants to municipalities, with 30% of the fund going to counties for recycling program promotion and expansion.

In addition, New Jersey's Electronic Waste Recycling Act establishes a recycling system for the safe and environmentally sound management of certain end-of-life electronic devices and components; it requires original equipment manufacturers to pay a registration fee to the Department and establish a collection, transportation and recycling system, either independently or jointly, for the recovery of computers and televisions. The registration fees are used to fund the administration of the program by the Department, which determines and issues manufacturers' collection obligations and goals and reviews the manufacturers' registrations, renewals, collection plans and annual reports. The Act also established a disposal ban effective January 1, 2011, which was the date by which manufacturers must implement their collection plans. In support of this legislation, the Department developed and adopted rules and regulations to assist in the implementation of the program. These included amendments to the Solid Waste rules at N.J.A.C. 7:26 and the Recycling Rules at N.J.A.C. 7:26A-1 and the adoption of new rules for the Electronic Waste (Ewaste) Management Program at N.J.A.C. 7:26A-13.

There is more information on the Department's recycling program, including guidance to the manufacturers, retailers, and consumers on the Department's website at <http://www.state.nj.us/dep/dshw/recycling/index.html>.



In 2006, DEP also updated its Statewide Solid Waste Management Plan, which can be found at <http://www.nj.gov/dep/dshw/recycling/swmp/index.html>, to identify ways to increase recycling and composting, as well as to improve source reduction and the removal of household hazardous waste from the normal disposal stream.

References

¹ See N.J.A.C. 7:26-1, et seq.

² See N.J.A.C. 7:26G-1 et seq.

³ See N.J.A.C. 7:26A-1, et seq.

More Information

The solid waste generation and recycling data are compiled annually by the DEP's Division of Solid and Hazardous Waste, Bureau of Recycling and Planning. These data are available on the NJDEP Web page at <http://www.state.nj.us/dep/dshw/recycling/stats.htm>. Information concerning these data can be obtained by contacting the Bureau of Recycling and Planning at 401 East State Street, P.O. Box 414, Trenton, NJ 08625 or (609) 984-3438.

