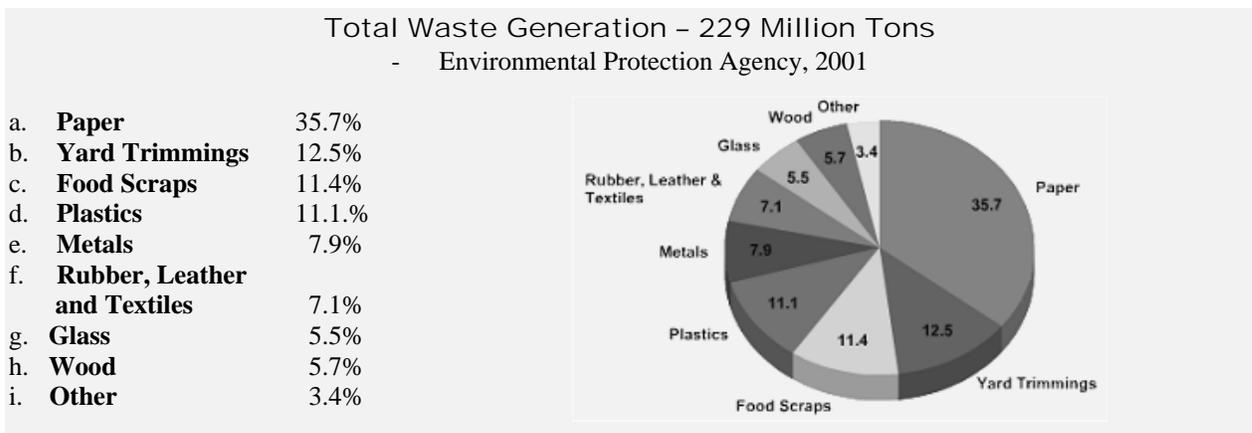


HERE TODAY, HERE TOMORROW-RECYCLED!

Section I: Exploring Waste

Solid waste is any trash or other waste material that is discarded, saved (for recycling or reuse) or incinerated because it no longer serves its original intended use.

Solid waste includes residential, commercial (small businesses) and institutional solid waste generated within a community, which is referred to as “municipal solid waste,” or MSW. This usually consists of everyday items such as packaging, food scraps and wrappings, clothing, yard debris, empty containers, batteries and paper products. In contrast, bulky waste, such as tree trunks, auto bodies, demolition and construction materials, appliances, furniture and empty drums, are counted as “industrial waste.” Certain solid wastes are classified as hazardous wastes and their disposal is subject to specific legal requirements. Hazardous wastes may be found in both municipal solid waste and industrial waste. A break-down of the amounts of various materials that make up MSW is provided below.



The purpose of this section is to introduce students and teachers to waste and discuss who produces it, how much one person produces, how it was historically dealt with in New Jersey and how it is being handled today. This section also introduces the state’s priorities for managing waste, as well as noting some current concerns. Finally, the relationships between solid waste management and the protection of natural resources are emphasized, along with what students, teachers and families can do to learn more about the trash that they produce.

The New Jersey Department of Environmental Protection, along with the federal Environmental Protection Agency, rank what are believed to be the most environmentally sound strategies for reducing and managing solid waste. This ranking is referred to as the “solid waste hierarchy” and these strategies are explored in priority order in the next three sections of *Here Today, Here Tomorrow – Recycled!* They include “*Source Reduction and Reuse*” (Section II), “*Recycling*” (Section III), and various forms of “*Disposal Processes*” such as landfills, resource recovery facilities and transfer stations (Section IV).

Historically, society disposed of its solid waste by using fairly unsophisticated methods, including the use of local dumps where waste was stored for long periods of time in the open air and periodic open burning was practiced to reduce the volume of trash in the dump. At one time New Jersey had more than 400 landfills. Many of these were small, privately operated sites, some of which were poorly managed. In addition to dumps, waste was incinerated both at 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 that escaped into the atmosphere. Also during this time and up until the early 1980s, New Jersey received waste from other states, such as New York and Pennsylvania.

In the late 1960s people across the country became more aware of how natural resources - the air, land and water, were being affected by human activity. Municipal landfills were leaking liquid wastes into groundwater and contamination was detected in streams and wells. Waste dumped out at sea was being washed back onshore and air emissions from burning processes were laden with particles and other types of pollution. Public concern for human health and environmental quality led to the first national celebration of Earth Day and the eventual formation of the federal Environmental Protection Agency and state agencies such as the New Jersey Department of Environmental Protection.

Today, New Jersey's solid waste management regulations include two important elements: standards for the construction and location of disposal and recycling facilities; and, the regulation and review of entities involved in waste management. While there are dozens of state and federal laws that regulate the state's solid waste management systems and facilities, the more notable pieces of legislation are featured below.

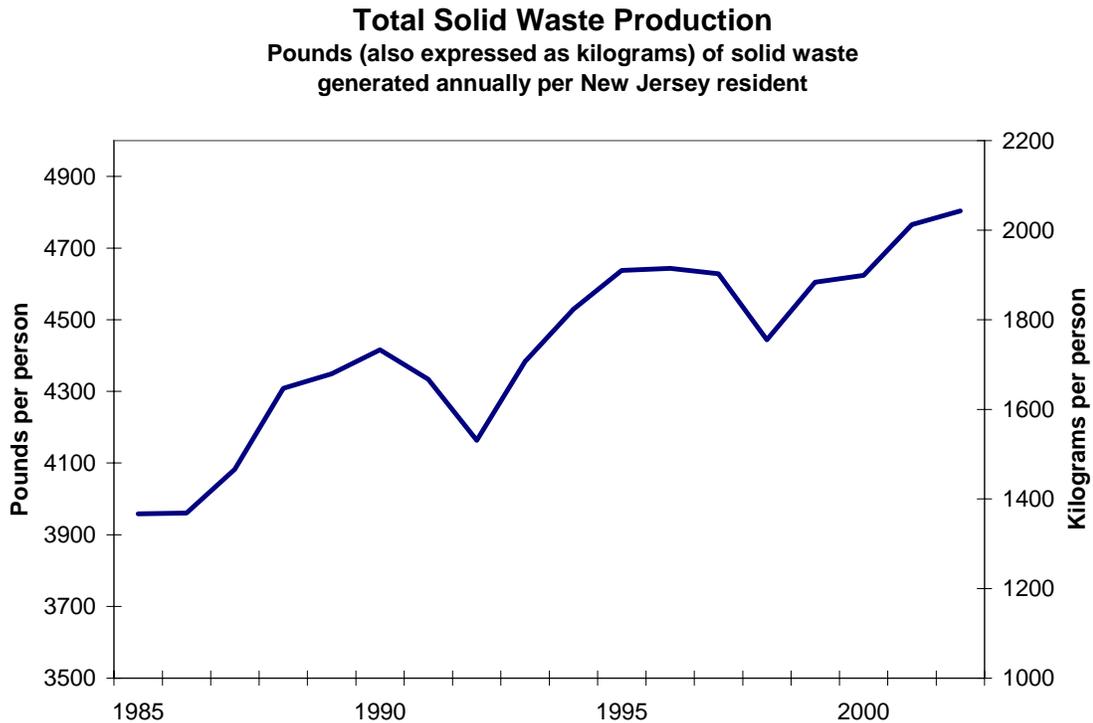
Milestone Legislation

- ***New Jersey Solid Waste Management Act (1970)***: Gave the New Jersey Department of Environmental Protection authority to establish standards for solid waste management;
- ***New Jersey Statewide Mandatory Source Separation and Recycling Act of 1987***: Places responsibilities on government agencies and individuals to divert materials from disposal. Recycling responsibilities are carried out by counties, municipalities and residents; and
- ***Clean Communities and Recycling Grant Act (2002)***: Funding is provided to towns and counties in an effort to increase recycling rates and reduce litter.

While great strides were made during the past thirty years to establish a foundation for sound, long-term environmental protection and natural resource management, progress had also been made in other areas of societal life. American households began to purchase and use more powerful medicines and personal care products, fast-acting cleaners, stickier glues, longer-lasting paints and more permanent dyes. People purchased and discarded appliances and cars more often and many everyday items were produced from plastic rather than metal, wood or glass. Products also became packaged for convenience or one-time use and easy disposal. New technology and innovative equipment quickly led to the discarding of outdated models. Eventually, different and increasing amounts of waste were entering the waste stream and in need of disposal.

In 2001, U.S. residents, businesses and institutions produced more than 229 million tons of municipal solid waste, which averages approximately 4.4 pounds of waste per person per day. In

2003, New Jersey citizens generated 19.9 million tons of solid waste, which averages approximately 6.4 pounds of waste per person per day. It's disturbing to realize that the average New Jersey citizen produces almost two pounds of waste per day more than the average person at the national level! And in either case, amounts have greatly increased from the 2.7 pounds per day produced by citizens back in 1960. This gradual increase of "waste per person" for New Jersey is reflected in the following graph:



In March 2005, the New Jersey Department of Environmental Protection proposed a new solid waste management plan which focuses on boosting recycling rates across New Jersey, especially in schools, multi-family housing complexes and small and medium-sized businesses.

Another concern addressed in this section is disposal of household hazardous waste. These are products purchased by individuals and typically used in homes, institutions and businesses. They include paints, batteries, used oil, pesticides and certain cleaning materials. The characteristics that set them apart from other forms of waste are as follows:

- Household hazardous wastes can be dangerous because they can be:
- **Corrosive**
 - **Toxic**
 - **Ignitable**
 - **Explosive**
 - **Reactive**
 - **Radioactive**

State and federal laws were established years ago with provisions for separate handling and disposal of hazardous materials. However, it is up to individuals to separate their household hazardous waste from the solid waste stream and properly dispose of them so that the products do not pollute air, land or water. Sound options include county hazardous waste cleanup days (materials collected go to a special landfill), the sharing of leftover hazardous materials with neighbors, or the use of non-toxic substitutes.

Finally, it would be difficult to learn about solid waste management without also touching upon renewable and nonrenewable resources. The issues highlighted in this section – the management of waste, rising generation of waste, falling recycling rates and the improper handling of hazardous materials, all challenge the quality and quantity of the state’s natural resources.

Consider this familiar choice: which type of grocery bag should be used – paper, cloth or plastic? According to solid waste professionals the best choice is the reusable cloth bag, which decreases the number of disposable bags in the waste stream. However, realistically, each choice has pro’s and con’s regarding how natural resources would be positively or negatively effected. In general, it is good to use items and materials that can be reused, are made from recycled materials, or that can be recycled. These priorities, combined with the use of materials made from renewable resources (resources that are created or produced at about the same rate at which they are consumed) versus nonrenewable resources (finite resources that cannot be replaced once they are used), help reduce energy consumption and demands for natural resources.

Waste management has always been, and will continue to be, intricately linked with other environmental concerns. Whether people like it or not, the generation of solid waste is a byproduct of daily living. Without oversight to ensure proper handling, transportation, management, storage and disposal, we risk polluting the air, land and water that people depend upon.

There is no better time than now for individuals to accept responsibility for their contributions to solid waste generation. We all need to pay more attention to what we purchase and how we discard it, and reduce our personal waste trail. While handfuls of people displaying concern may not make a big difference, many people doing so will – and the stresses of waste disposal on the environment can be reduced.

For More Information Visit:

- ***Draft Statewide Solid Waste Management Plan 2005***
New Jersey Department of Environmental Protection
<http://www.nj.gov/dep/dshw/recycle/plan05.htm>
- ***Solid Waste Management Planning in New Jersey*** (Powerpoint Presentation)
New Jersey Department of Environmental Protection
<http://www.nj.gov/dep/dshw/>
- ***Municipal Solid Waste***
Environmental Protection Agency
<http://www.epa.gov/epaoswer/non-hw/muncpl/index.htm>
- ***New Jersey’s County Solid Waste Management Officials***
New Jersey Department of Environmental Protection
<http://www.nj.gov/dep/dshw/recycle/swmoff.htm>