

HERE TODAY, HERE TOMORROW-RECYCLED!

Section II: Waste Reduction and Reuse

Two cliches are appropriate for this section – to “nip something in the bud” and “One man’s trash is another man’s treasure.” Before providing explanations regarding these sayings and how they reflect two of New Jersey’s top solid waste management priorities, it’s important to revisit pertinent information shared earlier in Section I.

Most relevant is this: In 2003 New Jersey citizens generated 19.3 million tons of solid waste, which averages approximately 6.4 pounds of waste per person per day. This quantity is almost two pounds more than the national average being produced daily (according to 2001 statistics from the Environmental Protection Agency) and is far greater than the 2.7 pounds per day produced by citizens in 1960. As explored in Section I, the types and amounts of solid waste produced by New Jersey residents have risen greatly over the past 25 years.

The second piece of information worth mentioning twice is the “solid waste hierarchy.” This is the ranking of solid waste management strategies that the New Jersey Department of Environmental Protection (DEP) and the U.S. Environmental Protection Agency consider being the most environmentally sound.

This section will focus on the two top strategies in the solid waste hierarchy – source reduction and reuse. The purpose of this section is to introduce students and teachers to the relevance and benefits of source reduction and reuse as well as involve them with examples of each. The exploration of source reduction methods focus on consumerism, packaging and composting while reuse activities focus on the reuse of packaging, clothing, toys and other items from around the home or at school.

Benefits of Source Reduction and Reuse:

- Reduces overall waste generation in terms of tonnage;
- Reduces cost of waste disposal (because of reduced tonnage);
- Extends the life of landfills; and
- Provides for the reduced and more efficient use of natural resources.

Source reduction is used to describe those activities that decrease the amount (weight or volume) or toxicity of waste that enters the solid waste stream (hence the cliche, “nipping it in the bud”). It also encompasses those activities that increase product durability, reusability and reparability so that the life span of an item is extended or so that it can be upgraded instead of being replaced.

For example, when bills are paid electronically the need for paper receipts, envelopes and checks is eliminated. Or, taking a cloth bag to the grocery store reduces use of the paper or plastic bags that the store provides. Or, businesses that repair broken appliances or upgrade computers (all for continued use or resale) reduce the need for newer models to be purchased by consumers. In

these examples the opportunity for potential solid waste items to enter the waste stream has been eliminated or the number of new similar items to be purchased by consumers has been decreased.

On a larger scale, source reduction can also help reduce air and water pollution as well as energy use. For example, pretend that for five years the homeowners in one community agreed to reduce the amounts of fertilizer being used on their lawns or gardens. By doing so they would eliminate dozens of empty fertilizer sacks from entering the waste stream. While this may not make a big difference regarding waste tonnage, less fertilizer being produced can help reduce quantities of air and water pollution caused by the manufacturing of fertilizer and fertilizer packaging.

According to the U.S. Environmental Protection Agency, yard trimmings and food scraps collectively make up about 23% of the nation's municipal solid waste stream. This amount comprises a lot of waste that can be turned into environmentally beneficial compost. **Composting** is the controlled decomposition of yard or food waste to make fine, nutrient-rich topsoil and it is one example of source reduction that is focused on in this section.

Composting in New Jersey – Breaking It Down to Basics:

- It is illegal to landfill yard waste in New Jersey – that's why branches, leaves and other yard debris are collected separately from trash to be disposed of
- Home composting is the best form of source reduction of organic material. While people cannot stop producing food scraps or cutting the grass, the composting of such materials on site (at home) removes them from the solid waste stream and also reduces the fuel or labor needed to transport them elsewhere for processing
- Many New Jersey towns and counties pick up yard waste and transport it to centralized composting facilities. At these sites leaves and grass are processed into a fine soil. While composting facilities can produce a better quality compost than what is made at home, they require fuel for daily operations and transportation, take up space, require labor and give off odors. In addition, storm runoff from compost piles at these facilities sometimes carries too much nitrogen into surface or groundwater, thereby becoming a form of water pollution
- In general, centralized composting facilities are preferred to having organic waste enter the solid waste stream for disposal; but, home composting, if feasible, is the preferred solution for the reduction of organic waste

Packaging is also focused on in this section as a source reduction strategy because consumers can use shopping strategies to reduce unwanted or unnecessary packaging from entering the solid waste stream. According to the U.S. Environmental Protection Agency, packaging makes up about 32% of the nation's municipal solid waste stream.

Packaging doesn't need to be wasteful and most of the time it's necessary. Packaging for food helps protect it from bruising and keeps foods and liquids from spoiling, spilling or leaking. It also protects foods and other products from being damaged during shipping. Many products need packaging to protect the item from being broken or stolen; or, many packages themselves are resistant to tampering or to being opened by young children. Finally, packaging almost always includes valuable product information and labeling.

Sometimes companies incorporate the use of excessive packaging when it's believed it will help the product to be more user-friendly, economical or convenient. While consumers don't usually make decisions regarding packaging that a product requires, their personal preferences are reflected in the products that people choose to buy or not buy. During the past decade many companies have incorporated the use of environmentally-friendly packaging because of having corporate decisions influenced by the environmental interests of consumers.

Practical Packaging Choices:

- ***Avoid excessive packaging*** – many personal products, such as deodorants, shampoos and conditioners, are sold in containers without boxes; or, many fresh whole fruits and vegetables are sold without packaging while prepared or cut vegetables and fruits require packaging
- ***Choose reusable products and packages*** – some detergents and cleaning products are sold in concentrated packets to be mixed with water by the consumer, thereby reducing the number of new bottles being produced and encouraging consumers to reuse bottles at home; in general, avoid buying one-time use, disposable products
- ***If practical, buy products in bulk*** – food items like juice, applesauce, yogurt and coffee can be purchased in large quantities or in disposable single servings – look at both selections and determine the amounts of trash that would result from each (usually bulk packaging is less)
- ***Choose recyclable packaging as well as packaging made from recycled materials*** – Purchase products with packaging that can be recycled. For example, soda, water and other drinks are usually sold in recyclable plastic containers. Other examples include plastic that is made of several bonded materials, such as juice boxes or waxed milk cartons. While plastics coded #1 and #2 can be recycled, coated plastics usually cannot. Finally, check to see if packaging was made from recycled materials, such as with plastics, cardboard, paper, etc.

Reuse is the second priority focused on in this section. Reuse is the redistribution of materials for use “as they are” in their current condition. Reusing something means reselling or donating it, or using it for a new or different use. While the reuse of an item may require some cleanup it does not require disassembly. (Hence the cliché, “One man’s trash is another man’s treasure.”) Continued use of an item prolongs its life span and value, lengthens its time out of the solid waste stream and postpones or eliminates a consumer’s decision to purchase a new, similar item.

Sound examples of reuse have been practiced in homes, schools and communities for decades and sometimes centuries. Home and school reuse practices includes using food containers and shoe boxes to store crayons and office supplies, using scraps of fabric for crafts, using both sides of one piece of paper and sharing clothing between family members. Communities around the country have been demonstrating practical reuse for years – examples include donations to charities, flea markets, used books and records sales, consignment shops, auctions and yard sales. The classroom activities in this section focus on waste reduction and reuse at home and school as well as how to organize and implement a “Swap Day.”

Reuse is also practiced by industry and examples include the continued use of items like plastic crates and wooden pallets. Packing materials, such as Styrofoam pieces and foam pellets, are also often reused. Though Styrofoam has not been manufactured with chlorofluorocarbons (CFCs) since 1979, it is a bulky material and is rarely recycled, though it may be collected and recycled in the future.

In general, people enjoy and rely on the consumption of goods and services and it's more challenging to convince people to "make do with less" than it is to show them how to separate trash or teach them why they should purchase items with less packaging.

Modern commerce reflects and is built upon people's long-standing desire to have the "biggest, best, newest and most" of commodities and the lessons in this section may not challenge or alter these values. At the same time, consumers of all ages are not typically presented with activities, discussions and projects that reflect their actions and force them to analyze the consequences or results of their own behaviors.

Through use of these activities it is hoped that people's awareness is expanded and they become more thoughtful and analytical about their choices and decisions and how the environment is effected by them.

For More Information Visit:

- ***Source Reduction and Reuse - Municipal Solid Waste***
U.S. Environmental Protection Agency
<http://www.epa.gov/msw/sourcedred.htm>
- ***Product Stewardship – Packaging***
U.S. Environmental Protection Agency
<http://www.epa.gov/epaoswer/non-hw/reduce/epr/products/packaging.htm>
- ***New Jersey Class C (Composting) Recycling Facilities***
New Jersey Department of Environmental Protection
<http://www.nj.gov/dep/dshw/rntp/classcfc.htm>
- ***The New Jersey Waste Wise Business Network***
New Jersey Department of Environmental Protection
<http://www.nj.gov/dep/dshw/recycle/brbn03.htm>