



## ***Steel Can Recycling Information***

Steel cans and other steel items are recycled in Palm Beach County when residents place them in the garbage or the recycling bins. When steel cans are thrown in the garbage, they are removed at the Solid Waste Authority (SWA) of Palm Beach County's Waste-to-Energy facility (*this is the facility where garbage is shredded, burned and used as a fuel source*) by a large magnet. After the steel is separated, it is placed in a machine which cleans and crushes it into nuggets. Afterwards, the nuggets are shipped from the SWA to steel mills where the actual recycling takes place.

When steel cans are placed in a recycling bin, they are separated from the other recyclables by a magnet and then baled. The bales are shipped to mills that melt the steel so that it can be used to make recycled steel products such as steel cans, construction beams, parts of cars and parts of trucks.

### ***Interesting Steel Recycling Facts***

- Every ton of steel recycled saves 2,500 pounds of iron ore, 1,000 pounds of coal, and 40 pounds of limestone.\*
- In 1994, the automobile recycling industry recycled enough steel from old cars to produce almost 13 million new cars.\*
- Americans discard enough iron and steel products to supply all of the automakers in America continually with the necessary amount of steel to build cars.\*\*

Source: \*Steel Recycling Institute, \*\*[Recycler's Handbook](#)

For more information, access the Steel Recycling Institute at <http://www.recycle-steel.org>

## ***Aluminum Can Recycling Information***

The aluminum can was invented in 1968. Aluminum cans are made from bauxite ore which is a non-renewable resource mined from the ground. This mining process creates pollution and consumes energy. Therefore, recycling aluminum cans reduces pollution, conserves energy and saves landfill space.

Aluminum cans placed in recycling bins are collected and brought to the Solid Waste Authority (SWA) of Palm Beach County's Materials Recycling Facility (MRF) where they are separated from other recyclables and then baled. The aluminum bales are loaded onto semi-trailer trucks and transported from the MRF to aluminum manufacturing plants where they are melted into a liquid form. Afterwards, the aluminum is cooled and then poured into a flat mold which gives it a long, rectangular shape. A flat sheet of aluminum is formed after the aluminum solidifies in the mold. The sheets of aluminum are sold to companies that make them into recycled products, such as aluminum cans. It takes approximately 60 days for an aluminum can to be recycled and appear back on store shelves.

### ***Interesting Aluminum Can Recycling Facts***

- Since 1972, approximately 13 million tons of aluminum have been recycled. That's enough aluminum cans to place side by side and stretch from the earth to the moon 190 times.\*
- It takes approximately 32 aluminum cans to make 1 pound of aluminum.\*
- The first aluminum can was made in 1968.\*\*
- Aluminum was worth more than gold when it was discovered.\*\*
- Americans throw away enough aluminum every 3 months to rebuild the entire commercial air fleet in America.\*\*

Source: \*Aluminum Can Manufacturers Institute, \*\* Recyclers Handbook  
For Reynolds Aluminum Corp - <http://www.rmc.com>

### ***Paper Recycling Information***

Newspapers and other paper products collected from residents are brought to the Solid Waste Authority (SWA) of Palm Beach County's Materials Recycling Facility where they are separated according to grade (*quality of paper*). All the newspaper is placed in a separate pile, all the cardboard is placed in a separate pile, all the magazines are placed in a separate pile and all the mixed paper is placed together in a pile. Once the paper is sorted, it is baled or loaded loosely onto trucks that transport it to paper manufacturing mills. At the mills, the paper is loaded onto conveyor lines which move it to a pulper which is a machine filled with water that has steel blades on the bottom. When the pulper is turned on, it tears the soaked paper apart and the ink is dissolved with chemicals. (*Sometimes chemicals are also added to whiten the fiber.*) At this point, the paper is referred to as "slurry" because it is mainly water mixed with paper fiber. The slurry is sprayed through two fabric belts which squeeze out some of the water. Then the slurry is carried by a conveyor to steel rollers which squeeze more water out of the fiber. Afterwards, a conveyor carries the slurry to numerous heated rollers which dry it. Following this, the slurry is pressed between steel rollers which smooths it into dry, flat paper. Finally, the paper goes to a machine which cuts it into the specified size and then winds it onto cardboard tubes. The paper is then loaded onto trucks and transported to companies that purchase the recycled paper.

Low-grade paper can be recycled into egg cartons or fiberboard. High-grade paper can be recycled into envelopes, writing paper and office paper. Other grades are recycled into toilet tissue and paper towels. Regardless of the quality of paper, there is a limit to the number of times paper can be recycled because each time it is recycled the fiber gets thinner and thinner.

### ***Interesting Paper Recycling Facts***

- It takes 17 trees to make 1 ton of paper.\*\*
- A stack of newspaper 3 1/2 feet high will save one Southern Pine tree.\*
- Americans purchase 62 million newspapers everyday and discard 44 million of them.\*\*\*
- Phone books are made with the lowest possible quality paper; however, they can still be recycled and made into ceiling tiles, textbook covers and insulation.\*\*\*

Source: \*World Wildlife Federation, \*\*American Forest and Paper Association, \*\*\*Recyclers Handbook  
For more information access the Mead Corporation at <http://www.mead.com> or the American Forest and Paper Association at <http://afandpa.org>

## ***Glass Recycling Information***

Glass bottles and jars placed in recycling bins are collected from Palm Beach County residents and brought to the Solid Waste Authority (SWA) of Palm Beach County's Materials Recycling Facility where workers sort them according to their color: green, clear or brown. After the glass is sorted, it is placed in trucks which transport it to glass manufacturing companies. These companies mechanically remove the product labels, metal lids and then crush the glass. The crushed glass, also called cullet, is mixed with sand, soda ash and limestone and heated at a temperature of 2,800 degrees Fahrenheit. After the cullet is heated sufficiently, it will liquify into molten glass. The molten glass is poured into glass container molds to form recycled glass bottles, jars and other products.

Recycling glass saves natural gas and electricity because the cullet melts easier than sand; therefore, the furnace does not have to be set at as high a temperature.

*(Windows, drinking glasses, dishes, light bulbs, pyrex and mirrors are made from glass that has different ingredients than what is used in glass bottles and jars. Therefore, these items are not accepted for recycling in Palm Beach County.)*

### ***Interesting Facts About Glass Recycling***

- Approximately 41 billion glass containers are produced in the United States (U.S.) each year.\*
- Glass-making has been recorded as early as 5,000 B.C.\*
- Every glass container made today has a percentage of recycled glass in its contents.\*
- We save the following each time we recycle a ton of glass: 1,330 pounds of sand, 433 pounds of soda ash and 433 pounds of limestone.\*\*

Source: \*Glass Packaging Institute, \*\* Recyclers Handbook

## ***Plastic Recycling Information***

Plastic containers that are placed in recycling bins are collected and brought to the Solid Waste Authority (SWA) of Palm Beach County's Materials Recycling Facility. The containers are sorted according to the number on the container (*the number on plastic containers indicates the particular type of plastic that was used to construct the container*). Afterwards, the plastic is baled and loaded onto semi-trailer trucks. The plastic is transported from the MRF to a plastic manufacturing mill where it is cleaned, washed and either cut into flakes by a grinder or pelletized. Then the flakes or pellets are melted and stretched to form plastic fiber.

Recycled plastic can be used to make a variety of products including t-shirts, carpets, recycled plastic containers, hoses, plastic lumber, street signs, pens, recycling bins, fiberfill for sleeping bags, notebooks and many more products.

## ***Interesting Facts About Plastic Recycling***

- The first PET (plastic # 1) bottle was recycled in 1977.\*
- Five PET bottles will provide enough fiber to make an extra-large t-shirt
- It takes five two-liter PET bottles to make one square foot of carpet.\*
- It takes 35 two-liter PET bottles to make enough fiberfill for a ski jacket.\*
- It takes 1,050 milk jugs to make a 6 foot plastic park bench.\*\*
- Every hour Americans consume 2 ½ million plastic bottles. \*\*
- SWA's recycling bins are made from post-consumer recycled plastic.

Source: \* NAPCOR

\*\*Recyclers' Handbook

For more information, please visit the American Plastics Council website at [www.plasticsresource.com](http://www.plasticsresource.com)

## **Plastic Recycling**

<b>Code</b>	<b>Original Plastic</b>	<b>New Products</b>
1 (PET) Polyethylene Terephthalate	<b>Soft-drink bottles, peanut butter jars, salad dressing bottles, frozen-food trays</b>	Surfboards, film, paint brushes, skis, carpets, soft-drink bottles
2 (HDPE) High Density Polyethylene	<b>Detergent bottles, milk and water jugs, toys, grocery bags*</b>	Flowerpots, trash cans, trash bags, stadium seats, toys, detergent bottles, plastic lumber
3 (V) Polyvinyl Chloride	<b>Shampoo bottles, clear food wrap</b>	Floor mats, pipes, hoses, mud flaps on trucks
4 (LDPE) Low Density Polyethylene	Bread bags, frozen-food bags	Grocery and other types of bags, lawn furniture
5 (PP) Polypropylene	<b>Ketchup bottles, yogurt cups, other food containers</b>	Food trays, car battery parts, brooms, video cassette storage cases
6 (PS) (styrofoam) Polystyrene	Plastic spoons, foam cups and trays*	Trash cans, egg cartons, hangers, flower pots, building insulation, rulers
7 Other Plastics	Packages with many layers of materials	Plastic lumber, limited number of recycled products such as pens and street signs

***Bolded items ARE acceptable in Palm Beach County's residential recycling program.***

*\* These items should be dropped off at grocery stores to be recycled.*