



**North Carolina Landfill**

**BANS**

# North Carolina Landfill Bans

## Background Information

- The 1989 Solid Waste Management Act banned certain recyclable materials from disposal in municipal solid waste landfills. The bans that took effect in the early 1990s were supplemented by local ordinances that discouraged the disposal of additional materials.
- §N.C.G.S. 130A-309.10 (f) reads:
  - “No person shall knowingly dispose of the following solid wastes in landfills”
  - What are these banned substances?



# North Carolina Landfill Bans

- **Take a guess: Which of the following are (or will be soon) banned from landfills?**

Motor Oil (Used)

Aseptic Packaging

Oyster Shells

Glass Containers

Scrap Tires

Newspaper

Yard Trash

Aluminum Cans

Styrofoam

Plastic Bottles

Antifreeze

Appliances

Food Waste

Lead-Acid Batteries

Televisions

Wooden Pallets

Motor Oil Filters

Phone Books

Rechargeable Batteries

Computer Equipment

Hard Bound Books

Beverage Containers from ABC Permitted Facilities

# North Carolina Landfill Bans

- **The answers are:**

Motor Oil (Used)

Oyster Shells

Scrap Tires

Yard Trash

Aluminum Cans

Plastic Bottles

Antifreeze

Appliances

Lead-Acid Batteries

Televisions

Wooden Pallets

Motor Oil Filters

Computer Equipment

Beverage Containers from ABC Permitted Facilities

# North Carolina Landfill Bans

- **Currently Banned**

- Aluminum Cans
- Antifreeze
- Appliances (White Goods)
- Beverage Containers from ABC permitted facilities
- Lead-Acid Batteries
- Motor Oil (Used)
- Oyster Shells
- Scrap Tires (Whole)
- Yard Trash

- **Banned as of October 2009**

- Motor Oil Filters
- Plastic Bottles
- Wooden Pallets

- **Banned as of January 2011**

- Televisions
- Computer Equipment



# North Carolina Landfill Bans: Aluminum Cans

- A statewide ban on the disposal of aluminum cans became effective July 1, 1994.
- Despite the ban, North Carolinians still throw away more than \$74,072,000 in aluminum cans each year.
- Recycling an aluminum can saves 95 percent of the energy required to make the same amount of aluminum from virgin materials.
- This commodity can be found at home, work, school, church, the soccer field, the bar, etc.



# Aluminum Cans

Carolina Recycle Loop

## 1 Collect

When you place an aluminum can (and other recyclables) in a bin, it is taken to a material recovery facility (MRF), such as Waste Management Inc. in Winston Salem, N.C. There the products are sorted by type and the aluminum cans are compressed into dense briquettes, or thousand-ton bales.



## 2 Process

The bales are shipped to Consolidated Alloys in Charlotte, N.C. where the condensed cans are shredded, crushed and stripped of decoration. The small pieces of aluminum are placed into melting furnaces and blended with new, virgin aluminum. After the metal is coiled it is shipped to aluminum can manufacturers, like Ball Corporation in Reidsville, N.C. It produces the can bodies and lids, and, in turn, delivers empty cans to beverage distribution companies, like Anheuser-Busch InBev in Charlotte, N.C., to be filled.

## 3 Buy-Recycled

The filled cans are then distributed to stores across the state to be bought and recycled again.

Aluminum Cans are Banned from landfill disposal.



# North Carolina Landfill Bans: Antifreeze

- Antifreeze was banned from landfills on October 1, 1991.
- Used antifreeze, through contact with a car's cooling system, may contain traces of fuel, oil and metal particles.
  - If not properly disposed of or recycled, these pollutants can seep into soil and ground water harming people and the environment.
- Over the past 10 years, North Carolina has recycled on average more than 28,000 gallons of antifreeze each year.



Antifreeze Recycling Unit Picture  
Courtesy of [toolexchangeinc.com](http://toolexchangeinc.com)

# North Carolina Landfill Bans: Appliances (White Goods)

- Appliances were banned in 1993 from landfills.
- Appliances are referred to as white goods throughout the statutes. They include products such as refrigerators, stoves and washing machines.
- Legislation that also passed in 1993 placed a disposal fee on white goods and this revenue provides resources to counties that implement a comprehensive management program for these materials.



# North Carolina Landfill Bans: Beverage Containers from ABC Facilities

- In 2005 legislation was passed requiring certain ABC permit holders to recycle all beverage containers.
  - Went into effect January 2008
  - Commodities to recycle include glass bottles, aluminum cans and plastic bottles.
- Beverage container diversion from ABC permitted facilities is close to more than 75,000 tons per year.
  - This is the equivalent of 119,544 barrels of oil.



# North Carolina Landfill Bans: Lead-Acid Batteries

- Lead-acid batteries have been banned since January 1991.
- The corrosivity and heavy metal content of lead-acid batteries may endanger human health and the environment. Acid spillage from such batteries has caused many disposal sites to be contaminated with lead.
- New batteries are 99% recyclable and are comprised of previously recycled materials.
- Over the past decade, more than 830,000 lead-acid batteries have been recycled.



# North Carolina Landfill Bans: Motor Oil (Used)

- As of March 1, 1990, North Carolina banned the disposal of used oil in landfills.
- Used oil generators include those who service vehicles and collect used oil from do-it-yourselfers.
- Improper disposal of oil can contaminate soil, surface water or drinking water. In North Carolina, more than 20,000,000 gallons of oil are sold annually for light trucks and automobiles.



*Picture courtesy of Edmunds.com*

# North Carolina Landfill Bans: Oyster Shells

- Oyster shells were banned in January 2007.
- Why ban oyster shells? Shells have multiple uses, including:
  - Can be used to help grow more oysters (#1 reason)
  - Driveway or trail bedding
  - Decorative ground or whole mulch
- N.C. oyster harvest trends have been decreasing primarily due to disease.
  - 1902: 1.8 million bushels
  - Current: 40,000 bushels



# North Carolina Landfill Bans: Scrap Tires (Whole)

- Whole tires were banned from landfills as of March 1, 1990.
- Used tire stockpiles are potential health risks. They can be havens in which pests reside and mosquitoes breed, are a potential fire hazard and can contaminate surface water run-off.
- More than 47,000 tons are diverted from landfills each year.



# North Carolina Landfill Bans: Yard Trash

- North Carolina banned yard trash from landfills in the early 1990s.
- Without the ban, yard waste would account for more than 5% of the waste placed in landfills.
- Yard trash includes trees, tree stumps, tree and shrub trimmings, and grass clippings.
- Many municipalities turn yard trash, including old Christmas trees, into mulch which is often available for residents to use.



# North Carolina Landfill Bans: Motor Oil Filters

- Oil filters are banned as of October 1, 2009.
- N.C. currently generates 14.3 million oil filters per year. Each filter contains 8 ounces of oil.
- Oil filter disposal rate: More than 10 million
- Oil filter recycling rate: 4.2 million (30%)
- 156,000 to 625,000 gallons of oil enter the waste stream annually due to the disposal of oil filters.



# North Carolina Landfill Bans: Plastic Bottles

- Plastic bottles are banned as of October 1, 2009.
- The law does not apply to containers that are intended for use in the sale and distribution of motor oil.
- North Carolina recycles only 18% of PET plastic bottles generated.
- North Carolinians throw away more than \$41,411,600 in plastic each year.
- Recycling plastic bottles conserves energy and resources and adds to the more than 14,000 recycling-related jobs in N.C.



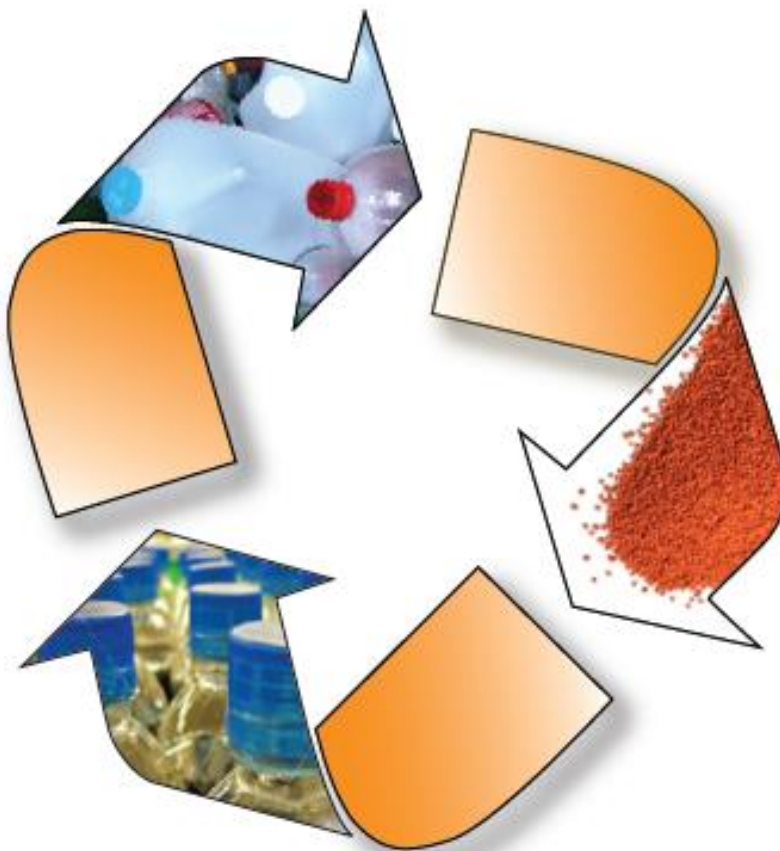
# Plastic Bottles *Carolina Recycle Loop*

## 1 Collect

When you place a plastic bottle (and other recyclables) in a bin it is taken to a material recovery facility (MRF), such as Waste Management Recycle America in Raleigh, N.C. There the products are sorted by type and the plastic bottles are separated by density and compressed into bales.

## 3 Buy-Recycled

The filled Coca-Cola bottles are then distributed to stores across the state to be bought and recycled again.



## 2 Process

Bottles are ground into tiny bits of plastic, called flake at NURRC in Spartanburg, S.C. It is washed by a patented process, called UnPET, in which the top layer of flake is removed. The clean flake is then used in place of pellets made from virgin materials. It requires only a fraction of the energy to produce plastic when using UnPET vs. virgin pellets. Southeastern Container Inc. in Enka, N.C. receives this flake which is then molded back into bottles. Some of these bottles are sent to Coca-Cola Bottling Co. in Charlotte, N.C.

Recyclable Plastic Bottles are Banned from landfill disposal  
effective October 1, 2009



# North Carolina Landfill Bans: Wooden Pallets

- Wooden pallets are banned as of October 1, 2009.
- As much as 250,000 to 300,000 tons are disposed of each year.
- More than 600,000 tons are already recycled annually.
- N.C. pallet recyclers employ more than 1,000 people.
- The pallet recycling industry has unused capacity for value-added products such as reuse, recycling, mulch and fuel.



# Wood Pallets

## Carolina Recycle Loop

### 1 Collect

When a wood pallet is collected for recycling, it is taken to a pallet recycling business where it can be reused as a pallet or made into a completely different product. There are more than 70 businesses in N.C. that recycle wood pallets.

### 3 Buy-Recycled

Ground pallets can be made into playground mulch or biofuel that is sold throughout the Carolinas and beyond.



### 2 Process

N.C. wood pallet recycling companies carefully inspect recovered pallets and determine whether a pallet is reused, repaired or recycled. Pallets in excellent condition are resold. Some pallets require minor repairs before sold as a reconditioned pallet. Reconditioned and used pallets are sold to industry at a cheaper cost than newly-manufactured pallets. Pallets not able to be reused are ground into small uniform pieces. The grinders used to process pallets also have large magnets that extract nails, which are also recycled.

Recyclable Wood Pallets are Banned from landfill disposal.  
effective October 1, 2009



# North Carolina Landfill Bans: Televisions and Computer Equipment

- As of January 1, 2011 televisions and computer equipment will be banned from landfill disposal.
- This will include:
  - Desktop and Laptop Computers
  - CRTs: TVs/Monitors
  - Flat panels: TVs/Monitors
  - Keyboards and Mice
- E-recycling is becoming more common and participation easier in local communities.



# North Carolina Landfill Bans: Web Resources

- [www.enr.state.nc.us](http://www.enr.state.nc.us) The Department of Environment and Natural Resources Web site
- [www.wastenotnc.org](http://www.wastenotnc.org): The Division of Waste Management Web site
- [www.p2pays.org](http://www.p2pays.org): The Division of Pollution Prevention and Environmental Assistance Web site
  - [www.re3.org](http://www.re3.org): Recycling Web site geared toward young adults
  - [www.recycleguys.org](http://www.recycleguys.org): Recycling Web site for elementary school-aged children

