

# Recycling and Repurposing: What to Toss Where

\*



# TOSSING in the RIGHT Place



## RECYCLE

Somerset County Bin

**Remove caps, labels, then clean & dry before toss:**

- **Metal** (crumple aluminum)



- **Glass**



- **Paper**

- **Plastic labelled #1 to #7**

No bottle caps (bring #5 to Library Bin)

No Styrofoam (bring to Green Fair)

No Med Bottles (bring to Police Station)

No Utensils, Cups, Plates

No Plastic Bags (bring to grocery store bin)

No Hangers (bring to dry cleaner)

No Light Bulbs (bring to accepting stores)

## COMPOST

**Backyard vs Industrial**

**Backyard: GREEN material:**

grass clippings, food scraps other than meat or dairy (create smell).

**BROWN materials:** straw, uncoated paper, newspaper

**Industrial: Most PLA, PHA, PDC Bagasse Bio-plastics**



## TRASH

**Cannot recycle or compost**

plastic without a number, cups, lids, utensils, labels, plastic diapers or gloves, sprayers, Styrofoam®, plastic-coated paper, incandescent light bulbs.



# Metal: A Valuable Commodity

- ▶ It takes a lot of energy to create a metal product. To make its final shape, metal has to undergo several different steps. Somerset County's recycling of metal items helps to conserve that energy. Examples that may be recycled include **CLEAN**:

- **Metal Scraps**
- **Aluminum Cans (do NOT crush cans)**
- **Metal Bottle Caps (do NOT bring to library)**
- **Pie Tin**
- **Hairspray Can**
- **Aluminum Foil (crumple into ball)**
- **Tin Cans**
- **Silverware**



# Glass

- ▶ Good news! Nearly all the glass in a product bought in the grocery store is recyclable.
- ▶ Do **NOT** throw glass into the trash, glass does not degrade in a landfill. Glass in a landfill will exist in 1000 years.
- ▶ **Somerset recycles glass of all colors, if:**
  - **Glass is clean & not broken**
  - **Labels and tops are removed**  
Examples: Jugs, flower vases, bottles without labels
  - Somerset Recycling does **NOT** take ceramic
  - When in doubt, leave it out.
- ▶ Check the free RECYCLE COACH app on how & where to recycle Electronic Glass and all items.



# Paper

- ▶ When prepared properly, most paper products can be recycled by Somerset County Recycling. Here are a few steps to prepare your paper.

- ▶ **Make sure the paper is:**

- **Clean.** No grease, food, or tape.

- **Pure.** No wax or plastic coating.

- **Flat.** Always break down large boxes.

- Take the hard cover off books, recycle book pages.

- **Dry.** Cover your recycle container to keep out rain. Wet paper is put into trash.

- **NOT SHREDED.** Do not recycle SHREDDED PAPER.

- Do NOT recycle colored construction paper, cups, tissue paper, napkins, frozen food boxes, napkins, metallic paper, paper towels, paper with metal objects.

- ▶ **Used paper cups, plates, towels CANNOT BE RECYCLED.**

- ▶ **Check the free RECYCLE COACH app on how to recycle**



# Plastics

- ▶ On the underside of most plastic containers, you will find a recycling triangle with a number inside. Each number indicates a different type of plastic.
- ▶ Somerset County recycling accepts **CONTAINERS** if the container has an imprinted number 1- 7, **the container has been rinsed and is clean, and has NO CAP.**
- ▶ Plastic takes between 500 to 1,000 years to degrade.
- ▶ **Somerset County Recycling does NOT accept:**
  - A. PLASTIC BOTTLE CAPS** – take to the LIBRARY to be repurposed
  - B. Medicine bottles** – bring medicines in the bottles to the POLICE STATION.
  - C. Shopping & Dry Cleaning bags** Many stores recycle clean plastic bags.
  - D. Plastic Utensils or Used Plastic Plates** If backyard compostable, add to the pile
  - E. STYROFOAM** – degrades to chemicals that are known carcinogens. Avoid use.
  - F. Plastic containers WITHOUT A NUMBER** Indicates that the item is a mixed plastic and cannot be recycled.
  - G. Plastic that has not been rinsed and is dirty.** Rinse, clean and then recycle.
- ▶ Download & refer to the Recycle Coach App that is free of charge.

# Top 11 Plastics Found along California Coastline

PLASTIC PRODUCT	% FOUND	LIKELY PLASTIC-TYPE (POLYMER)	BETTER ALTERNATIVES NOW	BEST ALTERNATIVES NOW
1. Food Wrappers (Candy, Chips, Gum, etc)	18.6	Several different plastics	More work needed on bio-benign alternatives	Bulk purchasing of food in reuseable containers
2. Bottle Caps (Plastic)	16.7	Polypropylene (PP #5)	“Connect the Cap” technical fix available	Reuseable bottles
3. Beverage Bottles (Plastic)	12	Polyethylene terephthalate (PET #1)	Increase deposit to increase collection rates	Replace with reuseables
4. Bags (Plastic)	9.4	Primarily Low-Density polyethylene (LDPE #4)	Natural, bio-based shopping bags	Replace with reuseable shopping bags
5. Straws, Stirrers	7.5	PP #5	Paper/wood straws/stirrers	Reuseable straws/stirrers
6. Lids (Plastic)	5.1	Polystyrene (PS #6)	More work needed on bio-benign alternatives	Replace with reuseable cups

► From Better Alternatives Now 2.0

<https://static1.squarespace.com/static/5522e85be4b0b65a7c78ac96/t/5aa0618a8165f553aa68b8b8/1520631281665/5+Gyres+BAN+List2.pdf>

# Top 11 Plastics Found along California Coastline (continued)

PRODUCT	% FOUND	LIKELY PLASTIC-TYPE (POLYMER)	BETTER ALTERNATIVES NOW	BEST ALTERNATIVES NOW
7. <b>Utensils</b>	<b>4.9</b>	Polystyrene (PS #6)	Natural, bio-based biodegradable utensils (bamboo/wood)	Replace with reusable utensils
8. <b>Cigarette Butts</b>	<b>3.2</b>	Cellulose Acetate Fiber	Filter-less cigarettes	Plant-based biodegradable cigarette filters
9. <b>Take-Out Containers (FOAM)</b>	<b>3.2</b>	PS #6	Plant-based biodegradable take-out containers	Reusable take-out container Work to change health codes to enable this change
10. <b>Take-Out Containers (PLASTIC)</b>	<b>3</b>	Several different plastics	Plant-based biodegradable take-out containers	Replace with reusable take-out containers
11. <b>Cups, Plates (Plastic)</b>	<b>2.8</b>	PS #6 & PET #1	Plant-based biodegradable cups	Replace with reusable cup & plates

► From Better Alternatives Now 2.0  
<https://static1.squarespace.com/static/5522e85be4b0b65a7c78ac96/t/5aa0618a8165f553aa68b8b8/1520631281665/5+Gyres+BAN+List2.pdf>



# Identifying Plastics: Most Valuable Plastics



**PET or PETE** – May recycle most clear plastics (if remove caps & clean)

**NOTE:** Plastic Caps that screw on can only be recycled at Warren or Watchung Library.



**HDPE** – May recycle most thick plastics (if remove caps & clean)

**NOTE:** Plastic Caps that screw on can only be recycled at Warren or Watchung Library.



**Polypropylene PP**  
– May recycle clean rigid #5 dairy, yogurt, bowl containers.



Somerset County does not accept bottle caps as create micro-plastics that contaminate our water.  
**NOTE:** Plastic Caps that Screw on can only be recycled at Warren or Watchung Library.

# Identifying Plastics: LESS Valuable Plastics



**PVC** – May recycle clean shampoo bottles (if remove cap) & clear plastic wrap. **NOTE:** Plastic Caps that screw on can only be recycled at Warren or Watchung Library. Other caps & sprayers are placed in trash.



**LDPE** – Bags. May recycle clean squeezable bottles (if caps removed) **NOTE:** Plastic Caps that screw on can only be recycled at Warren or Watchung Library. **NOTE:** Recycle plastic bags at a grocer or store that accepts them.



**PS – Polystyrene** – May recycle new or clean rigid carry-out containers, plates, cups. **Cannot recycle plates, cups, utensils, dirty PS, or STYROFOAM®** as it breaks down to possible cancer causing chemicals. May take to Foam Pack Industries 72 Fadem Rd. Springfield, NJ 9733763700



Miscellaneous, **Polycarbonate, PLA, PHA** - Three-or five-gallon jugs, nylon, sunglasses. **Cannot recycle items made of PLA or PHA. Compost PLA or PHA.**

# What Are PLAs & PHAs?

## Compostable Plant-based Plastics

- ▶ PLAs are polylactic acids – Polymers made from lactic acid, which is made via starch fermenting during corn, potatoes, wheat or sugarcane milling, soy protein, or cellulose. PLA looks like polyethylene and is used in bottles, plastic films, and as a substitute for polystyrene in “foam” plates, cutlery, & packing. PLAs are most useful in cooler temperatures.
- ▶ PHAs are polyhydroxyalkanoate polymers or co-polymers produced by microbial fermentation of carbon-based feedstocks. PHAs are modifiable to fit various purposes and are stable at high temperatures. PHAs are biodegradable, readily compostable thermoplastics, produced by microbial fermentation of carbon-based feedstocks.
- ▶ If **COMPOSTED** in the continuous “high” heat of an industrial composter, PLAs or PHAs biodegrade in three to six months.
- ▶ If placed in a landfill, PLAs or PHAs won’t breakdown any faster than fossil-fuel based plastics.
- ▶ **CANNOT BE RECYCLED.** No Recycle Symbols Appear on Products.
- ▶ See the **COMPOSTABLE** symbol or **PLA** or **PHA** wording on the product.

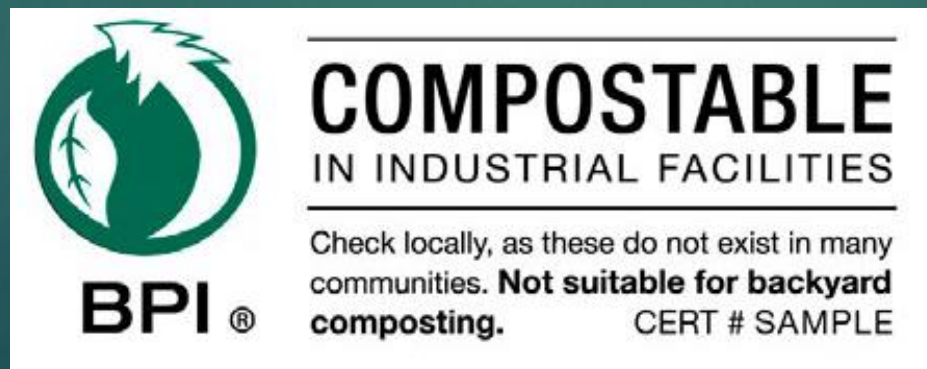


# What Are PDCs and Why Can't They be Recycled?

- ▶ PDCs are **pro-degradant concentrates** used to speed up the break down of plastic.
  - A metal compound, such as cobalt stearate, is added to plastic to promote oxidation and bioerosion of 95% of the plastic into brittle fragments within four weeks. Microorganisms gobble up the fragments as they disintegrate, turning them into [carbon dioxide](#), water and biomass.
- ▶ Biodegradable plastics look and feel exactly like the plastic products we're encouraged to recycle.
- ▶ **What happens if we accidentally recycle those biodegradable products?** Well, the consequences are potentially catastrophic—recycled polyethylene irrigation pumps that are contaminated with PDC additives aren't likely to last very long. In fact, plastic recyclers in South Africa feel so strongly about the inability to keep PDC-containing biodegradables out of recycling streams that they want to ban their use in that country.

# What happens if Compostable Plant-based Plastics are Recycled?

- ▶ The issue with recycling PLA or PHA plastic in the regular plastics recycling stream is that it is indistinguishable from PET plastic during flotation and density separations.
- ▶ Co-mingling PLA or PHA plastics with fossil-fuel plastics, reduces the quality and resale value of the re-pelletised polymer.
- ▶ Hopefully, No Recycle Symbols Appear on Products.



# How to Compost

- ▶ **Designate an area that is one cubic yard (or 3 feet by 3 feet by 3 feet)**
- ▶ **Mix equal parts “browns” (C or Carbons -** Leaves. Straw. Black & White Newspaper, Nut shells (except walnut), Shredded paper, Toothpicks, Unwaxed used paper plates, Used paper towels/napkins, Unwaxed cardboard (must rip into small pieces) Paper bag or cereal boxes (must shred), Woody prunings) **with “greens” (N or Nitrogens –** grass clippings and certain food scraps) **in layers in a pile.**
- ▶ If possible, allow air to circulate between the layers.
- ▶ To achieve optimal outcome, turn the pile periodically. If the pile becomes dry, add water.
- ▶ **Appropriate Food Scraps (GREENS) For Composting**
  - **Fruit and vegetable scraps**
  - **Coffee grounds and filters, natural tea bags & loose leaf tea**
  - **Cooked rice and pasta**
  - **Crushed egg shells**
  - **Tomato paste**
  - **Stale bread, tortillas and pitas**
  - **Stale potato chips**
  - **Seaweed**



# How Does a Compost Pile Work and Solving Problems ?

- ▶ Many types of bacteria, microbes, fungi, worms, and other invertebrates work to breakdown the materials in the compost pile. If enough energy and building blocks (BROWNS) and nitrogen (GREENS) are present, the organisms have access to air and water, and can generate heat, valuable compost will be formed. The fastest decomposition occurs at 104°-170°F (33-76°C), which is reached in commercial composters; however, moderate activity occurs at 70-90°F (21-32°C), if the microbes have access to fuel, air and water.
- ▶ Smells like Ammonia or Rotten Eggs? Add more brown, dry materials
- ▶ Rodents a problem? Do NOT compost grease, carnivore waste, meats, fish, or chicken.

# AVOID Composting these items.....



1. Meat: rotting meat can produce an offensive smell, which will attract pests for miles.
2. Pet waste should not be included in your compost pile. Feces may spread diseases which can be dangerous to both plants and humans.
3. Dairy will spoil soon and will produce a strong odor.
4. Grease, walnuts, treated plywood, diseased plants, weeds, ceramics, glass, oil-based plastics, pottery will either not degrade or will spread weeds or disease.



# SOMERSET COUNTY DOES NOT RECYCLE THE FOLLOWING:

Recycle #5 PLASTIC BOTTLE CAPS that SCREW at the Warren & Watchung Libraries. Caps will be repurposed.



Recycle clean plastic shopping bags at the collection bin near the front of most grocers & other stores.



Donate ceramics to thrift stores to be reused.

# Where Does Everything Go?

Recycling Bin

