


# Recycle Clean Recycle Right

Successful recycling requires that residents put only **clean** items in the **right** bins. Dirty or incorrect items may cause the entire bin to be sent to a landfill instead of recycled. Please only recycle the items listed for each bin.

Do NOT include:

- dirty or food stained items
- plastic that is not a jar, jug or bottle
- plastic 
- plastic caps, covers or lids
- plastic bags or plastic film
- plastic take-out containers
- poison, pesticide or automotive fluid containers
- shredded, waxed or coated paper
- squeeze tubes and juice boxes or bags
- spray cans and propane or gas containers
- aluminum foil or single use pie/loaf pans

NO trash. When in doubt, leave it out!

See the complete list at: [www.HawaiiZeroWaste.org](http://www.HawaiiZeroWaste.org)

## REDUCE

A key part of waste "reduction" is "conservation"- using natural resources wisely, and using less than usual in order to avoid waste.

## REUSE

People can "reuse" materials in their original form instead of throwing them away, or pass those materials on to others who could use them.

## RECYCLE

Lots of things (cans, bottles, paper, and cardboard) can be remade into either the same kind of thing or new products. Making new items from recycled ones takes less energy and fewer resources than making products from brand new materials.

(Source: National Institute of Environmental Health Services)

# Recycle

## It's Our Kuleana

(responsibility)

This brochure explains the basics of recycling: why it's important and what happens to items placed in recycle bins.

## What is recycling?

Recycling is the process of collecting and processing materials that would otherwise be thrown away as trash and turning them into new products.

(Source: U.S. Environmental Protection Agency)

## 2-Bin

recycling system  
for residents of the  
County of Hawai'i:

Paper  
&  
Cardboard



Metal  
Cans



Plastic  
Only  
& jars,  
bottles, jugs



Glass  
(only bottles & jars)



The County of Hawai'i provides information or programs for recycling or disposal of:

- scrap metal
- greenwaste
- HI-5 beverage containers
- appliances
- electronic or e-waste
- household hazardous waste
- vehicles
- motor oil

## Recycle Clean Recycle Right

For details about what can and cannot be recycled,  
please visit the Department of Environmental  
Management website: [www.HawaiiZeroWaste.org](http://www.HawaiiZeroWaste.org)





# Paper and Cardboard



Paper and cardboard are made from fibers that originate from trees or other plants. By cutting, grinding and processing, the fibers are turned into a liquid that is spread into sheets and dried.

## How are paper and cardboard recycled?

Used or waste paper and cardboard are sorted and baled. It is taken to a paper mill where the paper fibers are processed back into a liquid that is once again spread into sheets and dried.

In the United States, more than three-quarters of paper mills rely on recycled paper to make some or all of their products.

# How is recycling paid for?

Ideally, the cost of recycling is paid when the recycled materials are bought. People normally choose to buy recycled materials or products when the cost is less than the cost of the same items made from non-recycled materials. Some recycled materials, like aluminum and paper, are much cheaper compared to when they are made from natural resources taken from the Earth.



Many government agencies have recycling programs. One goal is to recover the cost of the programs by selling the collected items to companies that will recycle them. If the costs for the recycling programs are more than what can be recovered, the unrecovered costs are called subsidies. Some communities, such as the County of Hawai'i, are willing to pay subsidies because of the benefits of recycling.

# Metals

Earth's crust contains metals such as iron, aluminum and copper. Ore, the rocks that contain metals, must be smelted to separate the metals from other minerals. Smelting is a complex process using chemical reactions and large amounts of energy to heat the ore.

## How are metals recycled?

Used metals are recycled by melting them and removing impurities. This requires far less energy than smelting ore.

Making recycled aluminum from used metal can save up to 95% of the energy required to make it from mined ore.

The energy savings for copper is up to 75% and for steel it is up to 60%.



## A Global Market

Most of the recyclable materials collected in the County of Hawai'i are transported to brokers on the mainland or in Asia. These are companies that look for other companies interested in buying and recycling the materials.



The marketplace is global and there are many factors that can raise or lower the value of recyclables: transportation costs, quality or purity of materials, currency exchange rates, government trade agreements, etc.

## Extended Producer Responsibility

Some governments have passed laws requiring companies that make products to recycle them after consumers are finished using them. This is known as "Extended Producer Responsibility" (EPR). The cost of EPR products are paid for by the consumers and producers of the products.



# Why recycle?

## Economic Benefits

American companies rely on recycling to provide some of the materials they need.

Recycling is estimated to create nearly five times as many jobs as landfilling.

The value and usefulness of materials are lost if they are not recycled and instead go into landfills.

Recycling reduces the amount of material that goes into landfills. By conserving existing landfill space, there will be less need to build more landfills.

Recycling saves energy.

## Environmental Benefits

Recycling avoids taking natural resources and the damage to natural areas that sometimes occurs from mining, logging, etc.

Making products from recycled materials generates far less water pollution than making them from natural resources. It creates less toxins.

Less damage to natural areas like forests, wetlands and rivers, help protect wildlife that depend on them for survival.

Because recycling can save energy, it is possible to burn less fossil fuels and reduce carbon dioxide emissions, a major cause of global warming.

# Plastics

Plastics are usually made from fossil fuel based chemicals. Some are made from plants.

Different types of plastic have different molecular structures and are stamped with a corresponding number:



## How are plastics recycled?

Plastics are recycled by melting, shredding and other methods. As they are processed, labels and impurities are removed.

The new plastics can be made into a multitude of items including polyester for clothing, fabric and stuffing.

Recycling plastic can save up to 88% of the energy required to make new plastic.



The County's 2-Bin system currently accepts only plastic jars, bottles and jugs that are made from 1 & 2 plastics.

They must be rinsed clean.

Unacceptable items include:

- covers, caps or lids.
- plastic bags, plastic film or bubble wrap.
- containers that held motor oil, automotive fluids, pesticides or herbicides.

The production and use of plastics are increasing dramatically. Although there are benefits to using plastics there are impacts if they are not recycled.

- Plastics decompose very slowly and take up significant space in landfills.
- When people discard plastic in the environment, it becomes unsightly litter. Some of it eventually releases toxic chemicals.
- In the environment, plastic harms or kills animals that get entangled in or ingest it.



# Glass

New glass is mostly made from quartz sand taken from natural deposits.

## How is glass recycled?

Glass is sorted by color, melted and formed into new glass products. It is also crushed and used as aggregate in construction or landscaping.



Recycling glass can save up to 34% of the energy required to make glass from sand.

In the United States approximately 40% of glass is recycled.



# Organic Materials

Organic materials include greenwaste and food waste. Greenwaste includes yard trimmings, grass cuttings and discarded flowers.



## How are organics recycled?

Organic materials naturally break down into **compost**, an important part of most soils. Compost is nutritious for plants and valuable to farmers and gardeners. The break down process, or decomposition, happens when microorganisms or worms eat the organic materials. It is possible to speed up the process by stacking organic materials, keeping them moist and turning them over periodically. Decomposition can generate heat which helps kill weed seeds and invasive species like fire ants.

Another way to process greenwaste is to make **mulch** by chopping or grinding it up. Mulch is used as a ground cover to help keep moisture in the soil and prevent weeds from sprouting.

Making compost and mulch is important because it avoids putting greenwaste or food waste in the landfill. In landfills these materials can create methane gas, a contributor to climate change.



Ideally, compost and mulch are made near the source of the greenwaste or food waste. This saves transportation cost and reduces the chance of spreading invasive species.



# Electronics or E-Waste

Electronics are made from many materials: copper, gold, aluminum, lead, other metals, glass, plastic and more.

## How are electronics recycled?

Recyclers attempt to repair and resell functioning electronic equipment. Most electronics can be disassembled or shredded. Sophisticated technologies help recyclers separate the materials so they can be used again in new products.

One metric ton of electronic scrap from personal computers contains more gold than comes from 17 tons of gold ore.



The County of Hawai'i collects greenwaste free of charge from residents at eight locations around the island. For a fee, businesses can drop off greenwaste at the East Hawai'i Organics Facility and the West Hawai'i Organics facility.

For details go to: [www.HawaiiZeroWaste.org](http://www.HawaiiZeroWaste.org)