



## Reducing Pollution Risks from Your Trash

One of the most visible forms of pollution in Hawaii is household waste. This worksheet will help you determine the pollution risks from your trash disposal practices and give you some ideas of how to manage your trash to reduce those risks. The topics covered are

- identifying what is in your trash
- reusing, recycling, and composting
- proper waste disposal.

### What is household waste?

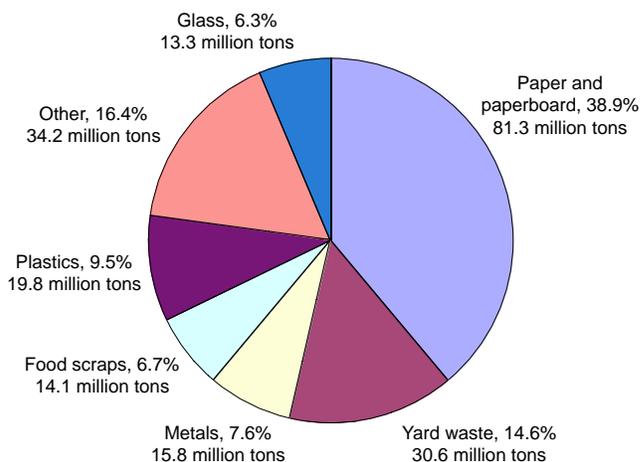
What do you call the stuff you want to get rid of? Trash? Garbage? Solid waste? Recyclables? Refuse? Junk? Here's how we define the terms:

- **Trash** and **waste** refer to items and materials that are being discarded.
- **Reusables** are items that are used again by a different user or for a different purpose, like a hand-me-down jacket or a jar used for a cup; they are not reprocessed into raw materials.
- **Recyclables** are materials including glass, metal, paper, even refrigerators that are collected, separated, processed back into raw materials, and made into new products.
- **Compostables** are primarily yard and food wastes that can decompose and return to the land as nutrients or organic matter.
- **Garbage** is generally food waste or wet food, either of animal or plant origin.

### What is in your trash?

As Hawaii's population increases, the amount of waste produced each year also rises. In fact, material consumption has increased faster than the population. Studies estimate that in 1994 each person in the USA produced around 4.4 pounds of waste each day, a significant increase from the 2.7 pounds produced per person daily in 1960.

Most consumers do not realize what makes up solid waste. Many think that we throw away more plastics by weight than we really do, or that disposable diapers are a major source of trash—which they are not. The following graph shows what is in the solid waste thrown away in the USA each year.



**Components of the U.S. national waste burden**

(Source: Franklin & Assoc. Ltd. 1995)

### The problem with waste

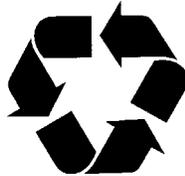
Much of Oahu's household waste is used for power generation by H-Power. However, the ash produced by the H-Power plant goes to landfills. On the other islands, most waste goes directly to landfills, and they are filling up. New regulations and land scarcity make it harder to find places for new landfills. Waste is a major environmental and economic problem for consumers and municipalities. Producing less waste and finding ways to deal with waste not only saves money but also helps protect air, soil, and water quality and the health of people and wildlife.

## Preventing and minimizing waste

Every household produces waste. This waste has to go somewhere. One way to minimize waste is to purchase products that produce less waste. Here are four things you can do:

- Buy only what you need and avoid accumulating unused products.
- Select products based on their durability, ease of repair, and potential for reuse.
- Purchase containers and packaging that can be recycled locally.
- When safe to do so, select packaging that minimizes waste.

Reusing, recycling and composting are three additional ways to keep trash out of landfills or incinerators.



## Reuse

Reuse also benefits the environment. You can usually find uses for more materials than you realize. Sharing old clothes and used furniture is a common form of reuse. If you can't share with friends or family, try to donate usable items to charitable organizations or thrift shops. Holding a neighborhood yard sale is a good way to get rid of unwanted possessions.

## Recycle

Wastes often can be recycled. Empty glass bottles can be used to make new bottles. Old newspapers can be used to make new paper. Some plastic containers such as milk cartons and soda bottles can be used to make new plastic things. Recycling almost always uses fewer resources and causes less pollution than making new materials.

Many schools on Oahu have recycling bins on their grounds. These bins are for recycling newspaper, glass, aluminum, and some plastics like milk cartons. Some apartment buildings, townhouses and condominium complexes also have recycling, either in the building itself or at a central location. If your building or complex does not have recycling, you may want to bring up the idea of starting a recycling program at the next association meeting.

The island you live on determines what materials you can recycle, how they need to be prepared, and where they can be recycled. Contact the appropriate number in

the box below for additional information on recycling opportunities on your island.

## Recycling information

### Statewide

Office of Solid Waste Management, Hawaii Department of Health, <<http://www.state.hi.us/health/eh/shwb/sw/index.html>>

Hawaii: ..... 974-4000 ext. 64226  
 Maui: ..... 984-2400 ext. 64226  
 Kauai: ..... 274-3141 ext. 64226  
 Molokai and Lanai: ..... 1-800-468-4644 ext. 64226  
 Oahu: ..... 586-4226

### County-specific

Oahu: City and County of Honolulu Department of Environmental Services, 527-5335, <<http://www.opala.org>>

Maui, Molokai, Lanai: Maui County Department of Public Works, 270-7880

Hawaii: Recycle Hawaii, 329-2886 or 961-2676, <<http://www.recyclehawaii.org/what.htm>> for recycling information

Kauai: Kauai County Solid Waste Office, 241-6880

## Compost

Yard trimmings and food wastes typically make up 10–25 percent of the wastes going into landfills. Composting is a natural process that turns kitchen and garden wastes into a high-quality organic fertilizer. Many common materials can be composted: leaves, grass clippings, plant trimmings, straw, and some kitchen scraps like coffee grounds and vegetable peelings. The final product is dark brown, crumbly compost that has a clean, earthy smell. It can be spread on lawns or mixed with garden soil as an excellent natural soil conditioner. As an alternative to landfill disposal, some communities, such as Kailua, Oahu, have established yard-waste compost programs with convenient drop-off sites. To compost at home, you can use one of the many compact and efficient composting bins on the market, or you can build your own. If you live in an apartment or condominium, it may be impossible for you to compost at home. But, you may be able to do it in a neighbor's yard or a community garden.

Basic information on composting grass and yard wastes is available in the publication *Reduce and recycle green waste* from the Hawaii Department of Health.

Additional materials on composting are available by request from your local CTAHR Cooperative Extension Service office.

**Waste disposal**

Disposing of household wastes by burning it or dumping it on private property can pose threats to your health and the environment. Waste dumped at your home is not only unsightly, it may contain harmful chemicals that can leach out and contaminate groundwater, or be spread by wind and rain. Burning your waste can produce toxic fumes as well as contaminated ashes that can blow or wash away and cause pollution.

Wastes dumped directly into storm drains, ditches or streams or washed into these water bodies can quickly cause pollution problems. Other materials, like foam "peanuts" and other plastic debris, can be transported by storm runoff to open water where they may be mistaken for food and eaten by fish or birds. Dumping potentially hazardous substances down a drain that leads to a septic system or sewer system can also cause problems. The table below provides information on the disposal methods for various types of household wastes that create the lowest water pollution risks.

You need to take particular care when disposing of household hazardous products. By reading product labels, you can generally tell which ones have hazardous ingredients. Look for words like CAUTION, WARNING, DANGER, FLAMMABLE, POISON, VAPOR HARMFUL, or HARMFUL OR FATAL IF SWALLOWED. These are clues that a substance in the product is potentially hazardous to your health and to the environment.

Carefully dispose of any of these types of products. If it is safe and legal to do so, use the product up according to the label directions so nothing is left to discard. If you do have extra that you do not need, always read the label for disposal recommendations, or contact the manufacturer. For more information, see HAPPI-Home 4, *Managing hazardous household products*.

**Assessing your risks**

There are two ways to reduce the risk of pollution from trash disposal. The first is to generate less trash and the second is to dispose of it in the most environmentally friendly way. Use the table on page 4 to assess your *waste potential*. A low waste potential means that less trash needs to be disposed of. Also, assess the pollution risks from the trash that you do have to throw away.

**Waste resource**

**Water quality–friendly disposal methods**

|   |   |
|---|---|
| Food waste                              | Compost vegetable matter if possible; dispose of meat and other materials in landfill   |
| Green waste,<br>grass clippings, leaves | Compost or use as mulch; separate from other waste for municipal composting where available   |
| Paper, cardboard                        | Reuse and recycle where possible; dispose in landfill as last resort  |
| Plastics                                | Reuse and recycle where possible; dispose in landfill as last resort  |
| Aluminum                                | Recycle where possible; dispose in landfill as last resort  |
| Other metals (steel, tin)               | Recycle where possible; dispose in municipal trash (on Oahu, recycled at H-power)   |
| Glass                                   | Reuse or recycle where possible; dispose in landfill as last resort   |
| Large appliances                        | Have potentially hazardous parts/items removed before recycling (PCBs, freon, mercury in lights, capacitors, etc.); take to landfill. |

For other potentially hazardous products including household cleaners, aerosol cans, paint, paint thinner, glues and adhesives, and gasoline, see HAPPI-Home 4, *Managing hazardous household products*, for information on storage and disposal.



This HAPPI document was adapted by Michael Robotham, Carl Evensen, and Linda J. Cox from *Managing household waste: preventing, reusing, recycling, and composting*, by Shirley Niemeyer, Michael P. Vogel, and Kathleen Parrott, Chapter 11, pp. 106–115, in *Home•A•Syst: An environmental risk assessment guide for the home* developed by the National Farm•A•Syst / Home•A•Syst Program in cooperation with NRAES, the Northeast Regional Agricultural Engineering Service. Permission to use these materials was granted by the National Farm•A•Syst/Home•A•Syst Office. HAPPI-Home materials are produced by the Hawaii's Pollution Prevention Information (HAPPI) project (Farm•A•Syst/Home•A•Syst for Hawaii) of the University of Hawaii College of Tropical Agriculture and Human Resources (UH-CTAHR) and the USDA Cooperative Extension Service (USDA-CES). Funding for the program is provided by a U.S. EPA 319(h) grant administered by the Hawaii State Department of Health.

## Waste Potential and Trash Disposal

|  | Low risk  | Moderate risk  | High risk  | Your waste potential   |
|--|---|--|--|--|
| <b>Quantities purchased</b>                                | I only buy what I need and avoid accumulating unused products   | I sometimes buy more product than I can use  | I often buy more product than I can use  | <input type="checkbox"/> low<br><input type="checkbox"/> moderate<br><input type="checkbox"/> high |
| <b>Product durability and potential for reuse</b>          | I select products based on their durability, ease of repair, and potential for reuse  | I sometimes consider durability, ease of repair, or potential for reuse  | I seldom consider durability, ease of repair, or potential for reuse           | <input type="checkbox"/> low<br><input type="checkbox"/> moderate<br><input type="checkbox"/> high |
| <b>Recyclability of packaging</b>                          | I regularly purchase containers / packaging that can be recycled locally  | I sometimes consider packaging that can be recycled  | I seldom consider recyclability  | <input type="checkbox"/> low<br><input type="checkbox"/> moderate<br><input type="checkbox"/> high |
| <b>Packaging selected</b>                                  | I always select packaging that minimizes waste  | I sometimes select packaging that minimizes waste  | I seldom consider whether a packaging minimizes waste                          | <input type="checkbox"/> low<br><input type="checkbox"/> moderate<br><input type="checkbox"/> high |
| <b>Trash disposal in storm drains, streams, or ditches</b> | No household wastes are discarded near storm drains, streams, or ditches; there is very little water runoff from driveways and yards                            | Some runoff from a driveway carries spills and yard chemicals away; runoff occasionally flows into storm drains, ditches, or streams | Household wastes are dumped into storm drains, streams, or ditches             | <input type="checkbox"/> low<br><input type="checkbox"/> moderate<br><input type="checkbox"/> high |
| <b>Yard and garden waste (green waste) disposal</b>        | All green waste is composted, disposed of in a municipal collection program, or left on the ground as mulch where it will not wash into streams or storm drains | Green waste is collected and disposed of on my property in a location far from streams or drainage ditches                           | Green waste is collected and disposed of in or near a stream or drainage ditch | <input type="checkbox"/> low<br><input type="checkbox"/> moderate<br><input type="checkbox"/> high |

### Your Action Plan

| Write down all your moderate-risk and high-risk activities below | What can you do to reduce the potential risk for water pollution? | Set a target date for action |
|--|---|------------------------------|
|  |   |                              |
|  |   |                              |
|  |   |                              |

For more information on the disposal of hazardous household products, see HAPPI-Home 4, *Managing hazardous household products*.