

# Waste Prevention and Recycling

## 1. Alternatives to Garbage Disposal at Landfills

King County and communities across the nation have explored various ways to manage their garbage, while at the same time providing resources for remanufacture. Most efforts have focused on these five major techniques:

- **Source reduction and reuse** – The design, manufacture, purchase, or reuse of materials to reduce the amount or toxicity of waste. Also called waste reduction or waste prevention.<sup>1</sup>
- **Product stewardship**, defined by the Northwest Product Stewardship Council as “an environmental management strategy that means whoever designs, produces, sells, or uses a product takes responsibility for minimizing the product’s environmental impact throughout all stages of the products’ lifecycle,” may also play a role. As consumer products make up a large portion of our waste, it is important to focus on minimizing the impact of those products by implementing product stewardship practices.
- **Recycling** – The collection, processing, and marketing of specific materials (such as plastics, metals, or food scraps) from the waste stream, so they can be made into new products.
- **Composting** – The collection and processing of yard waste, food scraps and food-soiled paper into compost, a soil amendment for gardens, parks and farms.
- **Mixed waste processing** – The separation of collected garbage into recyclables, compost, and disposable waste, using mechanical and hand-sorting methods.

The rising economic and environmental costs of landfilling waste have made waste reduction, recycling and composting cost-effective alternatives to disposal and have prompted places around the nation to develop innovative and effective programs. There are many forces that drive our interest in recycling and waste prevention, including

- the cost of landfill space and the difficulty of siting facilities, especially in urban areas.
- the cost of making landfills environmentally safe and limiting their impacts on global warming, groundwater, and other resources.
- the environmental effects and higher energy costs of using natural resources to create new products.
- economic benefits from jobs created and new products generated by recycling industries.
- cost savings for residents at the curb by reducing garbage and increasing recycling.

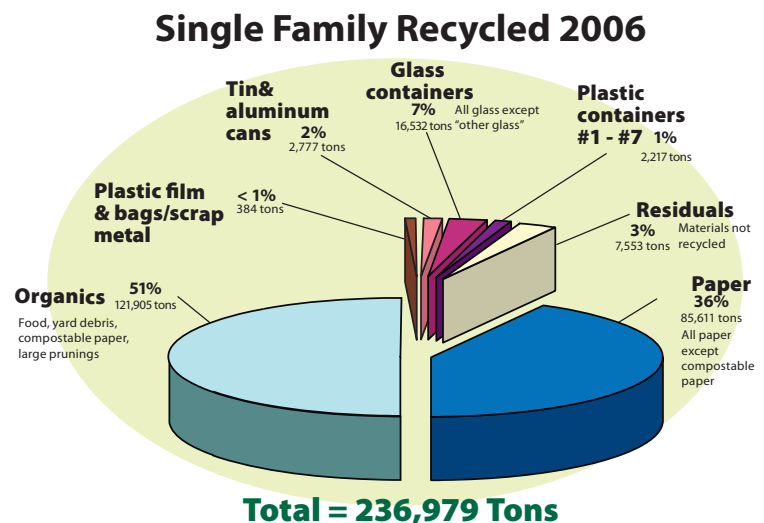


## 2. Waste Prevention and Recycling

### Goals for Waste Prevention and Recycling

Figure 2-1<sup>2</sup> illustrates the contents of residential curbside recycling in King County in 2006. As a long-term guiding principle, the King County Solid Waste Division in 2004 committed to Zero Waste of Resources 2030

Figure 2-1. What’s in King County’s Residential Curbside Recycling? (2006)<sup>3</sup>



Total tons disposed based on 2006 Hauler data provided by hauling companies.



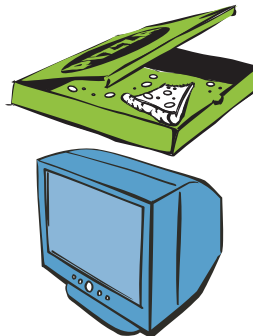
# Waste Prevention and Recycling



(ZWR) in King County Code, Title 10. This goal is designed to redefine waste and conserve valuable resources. ZWR does not mean that no garbage is disposed, but it redefines the term “waste” as materials that lack any value, not simply materials that are thrown away. Materials that have value are not waste, and any resource with economic value will not be landfilled in a ZWR system.<sup>3</sup>

When the Cedar Hills Regional Landfill closes, management of discarded material will become even more important (as we will have to look for other more expensive disposal options), and local management of material as a resource instead of a waste will benefit the economy, ratepayers, and the environment. King County has targeted seven major materials to form the core of its waste prevention, reduction, and recycling strategies as it works towards its goal of Zero Waste of Resources by 2030:

1. Paper
2. Food scraps
3. Yard waste
4. Wood
5. Electronics
6. Mercury
7. Metals



King County selected these seven materials because they make up large portions of the waste stream and are recyclable (recoverable paper, food scraps and food-soiled paper, yard waste, wood, electronics, and metals represent nearly 60 percent of disposed materials in King County) or involve hazardous materials (electronics and mercury). Subsequent chapters in this manual cover these targeted materials in more depth. Other materials may be targeted in the future depending on market conditions and King County’s ability to influence change in a cost-effective manner.

King County has already taken a number of steps toward Zero Waste of Resources, which will be covered later in this MRC manual. These efforts include

- a residential curbside ban on yard waste disposal.
- natural yard care programs that encourage back yard composting and mulch mowing.
- “What Do I Do With? ”, a Web site that provides vendor listings for recycling.
- residential curbside food scrap collection with yard waste for conversion into valuable compost.
- the Take it Back Network - an electronics take-back program and a ban on disposal of certain electronic equipment (cell

## Check It out Online

For more information on King County’s waste collection, transfer stations, landfill disposal and curbside recycling services, please see these Web sites:

- Garbage collectors by location: [www.your.kingcounty.gov/solidwaste/garbage-recycling/index.asp](http://www.your.kingcounty.gov/solidwaste/garbage-recycling/index.asp)
- Transfer station locations, hours, and fees: [www.your.kingcounty.gov/solidwaste/facilities/transfer.asp](http://www.your.kingcounty.gov/solidwaste/facilities/transfer.asp)
- Cedar Hills Regional Landfill information: [www.your.kingcounty.gov/solidwaste/facilities/cedarhills.asp](http://www.your.kingcounty.gov/solidwaste/facilities/cedarhills.asp)
- Curbside recycling services: [www.your.kingcounty.gov/solidwaste/garbage-recycling/recycling.asp](http://www.your.kingcounty.gov/solidwaste/garbage-recycling/recycling.asp)

# Waste Prevention and Recycling

phones, computers, monitors, laptops, and TVs) and mercury-containing products (button-cell batteries, fluorescent lights, and mercury switches, thermometers, thermostats).

- the LinkUp program, which helps close the recycling loop by developing markets for recyclable and reusable materials.
- **E-Cycle Washington** that allows residents to recycle their computers, monitors, laptops and TVs for FREE.
- environmentally preferable purchasing programs, including promotion of recycled-content products and materials reuse.

## Needs and Strategies for Waste Prevention

Preventing waste is the first step in waste reduction – by preventing waste from being generated, there is less waste to manage overall. Resource conservation means using materials such as wood, water, oil, and minerals wisely so that the earth’s supply will last as long as possible, and the environmental effects of extracting these materials are minimized. The U.S. Environmental Protection Agency puts preventing waste at its source at the top of the nation’s hierarchy for managing waste. Waste prevention involves changing consumption habits and production methods to conserve resources.

## Consumption and Consumerism in the U.S.

The 300 million people who live in the U.S. consume more resources and create more waste than the 1.3 billion people in China or the 1.1 billion people in India. Though the U.S. represents less than 5 percent of the world’s population of 6.7 billion, we consume about one-quarter of the earth’s total biological capacity, defined as the capacity of ecosystems to produce biological materials and absorb wastes using current technology.<sup>4</sup> The U.S. used about 21 percent of global energy consumption in 2006.<sup>5</sup> For many mineral resources, such as aluminum, the U.S. also consumes a disproportionately large share of world supplies, relative to its population.

In a lifetime, the average American throws away well over 100,000 pounds of solid waste. Yet the total waste we are responsible for is actually much higher, since much waste is also generated in resource extraction and manufacture of the products we consume and dispose. Some studies estimate this “upstream” production waste as 10 to 20 times higher than the amount we actually throw away.

Why do we consume so many more resources than other nations? Multiple factors



### Did You Know?

Containers and packaging make up 32 percent of the U.S. municipal solid waste stream. In 2007, King County spent \$41 million on products that are considered environmentally preferable, saving \$877,000 over conventional products.

Currently, 98 percent of King County single-family households who have curbside garbage collection can recycle food scraps and food-soiled paper in their curbside yard waste cart.

Source: King County Solid Waste Division, February 2009.

Since January 2009, Washington residents can recycle their unwanted televisions, laptops, computers, and monitors for free through the E-Cycle Washington program.

Source: [www.ecyclewashington.org](http://www.ecyclewashington.org)

# Waste Prevention and Recycling



help drive this consumption. American marketers lead the world in per-capita spending on advertising.

Convenience and disposability are frequent selling points.

Many disposable products, like paper towels and diapers, have largely replaced their durable counterparts.

Planned obsolescence, in which durable products – like clothing, furniture, appliances, and cars – are designed to be replaced before they are worn out, also contributes to increased consumption.

However, it does not have to be this way. Many countries with high standards of living have successfully reduced their waste. For example, several nations in western Europe generate only half as much waste per capita as the United States. The concept of sustainability involves managing current and future needs to foster strong communities, stable economies, and healthy ecosystems; this chapter's appendix provides more information on promoting sustainability. MRCs can teach others how to reconsider their consumption and recommend specific strategies, such as the ones outlined below, for preventing waste before it enters homes or workplaces.

## Shopping Smart

- **Decide what you really need.** Consider what you will use the product for, how often you'll use it, what the alternatives are, and whether you can manage without it.

- **Consider alternatives to new products,** including used goods, repair of existing products, rental or sharing of items, or reuse of something you already have.
- **Choose the product and the package to minimize waste.** Consider what it is made of, where it came from (were toxic materials or chemicals used in its production?), whether it is made to last, its packaging (how much, what kind), and whether the product or packaging contains recycled content or can be reused or recycled. Buying in bulk, economy size, or concentrated forms can also reduce the amount of packaging needed to obtain the same amount of product.
- **Be an EcoConsumer.** Visit [www.KCecoconsumer.com](http://www.KCecoconsumer.com) for resources and tips.
- **Shop local.** Buying locally grown food and locally made products can reduce environmental impacts (such as those associated with transportation) and bolster the local economy.

## Reducing Junk Mail

The U.S. Postal Service delivers more than 101 billion pieces of advertising mail every year. A significant portion of this advertising is unwanted or "junk" mail. Recycling junk mail is a good start, but reducing its flow can conserve natural resources – and your sanity. Strategies to help reduce junk mail include:

- **Keep your name from becoming a commodity.** When you enter a contest,



### Reduce Junk Mail

Contact the Direct Marketing Association Mail Preference Service to remove your name from many national mailing lists. This free service is good for five years. It works only for national lists and residential addresses. [www.dmachoice.org](http://www.dmachoice.org)

Visit the Catalog Choice website, a free service sponsored by several environmental nonprofits, to decline unwanted catalogs: [www.catalogchoice.org](http://www.catalogchoice.org)



# Waste Prevention and Recycling

donate money, purchase a mail-order, request a rebate, send in a warranty card, or subscribe to a magazine, you may be added to mailing lists – which may be rented, sold, or traded. To limit unwanted mail, write “Do not rent or sell my name” or “No mailing lists” on these forms.

- **Request removal from specific mailing lists.** Call the customer service number (often toll-free) of the organization or business to request removal of your name from their mailing list. Have the mailing label handy, or mail it back with a signed, dated written request. Catalog Choice is a

free service sponsored by several environmental nonprofits that makes it easy to unsubscribe from thousands of individual catalogs ([www.catalogchoice.org](http://www.catalogchoice.org)).

- **Get off national lists.** Contact the Direct Marketing Association (see page 4) to remove your name from national mailing lists.

See King County’s brochure, *How to Reduce Junk Mail*, for more information.

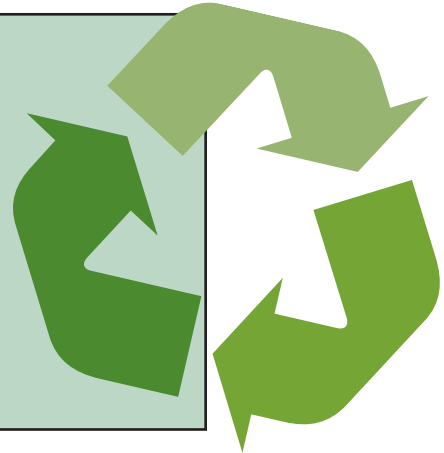


## Did You Know?

### Close the Loop

*Purchasing packages made with post-consumer recycled content – materials collected from households and businesses for recycling – builds markets for recycled materials and helps close the recycling loop.*

*Pre-consumer or post-industrial recycled materials use fewer resources than virgin resources. They consist of scraps from the manufacturing process fed back into production.*



## Endnotes

- 1 U.S. Environmental Protection Agency, Office of Solid Waste, Municipal Solid Waste Generation, Recycling, and Disposal in the United States: Facts and Figures for 2006, EPA530-F-07-030, November 2007.
- 2 King County, 2006 Solid Waste Division Annual Report, March 2007, Appendix, Table A-4.
- 3 Zero waste is another term used to imply 100 percent efficiency in waste management. This goal requires eliminating subsidies for raw material extraction and waste disposal. It also involves holding producers responsible for their products and packaging throughout their lifecycle and conversion to new products. Zero waste is a part of the goal of Zero Waste of Resources 2030.
- 4 U.S. Census Bureau, “U.S. and World Population Clocks,” [www.census.gov/main/www/popclock.html](http://www.census.gov/main/www/popclock.html); Global Footprint Network, “Data and Methods for National Footprint Accounts.” [www.footprintnetwork.org/gfn\\_sub.php?content=datamethods](http://www.footprintnetwork.org/gfn_sub.php?content=datamethods)
- 5 Energy Information Administration, International Energy Annual 2004. [www.eia.doe.gov/emeu/international/energyconsumption.html](http://www.eia.doe.gov/emeu/international/energyconsumption.html)

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