

Chapter 4 | Consumption and the Three Rs



The three Rs

About 1.3 million tons of garbage are generated in Hennepin County every year. From packaging and food scraps to junk mail and excess paint – it takes a lot of time and money to deal with all of that trash. Most are familiar with the phrase “reduce, reuse, recycle,” but let’s consider how well we truly understand the three Rs.

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Reduce

When a consumer declines to buy something or a manufacturer opts not to produce a product, they are practicing source reduction or waste prevention. Preventing waste in the first place is the first and most impactful step to take in managing waste. Reduction is at the top of the waste management hierarchies from both the U.S. EPA and State of Minnesota.

The reduce part of the three Rs refers to any method used by a consumer or producer of a product to reduce the amount of solid waste that will require some sort of management, whether that be recycling, composting, incineration or disposal. If something is never created or you don't buy it, you don't have to worry about how to reuse it or dispose of it later on.

Source reduction can also be used to reduce toxicity in the waste stream. For example, consumers practice toxicity source reduction when they buy or make non-toxic cleaning products.

Reuse



Reuse means finding ways to put existing materials back to their intended use and using things over and over again. There are many ways to practice the second R. Using durable, reusable items in place of disposable options is a good place to start. Things to use reusable items for include

coffee mugs, food containers, napkins, shopping bags, straws, utensils, and water bottles. By helping to avoid disposable items, this strategy also helps accomplish the first R – reduce. You can also donate to and buy items from reuse retailers like thrift stores and consignment shops, or look for reused items on online swap sites.

Recycle

Recycling refers to systems that collect, separate, process and market materials from the waste stream so they can be manufactured into new products. Many materials can be recycled. Types of paper, glass, metals, and plastics are collected in most curbside recycling programs, and other materials like electronics, mattresses, and motor oil are collected at drop-off sites. Organics recycling, where food scraps, food-soiled paper, and compostable products are turned into compost, is another form of recycling.

Some recycling programs are supported by product stewardship, which means that manufacturers take responsibility for their products from “cradle to cradle.” This includes providing and paying for the collection, reuse, and recycling of the products they make when those products are no longer being used by the consumer.



Consumption

Every product manufactured impacts the planet. Manufacturing uses resources and contributes to pollution. Waste prevention involves changing consumption habits and production methods to conserve resources.

When we must buy something, we can reduce the environmental impact by purchasing durable and made-to-last products, looking for products with recycled content, choosing to reuse products instead of buying new, and selecting products with minimal packaging.

We are consumers living in a market economy. Many factors influence our purchasing decisions, including attitudes toward the gross domestic product (GDP), product marketing strategies that exploit our values and emotions, and the planned obsolescence of goods produced.

Consumerism and the GDP

All consumption contributes to the gross domestic product (GDP), which is the total value of all the goods and services produced in the economy in one year. The concept of GDP is influential in shaping our attitudes and decisions as consumers. We are told that the country's economic well-being is linked to our consumption of goods. The more we buy, the better off our economy will be. Conversely, (by implication, at least) consuming less makes us worse off.

But this is a faulty argument. GDP is a quantitative measure, not a qualitative one. Though it reflects the numbers of goods and services purchased, it doesn't evaluate products in terms of their social or environmental benefits or impacts. Consider the following examples:

- Buying cigarettes contributes to the GDP. So does the cost of health care services required to treat the myriad diseases associated with smoking.
- An oil spill that requires cleanup and restoration services will raise the GDP.
- Producing excess packaging and undesired junk mail also enhances the GDP.

Many countries, such as Germany, Sweden, and Switzerland, have standards of living equal to the U.S., but they generate half the amount of waste per capita! We don't improve the quality of our lives by increasing our waste stream.

The 325 million people who live in the U.S. consume more resources and create more waste than the 1.38 billion people in China or the 1.32 billion people in India. The U.S. represents less than 5 percent of the world's population, but we consume about one-quarter of the Earth's total biological capacity. This is the capacity of ecosystems to produce biological materials and absorb wastes using current technology. About 18 percent of global energy in 2015 was consumed in the U.S., according to the Energy Information Administration. For many mineral resources, such as aluminum, the U.S. also consumes a disproportionately large share of world supplies relative to its population.

The notion that we must consume ever-increasing quantities of stuff to keep the economy growing is flawed for several other reasons. In a world of finite resources, perpetually increasing consumption cannot ultimately be sustained because it involves extracting raw materials faster than they can be naturally replenished. Experience also tells us that, even before we run out of those key resources, the pollution and habitat impacts of increased consumption will negatively impact the quality of life for people and the planet. Finally, although consumer spending does stimulate the economy and creates jobs, we don't need to limit our spending to low-quality/high-waste items. Buying high-quality, durable goods, services and life-enriching experiences and putting money into conventional savings and investments will also fuel the economy, usually with less waste.

A resource-hungry world and the need for sustainable materials management

Our reliance on minerals as fundamental ingredients in the manufactured products used in the U.S. – including cell phones, flat-screen monitors, paint and toothpaste – requires the extraction of more than 25,000 pounds of new, non-fuel minerals per capita each year. This rapid rise in mineral use has led to serious environmental impacts, such as habitat destruction, biodiversity loss, overly stressed fisheries and desertification.

It is projected that between 2000 and 2050, the world population will grow 50 percent, global economic activity will grow 500 percent, and global energy and materials use will grow 300 percent. Commenting on the effects of material resource use on the environment, the heads of major research institutes in the United States, Germany, Japan, Austria and the Netherlands have noted that, "unless economic growth can be dramatically decoupled from resource use and waste generation, environmental pressures will increase rapidly."

In addition to exceeding the Earth's bio-capacity by extracting too many materials, we return most of what we extract to the Earth as waste very quickly. According to the World Resources Institute, "one-half to three-quarters of annual resource inputs to industrial economies is returned to the environment as wastes within just one year."

Not only are we drawing upon nonrenewable resources and impacting the environment at an increasing rate, we are also creating more waste. As U.S. consumers have grown to favor disposable products and convenience goods, waste has increased at all stages of the material life cycle.

Advertising

We're surrounded by advertising campaigns that are strategically designed to influence our purchasing decisions by confusing our wants with needs. Although ads do provide us with information about new and improved products, they are often designed to pressure us to buy things we don't really need.

Advertisers rely on a few "hot button" themes: happiness, youth, status, success, luxury, convenience, and beauty. The convenience theme figures prominently in product marketing. For example, consider the number of ads on television for household items such as paper towels and plastic wrap that are convenient but disposable. "Time-saving" instant/microwavable meals – many of which are packaged in non-reusable and possibly non-recyclable plastic dishes – appeal to consumers' desires for convenience.

As consumers have become more environmentally conscious, we've begun to see green marketing campaigns. Unfortunately, these appeals to a "green ethic" may not guarantee the environmental soundness of the product or its packaging.

The following examples illustrate possible ways that green marketing can be misleading, or "green washing:"

- **"Biodegradable"** is a term you may see on packaging often intended to imply the item is compostable. Biodegradable means that an item decomposes under typical conditions. Many assume that is a relatively short amount of time, when actually the timeline for biodegradation varies widely. Unprocessed materials like fruits and vegetables can take as little as a week to a few months to biodegrade, while plastics take thousands of years. There is no regulation on the use of this term, so it's a term to view with caution.
- **"Recyclable"** labels on nationally distributed products can be misleading because of differing local conditions. The collection systems, processing facilities, and markets for recycled materials vary greatly throughout the country. If a product does not have local resources to get to the respective recycling market, then it isn't really recyclable.
- **"Made of recycled content"** may mean that the item contains 1 percent recycled content, 100 percent recycled content, or any percentage in between. The product being marketed may contain pre-consumer, industrial scrap material, which wouldn't have been landfilled anyway, instead of post-consumer material, which is derived from products that have already served a useful life. As a rule, higher levels of post-consumer content indicate lower environmental impact, but product labels may not tell the whole story.
- **"Environmentally friendly," "Earth-friendly," "eco-friendly," "bio-" or "green"** are essentially meaningless because there are no standards that products with these labels must meet. Still, they're popular and common advertising gimmicks.

Labels you can trust

Some labels have standards, regulations, or guidelines that mean you can trust the information they're communicating. The following are some labels you can trust.

- **How2Recycle:** The How2Recycle label was created to provide consistent and transparent recycling information on packages to consumers in North America. The label is being used by hundreds of large product manufacturers, but it is still relatively new. The label tells consumers how to prep the material for recycling, what type of material the packaging is made of, which part of the packaging is recyclable, and where to recycle it. The label also recently developed a similar format for compostable packaging.



- **BPI certified compostable:** The Biodegradable Products Institute (BPI) is the certifying entity for compostable plastics in North America. Look for the BPI logo on the products you purchase. You can also check to see whether a product meets the BPI standards for compostability at bpiworld.org.



Recycled-content labels explained

- **Recycled-content:** Product contains recovered materials. Recovered materials are wastes that have been diverted from conventional disposal, such as landfills, for another use. Recovered materials include both pre-consumer and post-consumer wastes.
- **Pre-consumer content:** Materials are generated by manufacturers and processors and may consist of scrap, trimmings, and other by-products that were never used in the consumer market.
- **Post-consumer content:** Material is an end product that has completed its life cycle as a consumer item and would otherwise have been disposed of as solid waste. Post-consumer materials include recyclables collected in commercial and residential recycling programs.

Recycled-content products may contain some pre-consumer waste, some post-consumer waste or both. A product does not have to contain 100 percent recovered materials to be considered "recycled," but the higher the percentage of recycled content, the greater the amount of waste that is diverted from disposal and the greater the environmental benefit. Always look at the amount of post-consumer recycled content in a product.

Types of products

Three basic types of products are produced and purchased in the United States: consumable, durable, and disposable.

Consumable products



Consumables include such things as food and fuel. When used (consumed), these products are gone and permanently transformed into energy and waste.

Gasoline is a prime example. We consume

gasoline to propel our cars (energy) while simultaneously producing air pollution (waste).

Durable products

Durable products include clothing, furniture, and tools. These products are designed to be used over and over again, and we can maintain and repair them to ensure longer product life. A sweater, for example, can be maintained by washing and repaired by darning and patching to last for many years.

Only at the end of their useful lives do durable products end up in the solid waste stream. How well a product is made and maintained along with how often it is used determines how soon it will need to be discarded and replaced with a new product.



Disposable products

Disposable products include items like paper or plastic dishes and utensils, non-rechargeable batteries, and personal-hygiene products. Disposables are designed and produced to be used only one time. Once used, they're thrown away.

Among the first disposables to appear on the market were hospital supply products, such as disposable syringes and gloves. They were promoted as being more sanitary than their durable counterparts, and their use is almost universally accepted as a health care standard.

Eventually, the use of disposables expanded from hospitals into homes. Disposable home products are more often touted for their convenience rather than hygiene. They were originally intended to serve as backups to durables, not as substitutes.

Paper towels, for example, were meant to capture the occasional big spill. In most homes today, paper towels have replaced their reusable cloth predecessor. Likewise, disposable diapers were initially intended for use during travel. Now most parents use disposables all the time. Gradually, these and other disposable products have all but replaced their durable counterparts.



Product obsolescence

A much subtler form of disposability is seen in durable products that have been designed for obsolescence. There is quite a difference between an item that is truly worn out and one that is obsolete only because it was poorly made, is out of fashion, or has been upstaged by an "improved" version with "new and exciting" features. Planned obsolescence refers to products that aren't made to last or marketing that tricks consumers into believing they "need" the "enhanced" product.

Advertising executive Earnest Calkins is often credited with introducing the strategy of rapid, planned stylistic changes into 20th-century business thinking. In 1930 he wrote, "the purpose is to make the customer discontent with an old type of kitchen utensil, bathroom or motor car because it is old-fashioned, out-of-date. The technical term for this idea is obsolescence. We no longer wait for things to wear out. We displace them with others that are not more effective but more attractive" (Modern Publicity, 1930).

Planned obsolescence is now commonplace in many industries, most notably automobiles, clothing, electronics, home furnishings, and sports equipment.

Each year, manufacturers of men's and women's clothing forecast which colors they expect to be popular in the upcoming season. And, year after year, consumers purchase the color that is "in." Louis Cheskin of the Color Research Institute contends that, "most design changes are not made for improving the product either aesthetically or functionally, but for making it obsolete." Although design and marketing for obsolescence increases sales

for manufacturers, it has the ultimate and unsustainable effect of turning otherwise durable products into quickly replaced and then disposed of commodities.

Planned product obsolescence contributes to our waste problem and increases consumption of energy and natural resources. We can change it only if we know what we actually need rather than letting ourselves be influenced by advertising and trends.

Reducing waste

CRAs play a vital role in teaching others how to reconsider their consumption and recommend specific strategies for preventing waste before it enters homes or workplaces.

By purchasing items that are overly packaged, disposable or of poor quality, your cash can soon end up as trash. Taking steps to reduce waste at home and when we shop is good for the environment and cost-effective.

Here are some steps you can take to reduce waste:

1. **Avoid disposables:** From plastic bags to water bottles and mugs to paper towels, napkins, plastic baggies, straws, cleaning wipes, coffee pods and more, there are so many opportunities to choose durable, reusable items over disposable.
2. **Shop for less packaging:** Avoid single-serve and individually wrapped items. Buy in bulk and bring bags or containers to fill. Choose products in recyclables or refillable containers.
3. **Borrow, rent, and shop used first:** Before you run to the store to buy a new item, think about how much you will use it. Could you borrow one from a friend or neighbor, rent it at a local store, or purchase it used?
4. **Buy well, buy once:** Well-designed and constructed products that are repairable will last longer and usually save you money, even if they cost more initially.
5. **Repair before replacing:** When something breaks, our first instinct these days is often to replace it. But before jumping to that conclusion, consider if repair is an option. Bring the item to a Fix-It Clinic, see if there are repair shops or services for the item, or look for repair tutorials online.
6. **Sell, give away, or donate usable clothing and household goods:** Keep the reuse cycle going by donating or giving away usable items you no longer want or need.
7. **Get your name off junk mail lists:** The average household receives as much as 100 pounds of

unwanted mail each year. See the Hold the Mail brochure for ways to get off junk mail lists.

8. **Give green gifts:** Avoid over-packaged, resource-consuming gifts that need batteries or electricity. Consider making a gift, sharing an experience, providing a service or giving an environmentally friendly product. And be sure that whatever you give, it's something the person really wants.
9. **Green your celebrations:** It can be easy to let your green habits slide when you're planning a party or joining a celebration. But this is also a great opportunity to lead by example! Carefully plan the amount of food being served, use reusable dishware, decorate with items that are reusable, recyclable, or compostable, make sure recycling and composting containers are available and your guests know what goes where. See our Green Party Planning checklist for more ideas.
10. **Choose actions that are right for you:** Take a look in your trash and recycling. What type of waste are you generating the most of? Are there opportunities to reduce or avoid that waste? Choose actions that will have the most impact on reducing your waste and that your household is likely to successfully adopt.

Packaging

Products are not the only waste-generating goods. Increasingly, packaging has become a focus of solid waste planners and consumers. And for good reason! Product packaging constitutes a large portion of the household waste stream and is a significant contributor to roadside litter. Containers and packaging made up 30 percent of the U.S. municipal solid waste stream in 2014.

Product stewardship for packaging isn't common yet in the U.S., but many European countries already require manufacturers to meet increased recycling goals and/or pay fees to cover the cost of recycling packaging materials through programs such as the Green Dot (the German "Grüne Punkt").



Purposes of packaging

Packaging has different purposes and functions. Some of these functions are critical while others are not. Here are some of the whys of packaging:

- **Product protection:** Sealed containers delay food spoilage. Wax, cellophane, and plastic wraps prevent moisture loss. Rigid foam, bubble wrap, cardboard, and paper padding protect breakable products during shipping. Oversized packaging is perceived to deter theft.
- **Identification:** Some packaging helps consumers identify products. For example, we expect beer bottles to be brown, green, or clear, depending on the brand.
- **Convenience:** Containers for ready-to-eat salads, other fast food items, and microwavable dinners are perceived as time-savers because we don't have to care for them. Once used, these materials are usually tossed into the trash.
- **Marketing:** Packaging is designed to sell by making one manufacturer's products look more desirable than those of its competitors. This marketing function often results in over-packaging. Children's toys, for example, are thought to be particularly enticing if they can be seen through hard plastic boxes.

Packaging materials

Glass, paper, plastic, aluminum, steel, and wood are commonly used packaging materials. All of these materials can be used in single-material and mixed-material packaging.

Aluminum cans are an excellent example of single-material packaging, which is generally easier to recycle than packaging created from multiple materials.

A mixed-material package is made of more than one type of material. Most of the products we buy come in mixed-material containers. Beverages, for example, may be sold in glass bottles that are covered with paper or plastic labels and sealed with plastic-lined metal caps. This is four different types of materials.

Sometimes, the mixed materials in packaging can be easily separated. Bottle caps, for example, can be removed from the bottles. Plastic cereal box liners can be removed so the boxboard can be recycled.

Some mixed-material packaging is made from inseparable, or composite, materials. Common composite-material packages include milk cartons and freezer boxes. Such packaging can be hard and sometimes impossible to separate.

Practicing better consumption by precycling

As we've seen, we're subjected to external influences that shape our purchasing habits and discourage waste reduction behavior. Becoming aware of these influences is a necessary first step in changing our behavior. Precycling is an approach to taking steps to become better consumers.

Much of the time, people make purchasing decisions with little prior thought or planning. As a result, they may buy products that aren't as useful as they had thought. Ill-considered purchases become clutter and eventually waste. This process contributes to the excess use of resources and adds to our waste stream.

To avoid this, consider this simple, three-step process:

1. Decide what you need.
2. Consider and identify alternatives to buying new products.
3. Select the best product for your real needs.



Precycling strategies

- **Make your own:** Use scrap paper for note pads, reuse glass jars and plastic tubs for canisters or containers, relabel and resend envelopes
- **Rent or borrow:** Things like ladders, slide projectors, party supplies, yard and garden equipment, camping and sports equipment, and library books
- **Maintain and repair:** Automobiles, shoes, clothing, appliances, furniture, tools
- **Buy used or resell:** Kitchenware, appliances, clothing, furniture, toys, musical instruments, sports and camping equipment
- **Donate or resell:** To charitable organizations, thrift stores or consignment shops; at rummage or yard sales; through classified ads, Craigslist, Facebook Marketplace, NextDoor

Step 1: Deciding what you need

We are all targets of marketing campaigns designed to make us think we need what manufacturers are selling.



Before making a purchase, ask the following questions:

- Why do I want this?
- How often will I use it?
- What are my alternatives to this product?
- Can I get along without it?
- What will I give up in order to buy this (e.g., time spent earning money to buy it, money and time spent on maintaining and disposing of it)? Is it worth it?

Step 2: Finding alternatives

Once you've decided what you need, consider alternatives, such as reusing an existing item rather than buying a new one. We can reuse by using items we already have, giving away or selling goods we no longer need, or purchasing used items. Reuse can also include renting or borrowing.



Party rental stores are great places to get dishes, flatware, and linens for larger parties and gatherings. There are now tool and toy libraries available (in addition to your traditional libraries for books and media). And don't forget about your family, friends, and neighbors – they are great resources for borrowing, sharing, swapping, and repairing.

Before purchasing something new, ask yourself:

- Is there something I already have that would serve the same purpose?
- Can I make it from things I already have?
- Can I borrow or rent it?
- Can I buy it used?

Step 3: Selecting the product and the package

Sometimes purchasing a new product really is the best option. Once you've gone through steps one and two and realized that this is the case, use selective shopping strategies. This means choosing both the product and its packaging carefully in order to minimize waste.

All manufacturers claim their products are the best. Use your own judgment by asking these questions before you buy:

- Will this product last? Some toys can be passed from child to child, while others break before the first child is tired of them. Purchasing durables, such as cloth napkins and lunch food containers, eliminates the need to replace them after each use.
- Is it repairable? Can the shoes be resoled or are parts replaceable? Well-designed and constructed products that are repairable will last longer and usually save you money, even if they cost more initially.
- Is it a classic? Will I be happy with it years from now?
- What will happen to it at the end of its life? Is it made out of materials that can be safely returned to the natural environment?
- Is the product free of unnecessary packaging? Is the package refillable or recyclable? Choose products with the least packaging over individually wrapped items. This will save you money as well.

Selective shopping: Items to look for

- Recyclable products: Cardboard and paper bags, aluminum cans, glass jars and bottles, tin cans
 - Recycled content: Toilet paper, facial tissue, greeting cards, printer paper, glass jars, aluminum cans, paperboard, cereal boxes
 - Durable products: Cloth diapers, refillable razors, refillable pens, cloth napkins, towels and rags, cast-iron pots and pans, covered food containers, travel mugs, rechargeable batteries
 - Minimal packaging: Meat wrapped in paper rather than Styrofoam and plastic wrap, no single-serving packages
 - Bulk buying: Loose produce, meat and seafood from a meat counter, food from self-serve bins (bring your own jars or containers), dish and laundry soap, hardware supplies, large blocks of cheese
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We live in a society where the old saying, “use it up, wear it out, make do, or do without” has been replaced by marketing strategies that encourage impulse buying. These strategies help us to reduce waste by considering our purchases before we make them.

People acting together can make a difference, so don't hesitate to speak up. Tell store managers what kinds of products and packaging you prefer. Bring a reusable bag or ask for your purchase not to be bagged (such as when you order just a sandwich). If just one-quarter of U.S. households used 10 fewer plastic bags a month, 2.5 billion fewer bags could be made each year. Four or five reusable bags used multiple times at least once a week can replace 520 plastic bags a year.

Bring your own containers to restaurants to bring home leftovers. Contact companies and let them know when products don't last or if packaging is excessive or non-recyclable. If enough people do this, manufacturers will change.

Resources

- **[hennepin.us/choosetoreuse](https://www.hennepin.us/choosetoreuse)**: A searchable guide of places to sell, donate, buy, repair, rent, and share reusable items plus reuse events and spotlight on reuse articles.
- **[hennepin.us/greendisposalguide](https://www.hennepin.us/greendisposalguide)**: A searchable directory of recycling and disposal options for common household items.
- **[hennepin.us/recycling](https://www.hennepin.us/recycling)**: Information about residential recycling in Hennepin County.
- **[hennepin.us/-/media/hennepinus/business/work-with-hennepin-county/environmental-education-activities/reducing-waste-appendix-green-party-checklist.pdf](https://www.hennepin.us/-/media/hennepinus/business/work-with-hennepin-county/environmental-education-activities/reducing-waste-appendix-green-party-checklist.pdf)**: Green party checklist
- Print resources: order copies at **[hennepin.us/environmentaleducation](https://www.hennepin.us/environmentaleducation)**
 - Hold the Mail
 - Residential recycling guide
 - Green Disposal Guide magnet
 - Drop-off facility brochure