

5. Waste



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In 2015, U.S. homes, schools, businesses and hospitals produced 262.4 million tons of municipal solid waste (MSW), also known as garbage. Individually, each of us produced an average of almost 4.5 lbs of waste per day. To put that in perspective, the U.S. produced 88.1 million tons of MSW in 1960, and each American was responsible for just 2.68 lbs a day.^[1]

Back in 1960, there was no such thing as recycling. We've come a long way since then, achieving a combined recycling and composting rate of 34.7%, but that rate has stayed basically the same since 2010.^[2]

Municipal waste does not include industrial waste, which comprises the majority of our nation's waste stream, but as consumers, we're not off the hook. We contribute to the problem of industrial waste by our consumption of manufactured goods—i.e., all the stuff we buy.

Why should we be concerned about reducing waste?

- **Save resources**—Many discarded products contain resources that are becoming scarce, like precious metals. Using them again saves digging up even more.
- **Save energy**—Making new goods takes energy; better to keep the old ones in use as long as possible.
- **Save money**—Get more use out of things you already own, rather than throwing them away and buying new.
- **Reduce climate change**—Rotting, buried garbage often produces methane, a greenhouse gas 28 to 36 times more potent than carbon dioxide.

What options do we have for dealing with this waste?

In order of preference, they are:

1. **Refuse**—Do you really need it?
2. **Reduce**—Do you need as much of it?
3. **Reuse/repair/repurpose**—Can it be fixed, used by others?
4. **Recycle**—Can it be broken down and used again?
5. **Return to earth (rot)**—Can it be composted?
6. **Landfill and incineration**—The last resort.

Each of these actions will help you reduce the amount of waste you produce. In your group, chat about each item and then decide which ones you want to tackle and when. Record your action plan on page 5.16.

- **Understand your own waste.** Let's take a look at what's going out the door each week so we can plan how to reduce it. (5.3)
- **The Story of Stuff.** Learn more about the impacts of our excessive consumption, how it contributes to waste, and what we can do about it. (5.4)
- **Refuse.** Just because it's free, that doesn't mean you need it. (5.5)
- **Reduce.** Enough is just the right amount. (5.6)
- **Reuse, recycle, repurpose, repair.** Before you even think of throwing something away, consider how it could be used again. (5.10 and 5.12)
- **Return to earth: Make your own compost.** This is a great activity for anyone who loves to grow things and is ready to take care of their own compostable waste. (5.14)

As you begin this journey, you may want to get inspiration from others who've tackled waste reduction with great success. For example, Bea Johnson and her family have shared their waste reduction practices at the **Zero Waste Family blog** and website: <https://zerowastehome.com/blog/>.

Notes:



Challenge

Every week, most of us make a trip to the garbage can and recycling bin. We drop in a bag or two (or more) of carefully separated (or not separated) waste and resolve to do better next week. But do we? Would we even know?

Anytime you want to make a change, it helps to know where you are starting from. What kind of “waste” are you actually producing?

- In the U.S., paper and paperboard products make up about 26% of the waste stream. We hear a lot about the “paperless office,” but our lives are filled with paper.
- Yard waste is 13.3% of the waste stream.
- More worrisome is the 13.1% of waste in the form of plastics, an amount that continues to grow year after year.
- Finally, about 2% of our waste is consumer electronics.^[2]

Solution

Our first step is going to be cataloging our waste for a week (or a month) so we know what we’ve got, and then we can decide what to do. Open up the bags and separate it into a few categories.

(These are ideas; you may want to pick additional categories if that’s helpful for you):

- **Recyclables**
 - Paper
 - Glass
 - Metal (cans, usually)
- **Compostables**
 - Food-contaminated paper
 - Food
- **Non-Recyclables**
 - Electronics
 - Non-recyclable plastics
 - Food packaging (the hardest waste of all to avoid)
 - Misc. trash

If you want to measure your success from week to week, consider weighing and recording your trash and recycling each week.

Transition Streets

5.4 THE STORY OF STUFF

The Practical
Action Plan

Watch “The Story of Stuff” video on DVD or online at
http://bit.ly/story_of_stuff

At the heart of our country’s waste problem is an obsession with “stuff.”

“We are using and throwing away too much stuff, more than our share ... The U.S. has 5% of the world’s population but consumes 30% of the world’s resources and creates 30% of the world’s waste.” -The Story of Stuff



Learn about the real impact of consumption by watching “The Story of Stuff,” a fast-paced 20-minute video that looks at the underside of our consumption habits. It’s available free online (see link above). After watching the video, choose one or two questions to discuss from the accompanying Discussion Guide https://www.nwf.org/~media/PDFs/Eco-schools/annie_leonard_discussion_guide.ashx.

For example, has anyone in your group lived or traveled in a developing nation? Did you notice differences in the cultural role of consumption? Differences in the prevalence of advertisements?

Annie Leonard, the producer of “The Story of Stuff,” said: “The American economy’s ultimate purpose is to create more consumer goods.”^[3] Do you think that’s true? Can that change? Should it?

Leonard said: “... many environmental and social change efforts have come to reflect the centrality of shopping in our culture, suggesting that change can be made ... through alterations in our individual consumption patterns. These efforts—buy Fair Trade or organic, use a reusable bag, screw in a CFL lightbulb—are a great place to start, but they are a terrible place to stop.”

- Do you think change through mindful shopping is an overall good thing, or a problem?
- How could we move beyond “voting with our dollars”?

What about all this stuff?

Cost: none

**\$ Savings:
low-high**

Effort: low

**CO2 saved:
med-high**

Solution

You've probably heard of the 3 Rs: Reduce, Reuse, Recycle. But how about the 5 Rs? **Refuse, Reduce, Reuse (repurpose, repair), Recycle and Return to earth (rot).**

If we really want to make a difference in waste, we'll have the biggest impact when we change our consumption habits. Refusing what we do not need (even if it's something we've been offered for free – like that T-shirt, sticker or water bottle!) is a first step.

Reduce Temptation

- Stop looking at catalogs. Get off the junk mail list by registering at <http://www.dmachoice.org>.
- Reduce your exposure to ads whenever possible.
- Break the habit of shopping as entertainment.

Understand *Needs Versus Wants*

“You can never get enough of what you don't need, because what you don't need won't satisfy you.” — Dallin H. Oaks

Make a list of the things you've bought in the last month (especially those things you didn't plan to buy). Why did you buy it? Was it a real need or a want?

Now think about the things you use every day that bring you pleasure. Take a moment to feel grateful and satisfied.

Understand Stress Buying

People in the U.S. have less leisure time now than any time since the feudal period. All that work adds up to a lot of stress and many people turn to shopping for relaxation. What are some ways we could change our work-life balance to find more satisfaction?

Notes:

Cost: none

\$ Savings:
low-high

Effort: low-med

CO2 saved:
med-high

Challenge

When we talk about **REDUCE**, we could mean two things: reducing how much we use and reducing how much we waste. These can be inter-related. Pay particular attention to three harmful types of waste: food waste, plastic waste and clothing waste.

In Paul Hawken's book, *Drawdown*,^[4] reducing **food waste** is identified as #3 of 100 solutions for reducing global warming. That's because food waste is responsible for adding 70.5 gigatons of CO2 into the atmosphere. A shocking 30% of all the food we grow never gets eaten (see 4.6). When food goes in the bin, so does the energy, water, fertilizer and human-power needed to grow it.

Plastic waste is another huge challenge. It's everywhere – in the furthest reaches of the arctic, inside sea animals, even in the salt we eat!^[5] Buying—and using—less plastic is a worthy, and sometimes seemingly impossible goal. Try it anyway.

The price of **clothing** has been decreasing for decades, but so has its quality. That's because clothing retailers have learned that the key to higher profitability is “fast fashion”—fashion trends that last a month and clothing that quickly comes apart at the seams.

The movie, “The True Cost,” documents the impact fast fashion is having on our environment, on garment workers, and on countries where donated clothing get dumped. You can get the movie as a digital download here:

<https://truecostmovie.com/watch/the-true-cost> (\$10).



Solution

Wondering where to start with reducing the glut of clothing in your closet? Try a minimalist approach. It frees up space AND time you don't have to spend trying to figure out what to wear every morning. Before you buy your next sweater or pair of shoes, learn more about the true cost of fast fashion.



What can you do?

- Trying to reduce how much plastic packaging you bring home from the grocery store? Bring empty jars, reusable containers and bags to fill at the bulk bins. Try the smartphone app ZeroWasteHome to identify stores in your area that sell items in bulk.
- Before you go-big at the warehouse club with a 5 lb. bag of salad, think about how much your family can really eat before it goes bad. Buying in bulk only works if you can properly store the food or promptly eat it.
- Understand the “best by,” “sell by” and “use by” dates on food.^[6] Most Americans misunderstand these dates and throw away perfectly good food.
- If food does go bad, compost it (see 5.10) or start a worm bin.
- Look for products with little or no packaging. Choose products with recyclable packaging over non-recyclable plastic packaging.
- For items you don’t use often (for example, tools, lawn mowers, equipment), see if you can borrow or rent rather than buy them.
- Rather than throwing away clothes and shoes, look for places where you can get things repaired: a local tailor or a shoe repair shop. You can also learn how to mend from watching videos online or from old books.
- Learn how to properly and promptly clean clothes to prevent stains. You can find videos online.

Notes:



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5.8 REDUCE FOOD PACKAGING

The Practical Action Plan

Cost: none

\$ Savings:
none-low

Effort: low

CO2 saved:
low-med

Challenge

According to the Environmental Protection Agency (EPA), food and food packaging accounts for almost 45% of the material in landfills in the U.S.^[7] Food packaging is a significant portion of trash discarded by the public.

In addition to producing unnecessary waste, packaged, pre-chopped vegetables go bad faster and often cost more.



Solution

Reduce the amount of food and packaging you throw away by planning ahead, buying fresh ingredients, growing your own food, and wasting less (see hints and tips on the following page).

Packaging we can't avoid can sometimes be disposed of through reuse or recycling rather than sending it to a landfill.

EPA Food Recovery Challenge: To reduce the amount of food and packaging that reaches landfills, the EPA started the Food Recovery Challenge. Visit <http://www.epa.gov/foodrecoverychallenge/> for resources, including an assessment tool for tracking food and packaging waste.



Next steps, hints & tips

- Buy fruit and vegetables loose or in paper bags from local shops.
- Purchase dry goods (nuts, rice, etc.) from the bulk section. Start to think of shopping as “refilling.” Bring your own containers (jars, bags, etc.) to refill.
- Take bags with you to the store (keep them in a place where you’ll be sure to remember them, like a bike basket or the trunk of your car).
- Take along your own reusable container or “doggie bag” for leftovers when you eat out.
- Choose larger sizes rather than individually packaged portions – but only if you will eat the food or promptly prepare it for storage.
- Your local coop, high-end grocery store, or specialty shop may have products like oil, vinegar, syrup, shampoo, soap and cleaning products in large containers for refilling containers you bring from home.
- Look for biodegradable and recyclable packaging, such as cardboard.
- Look for milk in reusable glass bottles.
- Ask the store managers what they're doing to reduce packaging and encourage them to step up their efforts.
- Many towns, cities, and even the state of California, are banning single-use plastic bags. Join them by saying “no” to plastic at the check-out counter.
- Start a neighborhood bulk-buying club to save money and packaging. Here’s a great resource to get started: <http://www.smallfootprintfamily.com/how-to-start-a-food-buying-club>.
- Make a list of all the food products your group members make from scratch instead of buying (salad dressing, yogurt, bread, butter, hummus, etc.). Share recipes!

Notes:

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5.10 REUSE

The Practical
Action Plan

Cost: none

\$ Savings:
low-med

Effort: low

CO2 saved:
low-med

The reuse economy

Reuse businesses are a vital part of the local economy in many states, and bring a variety of benefits to the community.

- Reuse businesses tend to be small and locally owned, providing local jobs.
- During tough financial times, reuse businesses increase economic resilience.
- Reusing materials reduces the demand on natural resources.
- Upcycling and repairing products reduces the energy used to create new products and keeps old products out of the landfill.



Fix It!

What you can do

- If something is broken, repair it instead of throwing it away and buying new.
- Consider organizing a neighborhood Repair Café to create a culture of reuse. See <https://repaircafe.org/>.
- When you need something, look first at consignment shops, thrift stores, and online at websites like Freecycle, Craigslist, Ebay, NextDoor, and Buy-Swap-Sell groups on Facebook.
- Sell your used things online, or donate rather than throwing away. You would be surprised at the things people want!
- Give old magazines to a neighbor, doctor's office, school or a Little Free Library.
- Rather than disposables, get durable and reusable cups, drink cartons, napkins, plates and cutlery. You can even find foldable items you can take with you on the go in a purse, laptop bag, or glove compartment.
- Use rechargeable batteries instead of disposable ones. They pay for themselves.
- Buy things that are made from recycled materials and are recyclable.



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5.11 REUSE

Creative reuse

The internet is full of ideas for creative reuse of household objects you might otherwise throw in the trash. Here are a few ideas to get you started:

- Pinterest: <https://www.pinterest.com/>
- 30 Creative Ways to Repurpose and Reuse Old Stuff:
- <http://www.boredpanda.com/creative-reuse-upcycling-repurposing-ideas/>
- 50 Creative Ways to Repurpose, Reuse, and Recycle Old Things:
<http://twistedifter.com/2012/06/creative-ways-to-repurpose-reuse-and-upcycle-old-things/>



Upcycling Ideas: used tires as a playground (Pinterest), toilet paper tubes to organize cables & cords, old credit cards become guitar picks (Twisted Sifter)

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5.12 RECYCLE

The Practical
Action Plan

Cost: none

\$ Savings:
none-low

Effort: low

CO2 saved:
low-med

Recycling conserves important raw materials, energy and natural habitats, and also reduces greenhouse gas emissions. Because recycling keeps valuable resources in circulation, it helps keep down the cost of goods you buy.

The precise benefits depend on the material you're recycling. For example, recycling aluminium saves 95% of the energy of making it from scratch, while recycling glass saves around 25%. That said, glass can be recycled again and again without losing its strength or purity—unlike other materials.



Challenge

In the U.S., we recycle and compost 34.7% of municipal solid waste, (not including backyard composting).^[2] Some cities do much better than that. San Francisco boasts a recycling/composting rate of 80%, with a goal of zero waste to landfill by 2020.^[8] Unfortunately, many municipalities have little to no local infrastructure for collection of recyclable materials.

We have the technology to recycle (and upcycle) much more than we do, from empty aerosol cans to batteries to bicycles. Some things are still beyond the reach of most municipal recycling programs and require extra effort on our part.

Yes, but... doesn't most of what we recycle just end up in a landfill somewhere? If you pay attention to your local recycling guidelines and are careful to place only the correct items in your recycle bin, they will be recycled. Although the greatest environmental benefit occurs when recycling is done locally, even if it's recycled in another country there can be significant carbon savings compared to using raw materials.

Next steps, hints & tips

- Make space next to your bin for recycling containers so it's as simple to recycle as it is to throw away. You can use cardboard boxes, bags, or stacking plastic containers.
- Try putting a sign on your trash can that reminds you to reuse and recycle.
- Look at a local recycling guide or map of recycling drop-off centers to find out what is available in your area. Share that information with your group.
- With glass jars, just rinse and recycle them. Don't worry about removing labels. Metal lids can be recycled too.
- Bathroom products are often forgotten. Rinse out empty bottles while you're in the shower. Even cardboard toilet paper tubes can be recycled or composted.
- With neighbors, organize shared trips to recycling sites for hazardous waste.
- Check the website of your city or county to find out what can be recycled locally and check www.earth911.com to see where to send the stuff that can't. Some examples:
 - Used mobile phones can be sent free of charge to several charities.
 - Old eyeglasses can be donated to Lions Club International for reuse.
 - Used printer cartridges can sometimes be taken back to stores that sell them or shipped back to the manufacturer.

Hazardous waste

Chemicals in hazardous waste can be released into the environment to contaminate our air, water, and possibly the food we eat. Throwing hazardous waste in the garbage is also hazardous to your garbage handlers.

In some states things like batteries, paint, motor oil, electronics and other toxic wastes are banned from the landfill. These materials must be taken to special collection sites.



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5.14 RETURN TO EARTH: COMPOST

The Practical Action Plan

Cost: none

\$ Savings: low

Effort: low

CO2 saved: low

Why compost?

When we throw food in the trash, we waste money, take up space in landfills, and create methane gas (see 4.6). Turning that food into compost not only avoids those emissions, it actually improves soil so that it can do an even better job of carbon sequestration (keeping carbon in the ground).

In some U.S. communities, food scraps and food-soiled papers are collected curbside. In other communities, there are volunteer-run public compost sites.

If these options aren't available to you and you grow anything at all, then with very little effort you could soon be making your own homemade compost—a climate-friendly alternative to store-bought, peat-based versions.

The first benefit of composting that you'll notice is a flourishing garden or window box. Compost improves the nutrient levels of your garden's soil, reduces the need for other fertilizers, increases water retention and reduces erosion.

Do compost	Don't compost
Fruit and vegetable waste and peelings	Meat, fish or dairy—attracts vermin and flies (unless you're using a Bokashi system)
Tea bags and coffee grounds	Hard objects like fruit pits
Crushed egg shells	Invasive weeds
Grass cuttings, leaves	Pesticide-treated plants or yard waste, including leaves from treated trees
Shredded paper, soft cardboard, and soiled paper napkins (unbleached)	Glossy paper or shiny cards—because of the chemicals used in the printing process
Human and animal hair	Sawdust from pressure-treated plywood/lumber
Vacuum dust (only from woollen carpets)	Non-biodegradable materials such as plastic, glass, or metal
Manure & bedding from animals that eat ONLY plants	Cat or dog excrement—contains pathogens that won't be killed in the decomposition process

5.15 MAKE YOUR OWN COMPOST

Getting started

You can make a traditional compost heap or use a worm bin. There are many types of compost bins on the market, although perfectly satisfactory ones can be constructed from scrap timber, trash barrels, bricks, or wire mesh. Instructions for making compost or worm bins are widely available.

A worm bin is a container housing a colony of red wiggler worms, ideal for composting. Worm bins can be kept indoors (in a basement, under the sink, or in a closet) or outside in warm climates. They produce worm castings (compost) and a liquid that forms a concentrated plant food ("compost tea"). There are a variety of worm bins available for sale, complete with "worm starter kits," or you can make your own. Not all compostable materials are good worm food, so do a little research on vermiculture before you get started.



Photo at left: Transition founder Rob Hopkins visits a community compost site run by Kompost Kids in Milwaukee, WI.

Yes, but ... I only have pots and window boxes, not a garden. You don't need to have your own garden to want to properly process food waste. Once the composting stage is over, you can add the worm castings and compost tea to a window box or give it to a neighbor who gardens.

I have absolutely no space for a compost or worm bin. Find a neighbor who is an avid gardener or composter and ask if you can bring your organic waste to them once or twice a week to add to their compost bin.

Additional Resources: For composting tips and instructions to make your own composters or worm bins see:

<http://www.treehugger.com/lawn-garden/4-diy-compost-bins-you-can-build-one-day-video.html>

<http://www.wikihow.com/Make-a-Worm-Compost-System>

<http://www.recyclenow.com/reduce/home-composting/making-compost>

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5.16 YOUR WASTE ACTION PLAN

Reminder

Suggested actions:

- Understand your waste (5.3)
- Learn about “Stuff” (5.4)
- Refuse [5.5]
- Reduce [5.6]
- Reduce food packaging (5.8)
- Reuse (5.10)
- Recycle (5.12)
- Return to earth: Make your own compost (5.14)

What other ideas does your group have that aren't covered above?
Add them below if you think they are relevant for you.

My actions	Already done	When I'll do this	Notes

Group actions

How can you help each other out in your group? List team actions here (with named person and due date):



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5.17 LOCAL RESOURCES

Where to go for local information

Add your own information about local resources, grants, contractors, etc. for each of the energy-saving actions below.

Recycling service:

Recycling guidelines (which items are accepted):

Hazardous waste guidelines & recycling options:

Where to recycle electronics:

Where to recycle batteries:

Local resources for upcycling and creative reuse:

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5.18 THE BIG PICTURE: WASTE

Questions for discussion

Waste is a factor in almost every part of our daily lives. At some point along your waste-reduction journey, you will find your actions at odds with consumer culture and you'll make choices that are unpopular or confusing to people close to you. Don't let that undermine your commitment.

It helps to have a community of like-minded folk you can connect with, who will understand and support you in your commitments. Plan now how you will get support and encouragement.

- Find a supportive Facebook group, like the Non-Consumer Advocate, or a local Zero Waste group. You may find your community's solid waste department or local recycling company is active on Facebook.
- Consider hosting a book group to read one of the popular decluttering books, or a movie night to watch "The Minimalist" movie. Then keep the momentum going by challenging each other to take an action.
- Look for a Minimalist group in your area on Meetup, or a frugal living group on Craigslist.

Waste reduction is more challenging than you think in a throw-away culture. Give yourself the skills and support you need to succeed.

Notes:

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5.19 REFERENCES

References

- [1] U.S. Environmental Protection Agency, “National Overview: Facts and Figures on Materials, Wastes and Recycling,” undated. <https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/national-overview-facts-and-figures-materials>
- [2] Resource Recycling, “National Statistics Show Stagnant U.S. Diversion Rate,” July 30, 2018. <https://resource-recycling.com/recycling/2018/07/30/national-statistics-show-stagnant-u-s-diversion-rate/>
- [3] Quote from *Story of Stuff* is by Raymond J. Saulnier, Chairmen of President Eisenhower’s Council of Economic Advisers, 1959. Quote Page 29, Government Printing Office, Washington, D.C. (HathiTrust Full View) <http://babel.hathitrust.org/cgi/pt?id=mdp.35112204466744;view=1up;seq=2>
- [4] Paul Hawken, *Drawdown*, Penguin Books, 2016. <https://www.drawdown.org/solutions/food/reduced-food-waste>
- [5] Laura Parker, “Microplastics Found in 90 Percent of Table Salts,” National Geographic, October 17, 2018. <https://www.nationalgeographic.com/environment/2018/10/microplastics-found-90-percent-table-salt-sea-salt/>
- [6] Lea Cearine, “How to Tell Whether Expired Food is Safe to Eat,” Consumer Reports, July 24, 2018. <https://www.consumerreports.org/food-safety/how-to-tell-whether-expired-food-is-safe-to-eat/>
- [7] United States Environmental Protection Agency, “Reducing Wasted Food & Packaging: A Guide for Food Services & Restaurants,” 2015. https://www.epa.gov/sites/production/files/2015-08/documents/reducing_wasted_food_pkg_tool.pdf
- [8] Aaron Sankin, “America’s Greenest City: San Francisco Now Reuses 80 Percent of Its Waste,” Huffington Post, October 8, 2012. http://www.huffingtonpost.com/2012/10/08/americas-greenest-city_n_1949160.html

Additional resources

Documentary films about garbage and reducing waste

- **REUSE: Because You Can’t Recycle the Planet** <http://www.reusedocumentary.com/>
- **No Impact Man** <https://colinbeavan.com/search-no-impact/>
- **DIVE! Living Off America’s Waste** <http://www.divethefilm.com/default.aspx>
- **Trashed: No Place for Waste** <http://www.trashedfilm.com/>
- **Garbage Warrior** <http://www.garbagewarrior.com/>
- **Waste Land** <http://www.wastelandmovie.com/>
- **Addicted to Plastic** <http://watchdocumentaries.com/addicted-to-plastic/>
- **The Story of Stuff** website carries several relevant videos, including *The Story of Microfibers*, *The Story of Electronics*, *The Story of Bottled Water*, and in 2019, *The Story of Plastic*. You may also want to watch *The Story of Change* for inspiration on actions to create change. They also offer a curriculum for students, grades 9-12, entitled “Buy, Use, Toss?”