

Quick Study: Where Our Garbage Goes

In a calm stretch of the northern Pacific lies the Eastern Garbage Patch, a stew of trash twice the size of Texas. Deadly for ocean life, the icky area holds some of the two billion tons of waste we create each year. While technology offers hope for more enlightened disposal, the clock is ticking: Garbage will double by 2030.

By Kristina Dell



From [Reader's Digest](#)

Flash Points

- **NIMBY** - Landfills are our country's No. 1 waste management tool, but they can release toxic chemicals into the water and soil around them as well as methane, a global warmer, into the air. In the 1990s, the EPA shut down thousands of leaky landfills, building larger ones with stricter environmental controls. Which means that if you do live near one, it's likely to be a whopper: There were 8,000 landfills in the United States in 1988, and there are fewer than 2,000 today. Where trash ends up is also a touchy, state-by-state game of hot potato. Ever since a court ruled decades ago that New Jersey had to accept others' trash, states have been buying and bartering for dumping rights beyond their own borders.
- **The recycling slump** - Demand for commodities like paper and glass has plummeted, causing the price of recyclables to decrease by 50 to 70 percent. In Berkeley, California, recyclables garnered about \$200 a ton last fall, but today they fetch only about \$35. Some cities have seen recycling turn from a revenue stream to an expense, since they can't even recoup the cost of sorting the goods.
- **Reuse, recycle ... burn?** - "Waste is a terrible thing to waste," says Bruce Parker, president of the National Solid Waste Management Association. His trade group supports giving trash a second life—and landfills a break—by following Europe's lead and investing in more waste-to-energy plants, which convert trash to fuel. As much as 55 percent of waste in countries like Denmark and Sweden heads to such plants, compared with only 8 percent in the United States. Resistance comes from environmental groups, like the Sierra Club and Greenpeace, who say recycling is cheaper and cleaner. The waste-to-energy camp counters that it's not necessarily an either-or: "Countries that have the most waste-to-energy also do the most recycling," says Nickolas Themelis of the Earth Engineering Center at Columbia University.

What's in the can?

The average American tosses 4.6 lbs of garbage every day.

The breakdown: Paper 32.7 %; Yard waste 12.8 %; Food waste 12.5 %; Plastics 12.1 %; Metals 8.2 %; Wood 5.6 %; Glass 5.3 %; Textiles 4.7 %; Rubber & leather 2.9 %; and Other 3.2 %

Where the trash goes

Landfill 54%

Recycling 33.4%

Incinerators 12.6%

Recession recycling

\$10 - The amount per ton Harvard used to be paid for its recyclables

\$35 - The amount per ton Harvard now has to pay to get rid of them

1.7 million

The number of homes the U.S. could power for 24 hours if we turned a day's worth of garbage into fuel

80% - How much of our trash is recyclable

33% - How much of our trash we recycle

60 Days - The average time it takes for a can to be recycled and placed back on the store shelf

\$304,479 - Cost per acre to build a landfill

Trashy nations

Who's tossing out the most—and least—junk worldwide (pounds per capita)

Ireland 1,764

Norway 1,764

U.S. 1,672

Netherlands 1,375

U.K. 1,287

Japan 913

Mexico 759

China 253

The Back-and-Forth

... On Plastics Made From Plants

"Our bioplastic is made from plants that can be grown in 100 days, not oil that takes 100 million years. Even today, it's a good choice."

--Steve Davies, spokesman, NatureWorks, largest U.S. maker

"There are lots of hungry people in the world, and it seems a little odd to be making disposable cups out of bioplastics."

--Hank Green, editor, ecogeek.org, an environmental blog

... On the Socioeconomics of Garbage

"Our research shows 75 percent of landfills and other polluters are in minority and low-income communities."

--Diana Bustamante, executive director, Colonias Development Council of New Mexico

"Our landfill has given the city a new revenue stream in an environmentally friendly way."

--Scott Simons, DTE Energy, which runs the Riverview Land Preserve, a landfill-with-golf-courses 20 miles south of Detroit

Forward Thinking

- **Better burning** - In the future, "poof" goes our trash: Gasification breaks garbage down into a flammable, synthetic gas, which can power gas turbines and generate electricity. It also recovers more usable energy than the steam turbines of traditional waste-to-energy plants. But startup costs have deterred many prospective customers. IST Energy in Waltham, Massachusetts, is testing a method that eliminates waste on the spot. The compact system fits on a flatbed truck and converts three tons of trash a day into energy, enough to power and heat a 200,000-square-foot office building for 24 hours.
- **Imitation plastic** - Last year, the U.S. House of Representatives switched to corn-based water bottles in its dining halls, a high-profile plug for bioplastics (also called PLA, for the polylactic acid they're made

from). Fashioned from corn and soybeans, they are biodegradable and made without oil. Wal-Mart, Wild Oats, and Newman's Own Organics now use at least some PLA packaging.

- **"Pay as you throw"** - Pitching things costs money, and those costs are being passed on to consumers (surprise!). California has deposit fees on car tires, which are notoriously hard to handle in landfills. Seattle's residents are charged for every garbage bin and bag they haul to the curb.
- **Circular thinking** - Upgradable computers from HP, a Nike sneaker you compost, Patagonia fleece made from used water bottles: Designing products with the end in mind, an idea popularized by the "cradle to cradle" movement, is catching on. Says architect William McDonough, a leading proponent, "Products can be used, recycled, and used again without losing any material quality."

The Time Line

500 BC	First dumps are mandated one mile outside Athens, Greece.
1354	In London, the king orders trash onto dung boats to prevent dumping in Thames.
1739	Benjamin Franklin petitions to end commercial waste dumping in Philadelphia.
1885	Americans build their first garbage incinerator, on Governors Island, New York.
1937	First U.S. compactor truck built, though it's not widely used until the late 1940s.
1973	Curbside recycling begins in Berkeley, California.
1976	The Resource Conservation and Recovery Act puts federal government in the waste management business.
1987	Trash goes tabloid: Six states and three countries refuse to accept Mobro 4000, a Long Island garbage barge, causing brief but widespread concern about possible Northeast landfill shortages.
1997	U.S. recycling hits 28%, up from 6.4% in 1960.
2001	New York reopens Fresh Kills Landfill to accept debris from World Trade Center site, then closes dump for good.
2004	Mayor Michael Bloomberg reinstates full recycling in New York City after saying in 2002, "We're not doing a good job, and until we can, it's just not worth it."
2008	Compost or else, says San Francisco mayor Gavin Newsom, proposing fines for offenders.
2009	Beijing's official recycling rate is zero, though private companies have begun new door-to-door efforts.
2009	As David de Rothschild plans to sail to the Pacific's Eastern Garbage Patch on his water-bottle boat, the United Nations estimates that every square kilometer of ocean has 13,000 pieces of plastic floating in it.