

Royte, Elizabeth. Garbage Land: On The Secret Trail of Trash. New York: Little, Brown and Company, 2005.

Information is presented in four parts according to topic:

Garbage 1

p. 237

According to the United Nations “Agenda 21” report, “The major cause of continued deterioration of the global environment is the unsustainable pattern of consumption and production, particularly in industrialized countries.” Biologist Edward O. Wilson said, “if the rest of the world consumed at our levels – with existing levels of technology – we’d require the resources of four more planet Earths.”

p. 187 Our nation also creates the most waste, and then we send it to be processed in countries that fail to protect their workers or their environment from industrial pollution.

p. 11 Since 1960, the nation’s municipal waste stream has nearly tripled, reaching a reported peak of 369 million tons in 2002. That’s more stuff per person than any other nation in the world and 2.5 times the per person rate of Oslo, Norway. Average U.S. residents, says the Environmental Protection Agency (EPA), throw out 4.3 pounds of garbage per person per day – 1.6 pounds more than 30 years ago. Biocycle Magazine and the Earth Engineering Center of Columbia University in their “State of Garbage in America” report 2003 said every American generated 1.31 tons of garbage, a year in which less than 27 percent was recycled or composted.

p. 73 Why is it so hard to look at garbage? A culture of shame has come to surround an ordinary fact of life: throwing things away. Sure the volume is shameful, especially the volume of stuff that could have been reused or should never have been acquired in the first place.

Garbage 2

p. 244 According to the Union of Concerned Scientists which made exhaustive studies of consumers' environmental impacts, the things that make the biggest difference to planetary health are transportation, housing, and meat eating.

p. 125 According to Richard Manning in Against the Grain: How Agriculture Has Hijacked Civilization, it takes an average of 5 ½ gallons of fossil energy converted to fertilizer to restore a year's worth of lost fertility to an acre of eroded land. Every single calorie we eat "is backed by at least a calorie of oil, more like ten."

p. 201 Biodiesel (made from plants) is substantially cleaner than regular diesel. According to a 1998 study by the National Renewable Energy Laboratory, it reduces emissions of carbon dioxide by 43 percent, hydrocarbons by 56 percent, particulates by 55 percent and sulfurs by 100 percent.

p. 145

p. 192 In 1999, marine researcher Charles Moore surveyed 500 square miles of the North Pacific subtropical gyre and found six pounds of floating plastic for every pound of naturally occurring zooplankton. A 2004 study conducted by marine ecologists around the British Isles showed accumulated microscopic fibers and bits of synthetic polymers in beach and seabed sediments and a big jump in the concentration of plastic particles amid plankton in the last 20 years.

p. 191 In an EPA ranking of the 20 chemicals whose production generates the most total hazardous waste, five of the top six are chemicals commonly used by the plastics industry.

p. 192-3 It's estimated that Americans go through about 100 billion polyethylene bags (grocery plastic bags etc.) Like other forms of plastic, they have high social and environmental costs born by the public and government, not by the producers of plastic or their users. South Africa has prohibited the sale of them, Taiwan and Bangladesh, where plastic clogged street drains, have banned free distribution of them in stores. Ireland reduced bag use by 90% by instituting a 15 cent charge for each bag.

Garbage 3

p.136-7 Virgin papermaking is one of the most environmentally harmful industries on earth. According to the national Resources Defense Council (NRDC), the paper industry is, after chemical and steel manufacturing, the third largest source of greenhouse gases in the U.S.

p. 237 In his documentary film Super Size Me, Morgan Spurlock ate only McDonald's fare for an entire month. During his McDiet, he saved all his McTrash, even mailing it home to himself while traveling. The result was 13 large sacks – a 6 foot pyramid – of paper cups, lids, straws, ketchup packets, napkins, paper bags, burger wrappings, ice cream cups, and French fry boxes. (Pressured by consumers, Mickey D's gave up polystyrene boxes for paper wrappings in the U.S., but continues to use them in other countries.) "Divide that by 90 (average number of meals) then multiply by 46 million (number of people McD serves every day) and you get enough garbage to fill the Empire State Building," Spurlock said. "And that's just one fast-food company in one day."

p. 135 The environmental savings of recycled paper affects trees, oil, water, energy and landfill. "We benefit from all of that," said Judy Goodstein of the Visy paper recycling plant on Staten Island. The plant saves trees from being turned into pulp (13,000 are saved a day), saves oil burned in logging operations, saves water by recycling 600,000 of the 700,000 daily gallons used inside the plant, uses 2.5 per cent of the electricity consumed in a virgin wood-pulping operation, and keeps 350,000 tons of paper a year out of landfills.

p. 136-7 While residential and commercial paper-recycling rates across the U.S. have steadily increased, consumption of virgin paper has steadily risen as well. Over the past 50 years, according to the independent market research firm Nima Hunter, worldwide use of virgin paper has increased sixfold, with the average U.S. office worker using more than 10,000 sheets of printing and copying paper per year. 95% of the 12 billion magazines printed annually in the U.S. have zero recycled content, and only about 20% are recycled, which puts more than nine billion magazines into landfills and incinerators every year.

NRDC reports, "Recycling paper is slowing global deforestation. Conservatively, timber harvests would expand 50% in the next 35 years if we didn't recycle paper."

We need to make sure we are **buying** recycled too paper too because shifting all this household paper from the landfill to a company that pulps, dries, and flattens isn't worth anything if economic markets don't signal its value. Collectively, the U.S. consumes more than 80 million tons of paper a year, and less than a third of that comes from recycled sources.

Garbage 3 cont.

p. 10 Buying shade-grown coffee that conserves forests for other species and supporting fair labor practices could have a salutary effect on people and places we'll never see.

p. 109 According to New York's Department of Sanitation, edible and inedible food debris accounts for 15% of household garbage in the city (the 2nd largest fraction after paper), while the national average is 9%. According to the Garbage Project, the average elementary school student throws away three and a half ounces of edible food a day.

p. 115 According to EPA, using a food digester (as in Europe to accelerate the composting process) for New York City's annual output of more than 7 million tons of food and other organic waste, instead of burying it, would avoid 1.8 million tons of greenhouse gas emissions and generate 1.4 billion kilowatt-hours of electricity.

Garbage 4

p.294 The total waste stream continues to grow, whether in places where recycling is on steroids, like Seattle, or where recycling is anemic, like the state of Mississippi, we'll never escape our own mess. If we don't wake up and make the connection between our economy and the environment (which provides the resources to make all our stuff), the planet will eventually do it for us. And it won't be pretty.

p. 242 Persuading Americans to consume less stuff, probably the single best thing we could do to save the planet (besides promoting energy conservation and zero population growth) isn't a big part of the environmental agenda. Instead we are asked to buy green. Buy products – cleaning solutions, building materials, organic socks, paper goods – that are free of toxins in their manufacture, use, and disposal. Buy products that don't generate greenhouse gases, that can be refurbished and reused, that are minimally packaged. Green purchasing tells us to vote with our wallets, but it ignores a third choice: not buying at all.

p. 155-6 Nationwide, beer and soda cans are the most recycled consumer product. But their rate of return fell from a peak of 65% in 1992 to a 23-year low of 44% in 2003, when 820,000 tons of aluminum cans were trashed. If all those cans were dug up, according to the Container Recycling Institute's Jenny Gitlitz, they'd have a value of \$21 billion at today's scrap prices. The entombed cans have raised the issue of landfill mining, which might become a common practice as natural resources disappear.

p. 256 Aluminum cans left in the back country, according to the National Park Service predictions, would last 80 to 100 years, and cigarette butts and wool socks between 100 and 500 years.

p. 288 In 2002, International Coastal Cleanup volunteers in 117 countries collected 1.8 million cigarette butts and cigar tips, representing 31 percent of all trash items. By design, cigarette filters trap toxic chemicals before they enter the smoker's body, but tossed on the ground, they leach toxins into the environment.

p. 177 Across the U.S., recovery rates for almost all recyclable materials have declined over the past couple of years. But the recovery of PET plastic (recycle No. 1), the most widely collected type, has fallen especially hard from a high of 39.7% in 1995 to a low of 19.9% in 2002, when 3.2 billion pounds of PET bottles were buried or burned. No. 1 water bottles have an even worse recycling rate than No. 1 soda bottles. In 2003, Americans drank 13 billion liters of bottled water, much of it in half liter bottles, and global bottled water sales reached 155 billion liters. Had all bottles been recycled, the Container Recycling Institute reported, "an estimated 6.2 million barrels of crude oil equivalent could have been saved, and over a million tons of greenhouse gas emissions could have been avoided."

p. UCS said, "Buy more of those things that help the environment. Low flow showerheads do, and Energy Star refrigerators, and hybrid cars, or converting your

regular rig to biodiesel. So does buying anything that has already been recycled and that substitutes for something new, including aluminum cans, paper products, plastic wood, and toothbrush handles extruded from used Stonyfield Farm yogurt cups.”

p. 252 Making new glass from old glass yields 50 percent energy savings over the scratch method, but fewer than a third of the glass bottles sold in the U.S. are recycled into anything, let alone refilled.

p. 138 Marcal and Seventh Generation are brands selling recycled toilet paper. The NY Times science section posed the question, “Is it better for the environment to dispose of toilet paper (and tissues) in the garbage or in the toilet?” Columnist Hershkowitz reported, “It is both practically desirable and ecologically superior to flush it down the toilet. Sewage treatment plants decompose both organic waste and the cellulose of toilet paper, but in a landfill, microbial activity would generate methane, a potent greenhouse gas. No matter where it ends up though, the big ecological problem with toilet paper is that companies produce it from virgin wood instead of recycled paper.”

p. 256 Worn-out sneakers can be mailed to Nike which shreds rubber and foam into flooring for gyms. The company accepts non-Nike footwear too.

Royte, author of Garbage Land, said, “I gave all my rubber bands back to the letter carrier, who was happy to reuse them.”

p. 278 “I took heart from the principles of source reduction and the growth of Craigslist and “free cycling” websites which help folks move unwanted goods laterally through their communities.”

p. 193 “Switching from plastic bottles of liquid dish soap to cakes of hard yellow soap worked great and came with zero packaging (a no brainer). I was already reusing my Ziplocs, but I resolved to always use containers, rather than Saran Wrap, to hold leftovers.”

p. 194 “What about the plastic bottles I used at home? I decided to buy ketchup only in glass, buy olive oil in cans. I could buy shampoo and conditioner in the largest size plastic bottle I could find (so as to minimize the number of bottles.)”