# Talking Trash

## A Brief History of Garbage

By Jon Roberts

### The town dump and other dirty secrets of waste

New York's streets, Nov. 13, 1911; by Bain News Service. Library of Congress

For most of us, trash day happens once a week. We park the can at the curb in the morning and when we get home from work it's gone. Neat. Where to put everyone's garbage is something that most citizens rarely consider, but it's a question that has been contemplated since humans established their first primitive societies.

Archaeological studies demonstrate that Native Americans in what is now Colorado may have produced an average of 5.3 pounds of trash per person per day in approximately 6,500 B.C. In more "modern" times, approximately 500 B.C., the Athenians developed one of the first municipal disposal sites in the Western world, requiring citizens to dump their garbage at least one mile from the city limits. Around A.D. 200, the Romans established an early form of garbage collection where teams of two men walked the streets, tossing garbage into a wagon. In the United States, trash management has been an evolution of changing mindsets over four hundred years, since the Pilgrims first landed on our shores.

#### Pigs, Vermin, and Vultures—Oh, My!

In early American history, there was essentially no thought about what to do with garbage and, as a result, it was everywhere. Disease was prevalent, but little was known about the causes. It wasn't yet evident that a significant portion of disease could be attributed to unsanitary conditions. Garbage was handled similarly to English practices—burning or dumping it into streets, alleys, and waterways. Pigs, stray dogs, and other animals roamed freely, eating garbage, which helped keep it in check. For cities near the coast, the ocean was a handy disposal site. Regulations addressing pollution in Boston Harbor did not take shape until the mid- to late-1600s.

While government showed little interest in developing waste management systems, by the mid-1700s individual American households, to a limited extent, began digging pits for their household wastes. Benjamin Franklin instituted the first municipal street cleaning service in Philadelphia in 1757. During the early 1800s, the concept of garbage as a "public nuisance" slowly gained traction, not for any correlation between unsanitary conditions and disease, but for the reeking smell and unsightliness of rotting waste and the resulting vermin. As late as the Civil War, dumping trash into the streets and alleyways remained a common practice, as was allowing animals to roam the streets to eat garbage. Animals were so important to waste management that some cities passed laws to protect them. In 1834, Charleston, West Virginia, enacted an ordinance to prohibit vulture hunting because the birds were needed to eat the trash.

The theory that unsanitary conditions could contribute to disease was gaining ground in England in the mid-1800s and gradually made its way to America. To address increasing public health concerns, local governments began setting standards for the protection of human health. The nation's first public health code was enacted in New York City in 1866.

#### Waterworks

Though large portions of the country remained rural, by the late 1800s American cities were becoming urbanized. The nation's expanding industrial base led to increasing amounts of waste—and problems with where to put it. Local politics, costs, and general public apathy frequently thwarted attempts to establish local sanitation controls. It took tragedy to force change.

A cholera epidemic in the Mississippi Valley in 1873 killed approximately three thousand people. In 1878, the South suffered the worst yellow fever epidemic in the nation's history. In the wake of these epidemics, local and federal governments became more involved in efforts to protect water supplies and ensure sewage was properly managed. Still, there was little effort to provide organized trash collection and disposal. Garbage was managed by dictating where it *couldn't* be disposed. Oklahoma Territory was no exception; territorial statutes of the late 1800s gave a laundry list of prohibited waste disposal practices.

As the nineteenth century ended, the need for a garbage collection system was a growing public concern. Beyond disease and management problems, citizens and politicians realized that a


New York City sanitation department employee sweeping street, ca. 1910. Library of Congress

Trash collection employees at work. National Photo Company, 1923. Library of Congress

clean city would attract business and create jobs which would, in turn, improve local economies. Public sanitary services were already well established with water and sewage managed by local governments; waste collection and management seemed a natural extension of those services.

## The Town Dump

During the first half of the twentieth century, urbanization (and its resulting trash) increased, but the focus of local governments remained with providing clean water and managing sewage. There was still little attention given to garbage. Most municipalities had established a "town dump" and required garbage to be disposed there. Collection services sometimes consisted of a one-man, horse-drawn wagon—not much different from the Roman process of 1,700 years earlier. While the town dump represented an early definition of what *could* be done with garbage, it was hardly adequate. Dumps were easy to construct and relatively cheap to operate; they were also extremely unsanitary, attracted vermin, smelled terrible, and were fire hazards. Dumps were generally located near rivers and streams, where liquids and refuse could easily enter and threaten water supplies, but as long as the garbage went somewhere—out of sight, out of mind—most people were satisfied. It was not until 1929 that the federal government issued the first location restriction for disposal sites by recommending, but not requiring, dumps to be located away from river banks.

After World War I, the nation's economic recovery was astounding. Through the Roaring Twenties, technical innovations, mass production, easy credit, and increased wages translated into a consumer society, an expanded middle class, and an increase in solid waste to be managed. Municipalities began citywide waste collection and disposal services, which quickly became costly enterprises with expanding city limits. Rather than attempt some sort of integrated waste management system to address the waste problem, most localities focused on reducing costs, instituting mechanized collection services (using large vehicles, barges, and railroads to transport waste from centralized transfer stations to a disposal site) or contracting for collection and disposal services. The town dump remained the primary disposal option.

In Great Britain, the concept of a "sanitary landfill" was developing by the 1920s. The British called the practice "controlled tipping," from which the term "tipping fee" (the fee charged by landfill operators) was probably coined. While the town dump model had been in use for years, the idea of a pseudo-engineered fill was quite unique. By alternating layers of waste and either soil or another non-putrefying material, the belief was that vermin, odors, and fires could be reduced, making land disposal more "sanitary" and acceptable. The first sanitary landfill built on British design in the U.S. was in Fresno, California, in 1934. Momentum slowly shifted toward use of sanitary landfills.

Meanwhile, the Great Depression brought an unprecedented loss of jobs and farms. Shanty towns of the displaced rose up across the nation. Often called "Hoovervilles" after President Herbert Hoover, whom many blamed for the Depression, these shanty towns were frequently located near town dumps. "Trashing" was a way to find a few scraps of food or something of value to sell. Oklahoma was not immune from this sad situation. A fairly large shanty town in Oklahoma City (documented in 1939 by Farm Security Administration photographer Russell Lee as "May's Avenue Camp"), with a population of several hundred was built in the North Canadian River floodplain in the area of the South May Avenue bridge. The Oklahoma City dump and an adjacent hog farm were located there. It was a grim aspect of life during the Great Depression. Town dumps were often dumping grounds for both people and trash.

## The Rise of Regulation

From the beginning of the Great Depression to the end of World War II, state laws began to prohibit adverse disposal practices. In 1934, the United States Supreme Court upheld a lower court ruling requiring New York City to cease disposal of its municipal waste at sea. In the 1930s, California passed laws prohibiting disposal of garbage within twenty miles of shore. While these actions may have helped remove refuse from America's waterways, we had not yet embraced the question, "How can we manage garbage *and* protect public health and the environment?"

After World War II, the Baby Boom was on and prosperity soared. New consumer goods made life easier: central air heated and cooled

homes; electric refrigeration facilitated pre-packaged, easy-to-prepare food; television introduced us to Lucy and Ricky; Detroit filled our desire for big, comfortable cars to travel the new Interstate highway system; new pesticides and herbicides ensured bountiful crops and perfectly-manicured lawns. Urban sprawl increased as the new middle class moved to the suburbs. With this new consumer society came a drastic increase in the amount of trash. While responsibility for collection and disposal rested with local governments, cities found it increasingly difficult to manage waste. National oversight was needed, yet town dumps, with the resulting fires, odors, and vermin, continued to be used in many locations.

It was not until 1953 that national guidelines for waste disposal sites (based, in part, on sanitary fill methods developed during World War II) were published. Even with criteria in place, most of the nation was slow to adopt them. In 1956, only about thirty-seven percent of landfills in the country were making an effort to follow the guidelines.

Though the federal government had established a long history of oversight of water resources, it was not until 1965 that the federal government finally put the solid waste problem on par with protection of water resources. In that year Congress passed the Solid Waste Disposal Act (SWDA), the first effort to implement a comprehensive management framework for the nation's solid waste. The SWDA was designed to assist state and local governments with developing and managing waste disposal and to promote the development of guidelines for waste collection, transportation, recovery, and disposal. Amazingly, when the SWDA was passed there were *less than ten* full-time employees in state solid waste programs nationwide. Furthermore, no state had any real solid waste legislation; solid wastes were indirectly covered under health and nuisance statutes. In 1970, Congress passed the Resource Recovery Act, shifting the emphasis of federal involvement from disposal to recycling, resource recovery, and conversion of waste to energy, and stipulating that a national system for hazardous waste management be implemented. The Environmental Protection Agency (EPA) was also created in 1970. Solid waste management was now as great a national concern as water quality had been for many years.

## Washington, We Have a Problem

Even with new federal authority over waste issues, one event would thrust the history of waste management to the nation's attention as never before, demonstrating that "out of sight, out of mind" was a disastrous approach. To a great extent, it changed the national conversation.

William Love had a grand vision to build a model industrial city, powered by cheap hydroelectric power. In 1892, he found the perfect location—a site the federal government had previously identified as a possible location for a canal between Lakes Erie and Ontario. Love's plan was to build a canal connecting the upper and lower Niagara River to provide hydroelectric power for his model city. The partially-completed canal was abandoned due to a collapse in the economy and the discovery of alternating current, which could transmit electricity cheaply over long distances. The site was sold in 1920 and for over thirty years the canal was a dumping ground for garbage and chemical wastes from the City of Niagara Falls, New York, and surrounding municipalities. In 1953, the owner of the site, Hooker Chemical Company, covered the site with soil and sold it to the Niagara school system for one dollar. A neighborhood and school were built on and around the canal. In 1978, after a record rainfall, toxic chemicals from the old canal began to leach into the yards and basements of the community. The Love Canal problem was thrust into the national spotlight as President Carter declared it a disaster area, releasing emergency funds to evacuate the citizens. Out of this debacle—fifty-eight years in the making—the federal government took on a greater role in waste management issues.

During the Great Depression, loss of jobs and farms forced many to relocate. Shanty towns, known as "Hoovervilles," cropped up across the country, often located in or near the city dump. This family home at the Oklahoma City dump (South May Avenue) was photographed by Russell Lee, July 1939, documenting what he identified as "May's Avenue Camp." Library of Congress

In 1980, in direct response to Love Canal, Congress passed the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), more-commonly known as Superfund. Its purpose was to implement a national response for problems resulting from past hazardous waste management, to impose liability on those entities creating problems, and to remediate (remedy, clean up, reclaim) contaminated soils and groundwater caused by those practices. CERCLA also imposed various taxes on chemical and petroleum industries, which were deposited into a trust fund (hence, the name Superfund) to be used for cleanups initiated under its provisions.

Under CERCLA authority, the Tar Creek Superfund Site in northeast Oklahoma became one of the first sites in the nation to undergo a Superfund cleanup. Due to the size of the affected area and the multitude of health and environmental problems associated with the site, the cleanup is still underway. Oklahoma has fourteen Superfund sites, most of which are former petrochemical refineries, lead and zinc smelters, mines, and industrial waste landfills. Seven sites have been completed and one is in the beginning phases of investigation. The remaining six are undergoing remediation or are in a long-term groundwater remedy phase.

## A Responsible Future

Since Love Canal, we have come to realize that trash talk is a bigger question than simply what can or can't be done with it. There is a larger responsibility to protect public health and the environment.


Father and child with sign reading "I want to live" at a Love Canal protest, 1978. Residents had become mistrustful of the U.S. Health Department, thinking information was being withheld, and with scientific experts who didn't know how to advise cleanup of their community, which would later be declared a national disaster area. Courtesy University Archives, State University of New York at Buffalo

Today's improved technology and waste management practices are specifically designed to protect public health and the environment, both at the source and at the final disposal location. Much more can be done, but with public awareness, increased recycling, improved manufacturing techniques, and other actions we will continue to reap the benefits of a cleaner, more attractive environment.

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**EXTRA! | READ | THINK | TALK | LINK**

- "Following Garbage's Long Journey around the Earth," *Fresh Air*, NPR, April 26, 2012. Radio host Terry Gross interviews Edward Humes, Pulitzer Prize-winning journalist and author of *Garbology: Our Dirty Love Affair with Trash*. Discussion includes where trash goes after we throw it out, how waste management is largely hidden from Americans' daily lives, and how it is making its way into oceans, the food chain, and to other countries as an export product. npr.org
- Love Canal Collections, University Archives, State University of New York at Buffalo. Newspaper articles chronicle the environmental disaster known as Love Canal. Includes images, maps, and posters, and a link to the University of Buffalo's Love Canal website. library.buffalo.edu/specialcollections/lovecanal
- Link TV. Watch videos on how other countries are managing trash and recycling (often doing a better job than the U.S.) and how trash collection is seen as noble, rewarding work. linktv.org (search: *garbage*)

The federal government encouraged conservation of waste paper during WWII, noting that it would "save millions of dollars annually for Uncle Sam." These young conservationists are measuring their stack, with the goal to donate it when it is "broomstick high." Photo by Ann Rosener, Feb. 1942, U.S. Office of War Information. Library of Congress

## Trash—By the Numbers

**12** Americans throw away enough office and writing paper annually to build a wall 12 feet high, stretching from Los Angeles to New York City. For every ton of paper recycled, we save 7,000 gallons of water, 17 trees, and 3 cubic yards of landfill space.

**500,000** Americans buy 62 million newspapers a day. It takes over 500,000 trees (an entire forest) to make all the Sunday editions in the U.S. each week.

**426** Americans throw out enough Styrofoam cups each year to circle the earth 426 times.

**75%** Recycling scrap metal consumes 75% less energy than raw materials. Each ton that is recycled saves 2,500 pounds of iron ore, 1,000 pounds of coal, and 40 pounds of limestone.

**120** Americans throw away enough used motor oil annually to fill 120 supertankers—and it can all be recycled. It takes 42 gallons of high-quality crude oil to produce 2.5 quarts of motor oil; it only takes 1 gallon of waste oil to produce the same amount.

**100** Glass never wears out. Each recycled glass bottle saves enough energy to light a 100-watt bulb for four hours.

**40%** Americans use enough plastic wrap every year to shrink-wrap the state of Texas. Plastic bags and wrap account for up to 40% of U.S. plastic garbage.

**20** You can make 20 new aluminum cans from recycled materials with the same amount of energy it takes to make 1 can from raw materials.

Source: Oklahoma Department of Environmental Quality