

“**Consume** more than you need

1

This is the dream  
Make you pauper  
Or make you queen  
I won't die lonely  
I'll have it all prearranged  
A grave that's deep and wide enough  
For me and all my **mountains o' things**”

*Lyrics from “Mountains o' Things” by Tracy Chapman*



1

12

average number  
of minutes a plastic  
bag is used before  
being thrown away

1,000,000,000,000

number of plastic  
bags used globally  
each year



1,000

minimum number  
of years before  
a plastic bag  
decomposes

# Planned obsolescence (n.)

A method of stimulating consumer demand by designing products that wear out or become outdated after limited use.

*<http://www.dictionary.com/browse/planned-obsolescence>*

“ Before [World War II], **plastic played a very limited role in material life**. After the war, [surplus] oil became the driving force behind the American economy, and plastics, which are **made from petroleum**, became **ubiquitous**, used in everything from dry cleaning bags and disposable pens to Styrofoam and shrink-wrap. An array of **disposable products** from plastic silverware to paper cups, meanwhile, **enshrined cleanliness and convenience...**”



*Excerpt from Down to Earth: Nature's Role in American History by Ted Steinberg*

“ I am convinced that if we are to get on the right side of the world revolution, we as a nation must undergo a radical revolution of values. We must rapidly begin the **shift from a ‘thing-oriented’ society to a ‘person-oriented’ society.**

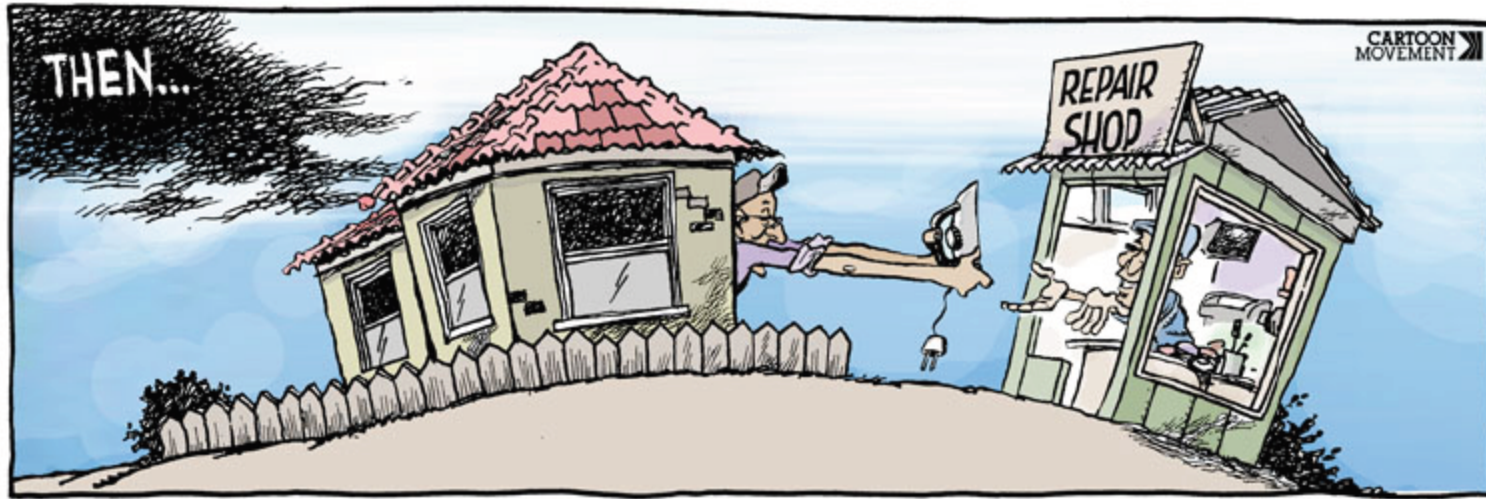
When machines and computers, profit motives, and property rights are considered more important than people, the giant triplets of **racism**, **materialism**, and **militarism** are incapable of being conquered... ”

*Excerpt from Dr. Martin Luther King, Jr.’s “A Revolution of Values”*

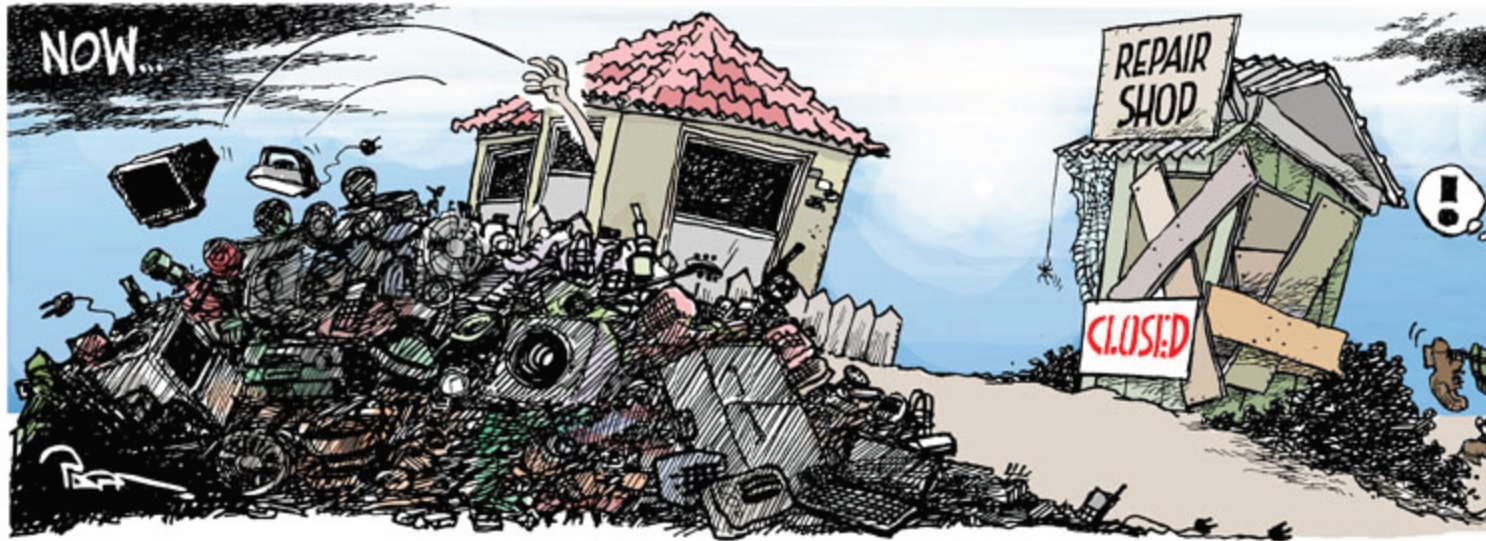


“ Men and women are sacrificed to the **idols of profit and consumption**: it is the ‘**culture of waste**’ ....Yet these things become the norm: that some homeless people die of cold on the streets is not news. In contrast, a ten point drop on the stock markets of some cities is a tragedy. [...] Thus people are disposed of, as if they were trash. ”

*Excerpt from Pope Francis's Weekly Address  
during World Environment Day on June 3, 2015*



1



*Popa Matumula, Tanzanian cartoonist  
Throw Away Society*





1

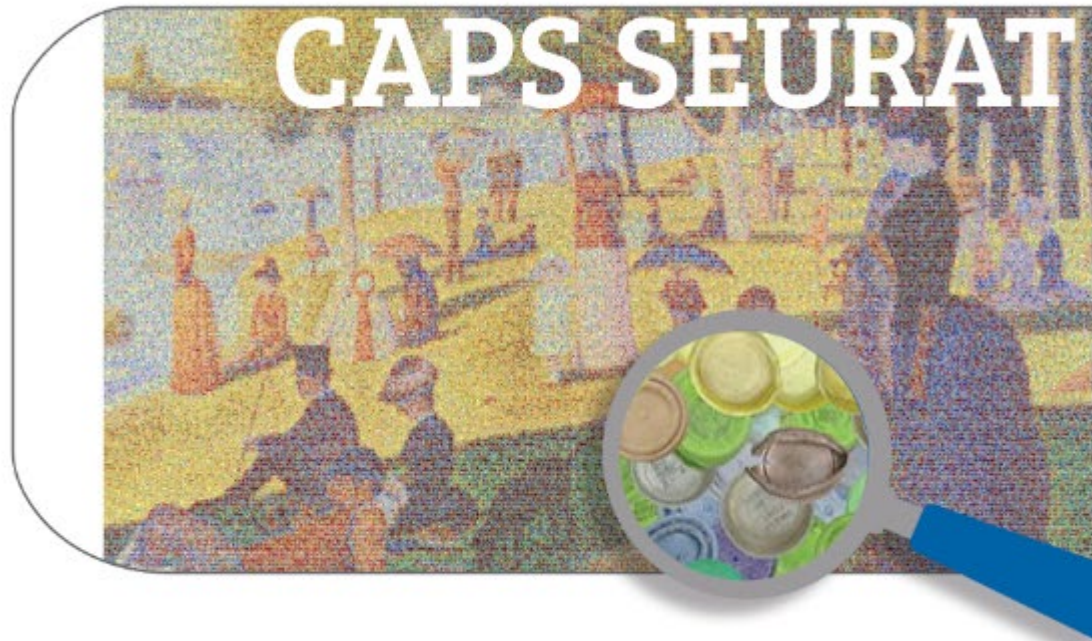
*Polyp, a British cartoonist*

*[http://www.polyp.org.uk/cartoons/consumerism/polyp\\_cartoon\\_Rat\\_Race.jpg](http://www.polyp.org.uk/cartoons/consumerism/polyp_cartoon_Rat_Race.jpg)*



*This panoramic image, titled "99 Cent," depicts a 99 Cents Only store in Los Angeles. It was taken by German photographer Andreas Gursky in 1999.*

© Andreas Gursky / 2017 Artists Rights Society (ARS), New York / VG Bild-Kunst, Bonn / Courtesy Sprüth Magers Berlin London



2011  
60x90" in one panel,  
and 88x132" in 3 panels

**400,000** plastic bottle caps,  
are depicted in Caps Seurat. That is  
equal to the average number of plastic  
bottles consumed in the  
**United States every minute.**



1

Chris Jordan, *Running the Numbers* (2006-Present)  
<http://www.chrisjordan.com/gallery/rtn/#caps-seurat>

1

# Consumerism (n.)

1. The protection or promotion of the interests of consumers.
2. The preoccupation of society with the acquisition of consumer goods.



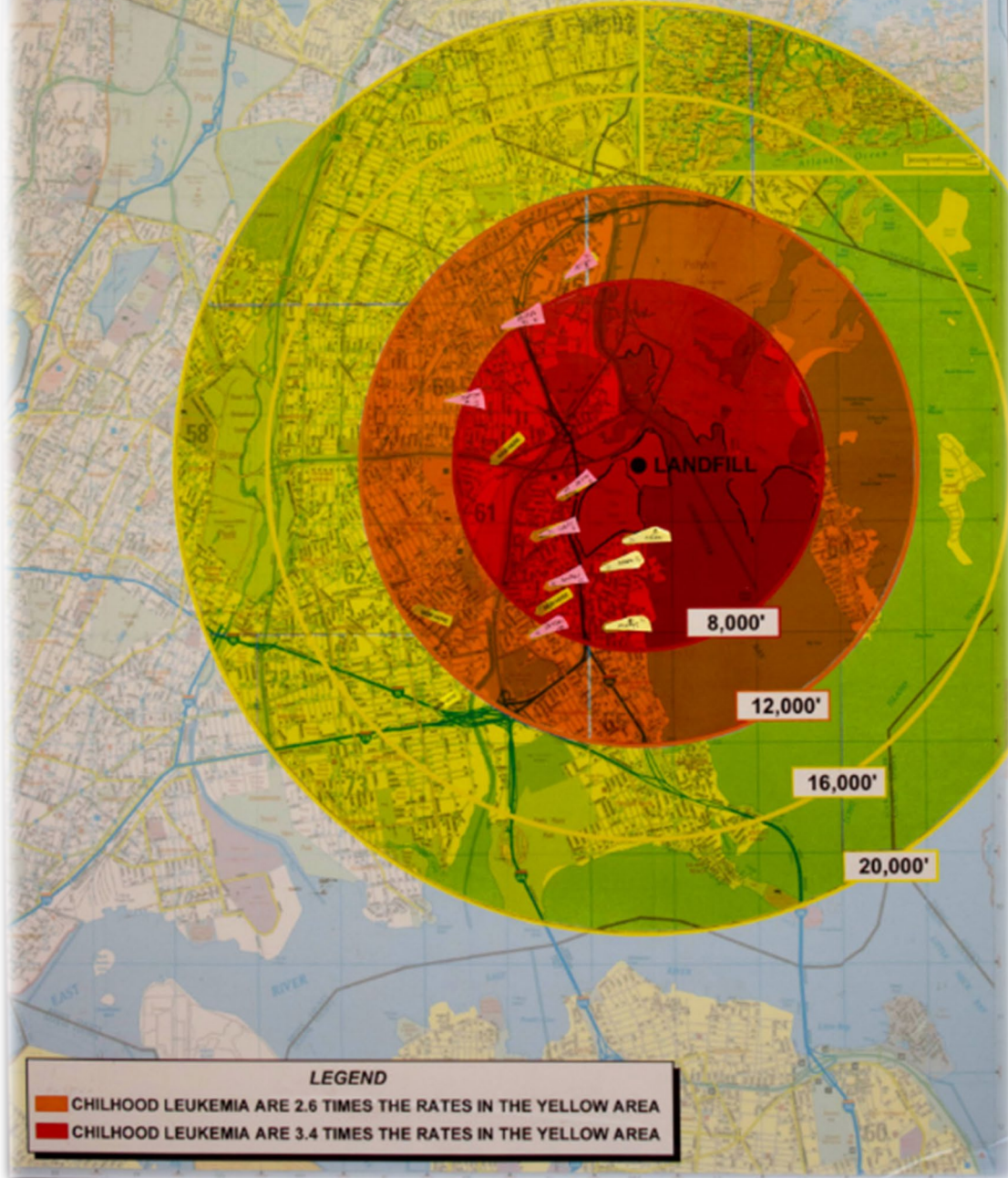
*Oxford English Dictionary*





## CHILDHOOD LEUKEMIA RATES HIGHER AMONG CHILDREN LIVING NEAR THE PELHAM BAY LANDFILL

Report Based on NYS Cancer Data 1988-96



In the 1960s and 1970s, **over 1.1 million gallons of chemicals were illegally dumped** into the **Pelham Bay Landfill**, located in the Bronx. Many of chemicals were toxic and seeped into the surrounding water, soil, and air.

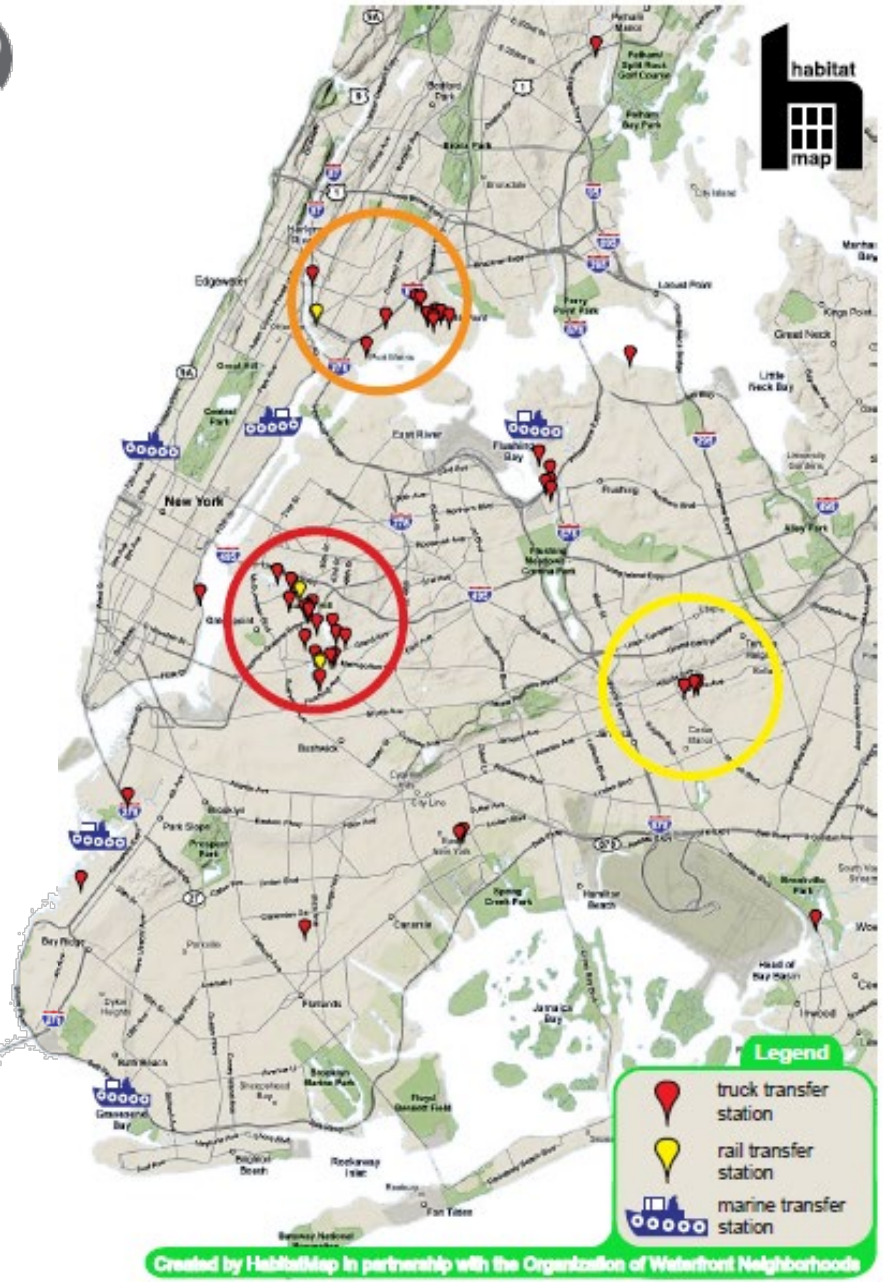
A decade later, numerous neighborhood children developed Acute Lymphoblastic Leukemia, believed to be a result of the illegal dumping. Three children died before they reached their teens, and those that survived spent their childhood dealing with this terrible disease. Many still suffer side effects from the treatment to this day.



2

“Everyday, garbage trucks needlessly travel thousands of miles throughout New York City polluting our air with diesel fuel, clogging our streets, and diminishing our quality of life. These **impacts are greatest** in those **few low-income and communities of color** where old truck-dependent transfer stations are clustered, and along the truck routes used to haul garbage.”

*Excerpt from a Testimony to the New York City Council (2/13/15)*



Created by HabitatMap in partnership with the Organization of Waterfront Neighborhoods

# Asthma Hospitalizations

Age Group: 0 to 14 years;  
UHF District; Number; 2014  
(2010, United Health Fund Districts)

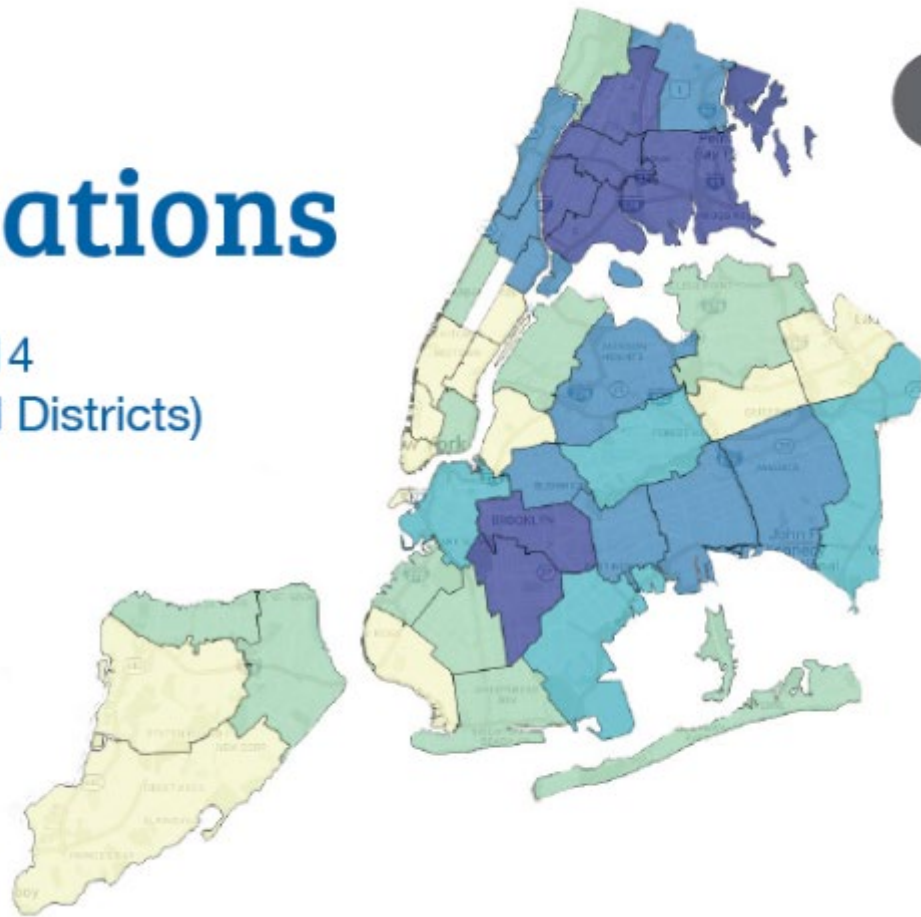
7 to 43

52 to 97

109 to 165

202 to 347

447 to 624



2

“A 2009 NYU-Wagner study reported that **rates of death from asthma** are about **three times higher in the Bronx** than the national average. Hospitalization rates are about five times higher.”

2

Source: Citizens' Committee for Children of New York (2013)

<http://data.cccnewyork.org/data/map/7/asthma-hospitalizations#7/197/4/11/20/a>  
<http://www.cccnewyork.org/blog/concentrations-of-risk-asthma-and-poor-housing-conditions/>



<http://www.nyenvironmentreport.com/the-bronx-is-breathing/>





Photo Credit: Photographer: Jenny Labelme  
Copyrighted Photo taken by Jenny Labelme  
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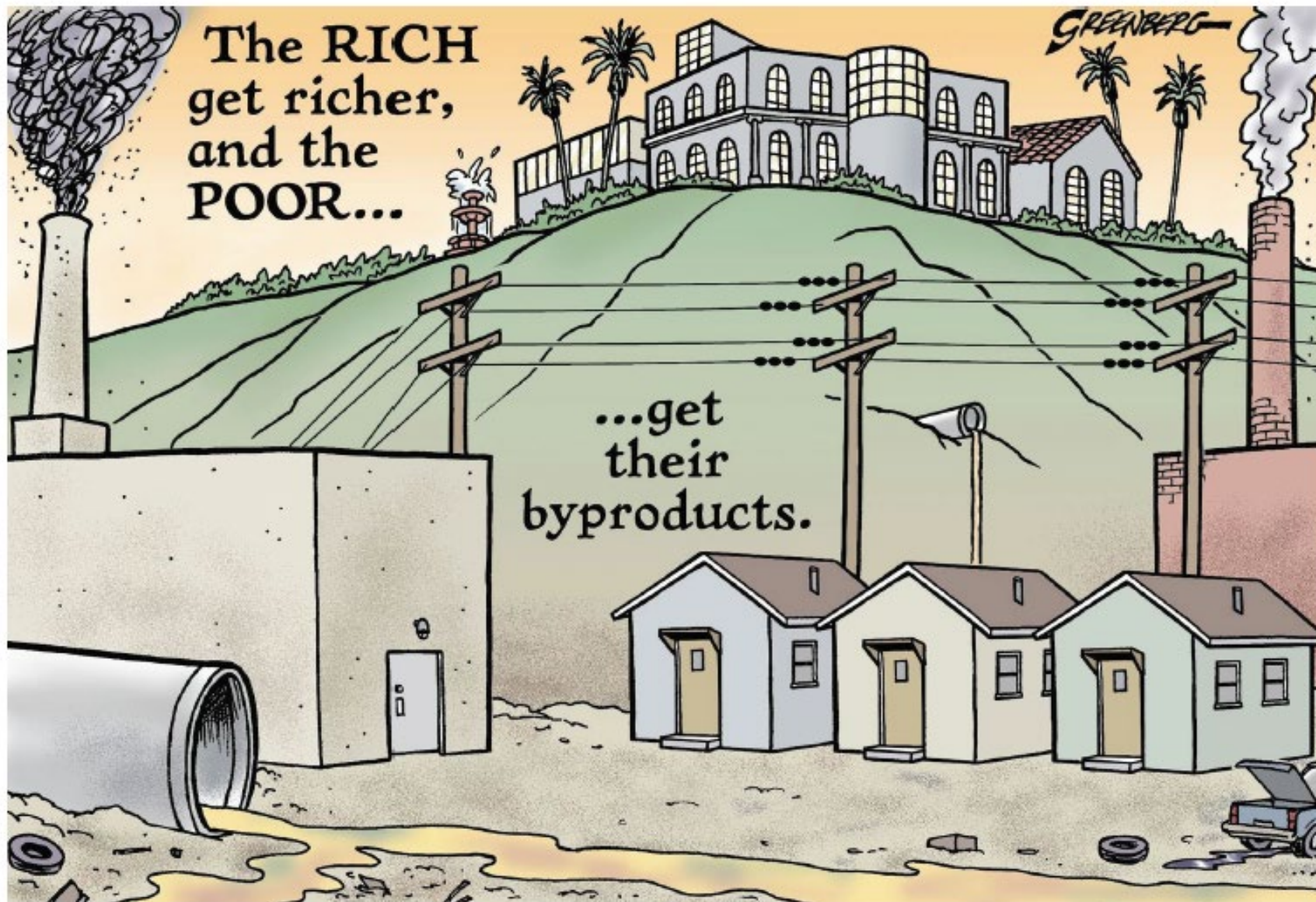
Protesters lying in front of dump trucks taking soil contaminated with PCB to the landfill.

2

In 1973, the Ward Transformers Company dumped 31,000 gallons of polychlorinated biphenyl (PCB) on the side of roadways in 14 North Carolina counties. NC devised a plan to build a **landfill** to deposit the **contaminated soil**.

The site of the landfill was Shocco, a rural town in Warren County that was **75% African American**, with neither a mayor nor a city council. Warren County had the highest majority of African Americans and out of North Carolina's 100 counties, it was ranked **97th in GDP**.

Residents feared that their **groundwater would be contaminated** by PCB, so **local leaders organized protests** against the construction of the landfill which attracted the support of civil rights groups nationwide.



Steve Greenberg, cartoonist April 15, 2010 VCReporter  
Title: The poor get...

CartoonStock.com



Neighborhood residents playing basketball at a court located near the Shell Oil Refinery in Norco, Louisiana.

©Mark Ludak

[http://www.mhhe.com/socscience/anthropology/image-bank/kottak/chap14/kot37055\\_1409ta.jpg](http://www.mhhe.com/socscience/anthropology/image-bank/kottak/chap14/kot37055_1409ta.jpg)

**Environmental justice** is the **fair treatment** and **meaningful involvement** of all people regardless of race, color, national origin, or income with respect to the development, implementation and enforcement of environmental laws, regulations and policies. **No group of people should bear the impact** of negative environmental consequences, and all people should have the **opportunity to participate** in decisions about things that may affect their environment and health.

2

*Definition from the United States Environmental Protection Agency*

Every day, nearly **6,000 tons** of trash are hauled in and out of the South Bronx, requiring about 1,400 diesel truck trips. This means **two to three truck trips every minute** over a typical eight to ten hour day.



2

The orange lines on this map are train cars loaded with NYC's waste headed to out-of-state landfills, blocking access to the waterfront and contributing to noise and air pollution.



Source: Google Maps screen capture 5/17/17

ZERO waste schools



“Only when the **last tree** has been cut down, the last fish been caught, and the last stream poisoned, will we realize we cannot eat money.”





The timber industry deforests land and replaces it with a monoculture tree farm, meaning all trees are the same type and same age. This patchwork forest is near Clatsop County, Oregon. This pattern of land use displaces and diminishes native flora and fauna, and releases greenhouse gases.

*<https://en.wikipedia.org/wiki/Clearcutting>  
Lewis and Clark River 2148s.JPG*



3



# 3 times

*as much water is  
used to make the  
plastic water bottle  
that you drink from.*

<http://bit.ly/2qz0Bx0>



Amount of oil  
needed to make  
**1 plastic bottle**

# Non-renewable resource (n.)

A resource that **does not renew itself** at a rate fast enough for human extraction (i.e., millennia and millions of years vs. years or decades).



Examples include **minerals** and **metal ores**, **fossil fuels (coal, petroleum, natural gas)** and **ground-water** in certain aquifers.

[https://en.wikipedia.org/wiki/Non-renewable\\_resource](https://en.wikipedia.org/wiki/Non-renewable_resource)

*Aerial view of strip mine with heavy machinery - Stuart Hall - Photographer's Choice - Getty Images.*

If Earth's history  
is compared to a calendar year,  
we, the modern humans, have...

Existed for  
23 minutes

Used 33% of  
Earth's natural resources  
in the last 0.2 seconds

“ I see a lot of **damage**  
**to Mother Earth.**



I see water being taken from creeks where  
**water belongs to animals,**  
**not to oil companies.”**



*"Fracking"*  
by Kap (2013)



“Running on Empty” by David Horsey (2011)

<http://www.sfgate.com/news/article/Running-on-empty-2383756.php>

“ Every year there are more people on the planet, and every year more of them move to cities. Since 1950, the **world's urban population has ballooned** to over 3.9 billion from 746 million.

“ To build those cities, people are pulling untold amounts of sand out of the ground. Usable sand is a **finite resource**. Desert sand, shaped more by wind than by water, generally doesn't work for construction. To get the sand we need, we are **stripping** riverbeds, floodplains and beaches. ”





“ Like that famous ship [the Titanic], [society’s] infrastructure is powered by **brutish** and **artificial** sources of energy that are **environmentally depleting**. It pours waste into the water and smoke into the sky. It attempts to work by its own rules, which are **contrary to those of nature**. And although, it may seem invincible, the fundamental **flaws in its design** presage tragedy and disaster. ”



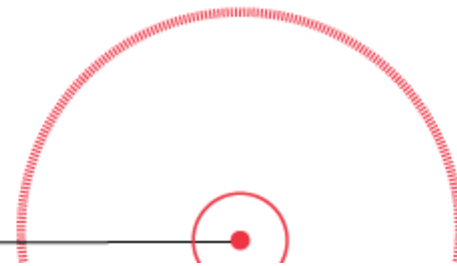
*Excerpt from “Cradle to Cradle” by William McDonough & Michael Braungart*



**The fossil fuel industry** has grown over the past decade by combining horizontal drilling and **fracking** to **extract oil & gas** from shale and other underground rock formations.

Fracking injects large quantities of water, sand and toxic chemicals under high pressure to release oil and gas that are tightly held in rock layers.

The fracking boom and low-priced natural gas have **spawned a resurgence in plastics manufacturing** — and the **pollution** that comes with it. Transforming ethane into plastics and other products is inherently **toxic**, polluting the environment and imposing **public health risks** on petrochemical workers and the communities near the plants.





## Alberta Tar Sands (Canada)

Tar sands are a mixture of mostly sand, clay, water, and a thick, molasses-like substance called **bitumen**. Bitumen is made of **hydrocarbons**—the same molecules in liquid oil—and is used to produce gasoline and other petroleum products. **Extracting bitumen from tar sands, and refining it into products like gasoline, is significantly costlier and more difficult than extracting and refining liquid oil.**

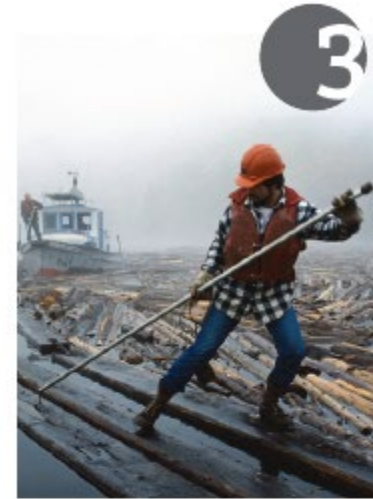
# Natural resource extraction

is the set of activities that involve removing materials from the environment.



Logging is one example of resource extraction.

If not done in a sustainable manner, logging extracts trees and their removal causes other changes that can result in soil and nutrient removal from the logged area. Even if it is accomplished sustainably, logging changes an environment.



“There is **no such thing**  
**as ‘away.’**”



When we throw  
anything away  
it must go  
somewhere.”



*Chris Jones*

*5 Gyres FAQ #1: What is a gyre?*

*World Map courtesy of Wikimedia Commons (commons.wikimedia.org)*

By 2050, there will be **more plastic**  
in the ocean **than fish**, by weight.



# Ocean Dumping Ban Act of 1988

4

In the past, communities around the world **used the ocean for waste disposal**, including the disposal of chemical and industrial wastes, radioactive wastes, trash, munitions, sewage sludge, and contaminated dredged material.

This federal law made it **unlawful** for any person to **dump**, or transport for the purpose of dumping, **sewage sludge** or **industrial waste** into ocean waters after December 31, 1991.





# A CENTURY OF AMERICAN GARBAGE

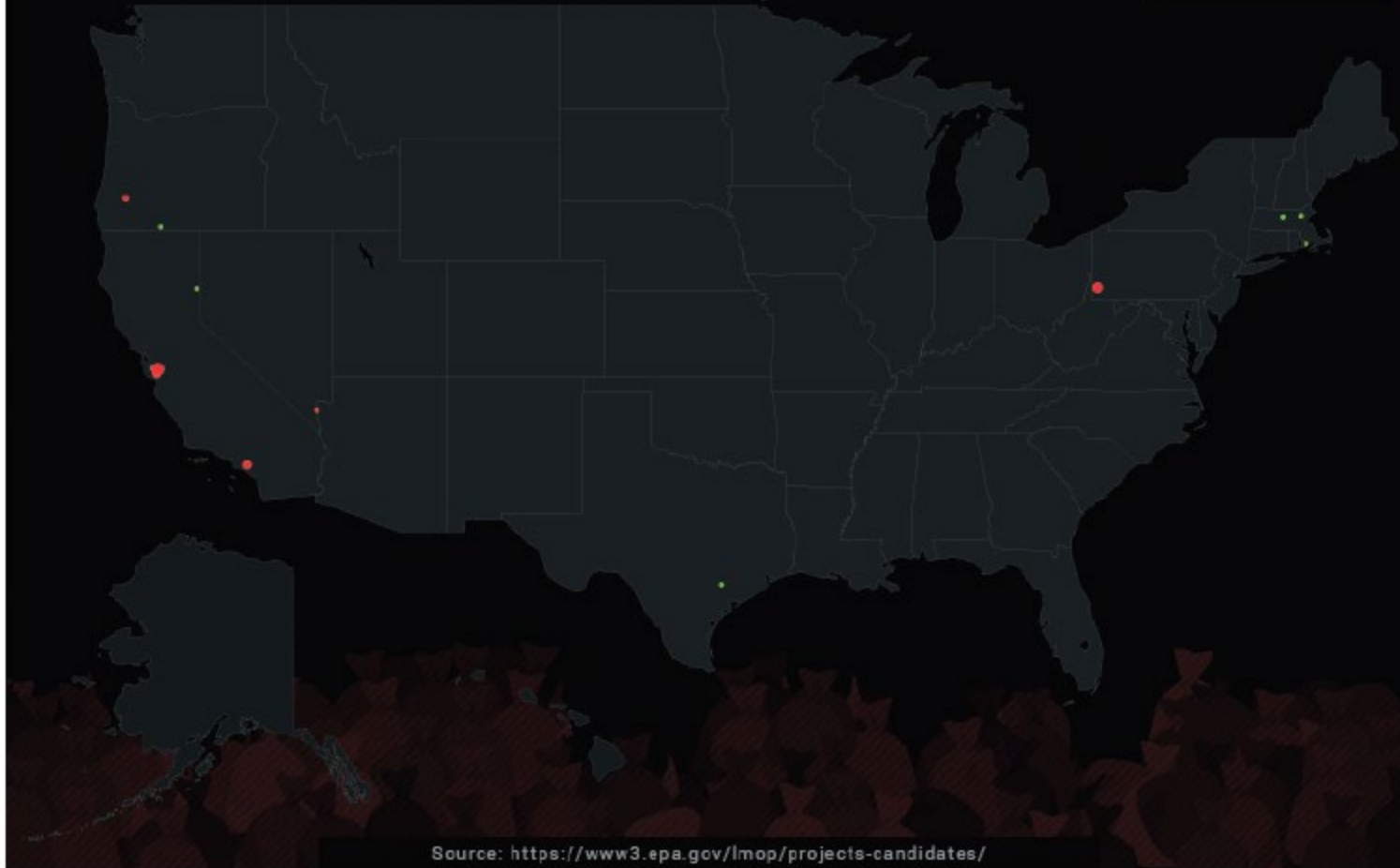
LANDFILLS OVER TIME, BY SIZE AND CURRENT STATUS

4

1930

LANDFILL STATUS

● Open ● Closed



<https://www.saveonenergy.com/land-of-waste/>

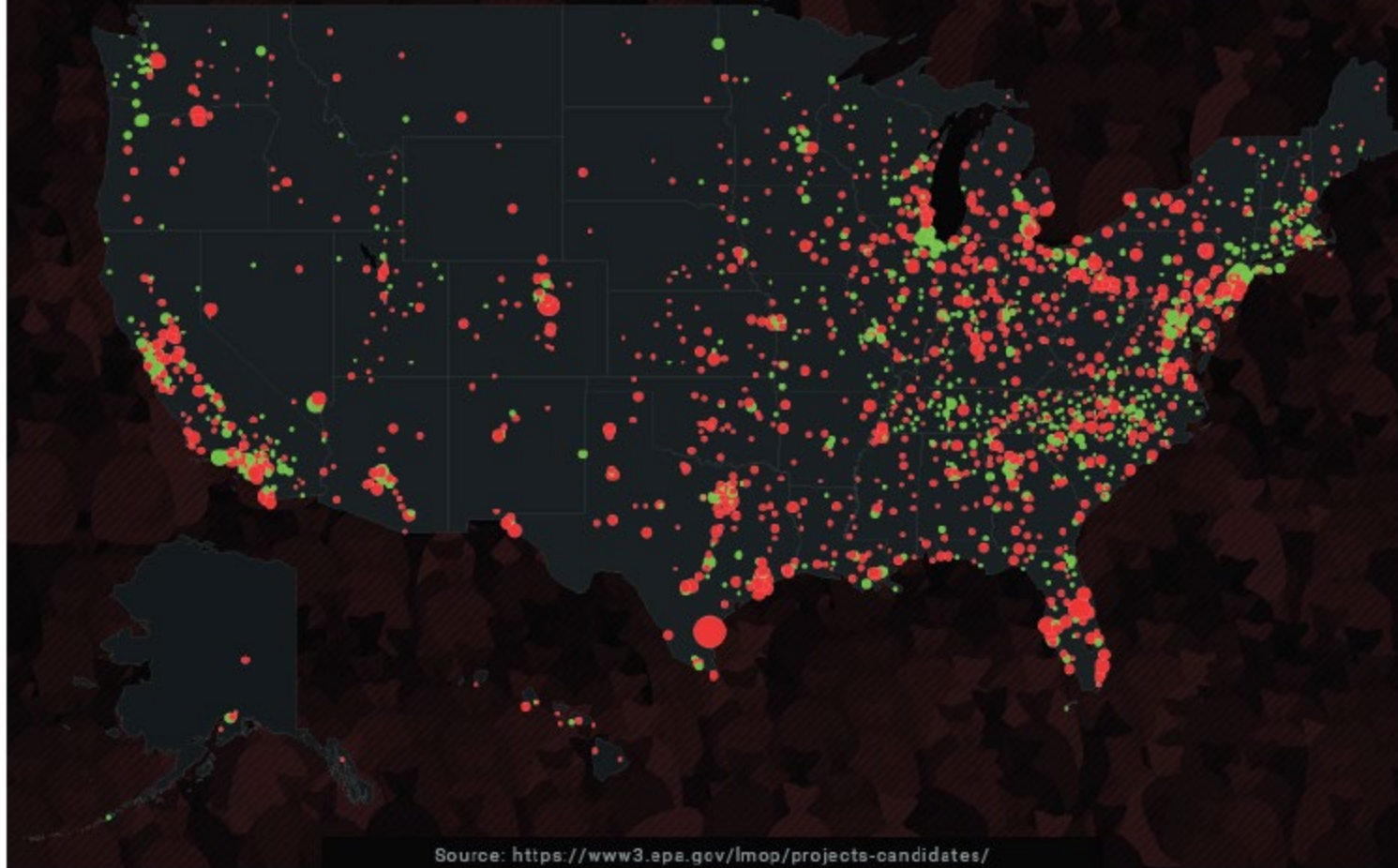
# A CENTURY OF AMERICAN GARBAGE

LANDFILLS OVER TIME, BY SIZE AND CURRENT STATUS

2013

LANDFILL STATUS

● Open ● Closed



Source: <https://www3.epa.gov/lmop/projects-candidates/>

**40%** of food in the United States goes uneaten.



**Most of  
that food**  
goes to landfills.

# LINEAR ECONOMY

4





4

<https://vimeo.com/195856946>



4

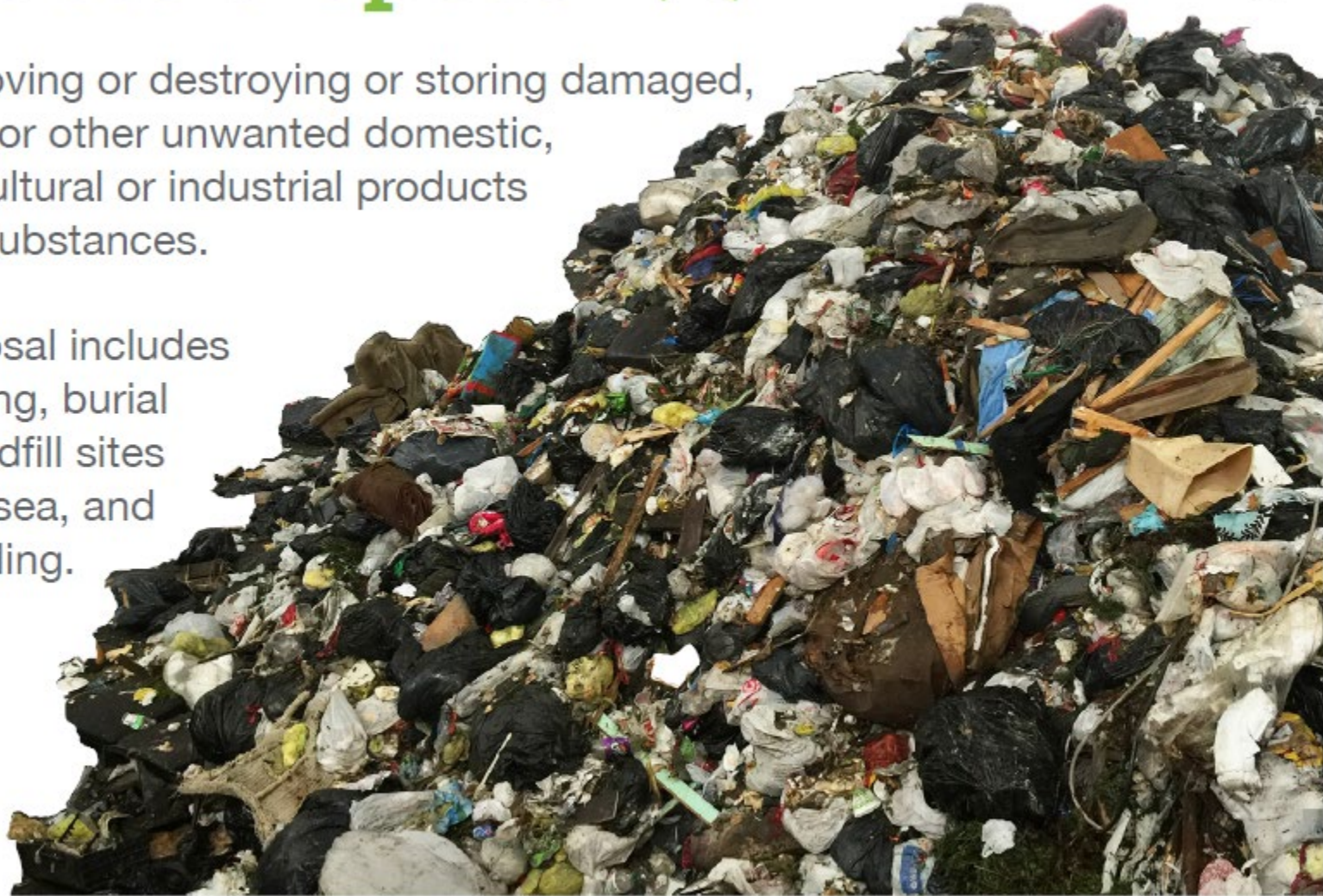
Chris Jordan, Midway Atoll Refuge  
<http://www.chrisjordan.com/gallery/midway/#CF000313%2018x24>

# Waste disposal (n.)

4

Removing or destroying or storing damaged, used or other unwanted domestic, agricultural or industrial products and substances.

Disposal includes burning, burial at landfill sites or at sea, and recycling.



4

“It’s important to understand that ‘waste-to-energy is not an accurate term,’ says Mike Ewall, [a veteran environmental justice advocate in the Chester, PA area].

**‘Incinerators are still incinerators even if they produce electricity.’**

“The argument is over whether ‘waste-to-energy’ plants adequately **capture** enough of the **pollutants** that are produced by trash-burning, or **continue to release dangerous toxins** into the air the same way old-fashioned incinerators did.”

*CityLimits.org, “Life Near a Landfill” by Jarrett Murphy*

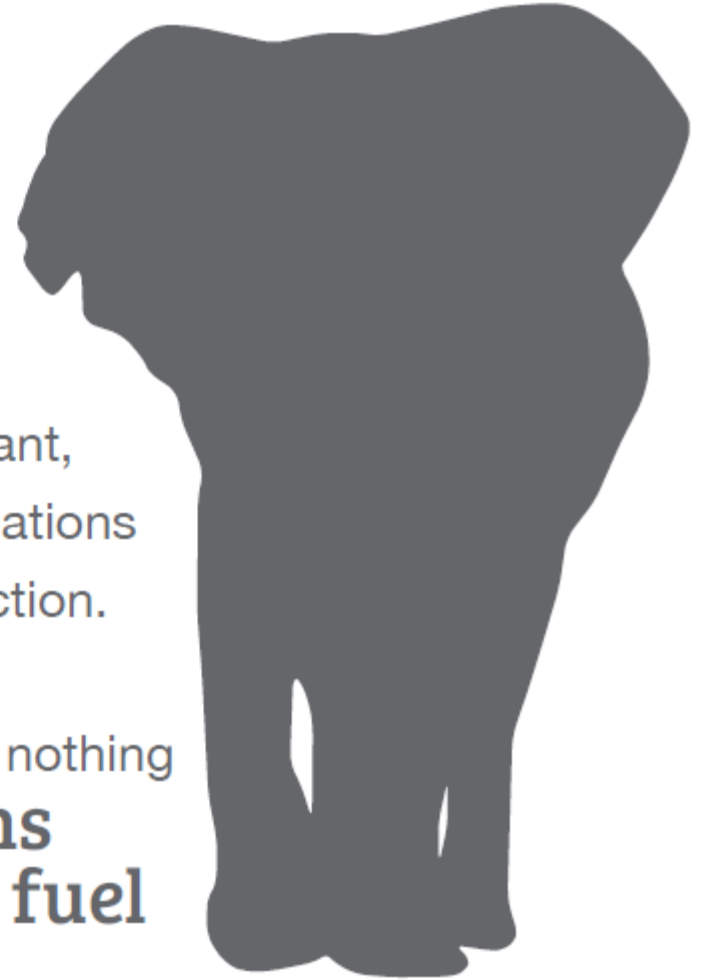
<https://citylimits.org/2015/05/22/life-near-a-landfill-the-towns-and-people-who-end-up-with-nycs-trash/>



4

“Most likely, you think we hated the elephant, the golden toad, the thylacine and all variations of whale harpooned or hacked into extinction.

It must seem like we sought to leave you nothing but benzene, mercury, **the stomachs of seagulls rippled with jet fuel and plastic.**”



*Excerpt from “Letter to Someone Living Fifty Years from Now” by Matthew Olzman*  
<https://www.poets.org/poetsorg/poem/letter-someone-living-fifty-years-now>

# Throw away (phrasal verb)



1. To get rid of something that you no longer want
2. To waste something such as an opportunity or an advantage



5

The first people of this land are the Lenni Lenape. The Lenni Lenape ate oysters regularly, as did their ancestors, chucking the shells into enormous piles over thousands of years. These piles of shells are called middens.

Middens are some of the oldest and largest piles of intact garbage dating from after the last ice age.



In fact, middens helped inform the names of early New York streets, such as Pearl Street in Manhattan. Even more, a 1980s restoration of the Statue of Liberty yielded over 9,000 artifacts—ancient tools, bones, broken pottery, and refuse from countless past dinners!

Before street cleaners and a real sanitation department, New York City relied on one tactic: **free-roaming pigs**, who fed on household food scraps tossed into the gutters.



“Two portly sows are trotting up behind this carriage, and a select party of half-a-dozen gentlemen hogs have just now turned the corner. Here is a solitary swine lounging homeward by himself. He has only one ear, having parted with the other to vagrant-dogs in the course of his city rambles. . . . They are the city scavengers, these pigs.”

- Charles Dickens, written during his travels of New York in 1842



Charles Dickens

“ In 1895, **sanitary conditions had become intolerable**. Horses were leaving an estimated **2.5 million pounds of manure** and **60,000 gallons of urine** on the streets every day.



**Horse carcasses rotted in the streets. Garbage piles reached a foot or two deep,** cleared only haphazardly by “ragtag army of the unemployed.”

In 1895, New York City hired **Colonel George Waring** as commissioner of the Department of Street Cleaning.



He treated the department as an army, mandating that street cleaners wear white uniforms to convey a sense of cleanliness, give the workforce a dignity, and make the public aware that there was a serious and dedicated effort to clean the city. It was a brilliant success. Hence their nickname, **the “White Wings.”**



1893



1895



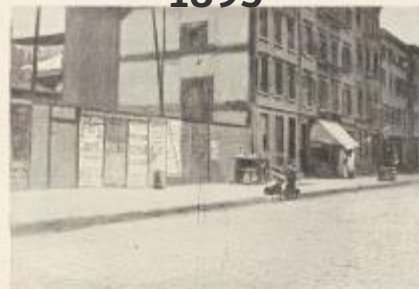
1893



1895



MARCH, 1893. SOUTHEAST CORNER OF FOURTH STREET AND AVENUE D. MAY, 1895.



MARCH, 1893. IN FRONT OF 225 N. 4TH ST. MAY, 1895. EAST SIDE OF 4TH ST.





Throughout the 1880s, 75 percent of New York City's garbage was being dumped into the Atlantic Ocean. Although city officials pledged to end ocean dumping, they couldn't find workable alternatives. It continued into the 1900s, and was finally halted by the U.S. Supreme Court in 1934.

5

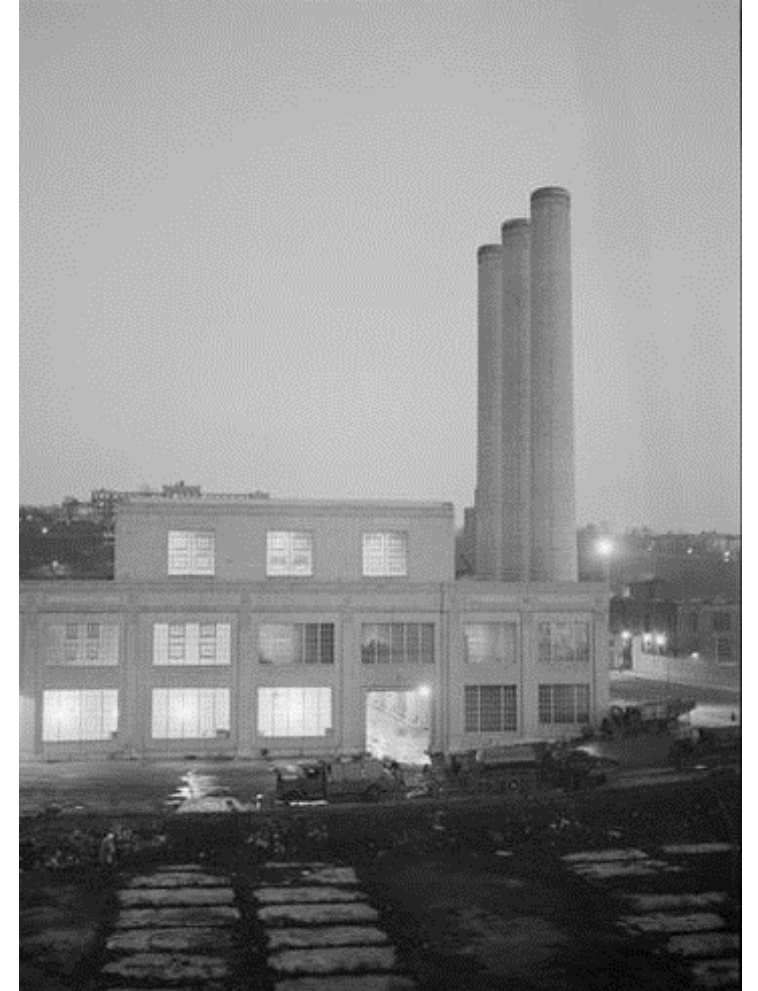
A mid-1950s campaign to prevent littering in New York included a gigantic waste basket in Times Square.





5

**New York City's first incinerator** – the first in the nation – was built on Governors Island in 1885. By the 1960's, the city was burning almost a third of its trash in its 22 municipal incinerators and 2,500 incinerators in apartment buildings.



However, a combination of environmental problems, health concerns and operating costs made incinerators less attractive by the mid-1980's. In 1990, the last working municipal incinerator stopped burning.

Before it closed in 2001, **Fresh Kills was the largest landfill in the world, visible from space, and is still one of the largest structures ever built in the history of humankind.** It's 2,200 acres were nearly three times of the size of Central Park.



View of Fresh Kills landfill, circa 1950.





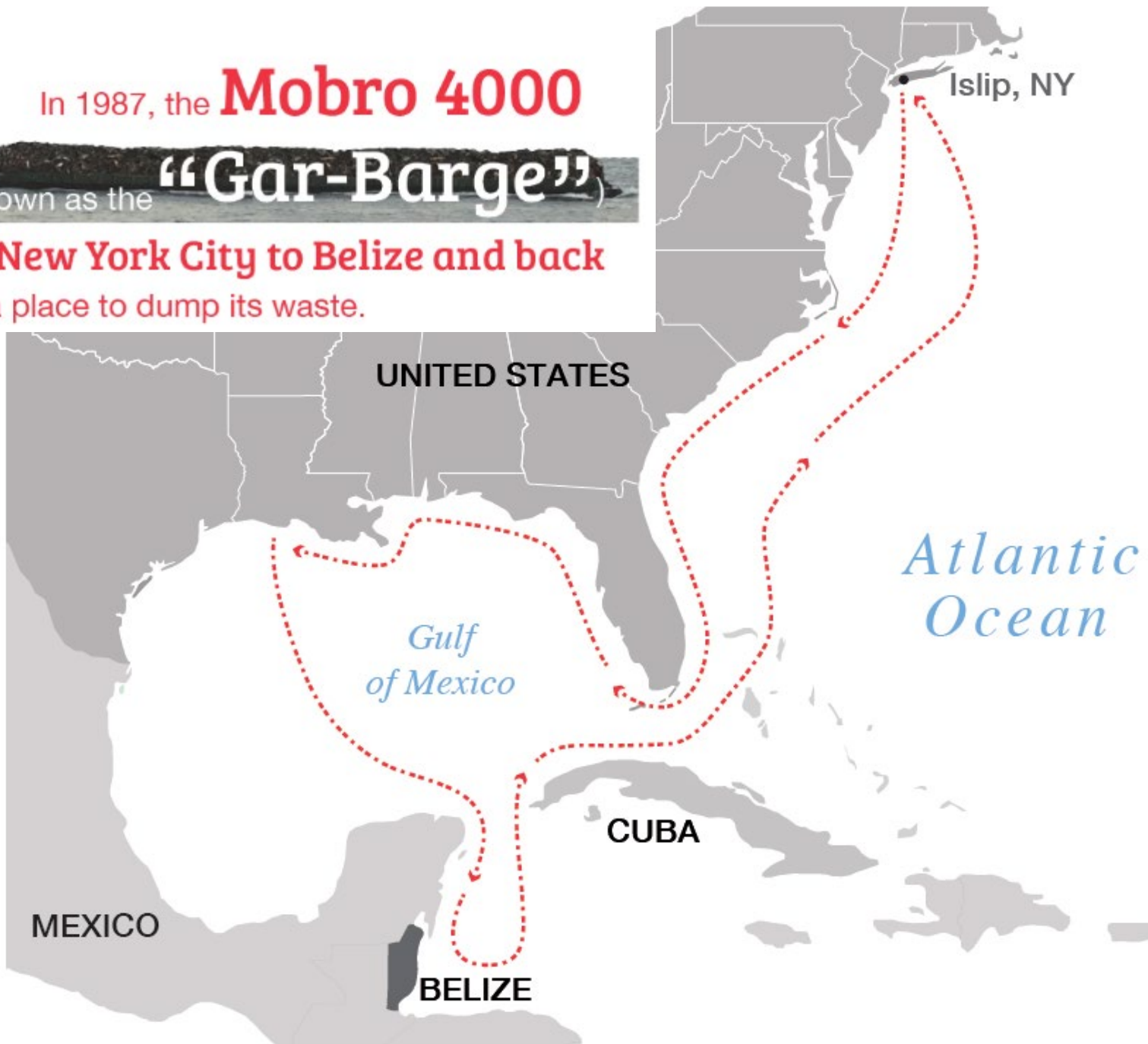
New York City's recycling law-- which provided residents with curbside collection of recyclables -- took effect on **July 14, 1989**.

Voluntary recycling collections, which had already begun in some neighborhoods, were now becoming mandatory citywide.

5



traveled from **New York City to Belize and back**  
trying to find a place to dump its waste.



**20 percent of the larger NYC metropolitan region is built on landfill.**

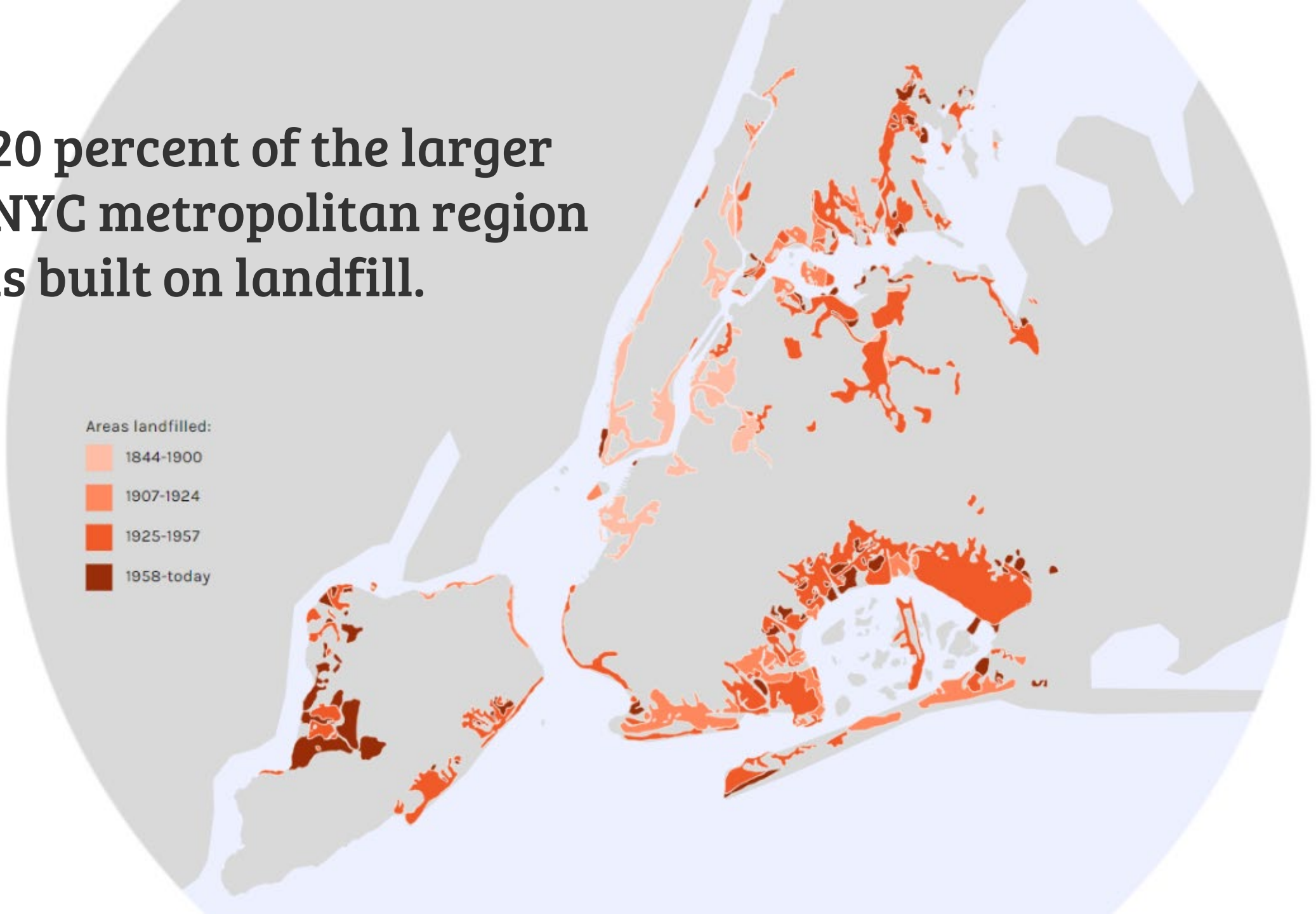
Areas landfilled:

1844-1900

1907-1924

1925-1957

1958-today





“Pizza Rat” might have been a funny viral video, but rats are a serious problem in New York City. They nest 100 feet from a food source, and **with piles of trash all over the city’s aging infrastructure**, it is a perfect rat habitat. Rats cause structural damage and carry diseases that can be fatal to humans.

*Facts: Rat Academy, NYC Department of Health*  
<http://images.hello giggles.com/uploads/2015/10/07/pizza-rat.jpg>