

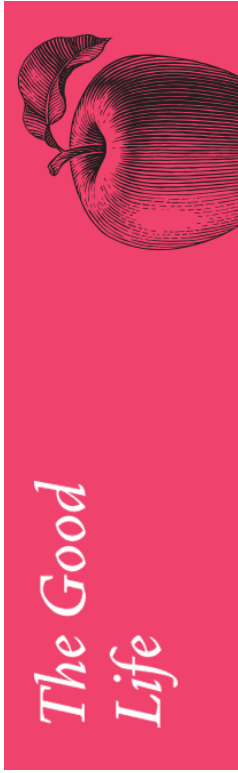
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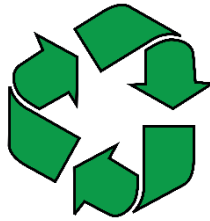


Exploring Environmental Justice in Baltimore

A Toxic Tour and Discussion with Energy Justice Network



Baltimore smokestack by Tony Gonzales with Flickr Creative Commons License



A Messina Good Life Theme Wide Event

Energy Justice Network

Energy Justice supports communities threatened by polluting energy and waste technologies. Taking direction from our grassroots base and the Principles of Environmental Justice, we advocate a clean energy, zero-emission, zero-waste future for all.

We understand that energy issues have profound impacts on many other environmental issues from agriculture to waste, and recognize that low-income communities and communities of color tend to be the most seriously impacted by polluting energy systems. We support a comprehensive, environmental justice approach. Find out more at energyjustice.net

Meet our Guide Dante Swinton



Dante came to Baltimore in 2014. He is a Masters candidate in Nonprofit Management and Social Entrepreneurship at the University of Baltimore. Beginning his time with Energy Justice Network in August of 2015, Dante has held numerous meetings with legislators and members of the Department of Public Works to advocate against incineration in favor of zero waste policies that would diminish pollution and create jobs for Baltimore. He currently divides his time between Baltimore and South Carolina, his home state.

PLUNDER

Plunder has matured into habit and addiction; the people who could author the mechanized death of our ghettos, the mass rape of private prisons, then engineer their own forgetting, must inevitably plunder much more. This is not a belief in prophecy but in the seductiveness of cheap gasoline.

Once, the Dream's parameters were caged by technology and by the limits of horsepower and wind. But the Dreamers have improved themselves, and the damming of seas for voltage, the extraction of coal, the transmuting of oil into food, have enabled an expansion in plunder with no known precedent. And this revolution has freed the Dreamers to plunder not just the bodies of humans but the body of the Earth itself. The Earth is not our creation. It has no respect for us. It has no use for us. And its vengeance is not the fire in the cities but the fire in the sky. Something more fierce than Marcus Garvey is riding on the whirlwind. Something more awful than all our African ancestors is rising with the seas. The two phenomena are known to each other. It was the cotton that passed through our chained hands that inaugurated this age. It is the flight from us that sent them sprawling into the subdivided woods. And the methods of transport through these new subdivisions, across the sprawl, is the automobile, the noose around the neck of the earth, and ultimately, the Dreamers themselves.

Ta-Nehesi Coates, *Between the World and Me*

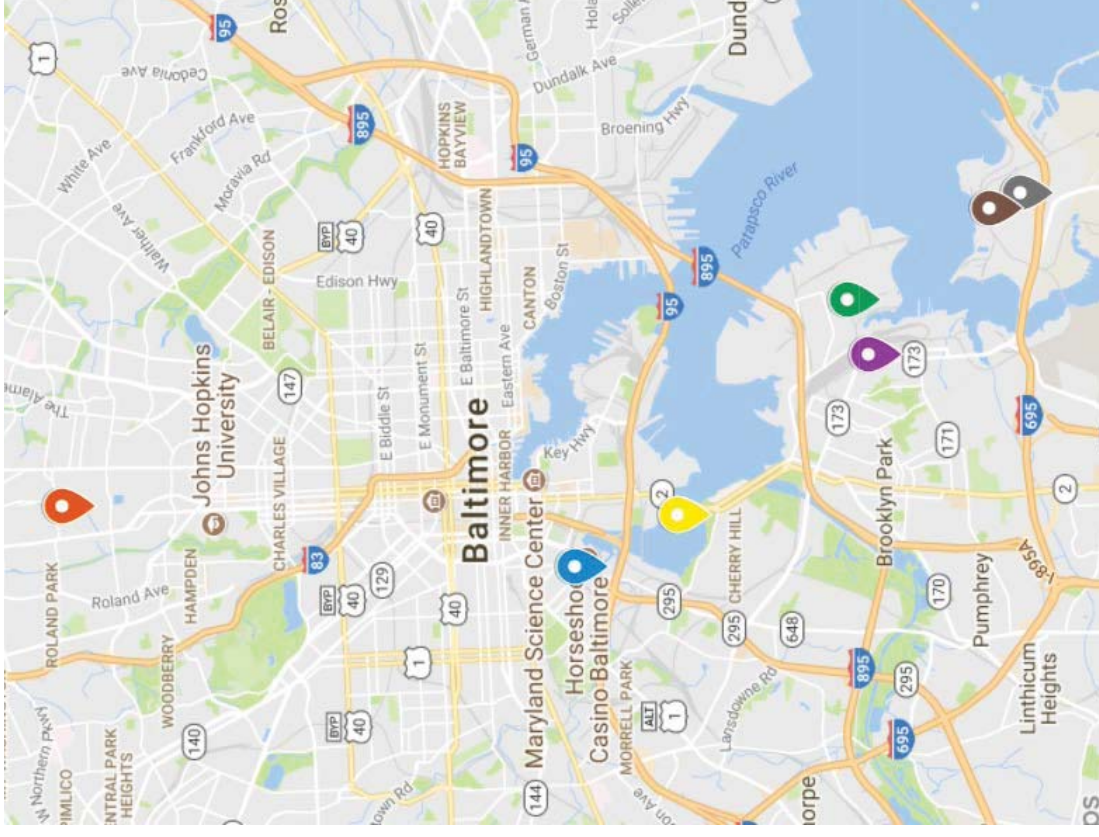
Meet the Panelists

Senowa Mize-Fox

Senowa Mize-Fox has a background in labor, racial, and climate justice organizing. She spent the last three years in Burlington, VT working with her labor union United Electrical Radio and Machine Workers of America helping to build strategies around just transition. Through this work she was connected with organizations such as the Vermont Workers' Center, Migrant Justice, Trade Unions for Energy Democracy, and Black Lives Matter VT. Senowa currently does operations work for the Climate Justice Alliance (www.climatejusticealliance.org) and resides in Baltimore, MD.



Tour Stops



Loyola (red), Wheelabrator (Blue), Middle Branch Park (Yellow), Former FMC Chemical Plant (Green), Curtis Bay Park (Purple), Medical Incinerator (Brown), Quarantine Road Landfill (Grey)

Environmental Justice for All

NOTES

Robert D. Bullard

A growing body of evidence reveals that people of color and low-income persons have borne greater environmental and health risks than the larger society. Hardly a day passes without the media discovering a community of color fighting some type of environmental threat. This was not always the case. For years, residents of the nation's ghettos, barrios, reservations, and rural "poverty pockets" watched helplessly as their communities became the dumping grounds for garbage, toxic waste, incinerators, smelters, sewage treatment plants, chemical industries, highways, and a host of other polluting facilities.

A new movement has taken root in the United States, and spread around the world, that defines environment as "everything"—where we live, work, play, worship, and go to school, as well as the physical and natural world. This relatively new national movement is called the environmental and economic justice movement. Three decades ago, the concepts of environmental justice had not registered on the radar screens of environmental, civil rights, or social justice groups. Nevertheless, one should not forget that Dr. Martin Luther King, Jr. went to Memphis in 1968 on an environmental and economic justice mission for the striking black garbage workers. The strikers were demanding equal pay and better work condition. Of course, Dr. King was assassinated before he could complete his mission.

What is environmental justice? Environmental justice is defined as 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. Fair treatment means that no group of people, including racial, ethnic, or socio-economic groups should

NOTES

bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies. Simply put, environmental justice means everyone (not just the people who can “vote with their feet” and move away from threats or individuals who can afford lawyers, experts, and lobbyists to fight on their behalf) is entitled to equal protection and equal enforcement of our environmental, health, housing, land use, transportation, energy, and civil rights laws and regulations.

Excerpt from *Environmental Justice for All*

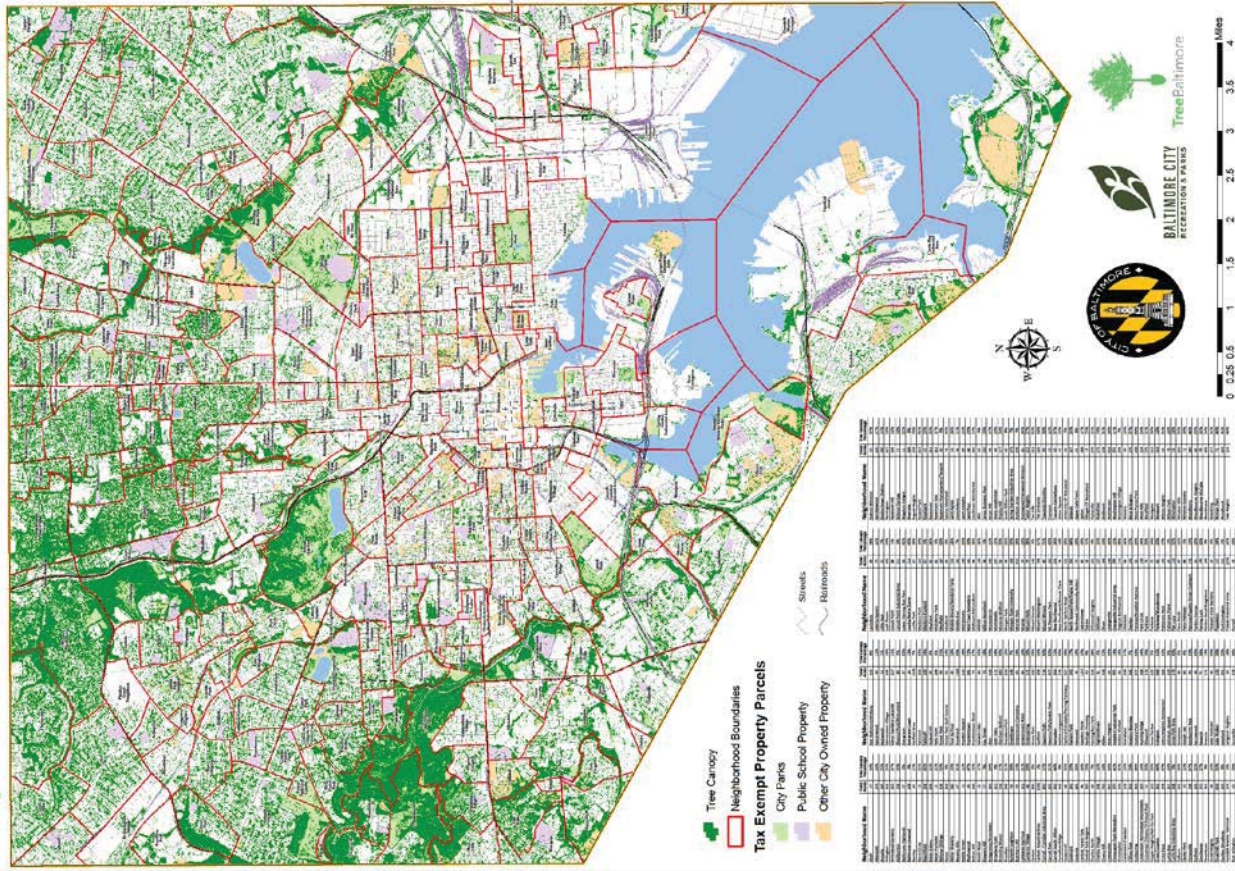
Robert D. Bullard

Professor of Sociology

Director, Environmental Justice Resource Center at Clark Atlanta University
©National Humanities Center, 2006

Does Baltimore have an environmental
justice problem?

Tree Baltimore Neighborhood Tree Canopy 2007

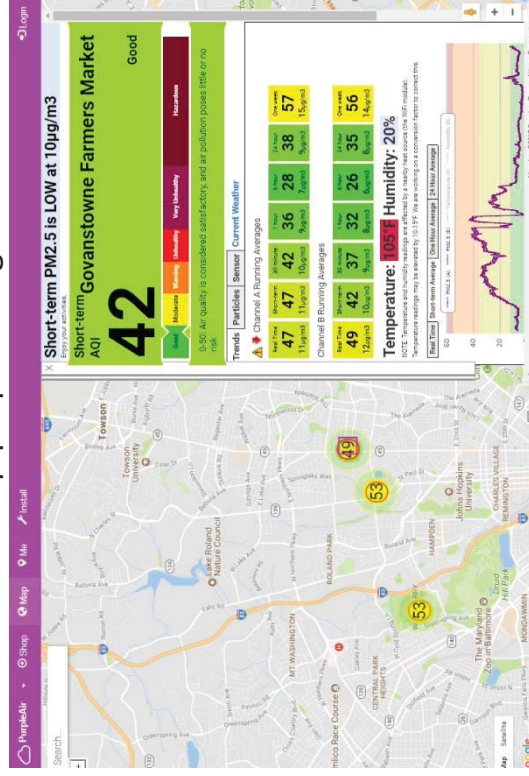


Monitoring Particle Pollution

Particulate Matter pollution levels are often different between locations in cities and neighborhoods. The amount of particle pollution depends on closeness to the pollution source, local scale weather, and the types of space.

At Loyola, We have established a local network of particulate matter monitors to learn more about particulate matter in the area.

Visit map.purpleair.org



Search by zipcode to see current local air quality. Clicking the icons on the map will provide more information about the air quality at that location.

Contact: eedahl@loyola.edu

Sponsored by Kolvenbach Programs, Technology Services, Dean of Loyola College, Environmental Studies & Academic Affairs

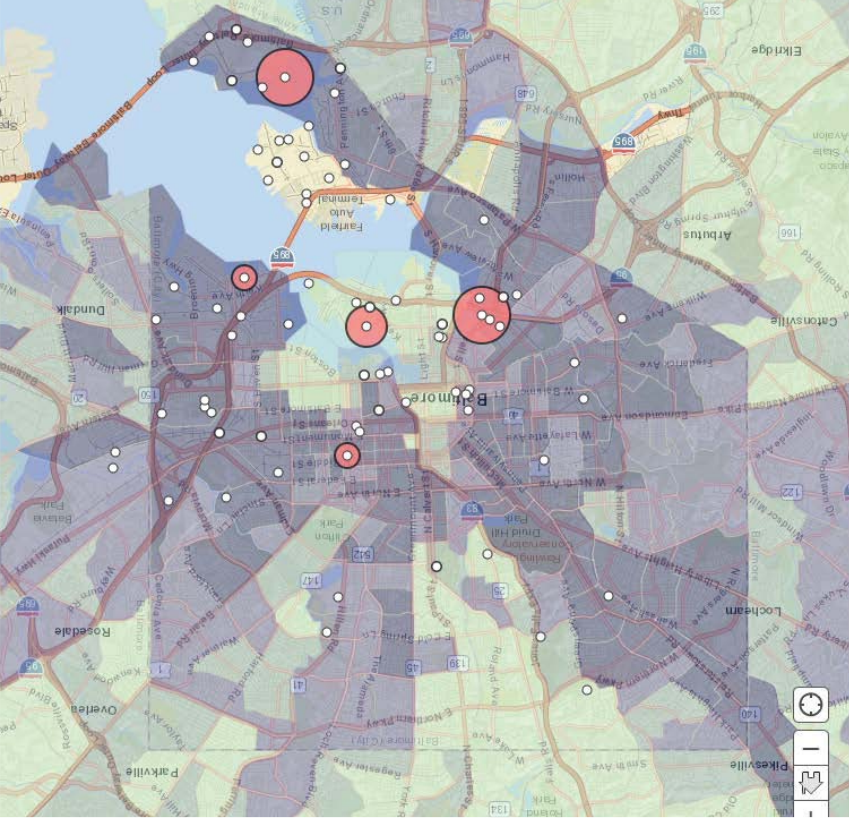
Urban green spaces (WHO.int)

Green spaces such as parks and sports fields as well as woods and natural meadows, wetlands or other ecosystems, represent a fundamental component of any urban ecosystem. Green urban areas facilitate physical activity and relaxation, and form a refuge from noise. Trees produce oxygen, and help filter out harmful air pollution, including airborne particulate matter. Water spots, from lakes to rivers and fountains, moderate temperatures.

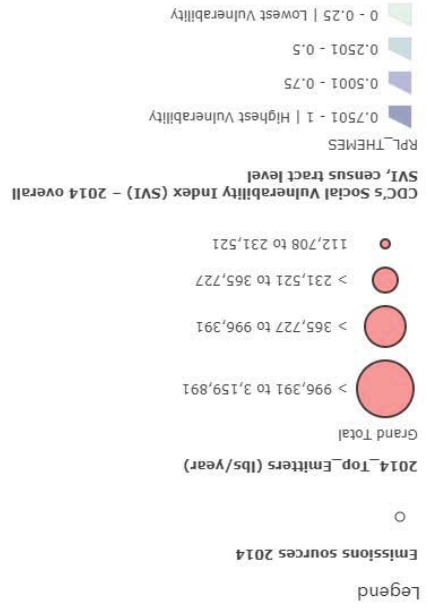
Urban parks and gardens play a critical role in cooling cities, and also provide safe routes for walking and cycling for transport purposes as well as sites for physical activity, social interaction and for recreation. Recent estimates show that physical inactivity, linked to poor walkability and lack of access to recreational areas, accounts for 3.3% of global deaths.

Green spaces also are important to mental health. Having access to green spaces can reduce health inequalities, improve well-being, and aid in treatment of mental illness. Some analysis suggests that physical activity in a natural environment can help remedy mild depression and reduce physiological stress indicators.

Where are the green spaces in Baltimore?



[Interactive Map at https://arg.is/1XavG8](https://arg.is/1XavG8)



Asthma is an epidemic in Baltimore

In Baltimore City¹

- 12.4 % of adults have asthma (8.4% statewide & 8.6 % nationally)
- 20% of children under 18 have asthma (11.9% statewide & 9.4% nationally).
- Baltimore's pediatric asthma hospitalization rate is the highest in Maryland and one of the highest in the nation.
- The average annual mortality rates from asthma in Baltimore City is 200 times higher than the state rate.

Baltimore asthma hospitalization rates among children are higher for households with single mothers and in areas with less green space.²

Asthma accounts for the greatest loss of productivity either through missed work days or school absenteeism. Nationally, it is estimated that 10 million work days and almost 14 million school days are missed each year due to asthma.²

Asthma rates and associated hospitalizations and mortality rates are impacted by urban factors such as air quality and built vs. vegetation cover as well as socioeconomic and racial factors.³

- Asthma disproportionately burdens people living in poverty and with low education persons.
- Hospitalizations and mortality disproportionately affect people of color and women.¹

Air pollution can make asthma symptoms worse and trigger asthma attacks. Ozone and particulate matter in the air can trigger asthma symptoms in both adults and children, even after exposure.

A major element of waste needed in the living process, with an element of excess in the constituent materials; distinguishing basic features performing no apparent function, and playing no discernable part in countering any negative forces, but which are nonetheless clearly essential for fulfillment of the process, and which, if removed, would establish an emptiness under the heart. Accepting the waste and the excess, and a fundamental inadequacy in the structure as a whole and in each individual part, there is still an ongoing dynamic in the parts as they succeed each other, and in the assembling record, that registers as positive.

By Thomas Kinsella
From 'Marginal Economy'
(Dublin: Peppercanister, 2006) 32.

1. Bankoski, A., Pinto, C. D., Hess-Mutinda, R., & McEachern, Y. (2012). *Maryland Asthma Surveillance Report*. Baltimore, MD: Maryland Department of Health & Mental Hygiene.
2. Baltimore City Health Department – health.baltimorecity.gov
3. Kimes, D., Ullah, A., Levine, E., Nelison, R., Timins, S., Weiss, S., . . . Blaisdell, C. (2004). *Health & Place*, 10, 141-152. doi:10.1016/S1353-8292(03)00054-6

Quarantine Road Landfill

Fast Facts from Energy Justice Network

- Opened in 1985 (1st cell), completed in 1993 (6th cell)
- Over half the waste annually is Wheelabrator ash
- 2010 incinerator ash ban as cover material
- Current outstanding debt: over \$17 million
- City bought the adjacent industrial landfill in the late 1990s
- Acquired a permit to expand, known as Quarantine Road II
- Numerous site complaints have been made by inspectors

"In 2013, Americans generated about 254 million tons of trash and recycled and composted about 87 million tons of this material, equivalent to a 34.3 percent recycling rate. On average, we recycled and composted 1.51 pounds of our individual waste generation of 4.40 pounds per person per day" (EPA.gov)

Health impacts of air pollution

Air pollutants can have a serious impact on human health. Children and the elderly are especially vulnerable.

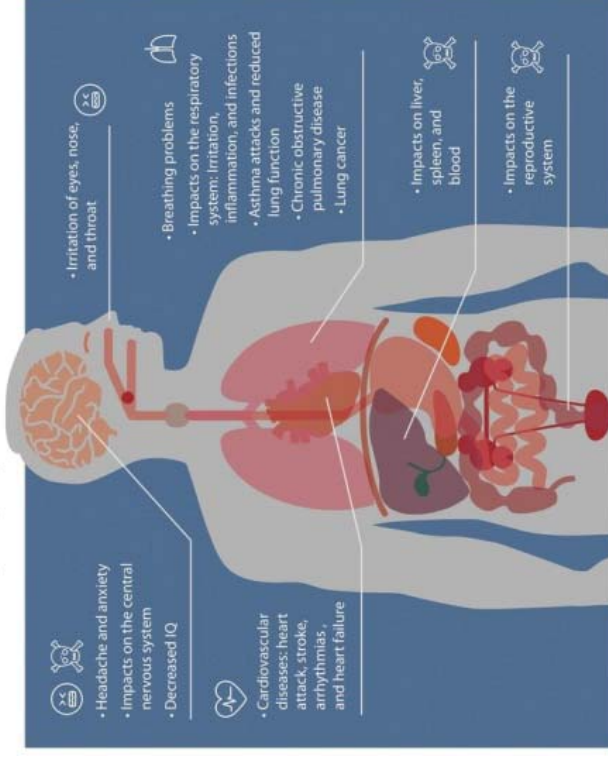


Image MN Pollution control agency

Is air pollution a universal health problem?

Experts say incineration is the least environmentally objectionable end-of-life option for unused drugs. But it's also the most expensive destruction method — from 50 cents to a dollar per pound, paid for by the facilities themselves — which is why many nursing homes resort to flushing.

Is the throwaway culture progress?

	MAJOR SOURCES	HEALTH EFFECTS	ENVIRONMENTAL EFFECTS
SO₂	Industry	Respiratory and cardiovascular illness	Precursor to acid rain, which damages lakes, rivers, and trees; damage to cultural relics
NO_x	Vehicles; industry	Respiratory and cardiovascular illness	Nitrogen deposition leading to over-fertilization and eutrophication
PM	Vehicles; industry	Particles penetrate deep into lungs and can enter bloodstream	Visibility
CO	Vehicles	Headaches and fatigue, especially in people with weak cardiovascular health	
Lead	Vehicles (burning leaded gasoline)	Accumulates in bloodstream over time; damages nervous system	Fish/animal kills
Ozone	Formed from reaction of NO _x and VOCs	Respiratory illness	Reduced crop production and forest growth; smog precursor
VOCs	Vehicles; industrial processes	Eye and skin irritation; nausea; headaches; carcinogenic	Smog precursor

World Resources Institute

The Air Quality Index tells you how clean or polluted your air is, and what associated health effects might be of concern. The AQI focuses on health effects you may experience within a few hours or days after breathing polluted air. EPA calculates the AQI for five major air pollutants regulated by the Clean Air Act: ground-level ozone, particle pollution (also known as particulate matter), carbon monoxide, sulfur dioxide, and nitrogen dioxide. For each of these pollutants, EPA has established national air quality standards to protect public health. Ground-level ozone and airborne particles are the two pollutants that pose the greatest threat to human health in this country.



(www.epa.gov)

Curtis Bay Energy – Medical Waste Incinerator

Excerpt from **Wasted: America's other drug problem** by Marshall Allen, ProPublica, April 2017

Perhaps the most graphic way to see the waste firsthand is a visit to the Curtis Bay Medical Waste facility on the south side of Baltimore, home of the largest incinerator of its kind in the country.

Here Curtis Bay's fleet of trucks delivers load after load of unused, unexpired drugs from hundreds of nursing homes and other facilities and clinics up and down the East Coast. Drugs also come from medical waste companies like SteriCycle and Daniels Sharpsmart. In 2015, 204 tons of non-hazardous pharmaceutical waste came from the Daniels location in the Bronx, according to records filed in New York. Such waste includes not only drugs tossed by nursing homes, but also those from hospitals, doctors' offices and other facilities.

Inside Curtis Bay, the drugs are processed and destroyed in an area the size of several hockey rinks. A conveyor belt about 15 feet off the ground snakes through the facility loaded with hundreds of boxes of pharmaceutical and medical waste — all leading to the two incineration chambers.

On a recent visit, the chamber was over 2,000 degrees, a heat that could be felt from 20 feet away.

From a platform above the incinerator's maw, you can watch as thousands of dollars of potentially lifesaving pills and medications tumble, box by box, into the steaming opening. Then they are shoveled into the blaze.

PARTICLE POLLUTION

Particulate Matter pollution includes:

- **PM₁₀** : inhalable particles, with diameters that are generally 10 micrometers and smaller;
- **PM_{2.5}** : fine inhalable particles, with diameters that are generally 2.5 micrometers and smaller.

Sources of PM

Particulate matter comes in many sizes and shapes and can be made up of hundreds of different chemicals. Some are emitted directly from a source, such as construction sites, unpaved roads, fields, smokestacks or fires.

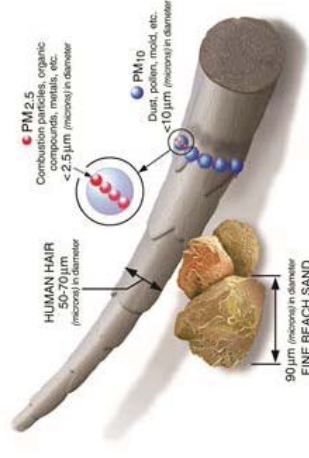
Most particles form in the atmosphere as a result of complex reactions of chemicals such as sulfur dioxide & nitrogen oxides, which are pollutants emitted from power plants, industries, & automobiles.

Health Effects of Particulate Matter

Smaller particles pose the greatest risk because they can get deep into your lungs, and some may even get into your bloodstream. People with heart or lung diseases, children, and older adults are the most likely to be affected by particle pollution exposure.

Exposure to these particles can affect both your lungs and your heart. Numerous scientific studies have linked particle pollution exposure to a variety of problems, including: premature death in people with heart or lung disease; nonfatal heart attacks; irregular heartbeat; aggravated asthma; decreased lung function; increased respiratory symptoms, such as irritation of the airways, coughing or difficulty breathing.

(www.epa.gov)



Baltimore released over 7 million gallons of sewage into Jones Falls

After heavy rain on Friday and Saturday, human waste overflowed underground and on a Baltimore street

The Drip, By Brew Editors, Baltimore Brew
August 1, 2017

The Baltimore Department of Public Works (DPW) disclosed today that more than 7 million gallons of sewage mixed with rainwater surged into the Jones Falls over the weekend – including over a half-million gallons that bubbled up through a manhole cover on an East Baltimore street.

The overflows began amid heavy rain on Friday and were primarily at “structured outfall” locations, pipes built a century ago as release points, to relieve pressure when too much water enters the system. According to DPW, 2.2 million gallons overflowed on July 28 from the above-ground structured outfall at 1901 Falls Road near the Baltimore Streetcar Museum. On the same day, another 4.3 million gallons spilled directly into the Jones Falls underground from the outfall at 428 East Preston Street and 496,000 gallons from the outfall at North Charles and West Lanvale streets. During two hours on Saturday afternoon in the 1800 block of East Eager Street, an estimated 589,000 gallons overflowed above-ground, according to a DPW news release. The sewage-laced rainwater “came through a manhole and washed into storm drains,” the release said.

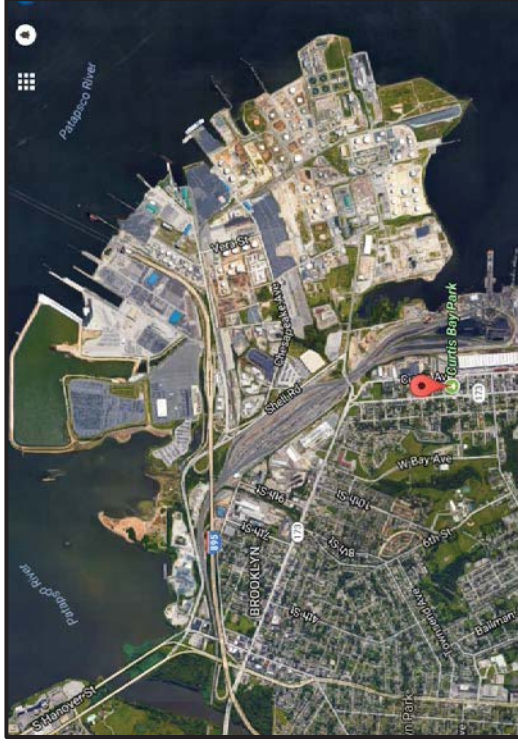
Violating the Clean Water Act

Federal officials sued the city years ago over the structured overflows, which permit millions of gallons of raw sewage to flow into local waterways and, ultimately, Chesapeake Bay. After decades of poor upkeep, Baltimore’s sewer lines have blockage points and sags that

How are health and environment connected?

How are waste and recycling connected to pollution?

Baybrook (Brooklyn & Curtis Bay)



Fast Facts from the Environmental Integrity Project

- Toxic air pollutants from Baybrook account for 37 percent of the entire amount of toxic emissions from the State of Maryland, and 87 percent of all toxic emissions from Baltimore City
- From 2005 to 2009, Curtis Bay ranked among the top ten zip codes in the United States for stationary emissions & in 2007 and 2008, Curtis Bay ranked first in the *entire country*.
- Of the four census tracts in the Baybrook region one ranked in the 92nd percentile and another in the 81st for risk of developing cancer.

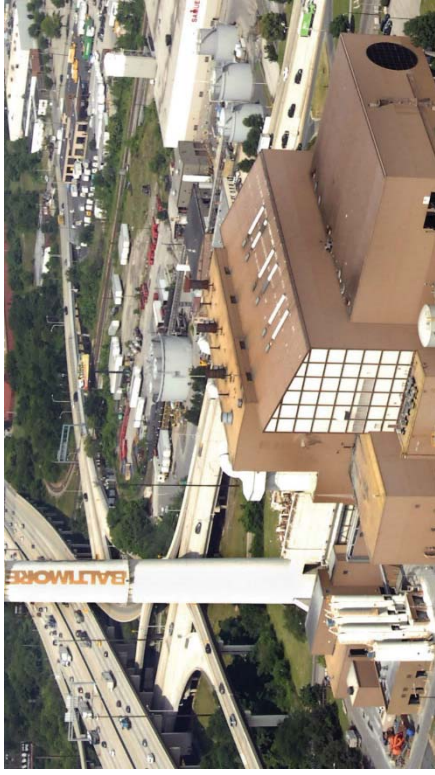
can cause overflowing toilets and flooded basements in homes and businesses during heavy storms. But the intentional “structured” releases of human waste into Herring Run, Gwynns Falls and other streams, as well as the Jones Falls, are in direct violation of the the 1973 Clean Water Act. Baltimore City signed a consent decree in 2002 with the Environmental Protection Agency (EPA) and Maryland Department of the Environment (MDE) to correct the problem through improved engineering. Originally requiring the city to be in compliance by December 31, 2015, the consent decree was extended to 2030 as the city copes with roughly \$1 billion of upgrades to its sewer lines and the Back River and Patapsco Wastewater Treatment Plants. The problem of structured sewage overflows is specifically supposed to be fixed by July 1, 2022, according to the revised agreement.



A sign posted by the Jones Falls Trail warns against having contact with the water.
Credit: Rachel Baye

Can urban streams be safe for recreation?

Wheelabrator, Baltimore



Aerial photo of Wheelabrator waste-to-energy incinerator on Russell St.
Lloyd Fox / 2009 Baltimore Sun, File

FAST FACTS

- Burns up to 2,250 tons of trash daily (Wheelabrator)
- 10th largest incinerator in the country (EJN)
- Accounts for 1/3 of all stationary emissions in the city (NEI, 2014)
- Number 1 in emissions of mercury, lead, sulfur dioxide, and nitrogen oxides (NEI, 2014)
- 3rd largest emitter of PM2.5
- Produces up to 64 MW of energy (enough energy to power 40,000 homes) (Wheelabrator)
- Per unit energy, produces more air pollution than coal (EJN)

Is incineration green energy?

Via justicemap.org

