THE COST OF BURNING TRASH

HUMAN AND ECOLOGICAL IMPACTS OF INCINERATION IN FLORIDA

Florida (FL) has the most Municipal Solid Waste (MSW) incinerators in the United States, with eleven incinerators. The cost of burning trash in municipal incinerators are significant to human and ecological health, and expensive for community members and municipalities.

VISUALIZING THE COST

EJ Community ●
Non-EJ Community ○

1 Bay County Waste-to-Energy Facility
(Panama City)

2 Lake County Resource Recovery Facility
(Okahumpka)

3 Pasco County Solid Waste Resource Recovery Facility
(Shady Hills)

4 Hillsborough County Resource Recovery Facility
(Tampa)

5 McKay Bay Refuse-to-Energy Facility
(Tampa)

6 Pinellas County Resource Recovery Facility
(Petersburg)

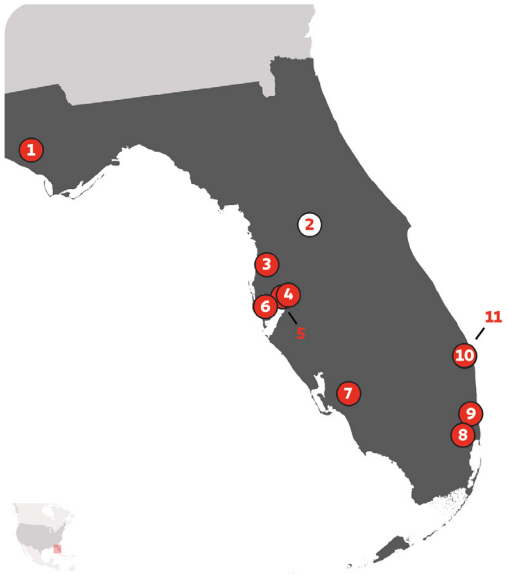
7 Lee County Resource Recovery Facility
(Fort Myers)

8 Miami-Dade County Resource Recovery Facility
(Doral)

9 Wheelabrator South Broward Inc.
(Fort Lauderdale)

10 Palm Beach Renewable Energy Facility #1
(West Palm Beach)

11 Palm Beach Renewable Energy Facility #2
(West Palm Beach)



The map shows Florida MSW incinerators and their location in environmental justice (EJ) communities (communities of color and low-income communities disproportionately impacted by environmental burdens and pollution). [1] Incinerators are often located in communities which face cumulative impacts from multiple sources of pollution. **In FL, 10 of the 11 MSW incinerators are located in an EJ community, within a three-mile radius.**

THE COST TO THE PLANET

Waste incineration **releases significant greenhouse gases** into the atmosphere contributing to climate change. In 2018, MSW incinerators in the U.S. emitted **11 million tons of carbon dioxide** and are nearly as carbon-intensive as burning coal.[2] Despite these contributions to air and climate pollution, incinerators have tried to re-brand as "waste-to-energy" facilities, and in some states, lobbying has earned renewable energy status and taxpayer-funded subsidies, which helps keep them afloat. This preferential treatment uses money and resources that could be going towards true clean energy like solar and wind.[3]

In Florida, burning municipal solid waste is considered a renewable energy source according to their Renewable Portfolio Standard (RPS).[4] The FL RPS gives incinerators access to renewable energy subsidies funded through taxpayer dollars that contribute to the profitability of this dirty industry. **These FL policies must change**.

Incineration companies often enter into **long-term (up to 30 year) contracts** with local municipalities that enforce delivery of a set amount of trash (called a put-or-pay contract) with the **threat of a financial penalty** for the town if the requirement is not met. Incineration contracts may:

- lock communities into waste incineration and decades of air pollution and carbon emissions
- disincentivize the transition to recycling, composting, and zero waste programs
- threaten the fiscal stability of communities by incineration industry debt and lawsuits

In spite of **serious environmental and health risks** associated with burning trash, renewable energy subsidies allow states and localities to promote incineration as an "environmentally-sound" way to manage waste.

THE COST TO HUMAN HEALTH

MSW incinerators are large emitters of toxic air pollutants that are detrimental to human health. Burning consumer waste emits many toxins such as heavy metals, dioxins, lead, mercury, nitrogen oxides (NOx), and Particulate Matter (PM). People living close to these facilities are exposed through inhalation or through contaminated food and water. These toxins are linked to a variety of problems including asthma, heart disease, miscarriage, stillbirth, kidney disease, high blood pressure, and lung disease. Notably, long-term exposure to PM has been shown to increase the risk of death from Covid-19.[5]

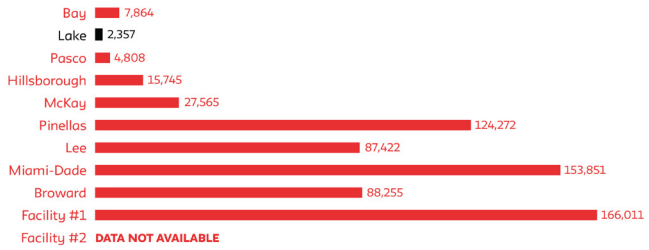
THE COST TO FLORIDIANS' HEALTH

491,603 people live within a three-mile radius of Florida's eleven incinerators, and are exposed to constant streams of toxic air pollution. Particulate Matter 2.5, lead and mercury are three of the most dangerous pollutants emitted from incinerators.

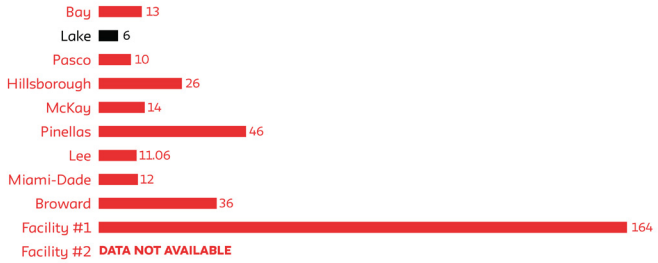
- Pinellas County Resource Recovery Facility is the largest incinerator in the state, and one of the largest incinerators in the country, burning 3,150 tons of waste per day.[6] Located in an EJ community, 64,909 people live within a three mile radius of the facility, 29% of whom are people of color, and 33% are low income residents.
- Pinellas County Resource Recovery facility was the largest emitter of mercury in 2017, emitting 151.26 pounds that year.
- In 2017, Palm Beach Renewable Energy Facility #1 was the largest emitter of PM2.5 and lead. Exposure to lead is particularly worrisome for children and can seriously affect mental and physical development.

AIR POLLUTANT EMISSIONS FOR FL INCINERATORS (2017)

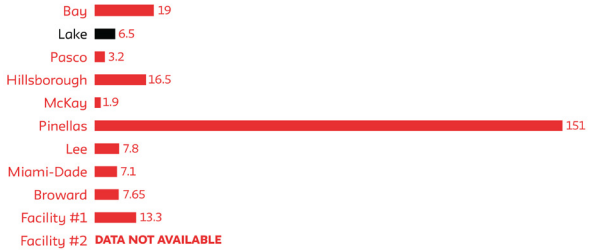
ANNUAL PM 2.5 (LBS)



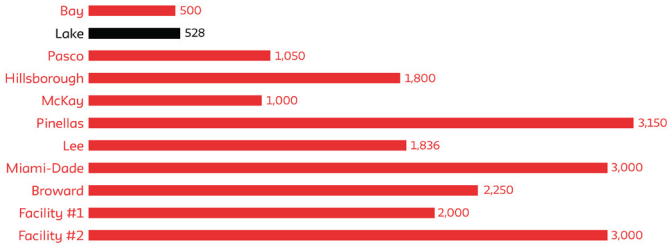
ANNUAL LEAD (LBS)



ANNUAL MERCURY (LBS)



DAILY TONS OF WASTE CAPACITY (LBS)



EJ-Community Non EJ-Community

THE COST TO FLORIDIANS' WALLET

In addition to paying more for healthcare due to a higher "pollution burden", residents in FL may also **pay more to have waste burned instead of landfilled.** The U.S. Energy Information Administration reports that burning trash in MSW incinerators is the most expensive way to make energy.[7]

- Pasco County, FL plans to expand the incinerator it owns, the Pasco County Solid Waste Resource Recovery Facility, as well as extend its contract with Covanta, (a publicly-held company that operates this incinerator), from 2025 to 2034. This expansion will cost $525 million.[8]

- Pasco County residents currently pay a "waste-to-energy" assessment in their annual tax bill which increased to $72 last year from $65 with plans for another $7 increase each year for the next six years.[9]

JOIN THE FIGHT

HELP ELIMINATE INCINERATION TO PROTECT FLORIDIANS HEALTH, ENVIRONMENT, AND HARD-EARNED MONEY. ADVOCATE FOR ZERO WASTE SOLUTIONS THAT MINIMIZE MUNICIPAL WASTE STREAMS AND CONSERVE RESOURCES THROUGH RESPONSIBLE PRODUCTION, CONSUMPTION, REUSE AND RECOVERY WITHOUT BURNING:

- End disposal in incinerators and landfills
- Utilize minimum recycled content standards in manufacturing processes
- Invest in infrastructure to recover maximum resources for reuse, recycling and composting
- Ensure community involvement in any state zero waste plan

To learn more, check out GAIA's Zero Waste Master Plan

Join a Community Group to close MSW incinerators, please contact:
Global Alliance for Incinerator Alternatives (GAIA)

ENDNOTES

[1] For the purposes of this study, an environmental justice community is defined using thresholds for race, Hispanic origin, and household income derived from the US Census Bureau. To determine the threshold for an EJ community, a review of the state-wide average for these socio-demographic characteristics was completed and an EJ community was defined as any census tract where the thresholds for the socio-demographic data was near the state average. In FL, 49.1% of the population are people of color, including Hispanic origin and 33% of households have income below 200% of the federal poverty level. Based on these averages, any census tract in FL (a) where 40% or more of the residents within a three-mile radius of the plant are people of color [all people who are NOT white/non Hispanic] or (b) 25% or more of the households are at or below 200% of the Federal Poverty Level would be considered an EJ community. The demographic indicators for this project came from EJSCREEN. The source of all demographic data in EJSCREEN comes from American Community Survey five-year summary, compiled yearly. For this project, data from the ACS 2013-2017 5-year estimates was gathered and wrangled for analysis which replicates the demographic variables used in EJSCREEN.

[2] EPA, "Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990-2018," (EPA, 2020): 2-3 https://www.epa.gov/sites/production/files/2020-04/documents/us-ghg-inventory-2020-main-text.pdf

[3] Steven C. Russo et al., Comments of the New York State Department of Environmental Conservation Regarding the Verified Petition of Covanta Energy Corporation, (Albany, New York: New York State Department of Environmental Conservation, 2011.

[4] DSIRE, Renewable Energy Standard Program Overview: Florida, (DSIRE, May 27, 2020) https://programs.dsireusa.org/system/program/detail/934 (accessed october 19, 2020)

[5] Zhaozhong Zhu,Kohei Hasegawa,Baoshan Ma,Michimasa Fujiogi,Carlos A. Camargo,Liming Liang, "Association of asthma and its genetic predisposition with the risk of severe COVID-19" (Journal of Allergy and Clinical Immunology, 2020) https://www.sciencedirect.com/science/article/pii/S009167492030806X

[6] Tishman Environment and Design Center, "U.S. Municipal Solid Waste Incinerators: An Industry in Decline," Tishman Center, May, 2019: 69-70 https://static1.squarespace.com/static/5d14dab43967cc000179f3d2/t/5d5c4bea0d59ad-00012d220e/1566329840732/CR_GaiaReportFinal_05.21.pdf

[7] U.S. Energy Information Administration, Updated Capital Cost Estimates for Utility Scale Electricity Generation Plants, (Washington, D.C.:U.S. Energy Information Administration, 2016), 9.

[8] Covanta, "Pasco" https://www.covanta.com/where-we-are/our-facilities/pasco

[9] Barbara Behrendt, "Pasco takes first step to expand its trash-to-energy incinerator" (Tampa Bay Times, April 21, 2020) (https://www.tampabay.com/news/pasco/2020/04/21/pasco-takes-first-step-to-expand-its-trash-to-energy-incinerator/

This fact sheet was prepared by The Tishman Environment and Design Center in consultation with GAIA and in collaboration with Moja Robisnon in November 2020.

GAIA is a worldwide alliance of more than 800 grassroots groups, non-governmental organizations, and individuals in over 90 countries whose ultimate vision is a just, toxic-free world without incineration.
www.no-burn.org

Tishman Environment and Design Center

The Tishman Environment and Design Center integrates bold design, policy and social justice approaches to tackle the climate crisis and advance environmental justice.
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