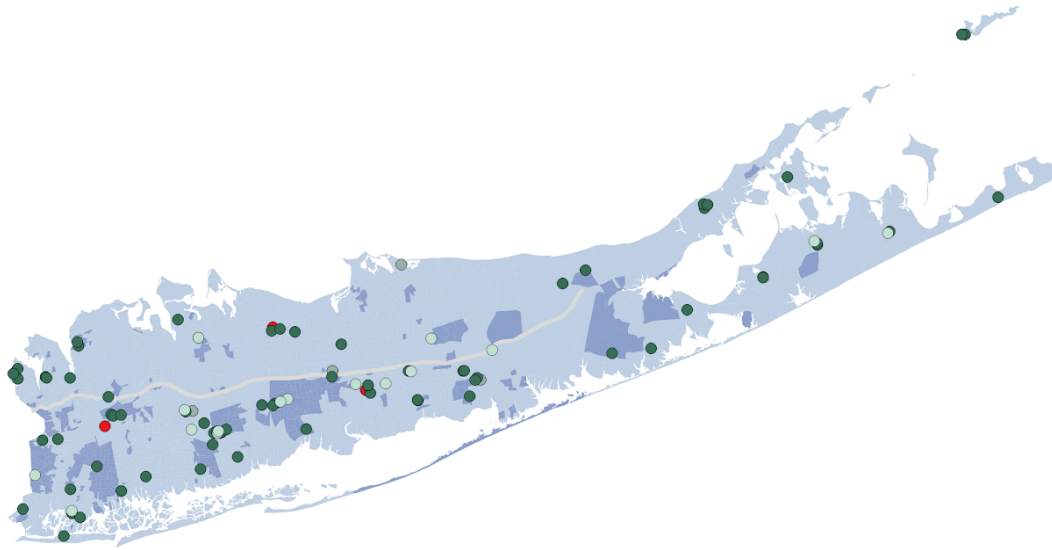
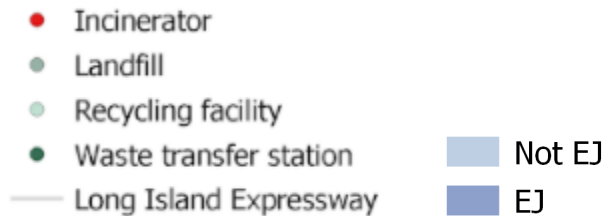


## Waste Structures on Long Island



### Key for waste facility types



According to the **New York State Department of Conservation (NYSDEC)**, there are 96 active waste structures on Long Island. These include 4 incinerators, 5 landfills, 16 material recovery facilities (recycling facilities), and 71 waste transfer stations. Out of the 96 waste structures, about 28% are located in or within a three mile radius of an environmental justice community.

**New York State-level thresholds\*** (thresholds: poverty rate = 23.6%, minority = 51.1%)

\*using definitions from [NYS EJ bill](#)

Definitions:

**Long Island-** New York's Nassau and Suffolk counties

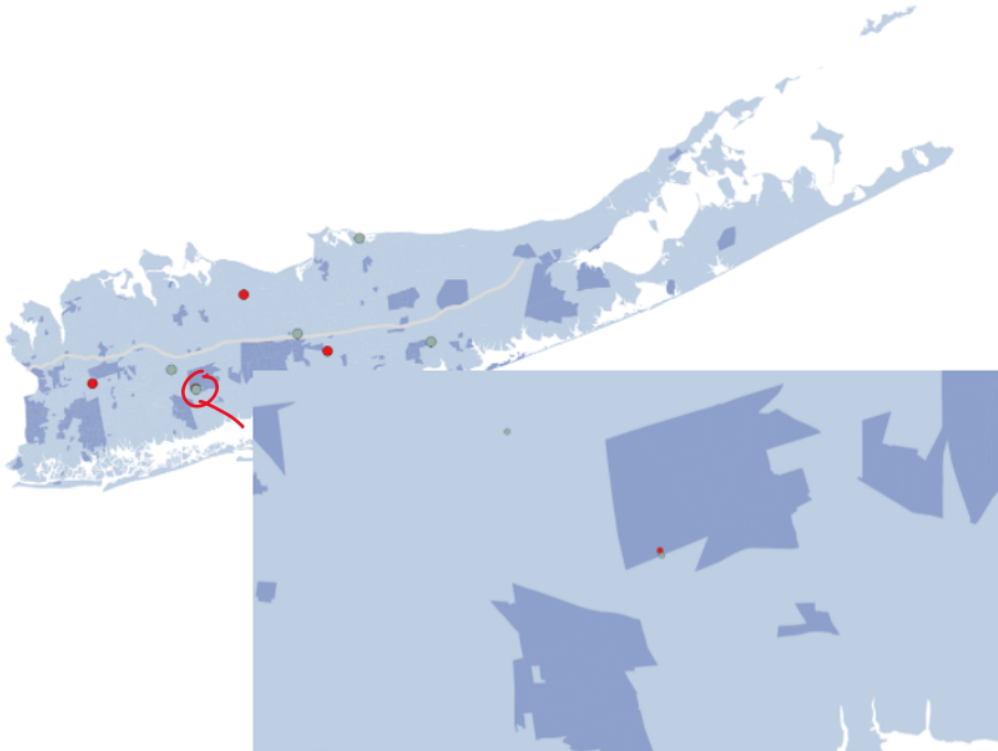
**Census block group-** a unit for the U.S. Census used for reporting which typically contain between 250-500 housing units.

**Environmental justice-** - the fair treatment and meaningful involvement of all people regardless of race, color, 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 a racial, ethnic, or socioeconomic group, should 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.

**Low income community-** a census block group, or contiguous area with multiple census block groups, having a low-income population equal to or greater than 23.59% of the total population.

**Minority community-** a population that is identified or recognized by the U.S. Census Bureau as Hispanic, African-American or Black, Asian and Pacific Islander or American Indian<sup>1</sup>.

#### Incinerators and landfills only



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<sup>1</sup> CP-29 *Environmental Justice and Permitting* . New York State Department of Conservation , 19 Mar. 2003, [www.dec.ny.gov/docs/permits\\_ej\\_operations\\_pdf/cp29a.pdf](http://www.dec.ny.gov/docs/permits_ej_operations_pdf/cp29a.pdf).



### *Waste-to-Energy (Incinerators)*

Waste-to-energy facilities, or incinerators, take municipal solid waste and burn it to generate electricity. It is estimated that 85 pounds of every 100 pounds of MSW can be burned as fuel to generate electricity in the United States<sup>2</sup>. According to NYSDEC annual reports, about 177,497.60 tons of municipal solid waste was incinerated at Long Island's four waste-to-energy facilities in 2019.

### *Landfills/Cleanfills/Ashfills*

A landfill is a facility designed for the disposal of solid waste and is meant to be operated, located and monitored to ensure compliance with federal regulations<sup>3</sup>. Landfills on Long Island are regulated by the New York State Department of Conservation.

Currently on Long Island, there are five active landfills, three of which are classified as cleanfills, one as an ashfill, and one as a municipal solid waste landfill. Municipal solid waste landfills, according to the EPA, are "specifically designed to receive household waste as well as other types of nonhazardous wastes"<sup>4</sup>. Cleanfills, or construction and demolition (C&D) debris landfills, exclusively receive construction and demolition materials such as glass, wood, concrete and waste materials generated from the demolition of roads, buildings, and bridges. Ashfills are a type of monofill, or a landfill that accepts only one kind of material. The by-product of waste-to-energy facilities is ash which is then transported to an ashfill.

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<sup>2</sup> "U.S. Energy Information Administration - EIA - Independent Statistics and Analysis." *Waste-to-Energy (MSW) in Depth - U.S. Energy Information Administration (EIA)*, [www.eia.gov/energyexplained/biomass/waste-to-energy-in-depth.php](http://www.eia.gov/energyexplained/biomass/waste-to-energy-in-depth.php).

<sup>3</sup> "Basic Information about Landfills." *EPA*, Environmental Protection Agency, 2 Mar. 2020, [www.epa.gov/landfills/basic-information-about-landfills](http://www.epa.gov/landfills/basic-information-about-landfills).

<sup>4</sup> "Basic Information about Landfills." *EPA*, Environmental Protection Agency, 2 Mar. 2020, [www.epa.gov/landfills/basic-information-about-landfills](http://www.epa.gov/landfills/basic-information-about-landfills).

## Recycling facilities and waste transfer stations only



### *Waste Transfer Stations*

Waste transfer stations are facilities that receive waste from a community and prepare for transportation to its final waste disposal site. Facilities on Long Island vary from private and publicly owned, however they all work to transport waste via rail or truck off of the island. Due to the fact that these facilities divert waste from the Brookhaven Landfill, environmental groups on Long Island support the construction of these facilities. Groups such as Citizens Campaign for the Environment (CCE) as recently as November 2020 endorsed a plan to truck C&D debris to a new waste transfer station in Medford, which would then be hauled away by rail<sup>5</sup>. However, local residents have voiced concerns about the disproportionate number of waste facilities in BIPOC communities. Though trucking and rail transfers appear to be the new trend for waste on Long Island, very little attention is given to those communities that will host said facilities.

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<sup>5</sup> Allen, J.D. "Advocates Clash Over What To Do With Long Island's Trash." *WSHU*, Feb. 2021, [www.wshu.org/post/advocates-clash-over-what-do-long-islands-trash](http://www.wshu.org/post/advocates-clash-over-what-do-long-islands-trash).

Currently, there are about 62 waste transfer stations on Long Island, more than half are located in what are classified as environmental justice communities. Unfortunately, the decision to construct and maintain a waste transfer station is not based on accountability or fairness, rather economics. According to the EPA, larger regional landfills that receive waste from a vast geographic area are more cost effective than constructing and maintaining a smaller landfill. By accepting a larger quantity of waste from more regions, facilities can keep their tipping fees low, which subsequently attracts more business <sup>6</sup>. This is why any municipal solid waste that is not incinerated is shipped to regional landfills in Ohio and Pennsylvania.

### *Recycling Facilities*

Recycling also diverts waste from landfills and incinerators by collecting and processing material for reuse and salvage. Recyclable materials are prepared for shipment to markets in materials recovery facilities (MRF). MRFs are transfer stations that separate and process recyclable material for shipment <sup>7</sup>.

### **Long Island threshold**

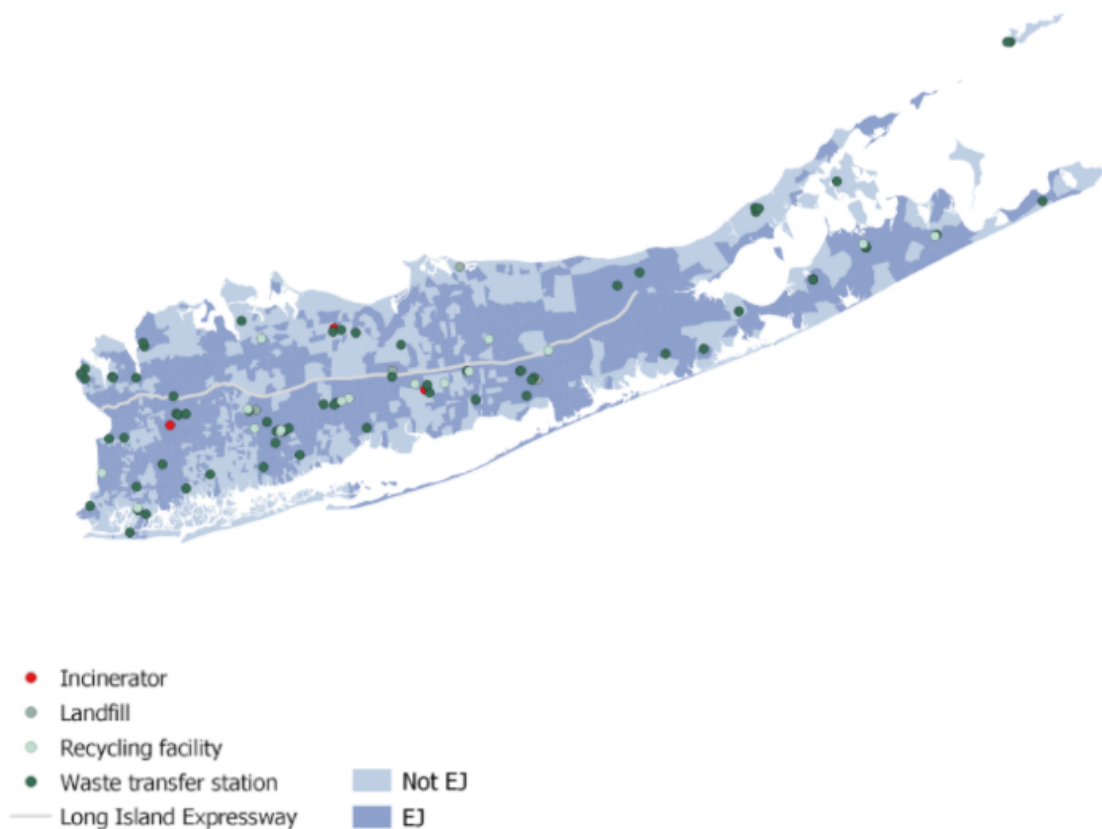
Out of the 96 waste structures, about 28% are located in or within a three mile radius of an environmental justice community. After seeing that using the New York State threshold only 27 waste structures ended up in EJ communities, we looked into exploring why this was. To me, this number seemed low and being very familiar with the demographics of Long Island, I wondered if the threshold needed to be adjusted. The New York State threshold takes the average income for all New Yorker households and determines vulnerabilities to poverty from what the state defines as a low income community. However, the cost of living on Long Island is higher than that of most counties in New York state. According to the U.S. Census Bureau, Nassau and Suffolk counties rank third and fifth respectively in median household income. The median household in Nassau is \$93,613 while Suffolk county is \$84,506, the median household income for New York state is \$55,603 <sup>8</sup>. Knowing this, Jennifer Ventrella and I decided that it would be worthwhile to adjust the EJ community threshold for Long Island to account for the higher than average household income level. This is reflected in the map below:

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<sup>6</sup> *Waste Transfer Stations: a Manual for Decision-Making*. United States Environmental Protection Agency, Solid Waste and Emergency Response, 2002.

<sup>7</sup> *Waste Transfer Stations: a Manual for Decision-Making*. United States Environmental Protection Agency, Solid Waste and Emergency Response, 2002.

<sup>8</sup> Bureau, US Census. *Census.gov*, 2010, [www.census.gov/](http://www.census.gov/).



Using the Long Island EJ community threshold, 67% of all waste structures are located in or within EJ communities. While this map takes into account the adjusted income poverty threshold it also implies that there are other factors that make EJ communities on Long Island. This could be air quality as there are many areas of Long Island that experience higher than accepted levels of emissions. After reviewing this map with BLARG (Brookhaven Action & Remediation Group), we agreed that the Long Island threshold paints a picture that goes deeper than waste issues and that it is worth exploring in the future. However, for the purpose of this project, we have decided to stick with the New York state threshold.