

# Environmental Justice: Cumulative Impacts Analysis

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**Annie Decker, Esq.**

**Chief of Legal, Planning, and  
Regulatory Affairs**

**Sarah Huang, PhD**

**Director, Office of Equity and  
Environmental Justice**

**Eliza Heins, Esq.**

**Staff Attorney, Environmental  
Quality Branch**

**Edith Pestana, MS, MPH**

**EJ Program Administrator, Office of  
Equity and Environmental Justice**

# Environmental Justice Communities

1. census block groups, for which **30%** or more of the population consists of low-income persons who are not institutionalized and have an income **below 200%** of the federal poverty level

2. **distressed municipalities**

[Distressed Municipalities \(ct.gov\)](https://www.ct.gov/dep/sectors/energy-environmental-protection/distressed-municipalities)





# Affecting Facilities

**electric generating facilities**

with a capacity greater than 10 megawatts

**sludge or solid waste incinerators or combustors**

**sewage treatment plants**

with a capacity greater than 50 million gallons per day

**intermediate processing centers**

volume reduction facilities or multitown recycling facilities

with a combined monthly volume in excess of 25 tons

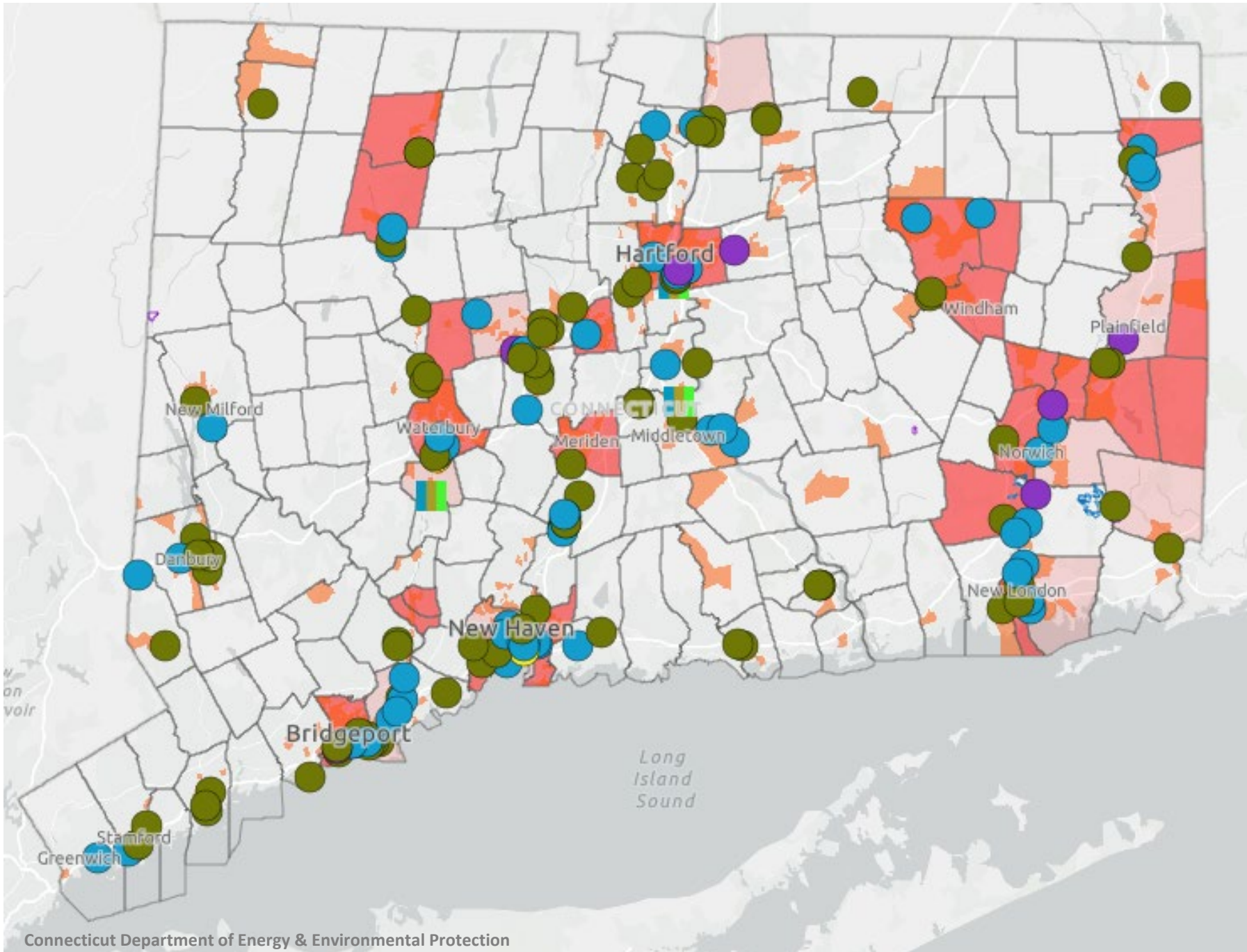
new or expanded **landfills**, including but not limited to,  
landfills that contain ash, construction and demolition debris, or solid waste

**medical waste incinerators**

**major sources of air pollution**

as defined by the Clean Air Act

[Environmental Justice Affecting Facilities Map \(arcgis.com\)](https://arcgis.com)



## EJ Communities & Affecting Facilities Map

### Affecting Facilities

- Air
- Waste
- Air, Waste
- Air, Waste, Water
- Waste, Water
- Water

### Town



### Tribal Lands

- Federally Recognized
- State Recognized

### Environmental Justice Block Groups 2023



### Environmental Justice Distressed Municipalities 2023

- Distressed Municipality
- Municipality within 5-year Grace Period



# Why Cumulative Impacts?

Health History

National Trend

A hand holding a blue pen is pointing to a document. The document features a bar chart with several bars in shades of blue, orange, and green. Below the bar chart, there is a line graph with a red line. The background is a light, blurred image of the same document and hand.

# Cumulative Impact Assessment Regulations (in process)

**Identification & measurement** of public health stressors' relative impacts

**Tools** for stakeholder industries and sectors

**Standards** for placing conditions on permits or denying permits



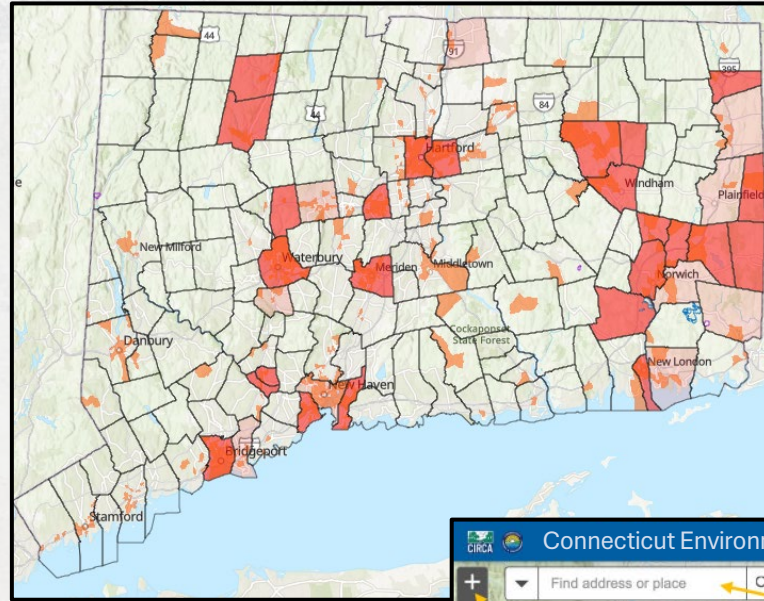
# Sample Cumulative Impacts Stressor Indicators

Potential Pollution Sources	Potential Pollution Exposure	Socioeconomic Factors	Health Sensitivity
Incinerators	Ozone	Poverty Levels	Asthma
Landfills	Particulate Matter 2.5	Unemployment	Coronary Heart Disease
Recycling	Major Sources of Air Pollution	Median Income	Diabetes
Significant Environmental Hazards	Minor Sources of Air Pollution	Population Age < 5	Low Birthweight
	Traffic Density	Population Age > 65	

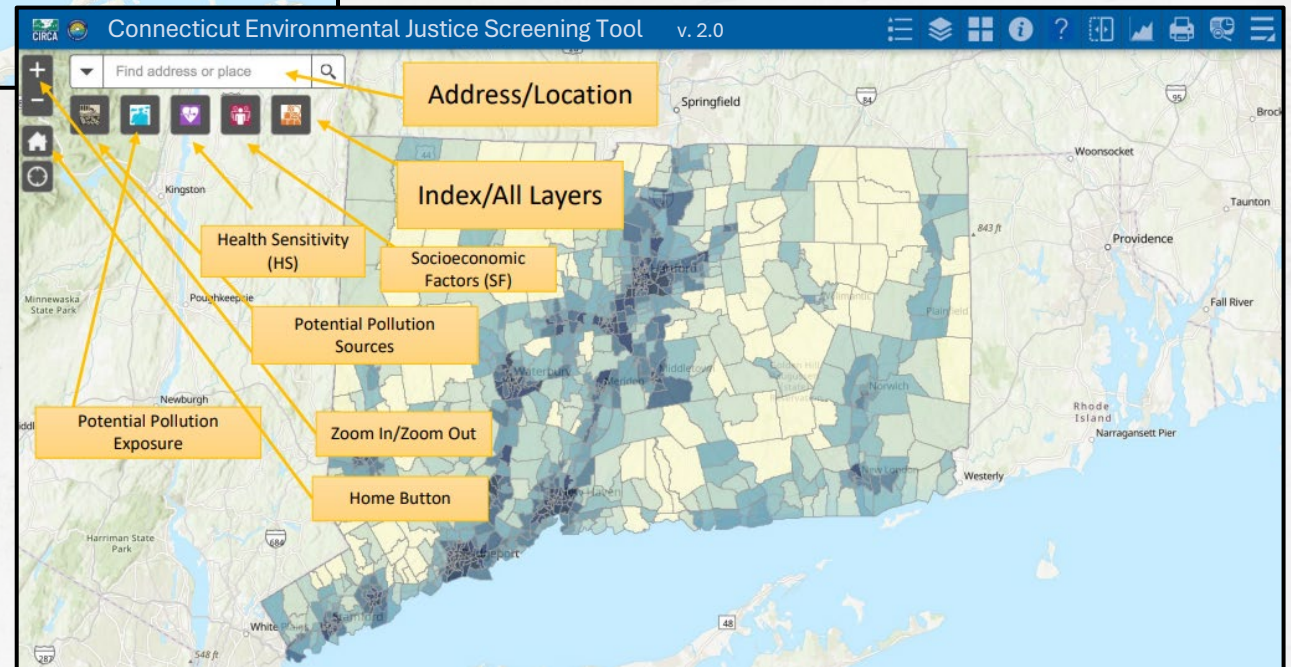


# CT Environmental Justice Tools

EJ Communities Map



EJ Screening Tool



Cumulative Impacts Tool\*

To Be Developed!



# Request for Proposals

**RFP Solicitation Number: DEEP07302024CM**

To create a tool to help permit applicants measure the relative impact of environmental and public health stressors across communities—so called “cumulative impacts”

## Timeline

RFP Released	July 30, 2024
Deadline for Questions	August 13, 2024
Answers Released	August 27, 2024
<b>Proposals Due</b>	<b>September 26, 2024</b>
Proposer Selected	Target date: October 25, 2024



# Colorado

## [regulations](#)

### FACILITIES

Sources of "Affected Pollutants" determined to have the potential to cause or contribute to significant health or environmental impacts, including VOC, Oxides of Nitrogen, Hazardous Air Pollutants (e.g., benzene, toluene, ethylbenzene, xylene), PM 2.5; regulations set threshold

### CUMULATIVE IMPACT ANALYSIS

Any census block group that is in the 80<sup>th</sup> percentile or higher for the indicators is a "Cumulatively Impacted Community"

### HIGHER STANDARDS IN CUMULATIVELY IMPACTED COMMUNITIES

Must apply Reasonably Available Control Technology to emission units  
Must design and implement source-specific monitoring plan (except for VOC)  
Must continue pre-production and early-production operation monitoring for the duration of facility operations

### INDICATORS

- Air Toxics
- Asthma
- Cancer
- Diabetes
- Diesel Particulate Matter
- Disability
- Drinking Water
- Drought
- Education
- Extreme Heat Days
- Fine Particulate Matter (PM2.5)
- Floodplains
- Heart Disease
- Housing Cost Burdened
- Income
- Lead
- Life Expectancy
- Linguistic Isolation
- Low Birth Weight
- Mental Health
- Mining
- Noise
- NPL (Superfund) Sites
- Oil and Gas
- Older (>64 Years Old)
- Other Air Pollutants
- Ozone
- People of Color
- Risk Management Plan Sites
- Surface Water
- Traffic
- Waste Facilities
- Water Discharge
- Wildfires
- Young (<5 Years Old)



# Massachusetts

[law](#); [regulations](#)

## FACILITIES

Any new or modified facility or emission unit that may emit air contaminants to the ambient air

## GEOGRAPHIC RADIUS

Within an EJ community

Within 1 mile of an EJ population if the facility or emission unit will not be a major source of air pollution

Within 5 miles of an environmental justice population if the facility or emission unit may be a major source of air pollution

## CUMULATIVE IMPACT ANALYSIS

Air quality dispersion modeling

Cumulative cancer risk calculated does not exceed the cumulative cancer risk limit (1 in 10,000,000)

Cumulative non-cancer risk calculated does not exceed cumulative non-cancer risk limit (hazard index = 1)

## INDICATORS

Air Toxics Cancer Risk  
Air Toxics Respiratory Hazard Index  
Airports  
Asthma prevalence in schools  
Childcare facilities  
Chronic obstructive pulmonary disease  
Coronary heart disease  
Diesel particulate matter  
Elevated blood lead levels prevalence  
English language isolation household  
Facilities under the EPA Toxics Release Inventory  
Facilities under the Toxics Use Reduction Act  
Facilities with air permits  
Fine Particulate Matter (PM2.5)  
Freight rail yards  
Hazardous waste treatment, storage and disposal  
Impervious Surface  
Income  
Large quantity hazardous waste generators  
Older (>65 years old)  
Long-term care residences  
Ozone summer seasonal average  
Low birth weight  
Port facilities  
Minority population percent  
Premature deaths  
Prisons  
Public housing  
Schools (k-12)  
Solid waste diversion and disposal  
Traffic proximity  
Wastewater treatment plants  
Young (<5 years old)



# New Jersey

[law](#); [regulations](#)

## FACILITIES

Major sources of air pollution  
Resource recovery facilities or incinerators  
Sludge processing facilities  
Sewage treatment plants  
Transfer stations or solid waste facilities  
Recycling facilities  
Scrap metal facilities  
Landfills  
Medical waste incinerators

## PERMIT CONDITIONS & DENIALS

Mandatory denial of new facilities if cumulative impact, unless compelling public interest

## GEOGRAPHIC POINT OF COMPARISON

lower value of the state or county's 50th percentile, calculate excluding the values of other overburdened facilities

## CONTROL MEASURES

All feasible measures to avoid adding to stressors → Onsite measures to minimize → Offsite measures within the EJ community → Feasible offsite measures to provide a net environmental benefit to EJ community

## INDICATORS

Air Toxics Cancer Risk  
Air Toxics Non-Cancer Risk  
Combined Sewer Overflows  
Drinking Water Well Testing  
Education  
Emergency Planning Sites  
Fine Particulate Matter (PM2.5)  
Flooding (Land Use Cover)  
Ground Water Classification Exception Areas  
Ground-Level Ozone  
Impervious Surface  
Known Contaminated Sites  
Lack of Recreational Open Space  
Lack of Tree Canopy  
NJ Pollutant Discharge Elimination System Sites  
Permitted Air Sites  
Potential Lead Exposure  
Railways  
Scrap Metal Facilities  
Soil Contamination Deed Restrictions  
Solid Waste Facilities  
Surface Water Pollution  
Traffic – Cars, Light- Medium- and Heavy-Duty Trucks  
Unemployment



# Connecticut

[2023 law](#)

## FACILITIES

electric generating facilities  
sludge or solid waste incinerators or combustors  
sewage treatment plants  
intermediate processing centers  
landfills  
medical waste incinerators  
major sources of air pollution

## PERMIT CONDITIONS & DENIALS

## GEOGRAPHIC POINT OF COMPARISON

(for example, county, state)

## CONTROL MEASURES

(may come in part from Clean Water Act, Clean Air Act laws)

### Socioeconomic

Disability  
Educational Attainment  
Elderly Population  
Energy Burden  
Food Security  
Health Insurance  
Housing Burden  
Linguistic Isolation  
Median Income  
Mobile Home  
Multi-Unit Home  
Poverty/Low Income  
Race/People of Color  
Rent-Ownership Ratio  
Single Parent  
Tree Canopy  
Unemployment  
Young Population

### Health Sensitivity

Asthma E.D. Visits  
Childhood Elevated Lead Levels  
COPD E.D. Visits  
Coronary Heart Disease  
Depression  
Diabetes  
Low Birth Weight Rate Infants  
Mental Health

## POSSIBLE INDICATORS

### Pollution Exposure

Diesel PM Emissions  
EPA Cancer Risk  
EPA Respiratory Hazard Index  
Facilities Releasing Toxins  
Minor Facilities with Permit-Limited Emissions Potential  
Noise  
Ozone  
Particulate Matter 2.5  
Permitted Major Air Pollution Sources  
Permitted Minor Air Pollution Source  
Traffic Density  
Urban Heat Index

### Pollution Sources

Brownfields  
Facilities Managing Chemicals  
Impervious Area  
Incinerators/Resource Recovery Facilities  
Landfills  
Lead Paint Risk in Housing  
Municipal Transfer Station  
Potentially Contaminated Sites  
Recycling Processing Facilities  
Proximity to Superfund Site  
Significant Environmental Hazards  
Underground Storage Tanks  
Wastewater Discharge



# Connecticut

[2023 law](#)

**Socioeconomic**  
Disability  
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Elderly Population  
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Food Security  
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## POSSIBLE INDICATORS

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- Impervious Area
- Incinerators/Resource Recovery Facilities
- Landfills
- Lead Paint Risk in Housing
- Municipal Transfer Station
- Potentially Contaminated Sites
- Recycling Processing Facilities
- Proximity to Superfund Site
- Significant Environmental Hazards
- Underground Storage Tanks
- Wastewater Discharge



# We want to hear from you

## Join us at upcoming workshops!

EJ Rulemaking Kickoff Meeting  
September 10, 2024; 5:30-7:30pm

[Register here](#)

Contact us:

[deep.EJrulemaking@ct.gov](mailto:deep.EJrulemaking@ct.gov)



Scan or click to  
receive email  
updates

Date	Event Name
Dec 2024	EJ Public Participation Plan and Report
Mar 2025	Identification and Measurement of Environmental and Health Stressors
June 2025	Geographic Points of Comparison
Aug 2025	Public Health and Environmental Stressor Tool
Dec 2025	Cumulative Impact Assessment and Standards for Denying and Placing Conditions on Permits
Early 2026	Final Comprehensive Summary and Draft Language

# **Environmental Justice: Cumulative Impacts Analysis**

