

Our Mission

The Department of Environmental Protection's mission is to protect Pennsylvania's air, land and water resources and to provide for the health and safety of its residents and visitors, consistent with the rights and duties established under the Environmental Rights Amendment (Article 1, Section 27 of the Pennsylvania Constitution).

We will work as partners with individuals, organizations, governments, and businesses to conserve and restore our natural resources and to address all current and future environmental challenges including climate change and environmental justice.





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Our Vision

To be a model environmental agency that moves at the speed of business and leads the way in science, innovation, and best practices to ensure clean air, land, and water for the health and safety of present and future generations.



Our Values

- Environmental Stewardship
- Public Service
- Communications
- Excellence and Continuous Improvement
- Commitment to Customers
- Accountability





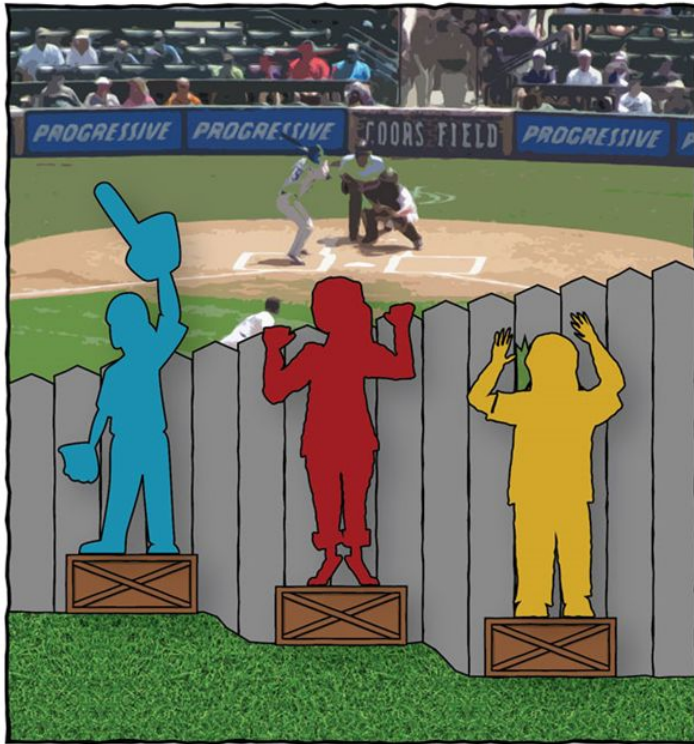
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Environmental Justice Defined

“Environmental justice means the **just treatment and meaningful involvement** of all people, regardless of income, wealth, race, color, national origin, area of residence, Tribal affiliation, or disability, in agency decision-making and other activities that affect human health and the environment so that people: are **fully protected from disproportionate and adverse human health and environmental effects** (including risks) and hazards, including those related to climate change, the cumulative impacts of environmental and other burdens, and **the legacy of racism or other structural or systemic barriers**; and have equitable access to a healthy, sustainable, and resilient environment in which to live, play, work, learn, grow, worship, and engage in cultural and subsistence practices. It further involves the **prevention of future environmental injustice and the redress of historic environmental injustice.**”



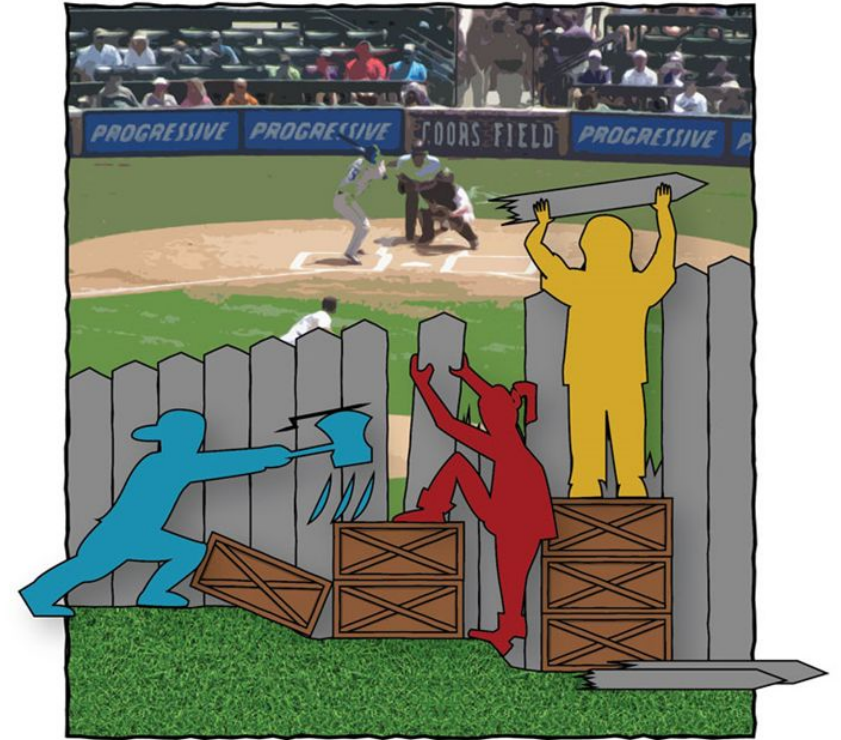
Equality, Equity, & Justice



EQUALITY



EQUITY



JUSTICE

The Science Behind Disproportionate Environmental Impacts



**Environmental injustice
is a force multiplier**

DRIVERS

- Built Environment: Proximity to pollution sources (e.g., stationary and mobile air emissions)
- Natural Environment: Disasters (e.g., wildfires, heat waves, pandemics)
- Social Environment: Health disparities (e.g., asthma, heart disease, hypertension, diabetes)



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Measuring EJ is Necessary and Challenging- Who is Asking and for What Purpose?

1) Environmental Justice is multidimensional. Therefore, PES must be complex. That complexity creates challenges to measuring Environmental Justice. PennEnviroScreen was built to identify areas where the EJ policy applies. For any other uses, we recommend being mindful of its limits.

2) Choices were made in the design and methodology of PennEnviroScreen which were appropriate for its use. For example, the tool was designed to be relevant to all Pennsylvania. This is why we only use indicators for which we have data for all of PA.

3) For the implementation of the EJ Policy, an EJ Areas is defined as above of the 80th percentile. For other purposes, PennEnviroScreen could be used to identify other EJ considerations.



**Environmental injustice
is a force multiplier**



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Uses of PennEnviroScreen

PennEnviroScreen is multi-functional by design:

- a) Permitting
- b) Enhanced Public Participation application
- c) Research
- d) Identifying Grant needs



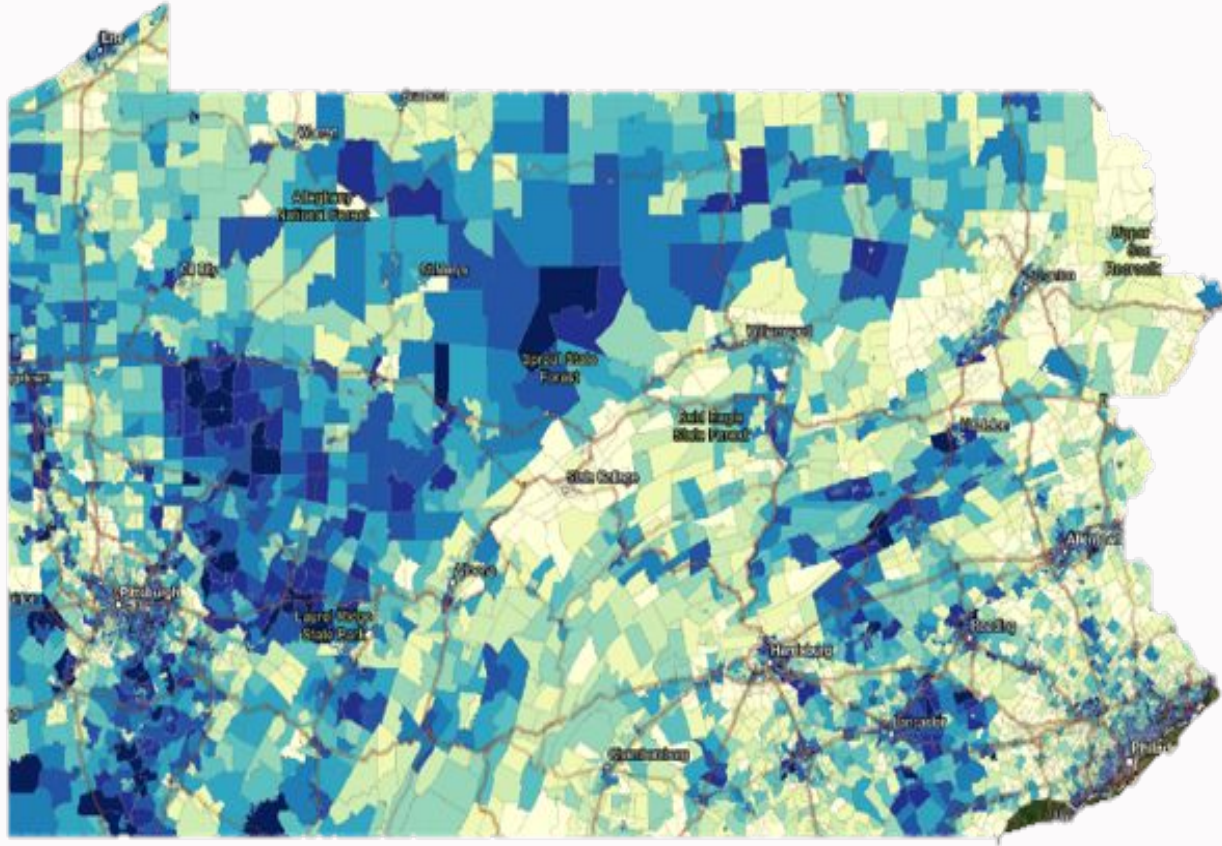
Check out our [PennEnviroScreen \(pa.gov\)](https://pa.gov) mapping tool

AND review the [Methodology Document](#) with all the factors and datasets linked in the About section on PennEnviroScreen.



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PennEnviroScreen



This model combines

Pollution Burden
+
Population
Characteristics

To identify Environmental Justice (EJ) Areas in accordance with the EJ Policy, which will increase public participation in the permitting process of proposed facilities



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PennEnviroScreen



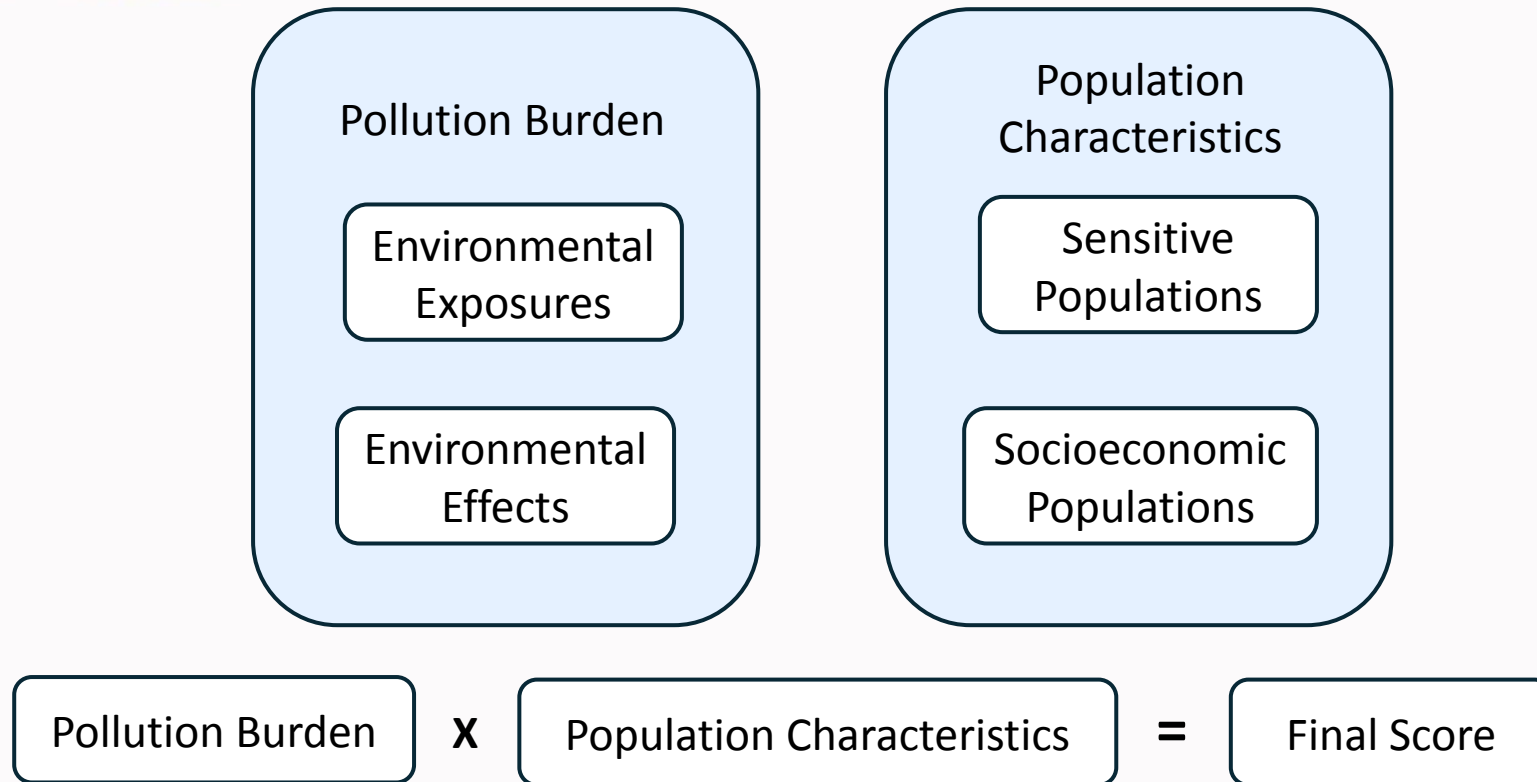
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EJ Areas and Criteria



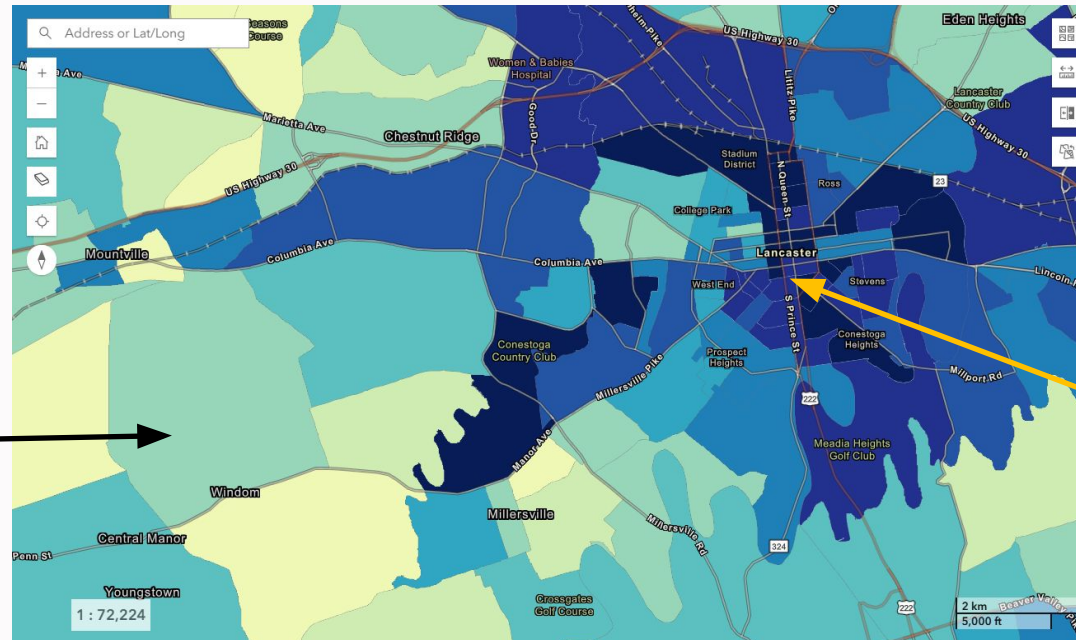
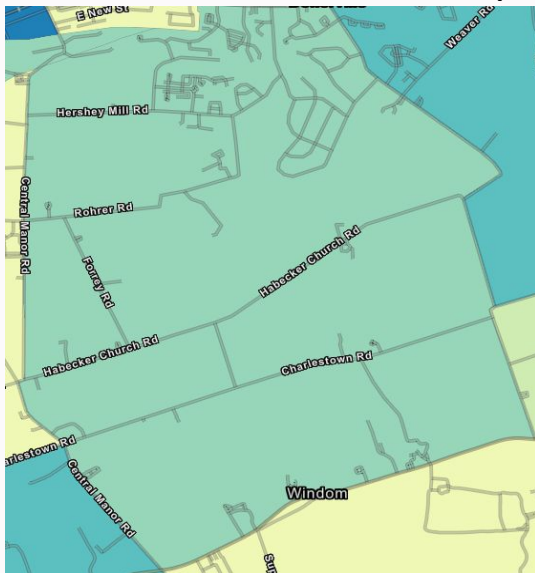
An environmental justice area is a place that has disproportionate impacts of pollution burden on certain vulnerable populations, as defined by the Policy.



Census Block Groups

- Census block groups are the spatial unit of measurement
 - Each block contains 600-3,000 people
 - Shifts in population result in boundary changes across decennial censuses
 - New boundaries are drawn to reflect population concentrations

Rural Census Block Group



Urban Census Block Group

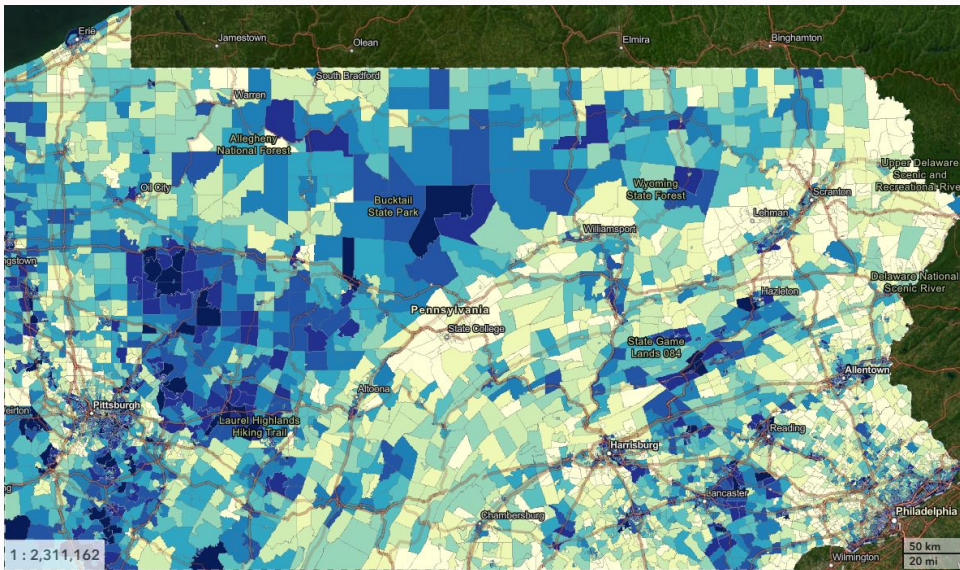




Census Block Groups

In PennEnviroScreen 1.0

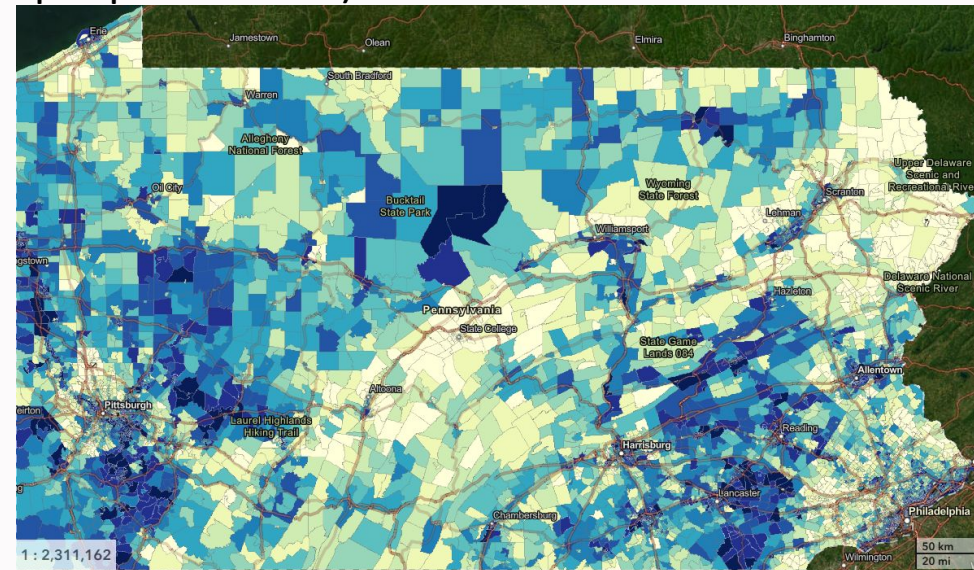
- 9,739 census block groups
- 12,702,379 PA population
- 2,331,043 people lived in EJ areas (~18%)



PennEnviroScreen 1.0

In PennEnviroScreen 1.1

- 10,172 census block groups
- 12,984,833 PA population
- 2,838,171 live in EJ areas. (~22% and ~500k more people than 1.0)



PennEnviroScreen 1.1

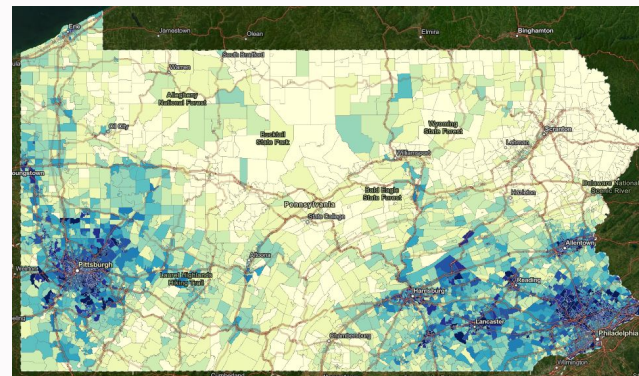
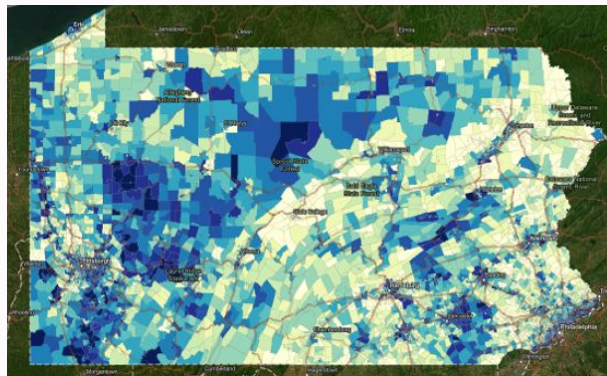
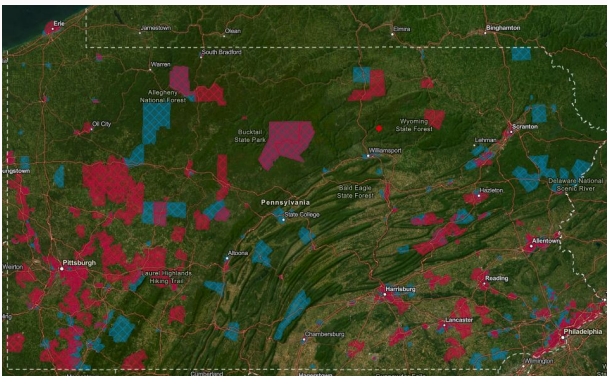


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How Might You Use PennEnviroScreen?

What are potential uses of PennEnviroScreen?

- General research
- Determine Enhanced Public Participation applicability for a permit application
- Assess where your grant application will serve
- Determine EJ status in a particular geography
- Identify local demographics and environmental concerns



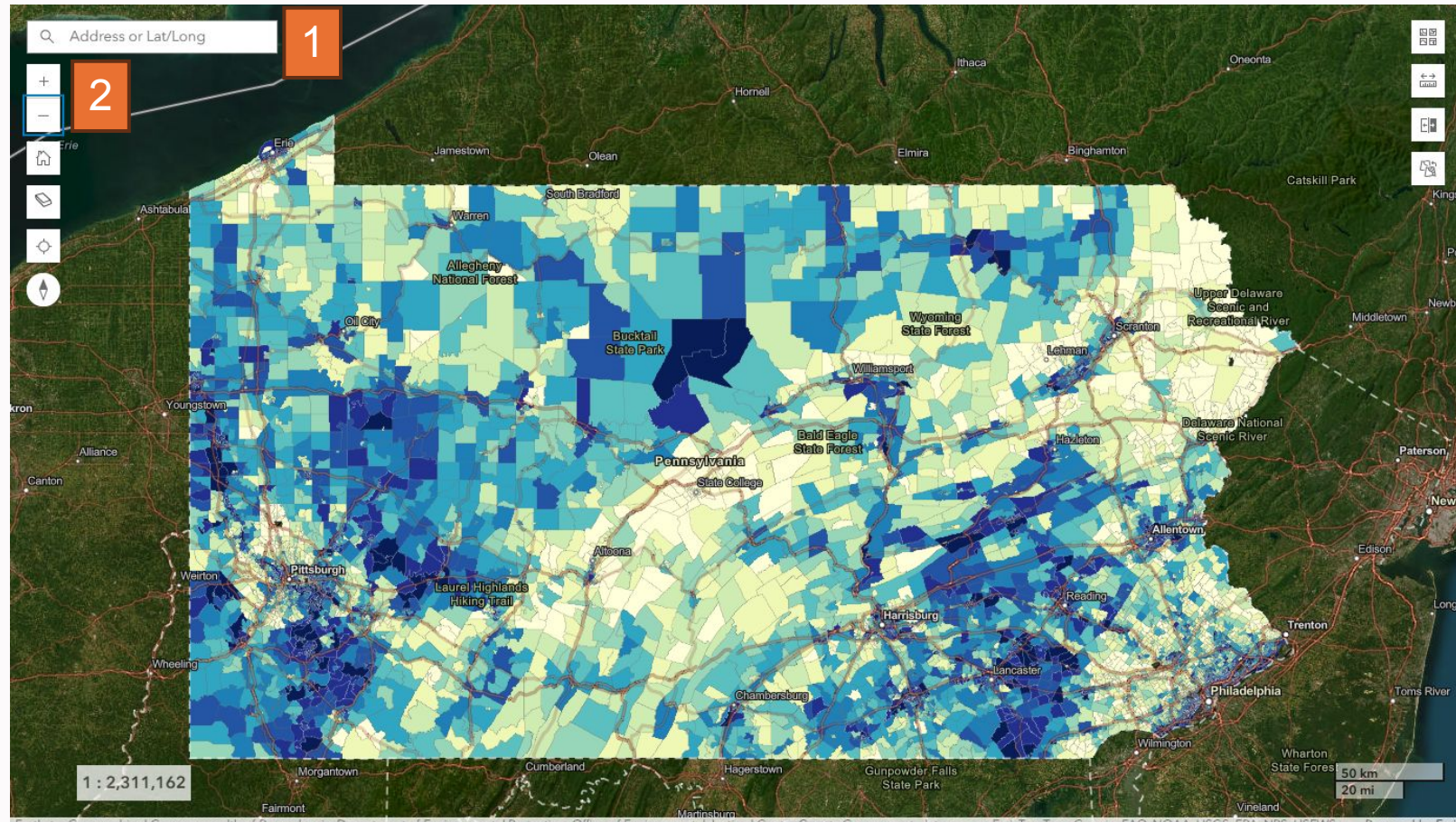


How to Use the Tool

1) Use the search bar. You can use street address, landmark, cross streets, or latitude-longitude (expressed in decimal format)

Or

2) Simply zoom and pan to a place you want to explore!



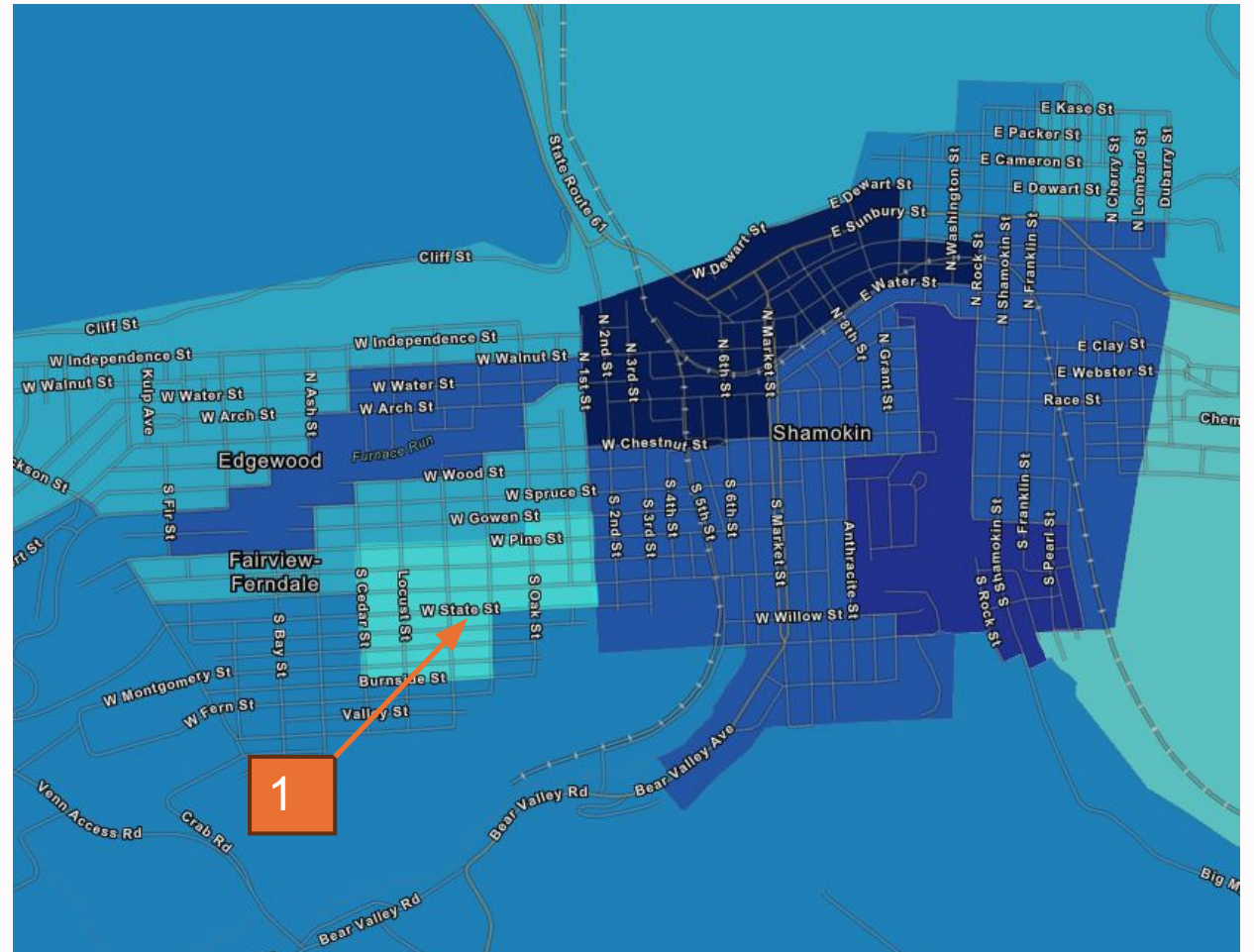


How to Use EJ Areas with Buffer View

Census Block Groups can produce puzzling results. It has a PES final score of 48 while those nearby are higher.

Sometimes there are strong differences in neighborhoods. But sometimes big differences are due to measurement artefacts that are inherent to the tool.

The tool should always be used with discretion and common sense to understand local EJ geography.





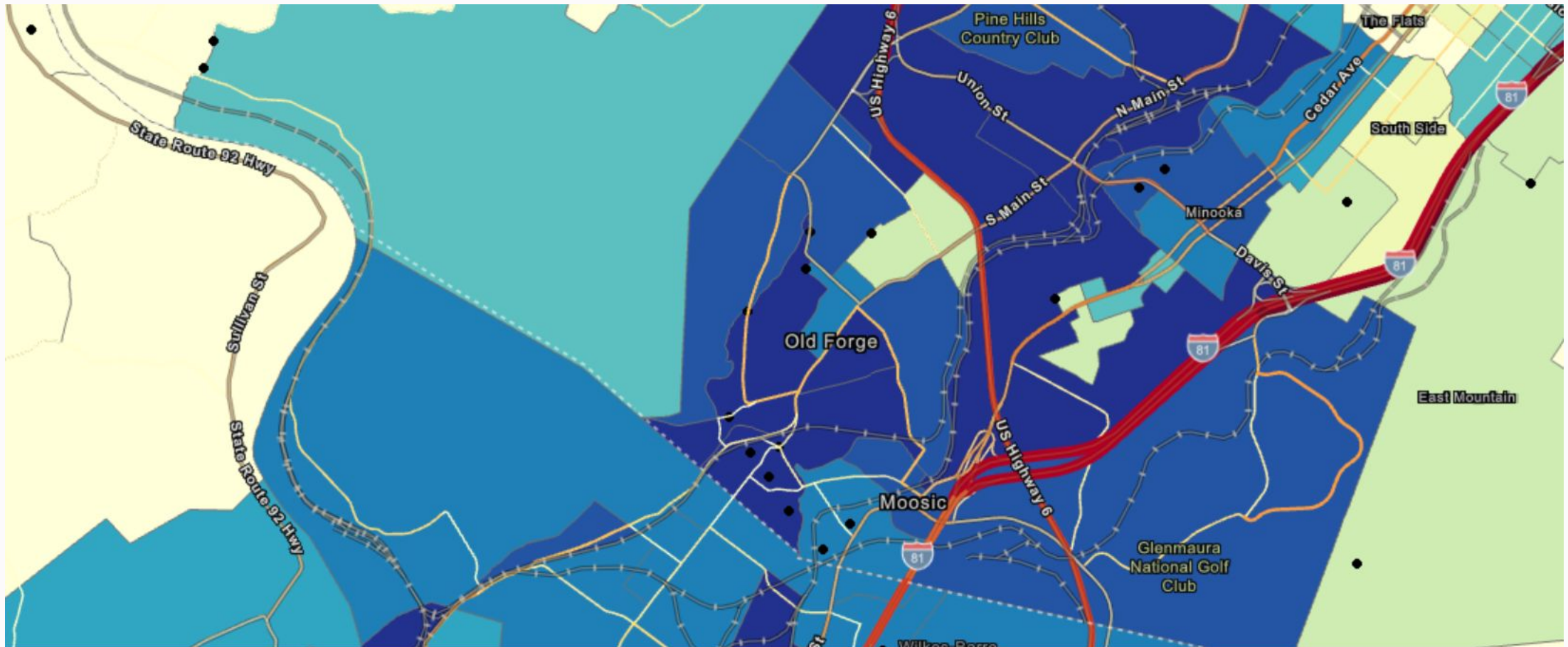
Abandoned Mine Lands, Traffic, and Illegal Dumping





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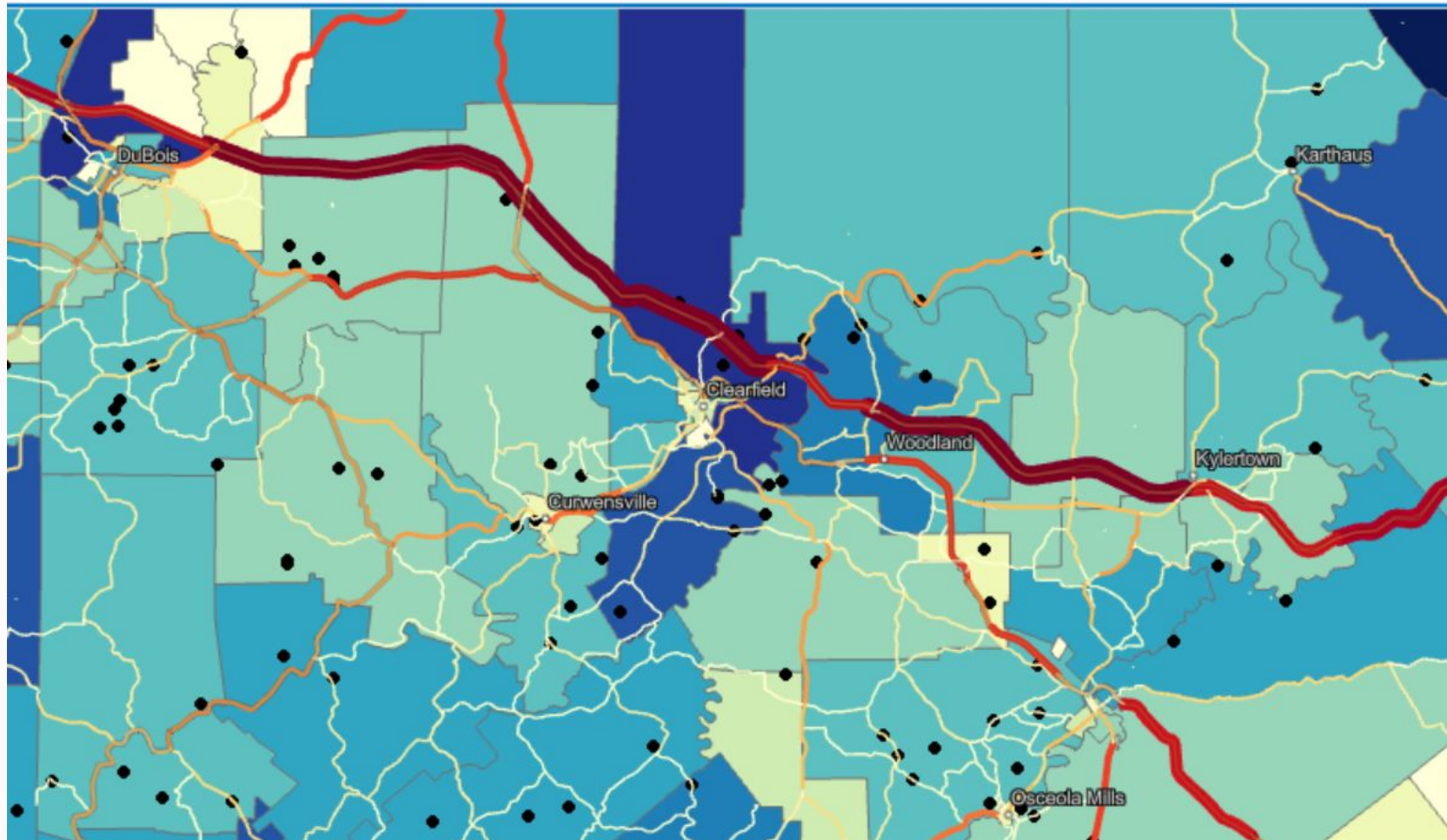
Old Forge Area: Abandoned Mine Lands, Traffic, and Illegal Dumping





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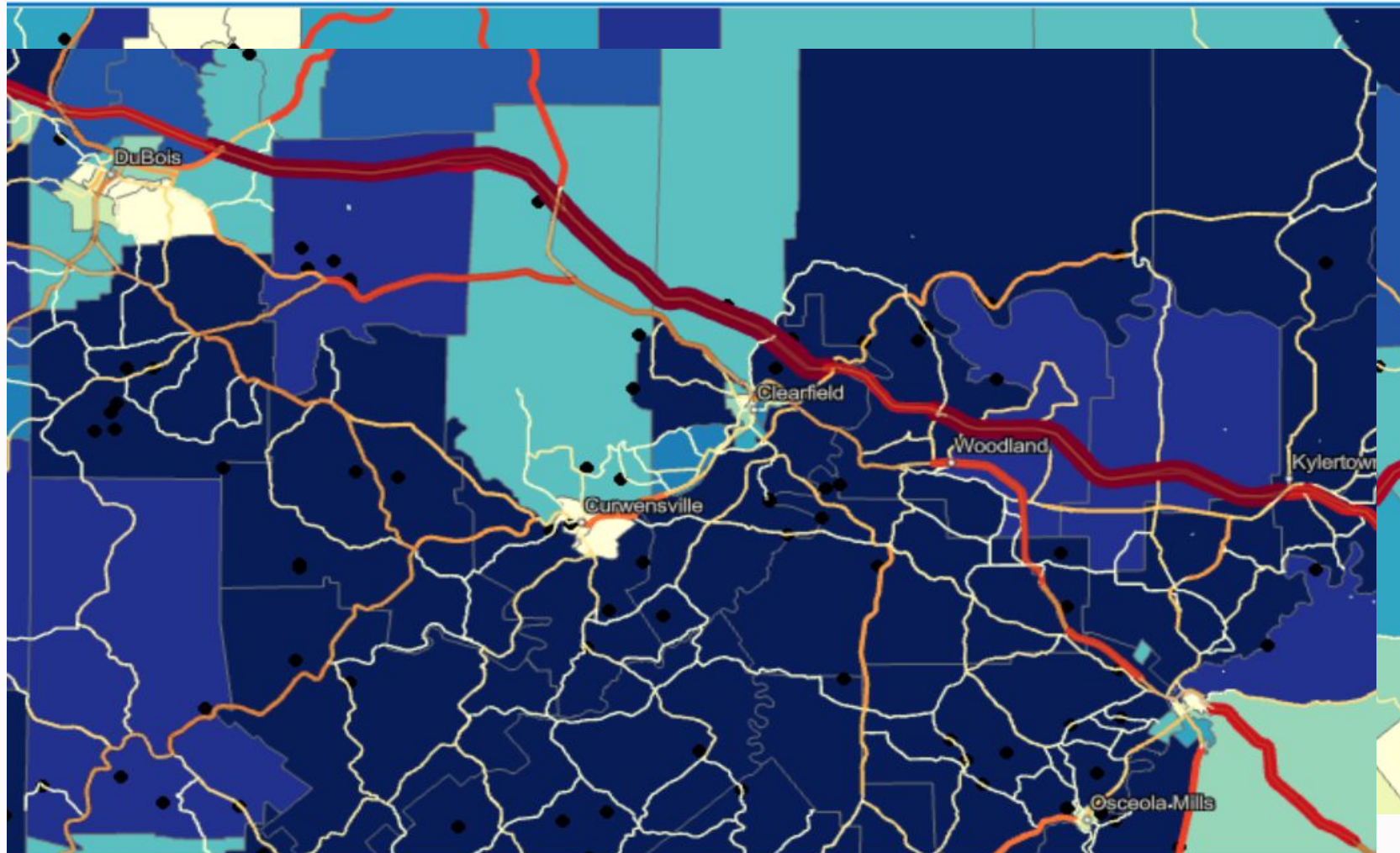
Clearfield County: EJ Areas (dark blue) and dumping?





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Clearfield County: EJ Areas (dark blue) and dumping?





How do we Update PES?

- The Environmental Justice Policy Section IX requires regular updates to PennEnviroScreen
 - First update, PennEnviroScreen 1.1, went live January 3rd, 2026
- There are two kinds of updates:
 - Minor Updates: smaller updates, which may involve including more recent data
 - Example: PennEnviroScreen 1.1 Updates
 - Major Updates: more substantive updates, which may involve adding or removing indicators or core methodology changes
 - Would involve an official public comment period and input from statewide stakeholders such as the Environmental Justice Advisory Board
- While the PennEnviroScreen's calculations didn't fundamentally change, the updated data and census geography resulted in shifts in EJ status across Pennsylvania.

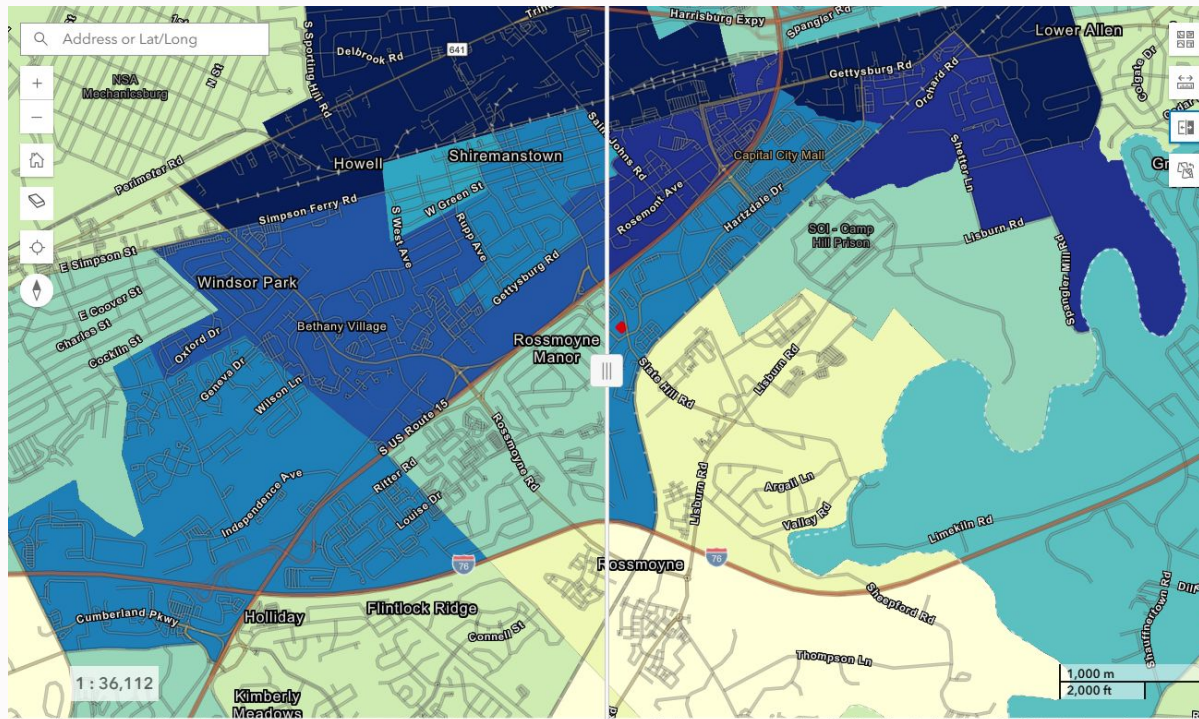


Pollution Burden

PennEnviroScreen 1.1 includes a new EJ threshold for areas in the 95th percentile or above for Pollution Burden but lack the population data needed to calculate a final score. This change resulted in the inclusion of 150 more EJ areas.

PennEnviroScreen

1.0



PennEnviroScreen

1.1



Environmental Exposures

Ozone: Percentile ranking of block groups based on statewide ozone concentration levels.

PM2.5: Percentile ranking of census block groups based on average annual fine particulate matter (PM2.5) concentrations in combination with satellite data.

Diesel Particulate Matter: Percentile ranking of block groups based on statewide diesel particulate matter concentration levels.

Toxic air emissions: Percentile ranking of block groups based on the risk level from toxic air emissions, averaged using scores from the RSEI model.

Toxic water emissions: Percentile ranking of block groups based on the risk level from toxic water emissions, averaged using scores from the RSEI model.



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Environmental Exposures

Pesticides: Percentile ranking of block groups based on the estimated release of 15 high-priority pesticides and county-wide estimated agricultural pesticide use.

Traffic density: Percentile ranking of block groups based on total vehicle traffic (cars and trucks) within a 150-meter buffer, multiplied by the total road length.

Compressor stations: Percentile ranking of block groups based on chemical emissions from natural gas compressor stations.

Child lead risk: Percentile ranking of block groups based on the proportion of housing units built before 1979, a key indicator of potential lead exposure.



Environmental Effects

Conventional wells: Percentile ranking of block groups based on proximity to crude oil and natural gas wells, weighted by distance and density.

Unconventional wells: Percentile ranking of block groups based on proximity to active or abandoned hydraulic fracturing (fracking) sites, weighted by distance and density.

Proximity to railroads: Percentile ranking of block groups based on railroad density, weighted by the class of rail (e.g., freight, passenger).

Land remediation: Percentile ranking of block groups based on proximity to active cleanup sites (e.g., Superfund and Brownfield), weighted by distance and density.

Hazardous waste and storage sites: Percentile ranking of block groups based on proximity to active hazardous waste sites, weighted by distance and density.

Environmental Effects

Municipal waste sites: Percentile ranking of block groups based on proximity to municipal waste sites (e.g., landfills and transfer stations) weighted by distance and density.

Coal mining: Percentile ranking of block groups based on proximity to active coal mining operations and associated facilities, weighted by distance and density.

Impaired lakes and streams: Percentile ranking of block groups based on proximity to impaired lakes and the density of impaired streams, weighted by area and location.

Abandoned mining concerns: Percentile ranking of block groups based on proximity to abandoned mines, including sites with drainage treatment or orphan mine discharge, weighted by distance and density.

Flood risk: Percentile ranking of block groups based on flood zone areas weighted proportionally to their intersection with the block group.



Sensitive Populations

Asthma: Percentile ranking of census tracts (applied to block groups) based on the prevalence of asthma among adults aged 18 years and older.

No health insurance: Percentile ranking of census tracts (applied to block groups) based on the proportion of adults aged 18–64 years without health insurance.

Cancer: Percentile ranking of census tracts (applied to block groups) based on the prevalence of cancer (excluding skin cancer) among adults aged 18 years and older.

Disability: Percentile ranking of block groups based on the proportion of the population living with a disability.

Heart disease: Percentile ranking of census tracts (applied to block groups) based on the prevalence of heart disease among adults aged 18 years and older.



Socioeconomic Populations

Low educational attainment: Percentile ranking of block groups based on the proportion of individuals who have completed less than a 9th-grade education or did not graduate high school.

Linguistic isolation: Percentile ranking of block groups based on the proportion of households where all members aged 14 or older have difficulty speaking English. Use the Pennsylvania Languages Map to identify predominant languages.

Housing-burdened low-income households: Percentile ranking of block groups based on households spending more than 50% of their income on housing costs and earning less than 80% of the area's median family income.

Poverty: Percentile ranking of block groups based on the proportion of the population living below 200% of the federal poverty line.



Socioeconomic Populations

Unemployment: Percentile ranking of block groups based on the proportion of the population unemployed.

Race: Percentile ranking of block groups based on the proportion of the population identifying as people of color.

Age over 65: Percentile ranking of block groups based on the proportion of the population aged 65 years and older.

Age under 5: Percentile ranking of block groups based on the proportion of the population aged under 5 years.