

FACT SHEET

Geospatial Data – Environmental Justice: Low Income Communities

Overview

Virginia EJScreen+ is an interactive geospatial visual interpretation of the [Virginia Environmental Justice Act \(§2.2-234 and 2.2-235\)](#) which defines an “Environmental Justice Community” as any “low-income community or community of color.” Its “Low Income Community” layer aims to provide a dataset that matches the “Low Income Community” definition within the Virginia Environmental Justice Act.

Dataset Summary

The Virginia Environmental Justice Act (§ 2.2-234 through § 2.2-235) defines an “Environmental Justice Community” as any “low-income community or community of color.”

- Low-income communities are identified as any census block group in which 30% or more of the population is composed of people with low income.
- The definition of “low income” is determined based on having an annual household income less than or equal to the greater of (i) an amount equal to 80% of the median income of the area in which the household is located, as reported by the U.S. Department of Housing and Urban Development (HUD), and (ii) 200% of the Federal Poverty Level.

Dataset Description and Purpose

This dataset shows census block groups within Virginia where at least 30% of the population meets the statutory threshold for low income based on household income data. The dataset integrates HUD’s 80% Area Median Income (AMI) county-level income limits and U.S. Department of Health and Human Services (HHS)’s 200% FPL thresholds alongside American Community Survey (ACS) 5-year poverty estimates to classify qualifying populations by using whichever dataset is greater (of the HUD data or the HHS data at the county level). It is designed to support the identification of environmental justice communities as defined by the Code of Virginia.

This dataset represents the geospatial extent as polygons and the corresponding attribution for census block groups that meet the definition of Low Income Communities, according to the Virginia Environmental Justice Act.

The Census Block Group and associated data are based on 2019-2023 ACS 5-year Data accessed from sources as follows:

Material Type	Name	Location/Link
Shape file	2024 Census Tiger Lines Tracts for Virginia	Census Tiger Lines
Table	HUD Area Median Income (80% AMI family of 4) by County	HUD Income Limits Documentation System
Table	Ratio of Income to Poverty Level in the Past 12 Months ACS 5-year estimates details table C17002	CensusData.gov
Feature Service	U.S. Housing and Urban Development – Low to Moderate Income Population by Block Group	HUD

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Dataset Credits:

Data layers created by DEQ based off of ACS 5-year Census Data.

Additional Map Credits: VGIN, ESRI, etc.

Update Cycle:

This dataset will be updated on a 5-year cycle as U.S. Census Bureau ACS 5-year data becomes available.

Material Type	Name	Location/Link
Feature Service	County FIPS Table VGIN County Boundaries	VGIN
Reference	200% FPL 2024 (reference family of 4) \$62,400 in the Continental US (CONUS)	Department of Health and Human Services (HHS)

Methodology

Per the definition of low income in the Virginia Environmental Justice Act, the following methodology was used to determine block groups whose populations are considered to be environmental justice communities:

1. Create county low income threshold as the greater of 80% AMI (HUD) and 200% FPL (HHS)
 - a. Annotate HUD 80% AMI by county
 - b. Annotate CONUS 200% FPL by county
 - c. Determine the county-level screening thresholds by selecting the greater of HUD and FPL for each county
2. Using table C17002 annotate the percent population below 200% FPL by block group
NOTE: some block groups have 0% population; use zero to null function to avoid div0! error.

$$\text{Percent below 200\% FPL} = \frac{\text{Total Population} - \text{Population at or above 200\% FPL}}{\text{Total Population}}$$

3. Annotate block group level low income table by joining table of percent below 200% FPL with the percent population below the HUD Low to Moderate (LOWMOD) Income Population by block group percent.
4. For each block group, identify the percent population low income based on the appropriate screening threshold at the county level (either FPL or HUD, as identified in Step 1).
5. Clean table to create Percent Population Low Income table; join to block group shape file.

Resource Constraints / Use Limitations

This dataset constitutes the low income communities based on low income definitions consistent with the Virginia Environmental Justice Act. Crediting the Virginia Department of Environmental Quality when using this data source is requested. [Public REST endpoints](#) are available and updated as changes are made.

Data Disclaimer

In collaboration with various agencies and organizations, DEQ strives to deliver accurate, useful, and up-to-date information. While every effort is made to ensure the accuracy of the data, it is possible that errors may arise from the physical sources used in developing these resources. Users should be aware of potential limitations and take responsibility for how they use the information, considering factors such as potential errors, original map scale, collection methodology, and data currency. For accurate application, users should consult relevant federal, state, or local resource management officials. Please report any errors or omissions to DEQ via email or phone. By accessing DEQ data, you agree to the terms and conditions outlined above.

Data Quality

The data included comes from authoritative federal and state sources including U.S. Census Bureau, VGIN, and DEQ. These data are believed to be maintained with a high degree of accuracy.

Spatial Reference Information

[NAD83, Virginia Lambert (EPSG: 3968) <https://epsg.io/3968>]

Terminology

Term	Definition
Low Income Community	Any census block group in which 30 percent or more of the population is composed of people with low income
Low Income (Virginia Environmental Justice Act definition)	Having an annual household income equal to or less than the greater of (i) an amount equal to 80 percent of the median income of the area in which the household is located, as reported by the Department of Housing and Urban Development (HUD), and (ii) 200 percent of the Federal Poverty Level
Median Income of the area in which the household is located	HUD's Area Median Income (AMI) for the county level
Low Income (HUD AMI definitions)	A household income equal to 50% - 80% of the AMI is considered low-income A household income equal to 30% - 50% of the AMI is considered very low-income A household income below 30% of the AMI is considered extremely low-income
Environmental Justice Community	Any low-income community or community of color
Federal Poverty Level	A measure of income updated yearly by the Department of Health and Human Services (HHS)

Data Dictionary / Field Information

Field Name	Field Alias	Field Explanation
OBJECTID	OBJECTID	ArcGIS unique identifier for each feature in a feature class or table
ALAND	Area Land (m ²)	Area of land measured in square meters
AWATER	Area Water (m ²)	Area of water measured in square meters
COUNTYFP	COUNTY FIPS	5-digit Federal Information Processing <i>Series</i> (FIPS) codes, formerly referred to as FIPS55, assigned and maintained by the Census Bureau
COUNTYNAME	County Name	County Name as approved by the Virginia General Assembly
GEOID	GEOID	Geographic identifiers assigned to geographic entities by the Census Bureau to facilitate the organization, presentation, and exchange of geographic and statistical data
Threshold	Low Income Threshold Type	The low income threshold type, either HUD or FPL; selected according to whichever is greater for each county
PctPopLI	Percent Population Low Income	Percent of the population of a census block group for whom income is less than or equal to the low income threshold for the county in which it is located
Shape_Area	Shape Area	ESRI Geometry Area - calculates the distance of an area for a polygon
Shape_Length	Shape Length	ESRI Geometry Length – calculates the distance of a line for a polygon

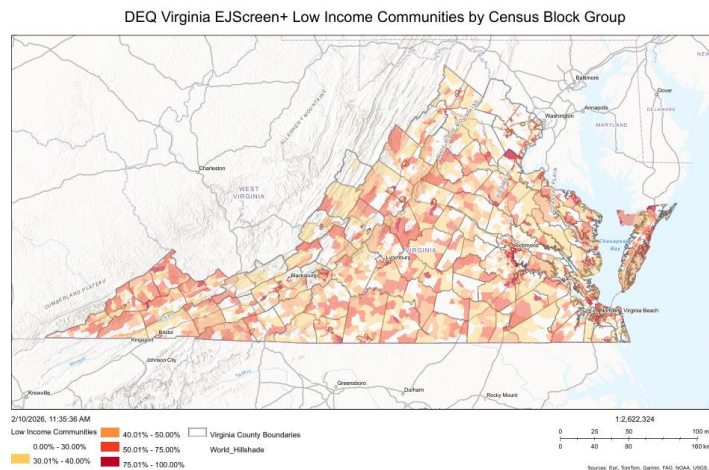


Figure 1 – Screenshot of Virginia EJScreen+ Low Income Communities identified in shades of red.

