About the Data

*The links provided for the following data sources are the links as of August 2025. Access to federal environmental data has been inconsistent, which may impact availability to the data in the future.

Vulnerable Populations – Under 10 Years Old

Definition: Percentage of the total population that is less than 10 years old, who can be more vulnerable to environmental pollutants and climate disasters.

Source: 2019 – 2023 American Community Survey (ACS) 5-Year Estimates, Table DP05

Link: https://data.census.gov/table/ACSDP5Y2023.DP05?q=population+age&g=040XX00US55,55$1400000

Vulnerable Populations – Over 64 Years Old

Definition: Percentage of the total population that is over 64 years old, who can be more vulnerable to environmental pollutants and climate disasters.

Source: 2019 – 2023 American Community Survey (ACS) 5-Year Estimates, Table DP05

Link: https://data.census.gov/table/ACSDP5Y2023.DP05?q=population+age&g=040XX00US55,55$1400000

Vulnerable Populations – Non-White Population

Definition: The percentage of the population that identify as Hispanic, Black or African American, Asian, American Indian or Native Alaskan, Native Hawaiian or Pacific Islander or Some Other Race. The legacy of residential segregation is a source of continued health disparities between racial and ethnic groups, which lead to increased vulnerability to environmental pollutants and climate disasters.

Calculation: This percentage was calculated by taking the total population and subtracting the proportion that identifies as White, non-Hispanic.

Source: 2019 – 2023 American Community Survey (ACS) 5-Year Estimates, Table B03002

Link: https://data.census.gov/table/ACSDT5Y2023.B03002?q=b03002&g=040XX00US55,55$1400000

Vulnerable Populations – Individuals Below 150% Poverty Line

Definition: Percentage of individuals whose income is below 150% of the poverty level. The poverty level is a federal standard calculated based on household size and annual income that determines a household's eligibility for public services. Learn more at https://aspe.hhs.gov/topics/poverty-economic-mobility/poverty-guidelines.

Source: 2019 – 2023 American Community Survey (ACS) 5-Year Estimates, Table S1701

Link: https://data.census.gov/table?q=poverty&g=040XX00US55,55$1400000

Vulnerable Populations – Households Speaking Limited English

Definition: Percentage of households that speak limited English at home. This population can have a harder time accessing resources due to their language barrier, making them more vulnerable to climate disasters.

Source: 2019 – 2023 American Community Survey (ACS) 5-Year Estimates, Table S1602

Link: https://data.census.gov/table/ACSST5Y2023.S1602?q=S1602&g=040XX00US55,55$1400000

Health Vulnerabilities

Definition: Percentage of adults (18 years or older) who reported having chronic health conditions (asthma, chronic obstructive pulmonary disease, coronary heart disease, and high blood pressure) and lacking health insurance. Cardiovascular (heart and blood) and respiratory (lung) conditions can be caused by or worsened with exposure to environmental pollutants. A lack of health insurance limits the ability of individuals with these chronic conditions to seek treatment, which can worsen their overall health.

Source: Center for Disease Control (CDC) PLACES, 2024 Release, Data from 2022

Link: https://www.cdc.gov/places/tools/data-portal.html

Parks & Greenspace

Definition: Percent of the area that is within 1-mile of a park or greenspace.

Source: Environmental Protection Agency (EPA) Environmental Justice Index (EJI), 2024 Release, Data from 2020, E_Park Metric

Link: https://www.atsdr.cdc.gov/place-health/php/eji/eji-data-download.html

Impervious Surface

Definition: Percentage of land covered by impervious surfaces. Impervious surfaces are hard surfaces like concrete, rooftops, etc. that cannot absorb water. These surfaces can worsen flooding events and increase the temperature, as they reflect sunlight.

Source: The U.S Climate Vulnerability Index (CVI), 2021

Link: https://github.com/wachiuphd/CVI

Canopy Cover

Definition: Percentage of land covered by tree canopy. Trees are an important source of shade, which keeps areas cooler, and clear air.

Calculation: Mean of raster values clipped to neighborhood boundaries.

Source: National Land Cover Database (NLCD), 2021 – USFS Tree Canopy Cover

Link: https://www.mrlc.gov/data/nlcd-2021-usfs-tree-canopy-cover-conus

Surface Heat

Definition: The temperature difference between urban areas and nearby non-urban areas, in degrees Fahrenheit.

Calculation: Mean of raster values clipped to neighborhood boundaries.

Source: U.S. Geological Survey (USGS), 2020

Link: https://www.sciencebase.gov/catalog/item/656e2d2ad34e7ca10833fb69

Lead Paint – Housing Stock

Definition: Percentage of housing units built before 1960, a proxy for potential lead paint exposure risk. Lead paint was banned in the US in 1979, meaning that all houses built before that year are more likely to have lead paint. However, houses built before 1960 are at a higher risk of containing lead paint, which can cause lead poisoning in young children if inhaled or consumed. Learn more about lead poisoning here: https://www.cdc.gov/lead-prevention/prevention/paint.html

Source: American Community Survey (ACS) Table DP04 (5-Year Estimates), 2023

Link: https://data.census.gov/table/ACSDP5Y2023.DP04?q=DP04&g=040XX00US55,55$1400000

Lead Paint - Lead Poisoning

Definition: Percentage of children tested for lead poisoning who test positive for elevated blood lead levels, based on state-level screening data.

Source: Wisconsin Department of Health Services (DHS), 2020–2023

Link: https://data.dhsgis.wi.gov/datasets/b138c2c0ffe74689ae011357f11a4899_1/explore

Annual NO_2 Concentration

Definition: Average annual nitrogen dioxide (NO2) in the air. NO2 is a harmful pollutant that can cause negative respiratory symptoms with short-term exposure and chronic conditions, such as asthma, with long-term exposure. The World Health Organization (WHO) standard for NO2 annual concentration is 10 µg/m3 or 5.3 ppb, meaning NO2 levels over this limit are unhealthy. Learn more here: https://www.who.int/news-room/feature-stories/detail/what-are-the-who-air-quality-guidelines

Source: Environmental Protection Agency (EPA) EJScreen, 2020

Link: https://screening-tools.com/epa-ejscreen

Annual PM2.5 Concentration

Definition: Average fine particulate matter (PM2.5) concentration, a key air pollutant with significant health risks. The Environmental Protection Agency (EPA) standard for PM2.5 annual concentration is 9 µg/m3, meaning PM2.5 levels over this limit are unhealthy.

Source: Environmental Protection Agency (EPA) EJScreen, 2020

Link: https://screening-tools.com/epa-ejscreen

Ozone Exceedance Days

Definition: Number of days exceeding the NAAQS standard of Ground-level ozone concentration, a respiratory irritant and component of smog. The Environmental Protection Agency (EPA) standard is 70 ppb, meaning concentrations over this limit are unhealthy.

Source: The 2018-2020 U.S. EPA Air Quality System (AQS) data, as available through the CDC's National Environmental Public Health Tracking Network

Link: https://data.cdc.gov/Environmental-Health-Toxicology/Daily-Census-Tract-Level-Ozone-Concentrations-2016/hf2a-3ebq/about_data

Traffic Density

Definition: The average number of vehicles that traveled over traffic points in the area. The Wisconsin Department of Transportation designates traffic points throughout the state, where they monitor the amount of vehicles passing through the point throughout the year. They use this data to calculate the AADT or the Annual Average Daily Traffic for each traffic point, which represents the expected number of vehicles passing through a traffic point on any given day.

Calculation: The traffic density for an area is calculated by taking the mean of the AADTs for all traffic points in an area.

Source: Wisconsin Department of Transportation, 2023

Link: https://data-wisdot.opendata.arcgis.com/datasets/WisDOT::traffic-counts/about

Hazardous Sites Map - Contaminated & Vapor Sites

Definition: The Bureau of Remediation and Redevelopment Tracking System is Wisconsin's registry of known or suspected contamination sites, including cleanups and spills. The contaminated sites include all sites that are actively operating or closed that could be a potential source of pollution in the nearby water and soil. The vapor sites are a subset of the contaminated sites where chemical vapors from contaminated water or soil have seeped into buildings, potentially causing indoor air pollution that can negatively impact health. These sites must go through extra remediation protocols.

Source: Wisconsin Department of Natural Resources Bureau of Remediation and Redevelopment Tracking System, August 2025

Link: https://apps.dnr.wi.gov/rrbotw/botw-search

Hazardous Sites Map - TRI Sites

Definition: Facilities that report toxic chemical releases under the Toxics Release Inventory program. These sites can be potential sources of air, water, and soil pollution.

Source: EPA Facility Registry Service (FRS) Dataset, August 2025

Link: https://www.epa.gov/frs/geospatial-data-download-service