### Washington Environmental Health Disparities Map

# What's new with version 2.0?



The Washington State Department of Health published version 2.0 of its Environmental Health Disparities (EHD) Map in Summer 2022, based on work started in 2021.

### The updates include:

- Updated indicators
- Updated methods and indicators for PM2.5, diesel emission, and ozone

### **Environmental Exposures**









- EHD Map version 2.0 uses estimated PM2.5 emissions from diesel sources derived from Washington State Department of Ecology's 2014 Comprehensive Emissions Inventory. Previously, diesel emissions were based on estimated NOx (Annual Tons/Km2) emissions from Washington State Department of Ecology's 2014 Comprehensive Emissions Inventory. This change was made because diesel PM2.5 emissions are a more relevant measure for human health and a more significant environmental health exposure than emissions of NOx from diesel.
- EHD Map version 2.0 improves upon previous methods with a **Proximity to** Heavy Traffic Roadways indicator, which is a continuous estimate and provides more accurate traffic variation, especially in rural areas. The new measure uses 2019 WSDOT roadway traffic data. The previous version used a **Populations Near** Heavy Traffic Roadways indicator estimating the percentage of people living near a busy roadway from 2017 WSDOT roadway traffic data.
- The Ozone concentration and PM2.5 concentration indicators are updated from 2009 2011 3-year estimates to 2014 2017 3-year estimates (not aligned with the calendar year to avert the extreme wildfire smoke event in summer 2017).
- The Toxic Releases from Facilities (RSEI) indicator is updated from 2012 2014 3-year average to a 2018 2020 3-year average.

### **Environmental Effects**









- The Lead Risk from Housing indicator is updated from 2013 2017 5-year American Community Survey (ACS) estimates to 2015 2019 5-year ACS estimates.
- The Proximity to Hazardous Waste Treatment Storage and Disposal Facilities (TSDFs) and Proximity to Risk Management Plan (RMP) Facilities indicators are updated from 2017 to 2021 EPA EJSCREEN data.
- The Proximity to National Priority List Facilities (Superfund Sites) indicator is updated from 2016 to 2021 EPA EJSCREEN data.
- The Wastewater Discharge indicator is updated from 2015 to 2021 EPA EJSCREEN data.

# What's new with version 2.0?



### **Socioeconomic Factors**







- The Limited English Proficiency, No High School Diploma, Population Living in Poverty, Unaffordable Housing, and Unemployment indicators are updated from 2013 – 2017 5-year ACS estimates to 2015 – 2019 5-year ACS estimates.
- The People of Color indicator is updated from 2017 to 2019 estimates from the Office of Financial Management.

## **Sensitive Populations**



The Low Birthweight and Cardiovascular Disease Mortality indicators are updated from 2014 – 2018 5-year estimates to 2015 – 2019 5-year estimates obtained from the Washington State Department of Health Center for Health Statistics.

Washington Environmental Health Disparities

# Threat x Vulnerability = Risk













VULNERABILITY







RISK





### THREAT

# Environmental Exposures

Diesel emissions

Ozone concentration PM2.5 concentration

Proximity to heavy traffic roadways

Toxic releases from facilities

#### Environmental Effects

Lead risk from housing

Proximity to hazardous waste treatment, storage, and disposal facilities

Proximity to Superfund sites

Proximity to risk management plan facilities

Wastewater discharge

# Socioeconomic Factors

Limited English

No high school diploma

People of color

Population living in poverty

Transportation expense Unaffordable housing

Unemployment

## Sensitive Populations

Populations with high death rates from cardiovascular disease

Populations with high percentages of low birth weight

## **Environmental Health Disparities**

Communities experiencing a disproportionate share of environmental health burdens that will need more assistance to reach equitable outcomes

