Environmental Health Disparities (EHD) Map
EHD Workgroup Partners

FRONT AND CENTERED

ENVIRONMENTAL & OCCUPATIONAL HEALTH SCIENCES
UNIVERSITY of WASHINGTON | SCHOOL OF PUBLIC HEALTH

DEPARTMENT OF
ECOLOGY
State of Washington

Washington State Department of Health

pscleanair.org
Puget Sound Clean Air Agency
## Community Listening Sessions

Community listening sessions are organized by various organizations and held in different locations across Washington State. The table below provides details on each session:

<table>
<thead>
<tr>
<th>Organization</th>
<th>Date</th>
<th>Location</th>
<th>Participant Information</th>
<th>Participant Count</th>
<th>Language</th>
<th>Issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>OneAmerica</td>
<td>7/31/2017</td>
<td>Vancouver</td>
<td>Latinx from Fruit Valley and surrounding neighborhoods</td>
<td>20</td>
<td>Spanish/English</td>
<td>Pollution, Climate, Puget Sound</td>
</tr>
<tr>
<td>Chaplains on the Harbor</td>
<td>8/15/2017, 8/20/2017</td>
<td>Westport &amp; Aberdeen</td>
<td>Homeless, Incarcerated, Native, Latinx, from Grays Harbor County</td>
<td>9</td>
<td>English</td>
<td>Pollution, Climate, Puget Sound</td>
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<tr>
<td>Community to Community</td>
<td>8/17/2017</td>
<td>Bellingham</td>
<td>Farm Workers, Latinx, Youth from Whatcom and Skagit County.</td>
<td>15</td>
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<tr>
<td>Latino Community Fund</td>
<td>8/18/2017</td>
<td>Ellensburg</td>
<td>Latinx youth, from central Washington</td>
<td>29</td>
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<td>Entre Hermanos</td>
<td>8/23/2017</td>
<td>Seattle</td>
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<td>12</td>
<td>Spanish</td>
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<tr>
<td>Na’ah Illahee Fund</td>
<td>8/25/2017, 9/7/2017</td>
<td>Port Angeles &amp; Yakima</td>
<td>Native, from Peninsula, central and eastern Washington</td>
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<td>Asian Pacific Cultural Center</td>
<td>11/13/2017</td>
<td>Pierce County</td>
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Community Listening Sessions

- Community listening sessions

What kinds of pollution, if any are impacting your life or work and that of your family and community?

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Community Listening Sessions

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What kinds of pollution, if any are impacting your life or work and that of your family and community?

What factors best show if your community is healthy or doing well compared to other communities?
# The Indicators

## Environmental Exposures
- Diesel emissions
- Ozone
- Particulate Matter 2.5 (PM 2.5)
- Toxic releases from facilities
- Traffic Density

## Environmental Effects
- Lead risk and exposure
- Proximity to hazardous waste generators and facilities
- Proximity to Superfund sites
- Proximity to facilities with highly toxic substances
- Wastewater discharge

## Sensitive Populations
- Cardiovascular disease
- Low birthweight

## Socioeconomic Factors
- Low educational attainment
- Housing burden
- Transportation expense
- Linguistic isolation
- Poverty
- Race (people of color)
- Unemployment

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WA State DOH | 7
## Environmental Health Disparities Map

<table>
<thead>
<tr>
<th>Least impacted</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>Most impacted</th>
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<tr>
<td></td>
<td>10% of communities</td>
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<td>10% of communities</td>
<td>10% of communities</td>
<td>10% of communities are similarly impacted</td>
<td>10% of communities</td>
<td>10% of communities</td>
<td>10% of communities are more impacted</td>
</tr>
<tr>
<td></td>
<td>70% of communities are less impacted</td>
<td></td>
<td></td>
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**WA State DOH | 8**
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The Model

**Final composite score**

\[
\text{Final composite score} = \text{Pollution Burden score} \times \text{Population Characteristics score}
\]

**Pollution burden**

\[
\text{Pollution burden score} = \left( \frac{\text{Average percentile of Environmental Exposures indicators} + 0.5 \times \text{Average percentile of Environmental Effects indicators}}{2} \right)
\]

**Population characteristics**

\[
\text{Population characteristics score} = \left( \frac{\text{Average percentile of Sensitive Population indicators} + \text{Average percentile of Socioeconomic Factors indicators}}{2} \right)
\]
Welcome to WTN, your source for environmental and public health data.

**Search WTN Data**
Sort, export, chart and map data for environmental and public health measures. [Search data now](#)

**Information by Location (IBL)**
Explore community rankings for topics such as health disparities (differences) and lead exposure risk. View [Information by Location tool now](#)

**WTN Dashboards**
View WTN data in a new way. Like our current tools, these [dashboards](#) have maps, charts and graphs. You can see these features in the same view.

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Use your phone or tablet to view our new tool for environmental health topics, such as radon. Touch the maps to see data for your community.
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Environmental Health Disparities Map
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Diesel Emission Levels of NOx (Annual)

Selection Criteria

View two measures together

Measure 1

Keyword Search

Search measures

Section

Environment

Topics

Air Quality

Sub Topic

Diesel Emissions

Measure

NOx-Diesel Emissions (Annual Tons/Km²)

Filters

Geography

Census Tract

Submit

Information and Resources About Air Quality

Derivation

The basis of the diesel NOx data is Washington State AIRPACT-5 modeling domain, which uses 4km x 4km sources (e.g. non-point and mobile) were allocated to individual grid-cells, based on the source weighted spatial interpolation.

The census tracts and boundaries used in this analysis (water-only tracts) and that the boundaries for coastal (shipping channels, ferry routes, and ports) that would containing all tracts by clicking the chart icon next to them. The boundaries used in this analysis come from the United States Census Bureau.

The 2014 Comprehensive EI data will be posted at: https://ecology.wa.gov/Air-Climate/Air-quality/Annual

The US EPA Spatial Surrogate Workbook was the basis.

County Name | Census Tract
---|---
n/a | State Total
Adams | 53001950100
Adams | 53001950200
Adams | 53001950300
Adams | 53001950400
Adams | 53001950500
Asotin | 53003960100
Asotin | 53003960200
Asotin | 53003960300
Asotin | 53003960400
Asotin | 53003960500
Asotin | 53003960600
Benton | 5300501000
Benton | 53005010201
Environmental Health Disparities Map
WTN Data Requirements
Data Requirements

To be included in WTN, data must be:
  o Science-based
  o Representative statewide
  o Sustainable data source and management
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  - Science-based
  - Representative statewide
  - Sustainable data source and management

- Additionally, WTN does not currently support:
  - Projected/predictive data