DRAFT: Identifying Overburdened Communities Highly Impacted by Air Pollution

Technical Support Document

For discussion with the EJ Council's CCA Committee.

Updated version to be released for the fall engagement process

Air Quality Program

Washington State Department of Ecology
Olympia, Washington

July 2022, Publication ##-##-###

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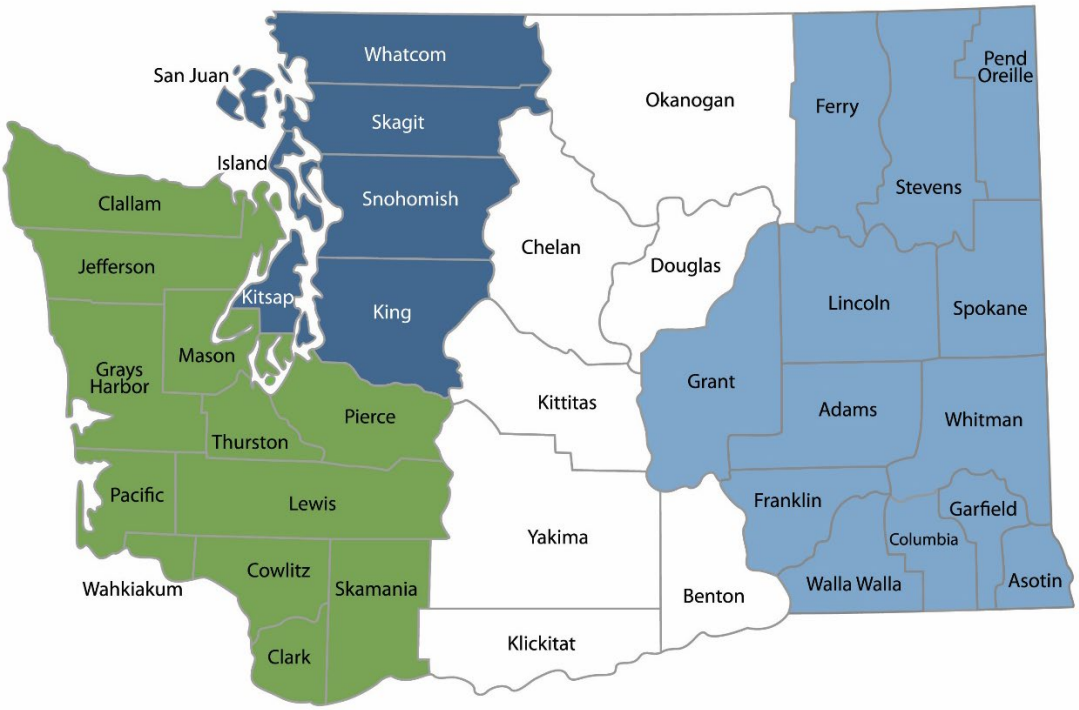
Department of Ecology's Regional Offices

Map of Counties Served



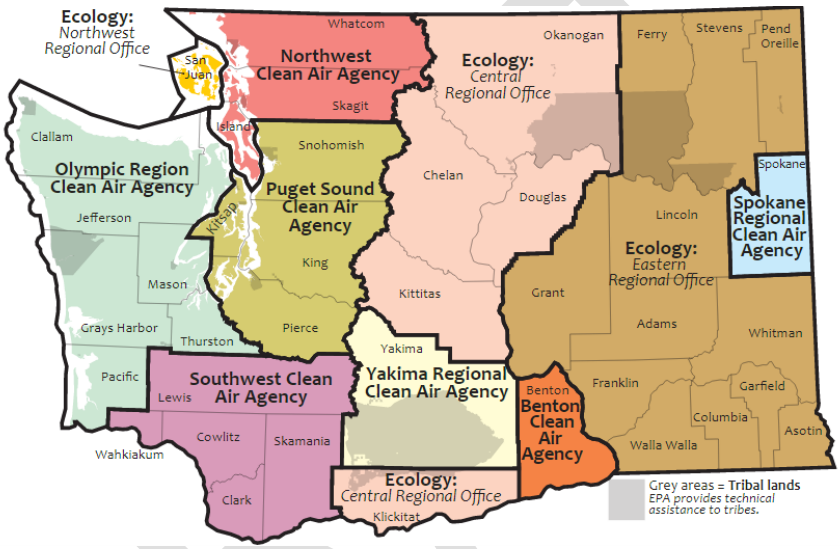
Southwest Region 360-407-6300	Northwest Region 206-594-0000	Central Region 509-575-2490	Eastern Region 509-329-3400

Region	Counties served	Mailing Address	Phone
Southwest	Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Mason, Lewis, Pacific, Pierce, Skamania, Thurston, Wahkiakum	P.O. Box 47775 Olympia, WA 98504	360-407-6300
Northwest	Island, King, Kitsap, San Juan, Skagit, Snohomish, Whatcom	P.O. Box 330316 Shoreline, WA 98133	206-594-0000
Central	Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, Yakima	1250 West Alder Street Union Gap, WA 98903	509-575-2490
Eastern	Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, Whitman	4601 North Monroe Spokane, WA 99205	509-329-3400
Headquarters	Statewide	P.O. Box 46700 Olympia, WA 98504	360-407-6000

Washington Local Clean Air Agencies

Ecology works in partnership with 12 local clean air agencies and tribes throughout the state of Washington to make sure we all have clean, healthy air to breathe.[1] Local air pollution control authorities, or local clean air agencies (LCAAs), manage most of the air quality regulation in Washington, within their jurisdictions. Tribal governments protect air quality within their tribal reservations, with technical assistance from EPA. Ecology is the primary air regulator in all other areas of the state.

Map of Counties Served



- Benton Clean Air Agency — Benton County
- Ecology Central Regional Office — Chelan, Douglas, Kittitas, Klickitat, Okanogan counties
- Ecology Eastern Regional Office — Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Stevens, Walla Walla, Whitman counties
- Ecology Industrial Section — Pulp mills, aluminum smelters
- Ecology Northwest Regional Office — San Juan County
- EPA Region 10 — Tribal lands
- Northwest Clean Air Agency — Island, Skagit, Whatcom counties
- Olympic Region Clean Air Agency — Clallam, Grays Harbor, Jefferson, Mason, Pacific, Thurston counties
- Puget Sound Clean Air Agency — King, Kitsap, Pierce, Snohomish counties
- Southwest Clean Air Agency — Clark, Cowlitz, Lewis, Skamania, Wahkiakum counties
- Spokane Regional Clean Air Agency — Spokane County
- Yakima Regional Clean Air Agency — Yakima County

[1] https://ecology.wa.gov/About-us/Accountability-transparency/Partnerships-committees/Clean-air-agencies

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Purpose of This Document

This document contains in-depth information about the technical aspects of the draft indicators to identify overburdened communities highly impacted by air pollution. The Washington Department of Ecology (Ecology) provides this information for full transparency of our process, indicators, and sources of data. A general overview of the draft indicators is available on our website.

Table 1. Acronyms used in this document

Acronym	Meaning
ACS	American Community Survey
AQI	Air Quality Index
CASAC	Clean Air Scientific Advisory Committee
CCA	Climate Commitment Act
CDC	Center for Disease Control
CEJST	Climate and Economic Justice Screening Tool
CO	Carbon Monoxide
COPD	Chronic Obstructive Pulmonary Disease
EHD Map	Washington Environmental Health Disparities Map
LCAA	Local Clean Air Agency
NAAQS	National Ambient Air Quality Standards
NEI	National Emissions Inventory
NO_2	Nitrogen Dioxide
O_3	Ozone
Pb	Lead
$PM_{2.5}$	Particulate matter smaller than 2.5 micrometers in diameter
PM_{10}	Particulate matter smaller than 10 micrometers in diameter
SO_2	Sulfur Dioxide
US EPA	United States Environmental Protection Agency
VOCs	Volatile Organic Compounds
WTN	Washington Tracking Network

Introduction

The Climate Commitment Act[2] requires Ecology to identify "overburdened communities highly impacted by air pollution" to ensure that the Cap & Invest Program achieves reductions in criteria air pollutants, as well as greenhouse gas emissions, in these communities. Criteria air pollutants are six common air pollutants that can harm your health and the environment. The federal Clean Air Act requires the US EPA to set National Ambient Air Quality Standards (NAAQS) for criteria air pollutants. Ecology, local clean air agencies, and Tribes monitor these pollutants across Washington State and take action to control and reduce pollution. These criteria pollutants are as follows:

- Carbon monoxide (CO)
- Lead (Pb)
- Ozone (O_3)
- Nitrogen dioxide (NO_2)
- Particulate matter:
    - Fine particulate matter ($PM_{2.5}$)
    - Coarse particulate matter (PM_{10})
- Sulfur dioxide (SO_2)

Once we have identified the overburdened communities highly impacted by air pollution, we will expand Ecology's statewide air monitoring network within these identified communities as directed by RCW 70A.65.020. New emissions standards to improve air quality for overburdened communities will be developed through future processes.

Overview of the Draft Process to Identify Communities

In order to identify overburdened communities highly impacted by air pollution, we have evaluated several indicators that reflect where vulnerable populations face environmental harms or health impacts due to air pollution that result in unequal adverse health outcomes. To help guide this process, we held two tribal listening sessions, eight public and community group listening sessions, as well as a survey, and a comment map over a three-month period. We also consulted with the Washington State Department of Health and Local Clean Air Agency staff. For more information on the public input from the first public comment period, and how we used it, see our website.

[2] Engrossed second substitute senate bill 5126, chapter 316, laws of 2021

According to the draft process to identify overburdened communities highly impacted by air pollution (Figure 1), to be considered overburdened, an area must meet the following conditions, based on data available statewide:

1. Have an elevated level of one or multiple criteria air pollutants;
2. Either have a 9 or 10 ranking on the Washington Environmental Health Disparities (EHD) map, be in the 90th percentile[3] or higher of census block groups for the EJScreen Demographic Index, or be Tribal land; and
3. Meet the threshold for one or more of the eight indicators for environmental exposures, health impacts, or vulnerable populations related to air quality.

After these statewide indicators are applied, more specific, regional data will be applied to the screened areas to refine the boundaries of the overburdened communities (see "Draft Factors to Identify Community Boundaries" below).

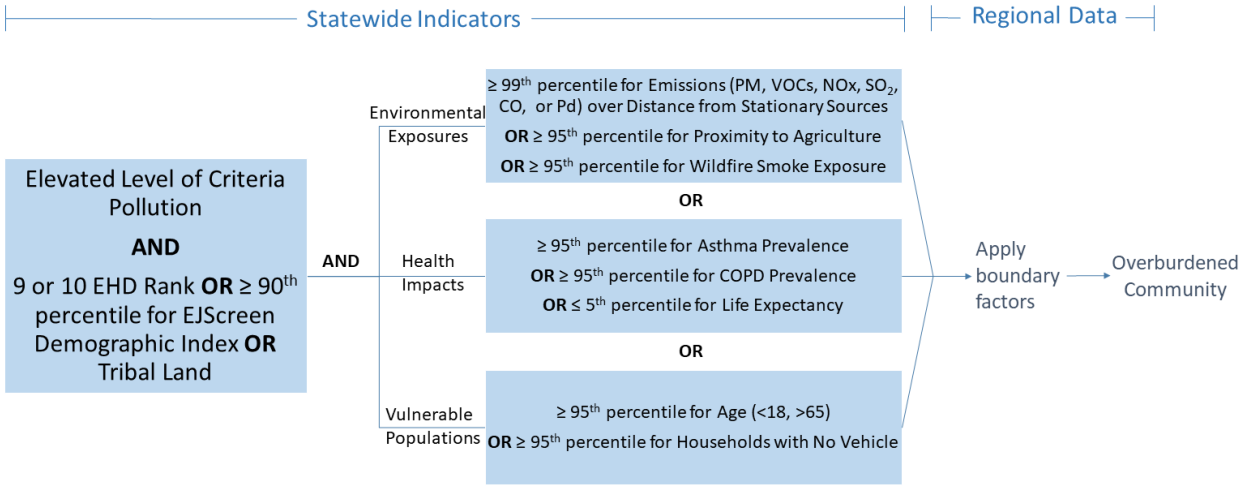

Figure 1. Flowchart of the draft process to identify overburdened communities highly impacted by air pollution.

We designed the draft indicators to be consistent with the definition of overburdened communities described in the CCA (see Appendix A) as it relates to air pollution. Additionally, the CCA directs us to monitor and reduce criteria air pollution in overburdened communities. The "Elevated level of criteria air pollution" indicator identifies areas where this type of pollution is highest. The EHD ranking, EJScreen Demographic Index, and Tribal land indicators help to identify areas where "vulnerable populations face combined, multiple environmental harms." The eight indicators related to environmental exposures, health impacts, or vulnerable

[3] Percentiles reflect the distribution of a variable and run from the 0th percentile, meaning the lowest score on a given scale, to the 100th percentile, meaning the highest score on a given scale. For example, if an area is in the 95th percentile for demographic index, which means it has a demographic index higher than 95% of all areas measured.

populations distinguishes where vulnerable communities face exposure to air pollutants "through multiple pathways, which may result in significant disparate adverse health outcomes or effects."

Across the state of Washington, communities have varied sources and impacts of air pollution. That is why only one of the eight indicators related to environmental exposures, health impacts, or vulnerable populations specific to air pollution must be met to be considered overburdened. These indicators are evaluated independently and do not compete with one other. The threshold for each indicator in this step is the 95th percentile,[4] which results in the selection of the top 5% of either census tracts or grid cells, depending on the indicator, to represent the most highly impacted communities for each individual indicator.[5]

We are proposing using the indicator data that is available statewide first as a screening step to identify general areas for further consideration. Using data available statewide avoids penalizing areas that have less data availability, or less spatially detailed data. However, Ecology is tasked with identifying specific communities overburdened by air pollution, which requires further refinement. Applying localized data, in addition to the statewide indicators, will help us ensure we are identifying overburdened communities accurately. That is why after the statewide indicators are applied (described above), we are proposing the use of additional local and regional data, where available and applicable, to inform the identification of boundaries for overburdened communities.

Draft Indicators

This section is a full technical breakdown of each of the draft indicators proposed by Ecology for identifying overburdened communities highly impacted by air pollution. Included for each draft indicator is a short description, the method for how the data was collected and/or put together, important caveats to consider when using these data, and the data source(s). For a general overview of the draft indicators, see the General Overview document.

[4] Percentile is based on area, not population. Two indicators are exceptions to this threshold: (1) Life Expectancy is an inversely related health impact, so the bottom 5th percentile is selected, and (2) Emissions over Distance from Stationary Sources is a combination of six separate map layers, and the 99th percentile from each was combined into a single map (see draft indicator information below for more detail).

[5] Using thresholds, rather than a single score or index, is similar to the approach used in the federal Climate and Economic Justice Screening Tool (CEJST). The Council on Environmental Quality developed the CEJST to help federal agencies identify disadvantaged communities across the country that are marginalized, underserved, and overburdened by pollution. As stated in the CEJST technical documentation, "Given the available datasets, however, it was determined that a thresholds approach would better enable the tool to identify disadvantaged communities in rural and urban areas…The thresholds approach addressed concerns that certain areas of the nation and territories would be penalized in an index simply because they had less available data."

Elevated Level of Criteria Air Pollution – Areas with an elevated level of a one or more criteria pollutants and/or the highest cumulative level of criteria pollutants, based on a combination of monitoring, modeling, and/or emissions data. For this indicator, the following thresholds are considered elevated levels of criteria air pollution:

Table 2. Criteria Pollutant Thresholds

Pollutant	Threshold	Rationale
$PM_{2.5}$	$PM_{2.5}$ 24-hour design value > 20.4 ug/m^3	Ecology's healthy air goal (used to identify areas of concern for $PM_{2.5}$)
	$PM_{2.5}$ annual design value > 8 ug/m^3	Lower end of Clean Air Scientific Advisory Committee (CASAC) recommendation for the $PM_{2.5}$ NAAQS reconsideration
PM_{10}	At least one recent exceedance of the federal 24-hour PM_{10} standard of 150 µg/m^3 not attributable to natural events such as wildfires or high-wind dust events	Lower exceedance frequency than NAAQS (not to be exceeded more than once per year on average over 3 years)
O_3	O_3 design value > 65 ppb	Lower end of US EPA's proposal for most recent O_3 NAAQS revision
NO_2	NO_2 1-hour design value > 54 ppb	Lower end of Moderate Air Quality Index (AQI) range
CO	8-hour design value > 4.5 ppm	Lower end of Moderate AQI range
SO_2	SO_2 1-hour design value > 36 ppm	Lower end of Moderate AQI range
Lead	Proximity to any lead source emitting more than 0.5 ton per year	Lowest threshold for EPA's monitoring network design criteria for lead monitoring, 40 CFR Part 58, Appendix D
Combined	98th percentile or above for the AQI sum of all statewide interpolated criteria pollutants combined ($PM_{2.5}$ 24-hour, O_3, NO_2, SO_2, CO)	Cumulative impact from criteria air pollution

Method: $PM_{2.5}$, O_3, NO_2, SO_2, CO: Modeled and monitored concentration data from July 2014 through June 2017 were used to interpolate criteria pollutant design values at 4 km x 4 km grid cell resolution across the state.

For a more in-depth explanation of the methods, caveats, and limitations of the interpolation for each individual pollutant, see NW-AIRQUEST Regional Background Design Values, 2014-2017.

PM_{10}: Due to the absence of reliable modeled or interpolated PM_{10} concentrations, we used monitoring data from sites in the Washington Ambient Air Monitoring Network.

Lead: We used the most recent state air emissions inventory and the most recent national emissions inventory (NEI) to identify sources that emit greater than 0.5 tons of lead per year.

Data source: NW-AIRQUEST Regional Background Design Values, 2014-2017 (Hosted on Idaho Department of Environmental Quality's Webpage); Washington Ambient Air Monitoring Network, Department of Ecology; Air Emissions Inventory, WA Department of Ecology; National Emissions Inventory, US EPA

Environmental Health Disparities Map Rank – The EHD Map is an interactive mapping tool that compares communities across our state for environmental health disparities. The following indicators are included in the EHD map (version 2.0):

- *Environmental Exposures* (diesel PM emissions; ozone concentration; $PM_{2.5}$ concentration; proximity to heavy traffic roadways; toxic release from facilities (RSEI model))
- *Environmental Effects* (lead risk from housing; proximity to hazardous waste treatment, storage, and disposal facilities (TSDFs); proximity to National Priorities List sites (Superfund Sites); proximity to Risk Management Plan (RMP) facilities; wastewater discharge)
- *Sensitive Populations* (death from cardiovascular disease; low birth weight)
- *Socioeconomic Factors* (limited English; no high school diploma; poverty; race - people of color; transportation expense; unaffordable housing; unemployed)

A rank of 9 or 10 is designated as the threshold for this indicator. This is consistent with what the Department of Health includes in the definition of a "highly impacted community," developed for the Clean Energy Transformation Act (CETA) for communities highly impacted by climate change and fossil fuel pollution.

Method: The overall EHD rank is calculated with the following equation:

$$\frac{(\text{Average Environmental Exposures Percentile} + 0.5 \times \text{Average Environmental Effects Percentile})}{2} \times \frac{(\text{Average Sensitive Populations Percentile} + \text{Average Socioeconomic Factors Percentile})}{2} = \textit{Overall EHD Risk}$$

For full methods, limitations, and caveats, see UW's Environmental & Occupational Health Sciences' webpage for the EHD Map Project.

Data source: WA Environmental Health Disparities Map, Version 2.0 (Note: As of 7/20/2022, Version 2.0 has not yet been published)

EJScreen Demographic Index – An average of the percent of low-income populations and people of color, used in the Environmental Justice Screening Tool (EJScreen), calculated at the census block group level.

Race and income are both included in the EHD map, however they are included separately in this indicator to account for communities that may experience elevated levels of criteria air pollution and greater vulnerability to pollution based to socioeconomic factors, but are not highly impacted by other types of pollution or environmental exposures that may result and an EHD ranking less than 9 or 10.

Method: The demographic index calculated using the following equation:

$$\frac{(\%\ \text{people of color} + \%\ \text{low income})}{2} = Demographic\ Index$$

We selected the "compare by state" data option to ensure that the percentiles reflect Washington State, rather than US demographics.

For more information on the methods, limitations, and caveats, see the EJScreen Technical Documentation.

Data source: EJScreen Version 2.0

Tribal Land – Tribal lands in Washington State, including:

- Reservation land - Federally recognized tribal reservation lands.
- Disputed land - Lands designated as being part of a reservation but title is disputed by other parties.
- Off-reservation tribal land - lands outside of a reservation acquired by or held in trust for tribal use.

We are inviting government-to-government consultation with Tribal nations and organizations affiliated with Washington Tribes on the areas included in "Tribal land." Tribal land is not limited to the listed bullets and we look forward to input from Tribal nations. For more information, see the "Tribal Consultation" section below.

Data source: Tribal Lands of Washington, WA Department of Ecology

Emissions over Distance from Stationary Sources – Emissions quantity divided by distance from major stationary sources of pollution, including airports and railyards for: $PM_{2.5}$, SO_2, CO, Pb, nitrogen oxides (NO_x), or Volatile Organic Compounds (VOCs). VOCs are not considered criteria pollutants; however, they are precursors to the formation of O_3, which is a criteria pollutant.

This indicator represents which areas are nearby to one or multiple stationary sources of criteria pollutants and criteria pollutant precursors.

Method: We used the AIRPACT 1.33 km gridded domain, major source emissions from the 2019 point-source [stationary] emissions database, airport emissions from the 2017 NEI, and railyard emissions from the 2017 NEI. We created individual layers for each pollutant were by: (1) calculating the distance of each source to each grid-cell and used a minimum distance of 1 km for calculations; (2) dividing the emissions for each pollutant by the distance to each grid-cell; and (3) summing the Emissions/Distance from all sources (by pollutant) for each grid-cell.

Caveats: The 99th percentile for each pollutant was selected for this indicator because it is made up of a combination of six separate map layers for each of the six pollutants included. The combined map of the six pollutants with the higher threshold for each had roughly the same weight as the other indicators with a 95th percentile threshold.

PM_{10} is not included here because >80% of PM_{10} emissions are included in the $PM_{2.5}$ emissions data.

Data source: Air Emissions Inventory, WA Department of Ecology, 2019; National Emissions Inventory, US EPA, 2017; AIRPACT grid-cells (1.33 km), University of Washington Weather Research and Forecasting (WRF) Model / Washington State University

Proximity to Agriculture – Average of proximity to land designated for cultivating crops and proximity to dairies adjusted for range of mature animals.

Method: We calculated separate scores for agricultural intensity and proximity to dairies. For agricultural intensity, each 1.33 km grid cell was assigned a score for the percent of agricultural land in a 15 km buffer, normalized to a scale of 0-1. Agricultural land was identified using the Washington State Department of Agriculture's 2017 Agricultural Land Use Dataset. For proximity to dairies, each 1.33 km grid cell was assigned a score for the total number of mature cattle at dairies within a 15 km buffer, normalized to a scale of 0-1. Dairy locations and number of mature cattle were extracted from a 2017 WSDA Dairy Map. In accordance with RCW 42.56.610 and 90.64.190, animal counts were generalized to the ranges listed in WAC 16-06-210 and each dairy assigned the midpoint of its corresponding range. The final proximity to agriculture score was calculated as the mean of the normalized agricultural intensity score and proximity to dairies score.

Caveats: The methods for quantifying agricultural intensity do not distinguish among different crop types, which may pose different environmental impacts to people living nearby. Furthermore, other types of animal feeding operations (aside from dairies) are currently not included, but may be added in the future depending on data availability.

Data source: Agricultural Land Use Map, WSDA, 2017; WA Dairy Map, WSDA, 2017; AIRPACT grid-cells (1.33 km), University of Washington Weather Research and Forecasting (WRF) Model / Washington State University

Wildfire Smoke Exposure – Estimated exposure to particulate matter pollution from wildfire smoke over a 4-year average.

Method: Daily interpolated $PM_{2.5}$ concentrations from 2015-2018 at census tract centroids were downloaded from EPA's Fused Air Quality Surfaces Using Downscaling Tool (FAQSD) available in EPA's Remote Sensing Information Gateway. For each census tract centroid, summer (June – Sept) 98^{th} percentile concentrations and number of days over 20 $\mu g/m^3$ were calculated. Both summary measures were normalized to a scale of 0-1 and summed into a final "smoke score," expressed as a percentile.

Caveats: Wildfire smoke exposure can vary significantly year to year. Interpolated concentrations from EPA's FAQSD tool have associated model uncertainty, and standard errors are likely greater in rural areas without proximate monitoring sites. As the FAQSD is a national tool, its model and interpolation parameters are not necessarily optimized for air quality conditions in the Pacific Northwest.

Data source: Remote Sensing Information Gateway, US EPA, 2015-2018

Asthma Prevalence – Asthma prevalence among adults aged 18 years or over.

Method: Weighted percentage of people aged ≥18 years who answer "yes" to both of the following questions: (1) have you ever been told by a doctor, nurse, or other health professional that you have asthma?, and (2) do you still have asthma? The weighted percentage ensures that survey responses match the population characteristics of each census tract.

Caveats: Physician-diagnosed asthma is self-reported and requires a doctor diagnosis of asthma, which may not include all persons with asthma. This measure does not include prevalence of asthma among children (under age 18). It also does not represent asthma severity.

Data source: PLACES: Local Data for Better Health, CDC, 2016-2019

COPD Prevalence – Chronic obstructive pulmonary disease prevalence among adults aged 18 years or older.

Method: Percentage of people aged ≥18 years who report ever having been told by a doctor, nurse, or other health professional that they had chronic obstructive pulmonary disease (COPD), emphysema, or chronic bronchitis.

Caveats: The percentage is based on being diagnosed by a physician and respondent recall of the diagnosis and might underestimate the true prevalence. This measure also does not represent COPD severity.

Data source: PLACES: Local Data for Better Health, CDC, 2016-2019

Life Expectancy – The number of years a newborn can expect to live if the current age-specific death rate remains constant.

Method: The Department of Health collects information on deaths in Washington State from death certificates. The Department collects and presents these data in data tables.

Caveats: Life expectancy calculations can fluctuate considerably in smaller populations or populations experiencing low or no deaths for the year(s) being calculated. Because of these issues, the life expectancy at birth calculation for the Census Tract geographies was suppressed for Census Tracts with a population (for the 5 years combined) of <5000 or a result with a Standard Error >2 or a record of <50 deaths for the time period.

Data source: Washington Tracking Network (WTN), 2015-2019

Age – Percent of individuals under age 18 and over age 65, as a fraction of the population.

Method: The number of individuals under the age of 18 and over the age of 65 were added together and divided by the total population in each census tract.

Data source: American Communities Survey (ACS) , U.S. Census, 2015-2019

Households with No Vehicle – Percent of household units with no vehicle.

Method: The number of household units that report having no vehicle available divided by the number of households in each census tract.

Caveats: Households with no vehicle is used as proxy for areas where individuals may be more likely to get around by walking, biking, or public transit, and therefore face greater exposure to outdoor air pollution during transit; however, it does not represent that exposure directly.

Data source: American Communities Survey (ACS), U.S. Census, 2015-2019

Draft Factors to Identify Community Boundaries

After statewide indicators are applied to screen for areas overburdened by air pollution, Ecology proposes using the following additional factors, including regional- and local-level data to identify the boundaries of the overburdened communities highly impacted by air pollution.

Existing community boundaries – Geographic boundaries used to distinguish communities. I.e. city limits, neighborhoods, etc.

Many people identify their community by geography, such as the town or the neighborhood(s) in which they live, work, and play. Where applicable, we can use these existing geographic boundaries to inform the boundaries of the identified overburdened communities.

Data source: Varies

Locations of sensitive receptors – Locations where occupants are more susceptible to the adverse effects of exposure to air pollution, including:

- K-12 schools
- Childcare facilities
- Hospitals & health clinics (e.g. assisted living facilities, nursing homes, etc.)
- Long-term care facilities
- Prisons, jails, & detention centers

Data source: Washington Geospatial Open Data

Regional data – Many studies or additional data on pollution, health, or environmental justice are available at the regional scale that can further refine the statewide draft indicator data. This includes pollution studies, health impact assessments, survey data, and more.

Local clean air agencies also may have additional air quality data available to help identify overburdened communities, or they may be doing work to address environmental justice within their own jurisdictions. For example, Puget Sound Clean Air Agency has a process to identify "focus areas," or geographic locations with degraded air quality, whose residents face economic or historic barriers to participation in clean air decisions and solutions within Puget Sound. The data and insights from that process can also be used to help inform overburdened community boundaries within that region.

Data source: Varies

Size – Large populated areas may be broken up into several adjacent overburdened communities.

Public input – Input from public comment periods will inform how we consider and apply the draft factors to determine overburdened community boundaries.

Indicators under Exploration

Several indicators were not included in the draft indicators due to data limitations. The following indicators are still under exploration, and may be added in the future if the limitations with the data are resolved:

- **Outdoor workers** (vulnerable population) – People who work primarily outdoors (agricultural workers, construction workers, postal delivery workers, etc.) have higher exposure to outdoor air pollution than people who primarily work indoors. We have not yet been able to identify or produce a dataset that captures the many different types of outdoor workers and where they are located across the state.
- **Homelessness** (vulnerable population) – Outdoor air pollution disproportionately affects unhoused people. Statewide data on homeless populations is available through the Point in Time Count; however, the data is only available at the county level, which does not provide enough resolution to determine where unhoused populations are located for community identification.
- **Childhood asthma** (health impact) – While prevalence of asthma is included in the draft indicators above, specifically childhood asthma was frequently brought up in the first public comment period. We have not been able to identify an adequate dataset where data on childhood asthma is collected and reported consistently across the state.
- **Proximity to CAFOs** (environmental exposure) – Currently the "proximity to agriculture" indicator includes cultivated crops and dairies, but not other types of concentrated animal feeding operations (CAFOs) such as beef feedlots and poultry farms. These facilities are not uniformly permitted, so we do not yet have a comprehensive source of data on different CAFO types in the state, or their relative sizes.

Tribal Consultation

We are inviting government-to-government consultation with Tribal nations throughout the entire process. We invited government-to-government consultation in December 2021 and conducted two Tribal meetings in January 2022, the week prior to the public listening sessions. We will continue to consult with Tribal nations and organizations affiliated with Washington Tribes on the process to identify overburdened communities highly impacted by air pollution.

Opportunities to Provide Feedback

Soliciting feedback from partner agencies, stakeholders, and the broader community is important to help ensure that the process to identify overburdened communities highly impacted by air quality is reflective of the concerns from communities across Washington State. Specifically, Ecology would like feedback on:

- Draft indicators to identify overburdened communities highly impacted by air pollution
- Draft factors for boundaries
- Data sources

You can provide feedback on any of these topics in multiple ways during our **fall public comment period from [dates TBD]**:

- Virtual public hearings (interpretation available)
- Submit comments through:
  - Online portal
  - Mail-in
  - Voicemail

We are currently building out our full community engagement plan for the fall engagement process. We appreciate the time from the Environmental Justice Council and other stakeholders to provide feedback on potential different inclusive strategies for engagement.

Next Steps

We will consider all the input received from the Environmental Justice Council, Tribal consultation, and the public before finalizing the indicators used for identifying overburdened communities highly impacted by air pollution. We will release a final version of the process, an updated technical support document, and a final list and map of overburdened communities the following winter.

Once overburdened communities are identified, we will begin the process of placing air monitors in the identified communities, as well as providing additional public outreach to provide information about monitoring.

More Information

Please visit our website for more information about this initiative, a draft map of areas that meet the initial draft indicator thresholds, up-to date-information about public input opportunities, as well as translated materials available in Spanish, Mandarin, Korean, Vietnamese, and Russian:

https://ecology.wa.gov/Air-Climate/Climate-change/Reducing-greenhouse-gases/Climate-Commitment-Act/Overburdened-communities

For questions regarding this document, please contact:

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Appendix A. Climate Commitment Act Legal Code

This focus of this initiative is on overburdened communities *highly impacted by criteria air pollution,* as directed by RCW 70A.65.020 (1). For the purposes of the Climate Commitment Act, overburdened communities, are defined in RCW 70A.65.010 (54):

> (54) "Overburdened community" means a geographic area where vulnerable populations face combined, multiple environmental harms and health impacts or risks due to exposure to environmental pollutants or contaminants through multiple pathways, which may result in significant disparate adverse health outcomes or effects.
>
> (a) "Overburdened community" includes, but is not limited to: (a) "Overburdened community" includes, but is not limited to:
>
> (i) Highly impacted communities as defined in RCW 19.405.020;
>
> (ii) Communities located in census tracts that are fully or partially on "Indian country" as defined in 18 U.S.C. Sec. 1151; and
>
> (iii) Populations, including Native Americans or immigrant populations, who may be exposed to environmental contaminants and pollutants outside of the geographic area in which they reside based on the populations' use of traditional or cultural foods and practices, such as the use of resources, access to which is protected under treaty rights in ceded areas, when those exposures in conjunction with other exposures may result in disproportionately greater risks, including risks of certain cancers or other adverse health effects and outcomes.
>
> (b) Overburdened communities identified by the department may include the same communities as those identified by the department through its process for identifying overburdened communities under RCW 70A.02.010.

RCW 70A.65.020, titled “Environmental Review” is the portion of the Climate Commitment Act that directs the formation and implementation of this initiative:

> (1) To ensure that the program created in RCW 70A.65.060 through 70A.65.210 achieves reductions in criteria pollutants as well as greenhouse gas emissions in overburdened communities highly impacted by air pollution, the department must:
>
> (a) Identify overburdened communities, which may be accomplished through the department's process to identify overburdened communities under chapter 70A.02 RCW;

(b) Deploy an air monitoring network in overburdened communities to collect sufficient air quality data for the 2023 review and subsequent reviews of criteria pollutant reductions conducted under subsection (2) of this section; and

(c)(i) Within the identified overburdened communities, analyze and determine which sources are the greatest contributors of criteria pollutants and develop a high priority list of significant emitters.

(ii) Prior to listing any entity as a high priority emitter, the department must notify that entity and share the data used to rank that entity as a high priority emitter, and provide a period of not less than 60 days for the covered entity to submit more recent data or other information relevant to the designation of that entity as a high priority emitter.

(2)(a) Beginning in 2023, and every two years thereafter, the department must conduct a review to determine levels of criteria pollutants, as well as greenhouse gas emissions, in the overburdened communities identified under subsection (1) of this section. This review must also include an evaluation of initial and subsequent health impacts related to criteria pollution in overburdened communities. The department may conduct this evaluation jointly with the department of health.

(b) Once this review determines the levels of criteria pollutants in an identified overburdened community, then the department, in consultation with local air pollution control authorities, must:

(i) Establish air quality targets to achieve air quality consistent with whichever is more protective for human health:

(A) National ambient air quality standards established by the United States environmental protection agency; or

(B) The air quality experienced in neighboring communities that are not identified as overburdened;

(ii) Identify the stationary and mobile sources that are the greatest contributors of those emissions that are either increasing or not decreasing;

(iii) Achieve the reduction targets through adoption of emission control strategies or other methods;

(iv) Adopt, along with local air pollution control authorities, stricter air quality standards, emission standards, or emissions limitations on criteria pollutants, consistent with the authority of the department provided under RCW 70A.15.3000, and may consider alternative mitigation actions that would reduce criteria pollution by similar amounts; and

(v) After adoption of the stricter air quality standards, emission standards, or emissions limitations on criteria pollutants under (b)(iv) of this subsection, issue an enforceable order or the local air authority must issue an enforceable order, as authorized under RCW 70A.15.1100, as necessary to comply with the stricter standards or limitations and the requirements of this section. The department or local air authority must initiate the process, including provision of notice to all relevant affected permittees or registered sources and to the public, to adopt and implement an enforceable order required under this subsection within six months of the adoption of standards or limitations under (b)(iv) of this subsection.

(c) Actions imposed under this section may not impose requirements on a permitted stationary source that are disproportionate to the permitted stationary source's contribution to air pollution compared to other permitted stationary sources and other sources of criteria pollutants in the overburdened community.

(3) An eligible facility sited after July 25, 2021, that receives allowances under RCW 70A.65.110 must mitigate increases in particulate matter in overburdened communities due to its emissions.

(4)(a) The department must create and adopt a supplement to the department's community engagement plan developed pursuant to chapter 70A.02 RCW. The supplement must describe how the department will engage with overburdened communities and vulnerable populations in:

(i) Identifying emitters in overburdened communities; and

(ii) Monitoring and evaluating criteria pollutant emissions in those areas.

(b) The community engagement plan must include methods for outreach and communication with those who face barriers, language or otherwise, to participation.