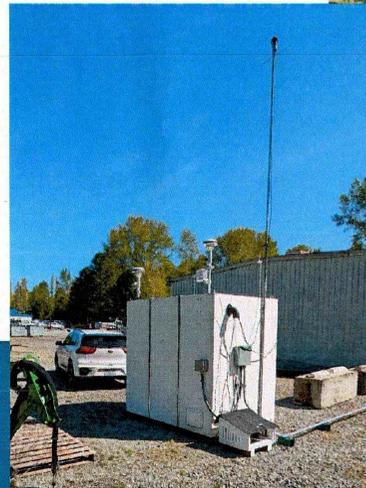
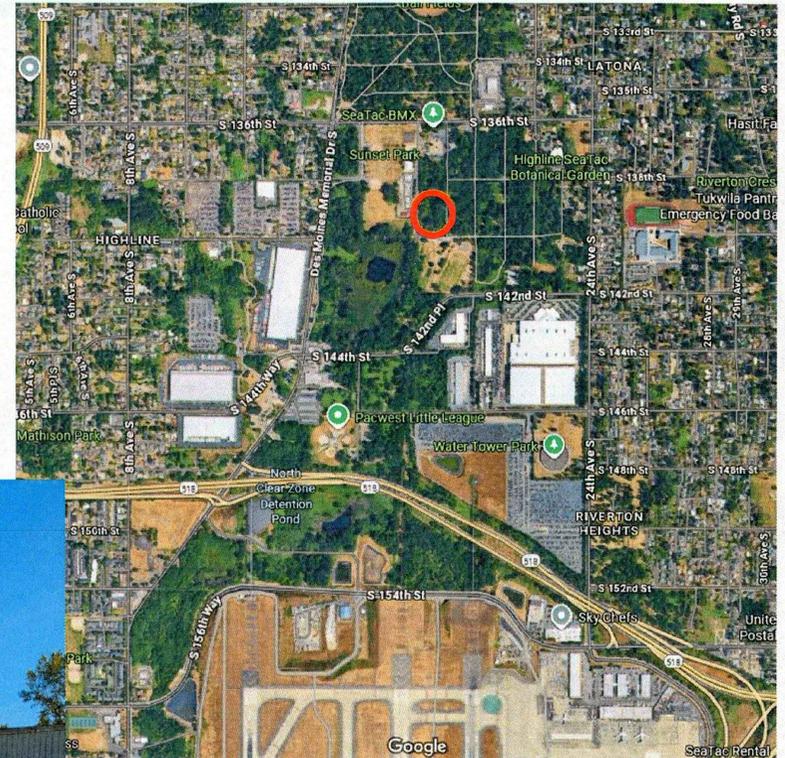


Puget Sound Clean Air Agency Monitoring Tour

Agenda

- 10:00-10:05 – Welcome and Introductions
- 10:05-10:15 – Overview of Pollutants Monitored and Air Quality
- 10:15-10:30 – Site Tour and Q&A
- We will also have staff available after 10:30 for those interested in further details and discussion.



Agency Monitoring Site Tour

September 2025

Vision and Mission

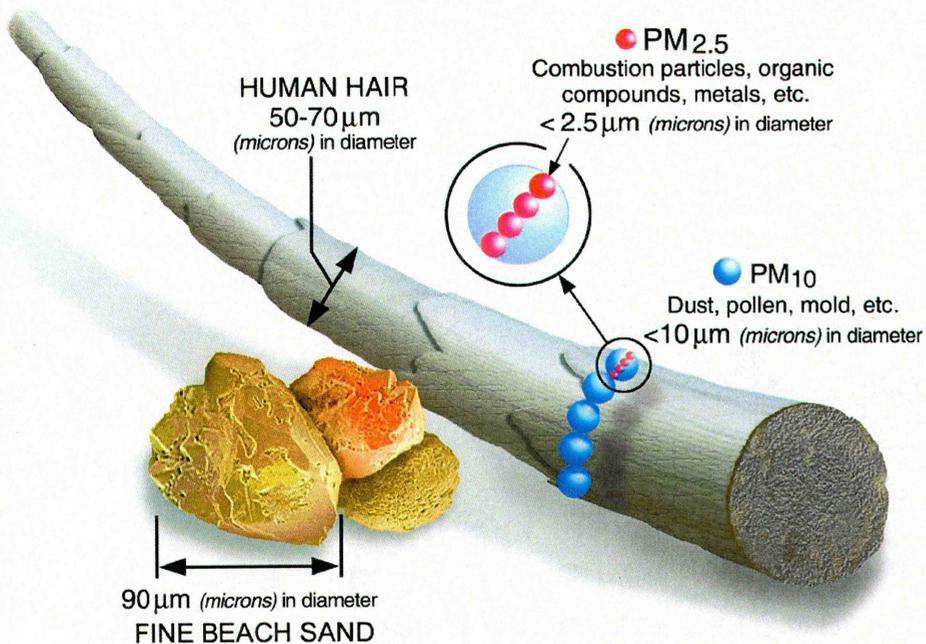
- **Vision:** Healthy air, climate, and environmental justice for the benefit of all people in the Puget Sound region
- **Mission:** We preserve, protect and enhance air quality and public health, enforce the Clean Air Act, support policies that reduce climate change, and partner with communities to do this work equitably

Programs focus on reducing greatest public health risks

- **Climate:**
 - Public draft Puget Sound Comprehensive Climate Action Plan (**CCAP**) coming this fall
 - Comprehensive actions to reduce greenhouse gas emissions to meet science-based targets
- **Wood Stove Replacement Program** restarting this month
 - Incentives to remove older, dirtier wood stoves and reduced harmful fine particle pollution (PM_{2.5})
- **Diesel Solutions:**
 - Incentives grants to reduce harmful diesel particulate matter (a subset of PM_{2.5})
- **Permitting and enforcement programs** to prevent/reduce risk from industrial sources
- **Wildfire smoke and wood smoke** forecasting and communication – for wildfires in summer and residential wood smoke in winter



Particle Pollution/Particulate Matter Drives Risk



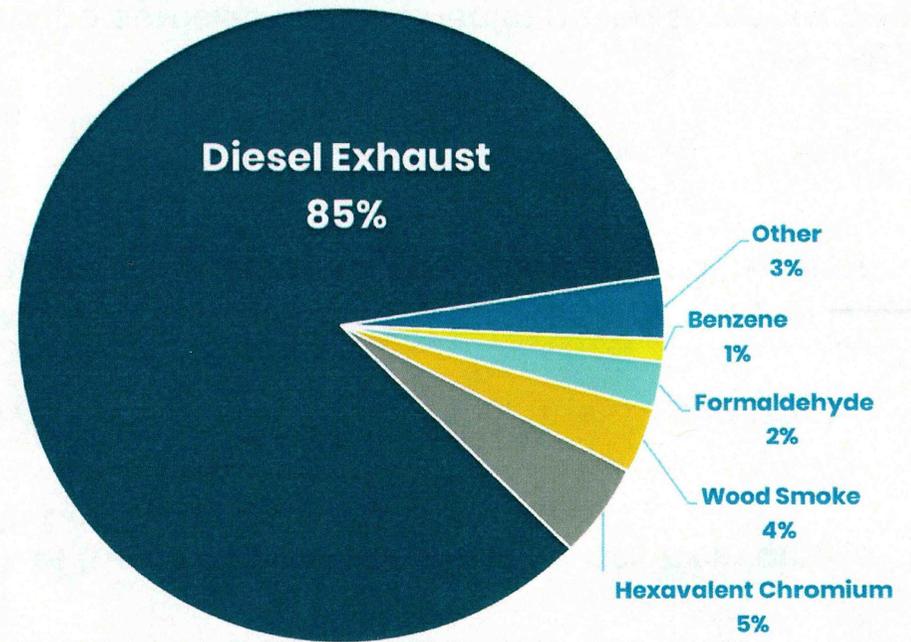
- Cardiac impacts (especially heart attacks), decreased lung function, premature death
- **90% of the cardiac and respiratory risk from air pollution in our region is from PM_{2.5}**
- Mostly comes from combustion, (fuels, wood, etc.)
- We currently meet health-based standards for PM_{2.5} and continue to focus efforts here because health benefits by reducing even further
- PM₁₀ is larger and less hazardous
- Ultrafine particles have no health based standard and are still being researched

Sources of Potential Cancer Risk

Not all particles are the same.

Particles from **diesel exhaust** are more toxic, and are the main source of potential cancer risk from air pollution across our jurisdiction

Sources of Potential Cancer Risk from Air Pollution
in the Puget Sound Region



Ultrafine particles – health impacts unclear

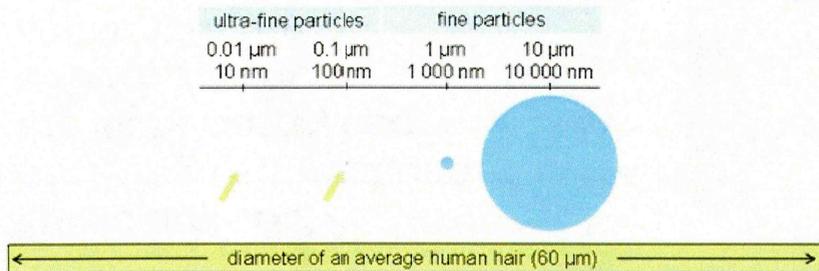


Table 3-1. Key causality determinations for PM_{2.5} and UFP exposures.

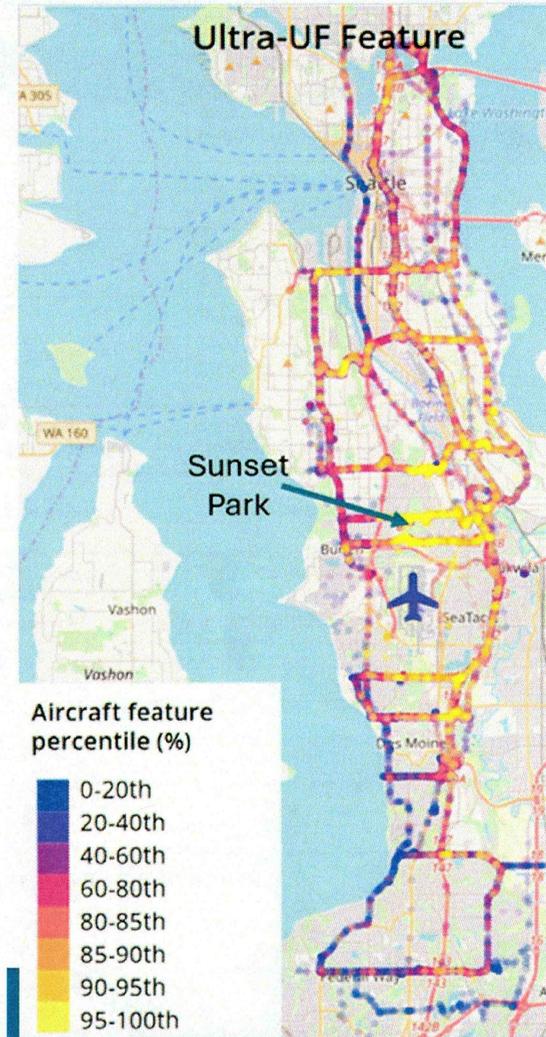
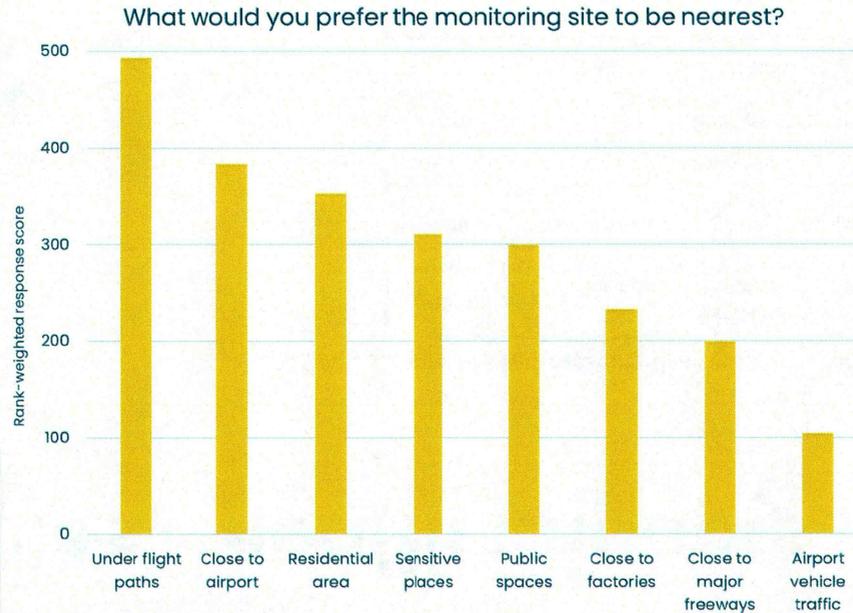
Health Outcome	Size Fraction	Exposure Duration	2009 ISA	2019 ISA
Mortality	PM _{2.5}	Long-term	<u>Causal</u>	<u>Causal</u>
		Short-term		
Cardiovascular effects	PM _{2.5}	Long-term	<u>Causal</u>	<u>Causal</u>
		Short-term		
	UFP	Short-term	Suggestive of, but not sufficient to infer	Suggestive of, but not sufficient to infer
Respiratory effects	PM _{2.5}	Long-term	Likely to be causal	Likely to be causal
		Short-term		
UFP	Short-term	Suggestive of, but not sufficient to infer	Suggestive of, but not sufficient to infer	
Cancer	PM _{2.5}	Long-term	Suggestive of, but not sufficient to infer	Likely to be causal
Nervous System effects	PM _{2.5}	Long-term	---	Likely to be causal
		Short-term	Inadequate	Suggestive of, but not sufficient to infer
	UFP	Long-term	---	Suggestive of, but not sufficient to infer
		Short-term	Inadequate	Suggestive of, but not sufficient to infer

About the site

We received EPA funding to set up a new air monitoring station near the airport and monitor PM_{2.5} and black carbon. State proviso funding supported the purchase of two ultrafine particle monitors.

Community Engagement

Public outreach confirmed interest under the flight paths, near the airport, and near residential areas.



Agency Monitoring Site Tour

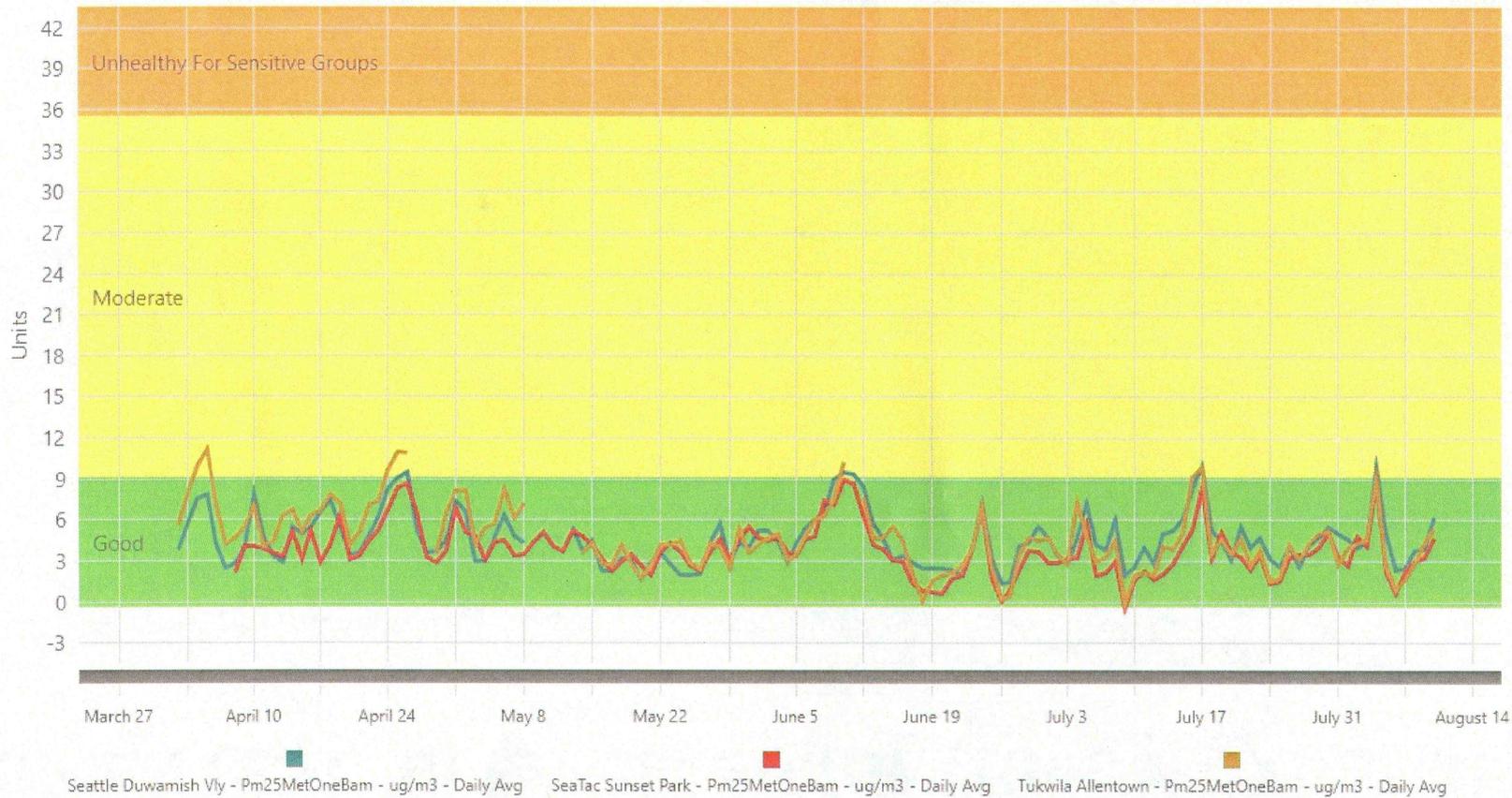
September 2025

UW MOV-UP Study

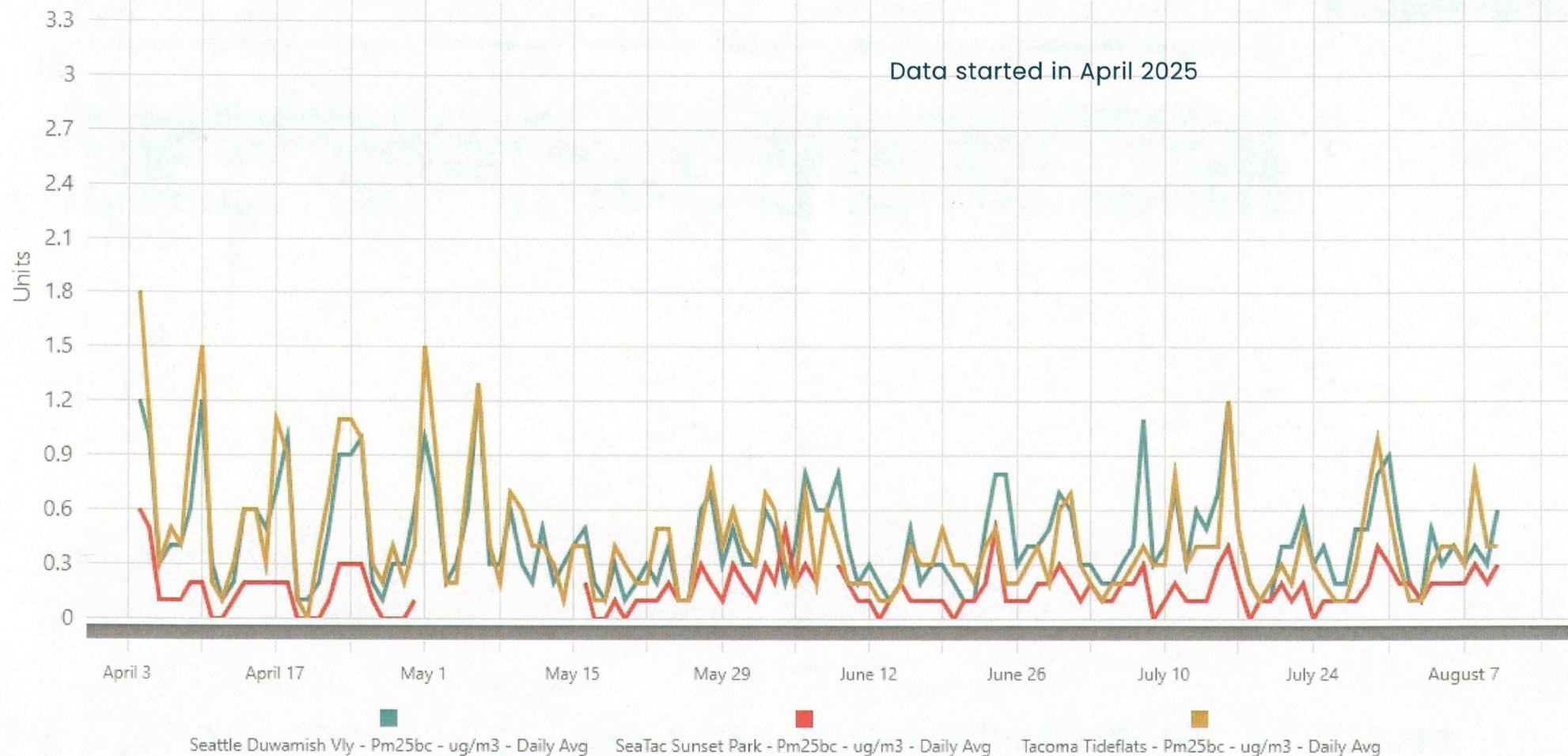
<https://deohs.washington.edu/mov-up>

PM_{2.5} levels so far – Sunset Park similar to nearby monitors

Data started in April 2025



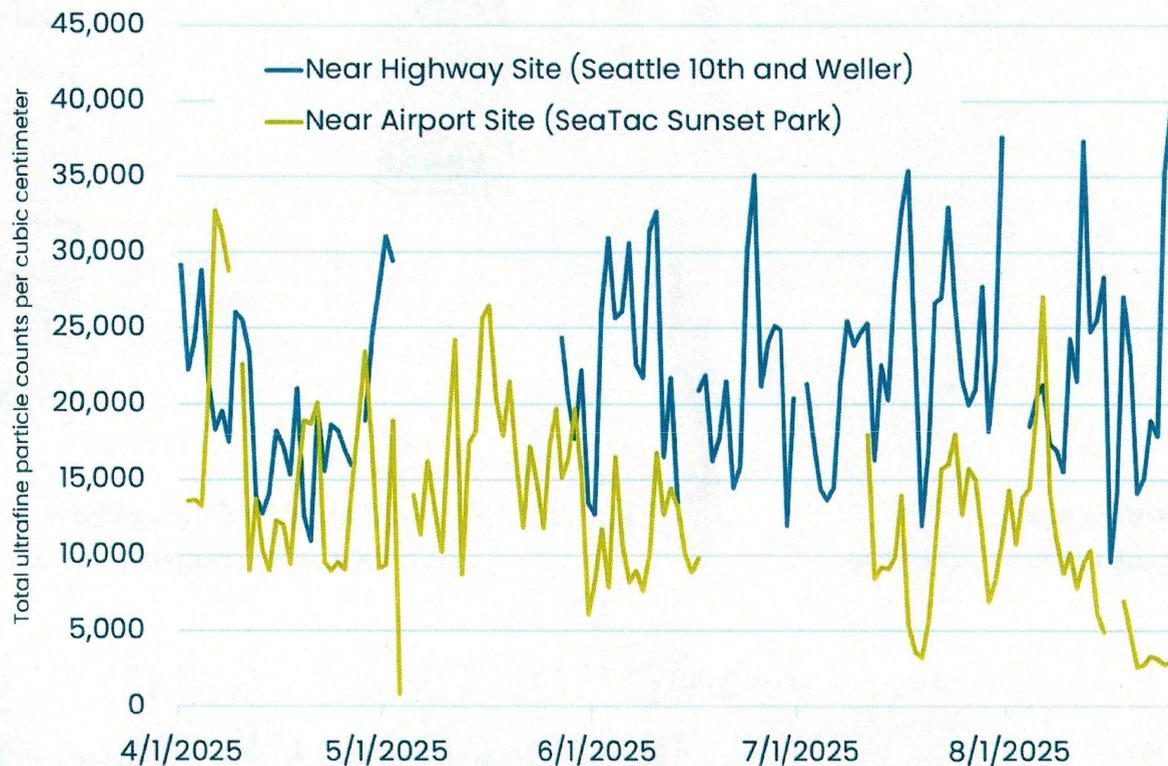
Black carbon levels so far (diesel exhaust)



Total ultrafine particle (UFP) levels so far Airport site lower than roadway site

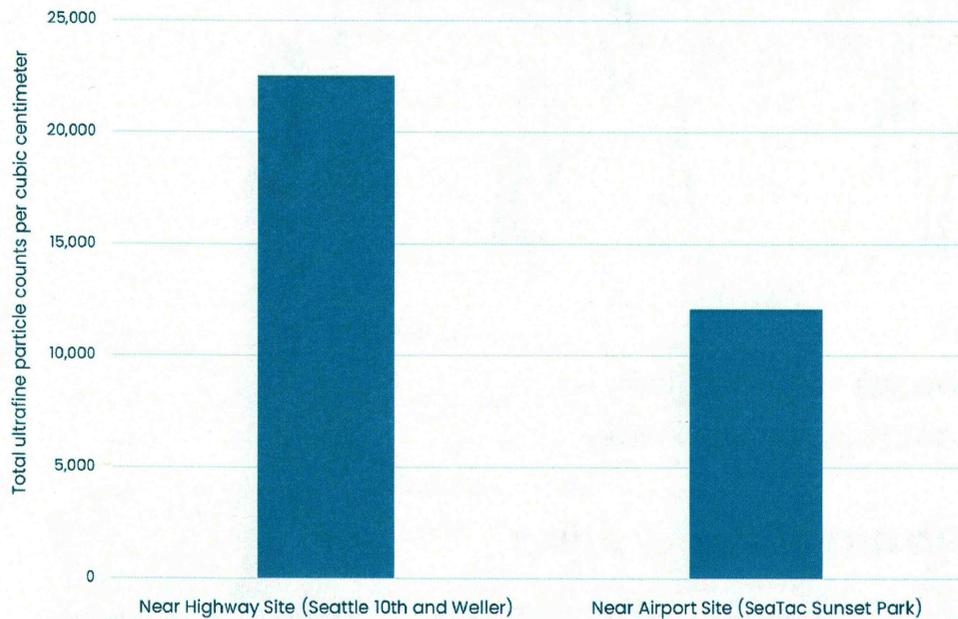
Data started in April 2025

Daily Average Ultrafine Particle Counts

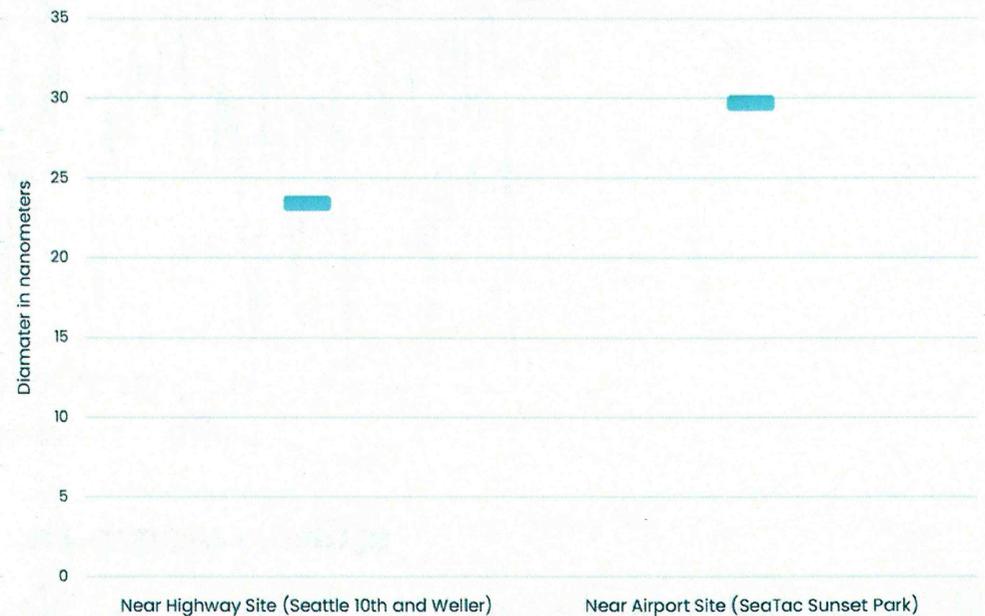


Overall UFP summary so far: Airport site lower than roadway site

Average Ultrafine Particle Counts
April - August 2025



Geometric Mean Ultrafine Particle Diameter
April - August 2025



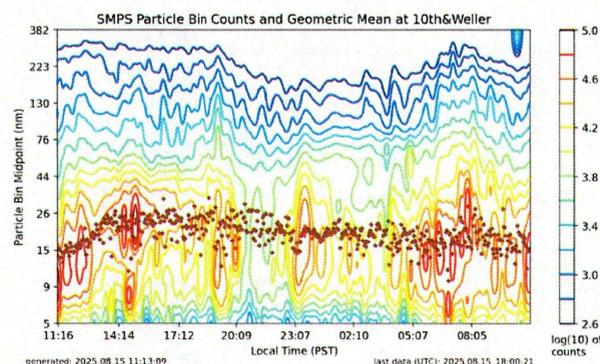
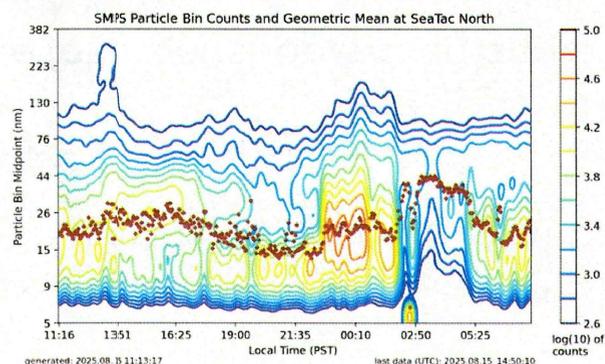
Senator Orwall's requested an update on the information being collected, how to access that information, and if it goes into statewide reports in the Department of Ecology

- Live data:

Agency Sensor Map – current PM_{2.5} information, along with AQI health thresholds <https://map.pscleanair.gov>

Our Air Graphing Tool – a technical tool to see and download raw current and past air pollutant data <https://secure.pscleanair.org/airgraphing>

Current Ultrafine Particle Data: <http://pscaa-ultrafinepmcurtains-public.s3-website-us-west-2.amazonaws.com/>



We can currently share raw UFP data with partners upon request. We are also planning to populate EPA's Air Quality System with this data for public download.

No current plans to incorporate this data in any Ecology reports at this time, however PSCAA will include the data in the next annual data summary

Sensor Lending Program

- Loan out sensors to community groups and individuals
- Three types of fine particle pollution (PM2.5) sensors: PurpleAir, Dylos, Airbeam
- Criteria and Application Form
- Guidance for monitor operation and how to interpret data



Air Sensor Lending Program Application

Sign In to Save Progress

Name*

Organization/Group (Optional)

Email Address*

Phone Number

City

Neighborhood/Community

What is your plan for using the air sensors; be specific (2-3 sentences).*

For example, I want to use a purple air sensor over the winter to see how wood smoke effects my neighborhood compared to other areas. I will look at the difference between my sensor and nearby sensors at night when smoke levels are highest. Or, I want to borrow a Dylos to use as a teaching tool to help kids learn about air quality. We will walk around our neighborhood with the sensor and explore how air quality changes nearby roads.

Note: Monitors in the lending program cannot be used to extrapolate health risks or for regulatory compliance.

How do you plan to use the results?

Have you already been in contact with someone at the agency? If so, who?

Select one or more of the following:

<https://www.pscleanair.gov/FormCenter/About-Us-4/Air-Sensor-Lending-Program-Application-64>

Agency Monitoring Site Tour

September 2025

Summary and Questions

- The Agency focuses actions to improve air quality on PM_{2.5} pollution, and specifically diesel PM_{2.5} because of their established health impacts.
- Improvement in PM_{2.5} levels leads to improved health outcomes.
- Actions to reduce PM_{2.5} and diesel PM_{2.5} also reduce ultrafine pollution, which is a subset
- We continue to track the latest science and continue actions that reduce most harmful emissions

Thank you for your attention – now let's look at the monitoring equipment!

Extra slides

Agency Monitoring Site Tour

September 2025



Particle Diameter Geometric Means (nm)

April - August 2025

