


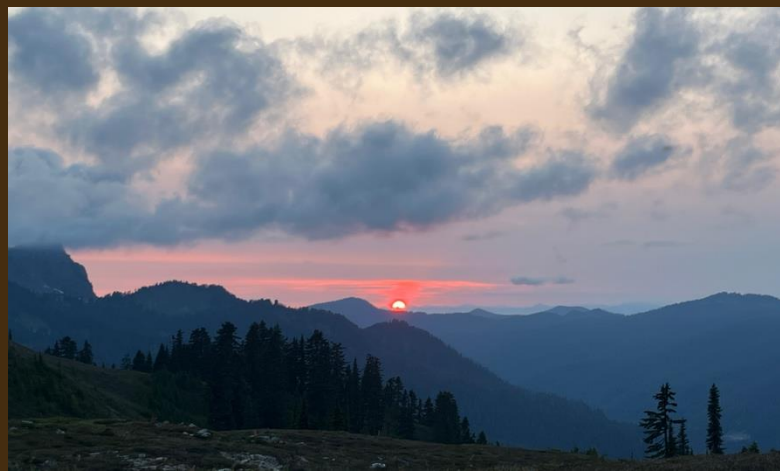
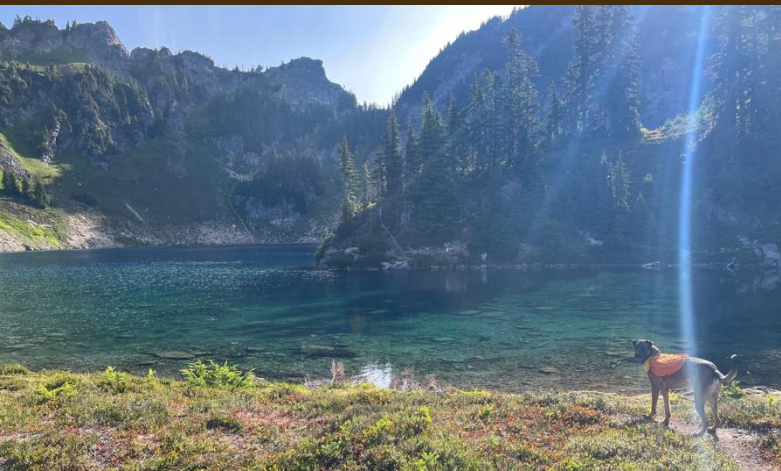


Air quality & farmworker health in Yakima County

Ethan Hume

University of Washington School of Public Health





About me

- Second year master's student studying health policy
- Seattle, WA is home
- Spent four years in New Orleans where I grew passionate about climate
- Enjoy backpacking, skiing, biking, and more

Agenda

1. Background

The Climate Commitment Act, wildfire intensity, health impacts, and existing protections.

2. Methods

Overview of stakeholder engagement & literature review.

3. Proposed policy options

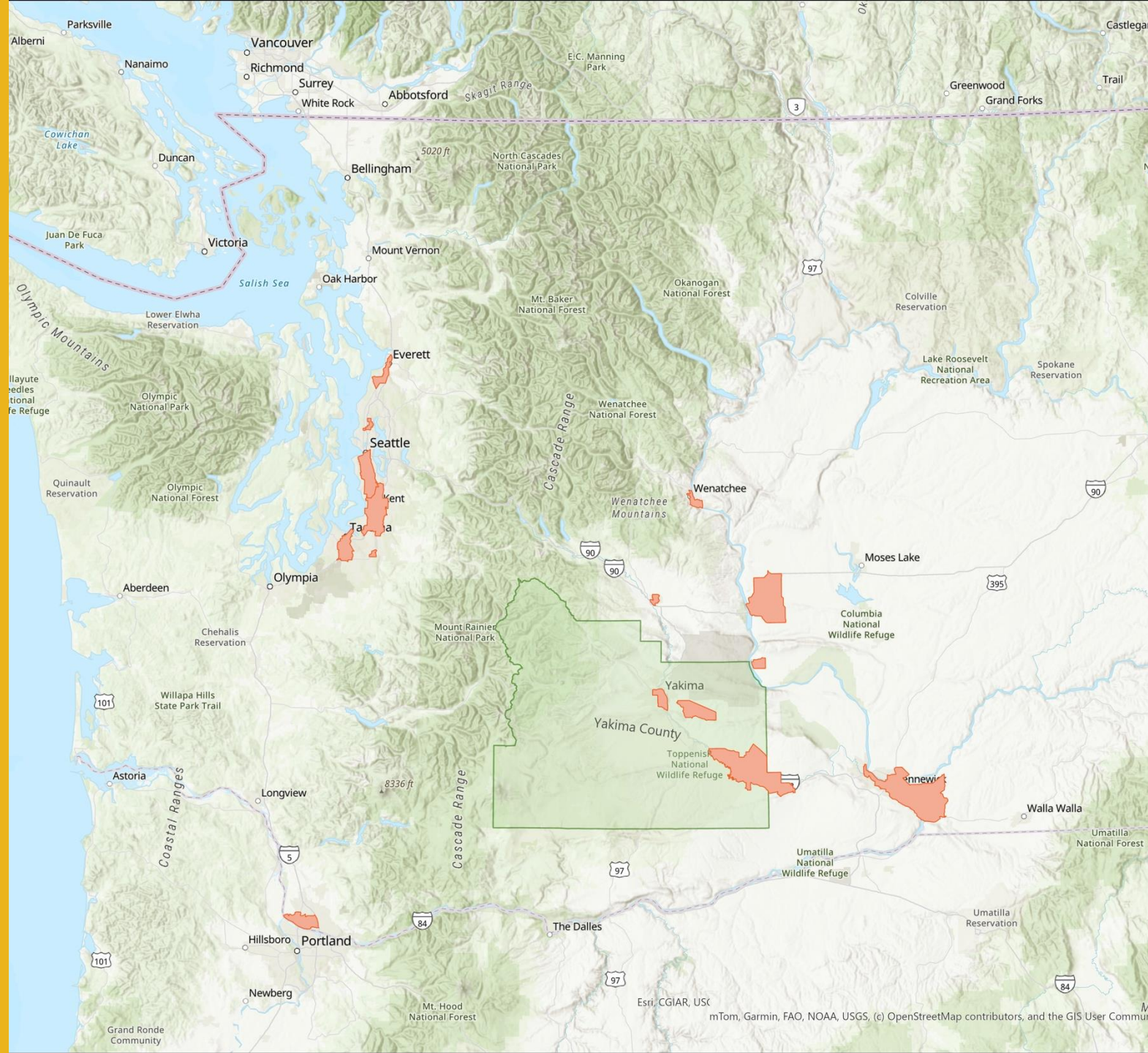
Stronger protections, enforcement, and support for outdoor workers.

Background

Background

Climate Commitment Act (CCA, 2021) and Healthy Environment for All (HEAL, 2021) require the State to:

- Identify and address environmental health disparities in overburdened communities (OBCs).
- Invest in EJ projects, especially within these OBCs.
- 4 of the 16 OBCs are in or adjacent to Yakima Co., and 7 are in south-central WA.



Background

Economy:

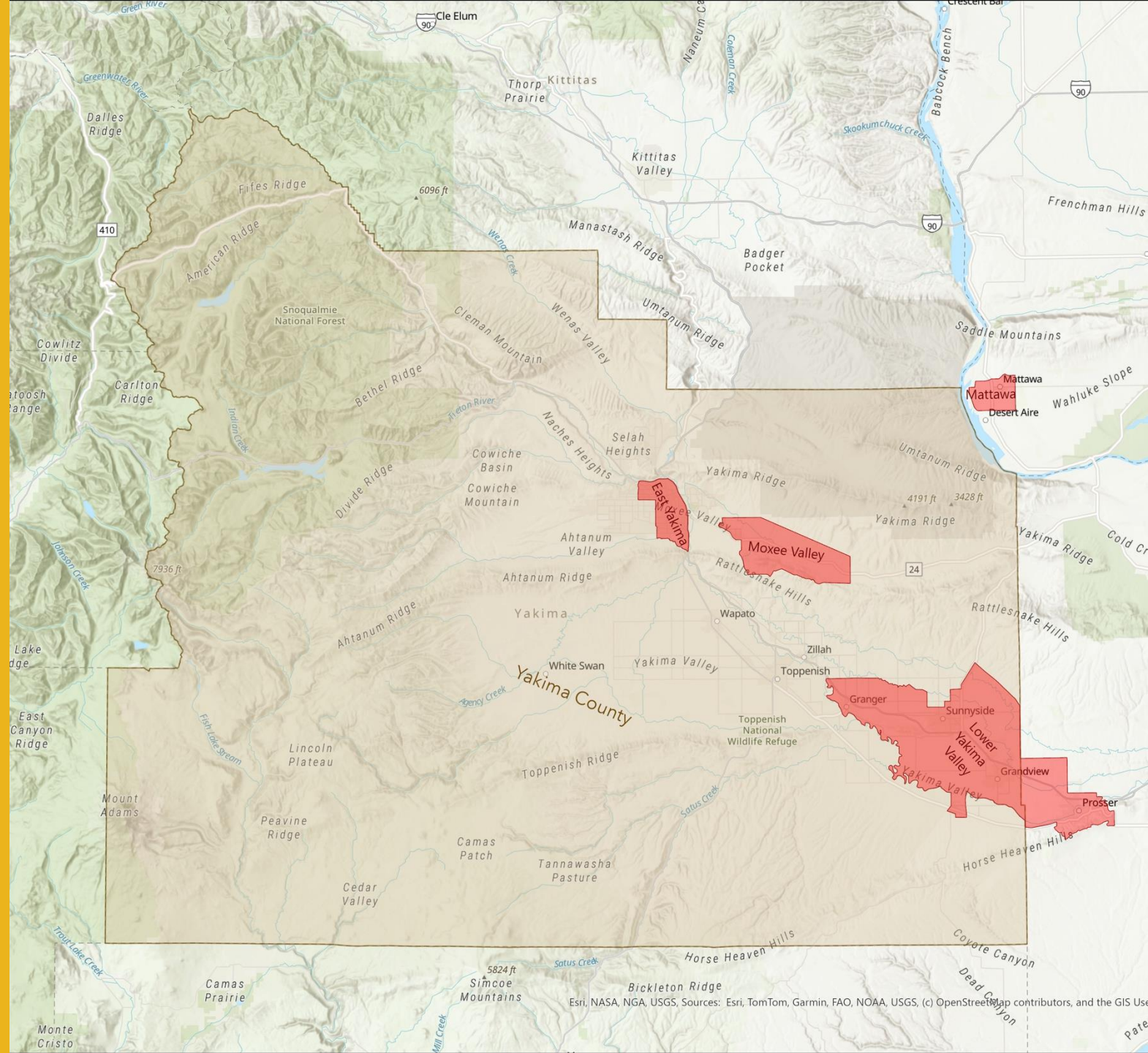
- Primarily agricultural.

Demographics:

- Population of ~250,000.
- 50.7% Hispanic or Latino.
- Generally working class with seasonal employment patterns.

Geography:

- Situated between Cascades and Columbia.
- River valleys create inversion issues.

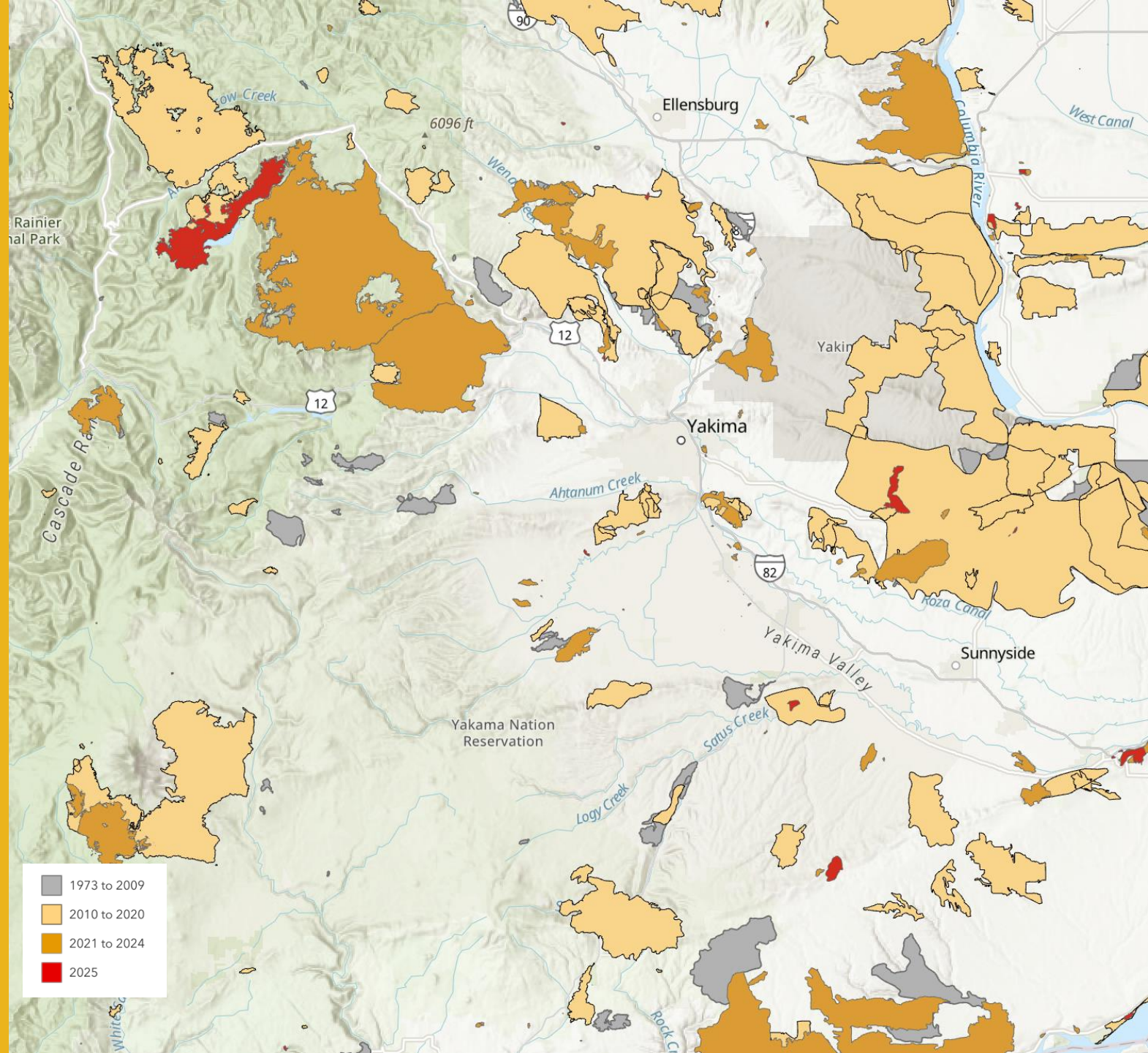


Background

Fires are increasingly frequent across WA and the Western US.

Yakima County is no exception. In the past fifteen years (orange), fires have grown larger and more destructive than historical wildfires (gray).

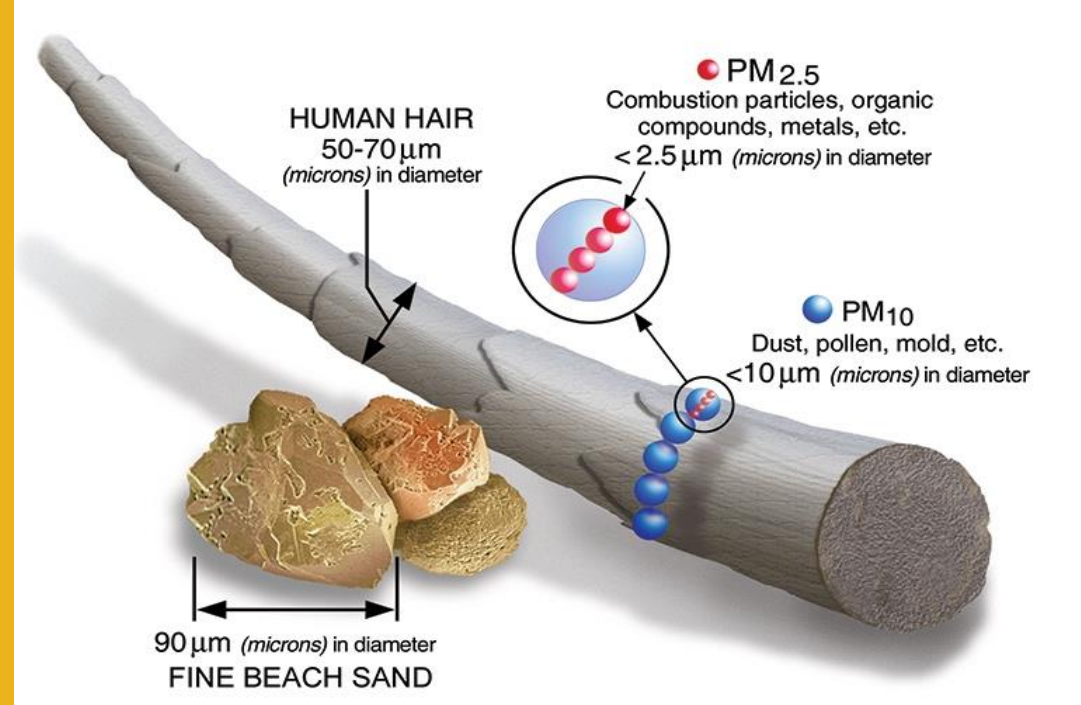
Wildfire smoke (WFS) is the largest component of air pollution in the region.



Background

The primary toxin in WFS is fine particulate matter (PM_{2.5})

- PM_{2.5} travels deep into the lungs and impacts breathing. May also cross into the blood stream and cause oxidative damage.
- PM_{2.5} derived from WFS is much more damaging than other sources.
- Linked to lung disease, growth stunting, cardiorespiratory deaths, and acute care visits.
- Missed school and work impacts socioeconomic outcomes.



Certified Burner Program
HB 2733

Established a prescribed burn certification program at DNR.

2018

2021

Healthy Environment for All Act

Directs state departments to identify and address environmental health disparities in overburdened communities (OBCs)

Climate Commitment Act

Aims to reduce emissions in WA and invest in environmental justice, especially in OBCs.

2021

2022

WA Smoke Management Plan

Regulates silvicultural burning under DNR's jurisdiction to protect public health and infrastructure

L&I Smoke Rule
WAC 296-307-098

Makes the wildfire smoke rule, which reduces exposure for outdoor workers, permanent.

2025

2025

Prescribed Fire Claims Fund
HB 1563

Established a claims fund pilo program to encourage prescribed burning by defraying risk.

Notification Rule
HB 1861

Proposed legislation which would require notification of smoke impacts from prescribed burns.

2026

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2021

2022

2025

2018

2021

2025

2026

Healthy Environment for All Act

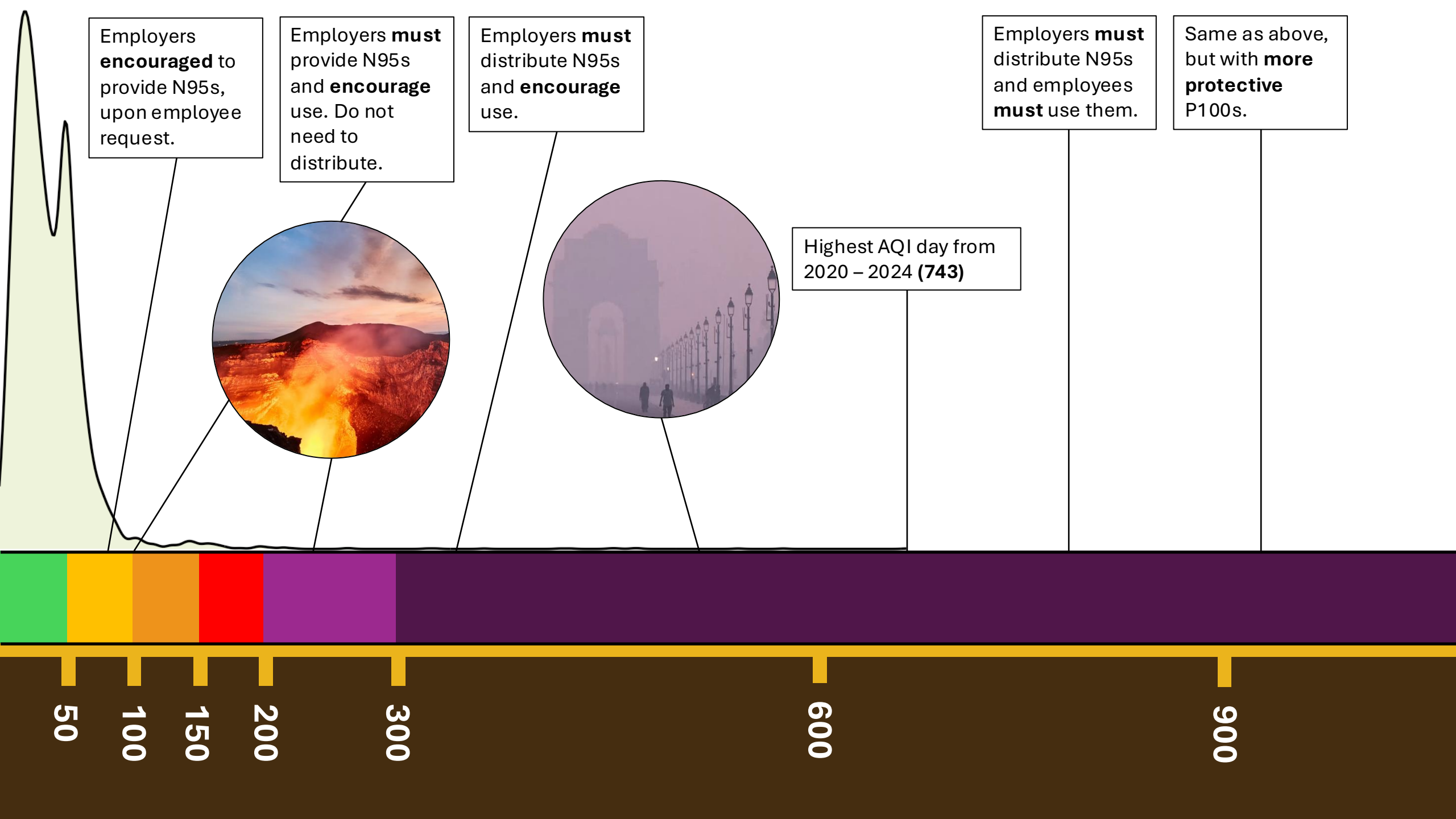
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Employers **encouraged** to provide N95s, upon employee request.

Employers **must** provide N95s and **encourage** use. Do not need to distribute.

Employers **must** distribute N95s and **encourage** use.

Employers **must** distribute N95s and employees **must** use them.

Same as above, but with **more protective** P100s.

Highest AQI day from 2020 - 2024 (**743**)



50 100 150 200 300 600 900

Methods

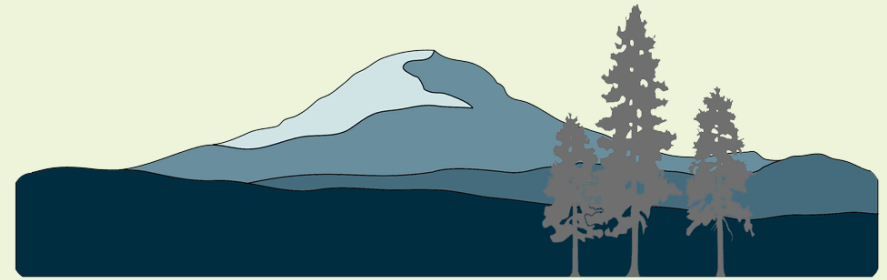
Methods

Policy options were considered in the context of learnings from stakeholder organizations.

These groups have extensive experience working on EJ issues in Yakima County, or on forest management goals in Washington State.

Particular thanks to:

- **Maricela Santana-Walle**, Empowering Latina Leadership & Action
- **Jean Mendoza**, Friends of Toppenish Creek
- **Lucas King**, Mt. Adams Resource Stewards



Mt. Adams Resource Stewards



Methods

Lit review included:

- Relevant policies in Washington, Oregon, California, and Florida
- Scientific and epidemiological literature
- Grey literature and selected news pieces

Data analysis:

- Some light data analysis was performed using EPA monitoring data
- Leveraged previous qualitative data collection (surveying) by ELLA

Proposed policy options

Lower AQI Thresholds

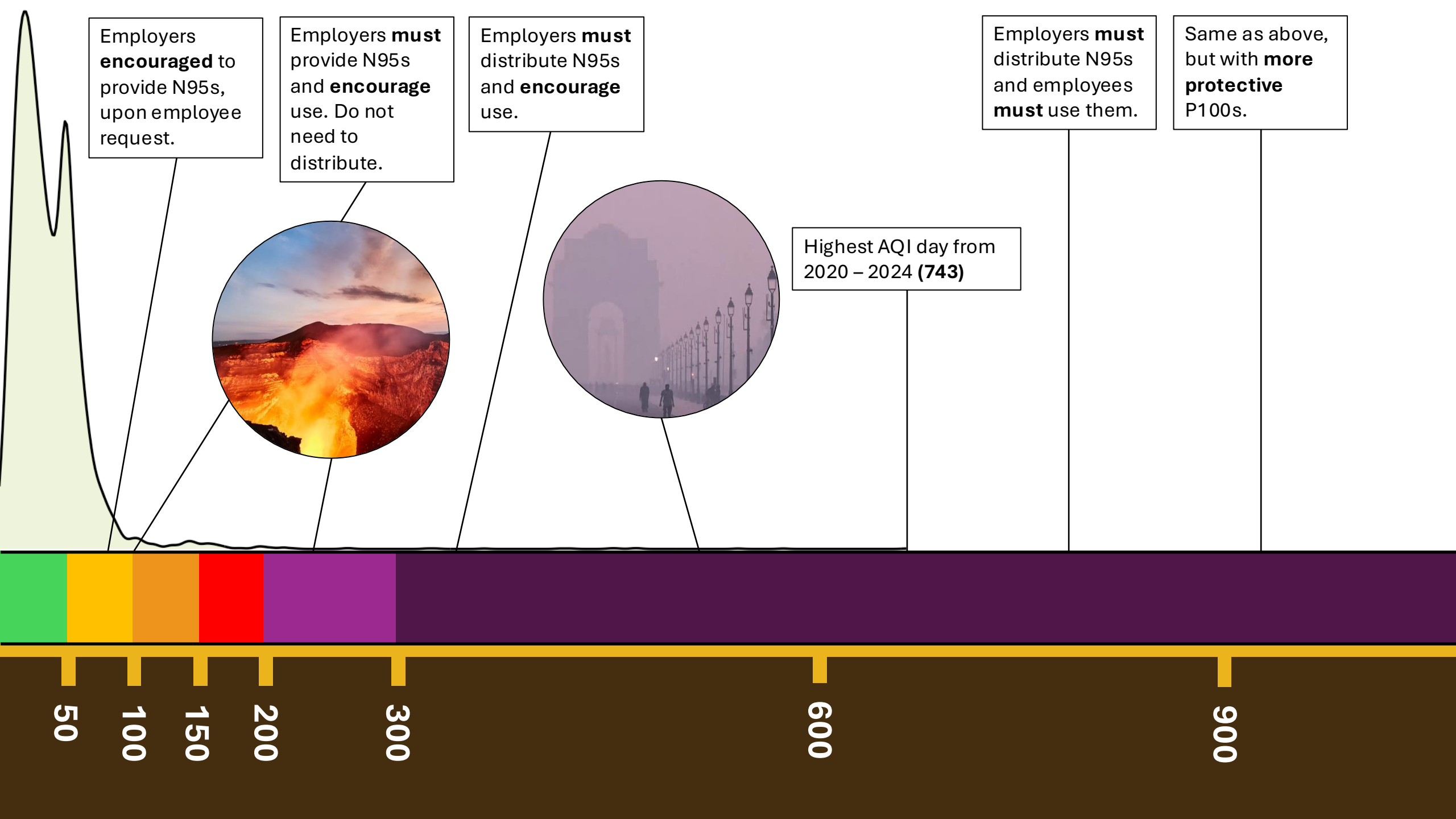
Policy Option 1 proposes lowering the AQI thresholds for employer response categories in the L&I smoke rule.

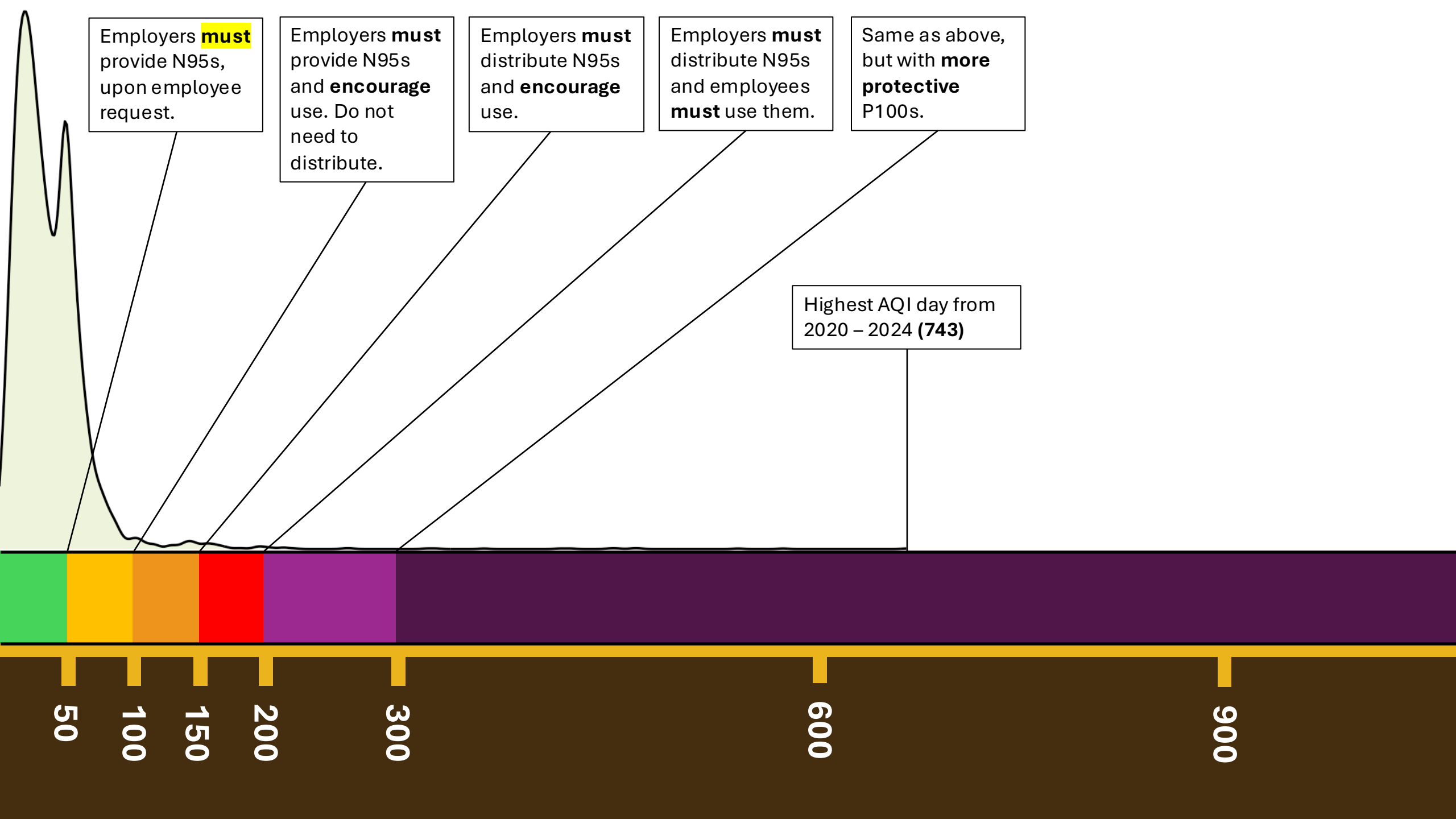
This aligns the smoke rule with scientific guidelines and existing knowledge of the role of smoke on health.

The new mandatory masking threshold of **300** would align Washington State guidelines with the other West Coast states.



Washington State has the highest threshold for mandatory masking amongst its West Coast peer states.





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50

100

150

200

300

600

900

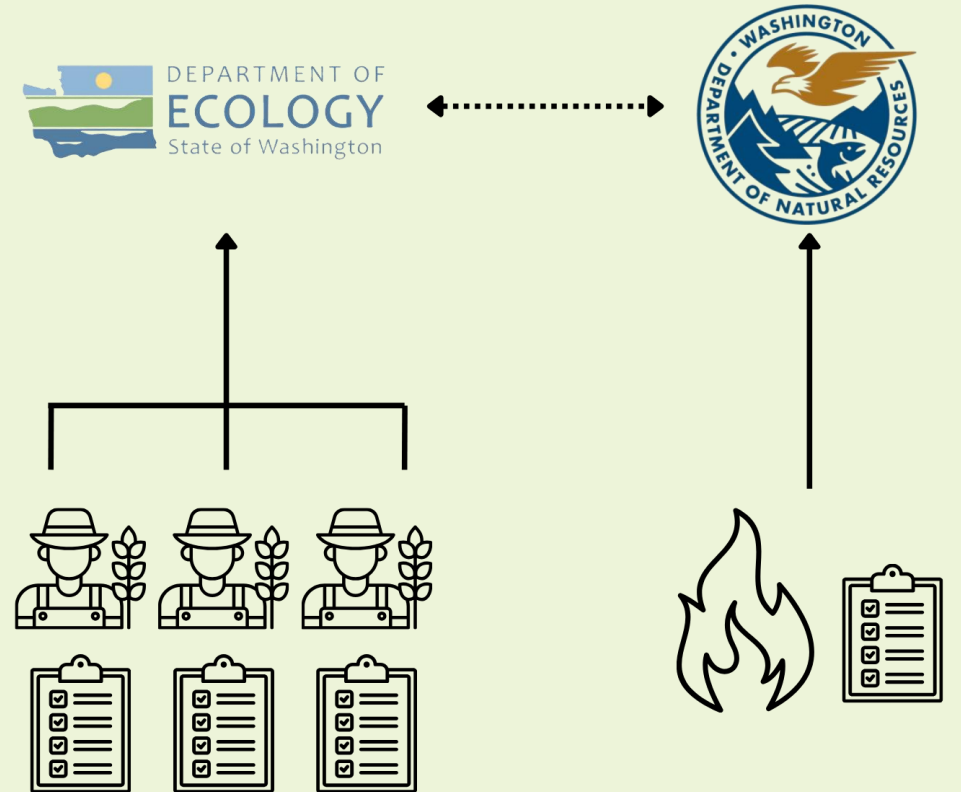
File response plans

Policy Option 2 would require that employers file their required smoke response plans with Labor & Industries.

Wildfire smoke is a toxic irritant. This policy aligns response plan filing with the method used by the EPA for Risk Management Plans similarly hazardous industrial materials.

Washington DNR already requires that silvicultural burn plans are filed with the agency. These and agricultural burns are major drivers of PM pollution in Yakima.

Alignment facilitates greater communication + prep.



Increase enforcement

Policy Option 3 would increase the number of spot inspections L&I performs at work sites.

Current enforcement is complaint-based. Spanish-speaking migrant laborers are unlikely to report workplace violations for many reasons.

This option is perhaps the most expensive presented. Would require several FTEs to be added. Mendeloff et al., 2011 found only 5% of sites need to be inspected annually.

44% of farmworkers who could not speak English reported they were “never offered a mask during intervals with smoke”.

- Washington State Institute for Public Policy, 2023

Once an establishment has been cited for a violation, the likelihood of finding another violation at that establishment declines substantially.

- Mendeloff et al., 2011



Establish *promotores*

Policy Option 4 would establish a state *promotores de salud* program focused on educating about WFS and workplace rights.

Promotores models are already popular throughout Washington and the West Coast as peer-driven, culturally relevant supportive models.

State involvement addresses the inherent instability of episodic, grant based funding for these programs.

“Justicia es cuando estás luchando porque algo se haga de una manera diferente”

Justice is when you're fighting for something to be done in a different way

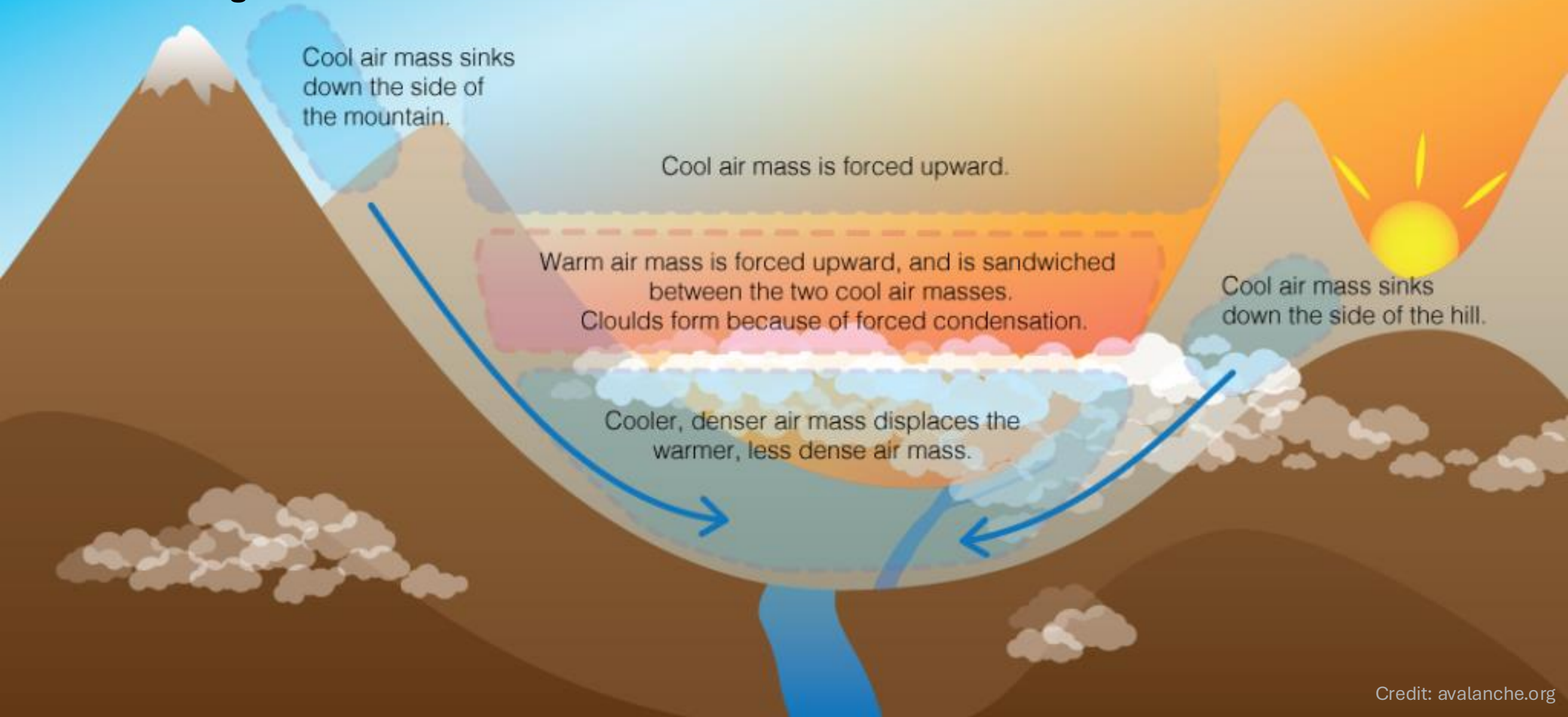


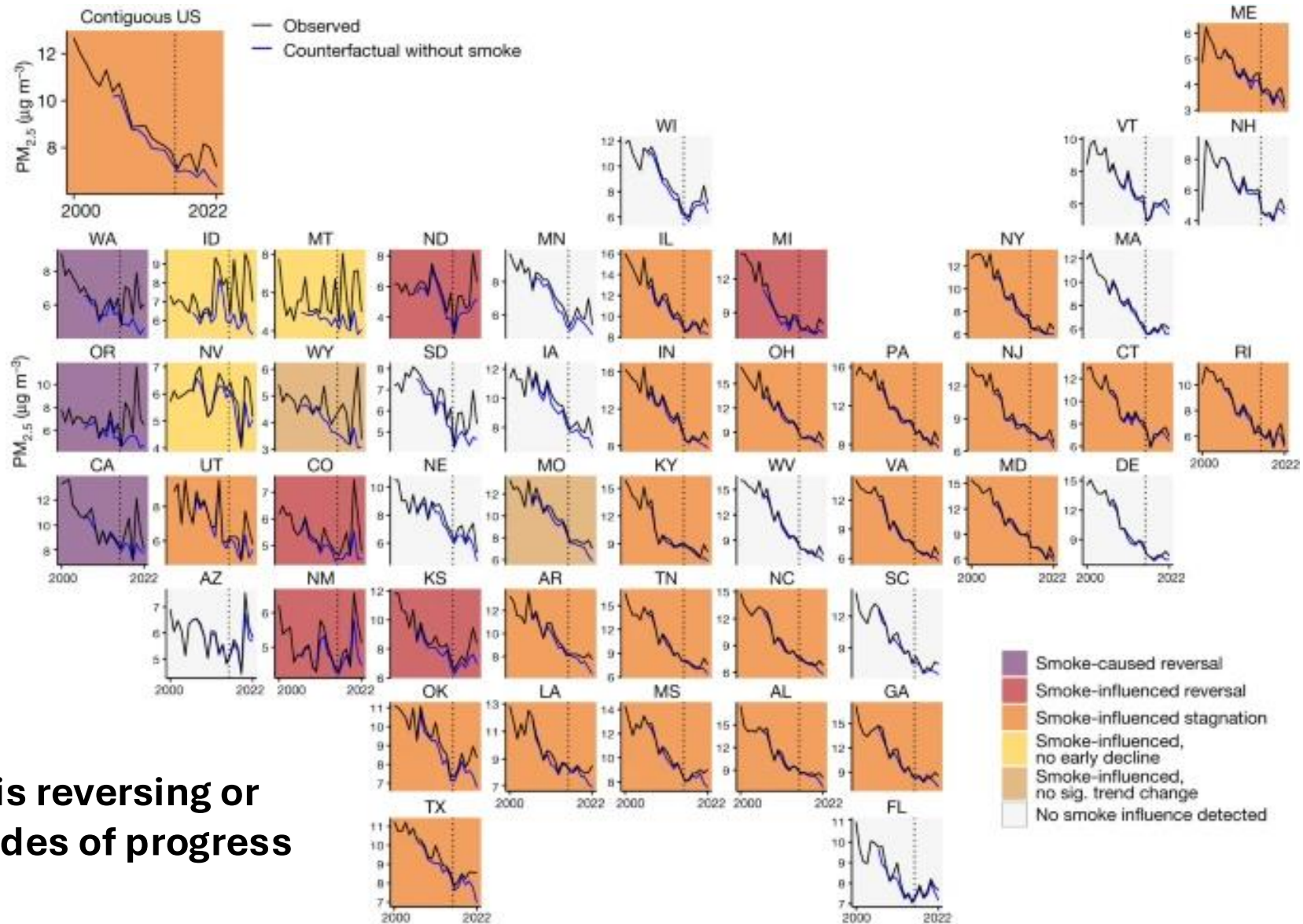
Thank you!

Questions?

Additional slides

Temperature inversion in valleys can trap smoke and other particulate pollution – and is likely becoming more frequent with climate change.





Wildfire smoke is reversing or stagnating decades of progress on PM_{2.5} goals.