

# Building Resilience Against Smoke and Heat (BRASH)

Sue Sullivan, Andrea Petzel, Valerie Pacino, Rachel Gregg, Lamai Cox

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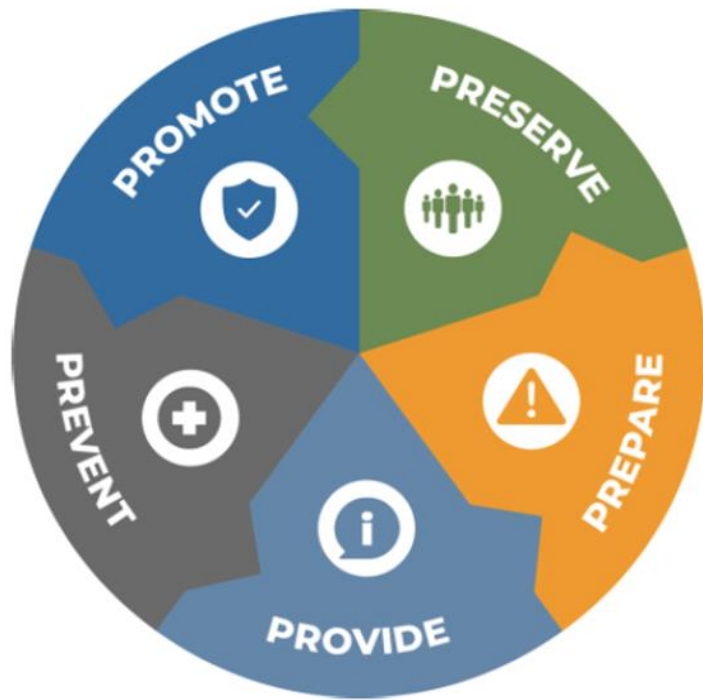
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# WCHCS Purpose



We serve Whatcom County by advancing equity and partnering with our community to:



- **Promote** health through policy and systems improvement
- **Prevent** disease and injury
- **Provide** accurate and reliable health, communication, information and data
- **Prepare** for and respond to emergencies
- **Preserve** a healthy environment where everyone can thrive

# Social Determinants of Health



## Social Determinants of Health



Social Determinants of Health can have a **significant impact on health equity**, creating avoidable differences in health status between and within community groups.

An aerial photograph of a city, likely Whatcom County, showing a river, a large stadium, and various buildings. The image is overlaid with a dark grey rectangular box containing white text. The text is centered and reads: "Climate Vulnerability Assessment" in a large, bold, sans-serif font, followed by "Identifying public health impacts of extreme heat and wildfire smoke on residents of Whatcom County" in a smaller, regular, sans-serif font.

# Climate Vulnerability Assessment

Identifying public health impacts of extreme heat and wildfire smoke on residents of Whatcom County



# **Community Engagement**

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# Engagement Goals

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- Engage frontline communities that face disproportionate health impacts from extreme heat and wildfire smoke and that are historically underrepresented in traditional planning processes.
- Build lasting relationships and partnerships that lead to place-based and sustainable adaptation strategies that also strengthen overall population health.
- Ensure engagement meaningfully informs final Climate Vulnerability Assessment.
- Operationalize equity in the County's climate planning work.

# Frontline Communities

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- Seniors and senior-serving organizations
- Youth and youth-serving organizations
- Black, Indigenous, and people of color (BIPOC)
- Immigrants and refugees
- Nooksack Indian tribe and Lummi Nation
- Outdoor workers and farmworkers
- People who are unhoused
- Geographically isolated communities
- People with health conditions that increase their vulnerability

# Engagement Process

## Phase I:

- 1:1 Interviews + focused conversations

## Phase II

### Tabling:

- Bellingham Food Bank (116)
- East Whatcom Regional Resource Center (44)
- Senior Centers

### Focused conversations:

- NW Youth Services Youth Advisory Board (~11)
- Ukrainian refugees (all women) (13)
- Base Camp (5)
- Bellingham Senior Center (4)
- Lynden Senior Center (7)





# What we asked...

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- How do smoke and how heat events impact you, your family, your friends?
- Where do you get the information you need in smoke/heat events?
- What do you need to feel safe during smoke/heat events?
- Who checks on you? Who do you check on?

# What we heard...

- Increased intensity and frequency of wildfire smoke and extreme heat events
  - "Every year, the summers are hotter and hotter and smokier and smokier."
  - "Last year's wildfires in Canada felt like the apocalypse."
- Varied risk perception among community members
  - "When it's smokey, I need more medication, which is really expensive."
  - "I'm a smoker so the wildfire smoke doesn't bother me."
- Importance of community resilience
  - Informal social networks and resource sharing
  - "My daughter lives on the east coast, but she monitors the weather out here and calls me a few times a day when it's really hot."
  - People are seeking more intergenerational spaces and programming to foster community connectedness and resilience



# What we heard...

- Disproportionate impact on frontline communities
  - Migrant farmworkers, other outdoor laborers, people experiencing homelessness and housing insecurity, individuals with chronic health conditions, older adults, children
- Adaptive behaviors and coping strategies
  - Seeking out water sources and shade, modifying their schedules, N95 masks, air conditioners and filters, sheltering in place
- Trusted sources of information
  - Heat and smoke alerts, news, libraries, resource centers (EWRRC, food banks), church, sensory cues
- Eagerness for specific and tangible resources
  - DIY air filters: "I didn't realize how terrible the air was until I saw how black the filter got."
  - Cool spots maps with bus passes/Discovery Passes
  - Water and electrolytes
  - Mistifiers and splash parks





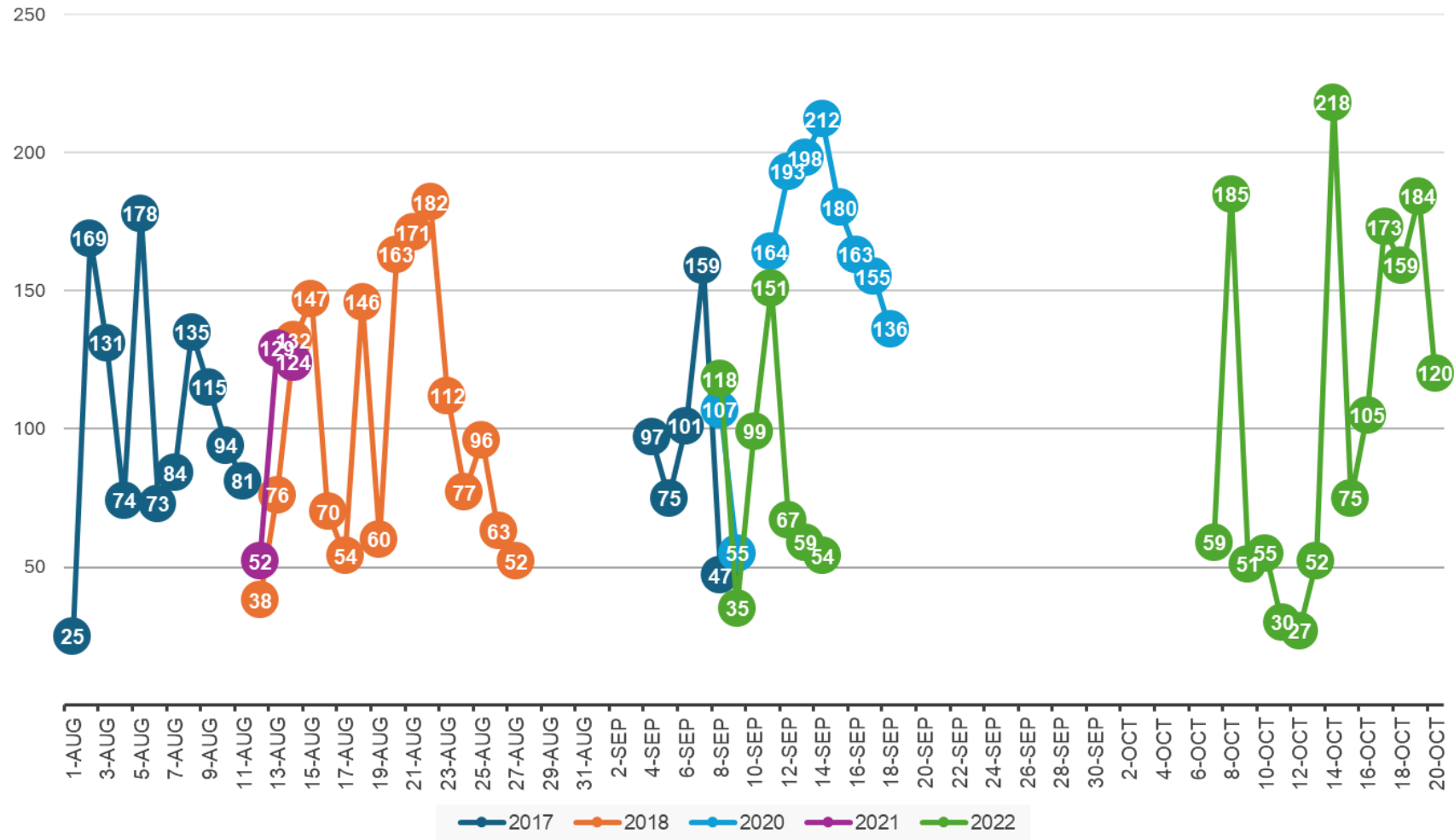
# **Vulnerability Assessment & Adaptation Strategies**

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# Longer and more frequent wildfire seasons driving unhealthy air quality.



Whatcom County PM2.5 Concentrations During Wildfire Season



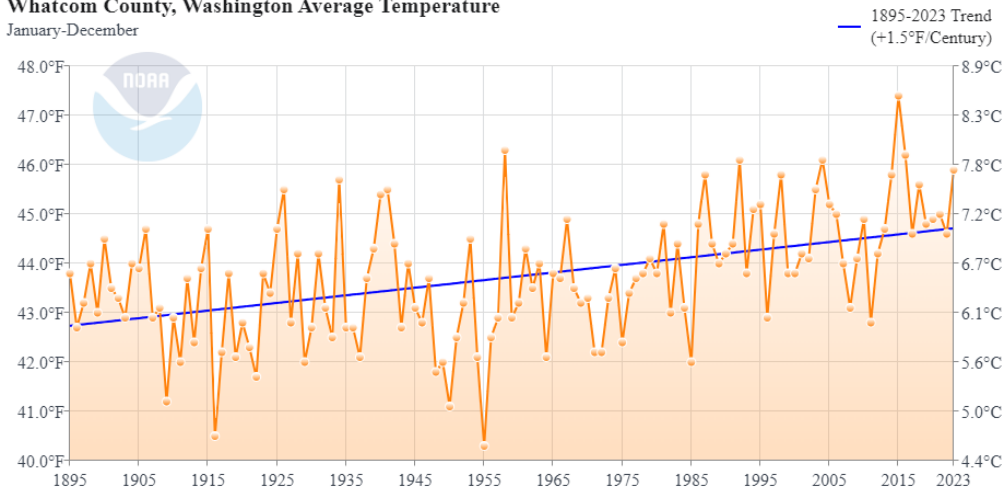


# Warmer temperatures and more frequent extreme heat events.

Relatively mild climate throughout the year – warm and dry in summer, cool and wet in winter

+1.5°F increase since 1895

Whatcom County, Washington Average Temperature  
January-December



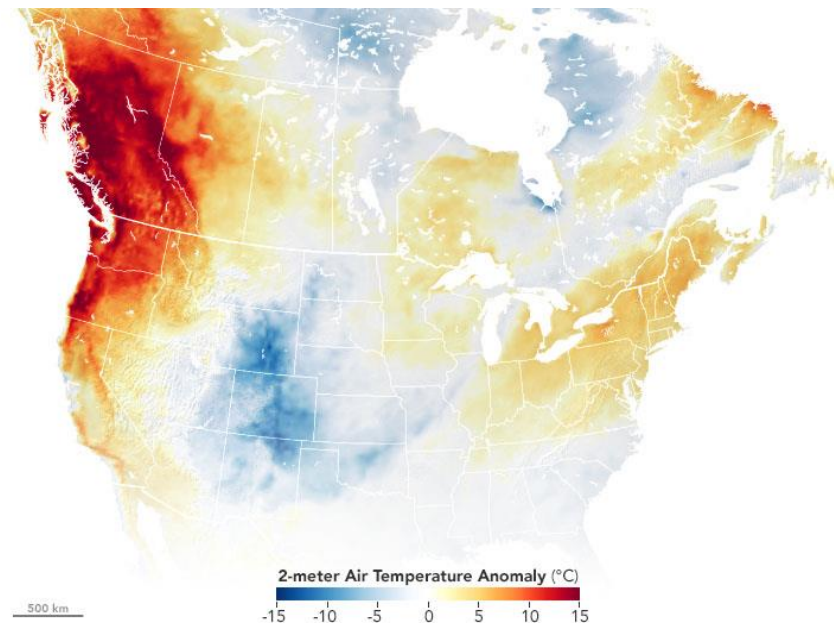
2021 Heat Dome (June 26 to July 2, 2021)

96°F in Blaine

98°F in Ferndale

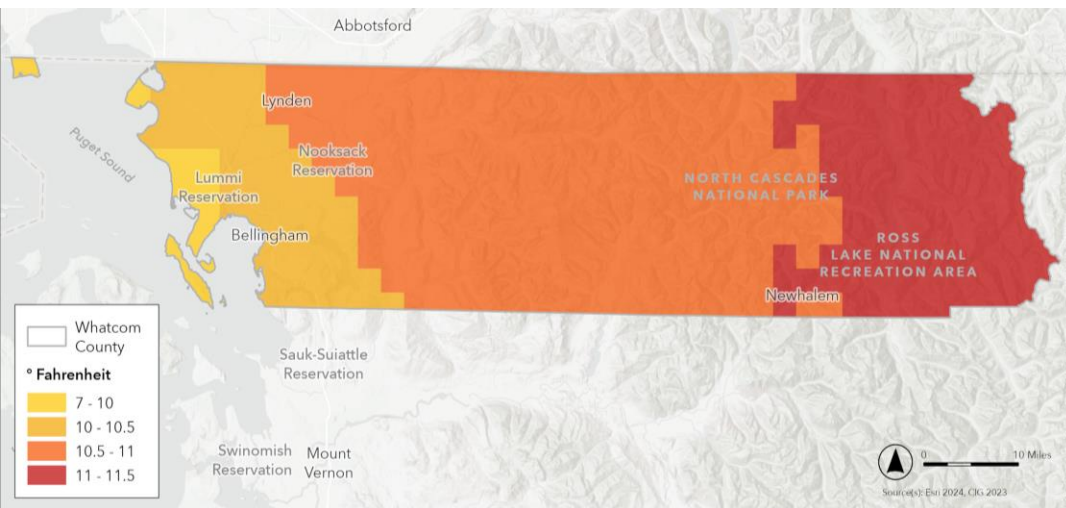
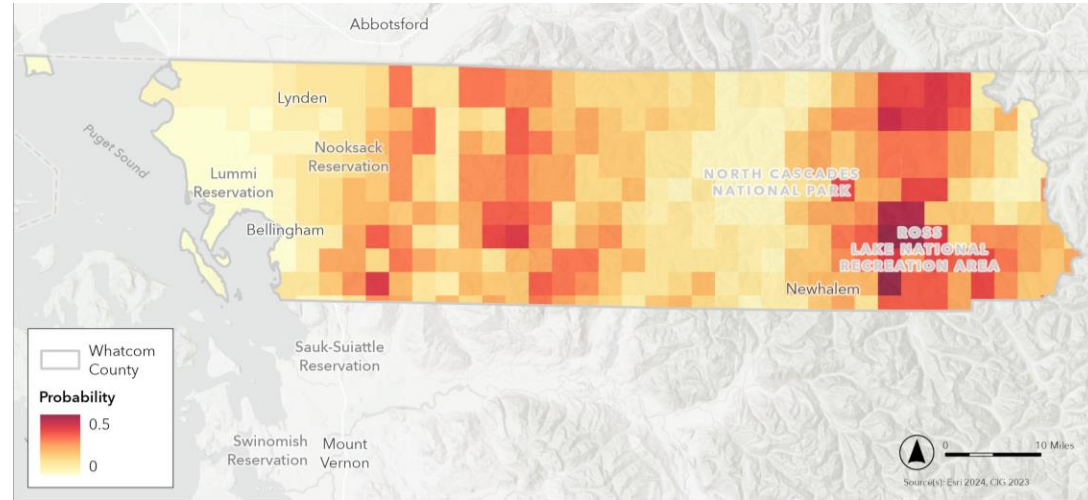
100°F in Bellingham

107°F in Sumas



# Whatcom County is very likely to experience...

**Increased probability of wildfire smoke events**



**Increased temperatures overall, higher temperatures during summer months, and more frequent extreme heat events**

# Wildfire smoke and extreme heat events are causing public health challenges.

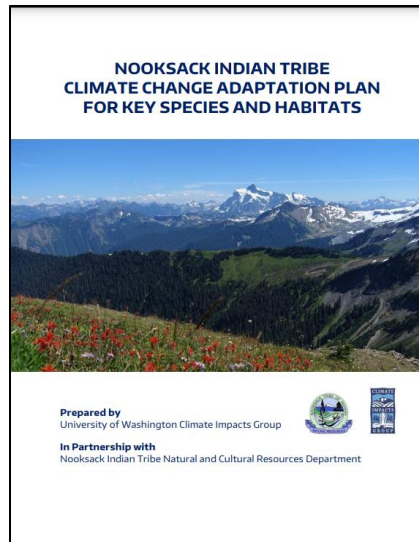
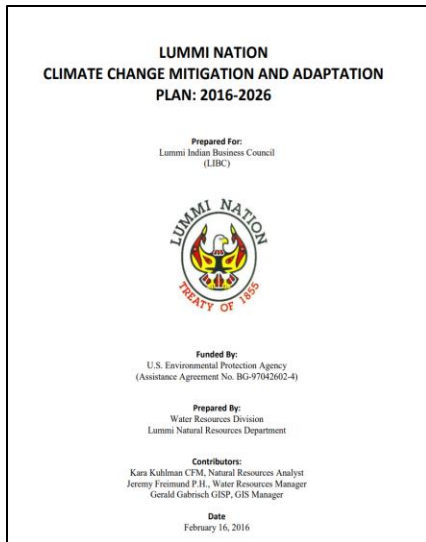
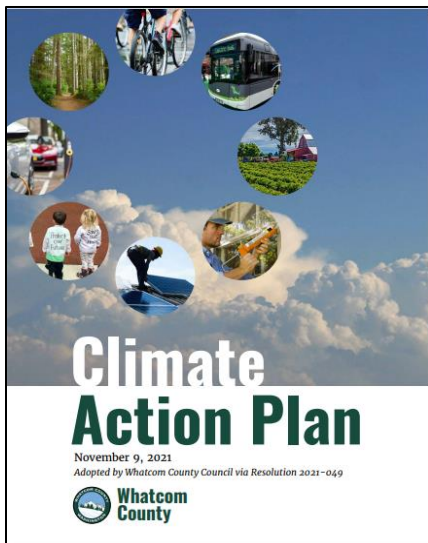
- Physical health impacts
- Mental health impacts
- Tribal cultural health impacts
- Impacts on ecosystem services
- Disruption to healthcare and emergency services







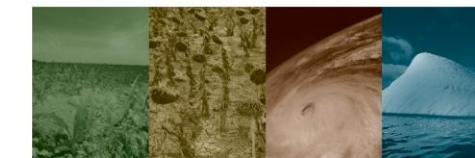
# What are our options for reducing public health vulnerability to smoke and heat?



The Use of Cooling Centers to Prevent Heat-Related Illness:  
Summary of Evidence and Strategies for Implementation

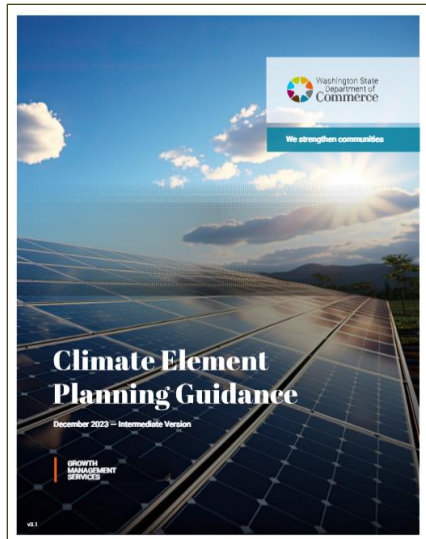
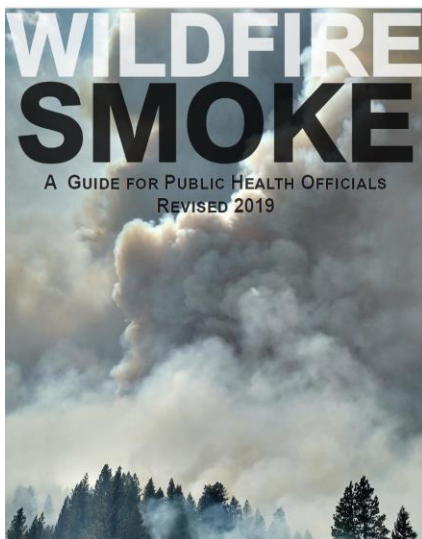


Evidence on the Use of Indoor Air Filtration as an  
Intervention for Wildfire Smoke Pollutant Exposure  
A Summary for Health Departments



BRACE Technical Report Series

Gregory Joseph,<sup>1\*</sup> Paul J. Schramm,<sup>2</sup> Ambarish Vaidyanathan,<sup>3</sup>  
Patrick Broysse,<sup>3</sup> Bradley Goodwin<sup>4</sup>

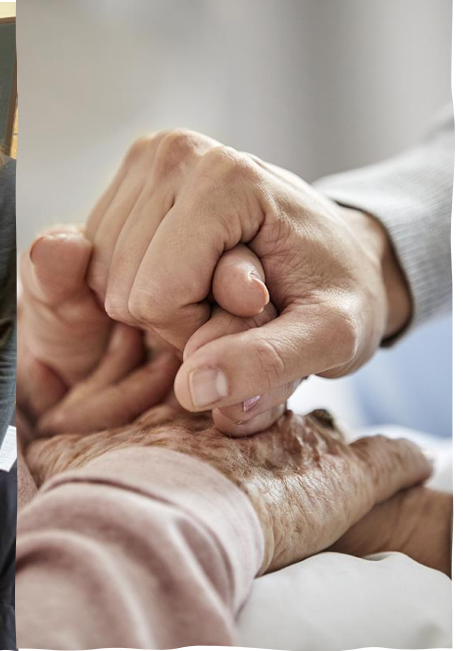




# Recommended Adaptation Strategies

## Strategies for WCHCS to Lead

- Host a Climate Summit among Whatcom County departments
- Develop and implement neighborhood outreach campaigns
- Improve air filtration in private and public spaces



# Recommended Adaptation Strategies

## Strategies for WCHCS to Support

- Protect outdoor workers
- Implement resilient transportation systems
- Invest in neighborhood green design and tree canopy cover
- Develop and ensure public access to cooling centers/resilience hubs
- Amplify messaging warning systems and public health consequences
- Direct new development out of high hazard areas





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# Phase 2 – HCS Priorities



- Continue climate change response program
- Seek additional funding for high-impact projects
- Seek recurring funding for public health interventions
- Hire EH Specialist related to fentanyl operations plan to work with the unhoused



*Aging Well Fair, Lynden, March 2024*



# Questions?

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