



# **THE ENVIRONMENTAL HEALTH DISPARITIES MAP**

EMBEDDING ENVIRONMENTAL JUSTICE INTO WASHINGTON STATE GOVERNMENT

# Partners

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# The Indicators

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## **Environmental exposures**

Diesel emissions

Ozone

Particulate matter 2.5  
(PM2.5)

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 birth weight

## **Socioeconomic factors**

Low educational  
attainment

Housing burden

Transportation  
expense

Linguistic isolation

Poverty

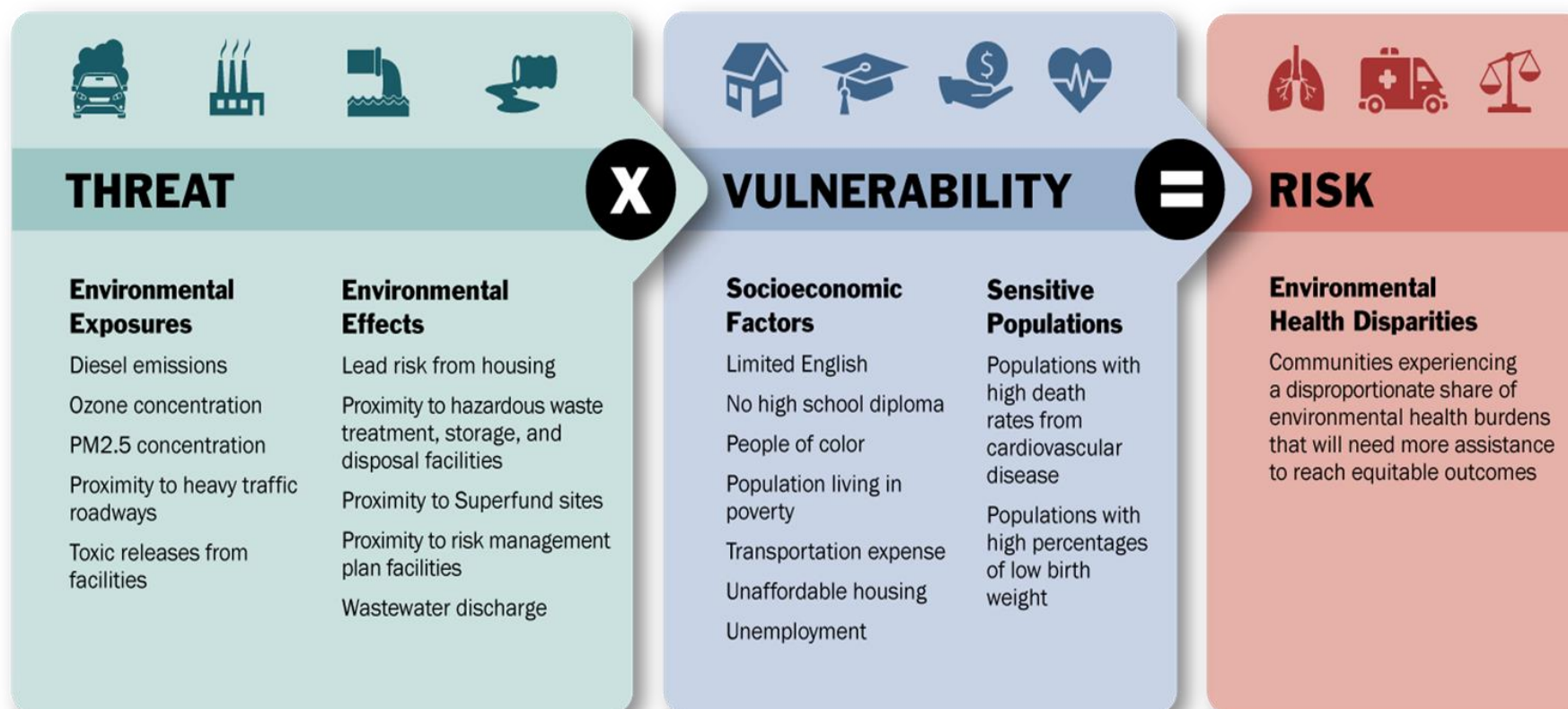
Race (people of color)

Unemployment

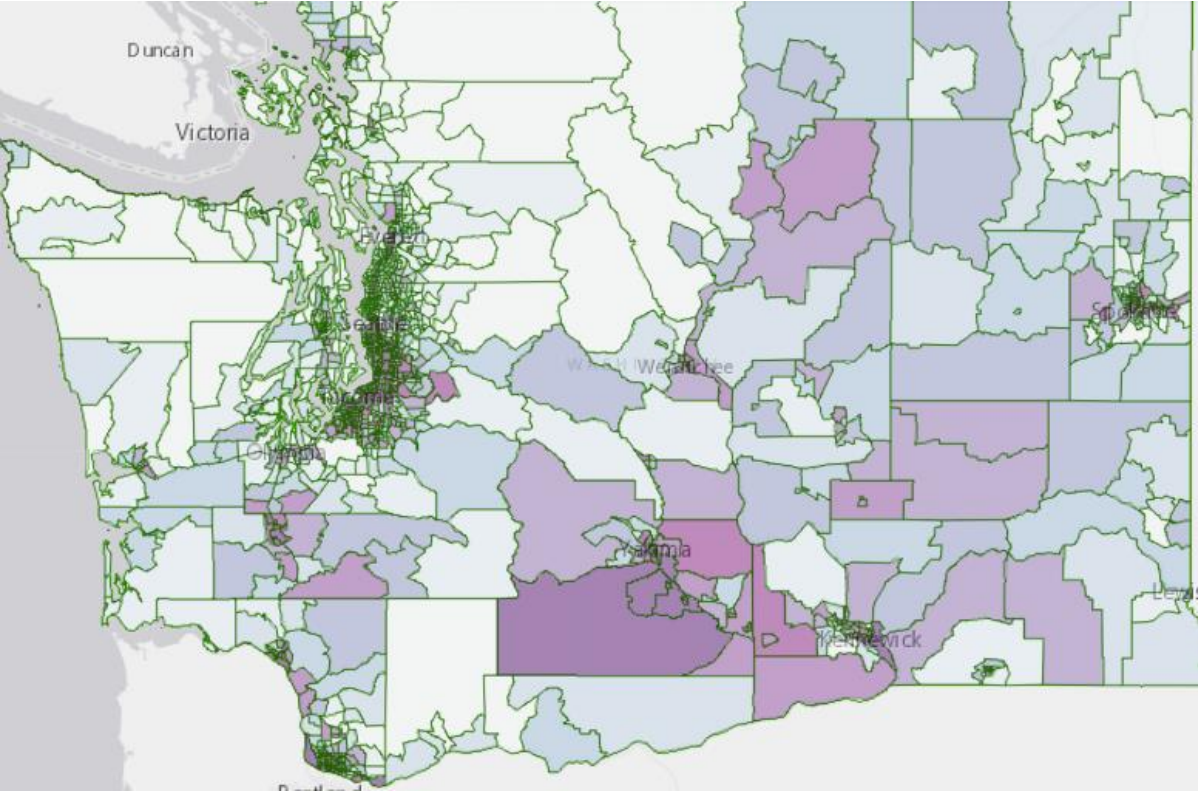


# Model for EHD Map

$$\text{Threat} \times \text{Vulnerability} = \text{Risk}$$



# EHD Map Ranking



Least impacted							Most impacted		
1	2	3	4	5	6	7	8	9	10
10% of communities	10% of communities	10% of communities	10% of communities	10% of communities	10% of communities	10% of communities	10% of communities	10% of communities	10% of communities
70% of communities are less impacted							10% of communities are similarly impacted	20% of communities are more impacted	

# Healthy Environment for All Act: EHD Map

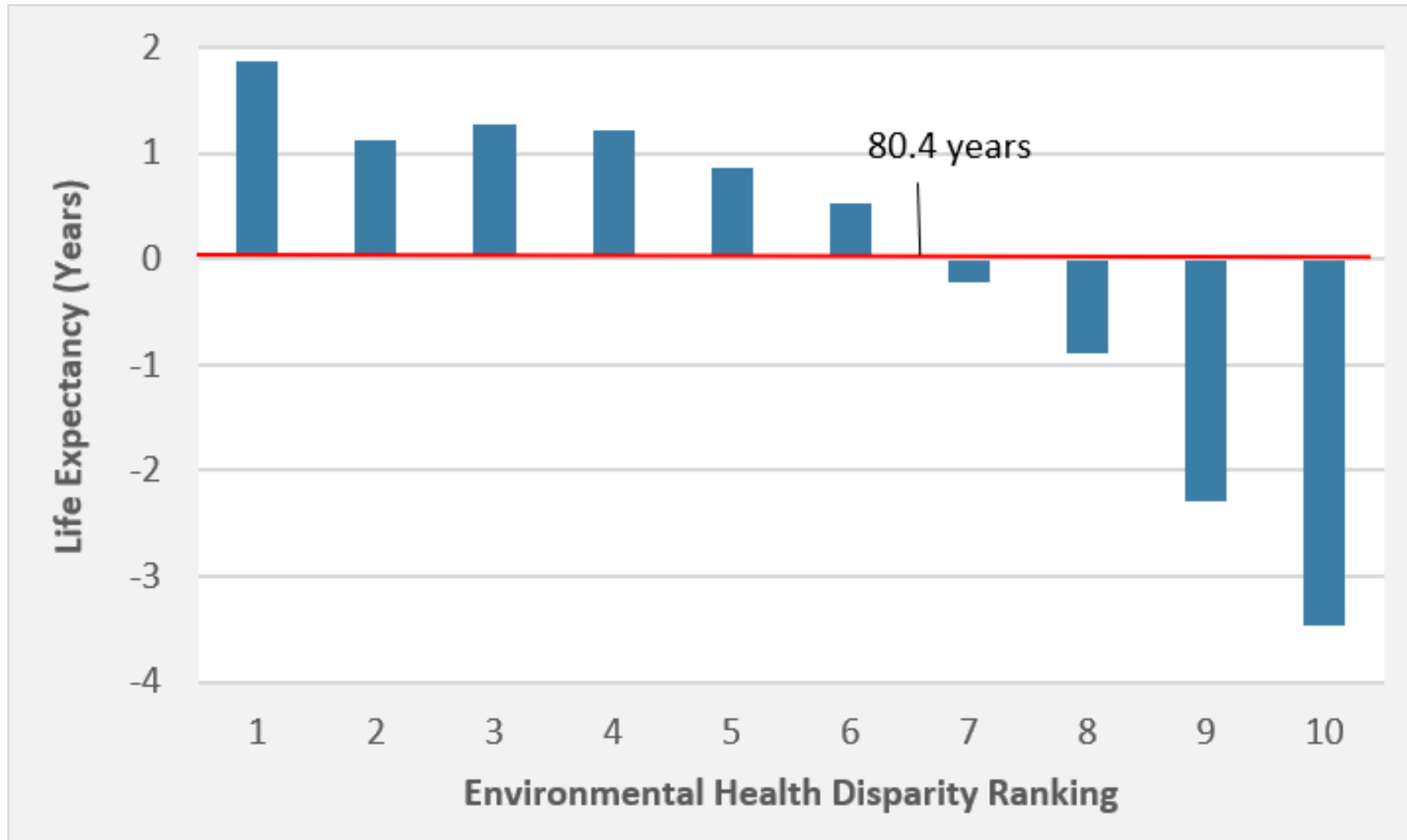
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- Further develop the EHD map, engaging with communities, tribes, researchers, and the Environmental Justice Council
- Track changes in disparities over time
- Perform a comprehensive evaluation every three years
- Expand online video trainings and guidance on how to use the EHD map
- Provide support and consultation to state agencies on how to use the EHD map

# What Can We Do with the EHD Map?

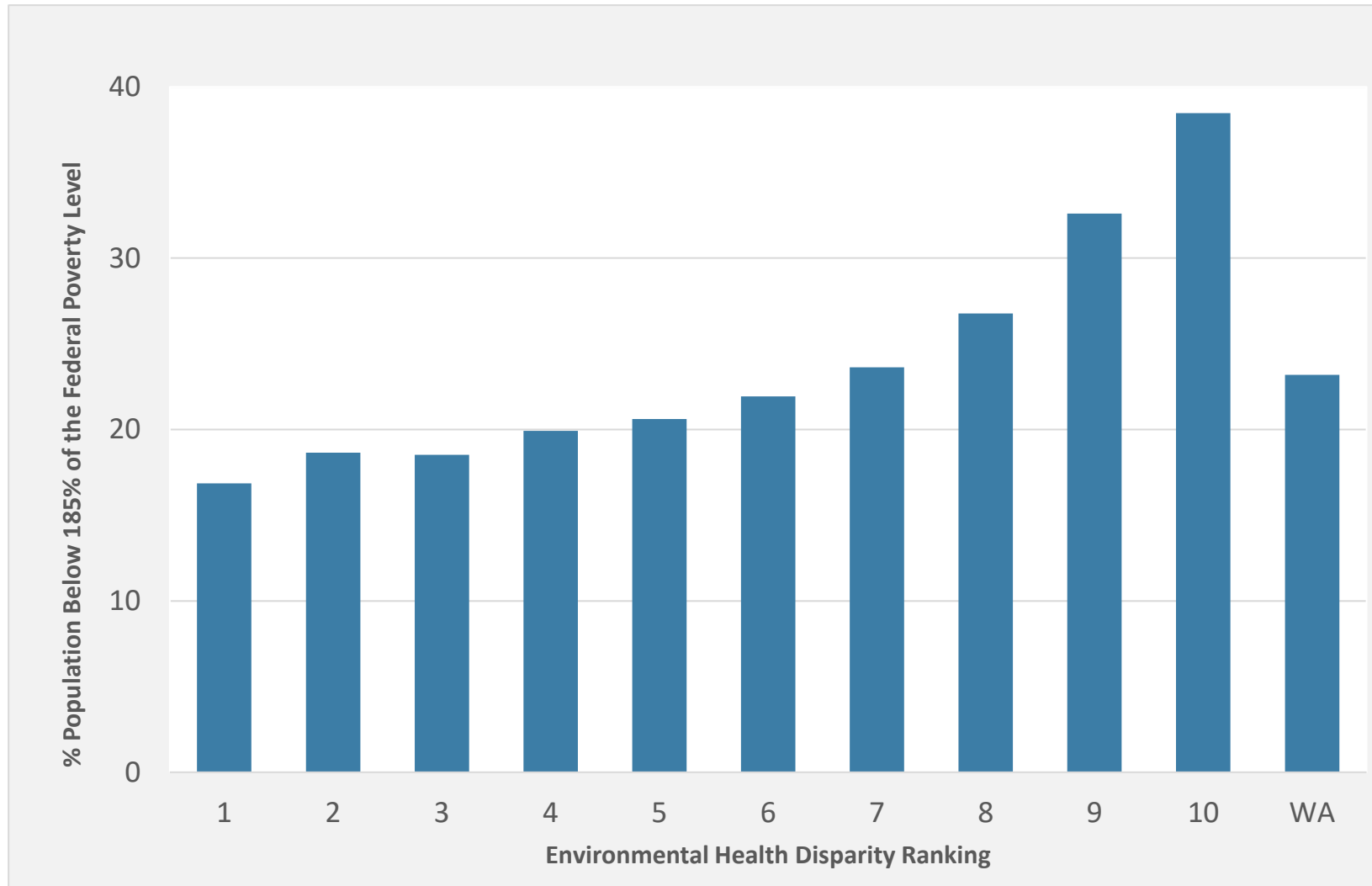


## Difference in Life Expectancy by EHD Rank

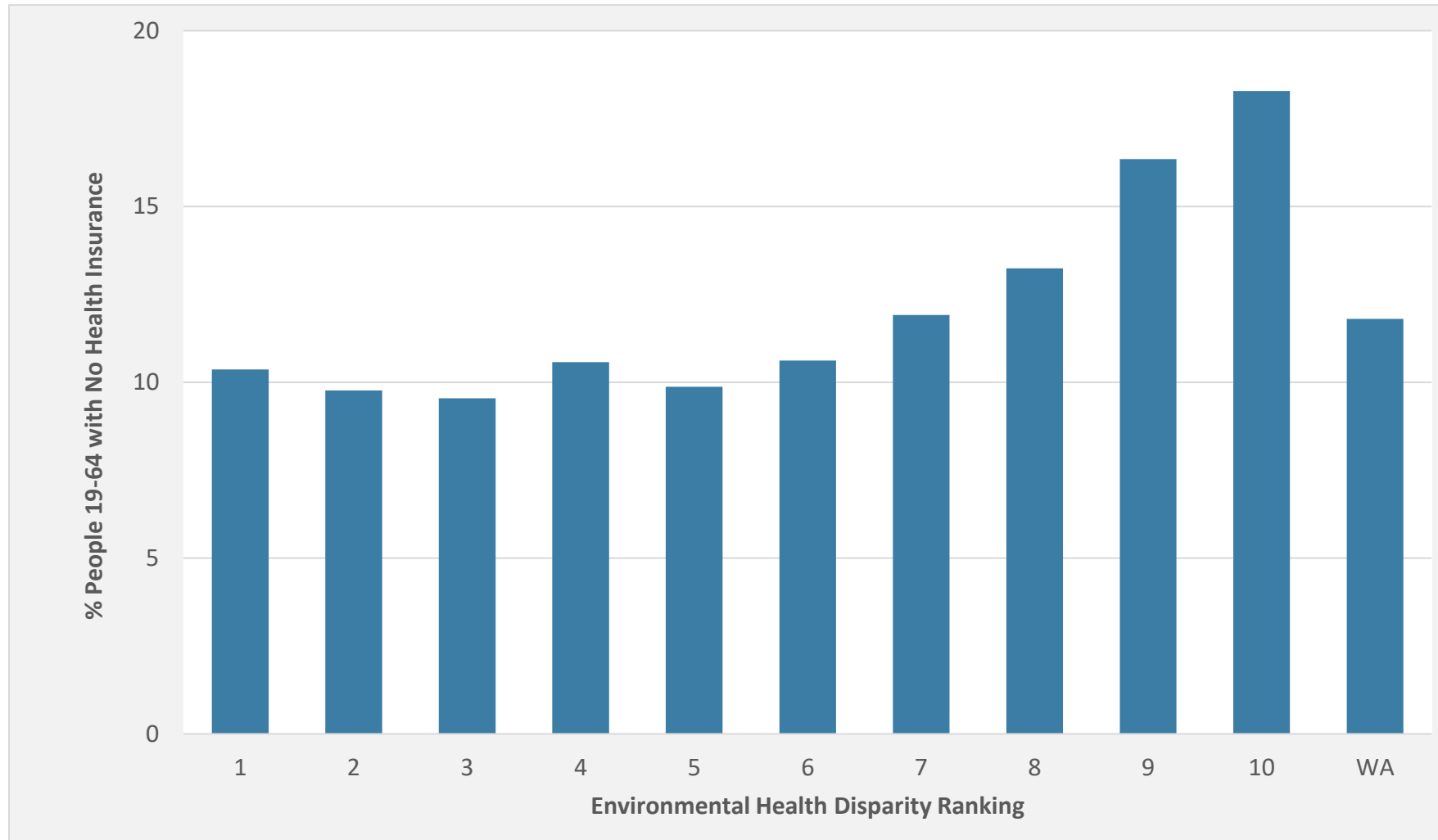




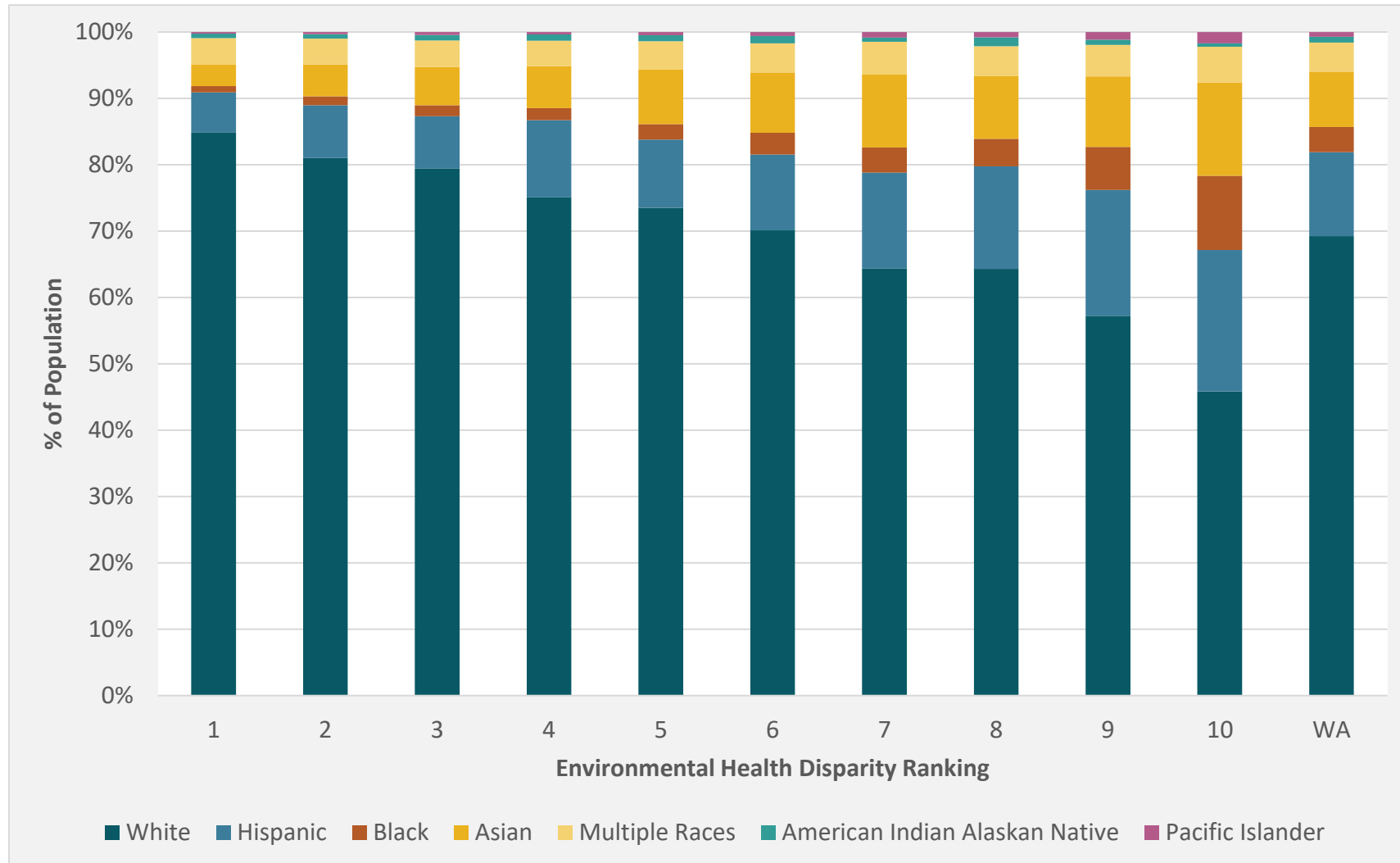
## Poverty by EHD Rank



## Health Insurance by EHD Rank



## Race and Ethnicity by EHD Rank



## Progress since HEAL Act (2021) passed

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- EHD map technical workgroup
- EHD map update 2.0 – July 28, 2022
- Working with academic partners on best ways to track changes over time
- New indicator development
  - Wildfire Smoke Exposure
  - Pesticides
  - Asthma



# Working Together to Improve the Environmental Health Disparities Map

- Some tribes have expressed concerns with the EHD map.
- Two listening sessions and two round tables were held to understand tribal concerns, to prepare for consultation.
- The agreements made with the tribes during consultation will help us address tribal concerns raised.

# Concerns

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## Overall

- Limited tribal engagement during development
- Use outside HEAL Act and CCA
- Narrow definition of Environmental Justice

## Methods

- Use of census tracts
- Modeling of existing indicators

## Indicators

- Not reflective of tribal values
- Lack tribal data

# Working Together to Improve the Environmental Health Disparities Map

- 1) Incorporate tribal input on current measures and prioritize new measures,
- 2) develop new measures that reflect tribal values, and
- 3) include tribal partners in map development, and
- 4) develop guidance for users of the map that includes tribal lands as highly impacted communities and describes ways to mitigate weaknesses of the map.

# Moving Forward

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- The EHD map transitioned from being a non-profit driven project to a government tool with funding implications.
- Building relationships with tribal data people and involving them at the formative stages of developing indicators.
- Creating a more transparent and accessible process for tribes and members of the public to shape and understand the map.
- Improving communication between agencies.
- Tribes have limited bandwidth and resources.
- We will be providing grant funding to tribes for capacity to engage on data issues.



# Indicator Ideas

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- Expand Proximity to Hazardous Waste Treatment Storage and Disposal Facilities Indicator (Legacy DOD sites, underground storage tanks)
- Wood stove use
- **Wildfire smoke exposure**
- Wildfire risk
- Slide risk
- **Water quality**
- Marine traffic air quality pollution
- Fish and natural resource consumption rates
- Ocean acidification
- **Harmful algal blooms**
- Stream temperature pollution
- Access to traditional foods
- Intergenerational knowledge transfer
- Natural resource dependent livelihoods
- Food deserts
- Healthcare access
- Cell and internet service access
- **Pesticides**
- **Asthma**
- **Mortgage Discrimination (modern redlining)**
- **Climate change**

Bold indicates measure/theme under development

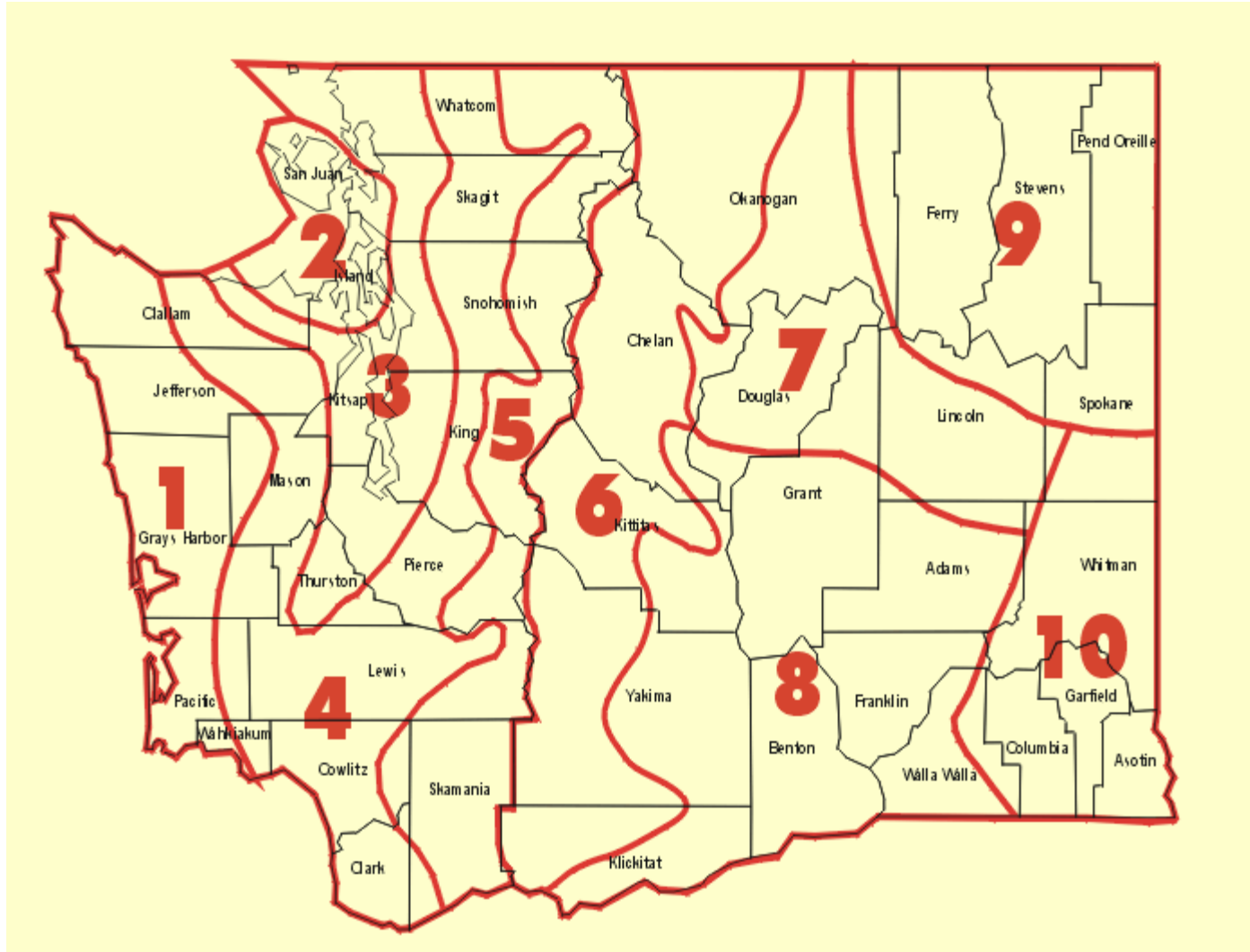
# Climate Change and the EHD Map

- Climate change is an important part of the environmental health discussion
- It has been identified as a gap in the EHD Map
- Washington is uniquely and diversely at risk from climate impacts
  - Climate hazards in Eastern Washington are very different from Western Washington
  - How to avoid cancellation effects in the model?
- Climate change health impacts are largely based on projected futures; how does this work within the model?



# Climate Change: EHD Map Threat Theme

- Colorado EnviroScreen includes climate change as a threat theme on their map.
- CalEnviroScreen does not.
- We are in early stages of developing a new theme to add to the map focused on climate-sensitive hazards.
  - This theme will look at **retrospective data only**
  - It will be more geographically complex than other themes – based on the NOAA Climate Divisions.



## Next Steps for Climate Change

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- A workgroup to guide decision-making will be formed in June.
- This will help us decide variables for inclusion, time frames, etc.
- The new theme is tentatively planned to be added in the 3.0 release.



# CONTACT

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