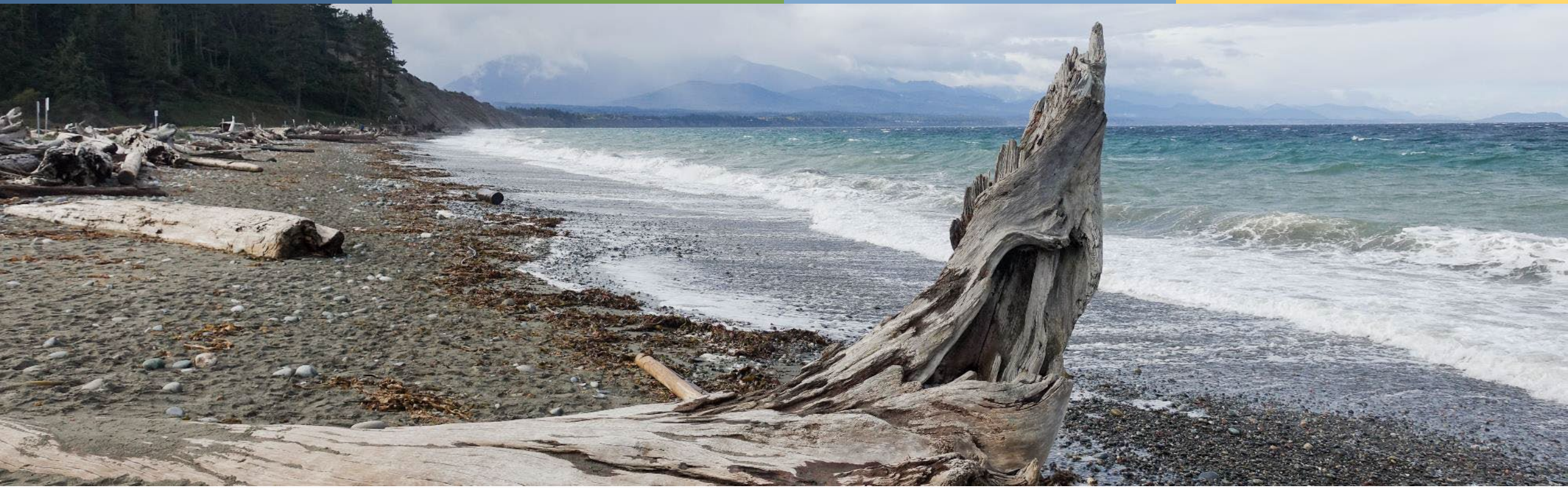


Prioritizing Environmental Justice

A Data Driven Regulatory Perspective

Teague Powell
WA State Department of Ecology
HWTR Program
December 5th 2023

Equality

The assumption is that **everyone benefits from the same supports**. This is equal treatment.

Equity

Everyone gets the supports they need (this is the concept of "affirmative action"), thus producing equity.

Justice

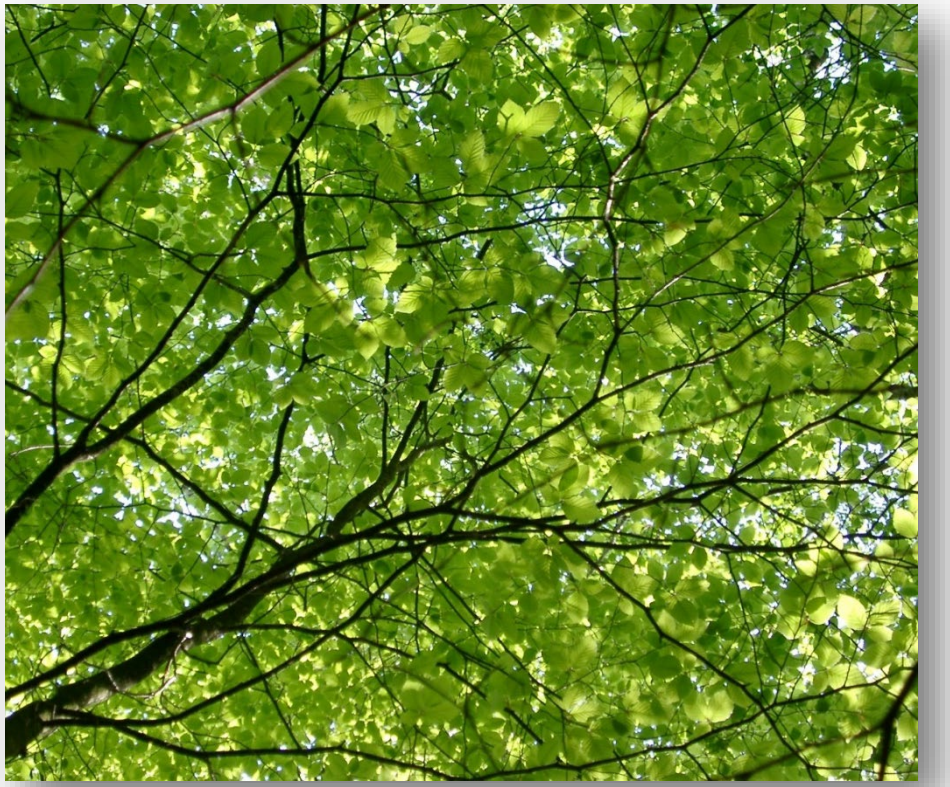
All 3 can see the game without supports or accommodations because **the cause(s) of the inequity was addressed**. The systemic barrier has been removed.

https://www.mobilizegreen.org/blog/2018/9/30/environmental-equity-vs-environmental-justice-whats-the-difference

Environmental Justice – A Definition

" The **fair treatment** and **meaningful involvement** of all people regardless of race, color, national origin, or income with respect to the development, **implementation**, and enforcement of environmental laws, rules, and policies… "

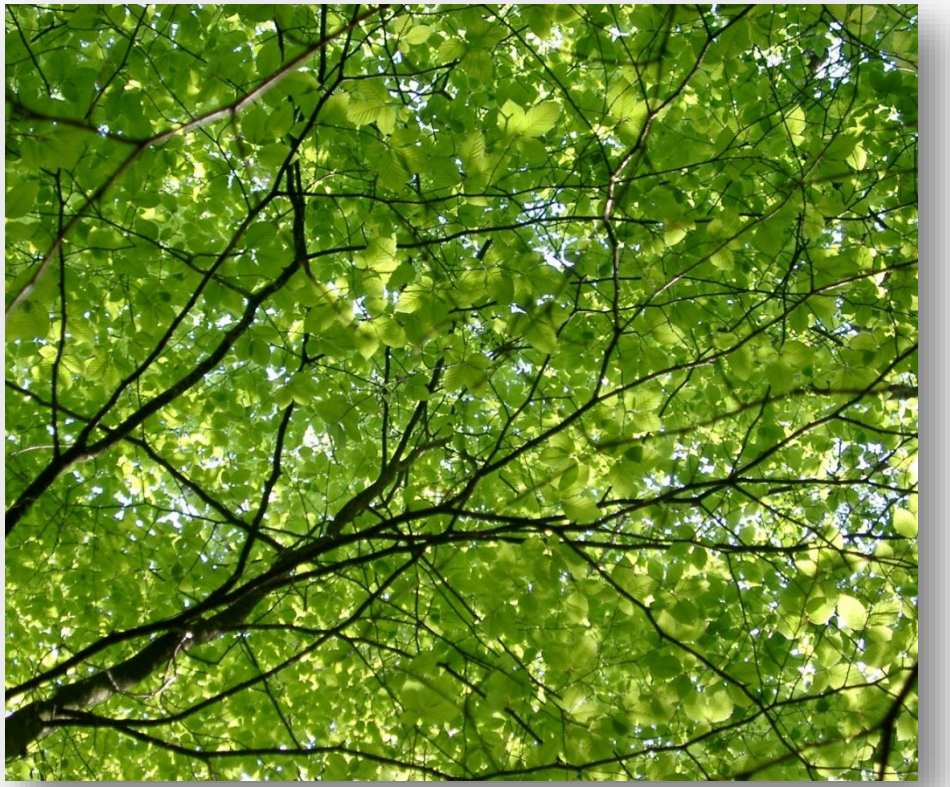
- WA's Healthy Environment for All (HEAL) Act



Environmental Justice – A Definition

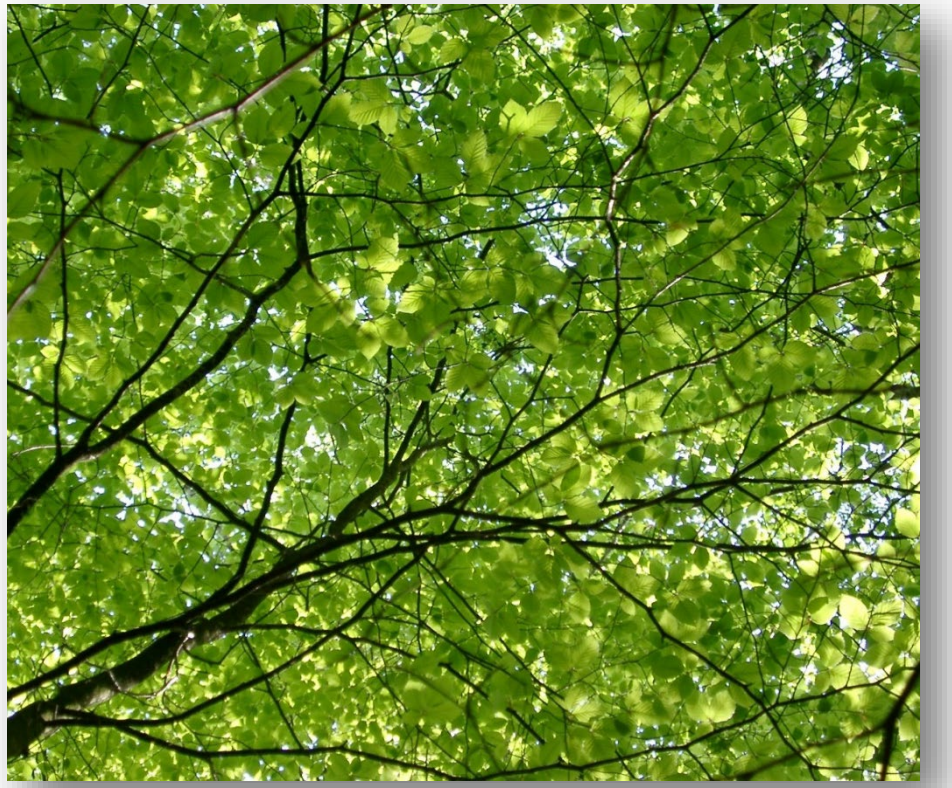
" … This includes using an intersectional lens to **address disproportionate environmental and health impacts** by **prioritizing highly impacted populations**, **equitably distributing resources and benefits**, and eliminating harm."

- *WA's Healthy Environment for All (HEAL) Act*



Environmental Justice – A Summary

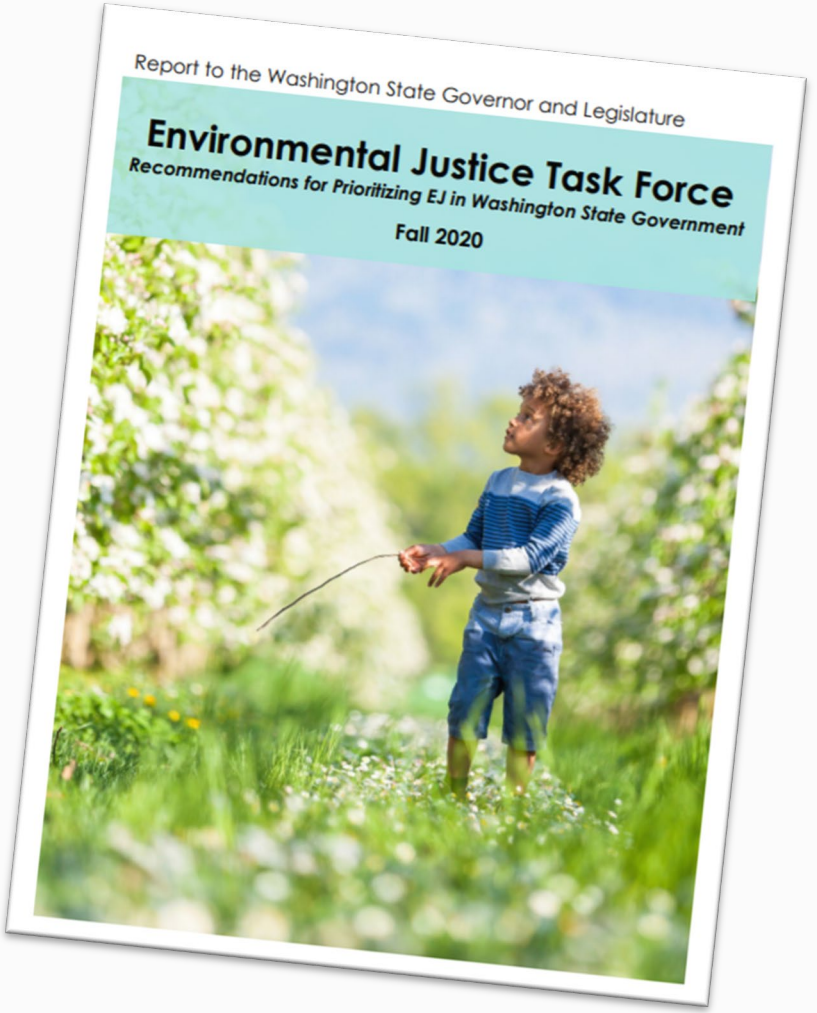
- Fair treatment
- Participation
- Addressing disparities
- Prioritizing impacted communities
- Equitable distribution



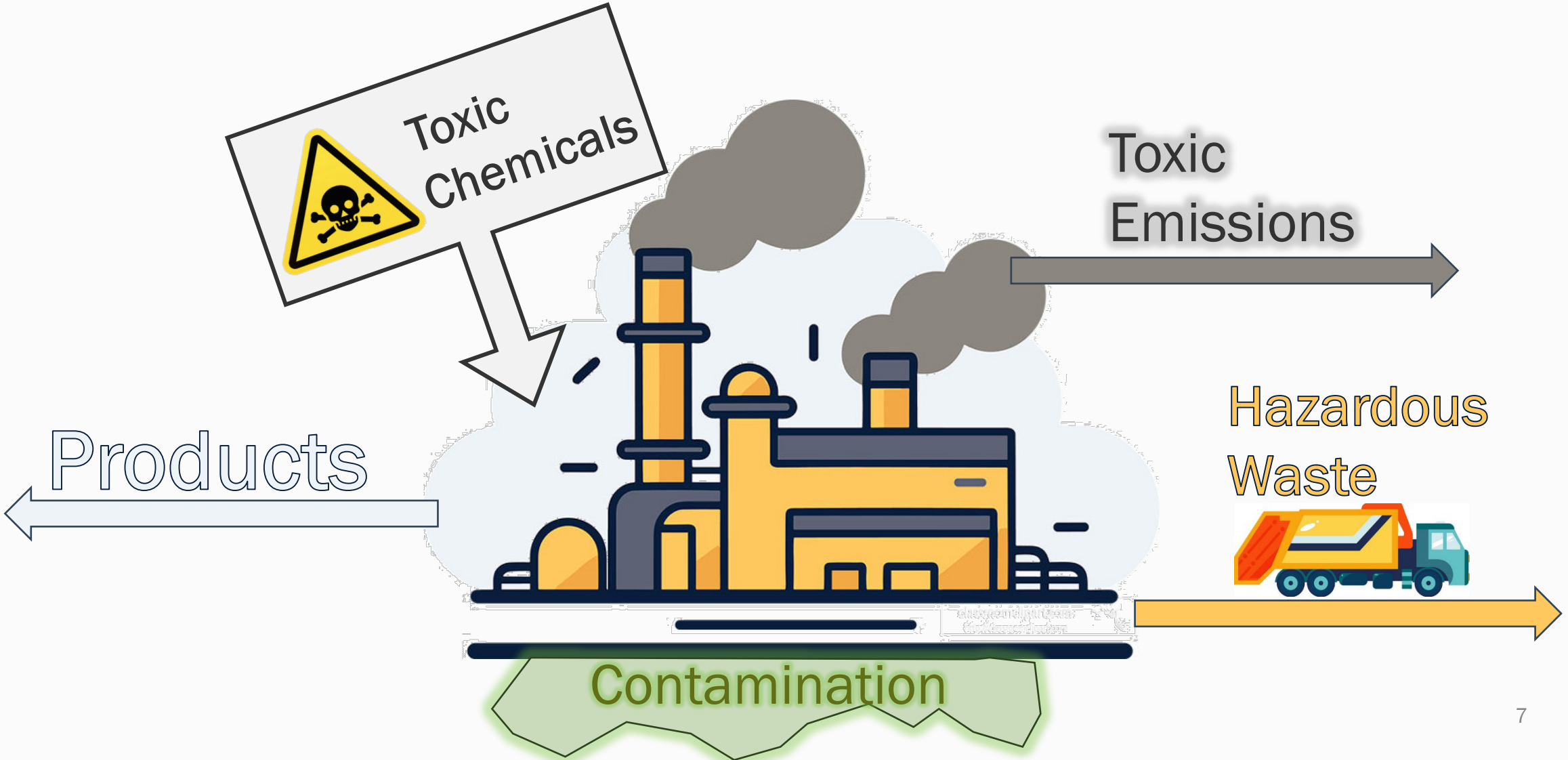
Roadmap to Implementation

Washington State Environmental Justice Task Force Final Report recommendations:

- **Integrate** Dept. of Health's WA Tracking Network (WTN)
- **Identify** areas of high concern
- Guide and **inform** with respect to EJ concerns
- Conduct EJ **review and analysis**
- **Center** EJ as a priority outcome in resource allocation



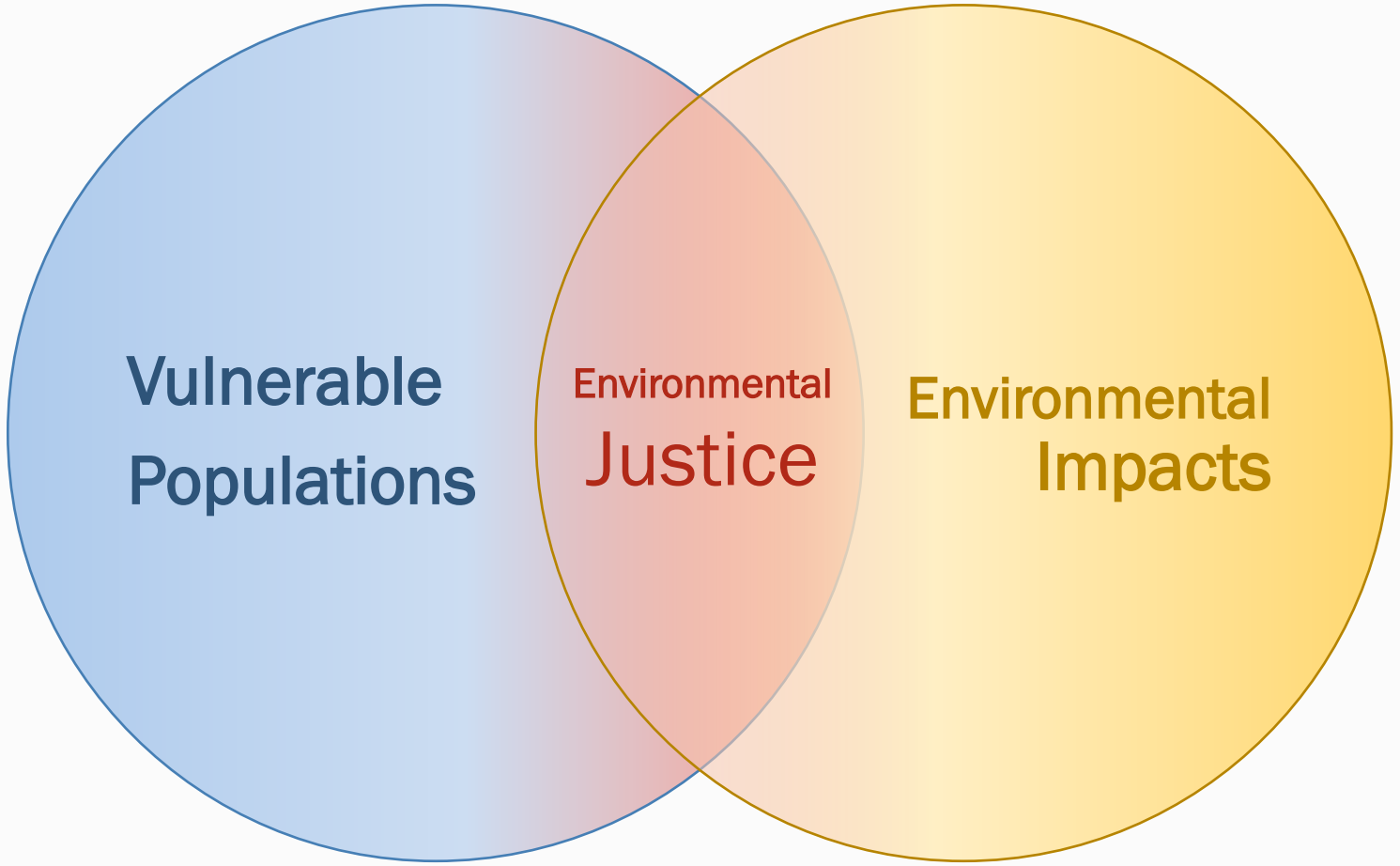
HWTR Program



Key Questions

- What is the scope of impact our work has?
- **What value or benefits are created?**
- **Who benefits?**
- Where are the key decisions made?
- **Who participates in the process?**

Mapping Tools for Environmental Justice



Mapping Tools for Environmental Justice

Washington State:	Nationwide:	
WA State Dept. of Health's **WA Tracking Network (WTN)**	EPA's **EJ Screen**	White House **Climate and Economic Justice Screening Tool**
+ Cumulative Scoring + Simplified Ranking - WA State Specific - Limited Depth of Data	+ Health Disparities Data + Climate Justice Data + Expanded Census Data + Additional Tools - Complex	+ Diverse metrics + Economic Perspective + Nuanced thresholds - Less popular

The Washington Tracking Network

Environmental Health Disparities Score

Composite Score

Pollution Burden Score

Environmental Exposures

- Diesel emissions
- Ozone
- Particulate Matter 2.5
- **Toxic releases**
- Traffic density

Environmental Effects

- Lead risk and exposure
- **Proximity to hazardous waste sites**
- Proximity to Superfund sites
- Proximity to facilities with highly toxic substances
- Wastewater discharge

Population Characteristics Score

Sensitive Populations

- Cardiovascular disease
- Low birth weight infants

Socioeconomic Factors

- Race (People of color)
- Poverty
- Unemployment
- Poor educational attainment
- Housing burden
- Linguistic isolation
- Transportation Expense

EPA's EJ Screen

EPA's EJ Screen

Thresholds Map with 'Supplemental Indexes'

Pollution Factors

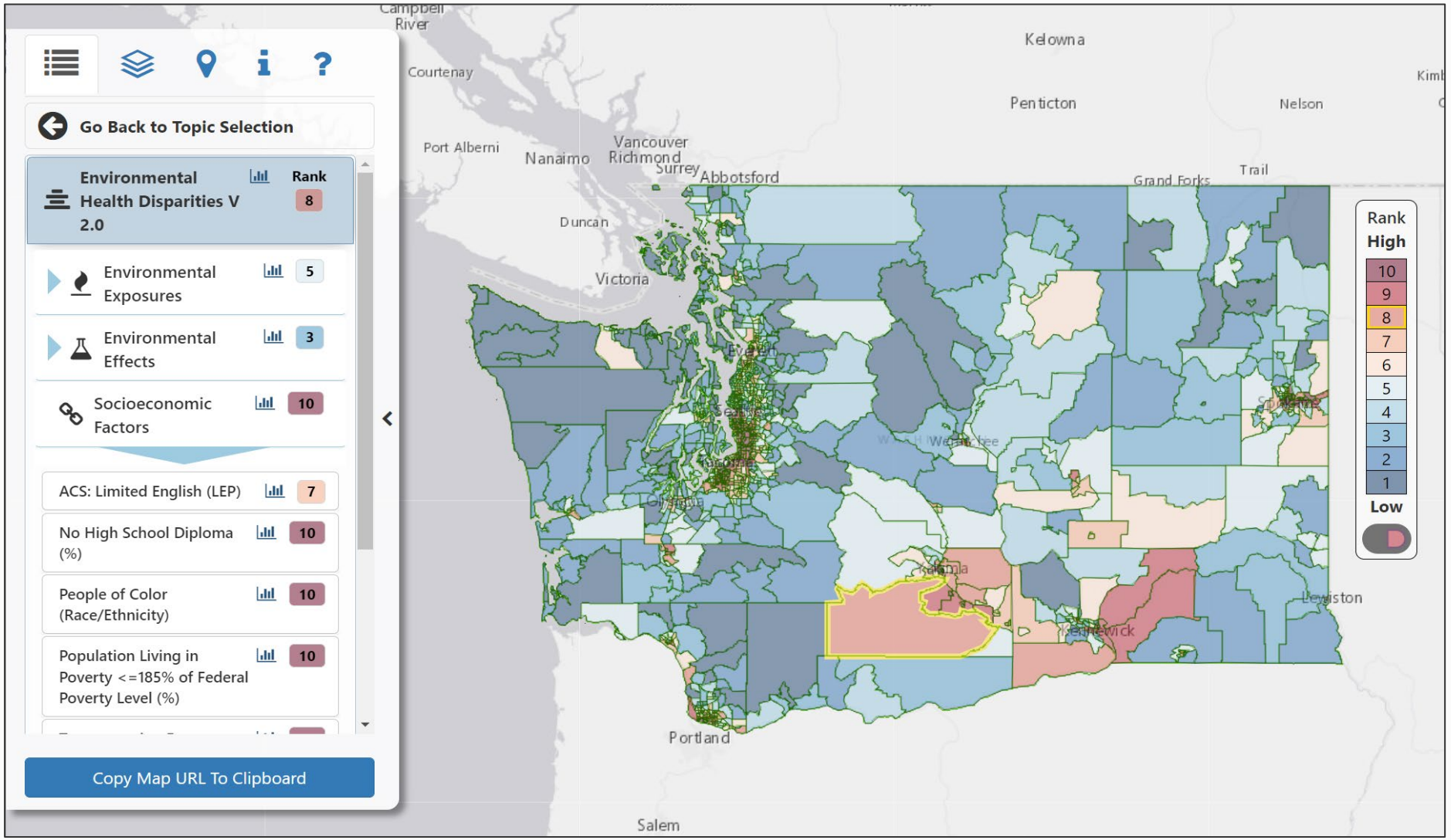
- Particulate Matter 2.5
- Ozone
- Diesel Particulate Matter
- Air Toxics Cancer Risk
- Air Toxics Respiratory Hazard Index
- Toxic Releases to Air
- Traffic Proximity and Volume
- Lead Paint (% pre-1960 housing)
- Superfund Proximity
- Risk Management Plan Facility
- Hazardous Waste
- Underground Storage Tanks and Leaking UST
- Wastewater Dischargers Indicator

Socio Economic Factors

- People of color
- Poverty
- Unemployment
- Poor educational attainment
- Low Life Expectancy
- Linguistic isolation
- Under age 5
- Over age 64

DEPARTMENT OF ECOLOGY
State of Washington

Mapping Tools for Environmental Justice



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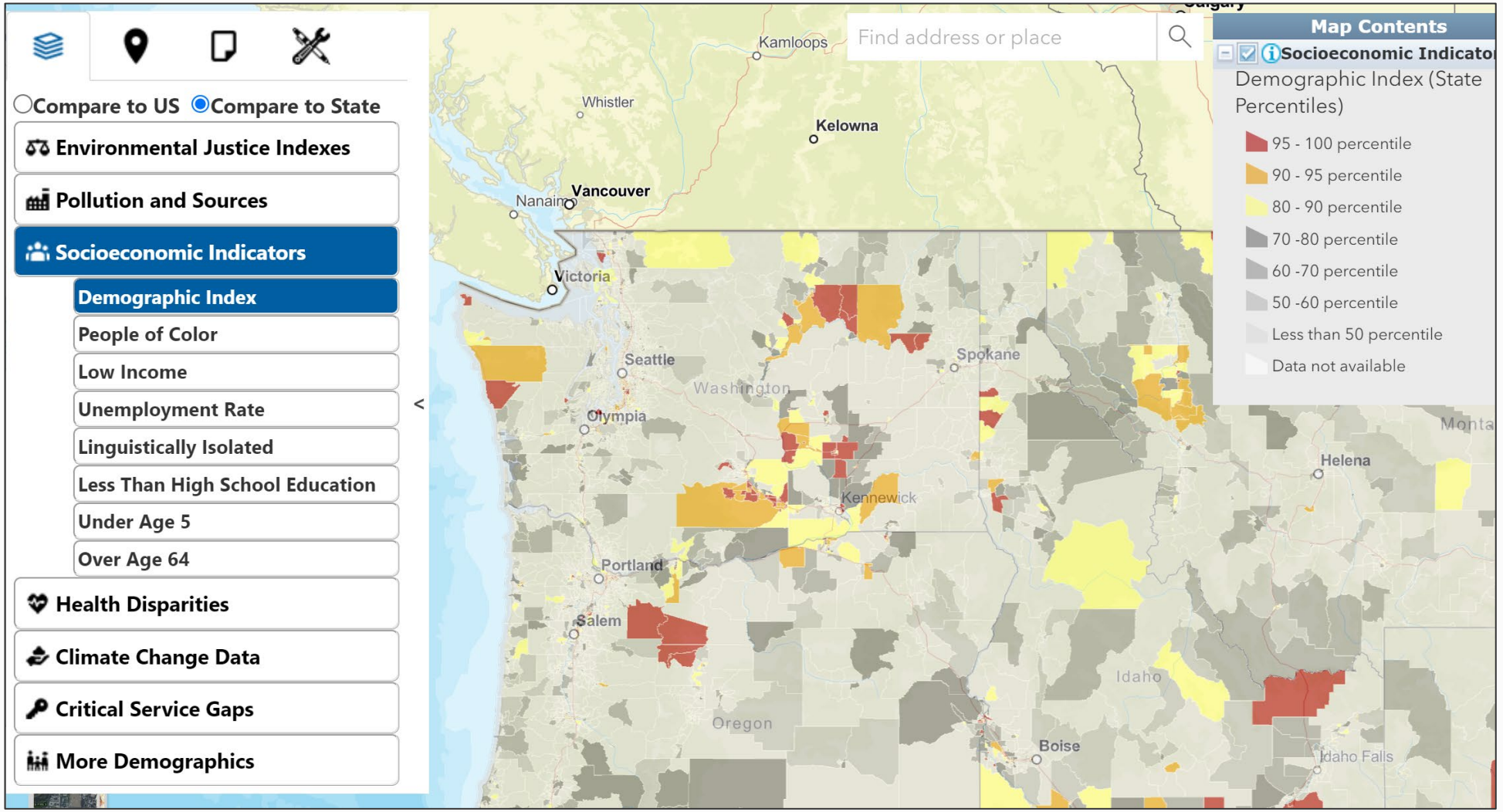
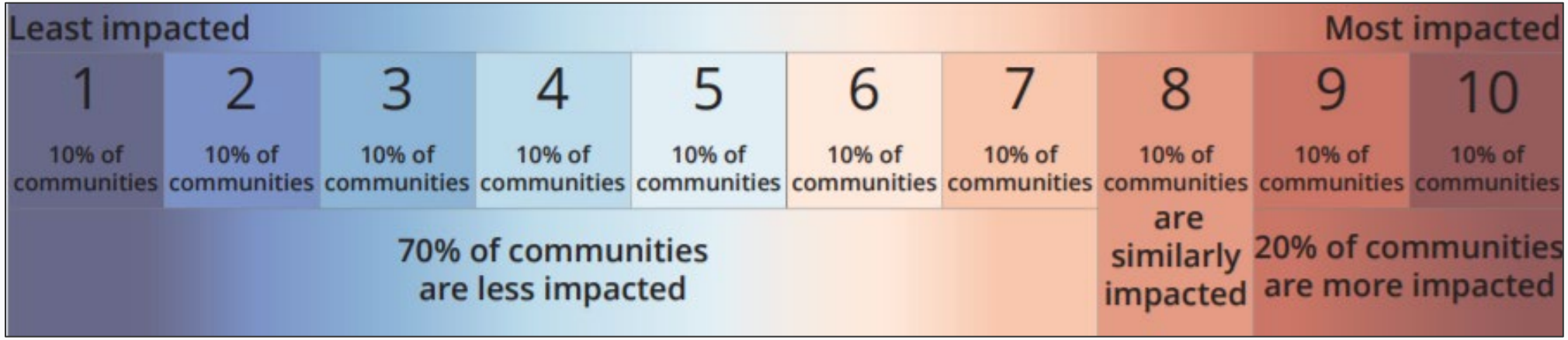
State of Washington

Mapping Tools for Environmental Justice

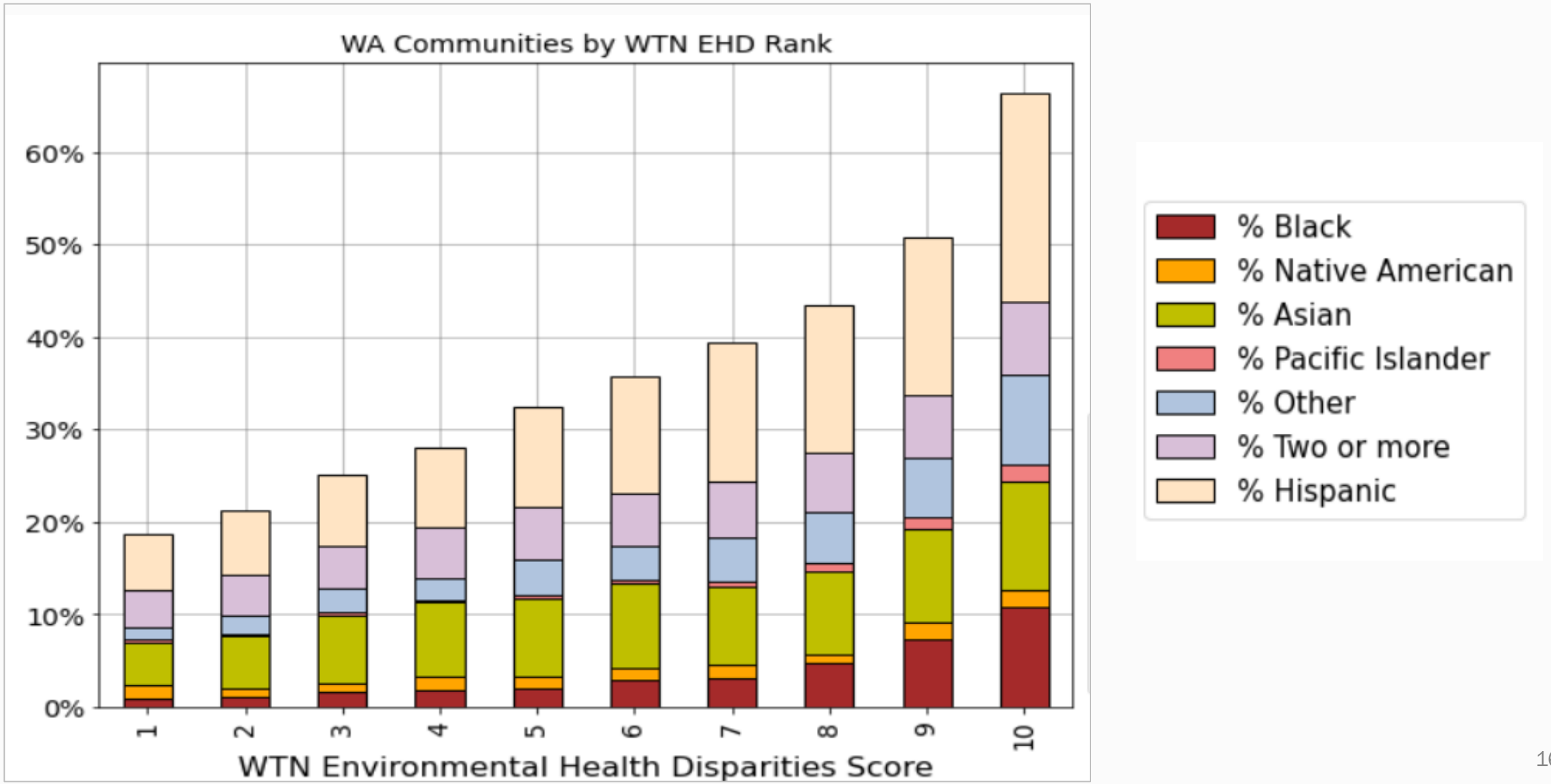


The Washington Tracking Network

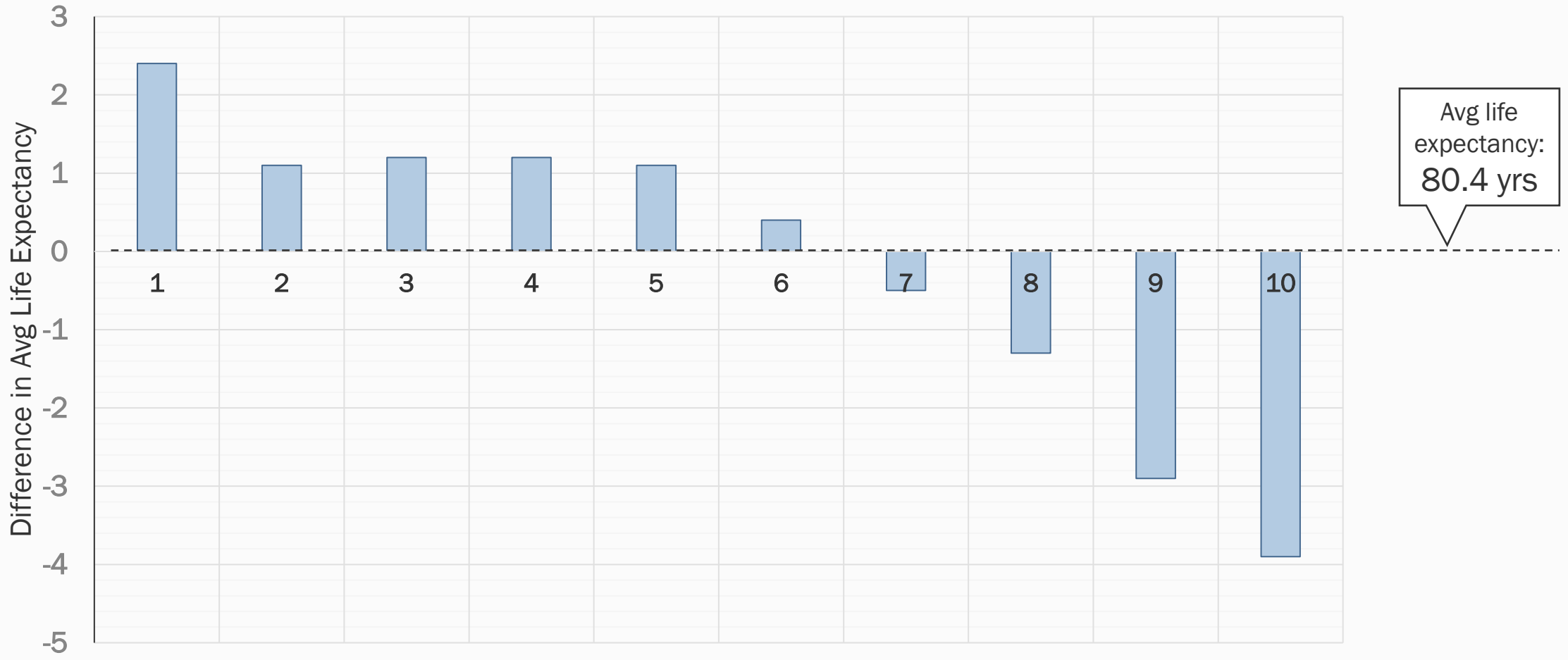


- Each 1-10 score corresponds to ~10% of WA communities (census tracts)
- Roughly equivalent to EPA's EJ Screen's state percentile rankings

Distributive Justice



Difference in Life Expectancy at Birth by EHD Rank

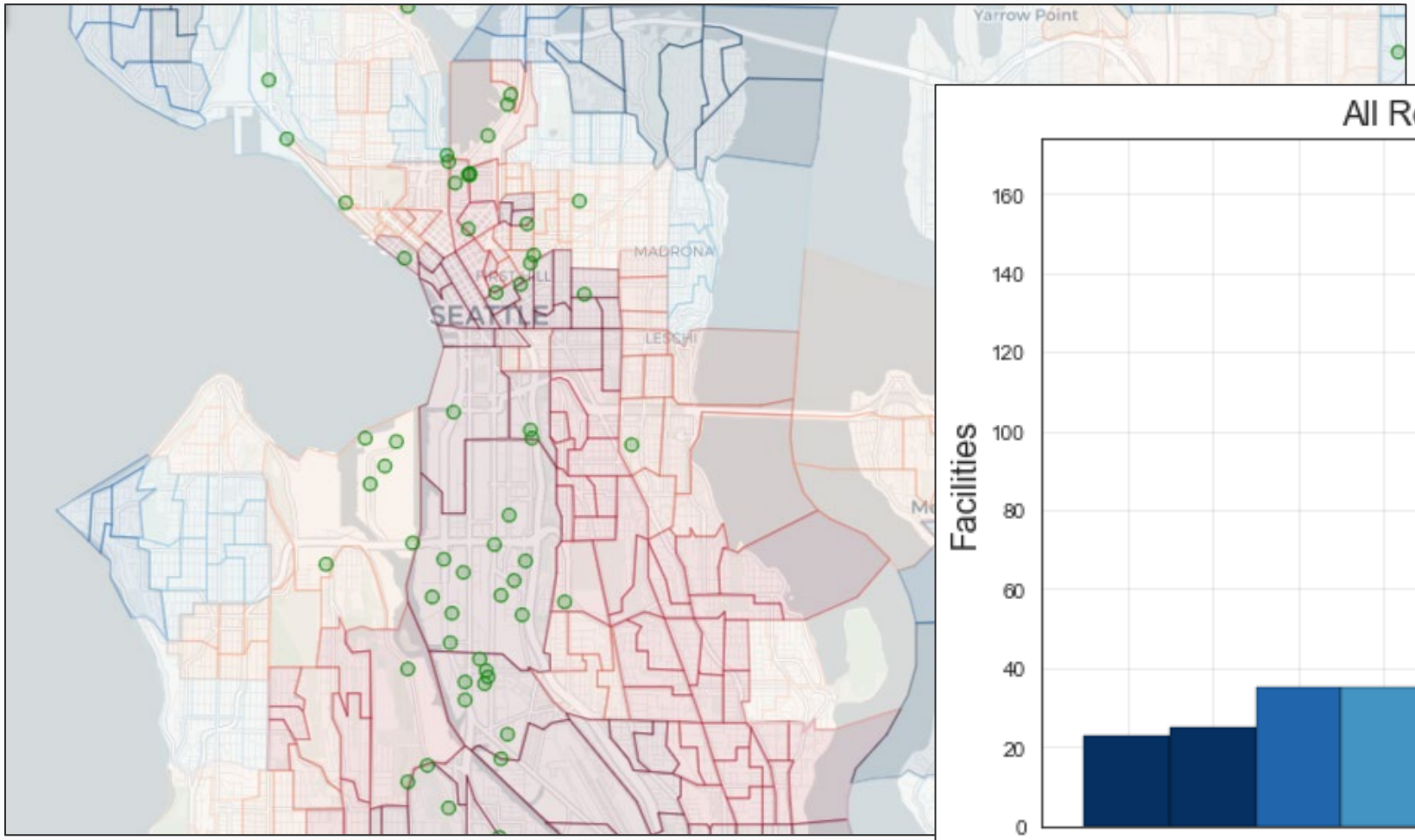


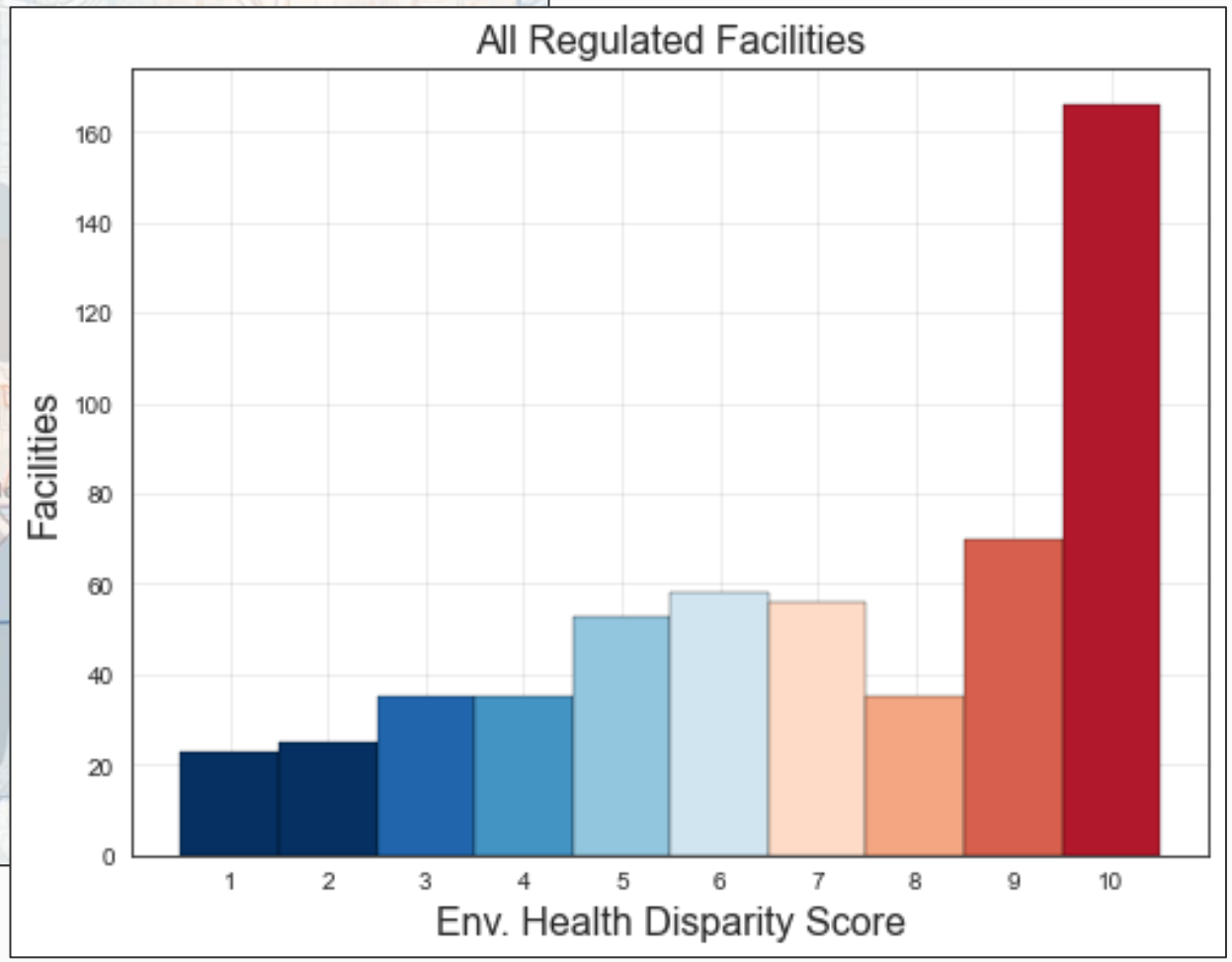
Example 1

Beyond the Fenceline

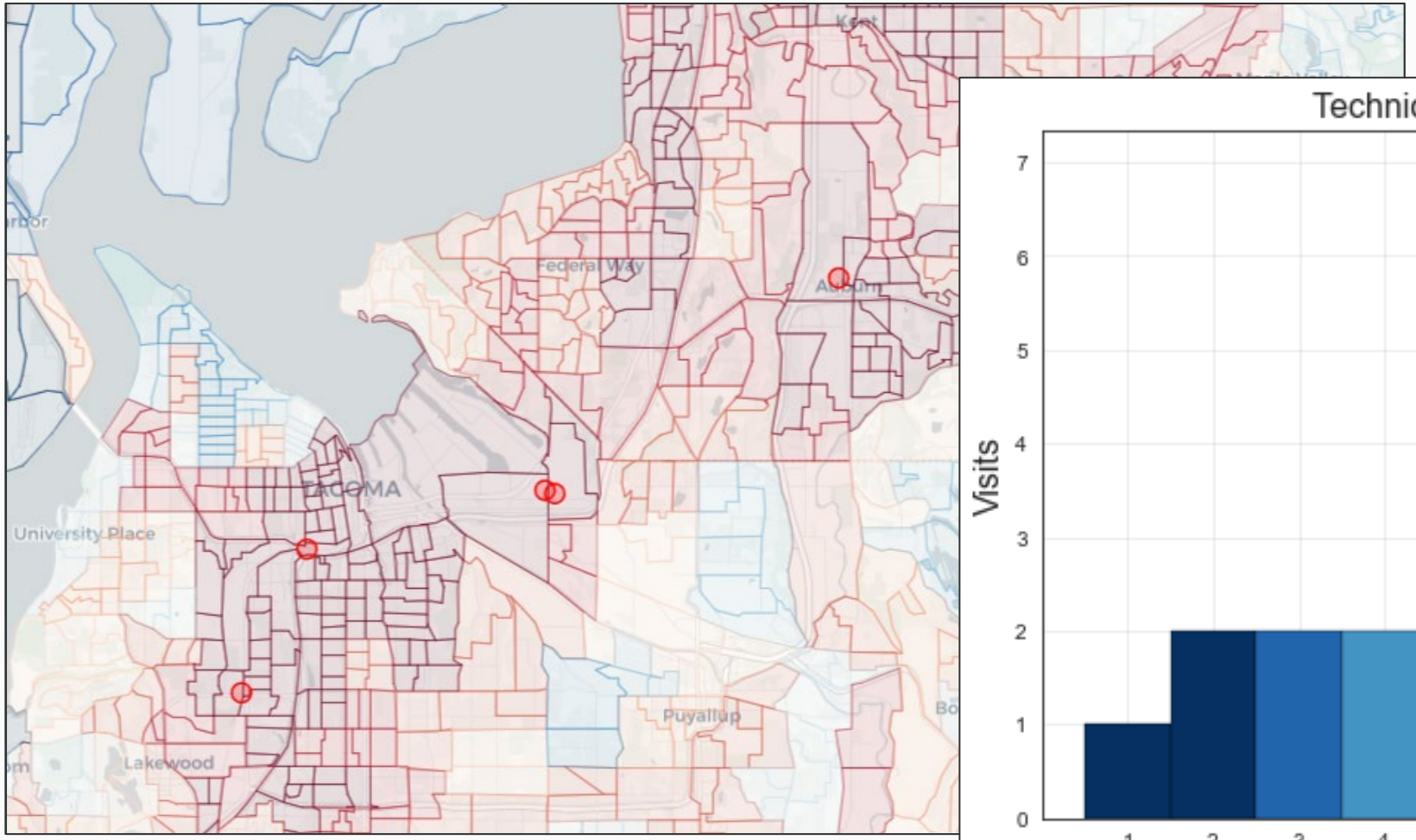
Service Equity in Technical Assistance

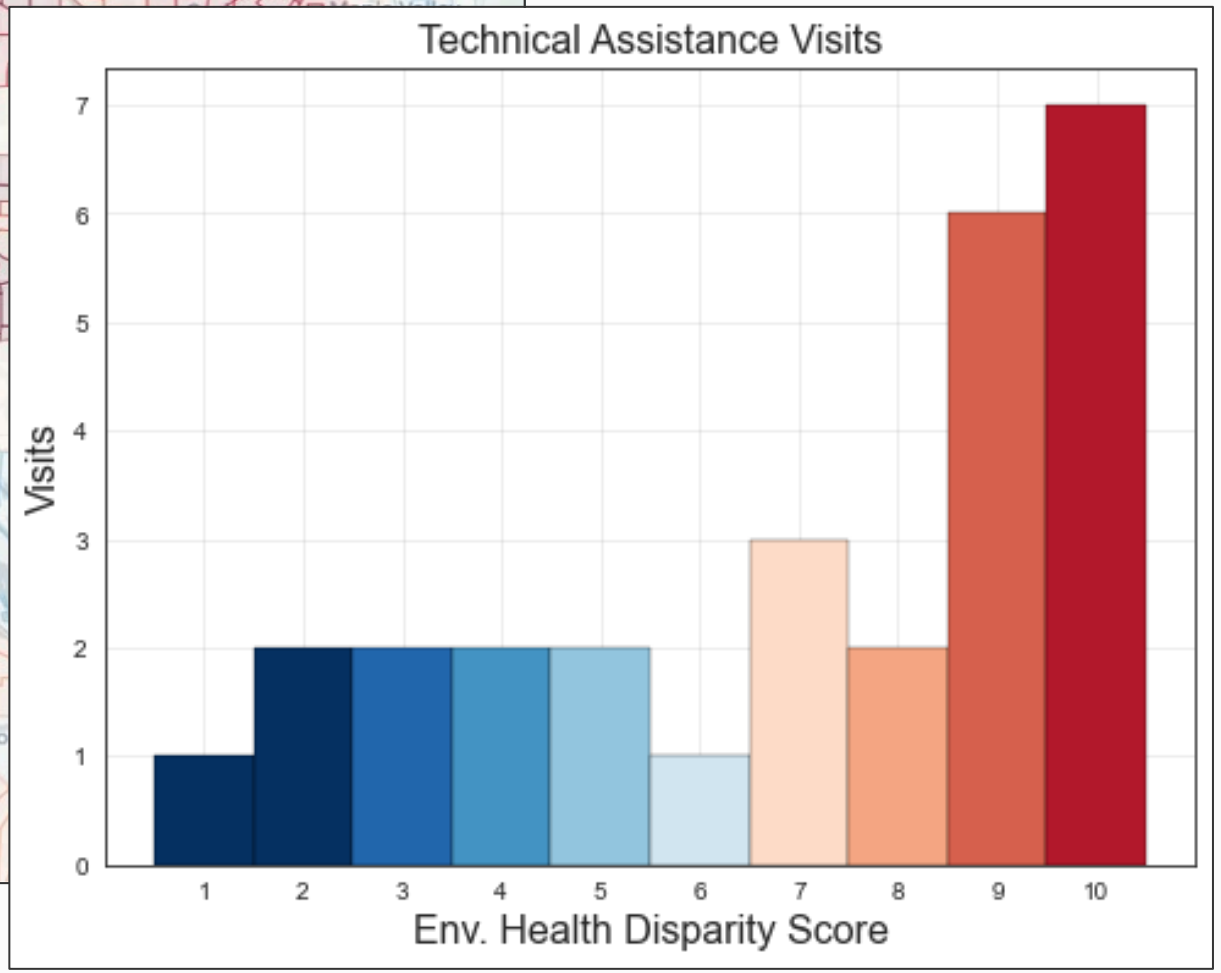
Hazardous Waste Facilities





Visits to Hazardous Waste Facilities





Comparing Distributions

Evaluating Service Equity

We visited 15 of the 320 facilities in areas that rank **below** the 80th percentile of concern.

We visited 13 of the 236 facilities in areas that rank **above** the 80th percentile of concern.

We visited areas of higher concern **at a rate 1% greater** than the rate at which we visited areas of lower concern

Setting Goals

- Aim to drive visits to impacted communities, ultimately achieving a significant portion of project successes at facilities in EJ communities
- Map our workflow, identify key decision points, and inform with respect to EJ data
- Empower staff to incorporate EJ into their work as they see fit
- Encourage continuous improvement and innovation

Example 2

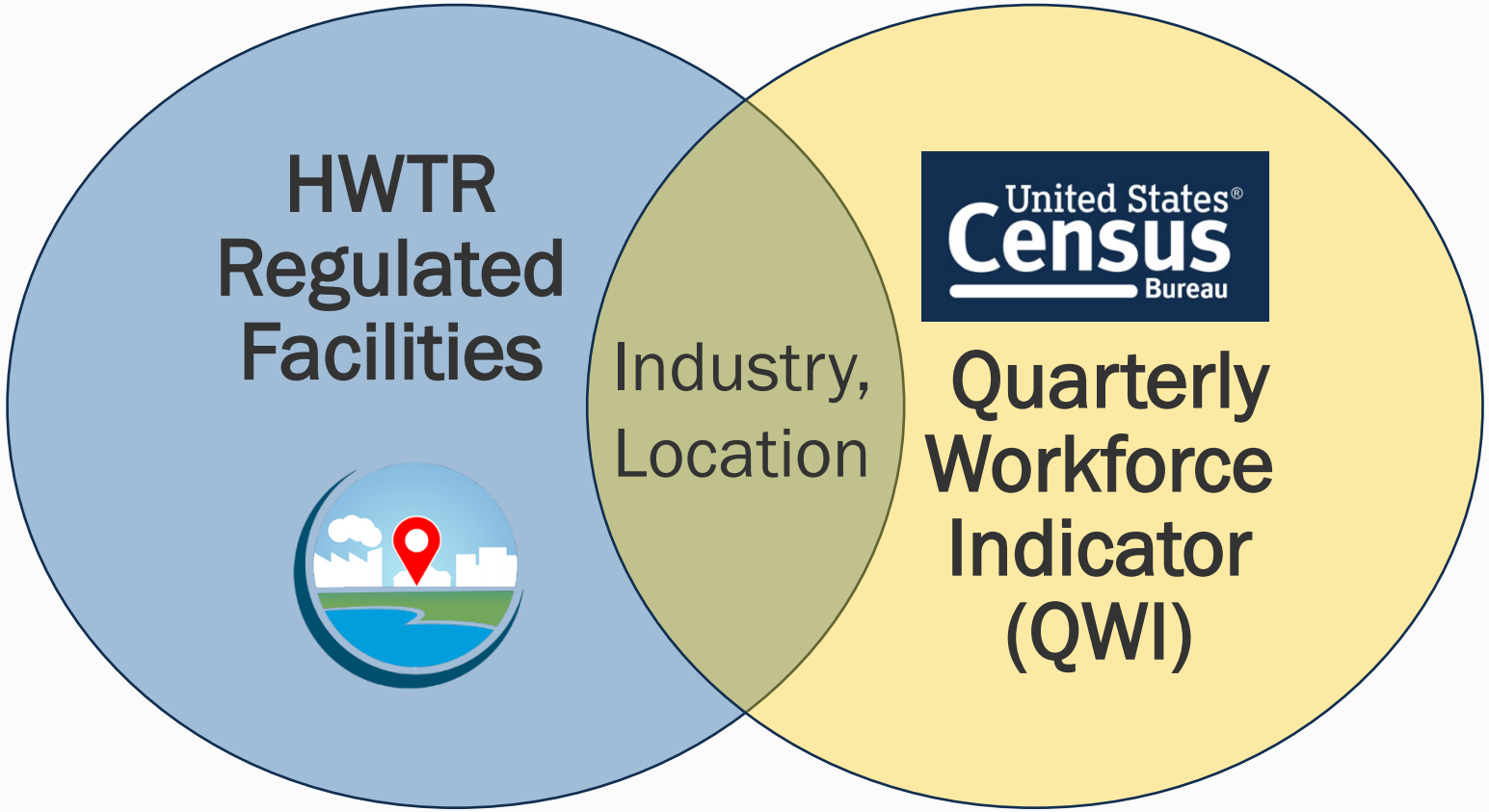
Within the Fenceline

Pollution Prevention Grant for Food Processors

Grant Selection Criteria

- Surveyed food manufacturers and processors across Washington for ideal candidate
- Evaluated ~11 potential candidates based on
  - Industry/Sector
  - Engineering systems
  - Technical readiness
  - Business readiness
  - Potential environmental benefits
  - (Environmental Justice Measures)

Exploring EJ in the Workforce



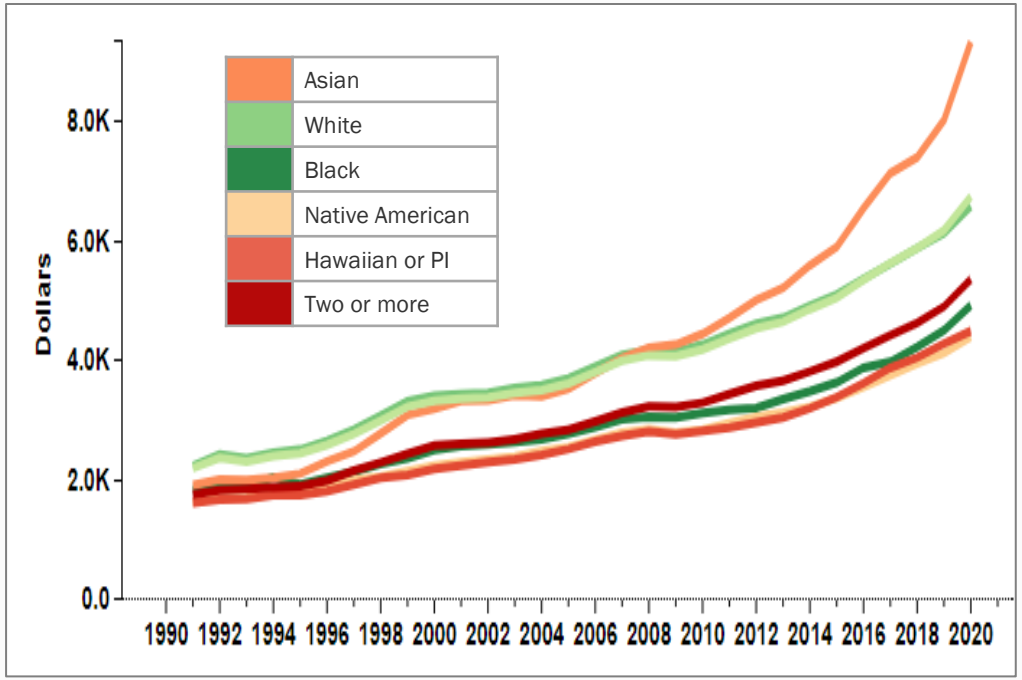
Exploring EJ in the Workforce

United States® Census Bureau Quarterly Workforce Indicator (QWI)

A set 32 economic indicators covering:

- Employment Count
- Industry
- Geography (State / County)
- Wages
- Worker Demographics
  - Age / sex
  - Race
  - Ethnicity
  - Education

Average Monthly Earnings by Race (WA)



Exploring EJ in the Workforce

Geography Level

Washington

Indicator

Emp - Beginning of Quarter Employment: Count

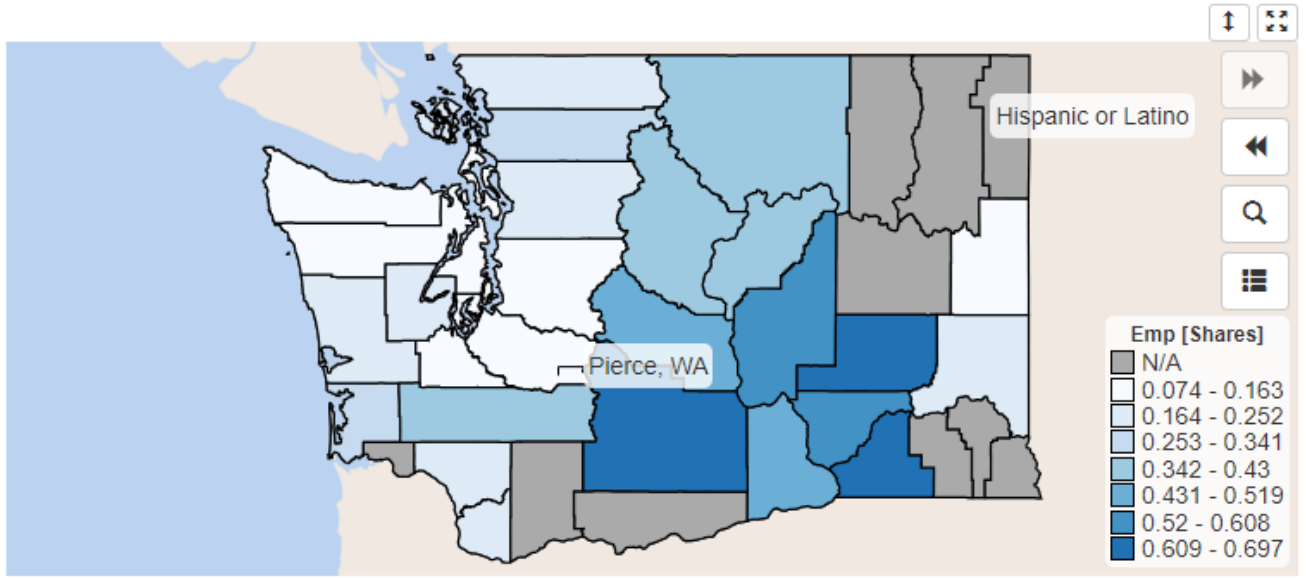
Get Data | Share | Get Report

Filters/Aggregations

Quarters: 2022 Q4
Geography: X-Axis
NAICS 3-digit Subsectors: Food Manufacturing
Firm Ownership: All Private Ownership
Firm Age/Size: None
Worker Characteristics: None

QWI Status Flags

- Data not available to compute this estimate.
- Aggregate of cells not released because component cells do not meet U.S. Census Bureau publication standards.



Line | Bar | Map

X-Axis

Counties

39 Counties Selected

Normalize on X-Axis

Group

Ethnicity

Two Ethnicities Selected

Normalize on Group

	Not Hispanic or Latino	▼ Hispanic or Latino
Adams, WA	0.303	0.697
Yakima, WA	0.324	0.676
Walla Walla, WA	0.377	0.623
Franklin, WA	0.414	0.586
Grant, WA	0.448	0.552
Benton, WA	0.529	0.470

TRI Facilities
Sorted by Estimated Black or Afr. Am. Workforce

Facility Name	Industry	County	State	All Races	% American Indian or Alaska Native Alone	% Asian Alone	% Hispanic or Latino	% Black or African American Alone	% Native Hawaiian or Other Pacific Islander Alone	% Two or More Race Groups	% White Alone	% Non White
EMERALD SERVICES	5621 - Waste Collection	KING	WA	1334	1.7%	6.6%	14.3%	**14.2%**	2.1%	6.0%	69.1%	30.8%
CERTAINTEED GYPSUM	3274 - Lime and Gypsum Product Manufacturing	KING	WA	267	0.7%	15.3%	16.4%	**12.7%**	0.0%	3.0%	67.4%	31.8%
BRADKEN ENERGY	3315 - Foundries	PIERCE	WA	262	0.0%	15.6%	12.9%	**12.6%**	0.0%	2.2%	67.2%	30.5%
PRAXAIR SPECIALTY CERAMICS	3251 - Basic Chemical Manufacturing	KING	WA	56	0.0%	5.3%	0.0%	**12.5%**	0.0%	5.3%	75.0%	23.2%
SR SMITH	3261 - Plastics Product Manufacturing	SNOHOMISH	WA	501	1.8%	12.3%	15.1%	**11.2%**	1.4%	4.5%	68.9%	31.3%
ACHILLES USA	3261 - Plastics Product Manufacturing	SNOHOMISH	WA	501	1.8%	12.3%	15.1%	**11.2%**	1.4%	4.5%	68.9%	31.3%
GEORGIA-PACIFIC GYPSUM	3274 - Lime and Gypsum Product Manufacturing	PIERCE	WA	107	0.0%	3.7%	11.2%	**10.3%**	5.6%	5.6%	72.9%	25.23
...												

Grant Selection Criteria

			Washington Tracking Network		QWI Workforce Profile for each County / Industry (NAICS4) Combination					
Company	NAICS	County	Env. Health Disparity Rank (1-10)	Socio-Economic Rank (1-10)	American Indian or Alaska Native	Asian	Black or African American	Hispanic or Latino	Native Hawaiian or Other Pacific Islander	White
Smith Brothers Farms Inc	111998	King	9	9	0%	30.2%	3.6%	20.0%	0%	46.1%
Andersen Dairy Inc.	112120	Clark	6	6	0%	5.4%	0%	27.0%	0%	67.5%
Trident Seafoods	311710	King	7	1	1.3%	20.8%	12.1%	16.4%	2.4%	44.3%
Macrina Bakery	311800	King	10	7	1.0%	19.1%	7.6%	13.1%	1.1%	53.8%
Olson's Baking Company L.L.C.	311800	Snohomish	8	9	0.9%	8.4%	4.2%	18.5%	0.7%	63.2%
BumbleBar/Clean Copack	311800	Spokane	6	6	1.4%	4.3%	4.7%	7.2%	3.5%	75.3%
Garden Fresh Foods	311999	King	5	1	1.2%	21.9%	8.5%	12.1%	1.7%	51.3%
The JM Smucker Company	311400	Yakima	8	10	2.1%	1.3%	1.1%	38.5%	0.1%	55.4%
Ste. Michelle Wine Estates	722511	King	6	6	1.2%	15.0%	5.3%	14.3%	0.6%	58.3%
Darigold Spokane	339999	Spokane	10	9	1.8%	1.4%	0.0%	3.7%	0%	90.7%
Welchs – Grandview, WA	311411	Yakima	7	10	2.1%	1.3%	1.1%	38.5%	0.2%	55.4%

Future Work

- Highlighting specific chemical hazards in local industries that disproportionately affect disadvantaged workers (i.e. cleaning products in janitorial services industry)
- Product Replacement Program efforts to address
  - PERC at dry cleaners
  - Solvents in auto shops
  - BPA in receipts at retail stores

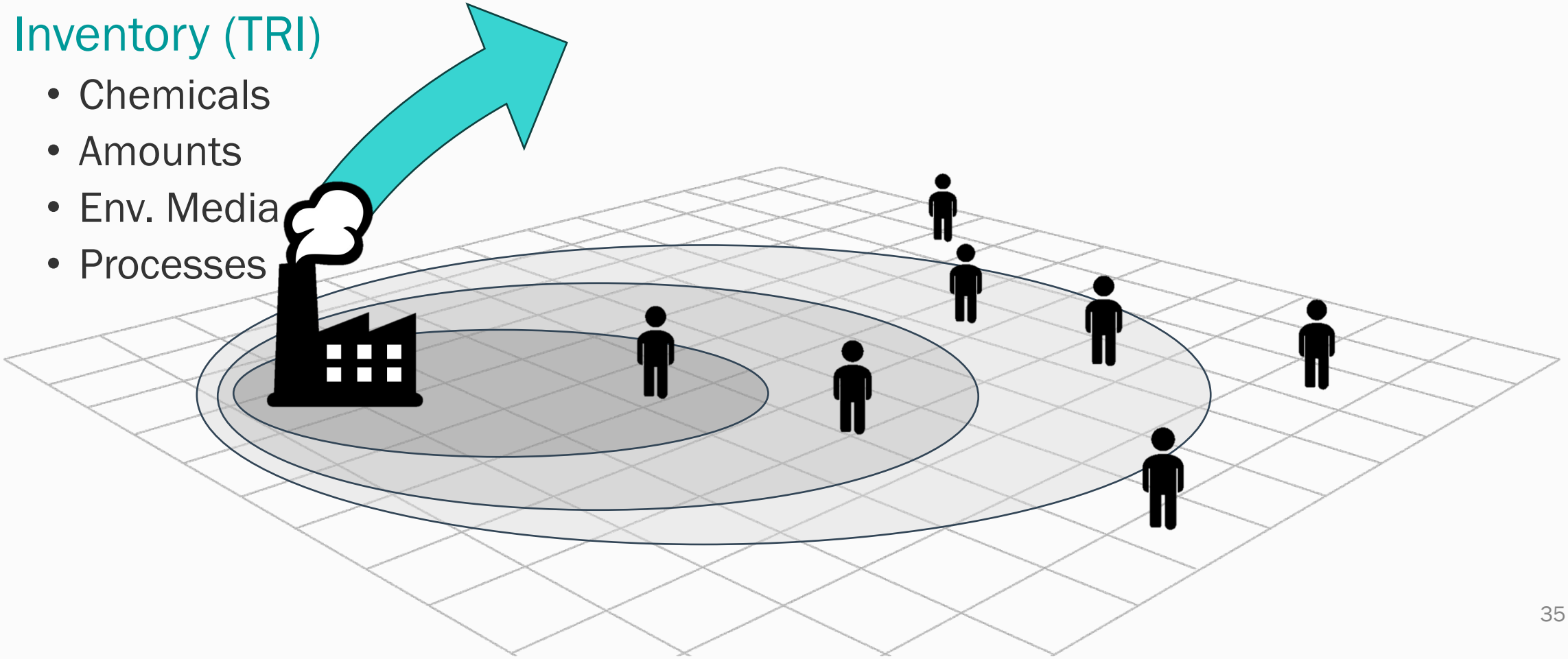
Example 3

Far Beyond the Fenceline

Toxic Emissions from a Community Perspective

Toxic Impacts to Communities

- Toxics Release Inventory (TRI)
  - Chemicals
  - Amounts
  - Env. Media
  - Processes



Toxic Impacts to Communities

- Toxics Release Inventory (TRI)
  - Chemicals
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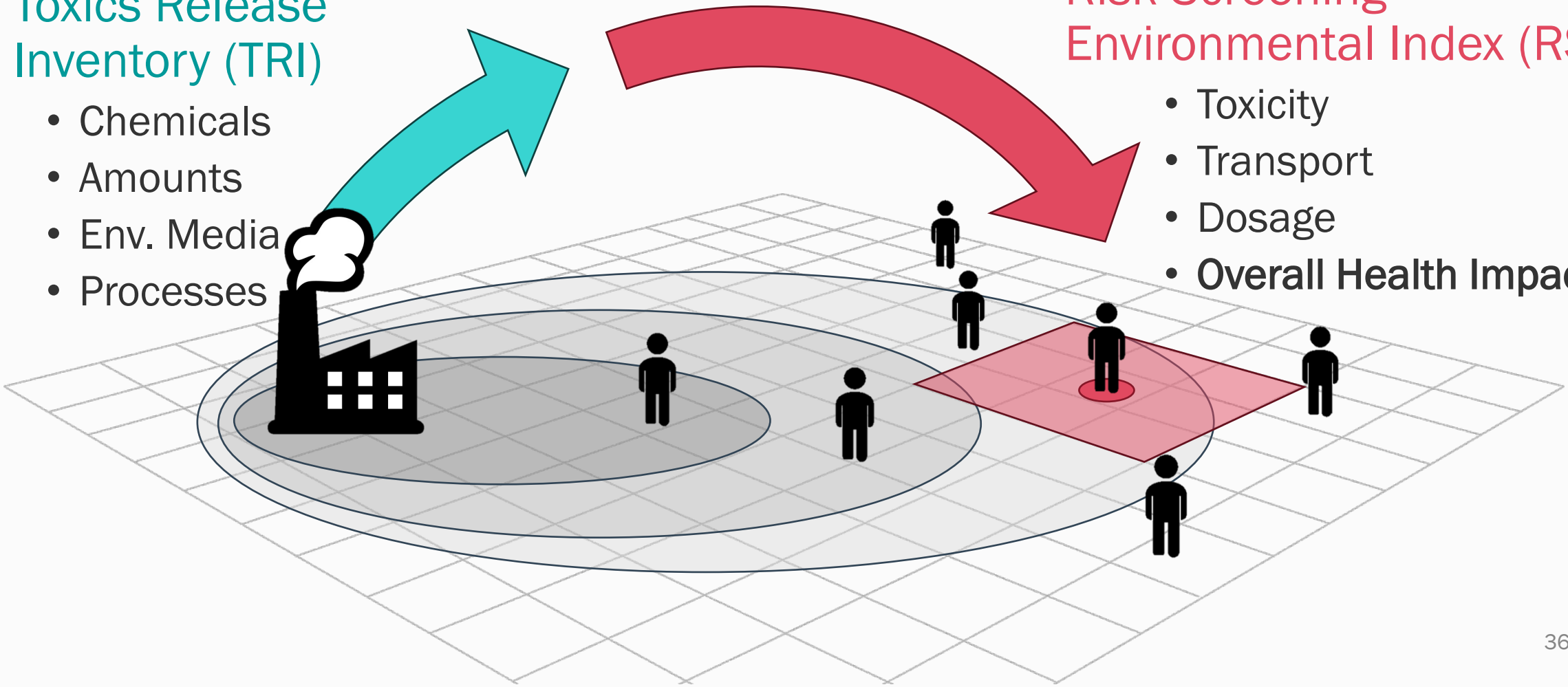
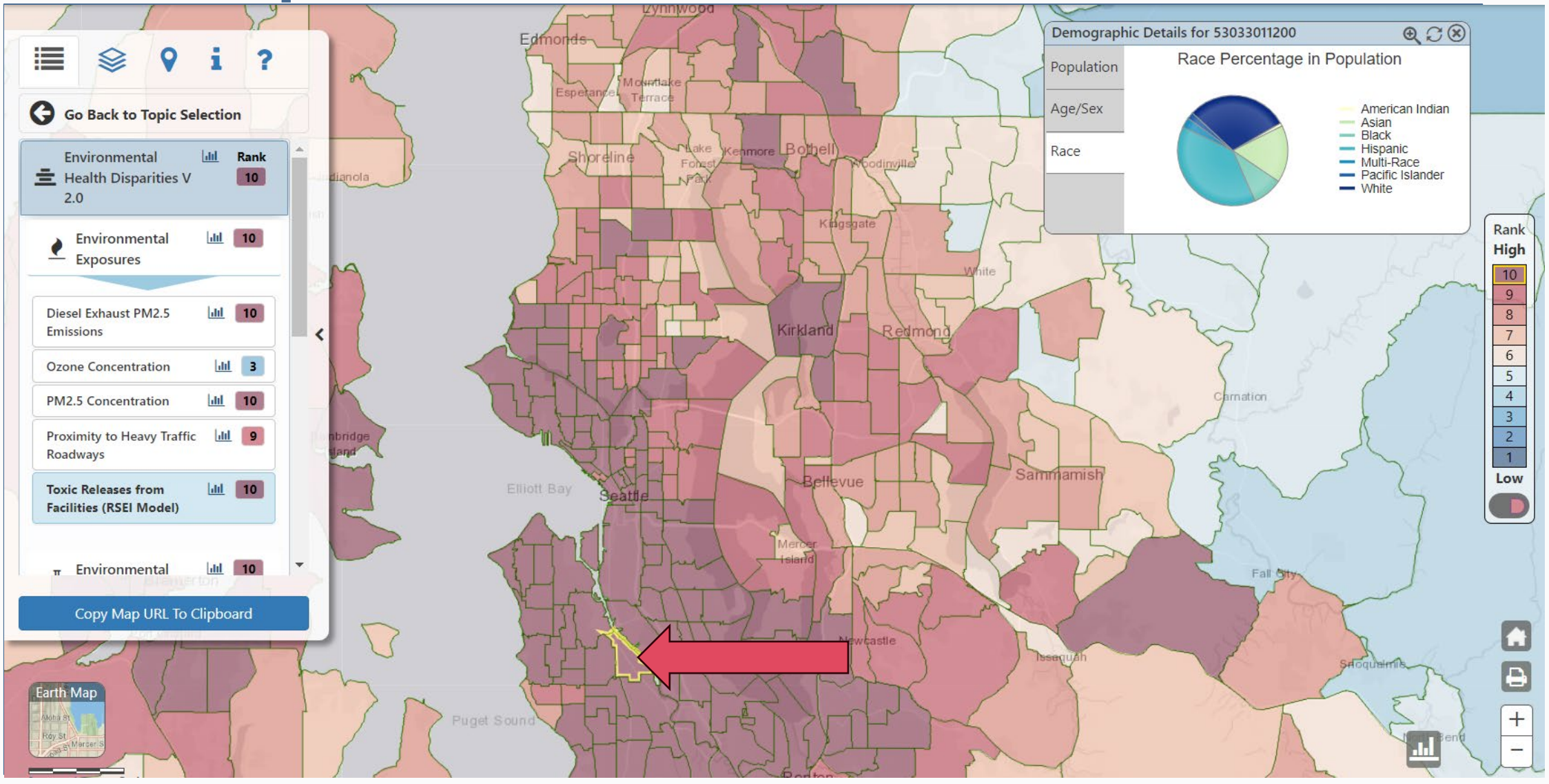


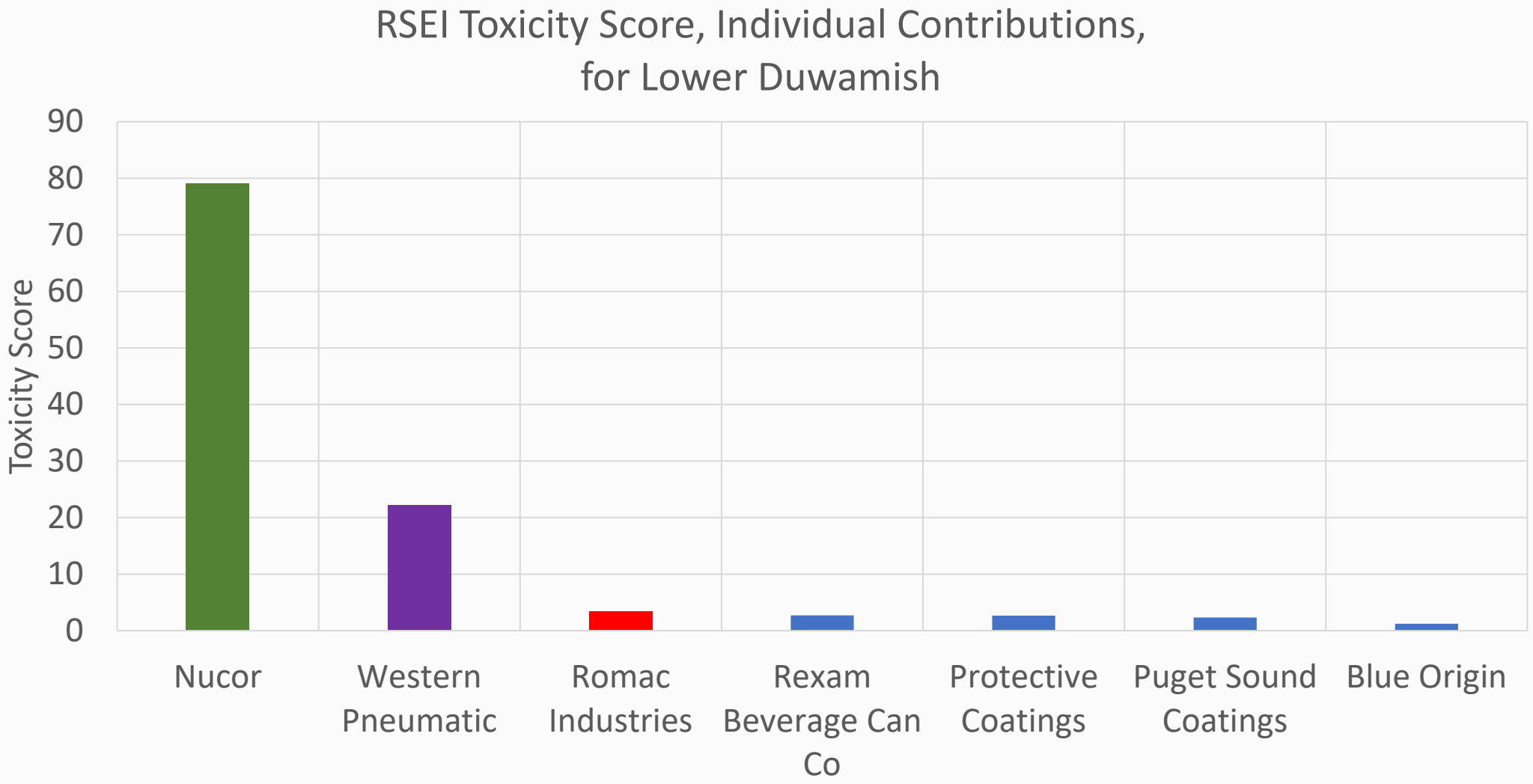
- Risk Screening Environmental Index (RSEI)
  - Toxicity
  - Transport
  - Dosage
  - **Overall Health Impact**

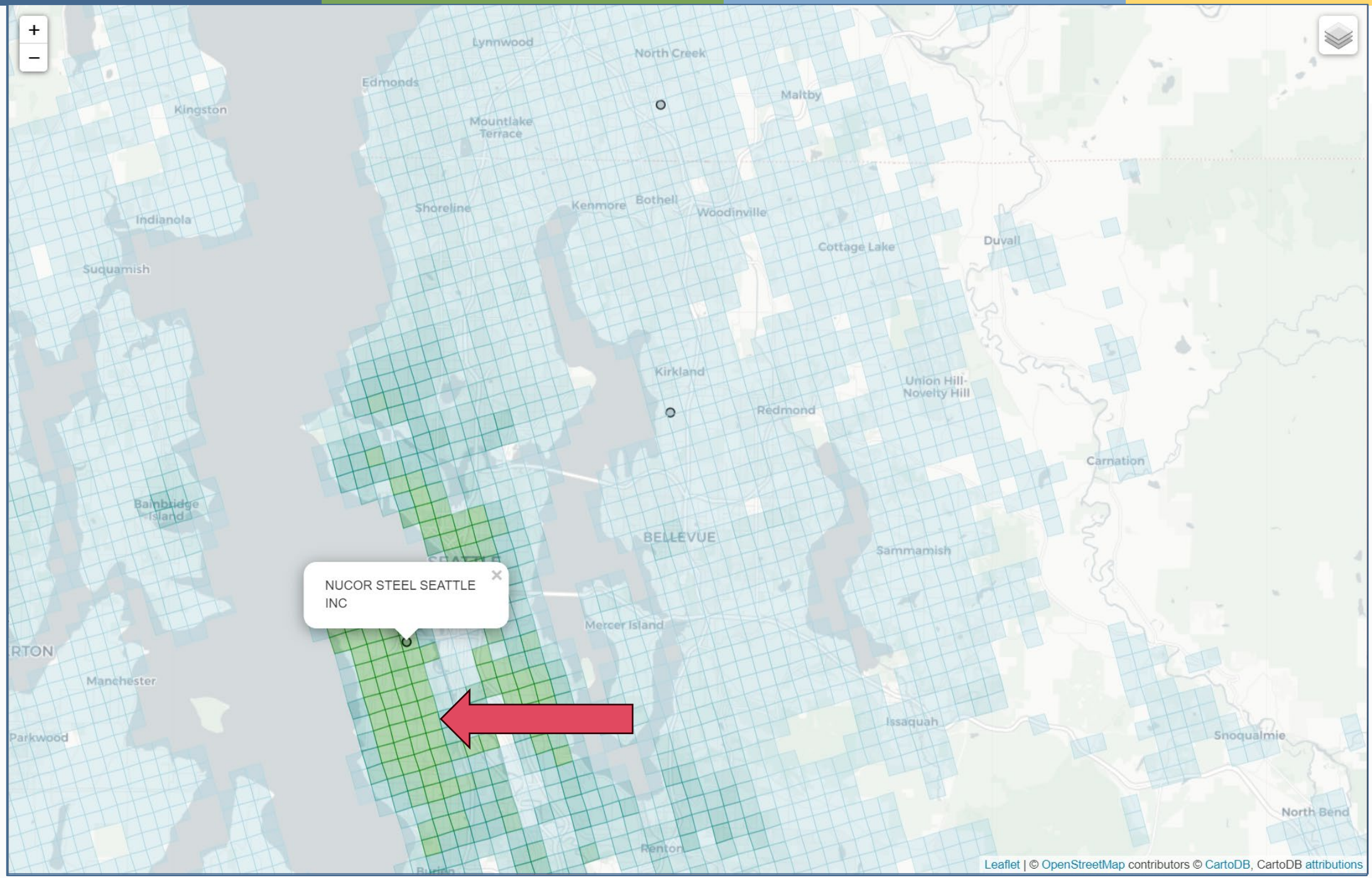
DEPARTMENT OF ECOLOGY
State of Washington

Toxic Impacts to Communities



Toxic Impacts to Communities

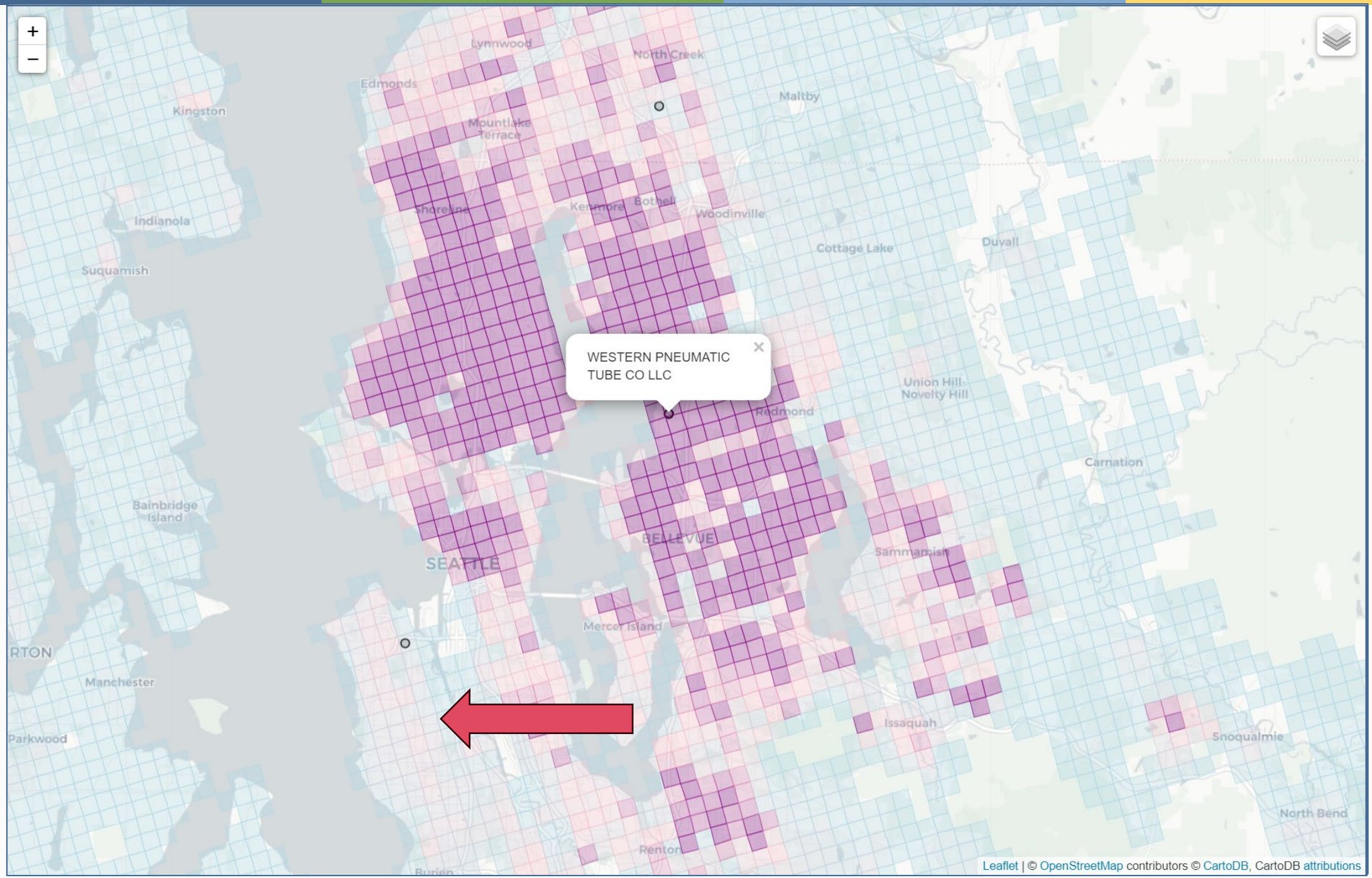




100

RSEI Risk Score

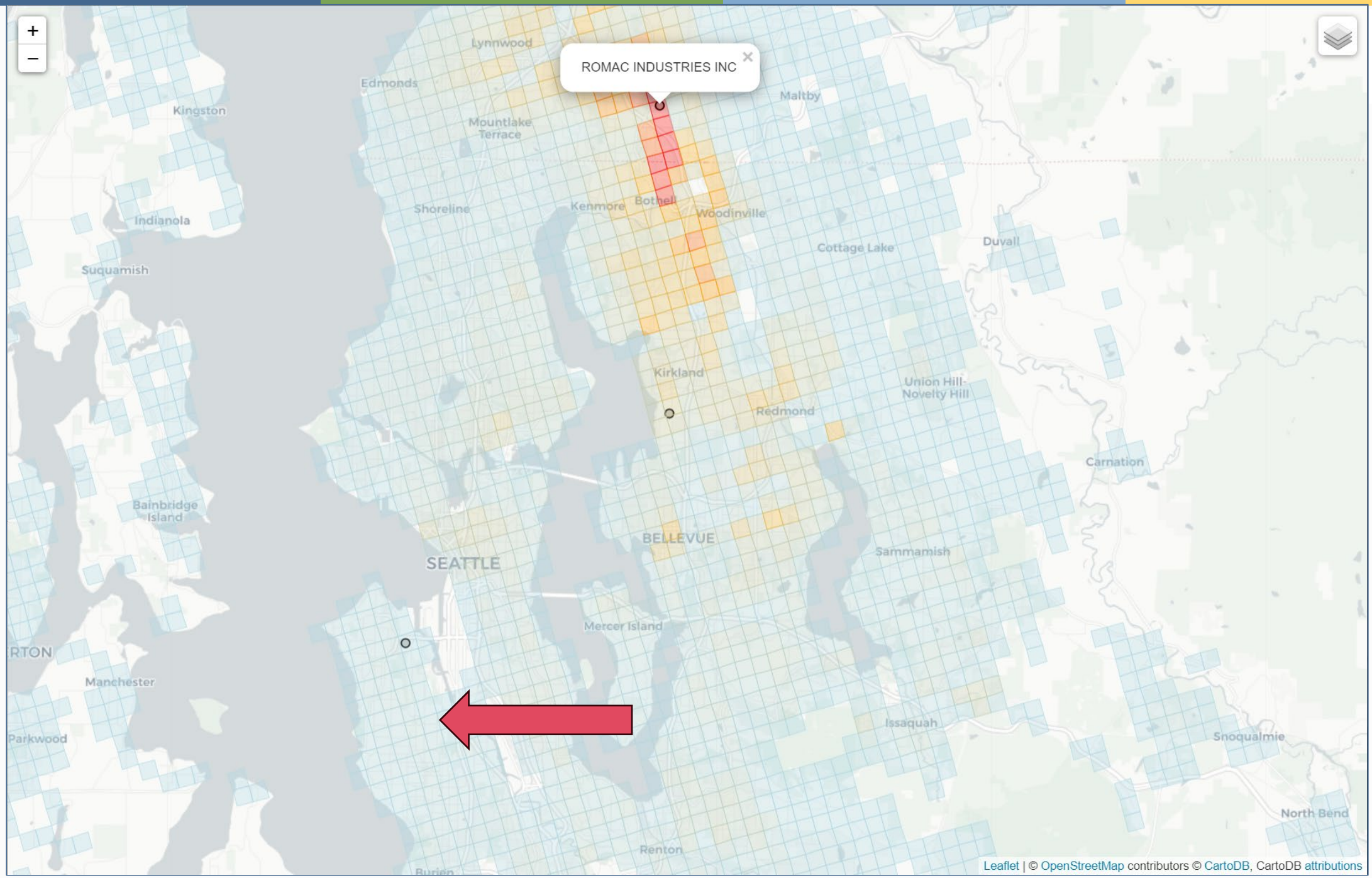
0



100

RSEI Risk Score

0



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RSEI Risk Score

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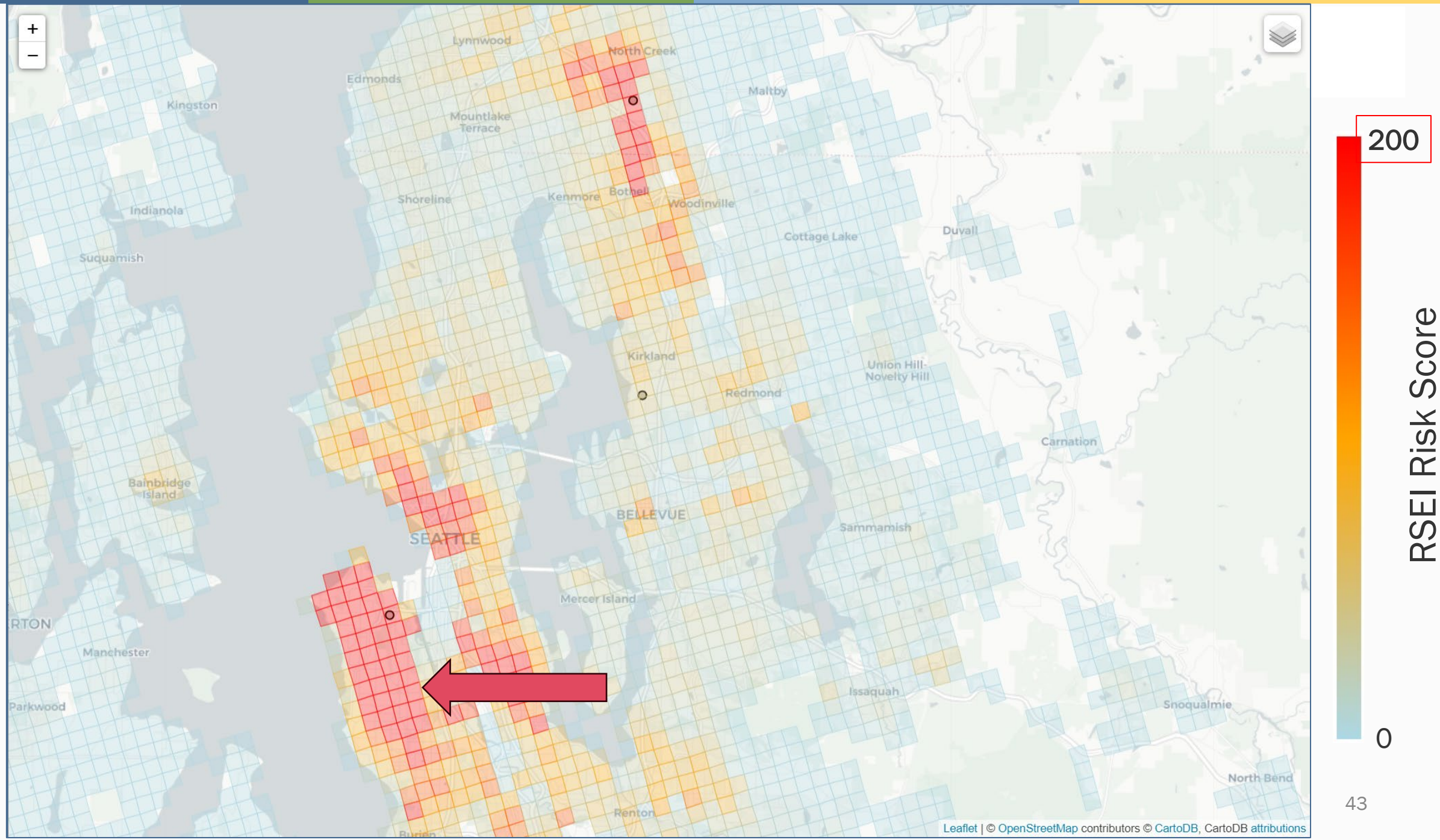
Lynnwood
North Creek
Edmonds
Maltby
Kingston
Mountlake Terrace
Shoreline
Kenmore
Bothell
Woodinville
Indianola
Cottage Lake
Duvall
Suquamish
Kirkland
Union Hill-Novelty Hill
Redmond
Carnation
Bainbridge Island
BELLEVUE
SEATTLE
Sammamish
Mercer Island
RTON
Manchester
Issaquah
Parkwood
Snoqualmie
North Bend
Renton
Leaflet | © OpenStreetMap contributors © CartoDB, CartoDB attributions
200
RSEI Risk Score
0

What's Next

- More work to understand how environmental burden is distributed across EJ communities
- Risk based evaluation
  - Chemical hazard
  - Exposure potential
  - Compliance history
- Community-centric prioritization, tracing toxic impacts from community to source, not the other way around
- Engaging communities on issues impacting them

Thank you

Questions, Feedback?

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Research Analyst
WA State Department of Ecology
Hazardous Waste Toxics Reduction Program
teague.powell@ecy.wa.gov

Resources

Mapping Tools

- EPA's EJ Screen
- WA Dept. of Health's WA Tracking Network's Env. Health Disparities Map
- Climate and Economic Justice Screening Tool (Justice 40)
- Census Data Tools
- Census Business Builder

Workforce / Business Demographics

- QWI Explorer
- Data Axle via Local Library Reference Databases

Guides

- WA State Environmental Justice Task Force Final Report
- Racial Equity Toolkit

Safer Products Washington (SPWA)

Law established a process for us to:

1. **Designate priority chemicals**
2. **Identify consumer products** that contain these chemicals
3. Decide whether to regulate those chemical-product combinations by requiring reporting or restrictions
4. Adopt rules to implement those regulatory actions

SPWA Outreach Efforts

- Three websites
- Webinars
- In person, facilitated, workshops
- Many updates via email list
- Infographics (in Spanish, Korean, Vietnamese, Samoan, Laotian, Iu Mien, Hmong, Russian, Tagalog)
- Public comment surveys
- Three public comment periods
- Focus sheets and infographics
- Blog posts, social media content, articles
- Videos in English and Spanish
- Storymaps in English and Spanish

SPWA – Lessons Learned

- Don’t let perfect stand in the way of good enough
- Identify where to collaborate and take community input
- Engage community groups
- Communicate boundaries, set expectations
- Facilitation helps create a more collaborative environment
- Responsiveness builds trust, be prepared to work outside the boundaries of your project, added outreach and education
- Storymaps, infographics, and surveys > Webinars
- Poster sessions to solicit comments
- Census data to inform outreach
- Language matters

Table of Contents

1 Introduction

2 Tools and Resources

3 Distributive Justice

4 Examples

5 Save Your Questions