

TDM Technical Committee

CTR Program Equity Study

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Equity Assessments

Key Findings



Social Vulnerability:

- CTR affected cities generally have a higher proportion of socially vulnerable populations compared to unaffected areas
- CTR worksites are also more likely to be in block groups with a high prevalence of social vulnerability



Overburdened Communities:

- CTR affected cities generally have a significantly higher Environmental Health Disparities (EHD) ranking compared to unaffected areas
- CTR worksites are also more likely to be in block groups with a high EHD ranking



Drive Alone Rates:

- Part-time employees are more likely to drive alone than full time employees
- There are statistically significant differences in the drive alone rates of employees based on their origin zip code.



CTR and Equity Industries:

- Professional services, construction, and health care are the most common industries in CTR affected cities
 - Healthcare is considered an essential industry and frequently employs shift workers
 - Professional services is one of the industries that most commonly employs people with disabilities
- Other *equity industries* are present throughout the State

The CTR Program is currently being implemented in socially vulnerable areas, which should make it easier to provide benefits to these community members.

Socially vulnerable populations in CTR affected cities

Understanding the **prevalence of vulnerable populations** in CTR affected cities

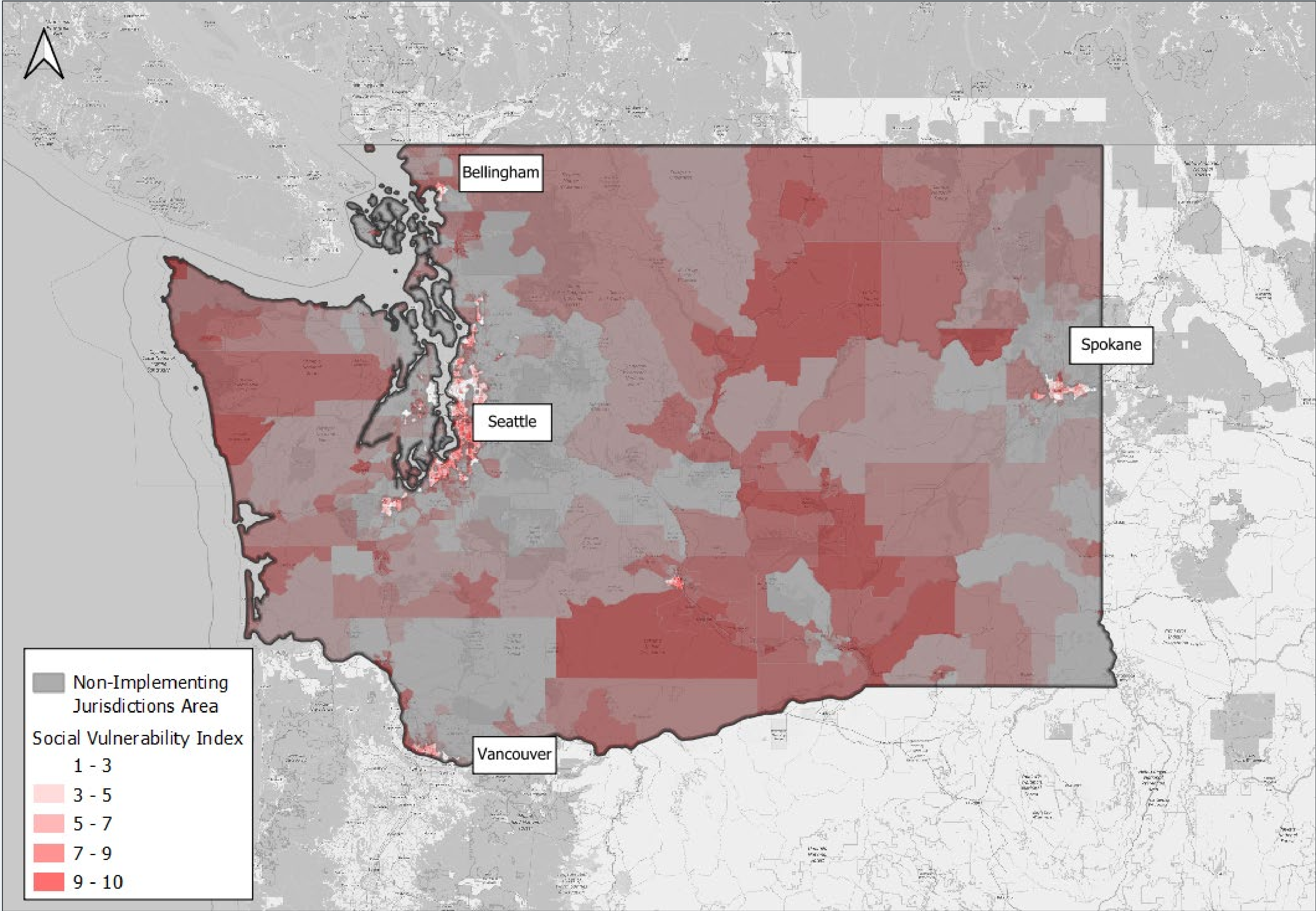
- 1. T-test:** Assess whether the average prevalence of vulnerable population characteristics in CTR affected cities is **significantly different** than in non-CTR affected areas
- 2. IV:** If block group is within a CTR affected city or not (binary)
- 3. DV:** Social Vulnerability Index (SVI), ranked from 1-10

	T-stat	df	P-value	Outcome
SVI rank by CTR affected city status	-3.665	1297.89	<0.001	Sig. diff

CTR Affected Cities Mean	Unaffected Areas Mean
5.79	5.23

Finding: SVI rank is generally slightly higher in CTR affected cities

Prevalence of vulnerable populations in CTR affected cities



Prevalence of CTR worksites in socially vulnerable communities

Understanding the **prevalence of socially vulnerable communities** in areas with **CTR worksites**

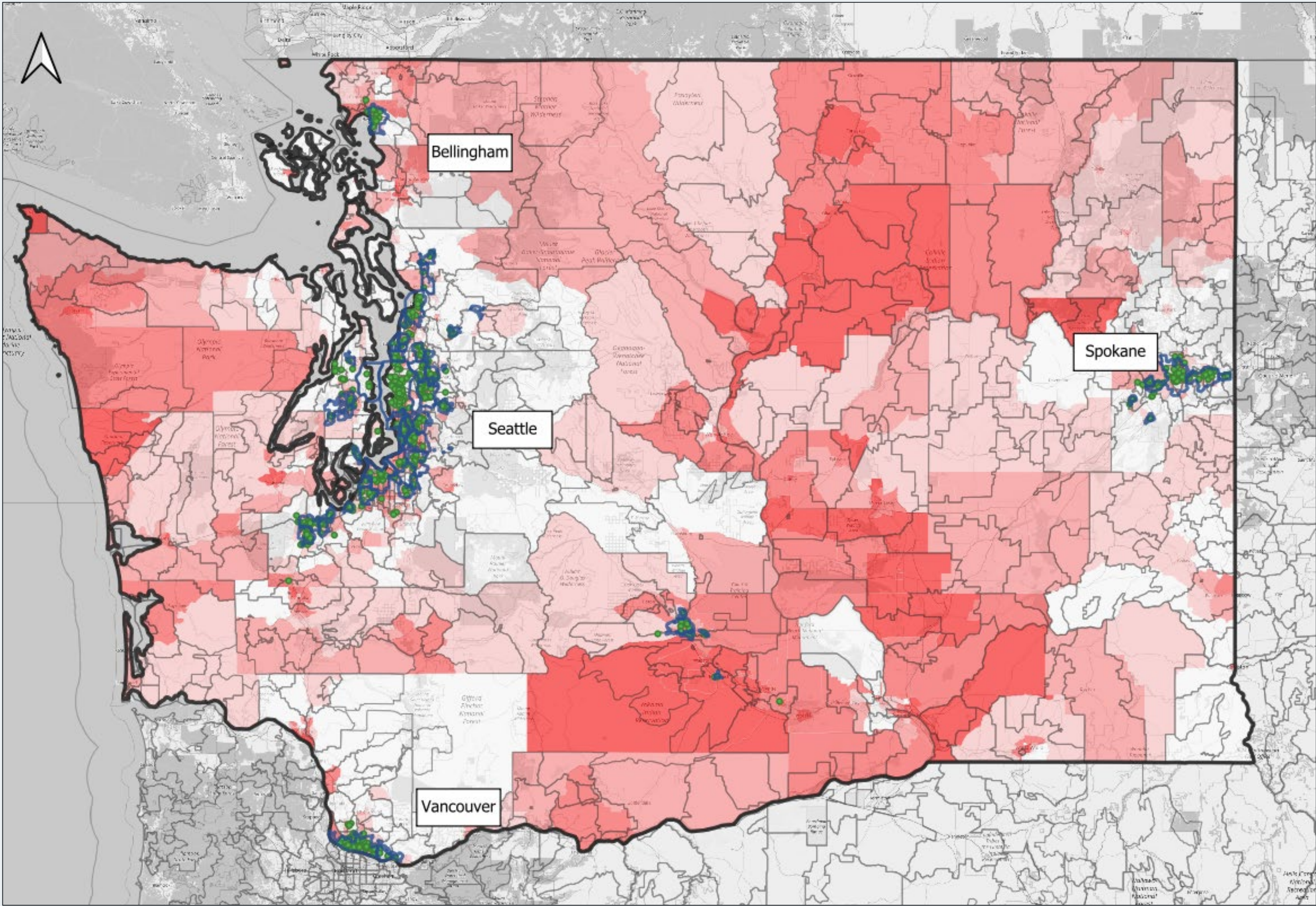
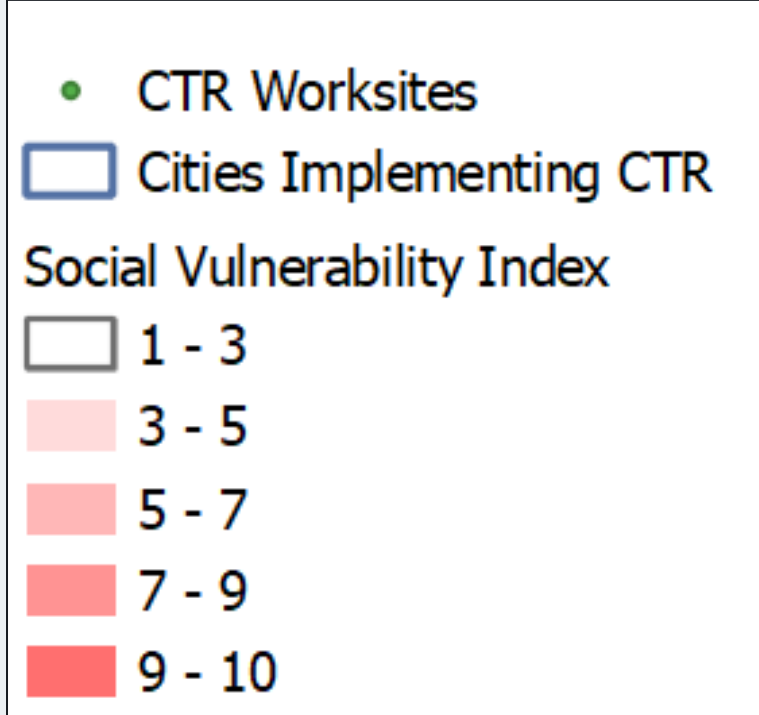
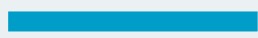
- 1. T-test:** Assess whether the average prevalence of socially vulnerable communities in areas with CTR worksites **is significantly different** than in areas without CTR worksites
- 2. IV:** If block group in a CTR affected city is categorized as a CTR site (binary)
- 3. DV:** Social Vulnerability Index (SVI), ranked from 1-10

	T-stat	df	P-value	Outcome
SVI rank by CTR site	-5.493	632.83	<0.001	Sig. diff

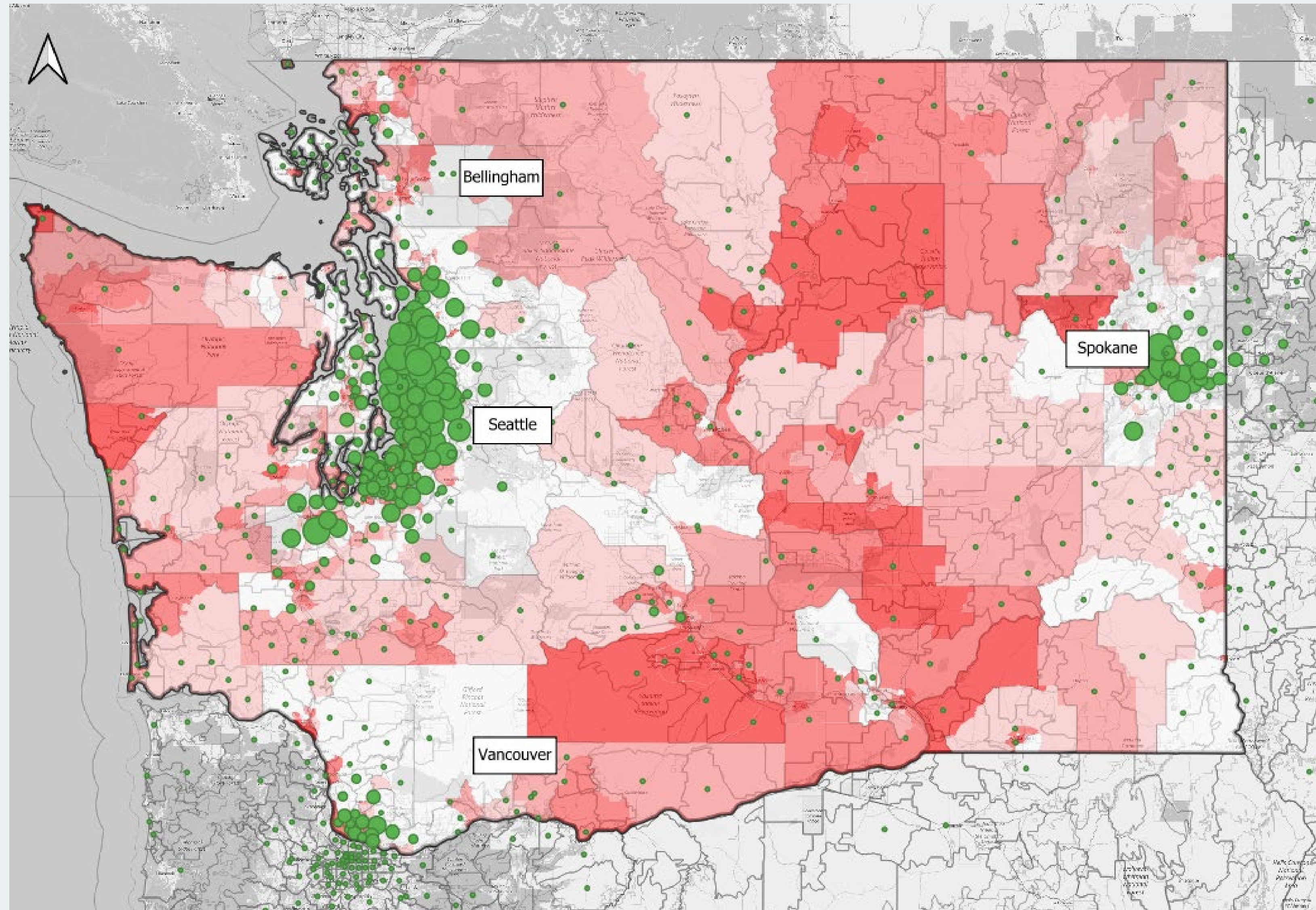
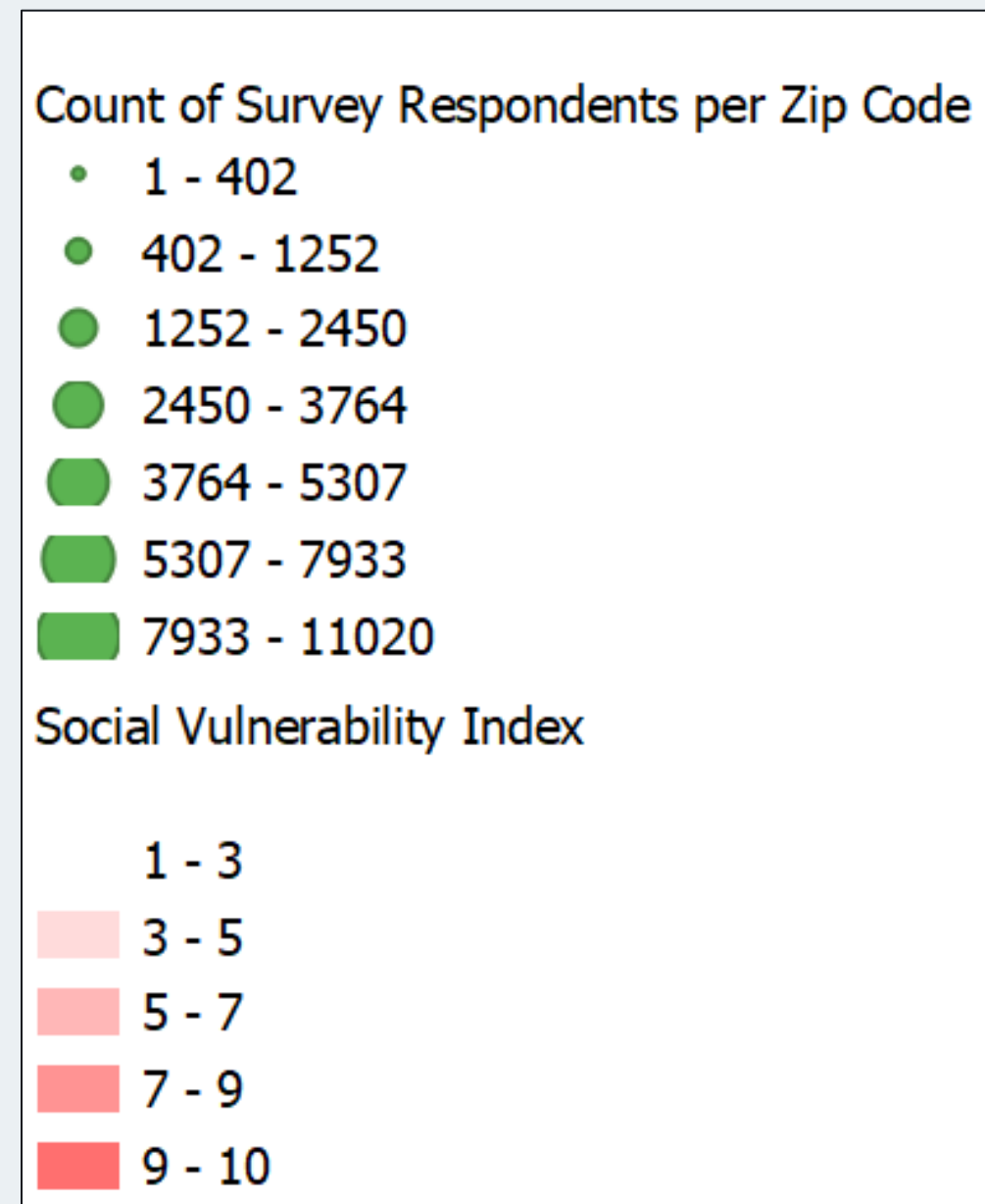
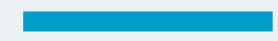
CTR Worksite Mean	Non-CTR Site Mean
6.510	5.435

Finding: Within CTR affected cities, socially vulnerable communities are more prevalent in areas with CTR worksites

Prevalence of CTR worksites in socially vulnerable communities



Employee origins and social vulnerability



Overburdened Communities

The CTR Program is currently being implemented in overburdened communities, which should mean that the environmental benefits of the program are accruing in these communities.

Prevalence of overburdened communities in CTR affected cities

Understanding the **prevalence of overburdened communities** in CTR affected cities

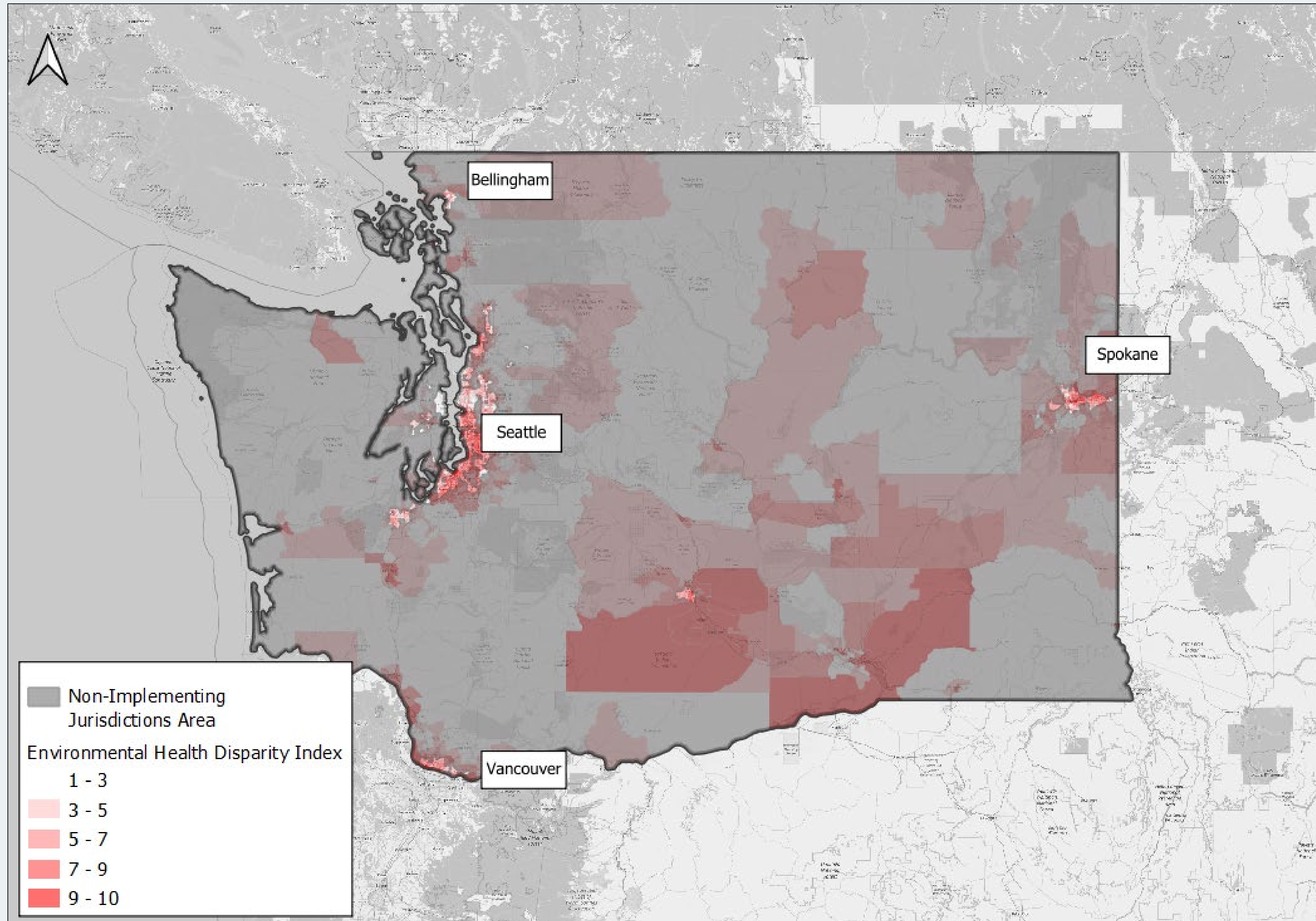
- 1. T-test:** Assess whether the average prevalence of overburdened communities in CTR affected cities **is significantly different** than in non-CTR affected areas
- 2. IV:** If block group is within a CTR affected city or not (binary)
- 3. DV:** Environmental Health Disparities, ranked from 1-10

	T-stat	df	P-value	Outcome
EHD rank by CTR-affected city status	-20.839	597.4	<0.001	Sig. diff

CTR Affected Cities Mean	Unaffected Areas Mean
6.72	3.95

Finding: Environmental Health Disparity rank is higher in CTR affected cities

Prevalence of overburdened communities in CTR affected cities



Prevalence of CTR worksites in overburdened communities

Understanding the **prevalence of overburdened communities** in areas with **CTR worksites**

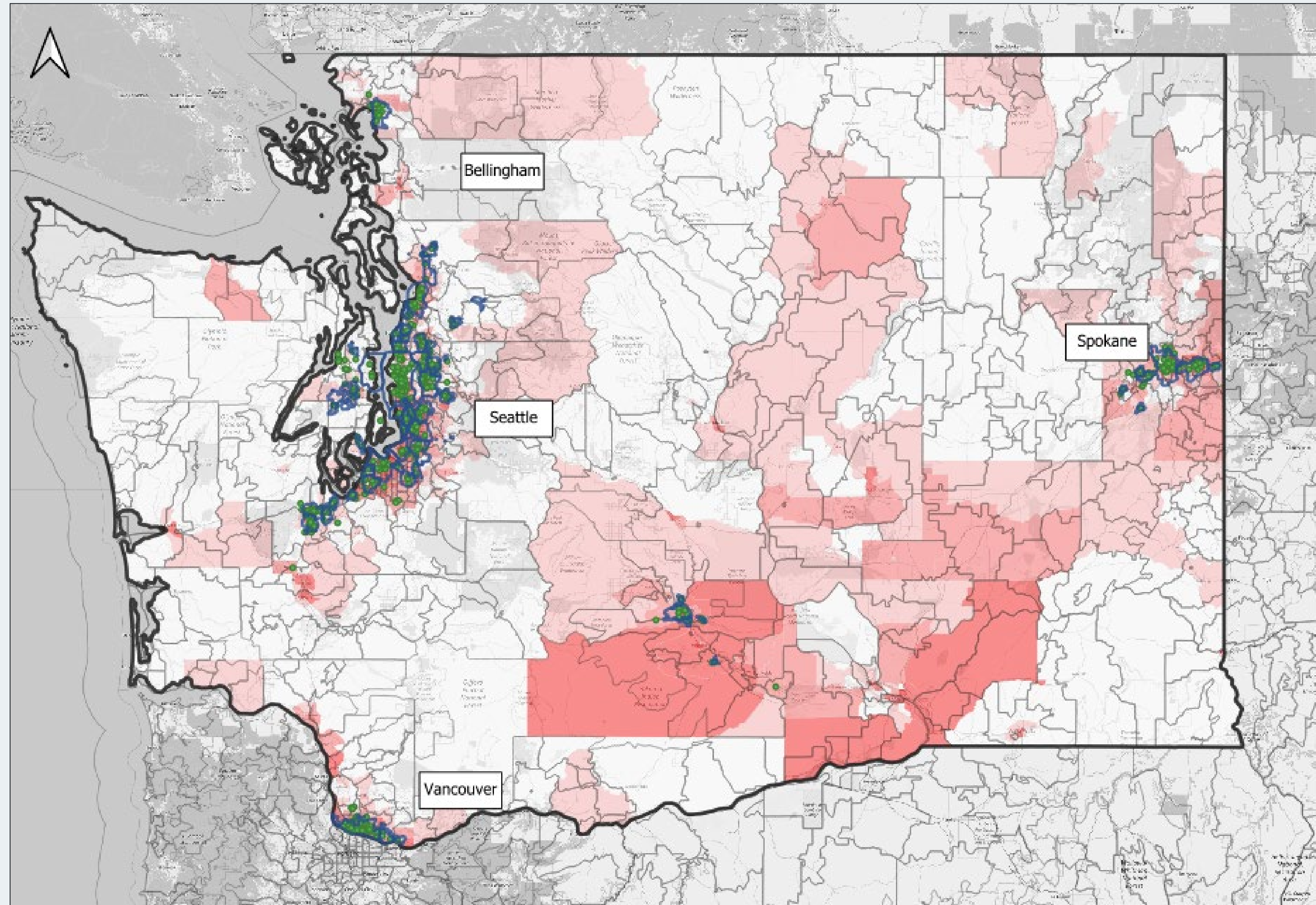
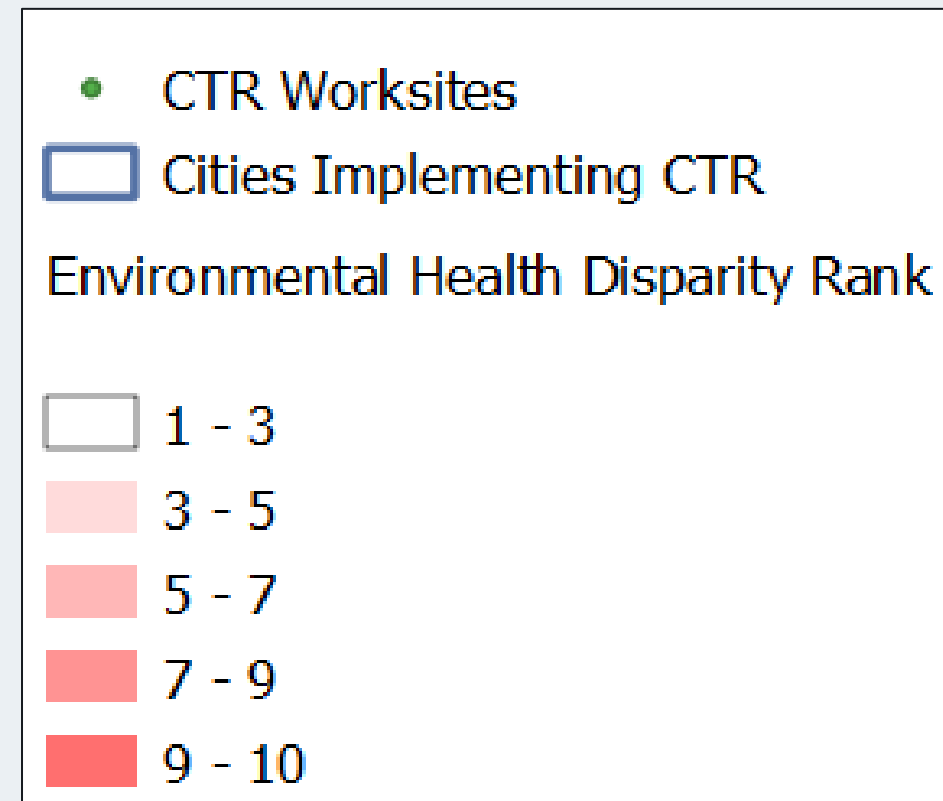
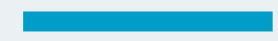
- 1. T-test:** Assess whether the average prevalence of overburdened communities in areas with CTR work sites **is significantly different** than in areas without CTR work sites
- 2. IV:** If block group in a CTR affected city is categorized as a CTR site (binary)
- 3. DV:** Environmental Health Disparities, ranked from 1-10

	T-stat	df	P-value	Outcome
EHD rank by CTR site	-3.708	589.63	<0.001	Sig. diff

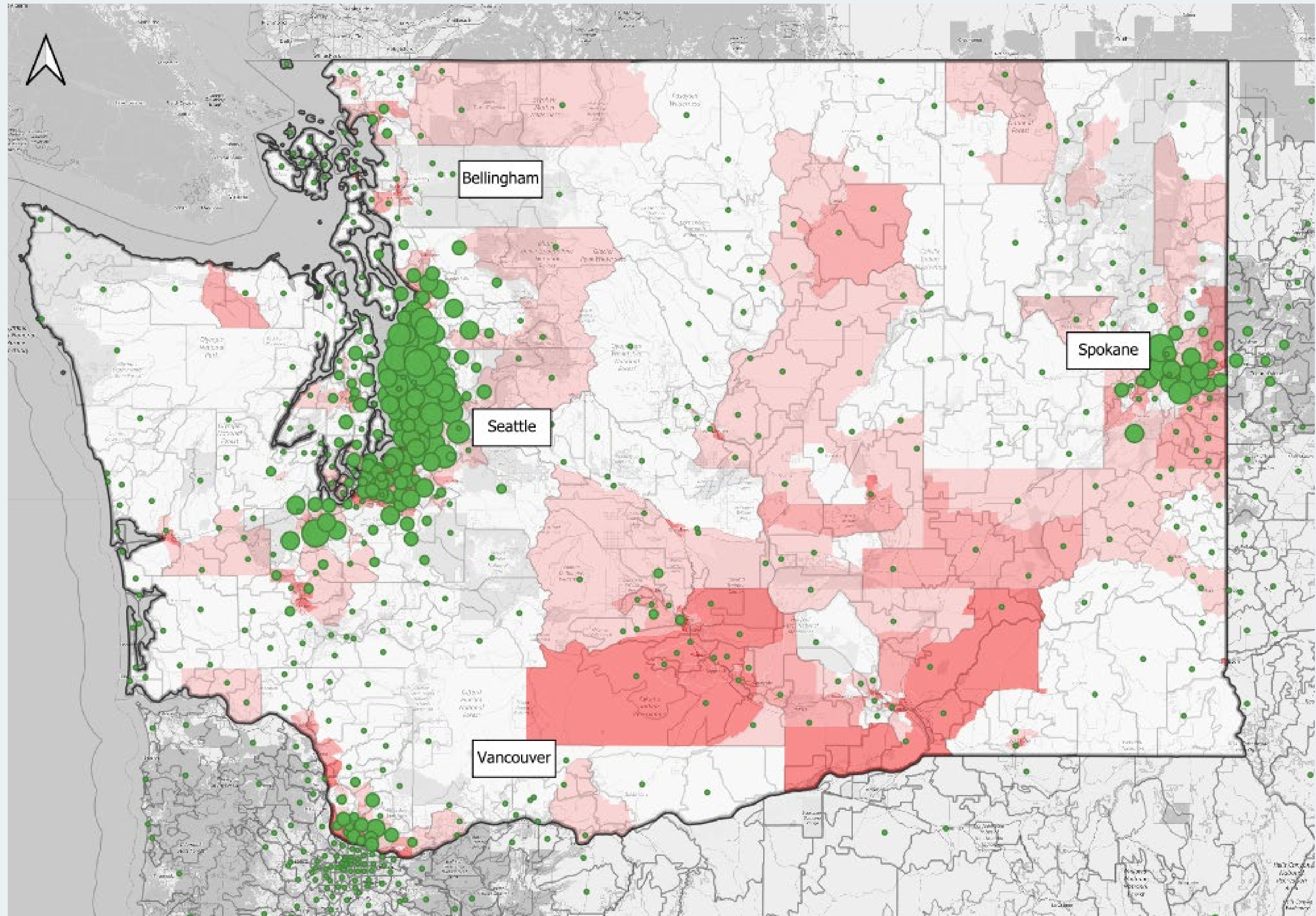
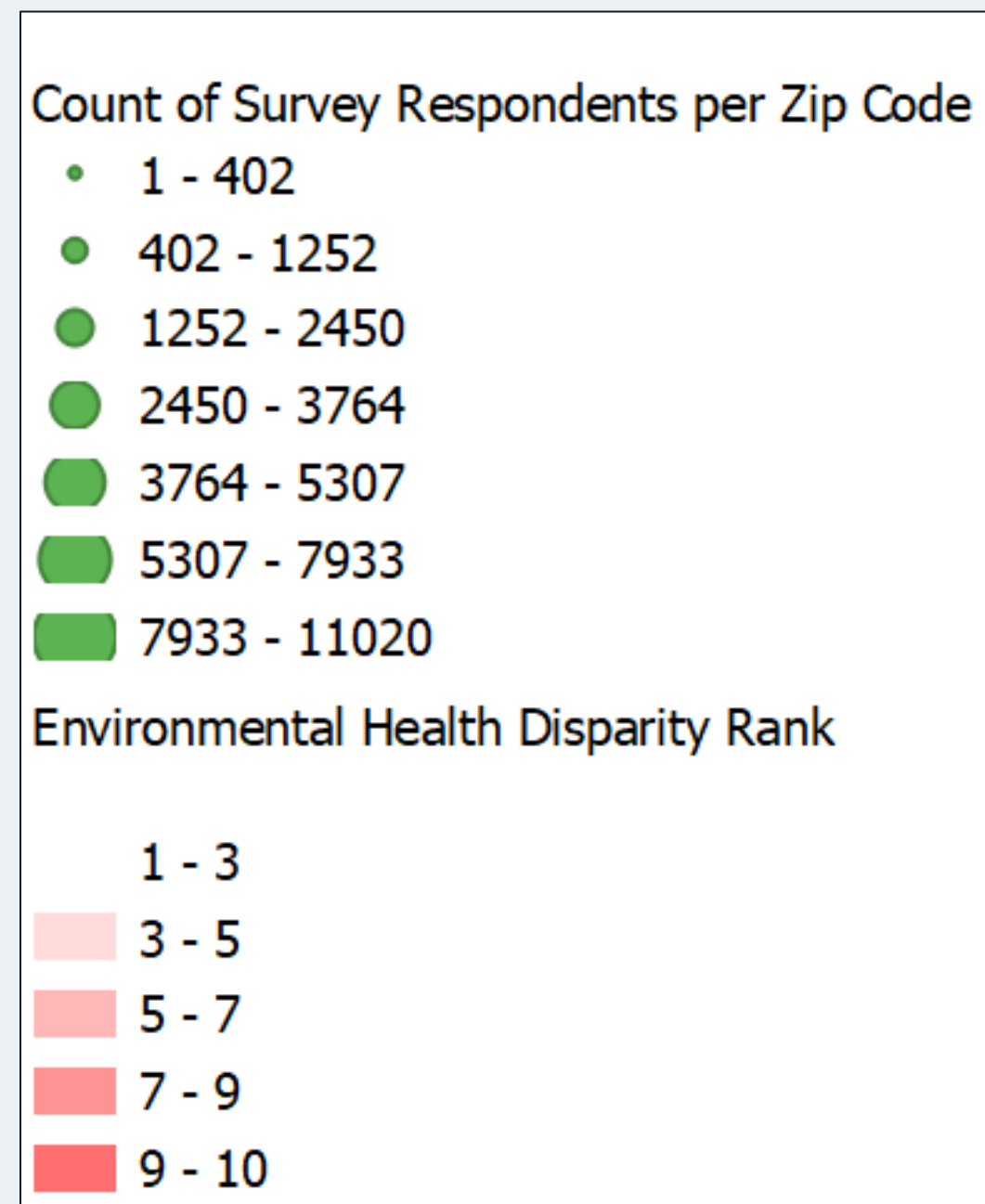
CTR Worksite Mean	Non-CTR Site Mean
7.18	6.50

Finding: Within CTR-affected cities, overburdened communities are more prevalent in areas with CTR sites

Prevalence of CTR worksites in overburdened communities



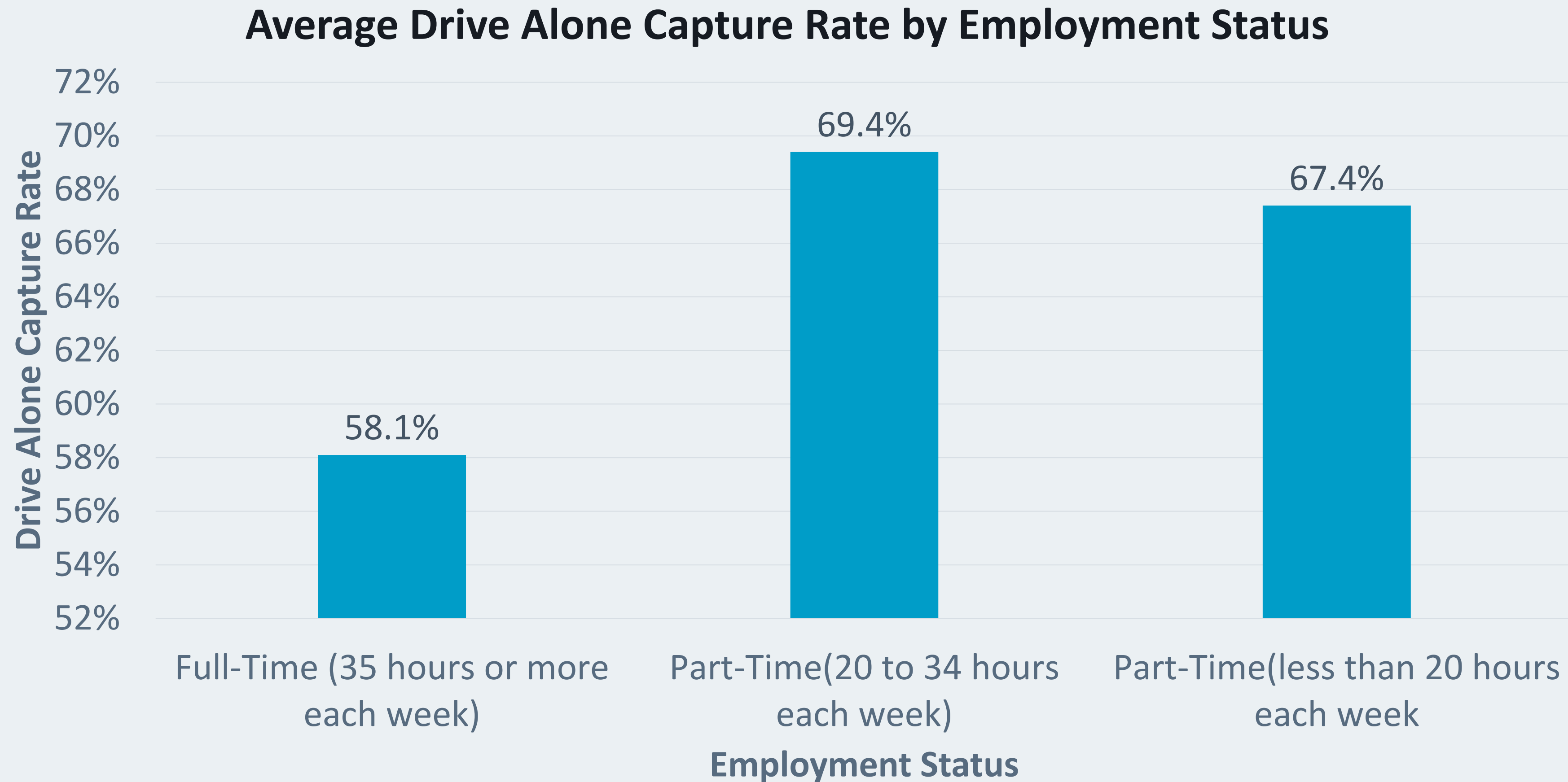
Employee origins and overburdened communities



Drive Alone Rates

Drive alone rates vary by employment status and employee origin zip code, implying that there may be compounding factors that contribute to a person's decision to drive alone to work.

CTR survey respondents who drive alone based on employment status



CTR survey respondents who drive alone based on their origin zip

Understanding the **differences in drive alone rates** based on **employees' home zip code**, using CTR survey data.

1. **Kruskal-Wallis Test:** Assess whether the **drive alone rates significantly vary among different zip code groups**.

- 1. **IV:** Employee Home Zip Code
- 2. **DV:** Drive Alone Capture Rate

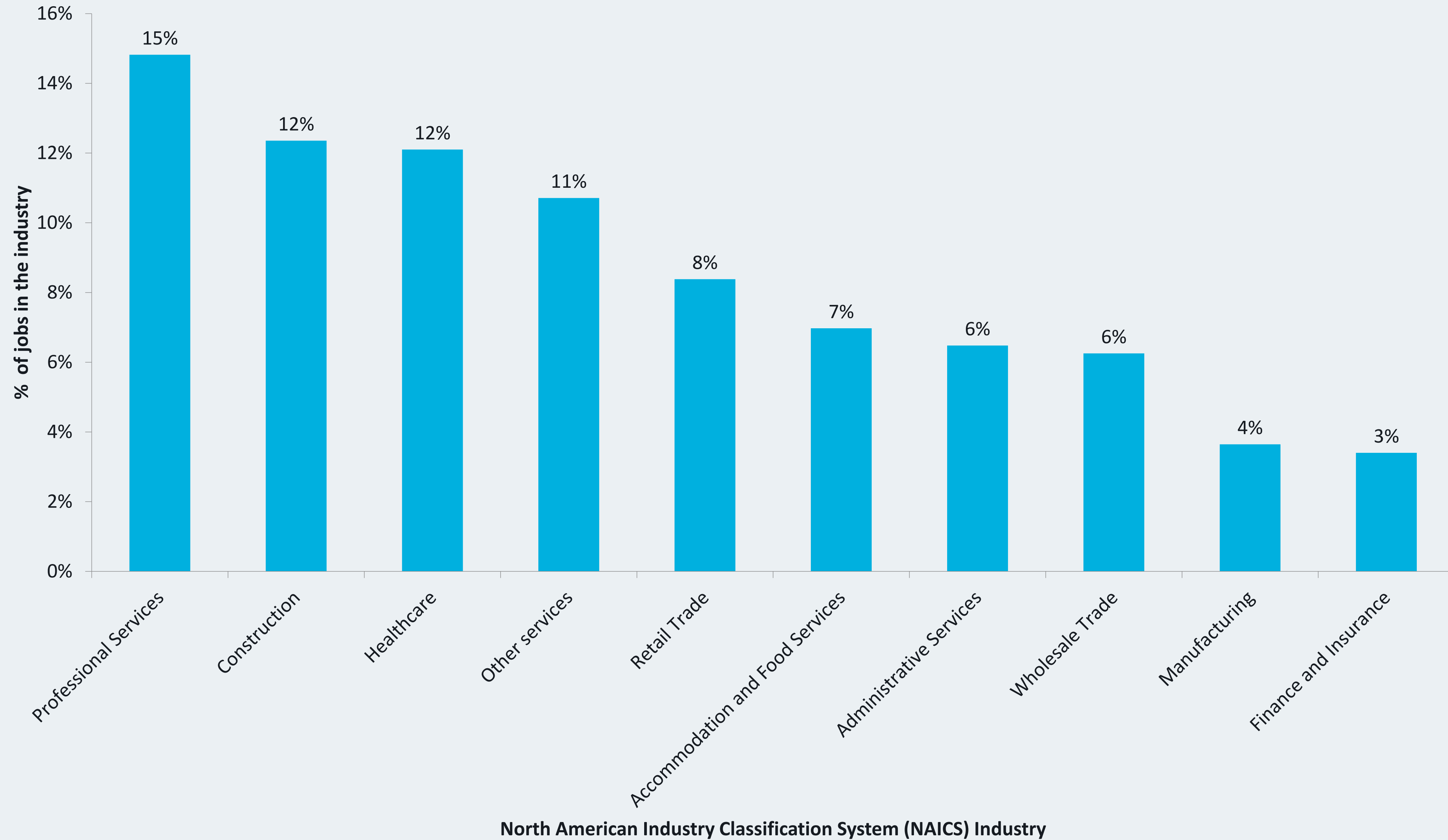
	K-W chi ²	df	P-value	Outcome
Drive Alone Rate by Zip Code	66622	948	<0.001*	Sig. diff

Finding: There are significant differences in the drive alone rate across the various employee home zip codes (to be explored in later assessment).

CTR and Equity Industries

Certain industries are more prevalent in CTR affected cities. These industries generally differ from *equity industries* that are more likely to employ essential workers, employees with disabilities, or shift workers.

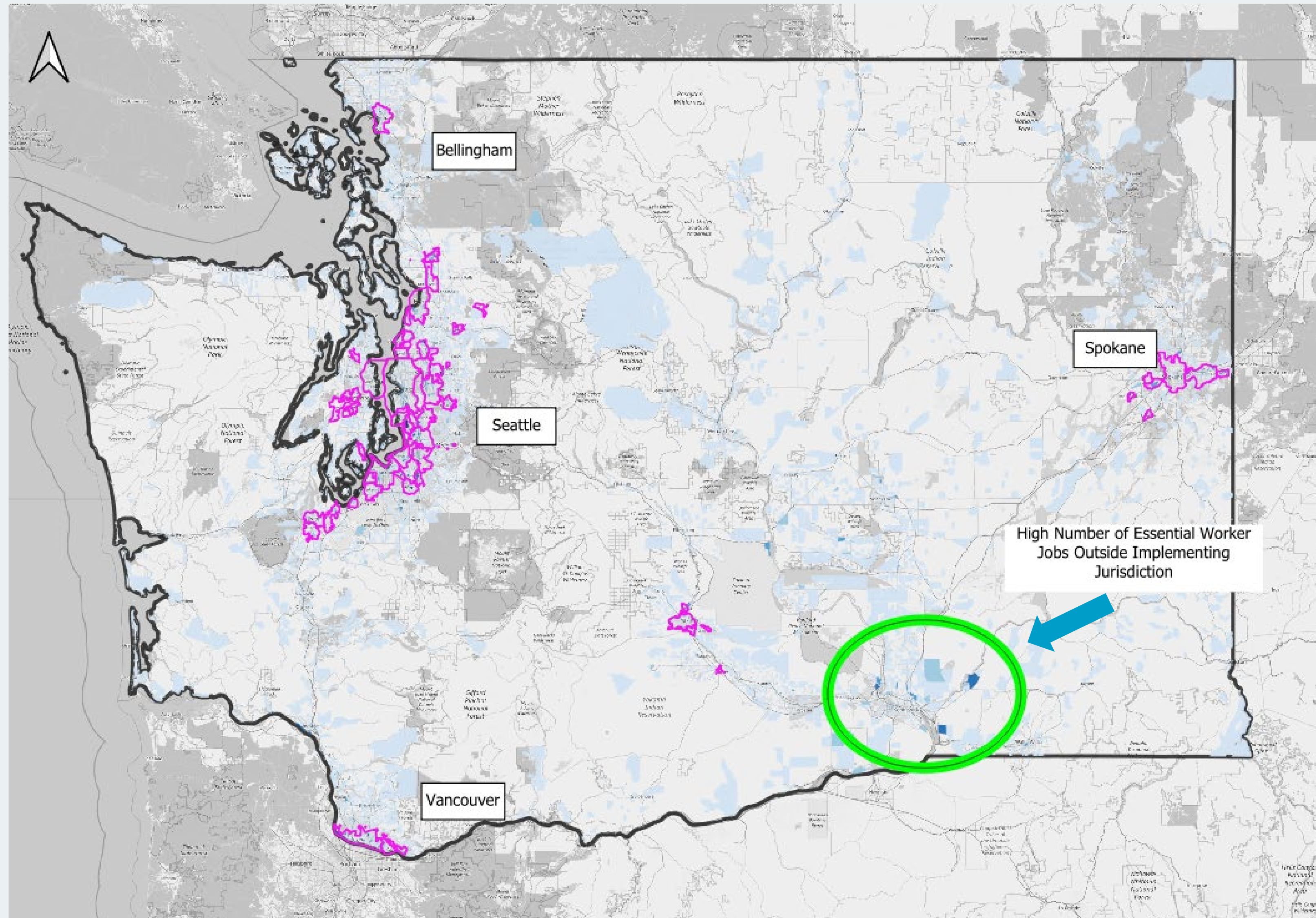
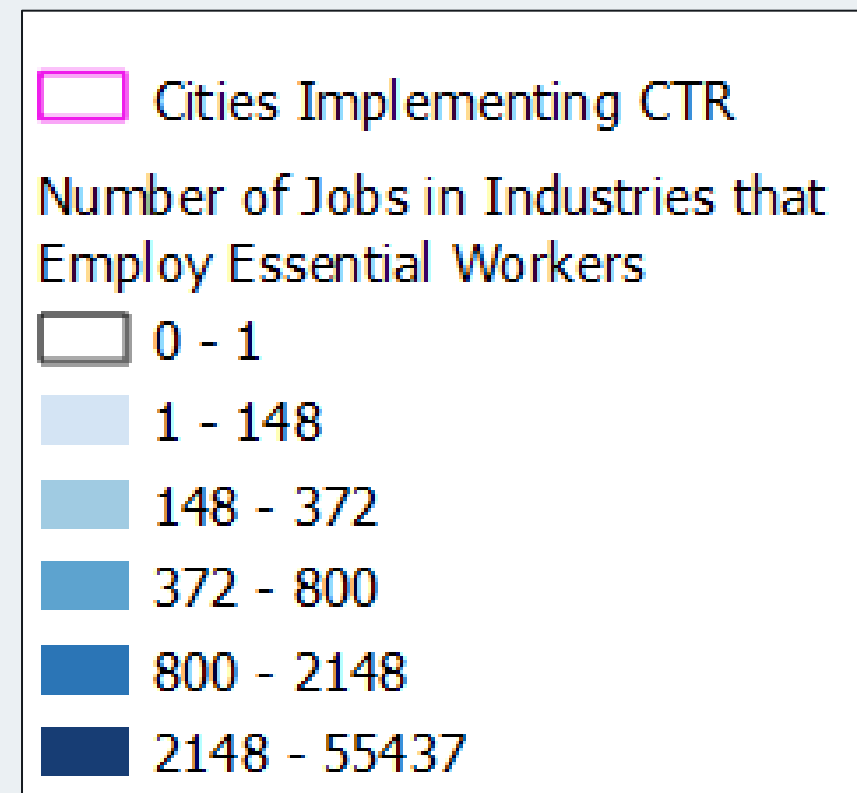
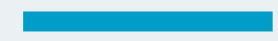
CTR Correlated Industries



The prevalence of *Equity Industries* in the State

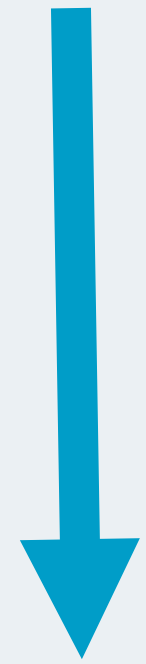
<p>Essential workers</p>	<p>Employees who provide goods or services that are considered vital, in some way, to life and welfare.</p>	<ul style="list-style-type: none"> • Agriculture, forestry, fishing and hunting • Utilities • Manufacturing • Transportation and Warehousing • Information Finance and Insurance • Administrative and Support and Waste Management and Remediation Services • Health Care and Social Assistance
<p>People with disabilities</p>	<p>Industries employing 10%+ of the population of employees who are classified as having a disability.</p>	<ul style="list-style-type: none"> • Education and health services • Retail trade • Professional and business services • Leisure and hospitality
<p>Shift workers</p>	<p>Industries where 10%+ of the workforce work a non-regular daytime schedule (including evening, nighttime, rotating, irregular hours, split shift, and other).</p>	<ul style="list-style-type: none"> • Leisure and hospitality • Transportation and utilities • Wholesale and retail trade • Manufacturing • Public administration • Education and health services • Other services • Agriculture, forestry, fishing, and hunting

CTR Affected Cities and Industries that Employ Essential Workers



DISCUSSION

Next Steps



- Finalize assessments
- Draft and final reporting

Thank you

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