

National Study of Treatment and Addiction Recovery Residences Report WASHINGTON

The National Study of Treatment and Addiction Recovery Residences (NSTARR) constitutes the largest and most diverse study of recovery housing in the US to date. NSTARR compiled data from publicly available sources (e.g., Oxford House, National Alliance for Recovery Residences, and Substance Abuse and Mental Health Services Administration websites) and lists maintained by entities tracking recovery housing. Residences for which locating information was available were geocoded and linked with U.S. Census data on urbanicity, alcohol- and drug-involved mortality, and COVID vulnerability. Data collection began in January 2020 and is ongoing until June 2023. The NSTARR database currently contains information on 10,358 residences operated by 3,628 providers in all 50 states. For a detailed description of methods and national findings, please see Mericle et al., 2022.

KEY FINDINGS

The NSTARR team identified 452 recovery residences (6.10 houses per 100,000 population) in Washington (see Table 1). Compared to other states (which include DC), Washington ranked 7 in terms of recovery housing availability per capita. Eighty-seven percent of the residences in Washington were geocoded for these analyses. Benton County, an urban county, had the most recovery residences per 100,000 population, and 15 counties had no identified recovery residences, representing a mix of rural-urban classifications; 27 had fewer than 5 recovery residences (see Figure 1).

We used geographic information systems to identify hot and cold spots in Washington. A hot spot is a cluster of high values (county with a high number of residences surrounded by other counties with high numbers of residences) and a cold spot is a cluster of low values (county with low counts surrounded by counties also with low counts). Our analyses found a hot spot and cold spots within the state (see Figure 2).

The age-adjusted alcohol- and drug-involved mortality rate (per 100,000 population) was 24.30 in Washington for the years 2009-2019. Washington ranked 13 on alcohol- and drug-involved mortality out of the 50 states and DC. Among the counties ranked, Ferry County had the highest alcohol- and drug-involved mortality rate and Douglas County had the lowest alcohol- and drug-involved mortality rate. Of the three counties that had the highest mortality rates in Washington (i.e., Ferry, Grays Harbor, and Columbia), two of them also ranked in the bottom half recovery housing availability per capita, suggesting more recovery resources may be needed (see Table 1 and Figure 3).

COVID vulnerability was summarized using the county-level data from the Centers for Disease Control and Prevention's COVID Vulnerability Index (CCVI). The CCVI is a composite measure of seven social determinants of health, encompassing modified themes from the Centers for Disease Control and Prevention's Social Vulnerability Index in combination with COVID risk factors to identify communities in need of additional support during the COVID pandemic. One county was classified as having very high vulnerability, and this county was located in an area ranked in the top half of recovery housing availability per capita, suggesting recovery housing is located in communities with greater need (see Table 1 and Figure 4).

452
RESIDENCES
TOTAL

7
NATIONAL
AVAILABILITY
RANKING

15
COUNTIES
WITHOUT
RESIDENCES

Table 1. County-level Descriptive Statistics on Recovery Residences

County Name	Population ¹	RUCC Classification ²	Number of Recovery Residences ³	Recovery Residences Per 100,000 Population	Recovery Residences Availability per Capita (Rank) ⁴	Age-Adjusted Alcohol/Drug Mortality ⁵ Rate per 100,000 Population	Mortality Rate (Rank) ⁶	CCVI Quintile ⁷
WASHINGTON	7,404,107		452	6.10	7	24.30	13	
Adams	19,594	Adjacent rural	0	0.00	39	35.50	32	High
Asotin	22,421	Urban	1	4.46	18	51.20	12	Very low vulnerability
Benton	197,518	Urban	30	15.19	1	34.10	33	Moderate
Chelan	76,229	Urban	4	5.25	14	43.50	20	Moderate
Clallam	75,392	Non-adjacent rural	8	10.61	3	55.40	8	Low
Clark	473,252	Urban	48	10.14	6	36.50	31	Low
Columbia	3,992	Urban	0	0.00	39	62.50	3	Very low vulnerability
Cowlitz	106,778	Urban	15	14.05	2	59.00	5	High
Douglas	42,023	Urban	3	7.14	9	27.80	38	Moderate
Ferry	7,578	Non-adjacent rural	0	0.00	39	66.30	1	Low
Franklin	92,009	Urban	1	1.09	24	29.80	37	High
Garfield	2,230	Adjacent rural	0	0.00	39	Suppressed	-	Very low vulnerability
Grant	95,502	Non-adjacent rural	0	0.00	39	44.90	17	High
Grays Harbor	72,779	Adjacent rural	4	5.50	12	65.90	2	High
Island	82,866	Adjacent rural	2	2.41	22	36.60	30	Very low vulnerability
Jefferson	31,285	Adjacent rural	0	0.00	39	42.80	22	Very low vulnerability
King	2,195,502	Urban	75	3.42	21	33.00	34	Moderate
Kitsap	265,882	Urban	28	10.53	4	39.10	26	Low
Kittitas	45,897	Adjacent rural	3	6.54	10	36.80	29	Very low vulnerability
Klickitat	21,721	Adjacent rural	0	0.00	39	41.60	24	Low
Lewis	78,145	Adjacent rural	0	0.00	39	44.30	19	Moderate
Lincoln	10,574	Adjacent rural	0	0.00	39	44.90	17	Very low vulnerability
Mason	63,804	Adjacent rural	4	6.27	11	52.90	10	Moderate
Okanogan	41,842	Adjacent rural	2	4.78	16	57.20	6	High
Pacific	21,688	Non-adjacent rural	1	4.61	17	59.80	4	Moderate
Pend Oreille	13,377	Urban	0	0.00	39	54.40	9	Low
Pierce	877,013	Urban	33	3.76	20	45.90	14	Moderate
San Juan	16,788	Non-adjacent rural	0	0.00	39	32.70	35	Very low vulnerability
Skagit	125,612	Urban	10	7.96	8	51.70	11	Moderate
Skamania	11,753	Urban	0	0.00	39	37.90	27	Very low vulnerability
Snohomish	798,808	Urban	31	3.88	19	42.80	22	Moderate
Spokane	505,505	Urban	42	8.31	7	45.10	16	Low
Stevens	44,655	Urban	0	0.00	39	45.40	15	Very low vulnerability
Thurston	279,711	Urban	15	5.36	13	37.60	28	Low

Wahkiakum	4,268	Adjacent rural	0	0.00	39	50.10	13	Very low vulnerability
Walla Walla	60,365	Urban	3	4.97	15	56.20	7	Moderate
Whatcom	220,821	Urban	4	1.81	23	43.00	21	Moderate
Whitman	49,231	Adjacent rural	0	0.00	39	30.90	36	Low
Yakima	249,697	Urban	26	10.41	5	41.10	25	Very high vulnerability

¹Population data were downloaded from tables in Social Explorer's ACS five-year estimate (2015-2019). American Community Survey 5-year Estimates, 2015-2019. Social Explorer tables, ACS 2015-2019. Social Explorer.

²The Rural-Urban Continuum Code (RUCC) was used to classify each county as urban, adjacent rural, or non-adjacent rural. Urban counties are counties with codes 1 (Counties in metro areas of 1 million population or more), 2 (Counties in metro areas of 250,000 to 1 million population), and 3 (Counties in metro areas of fewer than 250,000 population). Adjacent rural counties are counties with codes 4 (Urban population of 20,000 or more, adjacent to a metro area), 6 (Urban population of 2,500 to 19,999, adjacent to a metro area), and 8 (Completely rural or less than 2,500 urban population, adjacent to a metro area). Non-adjacent rural counties are the remaining three codes - 5 (Urban population of 20,000 or more, not adjacent to a metro area), 7 (Urban population of 2,500 to 19,999, not adjacent to a metro area), and 9 (Completely rural or less than 2,500 urban population, not adjacent to a metro area). Rural-Urban Continuum Code (RUCC). <https://www.ers.usda.gov/data-products/rural-urban-continuum-codes.aspx>

³Recovery residences are from the NSTARR project and are current as of 2020. Fifty-nine (59) recovery residences in the state were not successfully geocoded due to lack of adequate address information, and thus were not assigned to a county.

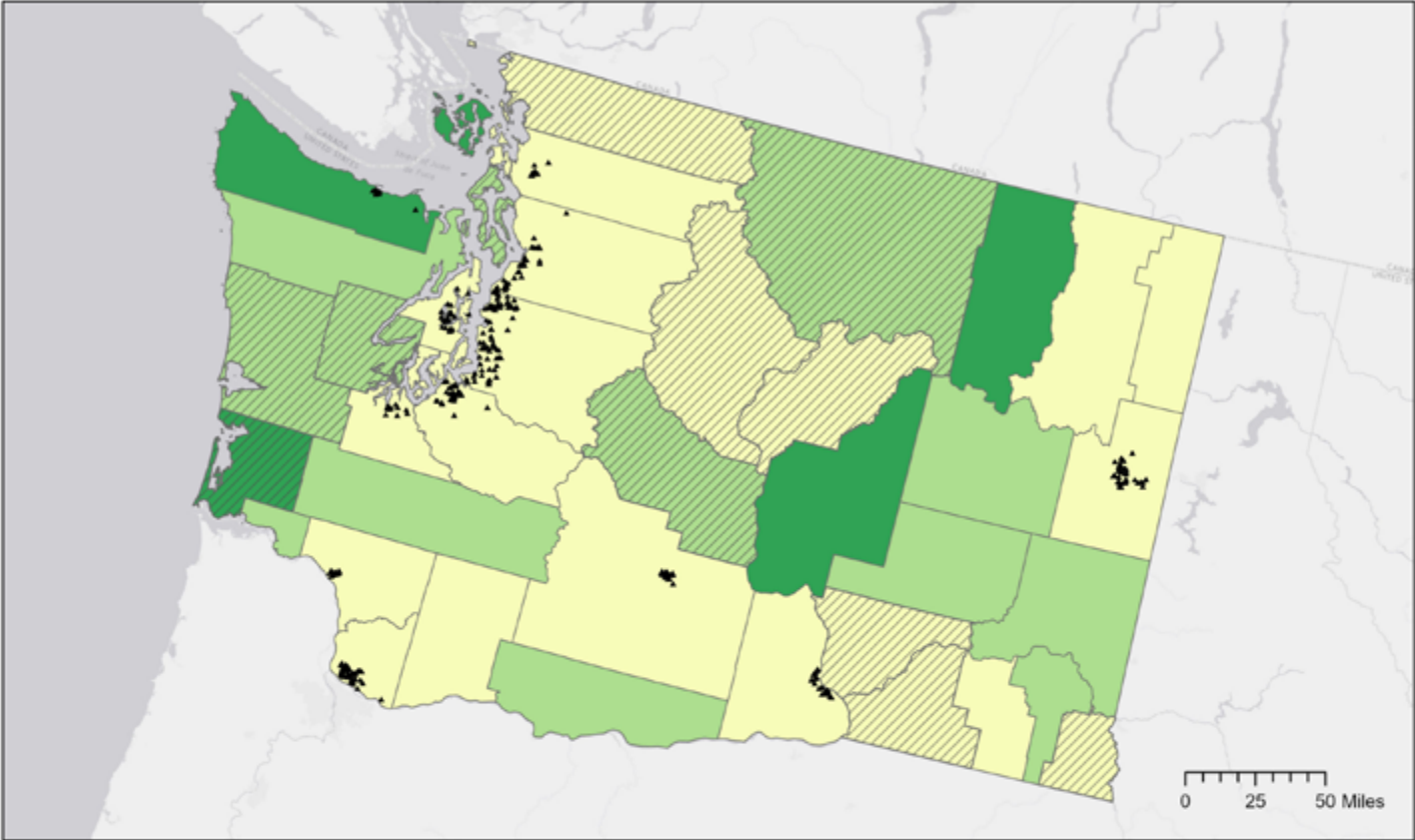
⁴Recovery residences availability per capita is ranked in order of decreasing recovery residence density per 100,000 population per county, with 1 (highest number of residences per 100,000) to 39 (lowest number of residences per 100,000 population). Counties without recovery residences were all assigned a tied rank of 39.

⁵Alcohol- and drug-involved mortality included all deaths as underlying causes of death and selected ICD-10 codes mentioning or attributed to alcohol or drugs as contributing cause of death. Data from the Centers for Disease Control and Prevention, 2020. CDC Wonder (Wide-ranging Online Data for Epidemiologic Research). U.S. Department of Health and Human Services, Atlanta, GA. Available at: <https://wonder.cdc.gov/>. For more information on coding multiple causes of death, see: Centers for Disease Control and Prevention, About Multiple Cause of Death, 1999-2019. <https://wonder.cdc.gov/mcd-icd10.html> accessed on August 9 2021.

⁶Mortality rate is ranked in order of decreasing alcohol- and drug-involved mortality from 1 (highest mortality per 100,000 population) to 38 (lowest mortality per 100,000 population).

⁷COVID-19 Community Vulnerability Index (CCVI) scores range in value from 0 – 1, with 0 being least vulnerable and 1 being the most vulnerable. Each county is ranked relative to all counties across the country, based on seven themes/domains. Each county was grouped into quintiles: very high (score of 0.8-1), high (0.6-0.8), moderate (0.4-0.6), low (0.2-0.4), and very low (0-0.2). For more information on how the CCVI I is calculated, see: COVID-19 Community Vulnerability Index (CCVI) methodology. Retrieved from [https://covid-static-assets.s3.amazonaws.com/US-CCVI/COVID-19+Community+Vulnerability+Index+\(CCVI\)+Methodology.pdf](https://covid-static-assets.s3.amazonaws.com/US-CCVI/COVID-19+Community+Vulnerability+Index+(CCVI)+Methodology.pdf)

Figure 1. Distribution of Residences by Rural-Urban Classification



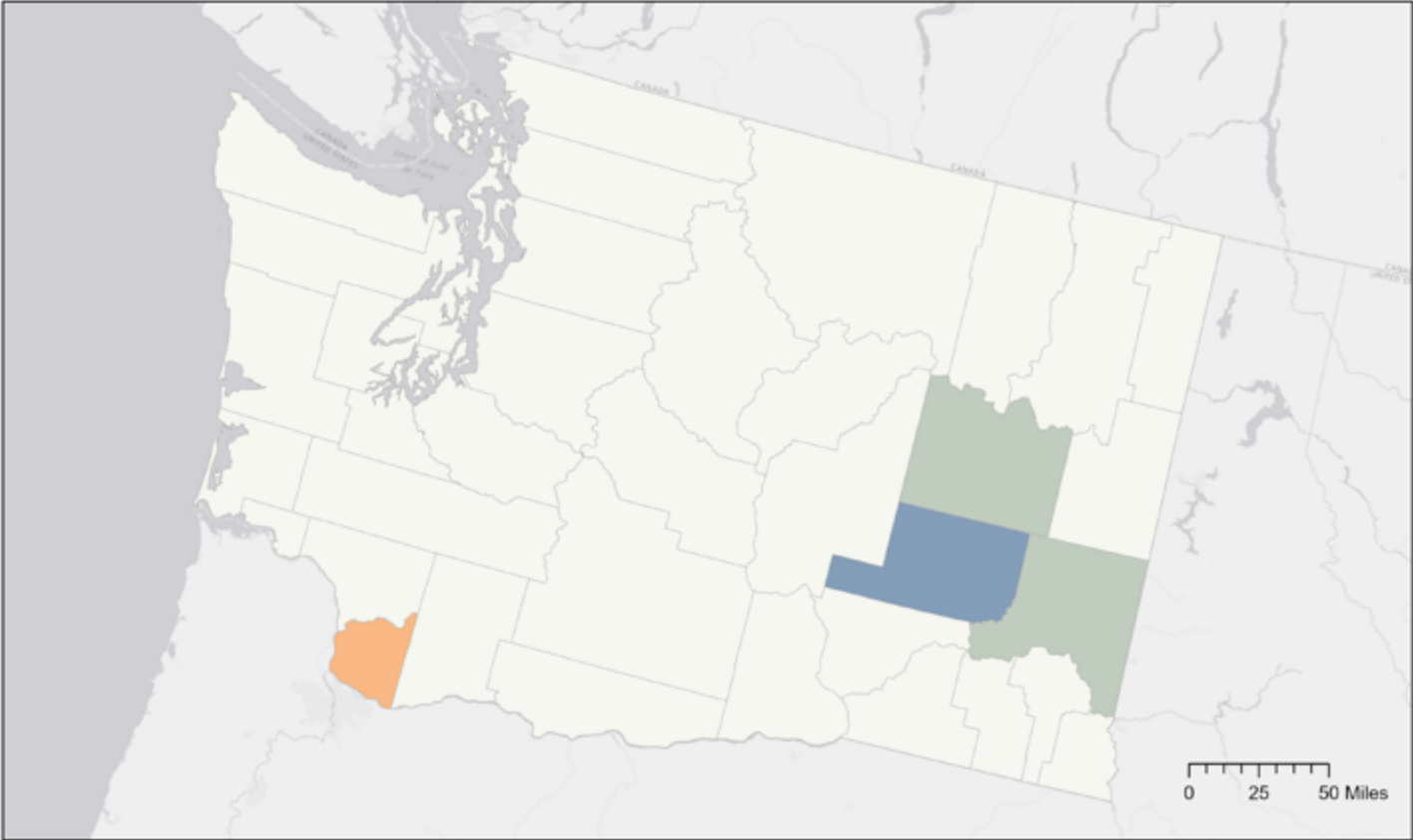
- ▲ Recovery residences
- Rural-Urban Classification Code (RUCC)
 - Urban
 - Adjacent rural
 - Non-adjacent rural
 - Counties with residence locations suppressed (1-4 residences) to protect privacy



Data Credits: Esri, HERE, Garmin, USGS, EPA, NPS
 Recovery residence locations: 2020
 Created by: NSTARR Project (May 2022)



Figure 2. Hot/Cold Spot Analysis of Recovery Residence Locations



Hot Spot Analysis (Getis-Ord GI*)

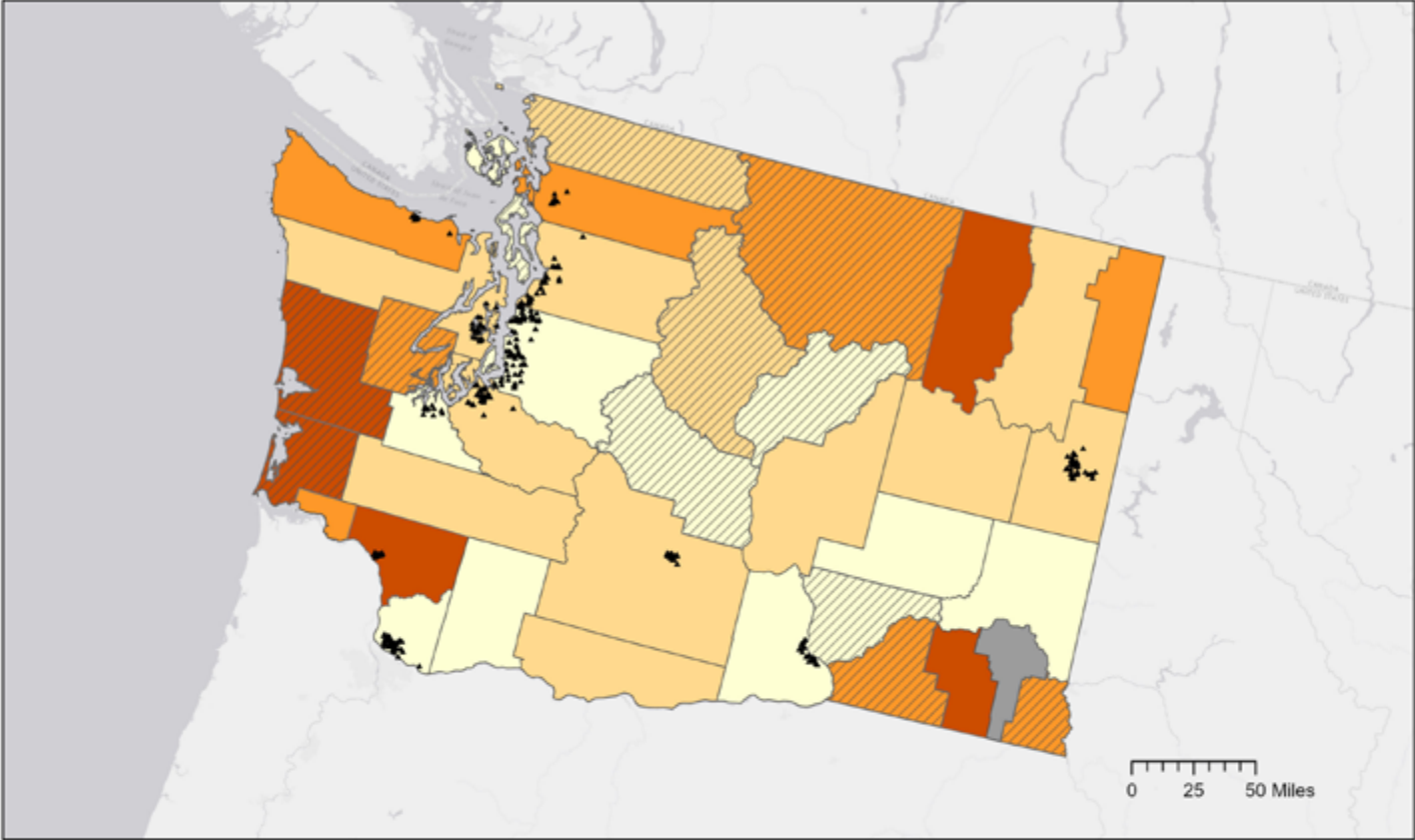
- Cold Spot with 99% Confidence
- Cold Spot with 95% Confidence
- Cold Spot with 90% Confidence
- Not Significant
- Hot Spot with 90% Confidence
- Hot Spot with 95% Confidence
- Hot Spot with 99% Confidence



Data Credits: Esri, HERE, Garmin, USGS, EPA, NPS
 Recovery residence locations: 2020
 Created by: NSTARR Project (May 2022)



Figure 3. Distribution of Residences by Age-adjusted Alcohol- and/or Drug-involved Mortality



▲ Recovery residences
 Age-adjusted alcohol and drug mortality rate per 100,000 population

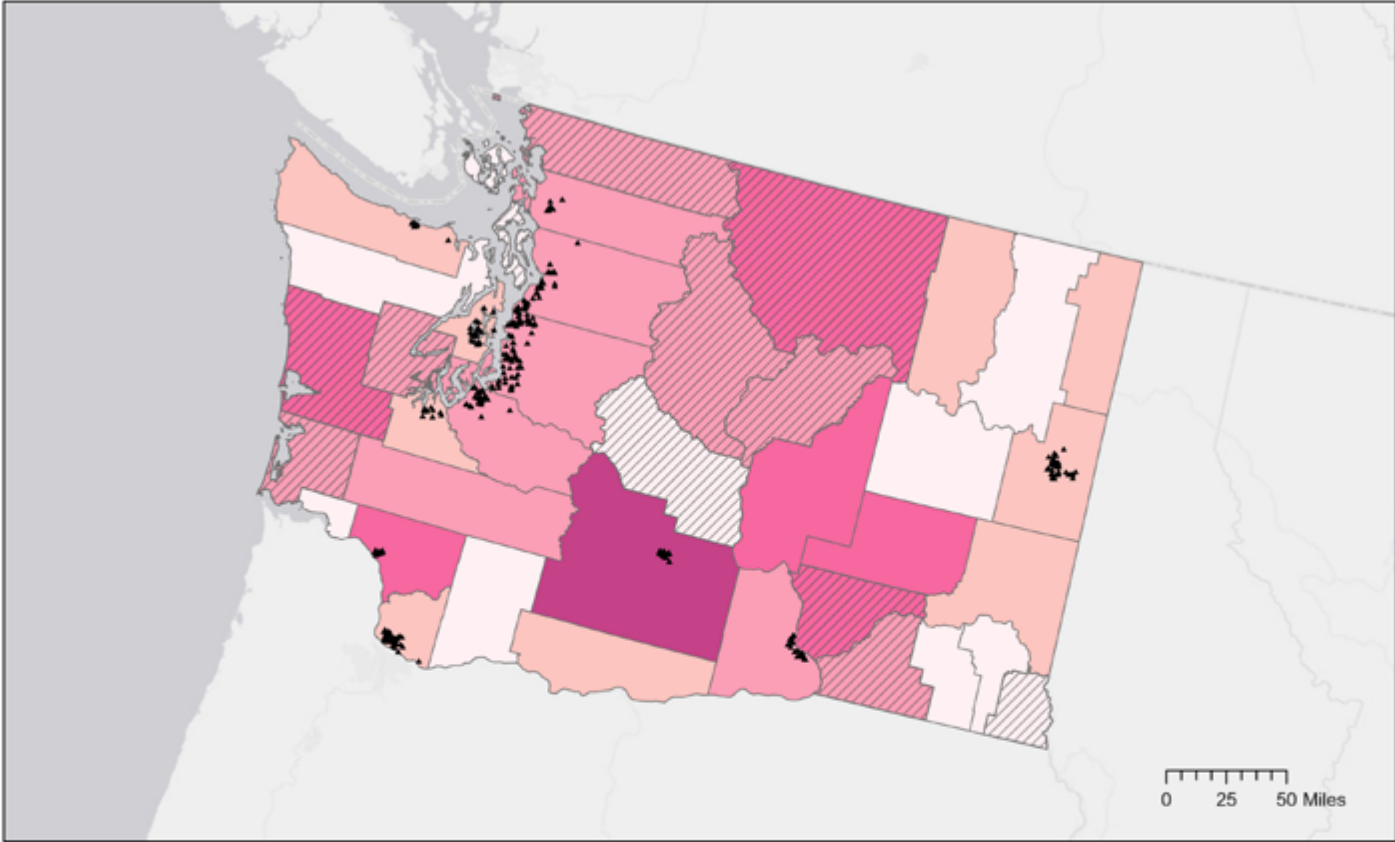
- 27 - 37
- 38 - 45
- 46 - 57
- 58 - 66
- Suppressed/Unreliable
- Counties with residence locations suppressed (1-4 residences) to protect privacy

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 National Study of Treatment and Addiction RECOVERY RESIDENCES

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 Recovery residence locations: 2020
 Created by: NSTARR Project (May 2022)



Figure 4. Distribution of Residences by COVID-19 Community Vulnerability Index



- ▲ Recovery Residences
- COVID-19 Community Vulnerability Index (CCVI)
- Very low vulnerability
- Low
- Moderate
- High
- Very high vulnerability
- Courties with residence locations suppressed (1-4 residences) to protect privacy



Data Credits: Esri, HERE, Garmin, USGS, EPA, NPS
 Recovery residence locations: 2020
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