

# National Study of Treatment and Addiction Recovery Residences Report Montana

**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 eight recovery residences (0.76 houses per 100,000 population) in Montana (see Table 1). Compared to other states (which include DC), Montana ranked 49 in terms of recovery housing availability per capita. Six of the residences in Montana could be geocoded for these analyses. Custer County, a non-adjacent rural county, had the most recovery residences per 100,000 population, and 52 counties had no identified recovery residences, representing a mix of rural-urban classifications; all 56 counties in the state had fewer than 5 recovery residences (see Figure 1).

We used geographic information systems to identify hot and cold spots in Montana. 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 hot spots but no cold spots within the state (see Figure 2).

The age-adjusted alcohol- and drug-involved mortality rate (per 100,000 population) was 30.80 in Montana for the years 2009-2019. Montana ranked 4 on alcohol- and drug-involved mortality out of the 50 states and DC. Among the counties ranked, Roosevelt County had the highest alcohol- and drug-involved mortality rate and Gallatin County had the lowest alcohol- and drug-involved mortality rate. Of the three counties that had the highest mortality rates in Montana (i.e., Roosevelt, Big Horn, and Glacier), all three 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. No counties were classified as having very high vulnerability (see Table 1 and Figure 4).

8

RESIDENCES  
TOTAL

49

NATIONAL  
AVAILABILITY  
RANKING

52

COUNTIES  
WITHOUT  
RESIDENCES

Table 1. County-level Descriptive Statistics on Recovery Residences

County Name	Population <sup>1</sup>	RUCC Classification <sup>2</sup>	Number of Recovery Residences <sup>3</sup>	Recovery Residences Per 100,000 Population	Recovery Residences Availability per Capita (Rank) <sup>4</sup>	Age-Adjusted Alcohol/Drug Mortality <sup>5</sup> Rate per 100,000 Population	Mortality Rate (Rank) <sup>5</sup>	CCVI Quintile <sup>7</sup>
<b>MONTANA</b>	1,050,649		8	0.76	49	30.80	4	
<b>Beaverhead</b>	9,415	Non-adjacent rural	0	0.00	56	23.90	37	Very low vulnerability
<b>Big Horn</b>	13,387	Adjacent rural	0	0.00	56	137.00	2	Low
<b>Blaine</b>	6,719	Non-adjacent rural	0	0.00	56	79.30	5	Low
<b>Broadwater</b>	5,945	Non-adjacent rural	0	0.00	56	31.70	32	Very low vulnerability
<b>Carbon</b>	10,597	Urban	0	0.00	56	36.10	26	Very low vulnerability
<b>Carter</b>	1,331	Non-adjacent rural	0	0.00	56	Suppressed	-	Very low vulnerability
<b>Cascade</b>	81,625	Urban	0	0.00	56	52.20	11	Very low vulnerability
<b>Chouteau</b>	5,732	Adjacent rural	0	0.00	56	41.30	21	Very low vulnerability
<b>Custer</b>	11,729	Non-adjacent rural	1	8.53	1	44.10	20	Very low vulnerability
<b>Daniels</b>	1,730	Non-adjacent rural	0	0.00	56	Suppressed	-	Very low vulnerability
<b>Dawson</b>	9,017	Non-adjacent rural	0	0.00	56	31.60	33	Very low vulnerability
<b>Deer Lodge</b>	9,106	Non-adjacent rural	0	0.00	56	48.20	14	Very low vulnerability
<b>Fallon</b>	2,921	Non-adjacent rural	0	0.00	56	Suppressed	-	Very low vulnerability
<b>Fergus</b>	11,221	Non-adjacent rural	0	0.00	56	48.10	15	Very low vulnerability
<b>Flathead</b>	99,899	Non-adjacent rural	0	0.00	56	32.30	31	Very low vulnerability
<b>Gallatin</b>	108,063	Non-adjacent rural	1	0.93	4	23.80	38	Very low vulnerability
<b>Garfield</b>	1,036	Non-adjacent rural	0	0.00	56	Suppressed	-	Very low vulnerability
<b>Glacier</b>	13,732	Non-adjacent rural	0	0.00	56	124.80	3	Moderate
<b>Golden Valley</b>	728	Urban	0	0.00	56	Suppressed	-	Very low vulnerability
<b>Granite</b>	3,311	Adjacent rural	0	0.00	56	Suppressed	-	Very low vulnerability
<b>Hill</b>	16,436	Non-adjacent rural	0	0.00	56	53.60	9	Very low vulnerability
<b>Jefferson</b>	11,917	Non-adjacent rural	0	0.00	56	36.60	25	Very low vulnerability
<b>Judith Basin</b>	1,954	Adjacent rural	0	0.00	56	Suppressed	-	Very low vulnerability
<b>Lake</b>	30,013	Adjacent rural	0	0.00	56	54.50	8	Low
<b>Lewis and Clark</b>	67,805	Non-adjacent rural	1	1.47	3	45.10	19	Very low vulnerability
<b>Liberty</b>	2,351	Non-adjacent rural	0	0.00	56	Suppressed	-	Very low vulnerability
<b>Lincoln</b>	19,537	Non-adjacent rural	0	0.00	56	35.00	28	Very low vulnerability
<b>Madison</b>	8,302	Non-adjacent rural	0	0.00	56	28.80	34	Very low vulnerability
<b>McCone</b>	1,790	Non-adjacent rural	0	0.00	56	Suppressed	-	Very low vulnerability

<b>Meagher</b>	1,888	Non-adjacent rural	0	0.00	56	Suppressed	-	Very low vulnerability
<b>Mineral</b>	4,251	Adjacent rural	0	0.00	56	73.40	6	Very low vulnerability
<b>Missoula</b>	117,309	Urban	0	0.00	56	38.30	24	Very low vulnerability
<b>Musselshell</b>	4,766	Adjacent rural	0	0.00	56	35.10	27	Very low vulnerability
<b>Park</b>	16,352	Non-adjacent rural	0	0.00	56	49.10	13	Very low vulnerability
<b>Petroleum</b>	453	Non-adjacent rural	0	0.00	56	Suppressed	-	Very low vulnerability
<b>Phillips</b>	4,077	Non-adjacent rural	0	0.00	56	41.30	21	Very low vulnerability
<b>Pondera</b>	5,994	Non-adjacent rural	0	0.00	56	50.90	12	Low
<b>Powder River</b>	1,607	Non-adjacent rural	0	0.00	56	Suppressed	-	Very low vulnerability
<b>Powell</b>	6,854	Adjacent rural	0	0.00	56	47.30	16	Very low vulnerability
<b>Prairie</b>	1,252	Non-adjacent rural	0	0.00	56	Suppressed	-	Very low vulnerability
<b>Ravalli</b>	42,512	Adjacent rural	0	0.00	56	33.20	30	Very low vulnerability
<b>Richland</b>	11,199	Non-adjacent rural	0	0.00	56	38.40	23	Very low vulnerability
<b>Roosevelt</b>	11,175	Non-adjacent rural	0	0.00	56	167.50	1	Low
<b>Rosebud</b>	9,152	Non-adjacent rural	0	0.00	56	87.30	4	Low
<b>Sanders</b>	11,681	Adjacent rural	0	0.00	56	46.90	17	Very low vulnerability
<b>Sheridan</b>	3,483	Non-adjacent rural	0	0.00	56	Suppressed	-	Very low vulnerability
<b>Silver Bow</b>	34,770	Non-adjacent rural	0	0.00	56	61.40	7	Very low vulnerability
<b>Stillwater</b>	9,466	Adjacent rural	0	0.00	56	27.40	36	Very low vulnerability
<b>Sweet Grass</b>	3,670	Non-adjacent rural	0	0.00	56	Suppressed	-	Very low vulnerability
<b>Teton</b>	6,086	Adjacent rural	0	0.00	56	27.60	35	Very low vulnerability
<b>Toole</b>	4,892	Non-adjacent rural	0	0.00	56	35.00	28	Low
<b>Treasure</b>	668	Adjacent rural	0	0.00	56	Suppressed	-	Very low vulnerability
<b>Valley</b>	7,471	Non-adjacent rural	0	0.00	56	46.20	18	Very low vulnerability
<b>Wheatland</b>	2,142	Non-adjacent rural	0	0.00	56	Suppressed	-	Very low vulnerability
<b>Wibaux</b>	1,122	Non-adjacent rural	0	0.00	56	Suppressed	-	Low
<b>Yellowstone</b>	159,008	Urban	3	1.89	2	52.80	10	Very low vulnerability

<sup>1</sup>Population 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.

<sup>2</sup>The 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>

<sup>3</sup>Recovery residences are from the NSTARR project and are current as of 2020. Two (2) recovery residences in the state were not successfully geocoded due to lack of adequate address information, and thus were not assigned to a county.

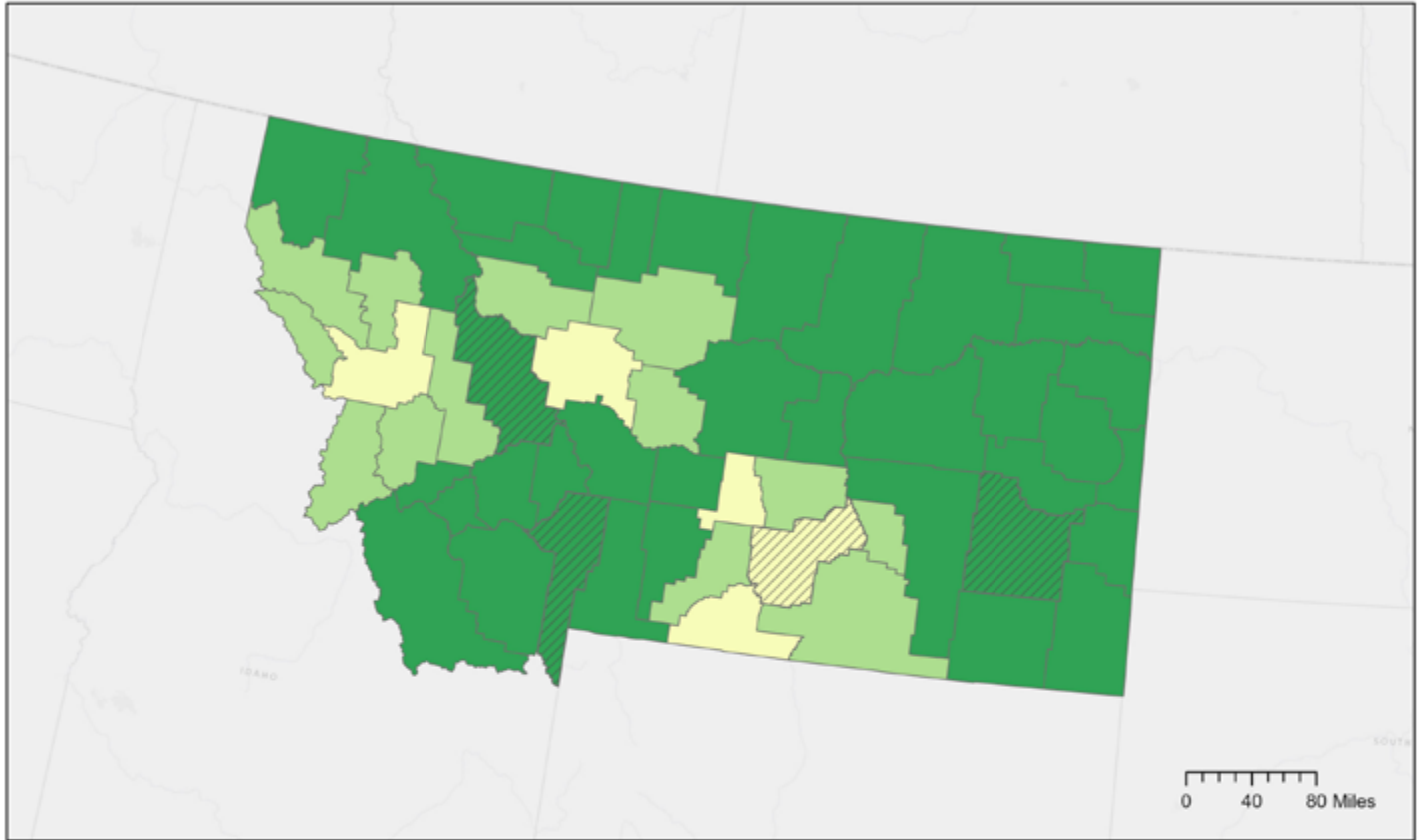
<sup>4</sup>Recovery residences availability per capita is ranked in order of decreasing recovery residence density per 100,000 population per county, with 1 (highest number of residences per 100,000) to 56 (lowest number of residences per 100,000 population). Counties without recovery residences were all assigned a tied rank of 56.

<sup>5</sup>Alcohol- 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.

<sup>6</sup>Mortality 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).

<sup>7</sup>COVID-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 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



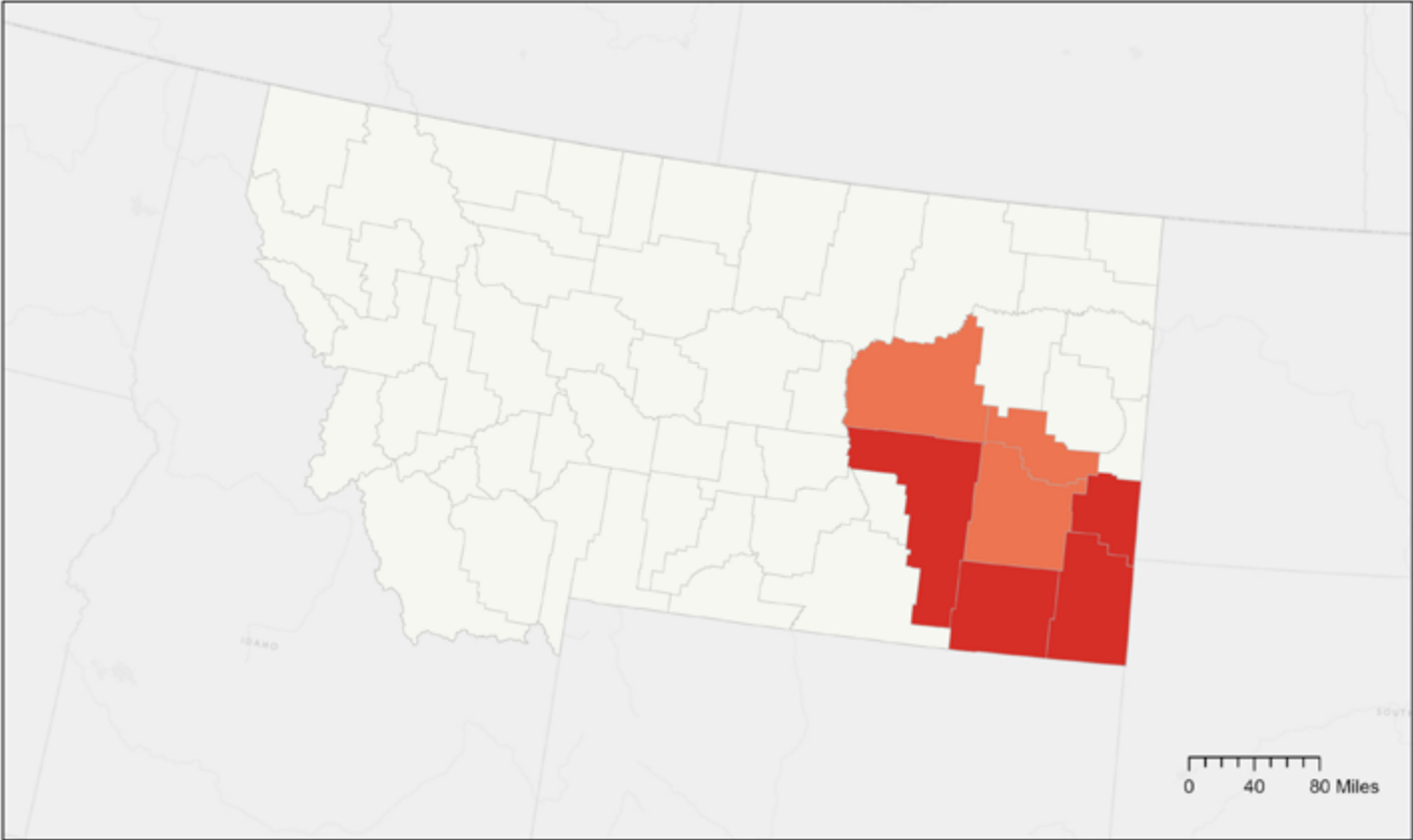
- ▲ Recovery residences
- Rural-Urban Classification Code (RUCC)**
- Urban
- Adjacent rural
- Non-adjacent rural
- Counties with residence locations suppressed (1-4 residences) to protect privacy



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\*)**

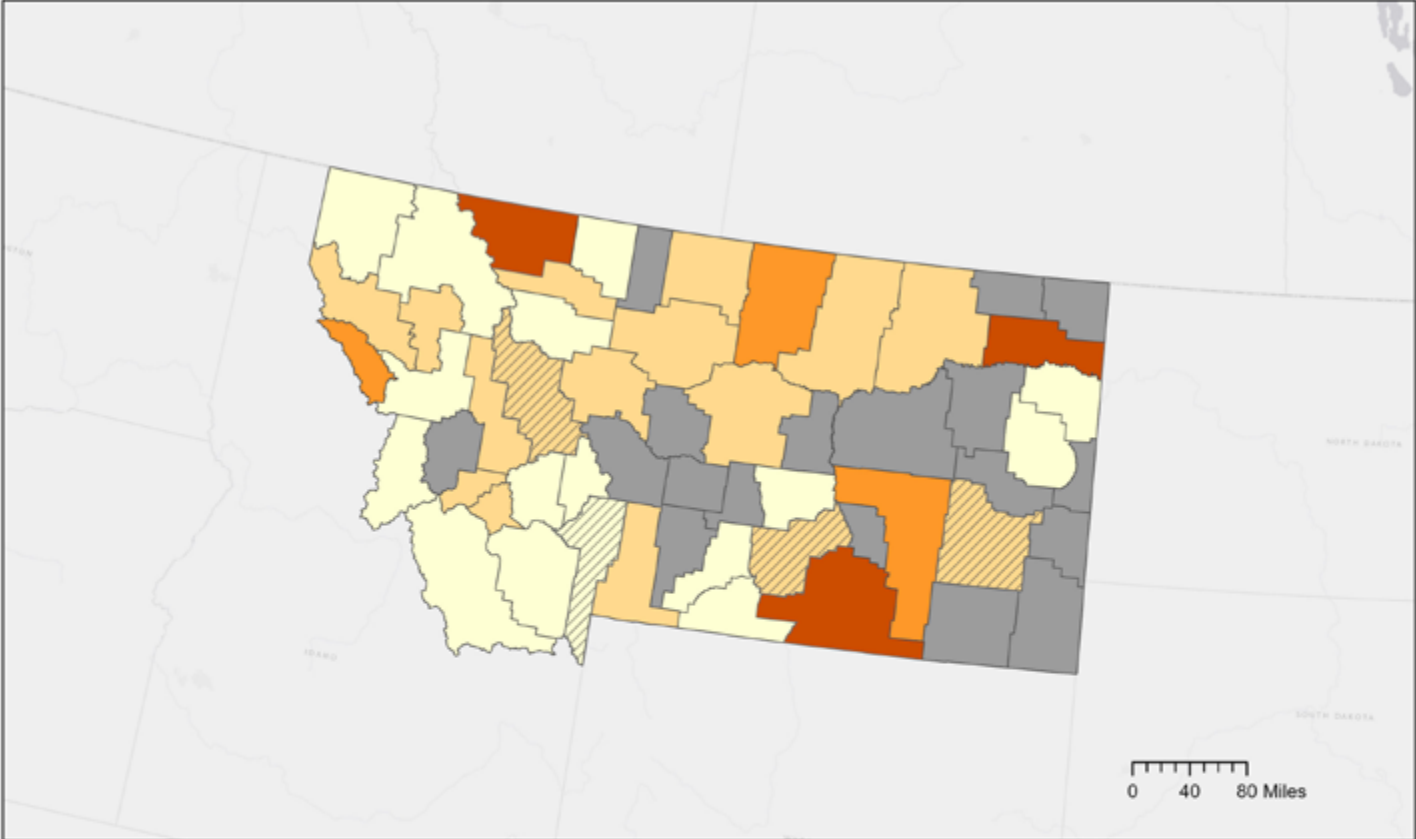
- Cold Spot with 99% Confidence
- Cold Spot with 95% Confidence
- Cold Spot with 90% Confidence
- Not Significant
- Hot Spot with 90% Confidence
- Hot Spot with 95% Confidence
- Hot Spot with 99% Confidence



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



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



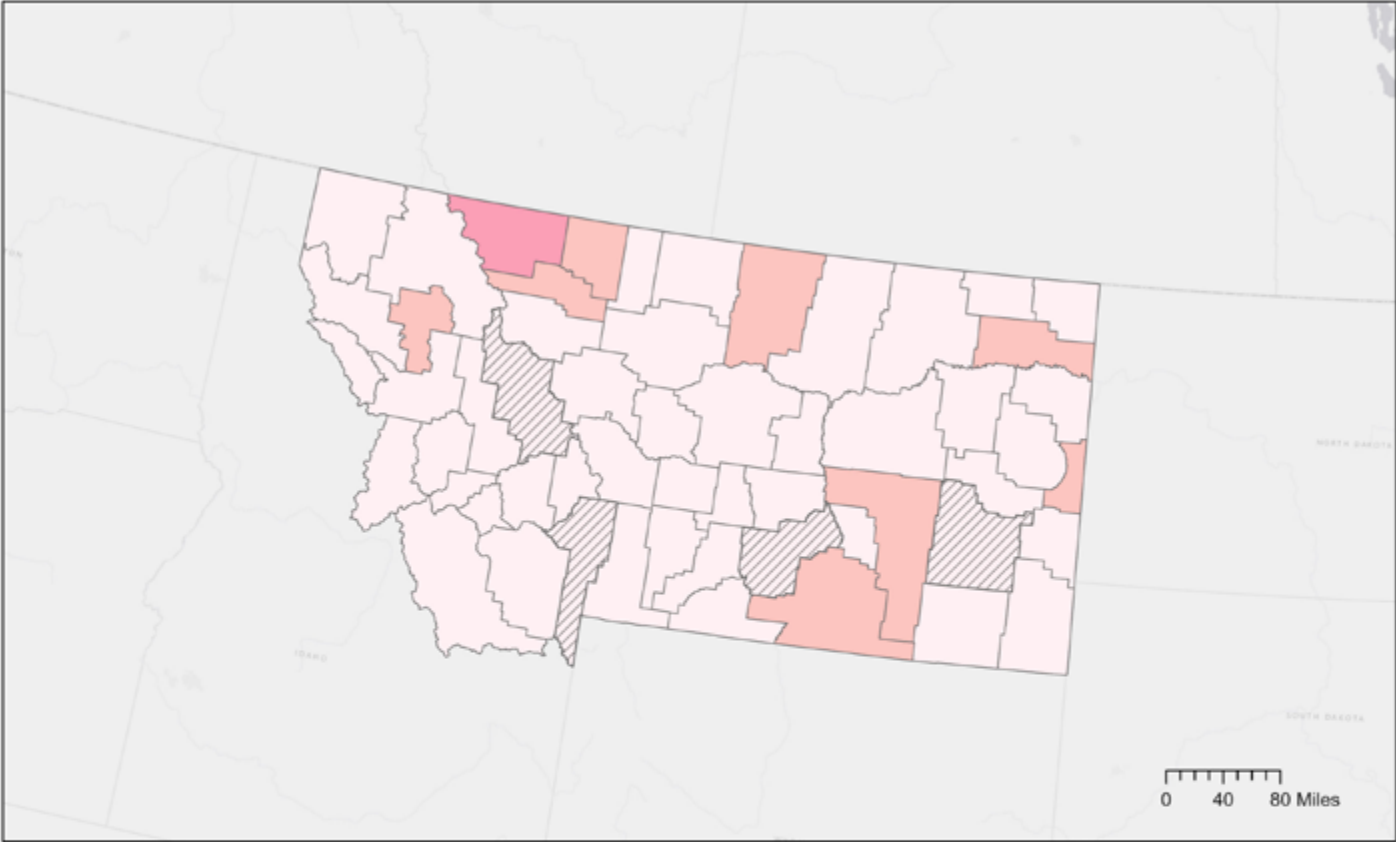
- ▲ Recovery residences
- Age-adjusted alcohol and drug mortality rate per 100,000 population
- 23 - 38
- 39 - 61
- 62 - 87
- 88 - 167
- Suppressed/Unreliable
- Counties with residence locations suppressed (1-4 residences) to protect privacy



Data Credits: Esri, HERE, Garmin, USGS, EPA  
 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
- Counties with residence locations suppressed (1-4 residences) to protect privacy



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







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