

# National Study of Treatment and Addiction Recovery Residences Report

## COLORADO

**The National Study of Treatment and Addiction Recovery Residences (NSTARR)** constitutes the largest and most diverse study of recovery housing in the U.S. 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 137 recovery residences (2.44 houses per 100,000 population) in Colorado (see Table 1). Compared to other states (which include DC), Colorado ranked 29 in terms of recovery housing availability per capita. Eighty-one percent of residences in Colorado could be geocoded for these analyses. Broomfield County, an urban county, had the most recovery residences per 100,000 population, and 51 counties had no identified recovery residences, representing a mix of rural-urban classifications; 57 had fewer than 5 recovery residences (see Figure 1).

We used geographic information systems to identify hot and cold spots in Colorado. 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 29.80 in Colorado for the years 2009-2019. Colorado ranked 6 on alcohol- and drug-involved mortality out of the 50 states and DC. Among the counties ranked, Huerfano County had the highest alcohol- and drug-involved mortality rate and Yuma County had the lowest alcohol- and drug-involved mortality rate. Of the three counties that had the highest mortality rates in Colorado (i.e., Huerfano, Costilla, and Las Animas), 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).

137  
RESIDENCES  
TOTAL

29  
NATIONAL  
AVAILABILITY  
RANKING

51  
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>6</sup>	CCVI Quintile <sup>7</sup>
COLORADO	5,610,349		137	2.44	29	29.80	6	
Adams	504,108	Urban	7	1.39	12	52.80	20	Moderate
Alamosa	16,107	Non-adjacent rural	0	0.00	64	71.80	7	High
Arapahoe	644,560	Urban	16	2.48	7	40.20	31	Low
Archuleta	13,253	Non-adjacent rural	0	0.00	64	41.10	30	Very low vulnerability
Baca	3,561	Non-adjacent rural	0	0.00	64	Suppressed	-	Low
Bent	5,787	Non-adjacent rural	0	0.00	64	58.50	12	High
Boulder	322,510	Urban	4	1.24	13	34.10	43	Low
Broomfield	67,886	Urban	3	4.42	1	33.00	45	Low
Chaffee	19,557	Non-adjacent rural	0	0.00	64	33.90	44	Very low vulnerability
Cheyenne	2,026	Non-adjacent rural	0	0.00	64	Suppressed	-	Very low vulnerability
Clear Creek	9,495	Urban	0	0.00	64	28.70	47	Very low vulnerability
Conejos	8,128	Non-adjacent rural	0	0.00	64	67.10	9	Moderate
Costilla	3,745	Non-adjacent rural	0	0.00	64	91.60	2	Moderate
Crowley	5,754	Adjacent rural	0	0.00	64	39.70	33	Moderate
Custer	4,776	Adjacent rural	0	0.00	64	50.10	22	Very low vulnerability
Delta	30,565	Adjacent rural	0	0.00	64	45.00	25	Low
Denver	705,576	Urban	20	2.83	5	67.70	8	High
Dolores	1,857	Non-adjacent rural	0	0.00	64	Suppressed	-	Very low vulnerability
Douglas	336,041	Urban	0	0.00	64	23.30	52	Very low vulnerability
Eagle	54,681	Non-adjacent rural	0	0.00	64	24.70	51	Very low vulnerability
El Paso	698,974	Urban	17	2.43	8	51.20	21	Moderate
Elbert	25,717	Urban	0	0.00	64	26.50	50	Very low vulnerability
Fremont	47,321	Adjacent rural	2	4.23	2	56.30	15	Moderate
Garfield	59,055	Non-adjacent rural	2	3.39	3	54.80	17	Low
Gilpin	6,018	Urban	0	0.00	64	36.00	40	Very low vulnerability
Grand	15,303	Non-adjacent rural	0	0.00	64	41.80	26	Very low vulnerability
Gunnison	16,802	Non-adjacent rural	0	0.00	64	32.30	46	Very low vulnerability
Hinsdale	857	Non-adjacent rural	0	0.00	64	Suppressed	-	Very low vulnerability
Huerfano	6,679	Adjacent rural	0	0.00	64	93.70	1	Low
Jackson	1,261	Non-adjacent rural	0	0.00	64	Suppressed	-	Very low vulnerability
Jefferson	574,798	Urban	17	2.96	4	41.70	28	Low

Kiowa	1,489	Non-adjacent rural	0	0.00	64	Suppressed	-	Very low vulnerability
Kit Carson	7,447	Non-adjacent rural	0	0.00	64	35.60	41	Moderate
La Plata	55,617	Adjacent rural	0	0.00	64	40.20	31	Very low vulnerability
Lake	7,751	Adjacent rural	0	0.00	64	37.90	36	Low
Larimer	344,786	Urban	9	2.61	6	38.30	35	Low
Las Animas	14,266	Non-adjacent rural	0	0.00	64	84.30	3	Moderate
Lincoln	5,585	Adjacent rural	0	0.00	64	27.90	48	Low
Logan	22,380	Non-adjacent rural	0	0.00	64	38.40	34	Low
Mesa	151,218	Urban	3	1.98	11	60.60	11	Moderate
Mineral	824	Non-adjacent rural	0	0.00	64	Suppressed	-	Very low vulnerability
Moffat	13,127	Non-adjacent rural	0	0.00	64	41.80	26	Low
Montezuma	26,031	Adjacent rural	0	0.00	64	75.00	6	Low
Montrose	41,686	Adjacent rural	0	0.00	64	55.50	16	Low
Morgan	28,517	Adjacent rural	0	0.00	64	49.20	24	Moderate
Otero	18,282	Adjacent rural	0	0.00	64	80.50	4	High
Ouray	4,796	Non-adjacent rural	0	0.00	64	57.10	14	Very low vulnerability
Park	17,867	Urban	0	0.00	64	41.60	29	Very low vulnerability
Phillips	4,290	Non-adjacent rural	0	0.00	64	49.50	23	Low
Pitkin	17,926	Non-adjacent rural	0	0.00	64	22.90	53	Very low vulnerability
Prowers	12,022	Non-adjacent rural	0	0.00	64	57.70	13	High
Pueblo	165,982	Urban	4	2.41	9	62.10	10	High
Rio Blanco	6,384	Non-adjacent rural	0	0.00	64	53.40	18	Very low vulnerability
Rio Grande	11,305	Non-adjacent rural	0	0.00	64	77.80	5	High
Routt	25,072	Non-adjacent rural	0	0.00	64	36.60	38	Very low vulnerability
Saguache	6,592	Non-adjacent rural	0	0.00	64	34.20	42	Low
San Juan	589	Non-adjacent rural	0	0.00	64	Suppressed	-	Very low vulnerability
San Miguel	8,049	Non-adjacent rural	0	0.00	64	36.50	39	Very low vulnerability
Sedgwick	2,322	Non-adjacent rural	0	0.00	64	Suppressed	-	Very low vulnerability
Summit	30,649	Non-adjacent rural	0	0.00	64	27.60	49	Very low vulnerability
Teller	24,524	Urban	0	0.00	64	53.40	18	Very low vulnerability
Washington	4,868	Non-adjacent rural	0	0.00	64	Suppressed	-	Very low vulnerability
Weld	305,345	Urban	7	2.29	10	37.40	37	Moderate
Yuma	10,003	Non-adjacent rural	0	0.00	64	19.40	54	Low

<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. Twenty-six (26) recovery residences in the state were not successfully geocoded due to lack of adequate address information, and thus were not assigned to a county.

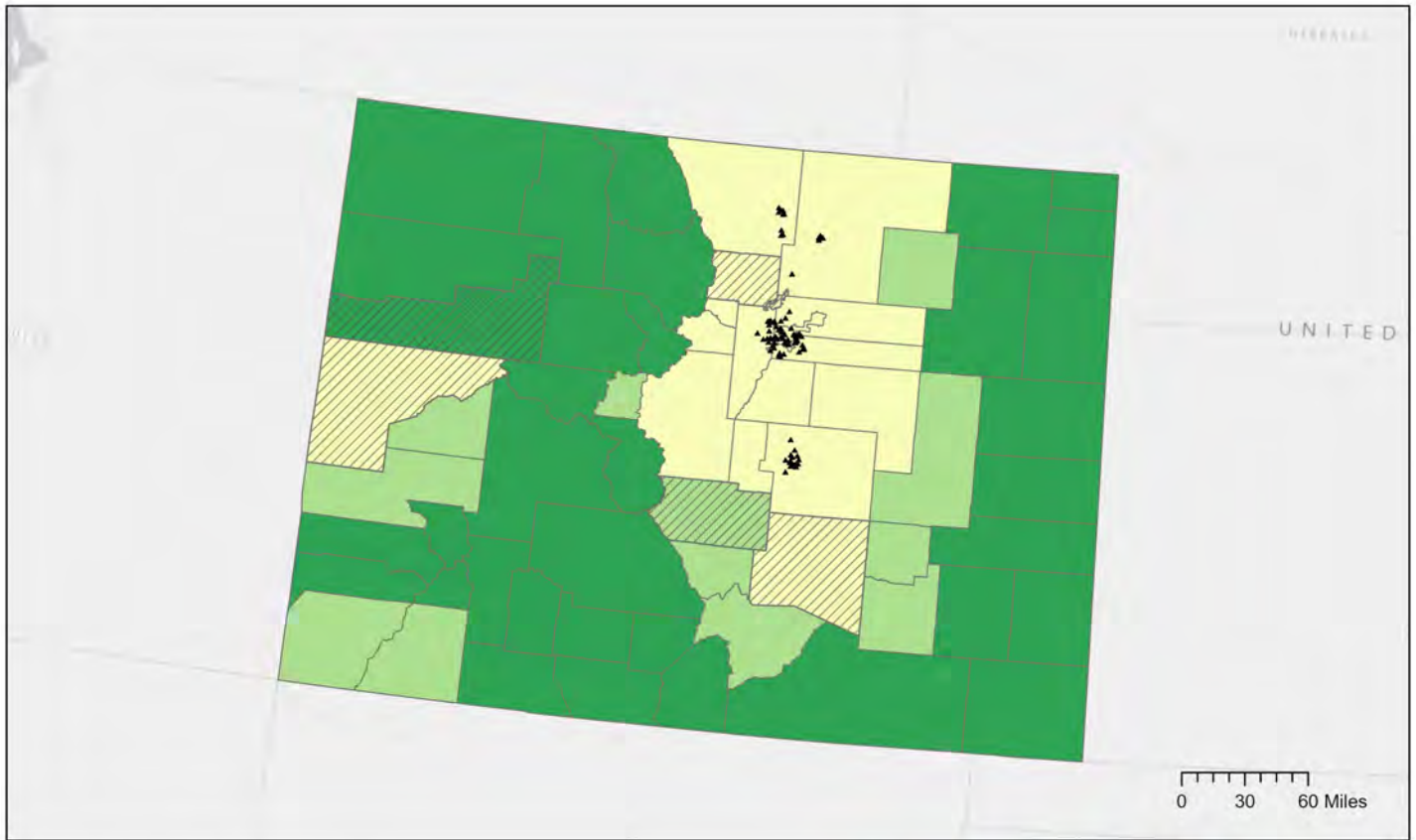
<sup>4</sup>Recovery residences availability per capita is ranked in order of decreasing recovery residence density per 100,000 population per county, with 1 (highest number of residences per 100,000) to 64 (lowest number of residences per 100,000 population). Counties without recovery residences were all assigned a tied rank of 64.

<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 54 (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 I is calculated, see: COVID-19 Community Vulnerability Index (CCVI) methodology. [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)

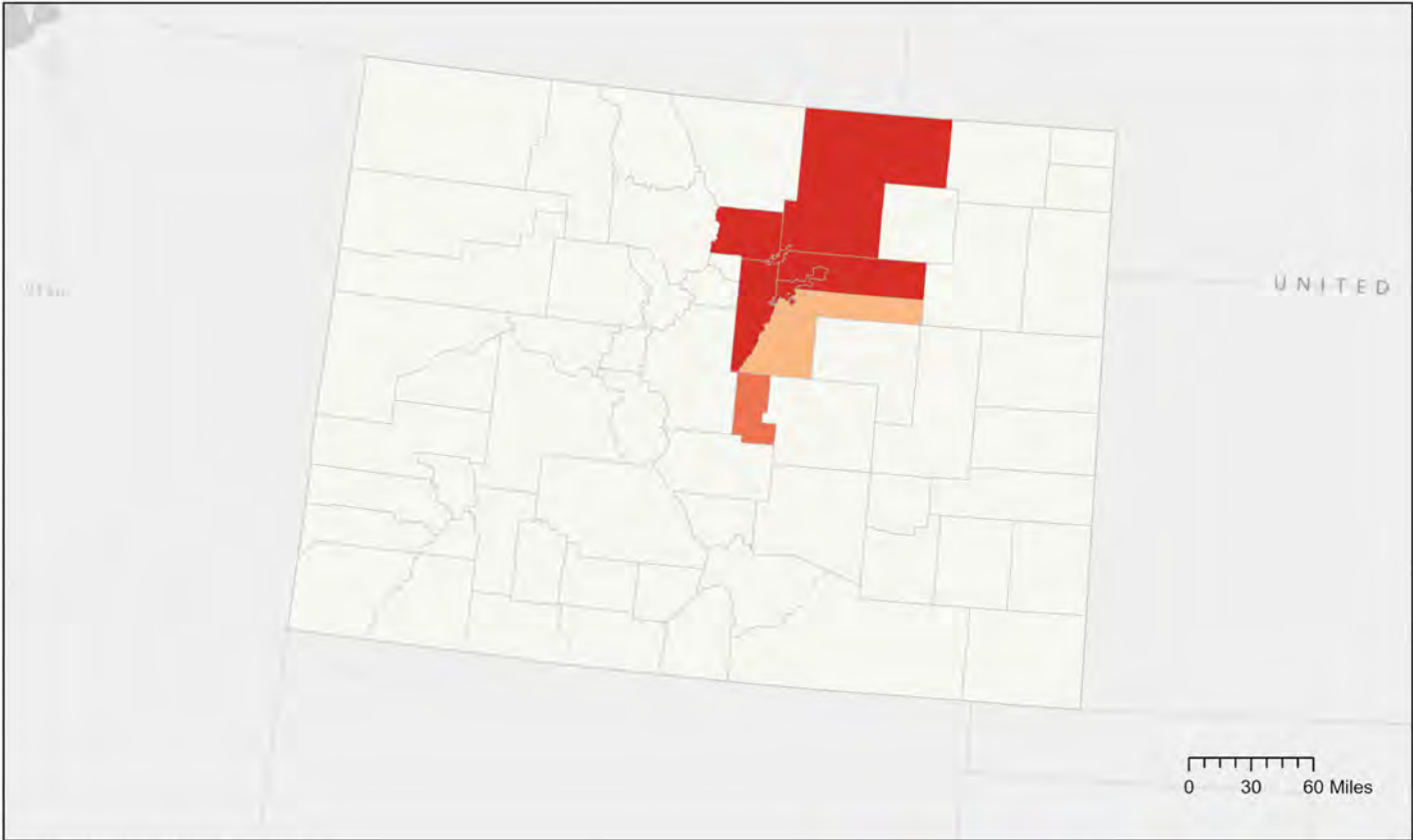
- Urban
- Adjacent rural
- Non-adjacent rural
- Counties with residence locations suppressed (1-4 residences) to protect privacy



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

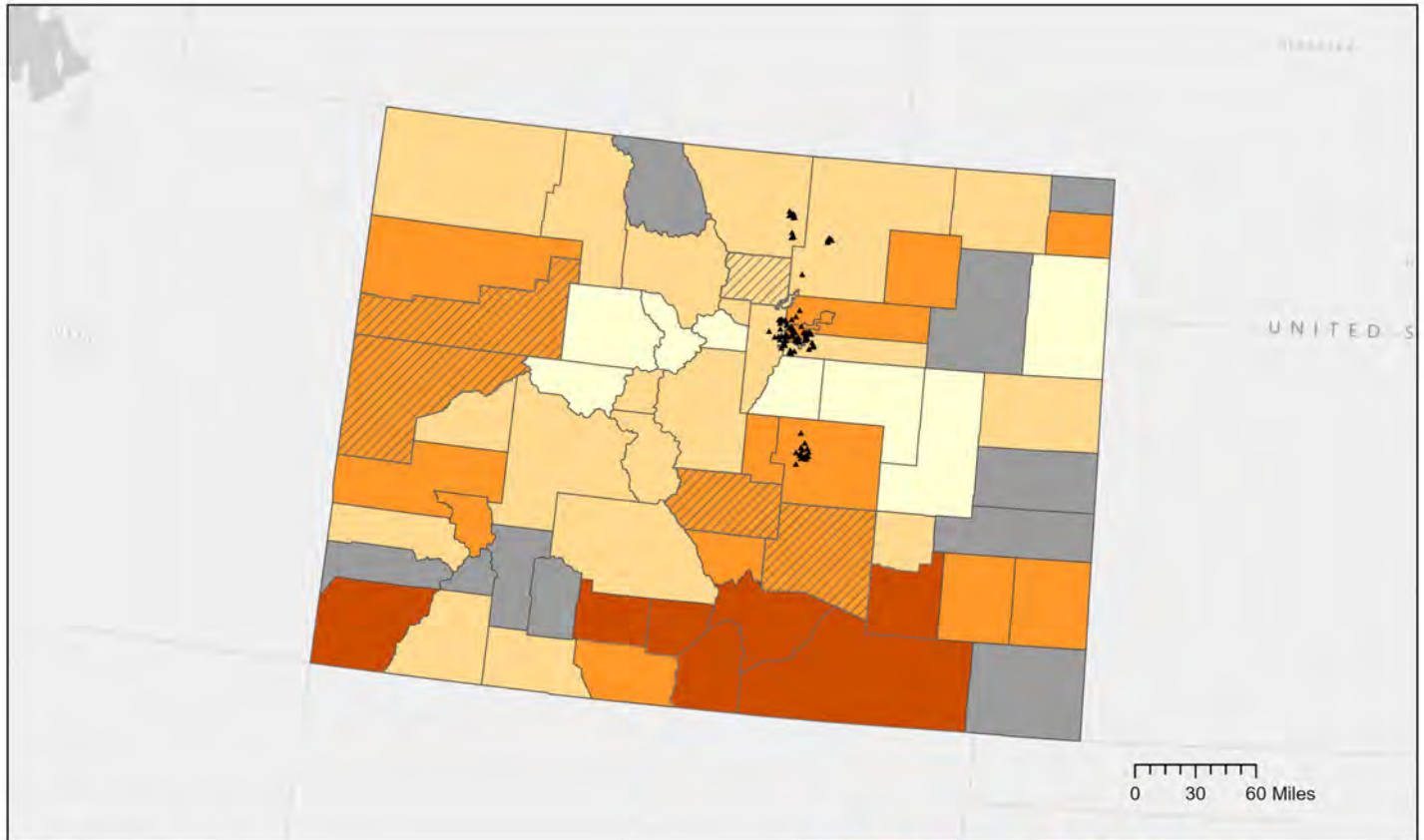


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Recovery residence locations: 2020  
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Figure 3. Distribution of Residences by Age-adjusted Alcohol- and/or Drug-involved Mortality



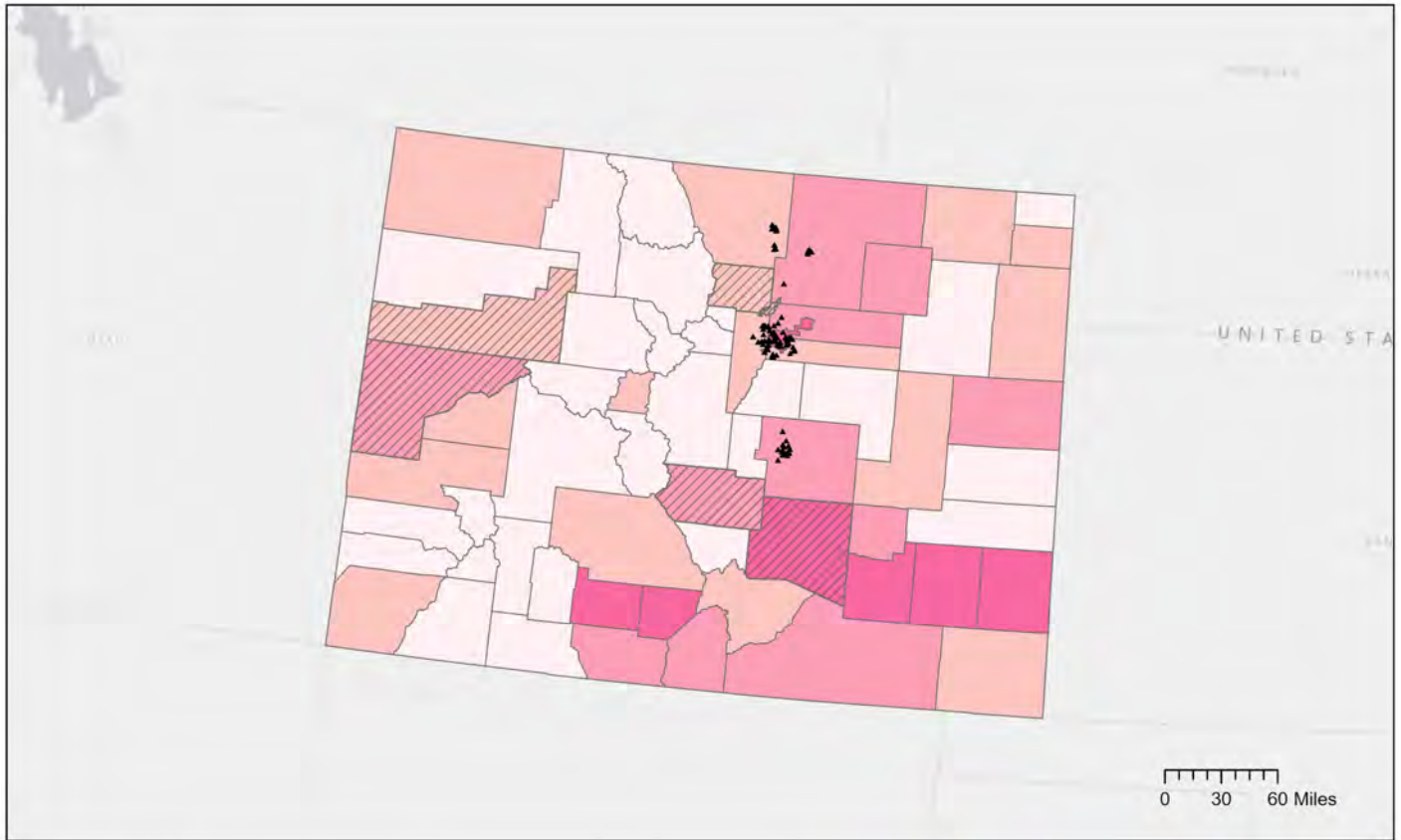
- ▲ Recovery residences
- Age-adjusted alcohol and drug mortality rate per 100,000 population
- 9 - 18
- 19 - 28
- 29 - 52
- 53 - 79
- Suppressed/Unreliable
- Counties with residence locations suppressed (1-4 residences) to protect privacy



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



Figure 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, NPS  
 Recovery residence locations: 2020  
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