

National Study of Treatment and Addiction Recovery Residences Report

WISCONSIN

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 98 recovery residences (1.69 houses per 100,000 population) in Wisconsin (see Table 1). Compared to other states (which include DC), Wisconsin ranked 40 in terms of recovery housing availability per capita. All but one residence in Wisconsin could be geocoded for these analyses. Forest County, a non-adjacent rural county, had the most recovery residences per 100,000 population, and 38 counties had no identified recovery residences, representing a mix of rural-urban classifications; 68 had fewer than 5 recovery residences (see Figure 1).

We used geographic information systems to identify hot and cold spots in Wisconsin. 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 21.20 in Wisconsin for the years 2009-2019. Wisconsin ranked 19 on alcohol- and drug-involved mortality out of the 50 states and DC. Among the counties ranked, Menominee County had the highest alcohol- and drug-involved mortality rate and Lafayette County had the lowest alcohol- and drug-involved mortality rate. Of the three counties that had the highest mortality rates in Wisconsin (i.e., Menominee, Forest, and Sawyer), 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).

98

RESIDENCES
TOTAL

40

NATIONAL
AVAILABILITY
RANKING

38

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
WISCONSIN	5,790,716		98	1.69	40	21.20	19	
Adams	20,094	Adjacent rural	0	0.00	72	57.80	6	Low
Ashland	15,617	Non-adjacent rural	0	0.00	72	61.70	5	Low
Barron	45,229	Adjacent rural	1	2.21	20	36.20	28	Low
Bayfield	14,993	Adjacent rural	0	0.00	72	36.20	28	Very low vulnerability
Brown	261,368	Urban	7	2.68	11	31.40	38	Moderate
Buffalo	13,126	Adjacent rural	0	0.00	72	22.10	62	Very low vulnerability
Burnett	15,289	Adjacent rural	0	0.00	72	45.10	13	Very low vulnerability
Calumet	49,928	Urban	0	0.00	72	25.30	54	Very low vulnerability
Chippewa	63,892	Urban	0	0.00	72	23.00	60	Very low vulnerability
Clark	34,579	Adjacent rural	0	0.00	72	15.20	70	Moderate
Columbia	57,133	Urban	1	1.75	23	53.30	9	Low
Crawford	16,235	Non-adjacent rural	0	0.00	72	23.30	59	Low
Dane	536,078	Urban	19	3.54	9	36.10	30	Low
Dodge	87,715	Adjacent rural	2	2.28	17	36.70	25	Low
Door	27,472	Adjacent rural	0	0.00	72	27.00	51	Low
Douglas	43,295	Urban	0	0.00	72	44.00	15	Low
Dunn	44,759	Adjacent rural	1	2.23	18	30.30	40	Very low vulnerability
Eau Claire	103,514	Urban	4	3.86	8	29.40	42	Low
Florence	4,314	Non-adjacent rural	0	0.00	72	64.30	4	Very low vulnerability
Fond du Lac	102,597	Urban	2	1.95	21	28.70	44	Low
Forest	8,995	Non-adjacent rural	1	11.12	1	78.60	2	Moderate
Grant	51,733	Adjacent rural	0	0.00	72	18.70	67	Very low vulnerability
Green	36,896	Urban	1	2.71	10	27.60	48	Very low vulnerability
Green Lake	18,755	Adjacent rural	0	0.00	72	35.60	33	Low
Iowa	23,618	Urban	1	4.23	6	25.50	53	Very low vulnerability
Iron	5,687	Non-adjacent rural	0	0.00	72	45.80	11	Low
Jackson	20,522	Adjacent rural	0	0.00	72	38.50	22	Low
Jefferson	84,701	Adjacent rural	1	1.18	27	27.10	50	Low
Juneau	26,478	Non-adjacent rural	0	0.00	72	54.20	8	Low
Kenosha	168,524	Urban	4	2.37	14	40.00	18	High
Kewaunee	20,387	Urban	0	0.00	72	22.00	63	Very low vulnerability
La Crosse	117,894	Urban	5	4.24	5	42.70	17	Low
Lafayette	16,715	Adjacent rural	0	0.00	72	14.70	71	Very low vulnerability

Langlade	19,146	Adjacent rural	0	0.00	72	31.50	37	Low
Lincoln	27,744	Adjacent rural	0	0.00	72	34.70	35	Very low vulnerability
Manitowoc	79,185	Adjacent rural	1	1.26	26	39.00	20	Low
Marathon	135,396	Urban	3	2.22	19	36.00	32	Low
Marinette	40,391	Adjacent rural	0	0.00	72	31.20	39	Low
Marquette	15,304	Adjacent rural	0	0.00	72	44.30	14	Very low vulnerability
Menominee	4,558	Adjacent rural	0	0.00	72	137.20	1	Moderate
Milwaukee	951,226	Urban	13	1.37	25	50.40	10	Very high vulnerability
Monroe	45,771	Adjacent rural	0	0.00	72	38.10	23	Moderate
Oconto	37,646	Urban	0	0.00	72	24.50	56	Very low vulnerability
Oneida	35,381	Non-adjacent rural	3	8.48	2	40.00	18	Very low vulnerability
Outagamie	185,700	Urban	2	1.08	29	27.60	48	Low
Ozaukee	88,597	Urban	1	1.13	28	18.60	68	Very low vulnerability
Pepin	7,265	Adjacent rural	0	0.00	72	Suppressed	-	Very low vulnerability
Pierce	41,977	Urban	1	2.38	13	24.90	55	Very low vulnerability
Polk	43,438	Adjacent rural	1	2.30	16	36.60	26	Very low vulnerability
Portage	70,632	Adjacent rural	4	5.66	3	24.10	57	Very low vulnerability
Price	13,416	Non-adjacent rural	0	0.00	72	22.50	61	Very low vulnerability
Racine	195,602	Urban	1	0.51	34	43.60	16	Moderate
Richland	17,459	Adjacent rural	0	0.00	72	28.90	43	Low
Rock	162,152	Urban	1	0.62	33	45.40	12	Moderate
Rusk	14,132	Adjacent rural	0	0.00	72	27.90	47	Low
Sauk	63,922	Adjacent rural	0	0.00	72	35.20	34	Low
Sawyer	16,399	Non-adjacent rural	0	0.00	72	72.60	3	Moderate
Shawano	40,904	Adjacent rural	1	2.44	12	23.50	58	Low
Sheboygan	115,178	Urban	1	0.87	30	34.30	36	Low
St. Croix	88,732	Urban	0	0.00	72	21.20	64	Very low vulnerability
Taylor	20,325	Adjacent rural	1	4.92	4	18.20	69	Very low vulnerability
Trempealeau	29,499	Adjacent rural	0	0.00	72	20.80	66	Very low vulnerability
Vernon	30,633	Adjacent rural	0	0.00	72	28.00	46	Low
Vilas	21,751	Non-adjacent rural	0	0.00	72	57.70	7	Low
Walworth	103,074	Adjacent rural	2	1.94	22	37.60	24	Moderate
Washburn	15,688	Non-adjacent rural	0	0.00	72	36.10	30	Very low vulnerability
Washington	134,925	Urban	1	0.74	32	29.70	41	Very low vulnerability
Waukesha	400,475	Urban	3	0.75	31	25.70	52	Very low vulnerability
Waupaca	51,245	Adjacent rural	2	3.90	7	36.40	27	Low
Waushara	24,193	Adjacent rural	0	0.00	72	21.10	65	Low
Winnebago	170,411	Urban	4	2.35	15	38.80	21	Low

Wood	73,112	Adjacent rural	1	1.37	24	28.40	45	Very low vulnerability
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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. One (1) recovery residence in the state was not successfully geocoded due to lack of adequate address information, and thus were not assigned to a county.

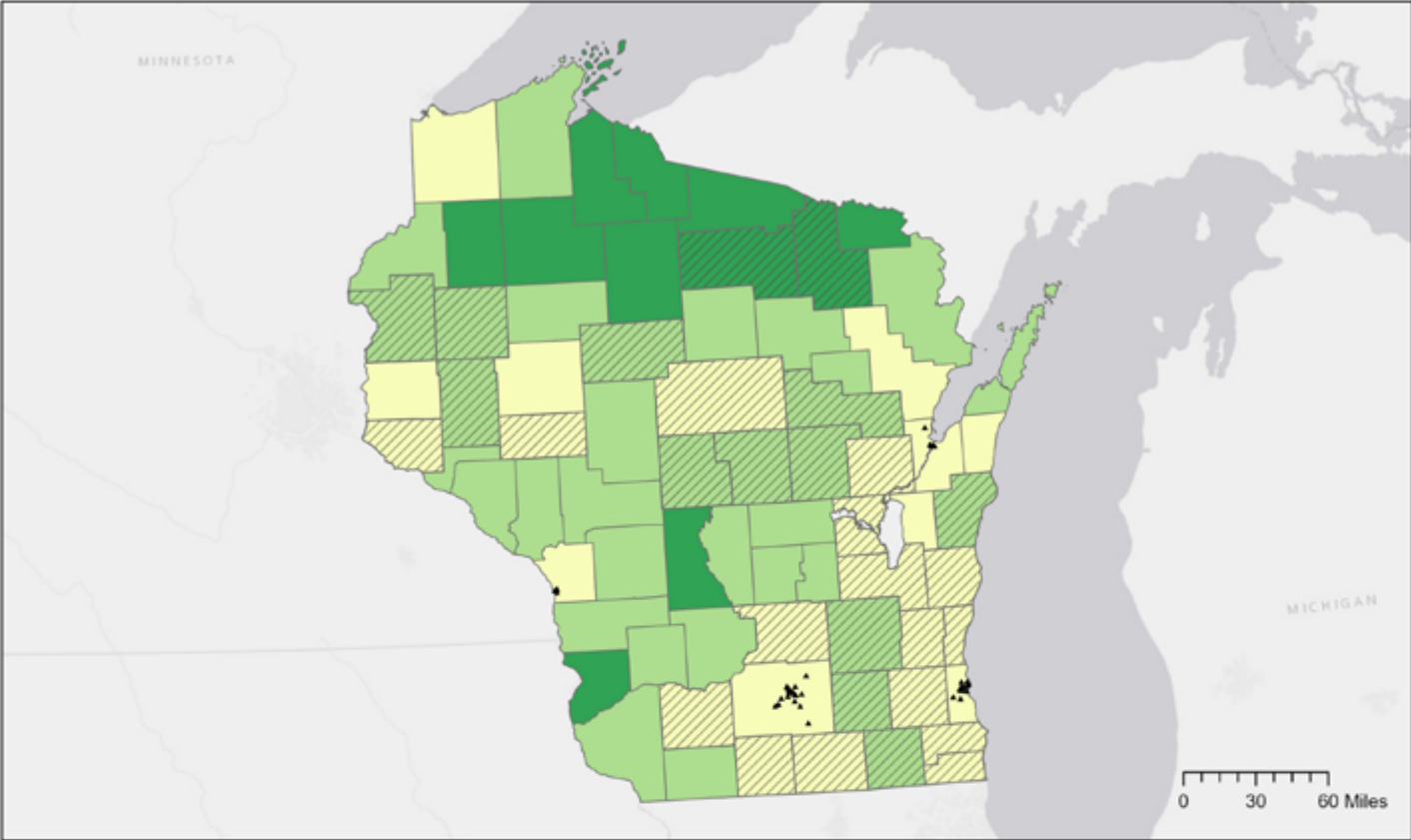
⁴Recovery residences availability per capita is ranked in order of decreasing recovery residence density per 100,000 population per county, with 1 (highest number of residences per 100,000) to 72 (lowest number of residences per 100,000 population). Counties without recovery residences were all assigned a tied rank of 72.

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 71 (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



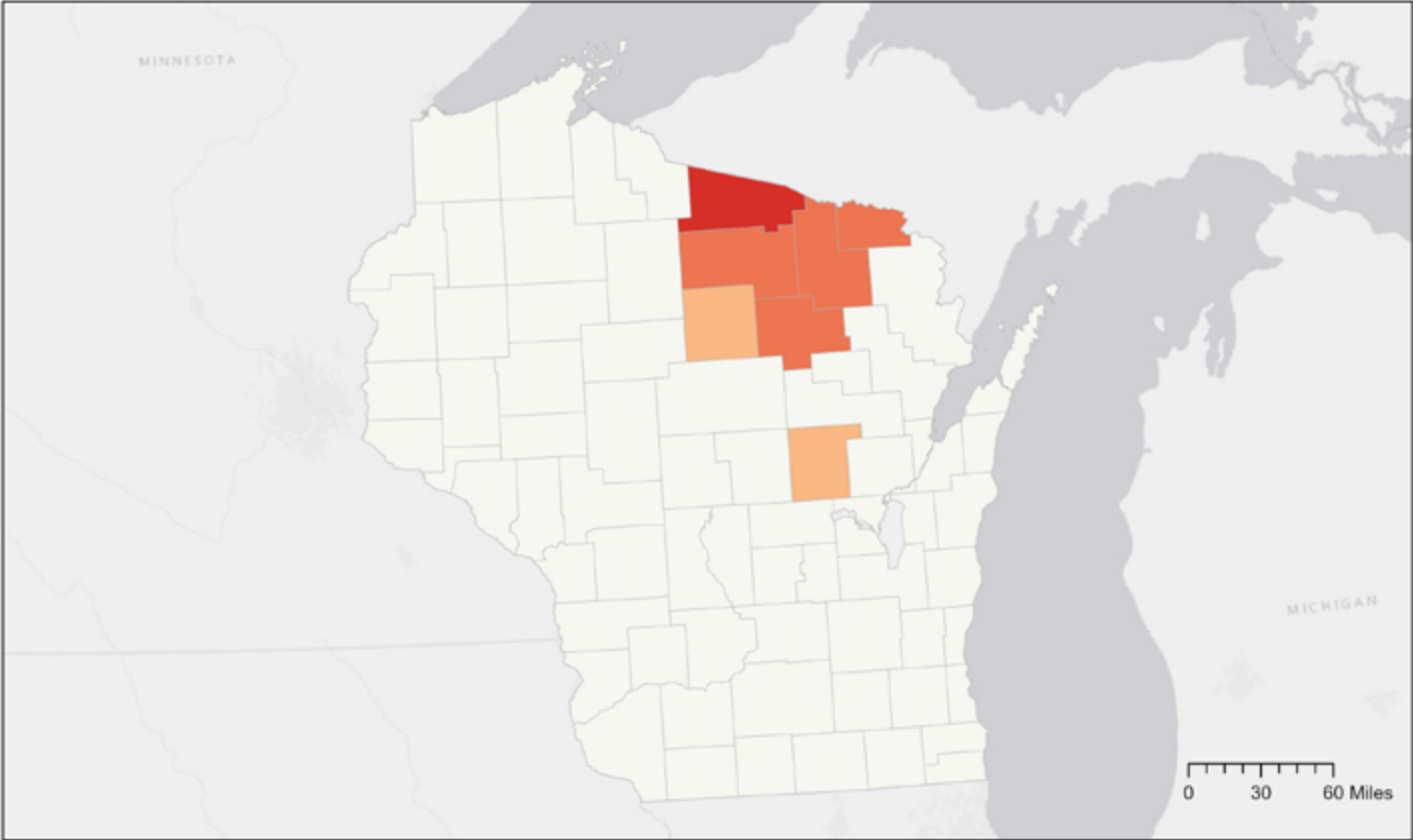
- ▲ Recovery residences
- Rural-Urban Classification Code (RUCC)**
- Urban
- Adjacent rural
- Non-adjacent rural
- Counties with residence locations suppressed (1-4 residences) to protect privacy



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*)

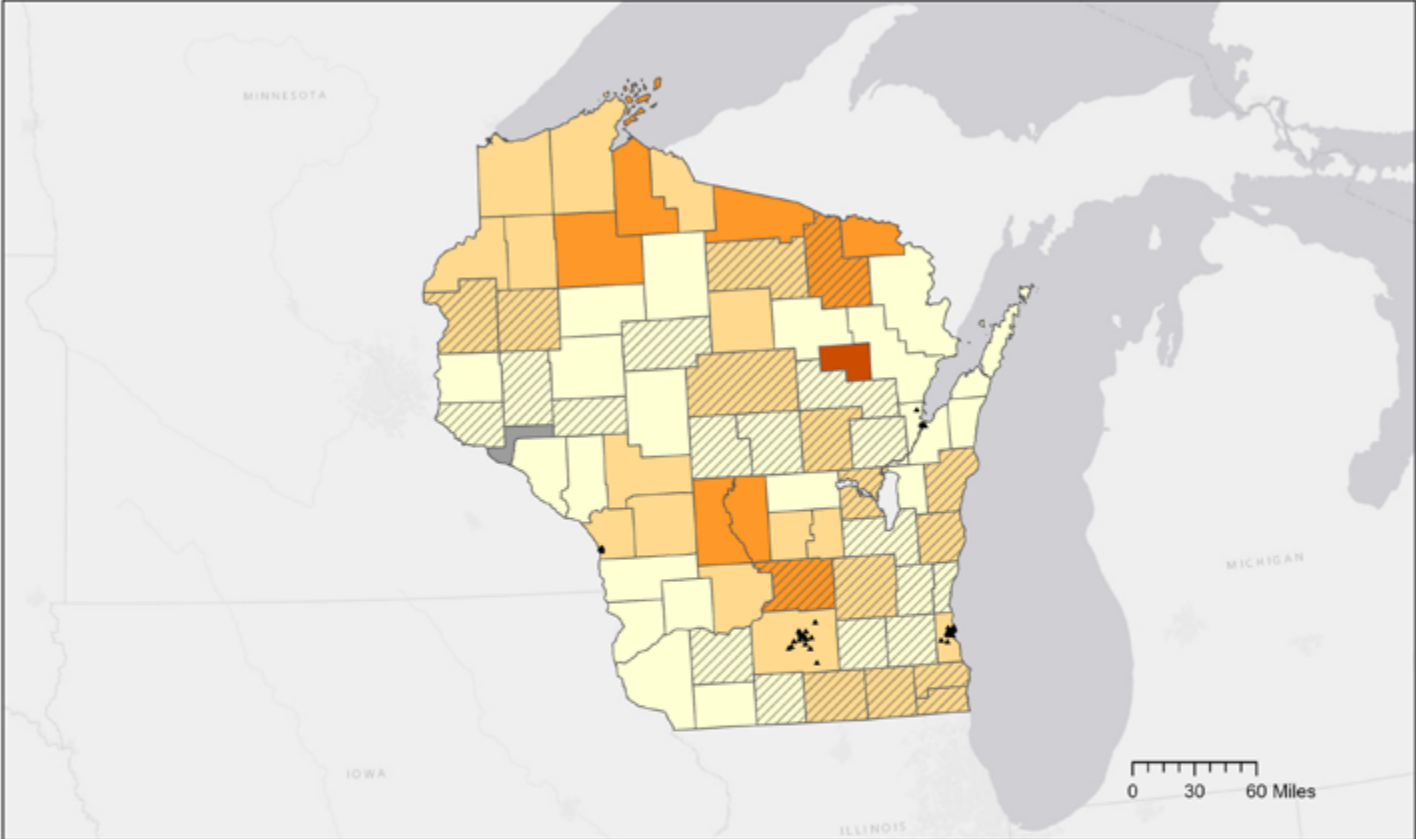
- Cold Spot with 99% Confidence
- Cold Spot with 95% Confidence
- Cold Spot with 90% Confidence
- Not Significant
- Hot Spot with 90% Confidence
- Hot Spot with 95% Confidence
- Hot Spot with 99% Confidence



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

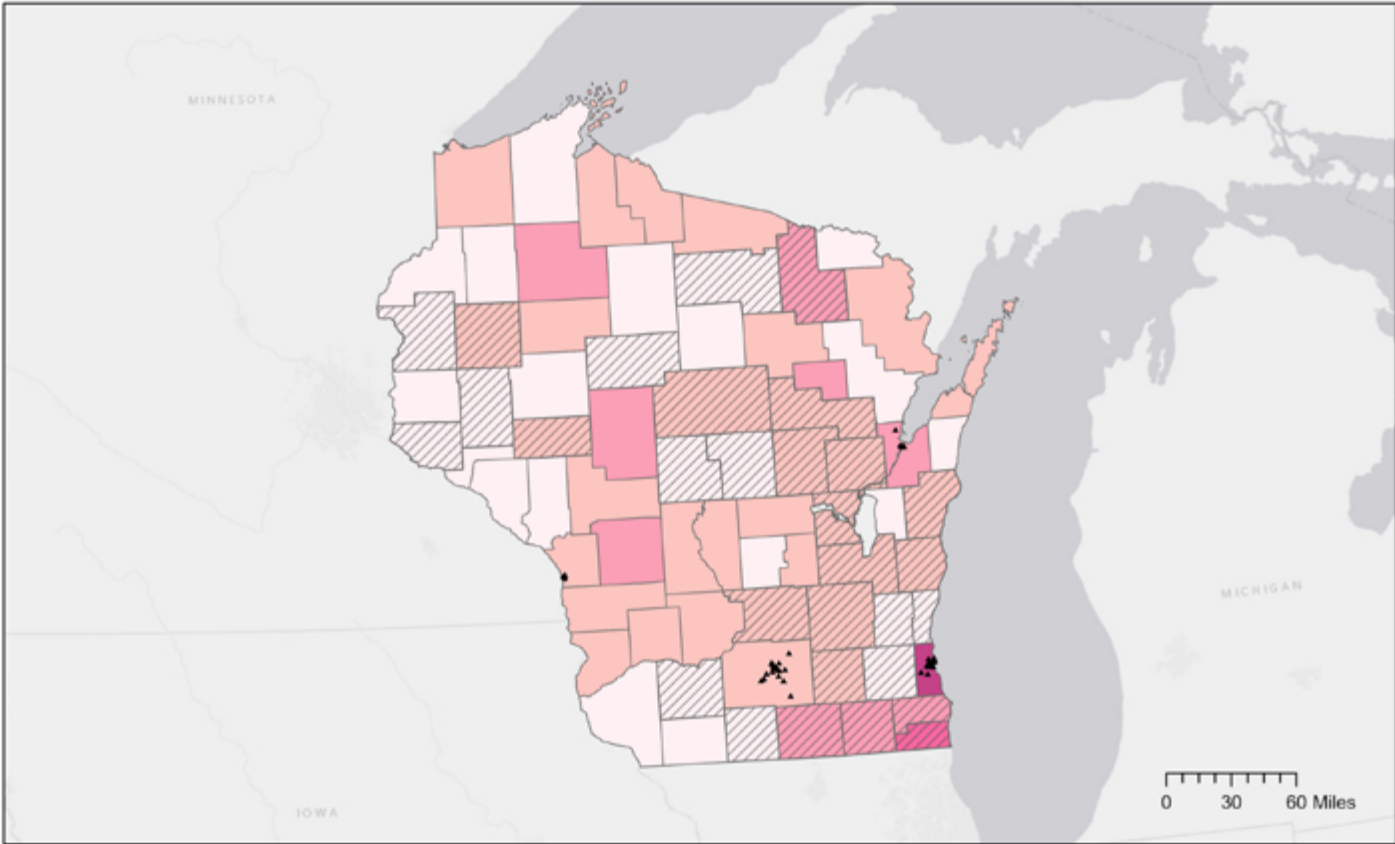
- 14 - 31
- 32 - 50
- 51 - 78
- 79 - 137
- Suppressed/Unreliable
- Counties with residence locations suppressed (1-4 residences) to protect privacy

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 Recovery residence locations: 2020
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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
- Countries 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)





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