

# National Study of Treatment and Addiction Recovery Residences Report Mississippi

**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 38 recovery residences (1.27 houses per 100,000 population) in Mississippi (see Table 1). Compared to other states (which include DC), Mississippi ranked 42 in terms of recovery housing availability per capita. All but one of the residences in Mississippi could be geocoded for these analyses. Tallahatchie County, a non-adjacent rural county, had the most recovery residences per 100,000 population, and 68 counties had no identified recovery residences, representing a mix of rural-urban classifications; 80 (all but two counties) had fewer than 5 recovery residences (see Figure 1).

We used geographic information systems to identify hot and cold spots in Mississippi. 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 12.30 in Mississippi for the years 2009-2019. Mississippi ranked 45 on alcohol- and drug-involved mortality out of the 50 states and DC. Among the counties ranked, Stone County had the highest alcohol- and drug-involved mortality rate and Lauderdale County had the lowest alcohol- and drug-involved mortality rate. Of the three counties that had the highest mortality rates in Mississippi (i.e., Stone, Wayne, and Tishomingo), none had any recovery housing at all, 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. Forty-three counties were classified as having very high vulnerability, and 33 counties ranked in the bottom half of recovery housing availability per capita, (they had no recovery housing at all), again suggesting that more recovery resources may be needed (see Table 1 and Figure 4).

38

RESIDENCES  
TOTAL

42

NATIONAL  
AVAILABILITY  
RANKING

68

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>
<b>MISSISSIPPI</b>	2,984,418		38	1.27	42	12.30	45	
<b>Adams</b>	31,266	Non-adjacent rural	0	0.00	82	21.20	45	Very high vulnerability
<b>Alcorn</b>	37,090	Non-adjacent rural	1	2.70	9	25.40	31	High
<b>Amite</b>	12,412	Adjacent rural	0	0.00	82	24.10	37	High
<b>Attala</b>	18,437	Adjacent rural	0	0.00	82	14.40	70	Very high vulnerability
<b>Benton</b>	8,232	Urban	0	0.00	82	Suppressed	-	Moderate
<b>Bolivar</b>	31,848	Non-adjacent rural	0	0.00	82	18.90	52	Very high vulnerability
<b>Calhoun</b>	14,499	Non-adjacent rural	0	0.00	82	12.60	72	Very high vulnerability
<b>Carroll</b>	10,070	Non-adjacent rural	0	0.00	82	17.60	60	Moderate
<b>Chickasaw</b>	17,193	Non-adjacent rural	0	0.00	82	15.50	67	Very high vulnerability
<b>Choctaw</b>	8,277	Non-adjacent rural	0	0.00	82	Suppressed	-	High
<b>Claiborne</b>	9,089	Adjacent rural	0	0.00	82	Suppressed	-	Very high vulnerability
<b>Clarke</b>	15,770	Non-adjacent rural	0	0.00	82	25.50	30	High
<b>Clay</b>	19,640	Non-adjacent rural	0	0.00	82	17.00	63	High
<b>Coahoma</b>	23,255	Non-adjacent rural	1	4.30	3	34.50	11	Very high vulnerability
<b>Copiah</b>	28,501	Urban	0	0.00	82	24.60	35	Very high vulnerability
<b>Covington</b>	18,978	Adjacent rural	0	0.00	82	27.30	22	High
<b>DeSoto</b>	178,975	Urban	0	0.00	82	25.30	33	Moderate
<b>Forrest</b>	75,224	Urban	4	5.32	2	30.10	17	Very high vulnerability
<b>Franklin</b>	7,733	Non-adjacent rural	0	0.00	82	23.20	42	Moderate
<b>George</b>	23,917	Adjacent rural	0	0.00	82	25.70	27	Moderate
<b>Greene</b>	13,645	Adjacent rural	0	0.00	82	Suppressed	-	Moderate
<b>Grenada</b>	21,088	Non-adjacent rural	0	0.00	82	17.70	58	Very high vulnerability
<b>Hancock</b>	46,961	Urban	0	0.00	82	44.10	5	High
<b>Harrison</b>	204,502	Urban	8	3.91	6	45.00	4	Very high vulnerability
<b>Hinds</b>	238,797	Urban	10	4.19	5	21.20	45	Very high vulnerability
<b>Holmes</b>	17,737	Adjacent rural	0	0.00	82	18.60	54	Very high vulnerability
<b>Humphreys</b>	8,389	Adjacent rural	0	0.00	82	28.10	19	Very high vulnerability
<b>Issaquena</b>	1,361	Adjacent rural	0	0.00	82	Suppressed	-	High
<b>Itawamba</b>	23,462	Non-adjacent rural	1	4.26	4	30.40	16	High
<b>Jackson</b>	142,376	Urban	1	0.70	14	38.00	8	High
<b>Jasper</b>	16,505	Non-adjacent rural	0	0.00	82	20.70	48	High

<b>Jefferson</b>	7,225	Adjacent rural	0	0.00	82	Suppressed	-	Very high vulnerability
<b>Jefferson Davis</b>	11,339	Adjacent rural	0	0.00	82	28.10	19	High
<b>Jones</b>	68,352	Adjacent rural	1	1.46	13	21.50	43	Very high vulnerability
<b>Kemper</b>	9,943	Non-adjacent rural	0	0.00	82	Suppressed	-	High
<b>Lafayette</b>	53,590	Adjacent rural	2	3.73	7	15.10	68	Low
<b>Lamar</b>	61,969	Urban	0	0.00	82	19.20	51	Moderate
<b>Lauderdale</b>	76,279	Non-adjacent rural	2	2.62	10	11.70	73	Very high vulnerability
<b>Lawrence</b>	12,633	Adjacent rural	0	0.00	82	23.70	41	High
<b>Leake</b>	22,792	Adjacent rural	0	0.00	82	15.70	66	Very high vulnerability
<b>Lee</b>	85,072	Non-adjacent rural	2	2.35	11	25.70	27	Very high vulnerability
<b>Leflore</b>	29,222	Non-adjacent rural	0	0.00	82	31.30	14	Very high vulnerability
<b>Lincoln</b>	34,320	Adjacent rural	0	0.00	82	18.40	56	High
<b>Lowndes</b>	59,150	Non-adjacent rural	2	3.38	8	26.30	25	Very high vulnerability
<b>Madison</b>	104,562	Urban	0	0.00	82	20.30	49	High
<b>Marion</b>	24,990	Adjacent rural	0	0.00	82	43.70	6	Very high vulnerability
<b>Marshall</b>	35,599	Urban	0	0.00	82	17.20	62	High
<b>Monroe</b>	35,673	Non-adjacent rural	0	0.00	82	25.60	29	High
<b>Montgomery</b>	10,068	Non-adjacent rural	0	0.00	82	25.80	26	High
<b>Neshoba</b>	29,332	Non-adjacent rural	0	0.00	82	23.80	40	Very high vulnerability
<b>Newton</b>	21,360	Non-adjacent rural	0	0.00	82	16.50	64	Very high vulnerability
<b>Noxubee</b>	10,700	Non-adjacent rural	0	0.00	82	Suppressed	-	Very high vulnerability
<b>Oktibbeha</b>	49,512	Non-adjacent rural	0	0.00	82	13.40	71	Moderate
<b>Panola</b>	34,190	Adjacent rural	0	0.00	82	24.10	37	Very high vulnerability
<b>Pearl River</b>	55,219	Adjacent rural	0	0.00	82	39.80	7	High
<b>Perry</b>	12,006	Urban	0	0.00	82	36.50	10	Moderate
<b>Pike</b>	39,532	Adjacent rural	0	0.00	82	25.40	31	Very high vulnerability
<b>Pontotoc</b>	31,618	Non-adjacent rural	0	0.00	82	29.70	18	Very high vulnerability
<b>Prentiss</b>	25,255	Non-adjacent rural	0	0.00	82	26.50	24	High
<b>Quitman</b>	7,187	Adjacent rural	0	0.00	82	30.50	15	Very high vulnerability
<b>Rankin</b>	152,677	Urban	0	0.00	82	21.50	43	Moderate
<b>Scott</b>	28,332	Adjacent rural	0	0.00	82	16.40	65	Very high vulnerability
<b>Sharkey</b>	4,404	Adjacent rural	0	0.00	82	Suppressed	-	Very high vulnerability
<b>Simpson</b>	26,888	Urban	0	0.00	82	18.70	53	Very high vulnerability
<b>Smith</b>	16,009	Adjacent rural	0	0.00	82	18.50	55	Moderate
<b>Stone</b>	18,276	Adjacent rural	0	0.00	82	57.90	1	High
<b>Sunflower</b>	26,168	Non-adjacent rural	0	0.00	82	24.70	34	Very high vulnerability

Tallahatchie	14,158	Non-adjacent rural	1	7.06	1	20.90	47	Very high vulnerability
Tate	28,404	Urban	0	0.00	82	36.90	9	Very high vulnerability
Tippah	22,018	Adjacent rural	0	0.00	82	15.00	69	Very high vulnerability
Tishomingo	19,441	Adjacent rural	0	0.00	82	49.60	3	High
Tunica	9,988	Urban	0	0.00	82	24.50	36	Very high vulnerability
Union	28,507	Adjacent rural	0	0.00	82	23.90	39	High
Walthall	14,477	Non-adjacent rural	0	0.00	82	26.70	23	Very high vulnerability
Warren	46,519	Adjacent rural	1	2.15	12	17.70	58	Very high vulnerability
Washington	46,057	Non-adjacent rural	0	0.00	82	18.30	57	Very high vulnerability
Wayne	20,373	Non-adjacent rural	0	0.00	82	50.90	2	High
Webster	9,768	Non-adjacent rural	0	0.00	82	33.40	12	High
Wilkinson	8,875	Adjacent rural	0	0.00	82	20.30	49	Very high vulnerability
Winston	18,229	Non-adjacent rural	0	0.00	82	32.30	13	Very high vulnerability
Yalobusha	12,367	Non-adjacent rural	0	0.00	82	17.60	60	High
Yazoo	28,565	Urban	0	0.00	82	27.80	21	Very high vulnerability

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. One (1) recovery residence in the state was not successfully geocoded due to lack of adequate address information, and thus was not assigned to a county.

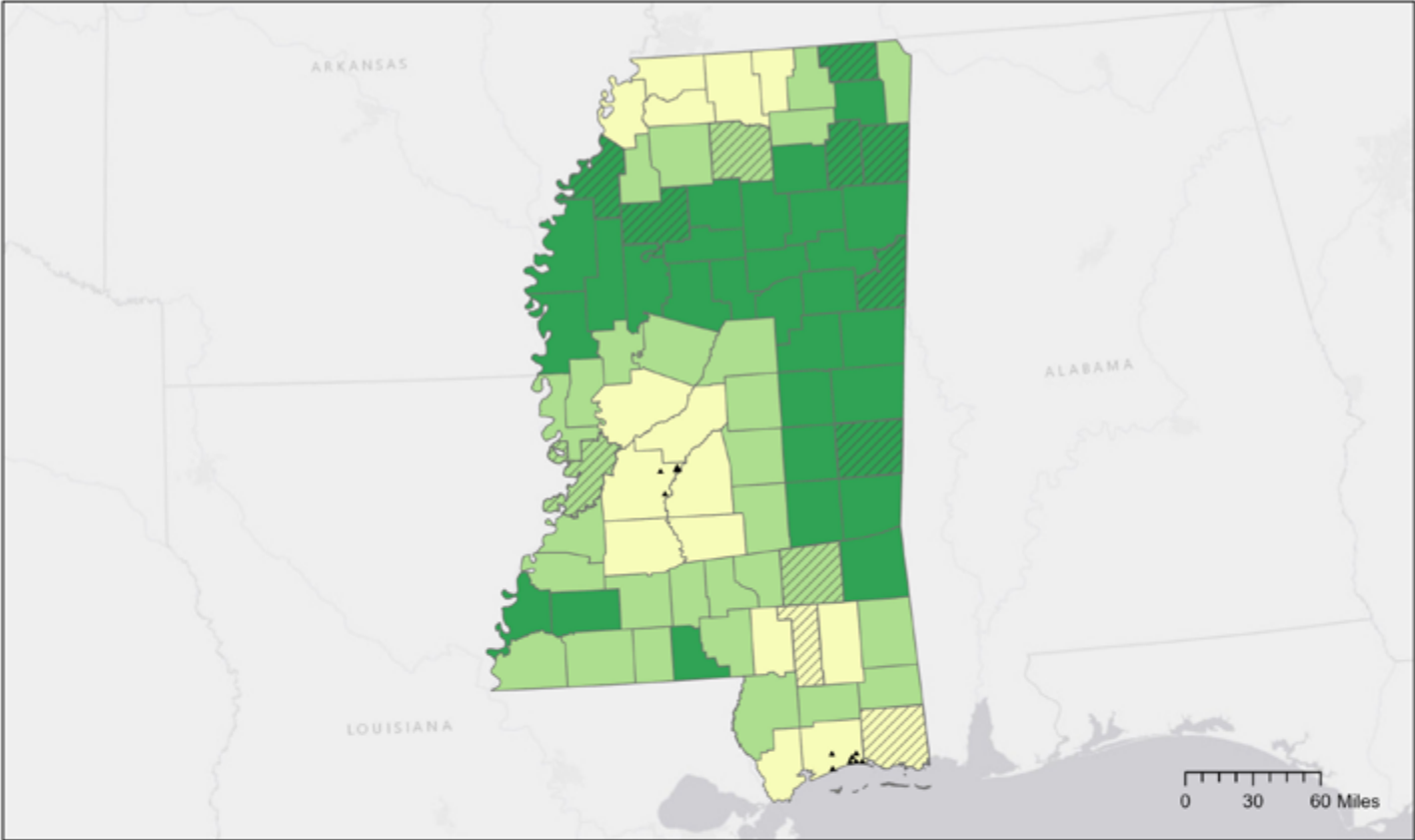
<sup>4</sup>Recovery residences availability per capita is ranked in order of decreasing recovery residence density per 100,000 population per county, with 1 (highest number of residences per 100,000) to 82 (lowest number of residences per 100,000 population). Counties without recovery residences were all assigned a tied rank of 82.

<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 73 (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. 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



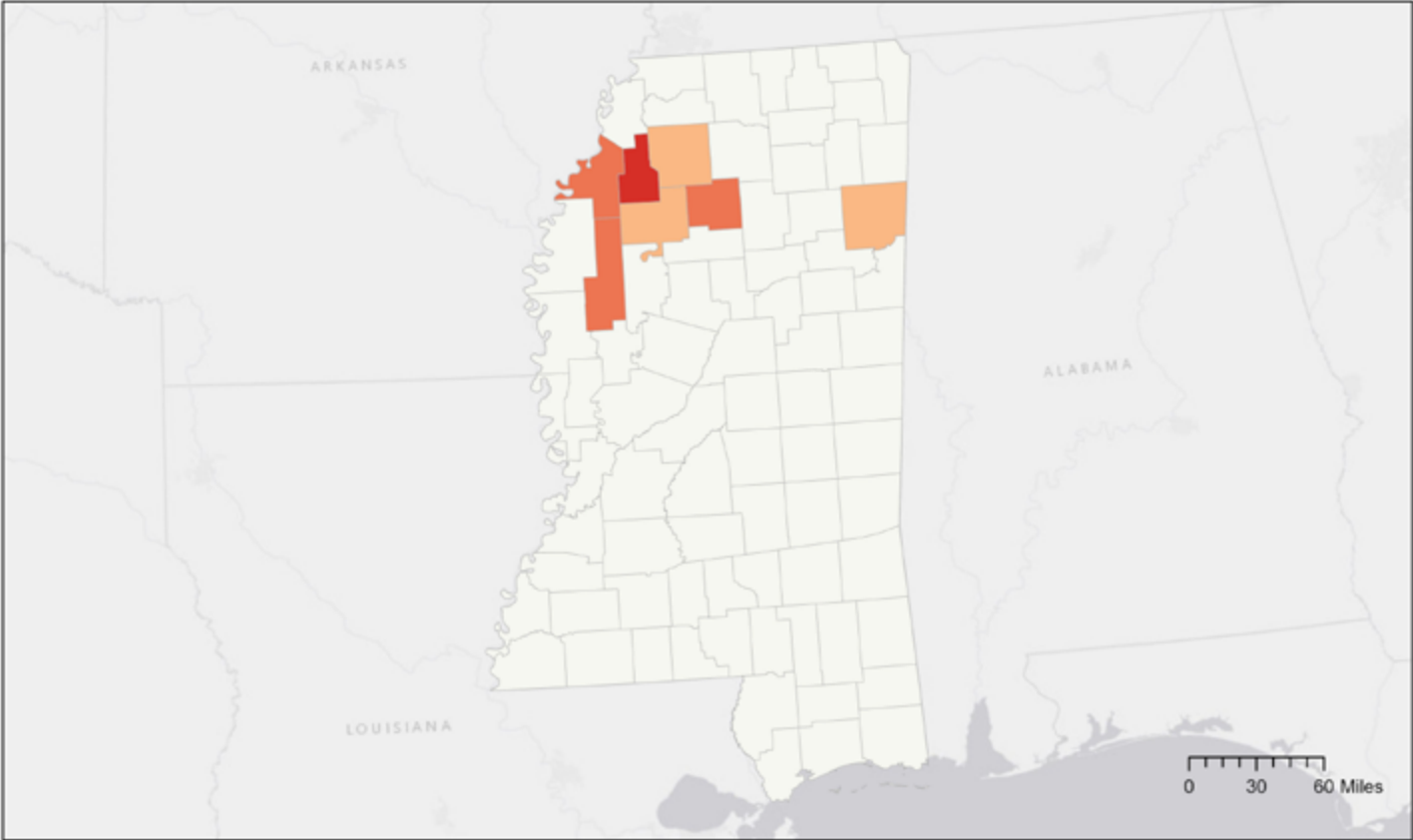
- ▲ Recovery residences
- Rural-Urban Classification Code (RUCC)**
- Urban
- Adjacent rural
- Non-adjacent rural
- Counties with residence locations suppressed (1-4 residences) to protect privacy



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\*)**

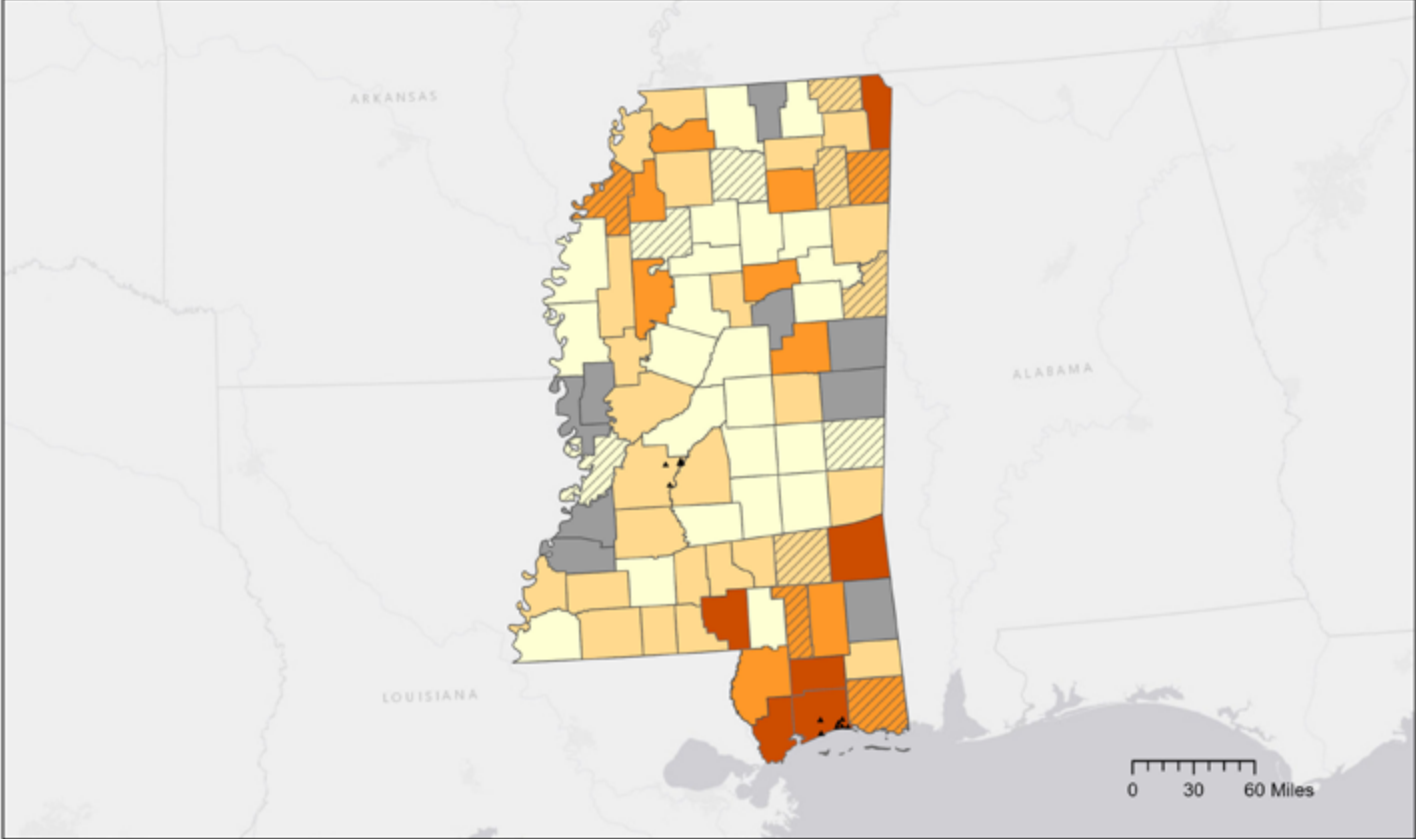
- Cold Spot with 99% Confidence
- Cold Spot with 95% Confidence
- Cold Spot with 90% Confidence
- Not Significant
- Hot Spot with 90% Confidence
- Hot Spot with 95% Confidence
- Hot Spot with 99% Confidence



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



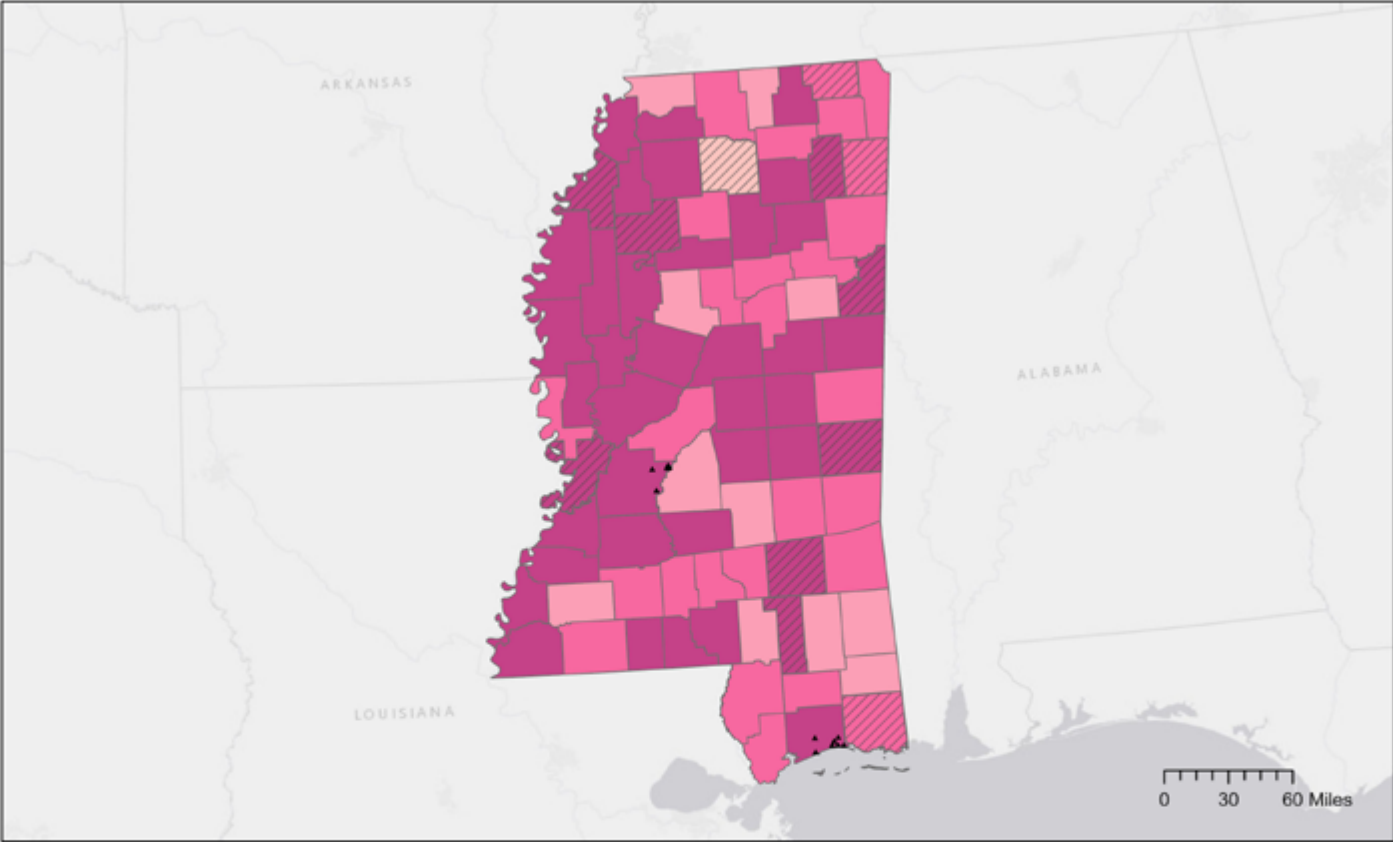
- ▲ Recovery residences
- Age-adjusted alcohol and drug mortality rate per 100,000 population
- 11 - 20
- 21 - 28
- 29 - 39
- 40 - 57
- Suppressed/Unreliable
- Countries with residence locations suppressed (1-4 residences) to protect privacy



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



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  
 Created by: NSTARR Project (May 2022)







National Study of Treatment and Addiction Recovery Residences  
6001 Shellmound Street, Suite 450  
Emeryville, CA 94608

 [nstarr.arg.org](http://nstarr.arg.org)  [nstarr@arg.org](mailto:nstarr@arg.org)  [@NSTARRStudy](https://www.facebook.com/NSTARRStudy)  [@arg\\_nstarr](https://twitter.com/arg_nstarr)

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