

## Appendix

**Table A1. Detailed Source Information for Secondary Data**

Variable	Data Provider or Source	Data Source Citation or Description
911 Calls in 2020	Missoula County Office of Emergency Management	This data set is publicly available on the <a href="#">Missoula City-County Public Report website</a> or by <a href="#">public records request</a> . We were provided the dataset as Excel files by the Missoula County Office of Emergency Management.
Temperature	Center for Population Health Research	Northwest Alliance for Computational Science and Engineering, PRISM Climate Group (2024). <i>Mean temperature in recent years</i> . [Data set]. <a href="https://prism.oregonstate.edu/recent/">https://prism.oregonstate.edu/recent/</a>
Air Quality (PM 2.5)	Center for Population Health Research	Landguth, E. L., Swanson, A., Holden, Z. A., Graham, J., Warren, D., & Noonan, C. (2022). <i>Daily 1-kilometer PM2.5 maps accounting for inversion potentials for the western United States 2003-2020</i> [Data set]. <a href="https://doi.org/10.6084/m9.figshare.c.5562330.v1">https://doi.org/10.6084/m9.figshare.c.5562330.v1</a>
Nonwhite Residents	American Community Survey	U.S. Census Bureau. (2022). <i>American Community Survey 5-Year Estimates Detailed Tables, B02001Race, Missoula County, MT</i> [Data table]. <a href="https://data.census.gov/table/ACS5Y2022.B02001?g=050XX00US30063\$1500000">https://data.census.gov/table/ACS5Y2022.B02001?g=050XX00US30063\$1500000</a>
Households Receiving Public Assistance	American Community Survey	U.S. Census Bureau. (2022). <i>American Community Survey 5-Year Estimates Detailed Tables, B19057 Public Assistance Income in the Past 12 Months for Households, Missoula County, MT</i> [Data table]. <a href="https://data.census.gov/table/ACS5Y2022.B19057?g=050XX00US30063\$1500000">https://data.census.gov/table/ACS5Y2022.B19057?g=050XX00US30063\$1500000</a>
Average Household Income	American Community Survey	U.S. Census Bureau. (2022). <i>American Community Survey 5-Year Estimates Detailed Tables, B19001 Household Income in the Past 12 Months (in 2022 Inflation-Adjusted Dollars), Missoula County, MT</i> [Data table]. <a href="https://data.census.gov/table/ACS5Y2022.B19001?g=050XX00US30063\$1500000">https://data.census.gov/table/ACS5Y2022.B19001?g=050XX00US30063\$1500000</a>
High School Education or Less	American Community Survey	U.S. Census Bureau. (2022). <i>American Community Survey 5-Year Estimates Detailed Tables, B15003 Educational Attainment for the Population 25 Years and Over, Missoula County, MT</i> [Data table]. <a href="https://data.census.gov/table/ACS5Y2022.B15003?g=050XX00US30063\$1500000">https://data.census.gov/table/ACS5Y2022.B15003?g=050XX00US30063\$1500000</a>

Appendix for: Barsky, C. S., McKeague, L. K., Emidy, M. B., Walters, M., Beck, A., & Chase-Begay, D. (2024). *Public Health Implications of 911 Calls During Heat and Smoke Events* (Natural Hazards Center Public Health Disaster Research Report Series, Report 42). Natural Hazards Center, University of Colorado Boulder. <https://hazards.colorado.edu/public-health-disaster-research/public-health-implications-of-911-calls-during-heat-and-smoke-events>

**Table A1, continued.**

Variable	Data Provider or Source	Data Source Citation or Description
<b>Renter-Occupied Households</b>	American Community Survey	U.S. Census Bureau. (2022). <i>American Community Survey 5-Year Estimates Detailed Tables, B25008 Total Population in Occupied Housing Units by Tenure, Missoula County, MT</i> [Data table]. <a href="https://data.census.gov/table/ACSDT5Y2022.B25008?g=050XX00US30063\$1500000">https://data.census.gov/table/ACSDT5Y2022.B25008?g=050XX00US30063\$1500000</a>
<b>Households With Annual Income Under \$50,000</b>	American Community Survey	U.S. Census Bureau. (2022). <i>American Community Survey 5-Year Estimates Detailed Tables, B19001 Household Income in the Past 12 Months (in 2022 Inflation-Adjusted Dollars), Missoula County, MT</i> [Data table]. <a href="https://data.census.gov/table/ACSDT5Y2022.B19001?g=050XX00US30063\$1500000">https://data.census.gov/table/ACSDT5Y2022.B19001?g=050XX00US30063\$1500000</a>
<b>Unemployed or Not in the Labor Force</b>	American Community Survey	U.S. Census Bureau. (2022). <i>American Community Survey 5-Year Estimates Detailed Tables, B23025 Employment Status for the Population 16 Years and Over, Missoula County, MT</i> [Data table]. <a href="https://data.census.gov/table/ACSDT5Y2022.B23025?g=050XX00US30063\$1500000">https://data.census.gov/table/ACSDT5Y2022.B23025?g=050XX00US30063\$1500000</a>
<b>Adults Over 65</b>	American Community Survey	U.S. Census Bureau. (2022). <i>American Community Survey 5-Year Estimates Detailed Tables, B01001 Sex by Age, Missoula County, MT</i> [Data table]. <a href="https://data.census.gov/table/ACSDT5Y2022.B01001?t=Age%20and%20Sex:Populations%20and%20People&amp;g=050XX00US30063\$1500000">https://data.census.gov/table/ACSDT5Y2022.B01001?t=Age%20and%20Sex:Populations%20and%20People&amp;g=050XX00US30063\$1500000</a>

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**Table A2. 911 Calls in Missoula County Per Year**

Year	Total 911 Calls	Annual Percent Change in 911 Calls (%)
2017	115,743	--
2018	111,411	- 3.74
2019	108,186	- 2.89
2020	101,163	- 6.49
2021	104,477	+ 3.28
2022	103,547	- 0.89
<b>Percent Change 2017-2022</b>		- 10.54

Note. The Missoula County population grew by an estimated 2.7 percent between 2017 and 2022, from 117,834 residents to 121,041 according to the U.S. Census Bureau. The 2017 population estimate is from PEPANNRES Annual Estimates of the Resident Population: April 1, 2010 to July 1, 2019, U.S. Census Bureau, 2019 (<https://data.census.gov/table/PEPPOP2019.PEPANNRES?g=050XX00US30063>). The 2022 population estimate is from American Community Survey 1-Year Estimates Data Profile, U.S. Census, 2022 (<https://data.census.gov/table?q=2022&g=050XX00US30063>)

**Table A3. Census Block-Group Level Correlation Matrix of 911 Calls and Socioeconomic Indicators**

	Mean	Std. Dev.	(1) 911 Calls per day	(2) Calls per day per 1,000 people	(3) Non-white (%)	(4) Households with Public Assistance (%)	(5) Average Income (\$)	(6) Households Occupied by Renters (%)	(7) Residents Over 65 (%)	(8) Household Income Under \$50k (%)	(9) Unemployed or Not in Labor Force (%)	(10) Residents with High School Education or Less (%)
(1) 911 Calls per day	3.14	3.28										
(2) Calls per day per 1,000 people	2.55	2.61	0.91**									
(3) Non-white Residents (%)	10.54	9.82	0.12	0.15								
(4) Households with Public Assistance (%)	2.47	3.33	-0.05	-0.12	0.18							
(5) Average Income (\$)	40,923.79	16,539.35	-0.25*	-0.21*	-0.26*	-0.08						
(6) Households Occupied by Renters (%)	38.14	26.37	0.42**	0.45**	0.31**	0.06	-0.41**					
(7) Residents Over 65 (%)	20.99	11.98	-0.12	-0.07	-0.11	-0.01	0.26*	-0.41**				
(8) Household Income Under \$50k (%)	36.68	18.25	0.31**	0.40**	0.32**	0.12	-0.54**	0.65**	-0.15			
(9) Unemployed or Not in Labor Force (%)	33.42	11.71	-0.02	0.02	0.12	0.09	0.04	-0.21*	0.73**	0.05		
(10) Residents with High School Education or Less (%)	20.13	10.81	0.12	0.08	0.12	0.08	-0.34**	-0.07	0.23*	0.13	0.21*	
(11) Population	1,362.54	592.28	0.13	-0.22*	0.09	0.09	-0.09	-0.04	-0.20	-0.15	-0.11	0.10

Note. Mean values for each variable across all 87 Block Groups in Missoula, Montana.

\*\* p<0.01, \* p<0.05

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