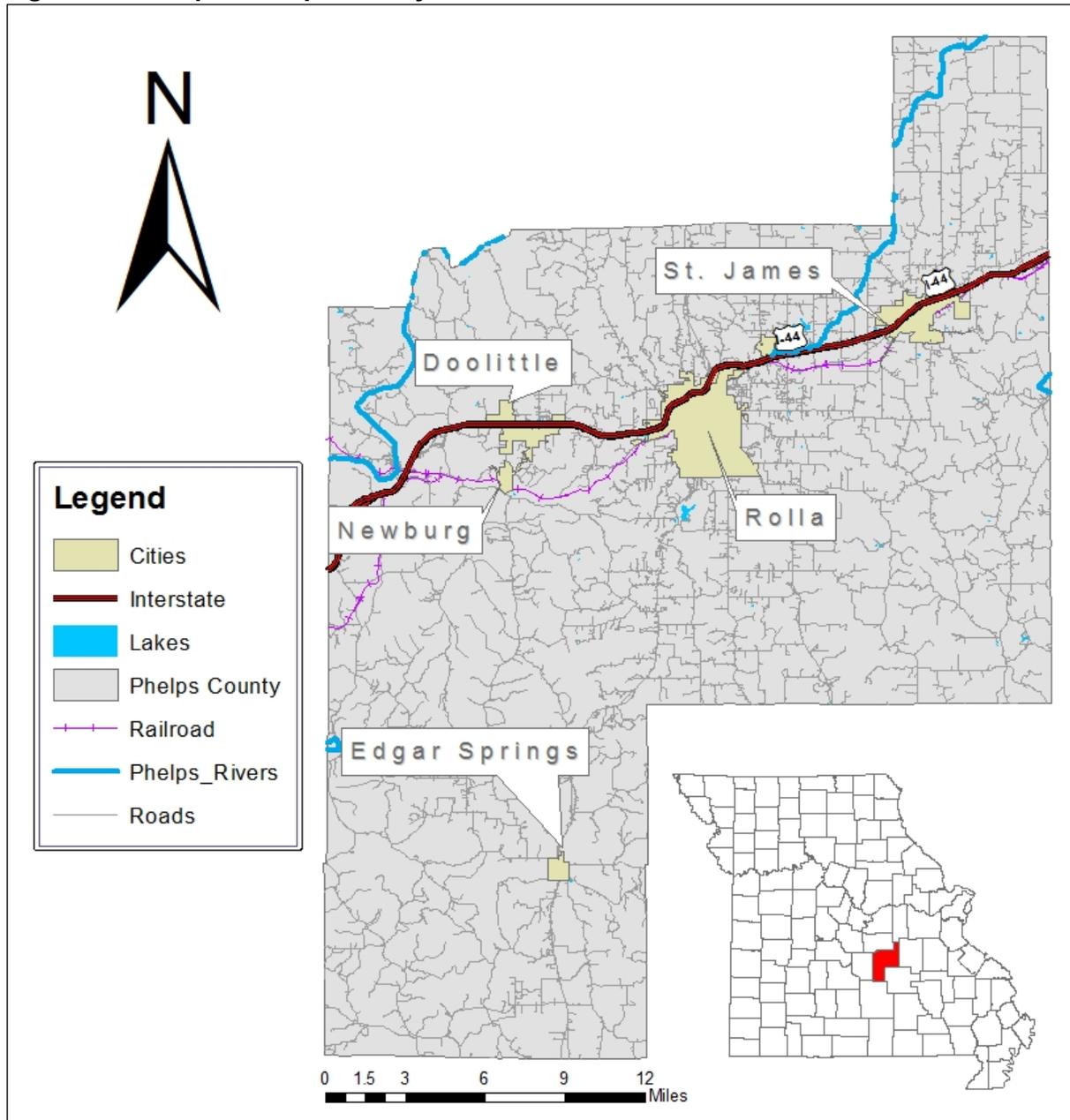

2 PLANNING AREA PROFILE AND CAPABILITIES

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2.1 Phelps County Planning Area Profile

Figure 2.1. Map of Phelps County



**Phelps County Hazard
Mitigation Plan**

MRPC
4 Industrial Drive
St. James, MO
65559

County Basemap

This map was created by the Meramec Regional Planning Commission's Environmental Department. To the best of the author's knowledge, the data presented here is true and correct. However, no responsibility is assumed by the author or MRPC for the accuracy of the information displayed on this map. October 2015



Phelps County has a population of approximately 44,630 according to the most recent census data illustrates the percentage population growth since 2010 as compared to the statewide and national population growth. The median household income and percentage growth since 1999, as compared to statewide and national figures can be found in **Table 2.2**. Furthermore, median house value percentage growth for Phelps County, Missouri, and the United States is provided in **Table 2.3**

Table 2.1. Percent Population Growth for County, State, and Nation 2010-2019

Demographic Region	Total Population		Change Over Period	
	2010	2019	Change	Percent
Missouri	5,814,785	6,104,910	290,125	4.99
United States	300,758,215	324,697,795	23,939,580	7.96
Phelps County	39,945	44,630	4,685	11.73

Source: U.S. Census Bureau, Census 2010 Summary File 1; U.S. Census Bureau, 2015-2019 5-Year American Community Survey

Table 2.2. Median Household Income and Percentage Growth for County, State, and Nation 2010 - 2019

Demographic Region	Median Household Income (USD)		Change Over Period	
	2010	2019	Change	Percent
United States	\$51,914	\$62,843	\$10,929	21.1
Missouri	\$46,262	\$55,461	\$9,199	19.9
Phelps County	\$40,260	\$44,154	\$3,894	9.7

Source: U.S. Census Bureau, 2006-2010 and 2015-2019 5-Year American Community Survey

Table 2.3. Median House Value Percentage Growth for County, State, and Nation 2010 - 2019

Demographic Region	Median House Value (USD)		Change Over Period	
	2010	2019	Change	Percent
United States	\$188,400	\$217,500	\$29,100	15.4
Missouri	\$137,700	\$157,200	\$19,500	14.2
Phelps County	\$114,700	\$135,000	\$20,300	17.7

Source: U.S. Census Bureau, Census 2010 Summary File 3; U.S. Census Bureau, 2015-2019 5-Year American Community Survey

2.1.2 Geography, Geology and Topography

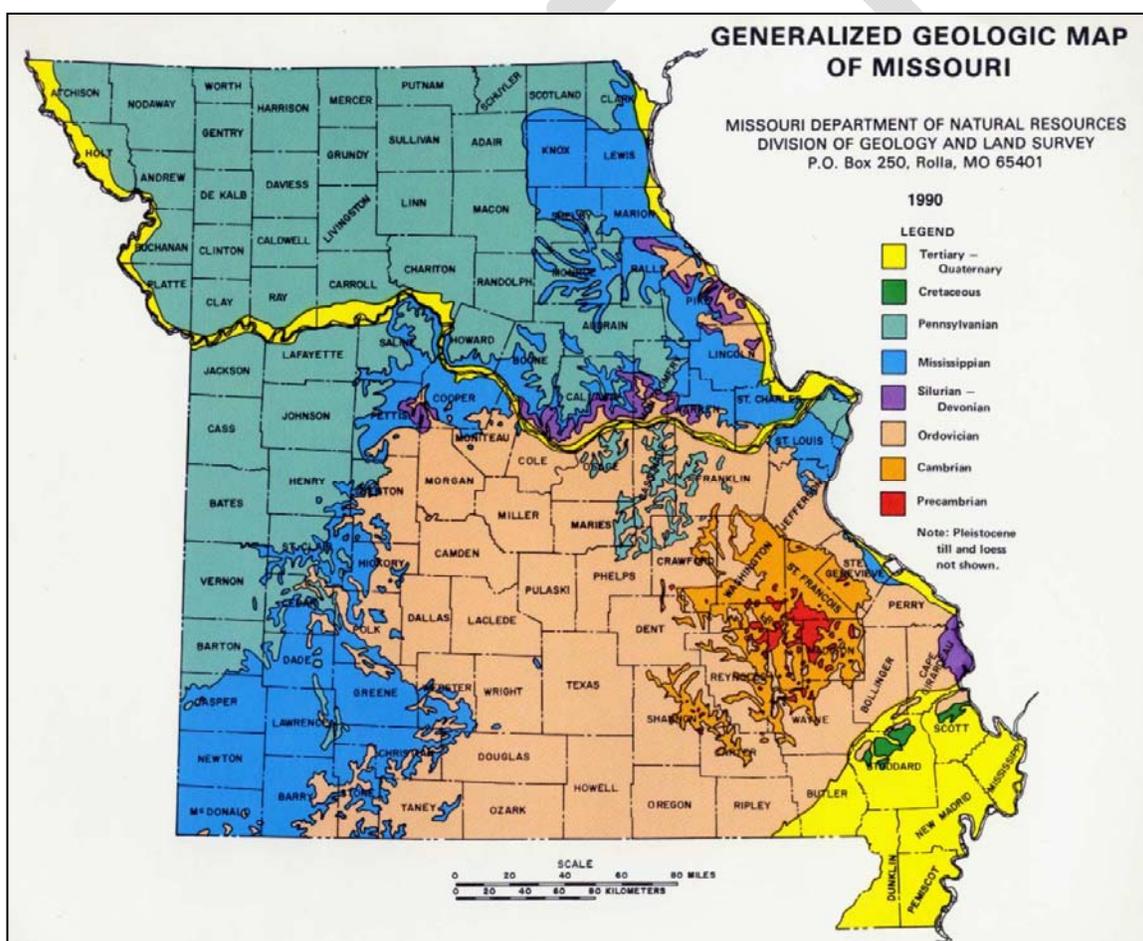
Phelps County has a total land area of 547 square miles. Approximately 31 percent of the land cover in the county is deciduous forest intermixed with 45 percent of grassland. Approximately 18 percent of the land cover within the county is cropland. The area has karst terrain, which is characterized by springs, caves, losing streams, and sinkholes. Additionally, the county is comprised of 2.5 square miles of total water area. Incorporated jurisdictions within the county include the cities of Doolittle, Edgar Springs, Newburg, Rolla and St. James.

The county seat, Rolla, is located in south central Missouri, approximately 60 miles southwest of the state capital of Jefferson City, approximately 105 miles northeast of Springfield, Mo. and

approximately 100 miles southwest of St. Louis, Mo. The county is bordered on the north by Maries and Gasconade counties. On the east side the county is bordered by Crawford and Dent counties. To the south the county is bordered by Dent and Texas counties. Pulaski County borders Phelps County to the west.

Located within the Ozark Mountains, Phelps County is located in the Ozark Plateau – the largest outcrop area of Ordovician-age rocks in the United States¹. This rock is 505 to 441 million years old and made up primarily of carbonates and thin shales with three distinctive sandstone layers: the Gunter at the base of the column, the red and white Roubidoux which is often used as a building stone and the St. Peter glass sand. This stone is the result of a time period when Missouri was covered by a shallow sea and the stone frequently produces aquatic fossils from that time period². Portions of this formation contain rock that dissolves and fractures over time from rainwater, thus resulting in the karst features found throughout the Ozarks. **Figure 2.2** depicts a generalized geologic map of Missouri and its counties.

Figure 2.2. Generalized Geologic Map of Missouri



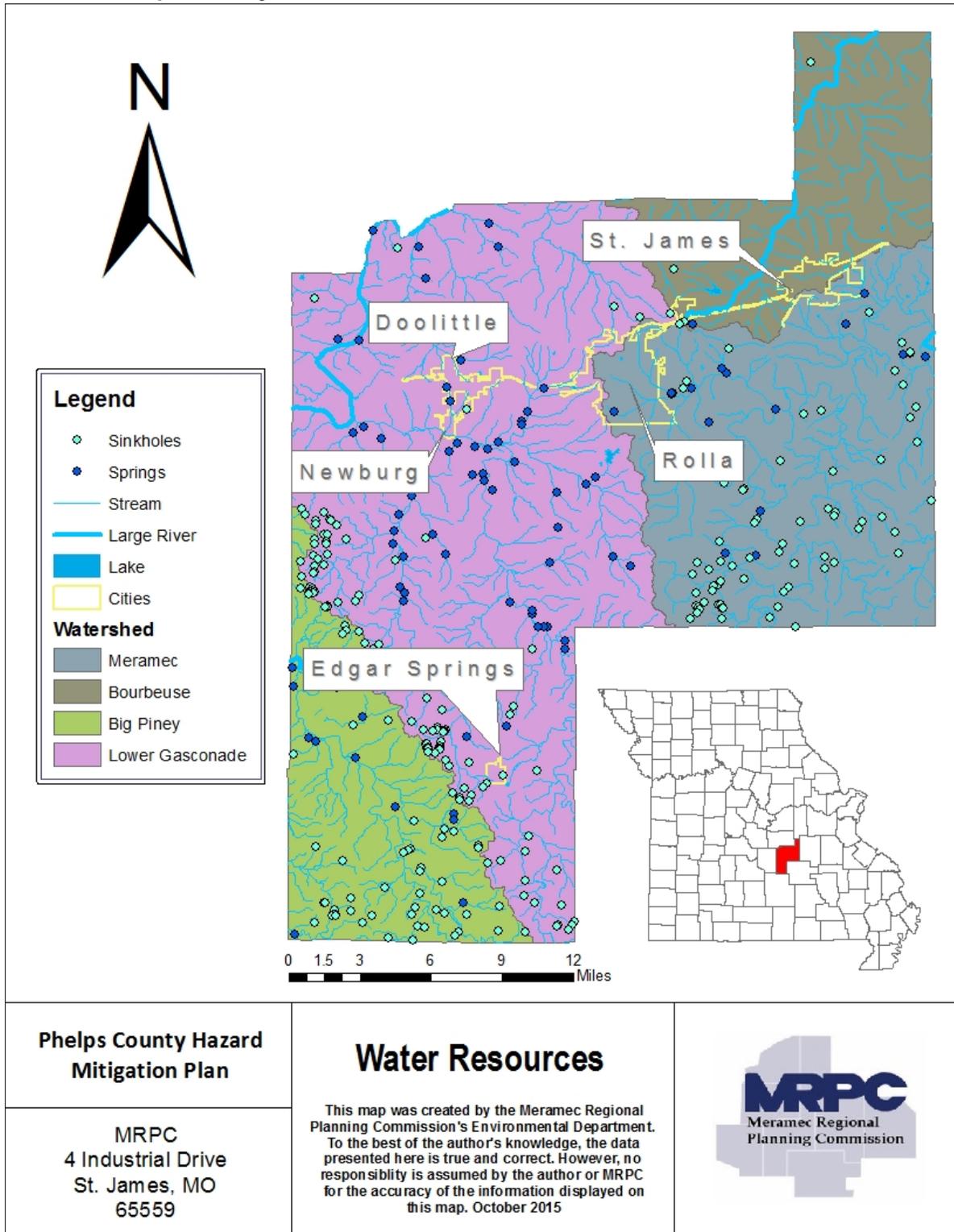
The topography in the county is typical of the Ozarks - rugged limestone hills with rocky ridges and bluffs, and deep, narrow valleys. The area has karst terrain which is characterized by springs, caves, losing streams and sinkholes. The maximum relief in the county is

¹ <http://geology.about.com/library/bl/maps/blmissourimap.htm>

² <http://members.socket.net/~joschaper/ordo.html>

approximately 500 feet, with the highest elevation at 1,352 above sea level and the lowest elevation at 587 feet above sea level.

Figure 2.3. Phelps County Watershed/Water Resources



Phelps County is comprised of five HUC8 watersheds which include the Big Piney, Bourbeuse,

Lower Gasconade and Meramec. The Big Piney Watershed covers the southwest corner of the county. The Lower Gasconade basin runs north and south through the west central part of the county. The Gasconade River watershed is located within the Ozark Plateau of the Interior Ozark Highlands. The river meanders north to northeast through Webster, Texas, Laclede, Pulaski, Dent, Maries, Osage, Phelps, and Gasconade counties to join the Missouri River. The Gasconade River is 271 miles long from mouth to headwaters with 263 miles having permanent flow. A number of springs within the middle Gasconade River portions are due to the karst geology of the Roubidoux and Gasconade Dolomite Formation and losing stream segments. The karst topography causes losing portions in the Osage Fork, Roubidoux, North Cobb, Little Piney, Spring, and Mill creeks, and Gasconade River. The entire Gasconade River watershed is reported to have 76 springs and the largest concentration of big springs in the state. The Bourbeuse Watershed covers the northeast corner of the county and the Meramec Watershed comprises approximately a quarter of the county and lies in the southeast corner. The Meramec River and its tributaries including the Bourbeuse River, Dry Creek, Huzzah Creek, Courtois Creek, Hazel Creek, Big River and Mineral Fork also drain parts of Phelps County. Included with this basin are 36 springs, three of these are located in Phelps County.

2.1.3 Climate

Snow occurs between November and April, both inclusive, but most of the snow falls in December, January and February. An average of about 13 inches of snow occurs annually in the Meramec Region. It is unusual for snow to stay on the ground for more than a week or two before it melts. Winter precipitation usually is in the form of rain, snow or both. Conditions sometimes borderline between rain and snow, and in these situations freezing drizzle or freezing rain occurs. Spring, summer and early fall precipitation comes largely in the form of showers or thunderstorms. Thunderstorms are most frequent from April to July. The average annual precipitation is 45.82 inches, which occurs on the average of less than 100 days per year. About half of these will be days with thunderstorms.

Because of its inland location, Missouri and Phelps County are subject to frequent changes in temperature. The average annual temperature is 56.2°F. The average annual high temperature is 65.95°F with the average annual low at 45.05°F. The average high and low in January is 40.5°F and 21.2°F, respectively. In July the average high and low are 88.5°F and 68°F, respectively. A high temperature of 113 degrees has been observed in the county.

While winters are cold and summers are hot, prolonged periods of very hot weather are unusual. Occasional periods of mild, above freezing temperatures are noted almost every winter. Conversely, during the peak of the summer season occasional periods of dry, cool weather break up stretches of hot, humid weather. About half of the days in July and August will have temperatures of 90°F or above, but it is not unusual for the temperature to drop into the 50s by the evening. In winter, there is an average of about 100 days with temperatures below 32°F. Temperatures below 0°F are infrequent with only about three days per year reaching this low temperature. The first frost occurs in mid-October, and the last frost occurs about mid-April.

2.1.4 Population/Demographics

Table 2.4 provides population/demographic data for Phelps County between 2000 and 2019 by jurisdiction. The unincorporated area of Phelps County was determined by subtracting the populations of the incorporated areas from the overall county population.

Table 2.4. Phelps County Population 2010-2019 by Jurisdiction

Jurisdiction	2000 Population	2010 Population	2019 Population	2010-2019 # Change	2010-2019 % Change
Unincorporated Phelps County	18,436	19,701	19,055	-646	-3.28%
Doolittle	644	621	670	49	7.89%
Edgar Springs	190	313	181	-132	-42.17%
Newburg	484	528	479	-49	-9.28%
Rolla	16,367	19,141	20,169	1,028	5.37%
St. James	3,704	4,169	4,076	-93	-2.23%

Source: U.S. Census Bureau, Census 2000 Summary File 1; Census 2010 Summary File 1; U.S. Bureau of the Census, 2015-2019 5-Year American Community Survey

Table 2.5 provides information in regard to the percent of individuals under the age of 5, and over 65 for the county, State, and Nation. In addition, average household size is illustrated in **Table 2.6** including figures for Phelps County, Missouri, and the U.S. In 2019 there were an estimated 20,287 households within the county³.

Table 2.5. Percent of Individuals Under the Age of 5, and Over 65 for County, State, and Nation (2019)

Location	% Under Age of 5	% Over Age of 65
Phelps County	5.6	15.8
Missouri	6.1	16.5
United States	6.1	15.6

Source: U.S. Census Bureau, 2015-2019 American Community Survey 5-Year Estimates

Table 2.6. 2019 Average Household Size for County, State, and Nation

Location	Average Household Size
Phelps County	2.28
Missouri	2.41
United States	2.6

Source: U.S. Census Bureau, 2015-2019 American Community Survey 5-Year Estimates

Social Vulnerability Index (SoVI ®)

The University of South Carolina developed the Social Vulnerability Index to evaluate and rank the ability to respond to, cope with, recover from, and adapt to natural disasters. The index

³ U.S. Census Bureau, 2012-2016 5-Year American Community Survey

synthesizes 30 socioeconomic variables which are primarily derived from the United States Census Bureau. **Table 2.7** depicts the Social Vulnerability Index for Phelps County along with its national percentile.

Table 2.7. Social Vulnerability Index (SoVI®)

State	County	SoVI Score (10 - 14)	National Percentile (10 - 14)
Missouri	Phelps County	(-)1.789999962	23.6%

Source: <http://artsandsciences.sc.edu/geog/hvri/sovi-data>

The analysis of 30 socioeconomic variables includes the standardization of data, and reduction of variables into a condensed set of statistically optimized components; positive component loadings (+) are linked with amplified vulnerability, and negative component loadings (-) are linked with diminished vulnerability. Scores are represented as a numeric value, but have no inherent mathematical properties. To simplify the metrics of the SoVI® Score, a negative number illustrates a county's resiliency to hazard events, and a positive number illustrates a decrease in resiliency⁴. Phelps County's SoVI® Score illustrates a diminished vulnerability to cope with natural disasters. Additionally, Phelps County is ranked 23.6 percent nationally, for counties most vulnerable to environmental hazards. **Figure 2.4** depicts Missouri's SoVI® to environmental hazards between 2010 and 2014. Furthermore, **Figure 2.5** depicts the Nation's SoVI® to environmental hazards between 2010 and 2014.

⁴ <http://webra.cas.sc.edu/hvri/products/sovifaq.aspx>

Figure 2.4. 2010 – 2014 Missouri Social Vulnerability to Environmental Hazards (SoVI ®)

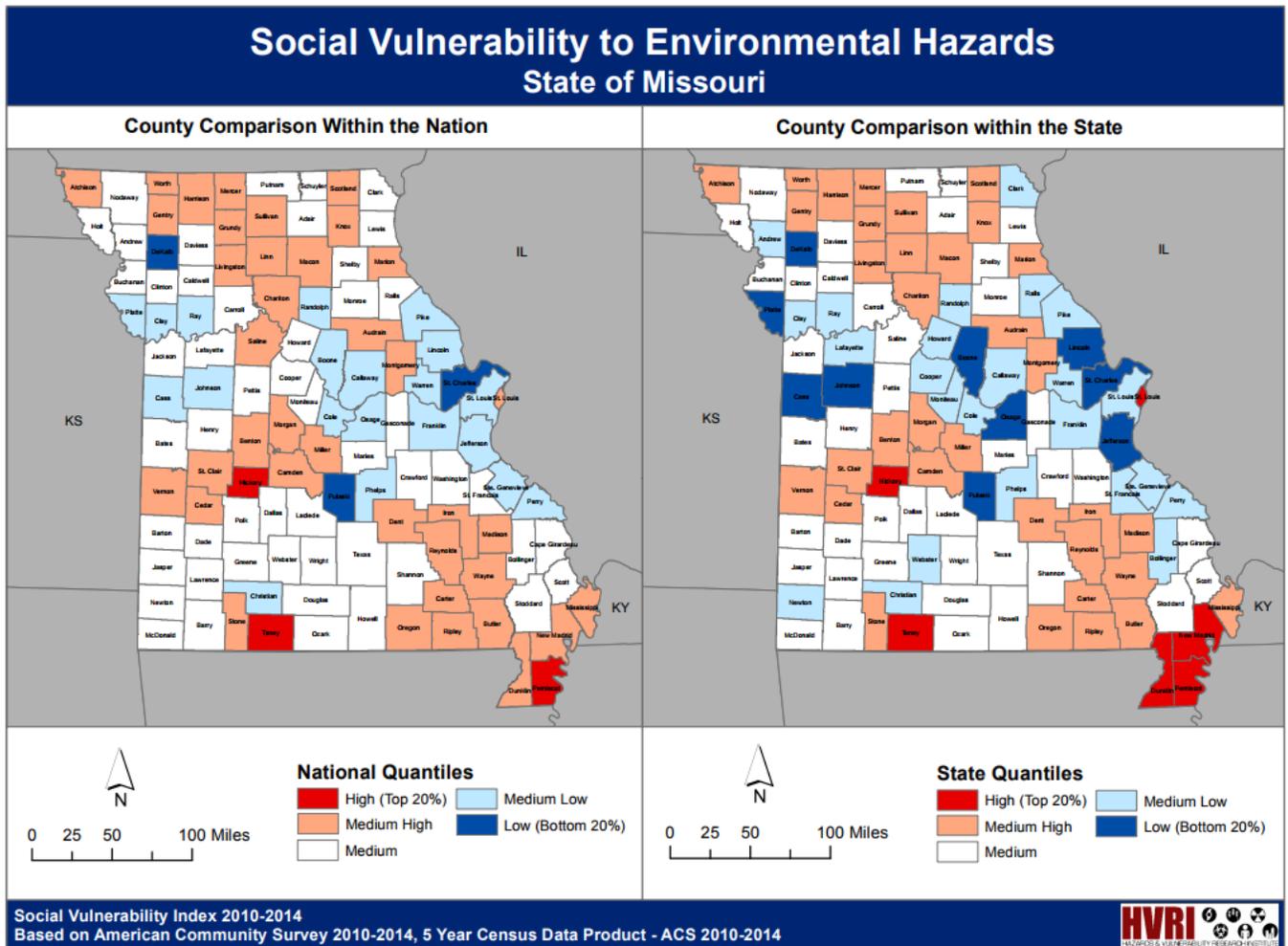
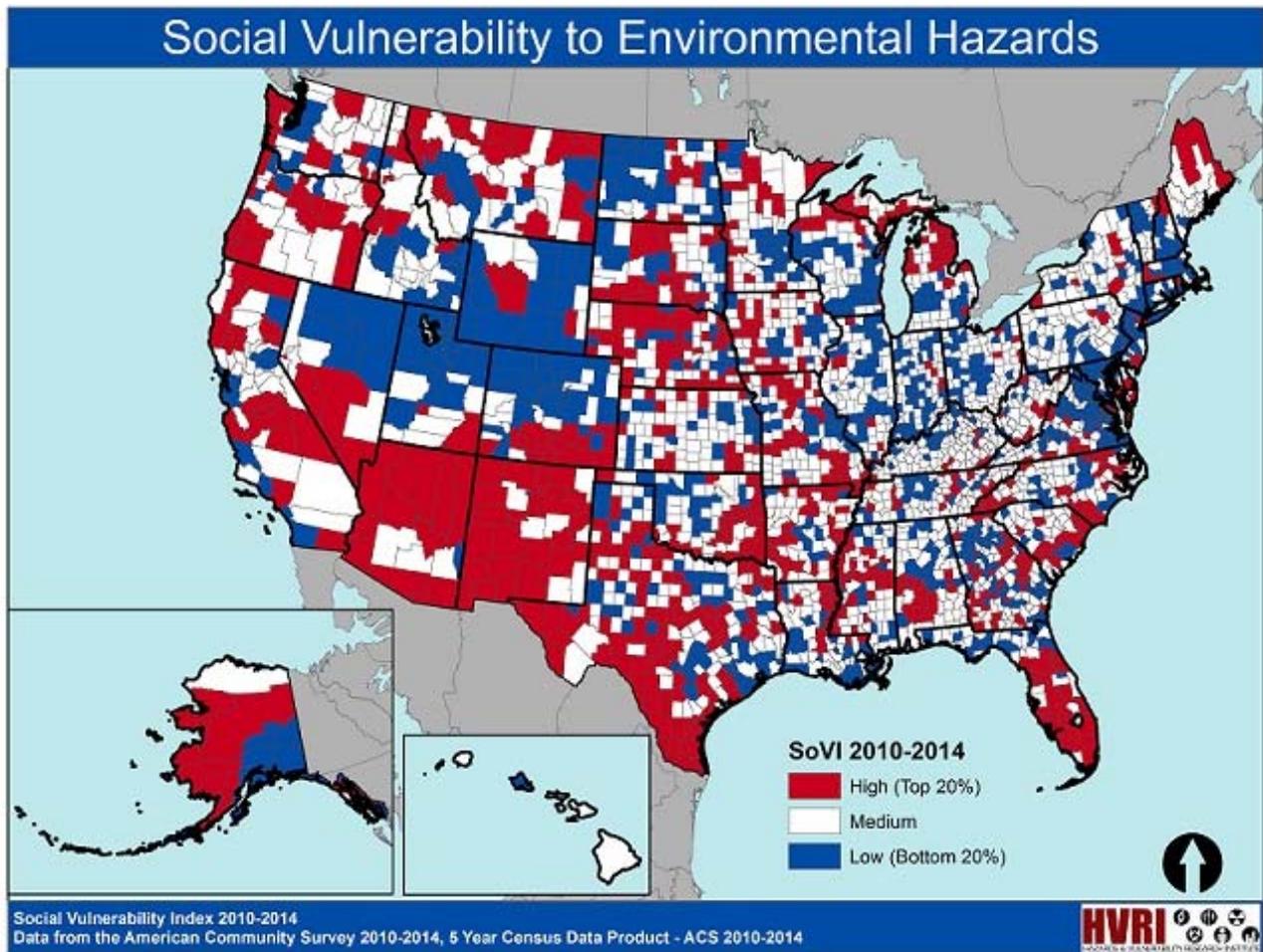


Figure 2.5. 2010 – 2014 U.S. Social Vulnerability to Environmental Hazards (SoVI ®)



Source: <http://artsandsciences.sc.edu/geog/hvri/sovi%C2%AE-0>

Table 2.8 provides additional demographic and economic indicators for Phelps County.

Table 2.8. 2019 Unemployment, Poverty, Education, and Language Percentage Demographics, Phelps County, Missouri

Jurisdiction	% in Labor Force	% of Population Unemployed	% of Families Below the Poverty Level	High School Diploma ONLY, ages 25+ (%)	Bachelor's degree or higher, ages 25+ (%)	% of population (language spoken at home other than English)
Phelps County	55.5	5.2	12.5	30.4	29.1	6.7
Doolittle	55.5	7.0	12.0	27.6	11.8	1.6
Edgar Springs	50.8	3.2	25.6	43.4	14.8	2.5
Newburg	43.4	19.4	30.7	46.4	2.9	0

Jurisdiction	% in Labor Force	% of Population Unemployed	% of Families Below the Poverty Level	High School Diploma ONLY, ages 25+ (%)	Bachelor's degree or higher, ages 25+ (%)	% of population (language spoken at home other than English)
Rolla	52.2	5.6	15.4	26.3	35.8	10.5
St. James	61.1	3.3	13.8	31.3	22.9	2.7

Source: U.S. Census Bureau, 2015-2019 American Community Survey, 5-Year American Community Survey

2.1.5 History

Phelps County was created by the legislature on Nov. 13, 1857, from territory originally belonging to Crawford, Pulaski, and Maries counties in South Central Missouri. The county was named for John Phelps of Green County, who was governor from 1877 to 1881. The county seat locating commission designated the area now known as Rolla to be the county seat. When the locating commission made its report, considerable protest was voiced concerning the choice of sites. Approximately 600 citizens of the county signed a petition of protest, citing the fact that only two of the three commission members had met to consider the possible sites for the county seat. The matter went first to the Circuit Court and then to the Supreme Court. Before the high court could make a decision, however, the legislature took action on Jan. 14, 1860, confirming the location of the county seat in Rolla. Starting under a considerable amount of criticism concerning the matter, all members of the county court resigned during April 1858, but later withdrew their resignations.

The town of Rolla did not exist as of Nov. 13, 1857, when the county was created. Only the J. Stever office and John Webber's home were located in the area. Early court business included the location and opening of roads from the county seat to various places within the state, including: St. Louis, Springfield, Jefferson City, Lake Spring and Salem. It is in this last road order, dated in July 1858 that the use of the name Rolla first appears in the court records. The name was used earlier, in May 1858, in a deed of railroad land to the county.

On April 26, 1859, the county court ordered the 50 acres donated by Mr. Bishop for the site of the county seat to be surveyed. The survey was conducted by A.E. Buchanan, a young railroad surveyor. Buchanan delivered his plat to the county court on May 31, 1859.

On Feb. 9, 1861, the day of Rolla's first town council meeting, a county-wide meeting was held to determine whether to join the Confederacy in secession. The consensus at that time was not to take any action until there were further developments. Further developments came in April of that year when Fort Sumter was fired upon, and county residents decided to support the South. The May 10th, Circuit Court session saw a heated debate of secession, which broke up the court. Circuit Court Judge James McBride departed to assume command as a Confederate general under Sterling Price. Outside the courthouse, a group of men drew down the United States Flag and raised a Confederate flag, which had been sewn by the women of Rolla. The group then moved to the newspaper office of Charles Walder, a Union supporter and editor of the Rolla Express, and forced him to close his shop. Southern sympathizers patrolled the town day and night, often ordering Union sympathizers to leave town.

On June 14 of that year, General Franz Sigel arrived by train with his 3rd Missouri Infantry and took over the town. From that day until the close of the war, Rolla was in Union hands. The 13th Illinois Infantry Regiment, under Colonel John B. Wyman, was brought in to guard Rolla and the

Pacific Railroad's terminal. It was this regiment that did the basic planning and building of Fort Wyman, although other regiments undertook the task of finishing it. President Lincoln's personal order was that Rolla should be held at all costs. Being situated at the terminus of the railroad, military wagon trains went out from Rolla to all Union armies stationed southwest in Arkansas, Hartville and Springfield and northwest to the Linn Creek area, now known as the Lake of the Ozarks. After General Price's defeat at Pea Ridge in March 1862, several troops that were organized by Gov. Jackson returned home. Confederate sympathizers, unwilling to profess their loyalty and support to the Union after the battle, were treated harshly. One example is the shooting of former Presiding Justice Lewis F. Wright and four of his sons in 1864, after being taken from their homes for "questioning."

Other towns within the county include Newburg, incorporated in 188 and St. James, incorporated in 1869. Doolittle was incorporated on July 2, 1944 and named after World War II hero Lieutenant Colonel James Doolittle. Edgar Springs was incorporated in the 1970's.

2.1.6 Occupations

Table 2.9 provides occupation statistics for the incorporated jurisdictions and incorporated county.

Table 2.9. Occupation Statistics, Phelps County, Missouri

Place	Management, Business, Science, and Arts Occupations	Service Occupations	Sales and Office Occupations	Natural Resources, Construction, and Maintenance Occupations	Production, Transportation, and Material Moving Occupations
Phelps County	7,916	3,804	3,487	1,373	2,535
Doolittle	60	55	53	24	47
Edgar Springs	23	11	7	5	14
Newburg	13	59	41	14	14
Rolla	3,802	1,727	1,473	449	741
St. James	565	480	404	65	405

Source: U.S. Census, 2015-2019 American Community Survey, 5-year Estimates.

2.1.7 Agriculture

Due to the rural nature of the area, agriculture and timber are significant factors in the local economy. According to the 2012 Census of Agriculture, the number of farms in the County was 718 encompassing 157,310 total acres⁵. In addition, the average farm was 219 acres. According to the 2017 Census of Agriculture, Phelps County had risen to 728 farms encompassing 159,530 acres, with an average farm size of 219 acres⁶. Furthermore, there are only approximately 12 farms with 1,000 or more acres in the County. Due to the rugged nature of the region, row crop farming is for the most part limited to the river valleys. In 2017, 24,881 acres of cropland were harvested, with forage (hay, haylage, grass silage, and greenchop) being the top crop in the County. Moreover, 31,286 cattle and calves were raised⁷. The average sale per farm was

⁵ 2012 Census of Agriculture, USDA, National Agriculture Statistics Service

⁶ Source: 2012 Census of Agriculture – County Data, USDA, National Agriculture Statistics Service

⁷ 2012 Census of Agriculture, Missouri Farm Commodity Sales, USDA, National Agriculture Statistics Service

\$19,230. Lastly, the total number of hired workers in the County was 373⁸ individuals comprising 1.84%⁹ of the total workforce.

The Ozarks region of Missouri is the focal point of several converging ranges of plant associations. Eastern hardwoods, southern pines and western prairies and the wildlife each supports, all reach the outward limits of their range in this area. As a result, various types of forest lands and animal habitats co-exist within a limited area. Several sawmills operate in the area and the large amount of National Forest Lands in the region also contribute to the importance of timber production and logging to the local economy.

2.1.8 FEMA Hazard Mitigation Assistance Grants in Planning Area

FEMA’s Hazard Mitigation Assistance (HMA) grant program provides funding for mitigation activities which have the potential to reduce disaster losses and protect life and property from future disaster damages¹⁰. Previous FEMA HMA Grants issued in the planning area can be found in **Table 2.10**.

Table 2.10. FEMA HMA Grants in County from 1993-2019

Project Type	Sub applicant	Award Date	Project Total (\$)
200.1 Acquisition of Private Real Property - Riverine	Phelps County	07/09/1993	362,589
200.1 Acquisition of Private Real Property - Riverine	Rolla	04/21/1994	0
91.1: Local Multi-Hazard Mitigation Plan	Missouri University of Science & Technology	09/01/2005	103,932
200.1 Acquisition of Private Real Property - Riverine	Phelps County	01/15/2007	1,370
206.2 Safe Room	Phelps County	05/09/2011	804,984
600.1: Warning Systems	Doolittle	05/09/2011	40,160
600.1: Warning Systems	Phelps County	07/19/2018	16,648
600.1: Warning Systems	Newburg	07/19/2018	17,000
200.1: Acquisition of Private Real Property - Riverine	Phelps County	07/23/2018	572,016
Total			1,918,699

Source: Missouri SEMA, <https://www.fema.gov/openfema-dataset-hazard-mitigation-grants-v1>

⁸http://www.agcensus.usda.gov/Publications/2012/Full_Report/Volume_1_Chapter_2_County_Level/Missouri/st29_2_007_007.pdf

⁹ U.S. Census Bureau, 2015-2019 American Community Survey

¹⁰ <https://www.fema.gov/media-library/assets/documents/103279>

2.1.9 FEMA Public Assistance (PA) Grants in Planning Area

The purpose of the Public Assistance (PA) Grant Program is to support communities' recovery from major disasters by providing them with grant assistance for debris removal, life-saving emergency protective measures, and restoring public infrastructure. Local governments, states, tribes, territories and certain private nonprofit organizations are eligible to apply. Public Assistance is FEMA's largest grant program. **Table 2.11** below gives information about all Public Assistance Grant for the Planning area. It gives the Declaration number, project type and size, the applicant, and the project total. Total PA grants is \$7,559,266.28.

Table 2.11. FEMA PA Grants in Phelps County from 1999-2019

Disaster Declaration	Project Type	Project Size	Applicant	Project Total
1412	ROAD DAMAGE	Small	City of Doolittle	\$33,563.90
1412	STATION PUMPS	Small	City of Newburg	\$6,186.07
1412	ROAD WASHOUTS	Small	Phelps County	\$1,025.75
1412	CULVERT DAMAGE	Small	Phelps County	\$2,058.03
1412	REPAIR COUNTY ROADS AND BRIDGES	Large	Phelps County	\$66,765.67
1412	ROAD REPAIR	Small	Phelps County	\$5,808.00
1412	REPAIR OF CITY STREETS	Small	City of Newburg	\$11,856.88
1412	ROAD DAMAGE	Small	Phelps County	\$8,953.31
1412	ROAD, DITCH AND CULVERT REPAIR	Small	Phelps County	\$3,292.27
1412	ROAD AND CULVERT REPAIR	Small	Phelps County	\$23,445.03
1412	LWC AND GRAVEL ROAD REPAIR	Small	Phelps County	\$1,332.78
1412	REPAIR COUNTY ROADS, CULVERTS AND DITCHES	Small	Phelps County	\$4,400.91
1676	EMERGENCY PROTECTIVE MEASURES	Large	City of Rolla	\$65,429.34
1676	PUBLIC UTILITIES	Small	City of St. James	\$47,641.10
1676	EMERGENCY PROTECTIVE MEASURES	Small	Rolla Municipal Utilities	\$5,856.09
1676	PUBLIC UTILITIES	Large	Rolla Municipal Utilities	\$266,184.96
1676	DEBRIS REMOVAL	Small	City of Newburg	\$3,920.00
1676	EMERGENCY PROTECTIVE MEASURES	Small	City of Rolla	\$1,621.59
1676	DEBRIS REMOVAL	Large	City of Rolla	\$160,112.98
1676	PUBLIC UTILITIES	Small	City of Newburg	\$1,739.12
1676	DEBRIS REMOVAL	Small	City of Doolittle	\$1,700.09
1676	PUBLIC UTILITIES	Small	City of Doolittle	\$6,072.53
1676	DEBRIS REMOVAL	Small	City of Rolla	\$22,529.45
1676	EMERGENCY PROTECTIVE MEASURES	Small	City of Doolittle	\$2,920.12
1676	RECREATIONAL OR OTHER	Small	City of Rolla	\$0.00
1676	DONATED RESOURCES	Small	City of Doolittle	\$1,267.04
1676	DEBRIS REMOVAL	Small	City of St. James	\$54,530.04

Disaster Declaration	Project Type	Project Size	Applicant	Project Total
1676	DEBRIS REMOVAL	Small	City of St. James	\$4,715.43
1676	EMERGENCY PROTECTIVE MEASURES	Small	Phelps County Commission Road & Bridge Dept	\$27,002.69
1676	DEBRIS REMOVAL	Large	Phelps County Commission Road & Bridge Dept	\$68,472.88
1676	DEBRIS REMOVAL	Small	University of Missouri Rolla	\$4,829.47
1676	EMERGENCY PROTECTIVE MEASURES	Small	University of Missouri Rolla	\$4,477.13
1676	DONATED RESOURCES	Small	St. James Fire Protection District	\$810.84
1676	DONATED RESOURCES	Small	Rolla Rural Fire Protection District	\$1,425.12
1676	EMERGENCY PROTECTIVE MEASURES	Small	Rolla Rural Fire Protection District	\$4,275.37
1676	EMERGENCY PROTECTIVE MEASURES	Small	City of Rolla	\$17,945.04
1676	DEBRIS REMOVAL	Small	Phelps County Commission Road & Bridge Dept	\$8,340.00
1676	EMERGENCY PROTECTIVE MEASURES	Small	St. James Fire Protection District	\$2,432.52
1676	EMERGENCY PROTECTIVE MEASURES - POLICE DEPT	Small	City of Rolla	\$5,599.18
1749	EMERGENCY PROTECTIVE MEASURES	Small	Phelps County	\$9,032.60
1749	ROAD WASHOUT	Small	Phelps County	\$27,586.20
1749	ROAD & BRIDGE DAMAGES	Small	Phelps County	\$23,113.03
1749	EMERGENCY PROTECTIVE MEASURES	Small	City of Newburg	\$1,515.25
1749	ROAD WASHOUT	Small	Phelps County	\$12,057.02
1749	ROAD WASHOUTS	Small	Phelps County	\$12,260.54
1749	STREET & ROAD DAMAGES	Small	City of Newburg	\$7,722.44
1749	ROAD WASHOUT	Small	City of Newburg	\$26,465.06
1749	ROAD WASHOUT	Small	Phelps County	\$11,638.39
1749	PEDESTRIAN WALKWAY & LOW WATER CROSSING	Small	City of Newburg	\$12,844.13
1749	EQUIPMENT STORAGE BUILDING DAMAGE	Small	City of Newburg	\$17,830.00
1749	ROADS & CULVERT WASHOUTS	Small	Phelps County	\$17,449.59
1749	ROAD WASHOUT	Small	Phelps County	\$13,624.17
1749	ROADS & CULVERT WASHOUTS	Small	Phelps County	\$6,569.59
1749	ROAD WASHOUT	Small	Phelps County	\$5,244.42

Disaster Declaration	Project Type	Project Size	Applicant	Project Total
1749	ROAD WASHOUT	Small	Phelps County	\$8,961.75
1749	ROAD WASHOUT	Small	Phelps County	\$10,785.03
1749	ROAD WASHOUT	Small	Phelps County	\$8,506.15
1749	ROAD WASHOUT	Small	Phelps County	\$29,378.48
1749	ROAD WASHOUT - REVISED 7/23/08	Small	Phelps County	\$5,489.87
1847	GWC-001 Roads	Small	Phelps County	\$8,219.40
1847	GWC-002 / Loss of road surface/base materials	Small	Phelps County	\$47,351.79
1847	GWC-004 / Loss of road surface/base materials	Small	Phelps County	\$17,234.41
1847	KDP07 - Staging of Rock	Small	Phelps County	\$38,904.40
1847	KDP12-CR 5340	Small	Phelps County	\$22,626.94
1847	GWC-005 / Loss of road surface/base materials	Small	Phelps County	\$30,986.05
1847	KDP13 / CR 1330, Coolbrook, 6330, 2370, 2080, 6100, 663	Small	Phelps County	\$54,826.66
1847	KDP10 - CR 1210 Missouri	Small	Phelps County	\$43,838.33
1847	KDP14 - CR8360 and CR3600	Small	Phelps County	\$11,848.11
1847	KPGW15/ CR 2170, CR2190, CR 2250, CR 2220, CR2270, CR 2	Small	Phelps County	\$14,782.54
1847	KPGW17 / Phelps County roads	Small	Phelps County	\$31,890.39
1847	KPGW18 / CR 5190	Small	Phelps County	\$21,586.15
1847	KDP08 - CR 6070 and 6080	Small	Phelps County	\$33,687.19
1847	KPGW23 / Phelps County Roads	Small	Phelps County	\$64,042.08
1847	KPGW20 / Phelps County Roads	Small	Phelps County	\$29,236.26
1847	KPGW22 / Phelps County Roads	Small	Phelps County	\$14,624.38
1847	KPGW21 / Phelps County Roads	Small	Phelps County	\$48,014.97
1847	LMNC-01 - City Gravel and Asphalt Street	Small	City of Newburg	\$10,894.59
1847	KPGW16 / Phelps County Roads	Small	Phelps County	\$26,278.16
1847	KPGW6 / Phelps County Roads	Small	Phelps County	\$38,287.08
1847	KPGW3 - Phelps County roads	Small	Phelps County	\$44,924.36
1847	KPGW24 - Phelps County roads	Small	Phelps County	\$40,667.93
1847	KPGW09 / CR 6190 Missouri	Large	Phelps County	\$73,764.23
1847	KPGW27- Road Washouts	Large	Phelps County	\$103,918.68
1847	KPGW26 / Road Washouts	Large	Phelps County	\$126,223.80
1847	KPGW28 / Road Washouts	Large	Phelps County	\$103,637.01
1847	KPGW25 / Road Washouts - 13 Sites	Large	Phelps County	\$89,147.67
1847	KPGW30 - Road Washouts - 20 Sites	Large	Phelps County	\$138,019.41
1847	KPGW29 / Road Washouts - 17 Sites	Small	Phelps County	\$53,729.47
1847	GWKP-019 / Wash out of road surfaces and sub-base	Small	Phelps County	\$55,860.86

Disaster Declaration	Project Type	Project Size	Applicant	Project Total
1847	GWKP011 / Washout, Washover, ditching	Small	Phelps County	\$61,030.44
1847	GWDW031 - Phelps County Roads	Large	Phelps County	\$140,995.75
4144	PCSD01B-Phelps County Cat B	Small	Phelps County	\$3,803.36
4144	CNPW02C Newburg Cat C	Small	City of Newburg	\$27,752.39
4144	CNPW01E Newburg Cat E	Small	City of Newburg	\$1,604.53
4144	PCRD03C	Large	Phelps County	\$93,545.69
4144	PCRD02C	Large	Phelps County	\$147,481.89
4144	PCSD05C Roads	Large	Phelps County	\$121,558.51
4144	PCSD08C - Phelps Damaged Roads	Large	Phelps County	\$100,023.73
4144	PCSD01A - Debris Alternative Project	Small	Phelps County	\$11,799.77
4144	PCSD07C- Road Damage	Large	Phelps County	\$201,260.42
4144	PCSD06C Gravel Roads	Large	Phelps County	\$209,164.26
4144	PCSD04C	Large	Phelps County	\$206,117.53
4144	PCSD09C- Roads	Large	Phelps County	\$154,392.35
4144	PCSD10C - Phelps County Roads	Large	Phelps County	\$291,631.18
4144	PCSD12C Phelps Culvert 5220	Small	Phelps County	\$18,374.65
4144	Phelps County Culvert PCSD11C	Small	Phelps County	\$34,471.25
4144	Phelps County Culvert PCSD13C	Small	Phelps County	\$6,283.09
4238	AH0005A - PAAP - Debris Removal	Small	Phelps County	\$14,137.60
4238	AH0001C Roads	Small	Phelps County	\$68,876.45
4238	AH0002C - Gravel Roads	Small	Phelps County	\$84,499.98
4238	PRC003C - Gravel Road Washout	Small	Phelps County	\$94,911.23
4238	PRC006C - Gravel Roads	Large	Phelps County	\$234,897.10
4238	PRC007C Gravel Roads	Large	Phelps County	\$184,170.43
4238	PRC008C - Gravel Roads	Small	Phelps County	\$53,201.95
4238	AH0004C - CMP and Box Culverts	Small	Phelps County	\$53,624.61
4250	161SB38 Roadway Ditch washed out	Small	City of Doolittle	\$10,159.20
4250	161SB50A - Debris Removal - PAAP Participate	Small	Phelps County	\$10,346.55
4250	161SB60C - Phelps County Culverts	Large	Phelps County	\$199,447.16
4250	161SB59C - County Roads	Small	Phelps County	\$77,435.64
4250	161SB51C - County Road 1,000's	Large	Phelps County	\$224,770.45
4250	161SB52C-County Road 2,000's	Small	Phelps County	\$92,264.73
4250	161SB53C - County Roads 3,000's	Large	Phelps County	\$121,483.00
4250	161SB57C - County Roads 7,000's	Large	Phelps County	\$225,348.19
4250	161SB54C - County Roads 4000	Small	Phelps County	\$46,531.43
4250	161SB63C - County Road 7530	Small	Phelps County	\$10,422.90
4250	161SB55C - County Roads 5000s	Small	Phelps County	\$102,541.63
4250	161SB56C-County Roads 6,000's	Large	Phelps County	\$298,185.59
4250	161SB58C-County Road 8,000's	Small	Phelps County	\$78,564.46

Disaster Declaration	Project Type	Project Size	Applicant	Project Total
4317	CP01208 - Debris Removal PAAP 1-30 days	Small	Phelps County	\$8,393.79
4317	CP01221 - PAAP 31 to 90 days	Small	Phelps County	\$1,805.87
4317	CP01409 - Low Water Crossing on CR 1280	Small	Phelps County	\$0.00
4317	CP01518 - County Gravel Road Washouts located in Sectio	Small	Phelps County	\$9,827.86
4317	CP01654 - County Road Gravel road washouts in Section 3	Small	Phelps County	\$30,124.18
4317	ST01835 - Gravel Road Washouts in Sector 1000	Small	Phelps County	\$22,445.04
4317	ST01779 - County Gravel Road Washouts located in Sectio	Small	Phelps County	\$28,873.79
4317	ST02117 - Retaining Wall	Small	City of Newburg	\$4,483.26
4317	ST02036 - Gravel Roads and Embankment Washouts	Large	Phelps County	\$99,695.85
4317	CP02058 - County Gravel Road Washouts in Sector 4000	Small	Phelps County	\$17,116.52
4317	ST02142 - Gravel Road and Ditch Repair	Small	Phelps County	\$19,699.48
4317	CP02153 - Gravel Road CR 9000	Small	Phelps County	\$10,480.34
4317	ST02139 - Gravel and Asphalt Road Washouts	Small	City of Edgar Springs	\$36,644.90
4317	CP02155 - Gravel Road and Shoulder Material Loss	Small	Phelps County	\$74,802.53
4317	CP02014 - County Road Gravel road washouts in sections	Small	Phelps County	\$10,630.67
4317	ST02168 - Gravel Road Washouts Sector 7000	Large	Phelps County	\$121,758.68
4317	CP02171 - Gravel Road Washouts in Sector 7000	Small	Phelps County	\$23,957.74
4317	ST02167 - Gravel Road Washouts in Sector 6000	Large	Phelps County	\$255,644.36
4317	ST02107 - Building and Equipment Damage	Small	City of Edgar Springs	\$13,345.61
4317	ST02228 - Damaged Culverts, Low Water Crossings and Gra	Small	City of Newburg	\$24,759.01
			Total	\$7,599,266.28

Source: Federal Emergency Management Agency, 11/30/2020

2.2 Jurisdictional Profiles and Mitigation Capabilities

This section will include individual profiles for each participating jurisdiction. It will also include a discussion of previous mitigation initiatives in the planning area. There will be a summary table indicating specific capabilities of each jurisdiction that relate to their ability to implement mitigation opportunities. The unincorporated county is profiled first, followed by the incorporated communities, the special districts, and the public school districts.

2.2.1 Unincorporated Phelps County

Overview

The jurisdiction of Phelps County includes all unincorporated areas within the county boundaries. Phelps County is governed by a three-member County Commission. The Commission is composed of a presiding commissioner, representing all of the county's population who is elected for a four-year term. Two associate commissioners representing roughly half the county's population each, are elected for four-year terms. The commission meets on Mondays and Thursdays of each week. Other elected county officials include the County Clerk, Prosecuting Attorney, Sheriff, Circuit Court Clerk, Recorder of Deeds, Collector of Revenue, Assessor, Treasurer, County Surveyor, Coroner, and Public Administrator.

Phelps County operates as a third-class county. The county government has the authority to administer county structures, infrastructures, and finances as well as floodplain regulations. Other county officials include a part-time Emergency Management Director, 911 Director, County Health Department Director, Floodplain Administrator, and Road and Bridge Supervisors. The Assessor's office has GIS capabilities.

Technical and Fiscal Resources

The county government has the authority to administer county structures, infrastructure, and finances. Third class counties do not have the authority to enforce building regulations. Phelps County has staff resources emergency management and transportation. The county has a 9-1-1 central dispatch center with enhanced 9-1-1 capabilities. Additionally, there is one outdoor warning siren in the county near Jerome.

There are six fire departments located in Phelps County. Five are volunteer departments. Those departments include Doolittle Rural Fire Protection District, Duke Rural Fire Department, Edgar Springs Fire Protection District, Rolla Rural Fire Protection District and St. James Fire Protection District. Rolla Fire & Rescue is a municipal fire department with paid staff. Doolittle, Edgar Springs, Rolla Rural and St. James fire districts are tax supported. Duke and Rolla Fire & Rescue are dues supported. The county is served by the Phelps County Sheriff's Department. The county has a 9-1-1 Central Dispatch Center located at the Rolla City Police Department, 1007 N. Elm Street, Rolla, MO. The county is served by two ambulance districts – Phelps County Ambulance Service and St. James Ambulance District. The county uses Everbridge call notification system to provide alerts to residents. The county owns two fixed generators that serve the County Jail and health department refrigeration backup.

Fiscal tools or resources that the county could potentially use to help fund mitigation activities include Community Development Block Grants, capital improvements project funding, levy taxes for specific purposes, impact fees for new development, incur debt through general obligation bonds, incur debt through special tax bonds, and withhold spending in hazard prone areas.

Existing Plans and Policies

The county has a Comprehensive Plan, County Emergency Operations Plan, County Recovery Plan, Economic Development Plan, Regional Transportation Plan, Flood Mitigation Assistance Plan, Critical Facilities Plan, and Floodplain Ordinance. The Meramec Regional Planning Commission serves as the floodplain coordinator for the county.

Other Mitigation Activities

The Office of Emergency Management, local fire departments, Sheriff’s Department, Tri-County Center for Independent Learning, and the Phelps County Health Department have conducted public education campaigns to raise awareness and increase preparedness among the county’s population. Those programs have included flood recovery awareness, Ready-in-3 emergency preparedness, fire safety, storm preparedness, weather spotter training, heat wave preparedness, dissemination of SEMA brochures and general press releases/social media outreach regarding hazards, preparedness, and mitigation. Bicycle and car seat safety education is provided by the Coalition for Roadway Safety.

The county also participates in the flood buyout program.

Table 2.12. Demographic and Structure Risk Parameters For Unincorporated Phelps County

Jurisdiction	Total Population	People With a Disability	Non-English Speaking Populations	People Below Poverty Level	Population Under 5 Yrs.	Population 65 Yrs. and Over	Residences Built Prior to 1939	Mobile Homes
Unincorporated Phelps County	19,055	3,732	742	2,482	876	3,670	709	1,480

Source: Source: U.S. Census Bureau, 2015-2019 5-Years American Community Survey

Table 2.13. Unincorporated Phelps County Mitigation Capabilities

Capabilities	Status Including Date of Document or Policy
Planning Capabilities	
Comprehensive Plan	Yes
Builder’s Plan	No
Capital Improvement Plan	No
City Emergency Operations Plan	No
County Emergency Operations Plan	Yes
Local Recovery Plan	No
County Recovery Plan	Yes
City Mitigation Plan	No
County Mitigation Plan	Yes
Debris Management Plan	No
Economic Development Plan	Yes – Regional CEDS 2018

Capabilities	Status Including Date of Document or Policy
Transportation Plan	Yes – Regional 2019
Land-use Plan	No
Flood Mitigation Assistance (FMA) Plan	Yes
Watershed Plan	No
Firewise or other fire mitigation plan	No
Critical Facilities Plan (Mitigation/Response/Recovery)	Yes
Policies/Ordinance	
Zoning Ordinance	No
Building Code	No
Floodplain Ordinance	Yes – 3/17/2016
Subdivision Ordinance	No
Tree Trimming Ordinance	No
Nuisance Ordinance	No
Storm Water Ordinance	No
Drainage Ordinance	No
Site Plan Review Requirements	No
Historic Preservation Ordinance	No
Landscape Ordinance	No
Program	
Zoning/Land Use Restrictions	No
Codes Building Site/Design	No
Hazard Awareness Program	No
National Flood Insurance Program	Yes
NFIP Community Rating System (CRS) Participating Community	No
National Weather Service (NWS) Storm Ready	Yes
FireWise Community Certification	No
Building Code Effectiveness Grading (BCEGs)	No
ISO Fire Rating	Varies
Economic Development Program	MRPC & Rolla Regional Economic Commission
Land Use Program	No
Public Education/Awareness	No
Property Acquisition	No
Planning/Zoning Boards	No
Stream Maintenance Program	No
Tree Trimming Program	No
Engineering Studies for Streams (Local/County/Regional)	No
Mutual Aid Agreements	Yes
Studies/Reports/Maps	
Hazard Analysis/Risk Assessment (City)	No
Hazard Analysis/Risk Assessment (County)	Yes – Hazard Mitigation (2016) & Hazardous Materials (annual) Plans
Evacuation Route Map	Yes
Critical Facilities Inventory	Yes – Hazard Mitigation (2016) & Hazardous Materials (annual) Plans
Vulnerable Population Inventory	No
Land Use Map	No
Staff/Department	
Building Code Official	No
Building Inspector	No
Mapping Specialist (GIS)	Yes
Engineer	Yes – Contract Only

Capabilities	Status Including Date of Document or Policy
Development Planner	No
Public Works Official	No
Emergency Management Director	Yes
NFIP Floodplain Administrator	Yes
Bomb and/or Arson Squad	No
Emergency Response Team	Yes
Hazardous Materials Expert	No
Local Emergency Planning Committee	Yes – Regional - MREPC
County Emergency Management Commission	No
Sanitation Department	No
Transportation Department	Yes
Economic Development Department	No
Housing Department	Yes - Phelps Co. PHA
Regional Planning Agencies	Yes - MRPC
Historic Preservation	No
Non-Governmental Organizations (NGOs)	
American Red Cross	No
Salvation Army	Yes
Veterans Groups	Yes
Environmental Organization	Yes
Homeowner Associations	Yes
Neighborhood Associations	Yes
Chamber of Commerce	Yes
Community Organizations (Lions, Kiwanis, etc.)	Yes
Local Funding Availability	
Ability to apply for Community Development Block Grants	Yes
Ability to fund projects through Capital Improvements funding	Yes
Authority to levy taxes for a specific purpose	Yes
Fees for water, sewer, gas, or electric services	No
Impact fees for new development	Yes
Ability to incur debt through general obligation bonds	Yes
Ability to incur debt through special tax bonds	Yes
Ability to incur debt through private activities	No
Ability to withhold spending in hazard prone areas	Yes – Flood Zone

Source: Data Collection Questionnaire, 2020

2.2.2 City of Doolittle

Overview

Doolittle is located in the west central portion of Phelps County. Doolittle is located on U.S. Interstate I-44. Doolittle is a fourth class city with a six-member board of alderman and a mayor. The city also employs a city clerk, city attorney, police chief, and a city superintendent. The city population from the 2019 5-year ACS data is 670, in 2010 it was 621, which shows a population growth of almost eight percent.

Technical and Fiscal Resources

Doolittle is a participating community in the National Flood Insurance Program and has a Flood Insurance Study. The City of Doolittle has a police department located in the city hall. The Central Communications Center, located in and operated by the Rolla Police Department, is contracted by Phelps County to provide 911 dispatching throughout the county. The office is staffed 24 hours a day. There are two outdoor warning sirens in Doolittle that are activated by the Center in Rolla.

The Phelps County Ambulance Service accommodates the western two-thirds of the county, including the City of Doolittle. There is also a Rural Fire Protection District located in Doolittle, which serves a portion of Phelps County including the Newburg School District. The Duke Rural Fire Department in Pulaski County serves the Doolittle portions of Highways J & K.

Public education programs are provided locally by the fire protection district and regionally by the Coalition for Roadway Safety and Phelps-Maries County Health Department. There is also a community page on Facebook for public sharing of emergency information for Doolittle, Newburg, and Jerome.

Over 23 percent of housing units in Doolittle are mobile homes, this is the highest percentage of mobile homes in the county. A greater percent of mobile homes increases the city's risk to damages from several hazards.

Table 2.14 below shows the demographic and structure statistics, and **Table 2.15** describes the mitigation capabilities of the city.

Table 2.14. Demographic and Structure Risk Parameters For Doolittle

Jurisdiction	Total Population	With a disability	Non-English Speaking Populations	People Below Poverty Level	Population Under 5 Yrs.	Population 65 Yrs. and Over	Residences Built Prior to 1939	Mobile Homes
Doolittle	670	129	10	101	46	120	49	70

Source: Source: U.S. Census Bureau, 2015-2019 5-Years American Community Survey

Table 2.15. City of Doolittle Mitigation Capabilities

Capabilities	Status Including Date of Document or Policy
Planning Capabilities	
Comprehensive Plan	No
Builder's Plan	No
Capital Improvement Plan	No
City Emergency Operations Plan	No
County Emergency Operations Plan	Yes – 2006
Local Recovery Plan	No
County Recovery Plan	No
City Mitigation Plan	No
County Mitigation Plan	Yes – 2016
Debris Management Plan	No
Economic Development Plan	Yes – Regional CEDS 2018

Capabilities	Status Including Date of Document or Policy
Transportation Plan	Yes – regional updated annually
Land-use Plan	No
Flood Mitigation Assistance (FMA) Plan	No
Watershed Plan	No
FireWise or other fire mitigation plan	No
Critical Facilities Plan (Mitigation/Response/Recovery)	No
Policies/Ordinance	
Zoning Ordinance	No
Building Code	No
Floodplain Ordinance	Yes – 2/20/08
Subdivision Ordinance	No
Tree Trimming Ordinance	No
Nuisance Ordinance	Yes
Storm Water Ordinance	No
Drainage Ordinance	No
Site Plan Review Requirements	No
Historic Preservation Ordinance	No
Landscape Ordinance	No
Program	
Zoning/Land Use Restrictions	No
Codes Building Site/Design	No
Hazard Awareness Program	No
National Flood Insurance Program	Yes
NFIP Community Rating System (CRS) Participating Community	No
National Weather Service (NWS) Storm Ready	No
Firewise Community Certification	No
Building Code Effectiveness Grading (BCEGs)	No
ISO Fire Rating	9
Economic Development Program	No
Land Use Program	No
Public Education/Awareness	No
Property Acquisition	No
Planning/Zoning Boards	No
Stream Maintenance Program	No
Tree Trimming Program	No
Engineering Studies for Streams (Local/County/Regional)	No
Mutual Aid Agreements	Yes
Studies/Reports/Maps	
Hazard Analysis/Risk Assessment (City)	No
Hazard Analysis/Risk Assessment (County)	Yes – Hazard Mitigation (2016) & Hazardous Materials (annual) Plans
Evacuation Route Map	No
Critical Facilities Inventory	Yes – Hazard Mitigation (2016) & Hazardous Materials (annual) Plans
Vulnerable Population Inventory	No
Land Use Map	No
Staff/Department	
Building Code Official	No
Building Inspector	No
Mapping Specialist (GIS)	No
Engineer	No

Capabilities	Status Including Date of Document or Policy
Development Planner	No
Public Works Official	Yes – Sewer
Emergency Management Director	No
NFIP Floodplain Administrator	Yes
Bomb and/or Arson Squad	No
Emergency Response Team	No
Hazardous Materials Expert	No
Local Emergency Planning Committee	Yes – regional MREPC
County Emergency Management Commission	No
Sanitation Department	No
Transportation Department	No
Economic Development Department	No
Housing Department	Yes - Phelps Co. PHA
Regional Planning Agencies	Yes - MRPC
Historic Preservation	No
Non-Governmental Organizations (NGOs)	
American Red Cross	No
Salvation Army	No
Veterans Groups	No
Environmental Organization	No
Homeowner Associations	No
Neighborhood Associations	No
Chamber of Commerce	No
Community Organizations (Lions, Kiwanis, etc.)	Yes
Local Funding Availability	
Ability to apply for Community Development Block Grants	Yes
Ability to fund projects through Capital Improvements funding	Yes
Authority to levy taxes for a specific purpose	Yes
Fees for water, sewer, gas, or electric services	Yes
Impact fees for new development	No
Ability to incur debt through general obligation bonds	Yes
Ability to incur debt through special tax bonds	Yes
Ability to incur debt through private activities	No
Ability to withhold spending in hazard prone areas	No

Source: Data Collection Questionnaire, 2020

2.2.3 City of Edgar Springs

Overview

Edgar Springs is located in the southern portion of Phelps County. State highways 63 and 28 intersect the City of Edgar Springs. Edgar Springs is incorporated as a fourth-class city with a four member board of aldermen and a mayor. The city employs a City Clerk, City Attorney, City Superintendent. The city population from the 2019 5-year ACS data is 181, in 2010 it was 313, which shows a population decline of over 42 percent.

Technical and Fiscal Resources

Edgar Springs currently participates in the National Flood Insurance Program. The Central Communications Center, located in and operated by the Rolla Police Department, is contracted by Phelps County to provide 911 dispatching throughout the county. The office is staffed 24 hours a day. The Phelps County Ambulance Service accommodates the western, two-thirds of the county, including the City of Edgar Springs. The city has one outdoor warning siren that is activated by the Center in Rolla. There is one FEMA approved tornado shelter at the Phelps County R-III School district that is available to the public.

The Phelps County Ambulance Service accommodates the western two-thirds of the county, including the City of Edgar Springs. Law enforcement in the community is provided by three police officers stationed at City Hall. The Edgar Springs Rural Fire Protection District provides fire protection.

Public education programs are provided regionally by the Coalition for Roadway Safety and Phelps-Maries County Health Department.

The City of Edgar Springs has the highest percent of the population under the age of 5, with almost ten percent.

Table 2.16 below shows the demographic and structure statistics, and **Table 2.17** describes the mitigation capabilities of the city.

Table 2.16. Demographic and Structure Risk Parameters For Edgar Springs

Jurisdiction	Total Population	With a disability	Non-English Speaking Populations	People Below Poverty Level	Population Under 5 Yrs.	Population 65 Yrs. and Over	Residences Built Prior to 1939	Mobile Homes
Edgar Springs	181	56	4	57	18	26	23	14

Source: Source: U.S. Census Bureau, 2015-2019 5-Years American Community Survey

Table 2.17. City of Edgar Springs Mitigation Capabilities

Capabilities	Status Including Date of Document or Policy
Planning Capabilities	
Comprehensive Plan	No
Builder's Plan	No
Capital Improvement Plan	No
City Emergency Operations Plan	No
County Emergency Operations Plan	Yes
Local Recovery Plan	No
County Recovery Plan	No
City Mitigation Plan	No
County Mitigation Plan	Yes – 2016
Debris Management Plan	No
Economic Development Plan	Yes – Regional CEDS 2018
Transportation Plan	Yes - Regional
Land-use Plan	No

Capabilities	Status Including Date of Document or Policy
Flood Mitigation Assistance (FMA) Plan	No
Watershed Plan	No
FireWise or other fire mitigation plan	No
Critical Facilities Plan (Mitigation/Response/Recovery)	No
Policies/Ordinance	
Zoning Ordinance	No
Building Code	No
Floodplain Ordinance	Yes
Subdivision Ordinance	No
Tree Trimming Ordinance	No
Nuisance Ordinance	No
Storm Water Ordinance	No
Drainage Ordinance	No
Site Plan Review Requirements	No
Historic Preservation Ordinance	No
Landscape Ordinance	No
Program	
Zoning/Land Use Restrictions	No
Codes Building Site/Design	No
Hazard Awareness Program	No
National Flood Insurance Program	Yes
NFIP Community Rating System (CRS) Participating Community	No
National Weather Service (NWS) Storm Ready	No
Firewise Community Certification	No
Building Code Effectiveness Grading (BCEGs)	No
ISO Fire Rating	No
Economic Development Program	No
Land Use Program	No
Public Education/Awareness	No
Property Acquisition	No
Planning/Zoning Boards	No
Stream Maintenance Program	No
Tree Trimming Program	No
Engineering Studies for Streams (Local/County/Regional)	No
Mutual Aid Agreements	Yes
Studies/Reports/Maps	
Hazard Analysis/Risk Assessment (City)	No
Hazard Analysis/Risk Assessment (County)	Yes – Hazard Mitigation (2016) & Hazardous Materials (annual) Plans
Evacuation Route Map	Yes
Critical Facilities Inventory	Yes – Hazard Mitigation (2016) & Hazardous Materials (annual) Plans
Vulnerable Population Inventory	No
Land Use Map	No
Staff/Department	
Building Code Official	No
Building Inspector	No
Mapping Specialist (GIS)	No
Engineer	No
Development Planner	No
Public Works Official	No
Emergency Management Director	Yes

Capabilities	Status Including Date of Document or Policy
NFIP Floodplain Administrator	Yes
Bomb and/or Arson Squad	No
Emergency Response Team	No
Hazardous Materials Expert	No
Local Emergency Planning Committee	Yes – MREPC
County Emergency Management Commission	No
Sanitation Department	No
Transportation Department	No
Economic Development Department	No
Housing Department	Yes - Phelps Co. PHA
Regional Planning Agencies	Yes - MRPC
Historic Preservation	No
Non-Governmental Organizations (NGOs)	
American Red Cross	No
Salvation Army	No
Veterans Groups	No
Environmental Organization	No
Homeowner Associations	No
Neighborhood Associations	No
Chamber of Commerce	No
Community Organizations (Lions, Kiwanis, etc.)	No
Local Funding Availability	
Ability to apply for Community Development Block Grants	Yes
Ability to fund projects through Capital Improvements funding	Yes
Authority to levy taxes for a specific purpose	Yes
Fees for water, sewer, gas, or electric services	Yes
Impact fees for new development	No
Ability to incur debt through general obligation bonds	Yes
Ability to incur debt through special tax bonds	Yes
Ability to incur debt through private activities	No
Ability to withhold spending in hazard prone areas	No

Source: Data Collection Questionnaire, 2020

2.2.4 City of Newburg

Overview

Newburg is located in the west central portion of Phelps County. Newburg is located on Highway T, south of U.S. Interstate I-44. Newburg is a fourth class city with a four member board of aldermen and a mayor. The city employs a city clerk, attorney, police judge, police chief, and water/sewer superintendent. The city population from the 2019 5-year ACS data is 479, in 2010 it was 528, which shows a population decline of over nine percent.

Technical and Fiscal Resources

Newburg is a participating community in the National Flood Insurance Program. The city has a Flood Insurance Study and maintains certificates of elevation. The city has a floodplain ordinance that is maintained by the city's emergency management director. The City of Newburg has a

police department located in the city hall. The Central Communications Center, located in and operated by the Rolla Police Department, is contracted by Phelps County to provide 911 dispatching throughout the county. The office is staffed 24 hours a day. There are two outdoor warning sirens in Newburg that are activated by the Center in Rolla.

The Phelps County Ambulance Service accommodates the western two-thirds of the county, including the City of Newburg. There is also a Rural Fire Protection District located in Doolittle, which serves a portion of Phelps County including the Newburg School District.

Public education programs are provided locally by the fire protection district and regionally by the Coalition for Roadway Safety and Phelps-Maries County Health Department. There is also a community page on Facebook for public sharing of emergency information for Doolittle, Newburg, and Jerome.

Newburg has the highest percent of population over 65 (24.6 percent), houses built prior to 1939 (43.1 percent), population with a disability (35.3 percent), and families living below the poverty line (37.8 percent). A greater percent of pre-1939 homes increases the city’s risk to damages from several hazards and a large percent of vulnerable populations increases the risk of injury or death due to hazards.

Table 2.18 below shows the demographic and structure statistics, and **Table 2.19** describes the mitigation capabilities of the city.

Table 2.18. Demographic and Structure Risk Parameters For Newburg

Jurisdiction	Total Population	With a Disability	Non-English Speaking Populations	People Below Poverty Level	Population Under 5 Yrs.	Population 65 Yrs. and Over	Residences Built Prior to 1939	Mobile Homes
Newburg	479	170	0	178	18	118	132	12

Source: Source: U.S. Census Bureau, 2018 5-Year American Community Survey

Table 2.19. City of Newburg Mitigation Capabilities

Capabilities	Status Including Date of Document or Policy
Planning Capabilities	
Comprehensive Plan	No
Builder's Plan	No
Capital Improvement Plan	No
City Emergency Operations Plan	No
County Emergency Operations Plan	Yes, 2006
Local Recovery Plan	No
County Recovery Plan	No
City Mitigation Plan	No
County Mitigation Plan	Yes - 2016
Debris Management Plan	Yes
Economic Development Plan	Yes – Regional CEDS 2018
Transportation Plan	Yes – regional 2019
Land-use Plan	No

Capabilities	Status Including Date of Document or Policy
Flood Mitigation Assistance (FMA) Plan	No
Watershed Plan	No
FireWise or other fire mitigation plan	No
Critical Facilities Plan (Mitigation/Response/Recovery)	No
Policies/Ordinance	
Zoning Ordinance	No
Building Code	Yes – ICC
Floodplain Ordinance	Yes
Subdivision Ordinance	No
Tree Trimming Ordinance	No
Nuisance Ordinance	Yes
Storm Water Ordinance	No
Drainage Ordinance	No
Site Plan Review Requirements	No
Historic Preservation Ordinance	No
Landscape Ordinance	No
Program	
Zoning/Land Use Restrictions	No
Codes Building Site/Design	No
Hazard Awareness Program	No
National Flood Insurance Program	Yes
NFIP Community Rating System (CRS) Participating Community	No
National Weather Service (NWS) Storm Ready	No
Firewise Community Certification	No
Building Code Effectiveness Grading (BCEGs)	No
ISO Fire Rating	8
Economic Development Program	No
Land Use Program	No
Public Education/Awareness	No
Property Acquisition	No
Planning/Zoning Boards	No
Stream Maintenance Program	No
Tree Trimming Program	No
Engineering Studies for Streams (Local/County/Regional)	No
Mutual Aid Agreements	Yes
Studies/Reports/Maps	
Hazard Analysis/Risk Assessment (City)	No
Hazard Analysis/Risk Assessment (County)	Yes – Hazard Mitigation (2016) & Hazardous Materials (annual) Plans
Evacuation Route Map	No
Critical Facilities Inventory	Yes – Hazard Mitigation (2016) & Hazardous Materials (annual) Plans
Vulnerable Population Inventory	No
Land Use Map	No
Staff/Department	
Building Code Official	Yes
Building Inspector	No
Mapping Specialist (GIS)	No
Engineer	Yes – Contractor
Development Planner	No
Public Works Official	Yes

Capabilities	Status Including Date of Document or Policy
Emergency Management Director	Yes
NFIP Floodplain Administrator	Yes
Bomb and/or Arson Squad	No
Emergency Response Team	No
Hazardous Materials Expert	No
Local Emergency Planning Committee	Yes - MREPC
County Emergency Management Commission	No
Sanitation Department	Yes
Transportation Department	No
Economic Development Department	No
Housing Department	Yes - Phelps Co. PHA
Regional Planning Agencies	Yes - MRPC
Historic Preservation	No
Non-Governmental Organizations (NGOs)	
American Red Cross	No
Salvation Army	No
Veterans Groups	No
Environmental Organization	No
Homeowner Associations	No
Neighborhood Associations	No
Chamber of Commerce	No
Community Organizations (Lions, Kiwanis, etc.)	No
Local Funding Availability	
Ability to apply for Community Development Block Grants	Yes
Ability to fund projects through Capital Improvements funding	No
Authority to levy taxes for a specific purpose	No
Fees for water, sewer, gas, or electric services	Yes
Impact fees for new development	No
Ability to incur debt through general obligation bonds	Yes
Ability to incur debt through special tax bonds	Yes
Ability to incur debt through private activities	No
Ability to withhold spending in hazard prone areas	No

Source: Data Collection Questionnaire, 2020

2.2.5 City of Rolla

Overview

Rolla is centrally located on the Interstate 44 corridor, and serves as the seat of Phelps County. Rolla is a third class city with a twelve-member city council and a mayor. The city employs a full-time city administrator, city clerk, community development director, prosecutor, chief of police, fire chief, public works director, municipal utilities manager, parks and recreation director, municipal judge, director of environmental services, and an Emergency Management Director. The city population from the 2019 5-year ACS data is 20,169, in 2010 it was 19,141, which shows a population growth of over five percent.

Technical and Fiscal Resources

Rolla participates in the National Flood Insurance Program. Rolla has a Flood Insurance Plan and maintains certificates of elevation. The city has a floodplain ordinance #3500, Chapter 15 Article 6. The Central Communications Center, located in and operated by the Rolla Police Department, is contracted by Phelps County to provide 9-1-1 dispatching throughout the county. The office is staffed 24 hours a day. The Phelps County Ambulance Service accommodates the western, two-thirds of the county, including the City of Rolla. Rolla receives fire protection services from both the City of Rolla Fire & Rescue and Rolla Rural Fire Protection Association. In addition, the Missouri State Highway Patrol Troop I Headquarters is located in the city of Rolla.

The city has ten severe weather sirens that are activated by the central dispatch center with coordination from the city fire chief. In addition to being served by Phelps County 9-1-1, the city has dispatch capability through the city police dispatch. Additional warning is provided through the mass notification system (Everbridge), as well as RAVE Missouri S&T notification system, and radio/television public address system.

The City of Rolla has 17 fixed location 2NW generators for critical infrastructure throughout the city, including City Hall, Rolla Municipal Utilities (two locations), The Centre, Fire Station 1 @ 2, Rolla Police Department, and Cedar Street Baptist Church which serves as a shelter.

Rolla's Community Development Department administers and enforces all building codes, 2000 ICC codes, fire codes, housing codes, BOCA codes, plumbing codes, mechanical codes and the National Electric Code. The city has ICC certified inspectors on staff, including the city building official, city zoning inspector and the city administrator. All residential and non-residential construction – both new and renovations – require a building permit and inspections by the city.

The fire department provides a number of education/outreach programs in the community and school district, including flood awareness and safety, hazardous weather awareness and preparedness, Fire Safety Week, and home smoke detectors. The city also provides environmental (solid waste) education in the school district as well as civic groups and community meetings. Rolla Public Works and Rolla Municipal Utilities provides education regarding water and electric conservation and the MS4 program and storm water management.

There is an annual Kid's Safety Day in Rolla that includes car seat and seat belt safety, fire preparedness, and other safety for families. In addition, public education programs are provided regionally by the Coalition for Roadway Safety and Phelps-Maries County Health Department. There are public Facebook pages for City of Rolla Missouri City Hall, City of Rolla Environmental Services, Rolla Police Department, City of Rolla Fire & Rescue, and Rolla Municipal Utilities.

Mitigation Actions

In 2004, a bond was passed to improve and build new storm water detention ponds and box culverts throughout the City. This action helped removed approximately 200 homes from the floodplain.

Rolla Municipal Utilities provides secondary power to Phelps Health (hospital) and provides a proactive tree trimming policy to prevent power failures during wind/ice storms.

The City of Rolla has the highest percentage of non-English speaking population. In addition, the

city has vulnerable populations at B.W. Robinson State School, Choices for people, Phelps Health (hospital), six nursing homes, Rolla Towers Apartments, and Rolla Apartments McCutchen.

Table 2.20 below shows the demographic and structure statistics, and **Table 2.21** describes the mitigation capabilities of the city.

Table 2.20. Demographic and Structure Risk Parameters For Rolla

Jurisdiction	Total Population	With a Disability	Non-English Speaking Populations	People Below Poverty Level	Population Under 5 Yrs.	Population 65 Yrs. and Over	Residences Built Prior to 1939	Mobile Homes
Rolla	20,169	2,716	1,984	5,021	1,274	2,369	341	228

Source: Source: U.S. Census Bureau, 2018 5-Years American Community Survey

Table 2.21. City of Rolla Mitigation Capabilities

Capabilities	Status Including Date of Document or Policy
Planning Capabilities	
Comprehensive Plan	Yes – January 17, 2006
Builder's Plan	No
Capital Improvement Plan	Yes – August 2019
City Emergency Operations Plan	Yes – December 2019
County Emergency Operations Plan	Yes
Local Recovery Plan	No
County Recovery Plan	No
City Mitigation Plan	Yes – 2015
County Mitigation Plan	Yes – 2016
Debris Management Plan	No
Economic Development Plan	Yes – regional CEDS 2018, RREC 2005
Transportation Plan	Yes – regional 2019
Land-use Plan	Yes – January 17, 2006
Flood Mitigation Assistance (FMA) Plan	No
Watershed Plan	Yes – March 2019
FireWise or other fire mitigation plan	No
Critical Facilities Plan (Mitigation/Response/Recovery)	No
Policies/Ordinance	
Zoning Ordinance	Yes – Ordinance #3799
Building Code	Yes, IBC 2018
Floodplain Ordinance	Yes – 2008
Subdivision Ordinance	Yes – Ordinance #3799
Tree Trimming Ordinance	Yes – Ordinance #4490
Nuisance Ordinance	Yes
Storm Water Ordinance	Yes – 2008
Drainage Ordinance	Yes – 2008
Site Plan Review Requirements	Yes – Limited
Historic Preservation Ordinance	Yes – Ordinance #3799
Landscape Ordinance	Yes
Program	
Zoning/Land Use Restrictions	Yes

Capabilities	Status Including Date of Document or Policy
Codes Building Site/Design	Yes
Hazard Awareness Program	No
National Flood Insurance Program	Yes
NFIP Community Rating System (CRS) Participating Community	No
National Weather Service (NWS) Storm Ready	Yes
Firewise Community Certification	Yes
Building Code Effectiveness Grading (BCEGs)	Yes – 4
ISO Fire Rating	2
Economic Development Program	Yes – Rolla Regional Economic Commission
Land Use Program	Yes
Public Education/Awareness	Yes
Property Acquisition	No
Planning/Zoning Boards	Yes
Stream Maintenance Program	Yes – March 2019
Tree Trimming Program	Yes
Engineering Studies for Streams (Local/County/Regional)	Yes
Mutual Aid Agreements	Yes
Studies/Reports/Maps	
Hazard Analysis/Risk Assessment (City)	No
Hazard Analysis/Risk Assessment (County)	Yes – Hazard Mitigation (2016) & Hazardous Materials (annual) Plans
Evacuation Route Map	No
Critical Facilities Inventory	Yes – Hazard Mitigation (2016) & Hazardous Materials (annual) Plans
Vulnerable Population Inventory	Yes
Land Use Map	Yes
Staff/Department	
Building Code Official	Yes
Building Inspector	Yes
Mapping Specialist (GIS)	Yes
Engineer	Yes
Development Planner	Yes
Public Works Official	Yes
Emergency Management Director	Yes
NFIP Floodplain Administrator	Yes
Bomb and/or Arson Squad	Yes – Arson Team
Emergency Response Team	Yes
Hazardous Materials Expert	Yes
Local Emergency Planning Committee	Yes – MREPC
County Emergency Management Commission	No
Sanitation Department	Yes
Transportation Department	Yes – Rolla Public Works
Economic Development Department	No – Contract – Rolla Economic Development Commission
Housing Department	Yes – Rolla Public Housing Authority
Regional Planning Agencies	Yes - MRPC
Historic Preservation	No
Non-Governmental Organizations (NGOs)	
American Red Cross	Yes
Salvation Army	Yes
Veterans Groups	Yes
Environmental Organization	Yes

Capabilities	Status Including Date of Document or Policy
Homeowner Associations	Yes
Neighborhood Associations	Yes
Chamber of Commerce	Yes
Community Organizations (Lions, Kiwanis, etc.)	Yes
Local Funding Availability	
Ability to apply for Community Development Block Grants	Yes
Ability to fund projects through Capital Improvements funding	Yes
Authority to levy taxes for a specific purpose	Yes
Fees for water, sewer, gas, or electric services	Yes
Impact fees for new development	Yes
Ability to incur debt through general obligation bonds	Yes
Ability to incur debt through special tax bonds	Yes
Ability to incur debt through private activities	No
Ability to withhold spending in hazard prone areas	Yes

Source: Data Collection Questionnaire, 2020

2.2.6 City of St. James

Overview

Doolittle is located in the eastern portion of Phelps County on U.S. Interstate I-44. St. James is a third class city with an eight member city council and a mayor. The city also employs a city clerk, city attorney, police chief, fire chief/EMD, utilities superintendent, street supervisor, police chief, judge, parks and recreation director, tourist information director, and community development director. The city population from the 2019 5-year ACS data is 4,076, in 2010 it was 4,169, which shows a population decline of two percent.

Technical and Fiscal Resources

St. James participates in the National Flood Insurance Program. Law enforcement in the community is provided by a police department. The Central Communications Center, located in and operated by the Rolla Police Department, is contracted by Phelps County to provide 9-1-1 dispatching throughout the county. The office is staffed 24 hours a day. The city has three warning sirens which are controlled by the St. James Fire Department. In addition, Everbridge notification system is used as well as a city Facebook page.

The St. James Ambulance District serves St. James and the eastern one-third portion of Phelps County. The city is also responsible for the St. James Fire Protection District. The fire station serves as the city EOC with the Tourist Center and Middle School serving as backup locations. The City of St. James has three portable generators and one fixed generator.

The city has a floodplain ordinance #631, adopted in 2000 and amended #903 in 2008. St. James has building codes that were adopted in 1975 as well as ICC codes, National Electric Codes. St. James also has a zoning ordinance, site plan review requirements, and stormwater management

ordinance #612 adopted in November 1999. Building permits, codes and ordinances are enforced by the city’s code administrator.

Fliers regarding electric and natural gas safety are mailed to residents with utility bills annually and also made available to the public at the Tourist Center. The Natural Gas Department also offers trainings upon request to local groups. The St. James Police Department provides DARE education and is heavily involved with the St. James Coalition. The coalition is responsible for the creation and distribution of educational fliers for all ages to be distributed through schools and community events. In 2019 the St. James Senior Center began a health fair geared towards aging residents.

Additional public education programs are provided regionally by the Coalition for Roadway Safety and Phelps-Maries County Health Department.

Mitigation Actions

The city is in the process of constructing a 10” watermain to connect the Parker Lane Water Tower and Well to the Football Field Tower and Well. In addition, the city is continuing to replace aged electric infrastructure, implementing a policy of underground secondary electric for new construction. The city also has an active tree trimming program in order to reduce damages and power outages due to hazardous weather events.

While not the highest rate in the county, the city does have a significant population over the age of 65 (18 percent) and The Missouri Veterans Home.

Table 2.22 below shows the demographic and structure statistics, and **Table 2.23** describes the mitigation capabilities of the city.

Table 2.22. Demographic and Structure Risk Parameters For St. James

Jurisdiction	Total Population	With a Disability	Non-English Speaking Populations	People Below Poverty Level	Population Under 5 Yrs.	Population 65 Yrs. and Over	Residences Built Prior to 1939	Mobile Homes
St. James	4,076	650	102	730	286	736	180	10

Source: Source: U.S. Census Bureau, 2015-2019 5-Year American Community Survey

Table 2.23. City of St. James Mitigation Capabilities

Capabilities	Status Including Date of Document or Policy
Planning Capabilities	
Comprehensive Plan	Yes – 2012
Builder's Plan	No
Capital Improvement Plan	Yes – 2019
City Emergency Operations Plan	No – Under Development
County Emergency Operations Plan	Yes
Local Recovery Plan	No
County Recovery Plan	No
City Mitigation Plan	No

Capabilities	Status Including Date of Document or Policy
County Mitigation Plan	Yes – 2016
Debris Management Plan	No
Economic Development Plan	Yes – Regional CEDS 2018
Transportation Plan	Yes – regional 2019
Land-use Plan	Yes – 2012
Flood Mitigation Assistance (FMA) Plan	No
Watershed Plan	No
FireWise or other fire mitigation plan	No
Critical Facilities Plan (Mitigation/Response/Recovery)	No – Under Development
Policies/Ordinance	
Zoning Ordinance	Yes
Building Code	Yes - ICC 2015, Ordinance #19-1147
Floodplain Ordinance	Yes – 2015, Ordinance #19-1139
Subdivision Ordinance	Yes
Tree Trimming Ordinance	Yes
Nuisance Ordinance	Yes
Storm Water Ordinance	Yes
Drainage Ordinance	Yes
Site Plan Review Requirements	Yes
Historic Preservation Ordinance	Yes
Landscape Ordinance	Yes
Program	
Zoning/Land Use Restrictions	Yes
Codes Building Site/Design	Yes
Hazard Awareness Program	Yes
National Flood Insurance Program	Yes
NFIP Community Rating System (CRS) Participating Community	No
National Weather Service (NWS) Storm Ready	Yes
Firewise Community Certification	No
Building Code Effectiveness Grading (BCEGs)	No
ISO Fire Rating	6
Economic Development Program	Yes
Land Use Program	Yes
Public Education/Awareness	Yes
Property Acquisition	No
Planning/Zoning Boards	Yes
Stream Maintenance Program	Yes
Tree Trimming Program	Yes
Engineering Studies for Streams (Local/County/Regional)	No
Mutual Aid Agreements	Yes
Studies/Reports/Maps	
Hazard Analysis/Risk Assessment (City)	No
Hazard Analysis/Risk Assessment (County)	Yes – Hazard Mitigation (2016) & Hazardous Materials (annual) Plans
Evacuation Route Map	No
Critical Facilities Inventory	Yes – Hazard Mitigation (2016) & Hazardous Materials (annual) Plans
Vulnerable Population Inventory	No
Land Use Map	Yes
Staff/Department	

Capabilities	Status Including Date of Document or Policy
Building Code Official	Yes
Building Inspector	Yes
Mapping Specialist (GIS)	Yes
Engineer	No
Development Planner	Yes
Public Works Official	Yes
Emergency Management Director	Yes
NFIP Floodplain Administrator	Yes
Bomb and/or Arson Squad	No
Emergency Response Team	No
Hazardous Materials Expert	No
Local Emergency Planning Committee	Yes – MREPC
County Emergency Management Commission	No
Sanitation Department	Yes
Transportation Department	No
Economic Development Department	No
Housing Department	Yes – Phelps Co. PHA
Regional Planning Agencies	Yes – MRPC
Historic Preservation	No
Non-Governmental Organizations (NGOs)	
American Red Cross	No
Salvation Army	No
Veterans Groups	Yes
Environmental Organization	Yes
Homeowner Associations	Yes
Neighborhood Associations	No
Chamber of Commerce	Yes
Community Organizations (Lions, Kiwanis, etc.)	Yes
Local Funding Availability	
Ability to apply for Community Development Block Grants	Yes
Ability to fund projects through Capital Improvements funding	Yes
Authority to levy taxes for a specific purpose	Yes
Fees for water, sewer, gas, or electric services	Yes
Impact fees for new development	Yes
Ability to incur debt through general obligation bonds	Yes
Ability to incur debt through special tax bonds	Yes
Ability to incur debt through private activities	No
Ability to withhold spending in hazard prone areas	Yes

Source: Data Collection Questionnaire, 2020

Table 2.24 summarizes the mitigation capabilities of Phelps County and its jurisdictions.

Table 2.24. Mitigation Capabilities Summary Table

CAPABILITIES	Unincorporated Phelps County	Doolittle	Edgar Springs	Newburg	Rolla	St. James
Planning Capabilities						
Comprehensive Plan	Yes	No	No	No	Yes – 1/7/2006	Yes – 2012

CAPABILITIES	Unincorporated Phelps County	Doolittle	Edgar Springs	Newburg	Rolla	St. James
Builder's Plan	No	No	No	No	No	No
Capital Improvement Plan	No	No	No	No	Yes – 2019	Yes – 2019
City Emergency Operations Plan	No	No	No	No	Yes-2019	No
County Emergency Operations Plan	Yes - 2006	Yes - 2006	Yes - 2006	Yes - 2006	Yes – 2006	Yes - 2006
Local Recovery Plan	No	No	No	No	No	No
County Recovery Plan	Yes	No	No	No	No	No
City Mitigation Plan	n/a	No	No	No	Yes	No
County Mitigation Plan	Yes – 2016	Yes – 2016	Yes – 2016	Yes – 2016	Yes – 2016	Yes – 2016
Debris Management Plan	No	No	No	Yes	No	No
Economic Development Plan	Yes – CEDS 2018	Yes – CEDS 2018	Yes – CEDS 2018	Yes – CEDS 2018	Yes – RECC 2005, CEDS 2018	Yes- CEDS 2018
Transportation Plan	Yes – Regional 2019	Yes – Regional 2019	Yes – Regional 2019	Yes – Regional 2019	Yes – Regional 2019	Yes – Regional 2019
Land-use Plan	No	No	No	No	Yes – 1/17/2006	Yes - 2012
Flood Mitigation Assistance (FMA) Plan	Yes	No	No	No	No	No
Watershed Plan	No	No	No	No	Yes - 2019	No
Firewise or other fire mitigation plan	No	No	No	No	No	No
Critical Facilities Plan (Mitigation/Response/Recovery)	Yes	No	No	No	No	No
Policies/Ordinances						
Zoning Ordinance	No	No	No	No	Yes	Yes
Building Code	No	No	No	Yes – ICC	Yes-IBC 2018	Yes – ICC 2015

CAPABILITIES	Unincorporated Phelps County	Doolittle	Edgar Springs	Newburg	Rolla	St. James
Floodplain Ordinance	Yes – 3/17/2016	Yes – 2/20/2008	Yes	Yes	Yes-2008	Yes – 2018
Subdivision Ordinance	No	No	No	No	Yes	Yes
Tree Trimming Ordinance	No	No	No	No	Yes	Yes
Nuisance Ordinance	No	Yes	No	Yes	Yes	Yes
Storm Water Ordinance	No	No	No	No	Yes – 2008	Yes
Drainage Ordinance	No	No	No	No	Yes – 2008	Yes
Site Plan Review Requirements	No	No	No	No	Yes	Yes
Historic Preservation Ordinance	No	No	No	No	Yes	Yes
Landscape Ordinance	No	No	No	No	Yes	Yes
Program						
Zoning/Land Use Restrictions	No	No	No	No	Yes	Yes
Codes Building Site/Design	No	No	No	No	Yes	Yes
Hazard Awareness Program	No	No	No	No	N/A	Yes
National Flood Insurance Program	Yes	Yes	Yes	Yes	Yes	Yes
NFIP Community Rating System (CRS) Participating Community	No	No	No	No	No	No
National Weather Service (NWS) Storm Ready	Yes	No	No	No	Yes	Yes
Firewise Community Certification	No	No	No	No	Yes	No
Building Code Effectiveness Grading (BCEGs)	No	No	No	No	Yes – 4	No
ISO Fire Rating	Varies	9	No	8	2	6

CAPABILITIES	Unincorporated Phelps County	Doolittle	Edgar Springs	Newburg	Rolla	St. James
Economic Development Program	Yes	No	No	No	Yes	Yes
Land Use Program	No	No	No	No	Yes	Yes
Public Education/Awareness	No	No	No	No	Yes	Yes
Property Acquisition	No	No	No	No	No	No
Planning/Zoning Boards	No	No	No	No	Yes	Yes
Stream Maintenance Program	No	No	No	No	Yes – 2019	Yes
Tree Trimming Program	No	Yes	No	No	Yes	Yes
Engineering Studies for Streams (Local/County/Regional)	No	No	No	No	Yes	No
Mutual Aid Agreements	Yes	Yes	Yes	Yes	Yes	Yes
Studies/Reports/Maps						
Hazard Analysis/Risk Assessment (City)	No	No	No	No	No	No
Hazard Analysis/Risk Assessment (County)	Yes – 2016, 2020	Yes – 2016, 2020	Yes – 2016, 2020	Yes – 2016, 2020	Yes – 2016, 2020	Yes – 2016, 2020
Evacuation Route Map	Yes	No	Yes	No	No	No
Critical Facilities Inventory	Yes – 2016, 2020	Yes – 2016, 2020	Yes – 2016, 2020	Yes – 2016, 2020	Yes – 2016, 2020	Yes – 2016, 2020
Vulnerable Population Inventory	No	No	No	No	Yes	No
Land Use Map	No	No	No	No	Yes	Yes
Staff/Department						
Building Code Official	No	No	No	Yes	Yes	Yes
Building Inspector	No	No	No	No	Yes	Yes

CAPABILITIES	Unincorporated Phelps County	Doolittle	Edgar Springs	Newburg	Rolla	St. James
Mapping Specialist (GIS)	Yes	No	No	No	Yes	Yes
Engineer	Yes	No	No	No	Yes	No
Development Planner	No	No	No	No	Yes	Yes
Public Works Official	No	Yes - Sewer	No	Yes	Yes	Yes
Emergency Management Director	Yes	No	Yes	Yes	Yes	Yes
NFIP Floodplain Administrator	Yes	Yes	Yes	Yes	Yes	Yes
Bomb and/or Arson Squad	No	No	No	No	Yes	No
Emergency Response Team	Yes	No	No	No	Yes	No
Hazardous Materials Expert	No	No	No	No	Yes	No
Local Emergency Planning Committee	Yes - MREPC	Yes - MREPC	Yes - MREPC	Yes - MREPC	Yes - MREPC	Yes - MREPC
County Emergency Management Commission	No	No	No	No	No	No
Sanitation Department	No	No	No	Yes	Yes	Yes
Transportation Department	Yes	No	No	No	Yes	No
Economic Development Department	No	No	No	No	No	No
Housing Department	Yes - Phelps Co. PHA	Yes - Phelps Co. PHA	Yes - Phelps Co. PHA	Yes - Phelps Co. PHA	Yes - Rolla PHA	Yes - Phelps Co. PHA
Regional Planning Agencies	Yes - MRPC	Yes - MRPC	Yes - MRPC	Yes - MRPC	Yes - MRPC	Yes - MRPC
Historic Preservation	No	No	No	No	No	No
Non-Governmental Organizations (NGOs)						
American Red Cross	No	No	No	No	Yes	No
Salvation Army	Yes	No	No	No	Yes	No
Veterans Groups	Yes	No	No	No	Yes	Yes
Environmental Organization	Yes	No	No	No	Yes	Yes

CAPABILITIES	Unincorporated Phelps County	Doolittle	Edgar Springs	Newburg	Rolla	St. James
Homeowner Associations	Yes	No	No	No	Yes	Yes
Neighborhood Associations	Yes	No	No	No	Yes	No
Chamber of Commerce	Yes	No	No	No	Yes	Yes
Community Organizations (Lions, Kiwanis, etc.)	Yes	Yes – Lions Club	No	No	Yes	Yes
Financial Resources						
Ability to apply for Community Development Block Grants	Yes	Yes	Yes	Yes	Yes	Yes
Ability to fund projects through Capital Improvements funding	Yes	Yes	Yes	No	Yes	Yes
Authority to levy taxes for a specific purpose	Yes	Yes	Yes	No	Yes	Yes
Fees for water, sewer, gas, or electric services	No	Yes	Yes	Yes	Yes	Yes
Impact fees for new development	Yes	No	No	No	Yes	Yes
Ability to incur debt through general obligation bonds	Yes	Yes	Yes	Yes	Yes	Yes
Ability to incur debt through special tax bonds	Yes	Yes	Yes	Yes	Yes	Yes
Ability to incur debt through private activities	No	No	No	No	No	No
Ability to withhold spending in hazard prone areas	Yes	No	No	No	Yes	Yes

Source: Data Collection Questionnaires, 2020

2.2.7 Public School District Profiles and Mitigation Capabilities

The following school districts are participating jurisdictions in this plan: St. James R-I School District, Newburg R-II School District, Phelps County R-III School District and Rolla 31 School District. As public institutions responsible for the care and education of the county's children, these school districts share an interest with Phelps County in public safety and hazard mitigation planning. **Figure 2.6** provides the boundaries of the school districts participating in this planning process.

Technical and Fiscal Resources

All school districts (with the exception of Phelps County R-III) have NOAA all hazard radios on site to provide early warning of hazard events. Phelps County R-III is in the process of ordering new NOAA all hazard radios and in the meantime relies on local radio broadcasts and cell phone alerts. In addition, each school district has fire alarms and intercom systems capable of providing specific instructions in the event of an emergency. St. James R-I and Rolla 31 School Districts operate an automated phone and text message system capable of contacting all parents in the event of an emergency.

Existing Plans and Policies

All four school districts have an emergency management plan and weapons policy.

Other Mitigation Activities

All schools participating in the plan conduct regular fire, earthquake, tornado drills, and lock-down security training at varying frequencies from quarterly to once an academic year. Phelps County R-III is the only school district that has a designated safe area for tornados that meets FEMA standards.

New Construction

St. James R-I School District is currently finishing a large renovation project to the high school. A secondary gym was converted to an auditorium. A practice gym was added on to an open courtyard. The old part of the school was gutted, renovated, and brought up to accessibility and safety standards. During construction a structural issue was found in the existing building's roof, that was added on to the current project. The school district also completed the construction of a preschool addition to the elementary school which was completed prior to the start of the 2020-2021 school year.

Newburg R-II School District is planning updates to the roof of the vo-ag building, as well as lighting heat and air, all of which are in a hazard area.

Phelps County R-III School District does not anticipate a new building or major renovation project in the near future.

Since the last Hazard Mitigation Plan the Rolla 31 school district completed construction of a new cafeteria enlargement, new science wing, new wrestling room, new office area and classrooms at the Rolla High School. A new cafeteria and classrooms were also constructed at the Junior High

building.

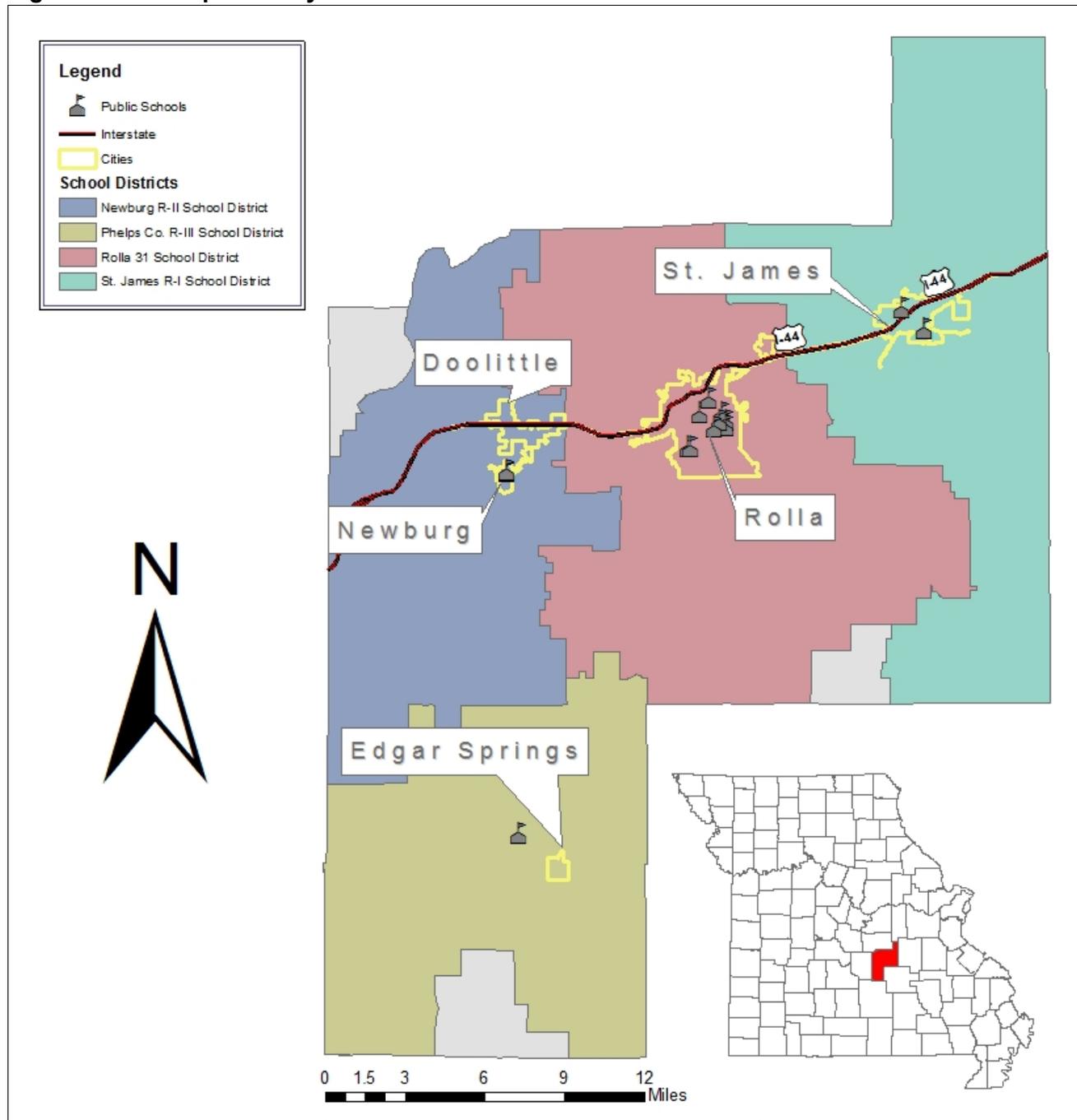
In the next five years the district anticipates construction at three buildings. Rolla High School anticipates a new gymnasium, renovations to the old gymnasium, a new band and choir room and includes a safe room. The Junior High building anticipates a new band and choir room including a safe room. Truman Elementary anticipates construction of a new library and office space with a safe room included. None of the Rolla 31 buildings are in hazard areas.

Table 2.25. School District Buildings and Enrollment Data, 2020

District Name	Building Name	Enrollment
St. James R-I		
	Lucy Wortham James Elementary	795
	St. James Middle School	459
	St. James High School	609
Newburg R-II		
	Newburg Elementary	205
	Newburg High School	198
Phelps County R-III		
	Phelps County Elementary	170
Rolla 31		
	Col. John B. Wyman Elem.	525
	Harry S Truman Elem.	422
	Mark Twain Elem.	455
	Rolla Middle	948
	Rolla Jr. High	600
	Rolla Sr. High	1242
	Rolla Technical Center	0
	Rolla Technical Institute	0

Source: <https://ogl.oa.mo.gov/DESE/schoolSearch/index.html>

Figure 2.6. Phelps County School Districts



Phelps County Hazard Mitigation Plan

MRPC
4 Industrial Drive
St. James, MO
65559

School Districts

This map was created by the Meramec Regional Planning Commission's Environmental Department. To the best of the author's knowledge, the data presented here is true and correct. However, no responsibility is assumed by the author or MRPC for the accuracy of the information displayed on this map. October 2015



Table 2.26. Summary of Mitigation Capabilities for School Districts

Capability	St. James R-I	Newburg R-II	Phelps County R-III	Rolla 31
Planning Elements				
Master Plan/Date	Yes – 10/4/2019	Yes – 2014	Yes – 2017	Yes – 2017
Capital Improvement	Yes – 12/15/2020	No	Yes – 2017	Yes – 2017
School Emergency Plan/Date	Yes – 10/4/2020	Yes	Yes – 2015	Yes – 2020
Weapons Policy/Date	Yes – 8/16/2018	Yes – 5/31/2013	Yes – 2019	Yes – 2020
Personnel Resources				
Full-Time Building Official (Principal)	Yes	Yes	Yes	Yes
Emergency Manager	No	Yes	Yes	No
Grant Writer	No	Yes	No	No
Public Information Officer	No	Yes	No	No
Financial Resources				
Capital Improvements Project Funding	Yes	Yes	No	Yes
Local Funds	Yes	Yes	Yes	Yes
General Obligation	No	No	No	Yes
Special Tax Bonds	No	No	No	No
Private Activities/Donations	Yes	No	Yes	Yes
State and Federal Funds/Grants	Yes	Yes	No	Yes
Other				
Privately or Self-Insured?	MUSIC School Consortium Insurance	Privately	MUSIC	MUSIC
Fire Evacuation Training	Quarterly	2x per year minimum	2x per year	Annually
Tornado Sheltering Exercises	Annually	1x per year minimum	Annually	Annually
Public Address/Emergency Alert System	VOIP Intercom System	Intercom System	Phones with Speaker System	PA System, Phone and Text Message System for Parents
NOAA Weather Radios	Yes	Yes	No	Yes

Lock-Down Security Training	Annually	1x per year minimum	Annually	Annually
Mitigation Programs	No	No	No	No
Tornado Shelter/Safe-room	No	No – not FEMA certified	Yes – FEMA Tornado Shelter	No
Campus Police	2 Rotating School Resource Officers	No – use Phelps Co, City of Doolittle	School Resource Officer	3 School Resource Officers

Source: Data Collection Questionnaires, 2020

There are numerous post-secondary schools in Phelps County. These campuses and their locations are shown in Error! Reference source not found..

Table 2.28 Phelps County Colleges/Universities

College/University	Location	Description
State Technical College of Missouri	One Technology Drive, Linn, MO 65051	Associates Degree and Certificates
East Central College	1964 Prairie Dell Road, Union, MO 63084	Associate Degrees
Missouri University of Science and Technology	Parker Hall Rolla, MO 65401	Main campus in Rolla, MO Bachelor, Masters, and Doctoral degrees
Drury University	Forum Plaza Rolla, MO 65401	Main campus in Springfield, MO Bachelor degrees
Webster University	1103 Kingshighway Rolla, MO 65401	Main campus in St. Louis, MO Bachelor and Masters degrees
Columbia College	Hwy 63 N. Rolla, MO 65401	Main campus in Columbia, MO Associate and Bachelor degrees