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Two Rivers Emergency Management, LLC is pleased to submit this Hazard Mitigation Plan (the "Deliverable") to the Benton County Emergency Management Agency (the "Client"). The statements, findings, conclusions, and recommendations are those of the author(s) and do not necessarily reflect the views of other organizations. This Deliverable was developed with input from, and in collaboration with, the Client. It is subject to the terms of the contract dated August 20, 2020 between Two Rivers Emergency Management, LLC and the Client, and constitutes the entire agreement between them. The Contract includes any and all representations, warranties, indemnifications, and remedies on which the Client may rely. Because of the specialized knowledge of the Client about how this Deliverable is to be used, it should be used only by the Client and its affiliates, in a manner that relies on the Client's discretion and expertise, and only for the purposes contemplated by the Contract. This Deliverable is not to be used in any other manner or relied upon by any other person.

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# Glossary

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ADEM – Arkansas Division of Emergency Management  
BRIC – Building Resilient Infrastructure and Communities  
CDBG – Community Development Block Grant Program  
CRS – Community Rating System  
EAP – Emergency Action Plan  
EMA – Emergency Management Agency  
EOC – Emergency Operations Center  
FEMA – Federal Emergency Management Agency  
FMA – Flood Mitigation Assistance Grant Program  
HMA – Hazard Mitigation Assistance  
HMGP – Hazard Mitigation Grant Program  
HMP – Hazard Mitigation Plan  
NADM – North American Drought Monitor  
NFHL – National Flood Hazard Layer  
NFIP – National Floodplain Insurance Program  
NID – National Inventory of Dams  
NOAA – National Oceanic and Atmospheric Administration  
NWS – National Weather Service  
PDM – Pre-Disaster Mitigation Grant Program  
SD – School District  
SFHA – Special Flood Hazard Area  
TREM – Two Rivers Emergency Management  
USACE – United States Army Corps of Engineers  
USCB – United State Census Bureau  
USDA – United States Department of Agriculture  
USGS – United States Geological Survey  
WUI – Wildland Urban Interface

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# Section 1 – Plan Development

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## *Plan Purpose*

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The 2021 Benton County Hazard Mitigation Plan (HMP) revision is threefold in its purpose. Strictly speaking, the Benton County Hazard Mitigation Plan provides guidance to substantially and permanently reduce Benton County and its communities' vulnerability to natural hazards.

This plan revision encompasses the continuation and updating of this original mission by incorporating new GIS technologies, improving its risk assessment methodologies, and recalibrating its mitigation strategies based on an assessment of the previous plan, approved in November of 2016, and the previous plan's usefulness over the past five years.

Secondly, participation in and the adoption of this plan grants the adopting entity the ability to apply for multiple grant funding programs through the Federal Emergency Management Agency (FEMA).

Additionally, a tertiary purpose of the plan is to promote sound public policy and support other local, regional, and state planning efforts which have the effects of protecting citizens, critical facilities, infrastructure, private property, and the natural environment. The development of this plan revision does so by increasing public awareness and education, collaborating with other planning organizations and governments engaged in planning efforts, serving as a reference and resource for the public, various governments, and other entities.

## *Plan Organization*

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The Benton County Hazard Mitigation Plan was developed and organized within the rules and regulations established under the 44 Code of Federal Regulation 201.6. This plan contains sections detailing the planning process, Benton County's communities, other participating entities and the planning area, a hazard vulnerability and risk assessment, capabilities assessment, and a mitigation strategy designed for the purpose of guiding Benton County and the plan's participants to become more disaster-resilient communities.

## *Plan Financing*

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The Benton County Hazard Mitigation Plan has been financed by Benton County and a FEMA Hazard Mitigation Grant Program (HMG) grant administered through the State of Arkansas' Division of Emergency Management (ADEM). The federal grant provided 75% of the total plan's cost while Benton County contributes 25%.

## ***Plan Participation***

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The Benton County Hazard Mitigation Plan was developed as the result of an ongoing collaborative effort between the full range of stakeholders in the planning area, local authorities, public school district, municipal jurisdictions, and the State of Arkansas. This effort was led by the Benton County Emergency Management Agency.

Concerns, capabilities, interests and historical data were gathered through interviews with stakeholders from within the communities, along with a number of electronic datasets, and ongoing planning committee work sessions. The public were granted opportunities to provide their input, influence, share knowledge, and be active participants in the plan's development. This was accomplished through a number of public outreach campaigns in the form of an on-site meeting and internet accessible surveys. Any comments, questions, and discussions resulting from these activities were given consideration in the development of this plan.

## ***Approval & Adoption***

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The Benton County Hazard Mitigation Plan was submitted for review to the ADEM on October 19th, 2021. Following the state's review, the plan was submitted to the FEMA Region VI office for federal review. FEMA Region VI granted "Approval Pending Adoption" on January 4<sup>th</sup>, 2023.

This plan has officially been adopted by all participating municipalities and school districts.

## 1.1 – Planning Process

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Benton County's revision process began in August of 2020 when Benton County contracted Two Rivers Emergency Management to develop their hazard mitigation plan update.

Two planning events were held throughout the planning process. Plan development kicked-off on 12 October 2020. Stakeholders from every municipality, and public-school district in the county and members of the public were invited to attend and participate. Additionally, neighboring EMAs were invited. This meeting was advertised for period of two weeks in advance. This event was held virtually due to COVID-19 restrictions.

This meeting delivered an understanding of the planning processes and steps required to update, including the organizing of resources, assessment of hazards, devilmnt of a mitigation plan, and steps to implementing the plan and monitoring its progress. All municipalities in the county actively participated in the process through solicitation, providing input, or participation in meetings. Details and documentation of stakeholder participation can be found in Section 1.2 and Appendix A – Plan Participation.

From October 2<sup>nd</sup> through October 17<sup>th</sup>, 2021, the Benton County EMA held a draft review and comment period that was open to the public. Advertisements were made on social media accounts and the county's website for two weeks. The plan was made available online in PDF format. No members of the public inquired about the plan. The plan draft was also distributed to the plan's primary stakeholders for review.

Throughout the process the public was given opportunities to review plan drafts, ask questions, and provide input on hazards. They were also invited to provide feedback on mitigation project prioritization, hazard identification, and hazard ranking. This was accomplished through their inclusion in the virtual meetings as well as an extensive online outreach campaign. Details and documentation of the public's participation can be found in Section 1.3 and Appendix A – Plan Participation.

The 2021 Benton County Hazard Mitigation Plan encompasses the following 28 jurisdictions:

Benton County	
City of Bella Vista	City of Springdale
City of Bentonville	City of Sulphur Springs
City of Cave Springs	Town of Avoca
City of Centerton	Town of Garfield
City of Decatur	Town of Gateway
City of Elm Springs	Town of Highfill
City of Gentry	Town of Springtown
City of Gravette	
City of Little Flock	Bentonville School District
City of Lowell	Decatur School District
City of Pea Ridge	Gentry School District
City of Rogers	Gravette School District
City of Siloam Springs	Pea Ridge School District
	Rogers School District
	Siloam Springs School District

## 1.2 – Stakeholder Engagement

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The Benton County Hazard Mitigation Plan includes the governmental and education entities within Benton County working together for the development and ongoing maintenance of this plan. The participants are grouped into four categories.

### ***Municipalities***

This group consists of representatives from municipal governments within the planning area.

### ***Education Entities***

This group consists of representatives from the public-school districts serving Benton County.

### ***Other Stakeholders***

This group consists of representatives from the local community, regulatory authorities, emergency services, commercial interests, neighboring EMAs, and other relevant organizations.

### ***The Public***

FEMA requires this planning effort to be open to constant input from interested citizens in compliance with the Sunshine Laws. In Arkansas, public meetings must comply with Arkansas Open Meetings Law, unless established by statutory exemption. Therefore, any individual citizens who wish to be involved in this effort to mitigate future disasters were encourage to attend the on-site meetings and complete the online mitigation survey to solicit relevant comments and concerns to be incorporated into the content of this plan.

Representatives from each group took part in periodic planning meetings, public meetings and events and individual meetings with TREM and Benton County EMA staff. Their specific involvement included activities such as collection and development of planning information, providing input into the planning process, reviewing draft editions of the plan and providing written documentation demonstrating their commitment to mitigation and intent to adopt the final approved plan. Although neighboring county EMAs were invited, none participated.

Each participating entity was expected to attend at least one of the on-site meetings, submit required data as requested, participate in the development of general information for the plan as well as their own individual planning information, mitigation strategies and initiatives, participate in a public review process, and submit the plan for formal adoption through their respective governing body. Information was kept on attendance, input and providing requested documentation. In the event an entity did not provide representation to a meeting, individual outreach was conducted to garner their inclusion.

## 1.2 – Stakeholder Engagement

The following table details the plan participants who participated in the hazard mitigation planning process. This list contains all relevant local and state agencies involved in hazard mitigation activities, agencies that have the authority to regulate development, and any appropriate neighboring communities.

**Table 1.1 – Stakeholders**

Name	Organization	Position
Robert McGowen	Benton County Division of Public Safety	Administrator
Michael Waddle	Benton County Emergency Management Agency	Director
Jay Frasier		
Josh Beam		
Robert Whitehorn	Town of Avoca	Mayor
Nanette Barnes	Town of Avoca	Treasurer
Peter Christie	City of Bella Vista	Mayor
Stephen Sims	City of Bella Vista	Fire Chief
Stephanie Orman	City of Bentonville	Mayor
Brent Boydston	City of Bentonville	Fire Chief
Mike Bender	City of Bentonville	Public Works Director
Randall Noblett	City of Cave Springs	Mayor
Bill Edwards	City of Centerton	Mayor
Bob Tharp	City of Decatur	Mayor
Harold Douthit	City of Elm Springs	Mayor
Connie Newman	City of Elm Springs	City Clerk
Gary Blackburn	Town of Garfield	Mayor
Andrew Tillman	Town of Gateway	Mayor
Kevin Johnston	City of Gentry	Mayor
Jeffrey Brenaman	City of Gentry	Director of Public Works
Kurt Maddox	City of Gravette	Mayor
Mallory Weaver	City of Gravette	Communications Director
Michelle Rieff	Town of Highfill	Mayor
Robert Stout	City of Little Flock	Mayor
Josh Dunavan	City of Little Flock	Fire Chief
Christopher Moore	City of Lowell	Mayor
Pete Melnicki	City of Lowell	Fire Chief
Jackie Crabtree	City of Pea Ridge	Mayor
Greg Hines	City of Rogers	Mayor
Jennifer Moore	City of Rogers	City Recorder
Tom Jenkins	City of Rogers	Fire Chief
John Turner	City of Siloam Springs	Mayor
Jeremy Criner	City of Siloam Springs	Fire Chief
Doug Sprouse	City of Springdale	Mayor
Mike Erwin	City of Springdale	Fire Chief
Mike Peters	City of Springdale	Police Chief
Terri Glenn	Town of Springtown	Mayor
Shane Weber	City of Sulphur Springs	Mayor
Debbie Jones	Bentonville School District	Superintendent
Dr. Steven Watkins	Decatur School District	Superintendent
Terrier Metz	Gentry School District	Superintendent
Jason Barrett	Gentry School District	Director of Operations
Maribel Childress	Gravette School District	Superintendent
Dennis Kurczek	Gravette School District	District Treasurer
Keith Martin	Pea Ridge School District	Superintendent
Kevin Ramey	Pea Ridge School District	Assistant Superintendent
Dr. Marlin Berry	Rogers School District	Superintendent
Marissa Byler	Rogers School District	Administrative Assistant
Jodi Wiggins	Siloam Springs School District	Superintendent
Shane Patrick	Siloam Springs School District	Assistant Superintendent

## 1.2 – Stakeholder Engagement

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Throughout the plan's development, TREM actively engaged stakeholders to solicit their review and feedback. Discussions were held as to what should and should not be considered a critical facility or portion of their infrastructure. This information was the compiled and used to drive the analysis in Sections 2, 3, and 4 of the plan. Additionally, they provided feedback on which hazards they considered to be the most dangerous from a boot-on-the-ground perspective. This perspective was evaluated alongside the statistical approach utilizing federal and state databases. This information provided important insight that was necessary to develop the risk assessment and mitigation strategy portions of the plan.

Stakeholder input was solicited as to the local planning processes, ordinances, codes and capabilities. Stakeholders were also engaged as to how they felt their mitigation plan was used and implemented since the development of their last plan and what could be improved in comparison. TREM collected information from stakeholders as to any mitigation actions and projects that were implemented since the development of their last plan and specifically what their priority projects would be for the next 5-year cycle of this mitigation plan. This input was critical to the development of the mitigation strategy outlined later in this plan.

## 1.3 – Public Engagement

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The Benton County Emergency Management Agency provided the opportunity for neighboring communities, agencies, businesses, academia, nonprofits, and other interested parties to be involved in the planning process. The public was notified of open meetings via the Benton County EMA's website, social media accounts, and a local newspaper, the Northwest Arkansas Democrat Gazette. Additionally, advertisements for the online public survey were advertised on these sites.

Relevant federal, state, and local governments, private, non-profit, regional organizations, and agencies with the authority to regulate development were invited to provide input and technical expertise through the public notices. They were contacted directly when their expertise was deemed necessary to the success of the plan.

At the public on-site meetings, TREM presented and outlined the mitigation plan update process to the public. During the first stakeholder meeting, TREM presented and outlined the mitigation plan update process and discussed stakeholder participation and expectations. In this meeting, the public and other stakeholders were encouraged to ask questions and provide their input.

The draft of this plan was available for public review via a TREM hosted project for the website during the 2-week draft review period.

### *Continued Public Involvement*

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Benton County is dedicated to involving the public in the continual shaping of its hazard mitigation plan and development of its mitigation projects and activities.

The Benton County EMA will continue to keep the public informed about its hazard mitigation projects and activities through its website. Additionally, it will work to update its website and eventually provide a "comments/suggestions" option for the public to submit their input.

In the event that this hazard mitigation plan undergoes any major developmental changes over its 5-year life cycle, the Benton County EMA will inform the public of these changes via a publicized and open forum meeting.

Copies of the Benton County Hazard Mitigation Plan will be available on their website for public distribution.

## 1.4 – Planning Resources

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This plan's content includes and was influenced by numerous documents and technical resources provided by the plan's stakeholders and other relevant entities. The following documents and technical resources were reviewed for applicable information to the development of this plan:

### **Documentation Resources**

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#### ***Benton County Hazard Mitigation Plan (2016)***

Benton County's latest FEMA approved hazard mitigation plan expired in April of 2020. The plan was thoroughly reviewed and components have been updated and incorporated throughout.

#### ***County and City Municipal Codes***

Each municipality's local ordinances, zoning, land use plans, and comprehensive plans (where available) have been reviewed for provisions relevant to hazard mitigation. This information has been incorporated throughout Section 4 of this plan.

#### ***School District Facility Master Plans***

The latest approved update to this plan was reviewed for demographic and community projection information and their planning process.

#### ***State of Arkansas All-Hazards Mitigation Plan (2018)***

The State of Arkansas' current hazard mitigation plan was reviewed for general guidance in the cases of their comparative statewide risk assessment, their initial selection of at-risk hazards, and local planning technical assistance and development strategy.

### **Technical Resources**

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#### ***FEMA National Flood Hazard Layer (NFHL)***

FEMA's NFHL data was used in mapping floodplain locations and estimating potential flood impacts and loss estimates.

#### ***National Oceanic and Atmospheric Administration (NOAA) National Climatic Data Center (NCDC)***

Weather data and historical events and their narratives were primary provided by NOAA's NCDC.

#### ***North American Drought Monitor (NADM)***

Since 1999, the USDA, NOAA, and the National Drought Mitigation Center at the University of Nebraska-Lincoln have partnered to centralize nationwide drought monitor maps, situation reports, drought status, and publish historical data on drought severity. The NADM was the primary source for historical drought data and drought severity assessment used in this plan.

#### ***USACE National Inventory of Dams (NID)***

The USACE NID is a congressionally authorized database which documents dams in the U.S. and its territories. This database attempts to maintain centralized data for all private and public dams. Information from the NID was used in the development of the Dam Failures hazard profile in this plan.

***United States Census Bureau (USCB)***

The USCB publicly publishes a number of GIS datasets that were used in developing the basemap layers used throughout this plan.

***United States Department of Agricultural (USDA) Statistics Service***

The USDA provided GIS data that was used in depicting land cover and the agricultural statistics used in developing the planning area's risk to droughts and grass and wildland fires.

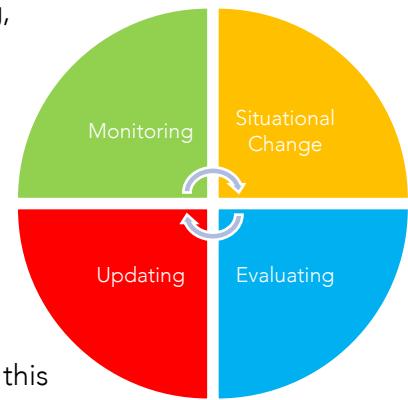
***United State Geologic Survey (USGS)***

USGS services provided historical earthquake data to show the negligible risk associated with the planning area.

## 1.5 – Plan Maintenance

The Benton County EMA has developed a method to ensure monitoring, evaluation, and updating of its HMP. Upon adoption of the Benton County HMP, the Benton County EMA will form a subcommittee on mitigation projects comprised of volunteer members from its LEPC. The chair of the subcommittee will be determined by appointment from the Benton County EMA Director. Additional members may be added based on necessity. The sub-committee will submit an annual report to the County Judge.

Please see the Benton County HMP Quarterly Report form at the end of this section.



The Benton County EMA may request a non-scheduled report on the monitoring, evaluation, or updating of any portion of the HMP due to irregular progress on mitigation actions and or projects, in the aftermath of a hazard event, or for any reason deemed appropriate.

### Plan Monitoring

Plan monitoring can be defined as the ongoing process by which stakeholders obtain regular feedback on the progress being made towards achieving their goals and objectives. In the more limited approach, monitoring may focus on tracking projects and the use of the agency's resources. In the broader approach, monitoring also involves tracking strategies and actions being taken by partners and non-partners, and figuring out what new strategies and actions need to be taken to ensure progress towards the most important results.

- Regularly report on mitigation actions' and projects' progress from start to finish.



A monitoring report will be written and submitted to the County Judge annually during one of their quarterly commission meetings or when triggered by a situation change. The monitoring report will answer the following questions:

- Is the mitigation project under, over, or on budget?
- Is the mitigation project behind, ahead of, or on schedule?
- Are there any changes in Benton County's capabilities which impact the HMP?
- Are there any changes in Benton County's hazard risk?
- Has the mitigation action been initiated or its initiation planned?
- If applicable, has participation in a mitigation action's collaboration been regular?
- If any, what plan updates occurred, why they occurred, and what is their impact?

The plan maintenance process is cyclical and maintenance items can operate simultaneously within the process.

## Plan Evaluating

A plan evaluation is a rigorous and independent assessment of either completed or ongoing activities to determine the extent to which they are achieving stated objectives and contributing to decision making.

An evaluation report will be written and submitted to Benton County EMA's Director when the situation dictates. The following situations are typical examples of when an evaluation will be necessary:

- Post hazard event
- Post training exercise
- Post tabletop or drill exercise
- Significant change or completion of a mitigation project
- Significant change or completion of a mitigation action

An evaluation report will ask the following questions in response to the previously listed events:

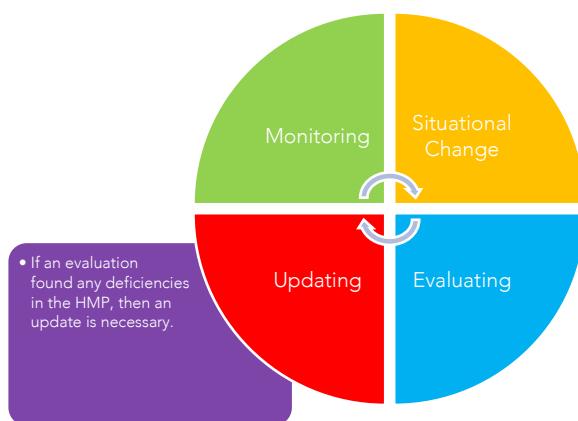
- Do the mitigation objectives and goals continue to address the current hazards?
- Are there new or previously unforeseen hazards?
- Are current resources appropriate for implementing a mitigation project?
- Was the outcome of a mitigation action/project expected?
- Are there implementation problems?
- Are there coordination problems?



## Plan Updating

Typically, a HMP update is initiated upon the completion of a plan evaluation and even then, only when the evaluation determines an update is appropriate. Additionally, when new hazard data becomes available it will be added to the HMP. New data will be confirmed or denied along with the annual HMP report. For whatever reason, a HMP update can be written anytime it is deemed necessary by the Benton County EMA.

Benton County will begin their update process three years from this plan's adoption according to FEMA DMA2000 guidelines on local mitigation plan updates under the direction of the EMA's Director.



**Benton County Mitigation Planning Committee**  
**Benton County Hazard Mitigation Plan**  
**Annual Report**

*Hazard Mitigation Plan Sub Committee Chair:*

*Meeting Date:*

*Plan Approval Date:*

*Plan Expiration Date:*

Have there been any disasters or training events since the last report? If so, list them below:

Disaster Number/Training Event	Hazard Type(s)	Was the hazard expected or unforeseen?	Is a plan update required?
Example: DR-1000	Volcanic Eruption	Unforeseen	Yes
Example: Annual Training	Flash Flooding	Expected	No

**Mitigation Projects:**

Project Name	Participating Jurisdictions	Proposed/Schedules/In Progress/Completed	Behind/Ahead/On-Schedule	Estimated Completion Date
Example: Floodproofing	Gallup	In Progress	On-Schedule	1/1/2020

**Miscellaneous Notes:**

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## Section 2 – Community Profiles

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This section provides a broad perspective, brief history, socio economic, geographical, and development information on the planning area and all of the plan's participants.

Benton County was formed in 1836 and named after Thomas Hart Benton, a U.S. Senator. Its county seat is the City of Bentonville and in full occupies a total land area of 884 square miles. The U.S. Census Bureau estimates the 2020 population of the planning area totals 284,333 people occupying 93,084 residential housing units.

The countywide population has experienced significant growth over the last decade. Some of the planning area's municipalities have experienced astronomical growth due to annexations of unincorporated county land. Whether nor not these demographics characteristics have an impact on hazard vulnerability and risk is discusses in Section 3.

**Table 2.1 – Population Change**

Year	Estimated Population	Percent Change from 2010	Percent Change from 2016
2010	221,339	-	-
2016	259,212	17.11%	-
2020	284,333	28.46%	9.69%

*\*The data are from the U.S. Census Bureau*

The planning area contains an estimated \$20,052,529,000 worth of municipal structural inventory broken down into six different structural type classes. The following tables summarize this breakdown.

**Table 2.2 – Municipal Structures Summary**

Structure Class	Structures	Total Class Value
Agricultural	236	\$86,295,000
Commercial	3,276	\$2,158,028,000
Government	84	\$61,889,000
Industrial	1,147	\$751,537,000
Residential	81,677	\$15,482,149,000
Multi-Unit Residential*	924	\$1,512,631,000
<b>Total =</b>	<b>87,344</b>	<b>\$20,052,529,000</b>

*\*Multi-Unit Residential is defined as a structure with 5 or more residential units*

*\*\*The data are from the Federal Emergency Management Agency*

Table 2.3– Municipal Structures by Count

Municipality	Ag	Com	Gov	Ind	Res	Res-M	Total
Benton County	100	554	11	266	17,836	63	18,830
Avoca	2	13	1	5	195	0	216
Bella Vista	10	235	3	76	12,596	44	12,964
Bentonville	32	670	29	201	11,712	210	12,854
Cave Springs	2	45	0	12	719	6	784
Centerton	1	60	1	21	3,358	34	3,475
Decatur	4	26	1	9	664	9	713
Elm Springs	0	0	0	0	40	0	40
Garfield	0	16	3	4	224	0	247
Gateway	1	4	0	2	166	0	173
Gentry	1	63	3	20	1,247	7	1,341
Gravette	10	87	2	28	1,393	8	1,528
Highfill	3	15	0	5	221	3	247
Little Flock	3	16	1	12	719	47	798
Lowell	7	128	2	35	2,390	48	2,610
Pea Ridge	2	55	3	19	1,810	0	1,889
Rogers	39	853	18	302	18,191	345	19,748
Siloam Springs	10	296	5	75	4,941	88	5,415
Springdale	8	130	0	53	2,939	11	3,141
Springtown	0	3	0	1	39	0	43
Sulphur Springs	1	7	1	1	277	1	288
Total =	236	3,276	84	1,147	81,677	924	87,344

\*Multi-Unit Residential is defined as a structure with 5 or more residential units

\*\*The data are from the U.S. Census Bureau and FEMA

Table 2.4 – Municipal Structures by Value

Municipality	Ag	Com	Gov	Ind	Res	Res-M	Total
Benton County	\$3,982,000	\$44,923,000	\$1,431,000	\$11,512,000	\$465,261,000	\$465,261,000	\$537,567,000
Avoca	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Bella Vista	\$244,000	\$7,582,000	\$0	\$577,000	\$148,166,000	\$42,000	\$156,881,000
Bentonville	\$862,000	\$58,055,000	\$981,000	\$8,761,000	\$168,114,000	\$33,006,000	\$269,779,000
Cave Springs	\$0	\$7,772,000	\$0	\$0	\$12,145,000	\$0	\$19,917,000
Centerton	\$56,000	\$8,361,000	\$134,000	\$634,000	\$4,489,000	\$4,962,000	\$58,996,000
Decatur	\$242,000	\$706,000	\$0	\$289,000	\$27,664,000	\$3,647,000	\$32,548,000
Elm Springs	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Garfield	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Gateway	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Gentry	\$0	\$1,554,000	\$0	\$770,000	\$13,024,000	\$1,020,000	\$16,368,000
Gravette	\$0	\$787,000	\$0	\$7,000	\$16,449,000	\$1,020,000	\$18,263,000
Highfill	\$18,000	\$5,216,000	\$0	\$185,000	\$1,533,000	\$0	\$6,952,000
Little Flock	\$1,637,000	\$1,156,000	\$0	\$276,000	\$31,291,000	\$1,902,000	\$36,262,000
Lowell	\$214,000	\$24,093,000	\$1,830,000	\$4,464,000	\$55,242,000	\$12,845,000	\$98,688,000
Pea Ridge	\$4,000	\$1,210,000	\$0	\$252,000	\$21,554,000	\$0	\$23,020,000
Rogers	\$1,618,000	\$129,964,000	\$478,000	\$119,865,000	\$515,495,000	\$196,179,000	\$963,599,000
Siloam Springs	\$263,000	\$15,340,000	\$0	\$17,193,000	\$71,323,000	\$24,771,000	\$128,890,000
Springdale	\$42,000	\$1,641,000	\$0	\$610,000	\$15,241,000	\$0	\$17,534,000
Springtown	\$0	\$115,000	\$0	\$0	\$2,155,000	\$0	\$2,270,000
Sulphur Springs	\$0	\$254,000	\$0	\$0	\$2,962,000	\$0	\$3,216,000
<b>Total =</b>	<b>\$9,182,000</b>	<b>\$308,729,000</b>	<b>\$4,854,000</b>	<b>\$165,395,000</b>	<b>\$1,572,108,000</b>	<b>\$744,655,000</b>	<b>\$2,390,750,000</b>

\*Multi-Unit Residential is defined as a structure with 5 or more residential units

\*\*The data are from the U.S. Census Bureau and FEMA

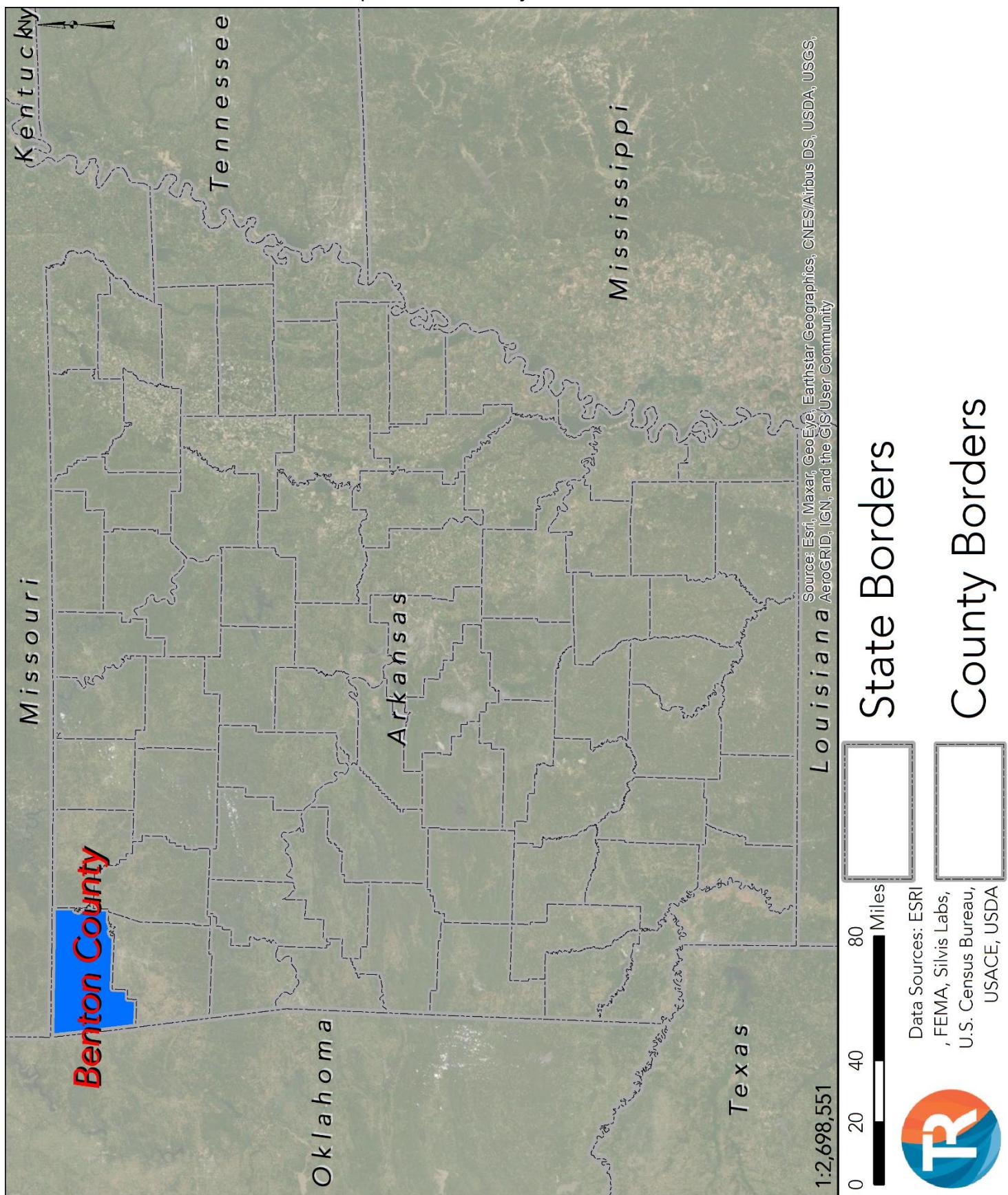
The Benton County EMA has identified a total of 214 critical facilities throughout the planning area. These facilities are deemed critical either by the nature in which they maintain basic services or that they house a high density of vulnerable populations. A breakdown by facility type of the 214 critical facilities is listed in the table below and shown in the map on the following page.

Table 2.5 – Critical Facilities, Planning Area

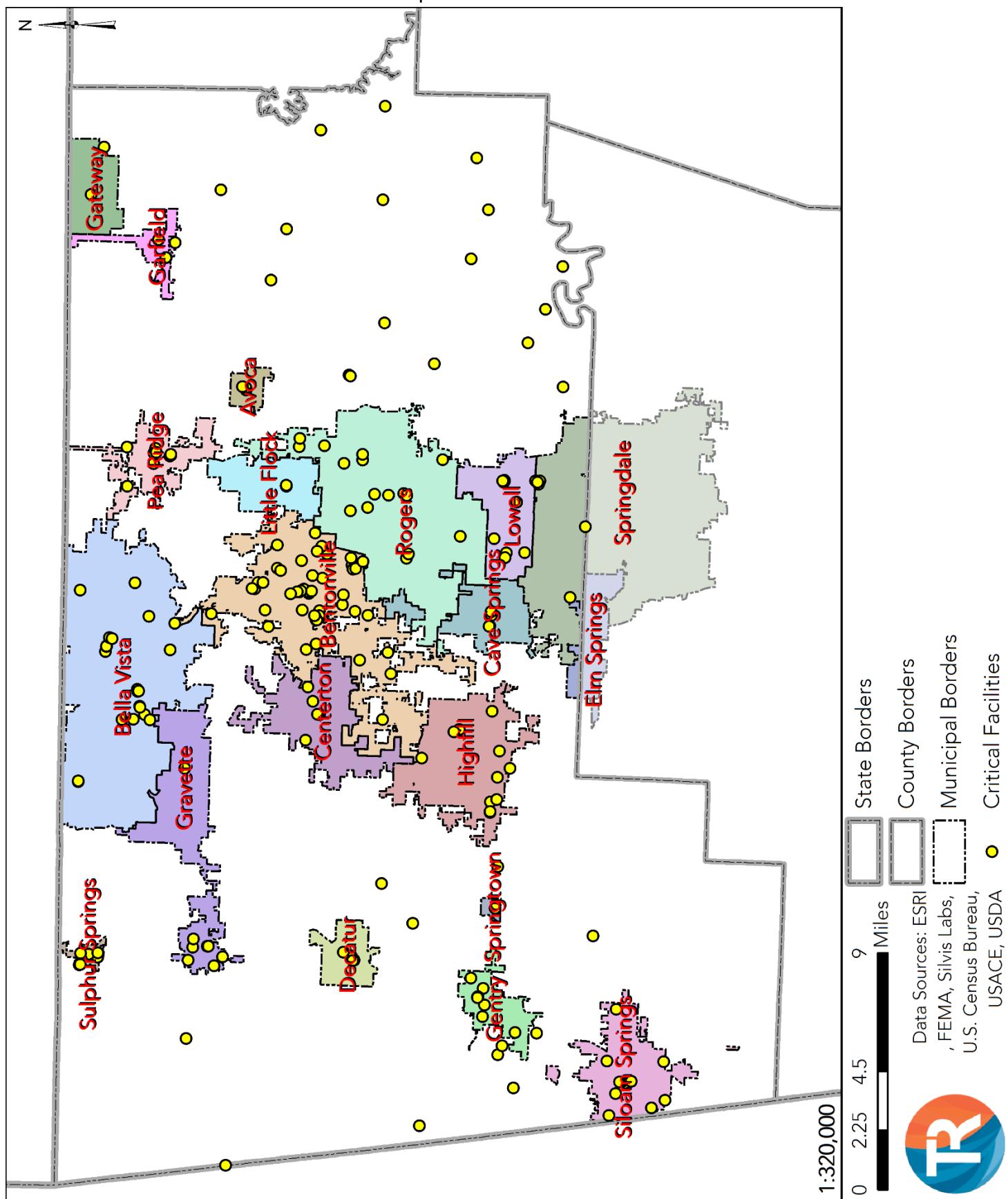
Facility Type	Critical Facilities
Airport	4
Assisted Living	12
Electric Utility	15
Fire Prevention/EMS	62
Government	41
Hospital	6
Law Enforcement	20
Public Works	7
Water Utility	47
<b>Total =</b>	<b>214</b>

\*The data are from Benton County

## Map 2.1 – Community Profile, Arkansas



Map 2.2 – Critical Facilities



## 2.1 – Benton County (Unincorporated)

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The latest Census Bureau estimate places 47,552 people living in unincorporated areas of Benton County occupying 18,505 housing units. The unincorporated portions of Benton County have only grown by a slim percentage since the development of their last plan in 2016.

Table 2.6 – Population Change, Benton County (Unincorporated)

Year	Estimated Population	Percent Change from 2010	Percent Change from 2016
2010	43,616	-	-
2016	46,988	7.73%	-
2020	47,552	9.02%	1.20%

\*The data are from the U.S. Census Bureau

The unincorporated portions of Benton County contain an estimated \$3,476,304,000 worth of municipal structural inventory broken down into six different structural type classes. The following table shows this breakdown.

Table 2.7 – Structural Inventory, Benton County (Unincorporated)

Structure Class	Structures	Total Class Value
Agricultural	100	\$26,792,000
Commercial	554	\$230,582,000
Government	11	\$5,124,000
Industrial	266	\$97,869,000
Residential	17,836	\$3,044,362,000
Multi-Unit Residential*	63	\$71,575,000
<b>Total =</b>	<b>18,830</b>	<b>\$3,476,304,000</b>

\*Multi-Unit Residential is defined as a structure with 5 or more residential units

\*\*The data are from the Federal Emergency Management Agency

## 2.1 – Benton County (Unincorporated)

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Of the 214 critical facilities within the planning area, 29 are geographically located in the unincorporated portions of Benton County. The table below lists these facilities.

**Table 2.8 – Critical Facilities by Location, Benton County (Unincorporated)**

Name	Type	Owner
Avoca Fire Station #2	Fire Prevention/EMS	Avoca
Beaver Lake Fire Department	Fire Prevention/EMS	County
Benton County Sheriff's Substation #3	Law Enforcement	County
Bentonville Tiger Storage Tank	Water Utility	Bentonville
Flint Creek Power Plant	Electric Utility	Private
Gallatin Fire Station	Fire Prevention/EMS	County
Garfield Water System	Water Utility	Garfield
Gentry Fire Station #3	Fire Prevention/EMS	Gentry
Gentry Fire Station #4	Fire Prevention/EMS	Gentry
Gentry Pump Station	Water Utility	Gentry
Gravette Water Tower #3	Water Utility	Gravette
Hickory Creek Fire Station #1	Fire Prevention/EMS	County
Hickory Creek Fire Station #2	Fire Prevention/EMS	County
Highfill Lift Station #3	Water Utility	Highfill
Highfill Pump Facility	Water Utility	Highfill
Highway 94 East Fire Department	Fire Prevention/EMS	County
Maysville Fire Department	Fire Prevention/EMS	County
NEBCO Fire Station #2	Fire Prevention/EMS	County
NEBCO Fire Station #3	Fire Prevention/EMS	County
NEBCO Fire Station #4	Fire Prevention/EMS	County
NEBCO Fire Station #5	Fire Prevention/EMS	County
Piney Point Fire Station #1	Fire Prevention/EMS	County
Piney Point Fire Station #2	Fire Prevention/EMS	County
Piney Point Fire Station #3	Fire Prevention/EMS	County
Piney Point Fire Station #4	Fire Prevention/EMS	County
Piney Point Fire Station #5	Fire Prevention/EMS	County
Pleasure Heights Fire Station	Fire Prevention/EMS	County
Prairie Creek Fire Station	Fire Prevention/EMS	County
Rocky Branch Fire Station	Fire Prevention/EMS	County

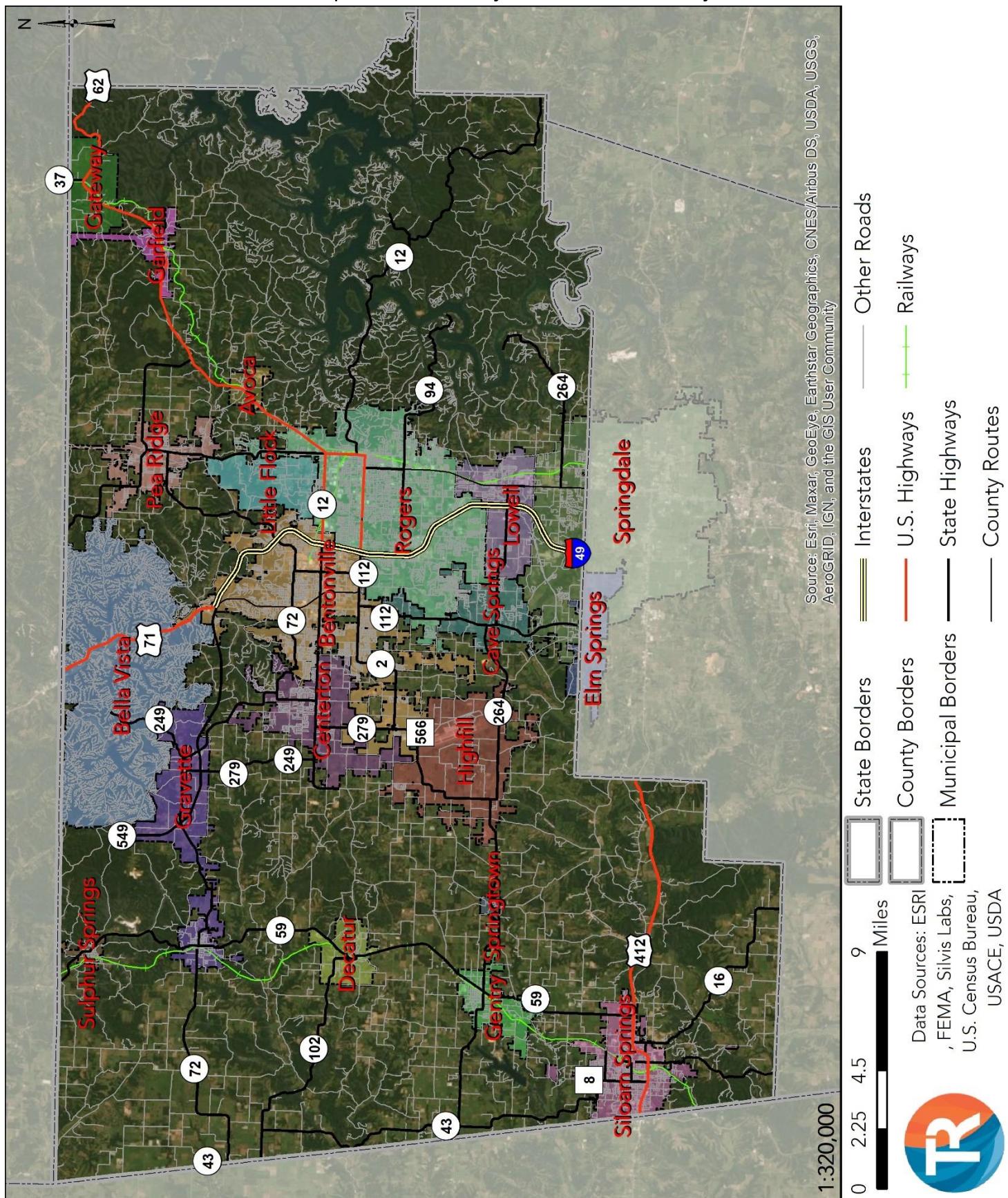
## 2.1 – Benton County (Unincorporated)

Of the 214 critical facilities within the planning area, 29 are owned and operated by the Benton County Government. The table below lists all of these facilities and which geographic location they reside.

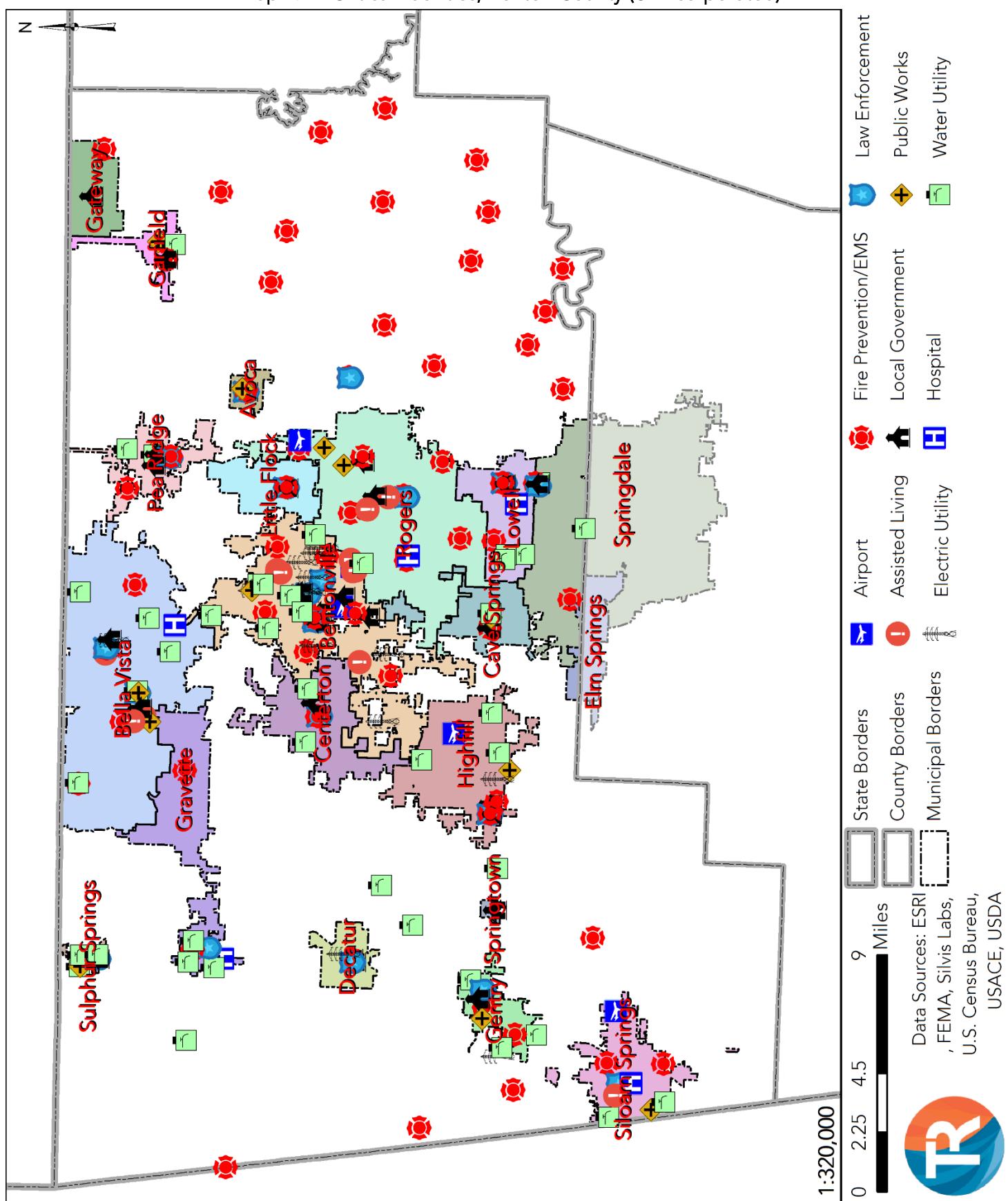
**Table 2.9 – Critical Facilities by Owner, Benton County (Unincorporated)**

Name	Type	Location
Beaver Lake Fire Department	Fire Prevention/EMS	County
Benton County Offices	Government	Bentonville
Benton County Road Department	Government	Bentonville
Benton County Search & Rescue	Fire Prevention/EMS	Bentonville
Benton County Sheriff's Office	Law Enforcement	Bentonville
Benton County Sheriff's Substation	Law Enforcement	Avoca
Benton County Sheriff's Substation #2	Law Enforcement	Bella Vista
Benton County Sheriff's Substation #3	Law Enforcement	County
Benton County Water Distribution #1	Public Works	Avoca
Gallatin Fire Station	Fire Prevention/EMS	County
Hickory Creek Fire Station #1	Fire Prevention/EMS	County
Hickory Creek Fire Station #2	Fire Prevention/EMS	County
Highway 94 East Fire Department	Fire Prevention/EMS	County
Hiwassee Fire Department	Fire Prevention/EMS	Gravette
Juvenile Detention Center	Law Enforcement	Bentonville
Maysville Fire Department	Fire Prevention/EMS	County
NEBCO Fire Station #1	Fire Prevention/EMS	Garfield
NEBCO Fire Station #2	Fire Prevention/EMS	County
NEBCO Fire Station #3	Fire Prevention/EMS	County
NEBCO Fire Station #4	Fire Prevention/EMS	County
NEBCO Fire Station #5	Fire Prevention/EMS	County
Piney Point Fire Station #1	Fire Prevention/EMS	County
Piney Point Fire Station #2	Fire Prevention/EMS	County
Piney Point Fire Station #3	Fire Prevention/EMS	County
Piney Point Fire Station #4	Fire Prevention/EMS	County
Piney Point Fire Station #5	Fire Prevention/EMS	County
Pleasure Heights Fire Station	Fire Prevention/EMS	County
Prairie Creek Fire Station	Fire Prevention/EMS	County
Rocky Branch Fire Station	Fire Prevention/EMS	County

## Map 2.3 – Community Profile, Benton County



Map 2.4 – Critical Facilities, Benton County (Unincorporated)



## 2.2 – Avoca

The latest Census Bureau estimate places 487 people living in Avoca occupying 197 housing units. Its population has declined moderately since participation in their last plan in 2016.

**Table 2.10 – Population Change, Avoca**

Year	Estimated Population	Percent Change from 2010	Percent Change from 2016
2010	488	-	-
2016	514	5.33%	-
2020	487	-0.20%	-5.25%

*\*The data are from the U.S. Census Bureau*

Avoca contains an estimated \$36,984,000 worth of municipal structural inventory broken down into six different structural type classes. The following table shows this breakdown.

**Table 2.11 – Structural Inventory, Avoca**

Structure Class	Structures	Total Class Value
Agricultural	2	\$171,000
Commercial	13	\$4,950,000
Government	1	\$1,671,000
Industrial	5	\$1,270,000
Residential	195	\$28,922,000
Multi-Unit Residential*	0	\$0
<b>Total =</b>	<b>216</b>	<b>\$36,984,000</b>

*\*Multi-Unit Residential is defined as a structure with 5 or more residential units*

*\*\*The data are from the Federal Emergency Management Agency*

Of the 214 critical facilities within the planning area, 4 are geographically located in Avoca. The table below lists these facilities.

**Table 2.12 – Critical Facilities by Location, Avoca**

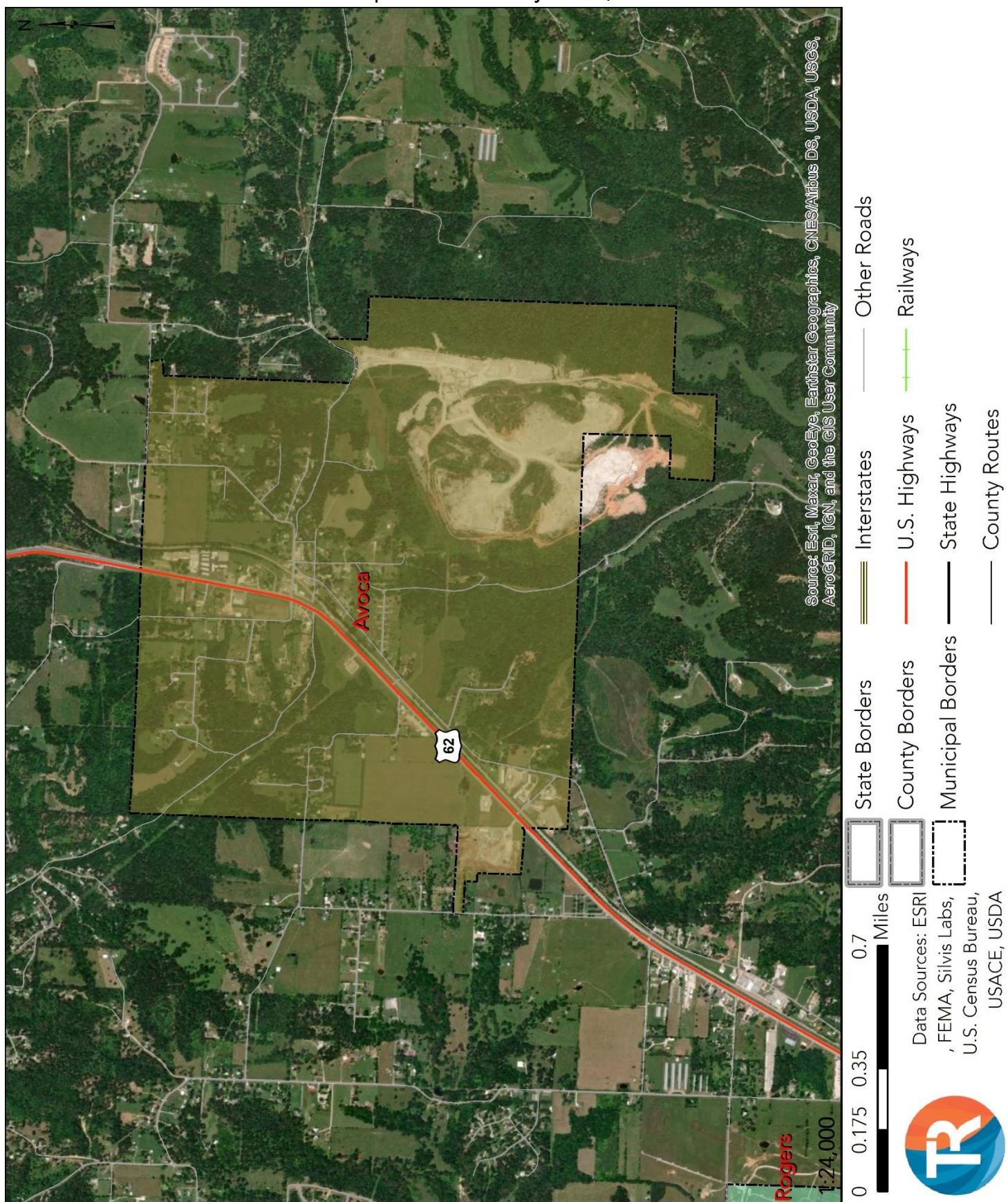
Name	Type	Owner
Name	Type	Owner
Avoca Fire & Rescue	Fire Prevention/EMS	Avoca
Avoca Town Hall	Government	Avoca
Benton County Sheriff's Substation	Law Enforcement	County

Of the 214 critical facilities within the planning area, 3 are owned and operated by the Avoca Government. The table below lists all of these facilities and which geographic location they reside.

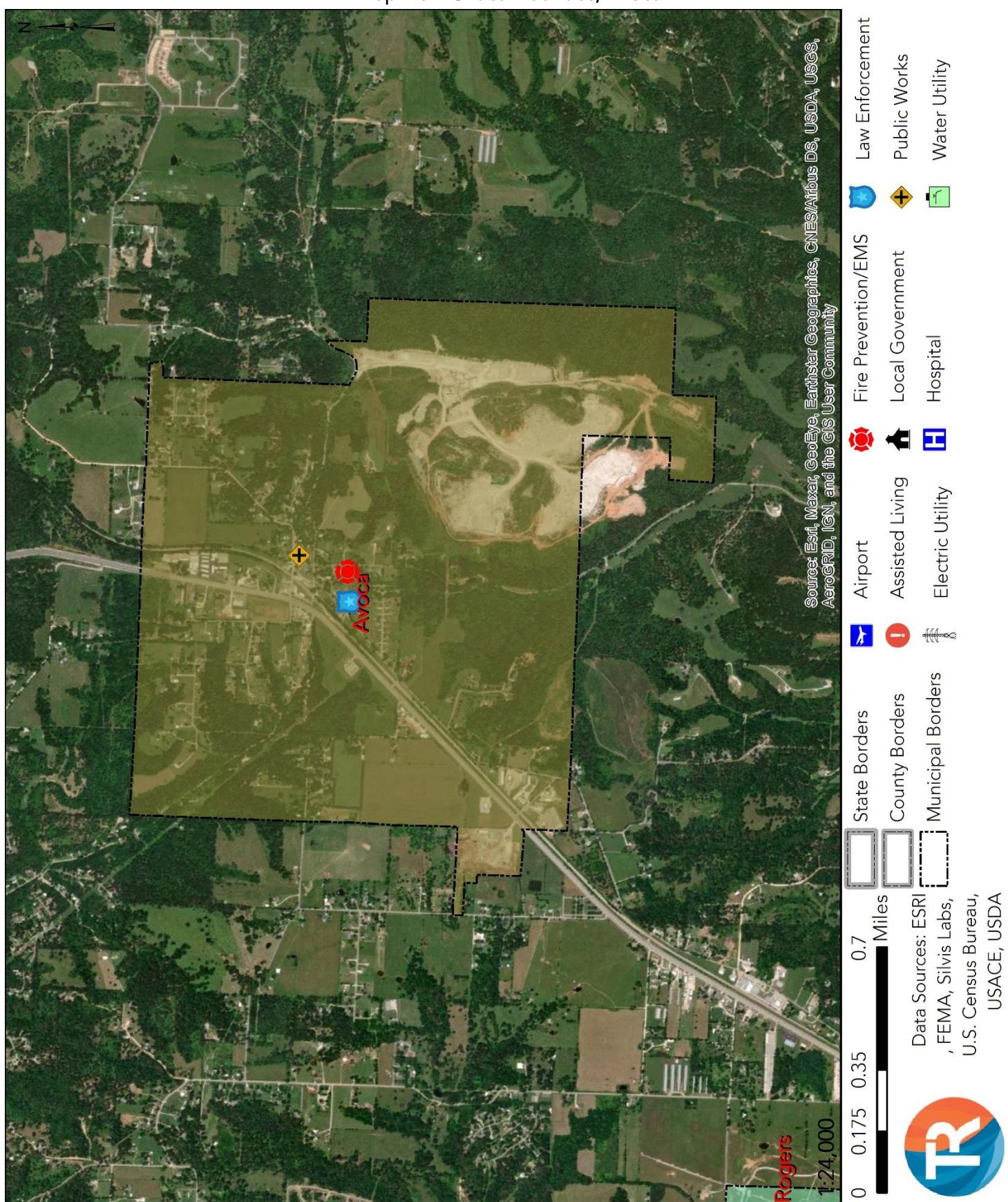
**Table 2.13 – Critical Facilities by Owner, Avoca**

Name	Type	Location
Avoca Fire & Rescue	Fire Prevention/EMS	Avoca
Avoca Fire Station #2	Fire Prevention/EMS	Avoca
Avoca Town Hall	Government	Avoca

## Map 2.5 – Community Profile, Avoca



Map 2.6 – Critical Facilities, Avoca



## 2.3 – Bella Vista

The latest Census Bureau estimate places 487 people living in Bella Vista occupying 13,112 housing units. Its population has grown moderately since participation in their last plan in 2016.

**Table 2.14 – Population Change, Bella Vista**

Year	Estimated Population	Percent Change from 2010	Percent Change from 2016
2010	26,461	-	-
2016	28,395	7.31%	-
2020	30,104	13.77%	6.02%

*\*The data are from the U.S. Census Bureau*

Bella Vista contains an estimated \$2,781,722,000 worth of municipal structural inventory broken down into six different structural type classes. The following table shows this breakdown.

**Table 2.15 – Structural Inventory, Bella Vista**

Structure Class	Structures	Total Class Value
Agricultural	10	\$1,669,000
Commercial	235	\$98,686,000
Government	3	\$882,000
Industrial	76	\$13,455,000
Residential	12,596	\$2,582,676,000
Multi-Unit Residential*	44	\$84,354,000
<b>Total =</b>	<b>12,964</b>	<b>\$2,781,722,000</b>

*\*Multi-Unit Residential is defined as a structure with 5 or more residential units*

*\*\*The data are from the Federal Emergency Management Agency*

## 2.3 – Bella Vista

Of the 214 critical facilities within the planning area, 22 are geographically located in Bella Vista. The table below lists these facilities.

**Table 2.16 – Critical Facilities by Location, Bella Vista**

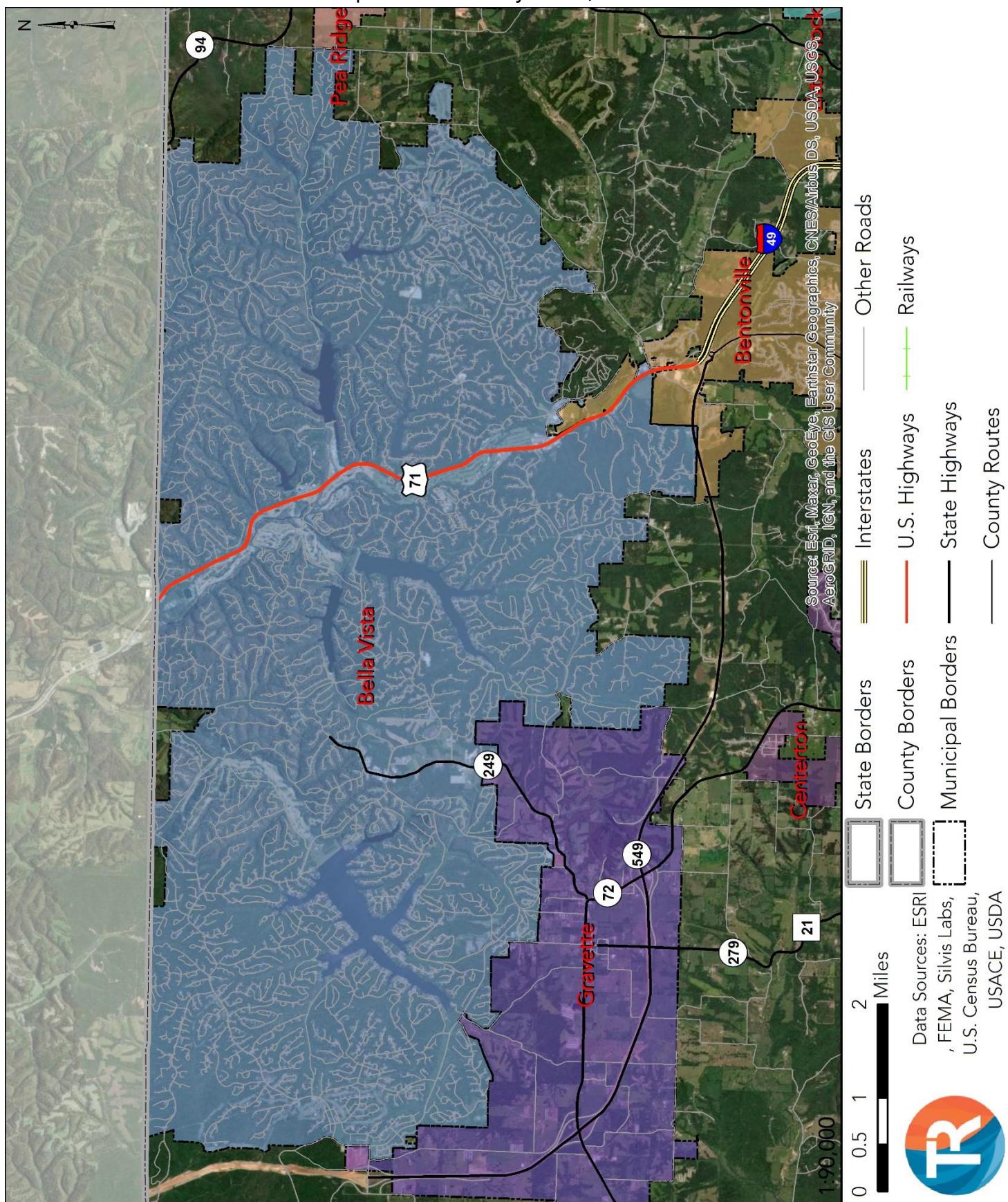
Name	Type	Owner
Bella Vista City Courts	Government	Bella Vista
Bella Vista City Hall	Government	Bella Vista
Bella Vista City Library	Government	Bella Vista
Bella Vista Community Development	Government	Bella Vista
Bella Vista Fire Station #2	Fire Prevention/EMS	Bella Vista
Bella Vista Fire Station #3	Fire Prevention/EMS	Bella Vista
Bella Vista Fire Station #4	Fire Prevention/EMS	Bella Vista
Bella Vista Police HQ	Law Enforcement	Bella Vista
Bella Vista Streets Department	Government	Bella Vista
Bella Vista Substation	Electric Utility	Private
Bella Vista Water Department	Public Works	Bella Vista
Bella Vista Water Tower #1	Water Utility	Bella Vista
Bella Vista Water Tower #2	Water Utility	Bella Vista
Bella Vista Water Tower #3	Water Utility	Bella Vista
Bella Vista Water Tower #4	Water Utility	Bella Vista
Bella Vista Water Tower #5	Water Utility	Bella Vista
Benton County Sheriff's Substation #2	Law Enforcement	County
Brookfield Assisted Living	Assisted Living	Private
Central Fire Station	Fire Prevention/EMS	Bella Vista
Concordia Retirement Complex	Assisted Living	Private
Highlands Healthcare & Rehab	Assisted Living	Private
Mercy Free Standing ER	Hospital	Private

Of the 214 critical facilities within the planning area, 16 are owned and operated by the Rogers Government. The table below lists all of these facilities and which geographic location they reside.

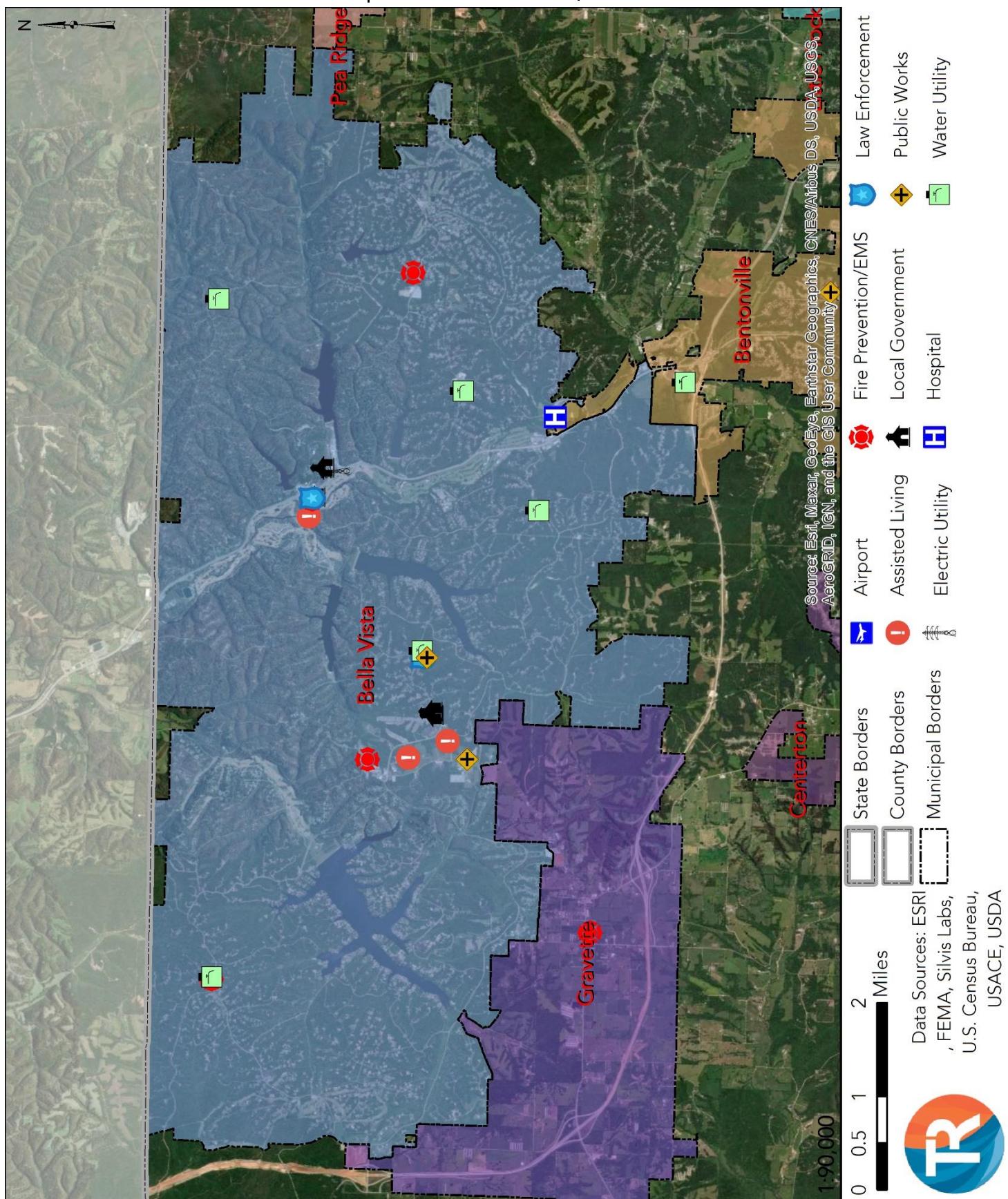
**Table 2.17 – Critical Facilities by Owner, Bella Vista**

Name	Type	Location
Bella Vista City Courts	Government	Bella Vista
Bella Vista City Hall	Government	Bella Vista
Bella Vista City Library	Government	Bella Vista
Bella Vista Community Development	Government	Bella Vista
Bella Vista Fire Station #2	Fire Prevention/EMS	Bella Vista
Bella Vista Fire Station #3	Fire Prevention/EMS	Bella Vista
Bella Vista Fire Station #4	Fire Prevention/EMS	Bella Vista
Bella Vista Police HQ	Law Enforcement	Bella Vista
Bella Vista Streets Department	Government	Bella Vista
Bella Vista Water Department	Public Works	Bella Vista
Bella Vista Water Tower #1	Water Utility	Bella Vista
Bella Vista Water Tower #2	Water Utility	Bella Vista
Bella Vista Water Tower #3	Water Utility	Bella Vista
Bella Vista Water Tower #4	Water Utility	Bella Vista
Bella Vista Water Tower #5	Water Utility	Bella Vista
Central Fire Station	Fire Prevention/EMS	Bella Vista

Map 2.7 – Community Profile, Bella Vista



Map 2.8 – Critical Facilities, Bella Vista



## 2.4 – Bentonville

The latest Census Bureau estimate places 54,164 people living in Bentonville occupying 14,698 housing units. Its population has grown significantly since participation in their last plan in 2016.

Table 2.18 – Population Change, Bentonville

Year	Estimated Population	Percent Change from 2010	Percent Change from 2016
2010	35,301	-	-
2016	47,166	33.61%	-
2020	54,164	53.43%	14.84%

\*The data are from the U.S. Census Bureau

Bentonville contains an estimated \$3,529,705,000 worth of municipal structural inventory broken down into six different structural type classes. The following table shows this breakdown.

Table 2.20 – Structural Inventory, Bentonville

Structure Class	Structures	Total Class Value
Agricultural	32	\$29,749,000
Commercial	670	\$509,682,000
Government	29	\$20,275,000
Industrial	201	\$129,129,000
Residential	11,712	\$2,480,300,000
Multi-Unit Residential*	210	\$360,570,000
Total =	12,854	\$3,529,705,000

\*Multi-Unit Residential is defined as a structure with 5 or more residential units

\*\*The data are from the Federal Emergency Management Agency

Of the 214 critical facilities within the planning area, 46 are geographically located in Bentonville. The following table lists these facilities.

Table 2.21 – Critical Facilities by Location, Bentonville

Name	Type	Owner
Benton County Offices	Government	County
Benton County Road Department	Government	County
Benton County Search & Rescue	Fire Prevention/EMS	County
Benton County Sheriff's Office	Law Enforcement	County
Bentonville 102 Storage Tank #4	Water Utility	Bentonville
Bentonville Activity Center	Government	Bentonville
Bentonville Administrative Services	Government	Bentonville
Bentonville City Hall (Old Community Development Building)	Government	Bentonville
Bentonville Community Center	Government	Bentonville
Bentonville Compost Facility	Public Works	Bentonville
Bentonville District Court	Government	Bentonville
Bentonville Fire Station #1	Fire Prevention/EMS	Bentonville
Bentonville Fire Station #2	Fire Prevention/EMS	Bentonville
Bentonville Fire Station #3	Fire Prevention/EMS	Bentonville
Bentonville Fire Station #4	Fire Prevention/EMS	Bentonville
Bentonville Fire Station #5	Fire Prevention/EMS	Bentonville
Bentonville Fire Station #6	Fire Prevention/EMS	Bentonville
Bentonville Fire Station #7	Fire Prevention/EMS	Bentonville
Bentonville McKissic Lift Station	Water Utility	Bentonville
Bentonville North Lift Station	Water Utility	Bentonville
Bentonville Police Department & EOC	Law Enforcement	Bentonville
Bentonville Pump Station & Tank	Water Utility	Bentonville
Bentonville South Lift Station	Water Utility	Bentonville
Bentonville Substation A	Electric Utility	Bentonville
Bentonville Substation B	Electric Utility	Bentonville
Bentonville Substation C	Electric Utility	Bentonville
Bentonville Substation D	Electric Utility	Bentonville
Bentonville Substation E	Electric Utility	Bentonville
Bentonville Substation F	Electric Utility	Bentonville
Bentonville Substation G	Electric Utility	Bentonville
Bentonville Substation H	Electric Utility	Bentonville
Bentonville Substation I	Electric Utility	Bentonville
Bentonville Switching Station	Electric Utility	Bentonville
Bentonville Utility Office	Government	Bentonville
Bentonville Wastewater Treatment Plant	Water Utility	Bentonville
Bradford House	Assisted Living	Private
Circle of Life Hospice	Assisted Living	Private
Downtown Storage Tank	Water Utility	Bentonville
Juvenile Detention Center	Law Enforcement	County
Legacy Village	Assisted Living	Private
Louise M. Thaden Municipal Airport	Airport	Bentonville
Northwest Medical Center	Hospital	Private
Osage Terrace	Assisted Living	Private
Special Police Services	Law Enforcement	Bentonville
The Meadows	Assisted Living	Private
Village on the Park	Assisted Living	Private

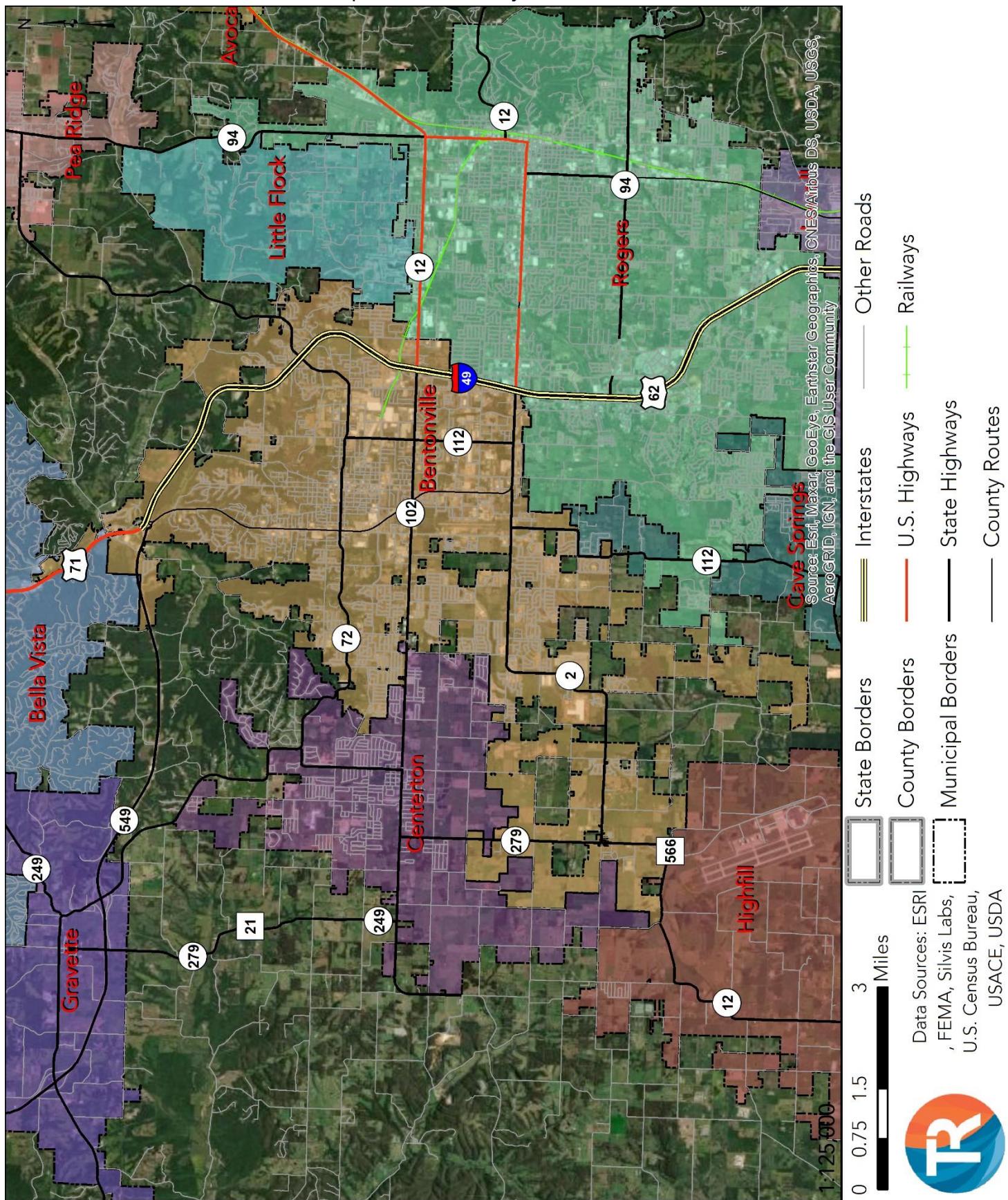
## 2.4 – Bentonville

Of the 214 critical facilities within the planning area, 34 are owned and operated by the Bentonville Government. The table below lists all of these facilities and which geographic location they reside.

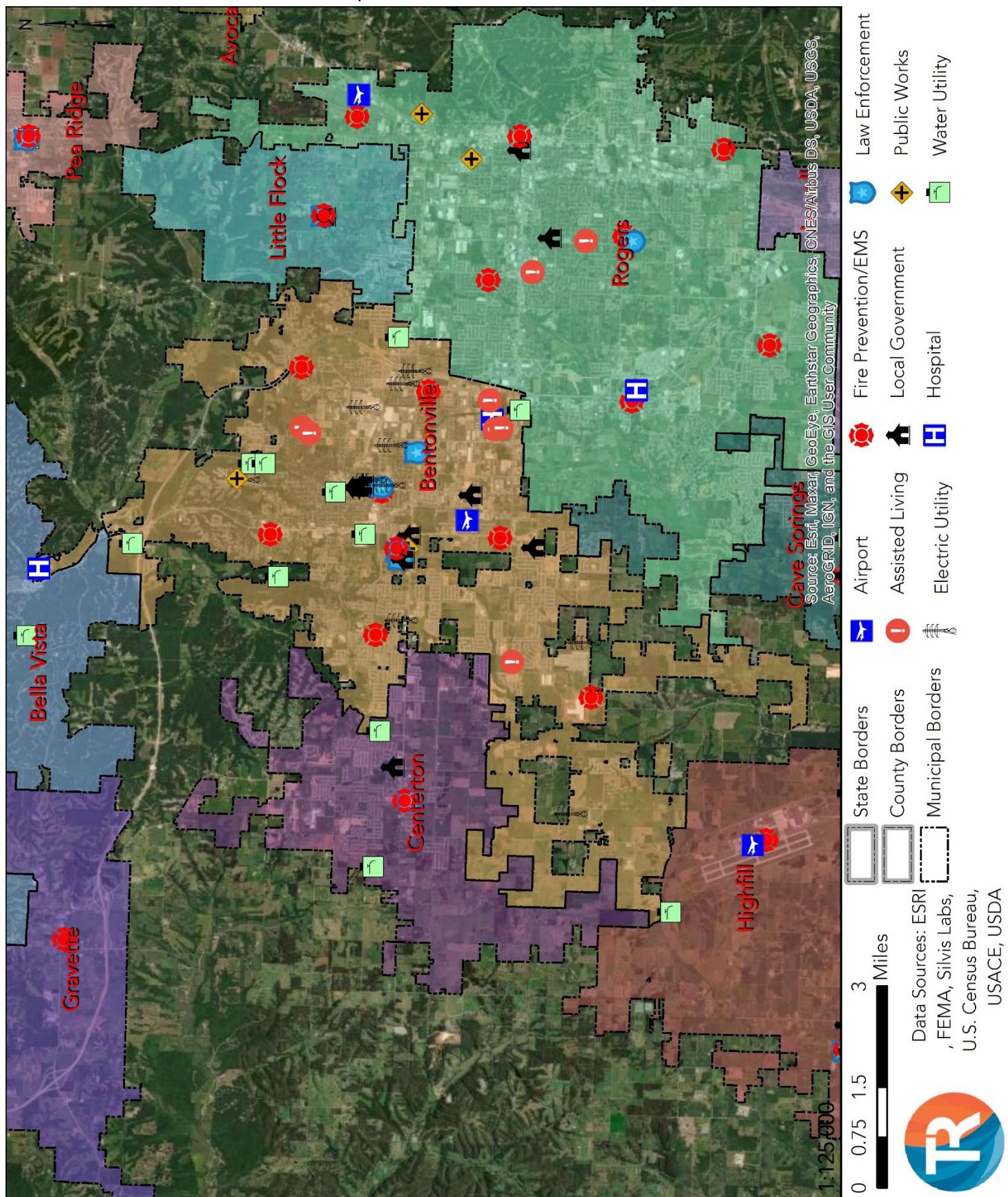
**Table 2.22 – Critical Facilities by Owner, Bentonville**

Name	Type	Location
Bentonville 102 Storage Tank #4	Water Utility	Bentonville
Bentonville Activity Center	Government	Bentonville
Bentonville Administrative Services	Government	Bentonville
Bentonville City Hall (Old Community Development Building)	Government	Bentonville
Bentonville Community Center	Government	Bentonville
Bentonville Compost Facility	Public Works	Bentonville
Bentonville District Court	Government	Bentonville
Bentonville Fire Station #1	Fire Prevention/EMS	Bentonville
Bentonville Fire Station #2	Fire Prevention/EMS	Bentonville
Bentonville Fire Station #3	Fire Prevention/EMS	Bentonville
Bentonville Fire Station #4	Fire Prevention/EMS	Bentonville
Bentonville Fire Station #5	Fire Prevention/EMS	Bentonville
Bentonville Fire Station #6	Fire Prevention/EMS	Bentonville
Bentonville Fire Station #7	Fire Prevention/EMS	Bentonville
Bentonville McKissic Lift Station	Water Utility	Bentonville
Bentonville North Lift Station	Water Utility	Bentonville
Bentonville Police Department & EOC	Law Enforcement	Bentonville
Bentonville Pump Station & Tank	Water Utility	Bentonville
Bentonville South Lift Station	Water Utility	Bentonville
Bentonville Substation A	Electric Utility	Bentonville
Bentonville Substation B	Electric Utility	Bentonville
Bentonville Substation C	Electric Utility	Bentonville
Bentonville Substation D	Electric Utility	Bentonville
Bentonville Substation E	Electric Utility	Bentonville
Bentonville Substation F	Electric Utility	Bentonville
Bentonville Substation G	Electric Utility	Bentonville
Bentonville Substation H	Electric Utility	Bentonville
Bentonville Substation I	Electric Utility	Bentonville
Bentonville Switching Station	Electric Utility	Bentonville
Bentonville Tiger Storage Tank	Water Utility	Bentonville
Bentonville Utility Office	Government	Bentonville
Bentonville Wastewater Treatment Plant	Water Utility	Bentonville
Downtown Storage Tank	Water Utility	Bentonville
Louise M. Thaden Municipal Airport	Airport	Bentonville

Map 2.9 – Community Profile, Bentonville



Map 2.10 – Critical Facilities, Bentonville



## 2.5 – Cave Springs

The latest Census Bureau estimate places 5,495 people living in Cave Springs occupying 785 housing units. Its population has grown significantly since participation in their last plan in 2016.

**Table 2.22 – Population Change, Cave Springs**

Year	Estimated Population	Percent Change from 2010	Percent Change from 2016
2010	1,729	-	-
2016	3,833	121.69%	-
2020	5,495	217.81%	43.36%

*\*The data are from the U.S. Census Bureau*

Cave Springs contains an estimated \$196,311,000 worth of municipal structural inventory broken down into six different structural type classes. The following table shows this breakdown.

**Table 2.23 – Structural Inventory, Cave Springs**

Structure Class	Structures	Total Class Value
Agricultural	2	\$439,000
Commercial	45	\$24,253,000
Government	0	\$178,000
Industrial	12	\$5,904,000
Residential	719	\$156,771,000
Multi-Unit Residential*	6	\$8,766,000
<b>Total =</b>	<b>784</b>	<b>\$196,311,000</b>

*\*Multi-Unit Residential is defined as a structure with 5 or more residential units*

*\*\*The data are from the Federal Emergency Management Agency*

Of the 214 critical facilities within the planning area, 8 are geographically located in Cave Springs. The following table lists these facilities.

**Table 2.24 – Critical Facilities by Location, Cave Springs**

Name	Type	Owner
Cave Springs City Hall	Government	Cave Springs
Cave Springs Fire Station	Fire Prevention/EMS	Cave Springs
Cave Springs Lift Station #1	Water Utility	Cave Springs
Cave Springs Lift Station #2	Water Utility	Cave Springs
Cave Springs Lift Station #3	Water Utility	Cave Springs
Cave Springs Lift Station #4	Water Utility	Cave Springs
Cave Springs Lift Station #5	Water Utility	Cave Springs
Cave Springs Public Works	Government	Cave Springs

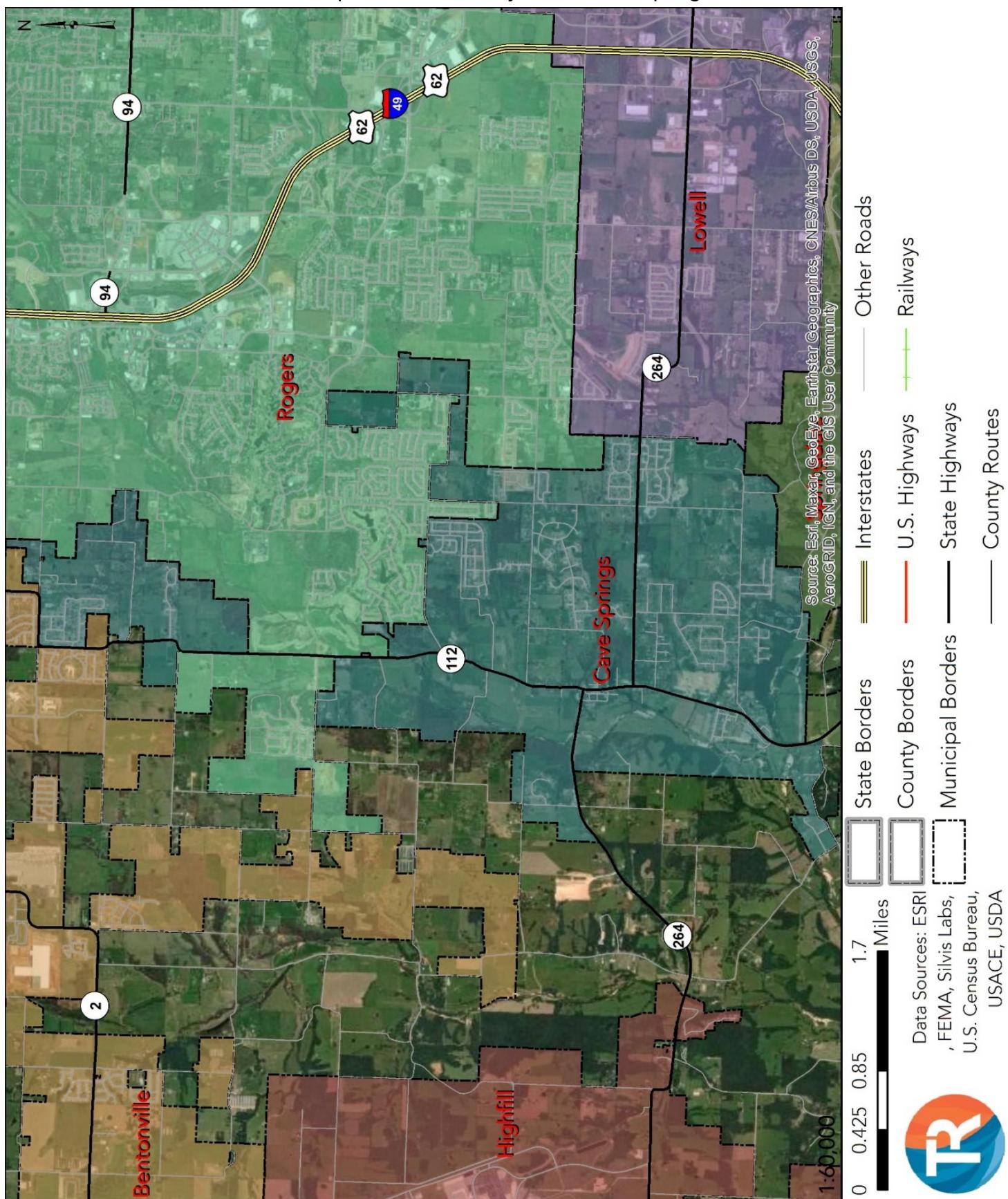
## 2.5 – Cave Springs

Of the 214 critical facilities within the planning area, 8 are owned and operated by the Cave Springs Government. The table below lists all of these facilities and which geographic location they reside.

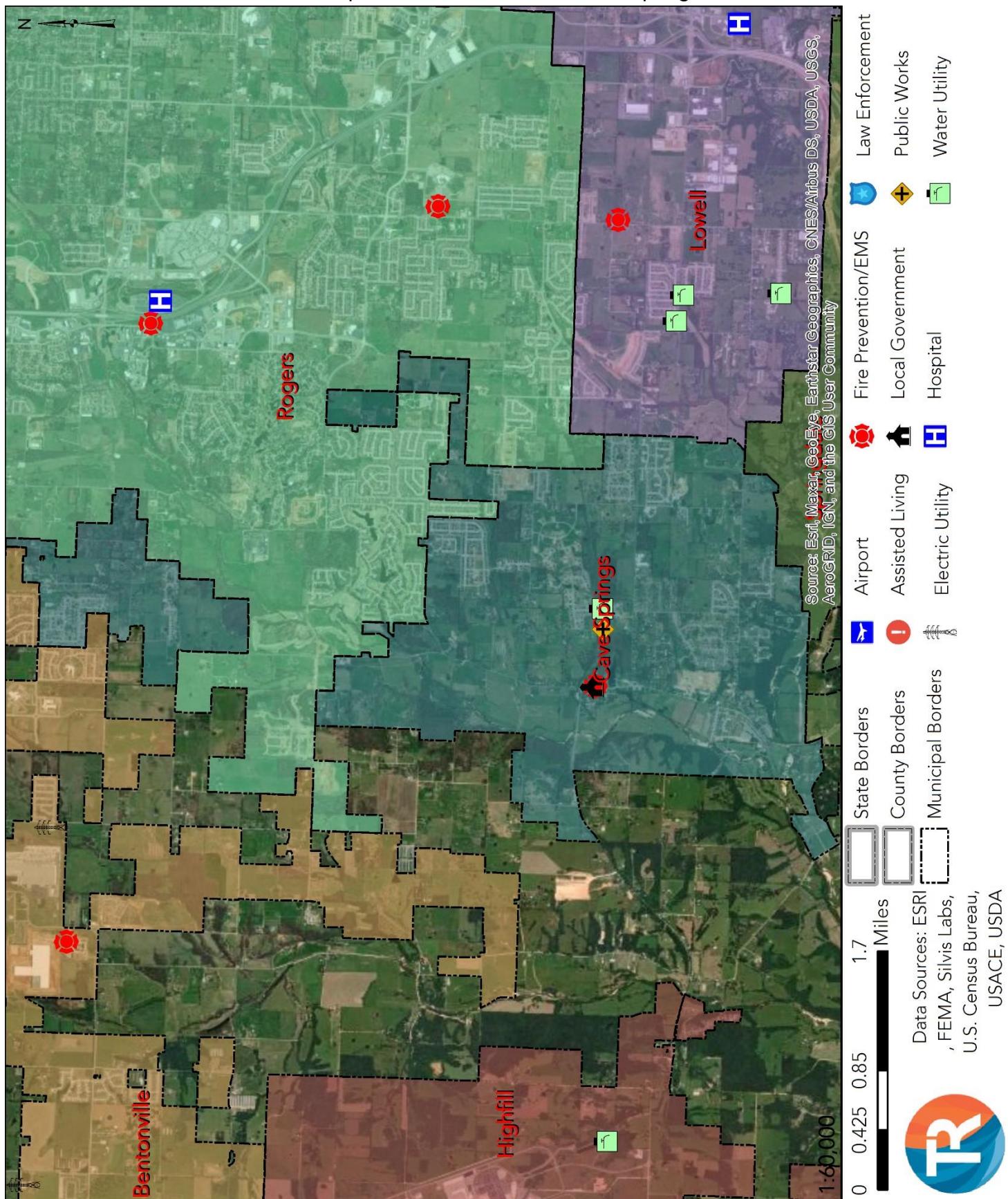
**Table 2.25 – Critical Facilities by Owner, Cave Springs**

Name	Type	Location
Cave Springs City Hall	Government	Cave Springs
Cave Springs Fire Station	Fire Prevention/EMS	Cave Springs
Cave Springs Lift Station #1	Water Utility	Cave Springs
Cave Springs Lift Station #2	Water Utility	Cave Springs
Cave Springs Lift Station #3	Water Utility	Cave Springs
Cave Springs Lift Station #4	Water Utility	Cave Springs
Cave Springs Lift Station #5	Water Utility	Cave Springs
Cave Springs Public Works	Government	Cave Springs

Map 2.11 – Community Profile, Cave Springs



Map 2.12 – Critical Facilities, Cave Springs



## 2.6 – Centerton

The latest Census Bureau estimate places 17,792 people living in Centerton occupying 3,809 housing units. Its population has grown moderately since participation in their last plan in 2016.

**Table 2.26 – Population Change, Centerton**

Year	Estimated Population	Percent Change from 2010	Percent Change from 2016
2010	9,515	-	-
2016	12,994	36.56%	-
2020	17,792	86.99%	36.92%

\*The data are from the U.S. Census Bureau

Centerton contains an estimated \$797,975,000 worth of municipal structural inventory broken down into six different structural type classes. The following table shows this breakdown.

**Table 2.28 – Structural Inventory, Centerton**

Structure Class	Structures	Total Class Value
Agricultural	1	\$341,000
Commercial	60	\$26,930,000
Government	1	\$134,000
Industrial	21	\$7,826,000
Residential	3,358	\$706,849,000
Multi-Unit Residential*	34	\$55,895,000
<b>Total =</b>	<b>3,475</b>	<b>\$797,975,000</b>

\*Multi-Unit Residential is defined as a structure with 5 or more residential units

\*\*The data are from the Federal Emergency Management Agency

Of the 214 critical facilities within the planning area, 5 are geographically located in Centerton. The following table lists these facilities.

**Table 2.29 – Critical Facilities by Location, Centerton**

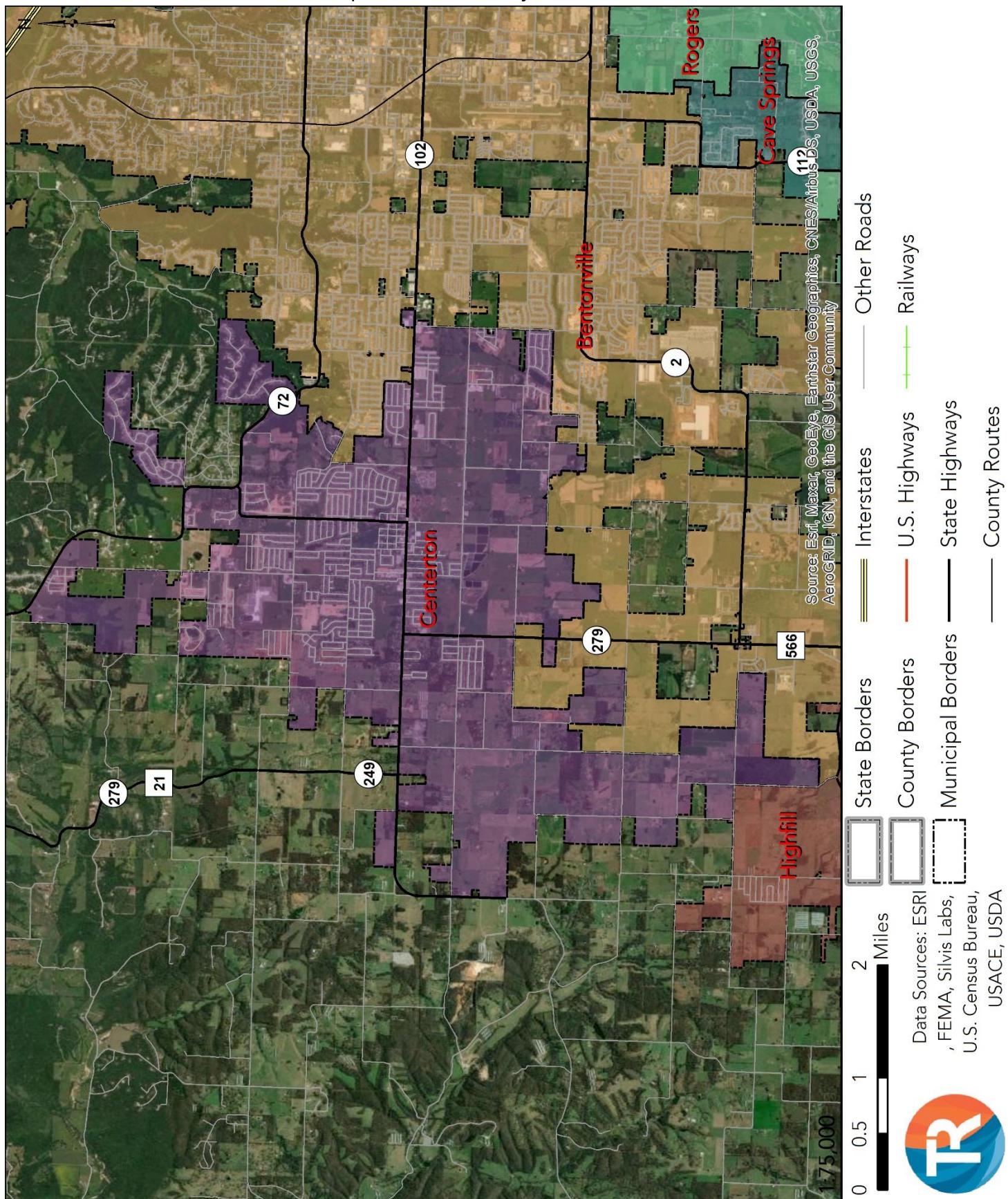
Name	Type	Owner
Centerton City Hall	Government	Centerton
Centerton Fire Station	Fire Prevention/EMS	Centerton
Centerton Police Station	Law Enforcement	Centerton
Centerton Wastewater Treatment	Water Utility	Centerton
Centerton Water Tower	Water Utility	Centerton

Of the 214 critical facilities within the planning area, 5 are owned and operated by the Centerton Government. The table below lists all of these facilities and which geographic location they reside.

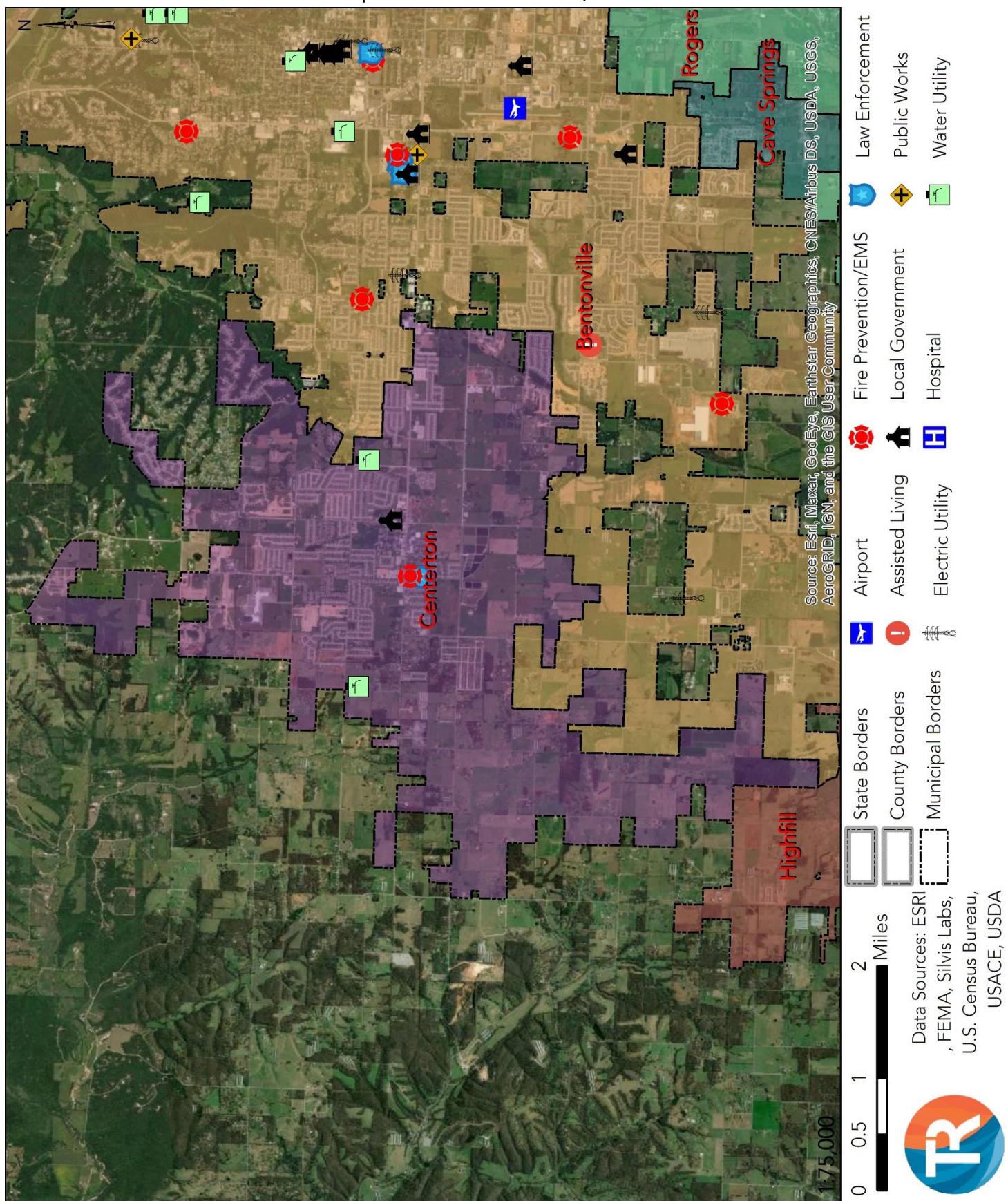
**Table 2.30 – Critical Facilities by Owner, Centerton**

Name	Type	Location
Centerton City Hall	Government	Centerton
Centerton Fire Station	Fire Prevention/EMS	Centerton
Centerton Police Station	Law Enforcement	Centerton
Centerton Wastewater Treatment	Water Utility	Centerton
Centerton Water Tower	Water Utility	Centerton

Map 2.13 – Community Profile, Centerton



Map 2.14 – Critical Facilities, Centerton



## 2.7 – Decatur

The latest Census Bureau estimate places 1,773 people living in Centerton occupying 709 housing units. Its population has grown moderately since participation in their last plan in 2016.

Table 2.30 – Population Change, Decatur

Year	Estimated Population	Percent Change from 2010	Percent Change from 2016
2010	1,699	-	-
2016	1,784	5.00%	-
2020	1,773	4.36%	-0.62%

\*The data are from the U.S. Census Bureau

Decatur contains an estimated \$135,459,000 worth of municipal structural inventory broken down into six different structural type classes. The following table shows this breakdown.

Table 2.31 – Structural Inventory, Decatur

Structure Class	Structures	Total Class Value
Agricultural	4	\$2,525,000
Commercial	26	\$9,765,000
Government	1	\$856,000
Industrial	9	\$7,894,000
Residential	664	\$104,631,000
Multi-Unit Residential*	9	\$9,788,000
Total =	713	\$135,459,000

\*Multi-Unit Residential is defined as a structure with 5 or more residential units

\*\*The data are from the Federal Emergency Management Agency

Of the 214 critical facilities within the planning area, 6 are geographically located in Decatur. The following table lists these facilities.

Table 2.32 – Critical Facilities by Location, Decatur

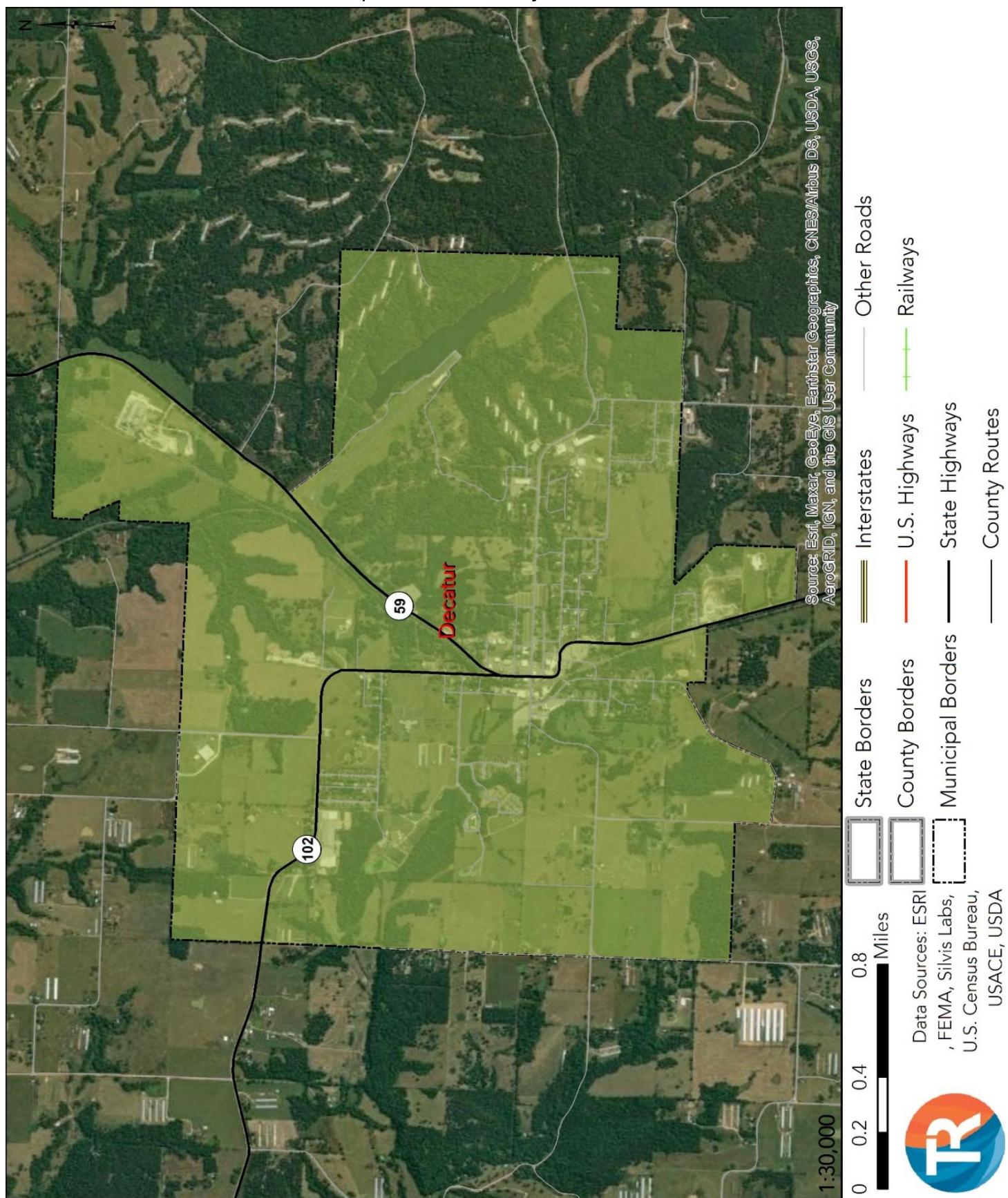
Name	Type	Owner
Decatur City Administration Office	Government	Decatur
Decatur City Library	Government	Decatur
Decatur City Shop	Government	Decatur
Decatur Fire Station	Fire Prevention/EMS	Decatur
Decatur Police Department	Law Enforcement	Decatur
Decatur Substation	Electric Utility	Private

Of the 214 critical facilities within the planning area, 5 are owned and operated by the Decatur Government. The table below lists all of these facilities and which geographic location they reside.

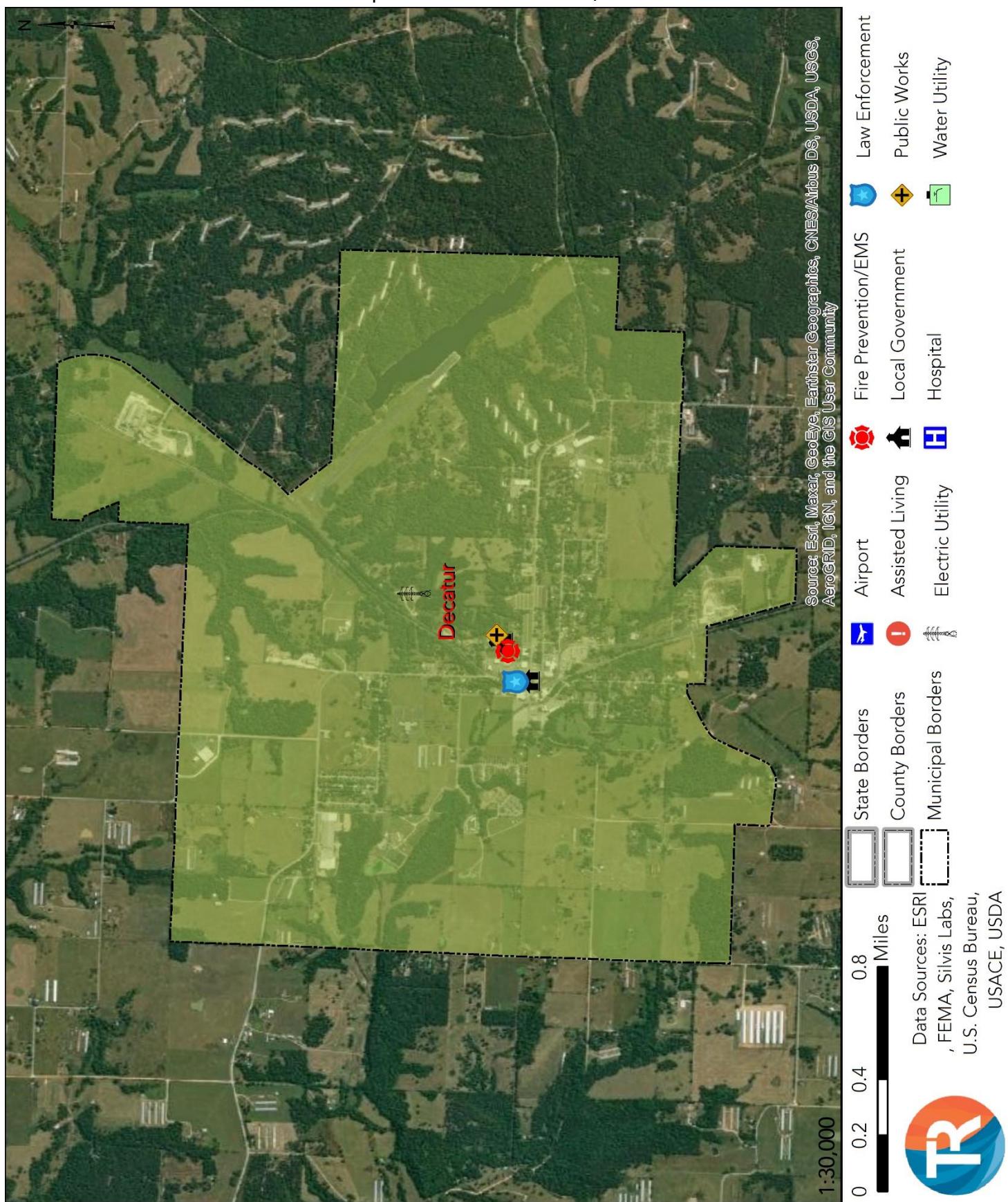
**Table 2.33 – Critical Facilities by Owner, Decatur**

Name	Type	Location
Decatur City Administration Office	Government	Decatur
Decatur City Library	Government	Decatur
Decatur City Shop	Government	Decatur
Decatur Fire Station	Fire Prevention/EMS	Decatur
Decatur Police Department	Law Enforcement	Decatur

Map 2.15 – Community Profile, Decatur



### Map 2.16 – Critical Facilities, Decatur



## 2.8 – Elm Springs

The latest Census Bureau estimate places 2,361 people living in Elm Springs. Of that population, it is estimated that 124 live within the borders of Benton County in 40 housing units. The overall population has grown moderately since 2016, but is not notable within Benton County's borders.

Table 2.34 – Population Change, Elm Springs

Year	Estimated Population	Percent Change from 2010	Percent Change from 2016
2010	1,535	-	-
2016	2,247	46.38%	-
2020	2,361	53.81%	5.07%

\*The data are from the U.S. Census Bureau

Elm Springs contains an estimated \$7,132,000 worth of municipal structural inventory broken down into six different structural type classes. The following table shows this breakdown.

Table 2.35 – Structural Inventory, Elm Springs

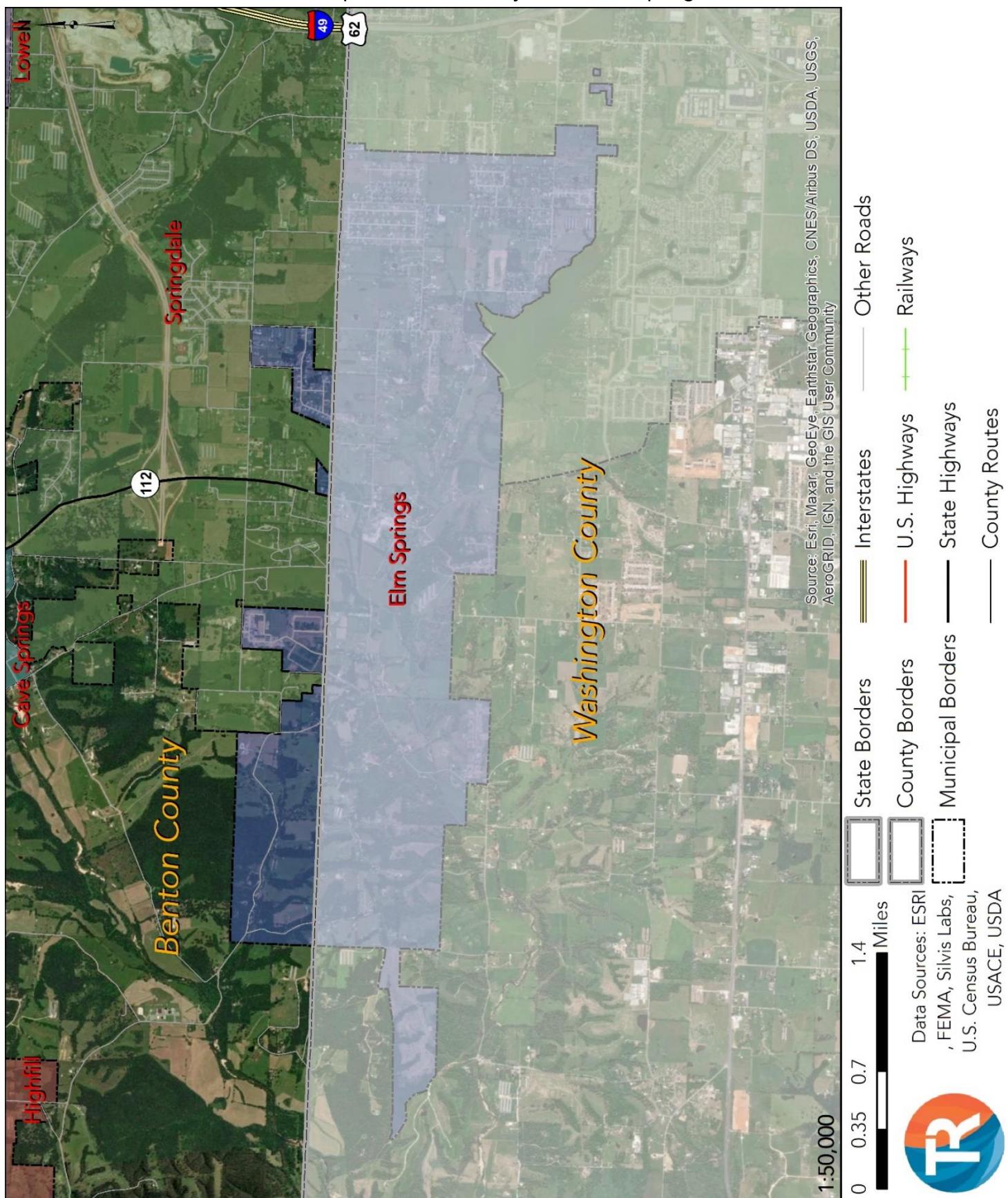
Structure Class	Structures	Total Class Value
Agricultural	0	\$0
Commercial	1	\$83,000
Government	0	\$0
Industrial	1	\$65,000
Residential	40	\$6,984,000
Multi-Unit Residential*	0	\$0
<b>Total =</b>	<b>42</b>	<b>\$7,132,000</b>

\*Multi-Unit Residential is defined as a structure with 5 or more residential units

\*\*The data are from the Federal Emergency Management Agency

Elm Springs does not have any critical facilities in the planning area and no other owned critical facilities are within the municipal borders of Elm Springs.

Map 2.17 – Community Profile, Elm Springs



## 2.9 – Garfield

The latest Census Bureau estimate places 593 people living in Garfield occupying 227 housing units. Its population has grown moderately since participation in their last plan in 2016.

Table 2.36 – Population Change, Garfield

Year	Estimated Population	Percent Change from 2010	Percent Change from 2016
2010	502	-	-
2016	568	13.15%	-
2020	593	18.13%	4.40%

\*The data are from the U.S. Census Bureau

Garfield contains an estimated \$34,738,000 worth of municipal structural inventory broken down into six different structural type classes. The following table shows this breakdown.

Table 2.38 – Structural Inventory, Garfield

Structure Class	Structures	Total Class Value
Agricultural	0	\$0
Commercial	16	\$3,866,000
Government	3	\$3,394,000
Industrial	4	\$1,285,000
Residential	224	\$26,193,000
Multi-Unit Residential*	0	\$0
Total =	247	\$34,738,000

\*Multi-Unit Residential is defined as a structure with 5 or more residential units

\*\*The data are from the Federal Emergency Management Agency

Of the 214 critical facilities within the planning area, 3 are geographically located in Garfield. The following table lists these facilities.

Table 2.39 – Critical Facilities by Location, Garfield

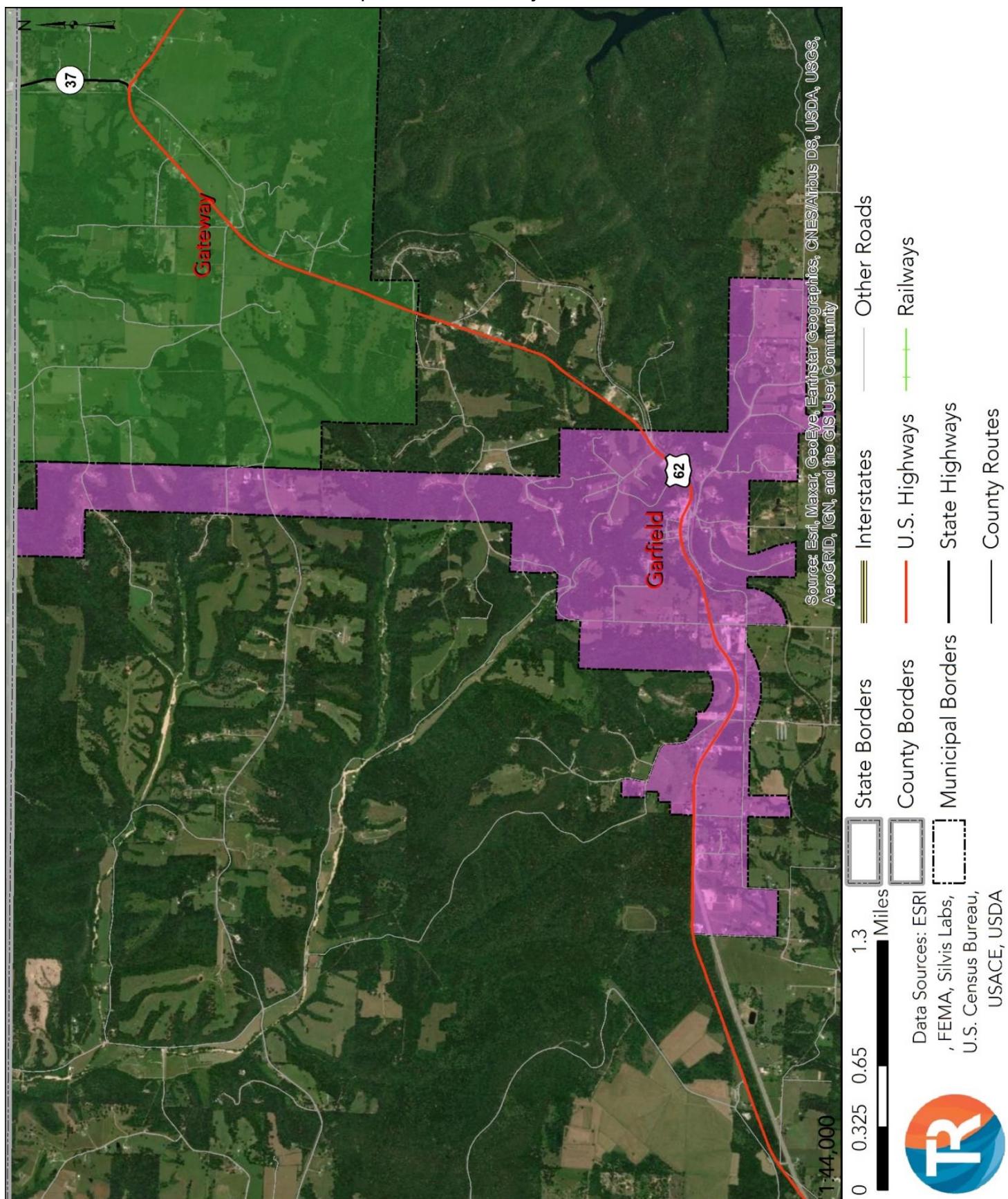
Name	Type	Owner
Garfield City Hall	Government	Garfield
Garfield City Shop	Government	Garfield
NEBCO Fire Station #1	Fire Prevention/EMS	County

Of the 214 critical facilities within the planning area, 3 are owned and operated by the Garfield Government. The table below lists all of these facilities and which geographic location they reside.

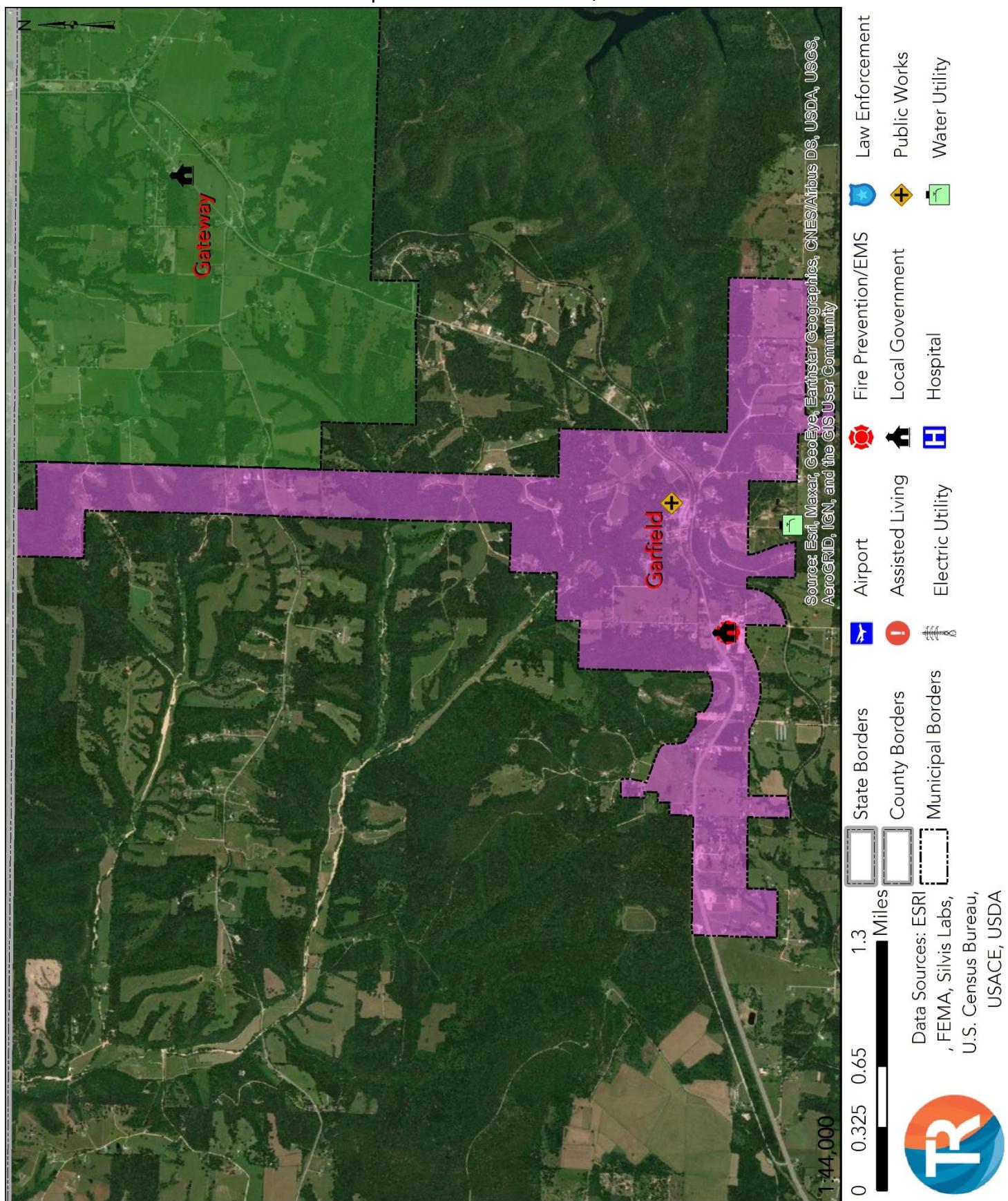
Table 2.40 – Critical Facilities by Owner, Garfield

Name	Type	Location
Garfield City Hall	Government	Garfield
Garfield City Shop	Government	Garfield
Garfield Water System	Water Utility	County

Map 2.18 – Community Profile, Garfield



Map 2.19 – Critical Facilities, Garfield



## 2.10 – Gateway

The latest Census Bureau estimate places 436 people living in Gateway occupying 172 housing units. Its population has declined significantly since participation in their last plan in 2016.

**Table 2.40 – Population Change, Gateway**

Year	Estimated Population	Percent Change from 2010	Percent Change from 2016
2010	405	-	-
2016	469	15.80%	-
2020	436	7.65%	-7.04%

*\*The data are from the U.S. Census Bureau*

Gateway contains an estimated \$23,043,000 worth of municipal structural inventory broken down into six different structural type classes. The following table shows this breakdown.

**Table 2.41 – Structural Inventory, Gateway**

Structure Class	Structures	Total Class Value
Agricultural	1	\$209,000
Commercial	4	\$1,101,000
Government	0	\$0
Industrial	2	\$463,000
Residential	166	\$21,270,000
Multi-Unit Residential*	0	\$0
<b>Total =</b>	<b>173</b>	<b>\$23,043,000</b>

*\*Multi-Unit Residential is defined as a structure with 5 or more residential units*

*\*\*The data are from the Federal Emergency Management Agency*

Of the 214 critical facilities within the planning area, 1 is geographically located in Gateway. The following table lists these facilities.

**Table 2.42 – Critical Facilities by Location, Gateway**

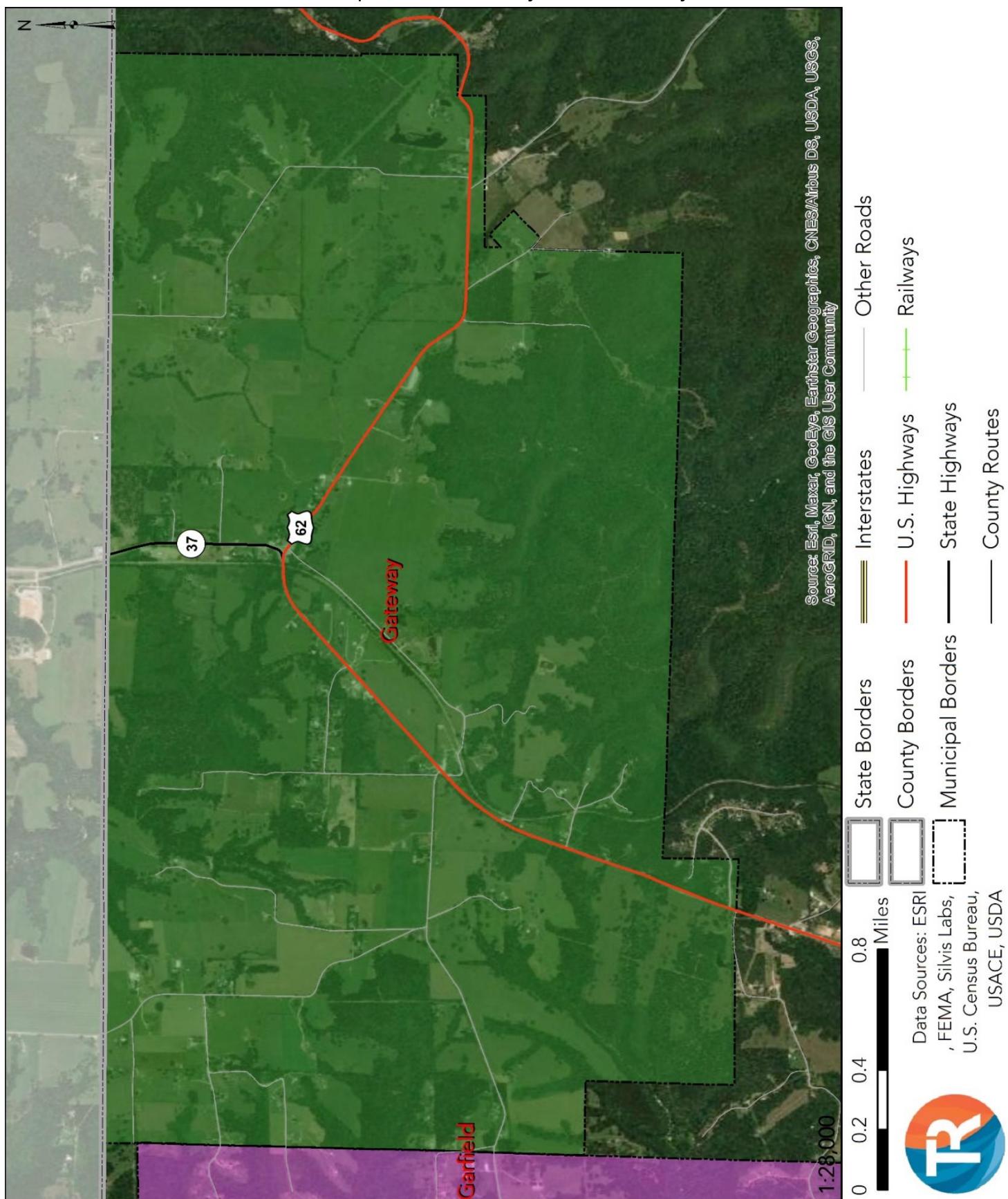
Name	Type	Owner
Gateway Town Office	Government	Gateway

Of the 214 critical facilities within the planning area, 1 is owned and operated by the Gateway Government. The table below lists all of these facilities and which geographic location they reside.

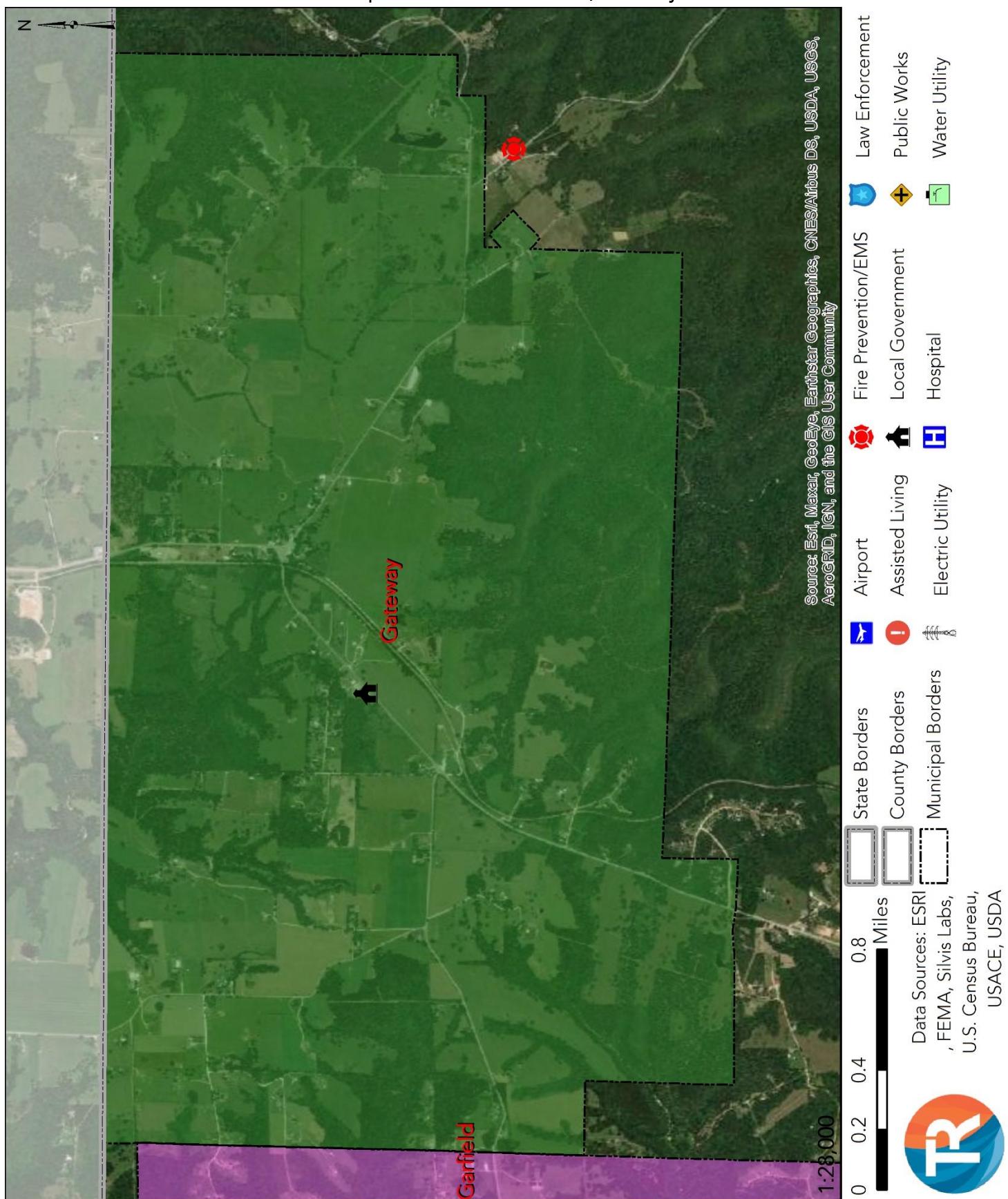
**Table 2.43 – Critical Facilities by Owner, Gateway**

Name	Type	Location
Gateway Town Office	Government	Gateway

## Map 2.20 – Community Profile, Gateway



Map 2.21 – Critical Facilities, Gateway



## 2.11 – Gentry

The latest Census Bureau estimate places 3,790 people living in Gentry occupying 1,410 housing units. Its population has remained steady since participation in their last plan in 2016.

**Table 2.44– Population Change, Gentry**

Year	Estimated Population	Percent Change from 2010	Percent Change from 2016
2010	3,158	-	-
2016	3,792	20.08%	-
2020	3,790	20.01%	-0.05%

*\*The data are from the U.S. Census Bureau*

Gentry contains an estimated \$227,760,000 worth of municipal structural inventory broken down into six different structural type classes. The following table shows this breakdown.

**Table 2.45 – Structural Inventory, Gentry**

Structure Class	Structures	Total Class Value
Agricultural	1	\$320,000
Commercial	63	\$22,612,000
Government	3	\$1,972,000
Industrial	20	\$7,107,000
Residential	1,247	\$186,277,000
Multi-Unit Residential*	7	\$9,472,000
<b>Total =</b>	<b>1,341</b>	<b>\$227,760,000</b>

*\*Multi-Unit Residential is defined as a structure with 5 or more residential units*

*\*\*The data are from the Federal Emergency Management Agency*

Of the 214 critical facilities within the planning area, 10 are geographically located in Gentry. The following table lists these facilities.

**Table 2.46 – Critical Facilities by Location, Gentry**

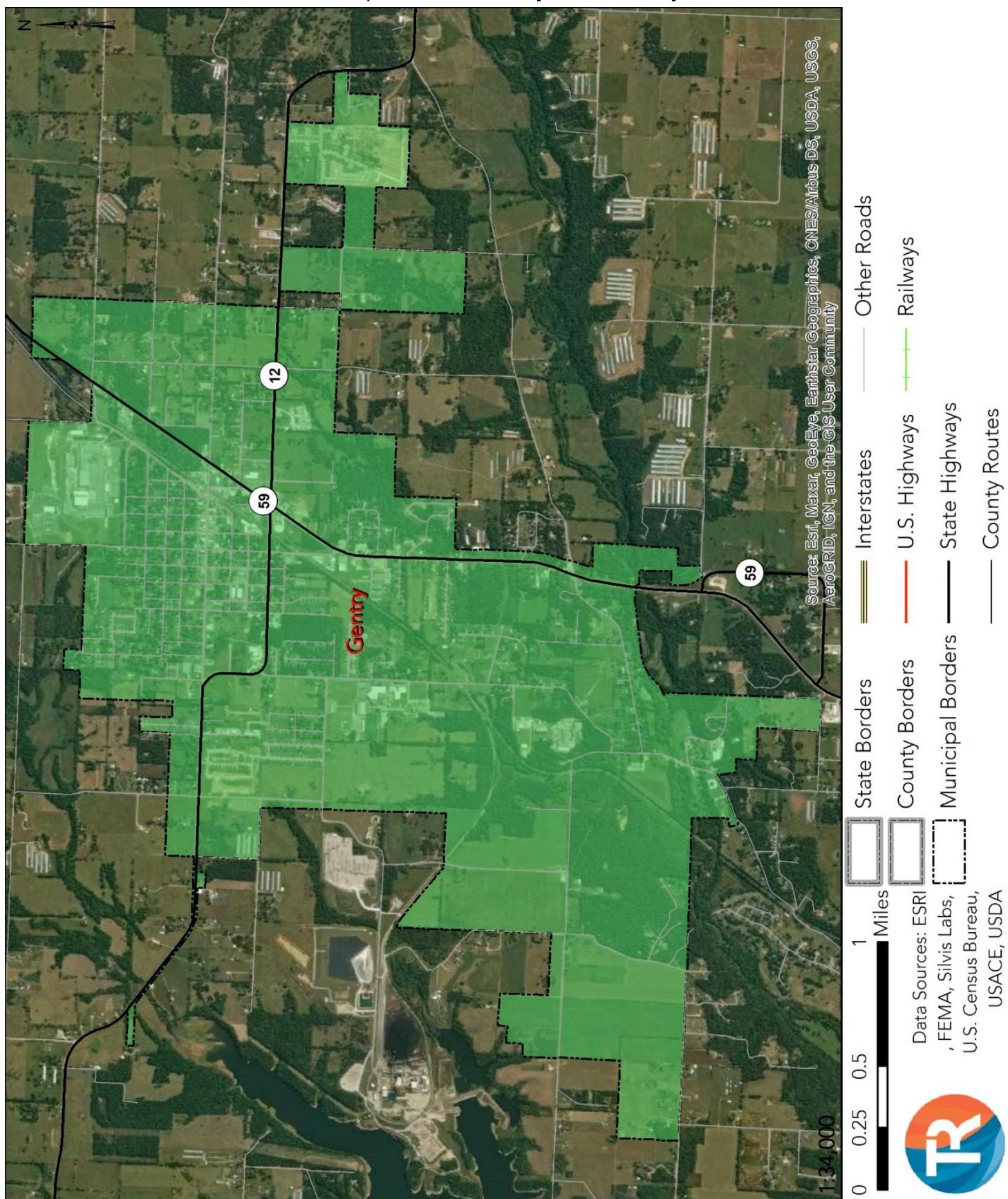
Name	Type	Owner
Gentry City Hall	Government	Gentry
Gentry Community Center	Government	Gentry
Gentry Fire Station #1	Fire Prevention/EMS	Gentry
Gentry Fire Station #2	Fire Prevention/EMS	Gentry
Gentry Police Department	Law Enforcement	Gentry
Gentry Public Library	Government	Gentry
Gentry Public Works	Government	Gentry
Gentry Wastewater Treatment	Water Utility	Gentry
Gentry Water Tower #1	Water Utility	Gentry
Gentry Water Tower #2	Water Utility	Gentry

Of the 214 critical facilities within the planning area, 13 are owned and operated by the Gentry Government. The table below lists all of these facilities and which geographic location they reside.

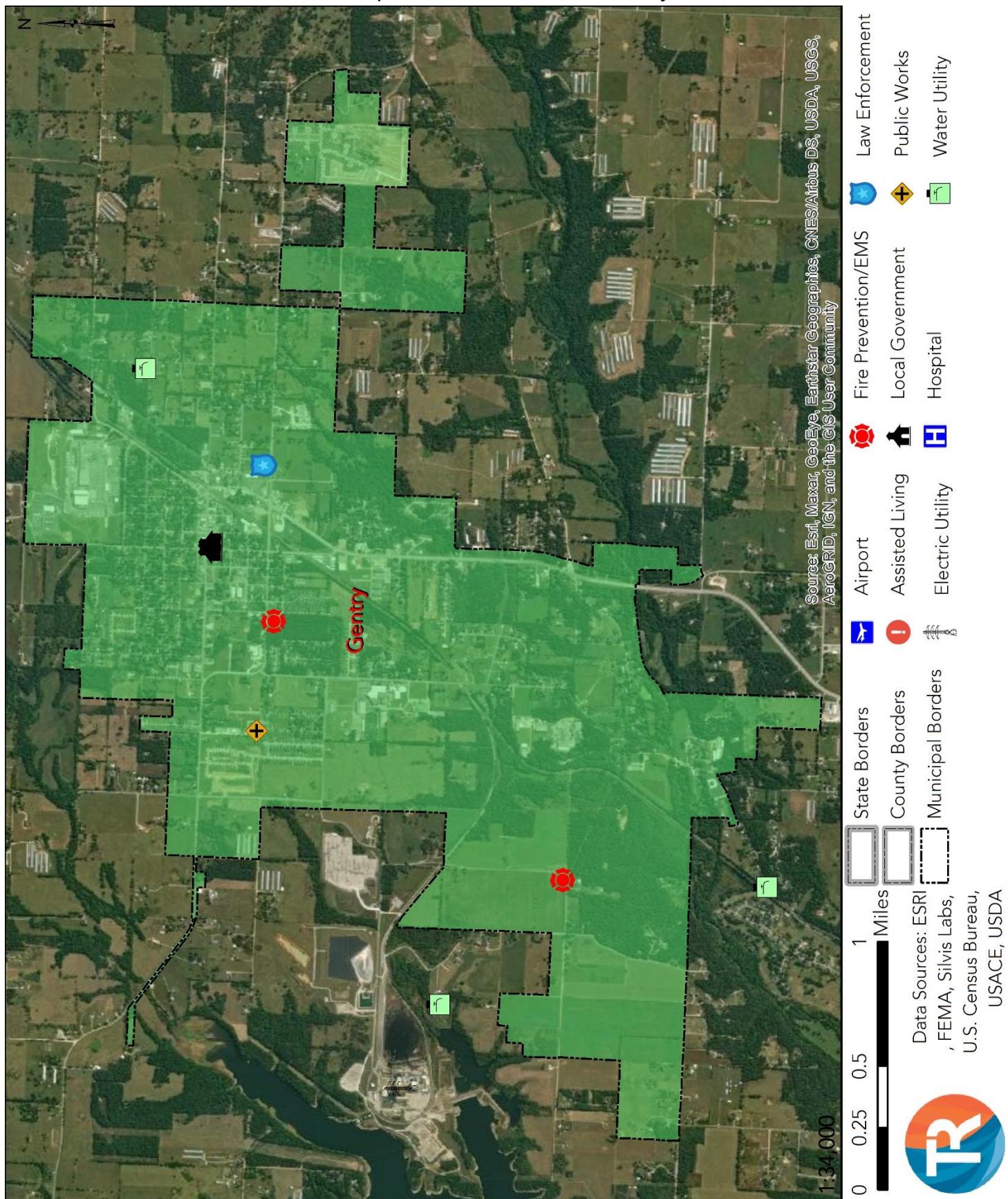
**Table 2.47 – Critical Facilities by Owner, Gentry**

Name	Type	Location
Gentry City Hall	Government	Gentry
Gentry Community Center	Government	Gentry
Gentry Fire Station #1	Fire Prevention/EMS	Gentry
Gentry Fire Station #2	Fire Prevention/EMS	Gentry
Gentry Fire Station #3	Fire Prevention/EMS	County
Gentry Fire Station #4	Fire Prevention/EMS	County
Gentry Police Department	Law Enforcement	Gentry
Gentry Public Library	Government	Gentry
Gentry Public Works	Government	Gentry
Gentry Pump Station	Water Utility	County
Gentry Wastewater Treatment	Water Utility	Gentry
Gentry Water Tower #1	Water Utility	Gentry
Gentry Water Tower #2	Water Utility	Gentry

Map 2.22 – Community Profile, Gentry



Map 2.23 – Critical Facilities, Gentry



## 2.12 – Gravette

The latest Census Bureau estimate places 3,547 people living in Gravette occupying 1,532 housing units. Its population has grown moderately since participation in their last plan in 2016.

**Table 2.48 – Population Change, Gravette**

Year	Estimated Population	Percent Change from 2010	Percent Change from 2016
2010	2,325	-	-
2016	3,330	43.23%	-
2020	3,547	52.56%	6.52%

*\*The data are from the U.S. Census Bureau*

Gravette contains an estimated \$287,137,000 worth of municipal structural inventory broken down into six different structural type classes. The following table shows this breakdown.

**Table 2.49 – Structural Inventory, Gravette**

Structure Class	Structures	Total Class Value
Agricultural	10	\$3,248,000
Commercial	87	\$40,071,000
Government	2	\$474,000
Industrial	28	\$11,557,000
Residential	1,393	\$214,113,000
Multi-Unit Residential*	8	\$17,674,000
<b>Total =</b>	<b>1,528</b>	<b>\$287,137,000</b>

*\*Multi-Unit Residential is defined as a structure with 5 or more residential units*

*\*\*The data are from the Federal Emergency Management Agency*

Of the 214 critical facilities within the planning area, 8 are geographically located in Gravette. The following table lists these facilities.

**Table 2.50 – Critical Facilities by Location, Gravette**

Name	Type	Owner
Gravette City Hall	Government	Gravette
Gravette Fire Station	Fire Prevention/EMS	Gravette
Gravette Police Station	Law Enforcement	Gravette
Gravette Water & Sewer Plant	Water Utility	Gravette
Gravette Water Tower #1	Water Utility	Gravette
Gravette Water Tower #2	Water Utility	Gravette
Hiwassee Fire Department	Fire Prevention/EMS	County
Ozarks Community Hospital	Hospital	Private

## 2.12 – Gravette

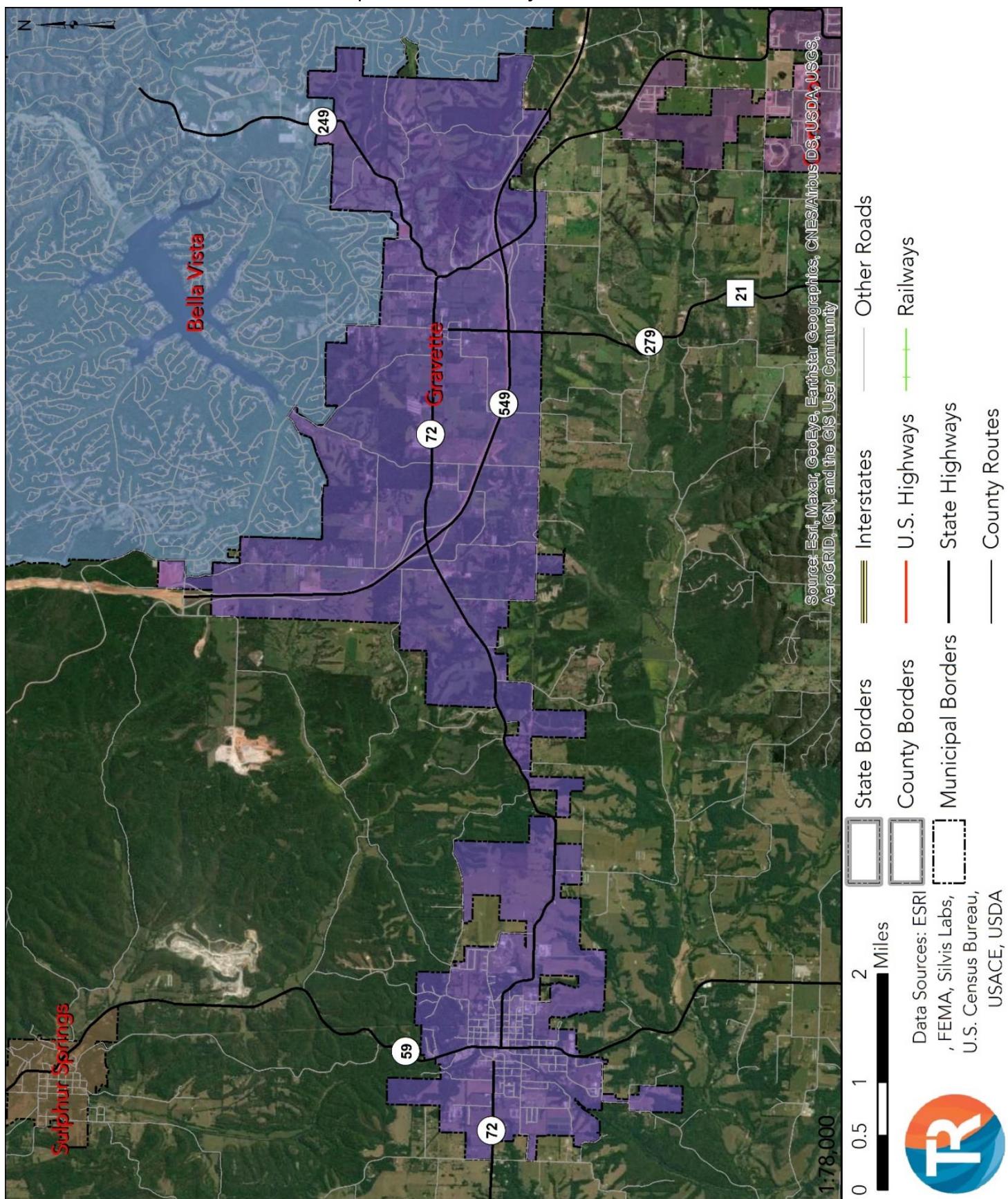
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Of the 214 critical facilities within the planning area, 7 are owned and operated by the Gravette Government. The table below lists all of these facilities and which geographic location they reside.

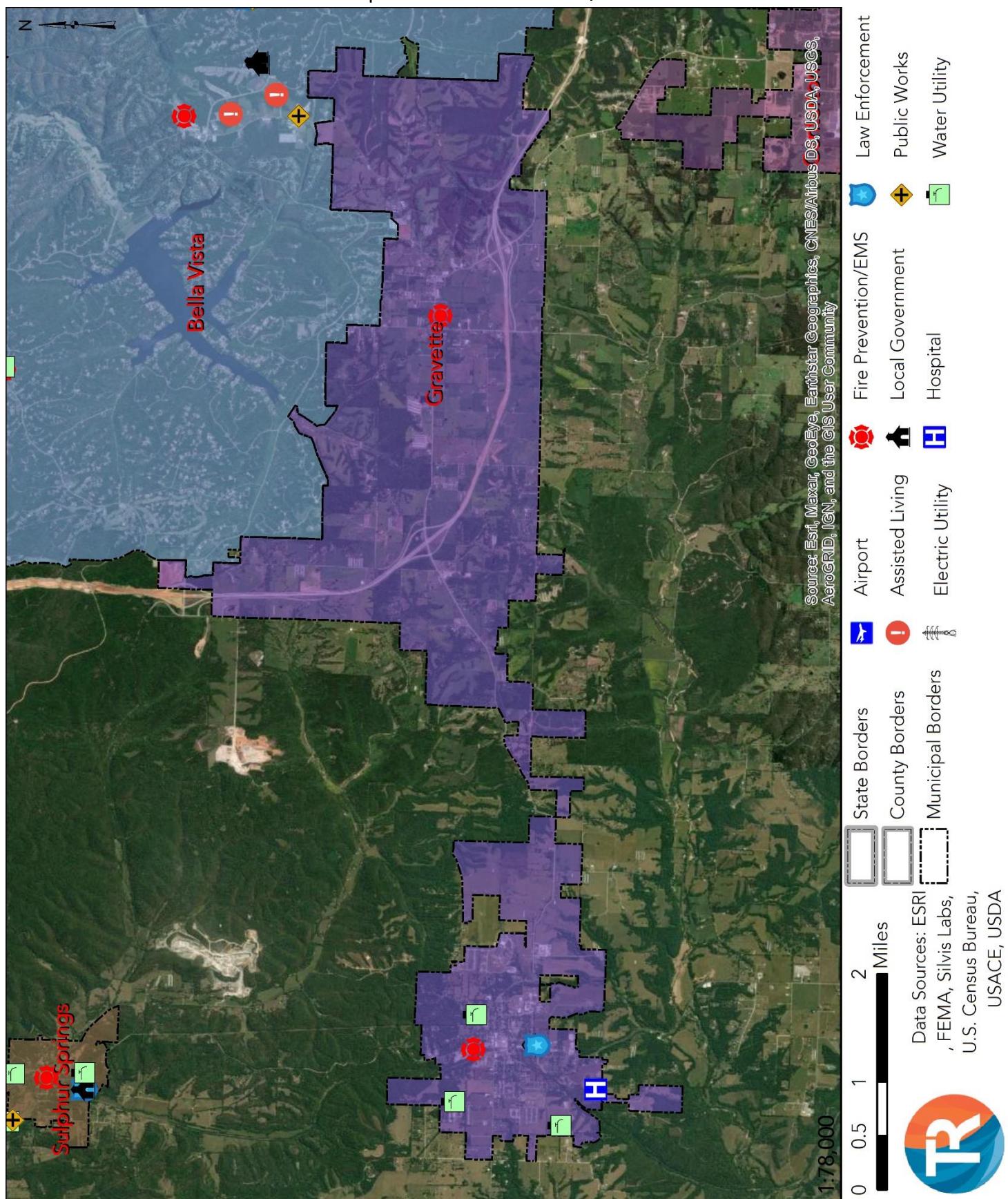
**Table 2.51 – Critical Facilities by Owner, Gravette**

Name	Type	Location
Gravette City Hall	Government	Gravette
Gravette Fire Station	Fire Prevention/EMS	Gravette
Gravette Police Station	Law Enforcement	Gravette
Gravette Water & Sewer Plant	Water Utility	Gravette
Gravette Water Tower #1	Water Utility	Gravette
Gravette Water Tower #2	Water Utility	Gravette
Gravette Water Tower #3	Water Utility	County

Map 2.24 – Community Profile, Gravette



Map 2.25 – Critical Facilities, Gravette



## 2.13 – Highfill

The latest Census Bureau estimate places 1,587 people living in Centerton occupying 271 housing units. Its population has grown astronomically since participation in their last plan in 2016.

Table 2.52 – Population Change, Highfill

Year	Estimated Population	Percent Change from 2010	Percent Change from 2016
2010	583	-	-
2016	644	10.46%	-
2020	1,587	172.21%	146.43%

\*The data are from the U.S. Census Bureau

Highfill contains an estimated \$56,095,000 worth of municipal structural inventory broken down into six different structural type classes. The following table shows this breakdown.

Table 2.53 – Structural Inventory, Highfill

Structure Class	Structures	Total Class Value
Agricultural	3	\$525,000
Commercial	15	\$22,148,000
Government	0	\$0
Industrial	5	\$1,006,000
Residential	221	\$27,592,000
Multi-Unit Residential*	3	\$4,824,000
Total =	247	\$56,095,000

\*Multi-Unit Residential is defined as a structure with 5 or more residential units

\*\*The data are from the Federal Emergency Management Agency

Of the 214 critical facilities within the planning area, 10 are geographically located in Highfill. The following table lists these facilities.

Table 2.54 – Critical Facilities by Location, Highfill

Name	Type	Owner
Highfill Administration Building	Government	Highfill
Highfill Fire Station	Fire Prevention/EMS	Highfill
Highfill Lift Station #1	Water Utility	Highfill
Highfill Lift Station #2	Water Utility	Highfill
Highfill Maintenance Building	Government	Highfill
Highfill Police Department	Law Enforcement	Highfill
Highfill Sewer Plant	Water Utility	Highfill
Highfill Substation	Electric Utility	Private
NWAR Regional Airport	Airport	Private
NWAR Regional Airport Fire Department	Fire Prevention/EMS	Private

## 2.13 – Highfill

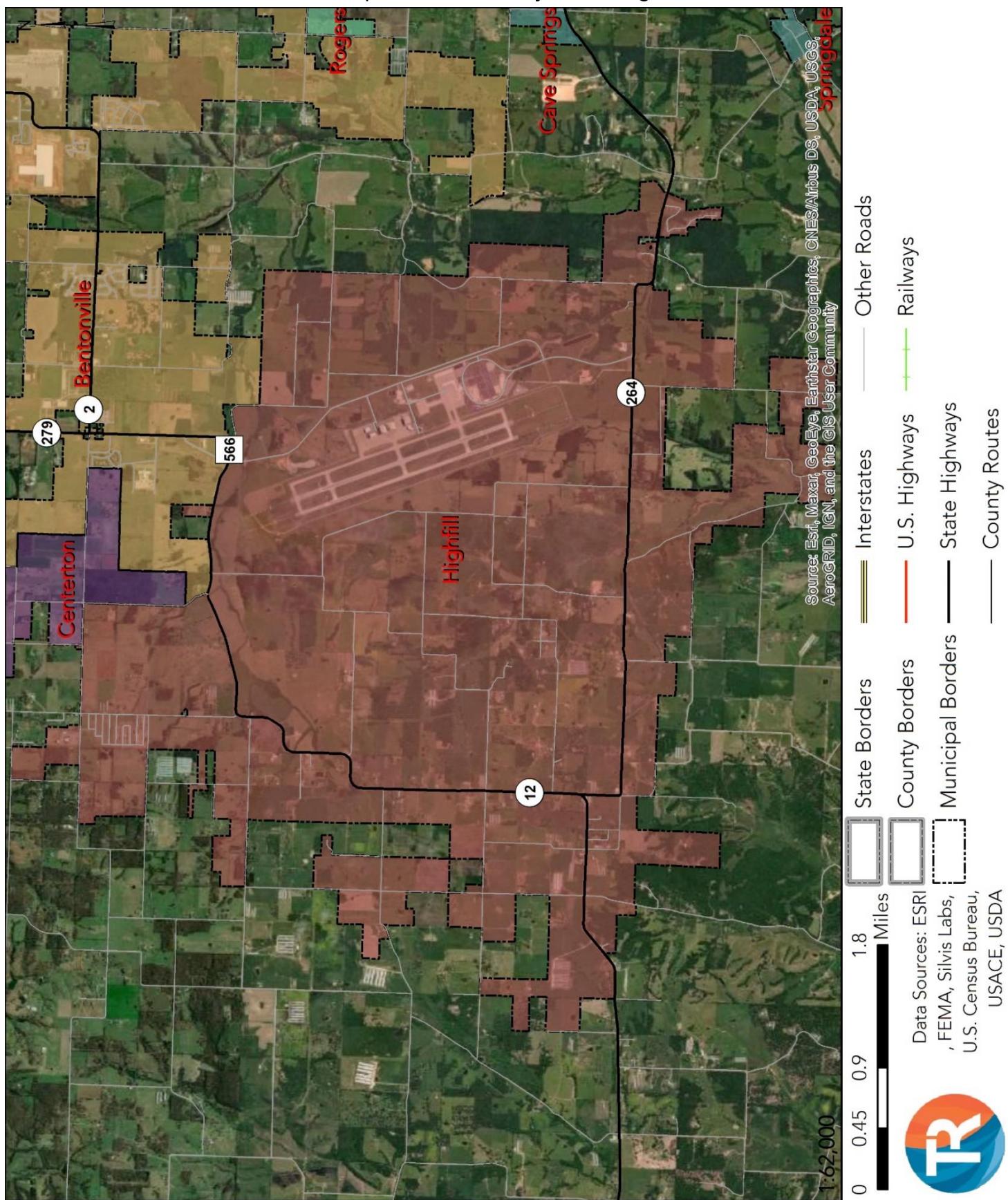
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Of the 214 critical facilities within the planning area, 9 are owned and operated by the Highfill Government. The table below lists all of these facilities and which geographic location they reside.

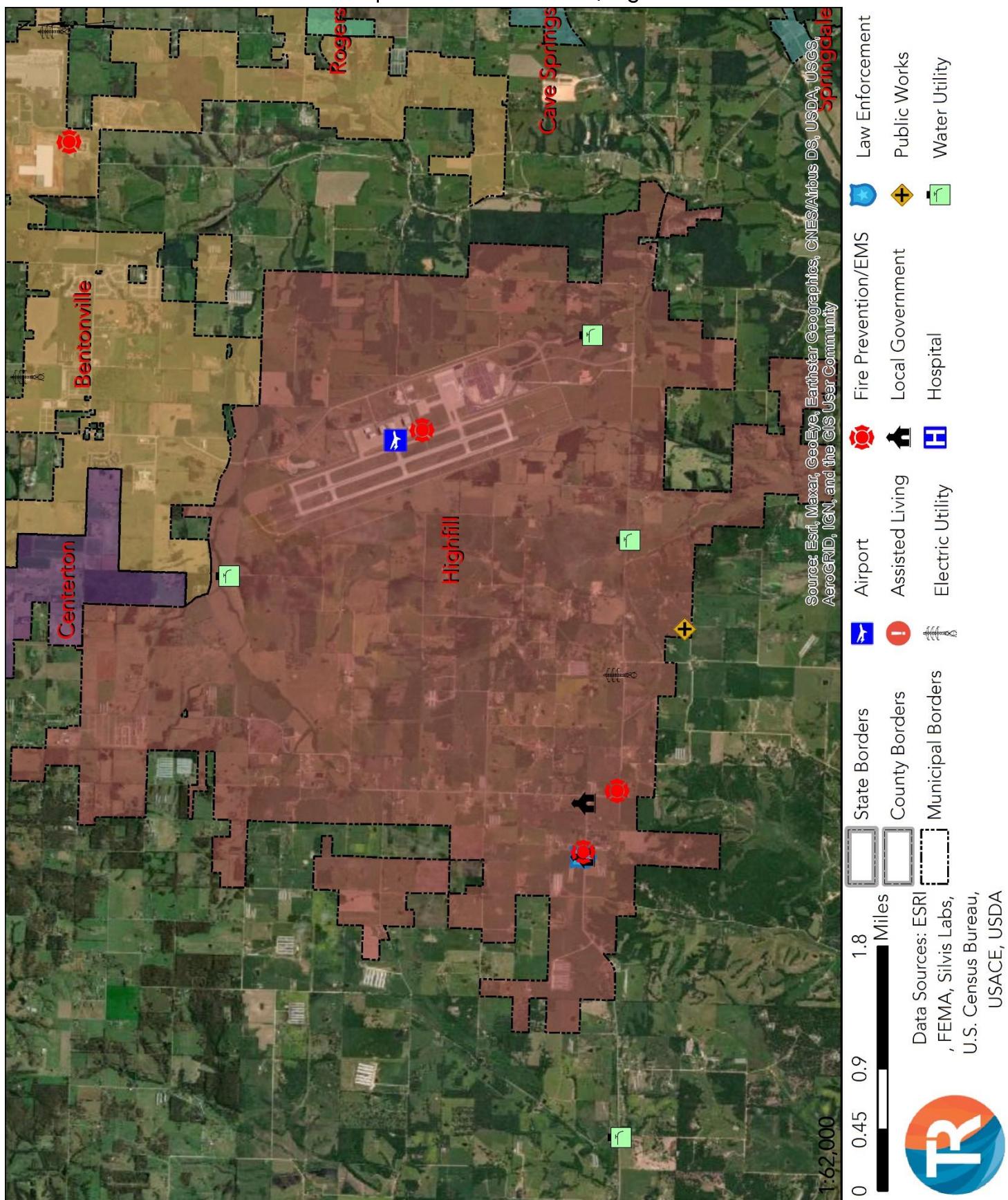
**Table 2.55 – Critical Facilities by Owner, Highfill**

Name	Type	Location
Highfill Administration Building	Government	Highfill
Highfill Fire Station	Fire Prevention/EMS	Highfill
Highfill Lift Station #1	Water Utility	Highfill
Highfill Lift Station #2	Water Utility	Highfill
Highfill Lift Station #3	Water Utility	Highfill
Highfill Maintenance Building	Government	Highfill
Highfill Police Department	Law Enforcement	Highfill
Highfill Pump Facility	Water Utility	Highfill
Highfill Sewer Plant	Water Utility	Highfill

Map 2.26 – Community Profile, Highfill



Map 2.27 – Critical Facilities, Highfill



## 2.14 – Little Flock

The latest Census Bureau estimate places 3,055 people living in Little Flock occupying 1,358 housing units. Its population has grown moderately since participation in their last plan in 2016.

Table 2.56 – Population Change, Little Flock

Year	Estimated Population	Percent Change from 2010	Percent Change from 2016
2010	2,585	-	-
2016	2,741	6.03%	-
2020	3,055	18.18%	11.46%

\*The data are from the U.S. Census Bureau

Little Flock contains an estimated \$246,079,000 worth of municipal structural inventory broken down into six different structural type classes. The following table shows this breakdown.

Table 2.57 – Structural Inventory, Little Flock

Structure Class	Structures	Total Class Value
Agricultural	3	\$1,917,000
Commercial	16	\$7,846,000
Government	1	\$94,000
Industrial	12	\$3,158,000
Residential	719	\$133,984,000
Multi-Unit Residential*	47	\$99,080,000
Total =	798	\$246,079,000

\*Multi-Unit Residential is defined as a structure with 5 or more residential units

\*\*The data are from the Federal Emergency Management Agency

Of the 214 critical facilities within the planning area, 3 are geographically located in Little Flock. The following table lists these facilities.

Table 2.58 – Critical Facilities by Location, Little Flock

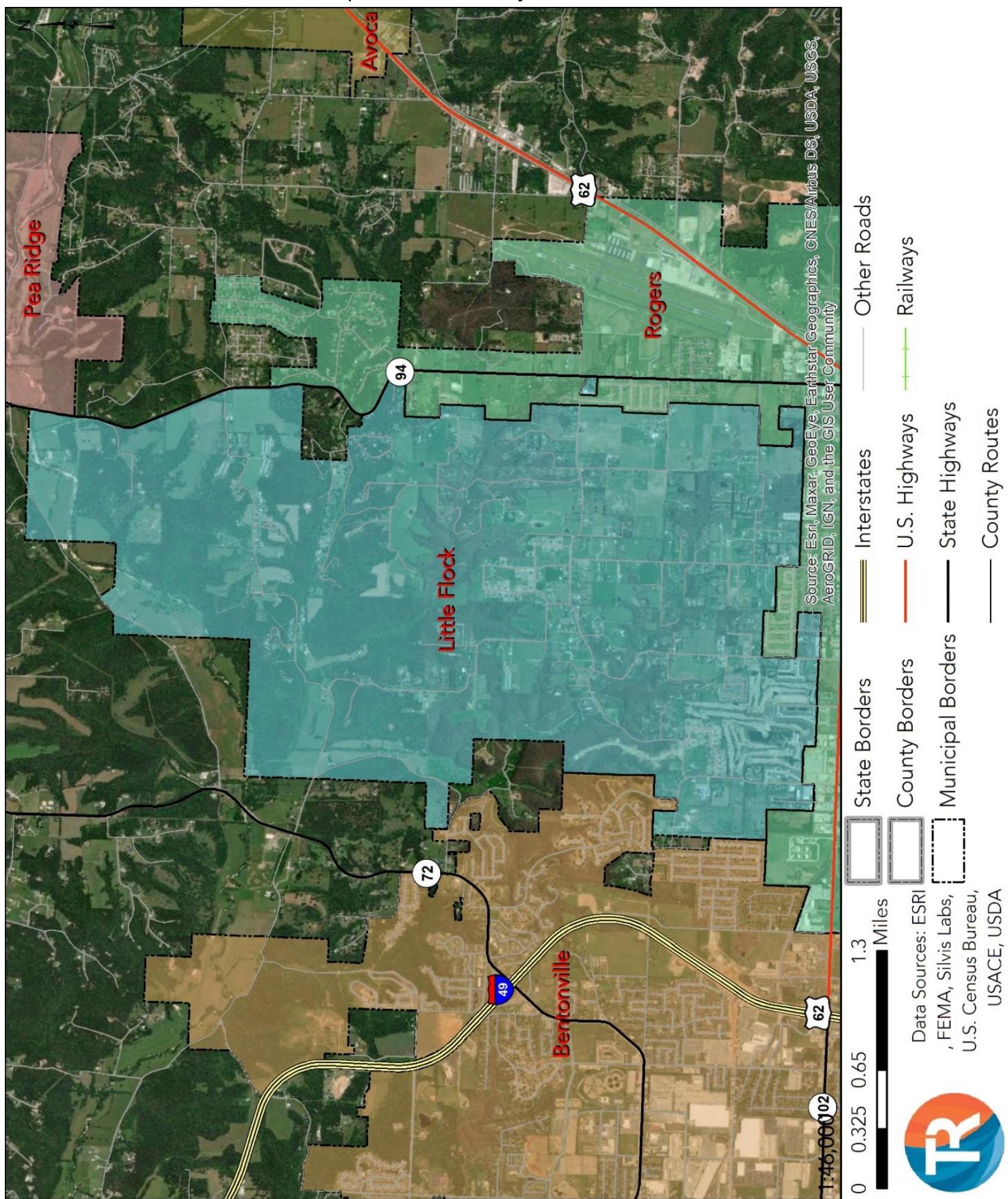
Name	Type	Owner
Little Flock City Hall	Government	Little Flock
Little Flock Fire Department	Fire Prevention/EMS	Little Flock
Little Flock Police Department	Law Enforcement	Little Flock

Of the 214 critical facilities within the planning area, 3 are owned and operated by the Little Flock Government. The table below lists all of these facilities and which geographic location they reside.

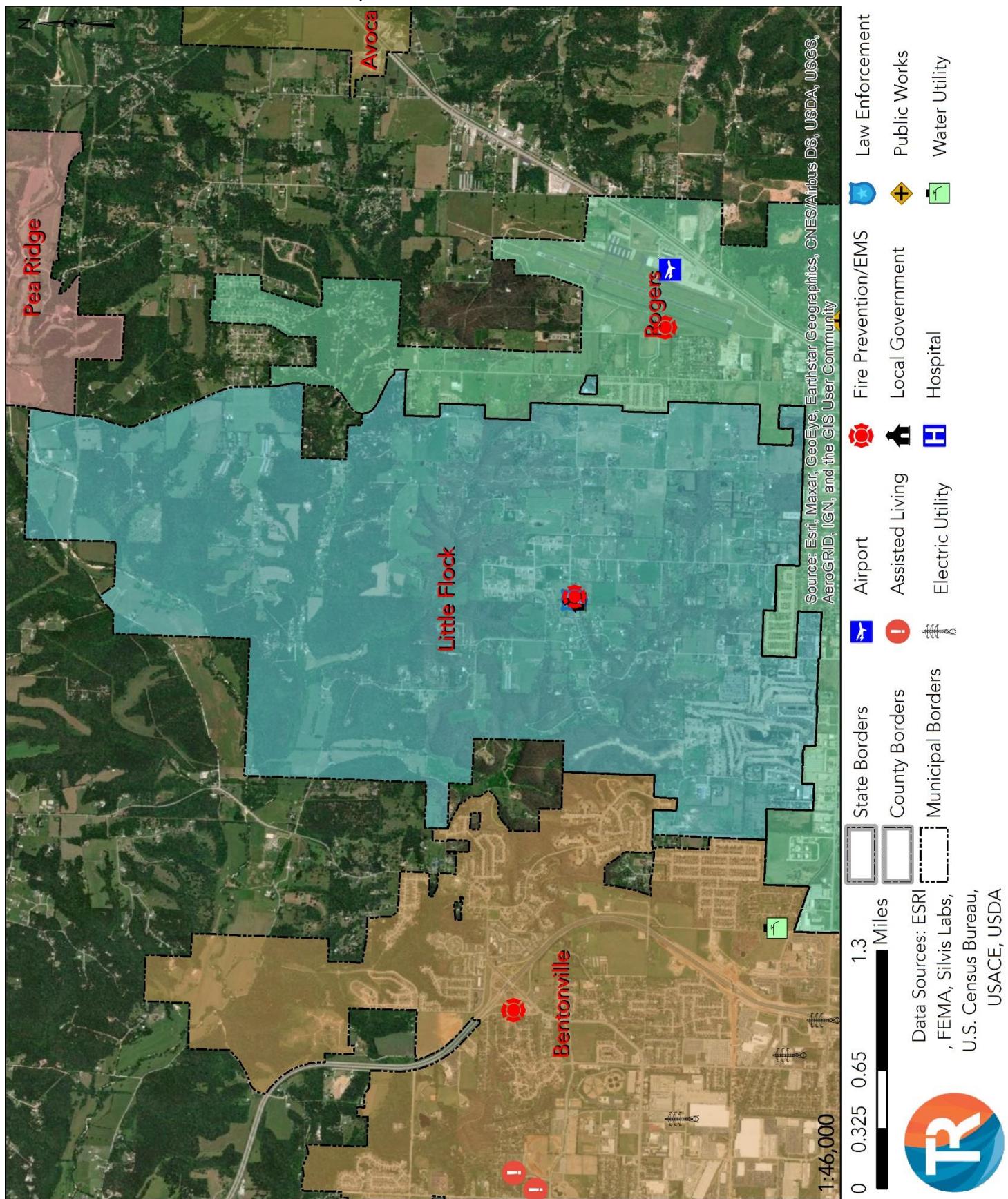
Table 2.59 – Critical Facilities by Owner, Little Flock

Name	Type	Location
Little Flock City Hall	Government	Little Flock
Little Flock Fire Department	Fire Prevention/EMS	Little Flock
Little Flock Police Department	Law Enforcement	Little Flock

Map 2.28 – Community Profile, Little Flock



### Map 2.29 – Critical Facilities, Little Flock



## 2.15 – Lowell

The latest Census Bureau estimate places 9,839 people living in Lowell occupying 2,897 housing units. Its population has grown moderately since participation in their last plan in 2016.

**Table 2.60 – Population Change, Lowell**

Year	Estimated Population	Percent Change from 2010	Percent Change from 2016
2010	7,327	-	-
2016	8,968	22.40%	-
2020	9,839	34.28%	9.71%

*\*The data are from the U.S. Census Bureau*

Lowell contains an estimated \$649,561,000 worth of municipal structural inventory broken down into six different structural type classes. The following table shows this breakdown.

**Table 2.61 – Structural Inventory, Lowell**

Structure Class	Structures	Total Class Value
Agricultural	7	\$1,354,000
Commercial	128	\$101,397,000
Government	2	\$1,830,000
Industrial	35	\$17,304,000
Residential	2,390	\$464,609,000
Multi-Unit Residential*	48	\$63,067,000
<b>Total =</b>	<b>2,610</b>	<b>\$649,561,000</b>

*\*Multi-Unit Residential is defined as a structure with 5 or more residential units*

*\*\*The data are from the Federal Emergency Management Agency*

Of the 214 critical facilities within the planning area, 10 are geographically located in Lowell. The following table lists these facilities.

**Table 2.62 – Critical Facilities by Location, Lowell**

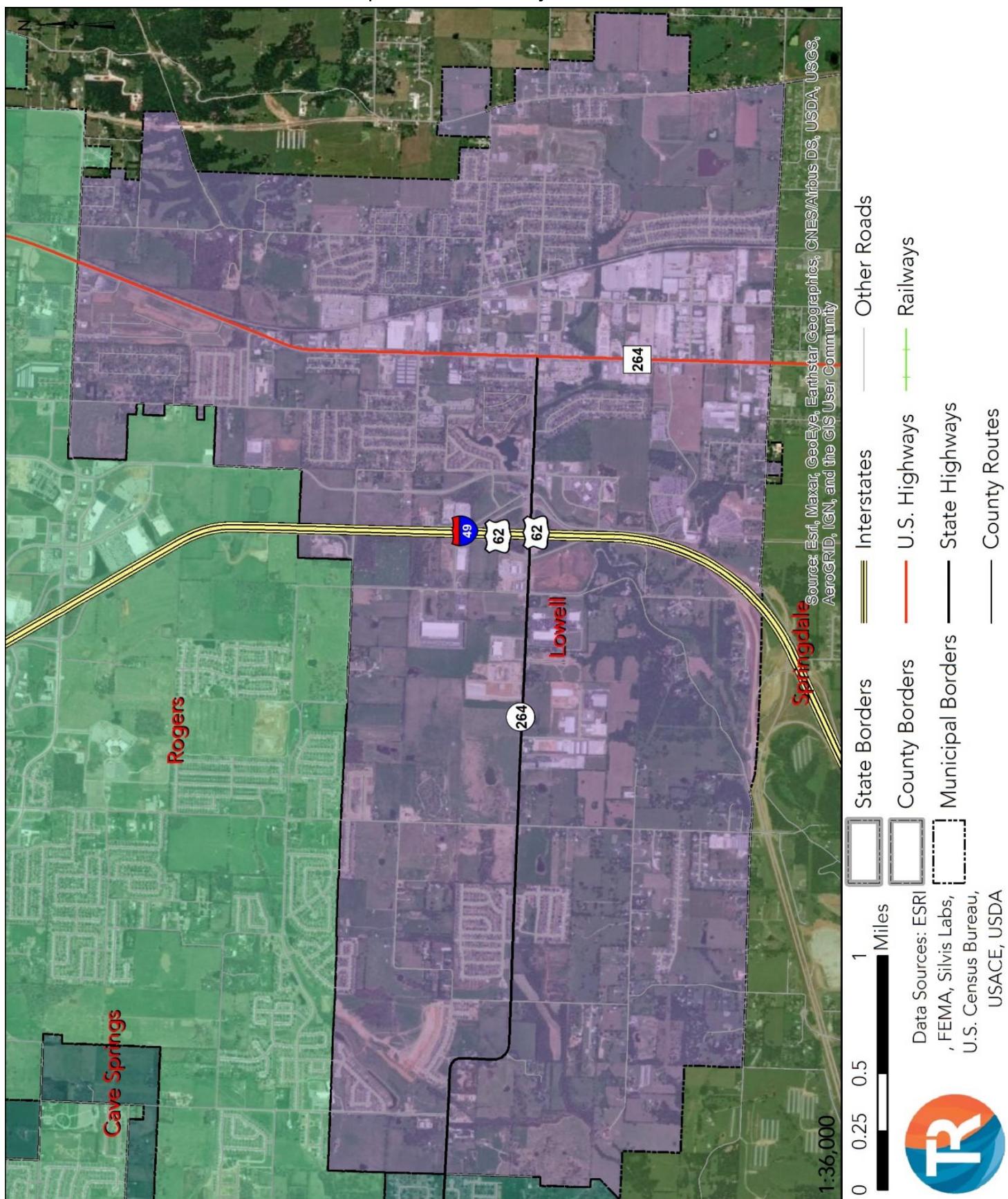
Name	Type	Owner
Lowell City Hall	Government	Lowell
Lowell City Street Department	Public Works	Lowell
Lowell Fire Station #1	Fire Prevention/EMS	Lowell
Lowell Fire Station #2	Fire Prevention/EMS	Lowell
Lowell Police Station	Law Enforcement	Lowell
Meadowlands Wastewater Treatment Plant	Water Utility	Lowell
Tuscan Heights Wastewater Treatment Plant	Water Utility	Lowell
UAMS Center for Children	Hospital	Private
<b>Weatherton Wastewater Treatment Plant</b>	<b>Water Utility</b>	<b>Lowell</b>

Of the 214 critical facilities within the planning area, 8 are owned and operated by the Lowell Government. The table below lists all of these facilities and which geographic location they reside.

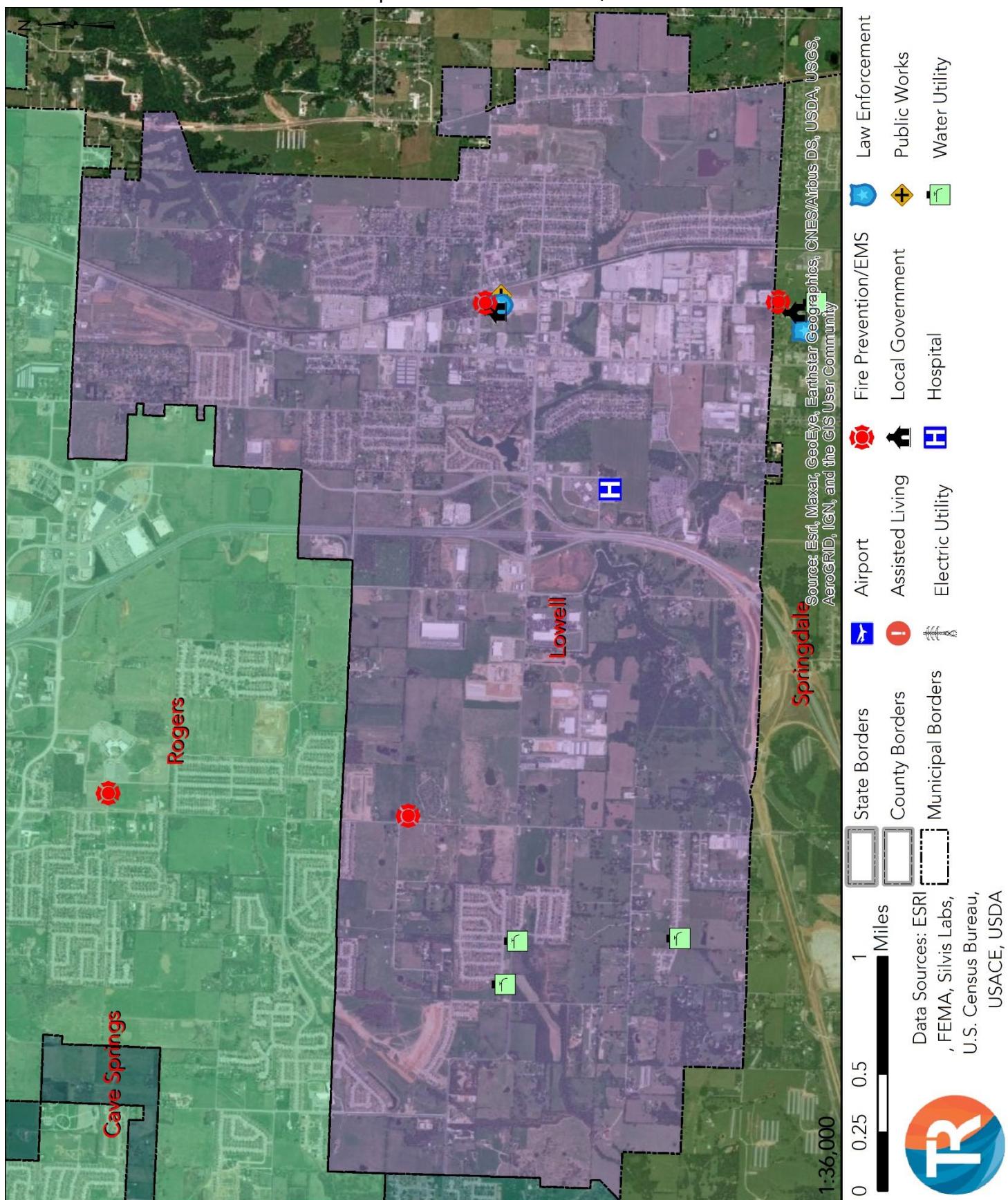
**Table 2.63 – Critical Facilities by Owner, Lowell**

Name	Type	Location
Lowell City Hall	Government	Lowell
Lowell City Street Department	Public Works	Lowell
Lowell Fire Station #1	Fire Prevention/EMS	Lowell
Lowell Fire Station #2	Fire Prevention/EMS	Lowell
Lowell Police Station	Law Enforcement	Lowell
Meadowlands Wastewater Treatment Plant	Water Utility	Lowell
Tuscan Heights Wastewater Treatment Plant	Water Utility	Lowell
Weatherton Wastewater Treatment Plant	Water Utility	Lowell

Map 2.30 – Community Profile, Lowell



Map 2.31 – Critical Facilities, Lowell



## 2.16 – Pea Ridge

The latest Census Bureau estimate places 6,559 people living in Centerton occupying 1,910 housing units. Its population has grown significantly since participation in their last plan in 2016.

**Table 2.64 – Population Change, Pea Ridge**

Year	Estimated Population	Percent Change from 2010	Percent Change from 2016
2010	4,794	-	-
2016	5,380	12.22%	-
2020	6,559	36.82%	21.91%

*\*The data are from the U.S. Census Bureau*

Pea Ridge contains an estimated \$330,949,000 worth of municipal structural inventory broken down into six different structural type classes. The following table shows this breakdown.

**Table 2.65 – Structural Inventory, Pea Ridge**

Structure Class	Structures	Total Class Value
Agricultural	2	\$301,000
Commercial	55	\$19,997,000
Government	3	\$3,067,000
Industrial	19	\$3,424,000
Residential	1,810	\$304,160,000
Multi-Unit Residential*	0	\$0
<b>Total =</b>	<b>1,889</b>	<b>\$330,949,000</b>

*\*Multi-Unit Residential is defined as a structure with 5 or more residential units*

*\*\*The data are from the Federal Emergency Management Agency*

Of the 214 critical facilities within the planning area, 9 are geographically located in Pea Ridge. The following table lists these facilities.

**Table 2.66 – Critical Facilities by Location, Pea Ridge**

Name	Type	Owner
Pea Ridge City Hall	Government	Pea Ridge
Pea Ridge Fire Station #1	Fire Prevention/EMS	Pea Ridge
Pea Ridge Fire Station #2	Fire Prevention/EMS	Pea Ridge
Pea Ridge Police Station	Law Enforcement	Pea Ridge
Pea Ridge Public Library	Government	Pea Ridge
Pea Ridge Public Works	Government	Pea Ridge
Pea Ridge Water Plant	Water Utility	Pea Ridge
Pea Ridge Water Tower #1	Water Utility	Pea Ridge
Pea Ridge Water Tower #2	Water Utility	Pea Ridge

## 2.16 – Pea Ridge

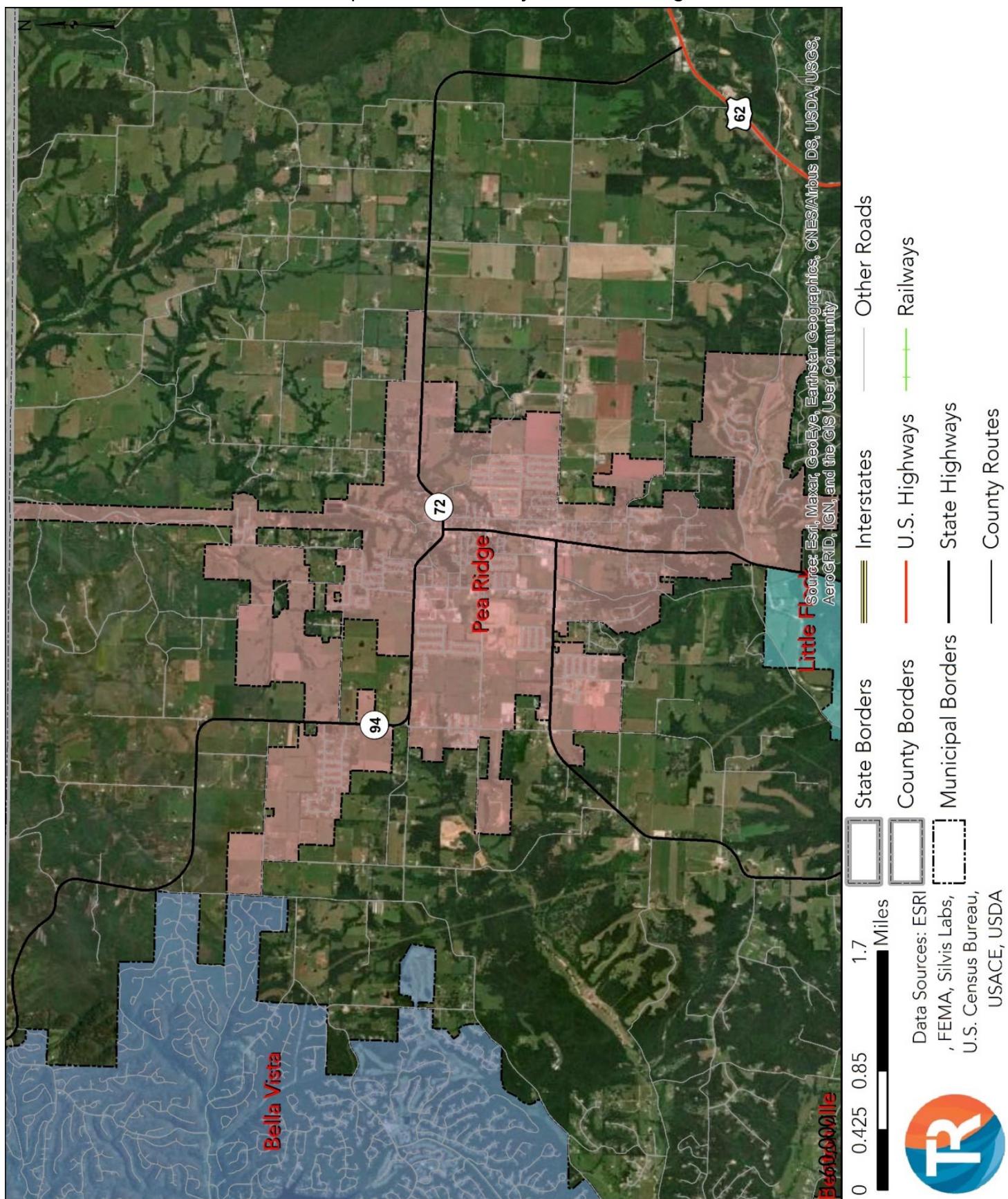
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Of the 214 critical facilities within the planning area, 9 are owned and operated by the Pea Ridge Government. The table below lists all of these facilities and which geographic location they reside.

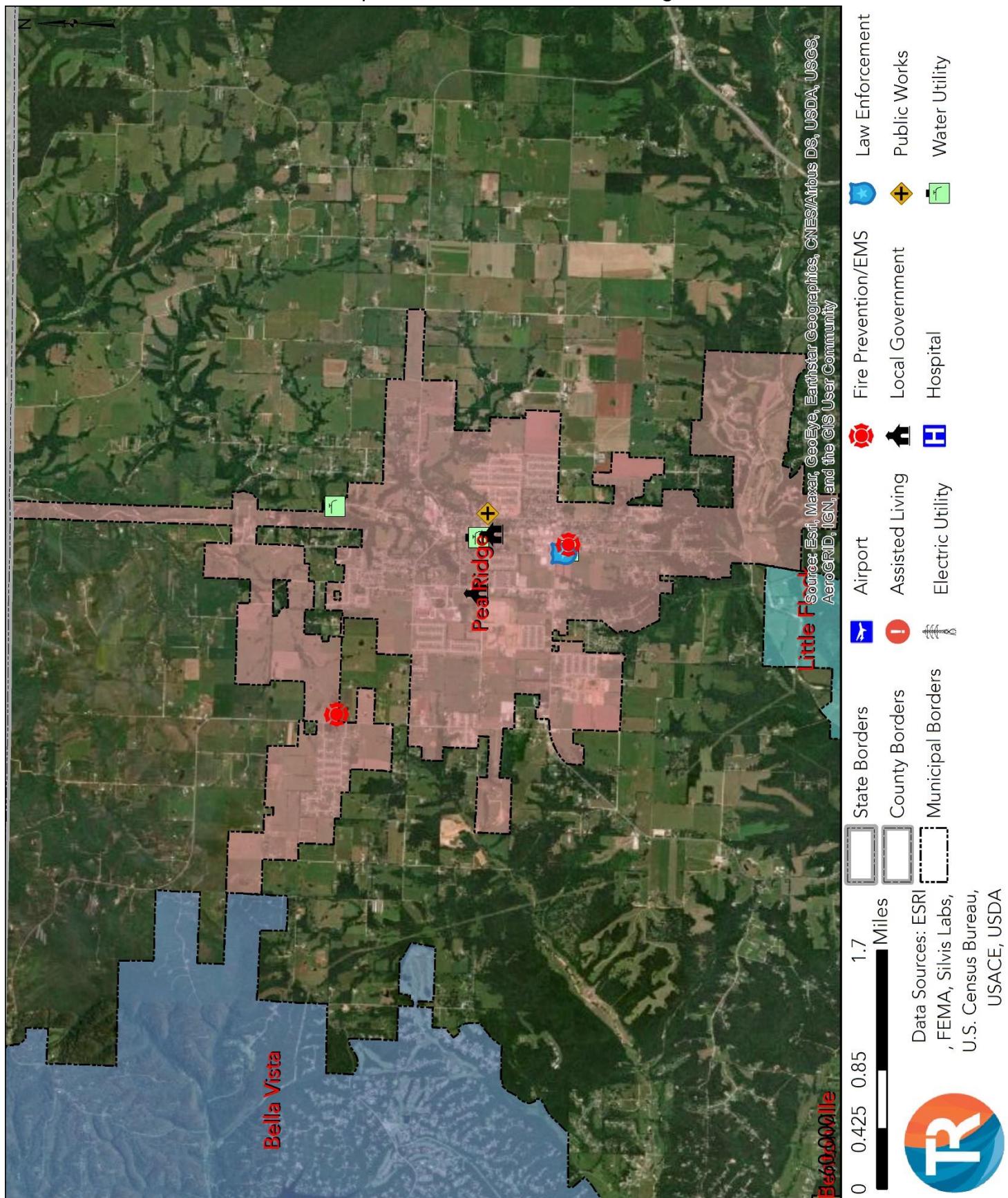
**Table 2.67 – Critical Facilities by Owner, Pea Ridge**

Name	Type	Location
Pea Ridge City Hall	Government	Pea Ridge
Pea Ridge Fire Station #1	Fire Prevention/EMS	Pea Ridge
Pea Ridge Fire Station #2	Fire Prevention/EMS	Pea Ridge
Pea Ridge Police Station	Law Enforcement	Pea Ridge
Pea Ridge Public Library	Government	Pea Ridge
Pea Ridge Public Works	Government	Pea Ridge
Pea Ridge Water Plant	Water Utility	Pea Ridge
Pea Ridge Water Tower #1	Water Utility	Pea Ridge
Pea Ridge Water Tower #2	Water Utility	Pea Ridge

Map 2.32 – Community Profile, Pea Ridge



Map 2.33 – Critical Facilities, Pea Ridge



## 2.17 – Rogers

The latest Census Bureau estimate places 69,908 people living in Rogers occupying 22,111 housing units. Its population has grown moderately since participation in their last plan in 2016.

Table 2.68 – Population Change, Rogers

Year	Estimated Population	Percent Change from 2010	Percent Change from 2016
2010	55,964	-	-
2016	65,236	16.57%	-
2020	69,908	24.92%	7.16%

\*The data are from the U.S. Census Bureau

Rogers contains an estimated \$5,176,417,000 worth of municipal structural inventory broken down into six different structural type classes. The following table shows this breakdown.

Table 2.69 – Structural Inventory, Rogers

Structure Class	Structures	Total Class Value
Agricultural	39	\$6,894,000
Commercial	853	\$772,539,000
Government	18	\$19,720,000
Industrial	302	\$329,980,000
Residential	18,191	\$3,515,719,000
Multi-Unit Residential*	345	\$531,565,000
Total =	19,748	\$5,176,417,000

\*Multi-Unit Residential is defined as a structure with 5 or more residential units

\*\*The data are from the Federal Emergency Management Agency

Of the 214 critical facilities within the planning area, 16 are geographically located in Rogers. The following table lists these facilities.

Table 2.70 – Critical Facilities by Location, Rogers

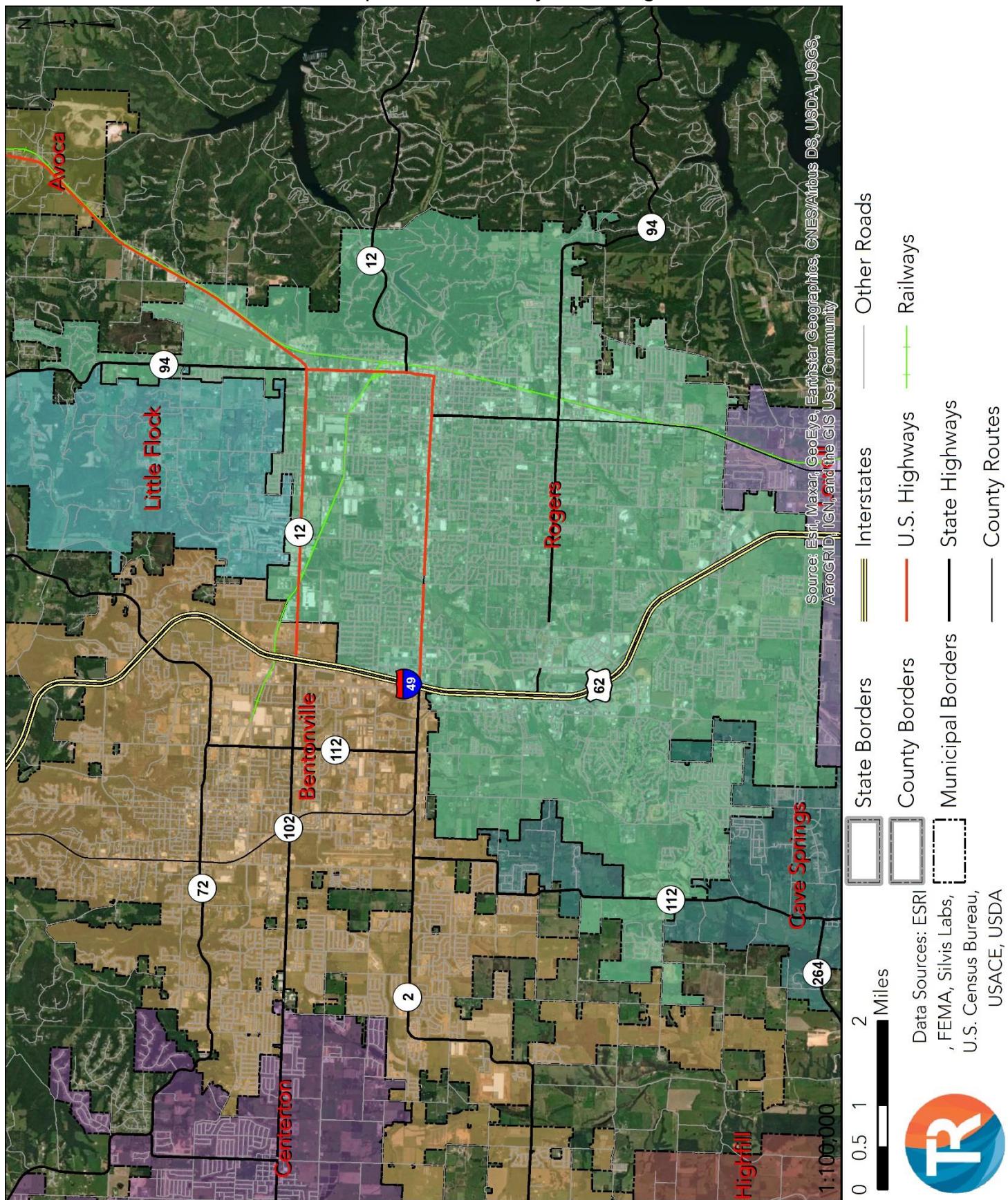
Name	Type	Owner
City Hall Administration Building	Government	Rogers
Heritage Park Nursing Center	Assisted Living	Private
Innisfree Nursing Center	Assisted Living	Private
Mercy Medical Center	Hospital	Private
Rogers Fire Station #1	Fire Prevention/EMS	Rogers
Rogers Fire Station #2	Fire Prevention/EMS	Rogers
Rogers Fire Station #3	Fire Prevention/EMS	Rogers
Rogers Fire Station #4	Fire Prevention/EMS	Rogers
Rogers Fire Station #5	Fire Prevention/EMS	Rogers
Rogers Fire Station #6	Fire Prevention/EMS	Rogers
Rogers Fire Station #7	Fire Prevention/EMS	Rogers
Rogers Municipal Airport	Airport	Rogers
Rogers Police Department	Law Enforcement	Rogers
Rogers Public Library	Government	Rogers
Rogers Street Department	Public Works	Rogers
Steve Mill Road Building	Public Works	Rogers

Of the 214 critical facilities within the planning area, 13 are owned and operated by the Rogers Government. The table below lists all of these facilities and which geographic location they reside.

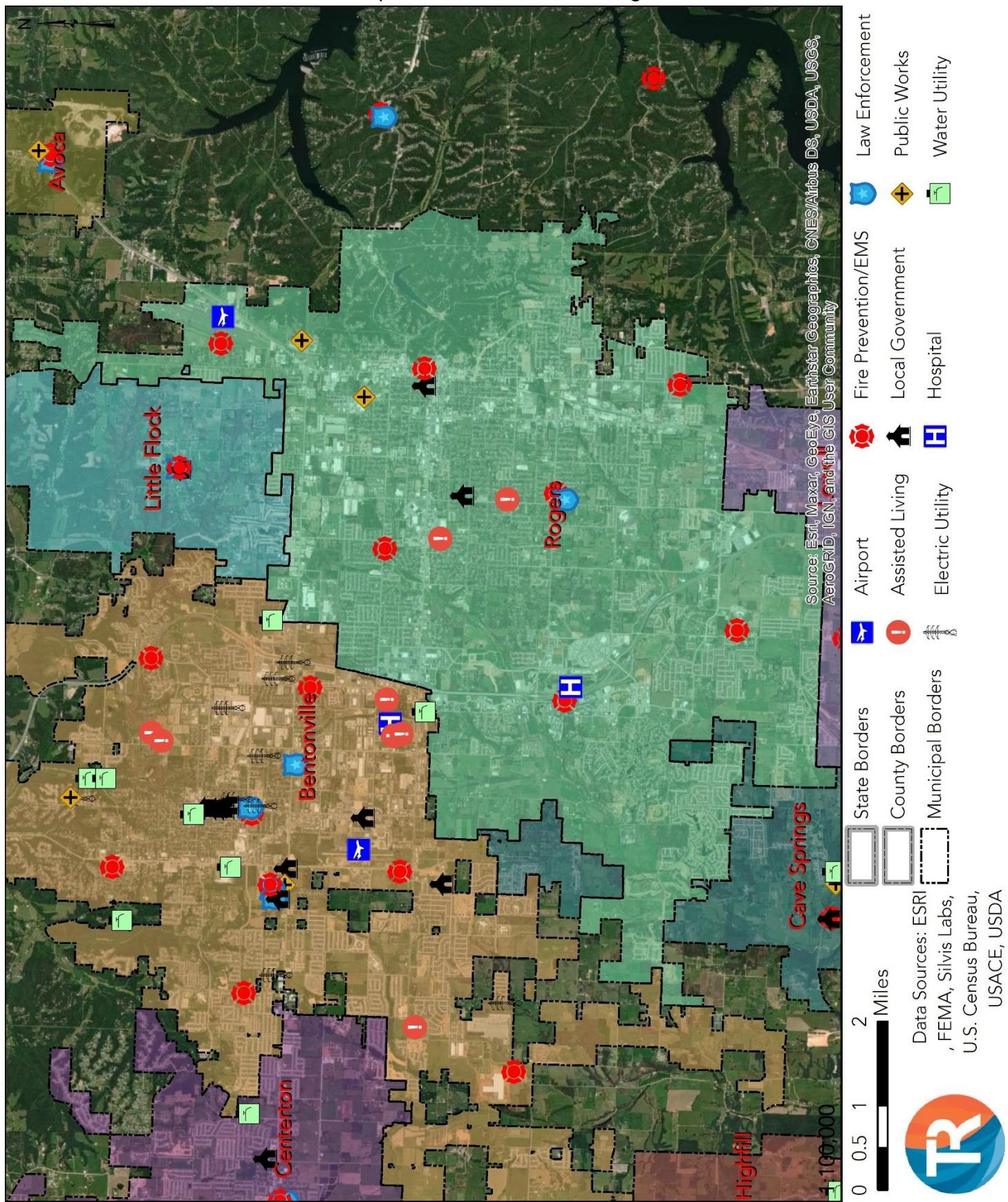
**Table 2.71 – Critical Facilities by Owner, Rogers**

Name	Type	Location
City Hall Administration Building	Government	Rogers
Rogers Fire Station #1	Fire Prevention/EMS	Rogers
Rogers Fire Station #2	Fire Prevention/EMS	Rogers
Rogers Fire Station #3	Fire Prevention/EMS	Rogers
Rogers Fire Station #4	Fire Prevention/EMS	Rogers
Rogers Fire Station #5	Fire Prevention/EMS	Rogers
Rogers Fire Station #6	Fire Prevention/EMS	Rogers
Rogers Fire Station #7	Fire Prevention/EMS	Rogers
Rogers Municipal Airport	Airport	Rogers
Rogers Police Department	Law Enforcement	Rogers
Rogers Public Library	Government	Rogers
Rogers Street Department	Public Works	Rogers
Steve Mill Road Building	Public Works	Rogers

Map 2.34 – Community Profile, Rogers



### Map 2.35– Critical Facilities, Rogers



## 2.18 – Siloam Springs

The latest Census Bureau estimate places 17,287 people living in Siloam Springs occupying 5,928 housing units. Its population has grown moderately since participation in their last plan in 2016.

Table 2.72 – Population Change, Siloam Springs

Year	Estimated Population	Percent Change from 2010	Percent Change from 2016
2010	15,039	-	-
2016	16,523	9.87%	-
2020	17,287	14.95%	4.62%

\*The data are from the U.S. Census Bureau

Siloam Springs contains an estimated \$1,217,993,000 worth of municipal structural inventory broken down into six different structural type classes. The following table shows this breakdown.

Table 2.73 – Structural Inventory, Siloam Springs

Structure Class	Structures	Total Class Value
Agricultural	10	\$7,603,000
Commercial	296	\$179,587,000
Government	5	\$2,040,000
Industrial	75	\$66,121,000
Residential	4,941	\$787,518,000
Multi-Unit Residential*	88	\$175,124,000
Total =	5,415	\$1,217,993,000

\*Multi-Unit Residential is defined as a structure with 5 or more residential units

\*\*The data are from the Federal Emergency Management Agency

Of the 214 critical facilities within the planning area, 11 are geographically located in Siloam Springs. The following table lists these facilities.

Table 2.74 – Critical Facilities by Location, Siloam Springs

Name	Type	Owner
Siloam Nursing & Rehab	Assisted Living	Private
Siloam Springs City Hall	Government	Siloam Springs
Siloam Springs Electric Dept.	Electric Utility	Siloam Springs
Siloam Springs Fire Station #1	Fire Prevention/EMS	Siloam Springs
Siloam Springs Fire Station #2	Fire Prevention/EMS	Siloam Springs
Siloam Springs Fire Station #3	Fire Prevention/EMS	Siloam Springs
Siloam Springs Municipal Airport	Airport	Siloam Springs
Siloam Springs Police Station	Law Enforcement	Siloam Springs
Siloam Springs Regional Hospital	Hospital	Private
Siloam Springs Wastewater Treatment Plant	Water Utility	Siloam Springs
Siloam Springs Water Treatment Plant	Water Utility	Siloam Springs

## 2.18 – Siloam Springs

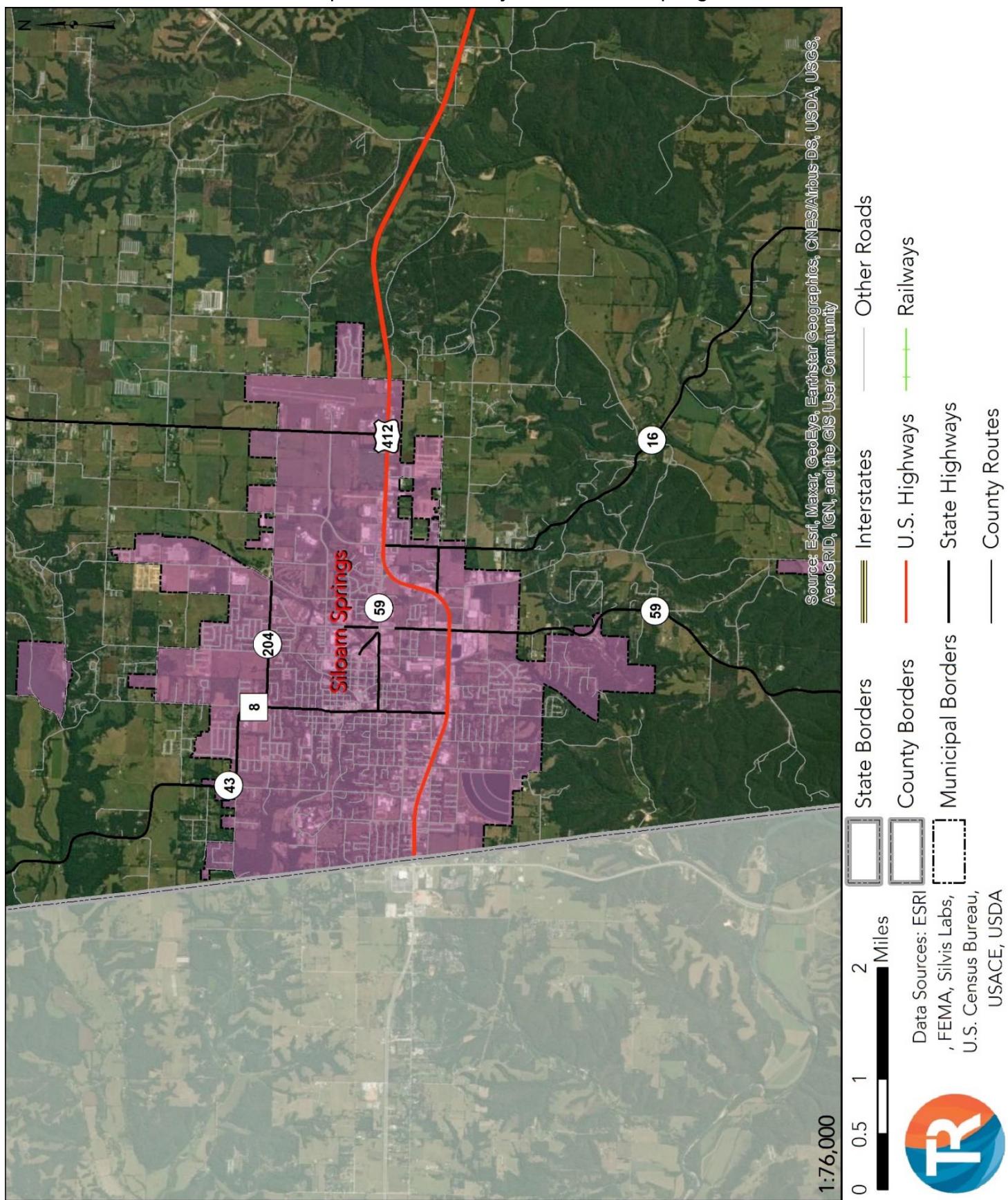
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Of the 214 critical facilities within the planning area, 9 are owned and operated by the Siloam Springs Government. The table below lists all of these facilities and which geographic location they reside.

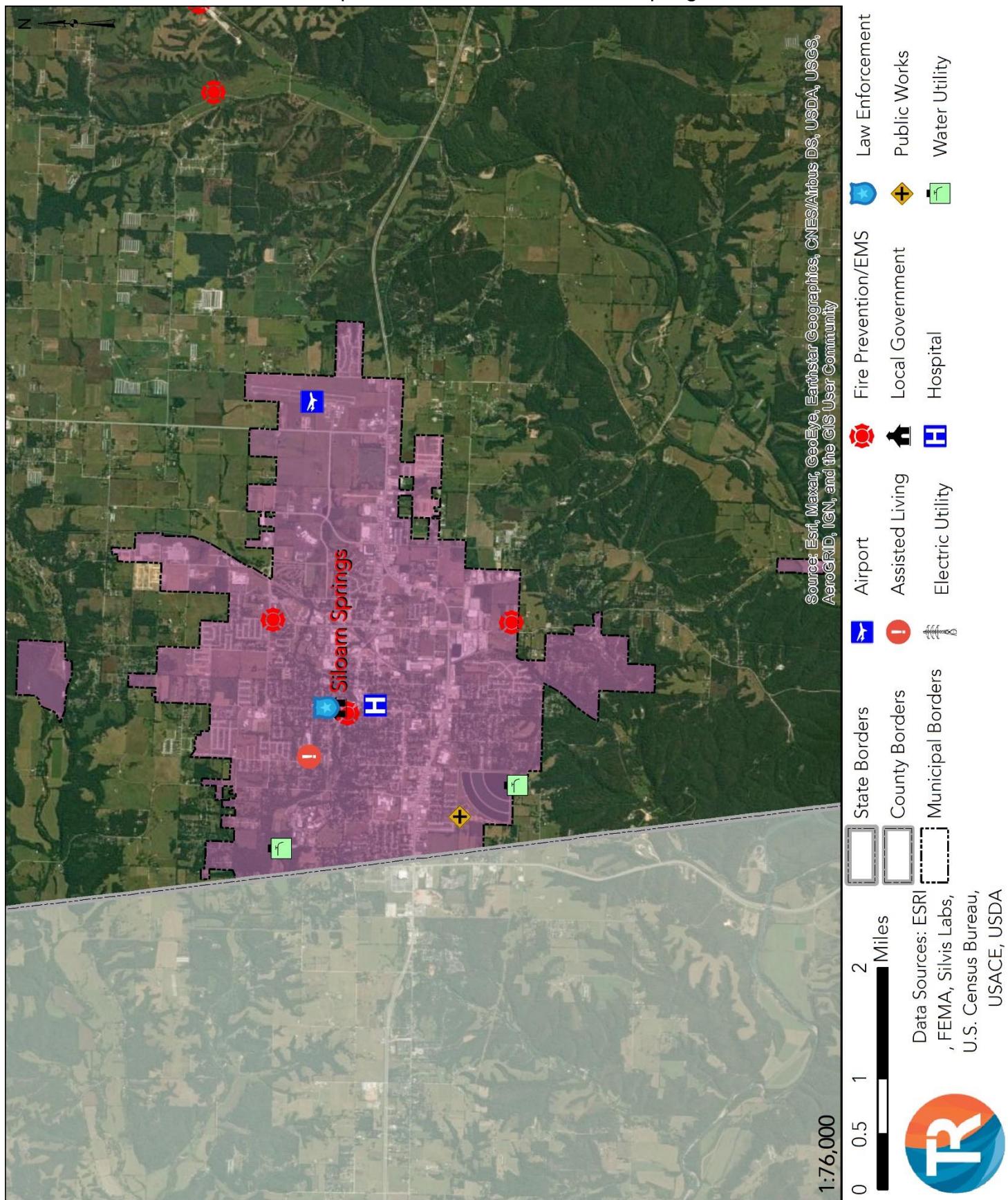
**Table 2.75 – Critical Facilities by Owner, Siloam Springs**

Name	Type	Location
Siloam Springs City Hall	Government	Siloam Springs
Siloam Springs Electric Dept.	Electric Utility	Siloam Springs
Siloam Springs Fire Station #1	Fire Prevention/EMS	Siloam Springs
Siloam Springs Fire Station #2	Fire Prevention/EMS	Siloam Springs
Siloam Springs Fire Station #3	Fire Prevention/EMS	Siloam Springs
Siloam Springs Municipal Airport	Airport	Siloam Springs
Siloam Springs Police Station	Law Enforcement	Siloam Springs
Siloam Springs Wastewater Treatment Plant	Water Utility	Siloam Springs
Siloam Springs Water Treatment Plant	Water Utility	Siloam Springs

## Map 2.36 – Community Profile, Siloam Springs



Map 2.37 – Critical Facilities, Siloam Springs



## 2.19 – Springdale

The latest Census Bureau estimate places 84,161 people living in Springdale. Of that population, it is estimated that 9,126 live within the borders of Benton County in 3,086 housing units. The overall population has grown moderately since 2016, but not significantly within Benton County's borders.

Table 2.76– Population Change, Springdale

Year	Estimated Population	Percent Change from 2010	Percent Change from 2016
2010	69,797	-	-
2016	78,737	12.81%	-
2020	84,161	20.58%	6.89%

\*The data are from the U.S. Census Bureau

Springdale contains an estimated \$787,050,000 worth of municipal structural inventory broken down into six different structural type classes. The following table shows this breakdown.

Table 2.77 – Structural Inventory, Springdale

Structure Class	Structures	Total Class Value
Agricultural	8	\$2,131,000
Commercial	130	\$78,922,000
Government	0	\$0
Industrial	53	\$46,088,000
Residential	2,939	\$639,142,000
Multi-Unit Residential*	11	\$20,767,000
<b>Total =</b>	<b>3,141</b>	<b>\$787,050,000</b>

\*Multi-Unit Residential is defined as a structure with 5 or more residential units

\*\*The data are from the Federal Emergency Management Agency

Of the 214 critical facilities within the planning area, 6 are geographically located in Springdale. The following table lists these facilities.

Table 2.78 – Critical Facilities by Location, Springdale

Name	Type	Owner
Bethel Heights City Hall	Government	Springdale
Bethel Heights Police Department	Law Enforcement	Springdale
Bethel Heights Wastewater Treatment Center	Water Utility	Springdale
Mercy EMS County South	Fire Prevention/EMS	Private
Springdale Fire Station #8	Fire Prevention/EMS	Springdale
<b>Springdale Water Treatment Plant</b>	<b>Water Utility</b>	<b>Springdale</b>

## 2.19 – Springdale

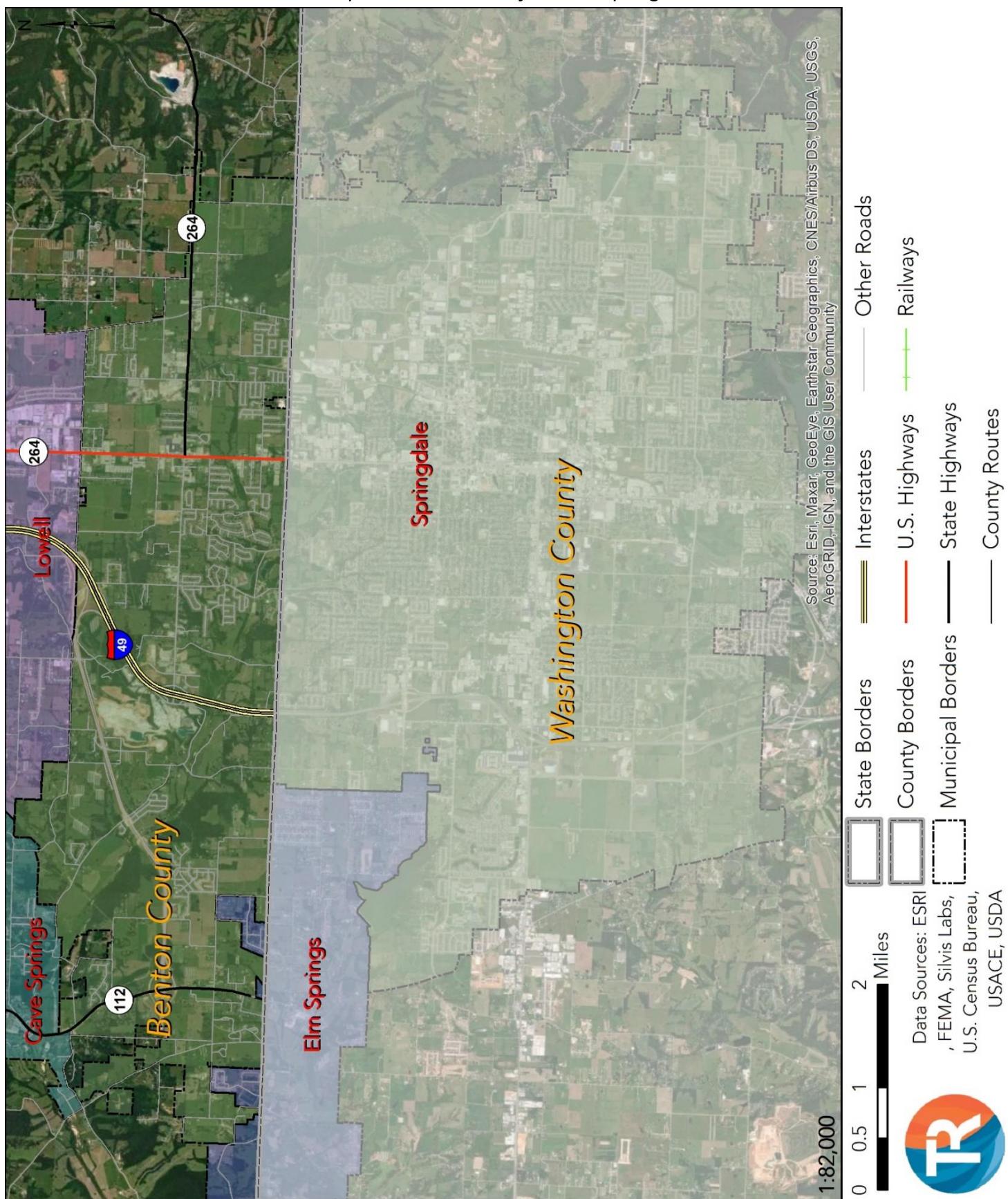
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Of the 214 critical facilities within the planning area, 5 are owned and operated by the Springdale Government. The table below lists all of these facilities and which geographic location they reside.

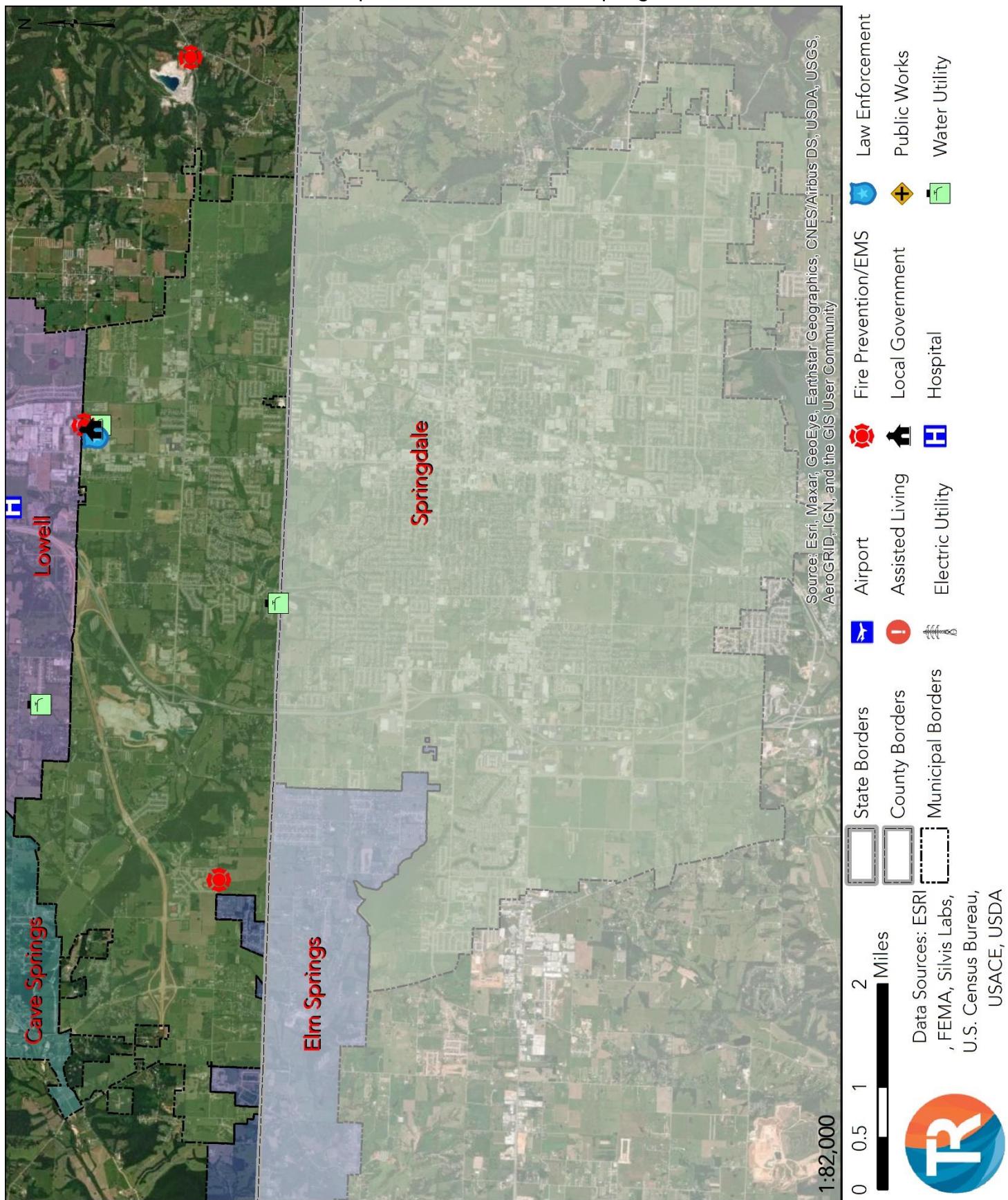
**Table 2.79 – Critical Facilities by Owner, Springdale**

Name	Type	Location
Bethel Heights City Hall	Government	Springdale
Bethel Heights Police Department	Law Enforcement	Springdale
Bethel Heights Wastewater Treatment Center	Water Utility	Springdale
Springdale Fire Station #8	Fire Prevention/EMS	Springdale
Springdale Water Treatment Plant	Water Utility	Springdale

Map 2.38 – Community Profile, Springdale



Map 2.39 – Critical Facilities, Springdale



## 2.20 – Springtown

The latest Census Bureau estimate places 83 people living in Springtown occupying 43 housing units. Its population has declined moderately since participation in their last plan in 2016.

Table 2.80 – Population Change, Springtown

Year	Estimated Population	Percent Change from 2010	Percent Change from 2016
2010	87	-	-
2016	94	8.05%	-
2020	83	-4.60%	-11.70%

\*The data are from the U.S. Census Bureau

Springtown contains an estimated \$5,890,000 worth of municipal structural inventory broken down into six different structural type classes. The following table shows this breakdown.

Table 2.81 – Structural Inventory, Springtown

Structure Class	Structures	Total Class Value
Agricultural	0	\$0
Commercial	3	\$592,000
Government	0	\$0
Industrial	1	\$273,000
Residential	39	\$5,025,000
Multi-Unit Residential*	0	\$0
Total =	43	\$5,890,000

\*Multi-Unit Residential is defined as a structure with 5 or more residential units

\*\*The data are from the Federal Emergency Management Agency

Of the 214 critical facilities within the planning area, 1 is geographically located in Springtown. The following table lists these facilities.

Table 2.82 – Critical Facilities by Location, Springtown

Name	Type	Owner
Springtown Town Hall	Government	Springtown

Of the 214 critical facilities within the planning area, 1 is owned and operated by the Springtown Government. The table below lists all of these facilities and which geographic location they reside.

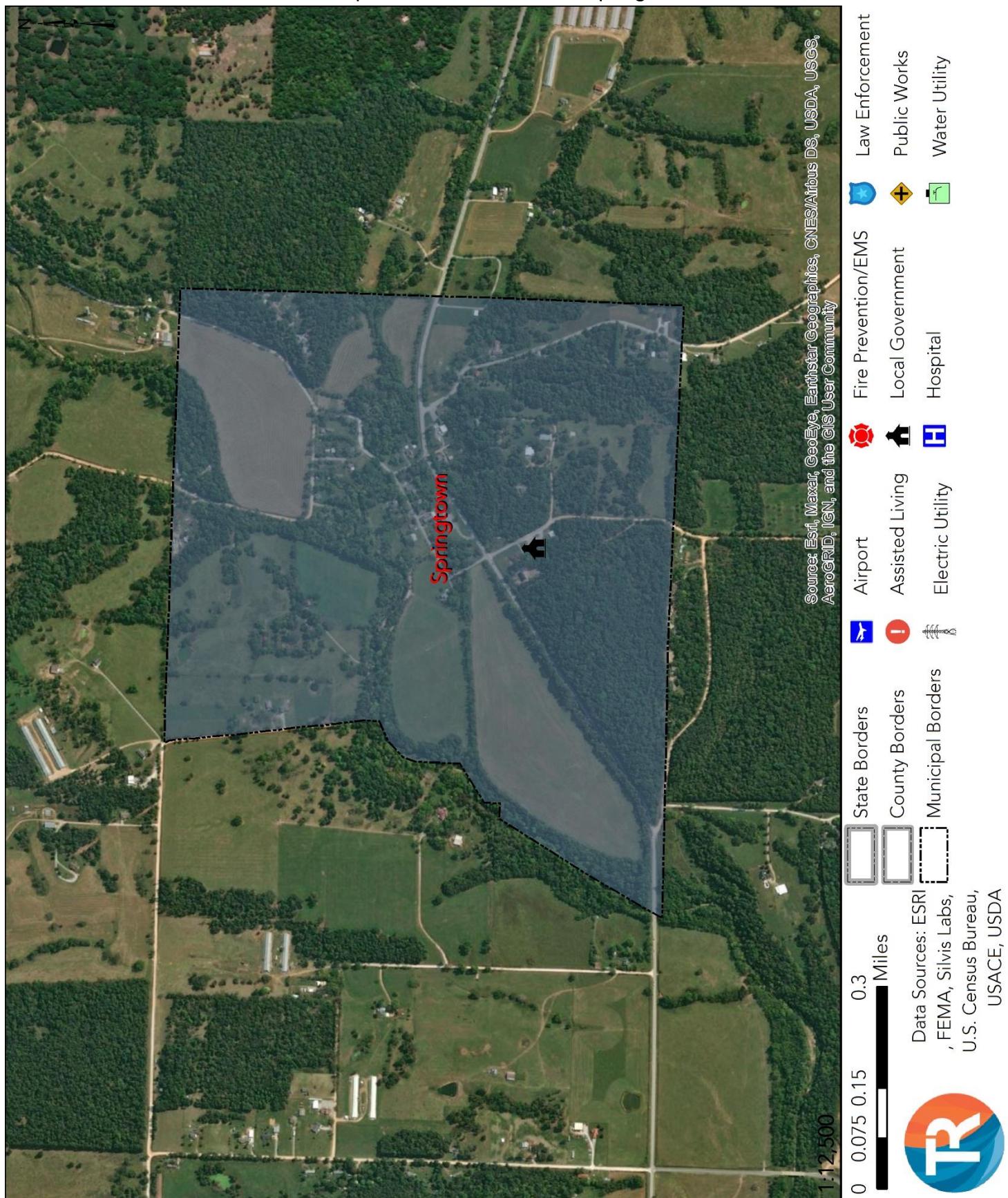
Table 2.83 – Critical Facilities by Owner, Springtown

Name	Type	Location
Springtown Town Hall	Government	Springtown

Map 2.40 – Community Profile, Springtown



Map 2.42 – Critical Facilities, Springtown



## 2.21 – Sulphur Springs

The latest Census Bureau estimate places 1,032 people living in Sulphur Springs occupying 284 housing units. Its population has grown astronomically since participation in their last plan in 2016.

**Table 2.84 – Population Change, Sulphur Springs**

Year	Estimated Population	Percent Change from 2010	Percent Change from 2016
2010	511	-	-
2016	543	6.26%	-
2020	1,032	101.96%	90.06%

*\*The data are from the U.S. Census Bureau*

Sulphur Springs contains an estimated \$48,225,000 worth of municipal structural inventory broken down into six different structural type classes. The following table shows this breakdown.

**Table 2.85 – Structural Inventory, Sulphur Springs**

Structure Class	Structures	Total Class Value
Agricultural	1	\$107,000
Commercial	7	\$2,419,000
Government	1	\$178,000
Industrial	1	\$359,000
Residential	277	\$45,052,000
Multi-Unit Residential*	1	\$110,000
<b>Total =</b>	<b>288</b>	<b>\$48,225,000</b>

*\*Multi-Unit Residential is defined as a structure with 5 or more residential units*

*\*\*The data are from the Federal Emergency Management Agency*

Of the 214 critical facilities within the planning area, 7 are geographically located in Springdale. The following table lists these facilities.

**Table 2.86 – Critical Facilities by Location, Sulphur Springs**

Name	Type	Owner
Sulphur Springs City Hall	Government	Sulphur Springs
Sulphur Springs Fire Station	Fire Prevention/EMS	Sulphur Springs
Sulphur Springs North Water Tower	Water Utility	Sulphur Springs
Sulphur Springs Police Department	Law Enforcement	Sulphur Springs
Sulphur Springs South Water Tower	Water Utility	Sulphur Springs
Sulphur Springs Streets Dept.	Public Works	Sulphur Springs
Sulphur Springs Water Plant	Water Utility	Sulphur Springs

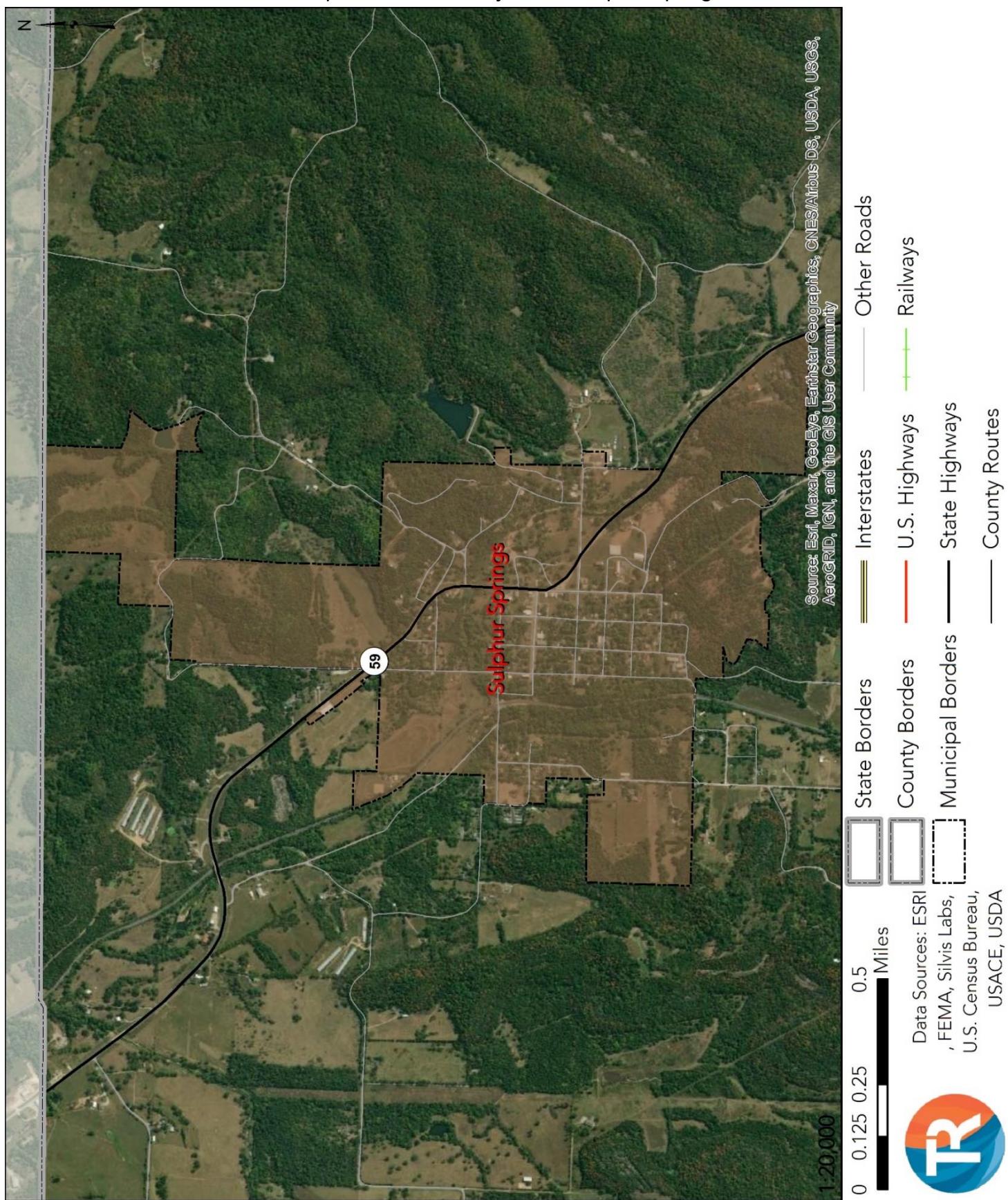
## 2.21 – Sulphur Springs

Of the 214 critical facilities within the planning area, 7 are owned and operated by the Sulphur Springs Government. The table below lists all of these facilities and which geographic location they reside.

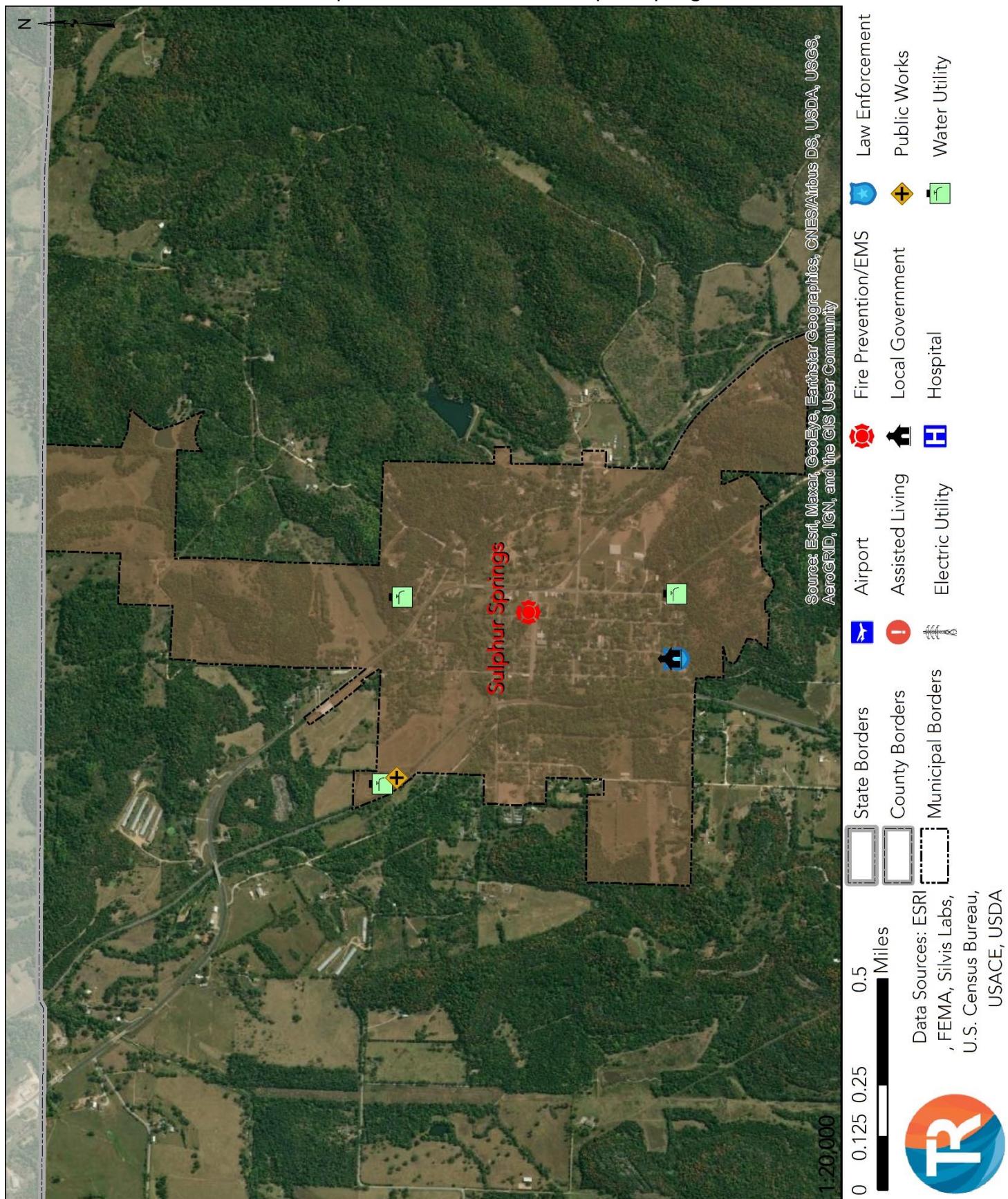
**Table 2.87 – Critical Facilities by Owner, Sulphur Springs**

Name	Type	Location
Sulphur Springs City Hall	Government	Sulphur Springs
Sulphur Springs Fire Station	Fire Prevention/EMS	Sulphur Springs
Sulphur Springs North Water Tower	Water Utility	Sulphur Springs
Sulphur Springs Police Department	Law Enforcement	Sulphur Springs
Sulphur Springs South Water Tower	Water Utility	Sulphur Springs
Sulphur Springs Streets Dept.	Public Works	Sulphur Springs
Sulphur Springs Water Plant	Water Utility	Sulphur Springs

Map 2.42 – Community Profile, Sulphur Springs



Map 2.43 – Critical Facilities, Sulphur Springs



## 2.22 – School Districts

Benton County is serviced by seven public school districts. These school districts provide education to 44,078 students provided by 5,942 teachers, administrators, and support staff.

**Table 2.88 – Community School District Demographics Summary**

School District	Staff	Students	Total
Bentonville	2,317	18,000	20,317
Decatur	100	535	635
Gentry	215	1,455	1,670
Gravette	340	1,925	2,265
Pea Ridge	268	2,215	2,483
Rogers	2,100	15,759	17,859
Siloam Springs	602	4,189	4,791
<b>Total =</b>	<b>5,942</b>	<b>44,078</b>	<b>50,020</b>

*\*The data are from the school districts and the State of Arkansas Department of Education.*

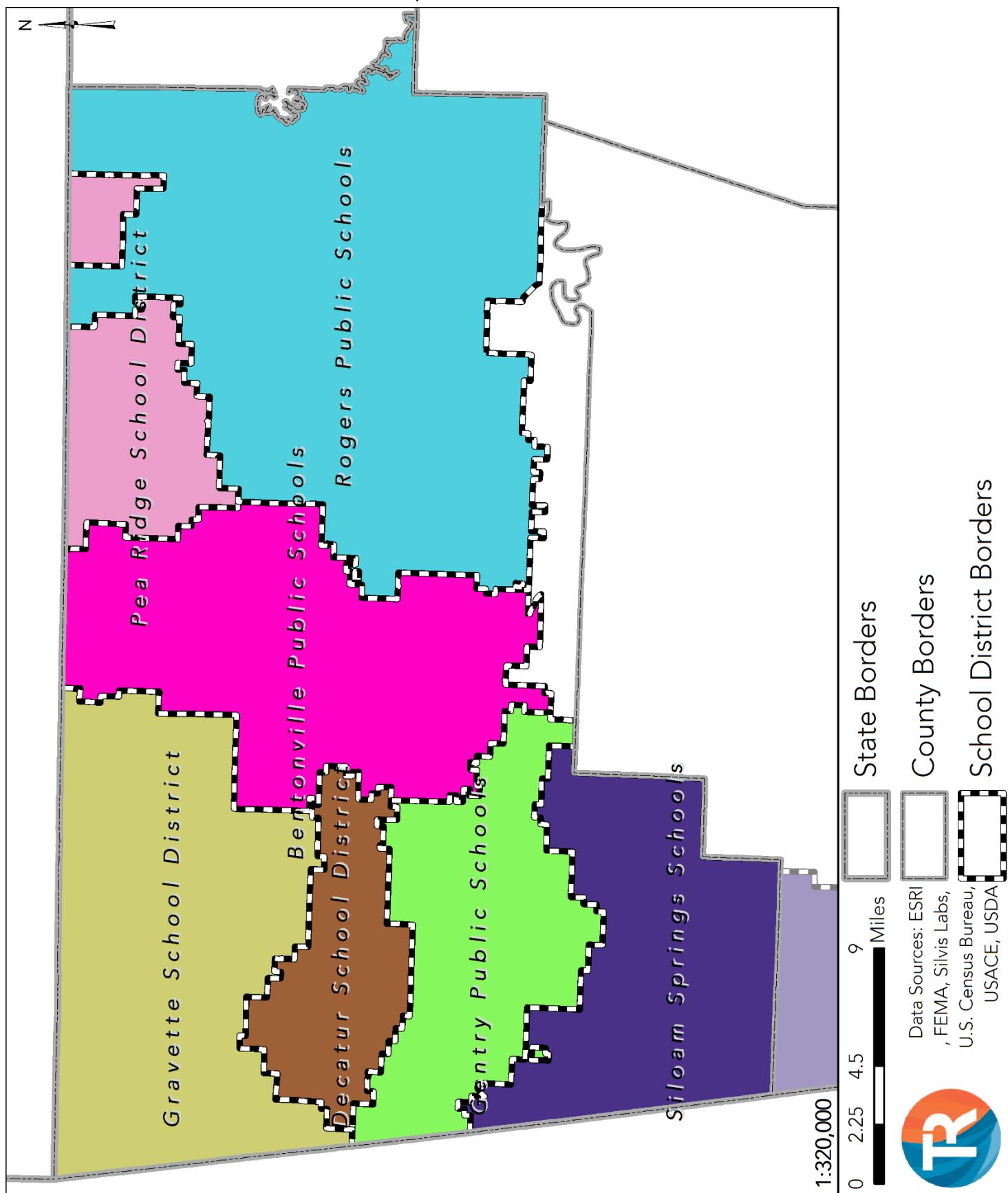
The total insured value of their structures and contents is \$1,785,546,297 as shown in the table below.

**Table 2.89 – School District Structural Summary**

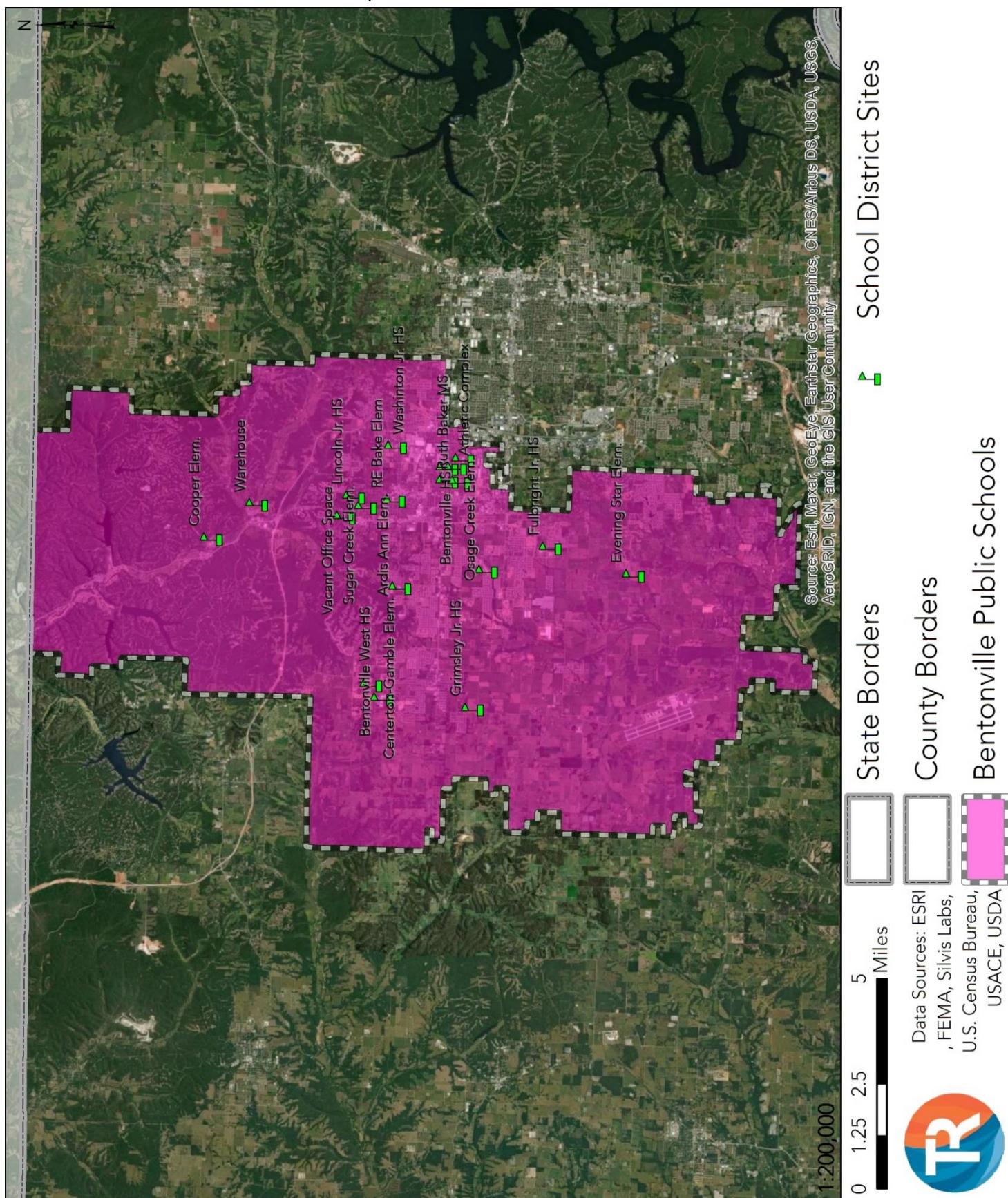
School District	Structures	Contents Value	Structural Value	Total Value
Bentonville	60	\$556,462,891	\$90,022,701	\$648,985,592
Decatur	11	-	\$29,974,460	\$29,974,460
Gentry	28	\$12,797,866	\$65,147,874	\$77,945,740
Gravette	21	\$19,849,576	\$97,814,386	\$117,663,962
Pea Ridge	24	\$19,715,559	\$100,444,404	\$120,159,963
Rogers	53	\$98,421,313	\$533,397,685	\$631,818,998
Siloam Springs	26	\$918,549	\$158,079,033	\$158,997,582
<b>Total =</b>	<b>223</b>	<b>\$708,165,754</b>	<b>\$1,074,880,543</b>	<b>\$1,785,546,297</b>

*\*The data are from the school districts and the State of Arkansas Department of Education.*

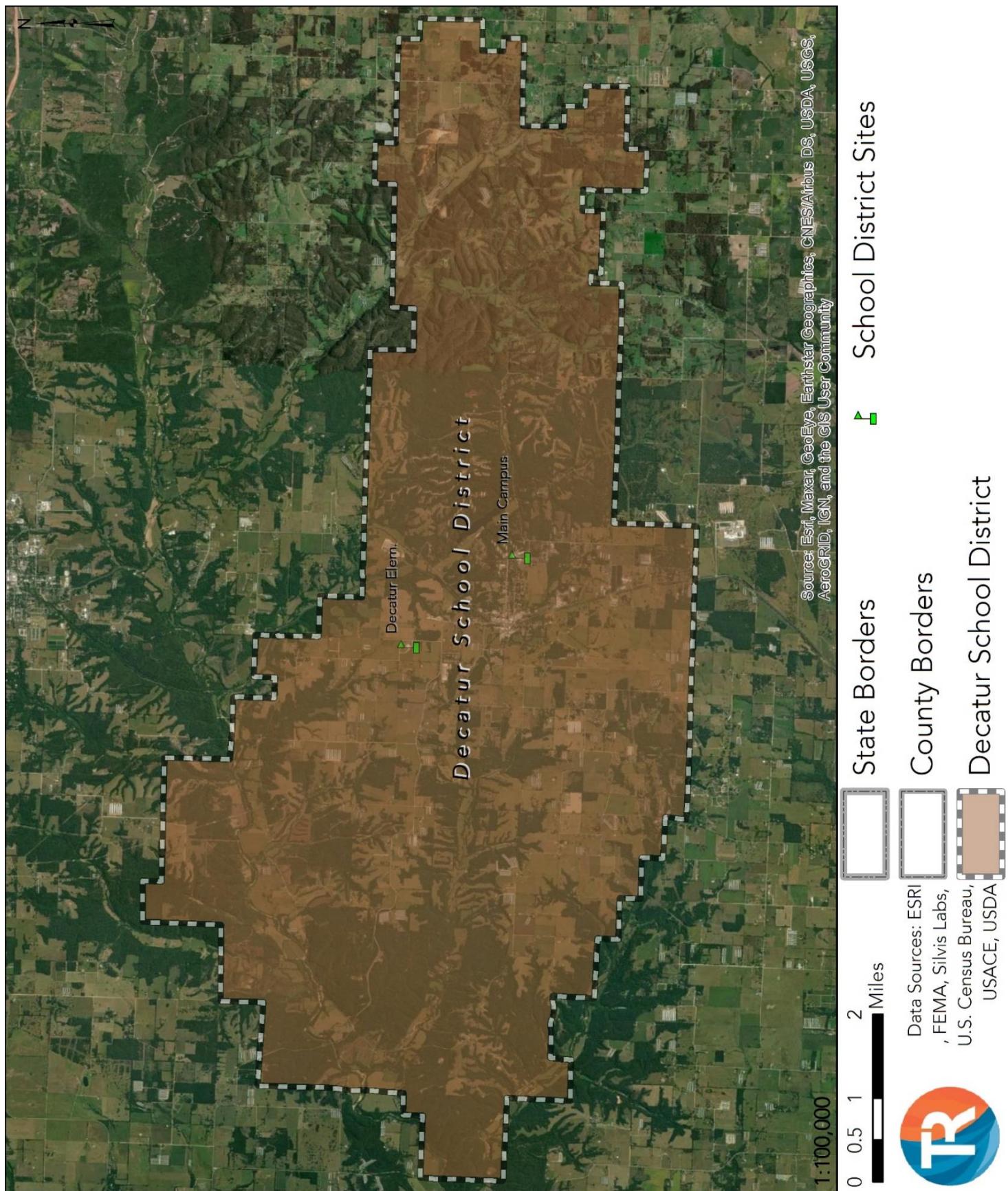
Map 2.44 – School Districts



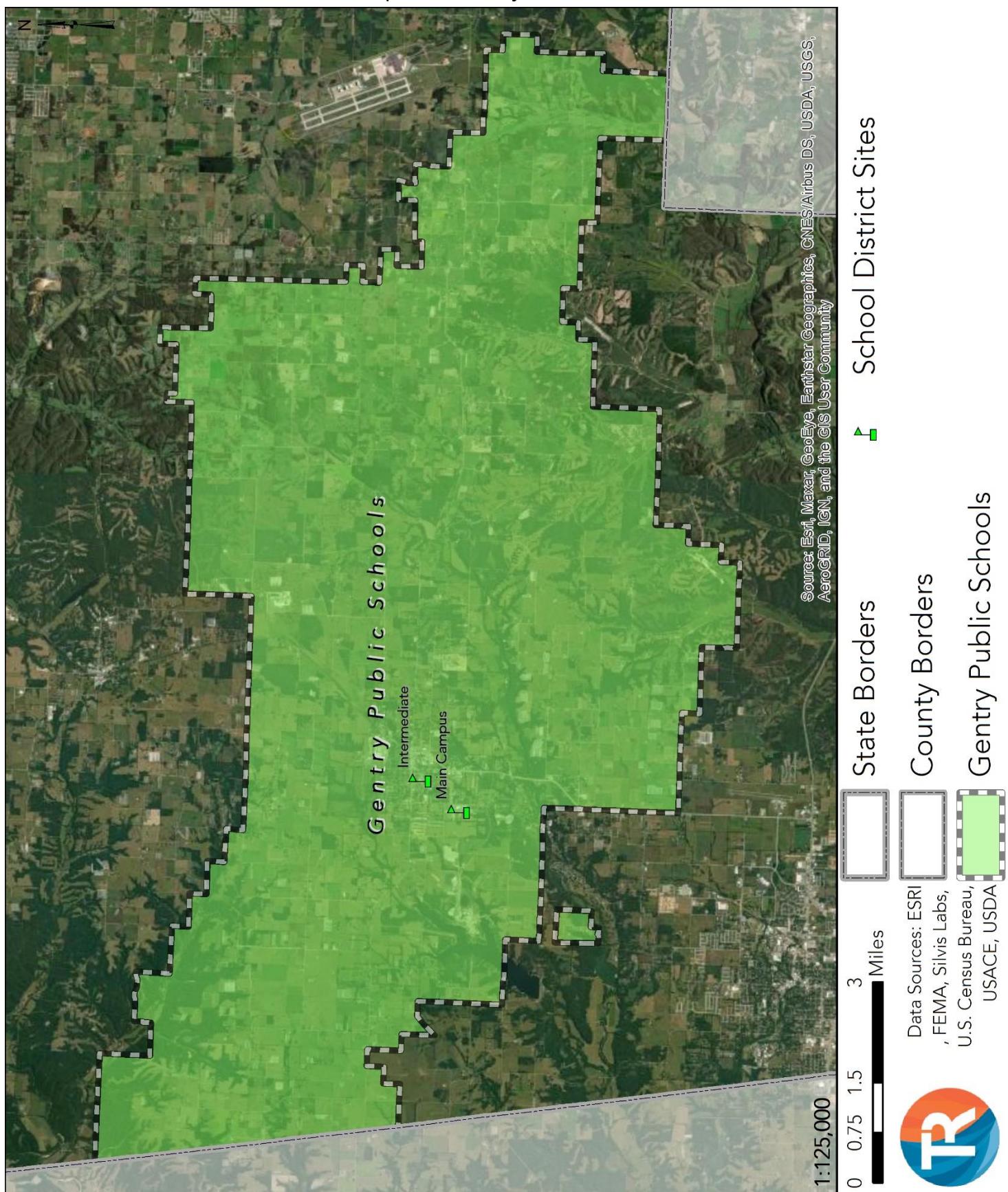
Map 2.45 – Bentonville School District



Map 2.46 – Decatur School District



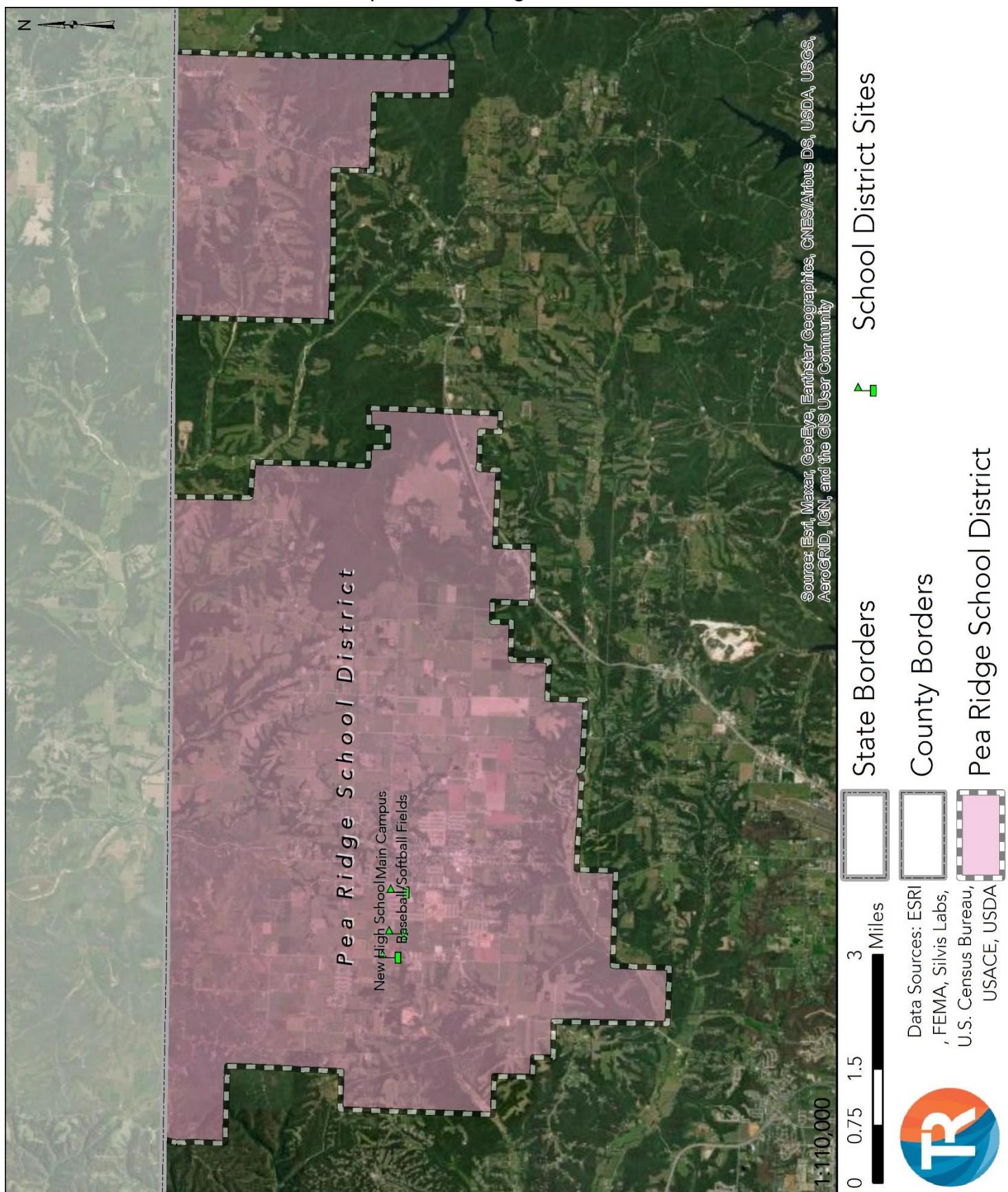
Map 2.47 – Gentry School District



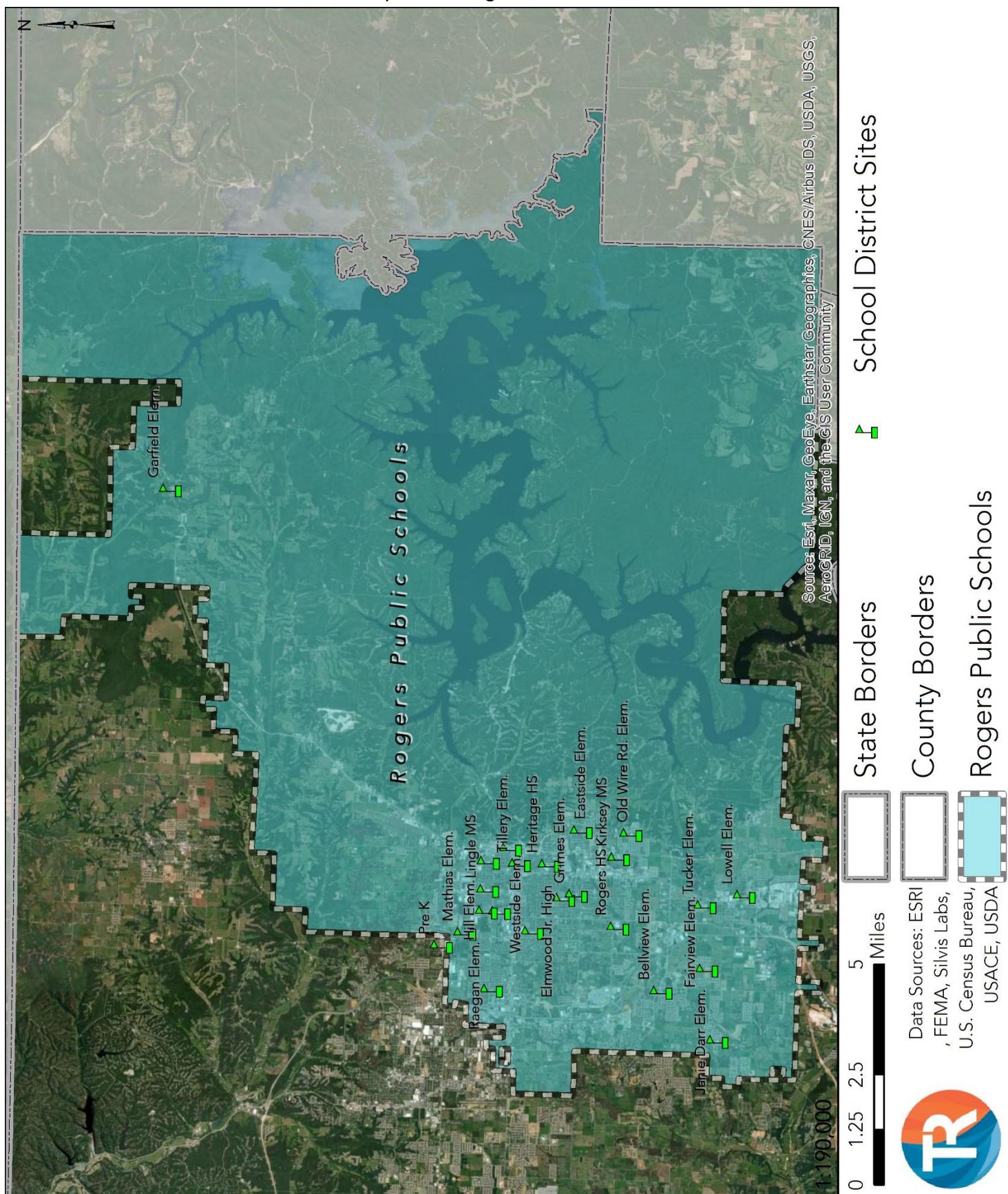
Map 2.48 – Gravette School District



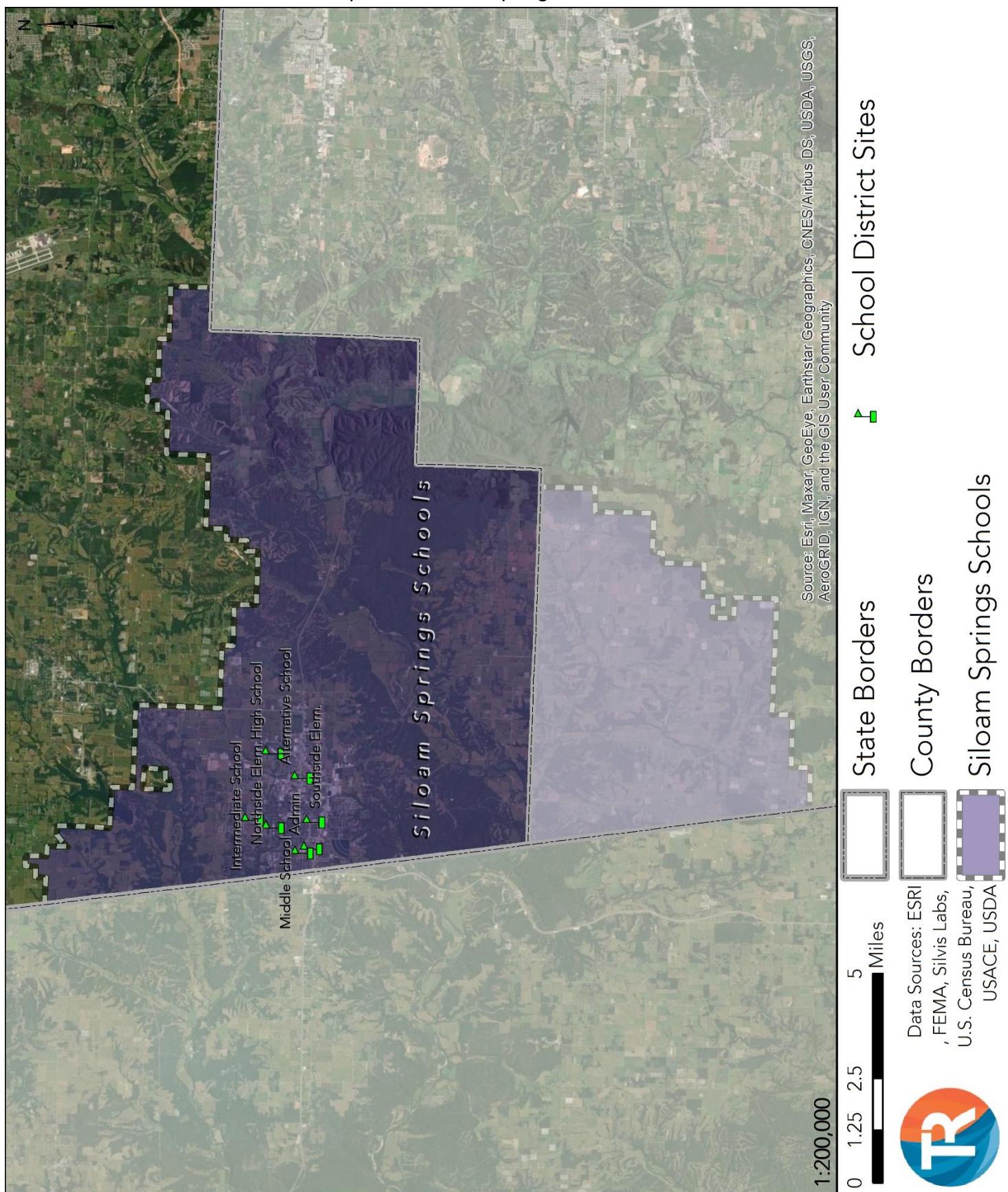
Map 2.49 – Pea Ridge School District



Map 2.50 – Rogers School District



Map 2.51 – Siloam Springs School District



# Section 3 – Risk Assessment

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## ***Purpose***

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This hazard mitigation plan’s risk assessment depicts each participating entity’s risk to each of the profiled hazards. These calculated risks serve as the justifying basis for the proposed mitigation activities and projects found in Section 4. Additionally, this risk assessment can further serve Benton County and the plan’s participating entities by aiding in decision making processes of other planning initiatives.

## ***Intent***

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The hazards profiled within this section were identified and selected based on their ability to reasonably affect the entire planning area or portions of Benton County and its communities. If a hazard has been excluded or removed, justification has been given.

To properly and accurately depict each hazard’s risk, Two Rivers Emergency Management employed various methodologies appropriately tailored by hazard application. Generally, each hazard profile; describes the type, location, and extent the hazard; includes information on previous occurrences of hazard events and estimates on future occurrence; describes a hazard’s estimated impact; assesses each participating entity’s vulnerability to a hazard; and analyzes how changes in development have affected an area since the development of Benton County’s last hazard mitigation plan.

Each hazard profile conforms to FEMA’s requirements as set forth in its Local Mitigation Plan Review Guide, Elements B1 through B3, and B4 and D1 where applicable.

## **3.1 – Methodology**

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The natural characteristics of each hazard dictate that not one single approach works to accurately depict risk. In general, the hazard profiled in this plan can be categorized as either area-wide hazards or those with discretely identified hazard areas.

### ***Area-Wide Hazards***

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Area-wide hazards indiscriminately impact the entire planning. Since it is beyond scientific measurement where an area-wide hazard, such as winter storms, will impact, and likely it will impact everywhere, it is reasonable to assume any significant growth and development will increase vulnerability and risk. Additionally, a hazard such as a tornado, will impact a specific path, but we are unable to predict where exactly it will begin. Thus, having any increase in growth or development increases the chance that a tornado will strike a developed segment of a jurisdiction. For this plan, this is relevant for droughts, earthquakes, flash flooding, tornadoes, severe storms, and winter storms.

### ***Hazards with Identified Hazard Areas***

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If a jurisdiction grows or develops into an established dam spillway, floodplain, WUI zone, or an area with greater linear extensibility, that jurisdiction’s vulnerability and risk increase by an amount equal to

### 3.1 – Methodology

the development or growth that now exists in that identified hazard area. For this plan, this is relevant for riverine flooding and wildfires.

## 3.2 – Hazard Selection

Appropriately identifying and selecting which natural hazards will be assessed is the first step in developing a risk assessment. The State of Arkansas Division of Emergency Management profiles fifteen natural and four human-caused hazards in its statewide hazard mitigation plan. Of those hazards, this plan profiles seven of those hazards.

Benton County has been designated as an affected area by federal declaration 15 times. These declarations show a broad picture of the which hazards pose the greatest threat to the planning area. The table below lists each federal disaster declaration, the hazards which caused the impact, and the dates of the events:

**Table 3.1 – Disaster Declarations**

Designation	Declaration	Hazards	Start Date	End Date
DR-4318	6/15/2017	Flooding, Tornadoes, Severe Storms	4/26/2017	5/19/2017
DR-4254	2/5/2016	Flooding, Tornadoes, Severe Storms	12/26/2015	1/22/2016
DR-4143	9/4/2013	Flooding, Severe Storms	8/8/2013	8/14/2013
DR-1975	5/2/2011	Flooding, Tornadoes, Severe Storms	4/14/2011	6/3/2011
DR-1819	2/6/2009	Winter Storm	1/26/2009	1/30/2009
DR-1758	5/20/2008	Flooding, Tornadoes, Severe Storms	5/2/2008	5/12/2008
DR-1751	3/26/2008	Flooding, Tornadoes, Severe Storms	3/18/2008	4/28/2008
DR-1528	6/30/2004	Flooding, Severe Storms	5/30/004	6/9/2004
DR-1472	6/6/2003	Flooding, Tornadoes, Severe Storms	5/2/2003	6/10/2003
DR-1354	12/29/2000	Winter Storm	12/12/2000	1/8/2001
DR-865	5/15/1990	Flooding, Severe Storms	5/1/1990	6/3/1990
DR-437	6/8/1974	Flooding, Severe Storms	-	-
DR-375	4/27/1973	Flooding, Severe Storms	-	-
DR-321	1/27/1972	Flooding, Severe Storms	-	-
DR-254	2/15/1969	Flooding, Severe Storms	-	-

\*The data are from the Federal Emergency Management Agency

Selecting only hazards that pose a reasonable risk to the planning area allows the mitigation strategy found in Section 4 to focus Benton County's capabilities and resources where they are needed most and can be the most effective. We found those hazards to be: Dam Failures, Droughts, Floods (River and Flash), Severe Storms (Hail, Thunderstorms, and Windstorms), Tornadoes, Wildfires, and Winter Storms.

### 3.2 – Hazard Selection

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The table below lists all of the natural hazards included in the statewide plan, whether they are included in this plan, and if excluded, a summary justification of why it has been excluded. A lengthier justification for exclusion can be found later in this section, 3.9 – Excluded Hazards.

**Table 3.2 – Hazard Inclusion**

Hazard	Determination	Summary Justification
Dam & Levee Failure	Included	High Hazard Dams Identified
Drought	Included	Disaster History
Earthquakes	Excluded	No reasonable risk
Expansive Soils	Excluded	No reasonable risk
Landslide	Excluded	No reasonable risk
River & Flash Flood	Included	Disaster History
Sinkholes	Excluded	No reasonable risk
Thunderstorms	Included	Disaster History
Tornado & Windstorm	Included	Disaster History
Wildland or Grass Fire	Included	Risk Identified
Winter Storms	Included	Disaster History

### 3.3 – Dam Failures

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A dam is a barrier across flowing water that obstructs, directs or slows down the flow, often creating a reservoir, lake or impoundments. Most dams have a section called a spillway or weir, over or through, which water flows, either intermittently or continuously.

Dams and levees can fail in a number of ways. A rainy-day failure occurs when heavy rain exceeds the storage capacity of the dam or levee and overflows. A sunny day (or piping) failure occurs due to slope failure, smaller

structural faults, or a controlled spillway release done to prevent full failure of overflowing water. Sunny day failures release a dam or levee's water over a period of time based on the size of the leak. In these scenarios, it is assumed the dam or levee is holding its normal water volume. A full or sudden failure caused by a major structural integrity issue is classified as a percentage of the probable maximum precipitation (PMP), i.e. a 50% PMP Breach means there was a sudden release of water while the dam is holding 50% of its maximum volume. In each instance an overwhelming amount of water, and potentially debris, is released.



Common causes for dam and levee failure are:

- Sub-standard construction materials/techniques
- Spillway design error
- Geological instability caused by changes to water levels during filling or poor surveying
- Sliding of a mountain into the reservoir
- Poor maintenance, especially of outlet pipes
- Human, computer or design error
- Internal erosion, especially in earthen dams.
- Earthquakes

Dam failures are rare, but when they occur can cause loss of life, and immense damage to infrastructure and the environment. The planning area contains five USACE designated high-hazard dams, the Lake Ann Dam, Lake Atlanta Dam, Lake Keith Dam, Little Flint Creek Dam, and the Loch Lomond Dam.

#### Location & Extent

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Response to a dam failure would be extensive and require wide ranging recovery efforts for reconstruction of the original flood control structures and any damaged property. There is usually little to no warning in the event of a dam or levee failure, depending on what lies below a dam or levee. By definition, all of the high-hazard dams threaten population and structures.

Numerous topographic, hydrologic, and weather conditions (how much water is stored at a dam based on rainfall) influence the extent and speed of waterflow exiting a failed or damaged dam. It is difficult to ascertain how quickly waters from a dam failure could arrive given that failure can occur as a full failure or a sunny day failure. Additionally, without a full hydrological assessment performed the USACE, it would be difficult to identify what volume of water would reach what point and how quickly.

### 3.3 – Dam Failures

The following table provides the best estimate of potential water volume flowing from the planning area's high hazard dams and levees in the event of a failure.

**Table 3.3 – High Hazard Dams**

Dam	Last Inspection Date	Dam Height (Feet)	Max Volume (Acre Feet)
Lake Ann	12/28/2016	65	2,900
Lake Atlanta	4/5/2017	43	800
Lake Keith	1/13/2009	17	50
Little Flint Creek	11/3/2016	115	24,400
Loch Lomond	12/28/2016	96	23,099

\*The data are from the USACE Inventory of Dams & the USACE National Levee Database.

### History & Probability

There have been no failures of high hazard dams in the planning area. Due to the lack of history of such events in the planning area, the probability of experiencing another levee failure event is categorized as 'rare' or under a 1% probability.

### Vulnerability of and Impact on Facilities

Facilities within a dam or levee failure inundation area are typically at extreme risk. The water level of a dam or levee failure can range from inches, causing damage similar to small floods, to completely engulfing a structure in water. Additionally, the speed of the flow can cause variations in the impact. A slow flow will cause damage similar to a riverine flood, however, a fast moving, high-level flow has the potential to completely destroy a structure, wash it away, and create debris that impacts other structures. See the following tables for a breakdown of the planning area's structural vulnerability and impact from a failure of the five high hazard dams in the planning area. None of the public-school districts' structures are threatened by the high-hazard dams.

**Table 3.4 – Vulnerability & Impact of Structures, Bella Vista - Lake Ann Dam**

Structure Class	Structure Count	Total Class Value
Agricultural	1	\$244,000
Commercial	2	\$1,009,000
Government	0	\$4,000
Industrial	1	\$307,000
Residential	338	\$63,204,000
Multi-Unit Residential*	0	\$0
<b>Total =</b>	<b>342</b>	<b>\$64,768,000</b>

\*Multi-Unit Residential is defined as a structure with 5 or more residential units.

\*\*The data are from the U.S. Census Bureau and FEMA.

### 3.3 – Dam Failures

**Table 3.5 – Vulnerability & Impact of Structures, Benton County – Lake Atlanta Dam**

Structure Class	Structure Count	Total Class Value
Agricultural	1	\$351,000
Commercial	8	\$6,319,000
Government	0	\$0
Industrial	4	\$642,000
Residential	354	\$63,470,000
Multi-Unit Residential*	0	\$0
<b>Total =</b>	<b>367</b>	<b>\$70,782,000</b>

\*Multi-Unit Residential is defined as a structure with 5 or more residential units.

\*\*The data are from the U.S. Census Bureau and FEMA.

**Table 3.6 – Vulnerability & Impact of Structures, Rogers – Lake Atlanta Dam**

Structure Class	Structure Count	Total Class Value
Agricultural	1	\$322,000
Commercial	2	\$363,000
Government	0	\$0
Industrial	4	\$1,182,000
Residential	39	\$5,670,000
Multi-Unit Residential*	0	\$0
<b>Total =</b>	<b>46</b>	<b>\$7,537,000</b>

\*Multi-Unit Residential is defined as a structure with 5 or more residential units.

\*\*The data are from the U.S. Census Bureau and FEMA.

**Table 3.7 – Vulnerability & Impact of Structures, Cave Springs – Lake Keith Dam**

Structure Class	Structure Count	Total Class Value
Agricultural	0	\$0
Commercial	12	\$7,772,000
Government	0	\$0
Industrial	0	\$0
Residential	37	\$8,125,000
Multi-Unit Residential*	0	\$0
<b>Total =</b>	<b>49</b>	<b>\$15,897,000</b>

\*Multi-Unit Residential is defined as a structure with 5 or more residential units.

\*\*The data are from the U.S. Census Bureau and FEMA.

**Table 3.8 – Vulnerability & Impact of Structures, Benton County – Little Flint Creek Dam**

Structure Class	Structure Count	Total Class Value
Agricultural	1	\$322,000
Commercial	0	\$0
Government	0	\$0
Industrial	0	\$0
Residential	15	\$3,357,000
Multi-Unit Residential*	0	\$0
<b>Total =</b>	<b>16</b>	<b>\$3,679,000</b>

\*Multi-Unit Residential is defined as a structure with 5 or more residential units.

\*\*The data are from the U.S. Census Bureau and FEMA.

### 3.3 – Dam Failures

**Table 3.9 – Vulnerability & Impact of Structures, Benton County – Loch Lomond Dam**

Structure Class	Structure Count	Total Class Value
Agricultural	0	\$0
Commercial	1	\$137,000
Government	0	\$0
Industrial	1	\$51,000
Residential	0	\$0
Multi-Unit Residential*	0	\$0
<b>Total =</b>	<b>1</b>	<b>\$188,000</b>

\*Multi-Unit Residential is defined as a structure with 5 or more residential units.

\*\*The data are from the U.S. Census Bureau and FEMA.

**Table 3.10 – Vulnerability & Impact of Structures, Bella Vista – Loch Lomond Dam**

Structure Class	Structure Count	Total Class Value
Agricultural	0	\$0
Commercial	1	\$15,000
Government	0	\$0
Industrial	1	\$359,000
Residential	88	\$20,042,000
Multi-Unit Residential*	0	\$0
<b>Total =</b>	<b>89</b>	<b>\$20,416,000</b>

\*Multi-Unit Residential is defined as a structure with 5 or more residential units.

\*\*The data are from the U.S. Census Bureau and FEMA.

### **Vulnerability of and Impact on Critical Facilities**

The Bella Vista Substation is located within the Lake Ann Dam's inundation area. It is the only critical facility in the planning area at risk to a dam failure.

### **Vulnerability of and Impact on Population**

Populations within a dam failure inundation area are at extreme risk. Depending on the speed of the water's arrival, a community's population may not have time to evacuate. Additionally, evacuation routes can be blocked by the dam waters. If flood waters arrive quickly, many people can die.

Depending on the elevation of the water, a community's population may not have any available shelter to avoid the waters. Dam failures in total directly threaten 877 housing units and 1,894 people throughout the planning area. None of the public-school districts' students, staff, or faculty area threatened by a dam or failure. The following table breaks down the housing units and estimated population threatened across each dam and plan stakeholder.

**Table 3.11 – Vulnerability & Impact of Structures, Bella Vista – Loch Lomond Dam**

Dam	Jurisdiction	Housing Units	Population
Lake Ann	Bella Vista	338	714
Lake Atlanta	Benton County	359	804
Lake Atlanta	Rogers	39	94
Lake Keith	Cave Springs	37	91
Little Flint Creek	Benton County	15	25
Loch Lomond	Bella Vista	89	166
Loch Lomond	Benton County	0	0
Total =		877	1,894

\*Multi-Unit Residential is defined as a structure with 5 or more residential units.

\*\*The data are from the U.S. Census Bureau and FEMA.

### **Vulnerability of and Impact on Systems**

A failure of any of the high hazard dams would have an impact on the directly affected areas previously outlined. However, systems as a whole would be minimally impacted by a dam failure in the planning area. A loss of water reserves as a result of a dam failure is not likely to affect the planning area's agricultural production due to the over abundance of storage tanks and water reservoirs throughout the planning area.

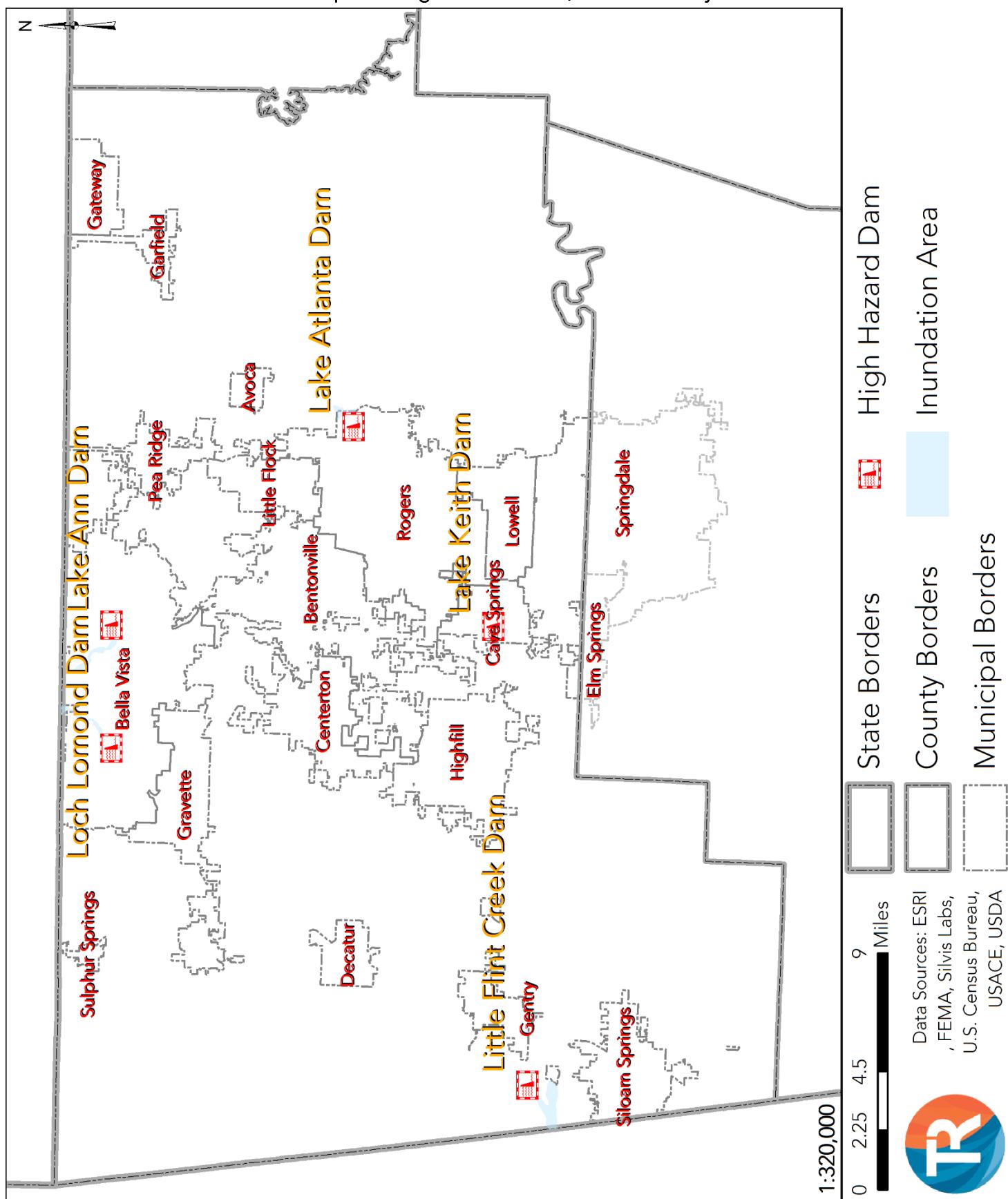


The planning area's transportation infrastructure would be impacted by a dam failure, but not to a great degree. Most primary and secondary roads can be circumvented in the event that a road is damaged from a dam failure. The table below lists primary and secondary roads that are located in high hazard dam inundation areas. The Loch Lomond Dam does not threaten any primary or secondary roadways.

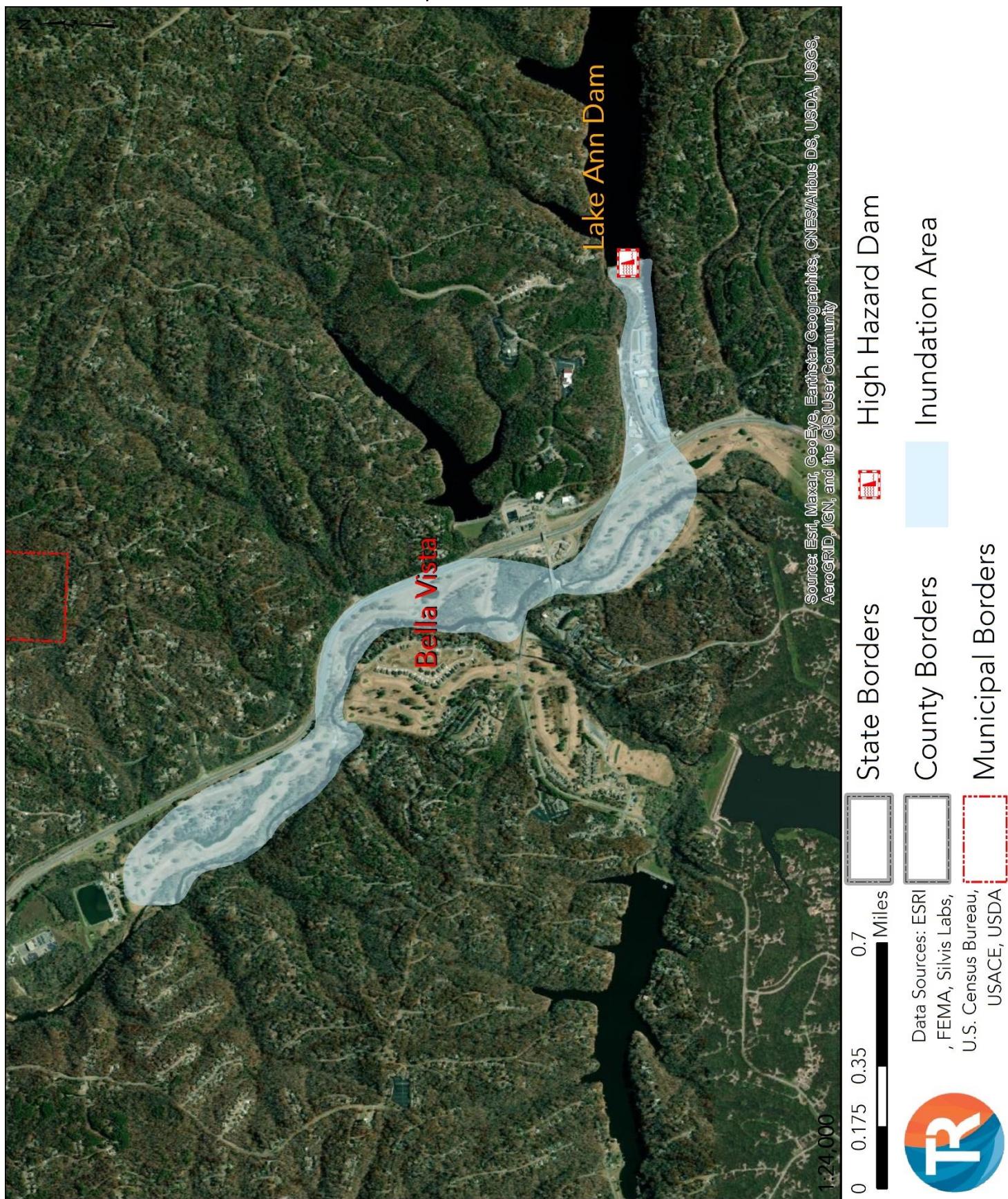
**Table 3.12 – Vulnerability & Impact of Structures, Rogers – Lake Atlanta Dam**

Dam	Primary/Secondary Road	Location
Lake Ann	U.S. Highway 71	Northern portion of Bella Vista
Lake Atlanta	State Highway 12	East of Rogers
Lake Keith	State Highway 264	Western edge of Cave Springs
Little Flint Creek	State Highway 43	North of Siloam Springs

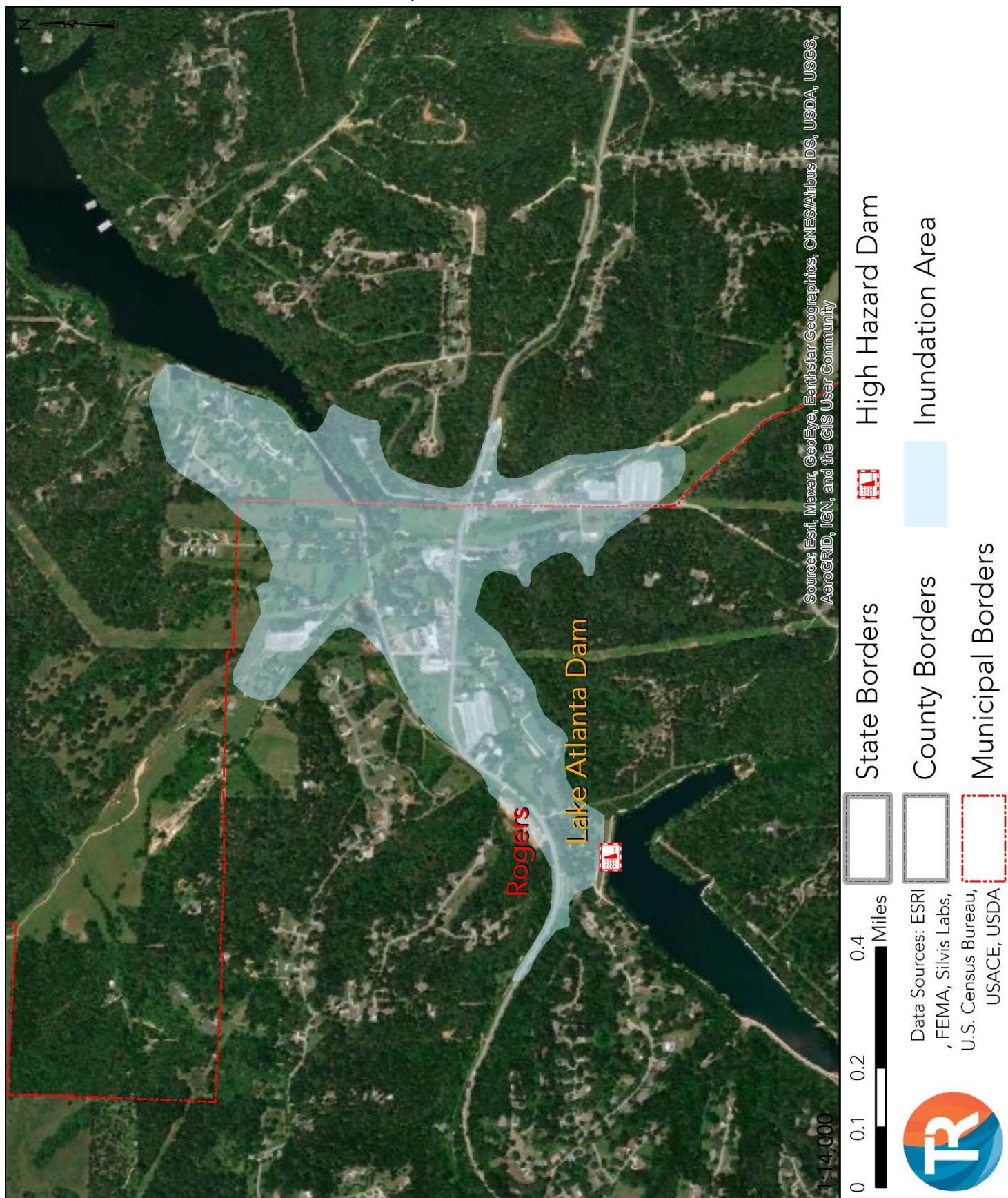
Map 3.1 – High Hazard Dams, Benton County



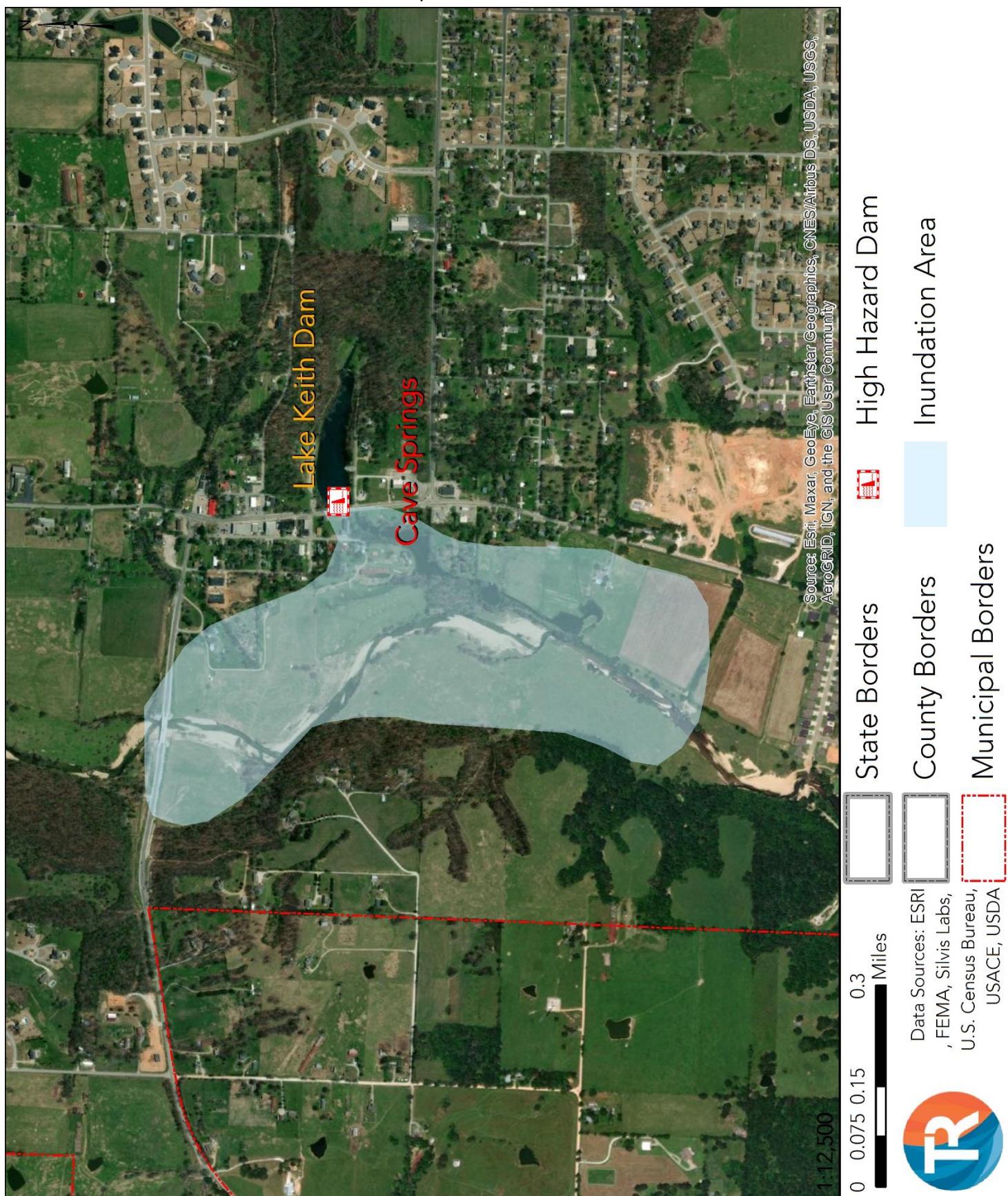
Map 3.2 – Lake Ann Dam



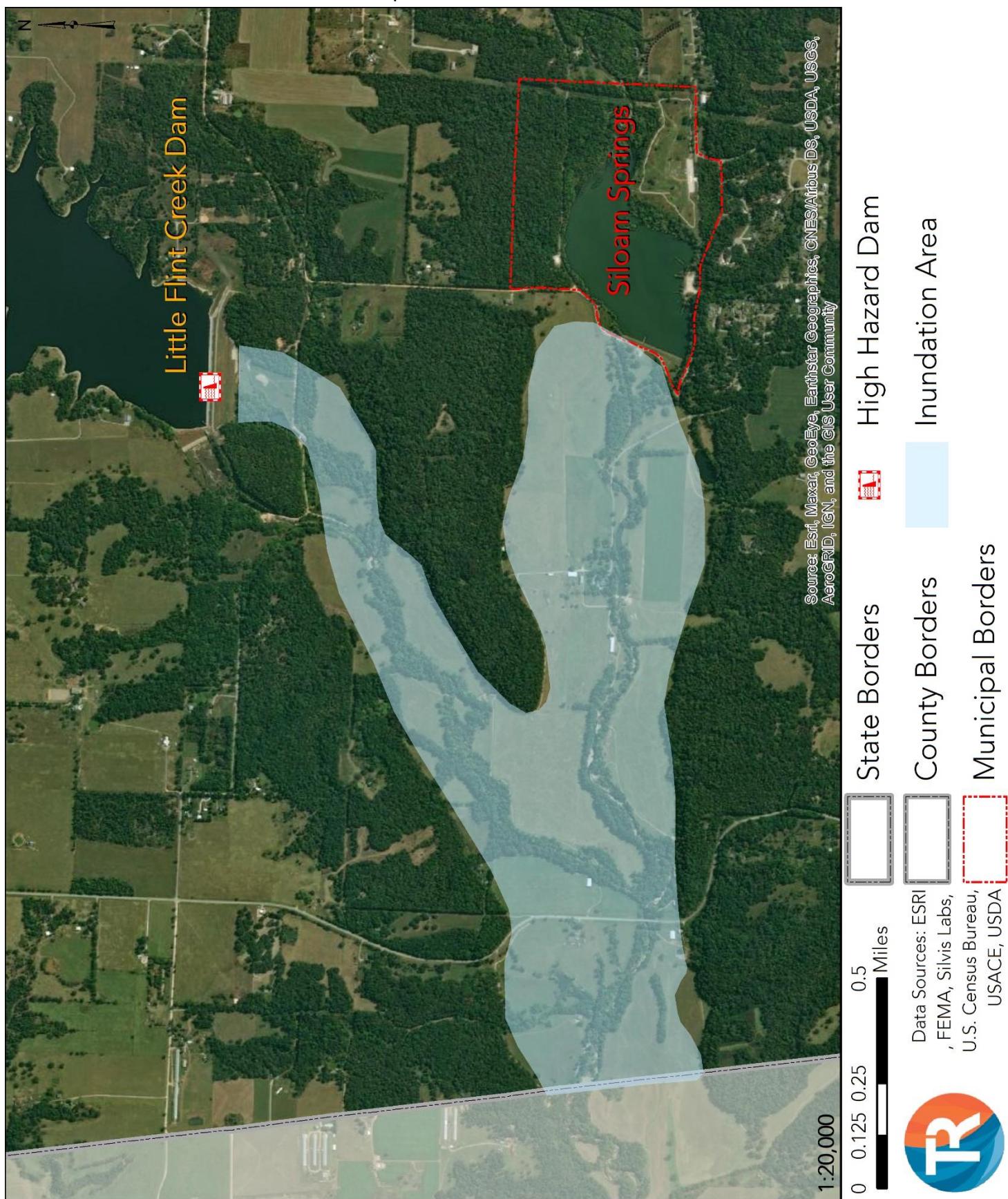
Map 3.3 – Lake Atlanta Dam



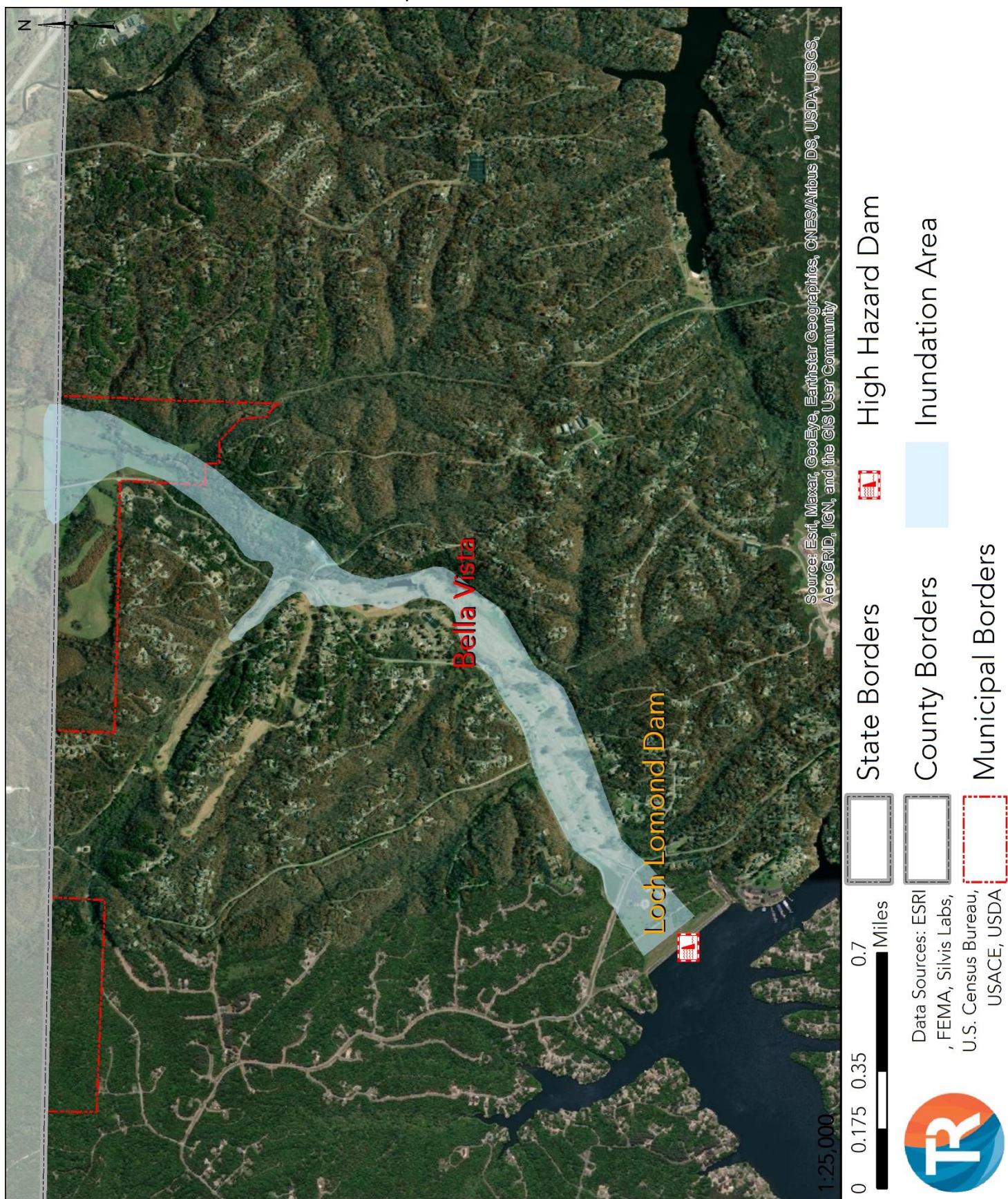
Map 3.4 – Lake Keith Dam



Map 3.5 – Little Flint Creek Dam



Map 3.6 – Loch Lomond Dam



## 3.4 – Droughts

Drought is an abnormally dry period lasting months or years when an area has a deficiency of water and precipitation in its surface and or underground water supply. The hydrological imbalance can be grouped into the following non-exclusive categories.



*Agricultural:* When the amount of moisture in the soil no longer meets the needs of previously grown crops.

*Hydrological:* When surface and subsurface water levels are significantly below their normal levels.

*Meteorological:* When there is a significant departure from the normal levels of precipitation.

*Socio-Economic:* When the water deficiency begins to significantly affect the population.

Droughts are regularly monitored by multiple federal agencies using a number of different indices. Typically, they are seasonal occurring in the late spring through early fall. Drought monitoring focuses on precipitation and temperature. When precipitation is less than normal, and natural water supplied begins to decrease, a drought is occurring.

When below average, little or no rain falls soil can dry out and plants can die. If unusually dry weather persists and water supply problems develop the time period is defined as a drought. Human activity such as over farming, excessive irrigation, deforestation, and poor erosion controls can exacerbate a drought's effects. It can take weeks or months before the effects of below average precipitation on bodies of water are observed. Depending on the region droughts can happen quicker, noticed sooner, or have their effects naturally mitigated. The more humid and wet an area is, the quicker the effects will be realized. A naturally dry region, which typically relies more on subsurface water will take more time to actualize its effects.

Periods of drought can have significant environment, agricultural, health, economic, and social consequences. The effects vary depending on vulnerability and regional characteristics. Droughts can also reduce water quality through a decreased ability for natural rivers and streams to dilute pollutants and increase contamination. See the list below for the most common effects of droughts.

- Diminished crop growth or yield
- Erosion
- Dust storms
- Ecosystem and environmental damage
- Increased probability of wildfires
- Reduced electricity production due to reduced flow through hydroelectric dams
- Shortages of water for industrial production

### Location & Extent

Drought is part of normal climate fluctuations in the United States. According to Benton County's drought history, most drought events affect the county for roughly 4 to 12 weeks in length. It should be noted, though, that climatic variability and the uncertainty of the future could contain dry conditions for

### 3.4 – Droughts

up to years at a time. Droughts occur over large geographic areas. It is extremely likely that if any part of the planning area is experiencing a drought that the whole planning area will also be experiencing drought conditions.

Historically, droughts have been measured by a number of indices, most notably the Palmer Drought Severity Index. However, NOAA currently uses an updated drought severity classification, the Drought Monitor Scale, shown below. Given the complex nature and unpredictability of droughts, the planning area can be affected by a drought ranging from D0 to D4 on the Drought Monitor Scale.

Table 3.13 – Drought Monitor Scale

LEVEL	DESCRIPTION
 Abnormally Dry	<p>D0</p> <ul style="list-style-type: none"><li>• Short-term dryness slowing planting, growth of crops</li><li>• Some lingering water deficits</li><li>• Pastures or crops not fully recovered</li></ul>
 Moderate Drought	<p>D1</p> <ul style="list-style-type: none"><li>• Some damage to crops, pastures</li><li>• Some water shortages developing</li><li>• Voluntary water-use restrictions requested</li></ul>
 Severe Drought	<p>D2</p> <ul style="list-style-type: none"><li>• Crop or pasture loss likely</li><li>• Water shortages common</li><li>• Water restrictions imposed</li></ul>
 Extreme Drought	<p>D3</p> <ul style="list-style-type: none"><li>• Major crop/pasture losses</li><li>• Widespread water shortages or restrictions</li></ul>
 Exceptional Drought	<p>D4</p> <ul style="list-style-type: none"><li>• Exceptional and widespread crop/pasture losses</li><li>• Shortages of water creating water emergencies</li></ul>

### 3.4 – Droughts

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Drought warning is based on a complex interaction of many different variables, water uses, and consumer needs. Drought warning is directly related to the ability to predict conditions that produce drought, primarily precipitation and temperature. A drought is not official or declared until dry conditions have been met for a period of time, meaning that it is inherent that the planning area would be experiencing drought conditions prior to a drought being officially declared.

#### ***History & Probability***

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Comprehensive data on droughts, drought impacts, and drought forecasting is extremely limited and often inaccurate. Due to the complexity of drought monitoring, the complexity of agricultural and livestock market pricing, and the large areas droughts impact, the USDA and USGS have difficulty quantifying and standardizing drought data. Each of these contributing drought factors has confounding variables within them.

Since 2000, the NADM has recorded 506 weeks of drought in the planning area with an average index of 1.35. Please see the table below for a breakdown of the severity of the recorded droughts. For a complete list of recorded drought events, please reference Appendix C.

**Table 3.14 – Drought History**

Drought Severity	Number of Weeks
D0	266
D1	148
D2	48
D3	34
D4	10
<b>Total =</b>	<b>506</b>

\*The data are from the NADM.

Given the historic precedent set by past droughts, it is highly likely that the planning area will experience season-long droughts in the future. As a rough estimate, the planning area should expect to see on average 5.82 months of drought per year or roughly 44.78% of each year.

#### ***Vulnerability of and Impact on Facilities***

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Droughts do not have an impact on structures.

#### ***Vulnerability of and Impact on Critical Facilities***

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Droughts do not have an impact on structures.

#### ***Vulnerability of and Impact on Population***

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Droughts do not have a direct impact that threatens injury or death to the planning area's population.

#### ***Vulnerability of and Impact on Systems***

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Drought's primary impact is on agriculture and livestock and thus can have significant effects on a jurisdiction's agricultural and tourist economies. If the precipitation level is below normal, farmers and

### *3.4 – Droughts*

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ranchers will struggle to grow their crops and feed their livestock. If rivers, streams, and lakes dry up, tourists will be less likely to enjoy a jurisdiction's amenity resources.

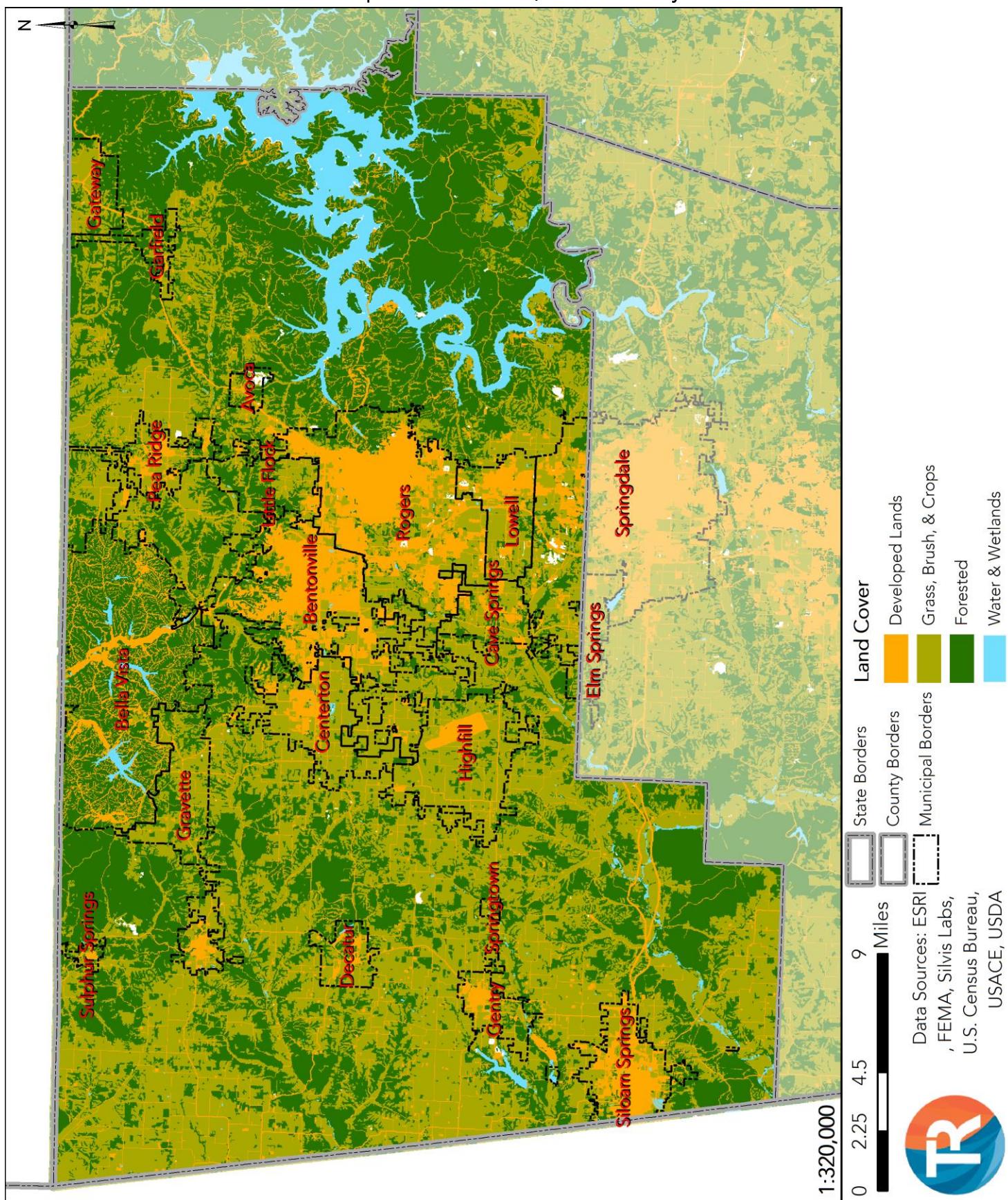
The planning area hosts 1,936 farms across 243,753 acres of land. The USDA estimates that the total value of products from these farms is \$593,371,000 per year. All of them are considered vulnerable to droughts. An estimate of the land engaged in agricultural activities can be found in the map at the end of this section.

### ***Key Considerations***

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The entire planning area is at risk to droughts. Even though the direct impact of a drought will likely affect the county at large and tertiary the municipalities, a drought's effects would quickly spread to the interdependent economies. Additionally, a greater population would place various communities at a higher vulnerability to droughts, the usage of water by the population pales in comparison to the amount used by agricultural activities and is largely negated.

### Map 3.7 – Land Cover, Benton County



## 3.5 – Floods

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Flooding is the most prevalent and costly disaster in the United States. Flooding occurs when water, due to dam failures, rain, or melting snows, exceeds the absorptive capacity of the soil and the flow capacity of rivers, streams or coastal areas. At this point, the water concentration hyper extends the capacity of the flood way and the water enters the floodplain. Floods are most common in seasons of rain and thunderstorms.

Intense rainfall, accompanying the large thunderstorms in the planning area, may result in water flowing rapidly from higher elevations, exceeding river flow capacity, collecting in agricultural areas, inadequate municipal stormwater drainage, or inadequate soil absorption capacity caused by urban and suburban development.

### ***Location & Extent***

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Various types of floods can happen quickly, under an hour, in the form of a flash flood, or accumulate seasonally over a period of weeks as is the case in a riverine flood. Flooding can occur anytime throughout the year, but typically happens in April, May, and October. A variety of factors affect the severity of flash and riverine flooding. These include topography, weather characteristics, development, and geology. Intense flooding will create havoc in any jurisdiction affected. The predicative magnitude of flash and riverine floods varies greatly.

Flash flooding is unpredictable and can occur anywhere throughout the planning area. Benton County, its municipalities, and the school districts are generally equally likely to experience flash flooding in low-lying areas, areas of poor drainage, or suburban sprawl.

Road closures are common after flooding events. Flooding records show it is extremely common for rural roads and older bridges to be damaged or completely washed away. Some reports details of full waterflow over highways. Hotspots for reoccurring flash flooding are Highways 37, 59, 62, 94, 265, Douglas Cemetery Road, Duke Hill Road, around Flint Creek, and the area of Bentonville between the Illinois River and Cave Springs.

NOAA flash flood records indicate that rural parts of the planning area have seen up to 6 inches flash flood waters in developed areas, with countless incidents of up 12 inches of water accumulating throughout the rural parts of the county. Up to 4 inches of water is considered routine in residential neighborhoods. On one occasion, flash flooding closed 80 roads simultaneously as a result of a single event.

Riverine flooding throughout the planning area varies, but is more limited to specific identified floodplains. Special Flood Hazard Areas (SFHA) were identified via effective NFHL maps produced by FEMA and are located later in this hazard profile. FEMA identified floodplains exist in numerous places throughout unincorporated Benton County and every participating municipality. None of the school districts have structures in identified floodplains, but still remain vulnerable to flash flooding. Garfield, Gateway, and Elm Springs do not have any structures within identified floodplains.

**Table 3.15 – Floodplain Classifications**

Zone Class	Description
A	Areas subject to inundation by the 1-percent-annual-chance flood event generally determined using approximate methodologies. Because detailed hydraulic analyses have not been performed, no Base Flood Elevations (BFEs) or flood depths are shown. Mandatory flood insurance purchase requirements and floodplain management standards apply.
AE	Areas subject to inundation by the 1-percent-annual-chance flood event determined by detailed methods. Base Flood Elevations (BFEs) are shown. Mandatory flood insurance purchase requirements and floodplain management standards apply.
AO	Areas subject to inundation by 1-percent-annual-chance shallow flooding (usually areas of ponding) where average depths are between one and three feet. Some Zone AO have been designated in areas with high flood velocities such as alluvial fans and washes. Communities are encouraged to adopt more restrictive requirements for these areas.
B	Areas subject to inundation by 0.2-percent-annual-chance flood event generally determined using approximate methodologies. Because detailed hydraulic analyses have not been performed, no Base Flood Elevations (BFEs) or flood depths are shown.

### ***History & Probability***

Since 1997, NOAA has recorded 125 floods (114 flash and 11 riverine) in the planning area. Most flash floods have shown to accumulate around 4 inches, but upwards of 10-12 has been reported in rural areas.

These floods have caused no recorded injuries and 6 fatalities in the planning area per NWS and NOAA records as well as local reports. They have caused \$0 from riverine and \$7,740,000 from flash floods in property damage. For a complete list of NOAA recorded flash and riverine floods, please reference Appendix C.

Based on the data recorded by NOAA, the planning area should expect a notable flash flood at a rate of 4.56 per year. All FEMA identified SFHAs classified as primary zone A floodplains meaning they are subject to inundation at a rate of 1% per year, while those identified as zone B are subject to riverine flood at 0.2% per year. Please see the table above for the various floodplain classifications that exist throughout the planning area.

### ***Vulnerability of and Impact on Facilities***

Benton County and the participating jurisdictions have agricultural, commercial, industrial, and residential structures in floodplains. Flooding can cause minimal or complete damage to any of these types of facilities taking them offline for days to years depending on the resources available and remediation costs after an event.

The average riverine flood event in Benton County costs \$0. The average flash flood costs \$67,895, while the existing range of a single incident has been from \$0 to \$2,000,000. The planning area has incurred a total of \$0 in property damage from riverine floods and \$7,740,000 in property damage from flash floods.

### 3.5 – Floods

The planning areas municipal and school district structures are valued at \$21,838,075,297 (\$20,052,529,000 municipal, \$1,785,546,297 school district). Since flash flooding threatens the entire planning area, all structures are considered exposed and vulnerable. A GIS analysis of FEMA's identified SFHAs puts a total of \$2,390,750,000 worth of the planning area's municipal structural inventory exposed to riverine flooding. None of the school districts structures are vulnerable to riverine flooding while all are vulnerable to flash flooding. The Bentonville and Rogers School Districts have some buildings that are dangerously close to, but not within identified floodplains. Those are the Bentonville High School, Cooper Elementary, Fairview Elementary, and Hill Elementary. Additionally, there are no identified floodplains in Elm Springs, Garfield, or Gateway.

**Table 3.16 – Vulnerable Municipal Structures by Count, Riverine Floods**

Municipality	Ag	Com	Gov	Ind	Res	Res-M	Total
Benton County	13	85	3	32	2,559	8	2,700
Avoca	0	0	0	0	0	0	0
Bella Vista	1	15	0	3	764	0	783
Bentonville	2	67	3	26	792	20	910
Cave Springs	0	12	0	0	55	0	67
Centerton	0	13	1	3	220	4	241
Decatur	2	4	0	1	181	3	191
Elm Springs	0	0	0	0	0	0	0
Garfield	0	0	0	0	0	0	0
Gateway	0	0	0	0	0	0	0
Gentry	0	4	0	1	87	1	93
Gravette	0	2	0	0	104	1	107
Highfill	0	5	0	1	12	0	18
Little Flock	1	3	0	1	137	1	143
Lowell	1	31	2	6	304	10	354
Pea Ridge	0	4	0	2	128	0	134
Rogers	4	137	1	64	3,104	127	3,437
Siloam Springs	1	31	0	8	425	12	477
Springdale	0	5	0	1	75	0	81
Springtown	0	1	0	0	17	0	18
Sulphur Springs	0	1	0	0	17	0	18
Total =	25	420	10	149	8,981	187	9,772

\*Multi-Unit Residential is defined as a structure with 5 or more residential units

\*\*The data are from the U.S. Census Bureau and FEMA

Table 3.17 – Vulnerable Municipal Structures by Value, Riverine Floods

Municipality	Ag	Com	Gov	Ind	Res	Res-M	Total
Benton County	\$3,982,000	\$44,923,000	\$1,431,000	\$11,512,000	\$465,261,000	\$465,261,000	\$537,567,000
Avoca	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Bella Vista	\$244,000	\$7,582,000	\$0	\$577,000	\$148,166,000	\$42,000	\$156,881,000
Bentonville	\$862,000	\$58,055,000	\$981,000	\$8,761,000	\$168,114,000	\$33,006,000	\$269,779,000
Cave Springs	\$0	\$7,772,000	\$0	\$0	\$12,145,000	\$0	\$19,917,000
Centerton	\$56,000	\$8,361,000	\$134,000	\$634,000	\$4,489,000	\$4,962,000	\$58,996,000
Decatur	\$242,000	\$706,000	\$0	\$289,000	\$27,664,000	\$3,647,000	\$32,548,000
Elm Springs	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Garfield	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Gateway	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Gentry	\$0	\$1,554,000	\$0	\$770,000	\$13,024,000	\$1,020,000	\$16,368,000
Gravette	\$0	\$787,000	\$0	\$7,000	\$16,449,000	\$1,020,000	\$18,263,000
Highfill	\$18,000	\$5,216,000	\$0	\$185,000	\$1,533,000	\$0	\$6,952,000
Little Flock	\$1,637,000	\$1,156,000	\$0	\$276,000	\$31,291,000	\$1,902,000	\$36,262,000
Lowell	\$214,000	\$24,093,000	\$1,830,000	\$4,464,000	\$55,242,000	\$12,845,000	\$98,688,000
Pea Ridge	\$4,000	\$1,210,000	\$0	\$252,000	\$21,554,000	\$0	\$23,020,000
Rogers	\$1,618,000	\$129,964,000	\$478,000	\$119,865,000	\$515,495,000	\$196,179,000	\$963,599,000
Siloam Springs	\$263,000	\$15,340,000	\$0	\$17,193,000	\$71,323,000	\$24,771,000	\$128,890,000
Springdale	\$42,000	\$1,641,000	\$0	\$610,000	\$15,241,000	\$0	\$17,534,000
Springtown	\$0	\$115,000	\$0	\$0	\$2,155,000	\$0	\$2,270,000
Sulphur Springs	\$0	\$254,000	\$0	\$0	\$2,962,000	\$0	\$3,216,000
Total =	\$9,182,000	\$308,729,000	\$4,854,000	\$165,395,000	\$1,572,108,000	\$744,655,000	\$2,390,750,000

\*Multi-Unit Residential is defined as a structure with 5 or more residential units

\*\*The data are from the U.S. Census Bureau and FEMA

### Vulnerability of and Impact on Critical Facilities

Since flash floods have the potential to affect the entire planning area, all of this plan's identified critical facilities are equally vulnerable to flash flooding. Of the planning area's 214 critical facilities, 15 are located within identified floodplains. The following table lists them.

Table 3.18 – Vulnerable Critical Facilities, Riverine Floods

Facility	Type	Owner	Location
Bella Vista Substation	Electric Utility	Private	Bella Vista
Bentonville Administrative Services	Government	Bentonville	Bentonville
Bentonville McKissic Lift Station	Water Utility	Bentonville	Bentonville
Bentonville North Lift Station	Water Utility	Bentonville	Bentonville
Bentonville South Lift Station	Water Utility	Bentonville	Bentonville
Bentonville Wastewater Treatment Plant	Water Utility	Bentonville	Bentonville
Cave Springs Lift Station #1	Water Utility	Cave Springs	Cave Springs
Cave Springs Public Works	Government	Cave Springs	Cave Springs
Centerton City Hall	Government	Centerton	Centerton
Centerton Wastewater Treatment	Water Utility	Centerton	Centerton
Highfill Lift Station #2	Water Utility	Highfill	Highfill
Pea Ridge Water Plant	Water Utility	Pea Ridge	Pea Ridge
Siloam Spring Fire Station #2	Fire Prevention/EMS	Siloam Springs	Siloam Springs
Siloam Springs Wastewater Treatment Plant	Water Utility	Siloam Springs	Siloam Springs
The Meadows	Assisted Living	Private	Bentonville

## Vulnerability of and Impact on Population

If evacuation is not heeded, or flood waters rise quickly enough, Benton County and its participating jurisdictions' population can drown or become trapped on rooftops or points of high elevations. This will expose them to elements and deprive them of basic needs and services.

As described previously, water that is long lasting and slow to drain will encourage the growth of mold and other bio-hazardous material, rendering a facility unusable until remediation is finished. Extra care, assessment, and sanitization are required before students and staff can re-inhabit a school or university facility, or they may face serious health concerns. Assisted care facilities housing vulnerable populations can take longer to evacuate. Additionally, the potential presence of mold after a flood requires extra care to be taken before their population can re-inhabit an assisted care facility where the inhabitants are at greater risk of infection. The planning area has incurred no injuries or fatalities from flooding.

The entire population of 18,625 and their 7,861 housing units are considered vulnerable and exposed to flash flooding while 1,978 residents in 861 housing units are currently identified as exposed and vulnerable to riverine floods. Similarly, all 4,663 of the school districts' students and their respective 523 staff and faculty are considered vulnerable and exposed to flash flooding. Of the school district locations identified or suspected to be in a floodplain, none of them are fully within the geographic range that would reasonably put any of their students, staff, or faculty at risk.

**Table 3.19 – Vulnerable Municipal Populations, Riverine Flooding**

Municipality	Housing Units	Population
Benton County	2,620	5,287
Avoca	0	0
Bella Vista	770	1,665
Bentonville	1,060	2,062
Cave Springs	56	153
Centerton	277	806
Decatur	194	509
Elm Springs	0	0
Garfield	0	0
Gateway	0	0
Gentry	96	253
Gravette	116	202
Highfill	14	22
Little Flock	143	323
Lowell	413	1,001
Pea Ridge	154	443
Rogers	4,444	10,295
Siloam Springs	547	1,475
Springdale	77	190
Springtown	18	37
Sulphur Springs	17	26
<b>Total =</b>	<b>11,016</b>	<b>24,749</b>

\*The data are from the U.S. Census Bureau and FEMA

## ***Vulnerability of and Impact on Systems***

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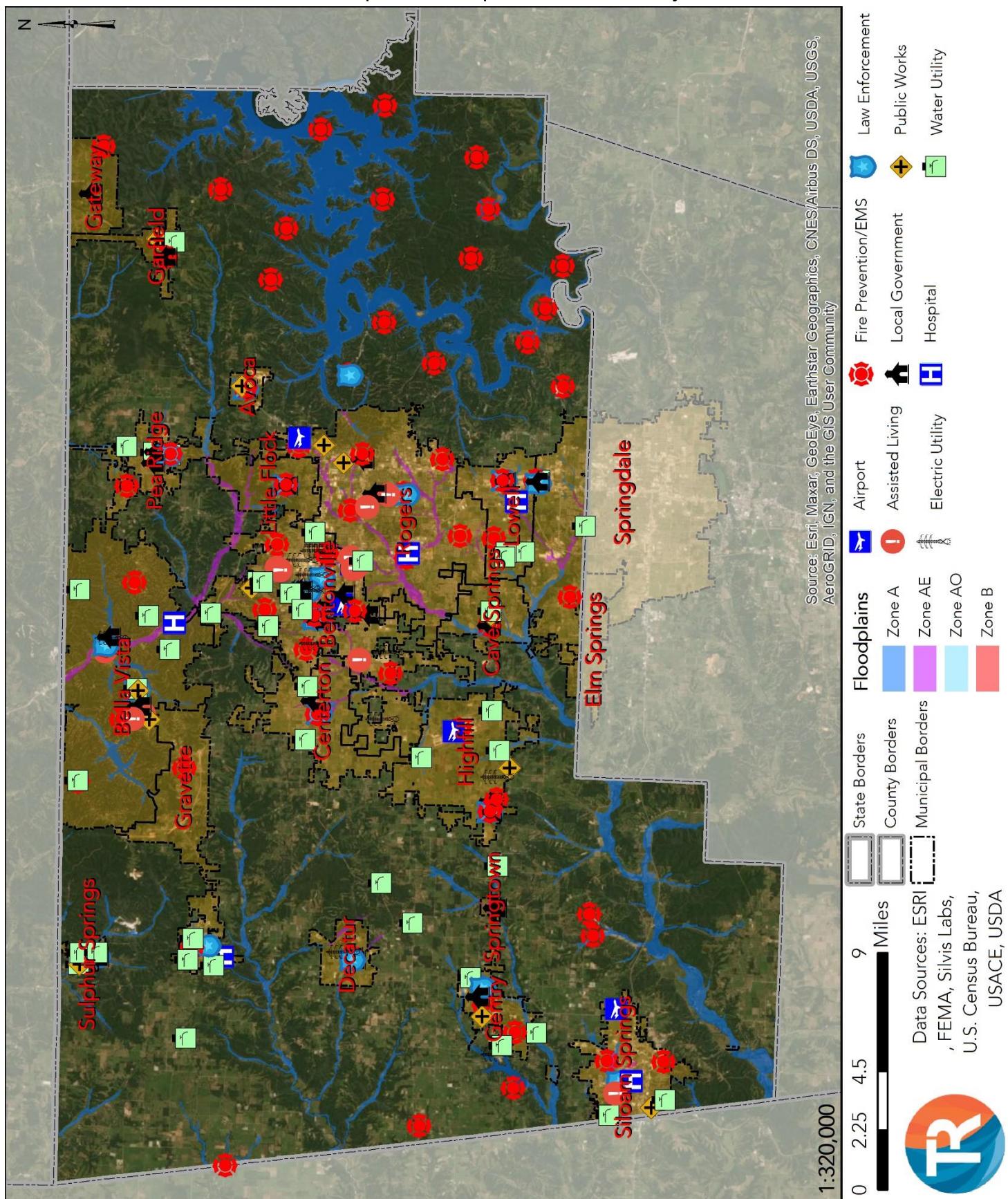
Flash flooding does not often cause widespread damage to property or infrastructure limited its ability to impact systems. Even in the case of a swept away roadway, the problem is often limited to secondary roadways. However, catastrophic riverine flooding can cause significant damage to a community's systems.

Extensive riverine flooding can significantly impact local governments' ability to provide basic goods and services to their communities either by losing essential facilities or by blocked infrastructure. This can take the form of lost law enforcement, fire prevention, medical, or water treatment facilities.

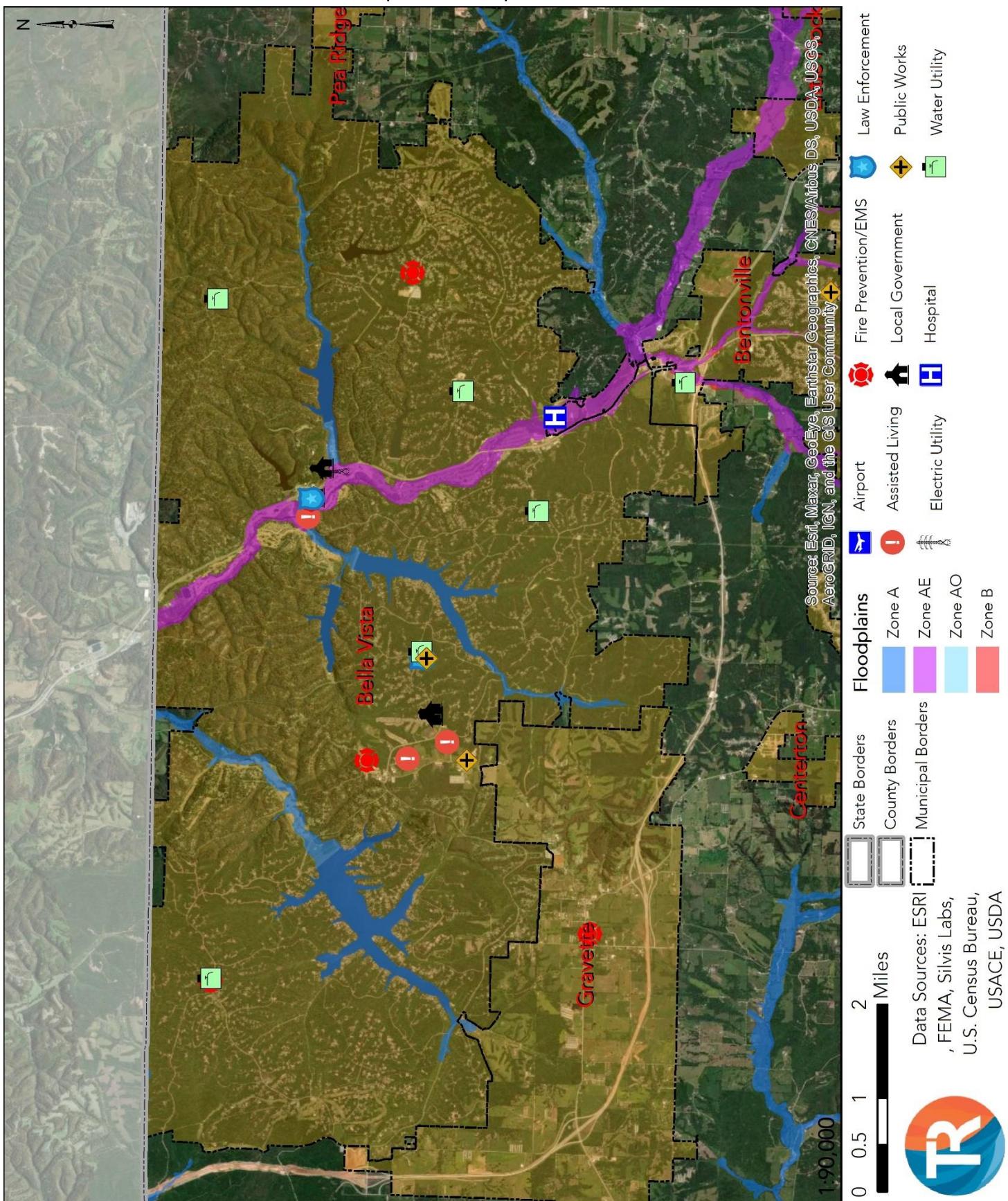
Significant damage to residential and or commercial structures can irrevocably damage a community and its economy creating refugees and economic hardship. If a chemical facility is significantly impacted it is possible the chemicals stored at the facilities can wash away with the flood waters and have detrimental effects on the local environment.

As previously discussed, both riverine and flash flooding has closed down numerous transportation routes within the planning area causing temporary limitations of the planning area's residents and business to go about their daily lives.

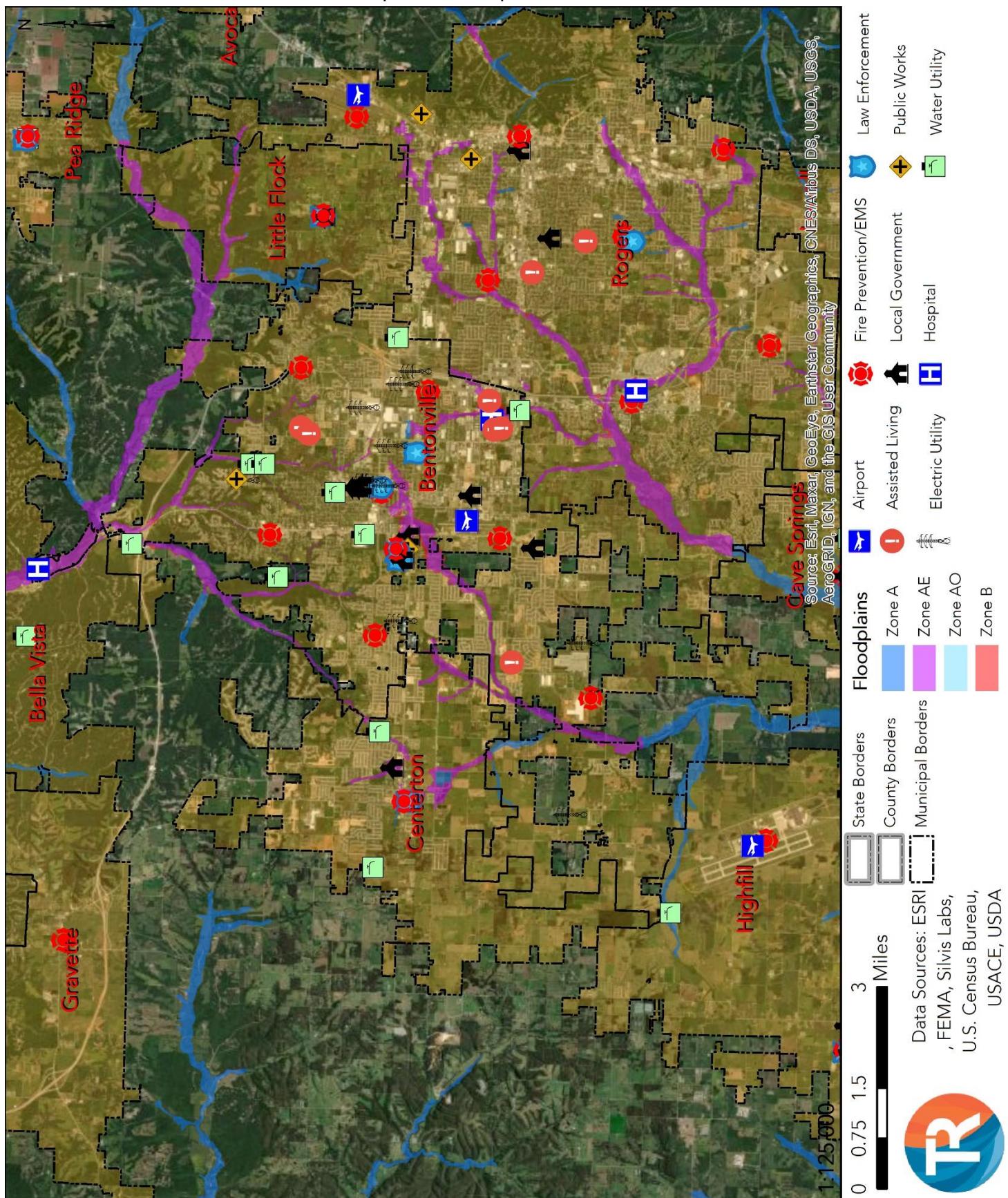
Map 3.2 – Floodplains, Benton County



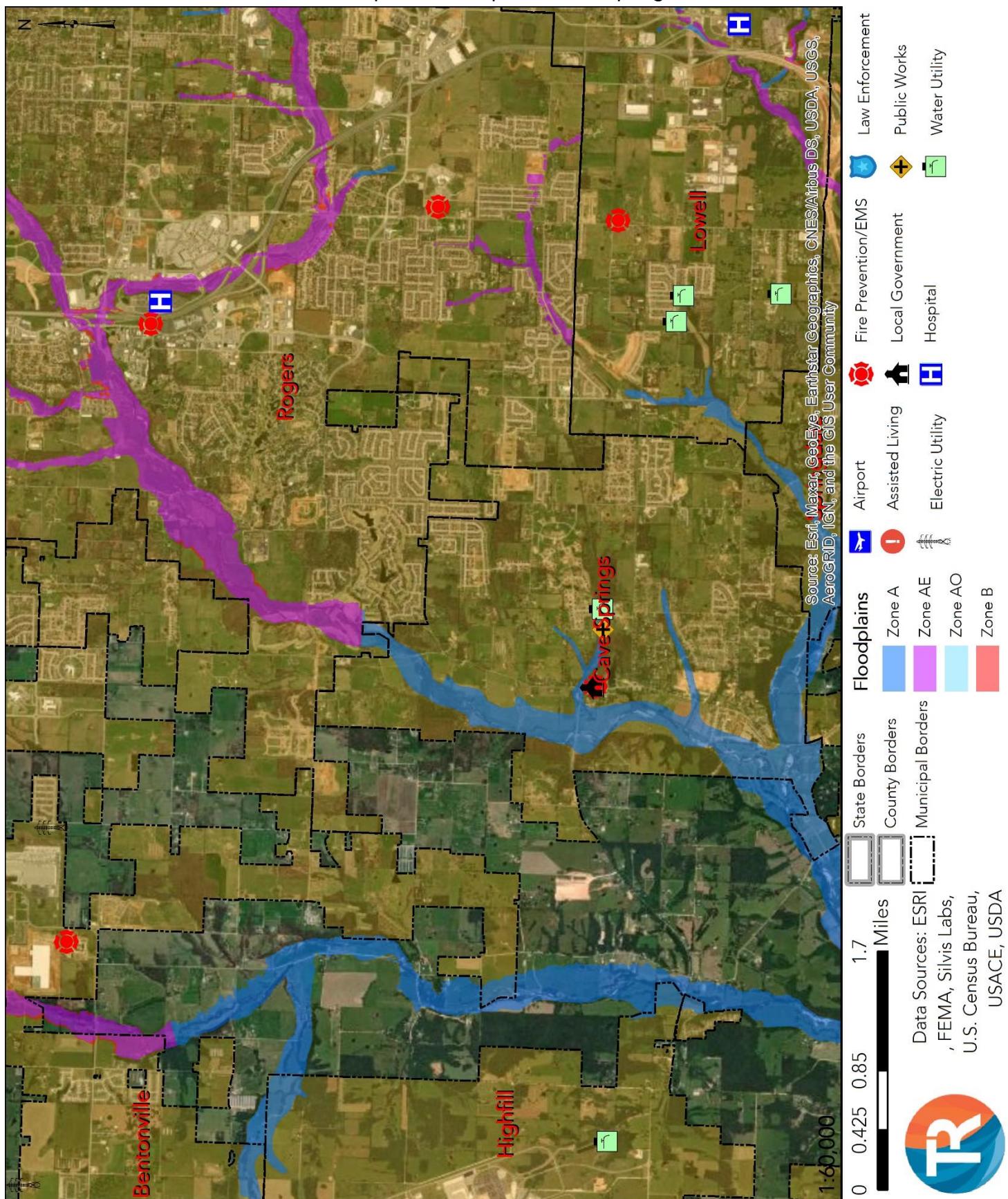
### Map 3.3 – Floodplains, Bella Vista



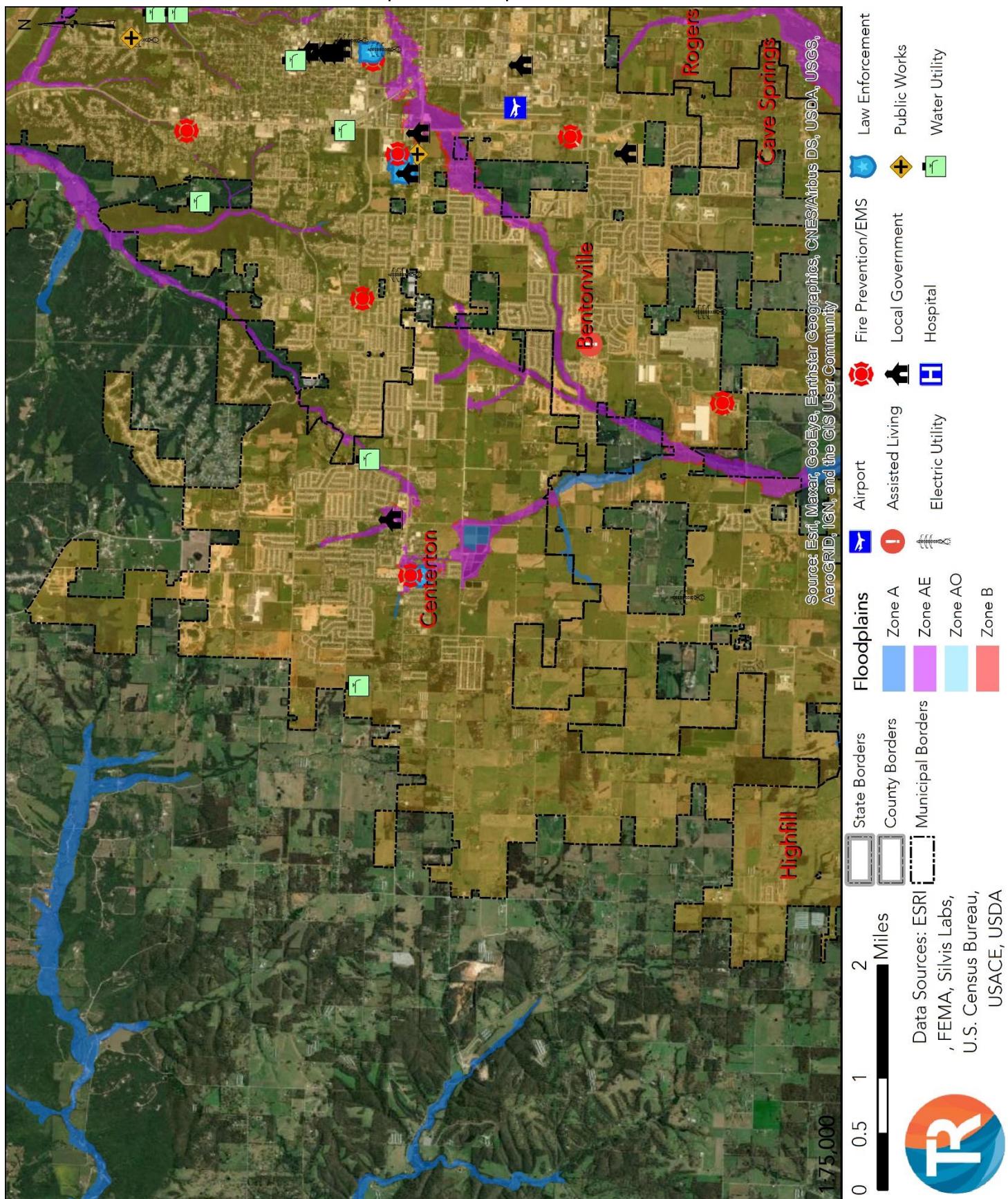
Map 3.4 – Floodplains, Bentonville



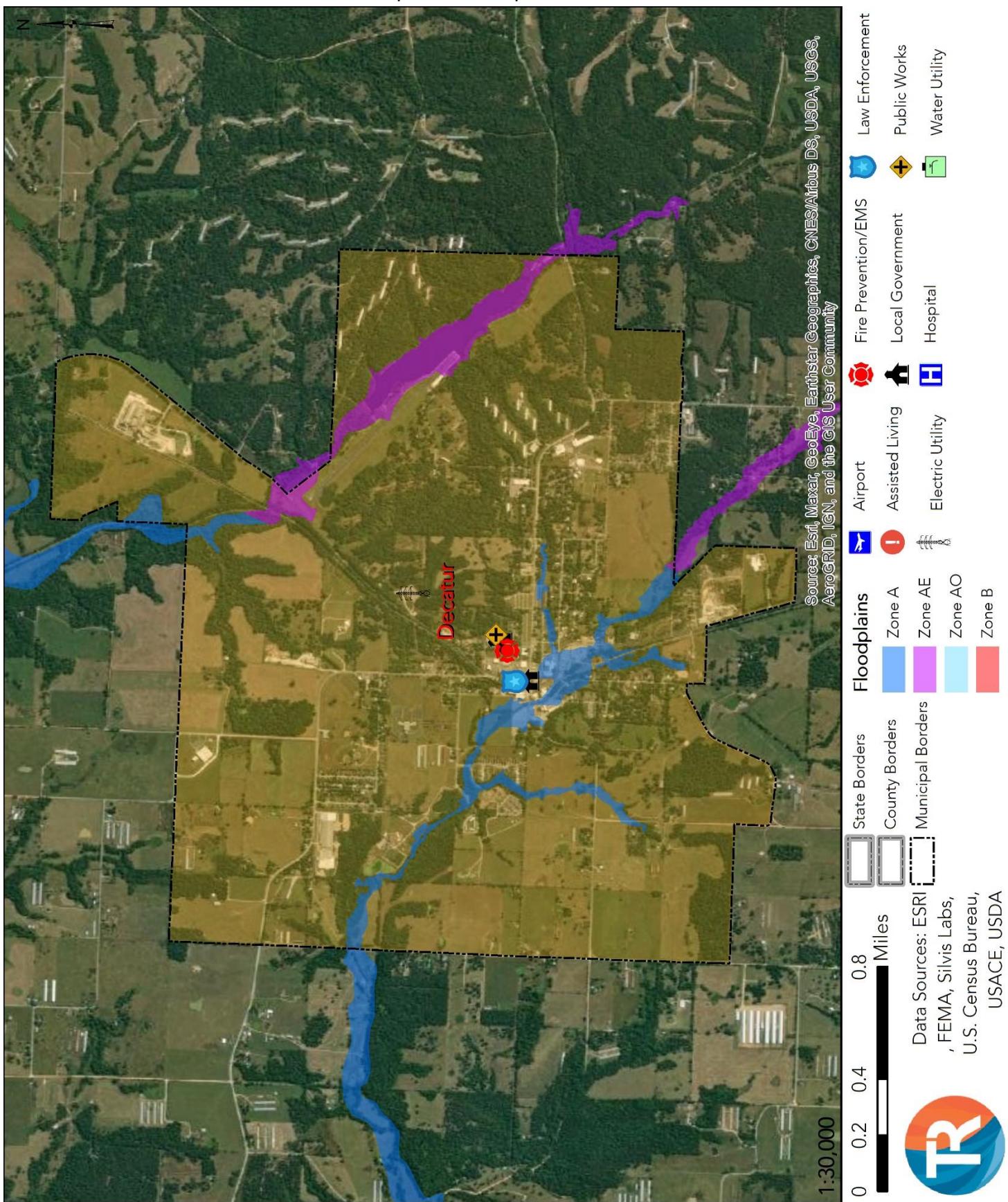
Map 3.5 – Floodplains, Cave Springs



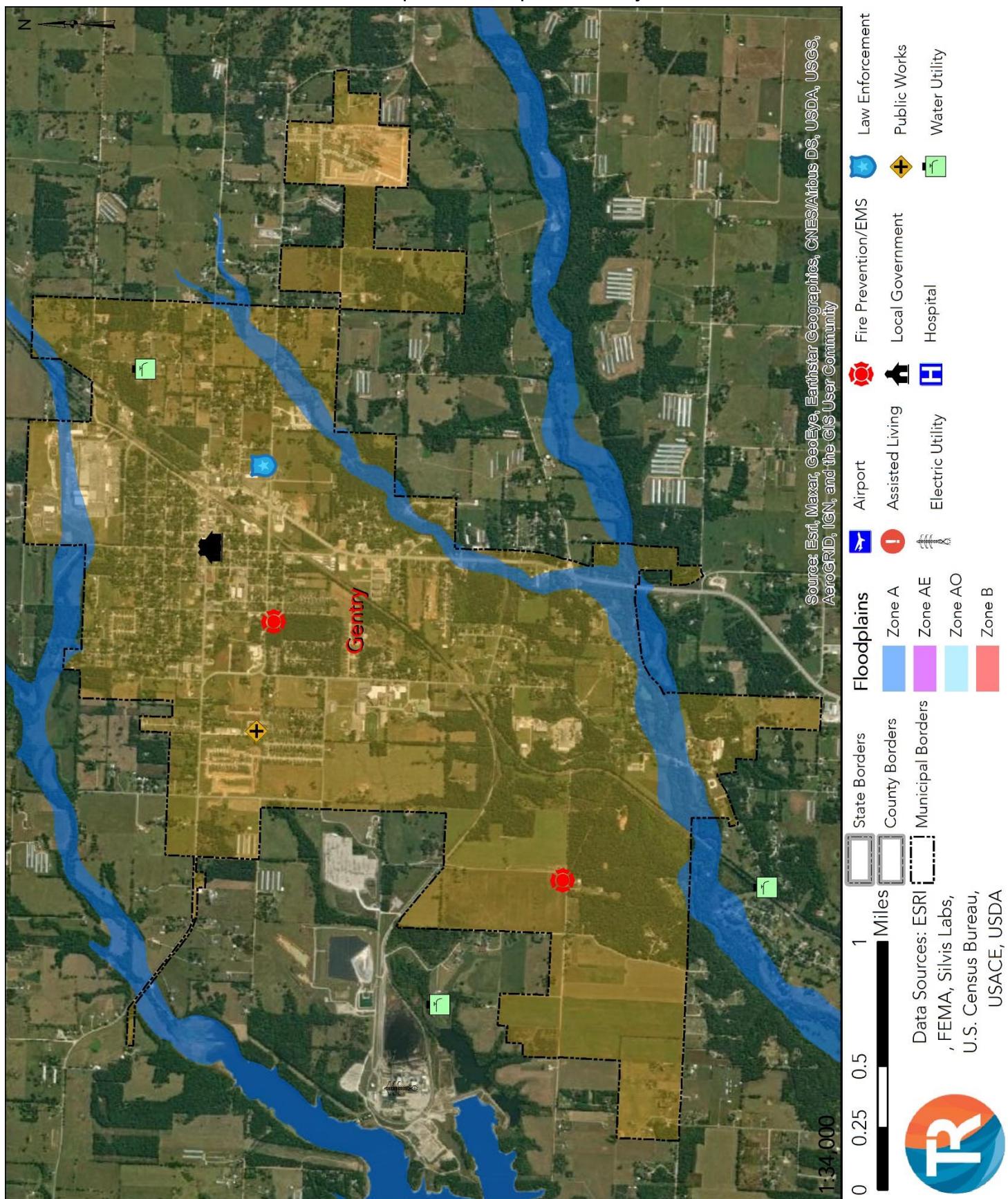
Map 3.6 – Floodplains, Centerton



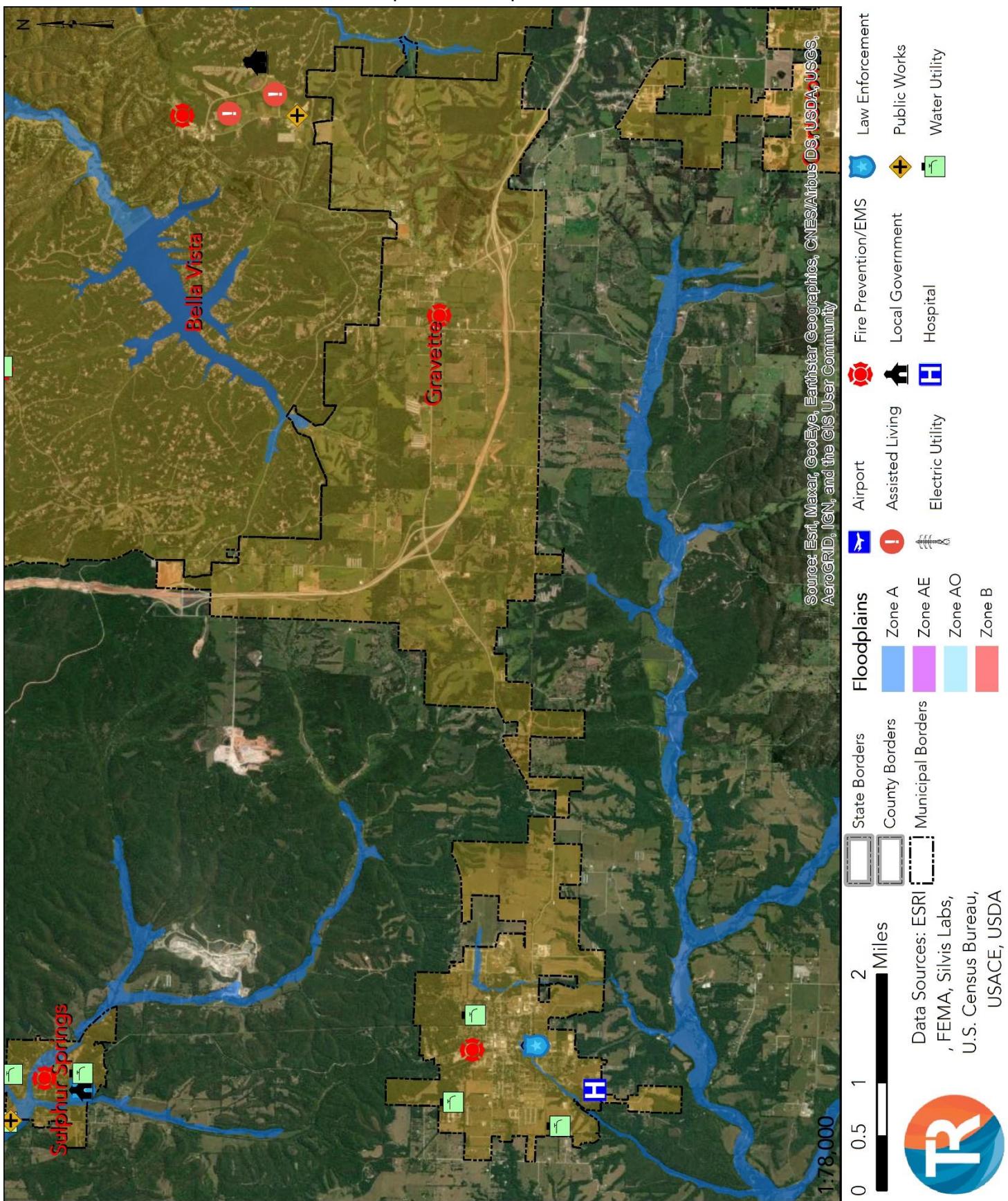
### Map 3.7 – Floodplains, Decatur



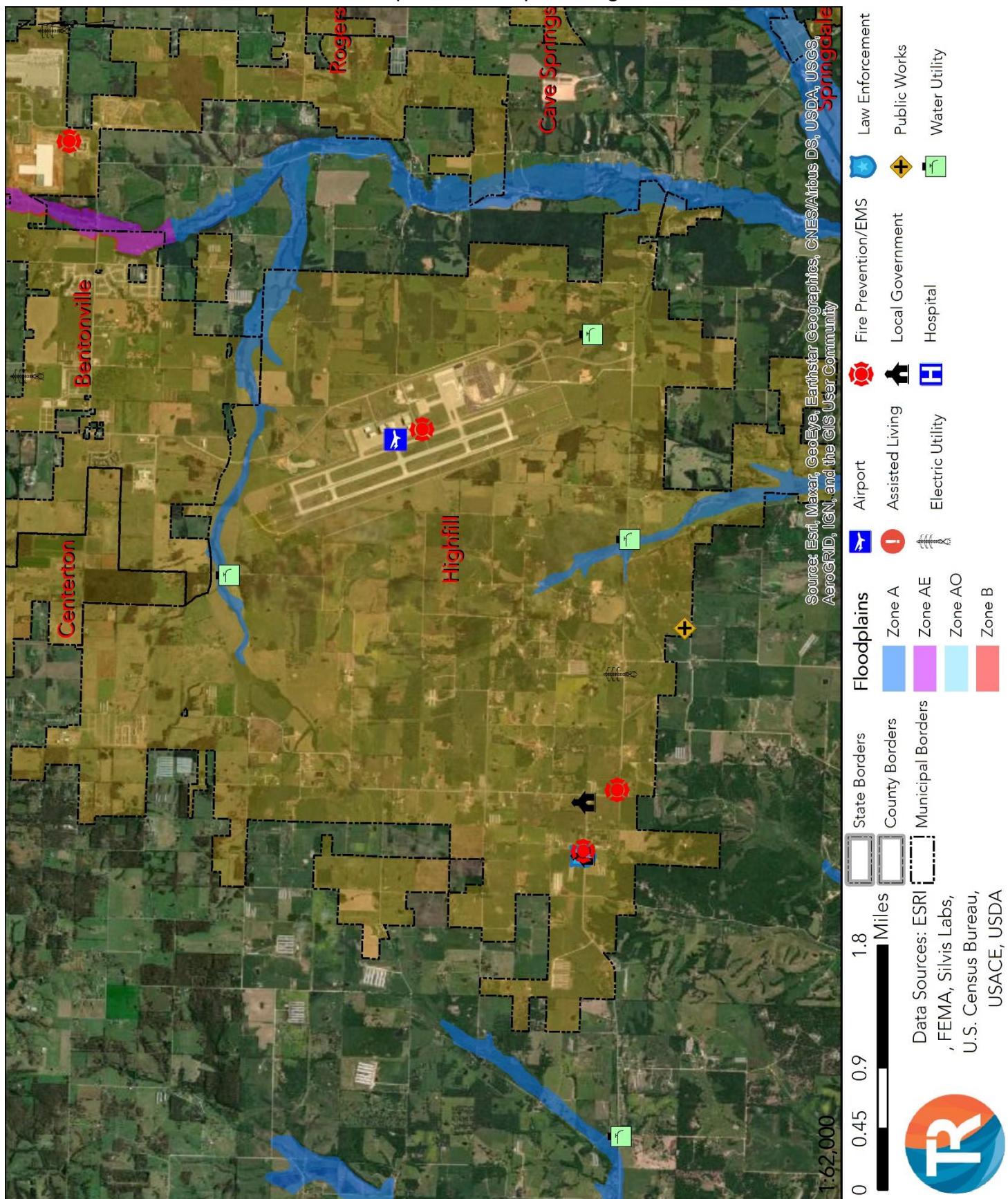
### Map 3.8 – Floodplains, Gentry



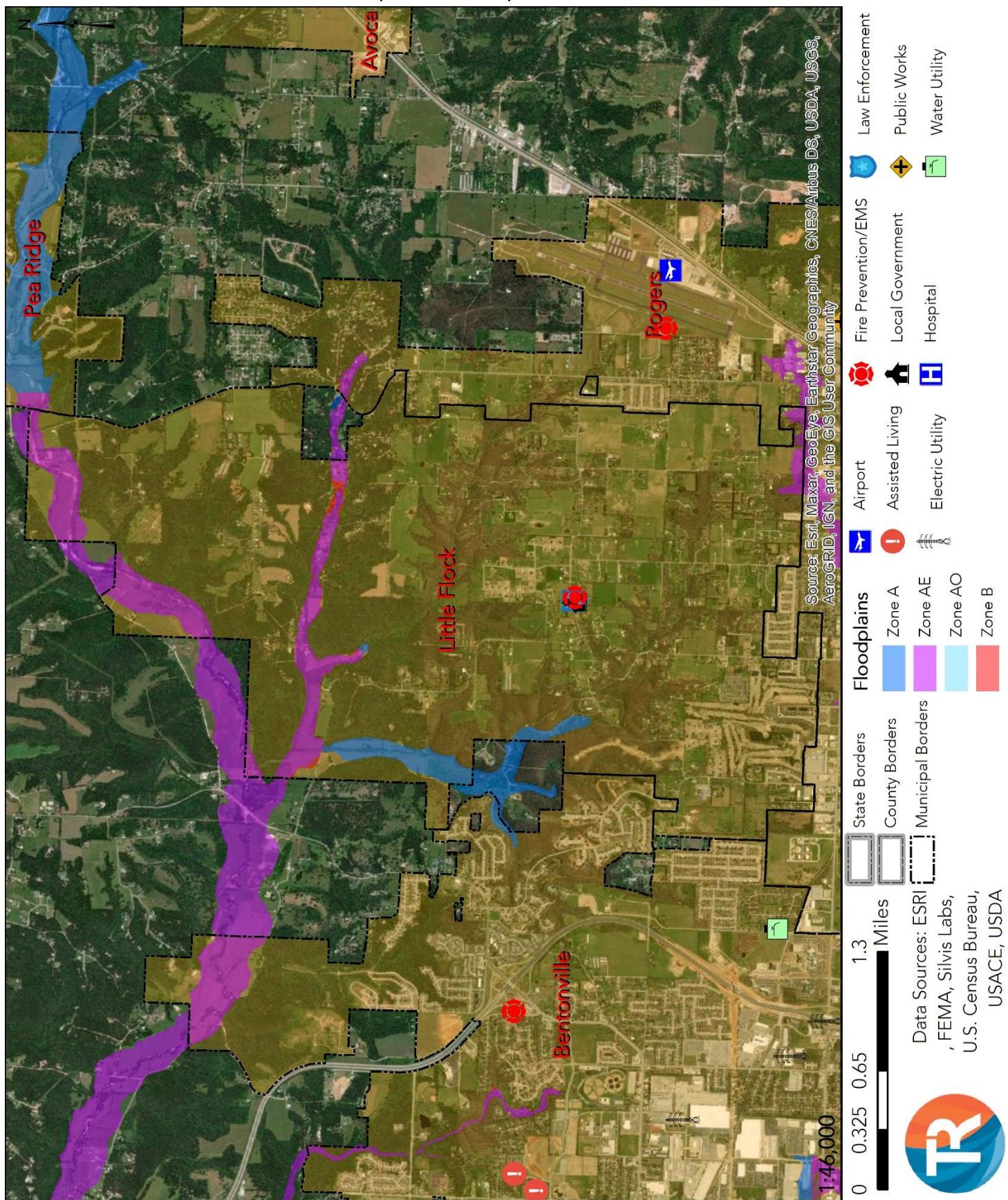
### Map 3.9 – Floodplains, Gravette



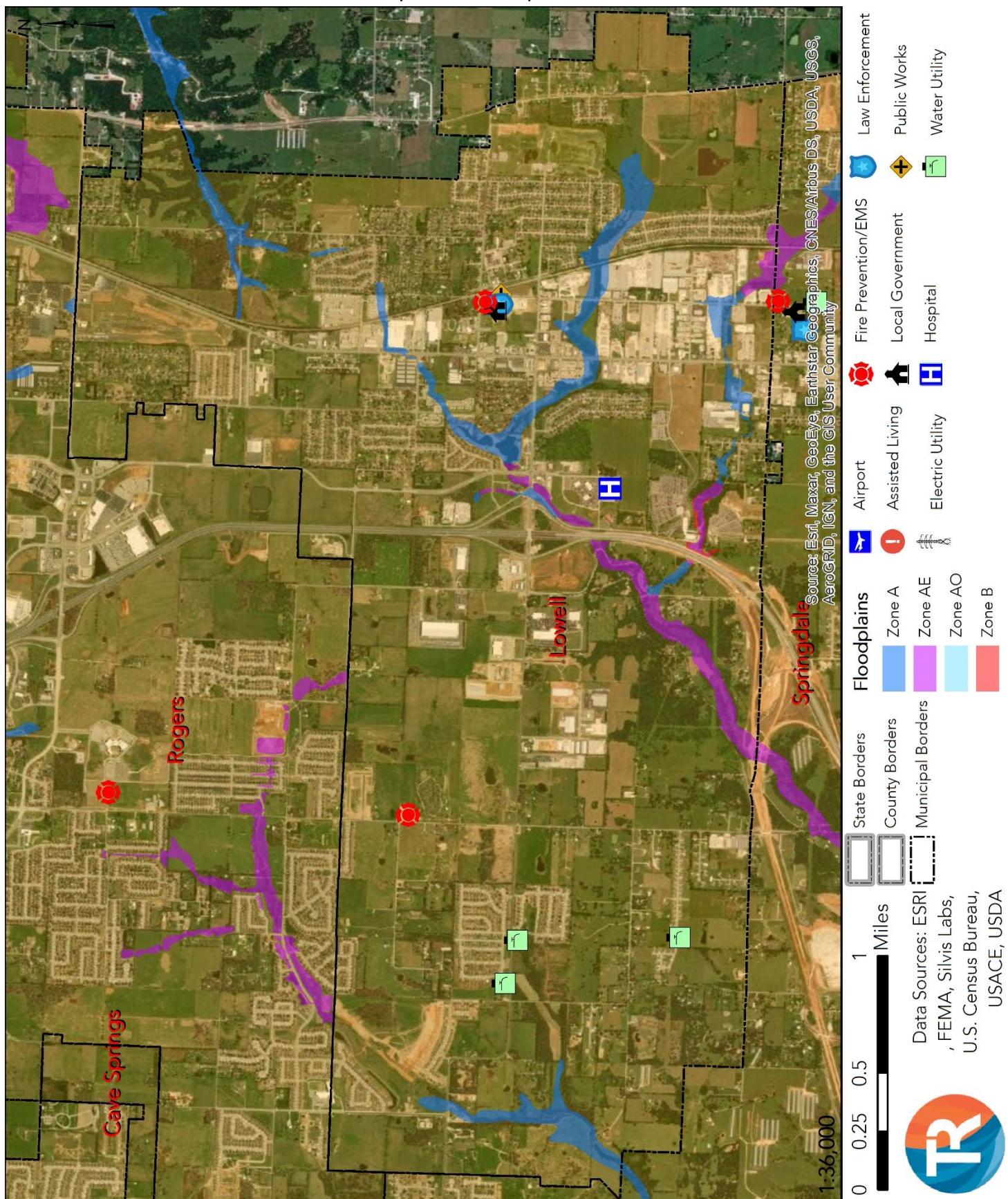
### Map 3.10 – Floodplains, Highfill



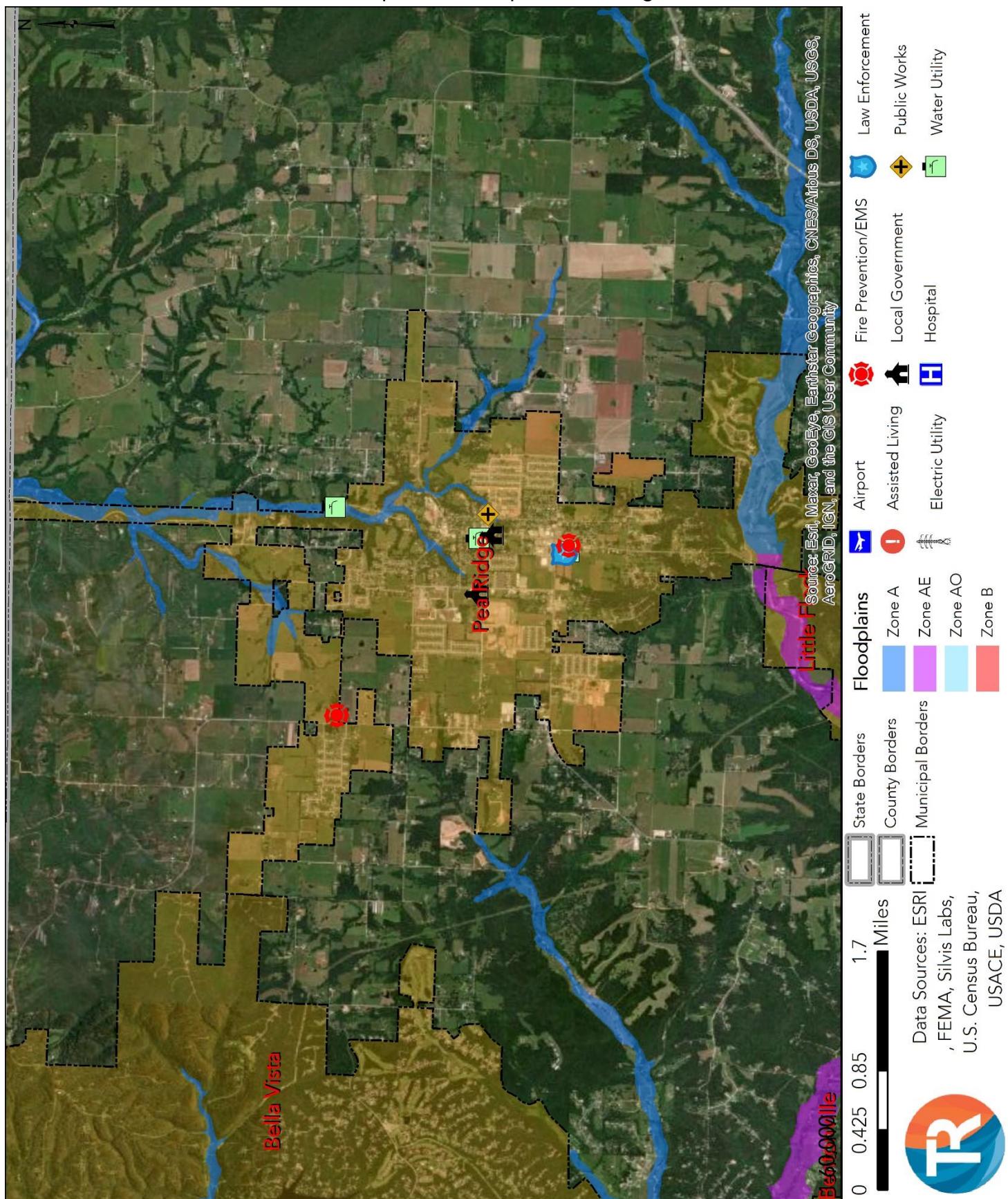
Map 3.11 – Floodplains, Little Flock



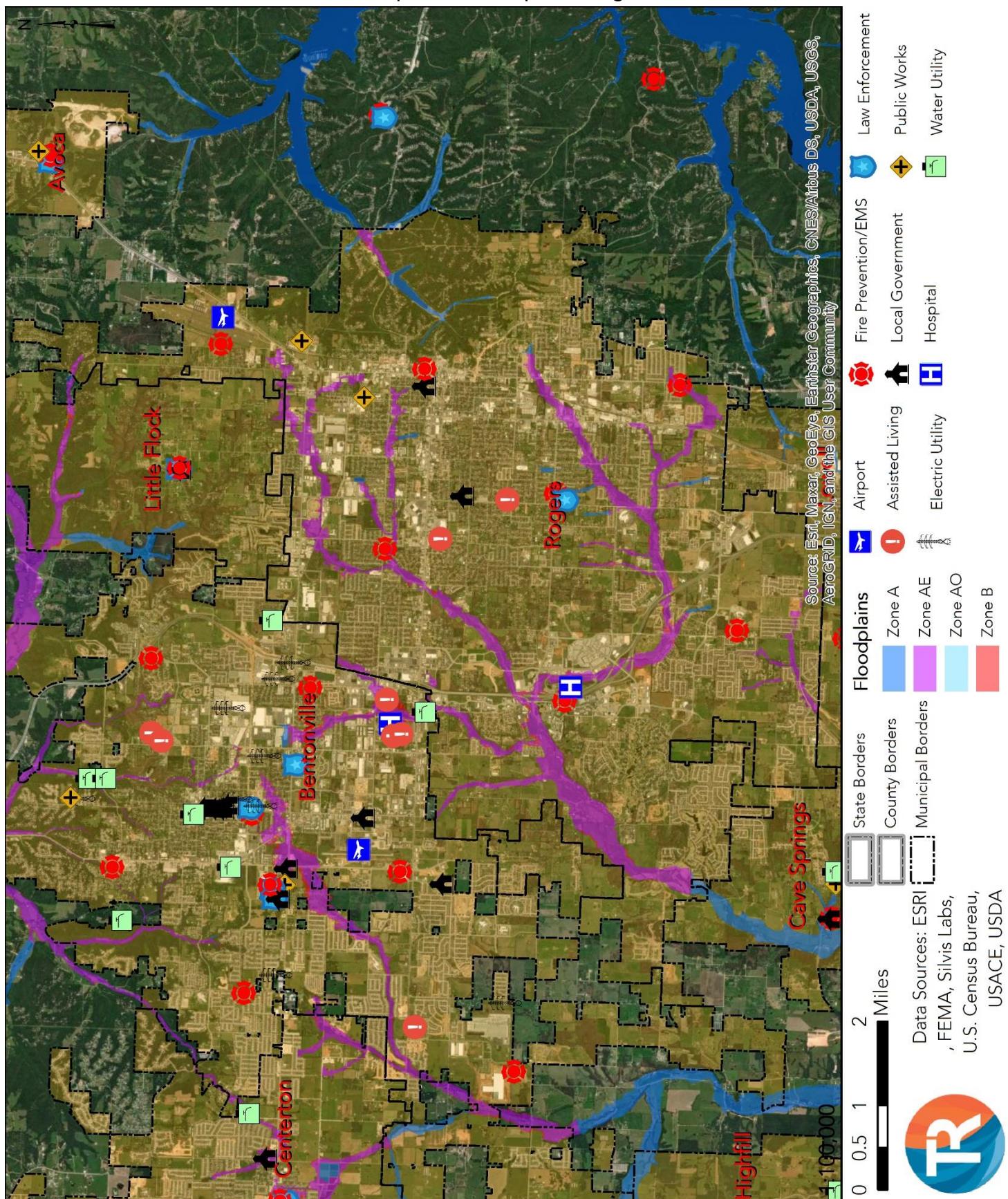
Map 3.12 – Floodplains, Lowell



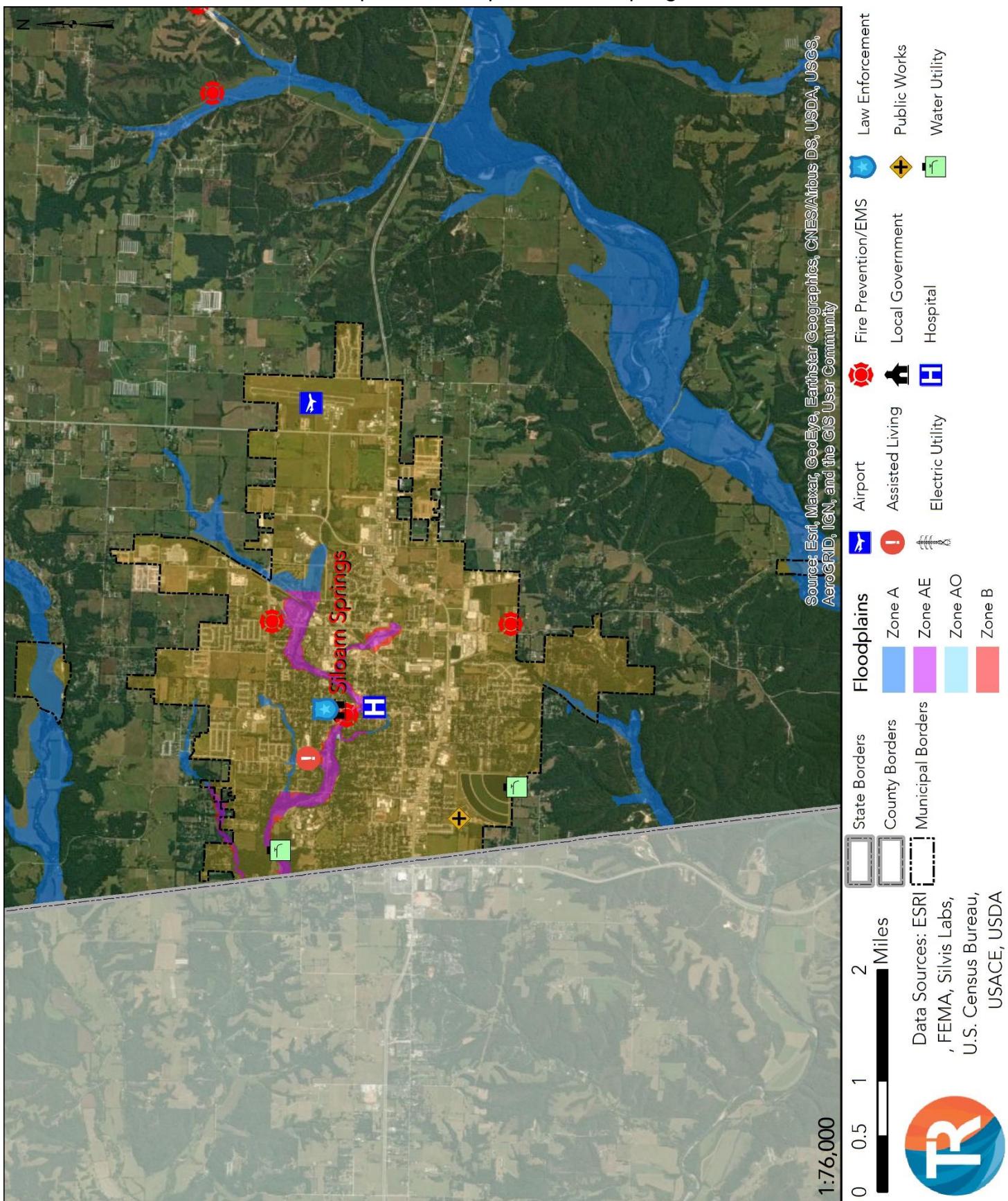
Map 3.13 – Floodplains, Pea Ridge



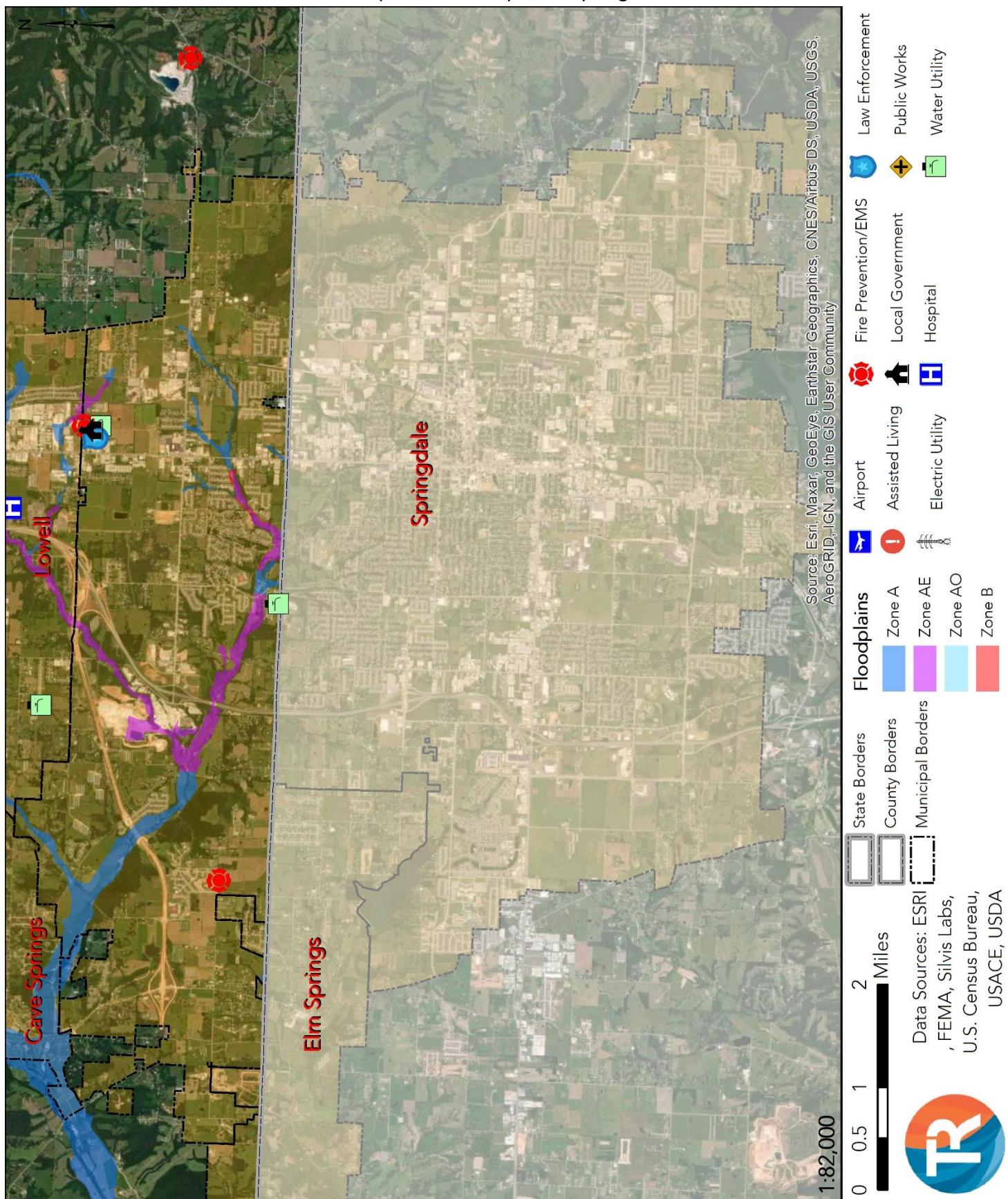
Map 3.14 – Floodplains, Rogers



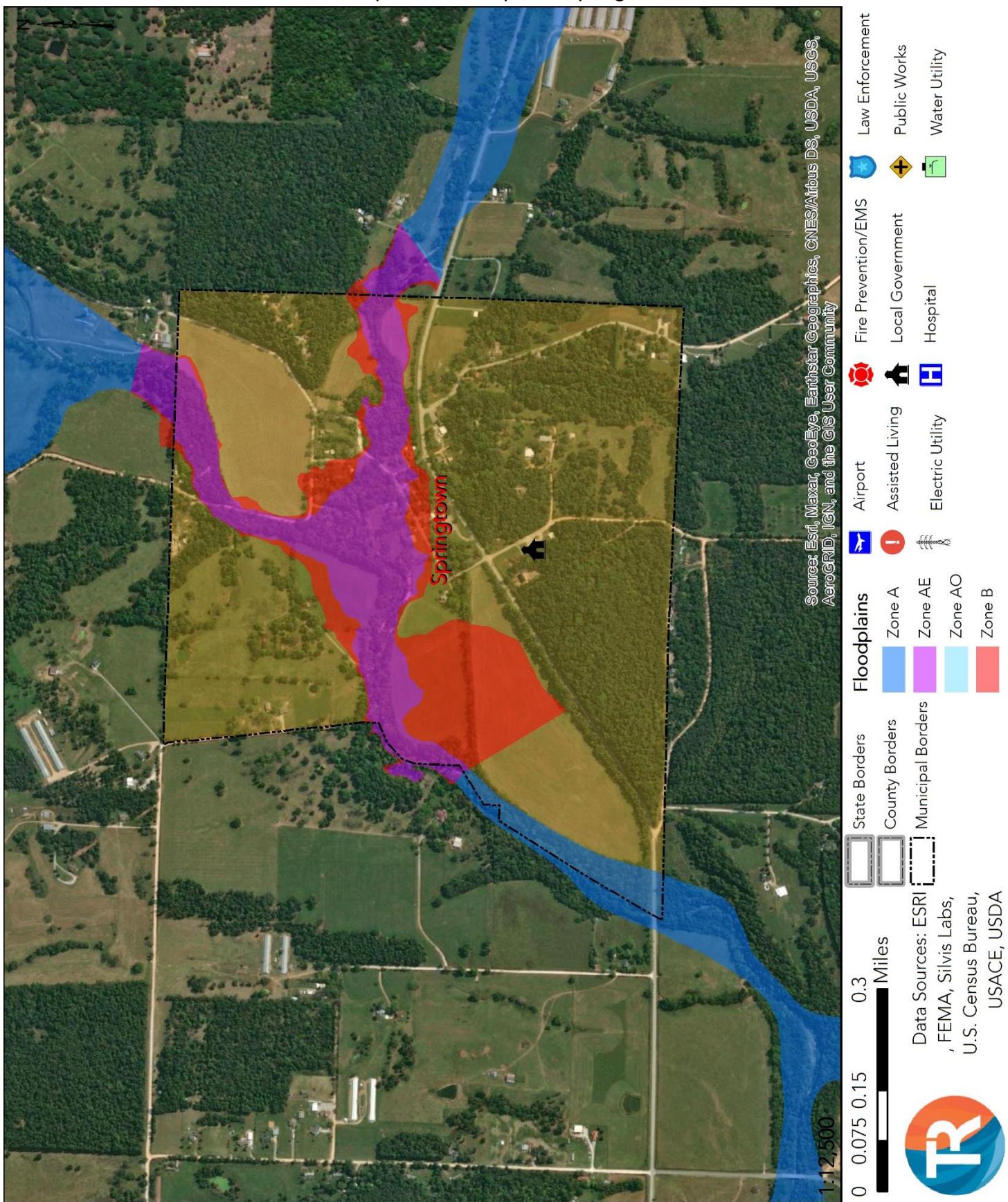
### Map 3.15 – Floodplains, Siloam Springs



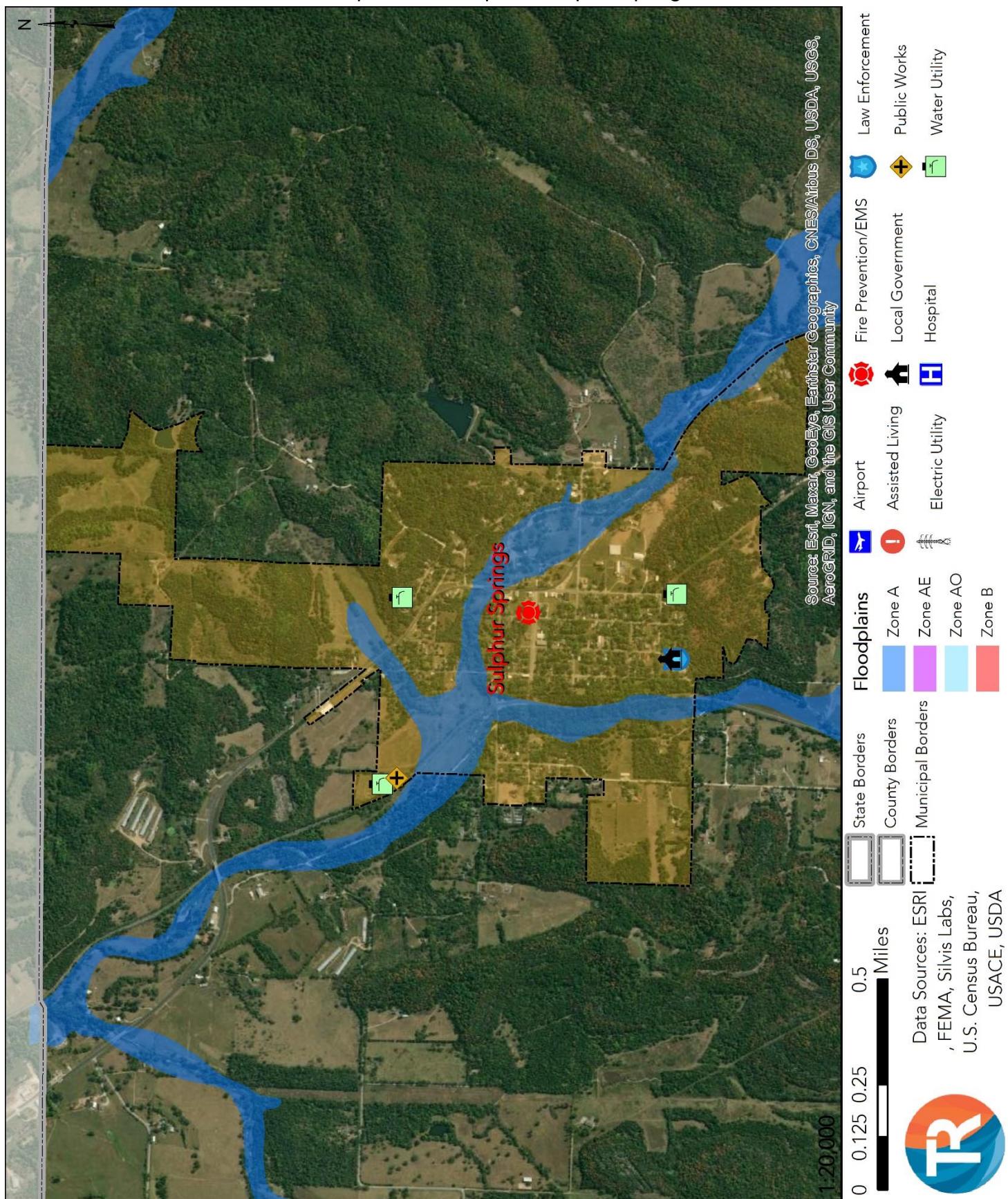
Map 3.16 – Floodplains, Springdale



### Map 3.17 – Floodplains, Springtown



Map 3.18 – Floodplains, Sulphur Springs



## 3.6 – Severe Storms

Severe storms comprise the hazardous and damaging weather effects often found in violent storm fronts. They can occur together or separate, they are common and usually not hazardous, but on occasion they can pose a threat to life and property.

This plan defines Severe Storms as a combination of the following severe weather effects as defined by NOAA and the NWS.



*Hail:* Showery precipitation in the form of irregular pellets or balls of ice more than 5 mm in diameter, falling from a cumulonimbus cloud.

*High/Strong Wind:* Sustained wind speeds of 40 miles per hour or greater lasting for 1 hour or longer, or winds of 58 miles per hour or greater for any duration. Often referred to as straight line winds to differentiate from rotating or tornado associated wind.

*Lightning:* A visible electrical discharge produced by a thunderstorm. The discharge may occur within or between clouds, between the cloud and air, between a cloud and the ground or between the ground and a cloud.

*Thunderstorm Winds:* The same classification as high or strong winds, but accompanies a thunderstorm. It is also referred to as a straight-line wind to differentiate from rotating or tornado associated wind.

For consistency with the NWS and NOAA, high and strong winds are shown separate from thunderstorm winds when raw, collected data is displayed. However, for their impacts and probability, they are combined and referred to simply as “wind” events. Undoubtedly, numerous more lightning strikes have occurred in the planning area throughout recorded history. However, for the purposes of assessing the planning area’s vulnerabilities and risk, only the strikes recorded by the NWS and NOAA are considered. The NWS and NOAA records consist of lightning strikes that have caused a significant impact, that is, they damaged property, infrastructure, or harmed people.

### Location & Extent

Severe storms are an area-wide hazard as they can strike anywhere in the planning area. Storms, severe or not, are often predicted within a day or multiple days in advance.

The severity of a storm is not as easily predicted and when it is, the window of notification is up to a few hours to under an hour. When a storm is imminent, it is unknown whether or not hail, lightning, or damaging winds will occur until after an incident has been reported. Since severe storms typically affect an area the size of a region, the expected intensity is the same throughout the planning area.

Thunderstorms, and the accompanying hail, lightning, and wind, typically last less than an hour. The portions of this timeframe where each storm classification would be considered “severe” should last less than 30 minutes.

### 3.6 – Severe Storms

Hail regularly falls in the planning area each year and has been recorded up to 2.75 inches in size. A complete hail index with size and typical damages can be found in the table below. Any incidents of hail can cause injury to the planning area's citizens, while anything above 1 inch could cause damage to structures. If windows are broken, some facilities will be rendered unusable until repaired.

**Table 3.20 – NOAA/TORRO Hailstorm Intensity Scale**

Class	Intensity Category	Diameter (Inches)	Size Comparison	Damage Impacts
H0	Hard Hail	0 – 0.33	Pea	No damage
H1	Potentially Damaging	0.33 – 0.60	Marble/Mothball	Slight damage to crops
H2	Potentially Damaging	0.60 – 0.80	Dime/Grape	Significant damage to crops
H3	Severe	0.80 - 1.20	Nickel to Quarter	Severe damage to crops, damage to glass and plastic, paint and wood scored
H4	Severe	1.20 - 1.60	Half Dollar	Widespread glass damage, vehicle bodywork damage
H5	Destructive	1.60 - 2.00	Silver Dollar to Golf Ball	Damage to tiled roofs, significant risk of personal injury.
H6	Destructive	2.00 - 2.40	Egg	Aircraft bodywork dented, brick walls pitted
H7	Very Destructive	2.40 - 3.00	Tennis Ball	Severe roof damage, risk of serious injuries to persons not protected
H8	Very Destructive	3.00 - 3.50	Baseball to Orange	Severe damage to aircraft bodywork
H9	Super Hailstorms	3.50 - 4.00	Grapefruit	Extensive structural damage, risk of severe injury or fatal injuries to persons not protected
H10	Super Hailstorms	4.00 +	Softball and up	Extensive structural damage, risk of severe injury or fatal injuries to persons not protected

It can safely be assumed any severe storm has the potential to cause a lightning strike. It can happen instantly with no warning and happen anytime throughout the storm's passage. A storm's lightning intensity is measured by lightning activity intensity levels outlined in the table on the following page. A strike could damage structures throughout the planning area and render it unusable for a period of time, or cause it to catch fire and damage it beyond repair. Most lightning strikes do not hit structures or people and therefore go unreported. The planning area can and has experienced lightning of all intensities listed in the table below.

**Table 3.21 – Lightning Activity Intensity Scale**

Level	Description
LAL 1	No activity
LAL 2	Isolated thunderstorms: Light rain will occasionally reach the ground. Lightning is very infrequent, 1 to 5 cloud-to-ground strikes in a 5-minute period.
LAL 3	Widely scattered thunderstorms: Light to moderate rain will reach the ground. Lightning is infrequent, 6 to 10 cloud-to-ground strikes in a 5-minute period.
LAL 4	Scattered thunderstorms: Moderate rain is commonly produced Lightning is frequent, 11 to 15 cloud-to-ground strikes in a 5-minute period.
LAL 5	Numerous thunderstorms: Rainfall is moderate to heavy. Lightning is frequent and intense, greater than 15 cloud-to-ground strikes in a 5-minute period.

### 3.6 – Severe Storms

Strong, high, and thunderstorm winds are classified as winds which occur between 40 and 70 miles per hour lasting for 1 hour or greater or of 58 miles per hour for any duration. The Beaufort Scale shown on the next page displays the ranges of wind speed and correlates them with their typical effects. At a level 7 and 8 citizens should remain indoors and anywhere above a level 8 will cause damage to structures. Damage to any amount of structures can cause serious disruption to the participating governments and school district. The scope of damage can range from one residential house up to widespread destruction of homes and reinforced buildings throughout the planning area. The planning area occasionally receives wind events between 50 and 65 miles per hour or a Beaufort level between 9 and 10.

Table 3.22 – Beaufort Scale

Beaufort Number	Wind Speed (MpH)	Seaman's Term	Effects
0	Under 1	Calm	Calm, smoke rise vertically
1	1 – 3	Light Air	Smoke drift indicates wind direction, but vanes do not move
2	4 – 7	Light Breeze	Wind felt on face, leaves rustle, vanes begin to move
3	8 – 12	Gentle Breeze	Leaves, small twigs in constant motion, light flags extended
4	13 – 18	Moderate Breeze	Dust, leaves, and loose paper raised up, small branches move
5	19 – 24	Fresh Breeze	Small trees begin to sway
6	25 – 31	Strong Breeze	Large branches of trees in motion, whistling heard in wires
7	32 – 38	Moderate Gale	Whole trees in motion, resistance felt in walking against the wind
8	39 – 46	Fresh Gale	Twigs and small branches break off of trees
9	47 – 54	Strong Gale	Slight structural damage occurs, slate blown from roofs
10	55 – 63	Whole Gale	Trees broken, structural damage occurs
11	64 – 72	Storm	Widespread damage
12	73 or Higher	Hurricane Force	Violence and destruction

### History & Probability

Since 1956, NOAA has recorded 359 hailstorms in the planning area. In most of these cases the hail reaches 1 inch in size. These hailstorms have not caused any personal injuries or deaths in the planning area. Hailstorms have inflicted \$3,966,000 in property damage in the planning area.

Since 1998, NOAA has recorded 16 significant lightning strike in the planning area. These events have caused 11 injuries and 1 fatality. They have inflicted \$457,000 in property damage.

Since 1996, NOAA has recorded 467 wind events in the planning area. Most of these events have been measured at between 55 to 60 miles per hour, but have a few have been measured in the 80s and one was clocked at 86. There are 13 recorded injuries and 2 fatalities from these wind events. Wind events have caused a total of \$10,354,300 in property damage throughout the planning area.

Based on the data recorded by NOAA, the planning area should expect a significant lightning strike in about every other year at .6956 strikes per year while it should experience a significant hailstorm about

### 3.6 – Severe Storms

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5 times per year at a rate of 5.5231 hailstorms per year. Additionally, the planning area should expect just over 7 significant wind events per year or at a rate of 7.18 events per year.

For a complete list of NOAA recorded hail, high wind, lightning, and thunderstorm winds, please reference Appendix C.

#### ***Vulnerability of and Impact on Facilities***

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Structural vulnerability to severe storms is the same throughout the planning area. Hail can be costly by damaging rooftops, outdoor equipment, and windows. Lightning can strike anything with the potential to significantly damage electrical infrastructure or ignite a fire. Wind events create flying debris which can damage infrastructure and buildings. Strong enough wind can cause structure damage to older, less well constructed buildings even toppling or leveling them. A FEMA Code 361 Tornado Safe Room will provide more than sufficient protection and resistance to any form of severe storm as they are designed and constructed above the standard metrics of a severe storm. NOAA records catalog that the planning area regularly reports severe storm damage to roofs and power lines while also uprooting and downing trees.

Significant changes to national building codes were implemented in 1999, and structures built before then are considered to be more vulnerable than those constructed afterwards.

The average hailstorm in the planning area costs \$11,047 in property damage. The range of a single incident is from \$0 to \$2,500,000.

The average lightning strike in the planning area inflicts \$28,562 in property damage. The range of a single incident ranges from \$0 to \$200,000.

The average wind event in the planning area costs \$22,172, while the existing range of a single incident has been from \$0 to \$3,500,000.

Benton County and its participating jurisdictions' municipal structures are valued at \$20,052,529,000 and their school district structures are valued at \$1,785,546,297, for a total value of \$21,838,075,297. Since severe storms threaten the entire planning area equally, all municipal and school district structures are considered exposed and vulnerable except for the identified safe rooms at the Decatur and Pea Ridge School Districts bringing the total down to \$21,835,413,893.

#### ***Vulnerability of and Impact on Critical Facilities***

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All infrastructure and critical facilities within the planning area are equally vulnerable and at risk since severe storms can affect any portion of the planning area and damage indiscriminately.

#### ***Vulnerability of and Impact on Population***

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In the absence of proper shelter, hail can cause serious injury to an unprotected person. As long as the planning area's citizens stay indoors and away from windows, they will be protected against hail injury

### 3.6 – Severe Storms

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and death. Similarly, they can avoid being struck by lightning by staying indoors. Although lightning may strike a structure sheltering people, it is extremely unlikely that the strike itself will directly injure or kill a sheltered person. As long as a structure is able to maintain its integrity during high-speed winds, it will protect people from wind injury or death. However, old or poorly constructed facilities are not good shelters as previously mentioned, flying debris can break windows or cause structural damage. Either of these instances have the potential to seriously injure or kill anyone taking shelter in older, less well constructed building. There are wind records of uprooting trees falling on mobile homes and killing the resident.

Benton County and its municipalities have a total population of 284,333 in 90,084 housing units all of which are vulnerable and at risk to severe storms. Similarly, all of the school districts' 44,078 students and their 5,942 staff and faculty are vulnerable and at risk.

Historically, there have been 24 injuries and 3 fatalities as a result of severe storms in the planning area.

### ***Vulnerability of and Impact on Systems***

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The planning area's assets and systems' vulnerability to severe storms is directly correlated to its population density throughout the planning area with its power grid being the most likely to suffer damage. Where there are people, there are power related infrastructure.

Hail damage is typically superficial and does not hamper a community's assets, systems, or activities. Lightning strikes can destroy or damage a community asset, but since their strikes are typically isolated and rarely hit anything, it is unlikely to significantly impact a larger system. Wind events can destroy and damage multiple structures and points of infrastructure. It has the potential to significantly impact a community's power grid compounding the effects of other hazards such as tornadoes, and winter storms.

### ***Key Considerations***

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Since severe storms strike over large areas and indiscriminately, there is not any particular portion of the planning area that is more likely than another to experience a severe storm. However, there are portions of the planning area that are more vulnerable to hail and wind related damage due to the age of a significant portion of their building stock.

As previously mentioned, the majority of the planning area's structures were built prior to 1999 and thus are more vulnerable and at risk to severe storms.

## 3.7 – Tornadoes

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A tornado is a violent, dangerous, rotating column of air that is in contact with both the surface of the earth and a cumulonimbus cloud or, in rare cases, the base of a cumulus cloud. Often referred to as a twister or a cyclone, they can strike anywhere and with little warning. Tornadoes come in many shapes and sizes, but are typically in the form of a visible condensation funnel, whose narrow end touches the earth and is often encircled by a cloud of debris and dust.

Tornadoes can cause several kinds of damage to buildings. Tornadoes have been known to lift and move objects weighing more than 3 tons, toss homes more than 300 feet from their foundations, and siphon millions of tons of water. However, less spectacular damage is much more common. Houses and other obstructions in the path of the wind cause the wind to change direction. This change in wind direction increases pressure on parts of the building. The combination of increased pressures and fluctuating wind speeds creates stress on the building that frequently causes connections between building components, roofing, siding, windows, etc., to fail. Tornadoes can also generate a tremendous amount of flying debris. If wind speeds are high enough, airborne debris can be thrown at buildings with enough force to penetrate windows, roofs, and walls.

### ***Location & Extent***

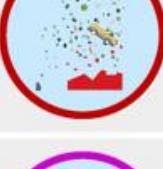
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Many tornadoes only exist for a few seconds in the form of a touchdown. A tornado may arrive with a storm front and touchdown in a matter of seconds without warning. Other times tornado watches and sirens will alert communities of high potential tornado producing weather or an already formed tornado and its likely path.

The most extreme tornados can attain wind speeds of more than 200 mph, stretch more than two miles across, and travel dozens of miles. Tornadoes are an area-wide hazard as they can strike anywhere in the planning area.

Until 2007 the Fujita Tornado Scale ranked the severity of tornadoes. The Fujita scale assigned a numerical F value, F0 through F5, based on the wind speeds and estimated damage. Since 2007 the U.S. switched over to the Enhanced Fujita Scale. The altered scale adjusted the wind speed values per F level and introduced a rubric for estimating damage. Most tornados have wind speeds less than 110 miles per hour, and travel a few miles before dissipating. The planning area should expect to see tornadoes of EF0 or EF1, but should be prepared for a tornado up to an EF5.

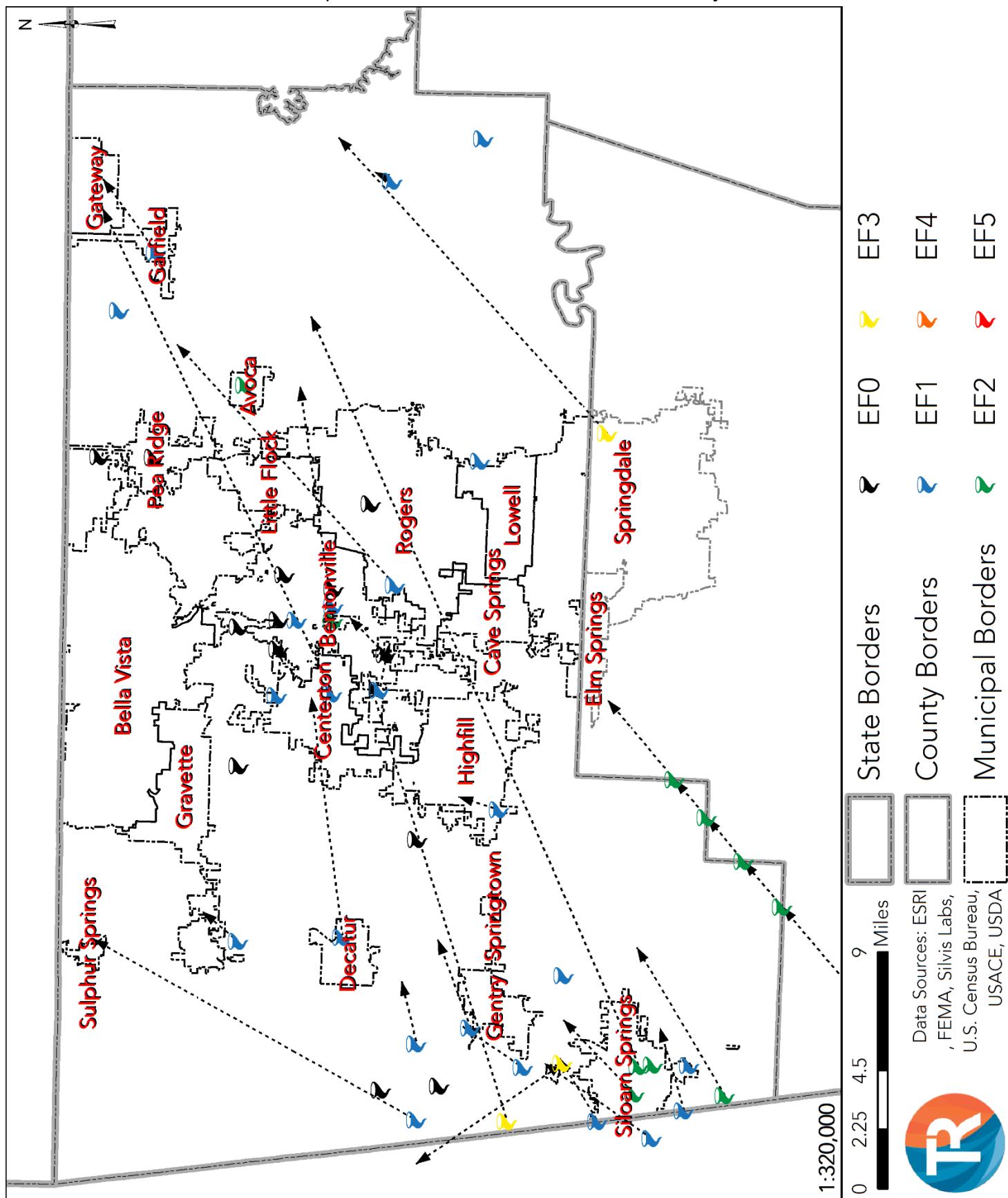
Table 3.23 – Fujita Scale

	SCALE	WIND SPEED	DESCRIPTION
	<b>EF-0</b>	65-85 MPH	'Minor' damage: shingles blown off or parts a roof peeled off, damage to gutters/siding, branches broken off trees, shallow rooted trees toppled.
	<b>EF-1</b>	86-110 MPH	'Moderate' damage: more significant roof damage, windows broken, exterior doors damaged or lost, mobile homes overturned or badly damaged.
	<b>EF-2</b>	111-135 MPH	'Considerable' damage: roofs torn off well constructed homes, homes shifted off their foundation, mobile homes completely destroyed, large trees snapped or uprooted, cars can be tossed.
	<b>EF-3</b>	136-165 MPH	'Severe' damage: entire stories of well constructed homes destroyed, significant damage done to large buildings, homes with weak foundations can be blown away, trees begin to lose their bark.
	<b>EF-4</b>	166-200 MPH	'Extreme' damage: Well constructed homes are leveled, cars are thrown significant distances, to story exterior wall of masonry buildings would likely collapse.
	<b>EF-5</b>	> 200 MPH	'Massive/incredible' damage: well constructed homes are swept away, steel-reinforced concrete structures are critically damaged, high-rise buildings sustain severe structural damage, trees are usually completely debarked, stripped of branches and snapped.

### History & Probability

Since 1954, the NWS has recorded 54 tornadoes in the planning area. Most have been EF0 or EF1 while the most intense has been an EF3. These tornadoes have caused 28 recorded injuries, no deaths, and an estimated \$26,247,750 in property damage. For a complete list of NWS recorded tornadoes, please reference Appendix C.

Map 3.8 – Historical Tornadoes, Benton County



### 3.7 – Tornadoes

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Based on the data recorded by the NWS, the planning area should expect a tornado at a rate of 0.8060 tornadoes per year or one tornado roughly every other year.

#### ***Vulnerability of and Impact on Facilities***

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Most tornadoes are in the EF1 – EF2 class. Building to modern wind standards and state codes provides significant protection from these hazard events; however, a community in the direct path of a violent, high scale tornado can do little to prevent significant property damage. Designing buildings to protect against extreme wind speeds, such as those associated with an EF4 or EF5 is extremely challenging and cost prohibitive. Anything less than a FEMA Code 361 compliant structure is susceptible to significant damage or complete destruction. A comparison of EF scale to the expected impact on facilities can be seen in the table shown previously in this section.

The average tornado event in the planning costs \$486,068 while the existing range of a single incident has been between and EF0 and EF3 costing between \$0 and \$10,000,000.

Benton County and its participating jurisdictions' municipal and public-school district structures are valued at a total of \$21,838,075,297 (\$20,052,529,000 municipal, \$1,785,546,297 school district). Since tornadoes threaten the entire planning area equally, all municipal and school district structures are considered exposed and vulnerable except for the identified safe rooms at the Decatur and Pea Ridge School Districts bringing the total down to \$21,835,413,893.

#### ***Vulnerability of & Impact on Critical Facilities***

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All infrastructure and critical facilities within the planning area are equally vulnerable and at risk since tornadoes can affect any portion of the planning area and damage indiscriminately.

#### ***Vulnerability of and Impact on Population***

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An EF4 or EF5 tornado has the potential to level the smaller jurisdictions and kill everyone in them while being able to do nearly the same in the larger ones. A lesser magnitude tornado has the ability to kill and injure citizens as it rips off the roofs and walls of its structures while launching airborne missiles born from debris.

Benton County and its participating municipal jurisdictions have a total population of 284,333 in 90,084 housing units all of which are vulnerable and at risk to tornadoes. Additionally, all 44,078 public-school district students and their 5,942 staff and faculty are considered vulnerable and at risk.

#### ***Vulnerability of and Impact on Systems***

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All of the planning area's community assets and systems' vulnerability to tornadoes is equal throughout the planning area. A small magnitude tornado will not significantly damage a community and its systems, but a larger magnitude tornado can impact a community for weeks, months, or years and even destroy a city completely. Significant damage to any portion of the planning area would hinder the community's economy and increase its social vulnerability.

### ***Key Considerations***

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Since tornadoes affect large areas and indiscriminately, there is not any particular portion of the planning area that is more likely than another to experience a tornado. However, there are portions of the planning area that are more vulnerable to wind related damage due to the age of a significant portion of their building stock.

All plan participants retain significant levels of building stock constructed prior to 1999. These buildings were generally constructed to lower wind resistant standards and codes and thus these structures are considered more vulnerable.

## 3.8 – Wildfires

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The NWS defines a wildfire as: Any free burning uncontrollable wildland fire not prescribed for the area which consumes the natural fuels and spreads in response to its environment. They can occur naturally, by human accident, and on rare occasions by human action. Typically, their point of origin is far from human development with the exception of roads, power lines, and similar rural infrastructure. There is a constant threat to hikers, campers, and other people engaging in outdoor activities. Significant danger to life and property occurs when human development meets and becomes intertwined with wildland's vegetation. The threat of wildfire and grass fires increases in areas prone to intermittent drought, or are generally arid or dry.

Population de-concentration in the U.S. has resulted in rapid development in the outlying fringe of metropolitan areas and in rural areas with attractive recreational and aesthetic amenities, especially forests, communities bordering forests and prairies where fires branch off. This demographic change is increasing the size of the wildland-urban interface (WUI), defined as the area where structures and other human development meet or intermingle with undeveloped wildland. Its expansion has increased the likelihood that wildland and grass fires will threaten life and property.

### ***Location & Extent***

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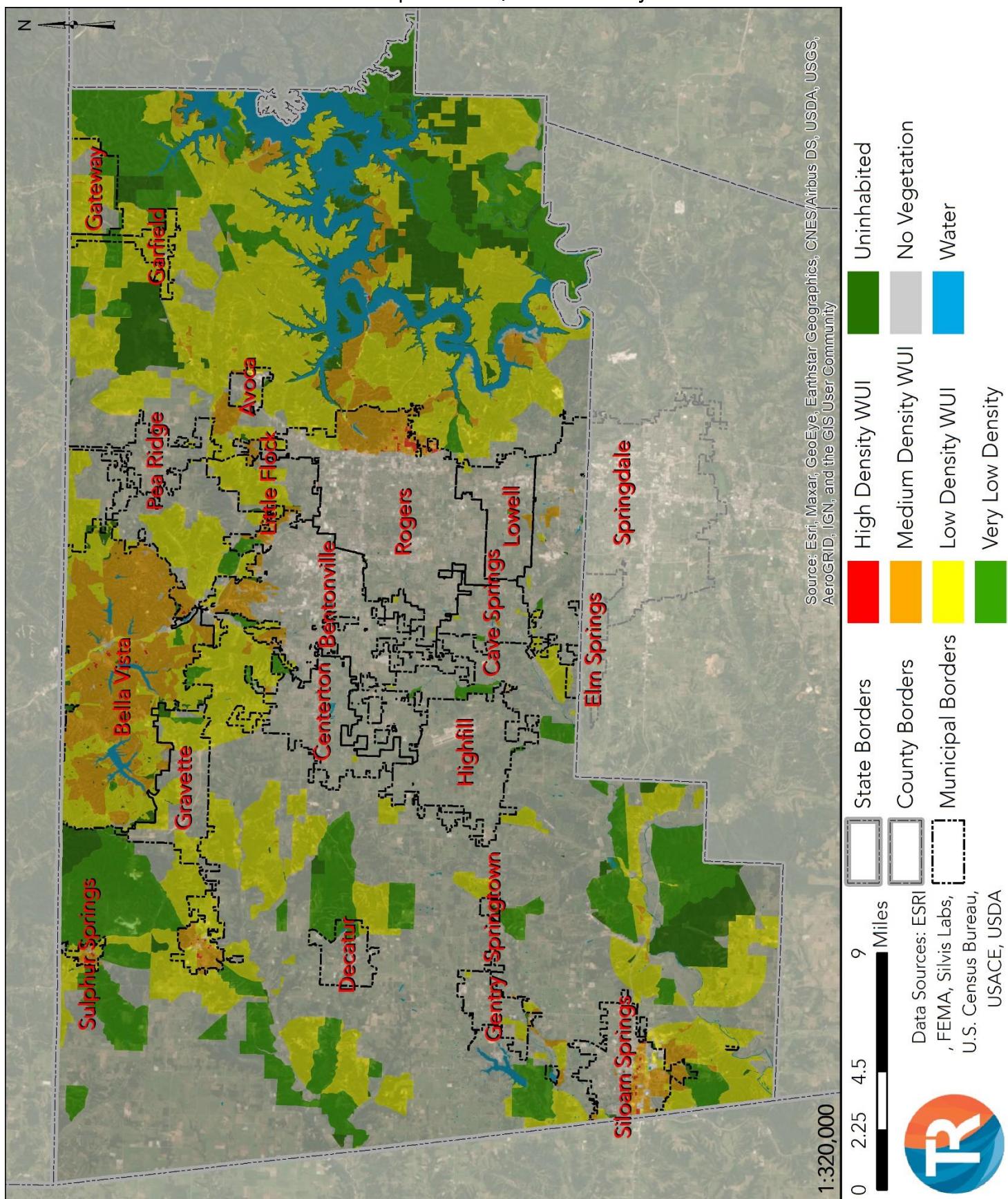
Most wildfires occur without warning and spread quickly but the event depends upon a number of conditions. Wind can turn a small flame into a multi-acre grassfire within a matter of minutes, while this can be further compounded by the level of moisture and available fuel based on the area's land use. Benton County and the planning area's fire response efforts are confronted with both open land brushfires as well as difficult to reach and extinguish rural-based wildfires.

Nearly every acre of undeveloped land in the planning area is covered in by some form of vegetation that could act as fuel for a fire. Map 3.1 in the Droughts hazard profile depicts the basic varieties of vegetation throughout the planning area.

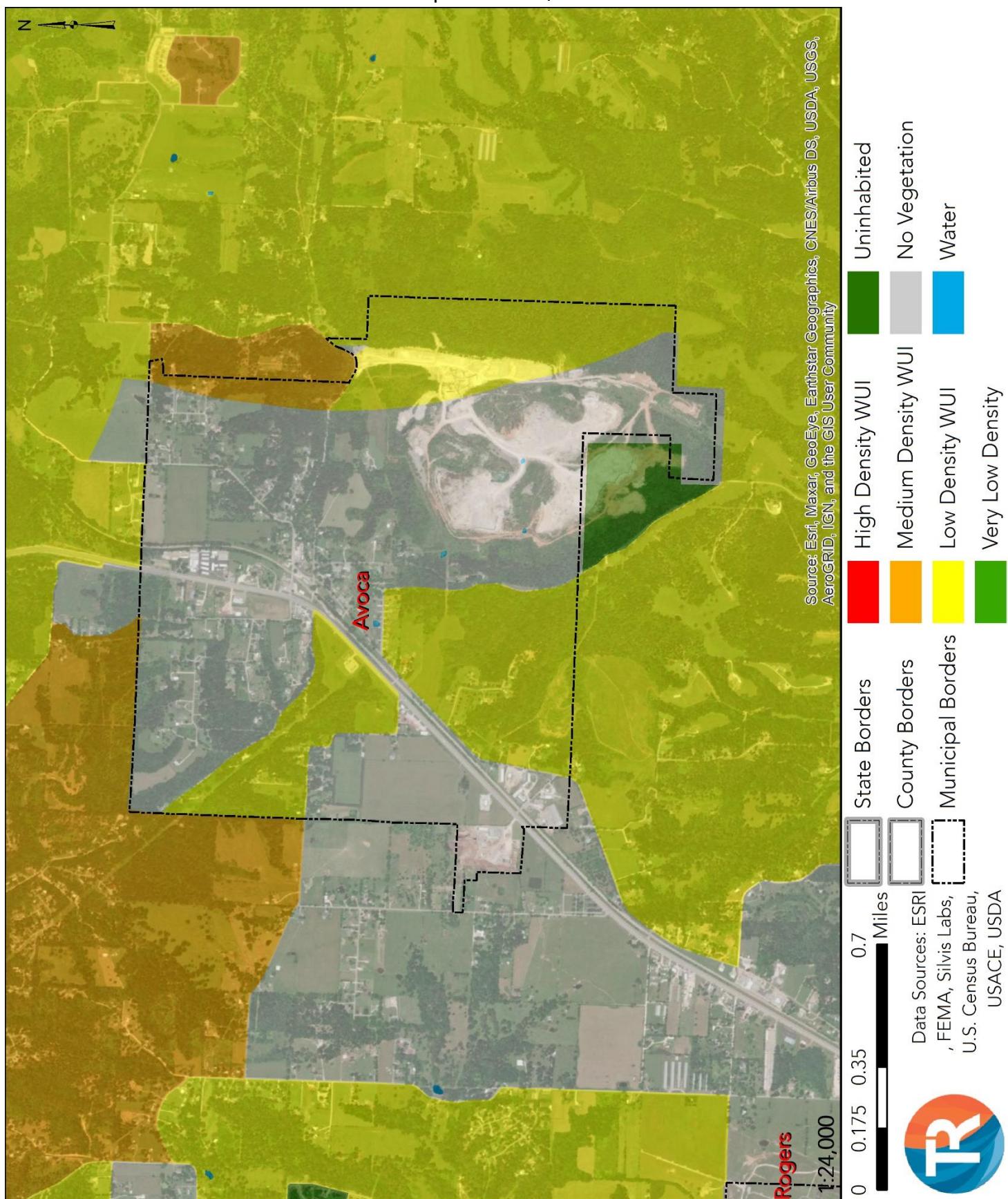
The planning area experiences sporadic brush fires that can occur almost anywhere. These fires are typically small and burn less area as they are mostly fed by grass and brush versus heavily forested areas. Additionally, although wildland and grass fires can occur almost anywhere throughout the planning area, the fuel available for a fire to burn and spread is less dense and thus does not create fires that have momentum that they do along the previously

WUI zones exist throughout the county, but are not as common as in most areas of Arkansas. In general, they are more common in the northern and eastern parts of the planning area. The maps on the following pages depict the WUI zones throughout the planning area.

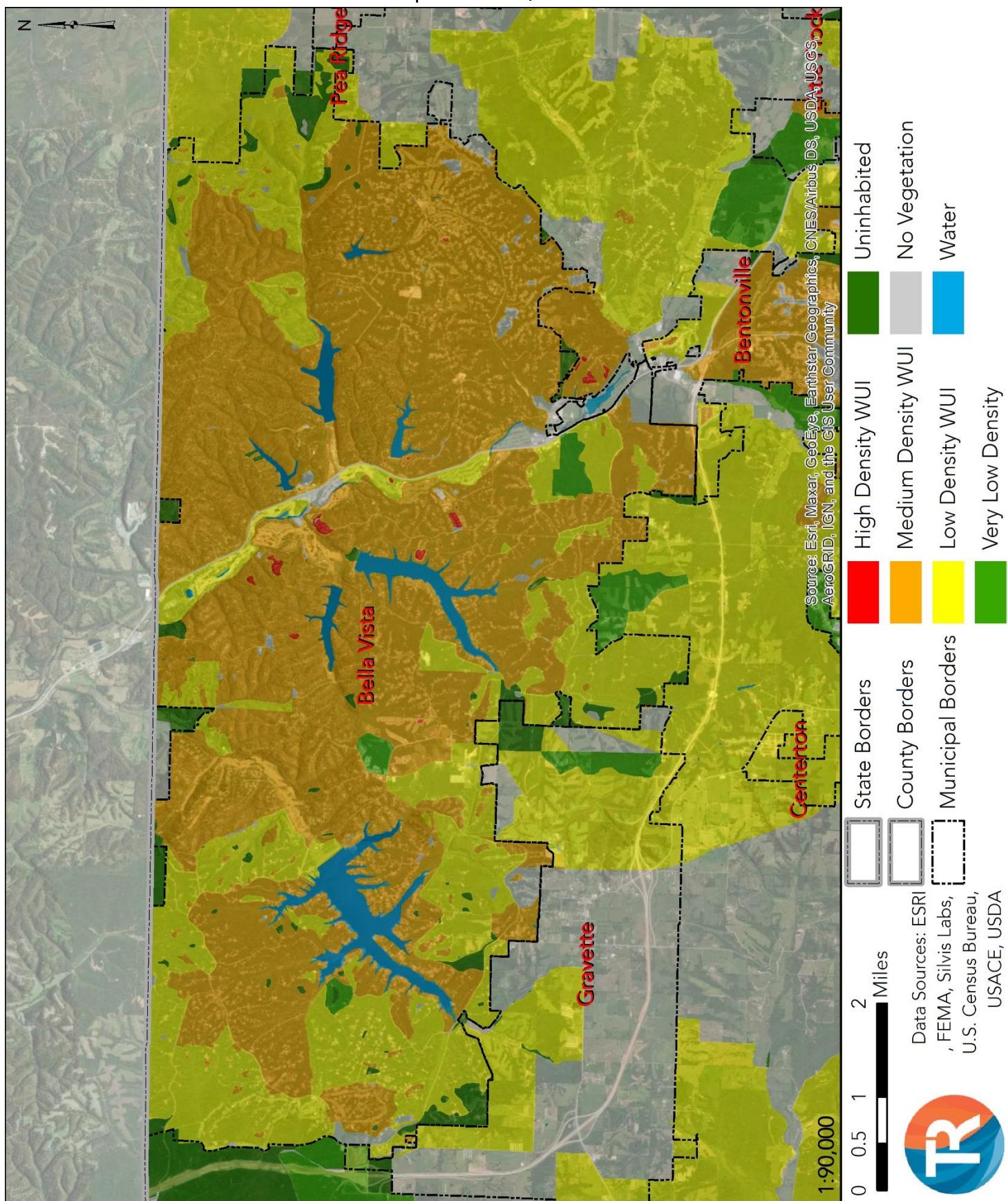
Map 3.9 – WUI, Benton County



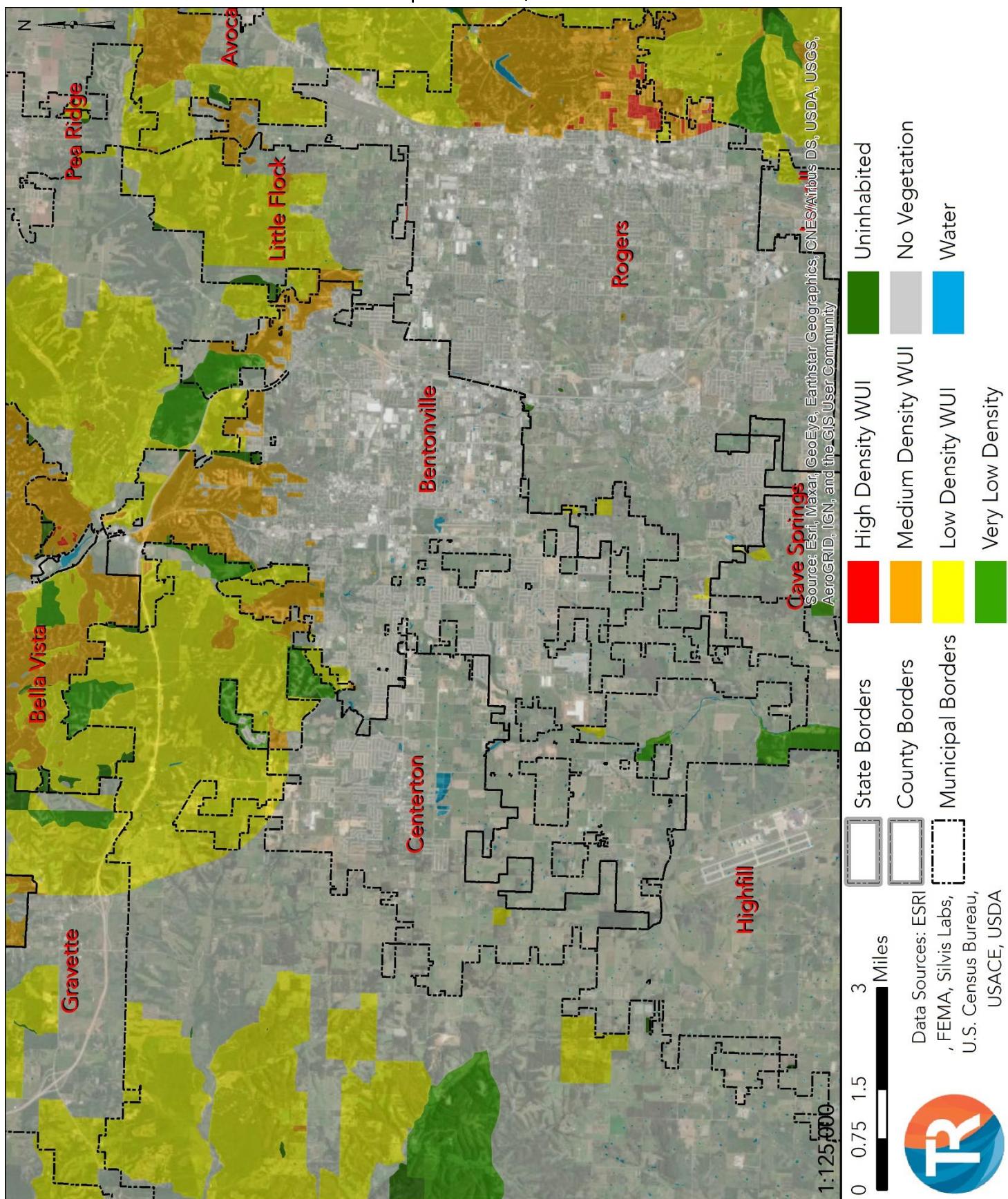
Map 3.10 – WUI, Avoca



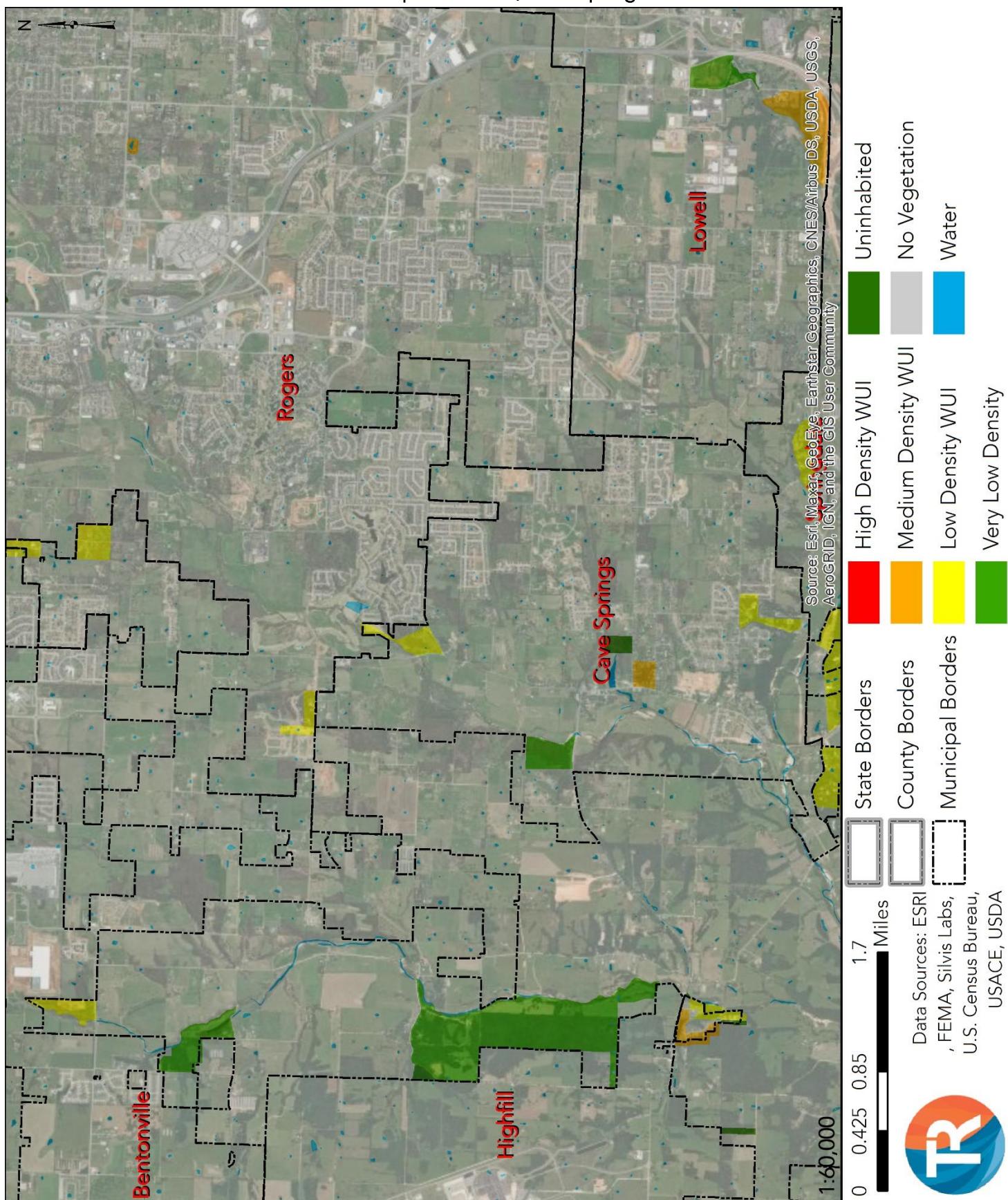
### Map 3.11 – WUI, Bella Vista



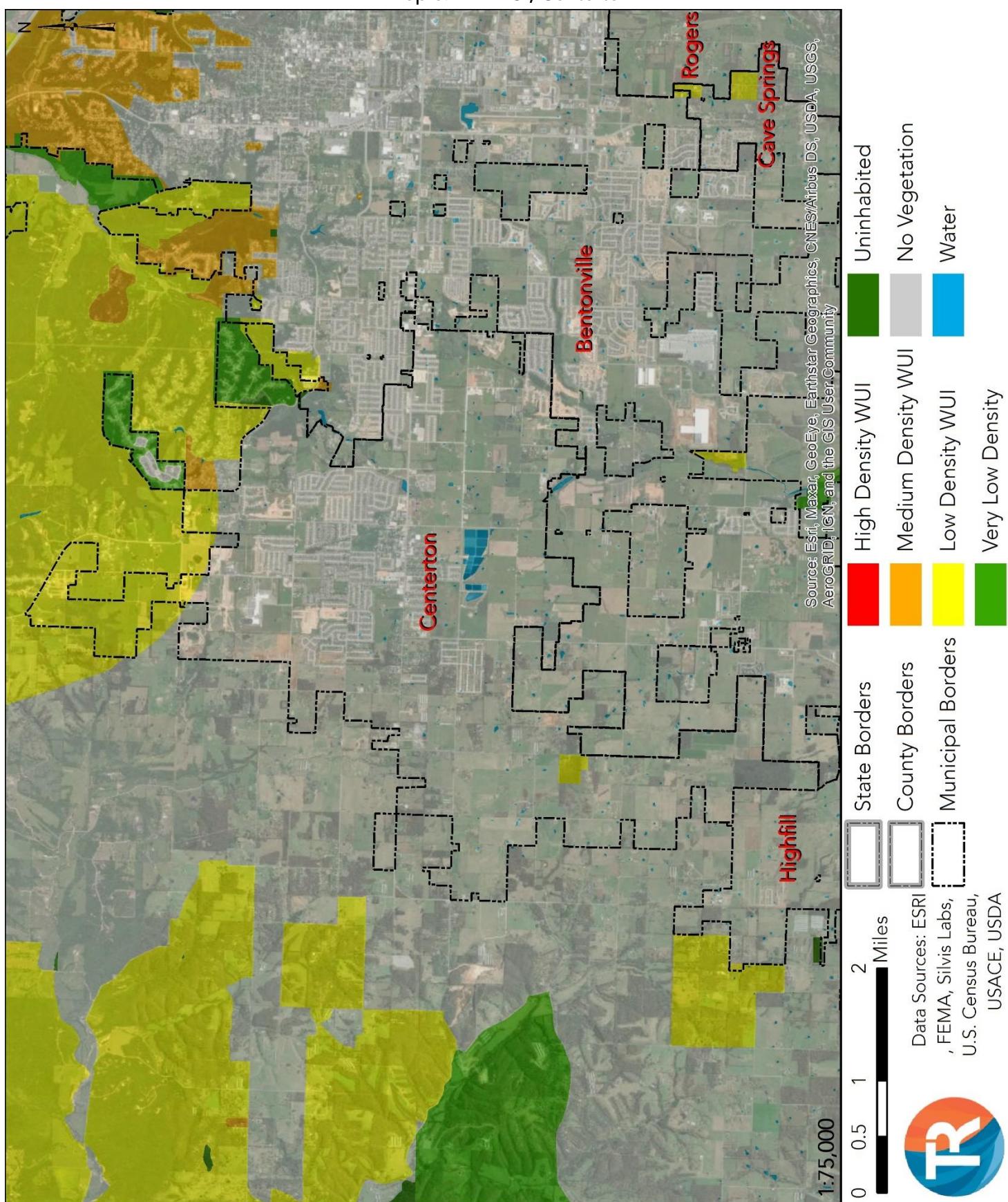
Map 3.12 – WUI, Bentonville



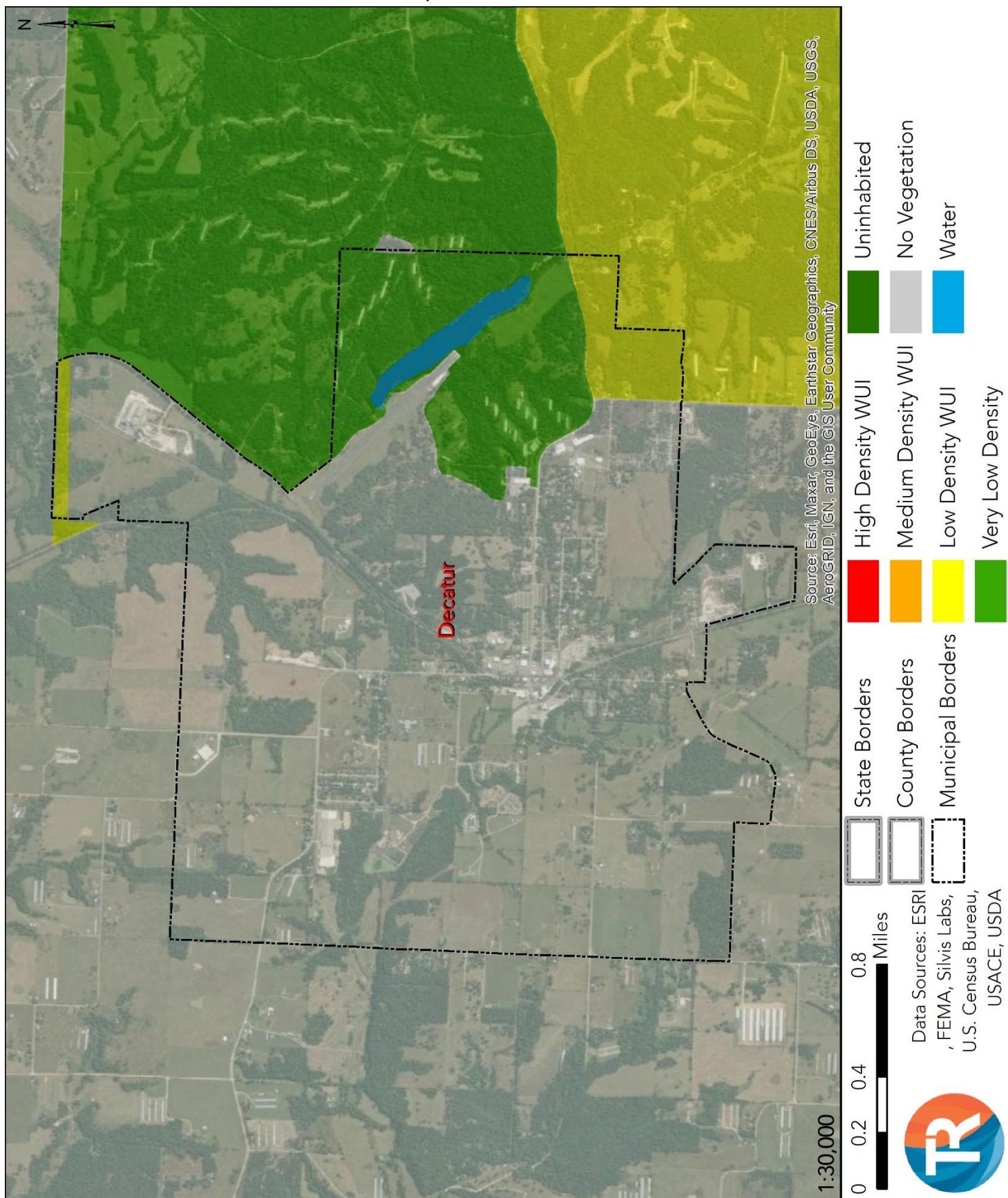
Map 3.13 – WUI, Cave Springs



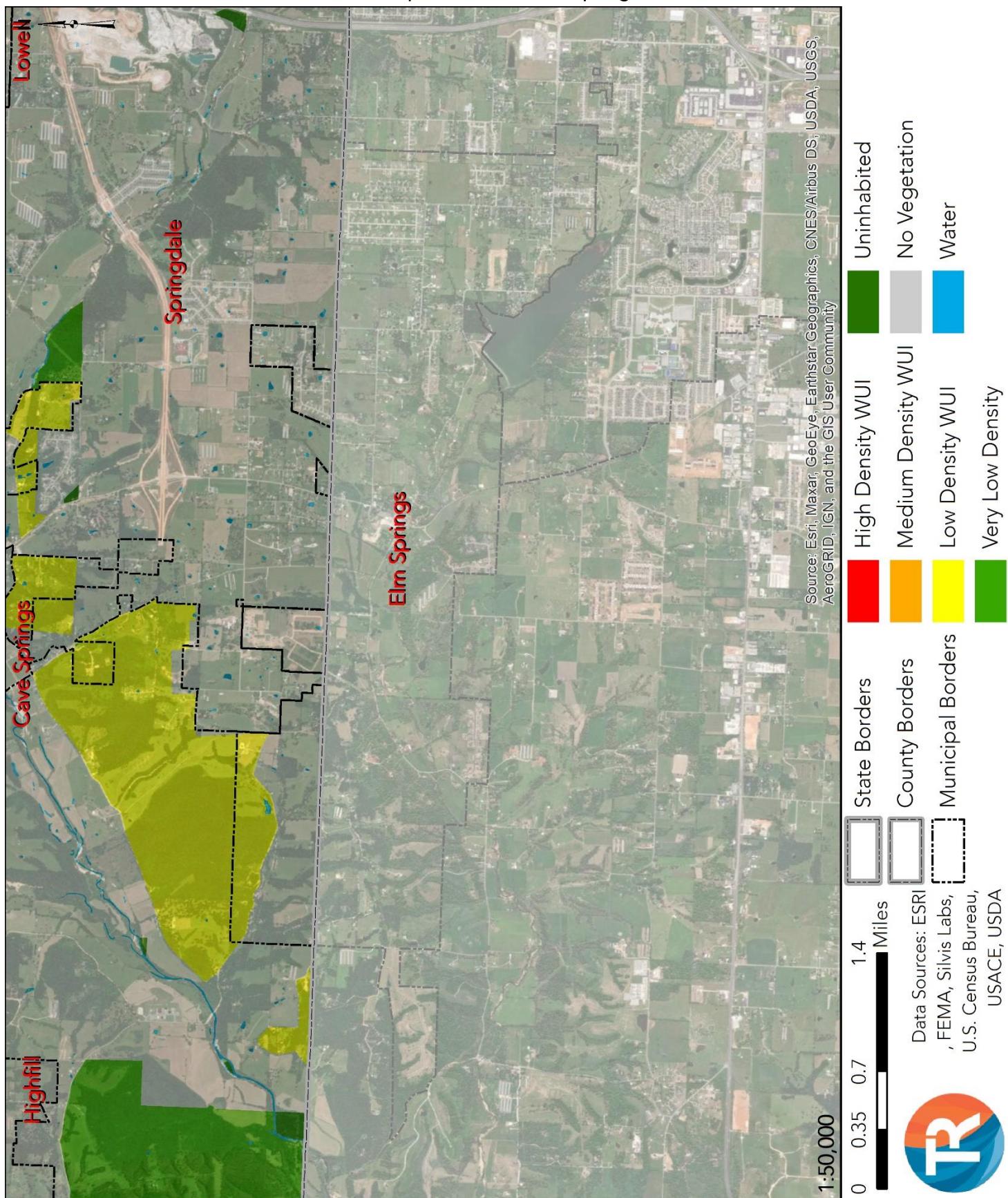
Map 3.14 – WUI, Centerton



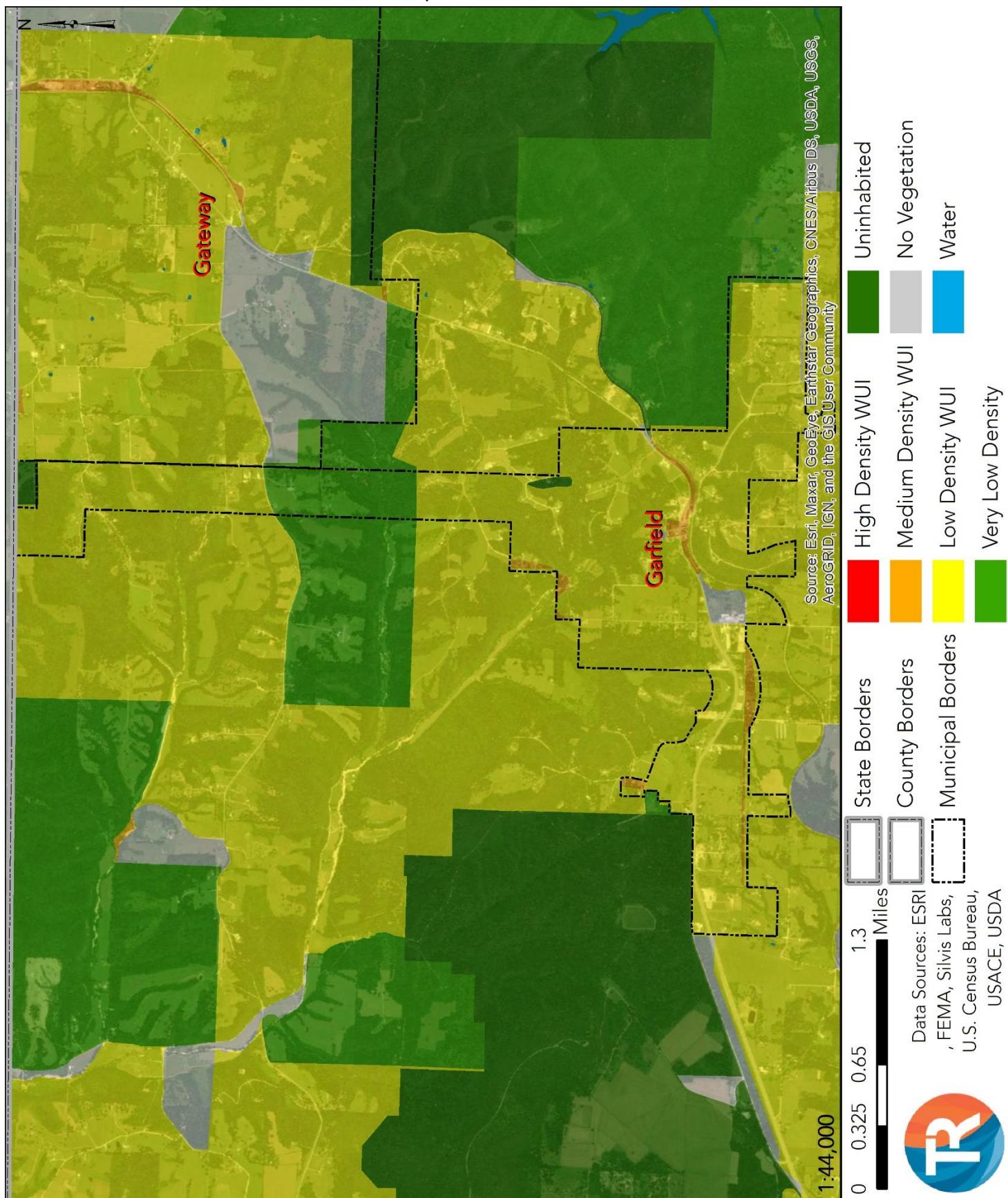
Map 3.15 – WUI, Decatur



Map 3.16 – WUI, Elm Springs

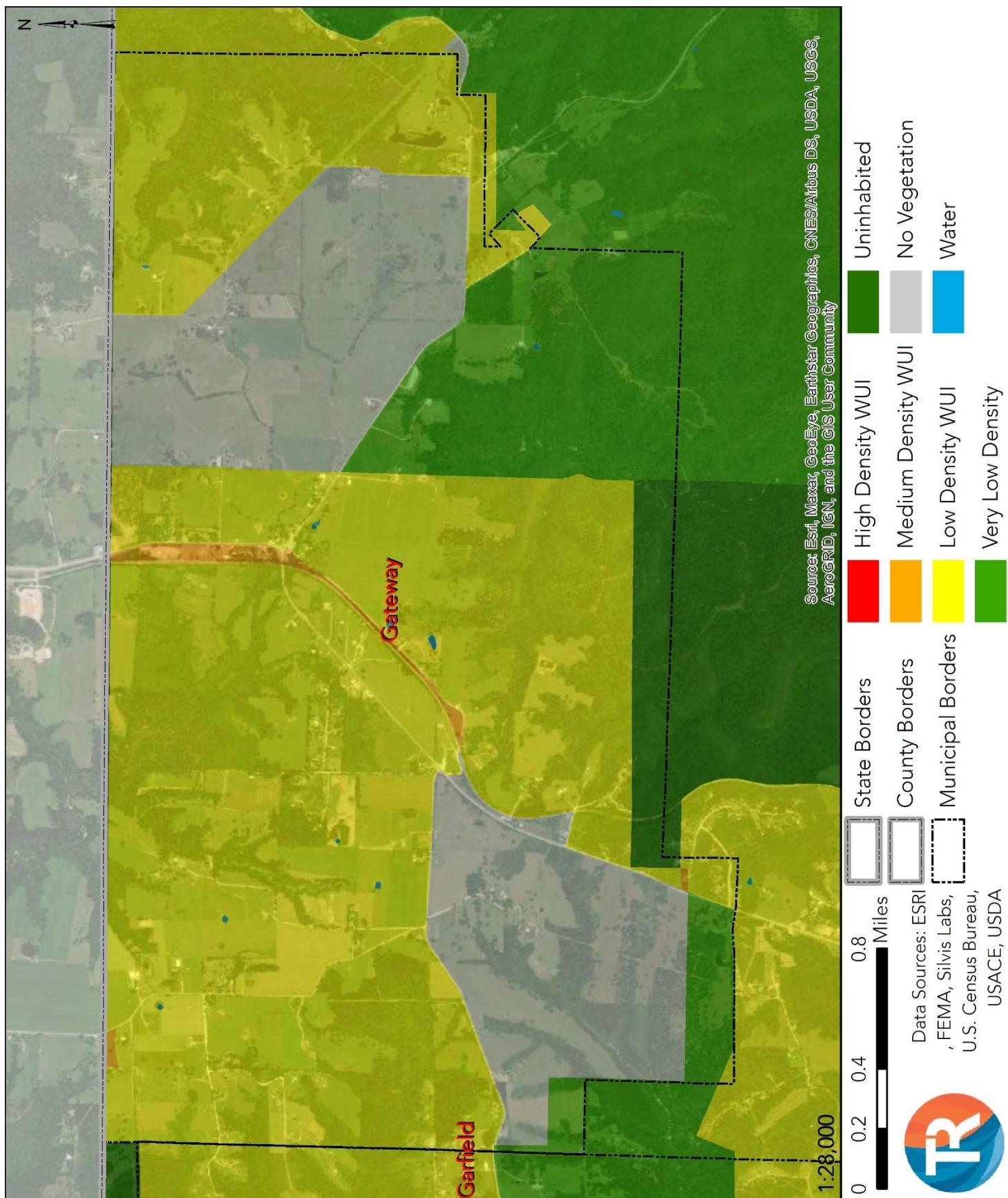


Map 3.16 – WUI, Garfield

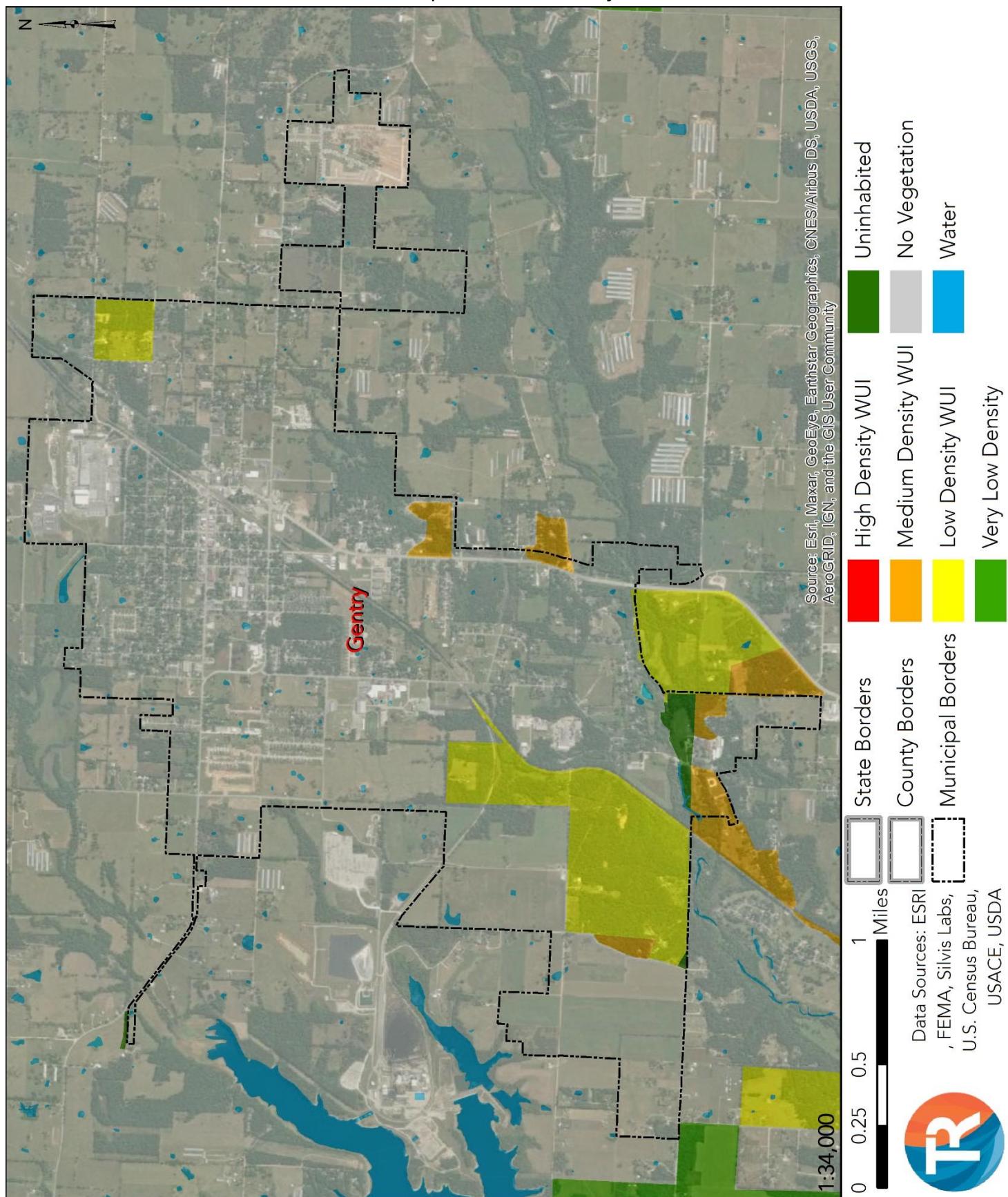


### 3.8 – Wildfires

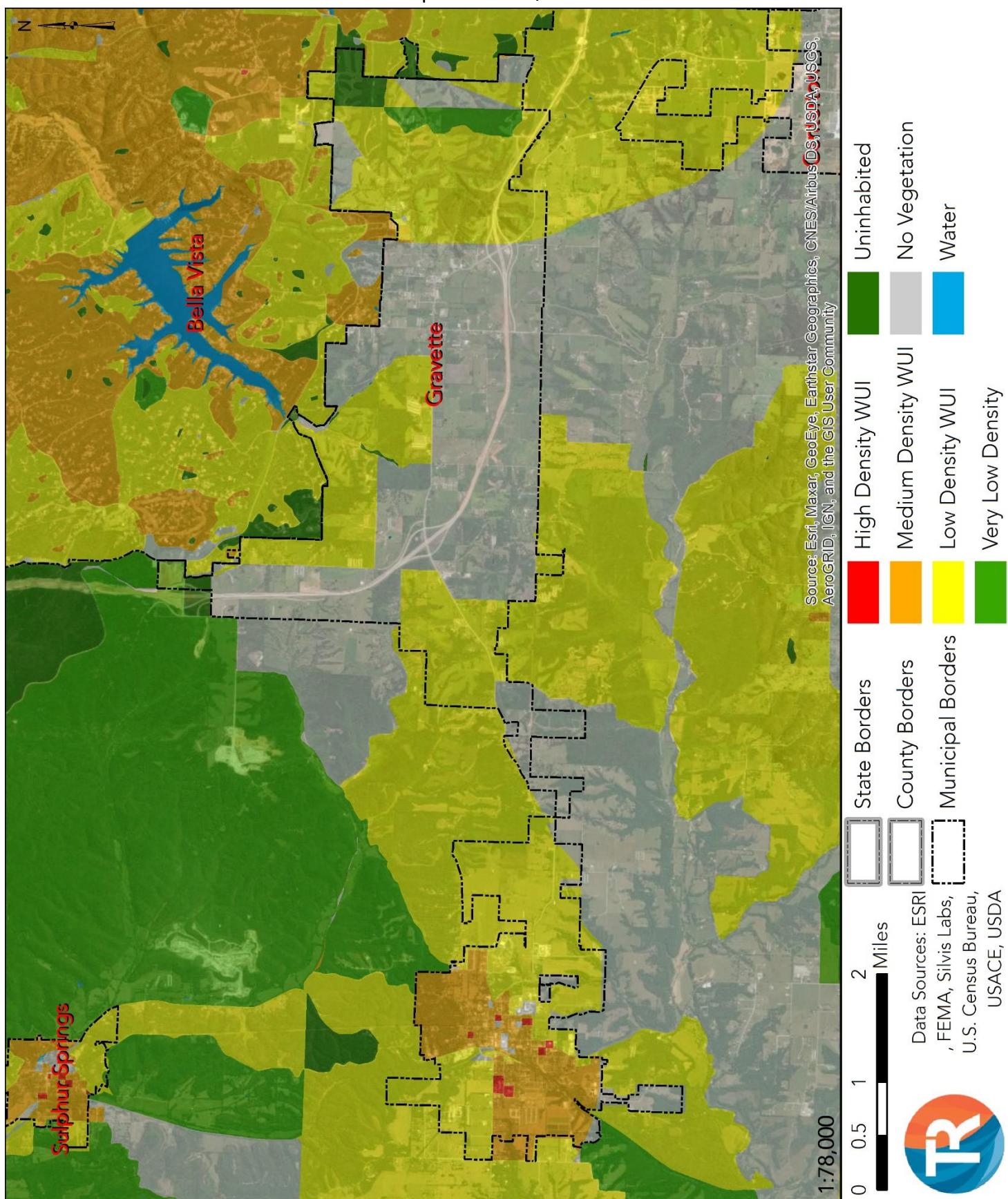
Map 3.16 – WUI, Gateway



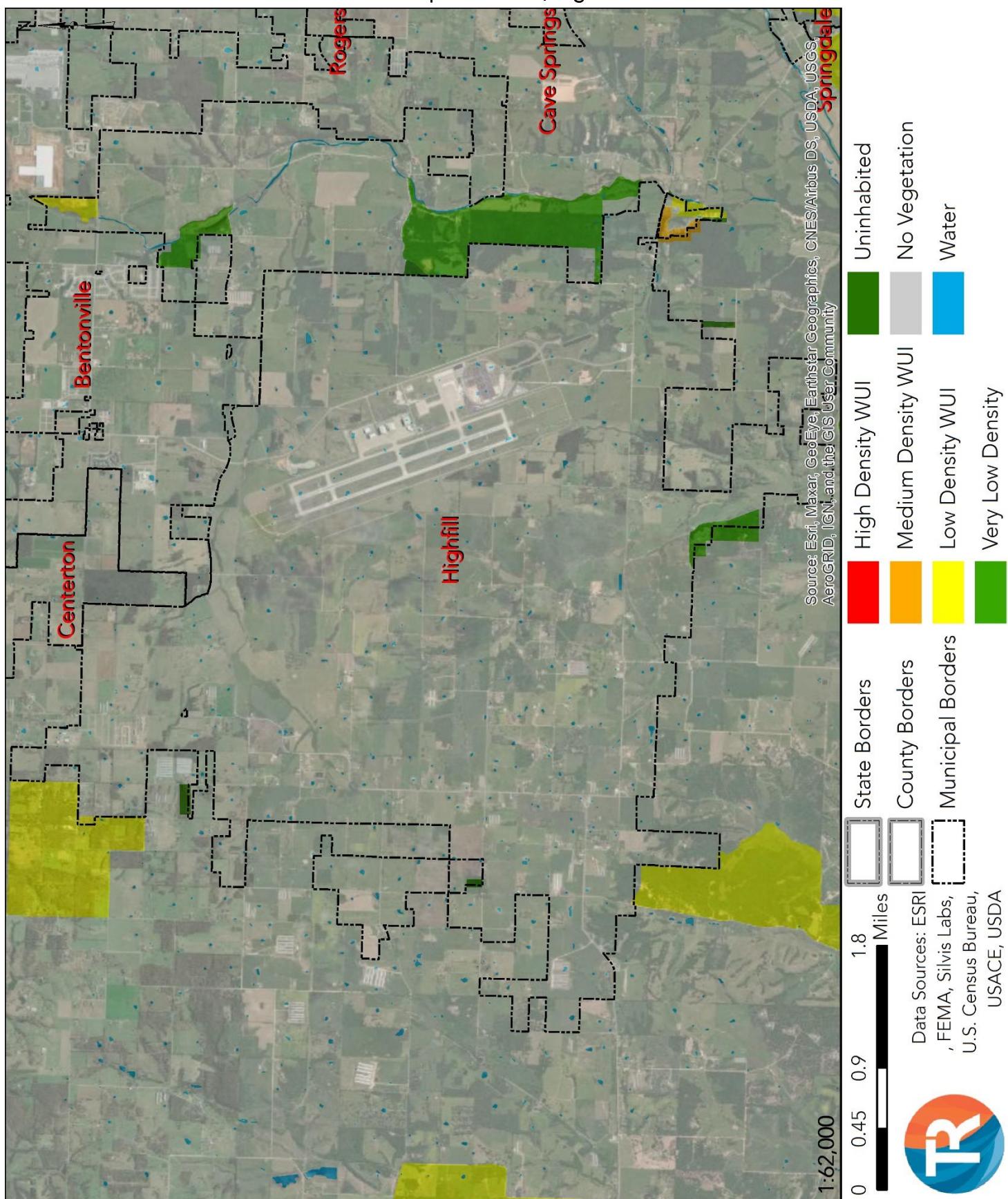
Map 3.16 – WUI, Gentry



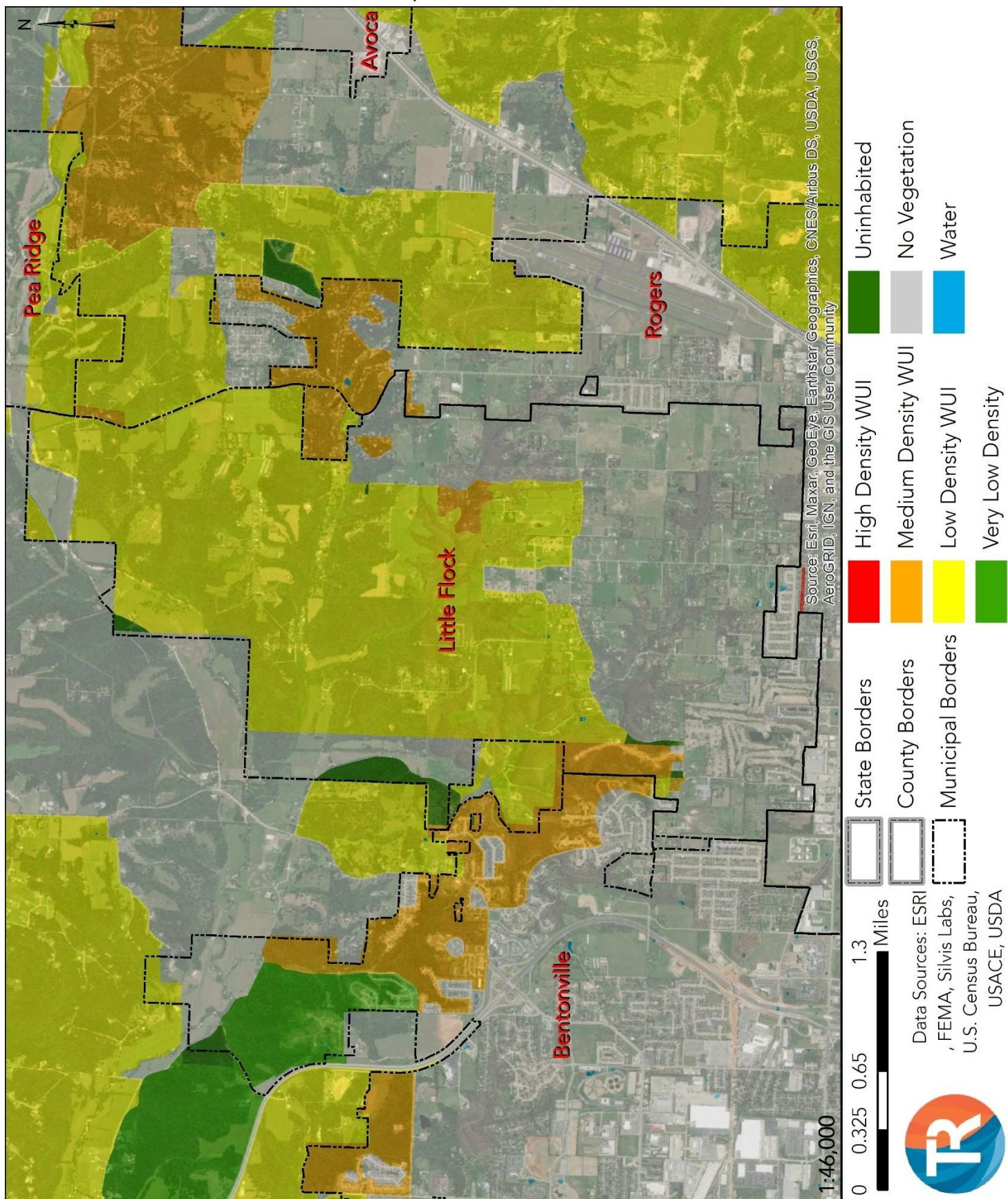
Map 3.16 – WUI, Gravette



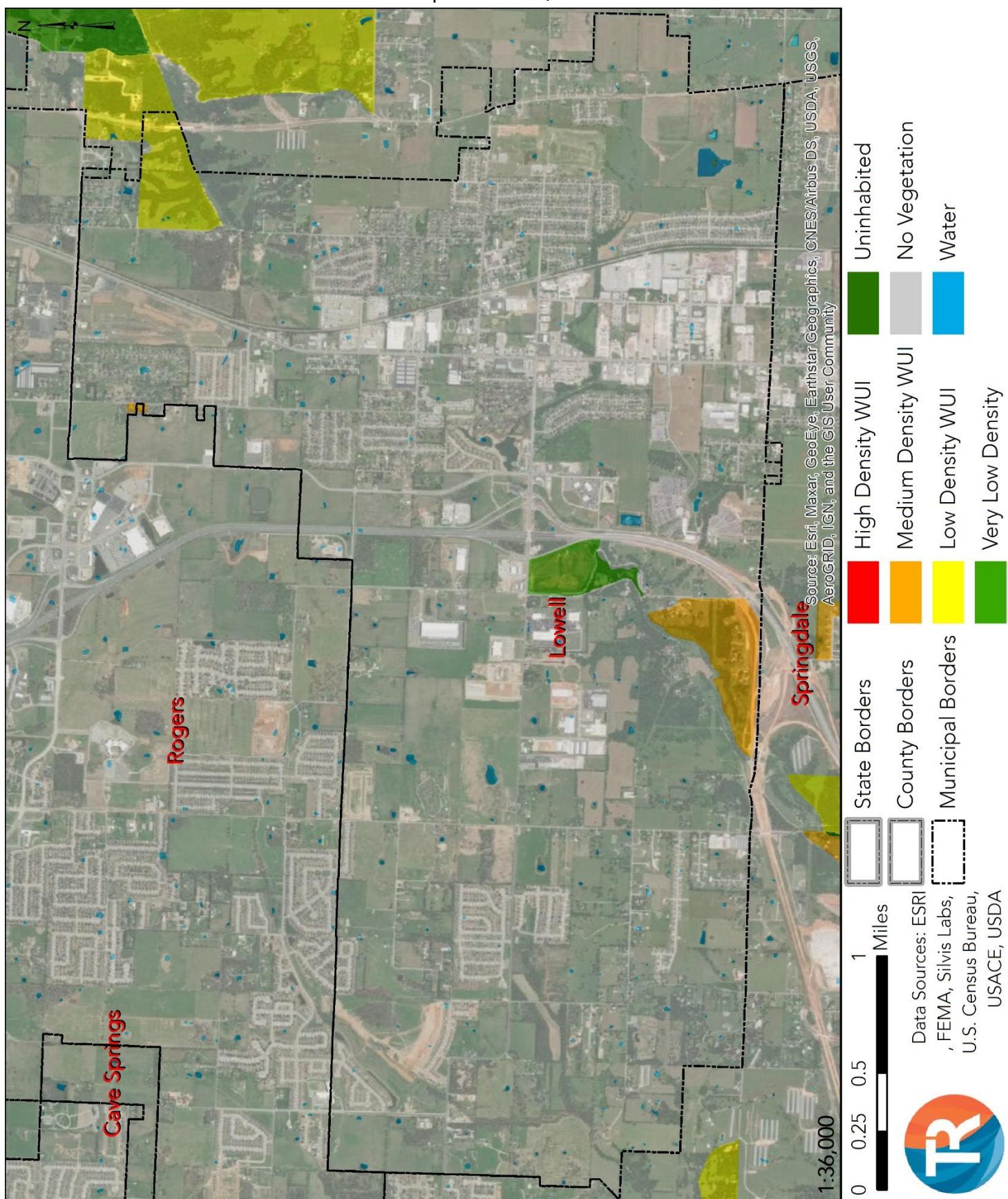
Map 3.16 – WUI, Highfill



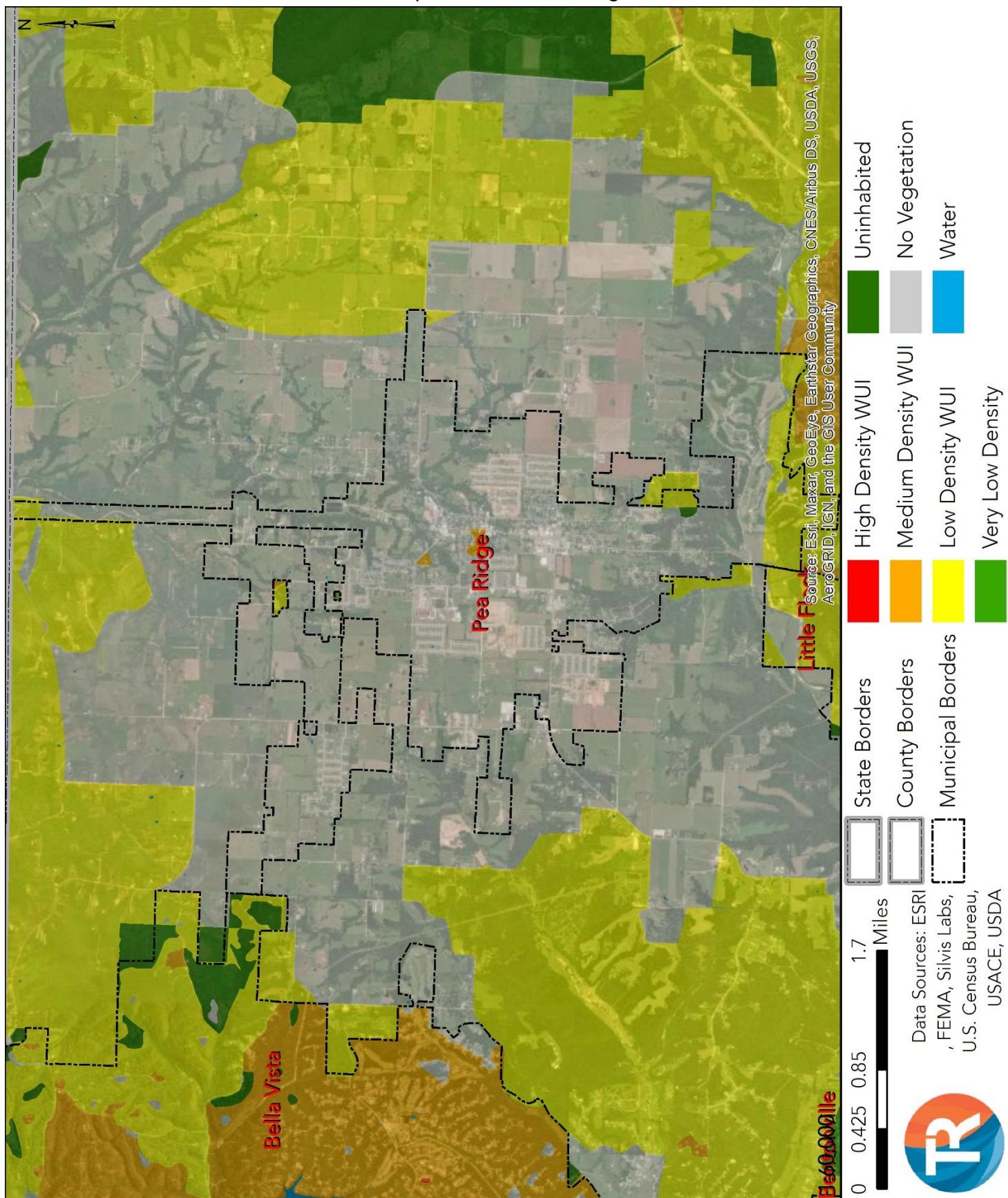
Map 3.16 – WUI, Little Flock



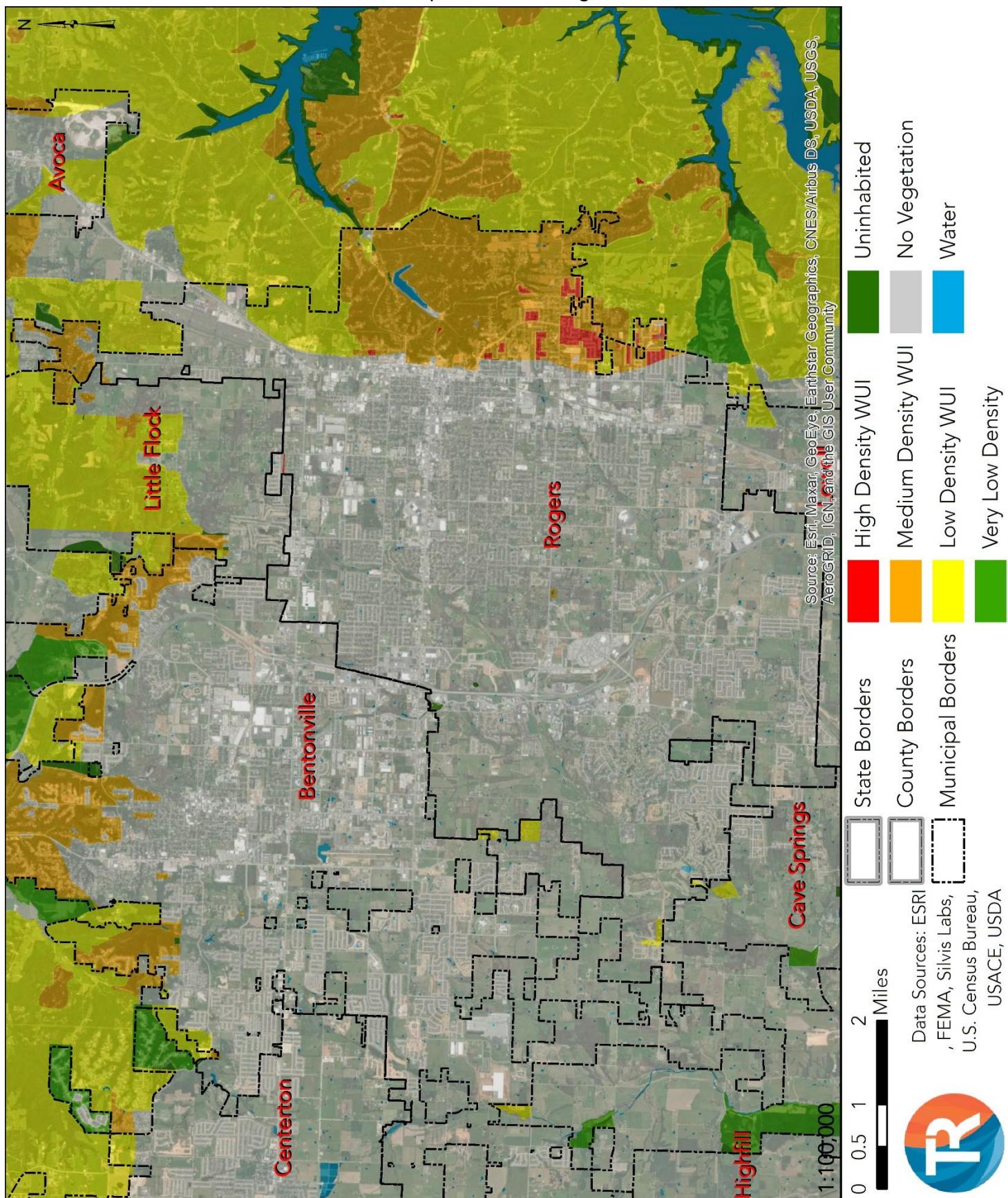
Map 3.16 – WUI, Lowell



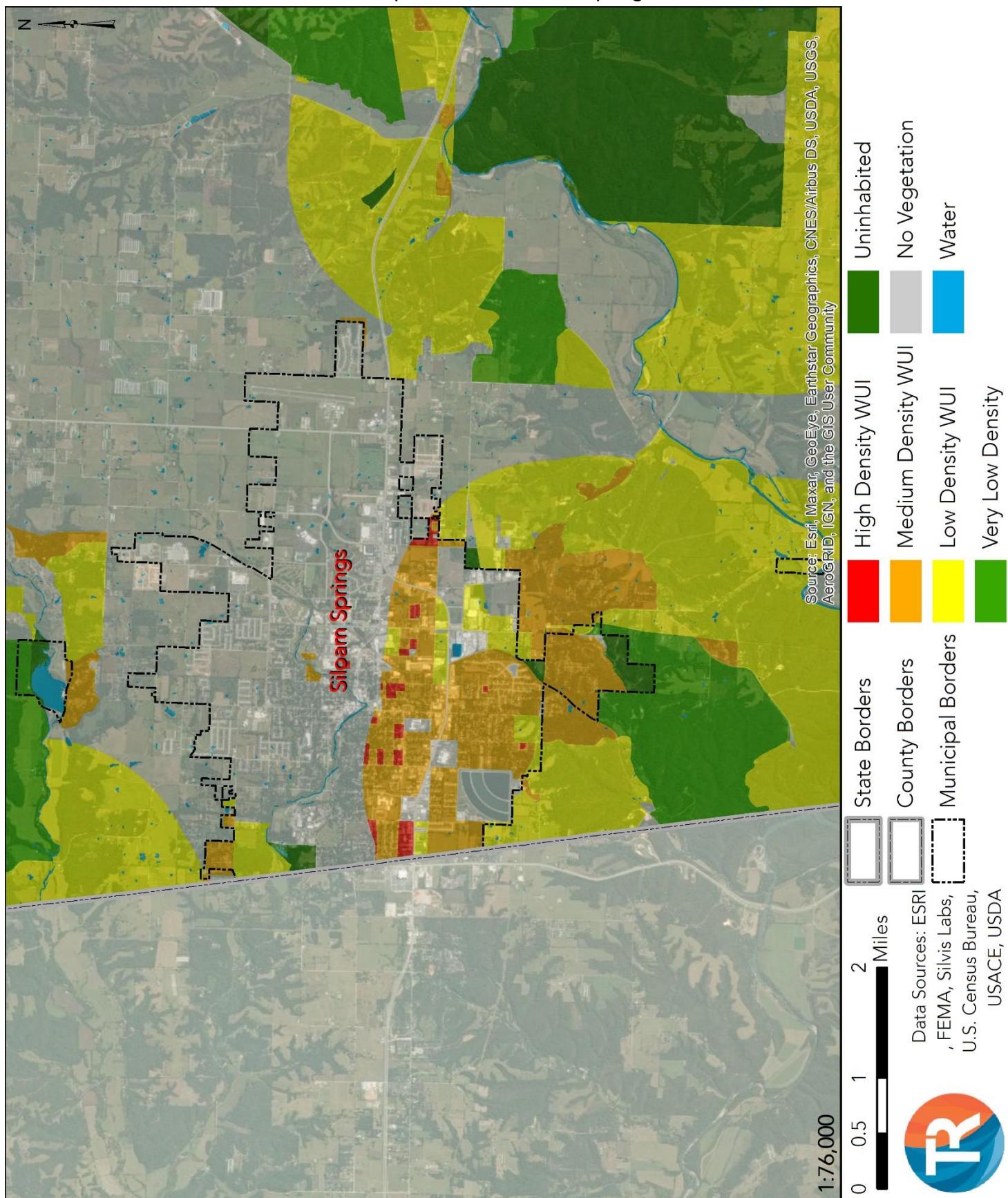
Map 3.16 – WUI, Pea Ridge



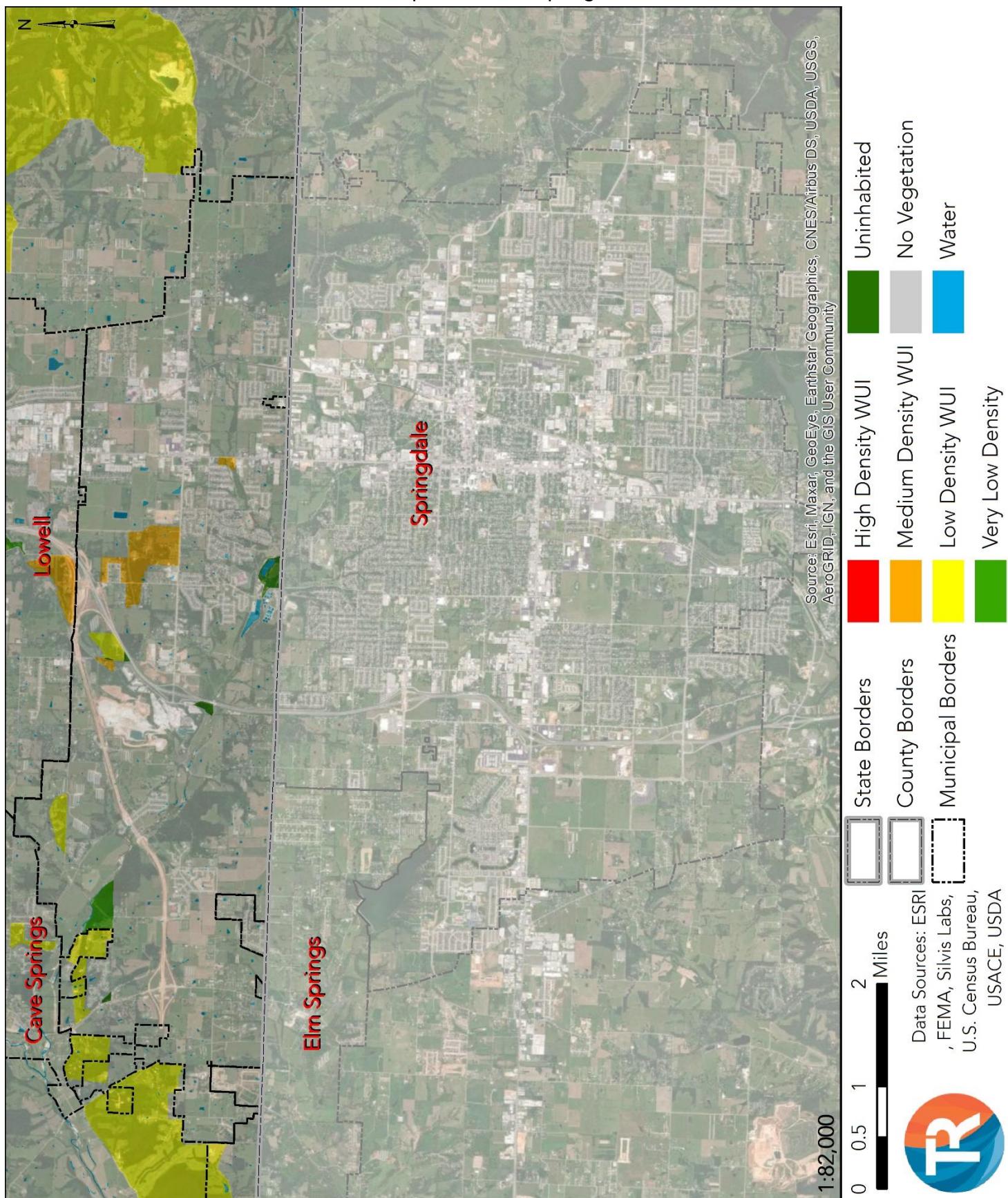
Map 3.16 – WUI, Rogers



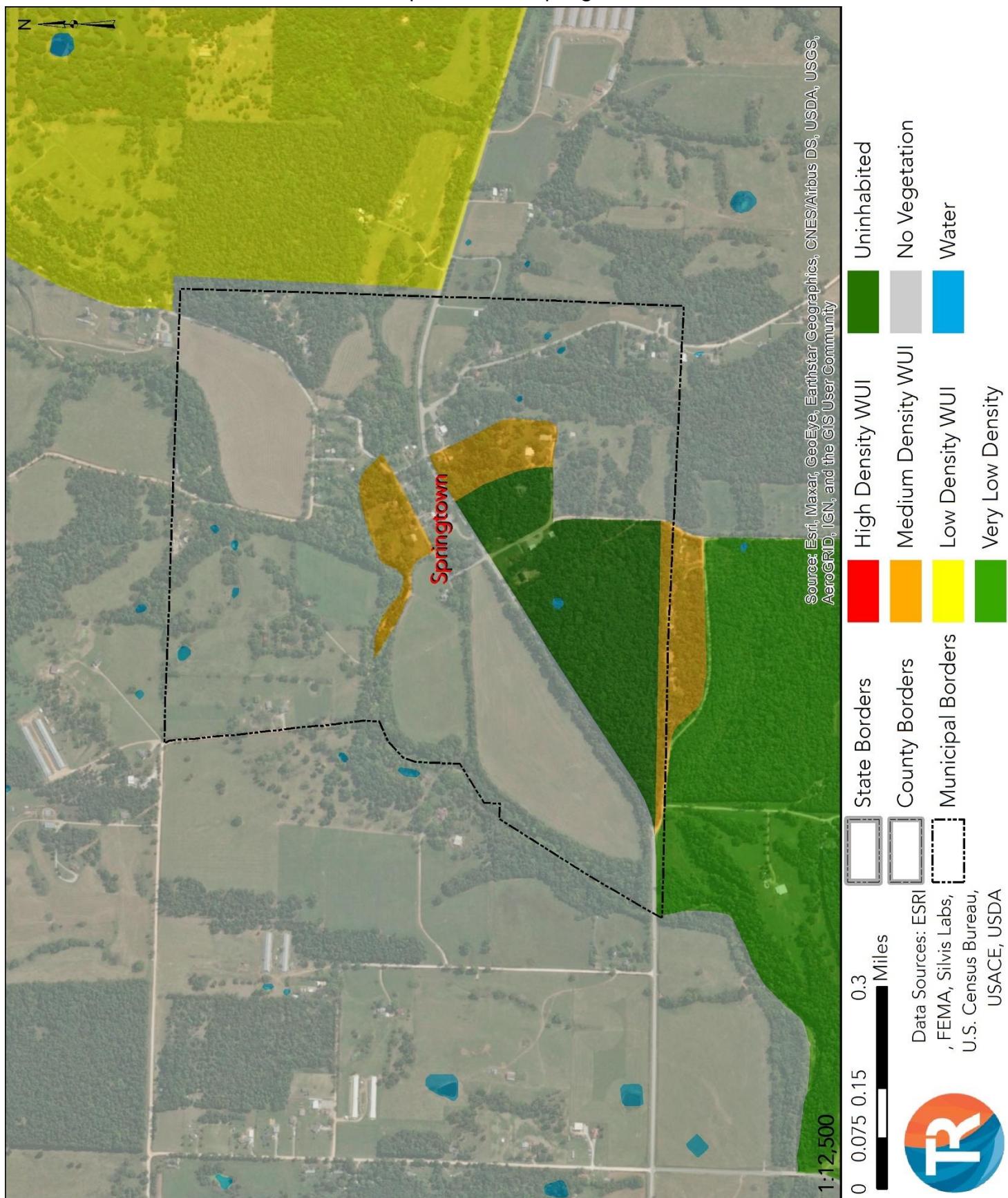
Map 3.16 – WUI, Siloam Springs



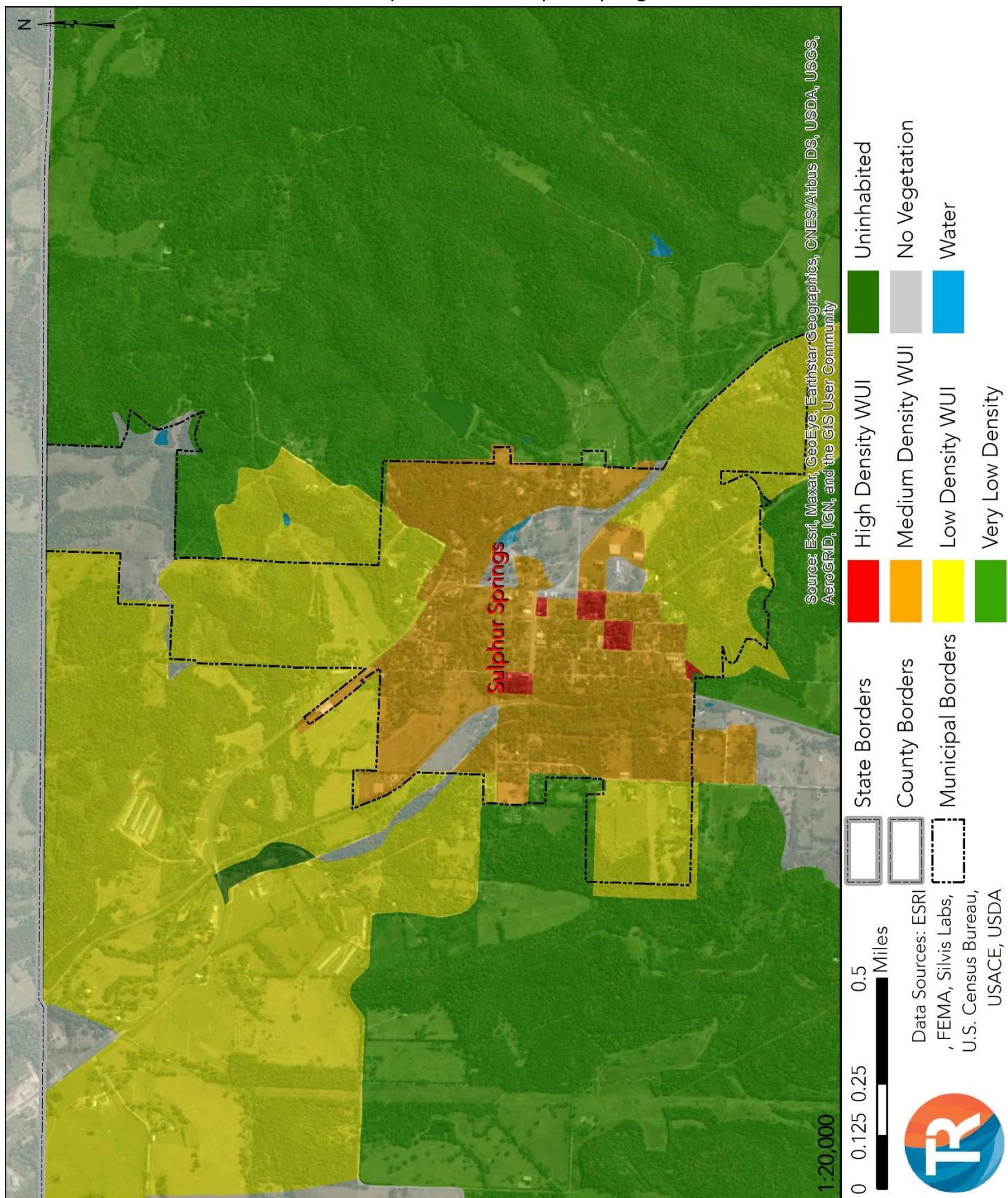
Map 3.16 – WUI, Springdale



Map 3.16 – WUI, Springtown



Map 3.16 – WUI, Sulphur Springs



Given these conditions, a wildfire occurring outside the forested areas previously mentioned should expect wildfires to occur at a rank 0 to 1 on the burn severity index, while major wildfires that originate anywhere in the forested regions previously mentioned can likely occur anywhere from 0 to 2 on the burn severity index. Based on historical data, the planning area should expect its wildfires to average around 21.51 acres per wildfire, but should expect most to burn below 10 acres with a rare outlier burning in excess of 50 acres.

Table 3.24 – Burn Severity Index

BURN SEVERITY	RANK	DESCRIPTION	CHARACTERISTICS
 Unburned	RANK 0	Fire extinguished before reaching microsite	<ul style="list-style-type: none"> <li>• Leaf litter from previous years intact and uncharted</li> <li>• No evidence of char around base of trees and shrubs</li> <li>• Pre-burn seedlings and herbaceous vegetation present</li> </ul>
 Low Severity Burn	RANK 1	Surface fire which consumes litter yet has little effect on trees and understory vegetation	<ul style="list-style-type: none"> <li>• Burned with partially consumed litter present</li> <li>• Evidence of low flame heights around base of trees and shrubs (&lt;0.5 m)</li> <li>• No significant decreases in overstory &amp; understory basal area, diversity or species richness from pre-burn assessments</li> <li>• Usually burning below 80 degrees Celcius</li> </ul>
 Medium-Low Severity Burn	RANK 2	No significant differences in overstory density and basal area, & no significant differences in species richness. However, understory density, basal area, and species richness declined.	<ul style="list-style-type: none"> <li>• No litter present and 100% of the area covered by duff</li> <li>• Flame lengths &lt; 2 m</li> <li>• Understory mortality present, little or no overstory mortality</li> </ul>
 Medium-High Severity Burn	RANK 3	Flames that were slightly taller than those of Medium-low intensity fires, but these fires had occasional hot spots that killed large trees, with a significant reduction in the understory.	<ul style="list-style-type: none"> <li>• Soil exposure on 1-50% of the area</li> <li>• Flame lengths &lt; 6 m</li> <li>• High understory mortality with some overstory trees impacted</li> </ul>
 High Severity Burn	RANK 4	Crown fires, usually a stand-replacing burn with relatively high overstory mortality.	<ul style="list-style-type: none"> <li>• Soil exposure &gt; 50%</li> <li>• Flame lengths &gt; 6m</li> <li>• Higher overstory mortality 20%</li> <li>• Usually burning above 800 degrees Celcius</li> </ul>

## History & Probability

Since 2013, the planning area has experienced 118 significant wildfires (those burning greater than 1 acre of land). In total, these wildfires have burned 2,538 acres of land. They occur at a yearly rate of 16.86 wildfires per year in which an average of 362.57 acres will be burnt per year.

**Table 3.25 – Historical Wildfires, Benton County**

Year	Fires	Acres
2013	14	230
2014	19	273
2015	19	422
2016	20	522
2017	20	362
2018	18	626
2019	8	103
<b>Total =</b>	<b>118</b>	<b>2,538</b>

\*The data are from the National Fire Incident Reporting System

## Vulnerability of and Impact on Facilities

A wildfire burning near a jurisdiction may cover it in soot, cause secondary fires from traveling coals, or directly engulf facilities burning them to the ground. Properties located in some rural areas can prove more difficult to reach by first responders. Additionally, many of these rural locations do not have adequate water supplies for first responders to utilize in extinguishing these fires, causing them to spread farther than they normally would. Facilities can be protected by creating defensible spaces or buffer zones, maintaining a fuel free environment, and structural modifications to prevent the growth of a wildland fire.

Wildfires threaten almost every structure that exists in a vegetated area as depicted in maps previously posted in this section. Benton County and the participating municipalities structures are valued at \$20,052,529,000. A GIS analysis of the identified WUI puts a total of 35,145 of the planning area's municipal structural inventory worth \$7,034,690,000 vulnerable to and at high risk to wildfires. Please see the following tables for a breakdown of these values by jurisdiction and maps located previously in this hazard profile for depictions of the WUI zones.

Of the school districts, 8 school district sites were identified within low, medium, or high WUI zones. The Decatur, Gentry, and Pea Ridge School Districts have no operations in identified WUI zones. The school district sites existing within identified WUI zones are the Bentonville SD's Lincoln Junior High site, all of the Gravette SD's structures, the Rogers SD's Eastside Elementary, Garfield Elementary, and the Old Wire Road Elementary (6 structures total), and the Siloam Springs SD's Middle School (6 buildings) campus and their Administrative Building. These structures values total to \$196,259,946.

**Table 3.26 – Vulnerable Municipal Structures by Count, Wildfires**

Municipality	Ag	Com	Gov	Ind	Res	Res-M	Total
Benton County	34	311	5	165	12,024	36	12,575
Avoca	1	3	0	3	90	0	97
Bella Vista	10	217	3	71	12,345	38	12,684
Bentonville	4	34	1	12	1,388	3	1,442
Cave Springs	0	1	0	0	28	0	29
Centerton	0	2	0	1	63	0	66
Decatur	0	0	0	0	14	0	14
Elm Springs	0	0	0	0	0	0	0
Garfield	0	15	3	4	221	0	243
Gateway	1	3	0	1	146	0	151
Gentry	0	1	0	0	53	0	54
Gravette	5	63	1	17	1,005	8	1,099
Highfill	0	1	0	0	0	0	1
Little Flock	0	8	0	4	258	1	271
Lowell	1	1	0	2	33	0	37
Pea Ridge	0	2	0	0	32	0	34
Rogers	11	61	1	42	3,363	13	3,491
Siloam Springs	4	129	3	27	2,291	35	2,489
Springdale	0	2	0	2	79	0	83
Springtown	0	0	0	0	9	0	9
Sulphur Springs	1	6	1	1	267	0	276
Total =	72	860	18	352	33,709	134	35,145

\*Multi-Unit Residential is defined as a structure with 5 or more residential units

\*\*The data are from the U.S. Census Bureau and FEMA

**Table 3.27 – Vulnerable Municipal Structures by Value, Wildfires**

Municipality	Ag	Com	Gov	Ind	Res	Res-M	Total
Benton County	\$9,723,000	\$121,058,000	\$2,342,000	\$50,056,000	\$2,087,503,000	\$40,665,000	\$2,311,347,000
Avoca	\$90,000	\$787,000	\$0	\$492,000	\$13,543,000	\$0	\$14,912,000
Bella Vista	\$1,592,000	\$91,525,000	\$878,000	\$12,521,000	\$2,537,911,000	\$70,906,000	\$2,715,333,000
Bentonville	\$878,000	\$25,845,000	\$127,000	\$10,339,000	\$384,469,000	\$3,897,000	\$425,555,000
Cave Springs	\$0	\$211,000	\$0	\$0	\$5,877,000	\$0	\$6,088,000
Centerton	\$0	\$1,186,000	\$0	\$72,000	\$12,005,000	\$0	\$13,263,000
Decatur	\$0	\$44,000	\$0	\$0	\$2,050,000	\$21,000	\$2,115,000
Elm Springs	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Garfield	\$0	\$3,673,000	\$3,394,000	\$1,285,000	\$25,905,000	\$0	\$34,257,000
Gateway	\$209,000	\$497,000	\$0	\$295,000	\$18,660,000	\$0	\$19,661,000
Gentry	\$0	\$216,000	\$0	\$0	\$9,249,000	\$0	\$9,465,000
Gravette	\$1,517,000	\$34,427,000	\$385,000	\$7,954,000	\$155,363,000	\$17,674,000	\$217,320,000
Highfill	\$0	\$17,000	\$0	\$0	\$0	\$0	\$17,000
Little Flock	\$17,000	\$2,921,000	\$0	\$899,000	\$55,874,000	\$1,561,000	\$61,272,000
Lowell	\$212,000	\$351,000	\$0	\$485,000	\$7,266,000	\$0	\$8,314,000
Pea Ridge	\$0	\$266,000	\$0	\$1,000	\$5,650,000	\$0	\$5,917,000
Rogers	\$2,388,000	\$28,703,000	\$760,000	\$18,326,000	\$544,798,000	\$18,551,000	\$613,526,000
Siloam Springs	\$738,000	\$80,428,000	\$888,000	\$21,332,000	\$347,926,000	\$57,783,000	\$509,095,000
Springdale	\$42,000	\$406,000	\$0	\$720,000	\$18,839,000	\$0	\$20,007,000
Springtown	\$0	\$0	\$0	\$0	\$1,195,000	\$0	\$1,195,000
Sulphur Springs	\$107,000	\$1,821,000	\$178,000	\$359,000	\$43,566,000	\$0	\$46,031,000
Total =	\$17,513,000	\$394,382,000	\$8,952,000	\$125,136,000	\$6,277,649,000	\$211,058,000	\$7,034,690,000

\*Multi-Unit Residential is defined as a structure with 5 or more residential units

\*\*The data are from the U.S. Census Bureau and FEMA

## Vulnerability of and Impact on Critical Facilities

Of the planning area's 214 critical facilities, 61 are located in high risk WUI zones. Please see the table below for a breakdown of these facilities.

Table 3.28 – Vulnerable Critical Facilities, Wildfires

Facility	Type	Owner	Location
Avoca Fire Station #2	Fire Prevention/EMS	Avoca	County
Beaver Lake Fire Department	Fire Prevention/EMS	County	County
Bella Vista City Courts	Government	Bella Vista	Bella Vista
Bella Vista City Library	Government	Bella Vista	Bella Vista
Bella Vista Community Development	Government	Bella Vista	Bella Vista
Bella Vista Fire Station #2	Fire Prevention/EMS	Bella Vista	Bella Vista
Bella Vista Fire Station #3	Fire Prevention/EMS	Bella Vista	Bella Vista
Bella Vista Streets Department	Government	Bella Vista	Bella Vista
Bella Vista Substation	Electric Utility	Private	Bella Vista
Bella Vista Water Department	Public Works	Bella Vista	Bella Vista
Bella Vista Water Tower #1	Water Utility	Bella Vista	Bella Vista
Bella Vista Water Tower #2	Water Utility	Bella Vista	Bella Vista
Bella Vista Water Tower #3	Water Utility	Bella Vista	Bella Vista
Bella Vista Water Tower #4	Water Utility	Bella Vista	Bella Vista
Bella Vista Water Tower #5	Water Utility	Bella Vista	Bella Vista
Benton County Sheriff's Substation #3	Law Enforcement	County	County
Bentonville Compost Facility	Public Works	Bentonville	Bentonville
Bentonville North Lift Station	Water Utility	Bentonville	Bentonville
Bentonville Substation D	Electric Utility	Bentonville	Bentonville
Bentonville Tiger Storage Tank	Water Utility	Bentonville	County
Bentonville Wastewater Treatment Plant	Water Utility	Bentonville	Bentonville
Brookfield Assisted Living	Assisted Living	Private	Bella Vista
Garfield City Shop	Government	Garfield	Garfield
Garfield Water System	Water Utility	Garfield	County
Gateway Town Office	Government	Gateway	Gateway
Gentry Fire Station #4	Fire Prevention/EMS	Gentry	County
Gentry Water Tower #2	Water Utility	Gentry	Gentry
Gravette City Hall	Government	Gravette	Gravette
Gravette Fire Station	Fire Prevention/EMS	Gravette	Gravette
Gravette Police Station	Law Enforcement	Gravette	Gravette
Gravette Water & Sewer Plant	Water Utility	Gravette	Gravette
Gravette Water Tower #1	Water Utility	Gravette	Gravette
Gravette Water Tower #2	Water Utility	Gravette	Gravette
Hickory Creek Fire Station #1	Fire Prevention/EMS	County	County
Hickory Creek Fire Station #2	Fire Prevention/EMS	County	County
Highfill Pump Facility	Water Utility	Highfill	County
Highlands Healthcare & Rehab	Assisted Living	Private	Bella Vista
Highway 94 East Fire Department	Fire Prevention/EMS	County	County
NEBCO Fire Station #2	Fire Prevention/EMS	County	County
NEBCO Fire Station #3	Fire Prevention/EMS	County	County
NEBCO Fire Station #4	Fire Prevention/EMS	County	County
NEBCO Fire Station #5	Fire Prevention/EMS	County	County
Ozarks Community Hospital	Hospital	Private	Gravette

### 3.8 – Wildfires

Piney Point Fire Station #1	Fire Prevention/EMS	County	County
Piney Point Fire Station #2	Fire Prevention/EMS	County	County
Piney Point Fire Station #3	Fire Prevention/EMS	County	County
Piney Point Fire Station #4	Fire Prevention/EMS	County	County
Piney Point Fire Station #5	Fire Prevention/EMS	County	County
Pleasure Heights Fire Station	Fire Prevention/EMS	County	County
Prairie Creek Fire Station	Fire Prevention/EMS	County	County
Rocky Branch Fire Station	Fire Prevention/EMS	County	County
Siloam Spring Fire Station #3	Fire Prevention/EMS	Siloam Springs	Siloam Springs
Siloam Springs Regional Hospital	Hospital	Private	Siloam Springs
Springtown Town Hall	Government	Springtown	Springtown
Sulphur Springs City Hall	Government	Sulphur Springs	Sulphur Springs
Sulphur Springs Fire Station	Fire Prevention/EMS	Sulphur Springs	Sulphur Springs
Sulphur Springs North Water Tower	Water Utility	Sulphur Springs	Sulphur Springs
Sulphur Springs Police Department	Law Enforcement	Sulphur Springs	Sulphur Springs
Sulphur Springs South Water Tower	Water Utility	Sulphur Springs	Sulphur Springs
Sulphur Springs Streets Dept.	Public Works	Sulphur Springs	Sulphur Springs
Sulphur Springs Water Plant	Water Utility	Sulphur Springs	Sulphur Springs

### *Vulnerability of and Impact on Population*

An inability to properly evacuate is a populations greatest vulnerability. They can be caught off guard due to improper warning systems and become trapped in a growing wildfire. Benton County and its municipalities have a population 284,333 of which 79,285 are considered vulnerable and at risk to wildfires. Similarly, of the total 90,084 housing units in the planning area, 235,429 are considered vulnerable and at risk to wildfires.

**Table 3.29 – Vulnerable Municipal Populations, Wildfires**

Municipality	Housing Units	Population
Benton County	12,332	26,416
Avoca	91	246
Bella Vista	12,805	25,691
Bentonville	1,434	3,988
Cave Springs	30	63
Centerton	67	202
Decatur	16	32
Elm Springs	0	0
Garfield	224	502
Gateway	152	351
Gentry	63	175
Gravette	1,118	2,561
Highfill	1	2
Little Flock	259	616
Lowell	34	64
Pea Ridge	36	84
Rogers	3,594	10,825
Siloam Springs	2,808	6,688
Springdale	80	237
Springtown	10	27
Sulphur Springs	275	515
<b>Total =</b>	<b>35,429</b>	<b>79,285</b>

\*The data are from the U.S. Census Bureau, FEMA.

### 3.8 – Wildfires

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Given the 4 school districts locations located in WUI zones, the Poyen School District has 68 staff and faculty along with 872 students considered vulnerable and at risk to wildfires while the Sheridan School District has 103 staff and faculty and 1,172 students considered at risk and vulnerable to wildfires.

#### ***Vulnerability of and Impact on Systems***

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It is unlikely that a single wildfire will grow large enough to cause significant or long-lasting damage to Benton County and its communities' economies, education services, or hinder the local governments' ability to provide services to their more demographically dense communities. However, a potent enough incident may cause short-term problems for their transportation systems in regards to response operations. Additionally, even a low-level wildfire can provide significant problems for pockets of rural, outlying unincorporated communities.

In the event a wildfire begins to burn and grow, evacuation routes may become blocked by the fire or by other people attempting to evacuate. The impingement of the local transportation system makes appropriate warning and information paramount in mitigating Benton County and its communities' systems vulnerability to wildfires. It is unlikely that any of the public-school districts' buses would become trapped by wildfires since exceptional care will be taken by the pertinent emergency services to reroute these buses.

## 3.9 – Winter Storms

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A severe winter storm encompasses multiple effects caused by winter weather. Included ice storms, heavy or prolonged snow, sleet, and extreme temperatures.

This plan defines severe winter storms as a combination of the following winter weather effects as defined by NOAA and the NWS.

*Ice Storm: An ice storm is used to describe occasions when damaging accumulations of ice are expected during freezing rain situations. Significant accumulations of ice pull down trees and utility lines resulting in loss of power and communication. These accumulations of ice make walking and driving extremely dangerous. Significant ice accumulations are usually accumulations of  $\frac{1}{4}$ " or greater.*

*Heavy Snow: This generally means snowfall accumulating to 4" or more in depth in 12 hours or less; or snowfall accumulating to 6" or more in depth in 24 hours or less. In forecasts, snowfall amounts are expressed as a range of values, e.g., "8 to 12 inches." However, in heavy snow situations where there is considerable uncertainty concerning the range of values, more appropriate phrases are used, such as "...up to 12 inches..." or alternatively "...8 inches or more."*

*Winter Storm: Hazardous winter weather in the form of heavy snow, heavy freezing rain, or heavy sleet. May also include extremely low temperatures and increased wind.*

### Location & Extent

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Winter storms are an area-wide hazard as they can strike anywhere in the planning area. Winter storms can range from moderate snow over a few hours to blizzard conditions with high winds, freezing rain or sleet, heavy snowfall with blinding wind-driven snow and extremely cold temperatures that last several days.

Winter storms typically form with warning and are often anticipated. Like other large storm fronts, the severity of a storm is not as easily predicted and when it is, the window of notification is up to few hours to under an hour. Although meteorologists estimate the amount of snowfall a winter storm will drop, it is not known exactly how many feet of snow will fall, whether or not it will form an ice storm, or how powerful the winds will be until the storm is already affecting a community.

Benton County and this plan's participants will typically receive 3 to 6 inches of snow during a winter storm, but a single storm in the planning area has managed to accumulate up to a reported 12 inches in a single event. It has been recorded that snow from a winter storm can fall at a rate of 1 inch per hour.

Additionally, Benton County and its participating jurisdictions have seen up to 1 inch of accumulated ice typically receiving  $\frac{1}{2}$  inch of accumulation from an ice storm.

### History & Probability

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Since 1996, NOAA has recorded 32 winter storms in the planning area. Most ice storms leave 0.25 inches of accumulation however, on one occasion the planning area has seen ice accumulation as much as 1 inch. Snowfall from winter storms typically leaves between 3 to 6 inches of snow.

### 3.9 – Winter Storms

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These winter storms have not caused any recorded direct injuries or fatalities. The NWS and NOAA have recorded \$30,250,000 in property damage as a result of winter storms. For a complete list of NOAA recorded winter storms, please reference Appendix C.

Based on the data recorded by NOAA, the planning area should expect a severe winter storm at a rate of 1.28 per year.

#### ***Vulnerability of and Impact on Facilities***

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Structural vulnerability to winter storms is the same throughout Benton County and its participating jurisdictions. Heavy snow accumulation can cause roofing to collapse on old or poorly constructed facilities. Ice storms will coat a facility's exterior, but is unlikely to cause anything more than superficial damage. Prolonged, extremely cold temperatures can cause significant damage to poorly insulated or heated facilities. The cold temperatures can cause a facility's water pipes and plumbing systems to freeze. As the water in these systems turns to ice it expands and eventually will cause pipes to burst.

Benton County and its participating jurisdictions' municipal structures are valued at \$20,052,529,000 and their school district structures are valued at \$1,785,546,297 for a total value of \$21,838,075,297. Since winter storms threaten the entire planning area equally, all municipal and school district structures are considered exposed and vulnerable.

The NWS and NOAA has recorded \$30,250,000 in property damage as a result of winter storms ranging from \$0 to \$30,000,000 for a single event. The average cost in property damage per storm is \$945,312.

#### ***Vulnerability of and Impact on Critical Facilities***

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All infrastructure and critical facilities within the planning area are equally vulnerable and at risk since winter storms can affect any portion of the planning area and damage indiscriminately.

#### ***Vulnerability of and Impact on Population***

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Benton County and its participating jurisdictions' population are equally vulnerable throughout the planning area. Benton County and its participating jurisdictions' citizens are at risk from prolonged, cold temperatures if they fail to be sheltered in an adequately heated structure or are unable to reach shelter. Some structures are dependent on electricity or steam for their heating making them vulnerable if a winter storm causes a power outage. Additionally, if a winter storm restricts travel, people may become immobile on roadways and be at the mercy of their vehicle's fuel supply. Exposure from winter storms in any of these cases can lead to frostbite and hypothermia. Both of these conditions if untreated can lead to death.

Benton County and its participating jurisdictions have a total population of 284,333 in 90,084 housing units all of which are vulnerable and at risk to severe winter storms. Additionally, all 44,078 school district students and their 5,942 staff and faculty are considered exposed and vulnerable. The school districts'

### 3.9 – Winter Storms

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students, staff, and faculty are considered at slightly lesser vulnerable than the population at-large since winter storms often arrive with warning and school would likely be cancelled.

Historically, there have been no recorded fatalities or injuries relating to winter storms across region wide fronts in Benton County and its participating jurisdictions.

#### ***Vulnerability of and Impact on Systems***

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Benton County and its participating jurisdictions' assets and systems vulnerability to severe winter storms is roughly same throughout the planning area. Winter storms create havoc on roads impacting travel from decreased speeds and traffic jams to an ice storm or blowing snow drifts making any travel impossible or extremely dangerous. Additionally, ice storms and snow accumulation can directly bring down power lines or bring down vegetation onto power lines. From these scenarios, Benton County and its participating jurisdictions can suffer power outages making it difficult to heat structures and exposing its citizens to prolonged cold temperatures. Winter storms can cause a problem for school districts in lost education days and transportation to and from their schools. Winter storms can trap students and staff on roadways exposing them to hazardous conditions and cold temperature. Winter storms have been recorded as depriving thousands of residents without power. On one occasion it was recorded that 75% of all residents in north western Arkansas were without power for more than 2 weeks.

#### ***Key Considerations***

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Winter storms have ability to affect a portion of or the entire planning area. Unfortunately, there is no way to predict ahead of time which areas will likely be more or less adversely directly affected. In regards to winter storm impacts, the rural municipalities of the planning area are less dense than a metro area and rely on a more decentralized power grid. Residents of these communities stand to last without out power for a greater period of time caused by a debilitating ice storm or blizzard.

## 3.10 – Excluded Hazards

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There exists a slim chance that any type of natural hazard could occur in any location throughout the United States. However, the probability of them occurring is so infinitesimally small and their impact so slight that it is not considered reasonable to develop a fully-profiled risk assessment for them. Additionally, without historical information or data to drive an analysis, it is unlikely that their conclusions would yield functional or practical strategies to mitigate them.

### ***Earthquakes***

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All reasonable and reputable simulations from a catastrophic New Madrid Seismic Zone event place Benton County outside of the impacted areas. The USGS has only recorded two earthquakes in and near the planning area. One was of magnitude 2.5 and the other was of 2.6, far below any threshold that would consider them at risk to damage from earthquakes.

### ***Expansive Soils***

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There are no areas of high clay content soils in Benton County. Although there are some small pockets of mixed clay content soils, there is not a history of damage caused by this hazard.

### ***Extreme Heat***

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Although incidents of extreme heat do occur throughout the planning area, they have never caused any recorded injuries, deaths, or property damage. The heat index levels that do occur, exist within a range or temperatures that are typically expected and known in advance allowing residents of Benton County to take routine precautions.

### ***Land Subsidence***

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The USGS defines risk to land subsidence as: "Collapse features tend to be associated with specific rock types, such as evaporites (salt, gypsum, and anhydrite) and carbonates (limestone and dolomite). These rocks are susceptible to dissolution in water and the formation of cavities. Salt and gypsum are much more soluble than limestone, the rock type most often associated with catastrophic sinkhole formation." Studies by the USGS have not found any of Benton County or its jurisdictions to be near any of the dangerous rock formations known to cause land subsidence.

### ***Landslides***

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The USGS has developed a national GIS dataset that demonstrates an area's susceptibility and probability of incidence based on a variety of soil, slope, and climactic factors. According to their analysis, all areas of Benton County and its participating jurisdictions are in the lowest risk category.

## 3.11 – Risk Summary

The table below outlines each participating jurisdiction's general risk to this plan's profiled hazards. The rankings are based on a composite evaluation of this plan's risk assessment, namely, a hazard's probability of occurring in the future, the vulnerability of a jurisdiction to a particular hazard, the intensity of past hazard impacts, and a joint evaluation of local experts and stakeholders.

Each participating jurisdiction was assessed against each hazard on a scale of 0 to 6, 0 meaning there is no reasonable risk, 1 being the lowest level of reasonable risk, and 6 being the highest level of risk.

Table 3.30 – Hazard Risk Summary

Jurisdiction	Dam Failures	Droughts	Floods	Severe Storms	Tornadoes	Wildfires	Winter Storms
Benton County	2	3	4	4	3	4	3
Avoca		1	2	4	3	2	3
Bella Vista	2	1	4	4	3	4	3
Bentonville		2	4	4	3	2	3
Cave Springs	1	1	4	4	3	1	3
Centerton		1	4	4	3	1	3
Decatur		1	4	4	3	1	3
Elm Springs		1	2	4	3	1	3
Garfield		1	2	4	3	3	3
Gateway		1	2	4	3	3	3
Gentry		1	4	4	3	2	3
Gravette		1	4	4	3	3	3
Highfill		1	4	4	3	1	3
Little Flock		1	4	4	3	2	3
Lowell		1	4	4	3	1	3
Pea Ridge		1	4	4	3	1	3
Rogers	1	2	4	4	3	3	3
Siloam Springs		1	4	4	3	3	3
Springdale		1	4	4	3	1	3
Springtown		1	4	4	3	2	3
Sulphur Springs		1	4	4	3	4	3
Bentonville SD			2	4	3	2	3
Decatur SD			2	4	3		3
Gentry SD			2	4	3		3
Gravette SD			2	4	3	3	3
Pea Ridge SD			2	4	3		3
Rogers SD			2	4	3	2	3
Siloam Springs SD			2	4	3	3	3

## Section 4 – Mitigation Strategy

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A mitigation strategy is a set of mitigation actions meant to prevent the potential impacts of hazards. There are several types of mitigation actions with a different method of reducing vulnerability.

Benton County and this plan's stakeholders have identified the sustained, proposed, and completed mitigation actions for each of the hazards identified as having the potential to affect the jurisdiction. For proposed mitigation actions, the planning team in each jurisdiction considered each type of mitigation action before identifying mitigation actions to include their final mitigation strategy. The mitigation strategy of each jurisdiction is included in this section of the plan.

### 4.1 – Mitigation Capabilities

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Each type of stakeholder provides a set of capabilities, in some cases broad and in some cases narrow, by which they can increase the planning area's resiliency. The broadest form of mitigation capabilities come from the county and the municipal governments. Their inherent legal authority allows them to institute the greatest regulatory and developmental changes.

The school districts have broad authority over their campuses and although budgets may be tight, they are more far reaching than some of the smaller organizations. Additionally, the necessity to protect the planning area's children grants them greater influence and political capital to institute change.

#### *Fiscal Capability*

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The planning area's municipal governments are not unique in the issues felt by small governments to retain the staff and resources necessary to accomplish the strategies necessary to mitigate hazards. However, they are aware of potential diverse funding sources available to communities for, assisting in the fiscal needs required to implement local hazard mitigation plans, including both government and private programs.

While federal and state programs carry out the bulk of disaster relief programs that provide funds for mitigation, local governments are able to search for alternative funding sources to supplement the local hazard mitigation budget. The participants in the mitigation planning process are aware that before effective mitigation strategies can be applied, stable funding sources and effective incentives must be established on a per project basis to encourage participation by the private and public sectors.

Benton County and this plan's municipal governments should seek out FEMA grant funding from the Building Resilient Infrastructure and Communities (BRIC), Hazard Mitigation Grant Program (HMGP), and the Flood Mitigation Assistance Grant Program (FMA). Given the size of the municipalities involved in this plan and the pocketed areas of significant flood risk, municipal governments should have access to the United States Department of Housing and Urban Development's Community Development Block Grant Program (CDBG) which occasionally will award grants to assist with projects that fall under hazard mitigation.

#### 4.1 – Mitigation Capabilities

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The school districts have the potential to receive additional funding via the Arkansas Division of Public School ACAD Facilities and Transportation Program to offset the local match required by FEMA grants. Additionally, the school districts can raise additional funding to self-fund or to assist in grant marching via debt bonding.

#### ***Institutional Capability***

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Benton County as a whole community is capable of implementing the strategies identified herein. In addition, they are capable of promoting the mitigation process and educating the public about the hazards prevalent to their area, as well as mitigation process necessary to mitigate those hazards.

In an emergency, the county and each municipality's response is an extraordinary extension of responsibility and action, coupled with normal day-to-day activity. Normal governmental duties will be maintained, with emergency operations carried out by those agencies assigned specific emergency functions.

#### ***Political Capability***

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During the process of the development of this plan, opposition to mitigation measures was not evident in any the plan's participants. The primary limiting factor is funding, which is made more difficult by the current situation in the local, state, and national economies.

The county, cities, and their partnerships with the participating agencies are well-organized and responsive to community needs. Leadership is informed and remains up-to-date on the hazards that threaten the area. Citizens who did participate in the public meetings and presentations showed an interest in doing things to promote a safer community. Therefore, the county and cities (the governing board, staff, and citizen population) appear willing to promote the economic efficiency and social utility of the mitigation measures contained in this plan, if appropriate funding can be identified.

Each of the participating municipalities undergoes budget reviews that begin with departmental reviews taking place in late spring to early summer. Preliminary submissions and budget refinement follow this review with budgets then finalized and published in the late fall. This process varies slightly from year-to-year depending on a variety of factors.

#### ***General Authority & Regulations***

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State of Arkansas law provides the legal authority for local governments to implement regulatory measures. The basis for much of this authority is the local government power designed to protect public health, safety and welfare. This authority enables local government to enact and enforce ordinances, and to define and abate nuisances. Hazard mitigation is a form of protecting public health, safety, and welfare, and falls under the general regulatory powers of local government. This also extends to building codes and inspections, land use, acquisition, and floodplain development regulation.

## ***Building Codes & Inspection***

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Building codes and inspections provide local governments with the means to maintain county structures that are resilient to natural hazards. Benton County and every municipality has adopted the 2012 International Building and Fire Prevention Codes. These codes prescribe minimum standards for building construction, which ensures that new buildings and structures are built to standards that are seismically sound, fire resistant and developed within flood-proofing measures. These codes also require appropriate hazard code updating and compliance when certain thresholds are met for remodel and renovation of existing buildings. These codes also authorize local governments to carry out building inspections to ensure local structures adhere to the minimum state building standards. Municipal officials have the primary role of enforcement of the International Building Code structural regulations. Fire departments also take part in the inspection process for fire and general public safety inspections. They enforce the appropriate codes both at the plan approval stage and the site inspection stage. Benton County and this plan’s municipal governments are committed to the high standards of building provided through the respective codes, and requires that the same codes and the same enforcement procedures apply during routine permitting procedures as well as following a disaster.

Only Gravette has reported the adoption of stricter codes in the form of the 2020 International Fire Prevention Code. It is recommended that more municipalities adopt the 2015 or 2020 International Building and Fire Prevention Codes.

## ***Land Use Planning***

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Through land use regulatory powers granted by the state, local governments can control the location, density, type and timing of land use and development in the community. Provisions of the land use plans are implemented through regulatory tools that include zoning and subdivision ordinances, and taxation. Table 4.1 outlines the various planning measures and documents that each municipality uses to govern its growth.

## ***Taxation***

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Taxation can be a powerful mitigation tool by providing local governments with a way to guide development. Tax abatements may be used to encourage landowners and developers to integrate mitigation measures into the process of building new developments and retrofitting existing properties in the floodplain. These tools can be especially effective in encouraging the mitigation of existing structures. Additionally, school districts have the ability to levy revenue through referendums for specific projects whether it is mitigation related or not. There is little a community or school district can do to increase their fiscal resources through taxation other than to grow or increase their tax rate. It is outside the scope of this plan to make recommendations on this subject.

**Table 4.1 – Budget Reviews & Planning Documents**

Municipality	Budget Reviews	Zoning	Land Use Plan	Comprehensive Plan
Benton County	October/November	No	Yes	Yes
Avoca	December	Yes	Yes	No
Bella Vista	September-November	Yes	Yes	Yes
Bentonville	October/November	Yes	Yes	Yes
Cave Springs	June & December	Yes	Yes	Yes
Centerton	October	Yes	Yes	Yes
Decatur	October/November	Yes	Yes	No
Elm Springs	October/November	Yes	Yes	No
Garfield	November	Yes	Yes	Yes
Gateway	October/November	No	Yes	No
Gentry	September-November	Yes	Yes	Yes
Gravette	September	Yes	Yes	No
Highfill	August	Yes	Yes	No
Little Flock	November/December	Yes	Yes	No
Lowell	November	Yes	Yes	Yes
Pea Ridge	October/November	Yes	Yes	No
Rogers	October/November	Yes	Yes	No
Siloam Springs	November/December	Yes	No	Yes
Springdale	September/October	Yes	Yes	Yes
Springtown	October/November	No	No	No
Sulphur Springs	October	Yes	No	No

### **Floodplain Programs**

Floodplain management is the operation of a community program of measures for reducing flood damage. These measures take a variety of forms; and generally, include zoning plans, subdivision, or building requirements, and special-purpose floodplain ordinances. Each of the participating municipalities has floodplain ordinances in place with restrictions on development in an identified floodplain. Benton County is capable of providing limited floodplain administration in the case of a few municipalities, but almost all provide their own floodplain administration.

Each municipality's floodplain construction restrictions declare that the basement of a livable dwelling must be 1 foot or more above the established base flood elevation. Rogers goes one step further and mandates that the basement of a livable dwelling must be 2 feet or more above the established BFE.

In order to build or modify a structure in an identified Zone A, the builder must apply for a development certificate requiring the lowest level of the structure (that includes the basement) to be built 1 foot above BFE (2 for Rogers).

Of the 21 participating municipal governments, all but Avoca are active participants in the NFIP while 4 are members of the CRS program. The identified floodplain that exists within Avoca's municipal boundaries does not come near any buildings of infrastructure, so there is not any reason as to why they would participate in the NFIP. The school districts are not eligible for NFIP or CRS participation. Each of the participating municipalities will maintain their compliance through the continued code enforcement of nonconforming structures and properties. Additionally, none of the participating municipalities have any desire to alter their current floodplain management practices in a way that would classify them as nonconforming or noncompliant.

Table 4.2 – Floodplain Administrators

Municipality	Floodplain Administrator
Benton County	Taylor Reamer
Avoca	Defer to the County
Bella Vista	Derick Linn
Bentonville	Dam Weese
Cave Springs	Andrew Williams
Centerton	Lorene Burns
Decatur	Defer to the County
Elm Springs	Matt Casey
Garfield	Defer to the County
Gateway	Defer to the County
Gentry	Mark Smithson
Gravette	David Keck
Highfill	JC Brenaman
Little Flock	Jessica Ferguson
Lowell	Richard Stone
Pea Ridge	Tony Townsend
Rogers	Community Risk Reduction Division
Siloam Springs	Randal Clark
Springdale	Brad Baldwin
Springtown	James Geurtz
Sulphur Springs	Sherman Buckley

Table 4.3 – NFIP Community Status

Jurisdiction	CID	CRS Rating	Initial FHBIM Identified	Initial FIRM Identified	Current Effective Map Date	Registration Entry Date
Benton County	050419	8	10/18/1977	09/18/91	06/05/12	09/18/92
Avoca	050582	N/A	-	09/18/91	06/05/12	06/12/08
Bella Vista	050511	N/A	-	09/28/07	09/28/07	09/18/91
Bentonville	050012	8	05/10/74	07/16/80	06/05/12	07/16/80
Cave Springs	050386	N/A	04/25/75	09/18/91	09/28/07	04/19/96
Centerton	050398	9	10/29/1976	09/18/91	06/05/12	04/28/08
Decatur	050399	N/A	04/18/75	08/24/82	06/05/12	08/24/82
Elm Springs	050213	N/A	08/16/74	04/30/86	05/16/08	04/30/86
Garfield	050319	N/A	04/18/75	01/03/86	09/28/07	01/03/86
Gateway	050213	N/A	08/16/74	04/30/86	05/16/08	04/30/86
Gentry	050324	N/A	05/02/75	09/18/91	09/28/07(M)	03/11/05
Gravette	050327	N/A	05/02/75	08/24/82	09/28/07(M)	08/24/82
Highfill	050581	N/A	-	09/18/91	06/05/12(M)	07/22/03
Little Flock	050479	N/A	06/21/77	09/18/91	06/05/12	01/14/08
Lowell	050342	N/A	05/02/75	08/19/87	06/05/12	08/19/87
Pea Ridge	050361	N/A	04/18/75	09/01/87	06/05/12	09/01/87
Rogers	050013	N/A	05/24/74	03/02/81	06/05/12	03/02/81
Siloam Springs	050014	N/A	05/10/74	11/19/1980	09/28/07	11/19/1980
Springdale	050004	8	-	09/28/07	06/05/12	09/09/04
Springtown	050219	N/A	04/05/74	06/15/81	05/16/08	06/15/81
Sulphur Springs	050015	N/A	08/23/74	09/21/82	09/28/07	09/21/82

\*The data are from FEMA.

## Repetitive Loss Properties

The planning area contains 31 properties classified as repetitive loss properties across 9 of the plan's participants. All 31 properties are classified as residential. Of these 31 residential properties, only 19 are insured. They are responsible for 79 unique losses totaling \$3,555,997 in claims. For a complete list of vulnerable properties of all classifications, refer to section 3.5.

**Table 4.4 – Repetitive Loss Properties**

Jurisdiction	Number of Properties	Number of Insured Properties	Number of Losses	Total Payments	Average Payment
Benton County	13	9	32	\$2,463,373	\$76,980
Bentonville	1	0	2	\$5,046	\$2,523
Cave Springs	2	2	6	\$79,991	\$13,331
Decatur	2	0	6	\$346,617	\$57,769
Gentry	1	1	3	\$122,526	\$4,175
Gravette	1	1	2	\$21,434	\$10,717
Rogers	6	5	15	\$151,975	\$10,131
Siloam Springs	2	0	6	\$159,891	\$26,648
Springdale	3	1	7	\$205,144	\$29,306
<b>Total =</b>	<b>31</b>	<b>19</b>	<b>79</b>	<b>\$3,555,997</b>	<b>\$45,012</b>

\*The data are from FEMA.

## 4.2 – Mitigation Goals

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The mitigation goals for Benton County and this plan’s participating jurisdictions were established based upon results from the local and state risk assessments, stakeholder meetings, and input from an extensive public survey. These goals represent the plan’s participants’ long-term vision for the continued reduction of hazard risks and the enhancement of their mitigation capabilities.

*Goal 1: Reduce the risk from natural hazard events utilizing community cooperation and an all-hazards approach.*

*Goal 2: Pursue additional, complete, and accurate data in support of mitigation planning, disaster preparedness, disaster response, and disaster recovery operations.*

*Goal 3: Integrate the hazard mitigation plan’s findings into the planning, and decision-making processes for all current and future emergency management and preparedness related activities.*

*Goal 4: Minimize the risk to life and property from dam failures.*

*Goal 5: Minimize the risk to property from droughts.*

*Goal 6: Minimize the risk to life and property from floods.*

*Goal 7: Minimize the risk to life and property from severe storms.*

*Goal 8: Minimize the risk to life and property from tornadoes.*

*Goal 9: Minimize the risk to life and property from wildfires.*

*Goal 10: Minimize the risk to life and property from winter storms.*

## 4.3 – Mitigation Projects

This plan identifies a comprehensive range of 23 possible and unique mitigation projects and 3 possible and unique mitigation actions. The selected set carefully takes an all-hazards approach to mitigation while simultaneously addressing each of the individual eight profiled hazards.

The projects and actions were selected based upon their potential to reduce the risk to life and property with an emphasis on new and existing infrastructure, ease of implementation, community and departmental support, consistency with other relevant plans and capabilities, available funding, vulnerability, and total risk. For further information on evaluation criteria, please see Section 4.4. The full list of mitigation projects and their descriptions can be found in Appendix D.

Some projects and actions mitigate risk and vulnerability to multiple hazards. Some of these projects and actions list participating jurisdictions that are only at risk from one or a few of the mitigation hazards. For example, the project: “Backup Generators” mitigates against multiple hazards. All participating jurisdictions are interested in this project, but some will not be using it to mitigate against riverine flooding. Instead they will be using it to mitigate against severe storms and severe winter storms.

**Table 4.5 – Mitigation Projects Summary**

Project/Action	Jurisdictions
Backup Generators	Benton County, All Municipal Governments, All School Districts
Bury Utility Lines, Pipes, and Tanks	Benton County, All Municipal Governments, All School Districts
Dam Retrofit	Benton County, Bella Vista, Cave Springs, Rogers
Debris & Natural Fuels Reductions	Benton County, All Municipal Governments, All School Districts (Except Decatur SD, Gentry SD, Pea Ridge SD)
Defensible Spaces & Buffer Zones	Benton County, All Municipal Governments, All School Districts (Except Decatur SD, Gentry SD, Pea Ridge SD)
Elevate Structures	Benton County, All Municipal Governments (Except Avoca, Garfield, Gateway), All School Districts
FEMA Code 361 Safe Rooms	Benton County, All Municipal Governments, All School Districts
Floodproofing	Benton County, All Municipal Governments, All School Districts
Flood Level Monitoring System	Benton County, All Municipal Governments (Except Avoca, Garfield, Gateway), Bentonville SD, Rogers SD
Insulation & Energy Efficiency	Benton County, All Municipal Governments, All School Districts
Irrigation Storage Tanks	Benton County, All Municipal Governments
Looped Grid Power Systems	Benton County, All Municipal Governments, All School Districts
Low Flow Utilities	Benton County, All Municipal Governments
Rainwater Retention Basins	Benton County, All Municipal Governments
Raise Transportation Infrastructure	Benton County, All Municipal Governments, All School Districts
Relocate or Buyout Vulnerable Structures	Benton County, All Municipal Governments (Except Avoca, Garfield, Gateway), Bentonville SD, Rogers SD
Snow Fences	Benton County, All Municipal Governments, All School Districts
Storm Water Drainage System Upgrade	Benton County, All Municipal Governments, All School Districts
Storm Water Pump Stations	Benton County, All Municipal Governments (Except Avoca, Garfield, Gateway), Bentonville SD, Rogers SD
Structural Integrity Monitoring Instruments	Benton County, Bella Vista, Cave Springs, Rogers
Water Line Insulation	Benton County, All Municipal Governments, All School Districts
Wildfire Structural Retrofit	Benton County, All Municipal Governments, All School Districts
Wind Resistance Structural Retrofit	Benton County, All Municipal Governments, All School Districts

**Table 4.6 – Mitigation Actions Summary**

Project/Action	Lead Agency
Public Awareness & Education	Benton County EMA
SKYWARN Storm Spotter Training	Benton County EMA
StormReady Accreditation	Benton County EMA

## Mitigation Project Updates

Benton County's prior approved mitigation plan (2016) contained suggested projects and actions that are no longer considered qualified mitigation projects or actions, rather, they classify as response, recovery, preparedness, or mere basic emergency management functions. Examples of these items include the development of basic emergency plans, risk assessments that are already part of mitigation planning, and basic municipal functions. If a project or action that was included in Benton County's prior plan is not listed below or listed as "carried forward" in Appendix D, it has been deleted. The table below lists the mitigation projects that have been completed or initiated since the development of their last hazard mitigation plan.

Table 4.7 – Mitigation Project Updates

Mitigation Project	Jurisdictions	Status	Notes
Backup Generators	Gentry	Completed	Lift Stations (2)
Backup Generators	Bentonville SD	Completed	
Bridge Replacement	Bentonville	Completed	NW 3rd St. Bridge
Bridge Replacement	Bentonville	Completed	Town Vu Bridge
Bridge Replacement	Gentry	Completed	Flint Creek & Dawn Hill E Rd.
Bridge Replacement	Springtown	Underway	Bredehoeft Rd.
Property Buyout	Lowell	Underway	Multiple Homes on Kincade Rd.
Storm Water Drainage System Upgrade	Bentonville	Completed	N. Main St.
Storm Water Drainage System Upgrade	Bentonville	Completed	SW 6th St. & SW B St.
Storm Water Drainage System Upgrade	Bentonville	Completed	South Walton & South Main St.
Storm Water Drainage System Upgrade	Bentonville	Completed	Bogle Park
Storm Water Drainage System Upgrade	Bentonville	Completed	Town Branch Stream
Storm Water Drainage System Upgrade	Bentonville	Completed	Little Sugar Stream
Storm Water Drainage System Upgrade	Bentonville	Completed	Lake Bella Vista
Storm Water Drainage System Upgrade	Bentonville	Underway	SE 5th St.
Storm Water Drainage System Upgrade	Bentonville	Underway	SE 8th St.
Storm Water Drainage System Upgrade	Bentonville	Underway	Downtown
Storm Water Drainage System Upgrade	Bentonville	Underway	Rolling Acres - Phase 1
Storm Water Drainage System Upgrade	Cave Springs	Underway	Creeks Golf Course
Storm Water Drainage System Upgrade	Cave Springs	Completed	Pace Lane
Storm Water Drainage System Upgrade	Gravette	Completed	Main Drainage Channel
Storm Water Drainage System Upgrade	Gravette	Completed	Detention Pond
Storm Water Drainage System Upgrade	Gravette	Underway	Main Drainage Channel
Storm Water Drainage System Upgrade	Gravette	Completed	North Mt. Pleasant
Storm Water Drainage System Upgrade	Gravette	Completed	Gordon Hollow
Storm Water Drainage System Upgrade	Gravette	Completed	Bluebird Rd.
Storm Water Drainage System Upgrade	Gravette	Completed	Baker St.
Storm Water Drainage System Upgrade	Siloam Springs	Completed	West Jefferson St.
Storm Water Drainage System Upgrade	Siloam Springs	Completed	Dogwood/Jo Lynn
Storm Water Drainage System Upgrade	Siloam Springs	Completed	Wedgewood
Storm Water Drainage System Upgrade	Siloam Springs	Completed	S. Prospect St.
Storm Water Drainage System Upgrade	Siloam Springs	Completed	Qual Run
Storm Water Drainage System Upgrade	Springdale	Completed	Numerous Areas
Storm Water Drainage System Upgrade	Sulphur Springs	Completed	Butler Creek Waterway
Transportation Relocation Network	Bentonville SD	Completed	

## 4.4 – Project Evaluation, Implementation, & Administration

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Situational changes will likely occur throughout the 5-year life cycle of a mitigation plan. This can happen due to any number of factors such as public influence, local and grant funding allotments, changing demographics, other developmental changes, and numerous more. These factors and many others have great influence over how activities and projects will need to be evaluated for feasibility and demand. Therefore, a flexible methodology will serve Benton County and this plan's participants best when determining what, when, and where to engage an activity or project.

At large, there have not been any major changes to Benton County, the participating municipalities, or school districts that have altered their priorities as it pertains to disaster or hazard risk.

### ***Project Evaluation***

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Benton County and this plan's participants will utilize the STAPLE+E method of assessing mitigation actions, projects, and alternatives. Upon deciding to move forth with a mitigation project, according to decision-making process of the participating jurisdiction, the decision-making body will use the form on the following page. Preliminary evaluations, per hazard, per project, per jurisdiction are found in Appendix E and are a composite of the STAPLE+E methodology and the composite risk for from each hazard for each jurisdiction.

The evaluations were conducted according the definitions in the table below:

**Table 4.8– STAPLE+E**

Category	Concept of Analysis
Social	Mitigation actions are acceptable to the community if they do not adversely affect a particular segment of the population, do not cause relocation of lower income people, and if they are compatible with the communities' social and cultural values.
Technical	Mitigation actions are technically most effective if they provide long-term reduction of losses and have minimal secondary adverse impacts.
Administrative	Mitigation actions are easier to implement if the jurisdiction has the necessary staffing and funding.
Political	Mitigation actions can truly be successful if all stakeholders have been offered an opportunity to participate in the planning process and if there is public support for the action.
Legal	It is critical that the jurisdiction or implementing agency have the legal authority to implement and enforce a mitigation action.
Economic	Budget constraints can significantly deter the implementation of mitigation actions. Hence, it is important to evaluate whether an action is cost-effective, as determined by a cost-benefit review, and possible to fund.
Environmental	Sustainable mitigation actions that do not have an adverse effect on the environment, that comply with Federal, State, and local environmental regulations, and that are consistent with the community's environmental goals, have mitigation benefits while being environmentally sound.

- 1.) Fill in the name of the mitigation action or project followed by two other viable alternatives which address the same hazards.
- 2.) For each consideration, indicate a plus ( + ) for favorable or negative ( - ) for less favorable. If the consideration does not apply, leave it blank.
- 3.) Compare the total number of pluses and negatives to the alternative actions. Some considerations may carry more weight than others, so a simple tally does not necessarily indicate a more viable or feasible action or project.

Table 4.9 – STAPLE+E Sample Form

Criteria	Considerations	Action/Project	Alternative 1	Alternative 2
Social	Community Acceptance			
	Effect on Segment of the Population			
Technical	Technical Feasibility			
	Long-Term Solution			
	Secondary Impacts			
Administrative	Staffing			
	Funding Allocated			
	Maintenance/Operations			
Political	Political Support			
	Local Champion			
	Public Support			
Legal	State Authority			
	Existing Local Authority			
	Political Legal Challenge			
Economic	Benefit of Action			
	Cost of Action			
	Contributes to Economic Goals			
Environmental	Effect on Land or Water			
	Effect on Endangered Species			
	Effect on HAZMAT Waste Sites			
	Consistent with Environmental Goals			
	Consistent with Federal Laws			
<b>Total =</b>				

## ***Project Implementation***

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Each municipal government participating in this plan has their own decision-making bodies that are free to implement the mitigation strategies found in this plan as they see fit. Each decision-making body will choose municipal departments to head up implementation efforts appropriate for that municipal department's area of responsibility.

The activity and project evaluation methodology described in this section serves as an aid for them to enhance their decision-making. It is highly suggested that the county coordinates with the other municipal governments as well as the non-municipal plan participants to work towards an organized and concentrated effort when implementing activities and projects. That is, it would better serve their implementation effectiveness to work as a whole community when deciding how to allocate staff and funding resources when implementing mitigation activities and projects.

The participating school districts will be in complete sole control of what, when, and where to implement mitigation activities or projects. Its decision-making bodies that are free to implement as they see fit. The activity and project evaluation methodology provide earlier in this section acts as an aid for them to best apply the prescribed mitigation strategy found in this plan.

## ***Project Administration***

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Benton County will be self-administering each project through its own government departments. The department chosen to administer a project will vary depending on the characteristics of each activity or project whereas public works would be better suited for some projects while county records and risk management would be better suited for others. For each of the participating municipalities, they have the option and flexibility to administer their own activities and projects if they so choose. However, for the purpose of efficiency and governmental scale, activities and projects will default to be administered by the Benton County EMA.

Each school district will administer activities and projects inhouse with individuals designated administrative responsibility on an ad-hoc, per project basis. Individual will be designated on a case-by-case basis as seen most fitting by the organization according to the specific characteristics of the project or activity as oversight and administration duties can vary wildly among these organizations. Each public-school district reported near similar processes which includes, contacting construction companies and architects for consultation, school board approval, further evaluation, and community input via public meetings.

## 4.5 – Planning Integration

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Mitigation doesn't end at plan approval. Plan approval is only the beginning. The successful implementation of any number mitigation activities and projects requires the coordination and collaboration of a number of local agencies, departments, and organizations. Each group has varying decision-making processes and authorities governing their actions. This plan, once approved, must be integrated into their decision-making processes as a tool for improving their respective resiliencies. Other than the county's EOP, their last hazard mitigation plan was not integrated into any other plans.

This plan is not only useful for implementing mitigation activities and projects, but is also critical in making development plans and capital improvement projects. The risk assessment in this plan can prevent unmanaged and dangerous development into identified hazard areas or other portions of the planning area that decrease a community's overall resiliency.

### **Comprehensive Land Use Planning**

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As of now, some of the participating municipal governments have comprehensive land use plans. Most of the municipalities maintain a set of ordinances, but as of yet does not have comprehensive plans. These plans typically detail building codes, ordinances, zoning, and other land use measures as they relate to hazard risk reduction. In the event any of the participating municipalities develop a comprehensive land use plan, the Benton County HMP shall be integrated into it in a manner as they see fit in accordance and appropriate to the complexity of their comprehensive land use plan. This shall be done in a manner where the Benton County HMP serves as a guide for reducing their hazard risk.

Since this is theoretical, there is not an established person or department that would be designated as the responsible party for the development of a comprehensive land use plan.

### **Democratic Governments & Boards**

---

All the participating jurisdictions use some form of a democratic voting process. These organizations rely on agenda proposals, deliberation and discussion, and voting to solidify their decision-making.

All participating jurisdictions engage in capital improvement, infrastructure, and other various projects on an ad hoc basis. For these stakeholders, this plan should be integrated into agenda proposal's designs and cross-referenced during deliberation and discussion of proposed activities and projects. By using this plan's risk assessment, development and capital improvement projects can be appropriately implemented taking into consideration a community's resiliency.

Since the mentioned projects are ad hoc, there is not a set timeframe for them. In the event hazard risk is relevant to a project, it's the responsibility of the Benton County EMA to bring the HMP to attention of the Town Council, City Council, School Board, or Quorum Court that is deliberating over a project.

### **Emergency Management Planning**

---

Any and all emergency management related planning will at a minimum cross reference this document during its production. In some instances, this plan or portions of it will be fully integrated depending on the circumstances and nature of the planning document.

### ***Emergency Operations Plans***

Benton County's next EOP update will reflect the most probable and dangerous hazard event scenarios from the plan's risk assessment. Additionally, the plan will be referenced in its entirety as an appendix to the EOP. This revision is the responsibility of the Benton County EMA for all of the jurisdictions participating in this plan. Upon revision completion, all participating jurisdictions and appropriate emergency services will be notified of the revisions and sent out new copies of the EOP.

The Benton County EMA revises their EOP on a yearly basis, but not at a set time of the year. The schedule varies as their staffing resources vary according to disasters and other unforeseen emergency events. During each revision it is their own responsibility to integrate the HMP into the EOP and to decide to what extent it shall be integrated.

### ***State of Arkansas Division of Emergency Management***

ADEM has a FEMA approved mitigation plan current as of 2018 and is updated every 5 years. The state's mitigation plan is required by FEMA regulation to include a discussion and summary of local hazard mitigation plans. The process of integrating this plan is already an established process and is managed by ADEM.

### ***Facilities Master Plans***

Every school district in Arkansas is responsible for maintaining a facilities master plan and updating it at 2-year intervals. These are submitted on February 1<sup>st</sup> of each even number year while they are also required to submit a preliminary plan on February 1<sup>st</sup> of each odd number year. Each participating school district has an approved facilities master plan from 2020.

Their current plan outlines enrollment projections and facilities needs and capabilities, and capital improvement planning. Upon FEMA approval and school district adoption, this plan needs to be integral in the next update of each facilities master plan. The integration is the responsibility of each school district's superintendent.

These plans' outlined planning process entails 4 primary steps to updating their plan, the second of which is "Inventory/Analysis of Conditions." Review of this plan's risk assessment and mitigation strategy needs to be considered during this phase of their planning process as it can help guide their decision-making process to better plan their capital improvement projects to incorporate hazard mitigating measures and thus increasing their resiliency.

Each public-school district approves the master plan prior to sending it out to the state for approval.

## Appendix A – Plan Participation



### Benton County Division of Public Safety

October 4 at 6:47 PM ·

...

The Benton County Emergency Management Agency is working with Two Rivers Emergency Management to update their multi-jurisdictional hazard mitigation plan under FEMA. The plan, known as the Benton County Hazard Mitigation Plan, will assess natural hazards' risk and vulnerabilities to the county, each municipality, and each school district and provide recommendations to increase their resiliency.

All residents, businesses, community neighbors, and other interested parties are invited to attend the plan's kick-off meeting. Due to the pandemic and CDC recommendations this meeting will be held virtually on Monday, October 12th at 10:00 AM by Two Rivers Emergency Management. If you wish to attend the meeting, please email Robert McGowen or Michael Waddle at: [Robert.McGowen@bentoncountyar.gov](mailto:Robert.McGowen@bentoncountyar.gov) or [Michael.Waddle@bentoncountyar.gov](mailto:Michael.Waddle@bentoncountyar.gov) respectively. Login credential via Zoom can be found at the project's website: [www.tworiversem.com/bentoncoar](http://www.tworiversem.com/bentoncoar)

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>**Benton County Hazard Mitigation Plan Update – Benton County Hazard Mitigation Plan Update**

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# NORTHWEST ARKANSAS Democrat Gazette

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## AFFIDAVIT OF PUBLICATION

I, Brittany Smith, do solemnly swear that I am the Accounting Legal Clerk of the Northwest Arkansas Democrat-Gazette, a daily newspaper printed and published in said County, State of Arkansas; that I was so related to this publication at and during the publication of the annexed legal advertisement the matter of: Notice pending in the Court, in said County, and at the dates of the several publications of said advertisement stated below, and that during said periods and at said dates, said newspaper was printed and had a bona fide circulation in said County; that said newspaper had been regularly printed and published in said County, and had a bona fide circulation therein for the period of one month before the date of the first publication of said advertisement; and that said advertisement was published in the regular daily issues of said newspaper as stated below.

Benton County Judges Office  
Emergency Management Agency Meeting

Was inserted in the Regular Edition on:  
October 4 & 11, 2020

Publication Charges: \$136.80

Brittany Smith  
Brittany Smith

Subscribed and sworn to before me  
This 16 day of Oct , 2020.

Catherine Staggs  
Notary Public  
My Commission Expires: 2/28/2025



### \*\*NOTE\*\*

Please do not pay from Affidavit.  
Invoice will be sent.

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Participants (13)

Find a participant

 Two Rivers Emergency Manage... (Host, me)			
 Jennifer Oakley			
 Mike Bender			
 Barry Moehring			
 brent			
 Jackie Crabtree			
 Jason Barrett			
 Jeremey Criner			
 Justin Bland			
 Pete Melnicki			
 Robert McGowen			
 14792711052			
 jfrasier			

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## Appendix A – Plan Participation

**Benton County Division of Public Safety**

**Intro**

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**Benton County Division of Public Safety**  
Published by Michael Waddle · October 2 at 7:00 PM · [Edit](#)

The Benton County Emergency Management Agency is finalizing its Hazard Mitigation Plan draft prior to submission to the Arkansas Division of Emergency Management and FEMA for review and approval. The plan assesses natural hazards' risks and vulnerabilities to the county, its municipalities, and school districts. It provides recommendations to increase their hazard resiliency and reduce risk. In doing so, these actions aim to protect property and those who reside within the county.

The draft plan will be available for questions and review for a two week period from October 4th to October 18th on the projects website located at: <https://tworiversem.com/bentoncoar/>. We invite you to take those two weeks to review the draft plan, provide any input you may have, or ask any related questions. Please direct all inquiries to: tony@tworiversem.com.

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## Appendix A – Plan Participation

Home 9+ 9+ 7 ...

**Benton County, Arkansas Government**

Page · Government Organization

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## Benton County Division of Public Safety

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# NORTHWEST ARKANSAS Democrat Gazette

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## AFFIDAVIT OF PUBLICATION

I, Brittany Smith, do solemnly swear that I am the Accounting Legal Clerk of the Northwest Arkansas Democrat-Gazette, a daily newspaper printed and published in said County, State of Arkansas; that I was so related to this publication at and during the publication of the annexed legal advertisement the matter of: Notice pending in the Court, in said County, and at the dates of the several publications of said advertisement stated below, and that during said periods and at said dates, said newspaper was printed and had a bona fide circulation in said County; that said newspaper had been regularly printed and published in said County, and had a bona fide circulation therein for the period of one month before the date of the first publication of said advertisement; and that said advertisement was published in the regular daily issues of said newspaper as stated below.

Benton County Judges Office  
Hazard Mitigation Plan

Was inserted in the Regular Edition on:  
October 3, 2021 .

Publication Charges: \$63.84

Brittany Smith  
\_\_\_\_\_  
Brittany Smith

Subscribed and sworn to before me  
This 4 day of Oct, 2021.

Cathy Wiles  
\_\_\_\_\_  
Notary Public  
My Commission Expires: 2/20/24

Cathy Wiles  
Benton COUNTY  
NOTARY PUBLIC – ARKANSAS  
My Commission Expires 02-20-2024  
Commission No. 12397118

\*\*NOTE\*\*  
Please do not pay from Affidavit.  
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The Benton County Emergency Management Agency is finalizing its Hazard Mitigation Plan draft prior to submission to the Arkansas Division of Emergency Management and FEMA for review and approval. The plan assesses natural hazards' risks and vulnerabilities to the county, its municipalities, and school districts. It provides recommendations to increase their hazard resiliency and reduce risk. In doing so, these actions aim to protect property and those who reside within the county. The draft plan will be available for questions and review for a two-week period from October 4th to October 18th on the project's website located at: <https://tworiversem.com/bentoncoar/>. We invite you to take those two weeks to review the draft plan, provide any input you may have, or ask any related questions. Please direct all inquiries to: [tony@tworiversem.com](mailto:tony@tworiversem.com). The cost of this publication was \$ 63.84 , paid for by Benton County Emergency Services out of Benton County General Funds.

75471647 Oct. 3, 2021

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# Appendix B – School District Facilities

Table B.1 – Facilities, Bentonville School District

Buildings	Location	Contents Values	Structural Values
Addition Connecting Baker To Old HS & MS	RE Baker Elem.	\$6,942,954	\$936,024
Administration Building	RE Baker Elem.	\$603,522	\$415,768
Administration Building #2	Washington Junior HS	\$4,875,000	\$682,500
Apple Glen Elementary	Washington Junior HS	\$11,305,375	\$1,393,152
Ardis Ann Elementary	Ardis Ann Elem.	\$26,985,335	\$3,286,970
Arend Arts Center	Bentonville HS	\$9,522,956	\$1,741,440
Baseball Field	Athletic Complex	\$1,699,105	\$0
Baseball/Softball Fields	Bentonville West HS	\$1,624,336	\$334,025
Bentonville Administration Building	Sugar Creek Elem.	\$3,592,217	\$614,946
Bentonville High School	Bentonville HS	\$39,016,741	\$4,788,962
Bentonville High School North Addition	Bentonville HS	\$33,442,060	\$6,084,022
Bentonville West High School	Bentonville West HS	\$69,730,432	\$14,339,213
Building Bridges Central Pre-K	RE Baker Elem.	\$834,140	\$108,840
Building Bridges Early Childhood Center	Washington Junior HS	\$692,889	\$108,840
Bus & Maintenance Garage	Ardis Ann Elem.	\$1,679,544	\$380,941
Centerton-Gamble Elementary	Centerton-Gamble Elem.	\$15,561,927	\$2,482,146
Centerton-Gamble Elementary Annex	Centerton-Gamble Elem.	\$902,578	\$168,702
Central Park Elementary	Fulbright Jr. HS	\$14,120,905	\$2,300,662
Central Park Elementary Annex	Fulbright Jr. HS	\$1,716,399	\$345,023
Classroom Addition	Bentonville HS	\$4,263,254	\$827,184
Coleman Activity Center	Washington Junior HS	\$2,889,787	\$304,752
Cooper Elementary	Cooper Elem.	\$15,995,848	\$2,790,704
Cooper Elementary Annex	Cooper Elem.	\$943,788	\$253,598
Evening Star Elementary	Evening Star Elem.	\$18,817,189	\$3,198,922
Football Stadium	Athletic Complex	\$4,102,453	\$816,301
Football Stadium Complex	Bentonville West HS	\$10,558,186	\$2,171,162
Fulbright Jr. High	Fulbright Jr. HS	\$25,248,076	\$5,123,647
Gateway Alternative Learning School	Gateway Alternative	\$3,008,464	\$598,621
Greenhouse	Bentonville HS	\$57,243	\$10,884
Grimsley Junior High	Grimsley Jr. High	\$30,379,844	\$4,556,977
Gymnasium	Sugar Creek Elem.	\$692,428	\$52,969
Gymnasiums	Bentonville HS	\$2,187,974	\$435,361
Lincoln Junior High	Lincoln Jr. HS	\$18,585,085	\$2,568,625
Mahan Auxiliary Gymnasium	Lincoln Jr. HS	\$2,175,299	\$174,144
Mary Mae Jones Elementary School	Mary Mae Jones Elem.	\$14,074,107	\$2,224,218
Multi-Purpose Building	Athletic Complex	\$11,459,027	\$1,306,081
Old High Middle School	RE Baker Elem.	\$9,264,822	\$1,197,241
Osage Creek Elementary & Creekside Middle School	Osage Creek Elem.	\$31,372,682	\$5,493,853
Pavilion	Ardis Ann Elem.	\$16,410	\$0
Pavilion	Washington Junior HS	\$16,410	\$0
R E Baker Elementary School	RE Baker Elem.	\$8,172,428	\$1,044,864
Ruth Hale Barker Middle School	Ruth Barker MS	\$14,670,953	\$2,545,296
Softball Field	Athletic Complex	\$1,486,717	\$0
Storage Building	Sugar Creek Elem.	\$2,188	\$10,884
Storage Buildings	Ardis Ann Elem.	\$6,564	\$10,884
Storage Buildings (2)	Storage	\$1,969	\$4,354
Student Services	Gateway Alternative	\$1,924,073	\$299,310
Sugar Creek Elementary School	Sugar Creek Elem.	\$9,940,239	\$1,197,241
Sugar Creek Gymnasium	Sugar Creek Elem.	\$980,044	\$65,305
Technology Building #1	Lincoln Jr. HS	\$1,334,628	\$435,361
Technology Building #2	Lincoln Jr. HS	\$537,208	\$489,781
Tennie Russell Primary	Sugar Creek Elem.	\$4,745,751	\$424,476
Thomas Jefferson Elementary	Sugar Creek Elem.	\$9,195,963	\$1,088,399
Track/Soccer	Athletic Complex	\$2,190,937	\$0
Trec Center	Sugar Creek Elem.	\$2,299,703	\$479,985
Vacant Office Space	Vacant Office Space	\$1,451,015	\$0
Warehouse	Warehouse	\$2,937,575	\$317,814
Washington Junior HS	Washington Junior HS	\$14,146,153	\$1,915,586
Willowbrook Classroom Annex	Fulbright Jr. HS	\$869,752	\$174,144
Willowbrook Elementary & Bright Field Middle School	Fulbright Jr. HS	\$28,612,240	\$4,901,597
Total =		\$556,462,891	\$90,022,701

\*The data are from the Bentonville School District.

**Table B.2 – Facilities, Decatur School District**

<b>Buildings</b>	<b>Location</b>	<b>Contents Values</b>	<b>Structural Values</b>
Agri Building	Main Campus	-	\$807,918
Agri Show Barn	Main Campus	-	\$49,976
Band Building	Main Campus	-	\$302,528
Cafeteria	Main Campus	-	\$1,143,968
Elementary	Decatur Elem.	-	\$8,044,129
Football Complex	Main Campus	-	\$207,080
Gym	Main Campus	-	\$3,149,170
High School	Main Campus	-	\$6,037,628
Middle School	Main Campus	-	\$7,398,322
Pre-K Building	Main Campus	-	\$1,036,697
Safe Room	Main Campus	-	\$1,797,044
Total =		-	\$29,974,460

\*The data are from the Decatur School District.

**Table B.3 – Facilities, Gentry School District**

<b>Buildings</b>	<b>Location</b>	<b>Contents Values</b>	<b>Structural Values</b>
Activities Complex	Main Campus	\$1,036,560	\$5,182,800
Admin Office	Intermediate	\$200,000	\$418,330
After School Multi-Purpose	Intermediate	\$215,040	\$1,075,200
Agri Building	Main Campus	\$172,800	\$864,000
Batting Cage (Baseball)	Main Campus	\$0	\$10,000
Batting Cage (Softball)	Main Campus	\$0	\$10,000
Bleachers (Baseball)	Main Campus	\$0	\$5,000
Bleachers (Home)	Main Campus	\$0	\$80,000
Bleachers (Softball)	Main Campus	\$0	\$4,500
Bleachers (Visitor)	Main Campus	\$0	\$100,000
Bull Pens	Main Campus	\$0	\$2,000
Bus Barn	Main Campus	\$100,000	\$420,000
Bus Shed	Main Campus	\$1,617	\$8,100
Career & Tech. Center	Main Campus	\$469,200	\$2,346,000
Carport	Main Campus	\$0	\$1,000
Central Storage	Intermediate	\$14,688	\$73,440
Classroom (Portable)	Main Campus	\$32,640	\$163,200
Clocks	Main Campus	\$0	\$5,000
Concessions	Main Campus	\$114,150	\$570,750
Covered Walkways	Intermediate	\$0	\$10,000
Covered Walkways	Main Campus	\$0	\$40,000
District Operations	Intermediate	\$96,768	\$483,840
Dugouts (Home)	Main Campus	\$0	\$28,417
Dugouts (Visitors)	Main Campus	\$0	\$23,250
Facilities Office	Intermediate	\$14,688	\$73,440
Fence	Intermediate	\$0	\$10,000
Fence (Baseball)	Main Campus	\$0	\$7,500
Fence (Bus Garage)	Main Campus	\$0	\$3,500
Fence (Football)	Main Campus	\$0	\$7,500
Field House	Main Campus	\$185,792	\$928,960
Flagpole	Intermediate	\$0	\$1,500
Flagpole (Football)	Main Campus	\$0	\$1,500
Flagpole (Middle School)	Main Campus	\$0	\$1,500
Flagpole (Primary)	Main Campus	\$0	\$1,500
Goal Posts	Main Campus	\$0	\$3,000
Grade 3-5 Building	Intermediate	\$1,860,000	\$9,300,000
Greenhouse	Main Campus	\$12,000	\$60,000
Gymnasium	Intermediate	\$210,095	\$950,475
Head Start	Intermediate	\$0	\$352,800
Head Start Storage A	Intermediate	\$0	\$5,000
Head Start Storage B	Intermediate	\$0	\$3,999
Lights (Baseball/Softball)	Main Campus	\$0	\$200,000
Middle & High School	Main Campus	\$5,099,328	\$25,496,640
Multi-Purpose	Intermediate	\$881,088	\$4,405,440
Network Admin	Intermediate	\$14,688	\$73,440

## Appendix B – School District Facilities

Old Agri Building	Main Campus	\$4,000	\$200,000
Pavilion (Middle & HS)	Main Campus	\$0	\$1,000
Pavilion (Primary)	Main Campus	\$0	\$5,000
Pavillion	Intermediate	\$0	\$5,000
Playground	Intermediate	\$0	\$50,000
Playround	Main Campus	\$0	\$100,000
Portable Bleachers	Main Campus	\$0	\$7,500
Press Box (Baseball)	Main Campus	\$10,000	\$50,000
Press Box (Football)	Main Campus	\$9,828	\$49,140
Primary (K-2)	Main Campus	\$1,964,704	\$9,823,520
Professional Development Center	Intermediate	\$30,000	\$144,000
Radio Tower	Intermediate	\$0	\$500
School Sign	Main Campus	\$0	\$25,000
School Sign (Hwy 59)	Main Campus	\$0	\$18,783
Scoreboard (Baseball)	Main Campus	\$0	\$15,000
Scoreboard (Football)	Main Campus	\$0	\$15,000
Scoreboard (Softball)	Main Campus	\$0	\$15,000
Security Lights (Middle & HS)	Main Campus	\$0	\$9,000
Security Lights (Primary)	Main Campus	\$0	\$16,500
Sign	Intermediate	\$0	\$25,000
Soccer Goals	Main Campus	\$0	\$10,000
Stadium Lights	Main Campus	\$0	\$300,000
Storage	Main Campus	\$0	\$0
Storage (Football)	Main Campus	\$15,360	\$76,800
Storage D	Intermediate	\$32,832	\$164,160
Ticket Booth (Football)	Main Campus	\$0	\$9,450
Track	Main Campus	\$0	\$200,000
	Total =	\$12,797,866	\$65,147,874

\*The data are from the Gentry School District.

Table B.4 – Facilities, Gravette School District

Buildings	Location	Contents Values	Structural Values
Admin Building	Main Campus	\$107,120	\$464,741
ALE Building	Main Campus	\$53,560	\$236,230
Athletic Field House	High School	\$653,769	\$3,242,838
Baseball Complex	High School	\$56,287	\$441,923
Batting Cage (Baseball)	High School	\$0	\$4,352
Batting Cage (Softball)	High School	\$0	\$4,352
Career Center	Main Campus	\$800,000	\$3,310,102
Competition Gymnasium	Main Campus	\$225,146	\$2,840,966
Field House	Main Campus	\$107,120	\$387,764
Food Warehouse	Main Campus	\$267,800	\$427,435
Football Complex	High School	\$267,800	\$3,427,470
Football Complex (MS)	Main Campus	\$15,053	\$286,737
Glen Duffy Elementary	Main Campus	\$2,200,000	\$10,104,913
Glen Duffy Pavilion	Main Campus	\$0	\$58,678
Glen Duffy Sign	Main Campus	\$0	\$21,424
Gymnasium	Main Campus	\$107,120	\$2,087,157
High School	High School	\$8,800,000	\$43,652,227
High School Lights	High School	\$0	\$85,690
High School Signs & Statues	High School	\$0	\$64,272
Lion Statue	High School	\$0	\$42,848
Maintenance Equipment Shed	High School	\$3,214	\$2,357
Maintenance Parking Shed	High School	\$3,214	\$1,365
Maintenance Shop Building	High School	\$214,240	\$297,901
Maintenance Storage	Main Campus	\$16,068	\$7,279
Middle School	Main Campus	\$3,400,000	\$16,447,027
Middle School Sign	Main Campus	\$0	\$21,424
Softball Complex	High School	\$33,772	\$206,894
Transportation Facility	High School	\$292,875	\$750,461
Upper Elementary	Main Campus	\$2,222,740	\$8,857,244
Upper Elementary Pavilion	Main Campus	\$2,678	\$30,315
	Total =	\$19,849,576	\$97,814,386

\*The data are from the Gravette School District.

Table B.5 – Facilities, Pea Ridge School District

Buildings	Location	Contents Values	Structural Values
Administration Building	Main Campus	\$500,000	\$2,500,000
Awnings	Main Campus	\$0	\$200,000
Batting Cages	Baseball/Softball Fields	\$0	\$9,500
Bleachers	Main Campus	\$0	\$15,000
Bleachers (Extra)	Baseball/Softball Fields	\$0	\$15,000
Brick Sign	Main Campus	\$0	\$15,000
Bus Garage	Main Campus	\$158,142	\$794,928
Bus Shop	Main Campus	\$60,000	\$257,800
Concession Stand	Baseball/Softball Fields	\$14,580	\$69,030
Concessions	Main Campus	\$60,000	\$300,000
Covered Walkways	Main Campus	\$0	\$20,000
Covered Walkways	Main Campus	\$0	\$40,000
Digital Sign	Main Campus	\$0	\$40,000
Dugouts (Baseball)	Baseball/Softball Fields	\$0	\$10,000
Dugouts (Softball)	Baseball/Softball Fields	\$0	\$6,536
Elementary	Main Campus	\$606,640	\$2,900,145
Elementary Annex 1 & 2	Main Campus	\$526,208	\$2,631,040
Fence	Main Campus	\$0	\$44,462
Fence #1	Main Campus	\$0	\$25,000
Fence #2	Main Campus	\$0	\$10,000
Fence (Baseball)	Baseball/Softball Fields	\$0	\$25,000
Fence (Softball)	Baseball/Softball Fields	\$0	\$12,000
Flagpole	Main Campus	\$0	\$2,000
Flagpole	Main Campus	\$0	\$3,000
Fuel Tanks	Main Campus	\$0	\$38,000
Flagpole (Softball)	Baseball/Softball Fields	\$0	\$1,000
Goal Posts	Main Campus	\$0	\$10,000
Gymnasium	Main Campus	\$627,520	\$3,137,600
High School	Main Campus	\$3,702,144	\$18,510,720
Industrial Tech.	Main Campus	\$230,000	\$230,000
Intermediate School	Main Campus	\$2,421,824	\$12,109,120
Junior High	Main Campus	\$2,219,168	\$11,095,840
Lights (Baseball)	Baseball/Softball Fields	\$0	\$75,000
Lights (Softball)	Baseball/Softball Fields	\$0	\$75,000
Lights (Stadium)	Main Campus	\$0	\$124,200
Multi-Purpose	Main Campus	\$900,800	\$4,504,000
New High School	New High School	\$5,058,729	\$25,293,642
OGC Storage	Main Campus	\$0	\$0
Pavilion HS	New High School	\$0	\$8,000
Pavilion Primary	Main Campus	\$0	\$8,000
PE Facility	Main Campus	\$75,000	\$375,000
Playground	Main Campus	\$0	\$40,000
Playground	Main Campus	\$0	\$8,700
Press Box	Main Campus	\$75,200	\$391,000
Primary School	Main Campus	\$2,383,904	\$11,919,520
Safe Room	Main Campus	\$0	\$864,360
Score Box (Baseball)	Baseball/Softball Fields	\$0	\$9,999
Score Box (Softball)	Baseball/Softball Fields	\$0	\$2,500
Scoreboard	Main Campus	\$0	\$181,025
Scoreboard (Baseball)	Baseball/Softball Fields	\$0	\$10,000
Scoreboard (Softball)	Baseball/Softball Fields	\$0	\$6,000
Security Lights	New High School	\$0	\$60,000
Security Lights	Main Campus	\$0	\$60,000
Sign (Elementary)	Main Campus	\$0	\$3,000
Sign (Intermediate)	Main Campus	\$0	\$20,000
Signals	Main Campus	\$0	\$0
Special Ed. & Math	Main Campus	\$37,800	\$187,740
Stands (Baseball)	Baseball/Softball Fields	\$0	\$10,000
Stands (Softball)	Baseball/Softball Fields	\$0	\$5,000
Storage	Main Campus	\$400	\$2,000
Storage #1 (Softball)	Baseball/Softball Fields	\$30,000	\$2,000
Storage #2 (Softball)	Baseball/Softball Fields	\$2,500	\$3,000
Storage (Concessions)	Baseball/Softball Fields	\$5,000	\$5,000

## Appendix B – School District Facilities

Ticket Booth (Home)	Main Campus	\$0	\$20,000
Ticket Booth (Visitor)	Main Campus	\$0	\$20,000
Tractor Shed	Main Campus	\$20,000	\$4,997
Turf & Track	Main Campus	\$0	\$1,068,000
	Total =	\$19,715,559	\$100,444,404

\*The data are from the Pea Ridge School District.

Table B.6 – Facilities, Rogers School District

Buildings	Location	Contents Values	Structural Values
Administration Building	Tillery Elem.	\$959,630	\$4,798,150
Alternative Learning	Alternative Learning	\$200,000	\$1,000,000
Bellview Elementary	Bellview Elem.	\$189,000	\$9,450,000
Bellview PE Building	Bellview Elem.	\$93,750	\$468,750
Eastside Elementary	Eastside Elem.	\$1,634,745	\$8,173,725
Eastside PE Building	Eastside Elem.	\$93,750	\$468,750
Elmwood Junior High	Elmwood Jr. High	\$5,785,690	\$28,928,450
ESOL	Tillery Elem.	\$140,000	\$700,000
Fairview Elementary	Fairview Elem.	\$2,000,000	\$22,000,000
Garfield Addition	Garfield Elem.	\$105,000	\$525,000
Garfield Elementary	Garfield Elem.	\$295,260	\$1,476,300
Garfield Old School	Garfield Elem.	\$175,000	\$875,000
Grimes Elementary	Grimes Elem.	\$1,746,150	\$8,730,750
Grimes PE Building	Grimes Elem.	\$93,750	\$468,750
Heritage High School	Heritage HS	\$13,530,000	\$67,650,000
HHS Alumni Stands (Football)	Heritage HS	\$0	\$400,000
HHS CC 1	Heritage HS	\$400,000	\$2,214,000
HHS Concession Stand	Heritage HS	\$25,000	\$102,500
HHS Concession Stand (1999)	Heritage HS	\$50,000	\$480,000
HHS Dressing Rooms	Heritage HS	\$320,825	\$1,604,125
HHS Fieldhouse (Football)	Heritage HS	\$744,068	\$3,720,340
HHS Practice Area	Heritage HS	\$50,000	\$4,935,000
HHS Pres Box (Football)	Heritage HS	\$50,000	\$2,000,000
HHS Restrooms (Football)	Heritage HS	\$0	\$96,000
HHS Scoreboard (Football)	Heritage HS	\$0	\$160,000
HHS Stadium Lights (Football)	Heritage HS	\$0	\$500,000
HHS Stadium Turf	Heritage HS	\$0	\$500,000
HHS Ticket Booth (Football)	Heritage HS	\$10,000	\$82,000
Hill Elementary	Hill Elem.	\$1,627,745	\$8,138,725
Hill PE Building	Hill Elem.	\$87,500	\$437,500
HSS Baseball & Softball Stadium	Heritage HS	\$851,037	\$4,255,185
HSS Fence (Tennis)	Heritage HS	\$0	\$33,000
HSS Gym Addition	Heritage HS	\$1,292,156	\$6,460,780
HSS Lights (Tennis)	Heritage HS	\$0	\$150,000
Janie Darr Elementary	Janie Darr Elem.	\$3,115,000	\$15,575,000
Jones Elementary	Kirksey MS	\$2,229,500	\$11,147,500
Kirksey Middle School	Kirksey MS	\$6,142,000	\$30,710,000
Lingle Middle School	Lingle MS	\$4,912,009	\$24,560,045
Lowell Elementary	Lowell Elem.	\$1,197,280	\$5,986,400
Lowell Gym	Lowell Elem.	\$200,000	\$1,000,000
Mathias Elementary	Mathias Elem.	\$1,470,000	\$7,350,000
Mathias PE Building	Mathias Elem.	\$93,750	\$468,750
Northside Elementary	Northside Elem.	\$2,700,000	\$13,500,000
Northside PE Building	Northside Elem.	\$112,500	\$562,500
Oakdale Fieldhouse	Oakdale Jr. High	\$200,000	\$765,480
Oakdale Junior High	Oakdale Jr. High	\$5,878,190	\$29,390,950
Old Wire Road Elementary	Old Wire Rd. Elem.	\$2,380,000	\$11,900,000
Pre K Center	Pre K	\$372,400	\$1,862,000
Professional Development	Rogers HS	\$423,250	\$2,116,250
Reagan Elementary	Raegan Elem.	\$1,705,375	\$8,526,875
Reagan PE Building	Raegan Elem.	\$93,750	\$468,750
REAP	Tillery Elem.	\$171,500	\$857,500
RHS Alumni Bleachers	Rogers HS	\$0	\$684,180
RHS Baseball & Softball Stadium	Rogers HS	\$852,595	\$4,262,975
RHS Basketball Arena	Rogers HS	\$3,267,495	\$16,337,475
RHS Concession Stand	Rogers HS	\$15,000	\$328,000
RHS Dressing Rooms	Rogers HS	\$350,000	\$5,960,400

## Appendix B – School District Facilities

RHS Fence (Tennis)	Rogers HS	\$0	\$33,000
RHS Greenhouse	Rogers HS	\$24,000	\$120,000
RHS Lights (Tennis)	Rogers HS	\$0	\$150,000
RHS Mens RR Home	Rogers HS	\$0	\$180,000
RHS Practice Facility	Rogers HS	\$50,000	\$4,706,875
RHS Stadium Gatehouse 1	Rogers HS	\$0	\$82,000
RHS Stadium Gatehouse 2	Rogers HS	\$0	\$41,000
RHS Stadium Lights	Rogers HS	\$0	\$307,000
RHS Stadium Press Box	Rogers HS	\$40,000	\$1,382,405
RHS Stadium Turf	Rogers HS	\$0	\$500,000
RHS Stadium Scoreboard	Rogers HS	\$0	\$200,000
RHS Visitors RR	Rogers HS	\$0	\$232,400
RHS Womens RR Home	Rogers HS	\$0	\$240,000
Rogers High School	Rogers HS	\$13,308,600	\$66,543,000
School Services	Kirksey MS	\$700,000	\$3,899,700
School Services Storage	Kirksey MS	\$25,000	\$20,000
School Services Warehouse	Kirksey MS	\$200,000	\$1,125,000
Technology Building	Tillery Elem.	\$295,009	\$596,225
The Annex	Kirksey MS	\$4,595,844	\$22,979,220
Tillery Elementary	Tillery Elem.	\$2,030,000	\$10,150,000
Tillery Gym	Tillery Elem.	\$399,875	\$1,999,375
Tucker School	Tucker Elem.	\$4,191,740	\$20,958,700
Westside Elementary	Westside Elem.	\$2,035,845	\$10,179,225
Westside PE Building	Westside Elem.	\$93,750	\$468,750
	Total =	\$98,421,313	\$533,397,685

\*The data are from the Rogers School District.

Table B.7 – Facilities, Siloam Springs School District

Buildings	Location	Contents Values	Structural Values
Administration Building	Admin	\$1,280	\$190,657
Agri Building	High School	\$11,026	\$1,830,455
Allen Elementary	Intermediate School	\$92,146	\$16,608,338
Alternative School	Alternative School	\$7,800	\$399,205
Band Bleachers	High School	\$0	\$92,154
Bleachers (East)	Middle School	\$0	\$275,457
Bud Parking Lot	Intermediate School	\$0	\$363,254
Bus Maintenance	Intermediate School	\$7,500	\$801,951
Career Academy	High School	\$10,000	\$1,950,440
Concession Stand	Middle School	\$680	\$77,990
Dressing Rooms (East)	Middle School	\$4,020	\$461,387
Field House	High School	\$13,582	\$2,254,782
Fine Arts Center	Middle School	\$26,489	\$456,340
Greenhouse	High School	\$0	\$259,510
High School	High School	\$273,131	\$47,172,582
Intermediate School	Intermediate School	\$130,768	\$21,333,109
Library	Northside Elem.	\$3,500	\$877,000
Maintenance Office	Southside Elem.	\$4,000	\$458,763
Maintenance Shop	Southside Elem.	\$6,000	\$583,468
Middle School Admin	Middle School	\$15,650	\$3,215,196
Middle School North	Middle School	\$78,120	\$13,247,921
Middle School South	Middle School	\$36,958	\$6,380,635
Northside Annex	Northside Elem.	\$5,000	\$943,560
Northside Elementary	Northside Elem.	\$54,528	\$8,435,243
Panther Arena	Middle School	\$34,500	\$4,551,446
Panther Stadium	High School	\$0	\$6,054,031
PE Facility	Northside Elem.	\$3,200	\$495,700
Press Box	Middle School	\$1,020	\$116,985
Rest Rooms	Middle School	\$400	\$45,876
Southside Elementary	Southside Elem.	\$92,001	\$16,740,441
Stadium Fence	Middle School	\$0	\$40,172
Stadium Lights	Middle School	\$0	\$114,773
Storage	Southside Elem.	\$5,250	\$450,212
Track	Middle School	\$0	\$800,000
	Total =	\$918,549	\$158,079,033

\*The data are from the Siloam Springs School District.

## Appendix C – Hazard Records

Table C.1 – Drought Records

Date	D0	D1	D2	D3	D4	DSCI
1/18/2000	100	0	0	0	0	100
1/25/2000	100	0	0	0	0	100
2/1/2000	100	0	0	0	0	100
2/8/2000	100	0	0	0	0	100
2/15/2000	100	0	0	0	0	100
2/22/2000	100	0	0	0	0	100
2/29/2000	24.78	0	0	0	0	25
4/4/2000	40.96	0	0	0	0	41
4/11/2000	40.95	0	0	0	0	41
4/18/2000	21.21	0	0	0	0	21
4/25/2000	84.93	0	0	0	0	85
5/2/2000	100	84.54	0	0	0	185
5/9/2000	39.38	0	0	0	0	39
5/16/2000	39.38	0	0	0	0	39
5/23/2000	42.03	0.13	0	0	0	42
5/30/2000	0.83	0	0	0	0	1
6/6/2000	22.89	0	0	0	0	23
6/13/2000	22.69	0	0	0	0	23
8/29/2000	89.27	0	0	0	0	89
9/5/2000	100	24.73	0	0	0	125
9/12/2000	100	100	0	0	0	200
9/19/2000	100	100	0	0	0	200
9/26/2000	100	100	0	0	0	200
10/3/2000	100	100	0	0	0	200
10/10/2000	100	100	0	0	0	200
10/17/2000	100	100	0	0	0	200
10/24/2000	100	100	0	0	0	200
10/31/2000	100	100	0	0	0	200
5/1/2001	100	0	0	0	0	100
5/8/2001	100	0	0	0	0	100
5/15/2001	100	0	0	0	0	100
7/31/2001	0.91	0	0	0	0	1
8/7/2001	0.92	0	0	0	0	1
8/14/2001	3.06	0	0	0	0	3
8/21/2001	9.54	0	0	0	0	10
8/28/2001	47.25	0	0	0	0	47
9/4/2001	77.74	0	0	0	0	78
12/11/2001	0.26	0	0	0	0	0
12/25/2001	0.04	0	0	0	0	0
1/1/2002	0.09	0	0	0	0	0
1/22/2002	3.14	0	0	0	0	3
9/10/2002	61.87	0	0	0	0	62
9/17/2002	100	0	0	0	0	100
9/24/2002	43.26	0	0	0	0	43
10/1/2002	100	0	0	0	0	100
10/8/2002	100	100	0	0	0	200
10/15/2002	100	100	0	0	0	200
10/22/2002	100	100	0	0	0	200
10/29/2002	100	100	0	0	0	200
11/5/2002	100	100	0	0	0	200
11/12/2002	100	100	0	0	0	200
11/19/2002	100	100	0	0	0	200
11/26/2002	100	100	0	0	0	200
12/3/2002	100	98.94	0	0	0	199
12/10/2002	100	0	0	0	0	100
12/17/2002	100	0	0	0	0	100
12/24/2002	100	0	0	0	0	100
12/31/2002	100	0	0	0	0	100
1/7/2003	100	0	0	0	0	100
1/14/2003	100	28.44	0	0	0	128
1/21/2003	100	36.52	0	0	0	137
1/28/2003	100	43.23	0	0	0	143
2/4/2003	100	30.32	0	0	0	130

## Appendix C – Hazard Records

2/11/2003	100	37.77	0	0	0	138
2/18/2003	100	50.41	0	0	0	150
2/25/2003	63.3	0	0	0	0	63
3/4/2003	45.22	0	0	0	0	45
3/11/2003	61.31	0	0	0	0	61
3/18/2003	53.67	0	0	0	0	54
3/25/2003	51.22	0	0	0	0	51
4/15/2003	100	32.81	0	0	0	133
4/22/2003	100	42.3	0	0	0	142
4/29/2003	100	46.31	0	0	0	146
5/6/2003	100	21.53	0	0	0	122
5/13/2003	100	0	0	0	0	100
5/20/2003	4.53	0	0	0	0	5
5/27/2003	8.03	0	0	0	0	8
6/3/2003	4.58	0	0	0	0	5
6/10/2003	2.5	0	0	0	0	3
7/8/2003	13.26	0	0	0	0	13
7/15/2003	99.94	0	0	0	0	100
7/22/2003	100	62.3	0	0	0	162
7/29/2003	100	73.2	0	0	0	173
8/5/2003	100	64.69	0	0	0	165
8/12/2003	100	66.14	0	0	0	166
8/19/2003	100	80.76	0	0	0	181
8/26/2003	100	71.55	0	0	0	172
9/21/2004	38.18	0	0	0	0	38
9/28/2004	57.25	0	0	0	0	57
10/5/2004	100	86.97	0	0	0	187
10/12/2004	100	2.77	0	0	0	103
10/19/2004	100	2.77	0	0	0	103
10/26/2004	100	0	0	0	0	100
5/10/2005	100	0	0	0	0	100
5/17/2005	88.24	0	0	0	0	88
5/24/2005	8.12	0	0	0	0	8
6/7/2005	4.45	0	0	0	0	4
6/14/2005	0.63	0	0	0	0	1
6/28/2005	100	0	0	0	0	100
7/5/2005	88.91	0	0	0	0	89
7/12/2005	86.92	0	0	0	0	87
7/19/2005	100	0	0	0	0	100
7/26/2005	100	75.51	0	0	0	176
8/2/2005	100	100	0	0	0	200
8/9/2005	100	100	0	0	0	200
8/16/2005	100	100	0	0	0	200
8/23/2005	100	100	0	0	0	200
8/30/2005	100	100	0	0	0	200
9/6/2005	100	100	0	0	0	200
9/13/2005	100	100	0	0	0	200
10/4/2005	71.48	0	0	0	0	71
10/11/2005	100	0	0	0	0	100
10/18/2005	100	50.25	0	0	0	150
10/25/2005	100	100	0	0	0	200
11/1/2005	100	100	0	0	0	200
11/8/2005	100	100	0	0	0	200
11/15/2005	100	84.63	0	0	0	185
11/22/2005	100	100	0	0	0	200
11/29/2005	100	100	0	0	0	200
12/6/2005	100	100	0	0	0	200
12/13/2005	100	100	31.63	0	0	232
12/20/2005	100	100	98.95	0	0	299
12/27/2005	100	100	98.95	0	0	299
1/3/2006	100	100	100	0	0	300
1/10/2006	100	100	100	10.32	0	310
1/17/2006	100	100	100	10.32	0	310
1/24/2006	100	100	100	34.3	0	334
1/31/2006	100	100	100	90.19	0	390
2/7/2006	100	100	100	100	0	400
2/14/2006	100	100	100	100	0	400
2/21/2006	100	100	100	100	0	400

## Appendix C – Hazard Records

2/28/2006	100	100	100	100	0.42	400
3/7/2006	100	100	100	100	0.42	400
3/14/2006	100	100	100	59.08	0	359
3/21/2006	100	100	100	48.24	0	348
3/28/2006	100	100	100	48.24	0	348
4/4/2006	100	100	100	48.24	0	348
4/11/2006	100	100	100	48.24	0	348
4/18/2006	100	100	100	100	0	400
4/25/2006	100	100	100	99.49	0	399
5/2/2006	100	100	100	0	0	300
5/9/2006	100	93.1	0	0	0	193
5/16/2006	100	73.6	0	0	0	174
5/23/2006	100	73.6	0	0	0	174
5/30/2006	100	73.6	0	0	0	174
6/6/2006	100	73.6	0	0	0	174
6/13/2006	100	0	0	0	0	100
6/20/2006	100	0	0	0	0	100
6/27/2006	100	0	0	0	0	100
7/4/2006	100	0	0	0	0	100
7/11/2006	100	0	0	0	0	100
7/18/2006	100	0	0	0	0	100
7/25/2006	100	97.36	0	0	0	197
8/1/2006	100	100	6.98	0	0	207
8/8/2006	100	100	0	0	0	200
8/15/2006	100	100	32.33	0	0	232
8/22/2006	100	100	46.77	0	0	247
8/29/2006	100	27.18	0	0	0	127
9/5/2006	100	27.18	0	0	0	127
9/12/2006	100	27.18	0	0	0	127
9/19/2006	100	100	0	0	0	200
9/26/2006	100	6.15	0	0	0	106
10/3/2006	100	6.15	0	0	0	106
10/10/2006	100	6.15	0	0	0	106
10/17/2006	100	6.15	0	0	0	106
10/24/2006	47.62	0	0	0	0	48
10/31/2006	45.3	0	0	0	0	45
11/7/2006	45.23	0	0	0	0	45
11/14/2006	45.23	0	0	0	0	45
11/21/2006	45.63	0	0	0	0	46
11/28/2006	47.08	0	0	0	0	47
12/12/2006	66.02	0	0	0	0	66
12/19/2006	63.85	0	0	0	0	64
12/26/2006	63.85	0	0	0	0	64
1/2/2007	22.36	0	0	0	0	22
1/9/2007	27.77	0	0	0	0	28
3/27/2007	100	0	0	0	0	100
4/3/2007	100	0	0	0	0	100
4/10/2007	100	0	0	0	0	100
4/24/2007	82.13	0	0	0	0	82
5/1/2007	100	0	0	0	0	100
5/8/2007	68.77	0	0	0	0	69
5/15/2007	68.77	0	0	0	0	69
5/22/2007	68.77	0	0	0	0	69
5/29/2007	99.79	0	0	0	0	100
6/5/2007	99.79	0	0	0	0	100
8/21/2007	89.2	0	0	0	0	89
8/28/2007	5.6	0	0	0	0	6
9/4/2007	23.57	0	0	0	0	24
11/6/2007	3.91	0	0	0	0	4
11/13/2007	7.87	0	0	0	0	8
11/20/2007	7.31	0	0	0	0	7
11/27/2007	7.31	0	0	0	0	7
12/4/2007	7.25	0	0	0	0	7
12/9/2008	48.54	0	0	0	0	49
12/16/2008	48.54	0	0	0	0	49
12/23/2008	48.54	0	0	0	0	49
1/27/2009	42.57	0	0	0	0	43
6/30/2009	16.35	0	0	0	0	16

## Appendix C – Hazard Records

7/7/2009	2.09	0	0	0	0	2
7/14/2009	2.09	0	0	0	0	2
7/21/2009	0.83	0	0	0	0	1
7/28/2009	4.8	0	0	0	0	5
8/4/2009	2.37	0	0	0	0	2
8/11/2009	2.37	0	0	0	0	2
8/24/2010	100	0	0	0	0	100
8/31/2010	100	97.12	0	0	0	197
9/7/2010	100	97.12	0	0	0	197
9/14/2010	100	84.94	0	0	0	185
9/21/2010	88.38	0	0	0	0	88
12/14/2010	1.43	0	0	0	0	1
12/21/2010	45.82	0	0	0	0	46
12/28/2010	100	0	0	0	0	100
1/4/2011	100	0	0	0	0	100
1/11/2011	100	10.09	0	0	0	110
1/18/2011	100	11.44	0	0	0	111
1/25/2011	100	11.44	0	0	0	111
2/1/2011	100	11.44	0	0	0	111
2/8/2011	100	11.44	0	0	0	111
2/15/2011	100	11.44	0	0	0	111
2/22/2011	100	11.44	0	0	0	111
3/1/2011	100	11.44	0	0	0	111
3/8/2011	100	11.44	0	0	0	111
3/15/2011	19.21	0	0	0	0	19
3/22/2011	19.21	0	0	0	0	19
3/29/2011	52.08	0	0	0	0	52
4/5/2011	19.48	0	0	0	0	19
4/12/2011	10.74	0	0	0	0	11
4/19/2011	10.74	0	0	0	0	11
6/28/2011	100	0	0	0	0	100
7/5/2011	100	39.4	0	0	0	139
7/12/2011	100	58.81	0	0	0	159
7/19/2011	100	58.81	0	0	0	159
7/26/2011	100	100	0	0	0	200
8/2/2011	100	100	100	0	0	300
8/9/2011	100	100	100	0	0	300
8/16/2011	100	100	5.77	0	0	206
8/23/2011	100	100	6.53	0	0	207
8/30/2011	100	100	6.42	0	0	206
9/6/2011	100	100	100	0	0	300
9/13/2011	100	100	100	0	0	300
9/20/2011	100	100	100	0	0	300
9/27/2011	100	100	100	0	0	300
10/4/2011	100	100	100	0	0	300
10/11/2011	100	100	100	0	0	300
10/18/2011	100	100	47.98	0	0	248
10/25/2011	100	100	47.98	0	0	248
11/1/2011	100	100	12.45	0	0	212
11/8/2011	100	100	0	0	0	200
11/15/2011	100	4.03	0	0	0	104
11/22/2011	74.75	0.37	0	0	0	75
11/29/2011	68.13	0	0	0	0	68
1/24/2012	70.02	0	0	0	0	70
1/31/2012	50.89	0	0	0	0	51
2/7/2012	50.89	0	0	0	0	51
2/14/2012	50.89	0	0	0	0	51
2/21/2012	50.89	0	0	0	0	51
2/28/2012	50.89	0	0	0	0	51
3/6/2012	50.89	0	0	0	0	51
3/13/2012	50.89	0	0	0	0	51
3/20/2012	0.5	0	0	0	0	1
5/22/2012	100	0	0	0	0	100
5/29/2012	100	50.76	0	0	0	151
6/5/2012	69.24	1.14	0	0	0	70
6/12/2012	69.24	1.14	0	0	0	70
6/19/2012	100	57.53	0.29	0	0	158
6/26/2012	100	99.67	0.29	0	0	200

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7/3/2012	100	100	0.29	0	0	200
7/10/2012	100	100	0.29	0	0	200
7/17/2012	100	100	100	0	0	300
7/24/2012	100	100	100	100	0	400
7/31/2012	100	100	100	100	0	400
8/7/2012	100	100	100	100	64.6	465
8/14/2012	100	100	100	100	85.26	485
8/21/2012	100	100	100	100	84.19	484
8/28/2012	100	100	100	100	76.62	477
9/4/2012	100	100	100	100	75.36	475
9/11/2012	100	100	100	100	75.36	475
9/18/2012	100	100	100	100	25.02	425
9/25/2012	100	100	100	100	25.02	425
10/2/2012	100	100	100	100	25.02	425
10/9/2012	100	100	100	100	25.02	425
10/16/2012	100	100	100	8.88	0	309
10/23/2012	100	100	100	8.88	0	309
10/30/2012	100	100	100	8.88	0	309
11/6/2012	100	100	100	14.81	0	315
11/13/2012	100	100	100	14.81	0	315
11/20/2012	100	100	100	14.81	0	315
11/27/2012	100	100	100	15.45	0	315
12/4/2012	100	100	100	15.45	0	315
12/11/2012	100	100	100	15.45	0	315
12/18/2012	100	100	100	14.09	0	314
12/25/2012	100	100	100	14.09	0	314
1/1/2013	100	100	100	14.09	0	314
1/8/2013	100	100	100	14.09	0	314
1/15/2013	100	100	100	12.17	0	312
1/22/2013	100	100	100	11.71	0	312
1/29/2013	100	100	100	11.71	0	312
2/5/2013	100	100	100	0	0	300
2/12/2013	100	100	100	0	0	300
2/19/2013	100	100	100	0	0	300
2/26/2013	100	100	97.22	0	0	297
3/5/2013	100	100	97.22	0	0	297
3/12/2013	100	100	0	0	0	200
3/19/2013	100	100	0	0	0	200
3/26/2013	100	100	0	0	0	200
4/2/2013	100	100	0	0	0	200
4/9/2013	100	91.35	0	0	0	191
4/16/2013	100	61.21	0	0	0	161
4/23/2013	67.11	0	0	0	0	67
7/9/2013	91.84	0	0	0	0	92
7/16/2013	100	83.13	0.01	0	0	183
7/23/2013	100	82.66	10.11	0	0	193
7/30/2013	61.92	10.28	0	0	0	72
8/6/2013	11.53	0	0	0	0	12
8/13/2013	1.39	0	0	0	0	1
8/20/2013	1.39	0	0	0	0	1
8/27/2013	5.12	0	0	0	0	5
9/3/2013	5.12	0	0	0	0	5
9/10/2013	100	0	0	0	0	100
9/17/2013	100	0	0	0	0	100
9/24/2013	0.83	0	0	0	0	1
2/25/2014	100	0	0	0	0	100
3/4/2014	100	0	0	0	0	100
3/11/2014	100	0	0	0	0	100
3/18/2014	100	0	0	0	0	100
3/25/2014	100	0	0	0	0	100
4/1/2014	100	0	0	0	0	100
4/8/2014	100	0	0	0	0	100
4/15/2014	100	0	0	0	0	100
4/22/2014	100	0	0	0	0	100
4/29/2014	100	0	0	0	0	100
5/6/2014	100	0	0	0	0	100
5/13/2014	100	0	0	0	0	100
5/20/2014	100	0	0	0	0	100

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5/27/2014	100	0	0	0	0	100
6/3/2014	100	17.48	0	0	0	117
6/10/2014	100	17.48	0	0	0	117
6/17/2014	100	0	0	0	0	100
6/24/2014	100	0	0	0	0	100
7/1/2014	100	0	0	0	0	100
7/8/2014	100	0	0	0	0	100
7/15/2014	100	0	0	0	0	100
7/22/2014	100	0	0	0	0	100
7/29/2014	100	1.92	0	0	0	102
8/5/2014	33.46	0.83	0	0	0	34
8/12/2014	40.2	0.83	0	0	0	41
8/19/2014	56.79	0.83	0	0	0	58
8/26/2014	56.79	0.83	0	0	0	58
9/2/2014	56.79	0.83	0	0	0	58
9/9/2014	56.79	0.83	0	0	0	58
9/16/2014	56.79	0.83	0	0	0	58
9/23/2014	56.79	0.83	0	0	0	58
9/30/2014	100	0.83	0	0	0	101
10/7/2014	100	0.83	0	0	0	101
1/20/2015	47.78	0	0	0	0	48
1/27/2015	41.63	0	0	0	0	42
2/3/2015	41.63	0	0	0	0	42
2/10/2015	100	0	0	0	0	100
2/17/2015	100	0	0	0	0	100
2/24/2015	100	0	0	0	0	100
3/3/2015	100	0	0	0	0	100
3/10/2015	100	71.41	0	0	0	171
3/17/2015	100	71.41	0	0	0	171
3/24/2015	100	71.41	0	0	0	171
3/31/2015	88.51	0	0	0	0	89
4/7/2015	70.91	0	0	0	0	71
4/14/2015	68.54	0	0	0	0	69
4/21/2015	67.28	0	0	0	0	67
4/28/2015	67.28	0	0	0	0	67
5/5/2015	100	0	0	0	0	100
5/12/2015	100	0	0	0	0	100
5/19/2015	96.62	0	0	0	0	97
10/13/2015	100	0	0	0	0	100
10/20/2015	100	0	0	0	0	100
10/27/2015	100	0	0	0	0	100
11/3/2015	100	0	0	0	0	100
11/10/2015	100	0	0	0	0	100
3/29/2016	100	0	0	0	0	100
4/5/2016	100	0	0	0	0	100
4/12/2016	100	0	0	0	0	100
4/19/2016	100	0	0	0	0	100
4/26/2016	100	0	0	0	0	100
5/3/2016	70.38	0	0	0	0	70
5/10/2016	70.38	0	0	0	0	70
5/17/2016	86.63	0	0	0	0	87
5/24/2016	86.63	0	0	0	0	87
5/31/2016	86.63	0	0	0	0	87
6/7/2016	86.63	0	0	0	0	87
6/14/2016	86.63	0	0	0	0	87
6/21/2016	85.84	0	0	0	0	86
6/28/2016	85.84	0	0	0	0	86
8/30/2016	0.19	0	0	0	0	0
9/6/2016	0.19	0	0	0	0	0
9/13/2016	16.69	0	0	0	0	17
9/20/2016	16.69	0	0	0	0	17
9/27/2016	16.69	0	0	0	0	17
10/4/2016	29.61	0	0	0	0	30
10/11/2016	20.95	0	0	0	0	21
10/18/2016	19.95	0	0	0	0	20
10/25/2016	19.95	0	0	0	0	20
11/1/2016	19.95	0	0	0	0	20
11/8/2016	29.63	0	0	0	0	30

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11/15/2016	29.63	0	0	0	0	30
11/22/2016	100	0	0	0	0	100
11/29/2016	100	0	0	0	0	100
12/6/2016	100	0	0	0	0	100
12/13/2016	100	7.46	0	0	0	107
12/20/2016	100	98.9	0	0	0	199
12/27/2016	100	98.9	0	0	0	199
1/3/2017	100	100	14.6	0	0	215
1/10/2017	100	100	34.73	0	0	235
1/17/2017	100	36.34	0	0	0	136
1/24/2017	100	36.34	0	0	0	136
1/31/2017	100	36.34	0	0	0	136
2/7/2017	100	57.12	0	0	0	157
2/14/2017	100	53.88	0	0	0	154
2/21/2017	100	99.02	0	0	0	199
2/28/2017	100	100	4.12	0	0	204
3/7/2017	100	100	4.12	0	0	204
3/14/2017	100	100	4.12	0	0	204
3/21/2017	100	100	7.03	0	0	207
3/28/2017	100	20.84	0	0	0	121
4/4/2017	100	20.84	0	0	0	121
4/11/2017	100	97.48	6.01	0	0	204
4/18/2017	100	97.48	6.01	0	0	204
4/25/2017	8.98	0	0	0	0	9
9/19/2017	34.52	0	0	0	0	35
9/26/2017	34.51	0	0	0	0	35
10/3/2017	100	34.54	0	0	0	135
10/10/2017	100	34.74	0	0	0	135
10/17/2017	100	54.49	0	0	0	154
10/24/2017	100	7.82	0	0	0	108
10/31/2017	100	7.82	0	0	0	108
11/7/2017	100	12.97	0	0	0	113
11/14/2017	100	12.97	0	0	0	113
11/21/2017	100	100	0	0	0	200
11/28/2017	100	100	9.55	0	0	210
12/5/2017	100	100	9.55	0	0	210
12/12/2017	100	100	9.55	0	0	210
12/19/2017	100	100	9.55	0	0	210
12/26/2017	100	74.5	0	0	0	175
1/2/2018	100	74.5	0	0	0	175
1/9/2018	100	74.5	0	0	0	175
1/16/2018	100	74.5	0	0	0	175
1/23/2018	100	100	0	0	0	200
1/30/2018	100	100	0	0	0	200
2/6/2018	100	100	6.86	0	0	207
2/13/2018	100	100	7.19	0	0	207
2/20/2018	100	100	7.19	0	0	207
2/27/2018	100	0	0	0	0	100
3/6/2018	15.51	0	0	0	0	16
3/13/2018	5.36	0	0	0	0	5
6/5/2018	54.76	0	0	0	0	55
6/12/2018	100	0	0	0	0	100
6/19/2018	100	0	0	0	0	100
6/26/2018	100	86.04	0	0	0	186
7/3/2018	100	99.31	0	0	0	199
7/10/2018	100	99.45	0	0	0	199
7/17/2018	100	99.38	0	0	0	199
7/24/2018	100	100	57.16	0	0	257
7/31/2018	100	100	0.23	0	0	200
8/7/2018	100	100	41.45	0	0	241
8/14/2018	100	100	41.45	0	0	241
8/21/2018	100	47.07	0	0	0	147
8/28/2018	52.5	15.21	0	0	0	68
9/4/2018	49.26	12.27	0	0	0	62
9/11/2018	41.51	12.27	0	0	0	54
9/18/2018	41.51	12.27	0	0	0	54
9/25/2018	41.51	6.88	0	0	0	48
10/2/2018	47.15	7.13	0	0	0	54

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10/9/2018	99.99	4.75	0	0	0	105
10/16/2018	99.99	4.96	0	0	0	105
10/23/2018	99.99	0	0	0	0	100
10/30/2018	99.99	0	0	0	0	100
11/6/2018	65.33	0	0	0	0	65
11/13/2018	65.33	0	0	0	0	65
11/20/2018	65.33	0	0	0	0	65
11/27/2018	100	47.96	0	0	0	148
12/4/2018	100	0	0	0	0	100
12/11/2018	100	0	0	0	0	100
12/18/2018	100	28.73	0	0	0	129
12/25/2018	100	28.73	0	0	0	129
1/1/2019	28.57	0	0	0	0	29
6/23/2020	97.7	0	0	0	0	98
6/30/2020	100	0	0	0	0	100
7/7/2020	82.85	0	0	0	0	83
7/14/2020	82.93	0	0	0	0	83
7/21/2020	100	0	0	0	0	100
7/28/2020	100	0	0	0	0	100
9/8/2020	58.58	0	0	0	0	59
9/15/2020	88.01	0	0	0	0	88
9/22/2020	99.4	11.33	0	0	0	111
9/29/2020	98.44	35.26	0	0	0	134
10/6/2020	100	51.88	10.51	0	0	162
10/13/2020	100	83.4	27.75	0.01	0	211
10/20/2020	100	100	60.54	0.01	0	261
10/27/2020	69.34	26.57	0.01	0	0	96
11/3/2020	22.47	0	0	0	0	22
11/10/2020	22.47	0	0	0	0	22
4/6/2021	4.34	0	0	0	0	4
4/13/2021	4.38	0	0	0	0	4
4/20/2021	2.67	0	0	0	0	3
9/7/2021	47.95	0	0	0	0	48
9/14/2021	49.28	0	0	0	0	49
9/21/2021	96.83	20.75	0	0	0	118

\*The data are from the National Drought Mitigation Center.

## Table C.2 – Flash Flood Records

Location	Event Date	Injuries	Deaths	Property Damage
S Of Siloam Springs	5/10/1996	0	0	\$5,000
Vaughn-Bentonville	9/26/1996	0	0	\$0
Bentonville	9/26/1996	0	0	\$0
Bentonville	11/6/1996	0	0	\$0
Countywide	11/7/1996	0	0	\$0
Nr War Eagle	7/10/1997	0	0	\$0
Siloam Spgs	8/19/1998	0	0	\$0
Countywide	10/5/1998	0	0	\$0
Highfill	2/6/1999	0	0	\$0
Countywide	5/4/1999	0	0	\$0
West Portion	6/30/1999	0	0	\$100,000
Countywide	6/17/2000	0	0	\$0
Countywide	6/21/2000	0	0	\$1,200,000
Countywide	6/28/2000	0	0	\$0
Healing Spgs	2/24/2001	0	0	\$0
Gentry	2/24/2001	0	0	\$0
Countywide	5/17/2002	0	0	\$0
Countywide	4/23/2004	0	0	\$0
Gentry	4/30/2004	0	0	\$0
Countywide	7/3/2004	0	0	\$1,000,000
Countywide	11/1/2004	0	0	\$0
Countywide	1/12/2005	0	0	\$0
Gravette	6/13/2005	0	0	\$0
Bentonville	6/1/2007	0	0	\$0
Gravette	1/7/2008	0	0	\$10,000
Sulphur Spgs	1/8/2008	0	0	\$0
Siloam Spgs	3/3/2008	0	0	\$0

## Appendix C – Hazard Records

Sulphur Spgs	3/18/2008	0	0	\$250,000
Gallitin	3/31/2008	0	0	\$0
Sulphur Spgs	4/10/2008	0	0	\$0
Gravette	4/10/2008	0	0	\$0
Siloam Spgs	6/1/2008	0	0	\$0
Garfield	7/5/2008	0	0	\$0
Cave Spgs	5/1/2009	0	0	\$0
Lowell	10/9/2009	0	0	\$20,000
Bella Vista	4/25/2011	2	0	\$0
Pea Ridge	5/22/2011	0	0	\$0
Gallitin	5/23/2011	4	0	\$0
Bentonville Branch J	4/18/2013	0	0	\$0
Springtown	4/18/2013	0	0	\$0
Bentonville	5/10/2013	0	0	\$20,000
Springtown	5/10/2013	0	0	\$0
Bella Vista	5/10/2013	0	0	\$0
Centerton	5/10/2013	0	0	\$0
Gentry	5/10/2013	0	0	\$0
Cave Spgs	5/10/2013	0	0	\$0
Gateway	8/8/2013	0	0	\$1,000,000
Bella Vista	8/8/2013	0	0	\$1,000,000
Bentonville	8/8/2013	0	0	\$2,000,000
Pea Ridge	8/8/2013	0	0	\$1,000,000
Highfill	8/8/2013	0	0	\$0
Siloam Spgs	10/10/2014	0	0	\$0
Gravette	10/10/2014	0	0	\$0
Bella Vista	4/17/2015	0	0	\$0
Wareagle	5/10/2015	0	0	\$0
Bentonville	5/24/2015	0	0	\$0
Pea Ridge	5/29/2015	0	0	\$0
Maysville	6/18/2015	0	0	\$0
Maysville	7/7/2015	0	0	\$0
Cherokee City	7/7/2015	0	0	\$0
Bentonville	7/7/2015	0	0	\$0
Bella Vista	7/7/2015	0	0	\$0
Rogers Muni Arpt	11/17/2015	0	0	\$0
Gravette	12/26/2015	0	0	\$0
Bella Vista	12/26/2015	0	0	\$0
Gravette	12/26/2015	0	0	\$0
Maysville	12/26/2015	0	0	\$0
Decatur	12/26/2015	0	0	\$0
Gentry	7/8/2016	0	0	\$0
Rogers	7/27/2016	0	0	\$0
Bentonville	9/8/2016	0	0	\$0
Bentonville	9/8/2016	0	0	\$0
Bentonville Muni Arp	9/8/2016	0	0	\$0
Bentonville Branch J	4/28/2017	0	0	\$0
Bentonville Branch J	4/29/2017	0	0	\$0
Cherokee City	4/29/2017	0	0	\$0
Bentonville Muni Arp	4/29/2017	0	0	\$0
Bentonville Branch J	4/29/2017	0	0	\$40,000
Sulphur Spgs	4/29/2017	0	0	\$0
Bentonville Branch J	4/29/2017	0	0	\$0
Siloam Spgs	4/29/2017	0	0	\$0
Gallitin	4/29/2017	0	0	\$0
Pea Ridge	7/2/2017	0	0	\$0
Bella Vista	2/24/2018	0	0	\$0
Healing Spgs	3/27/2018	0	0	\$0
Siloam Spgs	8/17/2018	0	0	\$0
Healing Spgs	8/17/2018	0	0	\$0
Logan	6/23/2019	0	0	\$0
Bestwater	6/23/2019	0	0	\$0
Gravette	6/23/2019	0	0	\$0
Siloam Spgs	6/23/2019	0	0	\$0
Healing Spgs	9/24/2019	0	0	\$0
Bella Vista	9/26/2019	0	0	\$0
Logan	10/6/2019	0	0	\$0
Bentonville Muni Arp	10/6/2019	0	0	\$0

Highfill	10/6/2019	0	0	\$0
Gravette	10/6/2019	0	0	\$50,000
Centerton	10/6/2019	0	0	\$10,000
Bella Vista	10/6/2019	0	0	\$0
Decatur	10/6/2019	0	0	\$0
Cave Spgs	10/6/2019	0	0	\$0
Highfill	10/6/2019	0	0	\$0
Gentry	10/6/2019	0	0	\$0
Cave Spgs	10/6/2019	0	0	\$25,000
Bella Vista	10/6/2019	0	0	\$0
Bentonville Branch J	1/10/2020	0	0	\$10,000
Osage Mills	3/19/2020	0	0	\$0
Lake Frances	4/28/2021	0	0	\$0
Rogers	4/28/2021	0	0	\$0
Bentonville	4/28/2021	0	0	\$0
Bentonville	4/28/2021	0	0	\$0
Siloam Spgs	4/28/2021	0	0	\$0
Garfield	4/28/2021	0	0	\$0
Cave Spgs	4/28/2021	0	0	\$0
Centerton	10/6/2019	0	0	\$10,000
Bella Vista	10/6/2019	0	0	\$0
Decatur	10/6/2019	0	0	\$0
Cave Spgs	10/6/2019	0	0	\$0
Highfill	10/6/2019	0	0	\$0
Gentry	10/6/2019	0	0	\$0
Cave Spgs	10/6/2019	0	0	\$25,000
Bella Vista	10/6/2019	0	0	\$0
Bentonville Branch J	1/10/2020	0	0	\$10,000
Osage Mills	3/19/2020	0	0	\$0
Lake Frances	4/28/2021	0	0	\$0
Rogers	4/28/2021	0	0	\$0
Bentonville	4/28/2021	0	0	\$0
Bentonville	4/28/2021	0	0	\$0
Siloam Spgs	4/28/2021	0	0	\$0
Garfield	4/28/2021	0	0	\$0
Cave Spgs	4/28/2021	0	0	\$0
Totals =		6	0	\$7,740,000

\*The data are from the NOAA NCDC Storm Events Database.

Table C.3 – Hail Records

Location	Event Date	Size (Inches)	Injuries	Deaths	Property Damage
Countywide	6/27/1956	1.75	0	0	\$0
Countywide	12/6/1956	1	0	0	\$0
Countywide	3/20/1962	0	0	0	\$0
Countywide	4/3/1965	1.75	0	0	\$0
Countywide	5/15/1965	1.75	0	0	\$0
Countywide	4/25/1967	1.5	0	0	\$0
Countywide	6/30/1972	0.75	0	0	\$0
Countywide	3/29/1976	1	0	0	\$0
Countywide	9/22/1977	1	0	0	\$0
Countywide	5/26/1980	1.75	0	0	\$0
Countywide	5/26/1980	1.75	0	0	\$0
Countywide	8/3/1980	1	0	0	\$0
Countywide	4/16/1982	1.75	0	0	\$0
Countywide	4/16/1982	1.75	0	0	\$0
Countywide	4/16/1982	1.75	0	0	\$0
Countywide	4/16/1982	1.75	0	0	\$0
Countywide	4/1/1983	1.75	0	0	\$0
Countywide	5/22/1983	1.75	0	0	\$0
Countywide	5/7/1984	1.75	0	0	\$0
Countywide	7/6/1984	1.75	0	0	\$0
Countywide	4/30/1985	0.75	0	0	\$0
Countywide	5/28/1985	1	0	0	\$0
Countywide	6/4/1985	2.75	0	0	\$0
Countywide	11/13/1985	0.75	0	0	\$0
Countywide	11/19/1985	0.75	0	0	\$0
Countywide	11/19/1985	0.75	0	0	\$0
Countywide	4/4/1986	0.75	0	0	\$0
Countywide	4/7/1986	0.75	0	0	\$0
Countywide	4/7/1986	1.75	0	0	\$0

## Appendix C – Hazard Records

Countywide	4/7/1986	0.75	0	0	\$0
Countywide	4/7/1986	1	0	0	\$0
Countywide	4/7/1986	0.75	0	0	\$0
Countywide	4/7/1986	0.75	0	0	\$0
Countywide	8/2/1986	1.75	0	0	\$0
Countywide	3/11/1988	0.75	0	0	\$0
Countywide	3/24/1988	1.75	0	0	\$0
Countywide	4/1/1988	0.75	0	0	\$0
Countywide	4/5/1988	0.75	0	0	\$0
Countywide	6/2/1988	0.75	0	0	\$0
Countywide	6/8/1988	0.75	0	0	\$0
Countywide	5/8/1989	1	0	0	\$0
Countywide	5/21/1989	1.75	0	0	\$0
Countywide	5/21/1989	0.75	0	0	\$0
Countywide	5/21/1989	0.75	0	0	\$0
Countywide	5/21/1989	1.75	0	0	\$0
Countywide	5/21/1989	1.75	0	0	\$0
Countywide	4/16/1990	1.75	0	0	\$0
Countywide	4/16/1990	1	0	0	\$0
Countywide	4/16/1990	0.75	0	0	\$0
Countywide	5/21/1990	0.75	0	0	\$0
Countywide	5/21/1990	0.75	0	0	\$0
Countywide	5/21/1990	1.75	0	0	\$0
Countywide	5/26/1990	0.75	0	0	\$0
Countywide	3/21/1991	0.75	0	0	\$0
Countywide	3/21/1991	0.75	0	0	\$0
Countywide	3/21/1991	0.75	0	0	\$0
Countywide	4/14/1991	0.75	0	0	\$0
Countywide	5/16/1991	1	0	0	\$0
Countywide	4/16/1992	0.75	0	0	\$0
Countywide	4/16/1992	0.75	0	0	\$0
Countywide	10/31/1992	1.75	0	0	\$0
Countywide	10/31/1992	0.75	0	0	\$0
Siloam Springs	4/24/1993	1.75	0	0	\$0
Gentry	4/24/1993	1.75	0	0	\$0
Bentonville	4/24/1993	1.75	0	0	\$0
Highfill	4/24/1993	1	0	0	\$0
Dumas	5/18/1993	0.75	0	0	\$0
Gravette	4/10/1994	0.75	0	0	\$0
Sulphur Springs	4/10/1994	0.75	0	0	\$0
Bella Vista	4/10/1994	0.75	0	0	\$0
Siloam Springs	4/10/1994	0.75	0	0	\$0
Cherokee City	4/10/1994	1.75	0	0	\$0
Maysville	4/10/1994	0.75	0	0	\$0
Gravette	4/10/1994	1	0	0	\$0
Cherokee City	4/10/1994	1	0	0	\$0
Gentry	4/10/1994	0.75	0	0	\$0
Bella Vista	4/10/1994	0.75	0	0	\$0
Bella Vista	4/10/1994	0.75	0	0	\$0
Bella Vista	4/10/1994	0.75	0	0	\$0
Pea Ridge	4/10/1994	1	0	0	\$0
Gravette	4/11/1994	0.75	0	0	\$0
Rogers	4/15/1994	0.88	0	0	\$0
Siloam Springs	5/25/1994	0.75	0	0	\$0
Siloam Springs	5/25/1994	0.75	0	0	\$0
Decatur	6/7/1994	0.75	0	0	\$0
Siloam Springs	6/9/1994	0.75	0	0	\$0
Rogers	6/30/1994	0.88	0	0	\$0
Little Flock	6/30/1994	1.75	0	0	\$0
Countywide	7/16/1994	0.75	0	0	\$0
Siloam Springs	7/23/1994	0.75	0	0	\$0
Siloam Springs	7/23/1994	0.88	0	0	\$0
Countywide	7/30/1994	0.88	0	0	\$0
Bella Vista	10/20/1994	0.88	0	0	\$0
Siloam Springs	1/12/1995	0.75	0	0	\$0
Siloam Springs	1/12/1995	0.75	0	0	\$0
Siloam Springs	1/12/1995	0.75	0	0	\$0

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Gentry	4/19/1995	0.75	0	0	\$50,000
Gentry	4/19/1995	0.75	0	0	\$0
Maysville	5/13/1995	0.88	0	0	\$0
Nr Gravette	5/13/1995	2.75	0	0	\$0
Nr Bentonville	5/13/1995	1	0	0	\$0
Nr Bentonville	5/13/1995	1.25	0	0	\$0
Nr Bentonville	5/13/1995	2	0	0	\$0
Monte Ne	5/13/1995	4.5	0	0	\$0
Lowell	5/13/1995	0.75	0	0	\$0
Siloam Springs	6/5/1995	0.88	0	0	\$0
Siloam Springs	6/5/1995	1	0	0	\$0
Cave Springs	6/9/1995	0.75	0	0	\$0
Siloam Springs	7/4/1995	0	0	0	\$0
Decatur	8/19/1995	0.75	0	0	\$0
Rogers	10/26/1995	1.75	0	0	\$0
Pea Ridge	10/26/1995	1.75	0	0	\$0
Rogers	10/26/1995	1	0	0	\$0
Rogers	10/26/1995	1	0	0	\$0
Bentonville	10/26/1995	4	0	0	\$0
Siloam Springs	11/10/1995	0.88	0	0	\$0
Siloam Springs	11/10/1995	1.25	0	0	\$0
Siloam Springs	11/10/1995	1.75	0	0	\$0
Gateway	11/10/1995	0.75	0	0	\$0
Siloam Springs	12/10/1995	0.88	0	0	\$0
Siloam Springs	12/10/1995	1.25	0	0	\$0
Siloam Springs	12/10/1995	1.75	0	0	\$0
Gateway	12/10/1995	0.75	0	0	\$0
Pea Ridge	3/14/1996	0.75	0	0	\$0
Sulphur Springs	3/14/1996	1.75	0	0	\$0
Pea Ridge	3/14/1996	0.75	0	0	\$0
Bentonville	3/14/1996	1.75	0	0	\$0
Bentonville	3/14/1996	1	0	0	\$0
Rogers	3/14/1996	1.75	0	0	\$0
Rogers	3/14/1996	1	0	0	\$0
Rogers	3/14/1996	1	0	0	\$0
Pea Ridge	3/14/1996	0.75	0	0	\$0
Bentonville	3/14/1996	0.88	0	0	\$0
Gentry	5/14/1996	0.88	0	0	\$0
Gentry	5/14/1996	1	0	0	\$0
Gravette	6/2/1996	0.75	0	0	\$0
Maysville	3/27/1997	0.88	0	0	\$0
Rogers	5/2/1997	0.75	0	0	\$0
Monte Ne	7/14/1997	1	0	0	\$0
Cave Spgs	7/14/1997	0.75	0	0	\$0
Bella Vista	2/25/1998	0.75	0	0	\$0
Cave Spgs	5/25/1998	0.75	0	0	\$0
Wareagle	8/18/1998	1	0	0	\$1,000
Maysville	3/5/1999	0.75	0	0	\$0
Lowell	4/3/1999	0.75	0	0	\$0
Bella Vista	4/22/1999	0.88	0	0	\$0
Siloam Spgs	5/22/1999	0.75	0	0	\$0
Gentry	9/7/1999	1	0	0	\$0
Bentonville	1/3/2000	0.88	0	0	\$0
Siloam Spgs	2/26/2000	1.75	0	0	\$0
Maysville	2/21/2001	1.75	0	0	\$0
Gravette	2/21/2001	0.75	0	0	\$0
Maysville	2/21/2001	1	0	0	\$0
Sulphur Spgs	2/21/2001	0.75	0	0	\$0
Centerton	5/11/2001	0.75	0	0	\$0
Bentonville	5/20/2001	1	0	0	\$0
Garfield	8/10/2001	1.75	0	0	\$0
Wareagle	10/10/2001	0.88	0	0	\$0
Bentonville	4/30/2002	0.88	0	0	\$0
Rogers	4/30/2002	0.75	0	0	\$0
Siloam Spgs	5/1/2002	0.75	0	0	\$0
Siloam Spgs	5/1/2002	0.88	0	0	\$0
Rogers	5/1/2003	1	0	0	\$0
Gentry	5/5/2003	0.88	0	0	\$0

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Gentry	5/13/2003	1.75	0	0	\$0
Wareagle	5/13/2003	0.75	0	0	\$0
Siloam Spgs	7/13/2003	0.75	0	0	\$0
Siloam Spgs	7/13/2003	1.5	0	0	\$0
Bella Vista	7/13/2003	0.75	0	0	\$0
Rogers	7/13/2003	0.88	0	0	\$0
Hiwassee	7/13/2003	0.75	0	0	\$0
Decatur	3/17/2004	1.75	0	0	\$0
Highfill	3/17/2004	1.75	0	0	\$0
Gentry	4/30/2004	0.75	0	0	\$0
Cave Spgs	4/30/2004	1.75	0	0	\$0
Bentonville	7/2/2004	0.88	0	0	\$0
Rogers	11/26/2004	0.88	0	0	\$0
Bella Vista	1/4/2005	1	0	0	\$0
Bentonville	4/5/2005	0.75	0	0	\$0
Pea Ridge	5/23/2005	0.75	0	0	\$0
Gravette	6/13/2005	0.75	0	0	\$0
Bentonville	1/12/2006	0.75	0	0	\$0
Siloam Spgs	3/11/2006	1	0	0	\$0
Gateway	3/11/2006	1.75	0	0	\$25,000
Rogers	3/12/2006	0.75	0	0	\$0
Decatur	3/12/2006	4	0	0	\$2,500,000
Gateway	3/12/2006	1.75	0	0	\$25,000
Bella Vista	4/5/2006	0.88	0	0	\$0
Garfield	4/24/2006	0.88	0	0	\$0
Lowell	9/22/2006	0.75	0	0	\$0
Centerton	9/23/2006	1	0	0	\$0
Bella Vista	3/1/2007	0.88	0	0	\$0
Bentonville	6/1/2007	1	0	0	\$0
Sulphur Spgs	1/7/2008	0.75	0	0	\$0
Hiwassee	1/7/2008	0.75	0	0	\$0
Bella Vista	1/7/2008	1.75	0	0	\$25,000
Siloam Spgs	1/7/2008	1	0	0	\$0
Sulphur Spgs	1/7/2008	0.75	0	0	\$0
Cherokee City	1/7/2008	1	0	0	\$0
Bella Vista	1/7/2008	0.75	0	0	\$0
Bentonville	3/14/2008	1	0	0	\$0
Hiwassee	3/27/2008	1.75	0	0	\$0
Pea Ridge	3/27/2008	0.75	0	0	\$0
Gentry	3/31/2008	0.88	0	0	\$0
Pea Ridge	4/22/2008	0.75	0	0	\$0
Garfield	4/22/2008	1	0	0	\$0
Gravette	5/10/2008	1.75	0	0	\$0
Decatur	5/10/2008	1.75	0	0	\$20,000
Vaughn	5/10/2008	1.75	0	0	\$0
Rogers	5/10/2008	1.75	0	0	\$75,000
Bentonville	5/10/2008	1.75	0	0	\$75,000
Lookout	5/10/2008	0.88	0	0	\$0
Rogers	5/25/2008	0.88	0	0	\$0
Rogers	5/25/2008	0.88	0	0	\$0
Rogers	5/26/2008	0.88	0	0	\$0
Rogers	5/26/2008	0.75	0	0	\$0
Gravette	5/31/2008	0.75	0	0	\$0
Siloam Spgs	6/1/2008	0.75	0	0	\$0
Highfill	6/1/2008	1	0	0	\$0
Bentonville	10/31/2008	0.88	0	0	\$0
Rogers	10/31/2008	0.75	0	0	\$0
Centerton	11/6/2008	1	0	0	\$0
Gentry	2/17/2009	0.88	0	0	\$0
Sulphur Spgs	2/26/2009	0.88	0	0	\$0
Gentry	2/26/2009	1	0	0	\$0
Siloam Spgs	4/18/2009	0.75	0	0	\$0
Gentry	5/1/2009	0.88	0	0	\$0
Gentry	5/1/2009	0.75	0	0	\$0
Cave Spgs	5/1/2009	1	0	0	\$0
Lowell	5/1/2009	1.75	0	0	\$25,000
Monte Ne	5/1/2009	3	0	0	\$50,000
Siloam Spgs	5/13/2009	1	0	0	\$0

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Rogers	5/15/2009	0.75	0	0	\$0
Bentonville	8/20/2009	0.88	0	0	\$0
Siloam Spgs	9/21/2009	0.75	0	0	\$0
Avoca	5/25/2010	1	0	0	\$0
Lowell	4/19/2011	1	0	0	\$0
Lowell	4/19/2011	1	0	0	\$0
Lowell	4/19/2011	1	0	0	\$0
Siloam Spgs	4/21/2011	1	0	0	\$0
Rogers	4/21/2011	1	0	0	\$0
Centerton	4/22/2011	2	0	0	\$25,000
Bentonville	4/22/2011	2	0	0	\$25,000
Maysville	4/23/2011	1	0	0	\$0
Lookout	4/23/2011	0.88	0	0	\$0
Lowell	4/23/2011	0.75	0	0	\$0
Gentry	4/26/2011	1.75	0	0	\$0
Lowell	4/26/2011	1.25	0	0	\$0
Lowell	4/26/2011	0.75	0	0	\$0
Rogers	4/26/2011	1	0	0	\$0
Decatur	4/26/2011	1	0	0	\$0
Rogers	5/7/2011	1.25	0	0	\$0
Rogers	5/7/2011	1.25	0	0	\$5,000
Bella Vista	5/22/2011	1	0	0	\$0
Siloam Spgs	5/22/2011	1.75	0	0	\$25,000
Centerton	5/22/2011	1	0	0	\$0
Gentry	5/22/2011	1.75	0	0	\$25,000
Bella Vista	5/22/2011	1.75	0	0	\$0
Pea Ridge	5/22/2011	2	0	0	\$25,000
Lowell	5/22/2011	2	0	0	\$25,000
Rogers	5/22/2011	1.75	0	0	\$25,000
Bella Vista	5/22/2011	1	0	0	\$0
Rogers	6/21/2011	0.75	0	0	\$0
Siloam Spgs	6/24/2011	1.25	0	0	\$0
Rogers	8/8/2011	1	0	0	\$0
Gallitin	8/12/2012	1.25	0	0	\$0
Cherokee City	8/16/2012	1	0	0	\$0
Hiwassee	9/26/2012	1.25	0	0	\$0
Hiwassee	9/26/2012	1.75	0	0	\$10,000
Bentonville	9/26/2012	1	0	0	\$0
Maysville	3/30/2013	0.75	0	0	\$0
Bella Vista	3/30/2013	0.88	0	0	\$0
Pea Ridge	4/3/2014	1	0	0	\$0
Pea Ridge	4/3/2014	1.75	0	0	\$15,000
Gateway	9/17/2014	0.75	0	0	\$0
Siloam Spgs	10/2/2014	0.88	0	0	\$0
Bentonville	10/2/2014	1	0	0	\$0
Bentonville	10/2/2014	1.25	0	0	\$0
Lowell	10/8/2014	1	0	0	\$0
Lowell	3/24/2015	1.75	0	0	\$10,000
Lowell	3/24/2015	1.5	0	0	\$5,000
Lowell	3/24/2015	1	0	0	\$0
Lowell	3/24/2015	1.5	0	0	\$0
Lowell	3/24/2015	2	0	0	\$10,000
Lowell	3/24/2015	2	0	0	\$20,000
Lowell	3/25/2015	1.5	0	0	\$0
Lowell	3/25/2015	1.75	0	0	\$20,000
Rogers	3/25/2015	0.88	0	0	\$0
Rogers	3/25/2015	1.75	0	0	\$15,000
Rogers	3/25/2015	2.5	0	0	\$50,000
Lowell	3/25/2015	2	0	0	\$10,000
Monte Ne	3/25/2015	1.75	0	0	\$10,000
Siloam Spgs	3/25/2015	1.25	0	0	\$5,000
Siloam Spgs	3/25/2015	1.75	0	0	\$20,000
Bentonville	4/17/2015	1.25	0	0	\$10,000
Bentonville	4/17/2015	0.88	0	0	\$0
Centerton	4/17/2015	1	0	0	\$0
Monte Ne	7/31/2016	1	0	0	\$0
Rogers	7/31/2016	0.75	0	0	\$0
Bentonville Branch J	9/16/2016	1	0	0	\$0

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Pea Ridge	3/1/2017	0.75	0	0	\$0
Bentonville	3/1/2017	0.75	0	0	\$0
Centerton	3/9/2017	0.75	0	0	\$0
Gravette	3/9/2017	1	0	0	\$0
Decatur	3/9/2017	1.25	0	0	\$0
Decatur	3/9/2017	1	0	0	\$0
Gentry	3/9/2017	1	0	0	\$0
Cave Spgs	4/28/2017	1	0	0	\$0
Cave Spgs	4/29/2017	1.25	0	0	\$0
Rogers Muni Arpt	4/29/2017	1.75	0	0	\$20,000
Garfield	5/31/2017	0.88	0	0	\$0
Garfield	5/31/2017	1.5	0	0	\$5,000
Rogers	7/2/2017	0.75	0	0	\$0
Rogers	7/2/2017	1	0	0	\$0
Gentry	8/18/2017	1	0	0	\$0
Bella Vista	5/16/2018	0.75	0	0	\$0
Gateway	7/19/2018	0.75	0	0	\$0
Pea Ridge	7/20/2018	1.75	0	0	\$20,000
Pea Ridge	7/20/2018	1.25	0	0	\$5,000
Rogers Muni Arpt	7/20/2018	1.25	0	0	\$5,000
Rogers	7/20/2018	1.75	0	0	\$25,000
Lowell	7/20/2018	1	0	0	\$0
Lowell	7/20/2018	1.25	0	0	\$5,000
Lowell	7/20/2018	1	0	0	\$0
Gravette	7/21/2018	1	0	0	\$0
Gravette	7/21/2018	1.25	0	0	\$5,000
Bentonville Branch J	8/9/2018	1	0	0	\$0
Decatur Arpt	8/16/2018	1	0	0	\$0
Siloam Spgs	10/7/2018	1	0	0	\$0
Siloam Spgs	4/30/2019	1	0	0	\$0
Bentonville	4/30/2019	1	0	0	\$0
Bentonville	4/30/2019	1	0	0	\$0
Bella Vista	5/20/2019	1	0	0	\$0
Bella Vista	5/20/2019	1.75	0	0	\$20,000
Bella Vista	5/20/2019	1.25	0	0	\$5,000
Monte Ne	6/2/2019	0.88	0	0	\$0
Siloam Spgs	10/20/2019	1	0	0	\$0
Siloam Spgs	1/10/2020	1	0	0	\$0
Decatur	1/10/2020	1.75	0	0	\$15,000
Siloam Spgs Arpt	1/10/2020	1	0	0	\$0
Centerton	1/10/2020	1	0	0	\$0
Bella Vista	3/11/2020	1	0	0	\$50,000
Bentonville	4/20/2020	1	0	0	\$0
Centerton	5/4/2020	2	0	0	\$150,000
Bentonville	5/4/2020	0.75	0	0	\$0
Bella Vista	5/4/2020	1.25	0	0	\$0
Cave Spgs	5/4/2020	0.75	0	0	\$0
Rogers	5/4/2020	1	0	0	\$0
Monte Ne	5/4/2020	0.88	0	0	\$0
Rogers	5/4/2020	3	0	0	\$250,000
Bentonville	5/4/2020	1	0	0	\$0
Gateway	3/17/2021	1.25	0	0	\$10,000
Gateway	3/17/2021	1.75	0	0	\$20,000
Bella Vista	3/17/2021	0.88	0	0	\$0
Beaty	5/9/2021	1	0	0	\$0
Hiwassee	5/9/2021	1.5	0	0	\$20,000
Lowell	5/27/2021	1.75	0	0	\$50,000
Lowell	5/27/2021	1.25	0	0	\$25,000
Bella Vista	5/27/2021	0.75	0	0	\$0
<b>Totals =</b>			<b>0</b>	<b>0</b>	<b>\$3,966,000</b>

\*The data are from the NOAA NCDC Storm Events Database.

Table C.4 – High Wind Records

Location	Event Date	Wind Speed (MpH)	Injuries	Deaths	Property Damage
Countywide	3/27/1998	-	0	0	\$5,000
Countywide	4/15/1999	-	0	0	\$1,000
Countywide	11/27/2005	52	0	0	\$5,000
Countywide	1/29/2008	61	0	0	\$0
Countywide	9/14/2008	52	0	0	\$400,000
Countywide	4/24/2014	52	0	0	\$2,000
Countywide	11/26/2019	50	0	0	\$0
Totals =			0	0	\$413,000

\*The data are from the NOAA NCDC Storm Events Database.

Table C.5 – Lightning Records

Location	Event Date	Injuries	Deaths	Property Damage
Garfield	5/9/1998	0	1	\$0
Highfill	5/4/1999	0	1	\$0
Siloam Spgs	9/8/2001	0	1	\$0
Siloam Spgs	9/9/2001	0	0	\$10,000
Bentonville	7/22/2003	0	1	\$0
Bentonville	5/13/2004	0	1	\$0
Siloam Spgs	6/4/2005	0	0	\$50,000
Siloam Spgs	8/23/2008	0	0	\$40,000
Bentonville	8/10/2009	0	0	\$5,000
Bentonville	8/10/2009	0	1	\$2,000
Bella Vista	5/14/2010	0	0	\$150,000
Rogers	5/30/2013	0	2	\$0
Bentonville	7/24/2013	0	0	\$200,000
Gentry	6/6/2014	0	2	\$0
Gravette	10/9/2014	0	1	\$0
Beaver Lake	6/13/2015	1	0	\$0
Totals =			1	11
				\$457,000

\*The data are from the NOAA NCDC Storm Events Database.

Table C.6 – Riverine Flood Records

Location	Event Date	Injuries	Deaths	Property Damage
Rogers	7/1/1999	0	0	\$0
Bentonville Muni Arp	4/18/2013	0	0	\$0
Bentonville	4/18/2013	0	0	\$0
Bella Vista	4/18/2013	0	0	\$0
Maysville	4/18/2013	0	0	\$0
Decatur Arpt	12/26/2015	0	0	\$0
Cave Spgs	12/27/2015	0	0	\$0
Bentonville	12/27/2015	0	0	\$0
Siloam Spgs	12/27/2015	0	0	\$0
Bentonville Muni Arp	12/27/2015	0	0	\$0
Bentonville Branch J	11/7/2019	0	0	\$0
Totals =			0	0

\*The data are from the NOAA NCDC Storm Events Database

Table C.7 – Thunderstorm Records

Location	Event Date	Wind Speed (MpH)	Injuries	Deaths	Property Damage
Countywide	12/6/1956	-	0	0	\$0
Countywide	11/15/1958	-	0	0	\$0
Countywide	4/12/1964	-	0	0	\$0
Countywide	9/4/1966	52	0	0	\$0
Countywide	12/8/1966	-	0	0	\$0
Countywide	2/1/1968	-	0	0	\$0
Countywide	4/26/1969	-	0	0	\$0
Countywide	7/24/1969	-	0	0	\$0
Countywide	11/19/1970	-	0	0	\$0
Countywide	11/19/1970	-	0	0	\$0
Countywide	5/22/1971	-	0	0	\$0
Countywide	10/27/1973	-	0	0	\$0
Countywide	11/3/1974	-	0	0	\$0
Countywide	6/5/1975	-	0	0	\$0
Countywide	6/5/1975	-	0	0	\$0
Countywide	6/16/1975	64	0	0	\$0
Countywide	6/16/1975	-	0	0	\$0
Countywide	8/30/1975	51	0	0	\$0
Countywide	7/25/1977	-	0	0	\$0
Countywide	4/5/1978	-	0	0	\$0
Countywide	4/11/1979	-	0	0	\$0
Countywide	5/2/1979	-	0	0	\$0
Countywide	7/21/1981	-	0	0	\$0
Countywide	5/14/1982	-	0	0	\$0
Countywide	6/27/1982	-	0	0	\$0
Countywide	8/24/1982	-	0	0	\$0
Countywide	8/24/1982	-	0	0	\$0
Countywide	8/24/1982	-	0	0	\$0
Countywide	8/24/1982	-	0	0	\$0
Countywide	9/13/1982	-	0	0	\$0
Countywide	9/13/1982	-	0	0	\$0
Countywide	9/13/1982	-	0	0	\$0
Countywide	9/13/1982	-	0	0	\$0
Countywide	5/27/1983	-	0	0	\$0
Countywide	7/26/1983	-	0	0	\$0
Countywide	7/31/1983	-	0	0	\$0
Countywide	5/7/1984	-	0	0	\$0
Countywide	8/8/1984	-	0	0	\$0
Countywide	9/15/1984	-	0	0	\$0
Countywide	10/16/1984	-	0	0	\$0
Countywide	11/1/1984	-	0	0	\$0
Countywide	4/5/1985	-	0	0	\$0
Countywide	5/29/1985	-	0	0	\$0
Countywide	11/19/1985	-	0	0	\$0
Countywide	4/7/1986	-	0	0	\$0
Countywide	4/7/1986	-	0	0	\$0
Countywide	4/8/1986	-	0	0	\$0
Countywide	6/10/1986	-	0	0	\$0
Countywide	6/27/1986	-	0	0	\$0
Countywide	8/2/1986	-	0	0	\$0
Countywide	6/23/1987	-	0	0	\$0
Countywide	8/19/1987	-	0	0	\$0
Countywide	8/19/1987	-	0	0	\$0
Countywide	8/19/1987	-	0	0	\$0
Countywide	3/11/1988	52	0	0	\$0
Countywide	3/24/1988	-	0	0	\$0
Countywide	6/8/1988	50	0	0	\$0
Countywide	6/29/1988	-	0	0	\$0
Countywide	11/15/1988	-	0	0	\$0
Countywide	11/15/1988	55	0	0	\$0
Countywide	3/28/1989	-	0	0	\$0
Countywide	5/22/1989	-	0	0	\$0
Countywide	5/22/1989	57	0	0	\$0

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Countywide	6/2/1989	-	0	0	\$0
Countywide	6/11/1989	-	0	0	\$0
Countywide	4/16/1990	50	0	0	\$0
Countywide	6/9/1990	-	0	0	\$0
Countywide	6/21/1990	-	0	0	\$0
Countywide	11/27/1990	-	0	0	\$0
Countywide	3/21/1991	-	0	0	\$0
Countywide	11/29/1991	-	0	0	\$0
Countywide	11/29/1991	52	0	0	\$0
Countywide	11/29/1991	52	0	0	\$0
Countywide	7/2/1992	-	0	0	\$0
Countywide	7/26/1992	-	0	0	\$0
Countywide	8/3/1992	-	0	0	\$0
Countywide	8/10/1992	-	0	0	\$0
Countywide	8/10/1992	-	0	0	\$0
Countywide	9/9/1992	52	0	0	\$0
Countywide	9/9/1992	52	0	0	\$0
Gentry	4/24/1993	52	0	0	\$0
Decatur	5/30/1993	-	0	0	\$500
Cherokee City	9/13/1993	-	0	0	\$5,000
Rogers	9/14/1993	-	0	0	\$50,000
Pea Ridge	10/8/1993	-	0	0	\$5,000
Benton	11/13/1993	-	0	0	\$5,000
Cherokee City	4/10/1994	-	0	0	\$500
Rogers	6/7/1994	52	0	0	\$50,000
Pea Ridge	7/7/1994	52	0	0	\$0
Countywide	7/16/1994	50	0	0	\$500
Bella Vista	7/30/1994	-	0	0	\$5,000
Siloam Springs	4/17/1995	-	0	0	\$5,000
Rogers	4/17/1995	-	0	0	\$50,000
Gentry	4/19/1995	7	0	0	\$50,000
Gentry	4/19/1995	-	0	0	\$50,000
Pea Ridge	4/19/1995	-	0	0	\$5,000
Cherokee City	5/7/1995	-	0	0	\$0
Sulphur Springs	5/7/1995	-	0	0	\$0
Hiawasse	5/7/1995	-	0	0	\$0
Bentonville	5/27/1995	52	0	0	\$0
Rogers	5/27/1995	52	0	0	\$0
Countywide	7/4/1995	-	0	0	\$0
Siloam Springs	7/4/1995	52	0	0	\$0
Siloam Springs	7/4/1995	61	0	0	\$2,000
Siloam Springs	7/4/1995	-	0	0	\$0
Bentonville	7/4/1995	-	0	0	\$0
Lowell	7/4/1995	-	0	0	\$1,000
Bentonville	7/25/1995	61	0	0	\$0
Sulphur Springs	7/25/1995	-	0	0	\$0
Hiawasse	7/25/1995	61	0	0	\$0
Lowell	7/25/1995	-	0	0	\$0
Siloam Springs	7/25/1995	-	0	0	\$0
Lowell	9/30/1995	-	0	1	\$3,500,000
Siloam Spgs	1/17/1996	52	0	0	\$0
Gravette	1/18/1996	-	0	0	\$1,500
Bentonville	1/18/1996	52	0	0	\$0
Cave Springs	7/4/1996	-	0	0	\$100
Bella Vista	9/23/1996	-	0	0	\$100
Bentonville	9/23/1996	-	0	0	\$5,000
Garfield	9/23/1996	-	0	0	\$3,000
Centerton	9/23/1996	-	0	0	\$100
Rogers	9/23/1996	61	0	0	\$0
Cave Springs	2/20/1997	-	0	0	\$20,000
Rogers	2/20/1997	-	0	0	\$120,000
Rogers	2/20/1997	-	0	0	\$1,000,000
Maysville	3/25/1997	-	0	0	\$100
Pea Ridge	4/20/1997	-	0	0	\$100
Pea Ridge	4/20/1997	-	0	0	\$100
Rogers	7/9/1997	-	0	0	\$100
Siloam Spgs	3/30/1998	-	0	0	\$100
Gentry	3/30/1998	-	0	0	\$2,000

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Bella Vista	3/30/1998		0	0	\$35,000
Cave Spgs	5/29/1998		0	0	\$1,000
Gravette	6/30/1998		0	0	\$15,000
Sulphur Spgs	6/30/1998		0	0	\$500
Pea Ridge	8/2/1998		0	0	\$1,000
Garfield	8/2/1998		0	0	\$300
Wareagle	8/18/1998		0	0	\$500
Siloam Spgs	8/19/1998		0	0	\$5,000
Siloam Spgs	8/19/1998		0	0	\$300
Maysville	10/5/1998		0	0	\$100
Garfield	10/5/1998		0	0	\$100
Gentry	10/5/1998	57	0	0	\$0
Cave Spgs	10/16/1998		0	0	\$100
Gentry	11/9/1998		0	0	\$1,000
Gravette	11/9/1998		0	0	\$1,000
Decatur	11/10/1998		0	0	\$2,000
Hiwassee	11/10/1998		0	0	\$500
Cave Spgs	11/10/1998		0	0	\$500
Bentonville	11/10/1998		0	0	\$200
Avoca	2/11/1999		0	0	\$100
Rogers	4/3/1999		0	0	\$500
Siloam Spgs	5/4/1999	52	0	0	\$0
Centerton	5/4/1999		0	0	\$15,000
Monte Ne	5/4/1999		0	0	\$10,000
Gentry	5/4/1999		0	0	\$100
Gentry	5/4/1999		0	0	\$100
Gentry	5/17/1999		0	0	\$3,000
Siloam Spgs	5/17/1999		0	0	\$15,000
Gravette	5/17/1999		0	0	\$6,000
Highfill	5/17/1999		0	0	\$60,000
Rogers	5/17/1999		0	0	\$5,000
Wareagle	5/17/1999		0	0	\$500
Rogers	5/17/1999		0	0	\$1,000
Lowell	5/23/1999		0	0	\$500
Siloam Spgs	5/31/1999		0	0	\$100
Cave Spgs	7/1/1999		0	0	\$5,000
Siloam Spgs	8/26/1999		0	0	\$100
Centerton	9/4/1999		0	0	\$2,500
Pea Ridge	9/4/1999		0	0	\$11,000
Rogers	4/20/2000		0	0	\$20,000
Bentonville	4/20/2000		0	0	\$3,000
Maysville	5/24/2000	61	0	0	\$500
Siloam Spgs	5/24/2000		0	0	\$500
Gentry	5/24/2000		0	0	\$500
Siloam Spgs	5/24/2000		0	0	\$500
Rogers	5/24/2000	52	0	0	\$0
Siloam Spgs	7/20/2000		0	0	\$1,000
Garfield	7/20/2000		0	0	\$100
Gentry	7/20/2000		0	0	\$1,000
Gateway	7/20/2000		0	0	\$10,000
Lowell	7/20/2000		0	0	\$100
Gentry	2/9/2001		0	0	\$5,000
Gentry	2/24/2001		0	0	\$100
Bentonville	2/24/2001		0	0	\$100
Wareagle	2/24/2001		0	0	\$500
Siloam Spgs	4/11/2001		0	0	\$100
Gravette	4/11/2001		0	0	\$100
Highfill	4/15/2001	86	0	0	\$1,000,000
Wareagle	4/15/2001		0	0	\$100
Siloam Spgs	4/23/2001	52	0	0	\$0
Bentonville	5/6/2001		0	0	\$100
Garfield	5/17/2001		0	0	\$100
Rogers	5/20/2001		0	0	\$500
Siloam Spgs	6/21/2001	61	0	0	\$0
Bentonville	8/9/2001	61	0	0	\$3,000
Highfill	8/11/2001		0	0	\$5,000
Garfield	8/29/2001	61	0	0	\$1,000
Gentry	9/7/2001	52	0	0	\$0

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Siloam Spgs	9/7/2001	61	0	0	\$0
Siloam Spgs	11/23/2001	52	0	0	\$0
Pea Ridge	11/23/2001	61	0	0	\$0
Highfill	11/23/2001	50	0	0	\$0
Bella Vista	3/9/2002	61	0	0	\$0
Pea Ridge	5/8/2002	52	0	0	\$1,000
Bentonville	5/8/2002	52	0	0	\$0
Rogers	5/8/2002	57	0	0	\$0
Cave Spgs	5/9/2002	52	0	0	\$0
Lowell	5/12/2002	57	0	0	\$0
Highfill	6/12/2002	61	0	0	\$5,000
Rogers	6/12/2002	61	0	0	\$25,000
Siloam Spgs	5/6/2003	52	0	0	\$0
Gentry	5/16/2003	61	0	0	\$50,000
Gravette	5/16/2003	61	0	0	\$0
Siloam Spgs	5/16/2003	61	0	0	\$100,000
Bentonville	5/16/2003	70	0	0	\$700,000
Bella Vista	5/16/2003	61	0	0	\$25,000
Pea Ridge	5/16/2003	70	0	0	\$100,000
Garfield	6/10/2003	61	0	0	\$0
Wareagle	7/11/2003	52	0	0	\$0
Garfield	7/22/2003	61	0	0	\$0
Gentry	10/15/2003	61	0	0	\$25,000
Gentry	4/30/2004	61	0	0	\$0
Bella Vista	5/30/2004	52	0	0	\$0
Gentry	7/2/2004	61	0	0	\$0
Siloam Spgs	7/2/2004	52	0	0	\$0
Sulphur Spgs	7/4/2004	61	0	0	\$5,000
Lowell	7/4/2004	61	0	0	\$0
Centerton	1/12/2005	70	0	1	\$250,000
Bella Vista	5/23/2005	61	0	0	\$5,000
Bentonville	5/23/2005	61	0	0	\$5,000
Rogers	5/23/2005	61	0	0	\$5,000
Gravette	5/23/2005	61	0	0	\$0
Siloam Spgs	6/4/2005	52	0	0	\$10,000
Bentonville	6/4/2005	61	0	0	\$10,000
Rogers	6/4/2005	52	0	0	\$0
Centerton	7/26/2005	70	0	0	\$200,000
Bentonville Muni Arp	3/12/2006	70	0	0	\$750,000
Siloam Spgs	4/2/2006	52	0	0	\$1,000
Bentonville	4/2/2006	61	0	0	\$0
Maysville	4/24/2006	61	0	0	\$0
Bentonville	5/9/2006	54	0	0	\$1,000
Rogers	5/9/2006	61	0	0	\$1,000
Gentry	5/9/2006	61	0	0	\$0
Bentonville	8/4/2006	61	0	2	\$50,000
Siloam Spgs	8/21/2006	61	0	0	\$0
Gentry	9/17/2006	61	0	0	\$50,000
Lowell	9/22/2006	61	0	0	\$0
Rogers	9/22/2006	52	0	0	\$0
Rogers	6/1/2007	52	0	0	\$1,000
Bella Vista	9/6/2007	61	0	0	\$0
Gentry	10/17/2007	52	0	0	\$0
Decatur	10/17/2007	61	0	0	\$0
Beaver Lake	10/17/2007	61	0	0	\$0
Beaver Lake	10/17/2007	61	0	0	\$0
Rogers	10/17/2007	61	0	0	\$0
Gravette	1/7/2008	70	0	0	\$2,000
Sulphur Spgs	1/8/2008	52	0	0	\$0
Sulphur Spgs	1/8/2008	52	0	0	\$0
Bella Vista	1/8/2008	61	0	0	\$0
Pea Ridge	1/8/2008	70	0	4	\$100,000
Garfield	1/8/2008	70	0	0	\$25,000
Gentry	2/5/2008	61	0	0	\$0
Wareagle	2/5/2008	52	0	0	\$0
Siloam Spgs	5/2/2008	61	1	1	\$200,000
Highfill	5/2/2008	56	0	0	\$0
Pea Ridge	5/2/2008	61	0	0	\$0

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Garfield	5/2/2008	61	0	0	\$0
Gravette	5/7/2008	52	0	0	\$0
Lowell	5/10/2008	61	0	0	\$1,000
Lookout	5/10/2008	52	0	0	\$0
Siloam Spgs	6/15/2008	61	0	0	\$0
Garfield	7/5/2008	61	0	0	\$100,000
Cave Spgs	7/12/2008	61	0	0	\$1,000
Siloam Spgs	8/30/2008	52	0	0	\$1,000
Pea Ridge	11/6/2008	61	0	0	\$0
Siloam Spgs	2/10/2009	52	0	0	\$0
Rogers	5/1/2009	52	0	0	\$0
Bentonville	5/13/2009	70	0	0	\$100,000
Bentonville	5/13/2009	52	0	0	\$0
Siloam Spgs	5/15/2009	52	0	0	\$0
Bella Vista	6/9/2009	61	0	0	\$0
Gentry	6/9/2009	61	0	0	\$0
Gentry	6/9/2009	70	0	0	\$25,000
Rogers	6/12/2009	74	0	0	\$0
Bentonville	6/12/2009	61	0	0	\$0
Rogers	6/12/2009	52	0	0	\$0
Bella Vista	6/12/2009	61	0	0	\$1,000
Gravette	5/13/2010	61	0	0	\$50,000
Bentonville	5/13/2010	56	0	0	\$0
Pea Ridge	5/13/2010	52	0	0	\$0
Best	5/13/2010	56	0	0	\$0
Garfield	5/13/2010	52	0	0	\$0
Decatur	8/1/2010	56	0	0	\$5,000
Decatur	8/1/2010	56	0	0	\$20,000
Lookout	9/2/2010	56	0	0	\$0
Hiwassee	10/25/2010	52	0	0	\$0
Pea Ridge	10/25/2010	52	0	0	\$0
Decatur	5/11/2011	52	0	0	\$0
Bentonville	5/11/2011	52	0	0	\$3,000
Rogers	5/11/2011	61	0	0	\$2,000
Rogers Muni Arpt	5/11/2011	69	0	0	\$0
Rogers Muni Arpt	5/11/2011	52	0	0	\$0
Rogers	5/20/2011	57	0	2	\$10,000
Cave Spgs	5/22/2011	61	0	0	\$0
Gravette	6/14/2011	61	0	0	\$0
Sulphur Spgs	6/14/2011	61	0	0	\$0
Bella Vista	6/14/2011	52	0	0	\$0
Bentonville	6/14/2011	61	0	0	\$5,000
Bentonville	6/14/2011	61	0	0	\$10,000
Siloam Spgs	6/24/2011	61	0	0	\$0
Bella Vista	7/24/2011	61	0	0	\$5,000
Osage Mills	7/30/2011	71	0	0	\$0
Lowell	8/8/2011	61	0	0	\$0
Bella Vista	8/10/2011	52	0	0	\$0
Bella Vista	2/29/2012	65	0	0	\$0
Pea Ridge	2/29/2012	65	0	0	\$0
Rogers	5/29/2012	52	0	0	\$0
Beaver Lake	7/7/2012	52	0	0	\$0
Gentry	7/8/2012	65	0	0	\$5,000
Vaughn	7/8/2012	75	0	0	\$20,000
Lookout	7/26/2012	70	0	0	\$0
Sulphur Spgs	8/4/2012	70	0	0	\$0
Bella Vista	8/4/2012	70	0	0	\$15,000
Bella Vista	8/4/2012	70	0	0	\$0
Pea Ridge	8/4/2012	61	0	0	\$10,000
Bentonville	8/4/2012	56	0	0	\$0
Sulphur Spgs	8/4/2012	70	0	0	\$5,000
Pea Ridge	8/4/2012	56	0	0	\$10,000
Pea Ridge	8/4/2012	70	0	0	\$0
Decatur	8/16/2012	56	0	0	\$0
Pea Ridge	9/6/2012	61	0	0	\$5,000
Garfield	9/6/2012	52	0	0	\$5,000
Lowell	9/7/2012	61	0	0	\$40,000
Rogers	9/7/2012	52	0	0	\$1,000

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Hiwasse	9/26/2012	56	0	0	\$0
Healing Spgs	10/13/2012	74	0	0	\$0
Cave Spgs	10/13/2012	61	0	0	\$25,000
Rogers Muni Arpt	10/13/2012	53	0	0	\$0
Bentonville	5/20/2013	56	0	0	\$0
Bentonville Muni Arp	5/20/2013	53	0	0	\$0
Lowell	5/20/2013	56	0	0	\$10,000
Pea Ridge	5/20/2013	70	0	0	\$15,000
Garfield	5/20/2013	70	0	0	\$15,000
Siloam Spgs	5/30/2013	65	0	0	\$0
Rogers Muni Arpt	7/23/2013	51	0	0	\$0
Pea Ridge	7/23/2013	65	0	0	\$0
Avoca	8/7/2013	56	0	0	\$5,000
Gravette	10/12/2013	52	0	0	\$5,000
Bella Vista	4/3/2014	52	0	0	\$0
Osage Mills	4/13/2014	50	0	0	\$0
Highfill	4/13/2014	52	0	0	\$1,000
Gravette	7/23/2014	70	0	0	\$0
Gentry	7/23/2014	70	0	0	\$0
Bentonville	7/23/2014	56	0	0	\$0
Osage Mills	7/23/2014	51	0	0	\$0
Siloam Spgs Arpt	7/23/2014	53	0	0	\$0
Bella Vista	7/23/2014	61	0	0	\$0
Highfill	7/23/2014	52	0	0	\$10,000
Lowell	7/23/2014	70	0	0	\$0
Centerton	7/23/2014	65	0	0	\$0
Pea Ridge	7/23/2014	56	0	1	\$20,000
Rogers	9/17/2014	52	0	0	\$0
Rogers	9/17/2014	56	0	0	\$2,000
Lowell	3/25/2015	70	0	0	\$0
Gravette	5/17/2015	65	0	0	\$20,000
Bentonville	5/29/2015	56	0	0	\$0
Bentonville Muni Arp	6/6/2015	56	0	0	\$0
Siloam Spgs	7/2/2015	65	0	0	\$0
Trident	7/9/2015	70	0	0	\$0
Bentonville Branch J	7/9/2015	70	0	0	\$0
Siloam Spgs	12/12/2015	56	0	0	\$0
Siloam Spgs	12/12/2015	65	0	0	\$3,000
Gentry	12/12/2015	65	0	0	\$0
Gentry	12/12/2015	65	0	0	\$0
Sulphur Spgs	4/26/2016	61	0	0	\$0
Decatur	4/26/2016	61	0	0	\$25,000
Bentonville	4/26/2016	56	0	0	\$0
Sulphur Spgs	4/26/2016	56	0	0	\$5,000
Bestwater	4/26/2016	61	0	0	\$0
Bestwater	7/27/2016	61	0	0	\$0
Rogers Muni Arpt	7/27/2016	61	0	0	\$0
Rogers	7/27/2016	52	0	0	\$0
Bentonville Branch J	7/27/2016	61	0	0	\$0
Rogers	7/31/2016	52	0	0	\$0
Bentonville Branch J	9/16/2016	56	0	0	\$5,000
Gravette	3/6/2017	61	0	0	\$2,000
Pea Ridge	3/6/2017	65	0	0	\$5,000
Pea Ridge	3/6/2017	52	0	0	\$0
Centerton	3/6/2017	61	0	0	\$0
Highfill	3/6/2017	56	0	0	\$0
Highfill	3/7/2017	56	0	0	\$0
Bentonville Branch J	4/4/2017	61	0	0	\$0
Osage Mills	4/25/2017	53	0	0	\$0
Highfill	4/25/2017	52	0	0	\$1,000
Bella Vista	4/26/2017	56	0	0	\$2,000
Bentonville	4/26/2017	61	0	0	\$0
Rogers Muni Arpt	4/26/2017	61	0	0	\$0
Rogers Muni Arpt	4/26/2017	56	0	0	\$2,000
Pea Ridge	4/26/2017	56	0	0	\$0
Bentonville	4/26/2017	61	0	0	\$1,000
Cave Spgs	4/26/2017	52	0	0	\$0
Pea Ridge	4/28/2017	61	0	0	\$0

## Appendix C – Hazard Records

Highfill	4/29/2017	61	0	0	\$1,000
Gravette	5/10/2017	52	0	0	\$0
Siloam Spgs	5/18/2017	52	0	0	\$0
Bentonville Muni Arp	5/18/2017	52	0	0	\$0
Bentonville Muni Arp	5/18/2017	53	0	0	\$0
Rogers	5/18/2017	61	0	0	\$5,000
Bella Vista	5/27/2017	52	0	0	\$0
Pea Ridge	5/27/2017	52	0	0	\$2,000
Siloam Spgs	5/27/2017	65	0	0	\$0
Lowell	6/1/2017	52	0	0	\$2,000
Avoca	7/2/2017	56	0	0	\$1,000
Gateway	7/4/2017	61	0	0	\$25,000
Bentonville	7/8/2017	65	0	0	\$0
Hiwassee	5/3/2018	56	0	0	\$0
Pea Ridge	7/6/2018	52	0	0	\$0
Rogers Muni Arpt	7/6/2018	56	0	0	\$1,000
Bentonville	7/6/2018	56	0	0	\$0
Gravette	7/17/2018	52	0	0	\$0
Decatur	7/17/2018	61	0	0	\$0
Vaughn	7/17/2018	61	0	0	\$0
Pea Ridge	7/20/2018	65	0	0	\$0
Rogers	7/20/2018	61	0	0	\$0
Siloam Spgs	10/7/2018	52	0	0	\$0
Siloam Spgs Arpt	11/30/2018	50	0	0	\$0
Pea Ridge	11/30/2018	56	0	0	\$0
Decatur	5/18/2019	61	0	0	\$50,000
Bella Vista	5/18/2019	61	0	0	\$75,000
Gentry	5/29/2019	61	0	0	\$0
Siloam Spgs	5/29/2019	61	0	0	\$0
Siloam Spgs Arpt	5/29/2019	58	0	0	\$0
Highfill	5/29/2019	61	0	0	\$2,000
Lowell	6/2/2019	56	0	0	\$2,000
Siloam Spgs	6/23/2019	70	0	0	\$0
Bentonville Branch J	6/23/2019	56	0	0	\$0
Lowell	6/23/2019	65	0	0	\$0
Monte Ne	7/5/2019	52	0	0	\$0
Gravette	7/10/2019	61	0	0	\$25,000
Gravette	8/26/2019	65	0	0	\$0
Gravette	8/26/2019	61	0	0	\$50,000
Bella Vista	8/26/2019	61	0	0	\$0
Centerton	8/26/2019	61	0	0	\$25,000
Bella Vista	8/26/2019	56	0	0	\$0
Osage Mills	8/26/2019	57	0	0	\$0
Rogers	8/26/2019	56	0	0	\$10,000
Bentonville	8/26/2019	65	0	0	\$0
Siloam Spgs	10/20/2019	65	0	0	\$0
Gallitin	10/20/2019	75	0	0	\$0
Monte Ne	10/20/2019	70	0	0	\$0
Monte Ne	10/20/2019	70	0	0	\$0
Monte Ne	10/20/2019	75	1	1	\$75,000
Pea Ridge	4/24/2020	61	0	0	\$0
Osage Mills	7/9/2020	51	0	0	\$0
Osage Mills	7/11/2020	55	0	0	\$0
Decatur	11/14/2020	61	0	0	\$40,000
Lowell	11/14/2020	61	0	0	\$0
Lowell	4/28/2021	52	0	0	\$0
Rogers	4/28/2021	61	0	0	\$25,000
Totals =			2	13	\$9,941,300

\*The data are from the NOAA NCDC Storm Events Database

Table C.8 – Tornado Records

Location	Event Date	Fujita Class	Injuries	Deaths	Property Damage
Countywide	3/24/1954	F3	0	4	\$2,500
Countywide	3/25/1954	F1	0	0	\$25,000
Countywide	5/16/1960	F1	0	0	\$25,000
Countywide	3/12/1961	F1	0	0	\$25,000
Countywide	6/12/1964	F1	0	0	\$25,000
Countywide	6/12/1964	F1	0	0	\$0
Countywide	4/8/1965	F1	0	0	\$25,000
Countywide	6/1/1968	F2	0	0	\$2,500
Countywide	4/30/1970	F1	0	0	\$25,000
Countywide	6/11/1970	F3	0	0	\$2,500,000
Countywide	10/8/1970	F3	0	4	\$250,000
Countywide	11/19/1970	F2	0	0	\$25,000
Countywide	5/1/1973	F2	0	4	\$250,000
Countywide	5/26/1973	F2	0	0	\$250,000
Countywide	5/26/1973	F0	0	0	\$250
Countywide	5/9/1974	F1	0	0	\$25,000
Countywide	4/18/1975	F1	0	0	\$25,000
Countywide	6/12/1977	F0	0	0	\$0
Countywide	5/7/1978	F1	0	0	\$2,500
Countywide	5/12/1978	F1	0	0	\$25,000
Countywide	3/14/1990	F0	0	0	\$0
Countywide	10/28/1991	F1	0	0	\$25,000
Siloam Springs	4/24/1993	F0	0	0	\$0
Sulphur Springs	10/8/1993	F0	0	0	\$5,000
Decatur	10/8/1993	F1	0	0	\$50,000
Centerton	10/8/1993	F0	0	0	\$5,000
Avoca	10/8/1993	F2	0	0	\$500,000
Gentry	5/13/1995	F0	0	0	\$0
Rogers	5/13/1995	F0	0	0	\$0
Pea Ridge	4/20/1997	F0	0	0	\$0
Gravette	3/30/1998	F1	0	0	\$100,000
Cherokee City	3/12/2006	F3	0	12	\$5,000,000
Bentonville	3/12/2006	F2	0	0	\$10,000,000
Hiwassee	1/7/2008	EF0	0	0	\$0
Centerton	1/7/2008	EF0	0	0	\$0
Gentry	1/7/2008	EF1	0	0	\$0
Bentonville	5/10/2008	EF1	0	0	\$100,000
Trident	12/31/2010	EF2	0	2	\$200,000
Robinson	12/31/2010	EF2	0	0	\$75,000
Cherokee City	4/22/2011	EF0	0	0	\$0
Highfill	4/22/2011	EF0	0	0	\$0
Bentonville	4/22/2011	EF0	0	0	\$0
Gentry	5/22/2011	EF1	0	0	\$25,000
Bentonville Muni Arp	10/13/2012	EF1	0	2	\$100,000
Siloam Spgs	5/20/2013	EF1	0	0	\$50,000
Larue	5/20/2013	EF1	0	0	\$50,000
Highfill	5/28/2015	EF1	0	0	\$25,000
Bella Vista	5/28/2015	EF0	0	0	\$10,000
Gentry	7/9/2015	EF1	0	0	\$150,000
Decatur Arpt	4/26/2016	EF1	0	0	\$50,000
Centerton	4/26/2016	EF1	0	0	\$30,000
Centerton	5/18/2017	EF0	0	0	\$40,000
Lake Frances	10/20/2019	EF1	0	0	\$150,000
Siloam Spgs	10/20/2019	EF2	0	0	\$6,000,000
Totals =			0	28	\$26,247,750

\*The data are from the NOAA NCDC Storm Events Database

Table C.9 – Winter Storm Records

Location	Event Date	Storm Type	Injuries	Deaths	Property Damage
Countywide	11/24/1996	Ice Storm	0	0	\$0
Countywide	1/2/1999	Winter Storm	0	0	\$0
Countywide	1/8/1999	Ice Storm	0	0	\$0
Countywide	12/25/2000	Ice Storm	0	0	\$0
Countywide	11/28/2001	Ice Storm	0	0	\$100,000
Countywide	12/3/2002	Ice Storm	0	0	\$0
Countywide	2/18/2006	Winter Storm	0	0	\$0
Countywide	11/29/2006	Winter Storm	0	0	\$0
Countywide	1/12/2007	Winter Storm	0	0	\$150,000
Countywide	12/9/2007	Ice Storm	0	0	\$0
Countywide	3/3/2008	Winter Storm	0	0	\$0
Countywide	1/26/2009	Ice Storm	0	0	\$30,000,000
Countywide	12/24/2009	Winter Storm	0	0	\$0
Countywide	1/28/2010	Winter Storm	0	0	\$0
Countywide	2/7/2010	Winter Storm	0	0	\$0
Countywide	3/20/2010	Winter Storm	0	0	\$0
Countywide	1/20/2011	Winter Storm	0	0	\$0
Countywide	2/1/2011	Winter Storm	0	0	\$0
Countywide	2/4/2011	Winter Storm	0	0	\$0
Countywide	2/8/2011	Winter Storm	0	0	\$0
Countywide	2/20/2013	Winter Storm	0	0	\$0
Countywide	12/5/2013	Winter Storm	0	0	\$0
Countywide	12/20/2013	Ice Storm	0	0	\$0
Countywide	1/5/2014	Winter Storm	0	0	\$0
Countywide	2/2/2014	Winter Storm	0	0	\$0
Countywide	3/2/2014	Winter Storm	0	0	\$0
Countywide	2/15/2015	Winter Storm	0	0	\$0
Countywide	2/27/2015	Winter Storm	0	0	\$0
Countywide	3/4/2015	Winter Storm	0	0	\$0
Countywide	12/13/2020	Winter Storm	0	0	\$0
Countywide	2/14/2021	Winter Storm	0	0	\$0
Countywide	2/16/2021	Winter Storm	0	0	\$0
Totals =			0	0	\$30,250,000

\*The data are from the NOAA NCDC Storm Events Database.

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## Appendix D – Mitigation Actions & Projects

### Backup Generators

Backup generators provide critical facilities with electricity in the event a community's electrical transmission grid is either damaged by a disaster or overloaded by excessive use during an event.

Specifically, plan stakeholders have requested backup generators at:

- Cave Springs, Otter Creek Sewer Lift Station

<b>Hazard/s Addressed</b>	Floods, Severe Storms, Winter Storms, Tornadoes, Wildfires, Winter Storms
<b>Effectiveness</b>	Medium
<b>Timeframe</b>	1 – 2 Years
<b>Lead Organization</b>	Benton County (Relevant Building Department), SD Facilities Departments, Municipal Public Works
<b>Funding Sources</b>	BRIC, HMGP, Local Budgets

### Bury Utility Lines, Pipes, and Tanks

Transferring existing utilities lines, pipes, and chemical storage tanks from above ground to below ground will significantly reduce the amount of property damage incurred from wind, ice, and snow related events.

<b>Hazard/s Addressed</b>	Severe Storms, Tornadoes, Winter Storms
<b>Effectiveness</b>	Medium
<b>Timeframe</b>	1 – 5 Years
<b>Lead Organization</b>	Benton County Public Works Department, SD Facilities Departments, Municipal Public Works
<b>Funding Sources</b>	BRIC, HMGP, Local Budgets

### Dam Retrofit

Retrofitting a dam or levee with structural upgrades can make them more resistant to failure, integrity degradation, and increase the water supply of the area. Examples of these upgrades are expanding the depth of the reservoirs, drill wells, and rock facing dam walls to prevent erosion.

<b>Hazard/s Addressed</b>	Dam Failure
<b>Effectiveness</b>	Medium
<b>Timeframe</b>	1 – 4 Years
<b>Lead Organization</b>	Benton County EMA
<b>Funding Sources</b>	BRIC, FMA, HMGP, Local Budgets

### Debris & Natural Fuels Reduction

Reducing the amount of debris and natural fuels in a community will deprive wildfires of the material it requires to spread and prevent high winds from launching deadly and damaging debris around during a severe storm or tornado. This project will be implemented in high risk areas as identified in this plan's WUI maps and well-known to burn areas as determined by the participating jurisdictions and appropriate local agencies.

<b>Hazard/s Addressed</b>	Severe Storms, Tornadoes, Wildfires
<b>Effectiveness</b>	Medium
<b>Timeframe</b>	1 Year
<b>Lead Organization</b>	Benton County EMA, SD Facilities Departments, Municipal Public Works
<b>Funding Sources</b>	BRIC, HMGP, Local Budgets

### Defensible Spaces & Buffer Zones

Creating defensible spaces and buffer zones void of vegetative fuel and covered with gravel or rock helps prevent the spread of wildfire as well as creating an area in which local emergency response services can safely operate. This 2-pronged approach directly mitigates damage to property and protects lives, but also indirectly mitigates the threat to life and property in the area at large. This project will be implemented in high risk areas as identified in this plan's WUI maps and well-known to burn areas as determined by the participating jurisdictions and appropriate local agencies.

<b>Hazard/s Addressed</b>	Wildfires
<b>Effectiveness</b>	Medium
<b>Timeframe</b>	1 Year
<b>Lead Organization</b>	Benton County EMA, SD Facilities Departments, Municipal Public Works
<b>Funding Sources</b>	BRIC, HMGP, Local Budgets

### Elevate Structures

Structures located within identified flood zones can be elevated above base flood elevation or predicted other predicted flood inundation levels.

<b>Hazard/s Addressed</b>	Floods
<b>Effectiveness</b>	High
<b>Timeframe</b>	1 – 3 Years
<b>Lead Organization</b>	Benton County EMA, SD Facilities Departments, Municipal Public Works
<b>Funding Sources</b>	BRIC, FMA, HMGP, Local Budgets

### FEMA Code 361 Safe Rooms

FEMA Code 361 regulations ensure a structure is capable of withstanding wind speeds greater than 200 miles per hour. Additionally, these anti-tornado regulations also ensure the structure is protected against hail, lightning, high and strong winds. This project can be implemented as a retrofit of a current structure or the construction of a new facility. Any critical facility is a potential target for this, but realistically location will be determined by which participating jurisdictions have the want and resources to accomplish this project.

<b>Hazard/s Addressed</b>	Severe Storms, Tornadoes
<b>Effectiveness</b>	High
<b>Timeframe</b>	1 – 3 Years
<b>Lead Organization</b>	Benton County (Relevant Building Department), SD Facilities Departments, Municipal Public Works
<b>Funding Sources</b>	BRIC, HMGP, Local Budgets

### Floodproofing

This technique is often used when relocation or buying out is not an option as is the case with a historic building or it would require astronomical funding that is not available. Floodproofing projects constitute any combination of structural and non-structural additions, changes, or adjustments to structures which reduce or eliminate flood damage. Wet floodproofing reduces property damage counteracting hydrostatic pressure on walls or other support structures by equalizing the pressure between the interior and exterior of a structure.

<b>Hazard/s Addressed</b>	Floods
<b>Effectiveness</b>	Medium
<b>Timeframe</b>	1 – 3 Years
<b>Lead Organization</b>	Benton County (Relevant Building Department), SD Facilities Departments, Municipal Public Works
<b>Funding Sources</b>	BRIC, FMA, HMGP, Local Budgets

### Flood Level Monitoring System

Strategically installing water monitoring stations will assist in measuring the severity of an existing or impending drought, the real-time and historical levels of flooding, as well as dam failures. Accurately measuring water levels will allow the community to take the necessary conservation and regulatory measures to mitigate the droughts, flood, and dam failure effects. This project should be implemented in all major basins and water retention, rivers and streams prone to flooding, natural and man-made, areas throughout the planning area. Additionally, having precise historical data from past floods will enhance the planning area's ability to develop future mitigation planning actions and projects.

<b>Hazard/s Addressed</b>	Droughts, Floods
<b>Effectiveness</b>	Low
<b>Timeframe</b>	1 – 3 Years
<b>Lead Organization</b>	Benton County EMA
<b>Funding Sources</b>	BRIC, FMA, HMGP, Local Budgets

### Insulation & Energy Efficiency

Upgrading a facility's windows, windows frames, roofing, and insulation will allow it to better maintain a desired warm or cool temperature during prolonged extreme heat or winter storms. Additionally, it decreases the energy load necessary to do so, decreasing the burden on the local energy grid.

<b>Hazard/s Addressed</b>	Winter Storms
<b>Effectiveness</b>	Low
<b>Timeframe</b>	1 – 3 Years
<b>Lead Organization</b>	Benton County (Relevant Building Department), SD Facilities Departments, Municipal Public Works
<b>Funding Sources</b>	BRIC, HMGP, Local Budgets

### Irrigation Storage Tanks

Storage tanks can significantly increase the water supply available to rural communities. They are instrumental in providing relief to agricultural sectors in places without sizable water delivery infrastructure during drought events. Further, they help enhance and maintain the ability of local responders to fight wildfires during drought periods.

<b>Hazard/s Addressed</b>	Droughts
<b>Effectiveness</b>	High
<b>Timeframe</b>	1 – 2 Years
<b>Lead Organization</b>	Benton County (Relevant Building Department), Municipal Public Works
<b>Funding Sources</b>	BRIC, HMGP, Local Budgets

### Looped Grid Power Systems

Linear power grids have single points of failure that are vulnerable to a number of hazards. Looped power grids operate in parallel and are thus significantly more resistant to damage allowing the utilities to maintain power after an event.

<b>Hazard/s Addressed</b>	Floods, Severe Storms, Tornadoes, Winter Storms
<b>Effectiveness</b>	Medium
<b>Timeframe</b>	1 – 5 Years
<b>Lead Organization</b>	Benton County (Relevant Building Department), Municipal Public Works
<b>Funding Sources</b>	BRIC, HMGP, Local Budgets

### Low Flow Utilities

To decrease water usage before, during, and after a drought, communities can install low water flow utilities throughout its critical facilities and infrastructure. This will not only decrease water usage, but also decrease water demands. The planning area should implement this project in conjunction with their school districts and critical facilities standard maintenance cycles.

<b>Hazard/s Addressed</b>	Droughts
<b>Effectiveness</b>	Low
<b>Timeframe</b>	1 – 2 Years
<b>Lead Organization</b>	Benton County (Relevant Building Department), Municipal Public Works
<b>Funding Sources</b>	BRIC, HMGP, Local Budgets

### Public Awareness & Education

A campaign will inform and educate the public on hazard risks, allowing them to better protect their property through preparation and their lives through appropriate evacuation and survival procedures.

<b>Hazard/s Addressed</b>	Droughts, Floods, Severe Storms, Tornadoes, Wildfires, Winter Storms
<b>Effectiveness</b>	Low
<b>Timeframe</b>	1 Year
<b>Lead Organization</b>	Benton County EMA
<b>Funding Sources</b>	Local Budgets

### Rainwater Retention Basins

Rainwater retention basins are artificial basins built in strategic locations to protect against floods and droughts by collecting and holding rainwater for an extended period of time. The participating jurisdictions should implement these installations in areas where the water can be used during a drought, for agricultural or urban use, or in areas where poor functioning, outdated, or old stormwater drainage systems are in place. Construction of these basins will occur in conjunction with local and regional irrigation districts to multiply their effectiveness and benefit.

<b>Hazard/s Addressed</b>	Droughts, Floods
<b>Effectiveness</b>	Low
<b>Timeframe</b>	1 – 4 Years
<b>Lead Organization</b>	Benton County (Relevant Building Department), Municipal Public Works
<b>Funding Sources</b>	BRIC, FMA, HMGP, Local Budgets

### Raise Transportation Infrastructure

To combat uncontrollable waters emanating from a dam or levee failure, flash flood, or riverine flood, transportation infrastructure may be raised to allow its continued use in a disaster as well as a partial earthen berm to protect a neighboring lower elevation area. Additionally, the increased elevation of road or railway bridges can prevent the buildup of debris during incidents of high floodwaters and preventing further water buildup.

Specifically, plan stakeholders have requested backup generators at:

- Lowell, Puppy Creek Bridge

<b>Hazard/s Addressed</b>	Floods
<b>Effectiveness</b>	High
<b>Timeframe</b>	1 – 5 Years
<b>Lead Organization</b>	Benton County Public Works Department, Municipal Public Works
<b>Funding Sources</b>	BRIC, FMA, HMGP, Local Budgets

### Relocate or Buyout Vulnerable Structures

Some structures may be able to be relocated from identified floodplains or dam inundation zones. Removing them from identified hazard area will eliminate their risk.

<b>Hazard/s Addressed</b>	Floods
<b>Effectiveness</b>	High
<b>Timeframe</b>	1 – 5 Years
<b>Lead Organization</b>	Benton County EMA, Municipal Public Works
<b>Funding Sources</b>	BRIC, FMA, HMGP, Local Budgets

### SKYWARN Storm Spotter Training

The NWS' SKYWARN Storm Spotter training program educates and delivers basic weather identification, spotting, and reporting information to any concerned citizens. Educating citizens in this program helps increase specific awareness and creates a skillset that helps the NWS create more accurate and timely warnings for tornadoes, severe storms, flash flooding, and other severe weather.

<b>Hazard/s Addressed</b>	Floods, Severe Storms, Tornadoes, Winter Storms
<b>Effectiveness</b>	Low
<b>Timeframe</b>	1 – 2 Years
<b>Lead Organization</b>	Benton County EMA
<b>Funding Sources</b>	Local Budgets

### Snow Fences

Snow fences force drifting snow to accumulate in a desired place minimizing the amount of snowdrift on roads and railways. Controlling snow accumulation decreases the danger to a jurisdiction's citizens traveling during and after a winter storm. This project should be implemented along major transportation routes throughout the planning area.

<b>Hazard/s Addressed</b>	Winter Storms
<b>Effectiveness</b>	Low
<b>Timeframe</b>	1 – 2 Years
<b>Lead Organization</b>	Benton County Public Works Department, SD Facilities Departments, Municipal Public Works
<b>Funding Sources</b>	BRIC, HMGP, Local Budgets

### Storm Water Drainage System Upgrade

Significant flood damage in developed communities can be prevented by upgrading their storm water drainage system by way of increasing culvert sizes, installing debris blocking grates, and weir dams. This mitigation measure will allow flood waters to drain quicker and prevent excess accumulation. This project should be implemented in older drainage systems and any expanding areas throughout the planning area.

Specifically, plan stakeholders have requested backup generators at:

- Bentonville, Town Branch Stream
- Gentry, Main Street, AR HWY 59 & Dawn Hill East Road
- Gravette, Main Street

<b>Hazard/s Addressed</b>	Floods
<b>Effectiveness</b>	Medium
<b>Timeframe</b>	1 – 4 Years
<b>Lead Organization</b>	Benton County EMA, Benton County Roads Department, SD Facilities Departments, Municipal Public Works
<b>Funding Sources</b>	BRIC, FMA, HMGP, Local Budgets

### Storm Water Pump Stations

Storm water pump stations help protect areas by pumping away large volumes of water therefore preventing or decreasing the level of a flood. Pump stations can vary in size and design, allowing them to be tailored to the needs of a specific floodplain, region, or site-specific facility.

<b>Hazard/s Addressed</b>	Floods
<b>Effectiveness</b>	Medium
<b>Timeframe</b>	1 – 4 Years
<b>Lead Organization</b>	Benton County (Relevant Building Department), SD Facilities Departments, Municipal Public Works
<b>Funding Sources</b>	BRIC, FMA, HMGP, Local Budgets

### StormReady Accreditation

The NWS' StormReady helps arm communities with the communication and safety skills needed to save lives and property before, during, and after an event. Communities who have achieved this accreditation are better prepared to save lives from severe weather through advanced planning, education, and awareness.

<b>Hazard/s Addressed</b>	Floods, Severe Storms, Tornadoes, Winter Storms
<b>Effectiveness</b>	Low
<b>Timeframe</b>	1 – 2 Years
<b>Lead Organization</b>	Benton County EMA
<b>Funding Sources</b>	Local Budgets

### Structural Integrity Monitoring Instruments

Dam failure is often preventable, but due to the structural nature of their construction and limited inspection resources, inspections happen too infrequently. Installing a series of seismic monitoring instruments at strategic locations along a dam can detect small, often unnoticed or detected, shifts in the dam's substructure that are the primary cause in premature collapse or failure. These instruments serve not only as early warning devices, but as the means to ensuring a dam's maintenance and repair schedule is kept.

<b>Hazard/s Addressed</b>	Dam Failure
<b>Effectiveness</b>	Medium
<b>Timeframe</b>	1 Year
<b>Lead Organization</b>	Benton County EMA
<b>Funding Sources</b>	BRIC, FMA, HMGP, Local Budgets

### Water Line Insulation

Insulating a facility's water pipes helps prevent them from freezing and bursting due to sudden and prolonged low temperatures during winter storms. The planning area should implement this project in conjunction with their school districts and critical facilities standard maintenance cycles.

<b>Hazard/s Addressed</b>	Winter Storms
<b>Effectiveness</b>	Low
<b>Timeframe</b>	1 Year
<b>Lead Organization</b>	Benton County Public Works Department, SD Facilities Departments, Municipal Public Works
<b>Funding Sources</b>	BRIC, HMGP, Local Budgets

### Wildfire Structural Retrofit

Retrofitting structures with screened vent enclosures, double paned glass, and spark arrestors will reduce the chances of a structure igniting from a wildfire as well as a wildfire's chance of spreading.	
<b>Hazard/s Addressed</b>	Wildfires
<b>Effectiveness</b>	Medium
<b>Timeframe</b>	1 – 2 Years
<b>Lead Organization</b>	Benton County (Relevant Building Department), SD Facilities Departments, Municipal Public Works
<b>Funding Sources</b>	BRIC, Local Budgets, PDM

### Wind Resistance Structural Retrofit

Enhancing a structure's wind resistance according to FEH bronze, silver, or gold specifications will significantly reduce probability of a structure incurring damage and potentially hurting its occupants during a wind related event. Efforts to do so are, but not limited to, strengthening gable anchorages, soffits, roof sheathing, anchoring attached structures such as porches or carports, replacing thing windows, enhancing the integrity of building openings, and developing continuous load paths throughout a structure.	
<b>Hazard/s Addressed</b>	Severe Storms, Tornadoes
<b>Effectiveness</b>	Medium
<b>Timeframe</b>	1 – 5 Years
<b>Lead Organization</b>	Benton County Public Works Department, SD Facilities Departments, Municipal Public Works
<b>Funding Sources</b>	BRIC, HMGP, Local Budgets

## Appendix E – Action & Project Prioritization

Table E.1 – Action & Project Prioritization, Benton County (Unincorporated)

Project/Action	Dam Failures	Droughts	Floods	Severe Storms	Tornadoes	Wildfires	Winter Storms
Backup Generators			High	Medium	Medium	Medium	Medium
Bury Utility Lines, Pipes, and Tanks				Medium	Medium		Medium
Dam Retrofit	Medium						
Debris & Natural Fuels Reduction				Medium	Medium	Medium	
Defensible Spaces & Buffer Zones						Medium	
Elevate Structures			High				
FEMA Code 361 Safe Rooms				High	High		
Floodproofing			High				
Flood Level Monitoring System		Low	High				
Insulation & Energy Efficiency							Low
Irrigation Storage Tanks		High					
Looped Grid Power Systems			High	Medium	Medium		Medium
Low Flow Utilities		Medium					
Public Awareness & Education		Low	Medium	Low	Low	Low	Low
Rainwater Retention Basins		Medium	Medium				
Raise Transportation Infrastructure			High				
Relocate or Buyout Vulnerable Structures			High				
SKYWARN Storm Spotter Training			Medium	Low	Low		Low
Snow Fences							Low
Storm Water Drainage System Upgrade			High				
Storm Water Pump Stations			High				
StormReady Accreditation			Medium	Low	Low		Low
Structural Integrity Monitoring Instruments	Low						
Water Line Insulation							Low
Wildfire Structural Retrofit						Medium	
Wind Resistance Structural Retrofit				Medium	Medium		

= Hazard or Project Not Applicable to this Plan Participant

= Action or Project not Applicable to this Hazard

Table E.2 – Action &amp; Project Prioritization, Avoca

Project/Action	Dam Failures	Droughts	Floods	Severe Storms	Tornadoes	Wildfires	Winter Storms
Backup Generators			Medium	Medium	Medium	Low	Medium
Bury Utility Lines, Pipes, and Tanks				Medium	Medium		Medium
Dam Retrofit	Medium						
Debris & Natural Fuels Reduction				Medium	Medium	Low	
Defensible Spaces & Buffer Zones						Low	
Elevate Structures			Medium				
FEMA Code 361 Safe Rooms				High	High		
Floodproofing			Medium				
Flood Level Monitoring System		Low	Medium				
Insulation & Energy Efficiency							Low
Irrigation Storage Tanks		Medium					
Looped Grid Power Systems			Medium	Medium	Medium		Medium
Low Flow Utilities		Low					
Public Awareness & Education		Low	Low	Low	Low	Low	Low
Rainwater Retention Basins		Low	Low				
Raise Transportation Infrastructure			Medium				
Relocate or Buyout Vulnerable Structures				Medium			
SKYWARN Storm Spotter Training			Low	Low	Low		Low
Snow Fences							Low
Storm Water Drainage System Upgrade			Medium				
Storm Water Pump Stations				Medium			
StormReady Accreditation			Low	Low	Low		Low
Structural Integrity Monitoring Instruments	Medium						
Water Line Insulation							Low
Wildfire Structural Retrofit						Low	
Wind Resistance Structural Retrofit				Medium	Medium		

= Hazard or Project Not Applicable to this Plan Participant

= Action or Project not Applicable to this Hazard

Table E.3 – Action &amp; Project Prioritization, Bella Vista

Project/Action	Dam Failures	Droughts	Floods	Severe Storms	Tornadoes	Wildfires	Winter Storms
Backup Generators			High	Medium	Medium	Medium	Medium
Bury Utility Lines, Pipes, and Tanks				Medium	Medium		Medium
Dam Retrofit	Medium						
Debris & Natural Fuels Reduction				Medium	Medium	Medium	
Defensible Spaces & Buffer Zones						Medium	
Elevate Structures			High				
FEMA Code 361 Safe Rooms				High	High		
Floodproofing			High				
Flood Level Monitoring System		Low	High				
Insulation & Energy Efficiency							Low
Irrigation Storage Tanks		Medium					
Looped Grid Power Systems			High	Medium	Medium		Medium
Low Flow Utilities		Low					
Public Awareness & Education		Low	Medium	Low	Low	Low	Low
Rainwater Retention Basins		Low	Medium				
Raise Transportation Infrastructure			High				
Relocate or Buyout Vulnerable Structures			High				
SKYWARN Storm Spotter Training			Medium	Low	Low		Low
Snow Fences							Low
Storm Water Drainage System Upgrade			High				
Storm Water Pump Stations			High				
StormReady Accreditation			Medium	Low	Low		Low
Structural Integrity Monitoring Instruments	Low						
Water Line Insulation							Low
Wildfire Structural Retrofit						Medium	
Wind Resistance Structural Retrofit				Medium	Medium		

= Hazard or Project Not Applicable to this Plan Participant

= Action or Project not Applicable to this Hazard

Table E.4—Action &amp; Project Prioritization, Bentonville

Project/Action	Dam Failures	Droughts	Floods	Severe Storms	Tornadoes	Wildfires	Winter Storms
Backup Generators			High	Medium	Medium	Low	Medium
Bury Utility Lines, Pipes, and Tanks				Medium	Medium		Medium
Dam Retrofit	■						
Debris & Natural Fuels Reduction				Medium	Medium	Low	
Defensible Spaces & Buffer Zones						Low	
Elevate Structures			High				
FEMA Code 361 Safe Rooms				High	High		
Floodproofing			High				
Flood Level Monitoring System		Low	High				
Insulation & Energy Efficiency							Low
Irrigation Storage Tanks		Medium					
Looped Grid Power Systems			High	Medium	Medium		Medium
Low Flow Utilities		Low					
Public Awareness & Education		Low	Medium	Low	Low	Low	Low
Rainwater Retention Basins		Low	Medium				
Raise Transportation Infrastructure			High				
Relocate or Buyout Vulnerable Structures			High				
SKYWARN Storm Spotter Training			Medium	Low	Low		Low
Snow Fences							Low
Storm Water Drainage System Upgrade			High				
Storm Water Pump Stations			High				
StormReady Accreditation			Medium	Low	Low		Low
Structural Integrity Monitoring Instruments	■						
Water Line Insulation							Low
Wildfire Structural Retrofit						Low	
Wind Resistance Structural Retrofit				Medium	Medium		

= Hazard or Project Not Applicable to this Plan Participant

= Action or Project not Applicable to this Hazard

Table E.5 – Action &amp; Project Prioritization, Cave Springs

Project/Action	Dam Failures	Droughts	Floods	Severe Storms	Tornadoes	Wildfires	Winter Storms
Backup Generators			High	Medium	Medium	Low	Medium
Bury Utility Lines, Pipes, and Tanks				Medium	Medium		Medium
Dam Retrofit	Medium						
Debris & Natural Fuels Reduction				Medium	Medium	Low	
Defensible Spaces & Buffer Zones						Low	
Elevate Structures			High				
FEMA Code 361 Safe Rooms				High	High		
Floodproofing			High				
Flood Level Monitoring System		Low	High				
Insulation & Energy Efficiency							Low
Irrigation Storage Tanks		Medium					
Looped Grid Power Systems			High	Medium	Medium		Medium
Low Flow Utilities		Low					
Public Awareness & Education		Low	Medium	Low	Low	Low	Low
Rainwater Retention Basins		Low	Medium				
Raise Transportation Infrastructure			High				
Relocate or Buyout Vulnerable Structures			High				
SKYWARN Storm Spotter Training			Medium	Low	Low		Low
Snow Fences							Low
Storm Water Drainage System Upgrade			High				
Storm Water Pump Stations			High				
StormReady Accreditation			Medium	Low	Low		Low
Structural Integrity Monitoring Instruments	Low						
Water Line Insulation							Low
Wildfire Structural Retrofit						Low	
Wind Resistance Structural Retrofit				Medium	Medium		

= Hazard or Project Not Applicable to this Plan Participant

= Action or Project not Applicable to this Hazard

Table E.6 – Action &amp; Project Prioritization, Centerton

Project/Action	Dam Failures	Droughts	Floods	Severe Storms	Tornadoes	Wildfires	Winter Storms
Backup Generators			High	Medium	Medium	Low	Medium
Bury Utility Lines, Pipes, and Tanks				Medium	Medium		Medium
Dam Retrofit	■						
Debris & Natural Fuels Reduction				Medium	Medium	Low	
Defensible Spaces & Buffer Zones						Low	
Elevate Structures			High				
FEMA Code 361 Safe Rooms				High	High		
Floodproofing			High				
Flood Level Monitoring System		Low	High				
Insulation & Energy Efficiency							Low
Irrigation Storage Tanks		Medium					
Looped Grid Power Systems			High	Medium	Medium		Medium
Low Flow Utilities		Low					
Public Awareness & Education		Low	Medium	Low	Low	Low	Low
Rainwater Retention Basins		Low	Medium				
Raise Transportation Infrastructure			High				
Relocate or Buyout Vulnerable Structures			High				
SKYWARN Storm Spotter Training			Medium	Low	Low		Low
Snow Fences							Low
Storm Water Drainage System Upgrade			High				
Storm Water Pump Stations			High				
StormReady Accreditation			Medium	Low	Low		Low
Structural Integrity Monitoring Instruments	■						
Water Line Insulation							Low
Wildfire Structural Retrofit						Low	
Wind Resistance Structural Retrofit				Medium	Medium		

= Hazard or Project Not Applicable to this Plan Participant

= Action or Project not Applicable to this Hazard

Table E.7 – Action &amp; Project Prioritization, Decatur

Project/Action	Dam Failures	Droughts	Floods	Severe Storms	Tornadoes	Wildfires	Winter Storms
Backup Generators			High	Medium	Medium	Low	Medium
Bury Utility Lines, Pipes, and Tanks				Medium	Medium		Medium
Dam Retrofit	Gray						
Debris & Natural Fuels Reduction				Medium	Medium	Low	
Defensible Spaces & Buffer Zones						Low	
Elevate Structures			High				
FEMA Code 361 Safe Rooms				High	High		
Floodproofing			High				
Flood Level Monitoring System		Low	High				
Insulation & Energy Efficiency							Low
Irrigation Storage Tanks		Medium					
Looped Grid Power Systems			High	Medium	Medium		Medium
Low Flow Utilities		Low					
Public Awareness & Education		Low	Medium	Low	Low	Low	Low
Rainwater Retention Basins		Low	Medium				
Raise Transportation Infrastructure			High				
Relocate or Buyout Vulnerable Structures			High				
SKYWARN Storm Spotter Training			Medium	Low	Low		Low
Snow Fences							Low
Storm Water Drainage System Upgrade			High				
Storm Water Pump Stations			High				
StormReady Accreditation			Medium	Low	Low		Low
Structural Integrity Monitoring Instruments	Gray						
Water Line Insulation							Low
Wildfire Structural Retrofit						Low	
Wind Resistance Structural Retrofit				Medium	Medium		

= Hazard or Project Not Applicable to this Plan Participant

= Action or Project not Applicable to this Hazard

Table E.8 – Action &amp; Project Prioritization, Elm Springs

Project/Action	Dam Failures	Droughts	Floods	Severe Storms	Tornadoes	Wildfires	Winter Storms
Backup Generators			Medium	Medium	Medium	Low	Medium
Bury Utility Lines, Pipes, and Tanks				Medium	Medium		Medium
Dam Retrofit	Medium						
Debris & Natural Fuels Reduction				Medium	Medium	Low	
Defensible Spaces & Buffer Zones						Low	
Elevate Structures			Medium				
FEMA Code 361 Safe Rooms				High	High		
Floodproofing			Medium				
Flood Level Monitoring System		Low	Medium				
Insulation & Energy Efficiency							Low
Irrigation Storage Tanks		Medium					
Looped Grid Power Systems			Medium	Medium	Medium		Medium
Low Flow Utilities		Low					
Public Awareness & Education		Low	Low	Low	Low	Low	Low
Rainwater Retention Basins		Low	Low				
Raise Transportation Infrastructure			Medium				
Relocate or Buyout Vulnerable Structures				Medium			
SKYWARN Storm Spotter Training			Low	Low	Low		Low
Snow Fences							Low
Storm Water Drainage System Upgrade			Medium				
Storm Water Pump Stations				Medium			
StormReady Accreditation			Low	Low	Low		Low
Structural Integrity Monitoring Instruments	Medium						
Water Line Insulation							Low
Wildfire Structural Retrofit						Low	
Wind Resistance Structural Retrofit				Medium	Medium		

= Hazard or Project Not Applicable to this Plan Participant

= Action or Project not Applicable to this Hazard

Table E.9 – Action &amp; Project Prioritization, Garfield

Project/Action	Dam Failures	Droughts	Floods	Severe Storms	Tornadoes	Wildfires	Winter Storms
Backup Generators			Medium	Medium	Medium	Medium	Medium
Bury Utility Lines, Pipes, and Tanks				Medium	Medium		Medium
Dam Retrofit	Medium						
Debris & Natural Fuels Reduction				Medium	Medium	Medium	
Defensible Spaces & Buffer Zones						Medium	
Elevate Structures			Medium				
FEMA Code 361 Safe Rooms				High	High		
Floodproofing			Medium				
Flood Level Monitoring System		Low	Medium				
Insulation & Energy Efficiency							Low
Irrigation Storage Tanks		Medium					
Looped Grid Power Systems			Medium	Medium	Medium		Medium
Low Flow Utilities		Low					
Public Awareness & Education		Low	Low	Low	Low	Low	Low
Rainwater Retention Basins		Low	Low				
Raise Transportation Infrastructure			Medium				
Relocate or Buyout Vulnerable Structures				Medium			
SKYWARN Storm Spotter Training			Low	Low	Low		Low
Snow Fences							Low
Storm Water Drainage System Upgrade			Medium				
Storm Water Pump Stations				Medium			
StormReady Accreditation			Low	Low	Low		Low
Structural Integrity Monitoring Instruments	Medium						
Water Line Insulation							Low
Wildfire Structural Retrofit						Medium	
Wind Resistance Structural Retrofit				Medium	Medium		

= Hazard or Project Not Applicable to this Plan Participant

= Action or Project not Applicable to this Hazard

Table E.10 – Action &amp; Project Prioritization, Gateway

Project/Action	Dam Failures	Droughts	Floods	Severe Storms	Tornadoes	Wildfires	Winter Storms
Backup Generators			Medium	Medium	Medium	Medium	Medium
Bury Utility Lines, Pipes, and Tanks				Medium	Medium		Medium
Dam Retrofit	Medium						
Debris & Natural Fuels Reduction				Medium	Medium	Medium	
Defensible Spaces & Buffer Zones						Medium	
Elevate Structures			Medium				
FEMA Code 361 Safe Rooms				High	High		
Floodproofing			Medium				
Flood Level Monitoring System		Low	Medium				
Insulation & Energy Efficiency							Low
Irrigation Storage Tanks		Medium					
Looped Grid Power Systems			Medium	Medium	Medium		Medium
Low Flow Utilities		Low					
Public Awareness & Education		Low	Low	Low	Low	Low	Low
Rainwater Retention Basins		Low	Low				
Raise Transportation Infrastructure			Medium				
Relocate or Buyout Vulnerable Structures				Medium			
SKYWARN Storm Spotter Training			Low	Low	Low		Low
Snow Fences							Low
Storm Water Drainage System Upgrade			Medium				
Storm Water Pump Stations				Medium			
StormReady Accreditation			Low	Low	Low		Low
Structural Integrity Monitoring Instruments	Medium						
Water Line Insulation							Low
Wildfire Structural Retrofit						Medium	
Wind Resistance Structural Retrofit				Medium	Medium		

= Hazard or Project Not Applicable to this Plan Participant

= Action or Project not Applicable to this Hazard

Table E.11 – Action &amp; Project Prioritization, Gentry

Project/Action	Dam Failures	Droughts	Floods	Severe Storms	Tornadoes	Wildfires	Winter Storms
Backup Generators			High	Medium	Medium	Low	Medium
Bury Utility Lines, Pipes, and Tanks				Medium	Medium		Medium
Dam Retrofit	Gray						
Debris & Natural Fuels Reduction				Medium	Medium	Low	
Defensible Spaces & Buffer Zones						Low	
Elevate Structures			High				
FEMA Code 361 Safe Rooms				High	High		
Floodproofing			High				
Flood Level Monitoring System		Low	High				
Insulation & Energy Efficiency							Low
Irrigation Storage Tanks		Medium					
Looped Grid Power Systems			High	Medium	Medium		Medium
Low Flow Utilities		Low					
Public Awareness & Education		Low	Medium	Low	Low	Low	Low
Rainwater Retention Basins		Low	Medium				
Raise Transportation Infrastructure			High				
Relocate or Buyout Vulnerable Structures			High				
SKYWARN Storm Spotter Training			Medium	Low	Low		Low
Snow Fences							Low
Storm Water Drainage System Upgrade			High				
Storm Water Pump Stations			High				
StormReady Accreditation			Medium	Low	Low		Low
Structural Integrity Monitoring Instruments	Gray						
Water Line Insulation							Low
Wildfire Structural Retrofit						Low	
Wind Resistance Structural Retrofit				Medium	Medium		

= Hazard or Project Not Applicable to this Plan Participant

= Action or Project not Applicable to this Hazard

Table E.12 – Action &amp; Project Prioritization, Gravette

Project/Action	Dam Failures	Droughts	Floods	Severe Storms	Tornadoes	Wildfires	Winter Storms
Backup Generators			High	Medium	Medium	Medium	Medium
Bury Utility Lines, Pipes, and Tanks				Medium	Medium		Medium
Dam Retrofit	Gray						
Debris & Natural Fuels Reduction				Medium	Medium	Medium	
Defensible Spaces & Buffer Zones						Medium	
Elevate Structures			High				
FEMA Code 361 Safe Rooms				High	High		
Floodproofing			High				
Flood Level Monitoring System		Low	High				
Insulation & Energy Efficiency							Low
Irrigation Storage Tanks		Medium					
Looped Grid Power Systems			High	Medium	Medium		Medium
Low Flow Utilities		Low					
Public Awareness & Education		Low	Medium	Low	Low	Low	Low
Rainwater Retention Basins		Low	Medium				
Raise Transportation Infrastructure			High				
Relocate or Buyout Vulnerable Structures			High				
SKYWARN Storm Spotter Training			Medium	Low	Low		Low
Snow Fences							Low
Storm Water Drainage System Upgrade			High				
Storm Water Pump Stations			High				
StormReady Accreditation			Medium	Low	Low		Low
Structural Integrity Monitoring Instruments	Gray						
Water Line Insulation							Low
Wildfire Structural Retrofit						Medium	
Wind Resistance Structural Retrofit				Medium	Medium		

= Hazard or Project Not Applicable to this Plan Participant

= Action or Project not Applicable to this Hazard

Table E.13 – Action &amp; Project Prioritization, Highfill

Project/Action	Dam Failures	Droughts	Floods	Severe Storms	Tornadoes	Wildfires	Winter Storms
Backup Generators			High	Medium	Medium	Low	Medium
Bury Utility Lines, Pipes, and Tanks				Medium	Medium		Medium
Dam Retrofit	Medium						
Debris & Natural Fuels Reduction				Medium	Medium	Low	
Defensible Spaces & Buffer Zones						Low	
Elevate Structures			High				
FEMA Code 361 Safe Rooms				High	High		
Floodproofing			High				
Flood Level Monitoring System		Low	High				
Insulation & Energy Efficiency							Low
Irrigation Storage Tanks		Medium					
Looped Grid Power Systems			High	Medium	Medium		Medium
Low Flow Utilities		Low					
Public Awareness & Education		Low	Medium	Low	Low	Low	Low
Rainwater Retention Basins		Low	Medium				
Raise Transportation Infrastructure			High				
Relocate or Buyout Vulnerable Structures			High				
SKYWARN Storm Spotter Training			Medium	Low	Low		Low
Snow Fences							Low
Storm Water Drainage System Upgrade			High				
Storm Water Pump Stations			High				
StormReady Accreditation			Medium	Low	Low		Low
Structural Integrity Monitoring Instruments	Medium						
Water Line Insulation							Low
Wildfire Structural Retrofit						Low	
Wind Resistance Structural Retrofit				Medium	Medium		

= Hazard or Project Not Applicable to this Plan Participant

= Action or Project not Applicable to this Hazard

**Table E.14 – Action & Project Prioritization, Little Flock**

Project/Action	Dam Failures	Droughts	Floods	Severe Storms	Tornadoes	Wildfires	Winter Storms
Backup Generators			High	Medium	Medium	Low	Medium
Bury Utility Lines, Pipes, and Tanks				Medium	Medium		Medium
Dam Retrofit	Gray						
Debris & Natural Fuels Reduction				Medium	Medium	Low	
Defensible Spaces & Buffer Zones						Low	
Elevate Structures			High				
FEMA Code 361 Safe Rooms				High	High		
Floodproofing			High				
Flood Level Monitoring System		Low	High				
Insulation & Energy Efficiency							Low
Irrigation Storage Tanks		Medium					
Looped Grid Power Systems			High	Medium	Medium		Medium
Low Flow Utilities		Low					
Public Awareness & Education		Low	Medium	Low	Low	Low	Low
Rainwater Retention Basins		Low	Medium				
Raise Transportation Infrastructure			High				
Relocate or Buyout Vulnerable Structures			High				
SKYWARN Storm Spotter Training			Medium	Low	Low		Low
Snow Fences							Low
Storm Water Drainage System Upgrade			High				
Storm Water Pump Stations			High				
StormReady Accreditation			Medium	Low	Low		Low
Structural Integrity Monitoring Instruments	Gray						
Water Line Insulation							Low
Wildfire Structural Retrofit						Low	
Wind Resistance Structural Retrofit				Medium	Medium		

= Hazard or Project Not Applicable to this Plan Participant

= Action or Project not Applicable to this Hazard

Table E.15 – Action &amp; Project Prioritization, Lowell

Project/Action	Dam Failures	Droughts	Floods	Severe Storms	Tornadoes	Wildfires	Winter Storms
Backup Generators			High	Medium	Medium	Low	Medium
Bury Utility Lines, Pipes, and Tanks				Medium	Medium		Medium
Dam Retrofit	■						
Debris & Natural Fuels Reduction				Medium	Medium	Low	
Defensible Spaces & Buffer Zones						Low	
Elevate Structures			High				
FEMA Code 361 Safe Rooms				High	High		
Floodproofing			High				
Flood Level Monitoring System		Low	High				
Insulation & Energy Efficiency							Low
Irrigation Storage Tanks		Medium					
Looped Grid Power Systems			High	Medium	Medium		Medium
Low Flow Utilities		Low					
Public Awareness & Education		Low	Medium	Low	Low	Low	Low
Rainwater Retention Basins		Low	Medium				
Raise Transportation Infrastructure			High				
Relocate or Buyout Vulnerable Structures			High				
SKYWARN Storm Spotter Training			Medium	Low	Low		Low
Snow Fences							Low
Storm Water Drainage System Upgrade			High				
Storm Water Pump Stations			High				
StormReady Accreditation			Medium	Low	Low		Low
Structural Integrity Monitoring Instruments	■						
Water Line Insulation							Low
Wildfire Structural Retrofit						Low	
Wind Resistance Structural Retrofit				Medium	Medium		

= Hazard or Project Not Applicable to this Plan Participant

= Action or Project not Applicable to this Hazard

Table E.16 – Action &amp; Project Prioritization, Pea Ridge

Project/Action	Dam Failures	Droughts	Floods	Severe Storms	Tornadoes	Wildfires	Winter Storms
Backup Generators			High	Medium	Medium	Low	Medium
Bury Utility Lines, Pipes, and Tanks				Medium	Medium		Medium
Dam Retrofit	Gray						
Debris & Natural Fuels Reduction				Medium	Medium	Low	
Defensible Spaces & Buffer Zones						Low	
Elevate Structures			High				
FEMA Code 361 Safe Rooms				High	High		
Floodproofing			High				
Flood Level Monitoring System		Low	High				
Insulation & Energy Efficiency							Low
Irrigation Storage Tanks		Medium					
Looped Grid Power Systems			High	Medium	Medium		Medium
Low Flow Utilities		Low					
Public Awareness & Education		Low	Medium	Low	Low	Low	Low
Rainwater Retention Basins		Low	Medium				
Raise Transportation Infrastructure			High				
Relocate or Buyout Vulnerable Structures			High				
SKYWARN Storm Spotter Training			Medium	Low	Low		Low
Snow Fences							Low
Storm Water Drainage System Upgrade			High				
Storm Water Pump Stations			High				
StormReady Accreditation			Medium	Low	Low		Low
Structural Integrity Monitoring Instruments	Gray						
Water Line Insulation							Low
Wildfire Structural Retrofit						Low	
Wind Resistance Structural Retrofit				Medium	Medium		

= Hazard or Project Not Applicable to this Plan Participant

= Action or Project not Applicable to this Hazard

Table E.17 – Action &amp; Project Prioritization, Rogers

Project/Action	Dam Failures	Droughts	Floods	Severe Storms	Tornadoes	Wildfires	Winter Storms
Backup Generators			High	Medium	Medium	Medium	Medium
Bury Utility Lines, Pipes, and Tanks				Medium	Medium		Medium
Dam Retrofit	Medium						
Debris & Natural Fuels Reduction				Medium	Medium	Medium	
Defensible Spaces & Buffer Zones						Medium	
Elevate Structures			High				
FEMA Code 361 Safe Rooms				High	High		
Floodproofing			High				
Flood Level Monitoring System		Low	High				
Insulation & Energy Efficiency							Low
Irrigation Storage Tanks		Medium					
Looped Grid Power Systems			High	Medium	Medium		Medium
Low Flow Utilities		Low					
Public Awareness & Education		Low	Medium	Low	Low	Low	Low
Rainwater Retention Basins		Low	Medium				
Raise Transportation Infrastructure			High				
Relocate or Buyout Vulnerable Structures			High				
SKYWARN Storm Spotter Training			Medium	Low	Low		Low
Snow Fences							Low
Storm Water Drainage System Upgrade			High				
Storm Water Pump Stations			High				
StormReady Accreditation			Medium	Low	Low		Low
Structural Integrity Monitoring Instruments	Low						
Water Line Insulation							Low
Wildfire Structural Retrofit						Medium	
Wind Resistance Structural Retrofit				Medium	Medium		

= Hazard or Project Not Applicable to this Plan Participant

= Action or Project not Applicable to this Hazard

Table E.18 – Action &amp; Project Prioritization, Siloam Springs

Project/Action	Dam Failures	Droughts	Floods	Severe Storms	Tornadoes	Wildfires	Winter Storms
Backup Generators			High	Medium	Medium	Medium	Medium
Bury Utility Lines, Pipes, and Tanks				Medium	Medium		Medium
Dam Retrofit							
Debris & Natural Fuels Reduction				Medium	Medium	Medium	
Defensible Spaces & Buffer Zones						Medium	
Elevate Structures			High				
FEMA Code 361 Safe Rooms				High	High		
Floodproofing			High				
Flood Level Monitoring System		Low	High				
Insulation & Energy Efficiency							Low
Irrigation Storage Tanks		Medium					
Looped Grid Power Systems			High	Medium	Medium		Medium
Low Flow Utilities		Low					
Public Awareness & Education		Low	Medium	Low	Low	Low	Low
Rainwater Retention Basins		Low	Medium				
Raise Transportation Infrastructure			High				
Relocate or Buyout Vulnerable Structures			High				
SKYWARN Storm Spotter Training			Medium	Low	Low		Low
Snow Fences							Low
Storm Water Drainage System Upgrade			High				
Storm Water Pump Stations			High				
StormReady Accreditation			Medium	Low	Low		Low
Structural Integrity Monitoring Instruments							
Water Line Insulation							Low
Wildfire Structural Retrofit						Medium	
Wind Resistance Structural Retrofit				Medium	Medium		

= Hazard or Project Not Applicable to this Plan Participant

= Action or Project not Applicable to this Hazard

Table E.19 – Action &amp; Project Prioritization, Springdale

Project/Action	Dam Failures	Droughts	Floods	Severe Storms	Tornadoes	Wildfires	Winter Storms
Backup Generators			High	Medium	Medium	Low	Medium
Bury Utility Lines, Pipes, and Tanks				Medium	Medium		Medium
Dam Retrofit	■						
Debris & Natural Fuels Reduction				Medium	Medium	Low	
Defensible Spaces & Buffer Zones						Low	
Elevate Structures			High				
FEMA Code 361 Safe Rooms				High	High		
Floodproofing			High				
Flood Level Monitoring System		Low	High				
Insulation & Energy Efficiency							Low
Irrigation Storage Tanks		Medium					
Looped Grid Power Systems			High	Medium	Medium		Medium
Low Flow Utilities		Low					
Public Awareness & Education		Low	Medium	Low	Low	Low	Low
Rainwater Retention Basins		Low	Medium				
Raise Transportation Infrastructure			High				
Relocate or Buyout Vulnerable Structures			High				
SKYWARN Storm Spotter Training			Medium	Low	Low		Low
Snow Fences							Low
Storm Water Drainage System Upgrade			High				
Storm Water Pump Stations			High				
StormReady Accreditation			Medium	Low	Low		Low
Structural Integrity Monitoring Instruments	■						
Water Line Insulation							Low
Wildfire Structural Retrofit						Low	
Wind Resistance Structural Retrofit				Medium	Medium		

= Hazard or Project Not Applicable to this Plan Participant

= Action or Project not Applicable to this Hazard

Table E.20 – Action &amp; Project Prioritization, Springtown

Project/Action	Dam Failures	Droughts	Floods	Severe Storms	Tornadoes	Wildfires	Winter Storms
Backup Generators			High	Medium	Medium	Low	Medium
Bury Utility Lines, Pipes, and Tanks				Medium	Medium		Medium
Dam Retrofit	Gray						
Debris & Natural Fuels Reduction				Medium	Medium	Low	
Defensible Spaces & Buffer Zones						Low	
Elevate Structures			High				
FEMA Code 361 Safe Rooms				High	High		
Floodproofing			High				
Flood Level Monitoring System		Low	High				
Insulation & Energy Efficiency							Low
Irrigation Storage Tanks		Medium					
Looped Grid Power Systems			High	Medium	Medium		Medium
Low Flow Utilities		Low					
Public Awareness & Education		Low	Medium	Low	Low	Low	Low
Rainwater Retention Basins		Low	Medium				
Raise Transportation Infrastructure			High				
Relocate or Buyout Vulnerable Structures			High				
SKYWARN Storm Spotter Training			Medium	Low	Low		Low
Snow Fences							Low
Storm Water Drainage System Upgrade			High				
Storm Water Pump Stations			High				
StormReady Accreditation			Medium	Low	Low		Low
Structural Integrity Monitoring Instruments	Gray						
Water Line Insulation							Low
Wildfire Structural Retrofit						Low	
Wind Resistance Structural Retrofit				Medium	Medium		

= Hazard or Project Not Applicable to this Plan Participant

= Action or Project not Applicable to this Hazard

Table E.21 – Action &amp; Project Prioritization, Sulphur Springs

Project/Action	Dam Failures	Droughts	Floods	Severe Storms	Tornadoes	Wildfires	Winter Storms
Backup Generators			High	Medium	Medium	Medium	Medium
Bury Utility Lines, Pipes, and Tanks				Medium	Medium		Medium
Dam Retrofit							
Debris & Natural Fuels Reduction				Medium	Medium	Medium	
Defensible Spaces & Buffer Zones						Medium	
Elevate Structures			High				
FEMA Code 361 Safe Rooms				High	High		
Floodproofing			High				
Flood Level Monitoring System		Low	High				
Insulation & Energy Efficiency							Low
Irrigation Storage Tanks		Medium					
Looped Grid Power Systems			High	Medium	Medium		Medium
Low Flow Utilities		Low					
Public Awareness & Education		Low	Medium	Low	Low	Low	Low
Rainwater Retention Basins		Low	Medium				
Raise Transportation Infrastructure			High				
Relocate or Buyout Vulnerable Structures			High				
SKYWARN Storm Spotter Training			Medium	Low	Low		Low
Snow Fences							Low
Storm Water Drainage System Upgrade			High				
Storm Water Pump Stations			High				
StormReady Accreditation			Medium	Low	Low		Low
Structural Integrity Monitoring Instruments							
Water Line Insulation							Low
Wildfire Structural Retrofit						Medium	
Wind Resistance Structural Retrofit				Medium	Medium		

= Hazard or Project Not Applicable to this Plan Participant

= Action or Project not Applicable to this Hazard

Table E.22 – Action &amp; Project Prioritization, Bentonville School District

Project/Action	Dam Failures	Droughts	Floods	Severe Storms	Tornadoes	Wildfires	Winter Storms
Backup Generators			Medium	Medium	Medium	Low	Medium
Bury Utility Lines, Pipes, and Tanks				Medium	Medium		Medium
Dam Retrofit	Medium						
Debris & Natural Fuels Reduction				Medium	Medium	Low	
Defensible Spaces & Buffer Zones						Low	
Elevate Structures			Medium				
FEMA Code 361 Safe Rooms				High	High		
Floodproofing			Medium				
Flood Level Monitoring System	Medium		Medium				
Insulation & Energy Efficiency							Low
Irrigation Storage Tanks	Medium						
Looped Grid Power Systems			Medium	Medium	Medium		Medium
Low Flow Utilities	Medium						
Public Awareness & Education	Medium		Low	Low	Low	Low	Low
Rainwater Retention Basins		Medium	Low				
Raise Transportation Infrastructure			Medium				
Relocate or Buyout Vulnerable Structures			Medium				
SKYWARN Storm Spotter Training			Low	Low	Low		Low
Snow Fences							Low
Storm Water Drainage System Upgrade			Medium				
Storm Water Pump Stations			Medium				
StormReady Accreditation			Low	Low	Low		Low
Structural Integrity Monitoring Instruments	Medium						
Water Line Insulation							Low
Wildfire Structural Retrofit						Low	
Wind Resistance Structural Retrofit				Medium	Medium		

= Hazard or Project Not Applicable to this Plan Participant

= Action or Project not Applicable to this Hazard

Table E.23 – Action &amp; Project Prioritization, Decatur School District

Project/Action	Dam Failures	Droughts	Floods	Severe Storms	Tornadoes	Wildfires	Winter Storms
Backup Generators			Medium	Medium	Medium		Medium
Bury Utility Lines, Pipes, and Tanks				Medium	Medium		Medium
Dam Retrofit	Medium						
Debris & Natural Fuels Reduction				Medium	Medium	Medium	
Defensible Spaces & Buffer Zones						Medium	
Elevate Structures			Medium				
FEMA Code 361 Safe Rooms				High	High		
Floodproofing			Medium				
Flood Level Monitoring System	Medium		Medium				
Insulation & Energy Efficiency							Low
Irrigation Storage Tanks	Medium						
Looped Grid Power Systems			Medium	Medium	Medium		Medium
Low Flow Utilities	Medium	Medium					
Public Awareness & Education	Medium	Medium	Low	Low	Low	Medium	Low
Rainwater Retention Basins		Medium	Low				
Raise Transportation Infrastructure			Medium				
Relocate or Buyout Vulnerable Structures			Medium				
SKYWARN Storm Spotter Training			Low	Low	Low		Low
Snow Fences							Low
Storm Water Drainage System Upgrade			Medium				
Storm Water Pump Stations			Medium				
StormReady Accreditation			Low	Low	Low		Low
Structural Integrity Monitoring Instruments	Medium						
Water Line Insulation							Low
Wildfire Structural Retrofit						Medium	
Wind Resistance Structural Retrofit				Medium	Medium		

= Hazard or Project Not Applicable to this Plan Participant

= Action or Project not Applicable to this Hazard

Table E.24 – Action &amp; Project Prioritization, Gentry School District

Project/Action	Dam Failures	Droughts	Floods	Severe Storms	Tornadoes	Wildfires	Winter Storms
Backup Generators			Medium	Medium	Medium		Medium
Bury Utility Lines, Pipes, and Tanks				Medium	Medium		Medium
Dam Retrofit	Medium						
Debris & Natural Fuels Reduction				Medium	Medium	Medium	
Defensible Spaces & Buffer Zones						Medium	
Elevate Structures			Medium				
FEMA Code 361 Safe Rooms				High	High		
Floodproofing			Medium				
Flood Level Monitoring System	Medium		Medium				
Insulation & Energy Efficiency							Low
Irrigation Storage Tanks	Medium						
Looped Grid Power Systems			Medium	Medium	Medium		Medium
Low Flow Utilities	Medium	Medium					
Public Awareness & Education	Medium	Medium	Low	Low	Low	Medium	Low
Rainwater Retention Basins		Medium	Low				
Raise Transportation Infrastructure			Medium				
Relocate or Buyout Vulnerable Structures			Medium				
SKYWARN Storm Spotter Training			Low	Low	Low		Low
Snow Fences							Low
Storm Water Drainage System Upgrade			Medium				
Storm Water Pump Stations			Medium				
StormReady Accreditation			Low	Low	Low		Low
Structural Integrity Monitoring Instruments	Medium						
Water Line Insulation							Low
Wildfire Structural Retrofit						Medium	
Wind Resistance Structural Retrofit				Medium	Medium		

= Hazard or Project Not Applicable to this Plan Participant

= Action or Project not Applicable to this Hazard

Table E.25 – Action &amp; Project Prioritization, Gravette School District

Project/Action	Dam Failures	Droughts	Floods	Severe Storms	Tornadoes	Wildfires	Winter Storms
Backup Generators			Medium	Medium	Medium	Medium	Medium
Bury Utility Lines, Pipes, and Tanks				Medium	Medium		Medium
Dam Retrofit	Medium						
Debris & Natural Fuels Reduction				Medium	Medium	Medium	
Defensible Spaces & Buffer Zones						Medium	
Elevate Structures			Medium				
FEMA Code 361 Safe Rooms				High	High		
Floodproofing			Medium				
Flood Level Monitoring System	Medium		Medium				
Insulation & Energy Efficiency							Low
Irrigation Storage Tanks	Medium						
Looped Grid Power Systems			Medium	Medium	Medium		Medium
Low Flow Utilities	Medium						
Public Awareness & Education	Medium		Low	Low	Low	Medium	Low
Rainwater Retention Basins		Medium	Low				
Raise Transportation Infrastructure			Medium				
Relocate or Buyout Vulnerable Structures			Medium				
SKYWARN Storm Spotter Training			Low	Low	Low		Low
Snow Fences							Low
Storm Water Drainage System Upgrade			Medium				
Storm Water Pump Stations			Medium				
StormReady Accreditation			Low	Low	Low		Low
Structural Integrity Monitoring Instruments	Medium						
Water Line Insulation							Low
Wildfire Structural Retrofit						Medium	
Wind Resistance Structural Retrofit				Medium	Medium		

= Hazard or Project Not Applicable to this Plan Participant

= Action or Project not Applicable to this Hazard

Table E.26 – Action &amp; Project Prioritization, Pea Ridge School District

Project/Action	Dam Failures	Droughts	Floods	Severe Storms	Tornadoes	Wildfires	Winter Storms
Backup Generators			Medium	Medium	Medium		Medium
Bury Utility Lines, Pipes, and Tanks				Medium	Medium		Medium
Dam Retrofit	Medium						
Debris & Natural Fuels Reduction				Medium	Medium		
Defensible Spaces & Buffer Zones							
Elevate Structures			Medium				
FEMA Code 361 Safe Rooms				High	High		
Floodproofing			Medium				
Flood Level Monitoring System	Medium		Medium				
Insulation & Energy Efficiency							Low
Irrigation Storage Tanks	Medium						
Looped Grid Power Systems			Medium	Medium	Medium		Medium
Low Flow Utilities	Medium	Medium					
Public Awareness & Education	Medium	Medium	Low	Low	Low		Low
Rainwater Retention Basins		Medium	Low				
Raise Transportation Infrastructure			Medium				
Relocate or Buyout Vulnerable Structures			Medium				
SKYWARN Storm Spotter Training			Low	Low	Low		Low
Snow Fences							Low
Storm Water Drainage System Upgrade			Medium				
Storm Water Pump Stations			Medium				
StormReady Accreditation			Low	Low	Low		Low
Structural Integrity Monitoring Instruments	Medium						
Water Line Insulation							Low
Wildfire Structural Retrofit						Medium	
Wind Resistance Structural Retrofit				Medium	Medium		

= Hazard or Project Not Applicable to this Plan Participant

= Action or Project not Applicable to this Hazard

Table E.27 – Action &amp; Project Prioritization, Rogers School District

Project/Action	Dam Failures	Droughts	Floods	Severe Storms	Tornadoes	Wildfires	Winter Storms
Backup Generators			Medium	Medium	Medium	Low	Medium
Bury Utility Lines, Pipes, and Tanks				Medium	Medium		Medium
Dam Retrofit	Medium						
Debris & Natural Fuels Reduction				Medium	Medium	Low	
Defensible Spaces & Buffer Zones						Low	
Elevate Structures			Medium				
FEMA Code 361 Safe Rooms				High	High		
Floodproofing			Medium				
Flood Level Monitoring System	Medium		Medium				
Insulation & Energy Efficiency							Low
Irrigation Storage Tanks	Medium						
Looped Grid Power Systems			Medium	Medium	Medium		Medium
Low Flow Utilities	Medium						
Public Awareness & Education	Medium		Low	Low	Low	Low	Low
Rainwater Retention Basins		Medium	Low				
Raise Transportation Infrastructure			Medium				
Relocate or Buyout Vulnerable Structures			Medium				
SKYWARN Storm Spotter Training			Low	Low	Low		Low
Snow Fences							Low
Storm Water Drainage System Upgrade			Medium				
Storm Water Pump Stations			Medium				
StormReady Accreditation			Low	Low	Low		Low
Structural Integrity Monitoring Instruments	Medium						
Water Line Insulation							Low
Wildfire Structural Retrofit						Low	
Wind Resistance Structural Retrofit				Medium	Medium		

= Hazard or Project Not Applicable to this Plan Participant

= Action or Project not Applicable to this Hazard

Table E.28 – Action &amp; Project Prioritization, Siloam Springs School District

Project/Action	Dam Failures	Droughts	Floods	Severe Storms	Tornadoes	Wildfires	Winter Storms
Backup Generators			Medium	Medium	Medium	Medium	Medium
Bury Utility Lines, Pipes, and Tanks				Medium	Medium		Medium
Dam Retrofit	Medium						
Debris & Natural Fuels Reduction				Medium	Medium	Medium	
Defensible Spaces & Buffer Zones						Medium	
Elevate Structures			Medium				
FEMA Code 361 Safe Rooms				High	High		
Floodproofing			Medium				
Flood Level Monitoring System	Medium		Medium				
Insulation & Energy Efficiency							Low
Irrigation Storage Tanks	Medium						
Looped Grid Power Systems			Medium	Medium	Medium		Medium
Low Flow Utilities	Medium						
Public Awareness & Education	Medium		Low	Low	Low	Medium	Low
Rainwater Retention Basins		Medium	Low				
Raise Transportation Infrastructure			Medium				
Relocate or Buyout Vulnerable Structures			Medium				
SKYWARN Storm Spotter Training			Low	Low	Low		Low
Snow Fences							Low
Storm Water Drainage System Upgrade			Medium				
Storm Water Pump Stations			Medium				
StormReady Accreditation			Low	Low	Low		Low
Structural Integrity Monitoring Instruments	Medium						
Water Line Insulation							Low
Wildfire Structural Retrofit						Medium	
Wind Resistance Structural Retrofit				Medium	Medium		

= Hazard or Project Not Applicable to this Plan Participant

= Action or Project not Applicable to this Hazard

## Appendix F – Plan Adoption Resolutions

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Benton County

























Little Flock





























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## Appendix G – ADEM Approval Letter

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## Appendix H – FEMA Approval Letter

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