



JASPER-NEWTON BI- COUNTY NATURAL HAZARD MITIGATION PLAN

Approved by
Federal Emergency Management Agency
(FEMA)
And
Missouri State Emergency Management Agency
(SEMA)

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Introduction

Located at the eastern edge of the Great Plains near the center of the North American continent, Jasper County and Newton County, Missouri have been fortunate to avoid many of the natural disasters that impact other areas of North America. The counties are virtually unknown to hurricanes, tsunamis, tidal surges, landslides, and forest fires. Furthermore, the geology of the region reduces the risk of an earthquake to a minimal threat. However, both counties are susceptible to other natural hazards. Tornadoes and severe thunderstorms, severe winter storms, drought, and heat waves are all hazards that impact the county on a routine basis, endangering both lives and property.

Mitigation is the means by which business and residential development can reduce the impacts of a disaster if action is taken before the event occurs. The first action that is necessary to reduce the effects of a disaster is the preparation and implementation of a mitigation strategy. Jasper County and Newton County aspire to make themselves more resistant to the long-term, negative impacts of a major natural disaster. This process can help both counties develop a more established partnership, a working mitigation plan through providing information to the public, and encouraging all interested parties throughout these jurisdictions to develop their own mitigation plans. Both Jasper and Newton County passed their first individual Natural Hazard Mitigation plans in 2005. An update was completed for each county in 2010. When planning began for the required five year update in 2015, it was decided that a bi-county plan would best serve the region due to the geographic location of Joplin which is bisected by the county line. This plan update continues to build on the foundation established by the previous plans, but focuses on the creation and implementation of an inter-county plan which takes into account both existing and potential mitigation actions that can continue to improve resistance and readiness to natural disasters for both counties and their internal jurisdictions.

Section 1 of this plan provides general background data for Jasper and Newton counties. This includes population statistics, identification of critical facilities, and general information regarding the county's infrastructure. Understanding "where you are" is a fundamental component of the planning process. It is hoped this section provides a snapshot of each county will serve to assist in the implementation of this plan.

Section 2 identifies and explores the types and likelihood of a hazard occurring in Jasper and Newton counties. It provides a general overview of each of the identified natural hazard and attempts to explain the impact upon each county should such a hazard occur.

Section 3 provides a capability assessment of Jasper and Newton counties regarding a natural disaster. It outlines the counties' disaster response capabilities and seeks to identify those areas which the counties may improve in disaster mitigation. Specifically, it identifies key personnel, organizational leaders, and existing plans regarding emergency planning. In addition, it provides a brief assessment of each municipality's readiness regarding hazard mitigation.

Section 4 provides mitigation goals, objectives, and plans in response to each identified natural

disaster. Each disaster has specific challenges identified with its respective occurrence, overall goals to reduce a disaster's effect, specific objectives towards achieving those goals, and implementation plans for the county to pursue.

In order for this plan to be successfully implemented, it must be periodically reviewed and updated as circumstances and technological capabilities advance. Adoption of this plan is not the end, but rather the continuation of a long-term commitment to disaster mitigation. The Jasper-Newton Bi-County Mitigation Plan is a bi-county and multijurisdictional plan that represents several local governments and entities within the each county. The following local governments participated in the original plan development, the 2010 update, and the 2015 process and acknowledge the plan through formal adoption:

Jasper County:

- Airport Drive
- Alba
- Avilla
- Brooklyn Heights
- Carl Junction
- Cartersville
- Carthage
- Carytown
- Duenweg
- Duquesne
- Fidelity
- Jasper
- Jasper County
- Joplin
- Neck City
- Oronogo
- Purcell
- Sarcoxie
- Waco
- Webb City

Newton County:

- Dennis Acres
- Diamond
- Fairview
- Granby
- Leawood
- Loma Linda
- Neosho
- Newton County
- Newtonia
- Redings Mill
- Ritchey
- Saginaw
- Seneca
- Wentworth

The following school districts and institutions of higher education also participated in the 2010 plan and the 2015 plan update. They also acknowledge the plan through formal adoption:

Jasper County:

- Avilla R-XIII
- Carl Junction R-I
- Carthage R-IX
- Jasper Co. R-V
- Joplin Schools
- Missouri Southern State University
- Sarcoxie R-II
- Webb City R-VII

Newton County:

- Crowder College
- Diamond R-IV
- East Newton Co. R-VI
- Neosho R-V
- Seneca R-VII
- Westview C-6
- Joplin Schools

Two new jurisdictions were added in 2015. Though they did not participate in the 2010 plan, these jurisdictions chose to participate in the new bi-county plan.

- Grand Falls Plaza
- Shoal Creek Drive

A number of new school districts and higher education institutions were added in 2015. Though they did not participate in the 2010 plan, these schools chose to participate in the new bi-county plan.

- College Heights Christian School
- Joplin Area Catholic School System (McAuley Catholic High School)
- Lighthouse Christian Academy
- Martin Luther School
- Neosho Christian School
- Ozark Christian College
- St. Ann's Catholic School
- Vatterott College

Eight jurisdictions did not to participate in the 2015 plan development.

- Silver Creek
 - Silver Creek was unincorporated and absorbed by Joplin in 2012.
- Asbury
 - Though Asbury participated in the 2010 plan, they chose not to participate in 2015.
- Reeds
 - Reeds did not participate in the 2010 plan, nor did they participate in 2015.
- Cliff Village
 - Cliff Village did not participate in the 2010 plan, nor did they participate in 2015.
- La Russell
 - Though La Russell participated in the 2010 plan, they chose not to participate in 2015.
- Shoal Creek Estates
 - Shoal Creek Estates did not participate in the 2010 plan, nor did they participate in 2015.
- Stark City
 - Though Stark City participated in the 2010 plan, no response was received for participation despite numerous attempts to contact their leadership.
- Stella
 - Though Stella participated in the 2010 plan, no response was received for participation despite numerous attempts to contact their leadership.

Prerequisites

Requirement §201.6(c)(5)

For multi-jurisdictional plans, each jurisdiction requesting approval of the plan must document that it has been formally adopted.

The following jurisdictions participated in the plan update process and have formally adopted the updated Hazard Mitigation Plan. Adoption resolutions are included in Appendix A.

Jasper County:

- Airport Drive
- Alba
- Avilla
- Brooklyn Heights
- Carl Junction
- Carterville
- Carthage
- Carytown
- Duenweg
- Duquesne
- Fidelity
- Jasper
- Jasper County
- Joplin
- Neck City
- Oronogo
- Purcell
- Sarcoxie
- Waco
- Webb City
- Avilla R-XIII
- Carl Junction R-I
- Carthage R-IX
- Jasper Co. R-V
- Joplin Schools
- Missouri Southern State University
- Sarcoxie R-II
- Webb City R-VII

Newton County:

- Dennis Acres
- Diamond
- Fairview
- Granby
- Grand Falls Plaza
- Leawood
- Loma Linda
- Neosho
- Newton County
- Newtonia
- Redings Mill
- Ritchey
- Saginaw
- Seneca
- Shoal Creek Drive
- Wentworth
- Crowder College
- Diamond R-IV
- East Newton Co. R-VI
- Neosho R-V
- Seneca R-VII
- Westview C-6
- Joplin Schools

Requirement §201.6(c)(5) Multi-Jurisdictional plans may be accepted, as appropriate, as long as each jurisdiction has participated in the process.

The Harry S Truman Coordinating Council (HSTCC), on behalf of Jasper County and Newton County, invited incorporated cities, school districts, area colleges, and private non-profit entities in the County to participate in the Jasper-Newton Bi-County Multi-Jurisdictional Hazard Mitigation Plan update. The Disaster Mitigation Act of 2000 (DMA 2000) requires that jurisdictions represented by a multi-jurisdictional plan participate in the planning process and formally adopt the plan. Each participating jurisdiction was required to meet plan participation requirements as defined by HSTCC at the beginning of the planning process.

Minimum participation requirements are defined as follows:

- Provide information to support plan update through **at least one** of the following methods:
 - Completion of data worksheets regarding hazard mitigation; or
 - Attendance at public meetings specific to this planning process.
- Formal adoption of the mitigation plan.

These minimum requirements were established as such due to the nature of the counties' jurisdictions. Many jurisdictions, particularly those with a population less than 1,000, do not have full time city staff nor paid leadership. Requiring attendance at a meeting places a difficult burden on these small cities and had the potential to negate their participation. By allowing participation in a virtual way (i.e. completion of worksheets and review of the plan draft), HSTCC ensured that the majority of jurisdictions, despite their size, were able to continue their participation in hazard mitigation planning.

Per its contract with the State Emergency Management Agency (SEMA), Jasper County, and Newton County, the Harry S. Truman Coordinating Council organized meetings, compiled data, and drafted the plan update which was submitted to the committee for approval. All of the jurisdictions listed as participants in the plan update met the minimum participation requirements as indicated in the table below. Documentation in the form of sign-in sheets for attendance at group meetings as well as time sheets for meetings with HSTCC staff is included in *Appendix B: Documentation of Public Participation*. The summary of all jurisdictional input is included in Section 4, Table 4.2, *Jasper - Newton Bi-County Objective Assessment*.

Table A Hazard Mitigation Participation by Jurisdiction

Participant	County	Completion of Data Worksheets	Meeting Attendance	Formal plan adoption 2015	Not participating
Airport Drive	Jasper	X	X	X	
Alba	Jasper	X		X	
Asbury	Jasper				X
Avilla	Jasper	X		X	
Brooklyn Heights	Jasper	X		X	
Carl Junction	Jasper	X	X	X	
Cartersville	Jasper	X	X	X	
Carthage	Jasper	X	X	X	
Carytown	Jasper	X		X	
Cliff Village	Newton				X
Dennis Acres	Newton	X		X	
Diamond	Newton	X	X	X	
Duenweg	Jasper	X		X	
Duquesne	Jasper	X		X	
Fairview	Newton	X		X	
Fidelity	Jasper	X	X	X	
Granby	Newton	X	X	X	
Grand Falls Plaza	Newton	X		X	
Jasper	Jasper	X		X	
Jasper County	Jasper	X	X	X	
Joplin	Jasper / Newton	X	X	X	
La Russell	Jasper				X
Leawood	Newton	X		X	
Loma Linda	Newton	X		X	
Neck City	Jasper	X		X	
Neosho	Newton	X	X	X	
Newton County	Newton	X	X	X	
Newtonia	Newton	X		X	
Oronogo	Jasper	X		X	
Purcell	Jasper	X		X	
Redings Mill	Newton	X		X	
Reeds	Jasper				X
Ritchey	Newton	X		X	
Saginaw	Newton	X	X	X	
Sarcoie	Jasper	X		X	
Seneca	Newton	X		X	
Shoal Creek Drive	Newton	X	X	X	
Shoal Creek Estates	Newton				X
Stark City	Newton				X
Stella	Newton				X
Waco	Jasper	X		X	
Webb City	Jasper	X	X	X	
Wentworth	Newton	X		X	
Avilla R-XIII	Jasper	X		X	
Carl Junction R-I	Jasper	X		X	
Carthage R-IX	Jasper	X	X	X	

JASPER-NEWTON BI-COUNTY NATURAL HAZARD MITIGATION PLAN

Participant	County	Completion of Data Worksheets	Meeting Attendance	Formal plan adoption 2015	Not participating
College Heights Christian School	Jasper	X		X	
Crowder College	Newton	X	X	X	
Diamond R-IV	Newton	X	X	X	
East Newton R-VI	Newton	X		X	
Jasper R-V	Jasper	X	X	X	
Joplin Schools	Jasper/Newton	X	X	X	
Lighthouse Christian Academy	Newton	X		X	
Martin Luther School	Jasper	X		X	
McCauley Catholic High School	Jasper	X		X	
Missouri Southern State University	Jasper	X		X	
Neosho Christian School	Newton	X		X	
Neosho R-V	Newton	X		X	
Ozark Christian College	Jasper	X		X	
Sarcozie R-II	Jasper	X		X	
Seneca R-VII	Newton	X	X	X	
St. Ann's Catholic School	Jasper	X		X	
Vatterott College	Newton	X		X	
Webb City R-VII	Jasper	X		X	
Westview C-6	Newton	X		X	

The planning committee was composed of members drawn from local entities, city and county representatives as well as private citizens from each jurisdiction. Table B on the following page provides the names of committee members and the jurisdictions represented in the planning process. Representatives worked to provide information about their jurisdictions through worksheets and meeting attendance. Input from the general public as well as surrounding jurisdictions was also solicited prior to each meeting through press releases and public announcements. Sample worksheets used in each meeting are provided as part of *Appendix B: Documentation of Public Participation*.

Beginning in March 2015 and continuing through July 2015, the Hazard Mitigation Committee met regularly to provide information for the update of the Jasper-Newton Bi-County Hazard Mitigation Plan. At the initial meeting in March, the committee reviewed and discussed the applicability of each portion in the original Hazard Mitigation Plan and opted to update all sections of the plan, though in varying degrees. Committee members were asked to provide updated information on critical response capabilities and assets within their communities for the next meeting.

Table B Hazard Mitigation Committee Members		
Jurisdiction	Name	Title
Jasper County	Keith Stammer Leigh Kelley	Emergency Management Director Assistant Emergency Management Director
Newton County	Carolyn Jackson Gary Roark Jim Jackson	NCEM Administrative Assistant Emergency Management Director Newton County Commission
Airport Drive	Sue Hirshey Frank Stine	Village Clerk Village Trustee
Alba	Brenda Gardner	City Clerk
Avilla	Brenda Jamison	City Clerk
Brooklyn Heights	Richard Rector	Chairman
Carl Junction	Steve Lawyer Bill Dunn Joe Perkins	City Administrator Carl Junction Firefighter Carl Junction Firefighter
Cartersville	William L. Cline Debbie Cornell	City Administrator City employee
Carthage	Roger Williams Rick Schlottke Morgan Housh David Myers	Fire Chief / EMD GIS Fire Department Administrative Assistant Carthage Fire
Carytown	Joyce Moore	Trustees Secretary
Dennis Acres	Norma Jean Richardson	Village Clerk
Diamond	JoAnn Ohlhausen Brenda Schmitt	City Clerk Mayor
Duenweg	Shirley Lewis	City Clerk
Duquesne	Gina Taylor	City Clerk
Fairview	Lorie Heatley	City Clerk
Fidelity	Teri Neal	City Clerk
Granby	Alisha Smith Joyce Mann Kevin Johnson	City Clerk City of Granby Granby Fire Department
Grand Falls Plaza	Fred G. Pugh	Village Chairman
Jasper	Mary L. McNary	City Clerk
Joplin	Keith Stammer Chuch Niess	EMD Joplin Police Department
Leawood	Denny Desmond	Village Chairman
Loma Linda	Pamela K. Richards	Town Clerk
Neck City	Donald D. Hole	Mayor
Neosho	Dana Daniel John Harrington Troy Royer	Economic Development Director City of Neosho employee City Manager
Newtonia	Jeanette Kleinol	Village Trustee
Oronogo	Jeff Fries	Police Chief
Purcell	Dorothy Haddock	City Clerk
Redings Mill	Marilow Norris	Village Clerk
Ritchey	Diana Hawkins	City Clerk
Saginaw	Jed Schlegel	Chairman
Sarcoxi	Don Triplett	Mayor
Seneca	Cynay Hutchings	City Clerk
Shoal Creek Drive	Harold D. Johnston	Trustee

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Waco	Dimita D. Doss	Mayor
Webb City	Andrew Roughton Don Melton	Deputy EMD Assistant EMD / Fire Chief
Wentworth	Clyde R. Stephens	Chairman
Avilla R-XIII	Brad Byers	Superintendent
Carl Junction R-I	Jennifer Kennedy	Superintendent's Secretary
Carthage R-IX	Dr. Mark Baker	Assistant Superintendent
College Heights Christian School	Nelson Horton	Superintendent
Crowder College	Amy Rand Mark Kalmbach	Vice President of Finance Director of Physical Plants
Diamond R-IV	Make Mabe	Superintendent
East Newton R-VI	Rusty McDermott	Facilities Director
Jasper R-V	Rick Stark	Superintendent
Joplin Schools	Jim Hounsshell Mike Johnson	Director of Safety and Security Facilities Director
Lighthouse Christian Academy	Mandy Davis	Director
Martin Luther School	Jeremy Schamber	Principal
McCauley Catholic High School	Gene Koester	Principal
Missouri Southern State University	Jeff Gibson	Director of Budgeting and Operations
Neosho Christian School	Lowell McInturff	Superintendent
Neosho R-V	Timothy Scott Crawley	Assistant Superintendent of Operations
Ozark Christian College	Monte Shoemake	Vice President of Student Life
Sarcoixie R-II	Dr. Kevin T. Goddard	Superintendent
Seneca R-VII	Jim Cummins	Superintendent
St. Ann's Catholic School	Ronnie L. Schaeffer	Principal
Vatterott College	Monty Caywood	Director of Education
Webb City R-VII	Kevin Cooper	Superintendent
Westview C-6	Misty Hailey	Director of Student Services

Additional committee members, independent of local jurisdictions also participated in plan development. These members included: Roy Cota, MoDOT; Jason Smith, METS Ambulance; Alan Griffin, Java Dave's Sales Supervisor; Skip Harper; Emergency Manager at Freeman Health Systems; Patsy Mulroney and Marsha Wallace, Empire District; Jeremiah Taylor, New-Mac.

The second committee meeting was held in June 2015. The committee discussed information submitted by each jurisdiction and reviewed the existing goals, actions, and objective from the 2010 plan. Utilizing their information and suggestions, HSTCC began the plan update. Because of the changing nature of the plan from a county plan to a bi-county plan, significant changes to each section were required. Section 1 combined information from both counties and all their included jurisdictions in terms of critical response capabilities as well as including the most recent census data. Section 2 also combined information from both counties. It was also updated with historical data as well as the latest storm and hazard records available through 2014. Vulnerabilities were reassessed in this section based on the addition of new data.

In July 2015, the committee met to assess, revise, and prioritize goals, actions, and objectives for the updated plan. Section 3 also combined information from both counties. It was minimally updated, focusing on clarification of existing plans, hazard mitigation implementation at the local level, and other recommendations for improvement. Section 4 received the most significant changes from the planning committee. Though the mitigation strategy and overarching goals did not change significantly, the objectives and actions were reassessed and revised in order to accommodate both counties and their diverse jurisdictions. Each objective and action was discussed at length during committee meetings, with discussion focused on the implementation, sufficiency, and applicability of each objective and action. A summary of the discussion concerning objectives and actions is located in Section 4. Because of the new nature of this combined plan, objectives and actions were significantly altered to encourage further mitigation planning in the aftermath of significant mitigation actions following the Joplin tornado in 2011. Many mitigation actions were completed following this disaster and jurisdictions in the region continue to focus on infrastructure changes to mitigate future disasters. Additionally, in order to ensure the viability and use of this plan, the committee focused on plan maintenance and implementation. After significant discussion, the committee chose to assess the Jasper-Newton Bi-county Hazard Mitigation Plan on an annual basis using a committee-created assessment worksheet. Annual assessments will be conducted by each county's Emergency Management Director (EMD) and open to the public as part of a regular commission meeting. Press releases in local newspapers will be used to encourage public participation in the assessment process. Plan copies will be publicly accessible in each local jurisdiction for review and comment by county citizens. Additionally, the EMD will present their findings to the County Commission for official approval of the plan review.

In September 2015, the general public, surrounding communities, and local/regional agencies were invited to review the Jasper-Newton Bi-County Natural Hazard Mitigation Plan draft. The draft was made available in print form at the office of the Harry S Truman Coordinating Council as well as online through the HSTCC website (<http://www.hstcc.org>). Invitations were sent via mail, email, social media, and print media. Documentation is provided in Appendix B.

<i>Table C</i>	<i>Summary of Update Review and Analysis by Plan Section</i>
Plan Section	Update Review and Analysis
Introduction	<ul style="list-style-type: none"> • Order of contents revised • Executive Summary revised, Prerequisites added, tables added for clarity • Planning process rewritten to include update process information
Section 1	<ul style="list-style-type: none"> • Demographic changes made utilizing Census 2010 information and ACS data. • Updates of critical response and other service providers and addresses were included.
Section 2	<ul style="list-style-type: none"> • Potential hazards revisited; No new hazards added. • Discussion of Dam Failure expanded. • Tornadoes were extracted from inclusion with Thunderstorms, Hail, and High Winds as a separately profiled hazard. • Climactic information updated. • Discussion of each hazard's impact revised to include jurisdiction-specific information where applicable. (Flood, Dam Failure, etc.) • County-wide vulnerability assessments revised using HAZUS data and the Missouri Structures project as well as local information from the county assessor's office.
Section 3	<ul style="list-style-type: none"> • Municipal Policies and Development Trends revisited and expanded with jurisdiction-specific information. • Tables revised for added clarification.
Section 4	<ul style="list-style-type: none"> • 2010 mitigation actions reviewed by committee for maintenance, revision, and/or elimination. • Goals, objectives, and actions revised to fit within a bi-county structure. • New mitigation actions were drafted based on committee input and discussion. • Monitoring and evaluation plan drafted and included.

Model Resolution for the Jasper-Newton Bi-County Hazard Mitigation Plan

The following resolution was adopted by _____ on _____, 2015.

Resolution No. _____

A RESOLUTION OF INTENT TO PARTICIPATE IN NATURAL HAZARD MITIGATION AND TO WORK TOWARD BECOMING A SAFER COMMUNITY.

WHEREAS, the _____ recognizes that no community is immune from natural hazard whether it be tornado/severe thunderstorm, flood, severe winter weather, drought, heatwave, earthquake, dam failure, or wildfire, and recognizes the importance of enhancing its ability to withstand natural hazards as well as the importance of reducing the human suffering, property damage, interruption of public services and economic losses caused by those hazards; and

WHEREAS, the _____ may have previously pursued measures such as building codes, fire codes, floodplain management regulations, zoning ordinance, and stormwater management regulations to minimize the impact of natural hazards; and

WHEREAS, the Federal Emergency Management Agency and the State Emergency Management Agency have developed a natural hazard mitigation program that assists communities in their efforts to become Disaster-Resistant Communities which are sustainable communities after a natural disaster that focus, not just on disaster relief, but also on recovery and reconstruction that brings the community to at least pre-disaster conditions in an accelerated, orderly, and preplanned manner; and

WHEREAS, by participating in the Natural Hazards Mitigation program, the _____ will be eligible to apply for post-disaster mitigation funds; and

WHEREAS, the _____ desires to commit to working with government partners and community partners to implement the Natural Hazards Mitigation Plan; and

WHEREAS, the _____ will implement pertinent precepts of the mitigation plan by incorporation into other community plans and mechanisms where appropriate; and

WHEREAS, the _____ will participate in the evaluation and review of the Plan after a disaster as well as complete mandated five-year update submitted to the State Emergency Management Agency and the Federal Emergency Management Agency for review and approval; and

NOW, THEREFORE, BE IT RESOLVED BY THE _____ OF THE _____ AS FOLLOWS:

The _____ hereby adopt the Jasper-Newton Bi-County Multi-Jurisdictional Natural Hazard Mitigation Plan attached hereto for the purpose of building a safer community by reducing natural hazard vulnerability.

Presiding Official Date

Secondary Official Date

Tertiary Official Date

Executive Summary

Following the severe weather, tornado, and flood disasters declared in the spring of 2002 (DR-141), Missouri's State Emergency Management Agency (SEMA) received flood buyout proposals from 23 communities across the state. Fortunately, they were able to help some of these communities with federal mitigation grant funding provided through the Federal Emergency Management Agency (FEMA). After November 1, 2004, communities like these are still eligible for federal disaster public assistance and individual assistance, but are not eligible for mitigation assistance unless they have an approved hazard mitigation plan on file. Under the rules for federal mitigation funding established by the Disaster Mitigation Act of 2000, local governments are required to have FEMA-approved hazard mitigation plans in place as a condition for receiving federal mitigation grant funding for any presidentially-declared disaster occurring after the 2004 deadline.

To accomplish the significant task of creating hazard mitigation plans for Missouri's 114 counties and nearly 1,000 municipalities, SEMA approached the Missouri Association of Councils of Government (MACOG) to meet the challenge of developing county and municipal plans throughout the state. The 19 regional planning commissions of MACOG provide an effective way for local governments to work together to share technical staff and address common problems in need of an area-wide approach. They also can effectively deliver programs that might be beyond the resources of an individual county or municipal government. The intent of regional planning commissions in Missouri is to be of service to their member counties and municipalities and to bring an organized approach to addressing a broad cross-section of area-wide issues. They are also available to assist their member entities in coordinating the needs of the area with state and federal agencies or with private companies or other public bodies.

The role of a regional planning commission varies across the state, depending upon the desires of the member counties and municipalities and their representatives. Nonetheless, the primary role of the regional planning commission is to provide a technical staff capable of providing sound advice to its membership and working for coordination of various planning and infrastructure needs among the various counties and municipalities, as appropriate.

In order to facilitate the five year update process, SEMA once again worked with MACOG to ensure a thorough, local process which reflects the needs of Jasper and Newton Counties and their interior jurisdictions. The Harry S. Truman Coordinating Council worked with Jasper County, Newton County, and their communities to facilitate the hazard mitigation update planning process as required by FEMA's FY2011 Hazard Mitigation Assistance Unified Guidance (<http://www.fema.gov/media-library/assets/documents/19022>). The Jasper-Newton Bi-County hazard mitigation plan was prepared by the staff of the HSTCC, which serves the southwest Missouri counties of Barton, Jasper, Newton, and McDonald.

Due to time and funding limitations, the plans developed by Missouri's regional planning commissions address only natural hazards. Man-made and/or technological hazards are not addressed in this plan, except in the context of cascading damages.

Citizens and public organizations have participated throughout the hazard mitigation planning process. This effort will be sustainable over the long-term because it enjoys grassroots support that stems from a sense of local and individual ownership. With the new bi-county Hazard Mitigation Plan in place, Jasper County, Newton County, and the jurisdictions within the counties will be eligible for future mitigation assistance from FEMA and will be able to more effectively carry out mitigation activities to lessen the adverse impact of future disasters within the county.

Assurance Statements of Compliance with Federal Regulations

This hazard mitigation plan complies with all applicable planning guidance from SEMA and FEMA; FEMA regulations, rules, guidelines, and checklists; Code of Federal Regulations; existing Federal and State laws; and such other reasonable criteria as the President/Governor, Federal/State congresses and SEMA/FEMA may establish in consultation with city/county governments while the plan is being developed.

This plan also meets the minimum planning requirements for all FEMA mitigation programs, such as the Flood Mitigation Assistance (FMA) Program, the Pre-Disaster Mitigation (PDM) Program, the Hazard Mitigation Grant Program (HMGP), and where appropriate, other FEMA mitigation-related programs such as the National Earthquake Hazards Reduction Program (NEHRP), the National Flood Insurance Program (NFIP), and the Community Rating System (CRS).

Basis for Planning Authority

The basis for authority to create a natural hazard mitigation plan lies in Section 322 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act), 42 U.S.C. 5165. This act was enacted under Section 104 of the Disaster Mitigation Act of 2000 (DMA 2000), P.L. 106-390. Section 104 is the legal basis for FEMA's Interim Final Rule for 44 CFR Parts 201 and 206, published in the Federal Register on February 26, 2002.

Acknowledgments and Special Thanks

Special thanks and acknowledgement go first to the Newton and Jasper County Commissioners. Marilyn Ruestman, Newton County Presiding Commissioner, John Bartosh, Jasper County Presiding Commissioner, Darieus Adams, Newton County Associate Commissioner, Alan Cook, Newton County District 1 Commissioner, Jim Honey, Newton County Associate Commissioner, and Jim Jackson, Newton County District 2 Commissioner, supported plan development from its inception. Further thanks must go to the Emergency Management Directors Keith Stammer and Gary Roark who helped tremendously with the details of the plan as well as Richard Schlottke, Carthage

GIS, who developed the required mapping and research in valuations. The Harry S. Truman Coordinating Council would also like to thank the Hazard Mitigation Committee, who spent many diligent hours working to research and compile information for this project. Members included area fire and emergency personnel, local community representatives, Jasper County representatives, Newton County representatives, and local school administration members.

Planning Process

Data for this plan was gathered in part through a series of public meetings held within Jasper and Newton Counties. The planning process for the Jasper-Newton Bi-County Hazard Mitigation Plan began during the spring of 2015, with support from the county commissions and introductory meetings. Individuals were invited to attend these meetings, with a special effort to invite participants representing various business and service interests throughout the included communities and counties. Participants were asked to identify critical infrastructure, rank the likelihood of disaster occurrence, perform a susceptibility analysis based on these factors, and determine appropriate mitigation strategies for each individual disaster. This data was recorded and assimilated into this plan by HSTCC staff.

Background and statistical data for this plan were collected from a variety of sources, including the United States Census Bureau, the United States Geological Society, the United States Army Corps of Engineers, the Missouri Department of Natural Resources, the Missouri Department of Conservation, the Center for Agricultural, Resources and Environmental Systems at the University of Missouri-Columbia, and the National Climatic Data Center. The Missouri State Hazard Mitigation Plan was last updated in 2013 and provided information regarding tornado, earthquake, and flood hazards affecting Jasper and Newton Counties. The last flood insurance study for Jasper County was conducted in 2012, while Newton County was completed in 2010. Flood hazard data from the 2013 HAZUS-MH loss run for Jasper and Newton counties was incorporated into the plan providing updated information on vulnerable structures, shelter requirements, and loss estimates. Other sources of information that include Comprehensive Land Use Plans, Zoning Ordinances, Building Codes, Storm Water Regulations, and Subdivision Regulations were reviewed for applicability to the plan and are summarized in Section 3 – Capability and Vulnerability Assessment.

Many of the following recommendations should not be considered final solutions, but rather short-term efforts that will ultimately have long-term strategic implications. To be sure, this process should be an ongoing effort that is periodically reviewed to ensure that information is still relevant and appropriate for the region. The goals and recommendations in the plan include broad implementation strategies, possible partners, and time frames for completion.

Participants and Jurisdictions Represented

The Harry S. Truman Coordinating Council, in conjunction with Jasper County, Newton County, SEMA, and FEMA, produced this document. Participants providing the data for

this project included the county commissions, emergency management directors, and interested members of the public from both counties. In addition, officials from each municipality, school district, and public university within the county were directly invited to participate in these meetings.

In accordance to Missouri’s “sunshine law” (RSMo 610.010, 610.020, 610.023, and 610.024), the public was notified each time the plan, or sections of the plan, was presented for review. Input from each public official (city and county) was solicited by mailing or emailing an explanatory letter and copy of the particular draft. These mailings were disbursed on a schedule that allowed officials sufficient time to review the draft prior to the next public County Commission or City Council meeting. Participation was solicited by letter from each of the following jurisdictions:

Jasper County:

- Airport Drive
- Alba
- Asbury
- Avilla
- Brooklyn Heights
- Carl Junction
- Carterville
- Carthage
- Carytown
- Duenweg
- Duquesne
- Fidelity
- Jasper
- Jasper County
- Joplin
- La Russell
- Neck City
- Oronogo
- Purcell
- Reeds
- Sarcoxie
- Waco
- Webb City
- Avilla R-XIII
- Carl Junction R-I
- Carthage R-IX
- Jasper Co. R-V
- Joplin Schools
- Missouri Southern State University
- Sarcoxie R-II
- Webb City R-VII

Newton County:

- Cliff Village
- Dennis Acres
- Diamond
- Fairview
- Granby
- Grand Falls Plaza
- Leawood
- Loma Linda
- Neosho
- Newton County
- Newtonia
- Redings Mill
- Ritchey
- Saginaw
- Seneca
- Shoal Creek Drive
- Shoal Creek Estates
- Stark City
- Stella
- Wentworth
- Crowder College
- Diamond R-IV
- East Newton Co. R-VI
- Neosho R-V
- Seneca R-VII
- Westview C-6
- Joplin Schools

Each jurisdiction was encouraged to send both elected and citizen representatives as well as county, state, and federal agencies and local businesses with an interest in contributing to the planning process. Input from the general public was solicited through reminders at public gatherings. Likewise, local utility companies, emergency response organizations, and other interested parties were invited to attend plan development meetings. Beginning in September 2015, public participation and draft review was encouraged through a press release in eleven local newspapers: *Carl Junction Standard*, *Carthage Press*, *Jasper County Citizen*, *Joplin Globe*, *Joplin Independent*, *Neosho Daily News*, *Neosho Post*, *Newton County News*, *Sarcoxie Record*, *Seneca New Dispatch*, and the *Webb City Sentinel*, which collectively serve the two-county region. Social media was also utilized via the HSTCC Facebook account. Surrounding jurisdictions were invited to review the county's plan draft via the HSTCC website which also provided a link to email-based comments. Sample letters, social media, and press releases are included at the end of this document as part of *Appendix B: Documentation of Public Participation*. Numerous citizens, public organizations, and elected officials have participated in this process. Implementation, monitoring, and evaluation will be sustainable over the long-term because it enjoys a grassroots support that stems from a sense of county.

Time Frame for Preparation

The data and results in this plan represent many months of effort. County officials were contacted in the early part of 2015 and plans were made regarding how and when to gather the necessary information for the formation of this plan. A series of meetings were held from March to July to gather public input. A draft of this plan was submitted to SEMA on November 1, 2015 for review and comment.

Section 1- Community Profiles

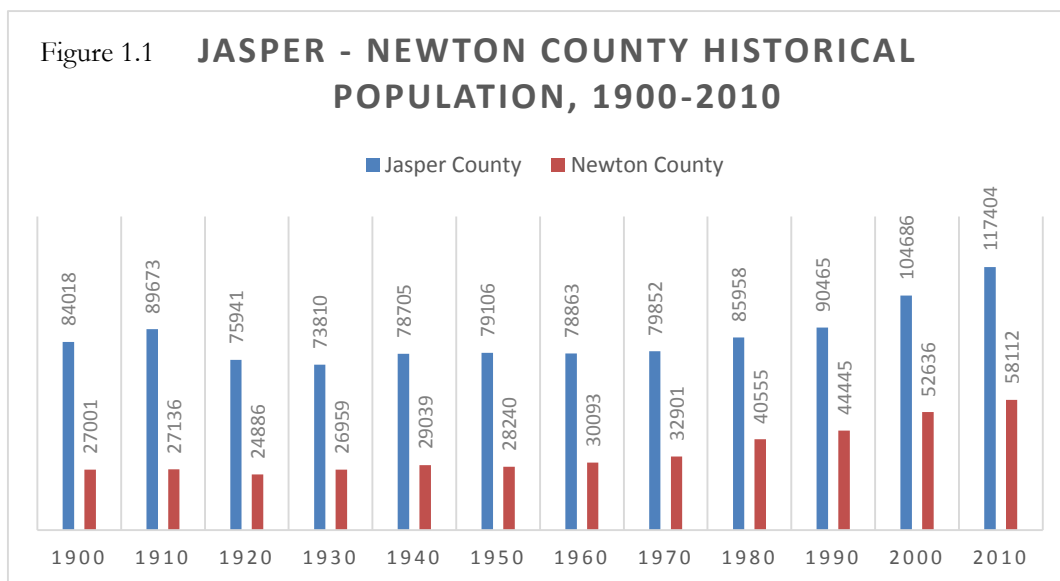
Origins of Jasper County and Newton County

Jasper County and Newton County were collectively established in 1838 when a reorganization of the territory prompted the splitting of the larger Barry County into four separate areas: Jasper, Newton, Barry, and Dade. The four regions remained tied together until 1841 when the Missouri Legislature passed a bill separating the four into independent counties. Jasper and Newton Counties were thus established as independent entities and named after heroes from the Revolutionary War. Carthage was adopted as Jasper County's county seat while Neosho was adopted for Newton County.

Soon after the counties' inception, the Civil War brought turmoil and division to the counties. There were several skirmishes in the area. After the Civil War, development began to flow into both counties when the Atlantic and Pacific Railroad (now the Burlington Northern Sante Fe – BNSF Railroad) brought a continental connection to the region. Other railroads subsequently entered the counties, and development and business has followed national and global trends ever since.

Historical Population Data

Over the past century, the population of both Jasper and Newton counties has steadily increased, with significant growth taking place from 1980 – 2010 (Figure 1.1).¹ Since 1900, the population of Jasper County has increased 139.74% while Newton County's population increased 215%, more than doubling its size. Like the counties themselves, most jurisdictions within the counties have also seen significant growth. Fourteen of the counties' villages and cities have experienced population decreases, all locations with less than 1,000 people (Tables 1.1 and 1.2).



¹ <http://www.census.gov/population/cencounts/mo190090.txt>

Table 1.1
Jasper County Community-Level Population

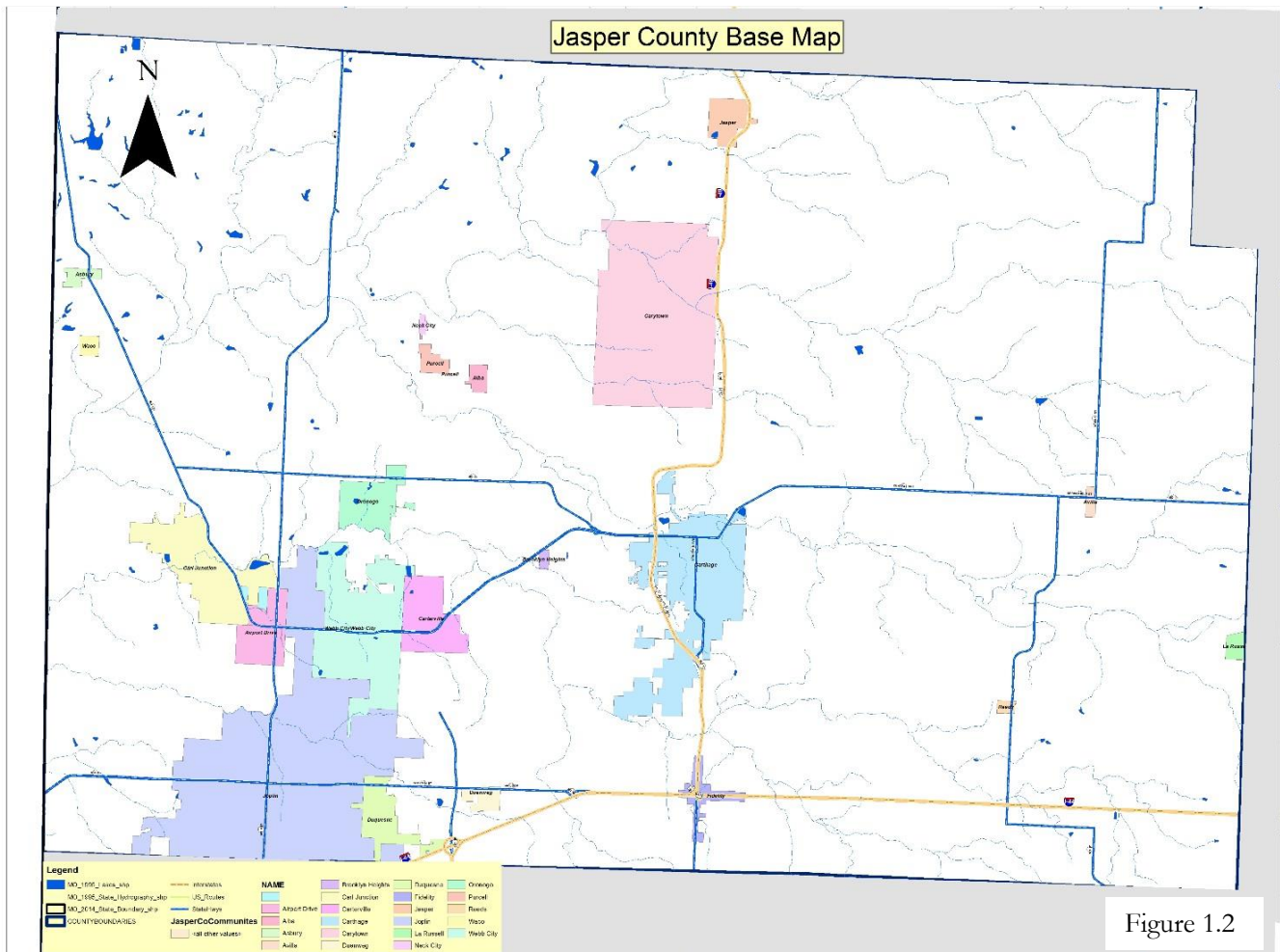
Community	1980	1990	2000	2010	Percentage change (2000-2010)
Airport Drive	702	818	622	698	+12.2%
Alba	474	465	588	555	-5.6%
Asbury	210	220	218	207	-5.0%
Avilla	151	99	137	126	-8.0%
Brooklyn Heights	126	116	125	100	-20.0%
Carl Junction	2,937	4,123	5,294	7,445	+40.6%
Cartersville	1,973	2,013	1,850	1,891	+2.2%
Carthage	11,104	10,747	12,668	14,502	+14.5%
Carytown	150	149	217	271	+24.9%
Cliff Village	24	19	33	40	+21.2%
Dennis Acres	56	157	68	76	+11.8%
Diamond	766	775	808	902	+11.6%
Duenweg	703	940	1,034	1,121	+8.4%
Duquesne	1,252	1,229	1,640	1,763	+7.5%
Fidelity	274	235	252	257	+2.0%
Jasper	1,012	994	1,012	931	-8.0%
Joplin	39,126	40,961	45,504	50,150	+10.2%
La Russell	126	114	138	114	-17.4%
Neck City	151	132	119	186	+56.3%
Oronogo	525	595	976	2,381	+144.0%
Purcell	322	354	357	408	14.3%
Reeds	105	88	103	95	-7.8%
Sarcoxi	1,381	1,330	1,354	1,341	-1.0%
Waco	129	86	86	87	+1.2%
Webb City	7,309	7,449	9,811	10,996	+12.1%

Table 1.2
Newton County Community-Level Population

Community	1980	1990	2000	2010	Percentage change 2000-2010
Cliff Village	24	19	33	40	+21.2%
Dennis Acres	56	157	68	76	+11.8%
Diamond	766	775	808	902	+11.6%
Fairview	282	298	395	383	-3.0%
Granby	1,678	1,908	2,121	2,134	+0.6%
Grand Falls Plaza	N/A	N/A	104	114	+9.6%
Leawood	631	736	904	682	-24.6%
Loma Linda	N/A	N/A	507	725	+43.0%
Neosho	9,493	9,254	10,505	11,835	+12.7%
Newtonia	224	204	231	199	-13.9%
Redings Mill	222	204	159	151	-5.0%
Ritchey	126	62	76	82	+7.9%
Saginaw	293	384	276	297	+7.6%
Seneca	1,853	1,885	2,135	2,336	+9.4%
Shoal Creek Drive	244	509	346	337	-2.6%
Shoal Creek Estates	89	21	51	96	+88.2%
Stark City	132	127	156	139	-10.9%
Stella	230	132	178	158	-11.2%
Wentworth	118	138	141	151	+7.1%

Geography, Geology, and Climate

Jasper County encompasses 641 square miles while Newton County encompasses 626 square miles. Both counties lie east of the Kansas border in the southwest corner of the state. Figures 1.2 and 1.3 provide the base maps for each county, including cities, rivers, and major transportation corridors. (Larger versions of maps are available in Appendix C.)





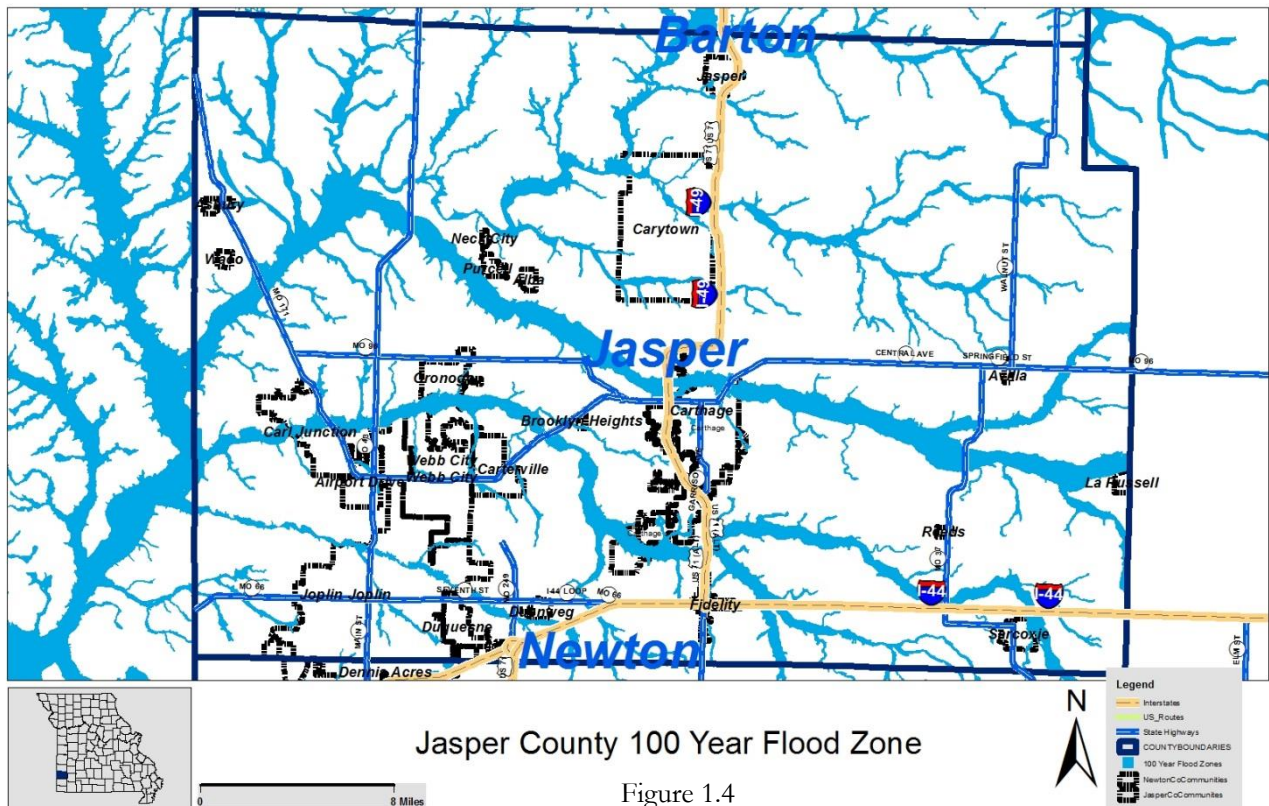
Jasper County and Newton County each have a warm humid temperate climate with hot summers and no dry season. In Jasper County, the average winter temperature is 35.2 degrees. The lowest temperature ever recorded is -15 degrees which was reported in Joplin in 1989. January is the coolest month on average. The average summer temperature is 77.6 degrees, and July is the hottest month on average. The highest temperature ever recorded in Jasper County was 115 degrees in 1954.

In Newton County, the average winter temperature is 35.2 degrees. The lowest temperature ever recorded is -31 degrees which was reported in Neosho in 1930. January is the coolest month on average. The average summer temperature is 80.04 degrees, and July is the hottest month on average. The highest temperature ever recorded in Newton County was 112 degrees in 1954 in Neosho. The annual average temperature is 57° in Jasper County and 57.2° in Newton County.

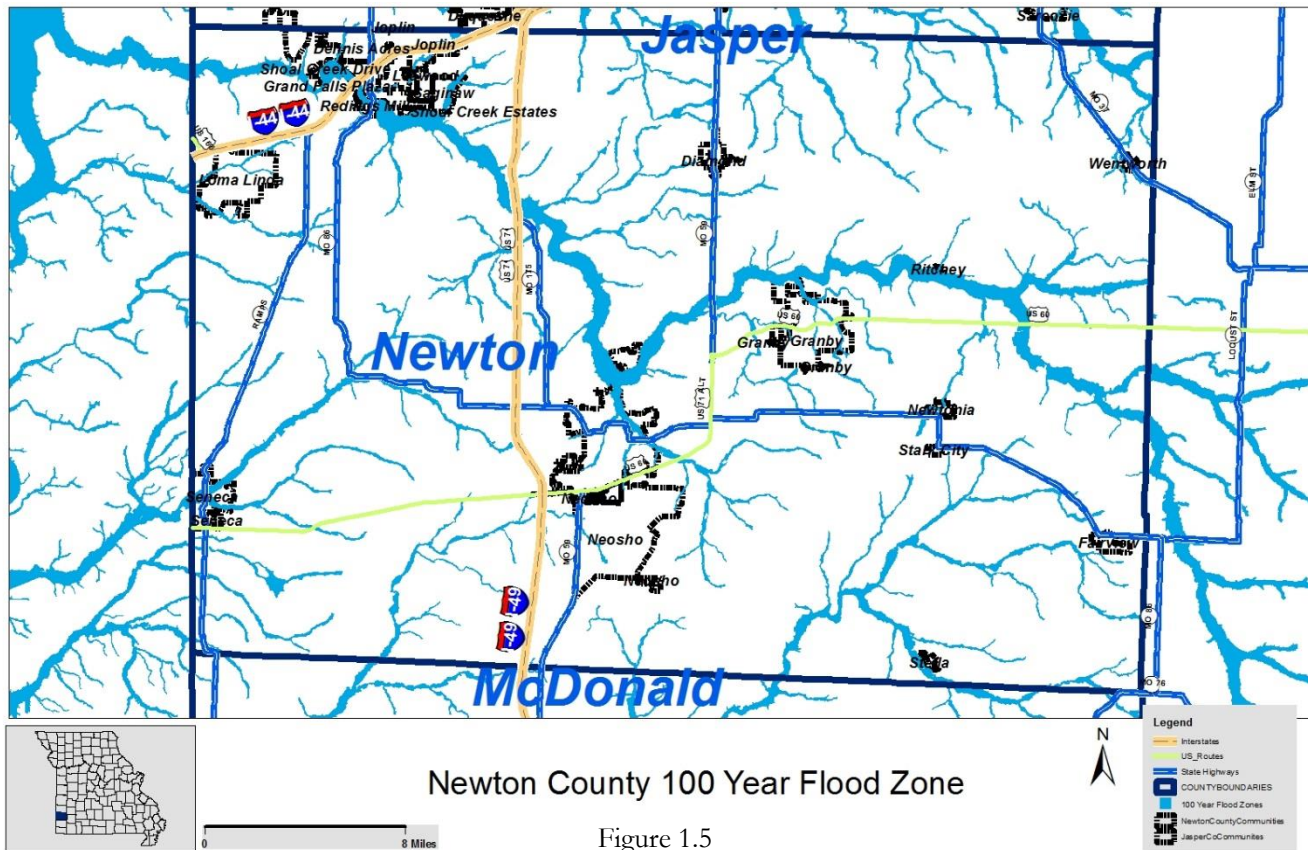
Annual precipitation averages 46.38 inches in Jasper County and 45.54 inches in Newton County. Seventy percent of the rainfall usually falls between April and October, with May averaging the most precipitation in each county. Thunderstorms occur approximately 52 days annually in both counties. Damaging tornadoes and thunderstorms occur locally and are usually

short in duration. Hailstorms also occur occasionally during the summer. Snowfall averages 10.11 inches in Jasper County and 10.2 inches in Newton County. The prevailing wind is from the south, and the average wind speed is 20.38 miles per hour in Jasper County but only 16.82 miles per hour in Newton County.²

Jasper County has two major floodplains while Newton County has one major floodplain (Figures 1.4 and 1.5). These floodplains are drained by two rivers and their associated tributaries: the Spring River and Shoal Creek, each flowing largely from northwest to southeast. Many smaller streams and tributaries drain into the two rivers.



² National Weather Service (<http://w2.weather.gov/climate/xmacis.php?wfo=sgf>); <http://www.usa.com/jasper-county-mo-weather.htm>; <http://www.usa.com/newton-county-mo-weather.htm>



Form of Government

Both Jasper County and Newton County functions through their County Commissions, three-member boards with final authority. Jasper County operates as a first-class county, while Newton County operates as a second-class county. Both counties can administer county structures, infrastructure, and finances. In addition, they also have the authority to administer a master plan, zoning codes, subdivision regulations, floodplain and stormwater regulations, but has no authority over building regulations. Jasper County's county seat is located in Carthage, while Newton County's county seat is located in Neosho. The Harry S. Truman Coordinating Council (HSTCC) is the regional government entity that helps member communities with support related activities to facilitate community goals and projects through state and federal funding programs. The incorporated municipalities in each county have autonomy from county regulation and conduct their own business on varying scales and through varying structures.

Media Relations

Both Jasper and Newton counties support a variety of media outlets which can be used to supply information to the public concerning local disasters as well as local planning issues. Twelve newspapers service the two-county region:

- Carl Junction Standard
- Carthage Press
- Jasper County Citizen
- Joplin Globe
- Joplin Independent
- Missouri Southern State University's Chart
- Neosho Daily News
- Neosho Post
- Newton County News
- Sarcoxie Record
- Seneca New Dispatch
- Webb City Sentinel

Numerous radio stations provide local coverage in Jasper and Newton Counties. Table 1.3 lists those stations and their location of origin. Additional radio stations available in the region originate from other counties in Missouri as well as from Kansas and Arkansas.

Four public television stations located in Jasper and Newton County service the immediate region. The City of Joplin

is home to KODE-TV Channel 12, KOZJ-TV Channel 26, KFJX-TV Channel 15, and KSN-TV Channel 16. The City of Neosho also supports a local station, KCL-TV Channel 332. One additional public station from Pittsburgh, Kansas, KOAM-TV, also provides residents with news and weather updates.

Radio Station	City of Origin	County
KW XD 103.5 FM	Asbury	Jasper
KDMO 1490 AM	Carthage	Jasper
KMXL 95.1 FM	Carthage	Jasper
KIXQ 102.5 FM	Joplin	Jasper
KOBC 90.7 FM	Joplin	Jasper
KOCR 1310 AM	Joplin	Jasper
KQYX 1450 AM	Joplin	Jasper
KSYN 92.5 FM	Joplin	Jasper
KWAS 1230 AM	Joplin	Jasper
KXMS 88.7 FM	Joplin	Jasper
WMBH 1560 AM	Joplin	Jasper
KBTN 1420 AM	Neosho	Newton
KBTN 99.7 FM	Neosho	Newton
KNEO 91.7 FM	Neosho	Newton
KJMK 93.9 FM	Webb City	Jasper
KKLL 1100 AM	Webb City	Jasper
KXDG 97.9 FM	Webb City	Jasper
KZRG 102.9	Joplin	Jasper/Newton

Demographic Information

The 2010 U.S. Census and American Community Survey (ACS) was used to construct a profile of the average Jasper and Newton County residents. The average age for a Jasper County resident is 35 years while Newton County's average is 39 years. The median household income for Jasper County from 2009 – 2013 was \$40,399 while Newton County's median household income for the same period was \$42,268. The average commute to work is 17.8 minutes for individuals over 16 years of age living in Jasper County, while Newton County is slightly higher at 21.8 minutes.

Age Cohort	Jasper County		Newton County	
	Population	Percent	Population	Percent
Under 5 years old	8,962	7.6%	3,874	6.7%
5-9 years	8,577	7.3%	3,957	6.8%
10-14 years	7,953	6.8%	4,268	7.4%
15-19 years	8,267	7.0%	4,377	7.5%
20-24 years	8,710	7.4%	3,391	5.8%
25-29 years	8,400	7.2%	3,293	5.7%
30-34 years	7,743	6.6%	3,168	5.5%
35-39 years	7,374	6.3%	3,507	6.0%
40-44 years	7,063	6.0%	3,685	6.3%
45-49 years	7,803	6.6%	4,279	7.4%
50-54 years	7,943	6.8%	4,202	7.2%
55-59 years	6,931	5.9%	3,731	6.4%
60-64 years	5,964	5.1%	3,507	6.0%
65-69 years	4,671	4.0%	2,854	4.9%
70-74 years	3,665	3.1%	2,148	3.7%
75-79 years	2,949	2.5%	1,651	2.8%
80-84 years	2,290	2.0%	1,198	2.1%
85+ years	2,139	1.8%	1,006	1.7%

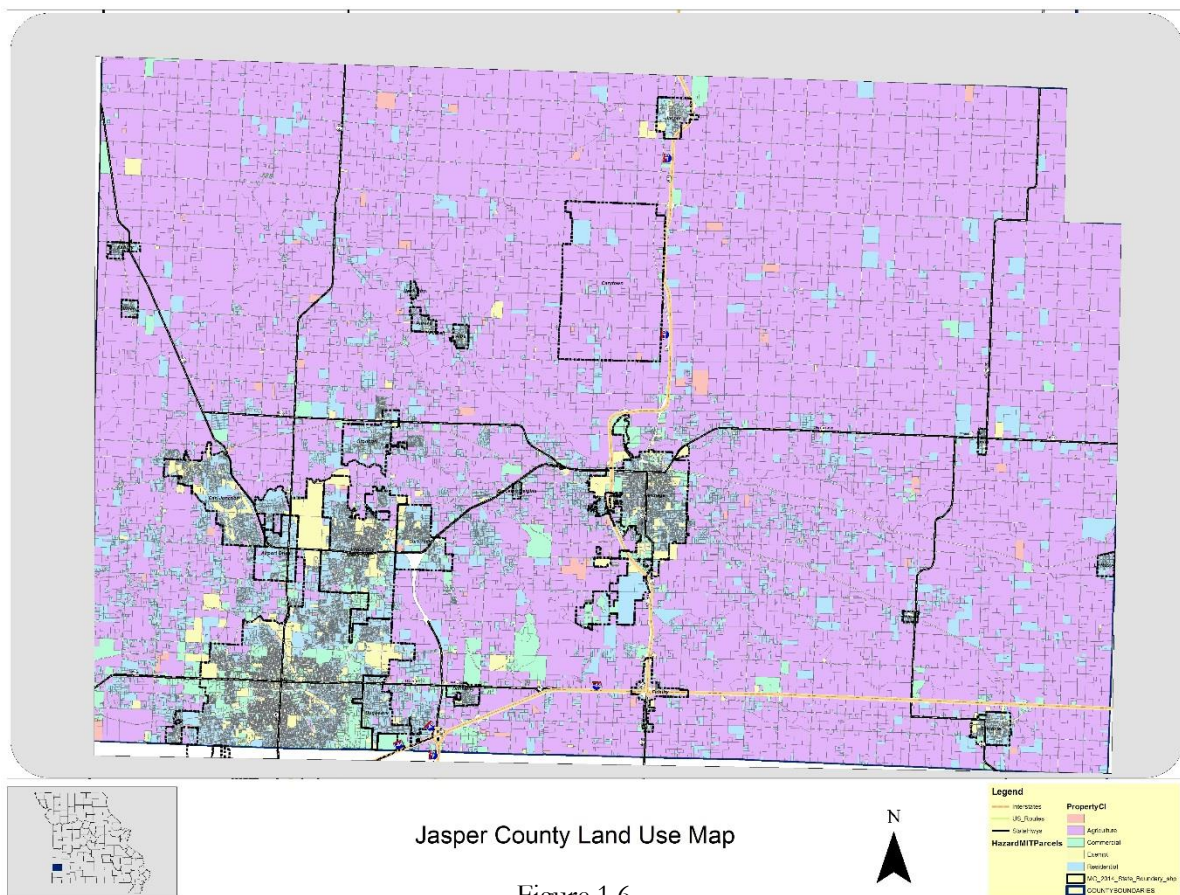
Persons under the age of five make up 7.6% and 6.7% of Jasper and Newton County's population, respectively. 28.7% are nineteen years old or younger in Jasper County, while 28.4% of Newton County residents fall into the same age category. 13.4% of Jasper County residents are sixty-five and older, while Newton County includes 15.2% in the same age bracket (Table 1.4). The graduation rate of students aged over 25 years is 84.3% in Jasper County and 85.4% in Newton County. 20.2% of Jasper County residents and 18.1% percent of Newton County residents over the age of 25 hold a bachelor's degree. Women make up 51% percent of the population in Jasper County and 50.4% in Newton County. The population of both counties is predominantly white, with 8.5% of Jasper County residents and 8.8% of Newton County residents being non-white races (Tables 1.5 and 1.6).

Race	Census			2010 Percentages
	1990	2000	2010	
White	87,093	96,880	103,596	88.2%
Black	1,153	1,391	2,267	1.9%
Am Indian/Alaska	2,219	1,420	1,778	1.5%
Asian/Pacific Islander	715	641	1,400	1.2%
Two or more races	N/A	2,493	3,735	3.2%

Race	Census			2010 Percentages
	1990	2000	2010	
White	43,000	49,095	51,914	89.3%
Black	174	282	438	0.7%
Am Indian/Alaska	1,271	1,155	1,339	2.3%
Asian/Pacific Islander	309	340	1,277	2.2%
Two or more races	N/A	1,206	1,787	3.1%

Land Use Information

Jasper County is 641.6 square miles, representing 638.49 square miles of land and 1.6 square miles of water. 246,707 acres of land are currently used for agriculture. The 2010 Census recorded 183.9 persons per square mile in Jasper County. Figure 1.6 depicts the land use by type in Jasper County.



Newton County is 626.2 square miles, representing 626 square miles of land and 0.2 square miles of water. Of the land mass, 247,762 acres are currently used for agriculture. The remainder of the land is forested, urbanized, or water (Figure 1.7).

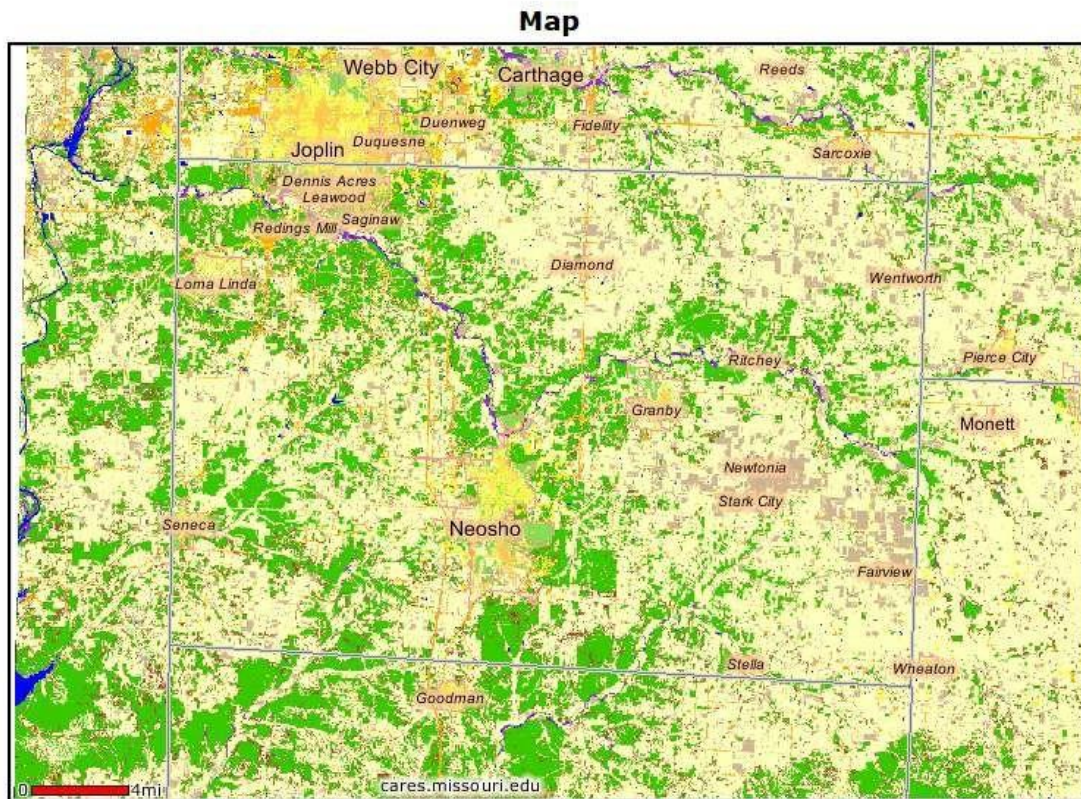


Figure 1.7



NFIP Participation

Both Jasper and Newton Counties participate in the National Flood Insurance Program. Jasper County has 121 policies while Newton County has 82 policies issued and in force. Independent jurisdictions also have separate NFIP policies. There is one property in Newton County that is validated, but none in Jasper County..³

- Airport Drive – 2 policies
- Carl Junction – 10 policies
- Carthage – 60 policies
- Duenweg – 5 policies
- Duquesne – 9 policies
- City of Joplin – 121 policies
- Jasper County – 58 policies
- Granby – 4 policies
- Grand Falls Plaza – 16 policies
- Loma Linda – 1 policy
- Neosho – 89 policies
- Newton County – 82 policies
- Oronogo – 8 policies
- Redings Mill – 1 policy
- Saginaw – 17 policies
- Sarcoxie – 5 policies
- Seneca – 90 policies
- Webb City – 34 policies

There are also a number of Severe Repetitive Loss Properties within Jasper and Newton County. Table 1.7 provides a summary of the SRL properties.

County	Jurisdiction	Mitigated/ Non-mitigated	Building Payments	Contents Payments	Total Payments	Average Payments	Losses	Properties
Jasper	Carthage	Non-mitigated	67,528.25	0.00	67,528.25	16,882.06	4	2
Jasper	Jasper County	Non-mitigated	51,338.05	11,962.14	63,300.19	9,042.88	7	3
Jasper	Joplin	Non-mitigated	85,937.89	17,693.55	103,631.44	10,363.14	10	5
Jasper	Sarcoxie	Non-mitigated	9,023.76	0.00	9,023.76	4,511.88	2	1
Newton	Grand Falls Plaza	Non-mitigated	18,366.04	0.00	18,366.04	9,183.02	2	1
Newton	Neosho	Non-mitigated	51,181.57	0.00	51,181.57	12,795.39	4	1
Newton	Newton County	Non-mitigated	177,220.73	37,658.01	214,878.74	23,875.42	9	4
Newton	Newton County	Mitigated	164,193.34	22,249.30	186,442.64	31,073.77	6	2
Newton	Saginaw	Non-mitigated	1,987.04	376.75	2,363.79	1,181.90	2	1

³ FY15 FMA SRL (Severe Repetitive Loss) List for MO Validated – Jasper and Newton Counties

Endangered Species, Historic Properties and Districts, and Archaeological Sites

Jasper and Newton Counties have a number of endangered and threatened species, both animal and plant, which reside within their borders. Endangered species include the Gray Bat (*Myotis grisescens*), Indiana Bat (*Myotis sodalis*), and Running Buffalo Clover (*Trifolium stoloniferum*). These species should be protected from habitat infringement or other risk to existence. Threatened species include the Northern long-eared bat (*Myotis septentrionalis*), Neosho madtom (*Noturus placidus*), Ozark cavefish (*Amblyopsis rosae*), Geocarpa (*Geocarpa minimum*), and the Western Prairie Fringed Orchid (*Platanthera praeclara*).

The National Register of Historic Places includes thirty-three Jasper County locations and eleven in Newton County. Tables 1.8 and 1.9 summarize these locations and their dates of addition to the register.

Property	Date listed	Location	City
66 Drive-In	4/2/2003	17231 Old 66 Boulevard	Carthage
Carthage Courthouse Square Historic District	5/15/1980	Bounded by E. Central Ave, S. Maple, Lincoln, and W. 5 th streets	Carthage
Carthage South Historic District	5/6/1982	City limits	Carthage
Cassill Place Historic District	1/2/1986	First half-block of W. Central east of Blanch St.	Carthage
Cave Spring School and Cemetery	7/17/2012	4323 Cty. Rd. 4	Sarcoxie
Colonial Apartments	8/14/2001	406 Walnut St.	Carthage
Elks Club Lodge No. 501	6/3/1985	318 – 320 W. 4 th St.	Joplin
Fifth and Main Historic District	7/5/2006	501 – 513 S. Main St.; 502 – 508 Virginia St.	Joplin
Fox Theater	7/30/1990	415 S. Main St.	Joplin
Gentry Apartments	8/8/2006	318 S. Wall St.	Joplin
Inter-State Grocer Company Building	10/24/2008	1027 – 1035 S. Main St.	Joplin
Jasper County Courthouse	2/8/1973	Courthouse Square	Carthage
Joplin and Wall Avenues Historic District	10/12/2010	Portions of S. Joplin and Wall Aves., W. First, Second, Third Sts.	Joplin
Joplin Carnegie Library	7/10/1979	9 th and Wall Sts.	Joplin
Joplin Connor Hotel (demolished)	2/28/1973	324 Main St.	Joplin
Joplin Downtown Historic District	7/16/2008	S. Main St., between E. 4 th and E. 6 th Sts.	Joplin
Joplin Furniture Company Building	8/7/2012	702 – 708 Main St.	Joplin
Joplin Supply Company	7/3/2007	228 S. Joplin Ave.	Joplin
Joplin Union Depot	3/14/1973	Broadway and Main St.	Joplin
Main and Eighth Streets Historic District	4/15/2011	Portions of the 800 and 900 block of S. Main St.	Joplin
Middle West Hotel	9/16/1982	1 S. Main St.	Webb City
Murphysburg Historic District	5/18/15	Roughly bounded by S. Sergeant, S. Pearl & S. Byers Aves., W. 1 st , W. 4 th , & W. 7 th Sts.	Joplin
Newman Brothers Building	7/23/1990	602 – 608 S. Main St.	Joplin
Olivia Apartments	6/20/2008	320 Moffet Ave.	Joplin

JASPER-NEWTON BI-COUNTY NATURAL HAZARD MITIGATION PLAN

Phelps Country Estate	8/29/1983	RR 1, Newcastle Rd. just west of CR 100	Carthage
Rains Brothers Building (destroyed by fire in 2012)	7/19/1990	906 – 908 S. Main St.	Joplin
Ridgway Apartments	8/8/2006	402 and 404 S. Byers Ave.	Joplin
St. Louis and San Francisco Railroad Building	10/22/2002	605 Main St.	Joplin
St. Peter the Apostle Catholic Church and Rectory	6/28/1991	812 Pearl St.	Joplin
Sarcoie Public Square Historic District	10/20/2014	Along 5 th , 6 th , Center, and Cross Sts.	Sarcoie
Scottish Rite Cathedral	6/21/1990	505 Byers Ave.	Joplin
South Main Street Historic District	10/12/2010	Western side of S. Main St., between W. First and W. Second Sts.	Joplin
Downtown Webb City Historic District	7/18/2014	Roughly N. & S. Main, E. & W. Broadway, Daugherty, E. Church, N. Tom, N. Liberty, N. & S. Webb	Webb City

Table 1.9 National Register of Historic Places – Newton County			
Property	Date listed	Location	City
First Battle of Newtonia Historic District	12/23/2004	Junction of Routes 86 and O	Newtonia
Bonnie & Clyde Garage Apartment	5/15/2009	3 miles south of Monument	Joplin
George Washington Carver National Monument	10/15/1966	3 miles south of Monument	Diamond
Jolly Mill	10/13/1983	Southwest of Pierce City	Pierce City
Lentz-Carter Merchandise Store	8/19/2008	744 Ozark St.	Stella
Neosho Commercial Historic District	8/12/1993	Along sections of Main, Spring, Washington, and Wood Sts.; also 114, 116, 118-120, 120, and 124 – 126 S. Wood St.	Neosho
Neosho High School	8/30/2002	W. McCord and N. Wood Sts.	Neosho
Neosho Wholesale Grocery Company	4/16/2013	224 N. Washington St.	Neosho
Matthew H. Ritchey House	12/5/1978	Mill St.	Newtonia
Second Baptist Church	1/4/1996	430 W. Grant St.	Neosho
Second Battle of Newtonia Site	12/23/2004	Roughly an area northwest, southwest, and southeast of the junction of Routes 86 and O	Newtonia

To date, the Archaeological Survey of Missouri had documented 37,759 sites in Missouri, 213 of which are located in Jasper County and 283 of which are located in Newton County. The exact locations cannot be shown in order to protect the individual resources.

Economy, Employment, and Industry

Labor Force, Unemployment, and Commuting Patterns

The 2013 American Community Survey reported that Jasper County has a potential labor force (defined as the population over the age of 16) of 58,801 persons, 66.1% of the total population, while Newton County has a potential labor force of 28,061, or 61.6% of the total population. Female workers account for 27,774 of the civilian labor force in Jasper County and 13,067 in Newton County. Tables 1.10 and 1.11 provide an employment breakdown by industry. Education, health, and social services dominate the local economy with 20.6% of the workforce in Jasper County and 23.1% in Newton County. Manufacturing holds a large portion of the workforce with 17% (Jasper) and 16.6% (Newton), and retail trade is the third highest employment category at 15.4% (Jasper) and 12.1% (Newton).

Table 1.10 Jasper County Employment, 2013 ⁴		
Economic Indicators	Number	Percent
Civilian labor force	58,714	66.0
Employed	54,386	61.1
Unemployed	4,328	4.9
Per capita income (dollars), 2009 - 2013	21,124	N/A
Individuals below poverty level, 2009 - 2013	N/A	18.4
Employment by industry		
Agriculture, forestry, fishing and hunting, and mining	540	1.0
Arts, entertainment, recreation, accommodation, and food services	4,648	8.7
Construction	2,800	5.2
Educational, health and social services	11,078	20.6
Finance, insurance, real estate, and rental and leasing	2,892	5.4
Information	1,218	2.3
Manufacturing	9,142	17
Other services (except public administration)	3,027	5.6
Professional, scientific, management, administrative, and waste management services	4,567	8.5
Public Administration	1,044	1.9
Retail trade	8,295	15.4
Transportation and warehousing, and utilities	2,829	5.3
Wholesale trade	1,658	3.1

⁴ <http://quickfacts.census.gov/qfd/states/29/29097.html>;
<http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkml>

Table 1.11 Newton County Employment, 2013⁵

Economic Indicators	Number	Percent
Civilian labor force	28,022	61.5
Employed	25,995	57
Unemployed	2,027	4.4
Per capita income (dollars)	22,341	N/A
Individuals below poverty level	N/A	15.0
Employment by industry		
Agriculture, forestry, fishing and hunting, and mining	733	2.8
Arts, entertainment, recreation, accommodation, and food services	2,160	8.3
Construction	1,651	6.4
Educational, health and social services	6,011	23.1
Finance, insurance, real estate, and rental and leasing	871	3.4
Information	544	2.1
Manufacturing	4,304	16.6
Other services (except public administration)	1,137	4.4
Professional, scientific, management, administrative, and waste management services	2,066	7.9
Public Administration	1,024	3.9
Retail trade	3,158	12.1
Transportation and warehousing, and utilities	1,529	5.9
Wholesale trade	807	3.1

When compared with the state of Missouri as a whole, Jasper County has both a lower income and higher percentage of citizens in poverty in spite of the fact that unemployment remains slightly lower than the state percentages. Newton County also has a lower income, but a lower percentage of persons below the poverty line than the state average. Unemployment is also less than state average for 2013 for both counties. Table 1.12 summarizes income, poverty, and employment for Jasper County and Newton County as compared to the state.

Table 1.12 Income and Poverty in Jasper and Newton County, Missouri

	Jasper County	Newton County	Missouri
Per Capita Income, 2009-2013	\$21,124	\$22,341	\$25,649
Median Household Income, 2009-2013	\$40,399	\$42,268	\$47,380
Percent Below Poverty Level, 2009-2013	18.4%	15.0%	15.5%
Percent Unemployed Persons, May 2013	8.3%	7.2%	8.8%

⁵ <http://quickfacts.census.gov/qfd/states/29/29145.html> ;
<http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkml>

Existing Community Plans

Jasper and Newton counties are both proactive counties with jurisdictions who use planning to help encourage and manage growth. Both counties have their own Emergency Operations Plans (EOP) which establish policies and procedures to help save lives, minimize injuries, protect property, and preserve both government and economic activities essential to survival and recovery in the event of a disaster. Additionally, 11 cities in Jasper County and 4 cities in Newton County have developed and adopted Master Plans (see Community Profiles at the end of this section). Those cities without master plans rely on their county's EOP. EOPs are maintained by the county's Emergency Management Director, and are updated both annually and as necessary with the assistance of the Local Emergency Planning Committee (LEPC). Beyond the communities, a number of entities within the county have emergency operations plans, including each school district, Missouri Southern State University, Crowder College, hospitals, county Health Departments, and many large manufacturing industries.

Additional plans include the *City of Joplin Vision 2020*, JATSO Long Range Transportation Plan, *City of Neosho Park and Recreation Plan/Floodplain Buyout Plan*, and Neosho's *Project Impact*. Vision 2020 puts forth long-term goals for the City of Joplin, focusing on areas which will enhance vitality and livability of the city through economic development, arts and culture, downtown development, and other beneficial structures. JATSO is the long-range transportation plan for the Joplin metro area which seeks to direct and fund transportation needs in the future. The Neosho Floodplain Buyout Plan has purchased 125 properties to date in order to create a greenway to help contain the 50 year flood and eliminate repetitive damages by creating recreation areas in the floodplain. Finally, Neosho's Project Impact has worked to create a more disaster resistant community through participation in FEMA programs.

Jasper County has also developed a Comprehensive Economic Development Strategy (CEDS). The CEDS, which is reviewed annually, provides demographic, economic, and developmental analyses for the area, and serves to guide the long term growth of the region through consideration of infrastructure improvement and the preservation and development of qualified workers. Both Jasper and Newton counties are included in the Missouri Department of Transportation's State Transportation Improvement Plan (STIP). The STIP provides both short- and long-term planning for the surface transportation network.

Development Trends

The population of the two-county region has steadily grown over time. Only in the early part of the twentieth century did either county experience a dip in the population. Since the 1970 Census, both Jasper and Newton counties' populations have continued to grow. Jasper County has an average population growth of 10% each decade from 1970 – 2010. Newton County has an average population growth of 15.4% each decade for the same period. As seen in Table 1.1, most jurisdictions in both counties have followed the same pattern, although some smaller jurisdictions have seen a decrease in population. Both

counties are positioned to continue increased population growth as urbanization trends continue nationwide, and regional trade and industry sectors located in the region continue to grow. The City of Joplin which spans both counties continues to grow at a significant rate. As in most rapidly developing cities, traditional problems development such as urban sprawl and traffic congestion are something with which the city and counties must contend with. The existence of planning and zoning helps to effectively minimize the effects of rapid growth.

Identified Assets

This section provides a survey of existing assets such as infrastructures, critical facilities, employment centers, commercial centers, and recreation centers. Performing a routine inventory of these characteristics is a vital role in hazard mitigation planning.

Inventory of Infrastructure

Infrastructures include transportation, communications, water and sewer, electricity and natural gas, solid waste disposal, law enforcement, emergency medical services, fire protection, and emergency services.

Roadways

Roadways are the main source of transportation within the region that facilitates the movement of people and goods. The Missouri Department of Transportation (MoDOT) provides and maintains all federal and state roadways. The MoDOT Southwest District headquarters is located in Springfield and includes 21 counties, of which Jasper and Newton County are two. Jasper County has 1,255 total miles of roadway, 385 of which are maintained by MoDOT and 870 of which are maintained by the Jasper County Highway Department. Newton County has 1,264 total miles of roadway, 330 of which are maintained by MoDOT and 934 of which are maintained by the Newton County Highway Department. The remaining roadways are maintained as municipal streets by communities, townships, or county roads.

Jasper County and Newton County have two primary interstates that provide transportation corridors within the county and into the surrounding counties. Interstate 44 provides east-west access, while Interstate 49 provides north-south access in both counties. U.S. Highways 86 and 60 provides east-west access in Newton County as well. State Routes 43, 171, and 96, and 37 are also popular routes for regional and local collector access. Each county has a series of special road districts that are responsible for local transportation needs.

Railroads

Railroads exist in both Jasper and Newton counties. Trains predominantly carry freight on the Kansas City Southern, Union Pacific, Missouri Northern Arkansas, and Burlington Northern Santa Fe Railroad lines.

Airports

The Joplin Regional airport is the only local public airport in the region, serving both Jasper and Newton County. It is owned and operated by the City of Joplin, providing commercial, military, cargo, corporate, and general aviation needs of the region. The Joplin Regional Airport has a 6,500 linear foot runway.

Public Transportation

The Joplin Metro Area Public Transit System (MAPS) is a curb-to-curb, accessible public transportation system within the cities of Joplin, Webb City, Carterville, Carl Junction, and Duquesne. This system operates between 8am and 5pm, Monday through Friday. The Sunshine Lamp Trolley also provides public transportation within the city limits of Joplin.

OATS, Inc. is a publicly-funded, public transit system designed to meet the transportation needs of those who have little or no access to alternative means of travel. The OATS vehicles utilize a flexible schedule to meet the demands of its riders, regardless of age or disability. OATS operates in both Jasper and Newton County, running routes in the rural areas.

Telecommunications

The following list of communication facilities is not all-inclusive, but represents the major providers of the counties' communications infrastructure.

Telecommunication Service Providers:

AT&T
CenturyLink
Craw-Kan Telephone Cooperative
GTC Broadband
Multiple Cell Service Providers (Sprint, Verizon, AT&T, etc.)
SGO Broadband
Le-Ru Telephone Company

Cable / Satellite Television

AT&T U-verse
Cable One
Medicom
Multiple Satellite Service Providers (Dish Network, DirectTV, etc.)

Internet Service Providers

AT&T U-verse
Cable One
Carthage Water & Electric
CenturyLink
Craw-Kan
GTC Broadband
Le-Ru Telephone Company
Mediacom
Rural iNet
SGO Broadband
Stouger Communications
Suddenlink
Total Highspeed
Wyerless

Sewer and Water Facilities

Water and sewer facilities are provided through several districts in Jasper and Newton County. The counties themselves do not provide public water. Water service is provided by municipal provisions or via rural water districts. In addition, the households not served by a district or city may rely on private wells. Two primary rural water districts serve the area: Jasper County Public Water District No. 1 and Jasper County Public Water District No. 2. One rural water district, Newton County Water District #1, serves Newton County. Municipalities in both counties have civic water providers or utilize Missouri American Water for their needs.

Wastewater needs are serviced by either public sewer systems or individual septic tanks. Smaller communities within the county have relied on Community Development Block Grants (CDBG) and USDA-Rural Development to help fund wastewater infrastructure projects. The Missouri Department of Natural Resources (DNR) has also been a source of funding.

Electricity and Natural Gas

Service Providers:

Carthage LP Co.
 Empire District
 Empire Gas Inc.
 Missouri Gas Energy (MGE)
 New-Mac Electric
 Smallwood Gas
 Synergy Gas Co.

Solid Waste Disposal

The private waste haulers serving Jasper County and Newton County are listed below. Household Hazardous Waste collection are also completed as allowed by the Region M Solid Waste Management District.

Service Providers:

Allied Waste Services of Galena
 American Disposal Services
 Big John's Heavy Equip Inc.
 C & R Disposal
 City of Joplin Recycling Center
 Cupp's Trash Service
 GDSI
 Jasper County Sanitation Service
 Joplin Hauling
 Jordan Disposal Service LLC
 Reliable Roll-Offs
 Waste Corporation of Missouri Inc.

Law Enforcement

Jasper County has one Sheriff's Department and twelve local police departments. The Sheriff's Department operates out of Carthage, with satellite offices in Joplin and Airport Drive. Newton County also has one Sheriff's Department and five municipal police departments. The Missouri State Highway Patrol Troop D is stationed in Newton County. Table 1.13 provides information on each of the law enforcement agencies in Jasper and Newton counties.

Department	County	Station Location(s)	Vehicles	Personnel
Carl Junction Police Department	Jasper	Carl Junction	7	11
Carthage Police Department	Jasper	Carthage	25	45
Cartersville Police Department	Jasper	Cartersville	4	5
Diamond Police Department	Newton	Diamond	2	3
Duenweg Police Department	Jasper	Duenweg	3	4
Duquesne Police Department	Jasper	Duquesne	4	10
Granby Police Department	Newton	Granby	3	8
Jasper County Sheriff's Department	Jasper	Carthage, Airport Drive, Joplin	7	7
Jasper Police Department	Jasper	Jasper	3	4
Joplin Police Department	Jasper	Joplin (2)	100	111
Missouri Southern State University Police Department	Jasper	Joplin	3	11
Neosho Police Department	Newton	Neosho	16	21
Newton County Sheriff's Department	Newton	Neosho	52	31
Oronogo Metropolitan Police Department	Jasper	Oronogo	3	5
Purcell Police Department	Jasper	Purcell	No data	14
Sarcoxis Police Department	Jasper	Sarcoxis	2	9
Seneca Police Department	Newton	Seneca	6	5

Emergency Medical Services

Ambulance and emergency medical services in Jasper County are provided by Mercy EMS, Metro Emergency Transport Services (METS), Aero Med Express, and the Debra Royce Clinic. The Newton County Ambulance Service supports all emergency transport to medical facilities in Newton County. The Newton County First Responders Unit also provides emergency and medical response service in the area. Freeman Medical and St. John's MedCenter both provide emergency helicopter evacuation services for the region.

Fire Protection

There are numerous fire departments serving Jasper County and Newton County, Missouri. Jasper County supports eleven departments, while Newton County supports nine. The following provides a list of all departments located in the region.

- Avilla Fire Department
- Asbury Fire Protection

- Carl Junction Fire
- Carterville Fire District
- Carthage Fire
- Diamond Fire Protection
- Duenweg Volunteer Fire
- Fairview Fire Protection
- Granby Fire / East Newton
- Jasper Volunteer Fire
- Joplin Fire
- Neosho Fire Department / Neosho District
- Oronogo Volunteer Fire
- Redings Mill Fire Protection
- Sarcoxie Volunteer Fire
- Seneca Fire Department
- Seneca Rural Fire District
- Stark City Volunteer District
- Stella Rural Volunteer Fire
- Tri Cities Fire Protection
- Webb City Fire

Figure 1.8 shows the service areas for each district in Jasper County. Figure 1.9 shows the station locations for each district in Newton County

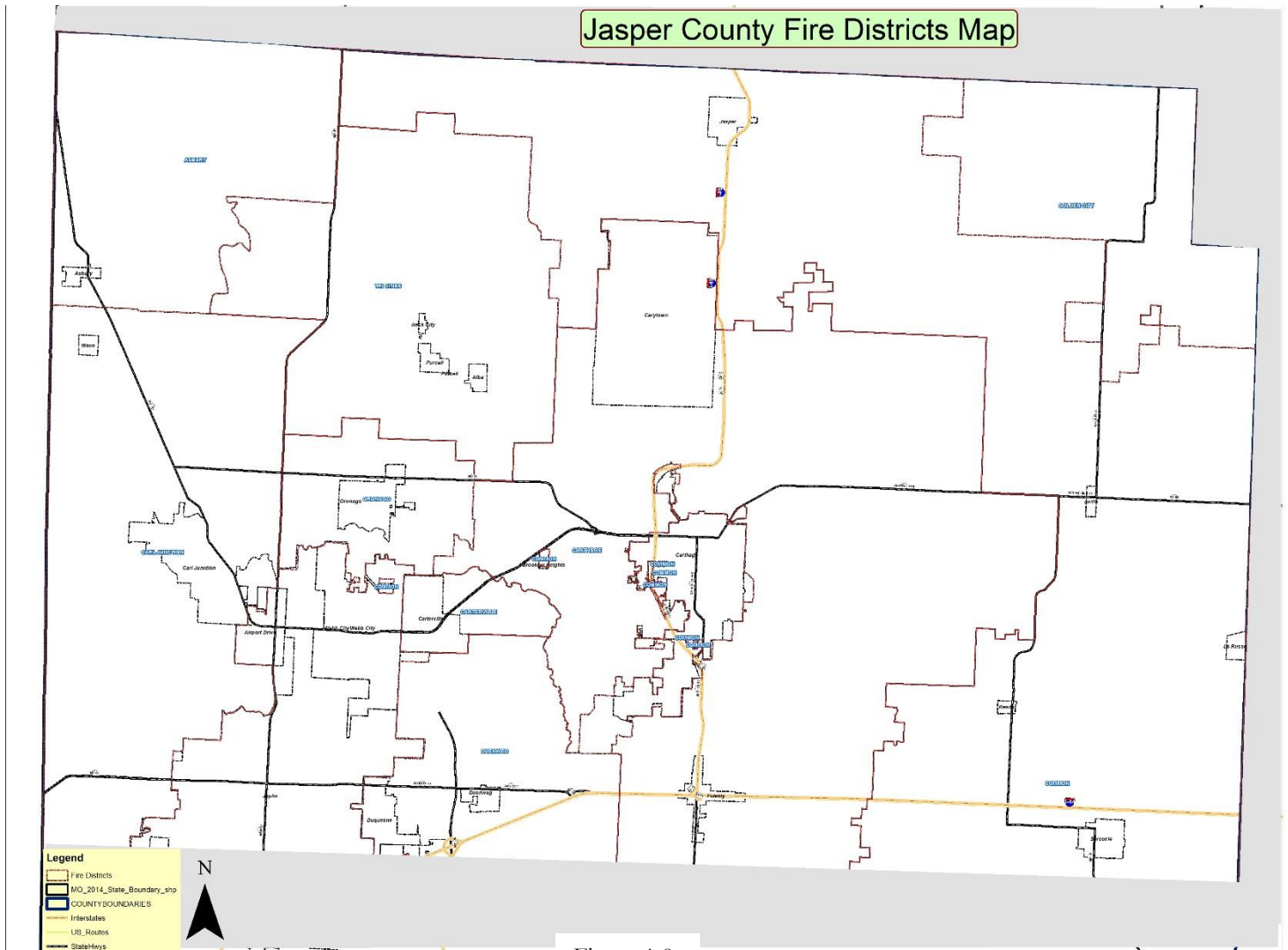
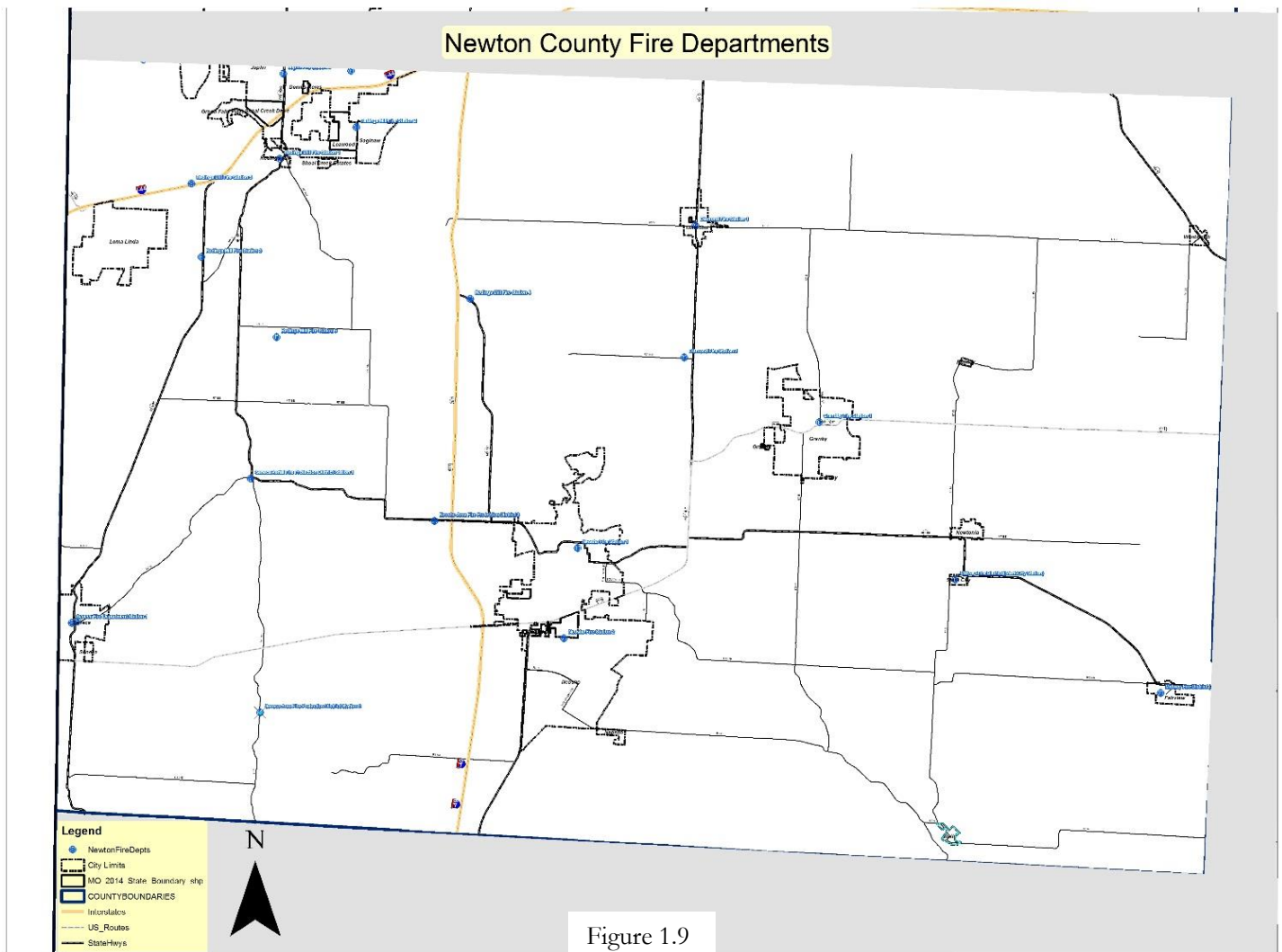


Figure 1.8

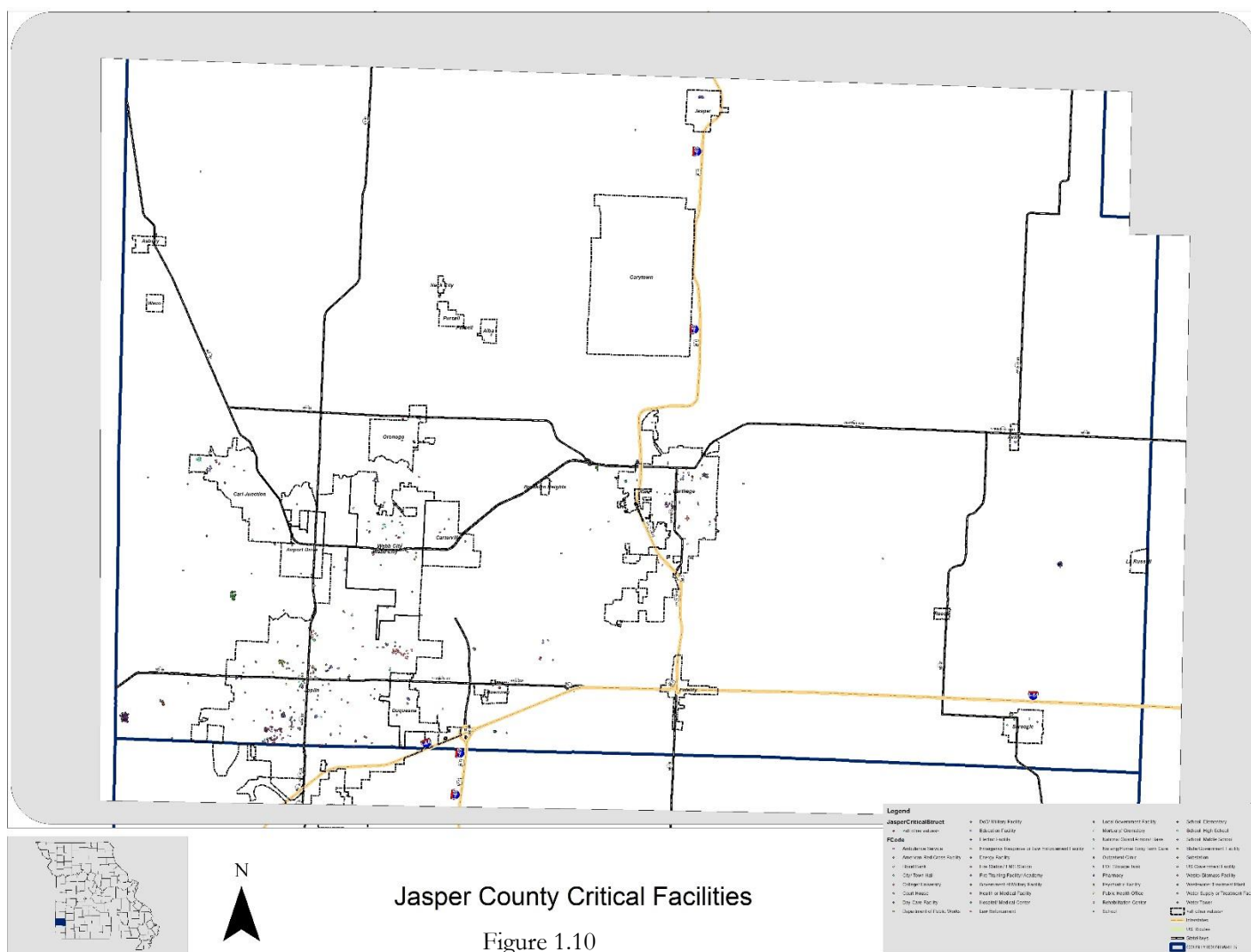


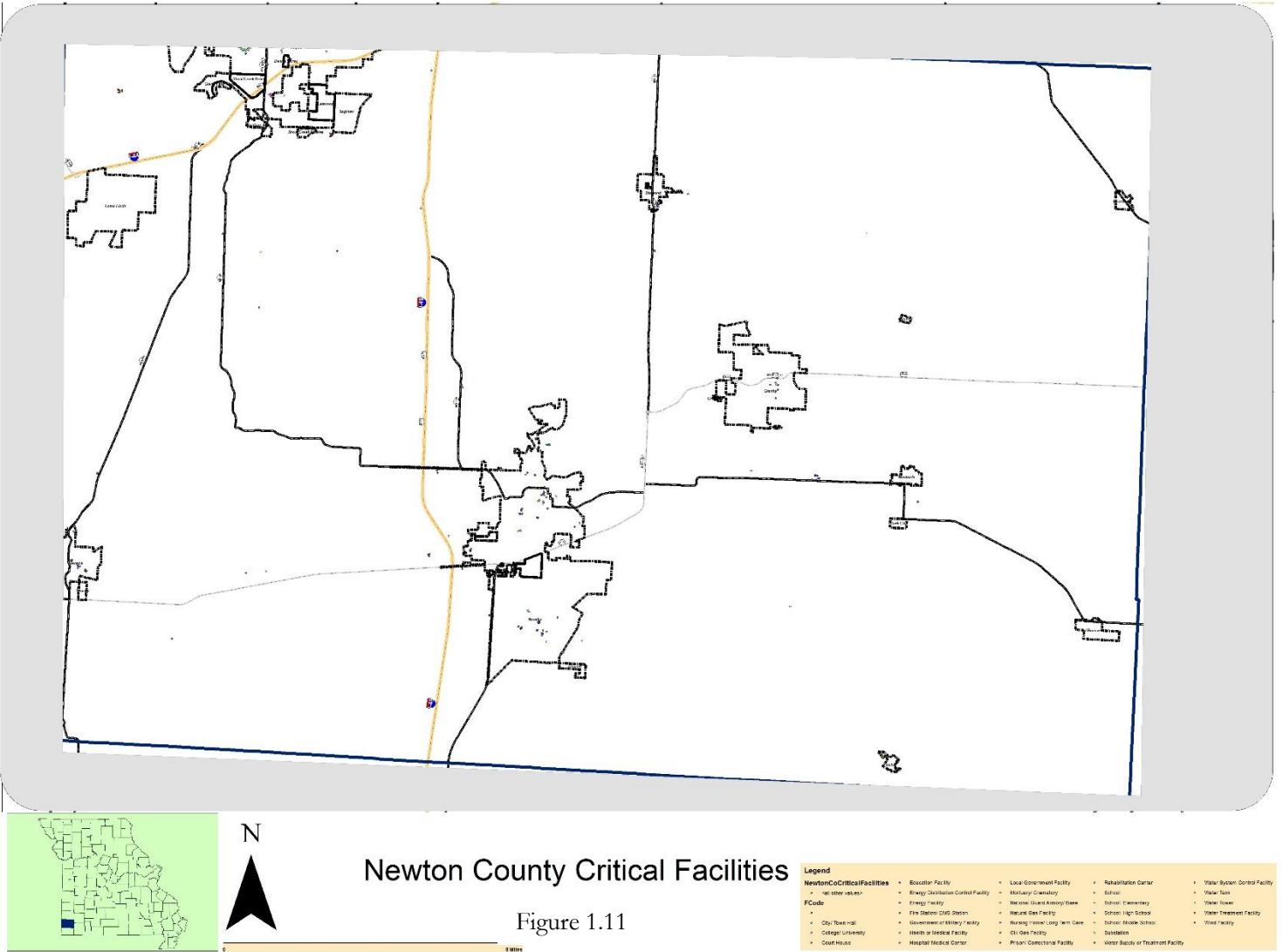
Emergency Services (911)

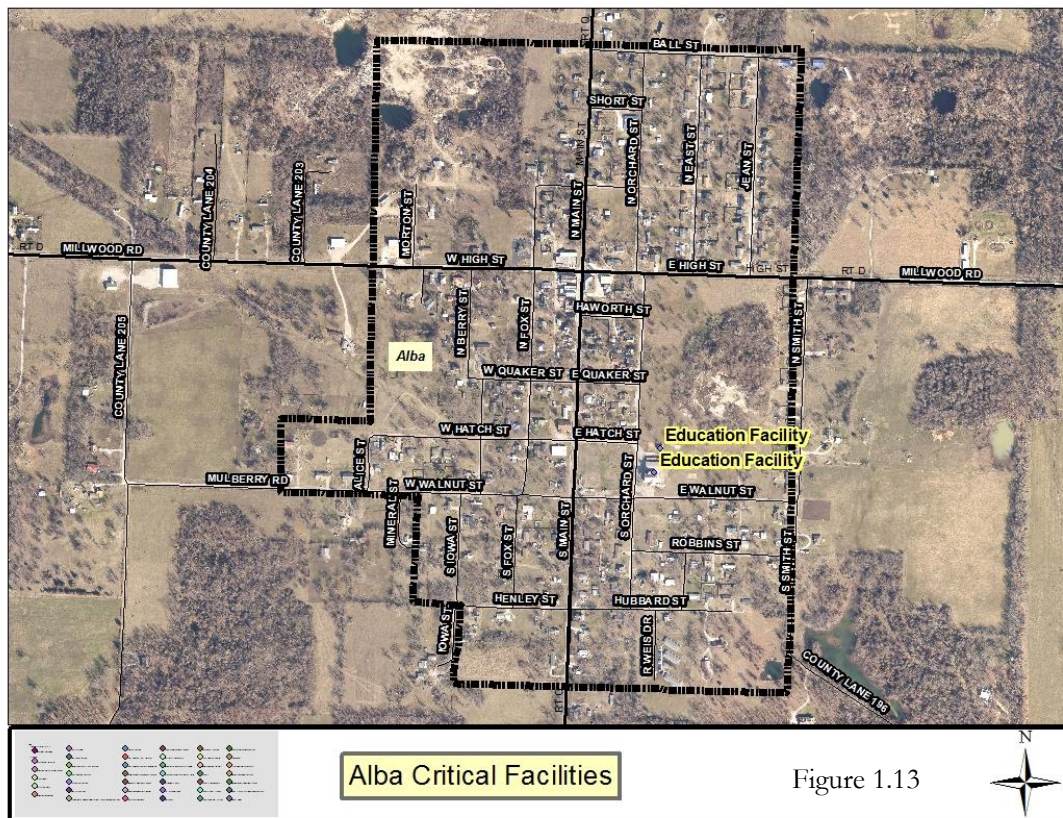
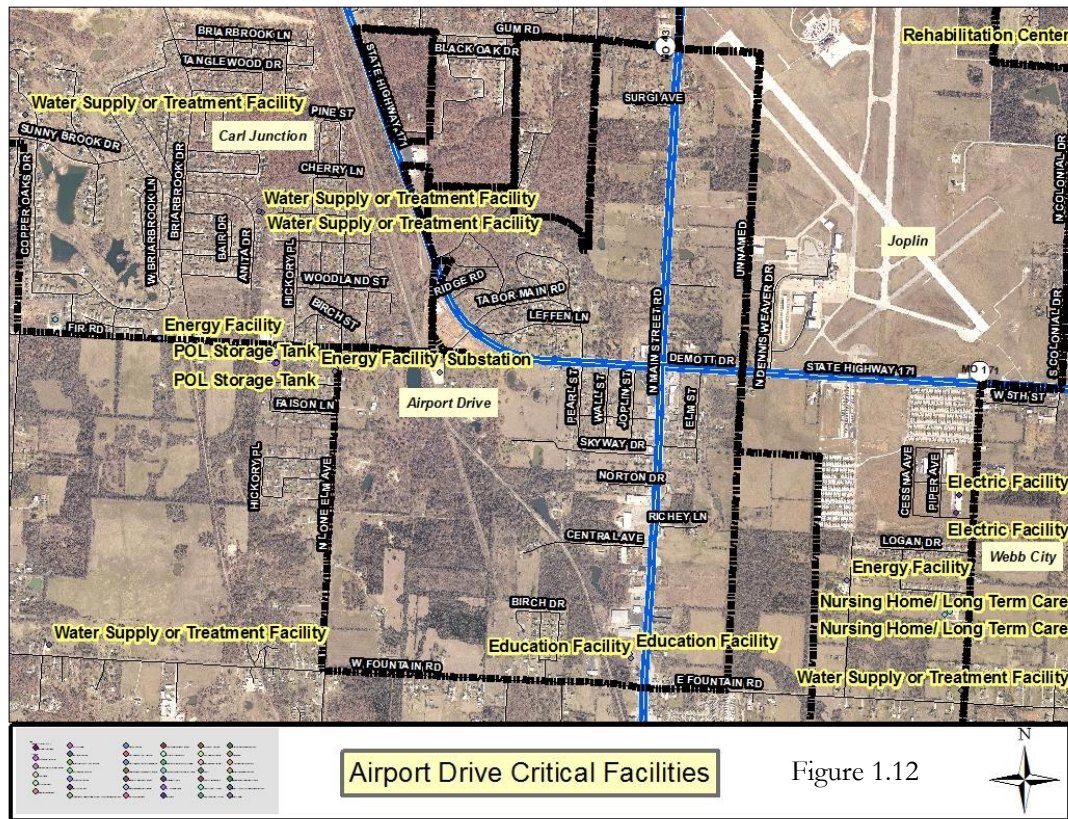
Jasper County, Newton County, and the City of Joplin are served by fully-staffed 911 Emergency systems, 24 hours a day, 7 days a week, 365 days a year. This system allows those living anywhere in the region to quickly summon emergency services such as fire, police, or ambulance personnel.

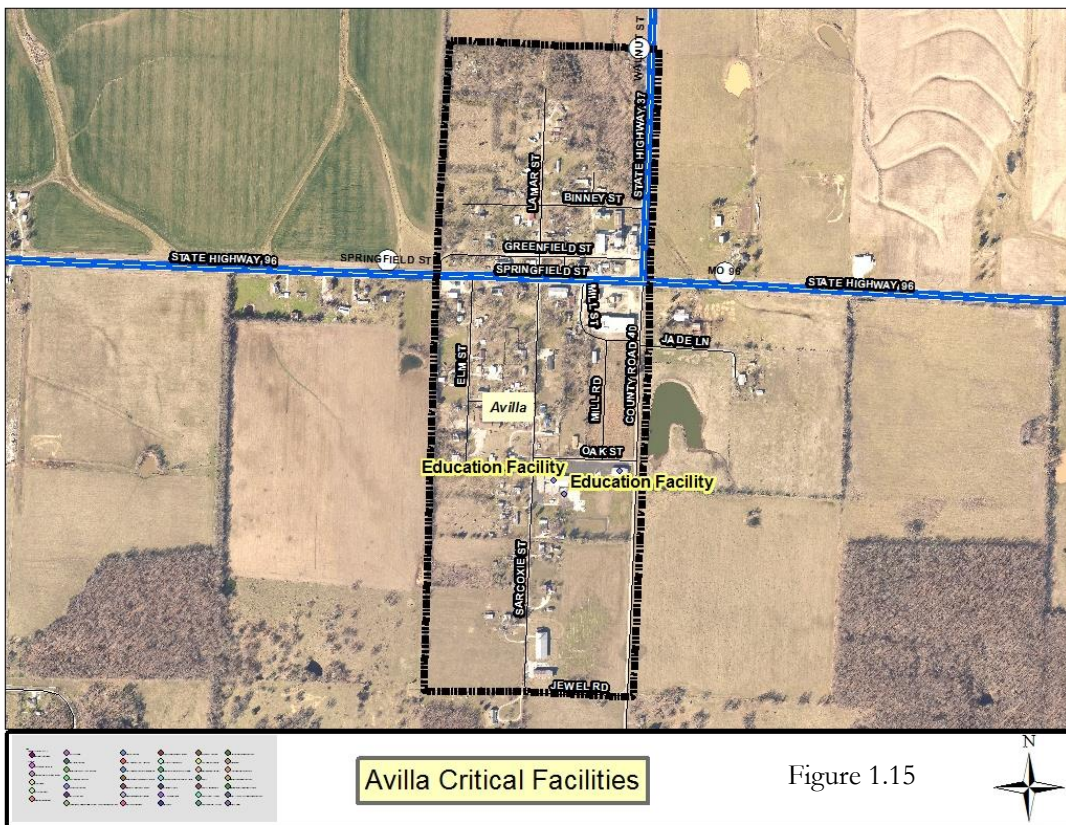
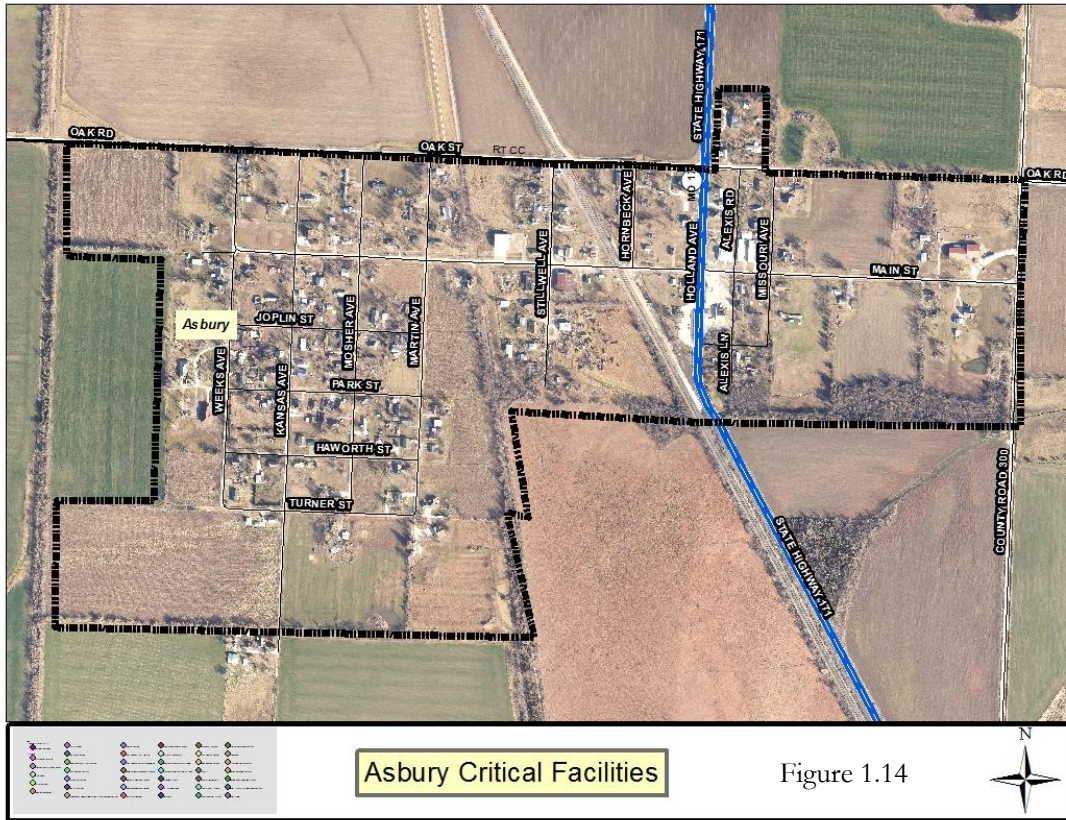
Inventory of Critical / Essential Facilities

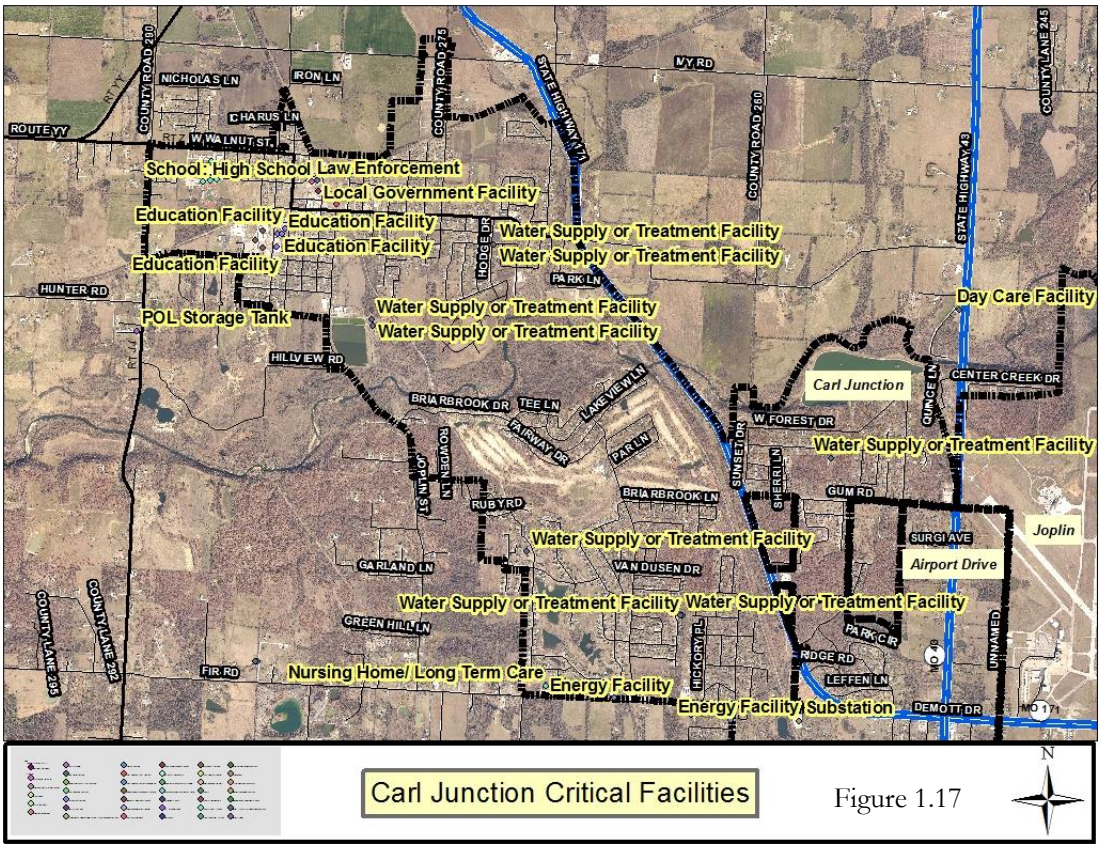
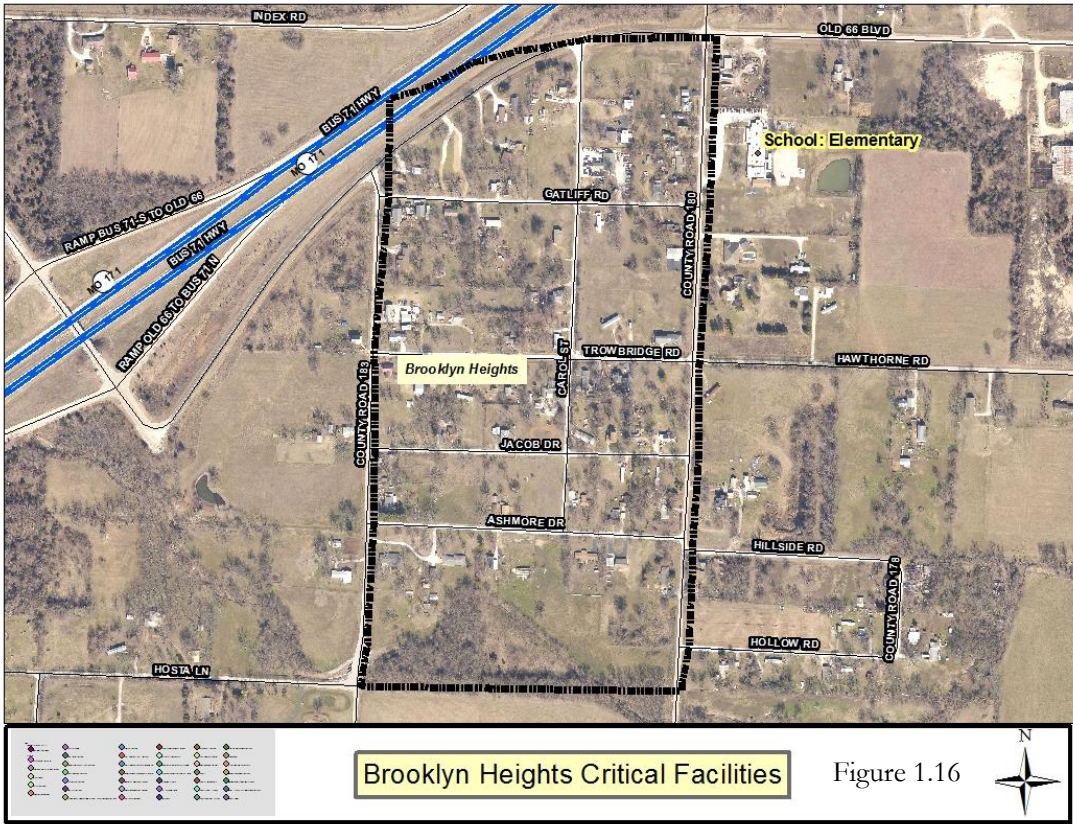
Relevant critical/essential facilities include medical facilities, schools, long-term care facilities, daycare centers, and government structures. These facilities represent resources for care and shelter, including populations requiring a higher level of care, and installations critical to community services (Figures 1.10 and 1.11). These facilities are at a higher risk during natural hazards due to the large population and their individual needs. Critical facilities are located in each jurisdiction as well. Figures 1.12 – 1.52 demonstrate the critical facilities located within the boundaries of each city or village.

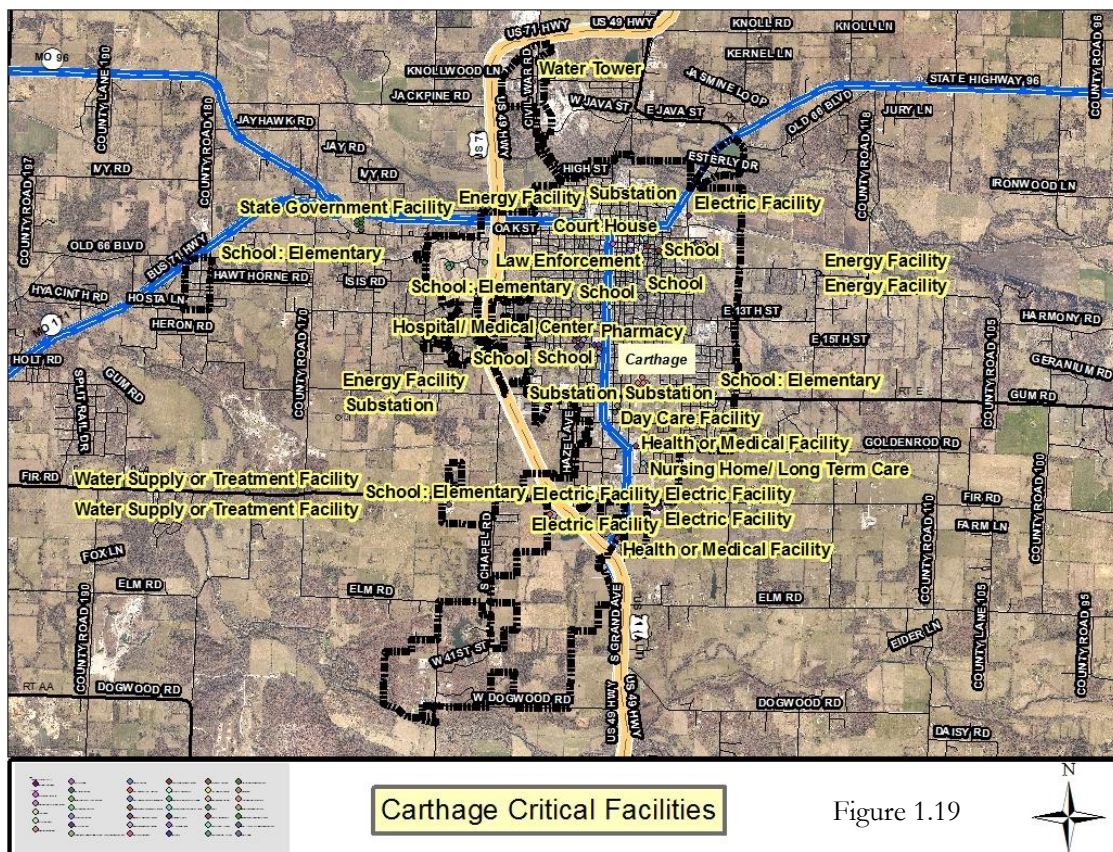
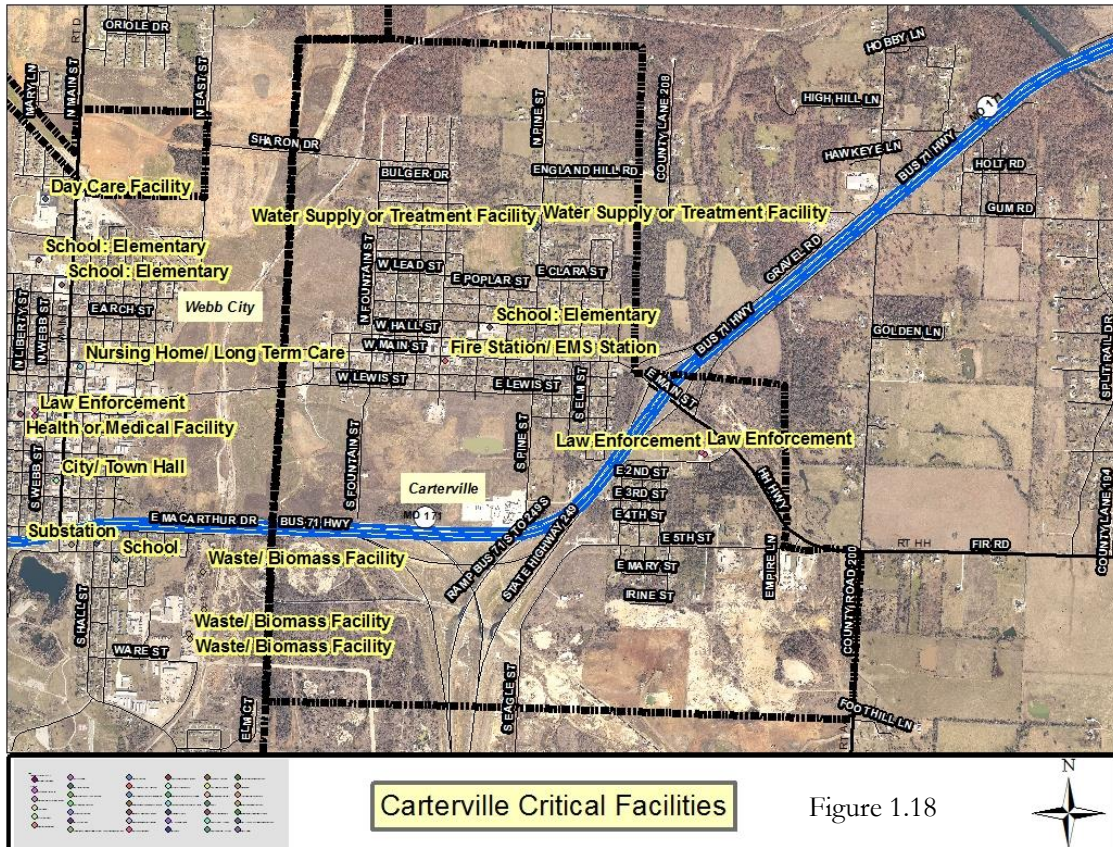












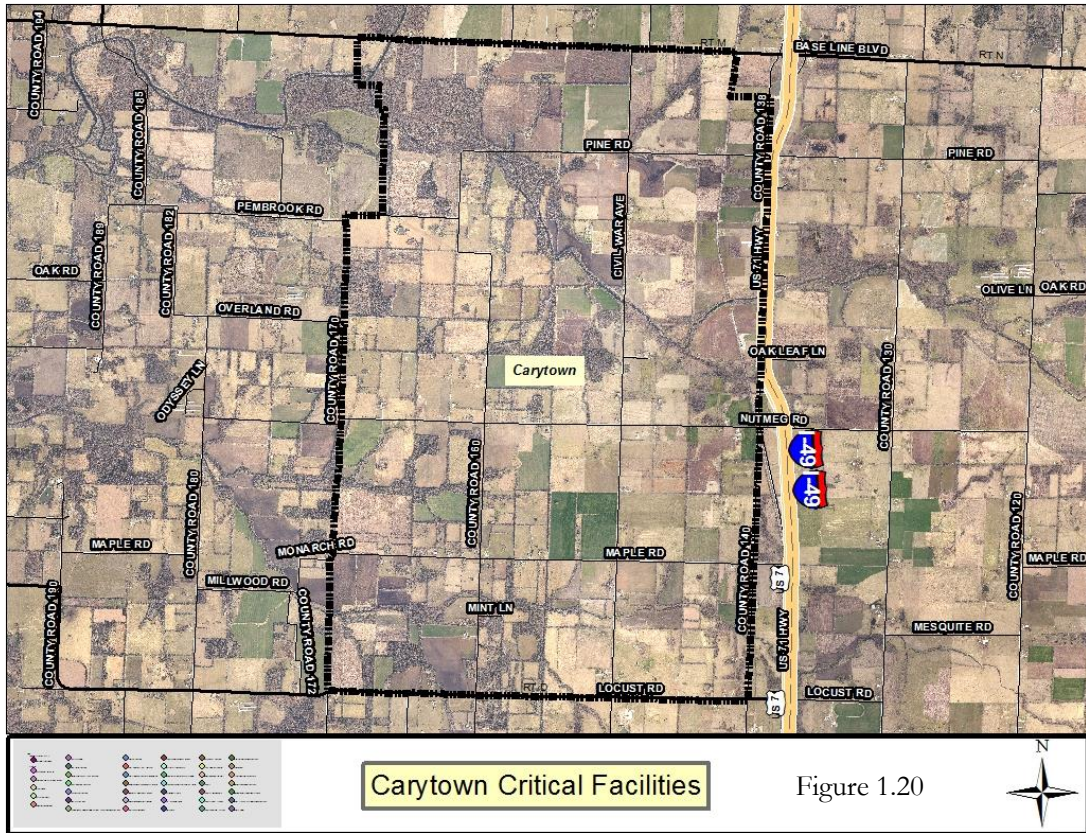


Figure 1.20

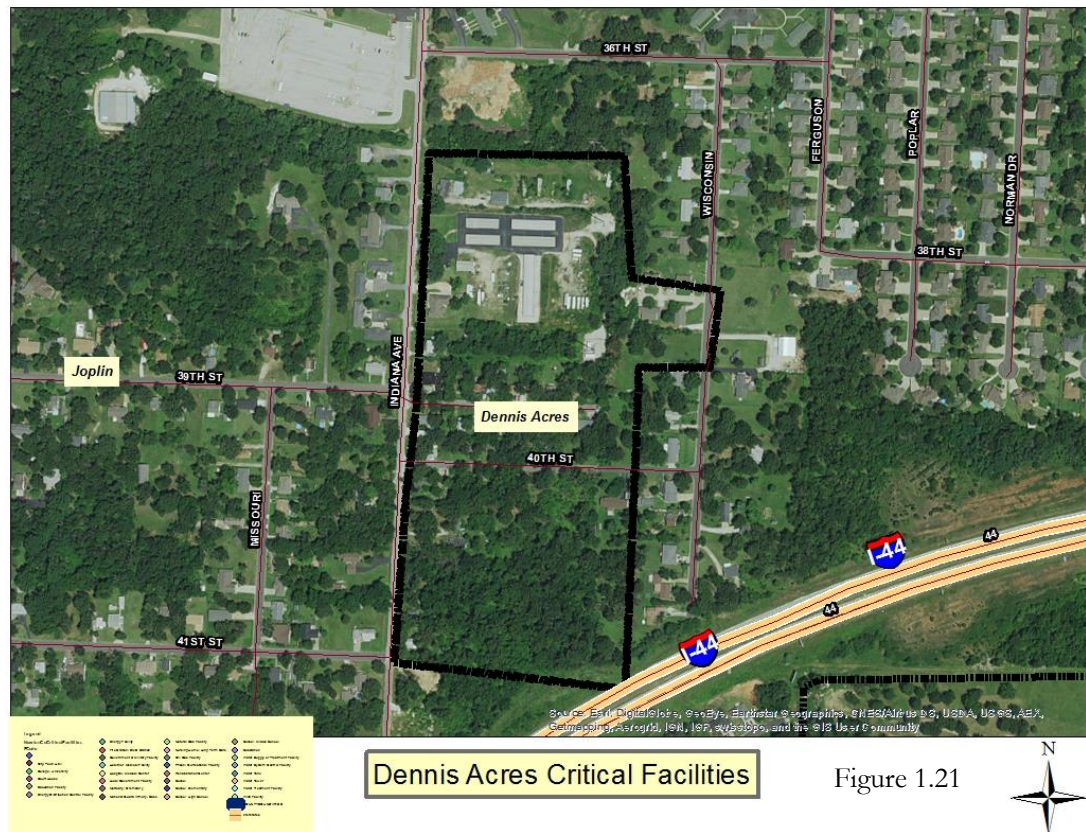
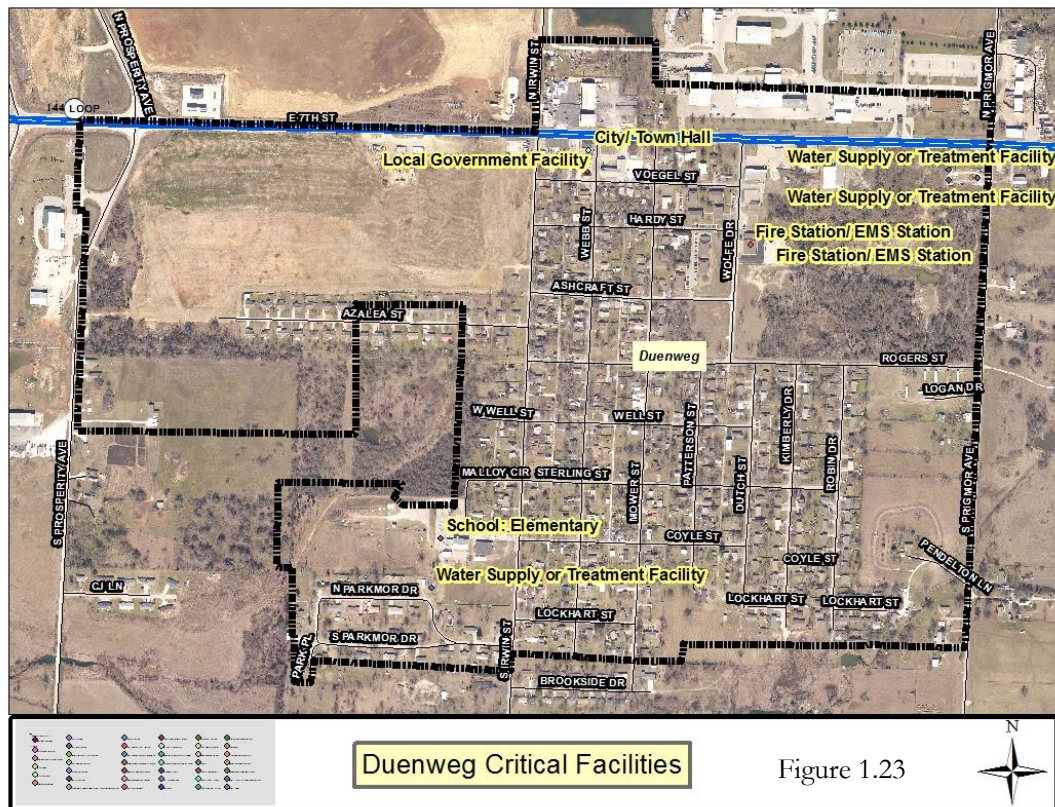
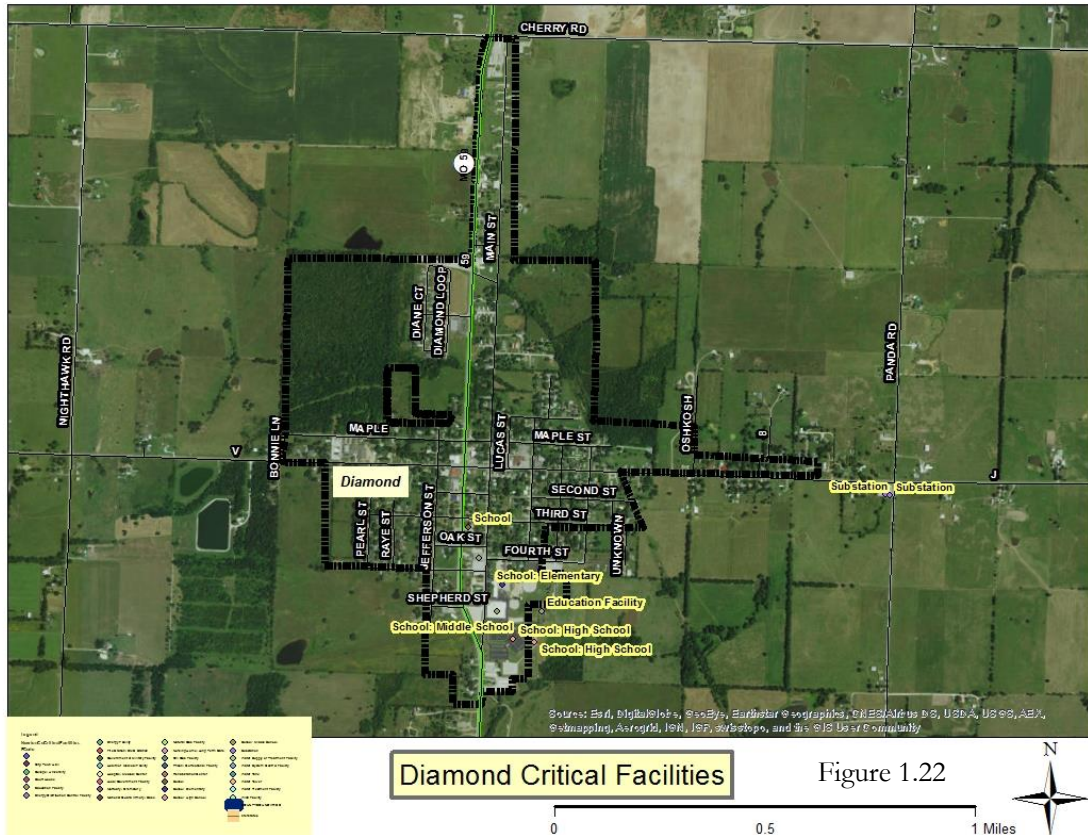
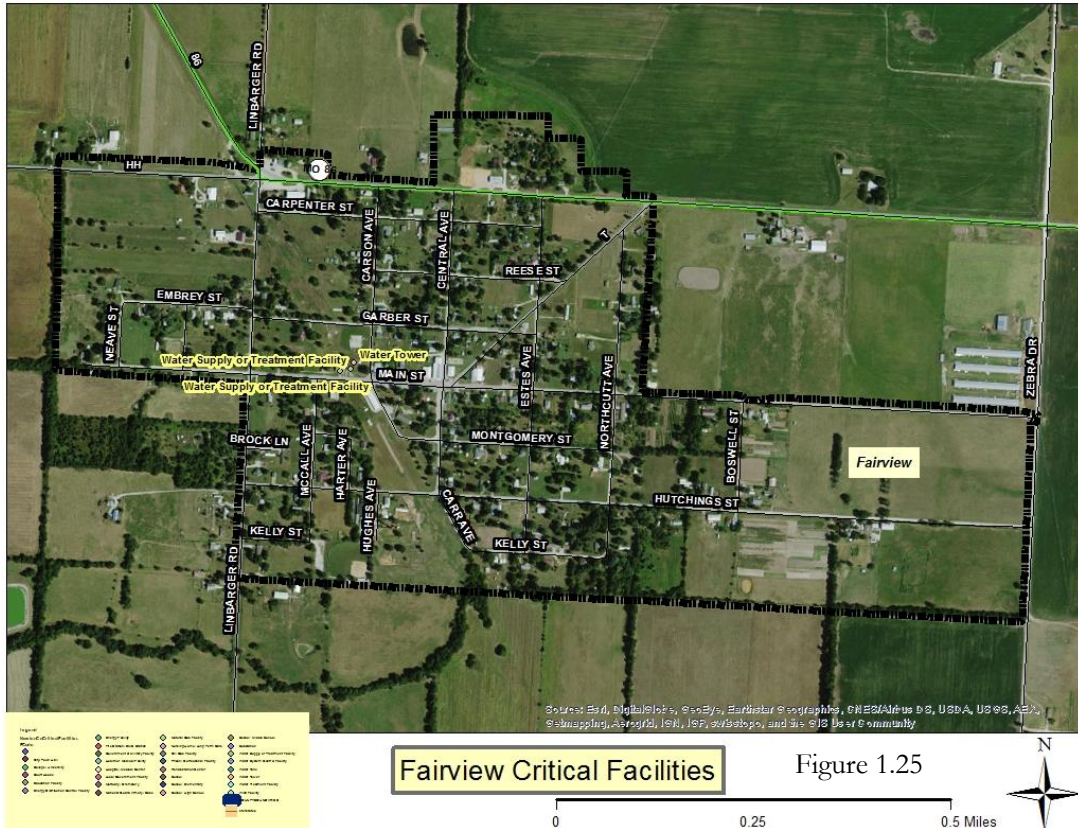
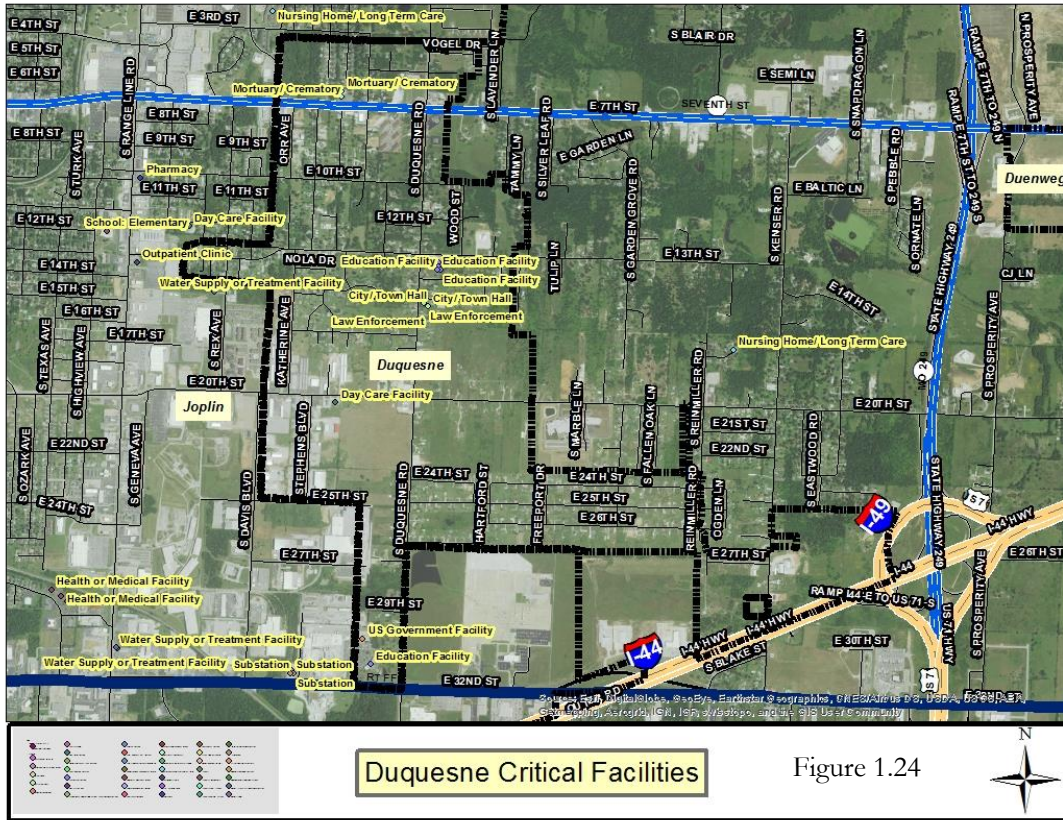
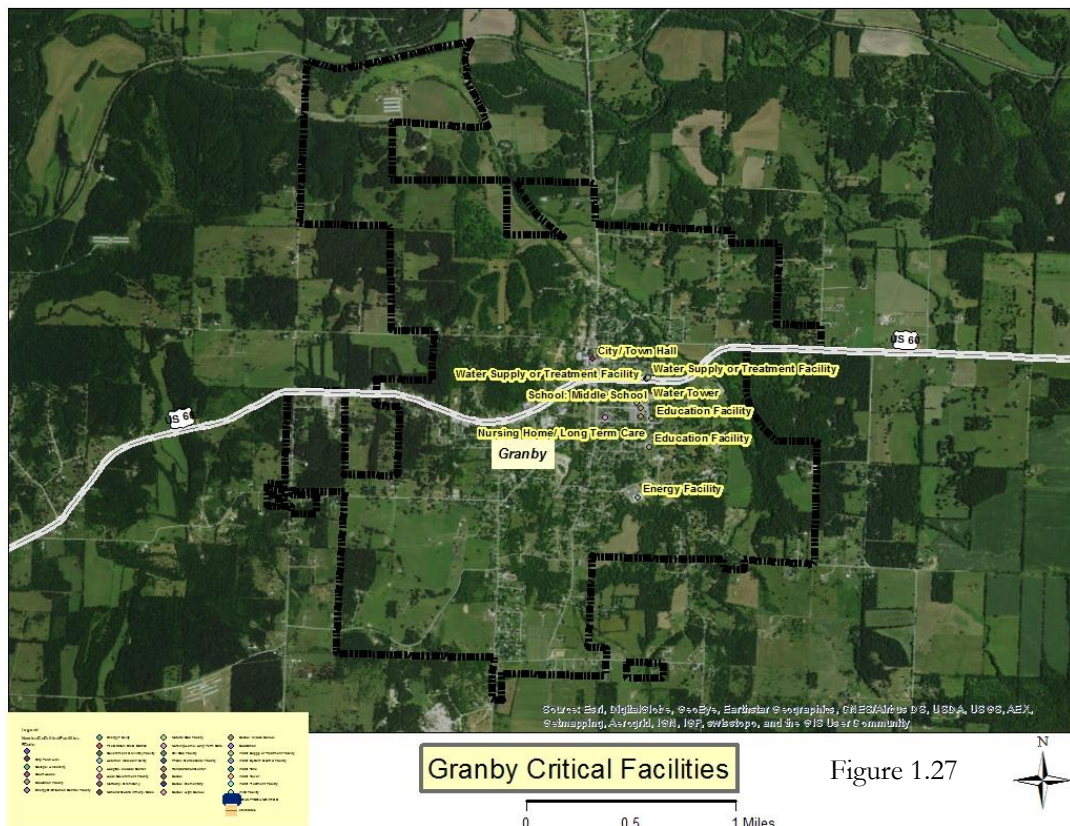
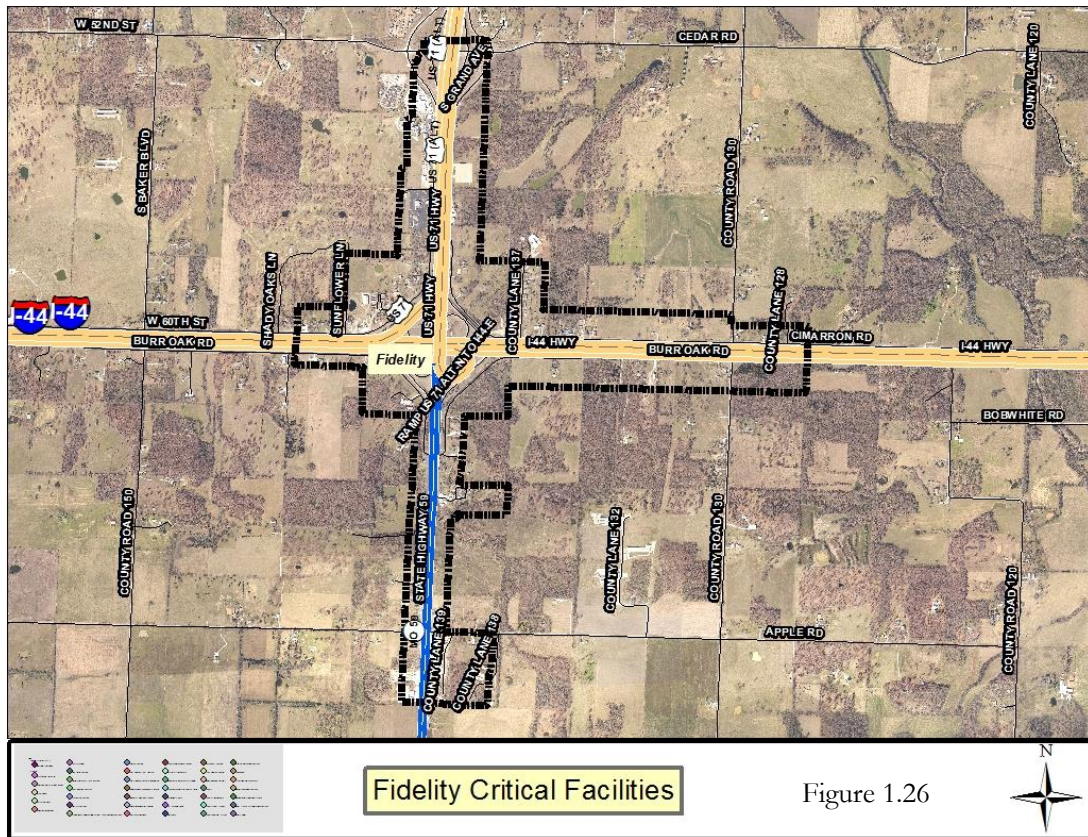
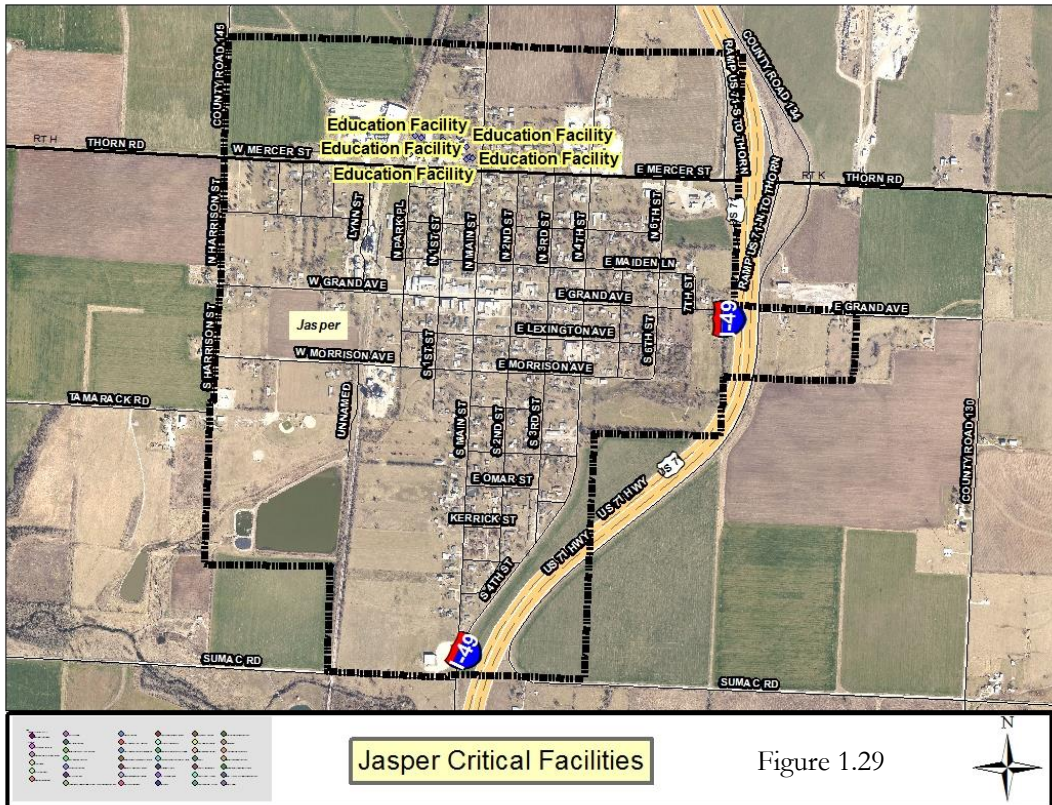
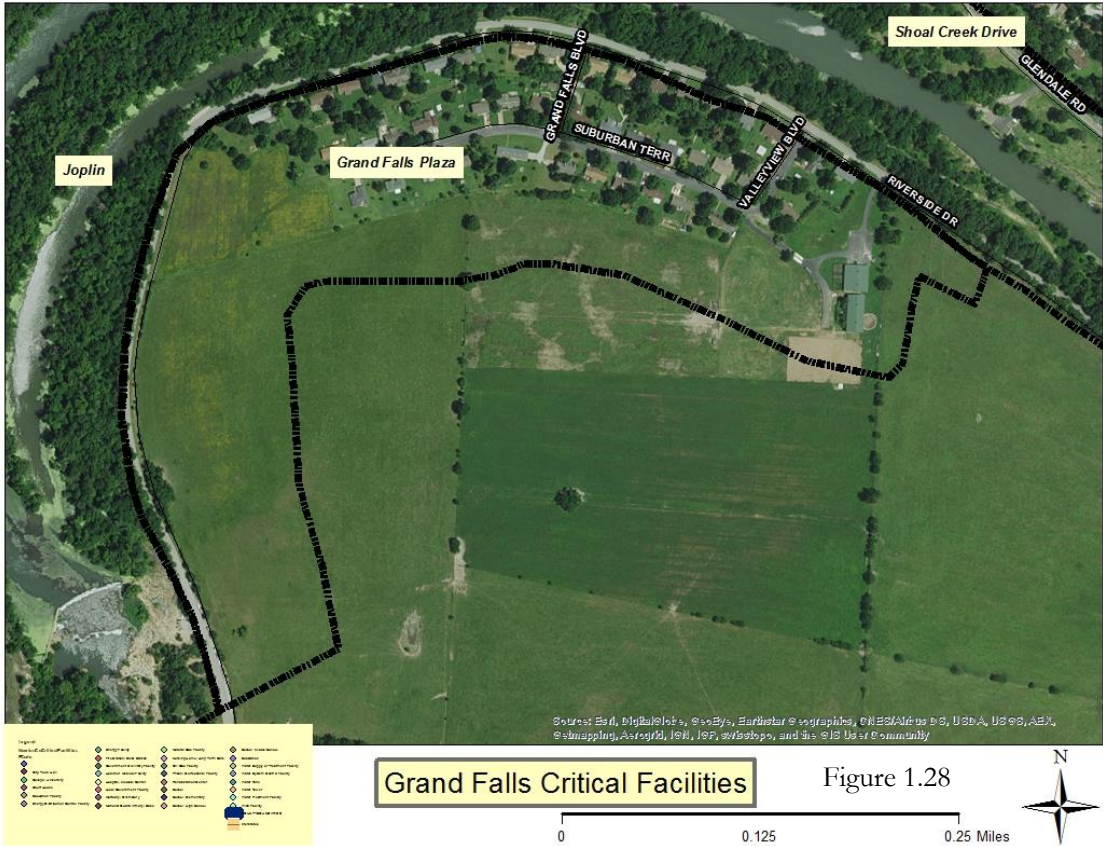


Figure 1.21









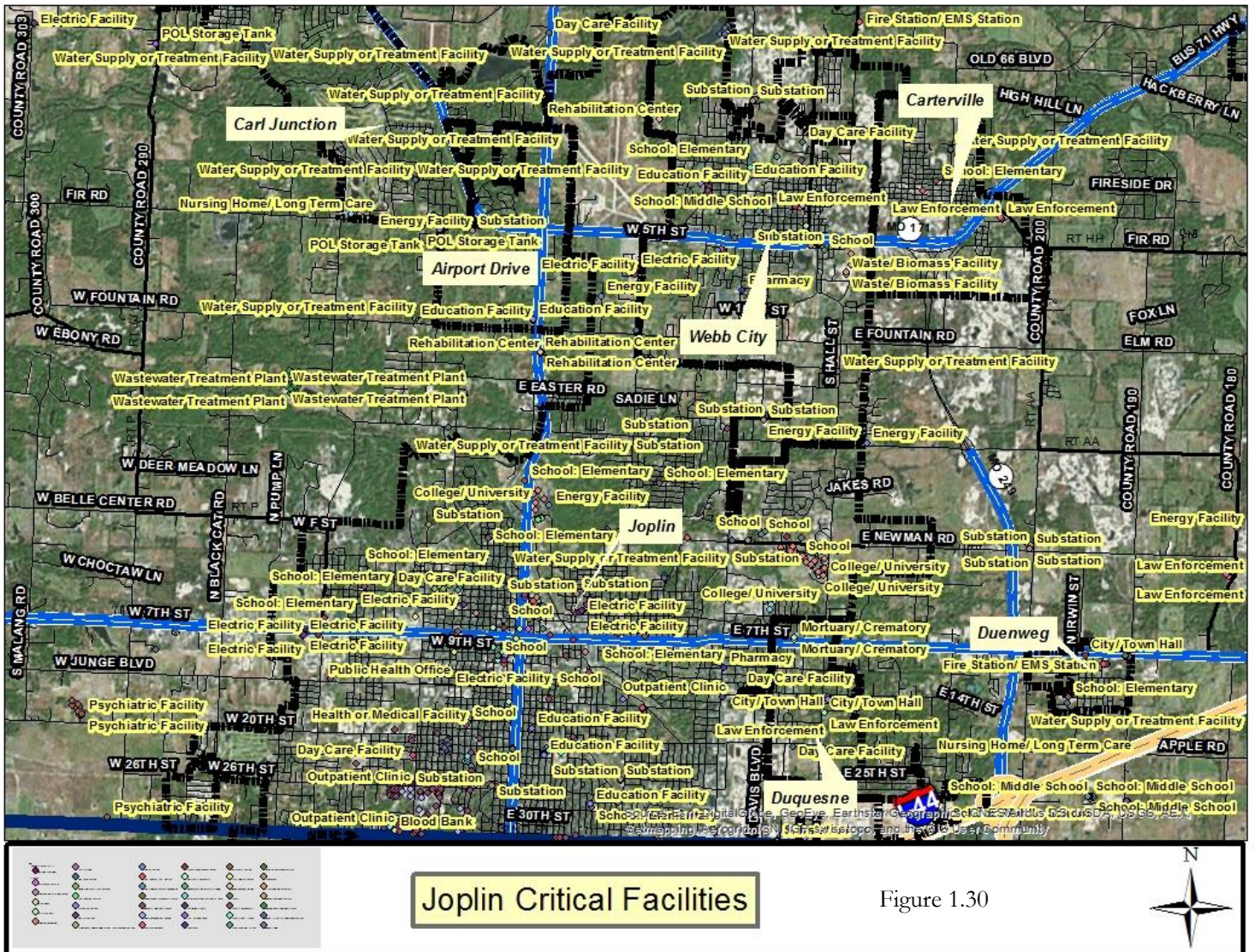


Figure 1.30

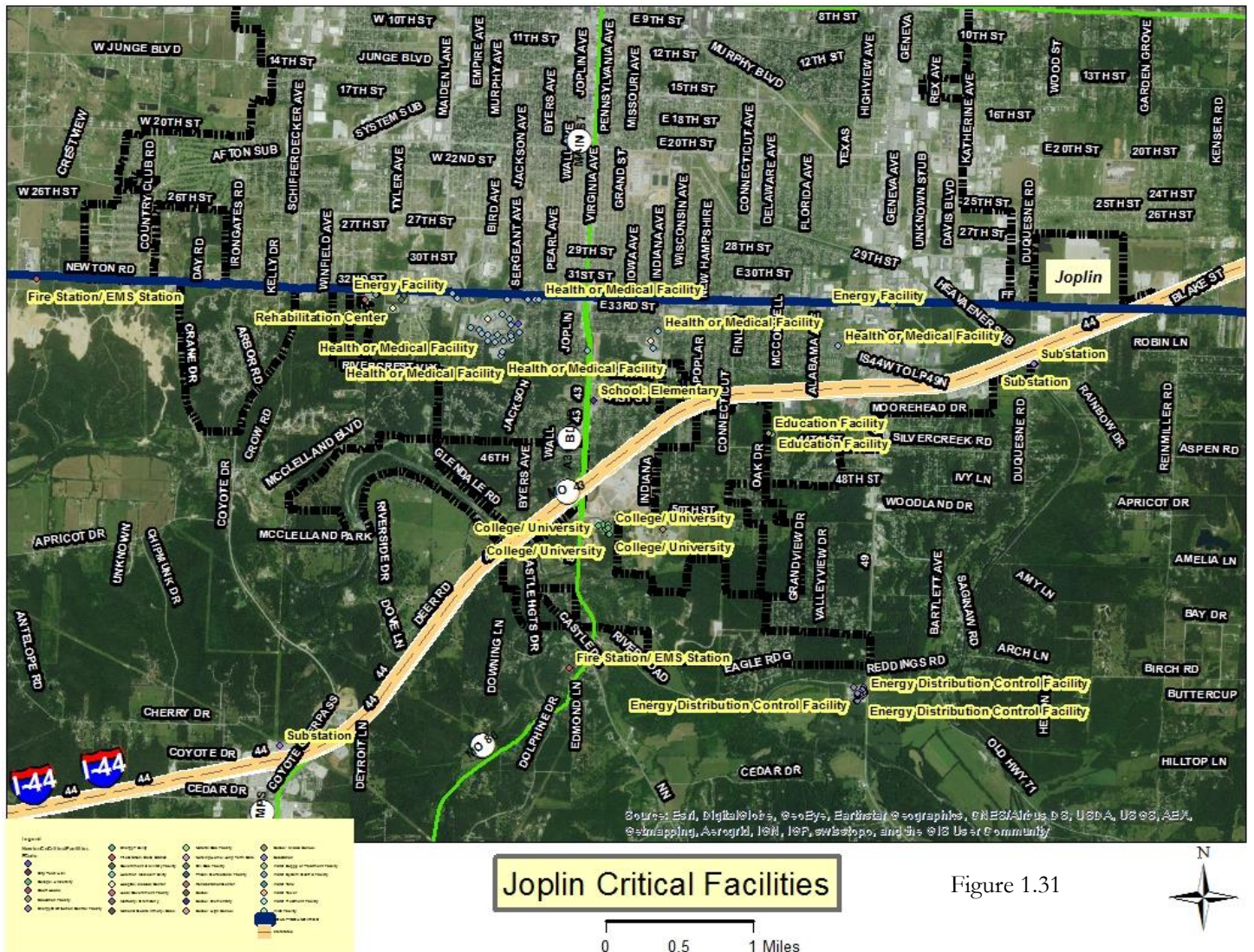


Figure 1.31

