VERSION 1

NOVEMBER 1, 2014

WASHINGTON COUNTY, ARKANSAS

PRE-HAZARD MITIGATION PLAN

General Description

This Washington County Pre-Hazard Mitigation Plan (WCHMP) was created to protect the health, safety, and economic interests of Washington County residents by reducing the risk of natural hazards. The plan provides a path toward continuous, proactive identification, and reduction of vulnerability to the most frequent hazards that result in repetitive and often severe social, economic, and physical damage. This plan provides a foundation for hazard mitigation activities within the municipalities of Washington County.

This WCHMP is also established to fulfill federal, state, and local hazard mitigation planning requirements. The Disaster Mitigation Act of 2000 (DMA 2000), Section 322 (a-d) in accordance with 44 CFR 201.6 requires local governments to have an approved local mitigation plan as a condition of receiving future federal disaster mitigation funds. The Washington County Hazard Mitigation Plan has been updated in its entirety as of 8/18/14.

In the past, federal legislation has provided funding for disaster relief, recovery, and some hazard mitigation planning. The Disaster Mitigation Act of 2000 (DMA 2000) is the latest legislation to improve this planning process. DMA 2000 amended the Robert T. Stafford Disaster Relief and Emergency Assistance Act by repealing the previous Mitigation Planning section (409) and replacing it with a new Mitigation Planning section (322). This new section emphasizes the need for State, Tribal, and Local entities to closely coordinate mitigation planning and implementation efforts. The new legislation reinforces the importance of mitigation planning and emphasizes planning for disasters before they occur. As such, this Act establishes a pre-disaster hazard mitigation program and new requirements for the national post-disaster Hazard Mitigation Grant Program (HMGP). It also requires that communities must have an approved hazard mitigation plan in order to receive assistance through the Stafford Act, excluding assistance provided pursuant to emergency provisions.

Development and implementation of the Plan has been and will be directed by the WCHMP Steering Committee, composed of the Executive Board of the Washington County Emergency Services Local Emergency Planning Committee (LEPC). The Steering Committee has appointed a Planning Committee, composed of representatives of the municipalities and other stakeholders, to oversee formulation and maintenance of the WCHMP, and to coordinate action items between the involved municipalities. Washington County Office of Emergency Management (WCOEM) is the agency tasked with supporting the Planning Committee in developing and maintaining the WCHMP. Implementing this plan provides several benefits to Washington County, its residents, and communities, including:

- Saving lives and protecting property
- Reducing vulnerability to future hazardous events
- Facilitating post-disaster funding for mitigation assistance
- Speeding the recovery process after a disaster
- Improving long-term community health
- Involving the public in decision-making, and
- Demonstrating community support for emergency management and hazard mitigation.

The Washington County Hazard Mitigation Plan is being developed to assess the ongoing all-hazard mitigation activities in Washington County, to evaluate additional mitigation measures

that should be undertaken, and to outline a strategy for implementation of mitigation projects. This plan is multi-jurisdictional; the planning area comprises all of unincorporated Washington County and thirteen cities within the County. This plan also includes the eight school districts located in Washington County. A map showing the locations of each of these jurisdictions within Washington County is in the Maps section of this report.

Formal adoption and implementation of a hazard mitigation plan presents many benefits to Washington County and its residents. By identifying problems and possible solutions in advance of a disaster, Washington County and participating communities and school districts will be in a better position to obtain pre- and post-disaster funding. Specifically, the Disaster Mitigation Act of 2000 establishes a pre-disaster hazard mitigation program and new requirements for the national post-disaster Hazard Mitigation Grant Program (HMGP). It requires that states and communities have a FEMA approved hazard mitigation plan in place prior to receiving post disaster HMGP funds. Adoption of this hazard mitigation strategy will also increase Washington County's eligibility for assistance from FEMA's Flood Mitigation Assistance (FMA) program. Washington County and participating communities will also gain additional credit points under FEMA's Community Rating System (CRS) program, which provides discounts on National Flood Insurance Program (NFIP) flood insurance premiums for residents of communities that voluntarily participate in this program. Most importantly, Washington County will be able to recover faster and more wisely from a disaster. Through planning and acting on local mitigation strategies, the city will reduce vulnerability to disasters and identify opportunities for mitigation. In addition, the communities may meet comprehensive planning and other planning requirements and achieve community goals.

Purpose and Authority

The purpose of the Washington County Hazard Mitigation Plan is to provide guidance for hazard mitigation activities in Washington County. The Washington County Office of Emergency Management has the responsibility to coordinate all local activities relating to hazard evaluation and mitigation and to prepare and submit to FEMA a Local Mitigation Plan following the criteria established in 44 CFR 201.4 and Section 322 of the Disaster Mitigation Act of 2000 (Public Law 106-390). The Disaster Mitigation Act of 2000 became law on October 30, 2000, and amends the Robert T. Stafford Disaster Relief and Emergency Assistance Act (the "Stafford Act") (Public Law 93-288, as amended). Regulations for this activity can be found in Title 44 of the Code of Federal Regulations Part 206, Subpart M.

This plan meets requirements for a local mitigation plan under Interim Final Rule 44 CFR 201.4, published in the Federal Register by the Federal Emergency Management Agency (FEMA) on February 28, 2002. Meeting the requirements of the regulations cited above keeps Washington County qualified to obtain all disaster assistance including hazard mitigation grants available through the Robert T. Stafford Disaster Relief and Emergency Assistance Act, P.L. 93-288, as amended.

Section 1

INTRODUCTION

In this section:

Washington County Population and Demographics

For 2010, the U. S. Census of Population documented 203,065 persons. The county is part of the economically healthy and expanding Fayetteville, Rogers, and Springdale metropolitan areas, which consists of the three counties of Benton, Washington and Madison counties in Arkansas. For 2010, the metro area's population was 440,121 residents.

Between 2000 and 2010, Washington County added 45,350 new residents, a 28.8% increase. Growth at this rate, translates to approximately 4,500 new residents annually, which is expected to continue throughout the 2010 to 2020 period. Most of the increase in population is occurring in and near the cities in the north central part of the county. The most dramatic percentage changes are found in some of the small communities which include Elkins, Farmington, Prairie Grove and Tontitown; with Tontitown reporting the greatest population increase of over 150 percent.

Following is a table showing 2000 and 2010 population figures and percent of change from 2000-2010 for the entire county and for each of the thirteen incorporated places in the county.

Population by County & City 2000 and 2010 Washington County, Arkanasas				
	2000 Census	2010 Census	Numerical Change 2000-2010	Percent Change 2000-2010
Washington County	157,715	203,065	45,350	28.8
Elkins	1,251	2,648	1,397	111.7
Elm Springs	1,044	1,535	491	47.0
Farmington	3,605	5,974	2,369	65.7
Fayettveille	58,047	73,580	15,533	26.8
Goshen	752	1,071	319	42.4
Greenland	907	1,259	352	38.8
Johnson	2,319	3,354	1,035	44.6
Lincoln	1,752	2,249	497	28.4
Prairie Grove	2,540	4,380	1,840	72.4
Springdale	45,798	69,797	23,999	52.4
Tontitown	942	2,460	1,518	161.1
West Fork	2,042	2,317	275	13.5
Winslow	399	391	(8)	(2.0)
Information Source: U.S. Census 2000 and 2010				

Below are fact sheets providing population information from the 2010 census for the participating jurisdictions.

Economy

Per capita income level of the citizens of the region is an important indicator of the economic well-being of Washington County. The table below indicates that the nation's per capita income increased 37 percent from 2000 through 2011 while the State of Arkansas recorded a 46 percent increase in income; Washington County provided a 48 percent increase in per capita income for its citizens.

Area	2000	2001	2010	2011	Increase from 2000-2011	PERCENT INCREASE	Percent of U.S. Average
United States	$ 30,319	$ 31,157	$ 39,791	$ 41,560	$ 11,241	37	
Arkansas (Metropolitan Portion)	24,735	25,980	34,783	36,167	11,432	46	87.02
Arkansas (Non-Metropolitan Portion)	19,732	21,039	28,707	30,003	10,271	52	72.19
Baxter, AR	22,452	23,534	31,075	32,335	9,883	44	77.80
Benton, AR	25,738	27,040	35,130	36,744	11,006	43	88.41
Boone, AR	21,305	21,882	29,416	30,524	9,219	43	73.45
Carroll, AR	18,900	20,315	25,967	27,121	8,221	43	65.26
Crawford, AR	19,145	20,200	26,789	27,699	8,554	45	66.65
Madison, AR	19,361	21,073	22,380	21,921	2,560	13	52.75
Marion, AR	17,323	17,834	25,450	26,684	9,361	54	64.21
Newton, AR	15,177	17,040	24,520	26,127	10,950	72	62.87
Searcy, AR	15,673	16,759	24,598	25,926	10,253	65	62.38
Washington, AR	22,425	23,847	32,269	33,220	10,795	48	79.93
Source: U.S. Department of Commerce, Bureau of Economic Analysis							

Economic Analysis of Arkansas Counties

A critical component in Washington County's economic growth and the economic growth of Northwest Arkansas comes as a result of local firm's expansion of company headquarters. The **"Business of Doing Business"** is a positive force on this economy. Bentonville is a home office of Wal-Mart, one of the country's largest retailers. The U.S. 540 corridor of Benton and Washington Counties serve as the home of the Tyson's Foods Corporation, George's Inc., and Simmons Foods Corporation which all represent major players in the poultry industry.
In addition J.B. Hunt Trucking, Cannon Express, and Willis Shaw all call Northwest Arkansas their home. The agriculture industry is growing in Northwest Arkansas, especially in the area of poultry production and processing. The nation's largest producer of processed poultry, Tyson Foods, has its corporate headquarters in Washington County. Tyson foods acquired the sixth largest processor of poultry Hudson Foods. Peterson Industries and Cobb-Vantress, the nation's leaders in the production of breeder stock for the poultry industry, are headquartered in Benton County. During the past year, these firms have contributed significantly to the creation of new

economic and job opportunities in Benton, Boone, Carroll, Madison, and most importantly, Washington County.

Future Development

The region has the potential for the creation of economic growth through the implementation of value-added manufacturing which utilizes the District's natural resources of agriculture land and forest products. A good example is the further processing of poultry, which creates new job opportunities for our citizens, as the region becomes a leading supplier of poultry to the fast food industry.

Universities are key components of the most comprehensive and successful economic development strategies. Studies nationwide reveal that research firms desiring to develop relationships with universities often want to be located at or near the campus to create synergies, improve collaboration and provide direct access to facilities and faculty.

The University of Arkansas at Fayetteville, the land-grant institution of higher education in the state is located in Washington County. The physics department at the university is recognized for its leadership in numerous research endeavors. The utilization of the resources of this institution has great potential for the economic development of the region in the area of implementing the industrial production of products generated from the research laboratories of the university. John Brown University is located only 26 miles from Fayetteville in the Benton County community of Siloam Springs. A smaller liberal arts college, best known for their masters' degree program in business. This program has been well received by the businesses in the Fayetteville-Springdale-Rogers Metropolitan Statistical Area (MSA). This program makes it possible for working individuals to attain a master's degree in business by attending night classes.

Section 2

PLANNING PROCESS

In this section:

Planning Committee

Washington County Planning Committee				
Name	**Title**	**Organization**	**POC**	**Email**
Marilyn Edwards	County Judge	Washington County	Rick Johnson	rjohnson@co.washington.ar.us
Bruce Ledford	Mayor	City of Elkins	Bruce Ledford	bruceledford@elkins.arkansas.gov
Ben Wall	Mayor	City of Elm Springs	Glenda Pettus	cityclerk@elmsprings.net
Ernie Penn	Mayor	City of Farmington	Melissa McCarville	melissamccarville@cityoffarmington-ar.gov
Lioneld Jordan	Mayor	City of Fayetteville	Lioneld Jordan	mayor@ci.fayetteville.ar.us
Joe Benson	Mayor	City of Goshen	David Edwards	goshen.city@sbcglobal.net
Bill Groom	Mayor	City of Greenland	Bill Groom	mayor@greenland-ar.com
Buddy Curry	Mayor	City of Johnson	Randy Birchfield	johnsonstreetdept@live.com
Rob Hulse	Mayor	City of Lincoln	Rob Hulse	mayor@lincolnarkansas.com
Sonny Hudson	Mayor	City of Prairie Grove	Sonny Hudson	sonnyhudson@pgtc.com
Doug Sprouse	Mayor	City of Springdale	Michael Irwin	mirwin@springdalear.gov
Jack Beckford	Mayor	City of Tontitown	Jack Beckford	mayor@tontitown.com
	Mayor	City of West Fork		city@westforkar.gov
Randy Jarnagan	Mayor	City of Winslow	Randy Jarnagan	N/A
Daniel Jordan	Superintendent	Elkins School District	Daniel Jordan	jordan@elkinsdistrict.org
Bryan Law	Superintendent	Farmington School District	Bryan Law	blaw@farmcards.org
Vicki Thomas	Superintendent	Fayetteville School District	David Tate	david.tate@Fayar.net
Charles Cudney	Superintendent	Greenland School District	Charles Cudney	ccudney@greenland.com
Steve Joel	Superintendent	Lincoln School District	Steve Flickinger	sflickinger@lincoln.k12.ar.us
Allen Williams	Superintendent	Prairie Grove School District	Vol Woods	vol.woods@pgtigers.org
Jim Rollins	Superintendent	Springdale School District	Gary Compton	gcompton@sdale.org
John Karnes	Superintendent	West Fork School District	John Karnes	jkarnes@wftigers.org

JURSIDICTION	NAME OF PARTICIPANTS / INVOLVEMENT
Unincorporated Washington County	DEM Director, Rick Johnson, DEM Deputy Director, John Luther, and Arkansas Tech University intern, Nicole Rea, attended the risk assessment and mitigation strategy meetings, completed all assessment forms, and provided information regarding generators for the courthouse and the courthouse annex. DEM Support Coordinator, Marqette Anderson attended the risk assessment meeting. Grant Administrator, Wayne Blankenship attended the mitigation strategy meeting and assisted in developing problem statements and mitigation strategies with DEM Director Johnson, Deputy Director John Luther, and intern Nicole Rea.
City of Winslow	Mayor, Randy Jarnagan, was present at the risk assessment meeting and presented information regarding capabilities, existing policies, and provided community asset information to the planning team. He conducted a phone conversation with DEM Director, Rick Johnson, to provide and relay mitigation strategies for the jurisdiction.
City of West Fork	Utility Manager, Michael Bartholomew, attended the risk assessment and mitigation strategy meeting. He provided the risk assessment, capabilities, problem statements, vulnerabilities, and mitigation strategies for the city. He also provided input regarding the prioritization of the mitigation strategies.
City of Lincoln	Director of IT and Field Engineer, Al Videtto, attended planning meetings and presented information for vulnerability and problem statements, provided regional information about fault lines and earthquake activity, and provided mitigation strategies.
City of Johnson	Major, Buddy Curry, presented his knowledge regarding hazards within his community. After taking careful consideration of the chosen problem statements, he reviewed the best course of action that would be appropriate based on his city's capabilities. There was an appointed phone conference between the mayor and DEM Deputy Director, John Luther, to confirm further the mitigation strategies.
City of Prairie Grove	The Mayor Sonny Hudson and City Manager, Larry Oelrich, worked together to assess the hazards within their community and provided comprehensive mitigating strategies to protect their citizens. The mayor and city manager were able provide valuable input for identifying critical infrastructures and roadways that are vulnerable. Mayor Hudson attended the mitigation strategy meeting and City Manager, Larry Oelrich, attended the risk assessment and mitigation strategy meeting.
City of Fayetteville	Fire Chief, David Dayringer, attended the risk assessment and mitigation meetings. He met with Tech student Tina Phouthavong, who discussed developing mitigation strategies. He was very involved in the whole process.
City of Elm Springs	Mayor Ben Wall and Building Inspector, Lorel Hoffman, attended the risk assessment meeting and provided information on the city's capabilities and discussed the community's assets. Mayor Wall and Building Inspector, Hoffman, took the forms back with them following the meeting to give more thought to their mitigation strategies. They used email correspondence with Tech student Clayton Frazier to communicate about potential strategies and how to prioritize these strategies.
University of Arkansas	U of A Police Chief and U of A Emergency Manager, Matt Miller, attended the risk assessment and mitigation strategy meetings. He provided the problem statements, vulnerabilities, and mitigation strategies for the college campus. He provided the community assets of 12 buildings. He provided consistent contact through phone and email to the mitigation planning team regarding information gathering and deadlines.
City of Elkins	The Fire Chief, J.D. Demotte, and Planning Administrator, Don Cryder, attended the mitigation strategy meeting and worked effortlessly to come up with multiple mitigation strategies. The Fire Chief and Planning Administrator provided problem statements and vulnerabilities of the city.
City of Springdale	Fire Chief, Mike Irwin, attended the mitigation strategy meeting. He provided mitigation strategies, vulnerabilities, and problem statements for the city. He discussed the Highway 71B flooding and specific pandemic strategies with Tech student Tina Phouthavong of the mitigation planning team. Administration Services Director, Wyman Morgan, provided information for risk assessment and capabilities through email to the mitigation planning team. He was not able to attend the meetings.

City of Farmington	Business Manager, Melissa McCarville, attended the risk assessment and mitigation strategy meeting. She provided the information regarding different hazards that threaten the city. She completed assessment forms for mitigation strategies, problem statements, and vulnerabilities.
City of Tontitown	Police and Fire Chief Chris Arthur, Public Works Director James Clark, and Police Captain Joey McCormick attended the mitigation strategy meeting. Public Works Director, Clark provided the risk assessment and capability worksheets through email correspondence. All three cooperated to provide mitigation strategies at the last meeting.
City of Greenland	Police Chief Gary Ricker attended the risk assessment and mitigation strategy meeting. He was very engaged in completing the risk assessment form, capability assessment form, problem statements, vulnerability, and mitigation strategy worksheets. He stated Greenland already had several safe rooms but needed additional safe rooms on the west side of town to protect citizens.
City of Goshen	Marshall David Edwards attended the mitigation strategy meeting. Marshal Edwards and Deputy Director Rick Johnson coordinated together to provide the problem statements and mitigation strategies. He provided through email the risk assessment capability forms because he was unable to attend the risk assessment meeting.
Fayetteville School District	Maintenance Director David Tate attended the risk assessment and mitigation strategy meeting. He provided the vulnerabilities, problem statements, mitigation strategies, and provided assets for the school district.
Elkins School District	Technology Director Debbie Kunz attended the risk assessment and mitigation strategy meetings. She was very helpful in providing information regarding the school's assessments and capabilities. She completed the mitigation strategies and problem statements.
Greenland School District	Superintendent Larry Ben and Facilities Manager Rick Gales attended the mitigation strategy meeting. They provided problem statements and four mitigation strategies during the meeting. They provided the remaining mitigation strategies to Tech students from the mitigation planning team through email correspondence.
Prairie Grove School District	Assistant Superintendent Vol Woods attended the risk assessment and mitigation strategy meeting. He completed the vulnerability and mitigation strategy worksheets. He was very valuable in identifying critical infrastructure of the schools.
Springdale School District	Assistant Superintendent Gary Compton attended the mitigation strategy meeting and provided problem statements and vulnerabilities of the school. He conducted a meeting with the mitigation planning team at Lakeside Junior High to discuss problem statements and created mitigation strategies.
Farmington School District	Superintendent Bryan Law attended the risk assessment and mitigation strategy meeting. He completed the vulnerability, problem statements, and mitigation strategy worksheets. He assisted in identifying the school assets.
Lincoln School District	Superintendent Mary Ann Spears attended the mitigation strategy meeting. She met with Tech student Kandace McDaniel. She emailed the risk assessment and capability forms when requested to do so. Additionally, she worked with Tech student Clayton Frazier via email to complete her prioritized mitigation strategies.
West Fork School District	Superintendent John Karnes attended the mitigation strategy meeting. He provided information about the school district buildings and other critical infrastructure. He provided additional information via email to Tech students.

Planning/ Updating Process

In January 2013, Washington County negotiated a subcontract with Arkansas Tech University Center for Preparedness and Recovery to facilitate updating their mitigation planning efforts.

The updating process began with confirming that the jurisdictions in the plan were remaining in the updated plan. Each mayor and superintendent was sent a letter from the Washington County OEM about the updating process and the initial kick-off meeting that was held on March 26, 2013. From the planning meeting, an updating committee was selected to approve the changes made to the mitigation plan.

The mitigation update process followed the following outline:

1) Countywide involvement and initial meeting.
   a) Initial meeting to discuss the mitigation plan and how the process would go
      i) Wednesday, March 26, 2013.
         3:00 pm to 6:00 pm at Northeast Conference Room of the Washington County Courthouse.
2) Risk Assessment
   a) Decision to update from a natural hazard risk assessment to an all hazard approach
   b) Updating Committee approved new hazard list for the updated plan
   c) Collection of data: Information provided by National Climatic Data Center, U.S. Department of Commerce.
3) Washington County LEPC Meeting
   a) Tuesday July 23, 2013
   b) 10:00 am at the Washington County EOC
   c) Hazard Mitigation Presentation
4) Vulnerability Assessment
   a) Meeting with all of the jurisdictions to review hazard profiles and review vulnerability
      i) September 24, 2013
      ii) 10:00 am at the Washington County Office of Emergency Management
5) Mitigation Strategies
   a) Meeting with planning committee to review risks and create new mitigation strategies
      i) November 19, 2013
      ii) 2:00 pm at the Washington County Office of Emergency Management
6) Review Meeting
   a) Meeting with Washington County OEM and Arkansas Tech to discuss changes in plan
      i) August 20, 2014
      ii) 10:00 am at the Washington County Office of Emergency Management
7) Risk Assessment Meeting
   a) Meeting with planning team, stakeholders, & public to gather risk and capabilities information
      i) September 17, 2014
      ii) 10:00 am to 6:00 pm at the Washington County Emergency Operations Center
8) Mitigation Strategies
   a) Meeting with planning team and stakeholders to gather mitigation strategies and review risk assessment
      i) October 6, 2014
      ii) 9:00 am to 5:00 pm at the Washington County Emergency Operations Center
9) Draft Review
   a) Mitigation Plan draft was put on Washington County website for review
      i) October 22, 2014

Planning/ Updating Process Involvement

Planning Committee and Stakeholders

For the various meetings, e-mails and letters were sent and radio announcements and phone calls were made for inviting the planning committee and stakeholders. Those invited to participate in the process include:

- City mayors
- School district superintendents
- Fire departments
- Police departments
- City managers
- Public works
- Floodplain administrators
- Facility managers
- Emergency managers

See Appendix A for documentation and sign-in sheets for the meetings.

Neighboring Communities and Public

Public notice in county newspapers and radio announcements were made to invite the public and neighboring communities. Announcements were also posted on the Washington County website as alternative means of inviting the public. Surveys were distributed to the public to gather what hazards were thought to be threats and should be included in the mitigation plan.

Public Feedback

Survey results and feedback from the public at meetings were used to identify what hazards should remain in the plan or be taken out. Feedback from the public was also used to determine each jurisdiction's problem statements and potential mitigation actions.

Review of Existing Studies, Plans, & Reports

Existing studies and plans were reviewed in the process of updating this hazard mitigation plan to identify what information could be incorporated. The Arkansas State Hazard Mitigation Plan was reviewed to identify hazards that pose a threat to the state. Local comprehensive plans and emergency response plans were reviewed to identify if and how they addressed hazards. Each jurisdictions' website was used to gather information about community assets. Reports from the National Climate Data Center and U.S. Geological Survey were used to identify past occurrences for the hazards. Each jurisdiction's website was used to gather information about community assets. Information from FEMA's Community Status Book Report was used to identify jurisdictions' participation in the National Flood Insurance Program. Reports were also obtained from the State National Flood Insurance Program Coordinator regarding community policies and total coverage.

Continuing Public Participation

Washington County is dedicated to involving the public directly in the continual reshaping and updating of the Washington County Hazard Mitigation Plan. The public will be able to directly comment on and provide feedback about the plan.

Copies of the plan will be catalogued and kept on hand at Cities of Elkins, Elm Springs, Farmington, Fayetteville, Goshen, Greenland, Johnson, Lincoln, Prairie Grove, Springdale, Tontitown, West Fork and Winslow, Washington County School Districts – Elkins, Farmington, Fayetteville, Greenland, Lincoln, Prairie Grove, Springdale and West Fork, and all of the public libraries in Washington County. Contained in the plan are the address, phone number, and email of the Director of the Washington County Office of Emergency Management, the primary point of contact for the plan. Copies of the plan will be kept at the Washington County Courthouse and Arkansas Tech University.

A public announcement inviting all interested parties will be made prior to each LEPC meeting during which the Hazard Mitigation Planning Committee reviews and evaluates the plan in its entirety. This meeting will provide the public a forum for which the general public can express concerns, opinions, or ideas about the plan. The Washington County Office of Emergency Management and the Washington County LEPC will publicize and host this meeting. Following the meeting, the Washington County Office of Emergency Management will review the comments and make changes to the plan, as appropriate.

Monitoring, Evaluating, and Updating the Plan

Washington County has developed a method to ensure that monitoring, evaluation, and as needed updating of the Washington County Hazard Mitigation Plan occurs annually and a five year re-evaluation meeting occurs every 5 years. The County will form a Hazard Mitigation Plan Evaluation Committee of the existing Washington County Local Emergency Planning Committee (LEPC). The LEPC consists of members from fire service, health officials, emergency management, law enforcement, community groups, transportation, hospital personnel, and emergency medical personnel, elected officials, and owners and operators of covered facilities. The Director of the Washington County Office of Emergency Management will be the initial Chair of the committee or Planning Team Leader. The Planning Team Leader will be responsible for leading these efforts by contacting the planning team committee, setting meeting dates, and ensuring that each jurisdiction will sustain a representative on the team.

Annual Review Meeting

During the annual Hazard Mitigation Plan review meeting, committee will meet to ensure the following:

- Update the plan of any events that occurred in the past year
- Review hazard profiles and discuss major changes or mitigation projects that have altered vulnerability of each jurisdiction
- Track and discuss the status of each mitigation strategy
- Mitigation strategy tables will be updated accordingly

The Washington County Office of Emergency Management will then have three months to update and make changes to the plan before submitting it to the committee members and the State Hazard Mitigation Officer. All meeting minutes, press releases, and other documentation of revisions should be kept on record by Washington County Department of Emergency Management.

5-year Re-evaluation Meeting

During the 5 year re-evaluation meeting, the committee will meet to ensure that all topics in the annual meeting are covered, as well as the following:

- Update demographic data
- Address new planning documents, ordinances, and codes that were put in place
- Update risk analysis and incorporate new development
- Add new mitigation strategies
- Discuss and include any priority changes in mitigation strategies
- Add conditions that may affect the risks and vulnerabilities of populations such as increase of population or climate variability.

The Washington County Office of Emergency Management will then update and make changes to the plan before submitting it to the committee members and the State Hazard Mitigation Officer. All meeting minutes, press releases, and other documentation of revisions should be kept on record by Washington County Department of Emergency Management. After any revisions necessary Washington County will submit the Hazard mitigation plan to ADEM and FEMA for review and approval.

If no changes are necessary, the State Hazard Mitigation Officer will be given a justification for this determination.

Section 3

RISK ASSESSMENT

In this section:

Risk Assessment

Risk Assessment, as defined by FEMA, is the process of measuring the potential loss of life, personal injury, economic injury, and property damage resulting from hazards by assessing the vulnerability of people, buildings, and infrastructure to natural hazards. Risk assessment provides the foundation for the rest of the mitigation planning process. The risk assessment process focuses attention on areas most in need by evaluating which populations and facilities are most vulnerable to all hazards and to what extent injuries and damages may occur. It tells you:

- The hazards to which your state or community is susceptible;
- What these hazards can do to physical, social, and economic assets;
- Which areas are most vulnerable to damage from these hazards; and
- The cost of damages or costs avoided which results from future mitigation projects.

In addition to mitigation planning, risk assessment information also allows emergency management personnel to establish early response priorities by identifying potential hazards and vulnerable assets.

Hazard Identification

Hazard Identification, the process of identifying hazards that threaten a given area, is the first step in the risk assessment process. Washington County identified several hazards that, because they pose a significant risk to Washington County and its residents, warranted a complete profile in this hazard mitigation plan. These hazards were identified through an extensive process that utilized input from planning team members, research of newspapers and other historical records, review of existing plans and reports, discussions with hazard experts, Internet research, the State Mitigation Plan, NOAA severe storm database, and information provided by FEMA and ADEM.

The following hazards are assessed in the following parts of this plan:

- Severe Weather
- High Winds
- Tornado
- Flood
- Dam Failure
- Winter Storms
- Extreme Temperatures
- Wildfire
- Drought
- Earthquake
- Pandemic

Previous hazards that were omitted from this plan update because, decided by the planning team, they are not natural hazards or no longer pose as a threat to Washington County include: Soil expansion, Cyber, Terrorism, HazMat, and utility failure.

Definitions for Classifications

The following definitions describe how the hazards were classified throughout the risk assessment in terms of extent, probability of future events, and overall significance.

Maximum Probable Extent (Magnitude/ Strength based on historic events or future probability)

- Weak: Limited classification on scientific scale, slow speed of onset or short duration of event, resulting in little to no damage
- Moderate: Moderate classification on scientific scale, moderate speed of onset or moderate duration of event, resulting in some damage and loss of services for days
- Severe: Severe classification on scientific scale, fast speed of onset or long duration of event, resulting in devastating damage and loss of services for weeks or months
- Extreme: Extreme classification on scientific scale, immediate onset or extended duration of event, resulting in catastrophic damage and uninhabitable conditions

Hazard	Scale/ Index	Weak	Moderate	Severe	Extreme
Hail	Hail Conservation Chart	0.25 to 0.88	1.00 to 1.75	2.00 to 3.00	4.00 and greater
High Wind	Beaufort Wind Scale	10	11	12	12
Tornado	Enhanced Fujita Scale	EF0	EF1, EF2	EF3	EF4, EF5
Drought	Palmer Drought Index	-1.0 to -1.9	-2.0 to -2.9	-3.0 to -3.9	-4.0 and below
Earthquake	Modified Mercalli Scale	I to IV	V to VII	VIII	IX to XII
	Richter Scale	2, 3	4, 5	6	7, 8

Probability of Future Events

- Unlikely: Less than 1 percent probability of occurrences in the next year or a recurrence interval of greater than every 100 years.
- Occasional: 1 to 10 percent probability of occurrence in the next year or a recurrence interval of 11 to 100 years.
- Likely: 10 to 90 percent probability of occurrence in the next year or a recurrence interval of 1 to 10 years.
- Highly Likely: 90 to 100 percent probability of occurrence in the next year or a recurrence interval of less than 1 year.

Overall Significance

- Low: two or more criteria fall in lower classifications or the event has a minimal impact on the planning area. This rating is sometimes used for hazards with a minimal or unknown record of occurrences of for hazards with minimal mitigation potential.

- Medium: The criteria fall mostly in the middle ranges of classifications and the event's impacts on the planning area are noticeable but not devastating. This rating is sometimes used for hazards with a high extent rating but very low probability rating.
- High: The criteria consistently fall in the high classifications and the event is likely/ highly likely to occur with sever strength over a significant to extensive portion of the planning area.

Profiling Hazards

Following is a detailed assessment of the risks associated with each of the hazards which could potentially affect the area. Included is information on previous occurrences of hazard events and on the probability of future events.

Severe Storm Hazard Profile

Thunderstorm

A thunderstorm can be defined as any storm that produces lightning and thunder. Most of the time, blustery winds, substantial rain, and hail are involved. A single cumulonimbus cloud map produce a thunderstorm, and therefore, only impact a small area; however, it may be accompanying groups of cumulonimbus clouds which may affect a large area. If a thunderstorm has winds gusting in excess of 58 mph (50 knots), hail one inch or larger, or a tornado, it is classified as "severe." Thunderstorm events are created by atmospheric imbalance and turbulence due to the combined conditions of unstable warm air rising rapidly into the atmosphere, adequate moisture producing clouds, rain and upward lifts of air currents resulting from colliding weather fronts (cold and warm), sea breezes, or mountains.

Lightning

Lightning is a visible discharge of electricity that typically occurs during a thunderstorm. The discharge of lightning can travel in three different ways: cloud to ground, cloud to cloud, or ground to cloud. The electrical discharge occurs when the separation of positively and negatively charged ions are strong enough. Lightning is created to try and balance out the opposing charges of these ions.

Hail

Hail is a form of precipitation that grows in the updraft of a thunderstorm. Within updrafts, some nuclei come in contact with supercooled water and freezes on contact. Stronger updrafts lift hailstones into more supercooled water allowing the hailstone to continue to grow. As the updraft strengthens the hailstones are capable of growing larger. Once the updraft of the thunderstorm weakens or can no longer support the weight of the hailstone gravity pulls it down. How the hail falls to the ground is dependent upon what is occurring within the thunderstorm. Hailstones can continue to grow as they fall and come into contact with raindrops and other hailstones. This also slows down the speed in which the hailstones fall out of the thunderstorm.
This chart represents common items that can be associated with hailstone sizes. All participating jurisdictions can experience hailstones in diameter ranging from 0.25 in. to 4.5 in.

Hail Conversion Chart	
Diameter of Hailstone	Description
0.25 inch	Pea Size
0.50 inch	Mothball Size
0.75 inch	Dime/Penny Size
0.88 inch	Nickel Size
1.00 inch (Severe Criteria)	Quarter Size
1.25 inch	Half Dollar Size
1.50 inch	Walnut or Ping Pong Ball Size
1.75 inch	Golf Ball Size
2.00 inch	Hen Egg Size
2.50 inch	Tennis Ball Size
2.75 inch	Baseball Size
3.00 inch	Teacup Size
4.00 inch	Grapefruit Size
4.50 inch	Softball Size

Past Severe Weather Occurrences

A number of thunderstorm events have affected Washington County over the last 10 years. Out of the 96 thunderstorm reports, only a handful have resulted in excessive damage. As a whole, thunderstorm events have caused $177,000 in damage to Washington County. Over the last 10 years, Washington County has had 102 hail occurrences reported, ranging in diameter from 0.75 inches to 3.00 inches. Out of the 102 occurrences, they have had 7 instances with 2 inch or greater hail. These hail occurrences have not resulted in any fatalities or injuries. In Washington County they have experienced approximately 1 Million dollars' worth of damage, and all of this damage has occurred since 2008. Over the last 10 years, Washington County has experienced four lightning events that were reported. Of the four events, one instance did take the life of an individual and injure another. Lightning has also caused 400,000 dollar worth of damage over the last 10 years in Washington County.

Future Probability

[(Current Year) 2014] subtracted by [(Historical Year) 2004] = 10 Years on Record
[(Years on Record) 10] divided by [(Number of Historical Events) 96] = 0.104
[(Number of Historical Events) 96] divided by [(Years on Record) 10] = 9.6

The historic frequency calculates that there is over 100% chance of a thunderstorm occurring in Washington County every 0.104 years. The probability that Washington County will experience a severe thunderstorm is high likely, meaning there is 90-100% probability of occurrence in the next year.

[(Current Year) 2014] subtracted by [(Historical Year) 2004] = 10 Years on Record
[(Years on Record) 10] divided by [(Number of Historical Events) 102] = 0.098
[(Number of Historical Events) 102] divided by [(Years on Record) 10] = 10.2

The historic frequency calculates that there is over 100% chance of a thunderstorm occurring in Washington County every 0.098 years. The probability that Washington County will experience an event of hail is high likely, meaning there is 90-100% probability of occurrence in the next year.

[(Current Year) 2014] subtracted by [(Historical Year) 2004] = 10 Years on Record
[(Years on Record) 10] divided by [(Number of Historical Events) 4] = 2.5
[(Number of Historical Events) 4] divided by [(Years on Record) 10] = 0.40

The historic frequency calculates that there is a 40% chance of a lightning event occurring in Washington County every 2.5 years. The probability that Washington County will experience an event of hail is likely, meaning there is 10-90% probability of occurrence in the next year, or a reoccurrence interval of 1 to 10 years.

Locations

Each jurisdiction in Washington County has an equal susceptibility to thunderstorm activity. The following sections will describe their community differences and how they will be affected differently.

Unincorporated Washington County, Arkansas Community Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems
• Visiting Populations • Non English Speaking Populations	• 3 Fire Departments		• Bobby Hopper Tunnel

Washington County Critical Facilities			
Critical Facility Name	Location	Facility Type	Value
Evansville Volunteer Fire Department	Evansville	Public Safety	$1.5 Million
Morrow Fire Department	Morrow	Public Safety	$1.5 Million
Cincinnati Fire Department	Summers	Public Safety	$1.5 Million
Bobby Hopper Tunnel	Winslow	Transportation	$37.1 Million

Unincorporated Washington County Risk Analysis

	Thunderstorm		Hail		Lightning	
Jurisdiction	Occurrences	Property Damage	Occurrences	Property Damage	Occurrences	Property Damage
Unincorporated Washington County	25	$55,000	21	$100,000	1	$150,000
Washington County	96	$177,000	102	$1.06 Million	4	$400,000
Unincorporated Washington County Percentages	25/96 = 26.04%		21/102 = 20.58%		1/4 = 25%	

Since 2004, Unincorporated Washington County has had 26 severe thunderstorm occurrences, resulting in $55,000 in property damage, with excessive wind (50kts or greater) out of the 96 reports for the entire Washington County. Unincorporated Washington also reported 21 hail occurrences, resulting in $100,000 in property damage, of the 102 for Washington County. Unincorporated Washington County also experience 1 lightning occurrence, resulting in $150,000 in property damage, out of the 4 reported for Washington County. These storms resulted in roof damage and downed trees from excessive winds. During a thunderstorm potential damage could include: damage to crops, structures, power lines, automobiles, communications, and risk of bodily harm.

Health and safety: Since 2004, one thunderstorm-related death has been reported in Washington County. Thunderstorms present the potential threat of injury or death. However no specific health problems can be attributed to thunderstorms.

Damage to Buildings and Infrastructure: Thunderstorms have the potential to impact the community and its critical assets. Damage to roofs, siding, windows and automobiles are possible effects of thunderstorms. Damage to key infrastructure such as; substations, transformers, poles, and power lines, can result from wind; which can cause downed trees and branches, and lightning. Communication can also be affected by thunderstorms. Lightning has the potential to disrupt signals, and damage towers and antennas.

Over a 10 year period, unincorporated Washington County has experienced high value loss, but is not immune to the possibility of a thunderstorm having a greater impact than past occurrences. The overall impact of thunderstorms for unincorporated Washington County is considered to be **medium**, meaning impacts are noticeable but not devastating.

Elkins, Arkansas Community Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems	Other
• Visiting Populations • Non English Speaking Populations	• Childcare Facilities • Schools • Senior Center • Health Clinic • Fire Department • City Hall/Police Department • Animal Control	• High Pressure Gas Line	• Telecommunications • Water & Waste Water Treatment	• *White River Bridge • *Tom Smith House • Bunch Park • Library

***National Historic Sites**

Elkins Critical Facilities		
Critical Facilities	Facility Type	Value
Elkins Volunteer Fire Department	Public Safety	$3 Million
Elkins City Hall/ PD	Public Safety	$300,000
Elkins School District	Education	$35.8 Million
Elkins Community Center	Shelter	$100,000
Telecommunications	Utility	$500,000

Elkins, Arkansas School District Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems
• Visiting Populations • Populations where English as a 2nd language	• Football Field • Softball Field • Baseball Field • Primary School • Elementary School • Middle School • High School • Wellness • Center • Gymnasium	• Central Office	• Buses • Fiber Line Connections (between all buildings)

Elkins School Critical Facilities		
Critical Facility	Facility Type	Value
Elkins Elementary Primary School	Education	$7 Million
Elkins Elementary School	Education	$8 Million
Elkins High School	Education	$10 Million
Elkins Middle School	Education	$9 Million
Central Office	Administration	$500,000
Transportation	Transportation	$1.8 Million

City of Elkins and Elkins School District Analysis

	Thunderstorm		Hail		Lightning	
Jurisdiction	Occurrences	Property Damage	Occurrences	Property Damage	Occurrences	Property Damage
Elkins	7	$15,000	2	$0	0	$0
Washington County	96	$177,000	102	$1.06 Million	4	$400,000
Elkins Percentage	7/96 = 7.29%		2/102 = 1.96%		0/4 = 0%	

Since 2004, the city of Elkins and the Elkins School District have had 7 severe thunderstorm occurrences with excessive wind (50kts or greater) out of the 96 reports for Washington County, resulting in $15,000 worth of damage. Elkins also reported 2 hail occurrences of the 102 for Washington County and no damage due to lightning occurrences. Past storms in the city of Elkins have resulting in structural damage and trees being blown down. During a thunderstorm potential damage could include: damage to crops, structures, power lines, automobiles, communications, and risk of bodily harm.

Health and safety: One thunderstorm related death that occurred in Washington County has been reported since 2004. Thunderstorms present the potential threat of injury or death. However no specific health problems can be attributed to thunderstorms.

Damage to Buildings and Infrastructure: Thunderstorms have the potential to impact the community and its critical assets. Damage to roofs, siding, windows and automobiles are possible effects of thunderstorms. Damage to key infrastructure such as; substations, transformers, poles, and power lines, can result from wind; which can cause downed trees and branches, and lightning. Communication can also be affected by thunderstorms. Lightning has the potential to disrupt signals, and damage towers and antennas.

Over a 10 year period, Elkins has not experienced high value loss, but is not immune to the possibility of a thunderstorm having a greater impact than past occurrences. The overall impact of thunderstorms for the city of Elkins and the Elkins School District is considered to be **medium**, meaning impacts are noticeable but not devastating.

Elm Springs, Arkansas Community Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems	Other
• Visiting Populations • Non English Speaking Populations	• City Hall/Police Department • Municipal Court	• Lake Elmdale Spillway	• AT&T Cell Tower • Water & Waste Water Treatment	• Elm Springs Park

Elm Springs Critical Facilities		
Critical Facilities	Facility Type	Value
Elms Springs City Hall/PD	Administration	$300,000
AT&T Cell Tower	Communication	$70,000
Water & Waste Water Treatment	Utilities	
Lake Elmdale Spillway	Spillway	$1.2 Million

City of Elm Springs Analysis

	Thunderstorm		Hail		Lightning	
Jurisdiction	Occurrences	Property Damage	Occurrences	Property Damage	Occurrences	Property Damage
Elm Springs	3	$4,000	2	$0	0	$0
Washington County	96	$177,000	102	$1.06 Million	4	$400,000
Elm Springs Percentage	3/96 = 3.1%		2/102 = 1.96%		0/4 = 0%	

Since 2004, the city of Elm Springs has had 3 severe thunderstorm occurrences with excessive wind (50kts or greater) out of the 96 reports for Washington County, resulting in $4,000 worth of damage. Elm Springs also reported 2 hail occurrences of the 102 for Washington County and no damage due to lightning occurrences. These storms resulted in downed trees and power poles. During a thunderstorm potential damage could include: damage to crops, structures, power lines, automobiles, communications, and risk of bodily harm.

Health and safety: One thunderstorm-related death that occurred in Washington County has been reported since 2004. Thunderstorms present the potential threat of injury or death. However no specific health problems can be attributed to thunderstorms.

Damage to Buildings and Infrastructure: Thunderstorms have the potential to impact the community and its critical assets. Damage to roofs, siding, windows and automobiles are possible effects of thunderstorms. Damage to key infrastructure such as; substations, transformers, poles, and power lines, can result from wind; which can cause downed trees and branches, and lightning. Communication can also be affected by thunderstorms. Lightning has the potential to disrupt signals, and damage towers and antennas.

Over a 10 year period, Elkins has not experienced high value loss, but is not immune to the possibility of a thunderstorm having a greater impact than past occurrences. The overall impact of thunderstorms for the city of Elkins is considered to be **medium**, meaning impacts are noticeable but not devastating.

Farmington, Arkansas Community Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems	Other
• Visiting Populations • Non English Speaking Populations	• City Hall/Police Department • Childcare Facilities • Senior Care Facilities • Fire Dept. • Medical Clinic • Animal Control • School	• High Pressure Gas line	• Electric Power Substation • Sewer Pump Station • Maintenance	• *Walnut Grove Presbyterian Church • Creek Side Park • Library

***National Historic Site**

Farmington Critical Facilities		
Critical Facilities	Facility Type	Value
Farmington Fire Department	Public Safety	$3 Million
Farmington City Hall/ PD	Administration	$300,000
Farmington School District	Education	$56 Million
Electric Power Substation	Utilities	$400,000

Farmington School District Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems
• Visiting Populations • Populations with English as a 2nd Language	• High School • Football Field • Middle School • Intermediate School • 2 Elementary • Schools • Baseball Field • Softball Field • Tennis Courts • 5 Gyms • Fine Arts Auditorium • Band & Choir Rooms • Agriculture Building • 3 Agri. Barns • Indoor Baseball/Softball Practice Buildings	• Central Offices and Technology •	• Maintenance Facility • Transportation Facility

Farmington School Critical Facilities		
Critical Facility	Facility Type	Value
Bob Folsom Elementary School	Education	$7 Million
Farmington High School	Education	$21 Million
George R Ledbetter Intermediate	Education	$7.5 Million
Jerry "Pop" Williams Elem School	Education	$9 Million
Randall G Lynch Middle School	Education	$9 Million
Central Office & Technology	Administration	$500,000
Maintenance Facility	Maintenance	
Transportation Facility	Transportation	$2.1 Million

City of Farmington and Farmington School District Analysis

	Thunderstorm		Hail		Lightning	
Jurisdiction	Occurrences	Property Damage	Occurrences	Property Damage	Occurrences	Property Damage
Farmington	5	$15,000	6	$75,000	0	$0
Washington County	96	$177,000	102	$1.06 Million	4	$400,000
Farmington Percentage	5/96 = 5.21%		6/102 = 5.88%		0/4 = 0%	

Since 2004, the city of Farmington and the Farmington School District have had 5 severe thunderstorm occurrences with excessive wind (50kts or greater) out of the 96 reports for Washington County, resulting in $15,000 worth of damage. Farmington also reported 6 hail occurrences, resulting in $75,000 in property damage, of the 102 occurrences for Washington County and no damage due to lightning occurrences. Past occurrences resulted in downed trees and power lines. During a thunderstorm potential damage could include: damage to crops, structures, power lines, automobiles, communications, and risk of bodily harm.

Health and safety: There have been no reported death associated with thunderstorms. However, one thunderstorm-related death that occurred in Washington County has been reported since 2004. Thunderstorms present the potential threat of injury or death. However no specific health problems can be attributed to thunderstorms.

Damage to Buildings and Infrastructure: Thunderstorms have the potential to impact the community and its critical assets. Damage to roofs, siding, windows and automobiles are possible effects of thunderstorms. Damage to key infrastructure such as; substations, transformers, poles, and power lines, can result from wind; which can cause downed trees and branches, and lightning. Communication can also be affected by thunderstorms. Lightning has the potential to disrupt signals, and damage towers and antennas.

Over a 10 year period, Farmington has experienced high value loss, but is not immune to the possibility of a thunderstorm having a greater impact than past occurrences. The overall impact of thunderstorms for the city of Farmington and the Farmington School District is considered to be **medium**, meaning impacts are noticeable but not devastating.

Fayetteville, Arkansas Community Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems	Other
• Visiting Populations • Non English Speaking Populations	• City Hall • Police Department • Childcare Facilities • Senior Care Facilities • 9 Fire Departments • Animal Control • Schools • Airport • Emergency Operations Center • Hospitals • Dispatch Center • Sheriff's Department • EMS	• Lake Fayetteville Dam • Wilson Lake Dam • Lake Sequoyah Dam	• Water & Wastewater Treatment • Sewer • Telecommunications	• Clinton House Museum • AR Air & Military Museum • Walton Arts Center • Library • *Clinton House • *Frisco Depot • *Guisinger Building • *Happy Hallow Farm • *Lafayette St. Overpass • *Lewis Brothers Building • *Mrs. Young Building • *Old Bank of Fayetteville • *Old Post Office

***National Historic Site**

Fayetteville Critical Facilities		
Critical Facilities	Facility Type	Value
Washington Regional	Medical	$400 Million
Veterans Health Care Center	Medical	$375 Million
Physicians Specialty Hospital	Medical	$100 Million
Boys and Girls Club	Shelter	$13.2 Million
Central United Methodist	Shelter	$1 Million
Paul R. Noland Wastewater Treatment Plant	Utilities	$100 Million
West Side Wastewater Treatment Plan	Utilities	$100 Million
Wheeler Fire Department	Public Safety	$1.5 Million
Fayetteville Fire Department- Station 1-7	Public Safety	$80 Million
Round Mountain Fire Department	Public Safety	$1.5 Million
Wedington Fire Department	Public Safety	$1.5 Million
Fayetteville PD	Public Safety	$600,000
Washington County Sheriff/ Jail	Public Safety	$35,704,712.26
NW AR Community Correction Center	Public Safety	$12.9 Million
Washington County EOC	Public Safety	$821,958.02
Courthouse	Administration	$10,580,214.34
Central EMS	Medical	$500,000
Fayetteville School District	Education	$230,683,160
Drake Field	Airport	$2 Million
Lake Fayetteville Dam	Dam	$3.6 Million
Wilson Lake Dam	Dam	$1.3 Million
Lake Sequoyah Dam	Dam	$3.6 Million
Water & Waste water treatment	Utility	$1,000,000
Telecommunication	Utility	$15 Million

Fayetteville School District Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems
• Visiting Populations • Populations where English is a 2nd language	• Adult and Community Education • 9 Elementary Schools • 2 Middle Schools • 2 Jr. High Schools • High School • Football Field • Baseball Field • Gymnasium • Track • Tennis Complex	• McClinton Administrative Center	•

Fayetteville School Critical Facilities		
Critical Facility	Facility Type	Value
Asbell Elementary School	Education	$8,187,920
Butterfield Elementary School	Education	$8,773,680
Fayetteville High School East	Education	$82,000,000
Happy Hollow Elementary School	Education	$10,500,000
Holcomb Elementary School	Education	$7,200,000
Holt Middle School	Education	$13,521,727
Leverett Elementary School	Education	$7,907,840
McNair Middle School	Education	$13,192,811
Owl Creek School	Education	$17,866,357
Ramay Junior High School	Education	$15,508,105
Root Elementary School	Education	$7,736,000
Vandergriff Elementary School	Education	$7,627,680
Washington Elementary School	Education	$7,152,800
Woodland Junior High School	Education	$20,608,240
Adult and Community Education	Education	$1.2 Million
McClinton Administrative Center	Administration	$150,000
Maintenance Facility	Maintenance	$200,000
Food Service Facility		$200,000
Transportation Facility	Transportation	$4.5 Million

City of Fayetteville and Fayetteville School District Risk Analysis

	Thunderstorm		Hail		Lightning	
Jurisdiction	Occurrences	Property Damage	Occurrences	Property Damage	Occurrences	Property Damage
Fayetteville	13	$30,000	20	$710,000	0	$0
Washington County	96	$177,000	102	$1.06 Million	4	$400,000
Fayetteville Percentage	13/96 = 13.54%		20/102 = 19.61%		0/4 = 0%	

Since 2004, the city of Fayetteville and the Fayetteville School District have had 13 severe thunderstorm occurrences with excessive wind (50kts or greater) out of the 96 reports for Washington County, resulting in $30,000 worth of damage. Fayetteville also reported 20 hail occurrences, resulting in $710,000 in property damage, out of the 102 reports for Washington County and no damage due to lightning occurrences. These storms resulted in downed trees and power lines. During a thunderstorm potential damage could include: damage to crops, structures, power lines, automobiles, communications, and risk of bodily harm.

Health and safety: There has been one thunderstorm related death for Fayetteville or the Fayetteville School District reported since 2004. Thunderstorms present the potential threat of injury or death. However no specific health problems can be attributed to thunderstorms.

Damage to Buildings and Infrastructure: Thunderstorms have the potential to impact the community and its critical assets. Damage to roofs, siding, windows and automobiles are possible effects of thunderstorms. Damage to key infrastructure such as; substations, transformers, poles, and power lines, can result from wind; which can cause downed trees and branches, and lightning. Communication can also be affected by thunderstorms. Lightning has the potential to disrupt signals, and damage towers and antennas.

Over a 10 year period, Fayetteville has experienced high value loss, but is not immune to the possibility of a thunderstorm having a greater impact than past occurrences. The overall impact of thunderstorms for the city of Fayetteville and the Fayetteville School District is considered to be **medium**, meaning impacts are noticeable but not devastating.

Goshen, Arkansas Community Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems
• Non English Speaking Populations	• City Hall/Marshall's Office • Fire Dept. • Community Center		

Goshen Critical Facilities		
Critical Facility	Facility Type	Value
Goshen Fire Department	Public Safety	$1.5 Million
Community Center	Shelter	$75,000
City Hall/ Marshall's Office	Administration	$100,000

City of Goshen Risk Analysis

	Thunderstorm		Hail		Lightning	
Jurisdiction	Occurrences	Property Damage	Occurrences	Property Damage	Occurrences	Property Damage
Goshen	6	$2,000	3	$25,000	1	$150,000
Washington County	96	$177,000	102	$1.06 Million	4	$400,000
Goshen Percentage	6/96 = 6.25%		3/102 = 2.94%		1/4 = 25%	

Since 2004, the city of Goshen has had 6 severe thunderstorm occurrences with excessive wind (50kts or greater) out of the 96 reports for Washington County, resulting in $2,000 worth of damage. Goshen also reported 3 hail occurrences, resulting in $25,000 in property damage, out of the 102 reports for Washington County and 1 occurrence of lightning, resulting in $150,000 in property damage, out of the 4 reports for Washington County. These storms resulted in downed trees and power lines, and roof damage. During a thunderstorm potential damage could include: damage to crops, structures, power lines, automobiles, communications, and risk of bodily harm.

Health and safety: Since 2004, there have been no reported thunderstorm related deaths for Goshen. Thunderstorms present the potential threat of injury or death. However no specific health problems can be attributed to thunderstorms.

Damage to Buildings and Infrastructure: Thunderstorms have the potential to impact the community and its critical assets. Damage to roofs, siding, windows and automobiles are possible effects of thunderstorms. Damage to key infrastructure such as; substations, transformers, poles, and power lines, can result from wind; which can cause downed trees and branches, and lightning. Communication can also be affected by thunderstorms. Lightning has the potential to disrupt signals, and damage towers and antennas.

Over a 10 year period, Goshen has experienced high value loss, but is not immune to the possibility of a thunderstorm having a greater impact than past occurrences. The overall impact of thunderstorms for the city of Goshen is considered to be **medium**, meaning impacts are noticeable but not devastating.

Greenland, Arkansas Community Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems	Other
• Non English Speaking Populations • Visiting Populations	• City Hall • Police Dept. • Fire Dept. • Childcare Facility • School			• Library

Greenland Critical Facilities		
Critical Facility	Facility Type	Value
City Hall	Administration	$100,000
Greenland Fire Department	Public Safety	$1.5 Million
Greenland PD	Public Safety	$300,000
Greenland School District	Education	$26.5 Million

Greenland School District Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems
• Non English Speaking Populations • Visiting Populations	• Elementary School • Middle School • High School • 2 Gymnasiums • Football Field • 2 Safe Rooms		

Greenland School Critical Facilities		
Critical Facility	Facility Type	Value
Greenland Elementary	Education	$7 Million
Greenland Middle School	Education	$7.5 Million
Greenland High School	Education	$10 Million
Central Office	Administration	$200,000
Transportation	Transportation	$2 Million

City of Greenland and Greenland School District Analysis

	Thunderstorm		Hail		Lightning	
Jurisdiction	Occurrences	Property Damage	Occurrences	Property Damage	Occurrences	Property Damage
Greenland	0	$0	4	$0	0	$0
Washington County	96	$177,000	102	$1.06 Million	4	$400,000
Greenland Percentage	0/96 = 0%		4/102 = 3.92%		0/4 = 0%	

Since 2004, the city of Greenland and the Greenland School District have had 0 severe thunderstorms with excessive wind (50kts or greater) out of the 96 reports for Washington County. Greenland and the Greenland School District have also reported 4 hail occurrences of the 102 reports for Washington County and no damage due to lightning occurrences. During a thunderstorm potential damage could include: damage to crops, structures, power lines, automobiles, communications, and risk of bodily harm.

Health and safety: Since 2004, there have been no reported thunderstorm related deaths for Greenland or the Greenland School District. Thunderstorms present the potential threat of injury or death. However no specific health problems can be attributed to thunderstorms.

Damage to Buildings and Infrastructure: Thunderstorms have the potential to impact the community and its critical assets. Damage to roofs, siding, windows and automobiles are possible effects of thunderstorms. Damage to key infrastructure such as; substations, transformers, poles, and power lines, can result from wind; which can cause downed trees and branches, and lightning. Communication can also be affected by thunderstorms. Lightning has the potential to disrupt signals, and damage towers and antennas.

Over a 10 year period, Greenland and the Greenland School District have not experienced a high value loss, but are not immune to the possibility of a thunderstorm having a greater impact than past occurrences. The overall impact of thunderstorms for the city of Greenland and the Greenland School District is considered to be **medium**, meaning impacts are noticeable but not devastating.

Johnson, Arkansas Community Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems
• Non English Speaking Populations • Visiting Populations	• City Hall • Police Dept. • Fire Dept. • Childcare Facility • Senior Care Facility • Animal Control		• Water and Wastewater Treatment

Johnson Critical Facilities		
Critical Facility	Facility Type	Value
Johnson Fire Department	Public Safety	$1.5 Million
Johnson PD	Public Safety	$300,000
City Hall	Administration	$125,000

City of Johnson Analysis

	Thunderstorm		Hail		Lightning	
Jurisdiction	Occurrences	Property Damage	Occurrences	Property Damage	Occurrences	Property Damage
Johnson	1	$1,000	2	$15,000	0	$0
Washington County	96	$177,000	102	$1.06 Million	4	$400,000
Johnson Percentage	1/96 =1.04%		2/102 = 1.96%		0/4 = 0%	

Since 2004, the city of Johnson has had 1 severe thunderstorm occurrence with excessive wind (50kts or greater), resulting in $1000 in property damage, out of the 96 reports for Washington County. Johnson also reported 2 hail occurrences, resulting in $15,000 in property damage, of the 102 reports for Washington County and no damage due to lightning occurrences. During a thunderstorm potential damage could include: damage to crops, structures, power lines, automobiles, communications, and risk of bodily harm.

Health and safety: Since 2004, there have been no reported thunderstorm related deaths for Johnson. Thunderstorms present the potential threat of injury or death. However no specific health problems can be attributed to thunderstorms.

Damage to Buildings and Infrastructure: Thunderstorms have the potential to impact the community and its critical assets. Damage to roofs, siding, windows and automobiles are possible effects of thunderstorms. Damage to key infrastructure such as; substations, transformers, poles, and power lines, can result from wind; which can cause downed trees and

branches, and lightning. Communication can also be affected by thunderstorms. Lightning has the potential to disrupt signals, and damage towers and antennas.

Over a 10 year period, Johnson has not experienced a high value loss, but are not immune to the possibility of a thunderstorm having a greater impact than past occurrences. The overall impact of thunderstorms for the city of Johnson is considered to be **medium**, meaning impacts are noticeable but not devastating.

Lincoln, Arkansas Community Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems	Other
• Visiting Populations • Non English Speaking Populations	• Childcare Facilities • Schools • Senior Center • Medical Clinic • Pharmacy • Fire Department • City Hall/Police Department • Animal Control	• Lincoln Lake Dam • Army National Guard • HAZMAT Storage at the water treatment Facility	• State Highway Dept. • Power Substation • Water & Waste Water Treatment • Prairie Grove Telephone Company • AT&T and Verizon Towers	• Library • Lincoln Lake • Lincoln Community Building • Town Square • Municipal Ball Park Complex

Lincoln Critical Facility Assessments		
Critical Facility	Facility Type	Value
Lincoln Fire Department	Public Safety	$3 Million
Lincoln City Hall/ PD	Administration	$300,000
Lincoln School District	Education	$42.5 Million
Lincoln Lake Dam	Dam	$2.5 Million
Power Substation	Utility	$100,000
Water & Wastewater Treatment	Utility	$10 Million
AT&T Cell Tower	Communication	$70,000
Verizon Cell Tower	Communication	$70,000
Lincoln Library	Shelter	$100,000

Lincoln School District Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems
• Visiting Populations • English as a 2nd Language Populations	• Elementary School • Middle School • High School	• Administrative Office	• Transportation Dept.

Lincoln School Critical Facilities		
Critical Facility	Facility Type	Value
Lincoln Elementary	Education	$7 Million
Lincoln Middle School	Education	$8 Million
Lincoln New Tech High School	Education	$25 Million
Maintenance	Maintenance	$100,000
Central Office	Administration	$500,000
Transportation	Transportation	$2.1 Million

City of Lincoln and Lincoln School District Analysis

	Thunderstorm		Hail		Lightning	
Jurisdiction	Occurrences	Property Damage	Occurrences	Property Damage	Occurrences	Property Damage
Lincoln	7	$5,000	7	$0	0	$0
Washington County	96	$177,000	102	$1.06 Million	4	$400,000
Lincoln Percentage	7/96 = 7.29%		7/102 = 6.86%		0/4 = 0%	

Since 2004, the city of Lincoln and the Lincoln School District has had 7 severe thunderstorm occurrences with excessive wind (50kts or greater) out of the 96 reports for Washington County. Lincoln also reported 7 hail occurrences of the 102 for Washington County. These storms resulted in roof damage from excessive winds and downed trees, resulting in $5,000 worth of property damage. During a thunderstorm potential damage could include: damage to crops, structures, power lines, automobiles, communications, and risk of bodily harm.

Health and safety: Since 2004, one thunderstorm-related death has been reported in Washington County. Thunderstorms present the potential threat of injury or death. However no specific health problems can be attributed to thunderstorms.

Damage to Buildings and Infrastructure: Thunderstorms have the potential to impact the community and its critical assets. Damage to roofs, siding, windows and automobiles are possible effects of thunderstorms. Damage to key infrastructure such as; substations, transformers, poles, and power lines, can result from wind; which can cause downed trees and branches, and lightning. Communication can also be affected by thunderstorms. Lightning has the potential to disrupt signals, and damage towers and antennas.

Over a 10 year period, Lincoln and the Lincoln School District has not experienced high value loss, but is not immune to the possibility of a thunderstorm having a greater impact than past occurrences. The overall impact of thunderstorms for the city of Lincoln and the Lincoln School District is considered to be **medium**, meaning impacts are noticeable but not devastating.

Prairie Grove, Arkansas Community Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems	Other
• Visiting Populations • Non English Speaking Populations	• City Hall/Police Department • Childcare Facilities • Senior Care Facilities • Fire Dept. • Animal Control • School	• Source Gas Pumping Station(Natural Gas) • Prairie Grove Lake Dam	• Prairie Grove Communications • Source Gas (Natural Gas) • Water & Wastewater • American Electric Power • Ozarks Electric	• *Borden House • *Lake-Bell House • Prairie Grove Battlefield Park

***National Historic Site**

Prairie Grove Critical Facilities		
Critical Facility	Facility Type	Value
Prairie Grove Fire Department	Public Safety	$3 Million
Prairie Grove City Hall/ PD	Administration	$300,000
Prairie Grove School District	Education	$31.8 Million
Source Gas Pumping Station (Natural Gas)	Utility	$100,000
Prairie Grove Lake Dam	Dam	$1.75 Million
Prairie Grove Communication	Communication	
Water & Wasterwater	Utility	$11.5 Million
American Electric Power	Utility	$400,000
Ozarks Electric	Utility	$100 Million

Prairie Grove School District Assets

People	Critical Facilities	High Potential Loss	Critical Infrastructure
• Visiting Populations • English as a 2nd Language Populations	• Primary School • Intermediate School • Middle School • High School • 2 Football Fields • Baseball Field • Softball Field • 2 Gyms	• Administrative Office	• Bus/ Maintenance Facility

Prairie Grove School Critical Facilities		
Critical Facility	Facility Type	Value
Prairie Grove Elementary	Education	$7.5 Million
Prairie Grove High School	Education	$8 Million
Prairie Grove Intermediate	Education	$7 Million
Prairie Grove Middle School	Education	$7.5 Million
Central Office	Administration	$500,000
Bus/ Maintenance Facility	Transportation	$1.8 Million

City of Prairie Grove and Prairie Grove School District Analysis

	Thunderstorm		Hail		Lightning	
Jurisdiction	Occurrences	Property Damage	Occurrences	Property Damage	Occurrences	Property Damage
Prairie Grove	4	$7,000	8	$50,000	2	$100,000
Washington County	96	$177,000	102	$1.06 Million	4	$400,000
Prairie Grove Percentage	4/96 = 4.17%		8/102 = 7.84%		2/4 = 50%	

Since 2004, the city of Prairie Grove and the Prairie Grove School District have had 4 severe thunderstorm occurrences with excessive wind (50kts or greater) out of the 96 reports for Washington County, resulting in $7,000 in property damage. Prairie Grove also reported 8 hail occurrences of hail, resulting in $50,000 in property damage, out of the 102 reports for Washington County and 2 occurrences of lightning occurrences, resulting in $100,000 in property damage, out of the 4 reports for Washington County. Past occurrences of thunderstorms for Prairie Grove have resulted in a fishing boat getting struck by lightning killing one of the occupants, structure fires resulting from lightning, and trees and power lines downed. During a thunderstorm potential damage could include: damage to crops, structures, power lines, automobiles, communications, and risk of bodily harm.

Health and safety: There has been one thunderstorm related death for Prairie Grove reported since 2004. Thunderstorms present the potential threat of injury or death. However no specific health problems can be attributed to thunderstorms.

Damage to Buildings and Infrastructure: Thunderstorms have the potential to impact the community and its critical assets. Damage to roofs, siding, windows and automobiles are possible effects of thunderstorms. Damage to key infrastructure such as; substations, transformers, poles, and power lines, can result from wind; which can cause downed trees and branches, and lightning. Communication can also be affected by thunderstorms. Lightning has the potential to disrupt signals, and damage towers and antennas.

Over a 10 year period, Prairie Grove and the Prairie Grove School District have experienced high value loss, but is not immune to the possibility of a thunderstorm having a greater impact

than past occurrences. The overall impact of thunderstorms for the city of Prairie Grove and the Prairie Grove School District is considered to be **medium**, meaning impacts are noticeable but not devastating.

Springdale, Arkansas Community Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems	Other
• Non English Speaking Populations • Visiting Populations	• City Hall • School • Municipal Airport • Hospital • Police Dept. • Fire Dept. • Childcare Facility • Senior Care Facility • Animal Control	• Beaver Lake Facility • Tenenbaum Lake Dam	• Water and Wastewater • Water Treatment • Sewer Treatment • Telecommunications	• *Beely Johnson American Legion Post 139 • *Fishback School • *Old Springdale High School • *Shiloh Church • *Shiloh Historic District • Springdale Youth Center • Aquatic Center • Library • Arvest Ball Park • Jones Center • Parsons Stadium • Botanical Garden

***National Historic Site**

Springdale Critical Facilities		
Critical Facility	Facility Type	Value
NW Health Center		$350 Million
Springdale Senior Center	Shelter	$100 Million
Springdale Water utilities	Utility	$100 Million
Springdale Fire Department- Station 1-6	Public Safety	$80 Million
Nob Hill Volunteer Fire Department	Public Safety	$1.5 Million
Tontitown Area Volunteer Fire Department Rural	Public Safety	$1.5 Million
Springdale PD	Public Safety	$600,000
State Police Troop L	Public Safety	$150,000
Springdale School District	Education	$940.95 Million
City Hall	Administration	$4.5 Million
Tenenbaum Lake Dam	Dam	$25,000
Water and Waste Water	Utility	$100 Million
Telecommunications	Utility	$15 Million
Springdale municipal airport	Airport	$2 Million

Springdale School District Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems
• Non English Speaking Populations • Visiting Populations	• Head Start • 17 Elementary Schools • 4 Middle Schools • 4 Jr. High Schools • 4 High Schools • Early Childhood Center • Football Fields • Nursing Services • Food Services	• Central Office • Professional Development Center • Support Services •	• Technology • Transportation • Warehouse Operations • Maintenance Dept.

Springdale School Critical Facilities		
Critical Facility	Facility Type	Value
Bayyari Elementary School	Education	$20 Million
Bernice Young Elementary	Education	$20 Million
Central Junior High School	Education	$30 Million
Elmdale Elementary School	Education	$20 Million
George Elementary School	Education	$20 Million
George Junior High School	Education	$30 Million
Har-ber High School	Education	$85 Million
Harp Elementary School	Education	$20 Million
Helen Tyson Middle School	Education	$25 Million
Hellstern Middle School	Education	$25 Million
Hunt Elementary School	Education	$20 Million
J. O. Kelly Middle School	Education	$25 Million
John Tyson Elementary School	Education	$20 Million
Jones Elementary School	Education	$20 Million
Lakeside Junior High School	Education	$30 Million
Monitor Elementary	Education	$20 Million
Parson Hill Elementary School	Education	$20 Million
Robert E. Lee Elementary School	Education	$20 Million
Sonora Elementary School	Education	$20 Million
Sonora Middle School	Education	$25 Million
Southwest Junior High School	Education	$30 Million
Springdale Alternative School	Education	$2 Million
Springdale High School	Education	$85 Million
Thurman G. Smith Elementary School	Education	$20 Million
Turnbow Elementary School	Education	$20 Million
Walker Elementary School	Education	$20 Million
Westwood Elementary School	Education	$20 Million
Willis Shaw Elementary School	Education	$20 Million
Early Childhood Center	Education	$2.5 Million
Central Office	Administration	$750,000
Professional Development Center	Education	$100,000
Support Services	Administration	$100,000
Technology Building	Technology	$100,000
Transportation	Transportation	$10 Million
Food Services	Dining Services	$200,000
Nursing Services	Medical	$100,000
Warehouse Operations	Storage	$250,000
Maintenance Department	Maintenance	$500,000
Washington Building		$1.5 Million

City of Springdale and Springdale School District Analysis

	Thunderstorm		Hail		Lightning	
Jurisdiction	Occurrences	Property Damage	Occurrences	Property Damage	Occurrences	Property Damage
Springdale	13	$12,000	6	$60,000	0	$0
Washington County	96	$177,000	102	$1.06 Million	4	$400,000
Springdale Percentage	13/96 =13.54%		6/102 = 5.88%		0/4 = 0%	

Since 2004, the city of Springdale and the Springdale School District have had 13 severe thunderstorms with excessive wind (50kts or greater) out of the 96 reports for Washington County, resulting in $12,000 worth of damage. Springdale also reported 6 hail occurrences, resulting in $60,000 in property damage, of the 102 for Washington County and no damage due to lightning occurrences. These storms resulted in downed power lines and trees. During a thunderstorm potential damage could include: damage to crops, structures, power lines, automobiles, communications, and risk of bodily harm.

Health and safety: There has been one thunderstorm related death for Springdale reported since 2004. Thunderstorms present the potential threat of injury or death. However no specific health problems can be attributed to thunderstorms.

Damage to Buildings and Infrastructure: Thunderstorms have the potential to impact the community and its critical assets. Damage to roofs, siding, windows and automobiles are possible effects of thunderstorms. Damage to key infrastructure such as; substations, transformers, poles, and power lines, can result from wind; which can cause downed trees and branches, and lightning. Communication can also be affected by thunderstorms. Lightning has the potential to disrupt signals, and damage towers and antennas.

Over a 10 year period, Springdale and the Springdale School District have experienced high value loss, but is not immune to the possibility of a thunderstorm having a greater impact than past occurrences. The overall impact of thunderstorms for the city of Springdale and the Springdale School District is considered to be **medium**, meaning impacts are noticeable but not devastating.

Tontitown, Arkansas Community Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems	Other
• Non English Speaking Populations • Visiting Populations	• City Hall • Police Dept. • Fire Dept. • Power Plant • Waste Management • Pam Trucking • K&K Vet Supply	•	• Water and Wastewater •	• Museum • Park • *Bariola Farm • *St. Joseph Catholic Church • *Tontitown School Building

***National Historic Site**

Tontitown Critical Facilities		
Critical Facility	Facility Type	Value
Tontitown Area volunteer Fire Department City	Public Safety	$1.5 Million
City Hall	Administration	$75,000
Police Department	Public Safety	$300,000
Power Plant	Utility	$1.2 Million

City of Tontitown Analysis

	Thunderstorm		Hail		Lightning	
Jurisdiction	Occurrences	Property Damage	Occurrences	Property Damage	Occurrences	Property Damage
Tontitown	4	$20,000	3	$25,000	0	$0
Washington County	96	$177,000	102	$1.06 Million	4	$400,000
Tontitown Percentage	4/96 =4.17%		3/102 = 2.94%		0/4 = 0%	

Since 2004, the city of Tontitown has had 4 severe thunderstorms with excessive wind (50kts or greater) out of the 96 reports for Washington County, resulting in $20,000 worth of damage. Tontitown also reported 3 hail occurrences, resulting in $25,000 in property damage, of the 102 for Washington County and no damage due to lightning occurrences. These storms resulted in downed trees in roadways and power lines. During a thunderstorm potential damage could include: damage to crops, structures, power lines, automobiles, communications, and risk of bodily harm.

Health and safety: Since 2004, there have been no reported thunderstorm related deaths for Tontitown. Thunderstorms present the potential threat of injury or death. However no specific health problems can be attributed to thunderstorms.

Damage to Buildings and Infrastructure: Thunderstorms have the potential to impact the community and its critical assets. Damage to roofs, siding, windows and automobiles are possible effects of thunderstorms. Damage to key infrastructure such as; substations,

transformers, poles, and power lines, can result from wind; which can cause downed trees and branches, and lightning. Communication can also be affected by thunderstorms. Lightning has the potential to disrupt signals, and damage towers and antennas.

Over a 10 year period, Tontitown has not experienced a high value loss, but are not immune to the possibility of a thunderstorm having a greater impact than past occurrences. The overall impact of thunderstorms for the city of Tontitown is considered to be **medium**, meaning impacts are noticeable but not devastating.

West Fork Community Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems
• Non English Speaking Populations • Visiting Populations	• City Hall • School • Police Dept. • Fire Dept. • Childcare Facility • Community Center • Animal Control	•	• Water and Wastewater • Windstream • State Highway Dept.

West Fork Critical Facilities		
Critical Facility	Facility Type	Value
West Fork Fire Department	Public Safety	$3 Million
Strickler Fire Department	Public Safety	$1.5 Million
West Fork School District	Education	$31.4 Million
City Hall	Administration	$100,000
Community Center	Shelter	$75,000
Windstream	Utility	$500,000
State Highway Department	Public Safety	$100,000

West Fork School District Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems
• English Speaking as a 2nd language Populations • Visiting Populations	• ABC School • Elementary School • Middle School • High School	• Administrative Offices	• Bus Fleet

West Fork School Critical Facilities		
Critical Facility	Facility Type	Value
West Fork Elementary School	Education	$10 Million
West Fork High School	Education	$10 Million
West Fork Middle School	Education	$9 Million
Central Office	Administration	$500,000
Transportation	Transportation	$1.8 Million
K-4 Activity Center	Education	$100,000

City of West Fork and West Fork School District Analysis

	Thunderstorm		Hail		Lightning	
Jurisdiction	Occurrences	Property Damage	Occurrences	Property Damage	Occurrences	Property Damage
West Fork	3	$10,000	7	$0	0	$0
Washington County	96	$177,000	102	$1.06 Million	4	$400,000
West Fork Percentage	3/96 =3.13%		7/102 = 6.86%		0/4 = 0%	

Since 2004, the city of West Fork and the West Fork School District have had 3 severe thunderstorm occurrences with excessive wind (50kts or greater), resulting in $10,000 in property damage, out of the 96 reports for Washington County. West Fork also reported 7 hail occurrences, resulting in no property damage, of the 102 reports for Washington County and no damage due to lightning occurrences. These storms resulted in structural damage, downed trees and power lines. During a thunderstorm potential damage could include: damage to crops, structures, power lines, automobiles, communications, and risk of bodily harm.

Health and safety: Since 2004, there have been no reported thunderstorm related deaths for West Fork. Thunderstorms present the potential threat of injury or death. However no specific health problems can be attributed to thunderstorms.

Damage to Buildings and Infrastructure: Thunderstorms have the potential to impact the community and its critical assets. Damage to roofs, siding, windows and automobiles are possible effects of thunderstorms. Damage to key infrastructure such as; substations, transformers, poles, and power lines, can result from wind; which can cause downed trees and branches, and lightning. Communication can also be affected by thunderstorms. Lightning has the potential to disrupt signals, and damage towers and antennas.

Over a 10 year period, West Fork and the West Fork School District have not experienced a high value loss, but are not immune to the possibility of a thunderstorm having a greater impact than past occurrences. The overall impact of thunderstorms for the city of West Fork and the West Fork School District is considered to be **medium**, meaning impacts are noticeable but not devastating.

Winslow Community Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems
• Non English Speaking Populations • Visiting Populations	• City Hall • Fire Dept.		

Winslow Critical Facilities		
Critical Facility	Facility Type	Value
Sunset Fire Department	Public Safety	$1.5 Million
Boston Mountain Fire Department	Public Safety	$1.5 Million
City Hall	Administration	$75,000

City of Winslow Analysis

	Thunderstorm		Hail		Lightning	
Jurisdiction	Occurrences	Property Damage	Occurrences	Property Damage	Occurrences	Property Damage
Winslow	3	$0	9	$0	0	$0
Washington County	96	$177,000	102	$1.06 Million	4	$400,000
Winslow Percentage	3/96 =3.13%		9/102 = 8.82%		0/4 = 0%	

Since 2004, the city of Winslow has had 3 severe thunderstorm occurrences with excessive wind (50kts or greater), resulting in no property damage, out of the 96 reports for Washington County. Winslow also reported 9 hail occurrences, resulting in no property damage, of the 102 reports for Washington County and no damage due to lightning occurrences. During a thunderstorm potential damage could include: damage to crops, structures, power lines, automobiles, communications, and risk of bodily harm.

Health and safety: Since 2004, there have been no reported thunderstorm related deaths for Winslow. Thunderstorms present the potential threat of injury or death. However no specific health problems can be attributed to thunderstorms.

Damage to Buildings and Infrastructure: Thunderstorms have the potential to impact the community and its critical assets. Damage to roofs, siding, windows and automobiles are possible effects of thunderstorms. Damage to key infrastructure such as; substations, transformers, poles, and power lines, can result from wind; which can cause downed trees and branches, and lightning. Communication can also be affected by thunderstorms. Lightning has the potential to disrupt signals, and damage towers and antennas.

Over a 10 year period, Winslow has not experienced a high value loss, but are not immune to the possibility of a thunderstorm having a greater impact than past occurrences. The overall impact of thunderstorms for the city of Winslow is considered to be **medium**, meaning impacts are noticeable but not devastating.

Severe Thunderstorm Vulnerability Analysis

The buildings of the Elkins school district do not have lightning rods. The Elkins school district, West Fork school district, Prairie Grove school district, Greenland school district, and Lincoln school district have no capability to back-up servers and network equipment. Also, the equipment they do have does not have surge protection. The lack of battery back-ups and surge protection will increase the probability of incurring information loss and high financial loss. Some buildings in the Springdale school district are struck by lightning due to being located in an open area.

The movement of students outside during transitional periods subject them to danger during thunderstorm and lightning events.

Critical facilities in the city of Prairie Grove, Springdale, Goshen, Farmington, West Fork, Tontitown, and the unincorporated districts of Washington County lack back-up systems and surge protection. The city of Greenland's City Hall still contains outdated electrical infrastructure and is a building with a leveled roof. Without the ability of back-up systems and surge protection during an electrical outage due to a thunderstorm event, communication and public notification capabilities will be hindered.

The University of Arkansas lacks immediate response capabilities for debris removal. The radio tower on campus has been struck by lightning during thunderstorm events and remains vulnerable. This increases the potential of communication loss and power outages.

Tornado Hazard Profile

According to the National Oceanic and Atmosphere Administration (NOAA), "a tornado is a violently rotating column of air extending from a thunderstorm to the ground." Tornados are usually produced by a thunderstorm and formed when cool air supersedes a layer of warm air, causing the warm air to rise rapidly. At times, vortices remain suspended in the atmosphere as funnel clouds; however, when the vortex makes contact with the ground, it becomes a tornado. The Enhanced Fujita Tornado Scale measures the wind speed and damage that a tornado produces and categorizes it by giving it a numerical value ranging from EF0 to EF5, as shown in the table below.

This scale demonstrates the possible range of tornado damage for the jurisdictions within the municipalities of Washington County. All participating jurisdictions can experience a tornado range of EF0-EF5.

Enhanced Fujita Scale

Scale Range	Wind Speed: 3-second gust (mph)	Description of Damage
EF0	65-85	**Minor Damage:** Chimneys are damaged; Some damage to gutters, siding, and roofs; Some tree branches broken; Shallow-rooted trees pushed over.
EF1	86-110	**Moderate Damage:** Roof severely stripped; Unanchored mobile homes are overturned; loss of exterior doors; windows and other glass broken; smaller tree trunks are snapped; attached garages may be destroyed.
EF2	111-13	**Considerable Damage:** Roof structures are damaged; foundation of frame houses shifted; mobile homes destroyed; large trees snapped or uprooted; debris becomes airborne; light object missiles generated.
EF3	136-165	**Severe Damage:** Roofs and some walls are torn from structures; severe damage to large buildings such as shopping malls; trains overturned; structures with weak foundations blown away some distance; most trees in forest are uprooted.
EF4	166-200	**Extreme Damage to Near-Total Destruction:** Well-constructed houses are destroyed; large debris becomes airborne; some structures are lifted from foundations and blown some distance.
EF5	Over 200	**Massive Damage:** Strong frame houses are leveled off foundations; steel-reinforced concrete structures critically damaged; high-rise buildings have severe structural deformation; automobile-sized missiles become air borne.

Past Tornado Occurrences

Washington County has experienced 12 tornadoes over the last 10 years. On average, the tornadoes that affected Washington County were between an EF0 and an EF2. In the past 10 years there has only been one tornado with a magnitude of EF3. Over the past 10 years tornadoes have caused 2.4 Million dollars' worth of damage throughout the county. The EF3 that occurred took the life of 4 individuals and injured 7 people. However, the other 11 tornado events only resulted in one injury.

Future Probability

[(Current Year) 2014] subtracted by [(Historical Year) 2004] = 10 Years on Record
[(Years on Record) 10] divided by [(Number of Historical Events) 12] = 0.833
[(Number of Historical Events) 12] divided by [(Years on Record) 10] = 1.2

The historic frequency calculates that there is over 100% chance of a tornado occurring in Washington County every 0.83 years. The probability that Washington County will experience a tornado is highly likely, meaning that there is a 90-100% probability of occurrence in the next year.

Locations

Each jurisdiction in Washington County has an equal susceptibility to tornadic activity. The following sections will describe their community differences and how they will be affected differently.

Unincorporated Washington County, Arkansas Community Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems
• Visiting Populations • Non English Speaking Populations	• 3 Fire Departments		• Bobby Hopper Tunnel

Washington County Critical Facilities			
Critical Facility Name	Location	Facility Type	Value
Evansville Volunteer Fire Department	Evansville	Public Safety	$1.5 Million
Morrow Fire Department	Morrow	Public Safety	$1.5 Million
Cincinnati Fire Department	Summers	Public Safety	$1.5 Million
Bobby Hopper Tunnel	Winslow	Transportation	$37.1 Million

Unincorporated Washington County Risk Analysis

Since 2004, unincorporated Washington County has had 11 tornado occurrence out of the 12 reports for entire Washington County, resulting in no property damage. During a tornado, potential damage can include: damage to agriculture, damage or destruction of structures or infrastructure, and bodily harm or death.

Jurisdiction	Occurrences	Property Damage
Unincorporated Washington County	11	$2.4 million

Health and Safety: There have been 4 reported deaths reported since 2004 pertaining to tornados for unincorporated Washington County. There have also been 8 reported injuries

related to the 11 tornado occurrences for unincorporated Washington County. Tornados present the potential threat of injury or death. However no specific health problems can be attributed to tornados.

Damage to Buildings and Infrastructure: Tornados have the potential to impact the community and its critical assets. The damaging or destruction of structures and infrastructure as well as; automobiles are possible effects of tornados. Damage or destruction to key infrastructure such as; roads, bridges, substations, transformers, poles, and power lines, can result from tornados; which can cause downed trees and branches. Communication can also be affected by tornados. Tornados have the potential to damage or destroy towers and antennas.

Over a 10 year period, unincorporated Washington County has experienced high value loss, but is not immune to the possibility of future devastating tornadoes occurring within the jurisdiction. The overall impact of tornadoes for the unincorporated areas of Washington County is considered to range from **high**, meaning that there is likely to occur over an extensive portion of the planning area.

Elkins, Arkansas Community Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems	Other
• Visiting Populations • Non English Speaking Populations	• Childcare Facilities • Schools • Senior Center • Health Clinic • Fire Department • City Hall/Police Department • Animal Control	• High Pressure Gas Line	• Telecommunications • Water & Waste Water Treatment	• *White River Bridge • *Tom Smith House • Bunch Park • Library

***National Historic Sites**

Elkins Critical Facilities		
Critical Facilities	Facility Type	Value
Elkins Volunteer Fire Department	Public Safety	$3 Million
Elkins City Hall/ PD	Public Safety	$300,000
Elkins School District	Education	$35.8 Million
Elkins Community Center	Shelter	$100,000
Telecommunications	Utility	$500,000

Elkins, Arkansas School District Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems
• Visiting Populations • Populations where English as a 2nd language	• Football Field • Softball Field • Baseball Field • Primary School • Elementary School • Middle School • High School • Wellness • Center • Gymnasium	• Central Office	• Buses • Fiber Line Connections (between all buildings)

Elkins School Critical Facilities		
Critical Facility	Facility Type	Value
Elkins Elementary Primary School	Education	$7 Million
Elkins Elementary School	Education	$8 Million
Elkins High School	Education	$10 Million
Elkins Middle School	Education	$9 Million
Central Office	Administration	$500,000
Transportation	Transportation	$1.8 Million

City of Elkins and Elkins School District Risk Analysis

Since 2004, the city of Elkins and the Elkins School District has had 1 tornado occurrence out of the 12 reports for Washington County, resulting in no property damage. During a tornado, potential damage can include: damage to agriculture, damage or destruction of structures or infrastructure, and bodily harm or death.

Jurisdiction	Occurrences	Property Damage
Elkins	1	$0
Washington County	12	$2.4 million
Elkins Percentage	1/12=8.3%	

Health and Safety: There have been no reported deaths reported since 2004 pertaining to tornados for the city of Elkins or the Elkins School District. However, there have been 8 reported injuries and 4 reported deaths related to the 12 tornado occurrences for Washington County. Tornados present the potential threat of injury or death. However no specific health problems can be attributed to tornados.

Damage to Buildings and Infrastructure: Tornados have the potential to impact the community and its critical assets. The damaging or destruction of structures and infrastructure as well as; automobiles are possible effects of tornados. Damage or destruction to key infrastructure such as; roads, bridges, substations, transformers, poles, and power lines, can

result from tornados; which can cause downed trees and branches. Communication can also be affected by tornados. Tornados have the potential to damage or destroy towers and antennas. The city of Elkins also consists of buildings that have the potential for greater impact due to their age or condition.

Over a 10 year period, the city of Elkins and the Elkins School District has not experienced high value loss, but is not immune to the possibility of a devastating tornado occurring within the jurisdiction. The overall impact of tornados for the city of Lincoln is considered to range from **medium** to **high**, meaning that there is a high extent rating but very low probability rating.

Elm Springs Community Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems	Other
• Visiting Populations • Non English Speaking Populations	• City Hall/Police Department • Municipal Court	• Lake Elmdale Spillway	• AT&T Cell Tower • Water & Waste Water Treatment	• Elm Springs Park

Elm Springs Critical Facilities		
Critical Facilities	Facility Type	Value
Elms Springs City Hall/PD	Administration	$300,000
AT&T Cell Tower	Communication	$70,000
Water & Waste Water Treatment	Utilities	
Lake Elmdale Spillway	Spillway	$1.2 Million

Elm Springs Risk Analysis

	Tornado	
Jurisdiction	Occurrences	Property Damage
Elm Springs	0	$0
Washington County	12	$2.4 million
Elm Springs Percentage	0/12=0%	

Since 2004, the city of Elm Springs has had no tornado occurrences out of the 12 reports for Washington County, resulting in no property damage. During a tornado, potential damage can include: damage to agriculture, damage or destruction of structures or infrastructure, and bodily harm or death.

Health and Safety: There have been no reported deaths reported since 2004 pertaining to tornados for the city of Elm Springs. However, there have been 8 reported injuries and 4 reported deaths related to the 12 tornado occurrences for Washington County. Tornados present the potential threat of injury or death. However no specific health problems can be attributed to tornados.

Damage to Buildings and Infrastructure: Tornados have the potential to impact the community and its critical assets. The damaging or destruction of structures and infrastructure as

well as; automobiles are possible effects of tornados. Damage or destruction to key infrastructure such as; roads, bridges, substations, transformers, poles, and power lines, can result from tornados; which can cause downed trees and branches. Communication can also be affected by tornados. Tornados have the potential to damage or destroy towers and antennas. The city of Elm Springs also consists of buildings that have the potential for greater impact due to their age or condition.

Over a 10 year period, Elm Springs has not experienced high value loss, but is not immune to the possibility of a devastating tornado occurring within the jurisdiction. The overall impact of tornados for the city of Elm Springs is considered to range from **medium** to **high**, meaning that there is a high extent rating but very low probability rating.

Farmington, Arkansas Community Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems	Other
• Visiting Populations • Non English Speaking Populations	• City Hall/Police Department • Childcare Facilities • Senior Care Facilities • Fire Dept. • Medical Clinic • Animal Control • School	• High Pressure Gas line	• Electric Power Substation • Sewer Pump Station • Maintenance	• *Walnut Grove Presbyterian Church • Creek Side Park • Library

***National Historic Site**

Farmington Critical Facilities		
Critical Facilities	Facility Type	Value
Farmington Fire Department	Public Safety	$3 Million
Farmington City Hall/ PD	Administration	$300,000
Farmington School District	Education	$56 Million
Electric Power Substation	Utilities	$400,000

Farmington, Arkansas School District Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems
• Visiting Populations • Populations with English as a 2nd Language	• High School • Football Field • Middle School • Intermediate School • 2 Elementary • Schools • Baseball Field • Softball Field • Tennis Courts • 5 Gyms • Fine Arts Auditorium • Band & Choir Rooms • Agriculture Building • 3 Agri. Barns • Indoor Baseball/Softball Practice Buildings	• Central Offices and Technology •	• Maintenance Facility • Transportation Facility

Farmington School Critical Facilities		
Critical Facility	Facility Type	Value
Bob Folsom Elementary School	Education	$7 Million
Farmington High School	Education	$21 Million
George R Ledbetter Intermediate	Education	$7.5 Million
Jerry "Pop" Williams Elem School	Education	$9 Million
Randall G Lynch Middle School	Education	$9 Million
Central Office & Technology	Administration	$500,000
Maintenance Facility	Maintenance	
Transportation Facility	Transportation	$2.1 Million

City of Farmington and Farmington School District Risk Analysis

	Tornado	
Jurisdiction	Occurrences	Property Damage
Farmington	0	$0
Washington County	12	$2.4 million
Farmington Percentage	0/12=0%	

Since 2004, the city of Farmington and the Farmington School District have had no tornado occurrences out of the 12 reports for Washington County, resulting in no property damage. During a tornado, potential damage can include: damage to agriculture, damage or destruction of structures or infrastructure, and bodily harm or death.

Health and Safety: There have been no reported deaths reported since 2004 pertaining to tornados for the city of Farmington or the Farmington School District. However, there have been 8 reported injuries and 4 reported deaths related to the 12 tornado occurrences for Washington

County. Tornados present the potential threat of injury or death. However no specific health problems can be attributed to tornados.

Damage to Buildings and Infrastructure: Tornados have the potential to impact the community and its critical assets. The damaging or destruction of structures and infrastructure as well as; automobiles are possible effects of tornados. Damage or destruction to key infrastructure such as; roads, bridges, substations, transformers, poles, and power lines, can result from tornados; which can cause downed trees and branches. Communication can also be affected by tornados. Tornados have the potential to damage or destroy towers and antennas. The city of Farmington also consists of buildings that have the potential for greater impact due to their age or condition.

Over a 10 year period, Farmington and the Farmington School District has not experienced high value loss, but is not immune to the possibility of a devastating tornado occurring within the jurisdiction. The overall impact of tornados for the city of Farmington and the Farmington School District is considered to range from **medium** to **high**, meaning that there is a high extent rating but very low probability rating.

Fayetteville, Arkansas Community Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems	Other
• Visiting Populations • Non English Speaking Populations	• City Hall • Police Department • Childcare Facilities • Senior Care Facilities • 9 Fire Departments • Animal Control • Schools • Airport • Emergency Operations Center • Hospitals • Dispatch Center • Sheriff's Department • EMS	• Lake Fayetteville Dam • Wilson Lake Dam • Lake Sequoyah Dam	• Water & Wastewater Treatment • Sewer • Telecommunications	• Clinton House Museum • AR Air & Military Museum • Walton Arts Center • Library • *Clinton House • *Frisco Depot • *Guisinger Building • *Happy Hallow Farm • *Lafayette St. Overpass • *Lewis Brothers Building • *Mrs. Young Building • *Old Bank of Fayetteville • *Old Post Office

***National Historic Site**

Fayetteville Critical Facilities		
Critical Facilities	Facility Type	Value
Washington Regional	Medical	$400 Million
Veterans Health Care Center	Medical	$375 Million
Physicians Specialty Hospital	Medical	$100 Million
Boys and Girls Club	Shelter	$13.2 Million
Central United Methodist	Shelter	$1 Million
Paul R. Noland Wastewater Treatment Plant	Utilities	$100 Million
West Side Wastewater Treatment Plan	Utilities	$100 Million
Wheeler Fire Department	Public Safety	$1.5 Million
Fayetteville Fire Department- Station 1-7	Public Safety	$80 Million
Round Mountain Fire Department	Public Safety	$1.5 Million
Wedington Fire Department	Public Safety	$1.5 Million
Fayetteville PD	Public Safety	$600,000
Washington County Sheriff/ Jail	Public Safety	$35,704,712.26
NW AR Community Correction Center	Public Safety	$12.9 Million
Washington County EOC	Public Safety	$821,958.02
Courthouse	Administration	$10,580,214.34
Central EMS	Medical	$500,000
Fayetteville School District	Education	$230,683,160
Drake Field	Airport	$2 Million
Lake Fayetteville Dam	Dam	$3.6 Million
Wilson Lake Dam	Dam	$1.3 Million
Lake Sequoyah Dam	Dam	$3.6 Million
Water & Waste water treatment	Utility	$1,000,000
Telecommunication	Utility	$15 Million

Fayetteville, Arkansas School District Community Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems
• Visiting Populations • Populations where English is a 2nd language	• Adult and Community Education • 9 Elementary Schools • 2 Middle Schools • 2 Jr. High Schools • High School • Football Field • Baseball Field • Gymnasium • Track • Tennis Complex	• McClinton Administrative Center	•

Fayetteville School Critical Facilities		
Critical Facility	Facility Type	Value
Asbell Elementary School	Education	$8,187,920
Butterfield Elementary School	Education	$8,773,680
Fayetteville High School East	Education	$82,000,000
Happy Hollow Elementary School	Education	$10,500,000
Holcomb Elementary School	Education	$7,200,000
Holt Middle School	Education	$13,521,727
Leverett Elementary School	Education	$7,907,840
McNair Middle School	Education	$13,192,811
Owl Creek School	Education	$17,866,357
Ramay Junior High School	Education	$15,508,105
Root Elementary School	Education	$7,736,000
Vandergriff Elementary School	Education	$7,627,680
Washington Elementary School	Education	$7,152,800
Woodland Junior High School	Education	$20,608,240
Adult and Community Education	Education	$1.2 Million
McClinton Administrative Center	Administration	$150,000
Maintenance Facility	Maintenance	$200,000
Food Service Facility		$200,000
Transportation Facility	Transportation	$4.5 Million

City of Fayetteville and Fayetteville School District Risk Analysis

	Tornado	
Jurisdiction	Occurrences	Property Damage
Fayetteville	0	$0
Washington County	12	$2.4 million
Fayetteville Percentage	0/12=0%	

Since 2004, the city of Fayetteville and the Fayetteville School District has had no tornado occurrences out of the 12 reports for Washington County, resulting in no property damage. During a tornado, potential damage can include: damage to agriculture, damage or destruction of structures or infrastructure, and bodily harm or death.

Health and Safety: There have been no reported deaths reported since 2004 pertaining to tornados for the city of Fayetteville or the Fayetteville School District. However, there have been 8 reported injuries and 4 reported deaths related to the 12 tornado occurrences for Washington County. Tornados present the potential threat of injury or death. However no specific health problems can be attributed to tornados.

Damage to Buildings and Infrastructure: Tornados have the potential to impact the community and its critical assets. The damaging or destruction of structures and infrastructure as well as; automobiles are possible effects of tornados. Damage or destruction to key infrastructure such as; roads, bridges, substations, transformers, poles, and power lines, can result from tornados; which can cause downed trees and branches. Communication can also be affected by tornados. Tornados have the potential to damage or destroy towers and antennas.

Over a 10 year period, Fayetteville or the Fayetteville School District has not experienced high value loss, but is not immune to the possibility of a devastating tornado occurring within the jurisdiction. The overall impact of tornados for the city of Fayetteville and the Fayetteville School District is considered to range from **medium** to **high**, meaning that there is a high extent rating but very low probability rating.

Goshen, Arkansas Community Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems
• Non English Speaking Populations	• City Hall/Marshall's Office • Fire Dept. • Community Center		

Goshen Critical Facilities		
Critical Facility	Facility Type	Value
Goshen Fire Department	Public Safety	$1.5 Million
Community Center	Shelter	$75,000
City Hall/ Marshall's Office	Administration	$100,000

Goshen Risk Analysis

	Tornado	
Jurisdiction	Occurrences	Property Damage
Goshen	0	$0
Washington County	12	$2.4 million
Goshen Percentage	0/12=0%	

Since 2004, the city of Goshen has had no tornado occurrences out of the 12 reports for Washington County, resulting in no property damage. During a tornado, potential damage can include: damage to agriculture, damage or destruction of structures or infrastructure, and bodily harm or death.

Health and Safety: There have been no reported deaths reported since 2004 pertaining to tornados for the city of Goshen. However, there have been 8 reported injuries and 4 reported deaths related to the 12 tornado occurrences for Washington County. Tornados present the potential threat of injury or death. However no specific health problems can be attributed to tornados.

Damage to Buildings and Infrastructure: Tornados have the potential to impact the community and its critical assets. The damaging or destruction of structures and infrastructure as well as; automobiles are possible effects of tornados. Damage or destruction to key infrastructure such as; roads, bridges, substations, transformers, poles, and power lines, can result from tornados; which can cause downed trees and branches. Communication can also be affected by tornados. Tornados have the potential to damage or destroy towers and antennas.

Over a 10 year period, Goshen has not experienced high value loss, but is not immune to the possibility of a devastating tornado occurring within the jurisdiction. The overall impact of tornados for the city of Goshen is considered to range from **medium** to **high**, meaning that there is a high extent rating but very low probability rating.

Greenland, Arkansas Community Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems	Other
• Non English Speaking Populations • Visiting Populations	• City Hall • Police Dept. • Fire Dept. • Childcare Facility • School			• Library

Greenland Critical Facilities		
Critical Facility	Facility Type	Value
City Hall	Administration	$100,000
Greenland Fire Department	Public Safety	$1.5 Million
Greenland PD	Public Safety	$300,000
Greenland School District	Education	$26.5 Million

Greenland, Arkansas School District Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems
• Non English Speaking Populations • Visiting Populations	• Elementary School • Middle School • High School • 2 Gymnasiums • Football Field • 2 Safe Rooms		

Greenland School Critical Facilities		
Critical Facility	Facility Type	Value
Greenland Elementary	Education	$7 Million
Greenland Middle School	Education	$7.5 Million
Greenland High School	Education	$10 Million
Central Office	Administration	$200,000
Transportation	Transportation	$2 Million

City of Greenland and Greenland School District Risk Analysis

Since 2004, the city of Greenland has had no tornado occurrences out of the 12 reports for Washington County, resulting in no property damage. During a tornado, potential damage can include: damage to agriculture, damage or destruction of structures or infrastructure, and bodily

	Tornado	
Jurisdiction	Occurrences	Property Damage
Greenland	0	$0
Washington County	12	$2.4 million
Greenland Percentage	0/12=0%	

harm or death.

Health and Safety: There have been no reported deaths reported since 2004 pertaining to tornados for the city of Greenland. However, there have been 8 reported injuries and 4 reported deaths related to the 12 tornado occurrences for Washington County. Tornados present the potential threat of injury or death. However no specific health problems can be attributed to tornados.

Damage to Buildings and Infrastructure: Tornados have the potential to impact the community and its critical assets. The damaging or destruction of structures and infrastructure as well as; automobiles are possible effects of tornados. Damage or destruction to key infrastructure such as; roads, bridges, substations, transformers, poles, and power lines, can result from tornados; which can cause downed trees and branches. Communication can also be affected by tornados. Tornados have the potential to damage or destroy towers and antennas.

Over a 10 year period, Greenland has not experienced high value loss, but is not immune to the possibility of a devastating tornado occurring within the jurisdiction. The overall impact of tornados for the city of Greenland is considered to range from **medium** to **high**, meaning that there is a high extent rating but very low probability rating.

Johnson, Arkansas Community Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems
• Non English Speaking Populations • Visiting Populations	• City Hall • Police Dept. • Fire Dept. • Childcare Facility • Senior Care Facility • Animal Control		• Water and Wastewater Treatment

Johnson Critical Facilities		
Critical Facility	Facility Type	Value
Johnson Fire Department	Public Safety	$1.5 Million
Johnson PD	Public Safety	$300,000
City Hall	Administration	$125,000

Johnson Risk Analysis

Since 2004, the city of Johnson has had no tornado occurrences out of the 12 reports for Washington County, resulting in no property damage. During a tornado, potential damage can include: damage to agriculture, damage or destruction of structures or infrastructure, and bodily harm or death.

	Tornado	
Jurisdiction	Occurrences	Property Damage
Johnson	0	$0
Washington County	12	$2.4 million
Johnson Percentage	0/12=0%	

Health and Safety: There have been no reported deaths reported since 2004 pertaining to tornados for the city of Johnson. However, there have been 8 reported injuries and 4 reported deaths related to the 12 tornado occurrences for Washington County. Tornados present the potential threat of injury or death. However no specific health problems can be attributed to tornados.

Damage to Buildings and Infrastructure: Tornados have the potential to impact the community and its critical assets. The damaging or destruction of structures and infrastructure as well as; automobiles are possible effects of tornados. Damage or destruction to key infrastructure such as; roads, bridges, substations, transformers, poles, and power lines, can result from tornados; which can cause downed trees and branches. Communication can also be affected by tornados. Tornados have the potential to damage or destroy towers and antennas.

Over a 10 year period, Johnson has not experienced high value loss, but is not immune to the possibility of a devastating tornado occurring within the jurisdiction. The overall impact of tornados for the city of Johnson is considered to range from **medium** to **high**, meaning that there is a high extent rating but very low probability rating.

Lincoln, Arkansas Community Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems	Other
• Visiting Populations • Non English Speaking Populations	• Childcare Facilities • Schools • Senior Center • Medical Clinic • Pharmacy • Fire Department • City Hall/Police Department • Animal Control	• Lincoln Lake Dam • Army National Guard • HAZMAT Storage at the water treatment Facility	• State Highway Dept. • Power Substation • Water & Waste Water Treatment • Prairie Grove Telephone Company • AT&T and Verizon Towers	• Library • Lincoln Lake • Lincoln Community Building • Town Square • Municipal Ball Park Complex

Lincoln Critical Facility Assessments		
Critical Facility	Facility Type	Value
Lincoln Fire Department	Public Safety	$3 Million
Lincoln City Hall/ PD	Administration	$300,000
Lincoln School District	Education	$42.5 Million
Lincoln Lake Dam	Dam	$2.5 Million
Power Substation	Utility	$100,000
Water & Wastewater Treatment	Utility	$10 Million
AT&T Cell Tower	Communication	$70,000
Verizon Cell Tower	Communication	$70,000
Lincoln Library	Shelter	$100,000

Lincoln, Arkansas School District Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems
• Visiting Populations • English as a 2nd Language Populations	• Elementary School • Middle School • High School	• Administrative Office	• Transportation Dept.

Lincoln School Critical Facilities		
Critical Facility	Facility Type	Value
Lincoln Elementary	Education	$7 Million
Lincoln Middle School	Education	$8 Million
Lincoln New Tech High School	Education	$25 Million
Maintenance	Maintenance	$100,000
Central Office	Administration	$500,000
Transportation	Transportation	$2.1 Million

Lincoln Risk Analysis

Since 2004, the city of Lincoln has had no tornado occurrences out of the 12 reported for Washington County. During a tornado, potential damage can include: damage to agriculture, damage or destruction of structures or infrastructure, and bodily harm or death.

	Tornado	
Jurisdiction	**Occurrences**	**Property Damage**
Lincoln	**0**	**$0**
Washington County	**12**	**$2.4 million**
Lincoln Percentage	**0/12= 0%**	

Health and Safety: There have been 8 reported injuries and 4 reported deaths related to the 12 tornado occurrences for Washington County. Tornados present the potential threat of injury or death to the 2,249 residents of the city of Lincoln, however no specific health problems can be attributed to tornados.

Damage to Buildings and Infrastructure: Tornados have the potential to impact the community and its critical assets. The damaging or destruction of structures and infrastructure as well as; automobiles are possible effects of tornados. Damage or destruction to key infrastructure such as; roads, bridges, substations, transformers, poles, and power lines, can result from tornados; which can cause downed trees and branches. Communication can also be affected by tornados. Tornados have the potential to damage or destroy towers and antennas. The city of Lincoln also consists of buildings that have the potential for greater impact due to their age or condition.

**Over a 10 year period, Lincoln has not experienced high value loss, but is not immune to the possibility of a devastating tornado occurring within the jurisdiction. The overall impact of tornados for the city of Lincoln is considered to range from medium to high, meaning that there is a high extent rating but very low probability rating.

Prairie Grove, Arkansas Community Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems	Other
• Visiting Populations • Non English Speaking Populations	• City Hall/Police Department • Childcare Facilities • Senior Care Facilities • Fire Dept. • Animal Control • School	• Source Gas Pumping Station(Natural Gas) • Prairie Grove Lake Dam	• Prairie Grove Communications • Source Gas (Natural Gas) • Water & Wastewater • American Electric Power • Ozarks Electric	• *Borden House • *Lake-Bell House • Prairie Grove Battlefield Park

***National Historic Site**

Prairie Grove Critical Facilities		
Critical Facility	Facility Type	Value
Prairie Grove Fire Department	Public Safety	$3 Million
Prairie Grove City Hall/ PD	Administration	$300,000
Prairie Grove School District	Education	$31.8 Million
Source Gas Pumping Station (Natural Gas)	Utility	$100,000
Prairie Grove Lake Dam	Dam	$1.75 Million
Prairie Grove Communication	Communication	
Water & Wasterwater	Utility	$11.5 Million
American Electric Power	Utility	$400,000
Ozarks Electric	Utility	$100 Million

Prairie Grove, Arkansas School District Assets

People	Critical Facilities	High Potential Loss	Critical Infrastructure
• Visiting Populations • English as a 2nd Language Populations	• Primary School • Intermediate School • Middle School • High School • 2 Football Fields • Baseball Field • Softball Field • 2 Gyms	• Administrative Office	• Bus/ Maintenance Facility

Prairie Grove School Critical Facilities		
Critical Facility	Facility Type	Value
Prairie Grove Elementary	Education	$7.5 Million
Prairie Grove High School	Education	$8 Million
Prairie Grove Intermediate	Education	$7 Million
Prairie Grove Middle School	Education	$7.5 Million
Central Office	Administration	$500,000
Bus/ Maintenance Facility	Transportation	$1.8 Million

City of Prairie Grove and Prairie Grove School District Risk Analysis

	Tornado	
Jurisdiction	Occurrences	Property Damage
Prairie Grove	0	$0
Washington County	12	$2.4 million
Prairie Grove Percentage	0/12=0%	

Since 2004, the city of Prairie Grove and the Prairie Grove School District has had no tornado occurrences out of the 12 reports for Washington County, resulting in no property damage. During a tornado, potential damage can include: damage to agriculture, damage or destruction of structures or infrastructure, and bodily harm or death.

Health and Safety: There have been no reported deaths reported since 2004 pertaining to tornados for the city of Prairie Grove and the Prairie Grove School District. However, there have been 8 reported injuries and 4 reported deaths related to the 12 tornado occurrences for Washington County. Tornados present the potential threat of injury or death. However no specific health problems can be attributed to tornados.

Damage to Buildings and Infrastructure: Tornados have the potential to impact the community and its critical assets. The damaging or destruction of structures and infrastructure as well as; automobiles are possible effects of tornados. Damage or destruction to key infrastructure such as; roads, bridges, substations, transformers, poles, and power lines, can result from tornados; which can cause downed trees and branches. Communication can also be affected by tornados. Tornados have the potential to damage or destroy towers and antennas.

The city of Prairie Grove also consists of buildings that have the potential for greater impact due to their age or condition.

Over a 10 year period, Prairie Grove and Prairie Grove School District has not experienced high value loss, but is not immune to the possibility of a devastating tornado occurring within the jurisdiction. The overall impact of tornados for the city of Prairie Grove and the Prairie Grove School District is considered to range from **medium** to **high**, meaning that there is a high extent rating but very low probability rating.

Springdale, Arkansas Community Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems	Other
• Non English Speaking Populations • Visiting Populations	• City Hall • School • Municipal Airport • Hospital • Police Dept. • Fire Dept. • Childcare Facility • Senior Care Facility • Animal Control	• Beaver Lake Facility • Tenenbaum Lake Dam	• Water and Wastewater • Water Treatment • Sewer Treatment • Telecommunications	• *Beely Johnson American Legion Post 139 • *Fishback School • *Old Springdale High School • *Shiloh Church • *Shiloh Historic District • Springdale Youth Center • Aquatic Center • Library • Arvest Ball Park • Jones Center • Parsons Stadium • Botanical Garden

***National Historic Site**

Springdale Critical Facilities		
Critical Facility	Facility Type	Value
NW Health Center		$350 Million
Springdale Senior Center	Shelter	$100 Million
Springdale Water utilities	Utility	$100 Million
Springdale Fire Department- Station 1-6	Public Safety	$80 Million
Nob Hill Volunteer Fire Department	Public Safety	$1.5 Million
Tontitown Area Volunteer Fire Department Rural	Public Safety	$1.5 Million
Springdale PD	Public Safety	$600,000
State Police Troop L	Public Safety	$150,000
Springdale School District	Education	$940.95 Million
City Hall	Administration	$4.5 Million
Tenenbaum Lake Dam	Dam	$25,000
Water and Waste Water	Utility	$100 Million
Telecommunications	Utility	$15 Million
Springdale municipal airport	Airport	$2 Million

Springdale, Arkansas School District Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems
• Non English Speaking Populations • Visiting Populations	• Head Start • 17 Elementary Schools • 4 Middle Schools • 4 Jr. High Schools • 4 High Schools • Early Childhood Center • Football Fields • Nursing Services • Food Services	• Central Office • Professional Development Center • Support Services •	• Technology • Transportation • Warehouse Operations • Maintenance Dept.

Springdale School Critical Facilities		
Critical Facility	Facility Type	Value
Bayyari Elementary School	Education	$20 Million
Bernice Young Elementary	Education	$20 Million
Central Junior High School	Education	$30 Million
Elmdale Elementary School	Education	$20 Million
George Elementary School	Education	$20 Million
George Junior High School	Education	$30 Million
Har-ber High School	Education	$85 Million
Harp Elementary School	Education	$20 Million
Helen Tyson Middle School	Education	$25 Million
Hellstern Middle School	Education	$25 Million
Hunt Elementary School	Education	$20 Million
J. O. Kelly Middle School	Education	$25 Million
John Tyson Elementary School	Education	$20 Million
Jones Elementary School	Education	$20 Million
Lakeside Junior High School	Education	$30 Million
Monitor Elementary	Education	$20 Million
Parson Hill Elementary School	Education	$20 Million
Robert E. Lee Elementary School	Education	$20 Million
Sonora Elementary School	Education	$20 Million
Sonora Middle School	Education	$25 Million
Southwest Junior High School	Education	$30 Million
Springdale Alternative School	Education	$2 Million
Springdale High School	Education	$85 Million
Thurman G. Smith Elementary School	Education	$20 Million
Turnbow Elementary School	Education	$20 Million
Walker Elementary School	Education	$20 Million
Westwood Elementary School	Education	$20 Million
Willis Shaw Elementary School	Education	$20 Million
Early Childhood Center	Education	$2.5 Million
Central Office	Administration	$750,000
Professional Development Center	Education	$100,000
Support Services	Administration	$100,000
Technology Building	Technology	$100,000
Transportation	Transportation	$10 Million
Food Services	Dining Services	$200,000
Nursing Services	Medical	$100,000
Warehouse Operations	Storage	$250,000
Maintenance Department	Maintenance	$500,000
Washington Building		$1.5 Million

City of Springdale and Springdale School District Risk Analysis

	Tornado	
Jurisdiction	Occurrences	Property Damage
Springdale	0	$0
Washington County	12	$2.4 million
Springdale Percentage	0/12=0%	

Since 2004, the city of Springdale and the Springdale School District has had 0 tornado occurrence out of the 12 reports for Washington County, resulting in no property damage. During a tornado, potential damage can include: damage to agriculture, damage or destruction of structures or infrastructure, and bodily harm or death.

Health and Safety: There have been no reported deaths reported since 2004 pertaining to tornados for the city of Springdale. However, there have been 8 reported injuries and 4 reported deaths related to the 12 tornado occurrences for Washington County. Tornados present the potential threat of injury or death. However no specific health problems can be attributed to tornados.

Damage to Buildings and Infrastructure: Tornados have the potential to impact the community and its critical assets. The damaging or destruction of structures and infrastructure as well as; automobiles are possible effects of tornados. Damage or destruction to key infrastructure such as; roads, bridges, substations, transformers, poles, and power lines, can result from tornados; which can cause downed trees and branches. Communication can also be affected by tornados. Tornados have the potential to damage or destroy towers and antennas.

Over a 10 year period, Springdale and the Springdale School District has not experienced high value loss, but is not immune to the possibility of a devastating tornado occurring within the jurisdiction. The overall impact of tornados for the city of Springdale and the Springdale School District is considered to range from **medium** to **high**, meaning that there is a high extent rating but very low probability rating.

Tontitown, Arkansas Community Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems	Other
• Non English Speaking Populations • Visiting Populations	• City Hall • Police Dept. • Fire Dept. • Power Plant • Waste Management • Pam Trucking • K&K Vet Supply	•	• Water and Wastewater •	• Museum • Park • *Bariola Farm • *St. Joseph Catholic Church • *Tontitown School Building

Tontitown Critical Facilities		
Critical Facility	Facility Type	Value
Tontitown Area volunteer Fire Department City	Public Safety	$1.5 Million
City Hall	Administration	$75,000
Police Department	Public Safety	$300,000
Power Plant	Utility	$1.2 Million

Tontitown Risk Analysis

Since 2004, the city of Tontitown has had 1 tornado occurrence out of the 12 reports for Washington County, resulting in no property damage. During a tornado, potential damage can include: damage to agriculture, damage or destruction of structures or infrastructure, and bodily harm or death.

	Tornado	
Jurisdiction	Occurrences	Property Damage
Tontitown	0	$0
Washington County	12	$2.4 million
Tontitown Percentage	0/12=0%	

Health and Safety: There have been no reported deaths reported since 2004 pertaining to tornados for the city of Tontitown. However, there have been 8 reported injuries and 4 reported deaths related to the 12 tornado occurrences for Washington County. Tornados present the potential threat of injury or death. However no specific health problems can be attributed to tornados.

Damage to Buildings and Infrastructure: Tornados have the potential to impact the community and its critical assets. The damaging or destruction of structures and infrastructure as well as; automobiles are possible effects of tornados. Damage or destruction to key infrastructure such as; roads, bridges, substations, transformers, poles, and power lines, can result from tornados; which can cause downed trees and branches. Communication can also be affected by tornados. Tornados have the potential to damage or destroy towers and antennas.

Over a 10 year period, Tontitown has not experienced high value loss, but is not immune to the possibility of a devastating tornado occurring within the jurisdiction. The overall impact of tornados for the city of Tontitown is considered to range from **medium** to **high**, meaning that there is a high extent rating but very low probability rating.

West Fork, Arkansas Community Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems
• Non English Speaking Populations • Visiting Populations	• City Hall • School • Police Dept. • Fire Dept. • Childcare Facility • Community Center • Animal Control	•	• Water and Wastewater • Windstream • State Highway Dept.

West Fork Critical Facilities		
Critical Facility	Facility Type	Value
West Fork Fire Department	Public Safety	$3 Million
Strickler Fire Department	Public Safety	$1.5 Million
West Fork School District	Education	$31.4 Million
City Hall	Administration	$100,000
Community Center	Shelter	$75,000
Windstream	Utility	$500,000
State Highway Department	Public Safety	$100,000

West Fork, Arkansas School District Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems
• English Speaking as a 2nd language Populations • Visiting Populations	• ABC School • Elementary School • Middle School • High School	• Administrative Offices	• Bus Fleet

West Fork School Critical Facilities		
Critical Facility	Facility Type	Value
West Fork Elementary School	Education	$10 Million
West Fork High School	Education	$10 Million
West Fork Middle School	Education	$9 Million
Central Office	Administration	$500,000
Transportation	Transportation	$1.8 Million
K-4 Activity Center	Education	$100,000

City of West Fork and West Fork School District Risk Analysis

Since 2004, the city of West Fork and the West Fork School District has had no tornado occurrences out of the 12 reports for Washington County, resulting in no property damage. During a tornado, potential damage can include: damage to agriculture, damage or destruction of structures or infrastructure, and bodily harm or death.

	Tornado	
Jurisdiction	Occurrences	Property Damage
West Fork	0	$0
Washington County	12	$2.4 million
West Fork Percentage	0/12=0%	

Health and Safety: There have been no reported deaths reported since 2004 pertaining to tornados for the city of West Fork and the West Fork School District. However, there have been 8 reported injuries and 4 reported deaths related to the 12 tornado occurrences for Washington County. Tornados present the potential threat of injury or death. However no specific health problems can be attributed to tornados.

Damage to Buildings and Infrastructure: Tornados have the potential to impact the community and its critical assets. The damaging or destruction of structures and infrastructure as well as; automobiles are possible effects of tornados. Damage or destruction to key infrastructure such as; roads, bridges, substations, transformers, poles, and power lines, can result from tornados; which can cause downed trees and branches. Communication can also be affected by tornados. Tornados have the potential to damage or destroy towers and antennas.

Over a 10 year period, West Fork and the West Fork School District has not experienced high value loss, but is not immune to the possibility of a devastating tornado occurring within the jurisdiction. The overall impact of tornados for the city of West Fork and the West Fork School District is considered to range from **medium** to **high**, meaning that there is a high extent rating but very low probability rating.

Winslow, Arkansas Community Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems
• Non English Speaking Populations • Visiting Populations	• City Hall • Fire Dept.		

Winslow Critical Facilities		
Critical Facility	Facility Type	Value
Sunset Fire Department	Public Safety	$1.5 Million
Boston Mountain Fire Department	Public Safety	$1.5 Million
City Hall	Administration	$75,000

Winslow Risk Analysis

	Tornado	
Jurisdiction	Occurrences	Property Damage
Winslow	0	$0
Washington County	12	$2.4 million
Winslow Percentage	0/12=0%	

Since 2004, the city of Winslow has had no tornado occurrences out of the 12 reports for Washington County, resulting in no property damage. During a tornado, potential damage can include: damage to agriculture, damage or destruction of structures or infrastructure, and bodily harm or death.

Health and Safety: There have been no reported deaths reported since 2004 pertaining to tornados for the city of Winslow. However, there have been 8 reported injuries and 4 reported deaths related to the 12 tornado occurrences for Washington County. Tornados present the potential threat of injury or death. However no specific health problems can be attributed to tornados.

Damage to Buildings and Infrastructure: Tornados have the potential to impact the community and its critical assets. The damaging or destruction of structures and infrastructure as well as; automobiles are possible effects of tornados. Damage or destruction to key infrastructure such as; roads, bridges, substations, transformers, poles, and power lines, can result from tornados; which can cause downed trees and branches. Communication can also be affected by tornados. Tornados have the potential to damage or destroy towers and antennas.

Over a 10 year period, Winslow has not experienced high value loss, but is not immune to the possibility of a devastating tornado occurring within the jurisdiction. The overall impact of tornados for the city of Winslow is considered to range from **medium** to **high**, meaning that there is a high extent rating but very low probability rating.

Tornado Vulnerability Assessment

The Elkins school district, the West Fork school district, the Springdale school district, and the Farmington school district currently do not have an emergency shelter or safe room for protection during any hazardous weather events. The Prairie Grove school district and the Lincoln school district need more safe rooms to adequately protect the growing student population and staff during extreme weather. The lack of these structures increases the chance of injuries and the loss of life.

The Greenland school district is in an area that has frequent tornado warnings and damage. There have been 12 occurrences in the last ten years.

The city of Farmington and the unincorporated districts of Washington County lack safe rooms in county buildings to protect staff during hazardous weather events. The University of Arkansas also lacks safe rooms in the academic buildings, to protect students and staff.

The city of Prairie Grove possesses only one partially constructed shelter for the public's use which needs to protect a population of 5000. The city of Springdale, Greenland, Goshen, Farmington, and Tontitown currently do not have the capability to shelter the public during extreme weather. Furthermore, the city of Greenland, Tontitown, Goshen, and the Lincoln school district do not have public notification capabilities; they also lack the capability to educate the public on warning sirens.

The length of time to restore electricity and clear roads in the city of West Fork creates cascading hazards for the public: including prohibiting functional needs populations to properly store medication and utilizing critical equipment for daily activities and life support.

The University of Arkansas does not have emergency response capabilities such as a Community Emergency Response Team (CERT). The lack of these resources hampers priority efforts in response and recovery.

High Wind Hazard Profile

Damaging winds that are not associated with rotation are known as straight-line winds. Straight-line winds are reported as high winds when they have sustained speeds of 40mph or greater for at least one hour, or any gust of at least 58 mph (which is defined as a severe wind). These high wind speeds are associated with strong thunderstorms, where they originate in the rain cooled air downdraft. High wind reports account for half of the severe wind reports in the U.S. yearly. These damaging winds are also capable of reaching and exceeding 100 mph.

Beaufort scale of Wind Force

Scale	Force Rating	Observable Land Effects	Speed MPH
0	Calm	Smoke rises vertically.	1
1	Light Air	Smoke drifts and leaves rustle.	1-3
2	Light Breeze	Wind felt on face.	4-7
3	Gentle Breeze	Flags extended, leaves move.	8-12
4	Moderate Breeze	Dust and small branches move.	13-18
5	Fresh Breeze	Small trees begin to sway.	19-24
6	Strong Breeze	Large branches move, wires whistle, umbrellas are difficult to control.	25-31
7	Near Gale	Whole trees in motion, inconvenience in walking.	32-38
8	Gale	Difficult to walk against wind. Twigs and small branches blown off trees.	39-46
9	Strong Gale	Minor structural damage may occur (shingles blown off roofs).	47-54
10	Storm	Trees uprooted, structural damage likely.	55-63
11	Violent Storm	Widespread damage to structures.	64-75
12	Hurricane	Severe structural damage to buildings, wide spread devastation.	76+

Past High Wind Occurrences

In the last 10 years Washington County has experienced three events of high winds that were not part of a thunderstorm. These events did not result in any monetary damage, nor take the life of anyone.

Future Probability

[(Current Year) 2014] subtracted by [(Historical Year) 2004] = 10 Years on Record
[(Years on Record) 10] divided by [(Number of Historical Events) 3] = 3.33
[(Number of Historical Events) 3] divided by [(Years on Record) 10] = 0.30

The historic frequency calculates that there is a 30% chance of high wind occurring in Washington County every 3.33 years. The chance that Washington County will experience a high wind occurrence is likely, meaning there is a 10-90% probability of recurrence interval of 1 to 10 years.

Locations

Each jurisdiction in Washington County has an equal susceptibility to high wind activity. Therefore high winds are reported county wide and not at the individual jurisdictional level. The following section will describe how all jurisdictions can be affected.

Jurisdictional Asset Values

Jurisdiction	*Criticial Facilities Assessed Capital*
Unincorporated Washington County	$4,500,000
Elkins	$39,700,000
Elm Springs	$1,570,000
Farmington	$59,700,000
Fayetteville	$1,491,990,044
Goshen	$1,675,000
Greenland	$28,400,000
Johnson	$1,925,000
Lincoln	$58,640,000
Prairie Grove	$148,850,000
Springdale	$1,499,475,000
Tontitown	$3,075,000
West Fork	$36,175,000
Winslow	$40,175,000
Elkins School	$35,800,000
Farmington School	$56,000,000
Fayetteville School	$230,683,160
Greenland School	$26,500,000
Lincoln School	$42,500,000
Prairie Grove School	$31,800,000
Springdale School	$744,200,000
West Fork School	$30,900,000

High Winds Analysis

Since 2004, Washington County has had 3 occurrences, resulting in $25,000 worth of property damage. Past occurrences of high winds have resulted in downed trees on road ways and structures. Shingles were blown off roofs and power lines and poles were also blown down. High winds bring the potential for structural damage, damage to infrastructure, and risk of bodily harm.

	High Winds	
Jurisdiction	Occurrences	Property Damage
Washington County	3	$25,000

Health and Safety: Although there have been no death or injury reports related to high winds in Washington County, there is a potential risk of injury associated with high winds.

Damage to Buildings and Infrastructure: High winds have the potential to impact Washington County and its critical assets. Structural damage; such as roof damage, broken windows, and damage to siding are potential risks affiliated with high winds. Damage to infrastructure; such as downed communication antennas, roads blocked by debris, downed power lines and poles are also risks of high winds.

Over a 10 year period, Washington County has not experienced high value loss, but is not immune to the possibility of a high wind event having a greater impact than past occurrences. The overall impact of high wind for Washington County is considered to be low, meaning impacts are minimal.

High Wind Vulnerability Analysis

Some buildings in the school districts of Elkins, Prairie Grove, Greenland, Springdale, and Lincoln may be severely damaged by high winds due to old and faulty roofing materials. Other property of the Elkins school district, such as bleachers and field signs are worn and not sturdy. Utility poles of the Greenland school district are not capable of withstanding high winds. The West Fork school district's secondary roads and landscape are vulnerable to fallen trees and limbs causing the bus transportation to be problematic, at times. The Farmington school district and Fayetteville school district do not have protective film on windows in many buildings, increasing the probability of broken glass causing injury or death. The West Fork school district has many trees that could become broken or uprooted and take out power lines causing power outages.

The city of Prairie Grove, Springdale, Greenland, Tontitown, Farmington, Goshen, West Fork, and the unincorporated districts of Washington County lack safe rooms in public buildings and community shelters during extreme weather events. Due to lack of equipment and vehicles for tree trimming, debris from broken limbs cause power outages, road blockage, and damage to buildings. Lincoln's public buildings, specifically the library, has large amounts of glass, and the municipal court and other community buildings have asphalt roofs.

Flood Hazard Profile

NOAA defines a flood as overflow of water onto ordinarily dry land. Flooding can occur during heavy rain, when snow melts too fast, or even with just a few inches of water. Any amount of water in an area that is normally dry, no matter how much or little, is considered to be flooding. Floods are unpredictable; they can come on fast or take a while to build up. They can last days, weeks, or longer. They are the most common and pervasive of any weather-related natural disasters. Also, flooding can occur anywhere within the jurisdiction that receives rain. The effects of flooding last for longer periods of time than flash flooding.

A **flash flood** is a flood resulting from heavy or excessive rainfall in a short period of time. Flash floods are usually characterized by powerful torrents after substantial rains that tear through river beds, urban streets, or mountain canyons sweeping away anything in their path. They are capable of occurring within minutes or a few hours of heavy rainfall. They can even occur if no rain has fallen, for example after the failing of a levee or dam.

Riverine flood refers to the flooding of a river when a river exceeds its flood stage and water spills over the banks of the river. This flooding can occur during any time of the year and is caused by excessive rain, persistent thunderstorms in the same area, ice jam, or combined rainfall and snowmelt.

A **floodplain** is lowland. It is a relatively flat to a gently sloping area of land that adjoins the channel of a stream, watercourse, or other body of water like a reservoir or a lake that has a possibility of being covered by flood water. The floodplain is normally a dry area of land.

Past Flood Occurrences

Over the last 10 years Washington County has not experienced any flood events.

Over the last 10 years, Washington County has experienced 50 flash flood events. These events have unfortunately taken the life of two individuals. Flash floods have also caused $7,680,000 worth of damage over the last 10 years.

Repetitive Loss and Severe Repetitive Loss Properties

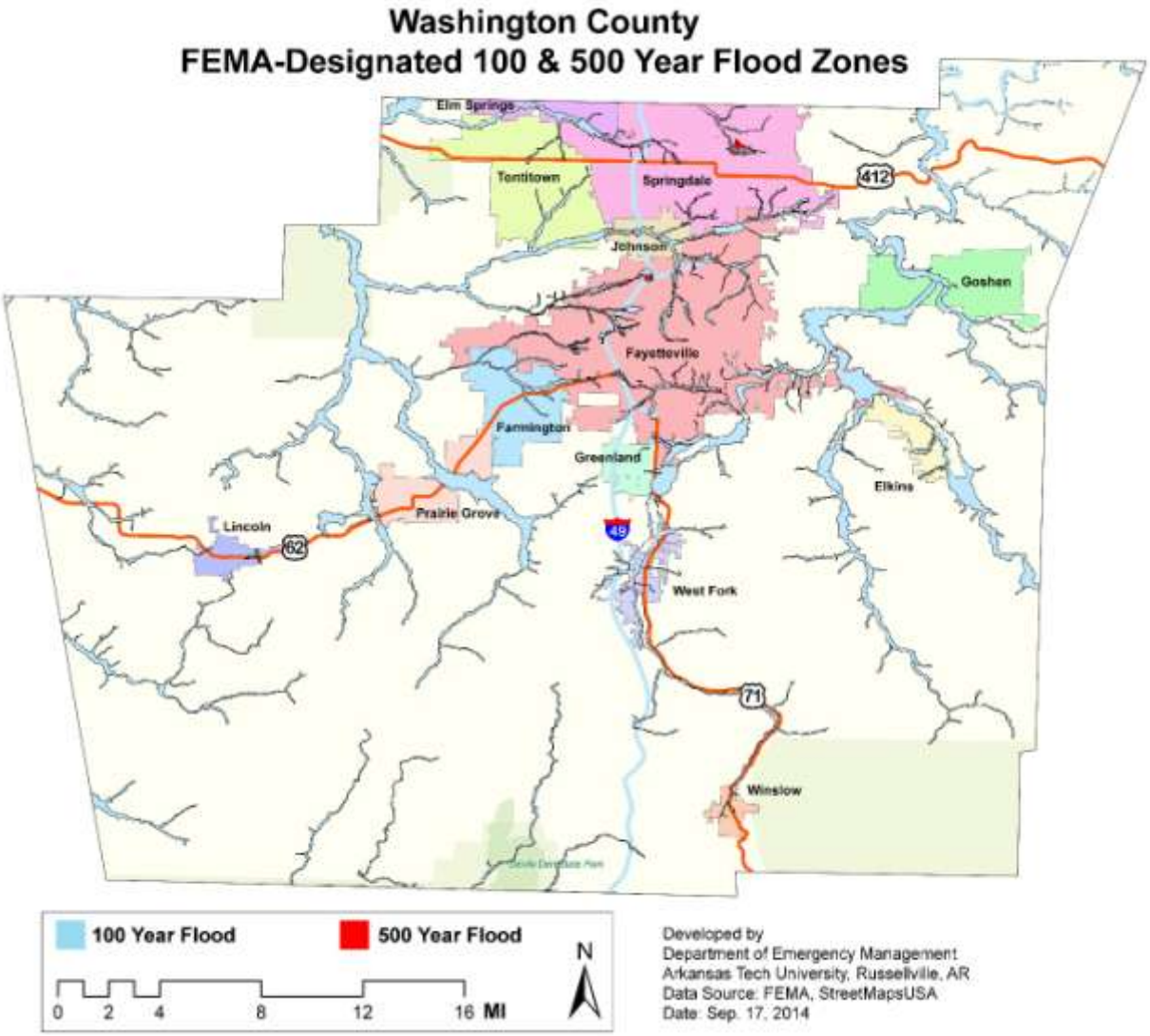
Jurisdiction	Repetitive Loss Properties	Type of Properties	Severe Repetitive Loss Properties	Type of Properties
Unincorporated Washington County	1	Residential	0	
Elkins	3	Residential	0	
Elm Springs	0		0	
Farmington	1	Residential	0	
Fayetteville	6	3 Residential 3 Commercial	10	4 Residential 6 Commercial
Goshen	0		0	
Greenland	0		0	
Johnson	0		0	
Lincoln	0		0	
Prairie Grove	0		0	
Springdale	2	1 Commercial 1 Institutional	0	
Tontitown	0		0	
West Fork	0		0	
Winslow	0		0	

Repetitive loss properties are those for which 2 or more losses of at least $1,000 have been paid under NFIP within any 10-year period since 1978. Severe repetitive loss properties are residential properties that have at least 4 NFIP payments over $5,000 each and the cumulative amount of such claims exceeds $20,000, or at least 2 separate claims payments with the cumulative amount exceeding the market value of the building.

Future Probability

[(Current Year) 2014] subtracted by [(Historical Year) 2004] = 10 Years on Record
[(Years on Record) 10] divided by [(Number of Historical Events) 50] = 0.20
[(Number of Historical Events) 50] divided by [(Years on Record) 10] = 5

The historic frequency calculates that there is over 100% chance of flash flood conditions occurring in Washington County every 0.2 years. The chance that Washington County will experience a flash flood is highly likely, meaning there is a 90-100% probability of occurrence in the next year.



Locations

Each jurisdiction in Washington County has an equal susceptibility to flood activity. The following sections will describe their community differences and how they will be affected differently.

Unincorporated Washington County Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems
• Visiting Populations • Non English Speaking Populations	• 3 Fire Departments		• Bobby Hopper Tunnel

Washington County Critical Facilities			
Critical Facility Name	Location	Facility Type	Value
Evansville Volunteer Fire Department	Evansville	Public Safety	$1.5 Million
Morrow Fire Department	Morrow	Public Safety	$1.5 Million
Cincinnati Fire Department	Summers	Public Safety	$1.5 Million
Bobby Hopper Tunnel	Winslow	Transportation	$37.1 Million

Unincorporated Washington County Analysis

	Flood		**Flash Flood**	
Jurisdiction	**Occurrences**	**Property Damage**	**Occurrences**	**Property Damage**
Unincorporated Washington County	**0**	**$0**	**10**	**$7,110,000**
Washington County	**0**	**$0**	**50**	**$7.6 Million**
Unincorporated Washington County Percentage	**0/0=0%**		**10/50=20%**	

Since 2004, Unincorporated Washington County has had 10 flash flood occurrences out of the 50 reports for the entire Washington County, resulting in $7,110,000 in property damage. The two occurrences of flash floods resulted in roadways being covered, disrupting traffic flow, and homes and other structures being damaged. During a flood, potential risk could include, but is not limited to: damage to crops, structures, infrastructure, illness, bodily harm, and death.

Health and Safety: Since 2004, there has been 1 reported deaths for Unincorporated Washington County out of the 2 reported for the entire county. Flood waters pose multiple risks that include the spread infectious diseases, chemical hazards, injuries, and death.

Damage to Building Infrastructure: Flood waters have the potential to impact the community and its critical assets. Damage or destruction to structures is a potential effect of floods. Floods also have the potential to destroy or damage infrastructure.

Over a 10 year period, Unincorporated Washington County has experienced a high value loss, but still has the potential of a greater future loss. The overall impact of flood and flash flood for Unincorporated Washington County is considered to be **high**, meaning that the event is likely to occur with severe strength over a significant to extensive portion of the planning area.

Elkins, Arkansas Community Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems	Other
• Visiting Populations • Non English Speaking Populations	• Childcare Facilities • Schools • Senior Center • Health Clinic • Fire Department • City Hall/Police Department • Animal Control	• High Pressure Gas Line	• Telecommunications • Water & Waste Water Treatment	• *White River Bridge • *Tom Smith House • Bunch Park • Library

*National Historic Sites

Elkins Critical Facilities		
Critical Facilities	Facility Type	Value
Elkins Volunteer Fire Department	Public Safety	$3 Million
Elkins City Hall/ PD	Public Safety	$300,000
Elkins School District	Education	$35.8 Million
Elkins Community Center	Shelter	$100,000
Telecommunications	Utility	$500,000

Elkins School District Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems
• Visiting Populations • Populations where English as a 2nd language	• Football Field • Softball Field • Baseball Field • Primary School • Elementary School • Middle School • High School • Wellness • Center • Gymnasium	• Central Office	• Buses • Fiber Line Connections (between all buildings)

Elkins School Critical Facilities		
Critical Facility	Facility Type	Value
Elkins Elementary Primary School	Education	$7 Million
Elkins Elementary School	Education	$8 Million
Elkins High School	Education	$10 Million
Elkins Middle School	Education	$9 Million
Central Office	Administration	$500,000
Transportation	Transportation	$1.8 Million

City of Elkins and Elkins School District Analysis

	Flood		Flash Flood	
Jurisdiction	**Occurrences**	**Property Damage**	**Occurrences**	**Property Damage**
Elkins	**0**	**$0**	**1**	**$0**
Washington County	**0**	**$0**	**50**	**$7.6 Million**
Elkins Percentage	**0/0=0%**		**1/50=2%**	

Since 2004, the city of Elkins and the Elkins School District have had 1 flash flood occurrence out of the 50 reports for Washington County, resulting in no property damage. During a flood, potential risk could include, but is not limited to: damage to crops, structures, infrastructure, illness, bodily harm, and death.

Health and Safety: There have no reported deaths in the city of Elkins, however Washington County as a whole has experienced 2 flood related deaths since 2004. Flood waters pose multiple risks that include the spread infectious diseases, chemical hazards, injuries, and death.

Damage to Building Infrastructure: Flood waters have the potential to impact the community and its critical assets. Damage or destruction to structures is a potential effect of floods. Floods also have the potential to destroy or damage infrastructure.

Over a 10 year period, Elkins has experienced no value loss, but still has the potential of a greater future loss. The overall impact of flood and flash flood for the city of Elkins and the Elkins School District is considered to be **low**, meaning that there are few occurrences of flood and flash flood over a 10 year period.

Elms Springs, Arkansas Community Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems	Other
• Visiting Populations • Non English Speaking Populations	• City Hall/Police Department • Municipal Court	• Lake Elmdale Spillway	• AT&T Cell Tower • Water & Waste Water Treatment	• Elm Springs Park

Elm Springs Critical Facilities		
Critical Facilities	Facility Type	Value
Elms Springs City Hall/PD	Administration	$300,000
AT&T Cell Tower	Communication	$70,000
Water & Waste Water Treatment	Utilities	
Lake Elmdale Spillway	Spillway	$1.2 Million

Elm Springs Analysis

	Flood		Flash Flood	
Jurisdiction	Occurrences	Property Damage	Occurrences	Property Damage
Elm Springs	0	$0	2	$0
Washington County	0	$0	50	$7.6 Million
Elm Springs Percentage	0/0=0%		2/50=4%	

Since 2004, the city of Elm Springs has had 2 flash flood occurrences out of the 50 reports for Washington County, resulting in no property damage. Past occurrences resulted in damage to roadways and bridges. During a flood, potential risk could include, but is not limited to: damage to crops, structures, infrastructure, illness, bodily harm, and death.

Health and Safety: There have no reported deaths in the city of Elm Springs, however Washington County as a whole has experienced 2 flood related deaths since 2004. Flood waters pose multiple risks that include the spread infectious diseases, chemical hazards, injuries, and death.

Damage to Building Infrastructure: Flood waters have the potential to impact the community and its critical assets. Damage or destruction to structures is a potential effect of floods. Floods also have the potential to destroy or damage infrastructure.

Over a 10 year period, Elm Springs has experienced no value loss, but still has the potential of a greater future loss. The overall impact of flood and flash flood for the city of Elm Springs is considered to be **low**, meaning that there are few occurrences of flood and flash flood over a 10 year period.

Farmington, Arkansas Community Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems	Other
• Visiting Populations • Non English Speaking Populations	• City Hall/Police Department • Childcare Facilities • Senior Care Facilities • Fire Dept. • Medical Clinic • Animal Control • School	• High Pressure Gas line	• Electric Power Substation • Sewer Pump Station • Maintenance	• *Walnut Grove Presbyterian Church • Creek Side Park • Library

*** National Historical Sites**

Farmington Critical Facilities		
Critical Facilities	Facility Type	Value
Farmington Fire Department	Public Safety	$3 Million
Farmington City Hall/ PD	Administration	$300,000
Farmington School District	Education	$56 Million
Electric Power Substation	Utilities	$400,000

Farmington School District Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems
• Visiting Populations • Populations with English as a 2nd Language	• High School • Football Field • Middle School • Intermediate School • 2 Elementary • Schools • Baseball Field • Softball Field • Tennis Courts • 5 Gyms • Fine Arts Auditorium • Band & Choir Rooms • Agriculture Building • 3 Agri. Barns • Indoor Baseball/Softball Practice Buildings	• Central Offices and Technology •	• Maintenance Facility • Transportation Facility

Farmington School Critical Facilities		
Critical Facility	Facility Type	Value
Bob Folsom Elementary School	Education	$7 Million
Farmington High School	Education	$21 Million
George R Ledbetter Intermediate	Education	$7.5 Million
Jerry "Pop" Williams Elem School	Education	$9 Million
Randall G Lynch Middle School	Education	$9 Million
Central Office & Technology	Administration	$500,000
Maintenance Facility	Maintenance	
Transportation Facility	Transportation	$2.1 Million

City of Farmington and Farmington School District Analysis

	Flood		Flash Flood	
Jurisdiction	**Occurrences**	**Property Damage**	**Occurrences**	**Property Damage**
Farmington	**0**	**$0**	**4**	**$50,000**
Washington County	**0**	**$0**	**50**	**$7.6 Million**
Farmington Percentage	**0/0=0%**		**4/50=8%**	

Since 2004, the city of Farmington and the Farmington School District have had 4 flash flood occurrences, resulting in $50,000 in property damage, out of the 50 reports for Washington County. In past occurrences several automobiles were stalled in high flood waters, roads were

covered, and a senior assisted living center was evacuated. During a flood, potential risk could include, but is not limited to: damage to crops, structures, infrastructure, illness, bodily harm, and death.

Health and Safety: There have no reported deaths in the city of Farmington, however Washington County as a whole has experienced 2 flood related deaths since 2004. Flood waters pose multiple risks that include the spread infectious diseases, chemical hazards, injuries, and death.

Damage to Building Infrastructure: Flood waters have the potential to impact the community and its critical assets. Damage or destruction to structures is a potential effect of floods. Floods also have the potential to destroy or damage infrastructure.

Over a 10 year period, Farmington has experienced high value loss, but still has the potential of a greater future loss. The overall impact of flood and flash flood for the city of Farmington and the Farmington School District is considered to be **low**, meaning that there are few occurrences of flood and flash flood over a 10 year period.

Fayetteville, Arkansas Community Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems	Other
• Visiting Populations • Non English Speaking Populations	• City Hall • Police Department • Childcare Facilities • Senior Care Facilities • 9 Fire Departments • Animal Control • Schools • Airport • Emergency Operations Center • Hospitals • Dispatch Center • Sheriff's Department • EMS	• Lake Fayetteville Dam • Wilson Lake Dam • Lake Sequoyah Dam	• Water & Wastewater Treatment • Sewer • Telecommunications	• Clinton House Museum • AR Air & Military Museum • Walton Arts Center • Library • *Clinton House • *Frisco Depot • *Guisinger Building • *Happy Hallow Farm • *Lafayette St. Overpass • *Lewis Brothers Building • *Mrs. Young Building • *Old Bank of Fayetteville • *Old Post Office

***National Historic Sites**

Fayetteville Critical Facilities		
Critical Facilities	Facility Type	Value
Washington Regional	Medical	$400 Million
Veterans Health Care Center	Medical	$375 Million
Physicians Specialty Hospital	Medical	$100 Million
Boys and Girls Club	Shelter	$13.2 Million
Central United Methodist	Shelter	$1 Million
Paul R. Noland Wastewater Treatment Plant	Utilities	$100 Million
West Side Wastewater Treatment Plan	Utilities	$100 Million
Wheeler Fire Department	Public Safety	$1.5 Million
Fayetteville Fire Department- Station 1-7	Public Safety	$80 Million
Round Mountain Fire Department	Public Safety	$1.5 Million
Wedington Fire Department	Public Safety	$1.5 Million
Fayetteville PD	Public Safety	$600,000
Washington County Sheriff/ Jail	Public Safety	$35,704,712.26
NW AR Community Correction Center	Public Safety	$12.9 Million
Washington County EOC	Public Safety	$821,958.02
Courthouse	Administration	$10,580,214.34
Central EMS	Medical	$500,000
Fayetteville School District	Education	$230,683,160
Drake Field	Airport	$2 Million
Lake Fayetteville Dam	Dam	$3.6 Million
Wilson Lake Dam	Dam	$1.3 Million
Lake Sequoyah Dam	Dam	$3.6 Million
Water & Waste water treatment	Utility	$1,000,000
Telecommunication	Utility	$15 Million

Fayetteville School District Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems
• Visiting Populations • Populations with English as a 2nd Language	• High School • Football Field • Middle School • Intermediate School • 2 Elementary • Schools • Baseball Field • Softball Field • Tennis Courts • 5 Gyms • Fine Arts Auditorium • Band & Choir Rooms • Agriculture Building • 3 Agri. Barns • Indoor Baseball/Softball Practice Buildings	• Central Offices and Technology •	• Maintenance Facility • Transportation Facility

Fayetteville School Critical Facilities		
Critical Facility	Facility Type	Value
Asbell Elementary School	Education	$8,187,920
Butterfield Elementary School	Education	$8,773,680
Fayetteville High School East	Education	$82,000,000
Happy Hollow Elementary School	Education	$10,500,000
Holcomb Elementary School	Education	$7,200,000
Holt Middle School	Education	$13,521,727
Leverett Elementary School	Education	$7,907,840
McNair Middle School	Education	$13,192,811
Owl Creek School	Education	$17,866,357
Ramay Junior High School	Education	$15,508,105
Root Elementary School	Education	$7,736,000
Vandergriff Elementary School	Education	$7,627,680
Washington Elementary School	Education	$7,152,800
Woodland Junior High School	Education	$20,608,240
Adult and Community Education	Education	$1.2 Million
McClinton Administrative Center	Administration	$150,000
Maintenance Facility	Maintenance	$200,000
Food Service Facility		$200,000
Transportation Facility	Transportation	$4.5 Million

City of Fayetteville and Fayetteville School District Analysis

	Flood		Flash Flood	
Jurisdiction	Occurrences	Property Damage	Occurrences	Property Damage
Fayetteville	0	$0	7	$100,000
Washington County	0	$0	50	$7.6 Million
Fayetteville Percentage	0/0=0%		7/50=14%	

Since 2004, the city of Fayetteville and the Fayetteville School District have had 7 flash flood occurrences, resulting in $100,000 in property damage, out of the 50 reports for Washington County. During a flood, potential risk could include, but is not limited to: damage to crops, structures, infrastructure, illness, bodily harm, and death.

Health and Safety: There have no reported deaths in the city of Fayetteville, however Washington County as a whole has experienced 2 flood related deaths since 2004. Flood waters pose multiple risks that include the spread infectious diseases, chemical hazards, injuries, and death.

Damage to Building Infrastructure: Flood waters have the potential to impact the community and its critical assets. Damage or destruction to structures is a potential effect of floods. Floods also have the potential to destroy or damage infrastructure.

Over a 10 year period, Fayetteville has experienced high value loss, but still has the potential of a greater future loss. The overall impact of flood and flash flood for the city of Fayetteville and the Fayetteville School District is considered to be **low**, meaning that there are few occurrences of flood and flash flood over a 10 year period.

Goshen, Arkansas Community Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems
• Non English Speaking Populations	• City Hall/Marshall's Office • Fire Dept. • Community Center		

Goshen Critical Facilities		
Critical Facility	Facility Type	Value
Goshen Fire Department	Public Safety	$1.5 Million
Community Center	Shelter	$75,000
City Hall/ Marshall's Office	Administration	$100,000

City of Goshen Analysis

Since 2004, the city of Goshen has had 1 flash flood occurrences, resulting in $100,000 in property damage, out of the 50 reports for Washington County. During a flood, potential risk could include, but is not limited to: damage to crops, structures, infrastructure, illness, bodily harm, and death.

	Flood		Flash Flood	
Jurisdiction	Occurrences	Property Damage	Occurrences	Property Damage
Goshen	0	$0	1	$100,000
Washington County	0	$0	50	$7.6 Million
Goshen Percentage	0/0=0%		1/50=2%	

Health and Safety: There have no reported deaths in the city of Goshen, however Washington County as a whole has experienced 2 flood related deaths since 2004. Flood waters pose multiple risks that include the spread infectious diseases, chemical hazards, injuries, and death.

Damage to Building Infrastructure: Flood waters have the potential to impact the community and its critical assets. Damage or destruction to structures is a potential effect of floods. Floods also have the potential to destroy or damage infrastructure.

Over a 10 year period, Goshen has experienced high value loss, but still has the potential of a greater future loss. The overall impact of flood and flash flood for the city of Goshen is considered to be **low**, meaning that there are few occurrences of flood and flash flood over a 10 year period.

Greenland, Arkansas Community Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems	Other
• Non English Speaking Populations • Visiting Populations	• City Hall • Police Dept. • Fire Dept. • Childcare Facility • School			• Library

Greenland Critical Facilities		
Critical Facility	Facility Type	Value
City Hall	Administration	$100,000
Greenland Fire Department	Public Safety	$1.5 Million
Greenland PD	Public Safety	$300,000
Greenland School District	Education	$26.5 Million

Greenland School District Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems
• Non English Speaking Populations • Visiting Populations	• Elementary School • Middle School • High School • 2 Gymnasiums • Football Field • 2 Safe Rooms		

Greenland School Critical Facilities		
Critical Facility	Facility Type	Value
Greenland Elementary	Education	$7 Million
Greenland Middle School	Education	$7.5 Million
Greenland High School	Education	$10 Million
Central Office	Administration	$200,000
Transportation	Transportation	$2 Million

City of Greenland and Greenland School District Analysis

	Flood		Flash Flood	
Jurisdiction	**Occurrences**	**Property Damage**	**Occurrences**	**Property Damage**
Greenland	**0**	**$0**	**0**	**$0**
Washington County	**0**	**$0**	**50**	**$7.6 Million**
Greenland Percentage	**0/0=0%**		**0/50=2%**	

Since 2004, the city of Greenland and the Greenland School District have had 0 flash flood occurrences out of the 50 reports for Washington County. During a flood, potential risk could include, but is not limited to: damage to crops, structures, infrastructure, illness, bodily harm, and death.

Health and Safety: There have no reported deaths in the city of Greenland, however Washington County as a whole has experienced 2 flood related deaths since 2004. Flood waters pose multiple risks that include the spread infectious diseases, chemical hazards, injuries, and death.

Damage to Building Infrastructure: Flood waters have the potential to impact the community and its critical assets. Damage or destruction to structures is a potential effect of floods. Floods also have the potential to destroy or damage infrastructure.

Over a 10 year period, Greenland has not experienced a value loss, but still has the potential of a great future loss. The overall impact of flood and flash flood for the city of Greenland and the Greenland School District is considered to be **low**, meaning that there are few occurrences of flood and flash flood over a 10 year period.

Johnson, Arkansas Community Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems
• Non English Speaking Populations • Visiting Populations	• City Hall • Police Dept. • Fire Dept. • Childcare Facility • Senior Care Facility • Animal Control		• Water and Wastewater Treatment

Johnson Critical Facilities		
Critical Facility	Facility Type	Value
Johnson Fire Department	Public Safety	$1.5 Million
Johnson PD	Public Safety	$300,000
City Hall	Administration	$125,000

City of Johnson Analysis

	Flood		Flash Flood	
Jurisdiction	**Occurrences**	**Property Damage**	**Occurrences**	**Property Damage**
Johnson	**0**	**$0**	**9**	**$205,000**
Washington County	**0**	**$0**	**50**	**$7.6 Million**
Johnson Percentage	**0/0=0%**		**9/50=18%**	

Since 2004, the city of Johnson has had 9 flash flood occurrences, resulting in $205,000 in property damage, out of the 50 reports for Washington County. During a flood, potential risk could include, but is not limited to: damage to crops, structures, infrastructure, illness, bodily harm, and death.

Health and Safety: There have no reported deaths in the city of Johnson, however Washington County as a whole has experienced 2 flood related deaths since 2004. Flood waters pose multiple risks that include the spread infectious diseases, chemical hazards, injuries, and death.

Damage to Building Infrastructure: Flood waters have the potential to impact the community and its critical assets. Damage or destruction to structures is a potential effect of floods. Floods also have the potential to destroy or damage infrastructure.

Over a 10 year period, Johnson has experienced high value loss, but still has the potential of a greater future loss. The overall impact of flood and flash flood for the city of Johnson is considered to be **low**, meaning that there are few occurrences of flood and flash flood over a 10 year period.

Lincoln, Arkansas Community Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems	Other
• Visiting Populations • Non English Speaking Populations	• Childcare Facilities • Schools • Senior Center • Medical Clinic • Pharmacy • Fire Department • City Hall/Police Department • Animal Control	• Lincoln Lake Dam • Army National Guard • HAZMAT Storage at the water treatment Facility	• State Highway Dept. • Power Substation • Water & Waste Water Treatment • Prairie Grove Telephone Company • AT&T and Verizon Towers	• Library • Lincoln Lake • Lincoln Community Building • Town Square • Municipal Ball Park Complex

Lincoln Critical Facility Assessments		
Critical Facility	Facility Type	Value
Lincoln Fire Department	Public Safety	$3 Million
Lincoln City Hall/ PD	Administration	$300,000
Lincoln School District	Education	$42.5 Million
Lincoln Lake Dam	Dam	$2.5 Million
Power Substation	Utility	$100,000
Water & Wastewater Treatment	Utility	$10 Million
AT&T Cell Tower	Communication	$70,000
Verizon Cell Tower	Communication	$70,000
Lincoln Library	Shelter	$100,000

Lincoln School District Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems
• Visiting Populations • English as a 2nd Language Populations	• Elementary School • Middle School • High School	• Administrative Office	• Transportation Dept.

Lincoln School Critical Facilities		
Critical Facility	Facility Type	Value
Lincoln Elementary	Education	$7 Million
Lincoln Middle School	Education	$8 Million
Lincoln New Tech High School	Education	$25 Million
Maintenance	Maintenance	$100,000
Central Office	Administration	$500,000
Transportation	Transportation	$2.1 Million

City of Lincoln and Lincoln School District Analysis

	Flood		Flash Flood	
Jurisdiction	Occurrences	Property Damage	Occurrences	Property Damage
Lincoln	0	$0	2	$50,000
Washington County	0	$0	50	$7.6 Million
Lincoln Percentage	0/0=0%		2/50=4%	

Since 2004, the city of Lincoln and the Lincoln School District have had 2 flash flood occurrences out of the 50 reports for Washington County, resulting in $50,000 in property damage. The two occurrences of flash floods resulted in roadways being covered, disrupting traffic flow, and homes and other structures being damaged. During a flood, potential risk could include, but is not limited to: damage to crops, structures, infrastructure, illness, bodily harm, and death.

Health and Safety: There have no reported deaths in the city of Lincoln, however Washington County as a whole has experienced 2 flood related deaths since 2004. Flood waters pose multiple risks that include the spread infectious diseases, chemical hazards, injuries, and death.

Damage to Building Infrastructure: Flood waters have the potential to impact the community and its critical assets. Damage or destruction to structures is a potential effect of floods. Floods also have the potential to destroy or damage infrastructure.

Over a 10 year period, Lincoln has experienced a high value loss, but still has the potential of a greater future loss. The overall impact of flood and flash flood for the city of Lincoln and the Lincoln School District is considered to be **low**, meaning that there are few occurrences of flood and flash flood over a 10 year period.

Prairie Grove, Arkansas Community Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems	Other
• Visiting Populations • Non English Speaking Populations	• City Hall/Police Department • Childcare Facilities • Senior Care Facilities • Fire Dept. • Animal Control • School	• Source Gas Pumping Station(Natural Gas) • Prairie Grove Lake Dam	• Prairie Grove Communications • Source Gas (Natural Gas) • Water & Wastewater • American Electric Power • Ozarks Electric	• *Borden House • *Lake-Bell House • Prairie Grove Battlefield Park

***National Historic Sites**

Prairie Grove Critical Facilities		
Critical Facility	Facility Type	Value
Prairie Grove Fire Department	Public Safety	$3 Million
Prairie Grove City Hall/ PD	Administration	$300,000
Prairie Grove School District	Education	$31.8 Million
Source Gas Pumping Station (Natural Gas)	Utility	$100,000
Prairie Grove Lake Dam	Dam	$1.75 Million
Prairie Grove Communication	Communication	
Water & Wasterwater	Utility	$11.5 Million
American Electric Power	Utility	$400,000
Ozarks Electric	Utility	$100 Million

Prairie Grove School District Assets

People	Critical Facilities	High Potential Loss	Critical Infrastructure
• Visiting Populations • English as a 2nd Language Populations	• Primary School • Intermediate School • Middle School • High School • 2 Football Fields • Baseball Field • Softball Field • 2 Gyms	• Administrative Office	• Bus/ Maintenance Facility

Prairie Grove School Critical Facilities		
Critical Facility	Facility Type	Value
Prairie Grove Elementary	Education	$7.5 Million
Prairie Grove High School	Education	$8 Million
Prairie Grove Intermediate	Education	$7 Million
Prairie Grove Middle School	Education	$7.5 Million
Central Office	Administration	$500,000
Bus/ Maintenance Facility	Transportation	$1.8 Million

City of Prairie Grove and Prairie Grove School District Analysis

	Flood		Flash Flood	
Jurisdiction	Occurrences	Property Damage	Occurrences	Property Damage
Prairie Grove	0	$0	1	$0
Washington County	0	$0	50	$7.6 Million
Prairie Grove Percentage	0/0=0%		1/50=2%	

Since 2004, the city of Prairie Grove and the Prairie Grove School District have had 1 flash flood occurrences, resulting in no property damage, out of the 50 reports for Washington County. The one past occurrence of flash flood for Prairie Grove resulted in several flooded roadways. During a flood, potential risk could include, but is not limited to: damage to crops, structures, infrastructure, illness, bodily harm, and death.

Health and Safety: There have no reported deaths in the city of Prairie Grove, however Washington County as a whole has experienced 2 flood related deaths since 2004. Flood waters pose multiple risks that include the spread infectious diseases, chemical hazards, injuries, and death.

Damage to Building Infrastructure: Flood waters have the potential to impact the community and its critical assets. Damage or destruction to structures is a potential effect of floods. Floods also have the potential to destroy or damage infrastructure.

Over a 10 year period, Prairie Grove has not experienced high value loss, but still has the potential of a greater future loss. The overall impact of flood and flash flood for the city of Prairie Grove and the Prairie Grove School District is considered to be **low**, meaning that there are few occurrences of flood and flash flood over a 10 year period.

Springdale, Arkansas Community Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems	Other
• Non English Speaking Populations • Visiting Populations	• City Hall • School • Municipal Airport • Hospital • Police Dept. • Fire Dept. • Childcare Facility • Senior Care Facility • Animal Control	• Beaver Lake Facility • Tenenbaum Lake Dam	• Water and Wastewater • Water Treatment • Sewer Treatment • Telecommunications	• *Beely Johnson American Legion Post 139 • *Fishback School • *Old Springdale High School • *Shiloh Church • *Shiloh Historic District • Springdale Youth Center • Aquatic Center • Library • Arvest Ball Park • Jones Center • Parsons Stadium • Botanical Garden

***National Historic Sites**

Springdale Critical Facilities		
Critical Facility	Facility Type	Value
NW Health Center		$350 Million
Springdale Senior Center	Shelter	$100 Million
Springdale Water utilities	Utility	$100 Million
Springdale Fire Department- Station 1-6	Public Safety	$80 Million
Nob Hill Volunteer Fire Department	Public Safety	$1.5 Million
Tontitown Area Volunteer Fire Department Rural	Public Safety	$1.5 Million
Springdale PD	Public Safety	$600,000
State Police Troop L	Public Safety	$150,000
Springdale School District	Education	$940.95 Million
City Hall	Administration	$4.5 Million
Tenenbaum Lake Dam	Dam	$25,000
Water and Waste Water	Utility	$100 Million
Telecommunications	Utility	$15 Million
Springdale municipal airport	Airport	$2 Million

Springdale School District Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems
• Non English Speaking Populations • Visiting Populations	• Head Start • 17 Elementary Schools • 4 Middle Schools • 4 Jr. High Schools • 4 High Schools • Early Childhood Center • Football Fields • Nursing Services • Food Services	• Central Office • Professional Development Center • Support Services •	• Technology • Transportation • Warehouse Operations • Maintenance Dept.

Springdale School Critical Facilities		
Critical Facility	Facility Type	Value
Bayyari Elementary School	Education	$20 Million
Bernice Young Elementary	Education	$20 Million
Central Junior High School	Education	$30 Million
Elmdale Elementary School	Education	$20 Million
George Elementary School	Education	$20 Million
George Junior High School	Education	$30 Million
Har-ber High School	Education	$85 Million
Harp Elementary School	Education	$20 Million
Helen Tyson Middle School	Education	$25 Million
Hellstern Middle School	Education	$25 Million
Hunt Elementary School	Education	$20 Million
J. O. Kelly Middle School	Education	$25 Million
John Tyson Elementary School	Education	$20 Million
Jones Elementary School	Education	$20 Million
Lakeside Junior High School	Education	$30 Million
Monitor Elementary	Education	$20 Million
Parson Hill Elementary School	Education	$20 Million
Robert E. Lee Elementary School	Education	$20 Million
Sonora Elementary School	Education	$20 Million
Sonora Middle School	Education	$25 Million
Southwest Junior High School	Education	$30 Million
Springdale Alternative School	Education	$2 Million
Springdale High School	Education	$85 Million
Thurman G. Smith Elementary School	Education	$20 Million
Turnbow Elementary School	Education	$20 Million
Walker Elementary School	Education	$20 Million
Westwood Elementary School	Education	$20 Million
Willis Shaw Elementary School	Education	$20 Million
Early Childhood Center	Education	$2.5 Million
Central Office	Administration	$750,000
Professional Development Center	Education	$100,000
Support Services	Administration	$100,000
Technology Building	Technology	$100,000
Transportation	Transportation	$10 Million
Food Services	Dining Services	$200,000
Nursing Services	Medical	$100,000
Warehouse Operations	Storage	$250,000
Maintenance Department	Maintenance	$500,000
Washington Building		$1.5 Million

City of Springdale and Springdale School District Analysis

	Flood		Flash Flood	
Jurisdiction	Occurrences	Property Damage	Occurrences	Property Damage
Springdale	0	$0	4	$0
Washington County	0	$0	50	$7.6 Million
Springdale Percentage	0/0=0%		4/50=8%	

Since 2004, the city of Springdale and the Springdale School District have had 4 flash flood occurrence out of the 50 reports for Washington County, resulting in no property damage. During a flood, potential risk could include, but is not limited to: damage to crops, structures, infrastructure, illness, bodily harm, and death.

Health and Safety: There have no reported deaths in the city of Springdale, however Washington County as a whole has experienced 2 flood related deaths since 2004. Flood waters pose multiple risks that include the spread infectious diseases, chemical hazards, injuries, and death.

Damage to Building Infrastructure: Flood waters have the potential to impact the community and its critical assets. Damage or destruction to structures is a potential effect of floods. Floods also have the potential to destroy or damage infrastructure.

Over a 10 year period, Springdale has not experienced high value loss, but still has the potential of a greater future loss. The overall impact of flood and flash flood for the city of Springdale and the Springdale School District is considered to be **low**, meaning that there are few occurrences of flood and flash flood over a 10 year period.

Tontitown, Arkansas Community Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems	Other
• Non English Speaking Populations • Visiting Populations	• City Hall • Police Dept. • Fire Dept. • Power Plant • Waste Management • Pam Trucking • K&K Vet Supply	•	• Water and Wastewater •	• Museum • Park • *Bariola Farm • *St. Joseph Catholic Church • *Tontitown School Building

***National Historic Sites**

Tontitown Critical Facilities		
Critical Facility	Facility Type	Value
Tontitown Area volunteer Fire Department City	Public Safety	$1.5 Million
City Hall	Administration	$75,000
Police Department	Public Safety	$300,000
Power Plant	Utility	$1.2 Million

City of Tontitown Analysis

	Flood		Flash Flood	
Jurisdiction	Occurrences	Property Damage	Occurrences	Property Damage
Tontitown	0	$0	2	$45,000
Washington County	0	$0	50	$7.6 Million
Tontitown Percentage	0/0=0%		2/50=4%	

Since 2004, the city of Tontitown has had 2 flash flood occurrences, resulting in $45,000 in property damage, out of the 50 reports for Washington County. During a flood, potential risk could include, but is not limited to: damage to crops, structures, infrastructure, illness, bodily harm, and death.

Health and Safety: There have no reported deaths in the city of Tontitown, however Washington County as a whole has experienced 2 flood related deaths since 2004. Flood waters pose multiple risks that include the spread infectious diseases, chemical hazards, injuries, and death.

Damage to Building Infrastructure: Flood waters have the potential to impact the community and its critical assets. Damage or destruction to structures is a potential effect of floods. Floods also have the potential to destroy or damage infrastructure.

Over a 10 year period, Tontitown has experienced high value loss, but still has the potential of a greater future loss. The overall impact of flood and flash flood for the city of Tontitown is considered to be **low**, meaning that there are few occurrences of flood and flash flood over a 10 year period.

West Fork, Arkansas Community Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems
• Non English Speaking Populations • Visiting Populations	• City Hall • School • Police Dept. • Fire Dept. • Childcare Facility • Community Center • Animal Control	•	• Water and Wastewater • Windstream • State Highway Dept.

West Fork Critical Facilities		
Critical Facility	Facility Type	Value
West Fork Fire Department	Public Safety	$3 Million
Strickler Fire Department	Public Safety	$1.5 Million
West Fork School District	Education	$31.4 Million
City Hall	Administration	$100,000
Community Center	Shelter	$75,000
Windstream	Utility	$500,000
State Highway Department	Public Safety	$100,000

West Fork School District Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems
• English Speaking as a 2nd language Populations • Visiting Populations	• ABC School • Elementary School • Middle School • High School	• Administrative Offices	• Bus Fleet

West Fork School Critical Facilities		
Critical Facility	Facility Type	Value
West Fork Elementary School	Education	$10 Million
West Fork High School	Education	$10 Million
West Fork Middle School	Education	$9 Million
Central Office	Administration	$500,000
Transportation	Transportation	$1.8 Million
K-4 Activity Center	Education	$100,000

City of West Fork and West Fork School District Analysis

	Flood		Flash Flood	
Jurisdiction	**Occurrences**	**Property Damage**	**Occurrences**	**Property Damage**
West Fork	**0**	**$0**	**3**	**$0**
Washington County	**0**	**$0**	**50**	**$7.6 Million**
West Fork Percentage	**0/0=0%**		**3/50=6%**	

Since 2004, the city of West Fork and the West Fork School District have had 3 flash flood occurrences, resulting in no property damage, out of the 50 reports for Washington County. During a flood, potential risk could include, but is not limited to: damage to crops, structures, infrastructure, illness, bodily harm, and death.

Health and Safety: There have no reported deaths in the city of West Fork, however Washington County as a whole has experienced 2 flood related deaths since 2004. Flood waters pose multiple risks that include the spread infectious diseases, chemical hazards, injuries, and death.

Damage to Building Infrastructure: Flood waters have the potential to impact the community and its critical assets. Damage or destruction to structures is a potential effect of floods. Floods also have the potential to destroy or damage infrastructure.

Over a 10 year period, West Fork has not experienced high value loss, but still has the potential of a greater future loss. The overall impact of flood and flash flood for the city of West Fork and the West

Fork School District is considered to be **low**, meaning that there are few occurrences of flood and flash flood over a 10 year period.

Winslow, Arkansas Community Assets

People	Critical Facilities	High Potential Loss	Infrastructure Systems
• Non English Speaking Populations • Visiting Populations	• City Hall • Fire Dept.		

Winslow Critical Facilities		
Critical Facility	Facility Type	Value
Sunset Fire Department	Public Safety	$1.5 Million
Boston Mountain Fire Department	Public Safety	$1.5 Million
City Hall	Administration	$75,000

City of Winslow Analysis

	Flood		Flash Flood	
Jurisdiction	**Occurrences**	**Property Damage**	**Occurrences**	**Property Damage**
Winslow	**0**	**$0**	**3**	**$0**
Washington County	**0**	**$0**	**50**	**$7.6 Million**
Winslow Percentage	**0/0=0%**		**3/50=6%**	

Since 2004, the city of Winslow has had 3 flash flood occurrences, resulting in no property damage, out of the 50 reports for Washington County. During a flood, potential risk could include, but is not limited to: damage to crops, structures, infrastructure, illness, bodily harm, and death.

Health and Safety: There have no reported deaths in the city of Winslow, however Washington County as a whole has experienced 2 flood related deaths since 2004. Flood waters pose multiple risks that include the spread infectious diseases, chemical hazards, injuries, and death.

Damage to Building Infrastructure: Flood waters have the potential to impact the community and its critical assets. Damage or destruction to structures is a potential effect of floods. Floods also have the potential to destroy or damage infrastructure.

Over a 10 year period, Winslow has not experienced high value loss, but still has the potential of a greater future loss. The overall impact of flood and flash flood for the city of Winslow is considered to be **low**, meaning that there are few occurrences of flood and flash flood over a 10 year period.

Flood/Flash Flood Vulnerability Analysis

The buildings of the Farmington school district has floor levels that are lower than the road. This is problematic due to the increased potential of loss of life and property. The drainage

system within the Springdale school district needs improvement due to the high rates of flash flood incidents it causes. This poses extreme risk for buses transporting children. The Lincoln school district needs a dry sheltering location out of flood zones and does not have alternate transportation routes during flooding events. Education is not on the safety plan in event of a flood. The Prairie Grove school district also needs alternate routes and protective measures for transporting students outside of the city of Prairie Grove. The Elkins school district has a low area between the middle school and new gymnasium that floods and becomes hazardous for students. There needs to be a bridge on the low lying area with a surrounding fence to prevent students from accessing the hazardous area. The West Fork school district also has low elevations that make it susceptible to flash flooding. The west side of the maintenance shop of the Fayetteville school district has flash flooding during severe weather and heavy rain. The Greenland school district is located within a low lying valley formed by the West Fork of the White River and is highly susceptible to flash floods becoming hazardous to students.

Flooding in the city of Farmington is problematic. The public library in the city is in a 100 year flood plain but has an elevation certificate. Other public buildings lack the same measure. The city of Tontitown does not have the capability for swift water rescue due to the lack of swift water rescue equipment and swift water training for the search and rescue teams. The city of West Fork, Prairie Grove, and Winslow have roads that are located in areas that have constant flooding events. There is not a measure in place to protect and maintain access to key transportation routes and bridges. Highway 71B, in the city of Springdale, is located under a railroad overpass and has constant flooding events. The city of Springdale also has a number of buildings in a 100 year flood plain. The city of Elkins lacks the resources for public information and warning systems. There are five flood plains and seven homes that are located within the flood plains in the city of Elkins. Brush creek and the tributary streams, in the city of Elm Springs, flood frequently. The city of Farmington is not in compliance with Department of Transportation regulations. The bridges and dams of the city of Farmington needs retrofitting. There are no “Turn Around, Don’t Drown” signage. The city of Greenland has constant highway flooding at Ward Slough and flooding on City Creek. The city of Goshen can potentially lose access to and from larger cities and hospitals due to bridge failures. They have the potential for continued damage to private homes. The city of Lincoln has many issues in flood prone areas. They are outside the flood plain but the elevation of buildings outside are lower than the adjacent grade. The unincorporated areas of Washington County has relevant issues that involve low water bridges and unserviceable culverts. Damage to gravel roads and worn roads restricts the response efforts to reach residents.

The University of Arkansas has the potential to lose essential equipment in buildings due to flooding on campus; it currently does not have alternate transportation routes and plans in place when roads are damaged or washed out.

Winter Storm Hazard Profile

Winter storms, which include heavy snowfall, ice storms, and strong winds, affect every state in the continental United States. Areas where such weather is uncommon, such as Arkansas, are typically disrupted more severely by winter storms than those regions that experience this weather more frequently.

The National Weather Service (NWS) defines snow as a steady fall for several hour or more. Heavy snow is defined as either a snowfall accumulating to a depth of 4 inches within 12 hours or less, or snowfall depth accumulation to 6 inches or more within 24 hours or less.
A blizzard occurs when circumstances continue for a period of 3 hours or more 1) constant wind or recurrent gusts to 35 miles an hour or greater, 2) substantial falling and/or blowing snow which decreases visibility to less than ¼ mile.

Sleet is defined as pellets of ice composed of frozen or mostly frozen raindrops or refrozen partially melted snowflakes. Theses pellets of ice typically bounce after striking the ground or other hard surfaces.

Freezing Rain or freezing drizzle refers to when rain freezes on surfaces such as the ground, power lines, vehicles, roadways, etc. Small accumulations of ice can result in driving and walking complications while substantial accumulations produce tremendously dangerous and damaging conditions.

Ice storms are described as periods when accumulations of ice are expected during freezing rain. Significant accumulations of ice has the potential to cause damage to trees and utility lines. Substantial ice accumulations are generally accumulations of .25 inches or greater.

Past Winter Weather Occurrences

Washington County experiences many winter weather related events. Over the last 10 years, they have had 16 reported winter storm events. These events have not resulted in any crop or property damage for the county. Over the last 10 years, Washington County has had one ice storm. This ice storm did not take any lives, but it did result in approximately 45 Million dollars' worth of damage.

Future Probability

[(Current Year) 2014] subtracted by [(Historical Year) 2004] = 10 Years on Record
[(Years on Record) 10] divided by [(Number of Historical Events) 12] = 0.833
[(Number of Historical Events) 12] divided by [(Years on Record) 10] = 1.2

The historic frequency calculates that there is over 100% chance of a winter storm occurring in Washington County every 0.83 years.

Locations

Each jurisdiction in Washington County has an equal susceptibility to winter weather activity. Therefore winter weather is reported county wide and not at the individual jurisdictional level. The following section will describe how all jurisdictions can be affected.

Jurisdictional Asset Values

Jurisdiction	*Criticial Facilities Assessed Capital*
Unincorporated Washington County	$4,500,000
Elkins	$39,700,000
Elm Springs	$1,570,000
Farmington	$59,700,000
Fayetteville	$1,491,990,044
Goshen	$1,675,000
Greenland	$28,400,000
Johnson	$1,925,000
Lincoln	$58,640,000
Prairie Grove	$148,850,000
Springdale	$1,499,475,000
Tontitown	$3,075,000
West Fork	$36,175,000
Winslow	$40,175,000
Elkins School	$35,800,000
Farmington School	$56,000,000
Fayetteville School	$230,683,160
Greenland School	$26,500,000
Lincoln School	$42,500,000
Prairie Grove School	$31,800,000
Springdale School	$744,200,000
West Fork School	$30,900,000

Winter Storm Analysis

	Winter Storms		Heavy Snow		Ice Storm	
Jurisdiction	Occurrences	Property Damage	Occurrences	Property Damage	Occurrences	Property Damage
Washington County	15	$0	1	$0	1	$45 million

Since 2004, Washington County has had 16 winter storm occurrences, resulting in no property damage, 1 occurrence of heavy snow, resulting in no property damage, and 1 occurrence of an ice storm, resulting in $45 million in property damage. These storms resulted in many motor vehicle accidents and power outages. Winter storms can result in the damaging of infrastructure, structures, bodily harm, and death.

Health and Safety: Winter storms have the potential of bodily harm and death. Since 2004, there has been one winter storm related injury reported in Washington County.

Building and Infrastructure: Winter storms have the potential to impact the community and its critical assets. Damage to structures and infrastructure is a potential effect of winter storms. Communication also has the potential to be effected by winter storms.

Over a 10 year period, Washington County has experienced a high value loss, and has the potential to experience greater loss in the future. The overall impact of winter storms for Washington County is considered to be **medium,** meaning impacts are noticeable but not devastating.

Winter storm Vulnerability Analysis

The school districts of Greenland, Springdale, and Lincoln have a high risk of structural failure due to weight on the roofs of buildings. Power poles and lines are subject to damage due to excessive weight creating cascading effects of power loss and information loss. The Fayetteville school district, The Lincoln school district, and the Elkins school district lack essential equipment to clear parking lots and sidewalks during heavy snow, creating hazardous situations for pedestrians and drivers. The West Fork school district is made up of 133 square miles of mountainous terrain, creating problematic issues transporting students to and from school. The Springdale school district also has problematic issues concerning transporting students to and from school on icy roadways; there are currently no alternate routes or plans. The Prairie Grove school district has reoccurring structural issues with pipes freezing in the buildings at school. The Farmington school district currently faces problems of losing power during freezing conditions and starting buses during freezing conditions. This creates an impossible environment for daily routines for students and staff.

The city of Winslow, Goshen, Greenland, Farmington, Elm Springs, Elkins, Prairie Grove, West Fork, Tontitown, Farmington, the University of Arkansas campus, and the unincorporated areas of Washington County, lack an effectiveness for clearing roads. The city of Winslow, Elm Springs, Greenland, and the city of Springdale face structural failures that includes buildings, power poles, and power lines due to excessive weight creating cascading effects of power loss and information loss. The city of West Fork and the University of Arkansas campus has a need for an alternate power source during downed power lines and power outages. Damage to trees

creates road blockage and other transportation issues. The city of Lincoln has limited resources for stock piling food and transporting residents to shelters, including limited space in community shelters. The city of Elm Springs has public buildings, specifically the City Hall, which is uninsulated. The city of Elkins does have the capability to provide emergency shelters to residents.

Extreme Temperature Profile

Extreme heat is characterized by a combination of very high temperatures and exceptionally humid conditions. A heat wave results from persistent conditions over a period of time. Exposure to extreme heat can result in heatstroke.
This scale demonstrates the possible range of high temperatures for the jurisdictions within the municipalities of Washington County.
All participating jurisdictions within Washington County are capable of experiencing any category within this scale.

NOAA's National Weather Service

Heat Index

Temperature (°F)

Relative Humidity (%)	80	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110
40	80	81	83	85	88	91	94	97	101	105	109	114	119	124	130	136
45	80	82	84	87	89	93	96	100	104	109	114	119	124	130	137	
50	81	83	85	88	91	95	99	103	108	113	118	124	131	137		
55	81	84	86	89	93	97	101	106	112	117	124	130	137			
60	82	84	88	91	95	100	105	110	116	123	129	137				
65	82	85	89	93	98	103	108	114	121	128	136					
70	83	86	90	95	100	105	112	119	126	134						
75	84	88	92	97	103	109	116	124	132							
80	84	89	94	100	106	113	121	129								
85	85	90	96	102	110	117	126	135								
90	86	91	98	105	113	122	131									
95	86	93	100	108	117	127										
100	87	95	103	112	121	132										

Likelihood of Heat Disorders with Prolonged Exposure or Strenuous Activity

Caution | Extreme Caution | Danger | Extreme Danger

Category	Classification	Heat Index/Apparent Temperature (°F)	General Affect on People in High Risk Groups
I	Extremely Hot	130°F or Higher	Heat/Sunstroke HIGHLY LIKELY with continued exposure
II	Very Hot	105°F - 130°F	Sunstroke, heat cramps, or heat exhaustion LIKELY, and heatstrokePOSSIBLE with prolonged exposure and/or physical activity
III	Hot	90°F - 105°F	Sunstroke, heat cramps, or heat exhaustion POSSIBLE with prolonged exposure and/or physical activity
IV	Very Warm	80°F - 90°F	Fatigue POSSIBLE with prolonged exposure and/or physical activity

Extreme Cold can accompany winter storms and be left in their aftermath Special populations such as infants and the elderly are most vulnerable to extended exposure to the cold, which can cause potentially life-threatening conditions such as hypothermia and frostbite. Below freezing temperatures can damage vegetation and cause damage to pipes inside homes and businesses.

Wind Chill is defined as how the wind and cold feels on the exposed skin. It is not the actual temperature. During colder weather, as the wind increases, body heat is pulled away from the body at a faster rate, this causes the body temperature to drop.
This scale demonstrates the possible range of cold temperatures for the jurisdictions within the municipalities of Washington County.

All participating jurisdictions within Washington County are capable of experiencing any category within this scale.

Wind (mph)	Temperature (°F)																	
Calm	40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
5	36	31	25	19	13	7	1	-5	-11	-16	-22	-28	-34	-40	-46	-52	-57	-63
10	34	27	21	15	9	3	-4	-10	-16	-22	-28	-35	-41	-47	-53	-59	-66	-72
15	32	25	19	13	6	0	-7	-13	-19	-26	-32	-39	-45	-51	-58	-64	-71	-77
20	30	24	17	11	4	-2	-9	-15	-22	-29	-35	-42	-48	-55	-61	-68	-74	-81
25	29	23	16	9	3	-4	-11	-17	-24	-31	-37	-44	-51	-58	-64	-71	-78	-84
30	28	22	15	8	1	-5	-12	-19	-26	-33	-39	-46	-53	-60	-67	-73	-80	-87
35	28	21	14	7	0	-7	-14	-21	-27	-34	-41	-48	-55	-62	-69	-76	-82	-89
40	27	20	13	6	-1	-8	-15	-22	-29	-36	-43	-50	-57	-64	-71	-78	-84	-91
45	26	19	12	5	-2	-9	-16	-23	-30	-37	-44	-51	-58	-65	-72	-79	-86	-93
50	26	19	12	4	-3	-10	-17	-24	-31	-38	-45	-52	-60	-67	-74	-81	-88	-95
55	25	18	11	4	-3	-11	-18	-25	-32	-39	-46	-54	-61	-68	-75	-82	-89	-97
60	25	17	10	3	-4	-11	-19	-26	-33	-40	-48	-55	-62	-69	-76	-84	-91	-98

Frostbite Times: 30 minutes, 10 minutes, 5 minutes

$$\text{Wind Chill (°F)} = 35.74 + 0.6215T - 35.75(V^{0.16}) + 0.4275T(V^{0.16})$$

Where, T= Air Temperature (°F) V= Wind Speed (mph)

Effective 11/01/01

Past Extreme Temperature Occurrences

Over the past 10 years Washington County has experienced three days with extreme heat. None of these extreme heat days have resulted in any crop or property damage. Even though none of these events caused monetary damage to Washington County, the excessive heat did take the life of one person. Over the last 10 years Washington County has not experienced any extreme cold events.

Future Probability

[(Current Year) 2014] subtracted by [(Historical Year) 2004] = 10 Years on Record
[(Years on Record) 10] divided by [(Number of Historical Events) 12] = 0.833
[(Number of Historical Events) 12] divided by [(Years on Record) 10] = 1.2

The historic frequency calculates that there is over 100% chance of extreme temperature occurring in Washington County every 0.83 years.

Locations

Each jurisdiction in Washington County has an equal susceptibility to extreme temperature activity. Therefore extreme temperatures are reported county wide and not at the individual jurisdictional level. The following section will describe how all jurisdictions can be affected.

Jurisdictional Asset Values

Jurisdiction	*Criticial Facilities Assessed Capital*
Unincorporated Washington County	$4,500,000
Elkins	$39,700,000
Elm Springs	$1,570,000
Farmington	$59,700,000
Fayetteville	$1,491,990,044
Goshen	$1,675,000
Greenland	$28,400,000
Johnson	$1,925,000
Lincoln	$58,640,000
Prairie Grove	$148,850,000
Springdale	$1,499,475,000
Tontitown	$3,075,000
West Fork	$36,175,000
Winslow	$40,175,000
Elkins School	$35,800,000
Farmington School	$56,000,000
Fayetteville School	$230,683,160
Greenland School	$26,500,000
Lincoln School	$42,500,000
Prairie Grove School	$31,800,000
Springdale School	$744,200,000
West Fork School	$30,900,000

Extreme Temperature Analysis

	Extreme Heat		Extreme Cold	
Jurisdiction	Occurrences	Property Damage	Occurrences	Property Damage
Washington County	3	$0	0	$0

Since 2004, Washington County has had 3 occurrences of extreme heat, resulting in no property damage. Washington County has had no occurrences of extreme cold. Extreme temperatures bring the potential risk of bodily harm or death.

Health and Safety: Extreme temperatures have the potential of bodily harm and death. Since 2004, there has been 1 death related to extreme heat. Extreme heat can cause heat rash, cramps, heat exhaustion, heat stroke, and death. Extreme cold can result in frost bite and hypothermia.

Over a 10 year period, Washington County has experienced no valued loss, but has the potential to experience a greater loss in the future. The overall impact of extreme temperature for Washington County is considered to be **low**, meaning that there is minimal number of occurrences.

Extreme Temperature Vulnerability Analysis

The Farmington school district, Lincoln school district, and the Fayetteville school district do not have an alternate power source, such as generators, to heat or cool the buildings during power outages. There is a high risk of heat exhaustion, especially during outdoor sport practices, during the hot months in the Lincoln school district, Farmington school district, Prairie Grove school district, and Greenland school district. There are heat hazards to the grounds workers performing tasks outside, during hot months. The West Fork school district has concerns of extreme heating and cooling that will cause heat exhaustion, heat strokes, frost bite, and hypothermia to students and staff. The buses of the Springdale school district do not have air-conditioners. The Springdale school district, Lincoln school district, and the Elkins school district has reoccurring structural issues with pipes freezing and bursting. This creates an uninhabitable environment for students and staff. There are concerns with transportation capabilities during freezing conditions in the Lincoln school district.

The city of Farmington, Tontitown, Springdale, Elkins, Greenland, Goshen, Lincoln, Winslow, Johnson, Elm Springs, and the University of Arkansas lack the capability to provide sheltering during extreme hot and cold temperatures. During hot months, there is a limitation for workers completing outside tasks for the city of Farmington. The University of Arkansas had 600 patients identified with heat exhaustion during the first football game of 2014. The city of Tontitown has a need for heating and cooling units to disperse and loan to households with elderly and other functional needs populations. The city of Elm Springs, Winslow, and Elkins lack back-up generators for public buildings. The city of West Fork has reoccurring events of frozen water lines during freezing temperatures. The city of Prairie Grove currently lacks the capability to identify high risk individuals in the community that are vulnerable to extreme heat or cold temperatures. The city of Johnson and the unincorporated areas of Washington County lack education for public awareness about extreme temperatures. The city of Johnson lacks community involvement and volunteerism to run the city's shelters.

Earthquake Hazard Profile

An earthquake is a sudden release of energy in Earth's crust that causes shaking or vibrations on Earth's surface. These vibrations that travel through Earth's surface are known as seismic waves. An earthquake originates as a result of a rupture, slippage, or movement of rocks along a fault line. When this movement occurs along the fault it causes seismic waves to radiate in all directions. Seismic waves are recorded on an instrument referred to as a seismograph. Seismographs record a zig-zag line that demonstrates the varying amplitudes of the vibrations in Earth's surface beneath the instrument. The severity of an earthquake is expressed in magnitude and intensity. Magnitude is related to the amount of the seismic energy at the epicenter of the earthquake. The effect the earthquake has on Earth's surface is referred to as the intensity. Currently the Modified Mercalli (MM) intensity scale is used to express how the earthquake was observed by people, buildings, and natural features. The intensity varies from place to place depending on the location of the observer in respect to the epicenter. The Richter Magnitude Scale is used to determine the amplitude of the earthquake at the epicenter. This scale is used to categorize the earthquake for reporting processes. The MM scale is used to see how far the earthquakes intensity was felt and how it affected people in all directions. Although earthquakes have only one magnitude, they have variable intensities that generally decrease with increasing distance from the epicenter.

This following scale demonstrates the possible range of earthquake intensity for the jurisdictions within the municipalities of Washington County.

All participating jurisdictions within Washington County are capable of experiencing any category within the scale.

Modified Mercalli Scale

Modified Mercalli intensity	**Damage Description**
I	Not felt except by a very few under especially favorable conditions
II	Felt only by a few persons at rest, especially on upper floors of buildings
III	Felt quite noticeably by persons indoors, especially on upper floors of buildings. Many people do not recognize it as an earthquake. Standing motor cars may rock slightly. Vibrations similar to the passing of a truck. Duration estimated.
IV	Felt indoors by many, outdoors by few during the day. At night, some awakened. Dishes, windows, doors disturbed; walls make cracking sound. Sensation like heavy truck striking building. Standing motor cars rocked noticeably.
V	Felt by nearly everyone; many awakened. Some dishes, windows broken. Unstable objects overturned. Pendulum clocks may stop.
VI	Felt by all, many frightened. Some heavy furniture moved; a few instances of fallen plaster. Damage slight.
VII	Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable damage in poorly built or badly designed structures; some chimneys broken.
VIII	Damage slight in specially designed structures; considerable damage in ordinary substantial buildings with partial collapse. Damage great in poorly built structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned.
IX	Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb. Damage great in substantial buildings, with partial collapse. Buildings shifted off foundations
X	Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations. Rails bent.
XI	Few, if any (masonry) structures remain standing. Bridges destroyed. Rails bent greatly.
XII	Damage total. Lines of sight and level are distorted. Objects thrown into the air.

Past Earthquake Occurrences

Over the last 10 years Washington County has not experienced any earthquake events.

Future Probability

[(Current Year) 2014] subtracted by [(Historical Year) 2004] = 10 Years on Record
[(Years on Record) 10] divided by [(Number of Historical Events) 12] = 0.833
[(Number of Historical Events) 12] divided by [(Years on Record) 10] = 1.2

The historic frequency calculates that there is over 100% chance of an earthquake occurring in Washington County every 0.83 years.

Locations

Each jurisdiction in Washington County has an equal susceptibility to seismic activity. Therefore earthquake data is reported county wide and not at the individual jurisdictional level. The following section will describe how all jurisdictions can be affected.

Jurisdictional Asset Values

Jurisdiction	*Criticial Facilities Assessed Capital*
Unincorporated Washington County	$4,500,000
Elkins	$39,700,000
Elm Springs	$1,570,000
Farmington	$59,700,000
Fayetteville	$1,491,990,044
Goshen	$1,675,000
Greenland	$28,400,000
Johnson	$1,925,000
Lincoln	$58,640,000
Prairie Grove	$148,850,000
Springdale	$1,499,475,000
Tontitown	$3,075,000
West Fork	$36,175,000
Winslow	$40,175,000
Elkins School	$35,800,000
Farmington School	$56,000,000
Fayetteville School	$230,683,160
Greenland School	$26,500,000
Lincoln School	$42,500,000
Prairie Grove School	$31,800,000
Springdale School	$744,200,000
West Fork School	$30,900,000

Earthquake Analysis

	Earthquake	
Jurisdiction	Occurrences	Property Damage
Washington County	0	$0

Since 2004, Washington County has had no occurrences of earthquakes. Earthquakes have the potential to impact structure, infrastructure, health, and safety. Earthquakes also can result in cascading effects.

Health and Safety: An earthquake has the potential to cause injury or death. Most deaths affiliated with earthquakes are caused by falling debris or entire structures collapsing on top of them. Earthquakes have the potential to cause landslides which could also result in injury or death.

Building and Infrastructure: Earthquakes have the potential to impact a community and its critical assets. Earthquakes have the potential to damage structures and infrastructure. Earthquakes have the potential to cause landslides and liquefaction of soil which could result in damage or destruction to structures and infrastructure.

Over a 10 year period, Washington County has experienced no value loss as a result of earthquake, but has the potential to experience a great loss in the future. The overall impact of earthquakes for Washington County is considered **low,** meaning that there are minimal or unknown recorded occurrences.

Earthquake Vulnerability Analysis

A major earthquake could cause disruption of utilities, gas leaks and explosions, major structural damage, and transportation issues in all the school districts of Farmington, Springdale, Lincoln, Prairie Grove, Elkins, West Fork, Fayetteville, and Greenland. There is also a lack of education and training on earthquake preparedness in these school districts. There is also a sufficient need to increase the capacity for an influx of refugees.

There is a high potential for loss of all or most utilities. Damage of city infrastructure, which includes bridges and roads, could occur. As well as all this, economic issues could arise. Communication will be problematic with responders and citizens. No building on the University of Arkansas is rated to withstand a 3 magnitude earthquake on the rector scale. There is a lack of self-preparedness and earthquake insurance availability in all the districts of Washington County, including the unincorporated districts. Dams and bridges have not been retrofitted to withstand any magnitude of an earthquake. There is a lack of shelter availability due to the increased potential of displaced citizens.

Drought Hazard Profile

Drought is "a persistent and abnormal moisture deficiency having adverse impacts on vegetation, animals, and people." Droughts can be categorized by one of four types: 1) meteorological drought, 2) hydrological drought, 3) agricultural drought, and 4) socioeconomic drought. Meteorological drought occurs when dry weather patterns dominate an area. Meteorological drought can occur suddenly and end quickly, while hydrological drought requires more time to develop and then recover. Hydrological drought occurs when water supplies are low, especially in streams, reservoirs, and groundwater levels, primarily after several months of meteorological drought. Agricultural drought occurs when crops are affected. Socioeconomic drought deals with the supply and demand of different commodities to drought. The Drought Monitor summary map classifies drought areas by categorizing droughts by the level of intensity. D0 represents areas that are abnormally dry that will potentially result in a drought or are drought areas recovering from previous drought conditions. D1 is the least intense category of drought, whereas D4 is the most severe.

This scale demonstrates the possible range of drought for the jurisdictions within the municipalities of Washington County.

All participating jurisdictions within Washington County are capable of experiencing any category within this scale.

Drought Severity Classification

Category	Description	Description of Possible Impacts	Drought Monitoring Indices	
			Palmer Drought Index	Standard Precipitation Index (SPI)
D0	Abnormally Dry	Going into drought: short-term dryness slowing planting, growth of crops or pastures. Coming out of drought: some lingering water deficits; pastures or crops not fully recovered	-1.0 to -1.9	-0.5 to -0.7
D1	Moderate Drought	Some damage to crops or pastures; Streams, reservoirs, or wells low; Some water shortages developing or imminent; Voluntary water use restrictions requested; Fire risk high.	-2.0 to -2.9	-0.8 to -1.2
D2	Severe Drought	Crop or pasture losses likely; Water shortages common; Water restrictions imposed; Fire risk very high.	-3.0 to -3.9	-1.3 to -1.5
D3	Extreme Drought	Major crop and pasture losses; Widespread water shortages or restrictions; Extreme fire danger.	-4.0 to -4.9	-1.6 to -1.9
D4	Exceptional Drought	Exceptional and widespread crop and pasture losses; Shortages of water in reservoirs, streams and wells creating water emergencies; Exceptional fire risk.	-5.0 or less	less than -2

Past Drought Occurrences

Over the last 10 years, Washington County has had 20 drought occurrences. These events have not resulted in any crop or property damage, nor taken the life of anyone.

Future Probability

[(Current Year) 2014] subtracted by [(Historical Year) 2004] = 10 Years on Record
[(Years on Record) 10] divided by [(Number of Historical Events) 12] = 0.833
[(Number of Historical Events) 12] divided by [(Years on Record) 10] = 1.2

The historic frequency calculates that there is over 100% chance of a drought occurring in Washington County every 0.83 years.

Locations

Each jurisdiction in Washington County has an equal susceptibility to drought conditions. Therefore drought conditions are reported county wide and not at the individual jurisdictional level. The following section will describe how all jurisdictions can be affected.

Jurisdictional Asset Values

Jurisdiction	*Criticial Facilities Assessed Capital*
Unincorporated Washington County	$4,500,000
Elkins	$39,700,000
Elm Springs	$1,570,000
Farmington	$59,700,000
Fayetteville	$1,491,990,044
Goshen	$1,675,000
Greenland	$28,400,000
Johnson	$1,925,000
Lincoln	$58,640,000
Prairie Grove	$148,850,000
Springdale	$1,499,475,000
Tontitown	$3,075,000
West Fork	$36,175,000
Winslow	$40,175,000
Elkins School	$35,800,000
Farmington School	$56,000,000
Fayetteville School	$230,683,160
Greenland School	$26,500,000
Lincoln School	$42,500,000
Prairie Grove School	$31,800,000
Springdale School	$744,200,000
West Fork School	$30,900,000

Drought Analysis

	Drought	
Jurisdiction	Occurrences	Property Damage
Washington County	20	$0

Since 2004, Washington County has had 20 occurrences of drought, resulting in no property damage. Drought has the potential to impact crops, livestock, health, and can create possibilities for wildfire.

Health and Safety: Drought has the potential of bodily harm and death. Viruses, protozoa, and bacteria can contaminate both groundwater and surface water when rainfall decreases. People who obtain their drinking water from private wells may be at higher risk for infectious disease that can be linked to drought. E. coli and Salmonella are bacteria that can contaminate food and cause infectious disease during a drought. Food is a method for disease transmission when drought occurs because water shortages can force farmers to use recycled water to irrigate their fields and process the food they grow. It is possible that surface runoff can cause the inadvertent contamination of crops, due to the rain water's inability to penetrate the dry and compacted soil that occurs with drought.

Over a 10 year period, Washington County has experienced no valued loss, but has the potential to experience a great loss in the future. The overall impact of drought for Washington County is considered **high,** meaning that drought is likely to occur with severe strength over a significant to extensive portion of the planning area.

Drought Vulnerability Analysis

Farmington school district does not currently have education about grazing and crop rotation. The Farmington school district, Springdale school district, the Fayetteville school district, the Greenland school district, and Elkins school district does not have an Emergency Operations Plan (EOP) for drought. The Springdale school district has a sizable agriculture department that would suffer from the event of a drought. The landscaping, including athletic fields, of the Springdale school district, Lincoln school district, and Prairie Grove school district would suffer if water had to be rationed. The West Fork school district would suffer from critical water shortages, leading to the need for water conservation training.

The city of Lincoln, Winslow, Johnson, Greenland, West Fork, and the unincorporated areas of Washington County face a high potential for a decline in water supply for combating events of woodland wild fires and structural fires. The city of Johnson and the unincorporated areas of Washington County have the potential to suffer from vegetation loss and destruction. The city of Goshen is a dependent of Fayetteville's city water, causing an increased risk of water supply deficiency. Extreme drought could lead to water shortages in the city of Fayetteville. There is a potential of a diminishing supply of potable water in the city of Greenland and the city of Tontitown, in the event of a drought. The city of Elkins has an insufficient water reserve; they depend solely on Fayetteville's water supply, with only one water line that enters the city of Elkins. An extended drought in the city of Prairie Grove can lead to diminished water supplies and create water demand in excess of treatment capabilities. The city of Springdale, Tontitown,

Farmington, and Elm Springs lack understanding and awareness of the impact of a drought on the city. In the city of Elm Springs, there is currently no protocols in place for water restrictions, in the event of a drought. The city of Farmington has water limitations, because they get their supply from the city of Fayetteville and the Washington County water authority. The research and educational activities will be affected during the event of drought at the University of Arkansas. The university is susceptible to loss of animals and vegetation.

Dam Failure Hazard Profile

A dam is typically constructed of earth, rock, and/or concrete and is used for the purpose of storage, diversion, and control and water within a waterway. These man made barriers that make up the dam work to impound water in the upstream area of a water way, referred to a reservoir. When a dam fails it send uncontrolled amounts of impounded water or waste downstream, causing flooding. A dam failure occurs from a catastrophic collapse, overtopping of the dam, or breach. Most dam failures occur when a spillways capacity is exceeded and the water overtops the dam, or when a dam is poorly constructed and cannot support the excessive flowing water in the reservoir. When a dam is breached it causes a high velocity of water to rush downstream which will damage or destroy everything in its path.

Past Dam Failure Occurrences

Over the past 10 years, Washington County has not experienced any dam failures.

Future Probability

[(Current Year) 2014] subtracted by [(Historical Year) 2004] = 10 Years on Record
[(Years on Record) 10] divided by [(Number of Historical Events) 12] = 0.833
[(Number of Historical Events) 12] divided by [(Years on Record) 10] = 1.2

The historic frequency calculates that there is over 100% chance of a dam failure occurring in Washington County every 0.83 years.

Locations

Each jurisdiction in Washington County has an equal susceptibility to dam failure. Therefore dam failures are reported at the county level and not at the individual jurisdictional level. The following section will describe how all jurisdictions can be affected.

Jurisdictional Asset Values

Jurisdiction	*Criticial Facilities Assessed Capital*
Unincorporated Washington County	$4,500,000
Elkins	$39,700,000
Elm Springs	$1,570,000
Farmington	$59,700,000
Fayetteville	$1,491,990,044
Goshen	$1,675,000
Greenland	$28,400,000
Johnson	$1,925,000
Lincoln	$58,640,000
Prairie Grove	$148,850,000
Springdale	$1,499,475,000
Tontitown	$3,075,000
West Fork	$36,175,000
Winslow	$40,175,000
Elkins School	$35,800,000
Farmington School	$56,000,000
Fayetteville School	$230,683,160
Greenland School	$26,500,000
Lincoln School	$42,500,000
Prairie Grove School	$31,800,000
Springdale School	$744,200,000
West Fork School	$30,900,000

Dam Failure Analysis

Since 2004, the city of Lincoln has had no occurrences of dam failure. Dam failure can result in the damaging or destruction of crops, livestock, structures, infrastructure, bodily harm, and death.

	Dam Failure	
Jurisdiction	Occurrences	Property Damage
Washington County	0	$0

Health and Safety: When dam failure occurs other flooding also occurs. This brings the potential of disease, injury, and death. There have been no dam failure related deaths in reported in all of Washington County.

Building and Infrastructure: Dam failure has the potential to impact the community and its critical assets. Damage or destruction to structures and infrastructure is a potential effect of dam failure. The sudden displacement of water has the potential to damage or destroy any thing in its path.

Over a 10 year period, Lincoln has not experienced a high value loss, but is not immune to the possibility of a dam failure event having a great impact in the future. The overall impact of dam failure for the city of Lincoln is considered to be **low**, meaning that there is little, unknown, or no records of occurrences.

Dam Failure Vulnerability Analysis

The school discrtics of Farmington, Lincoln, Prairie Grove, Elkins, West Fork, Fayetteville, and Greenland are not located in areas near dams and are not susceptible to dam breach hazards.

The Springdale school district would have a deficiency of water in the event of a dam failure because their source of water is received from Beaver Lake. They would not be susceptible to property or infrastructure damage.

The city of Farmington, Tontitown, West Fork, Elkins, Greenland, Goshen, Winslow, and the University of Arkansas are not susceptible to dam failure.

The city of Lincoln has earthen dams. Failure of these dams would flood significant areas of Rhea's Mill. In the event of the Lake Fayetteville dam failure, drainage system congestion, flooding, transportation restrictions, and life safety dangers would occur in the city of Johnson. The Prairie Grove Lake Dam needs to meet the high hazard classification and needs extensive improvement to meet the standard. The city of Springdale, Elm Springs, and the unincorporated areas of Washington County rely on Beaver Lake for water supply. Failure of the Beaver lake dam could impose a water deficiency and effect over 50,000 people. There are several homes that could be flooded and destroyed, including loss of life in the event of a Fayetteville dam failure in the city of Fayetteville. There are 22 dams in the unincorporated areas of Washington County that could cause severe flooding and interfere with transportation routes.

Wildland Urban Interface

Description

The South is one of the fastest growing regions in the nation, with an estimated population growth of 1.5 million people per year. The South also consistently has the highest number of wildfires per year. Population growth is pushing housing developments further into natural and forested areas where most of these wildfires occur. This situation puts many lives and communities at risk each year.

In particular, the expansion of residential development from urban centers out into rural landscapes, increases the potential for wildland fire threat to public safety and the potential for damage to forest resources and dependent industries. This increase in population across the region will impact counties and communities that are located within the Wildland Urban Interface (WUI). The WUI is described as the area where structures and other human improvements meet and intermingle with undeveloped wildland or vegetative fuels. Population growth within the WUI substantially increases the risk from wildfire.

According to the Southern Wildfire Risk Assessment (SWRA) report for the **Washington County** project area, it is estimated that **88 percent** of the total project area population live within the WUI.

The Wildland Urban Interface (WUI) layer reflects housing density depicting where humans and their structures meet or intermix with wildland fuels.

Housing Density	WUI Population	Percent of WUI Population	WUI Acres	Percent of WUI Acres
LT 1hs/40ac	1,872	1.0%	99,953	32.4%
1hs/40ac to 1hs/20ac	3,367	1.9%	51,972	16.9%
1hs/20ac to 1hs/10ac	8,116	4.5%	56,215	18.2%
1hs/10ac to 1hs/5ac	10,881	6.1%	36,954	12.0%
1hs/5ac to 1hs/2ac	18,903	10.6%	29,041	9.4%
1hs/2ac to 3hs/1ac	92,506	51.7%	30,398	9.9%
GT 3hs/1ac	43,242	24.2%	3,824	1.2%
Total	**178,887**	**100.0%**	**308,358**	**100.0%**

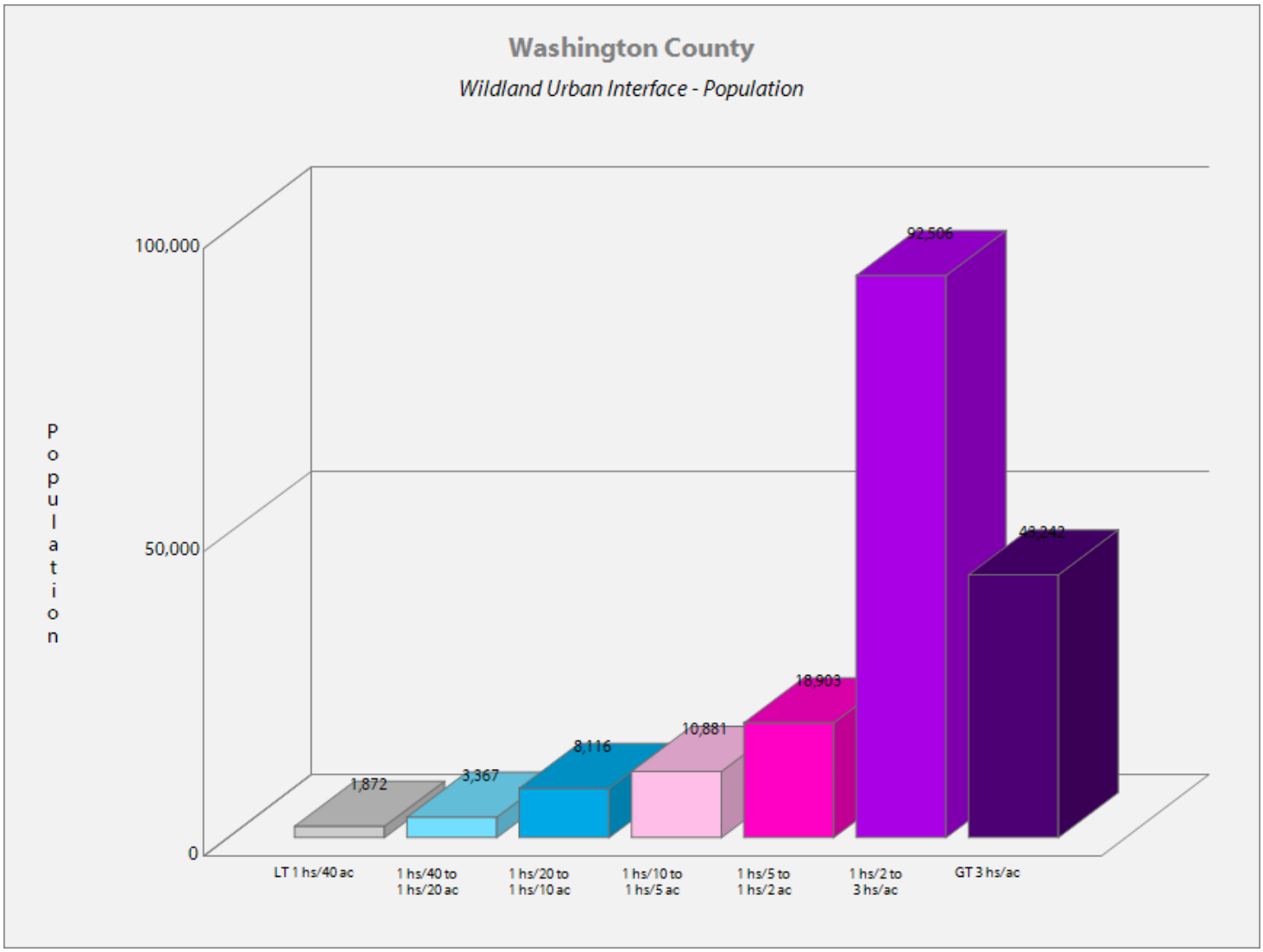
WUI – Population and Acres

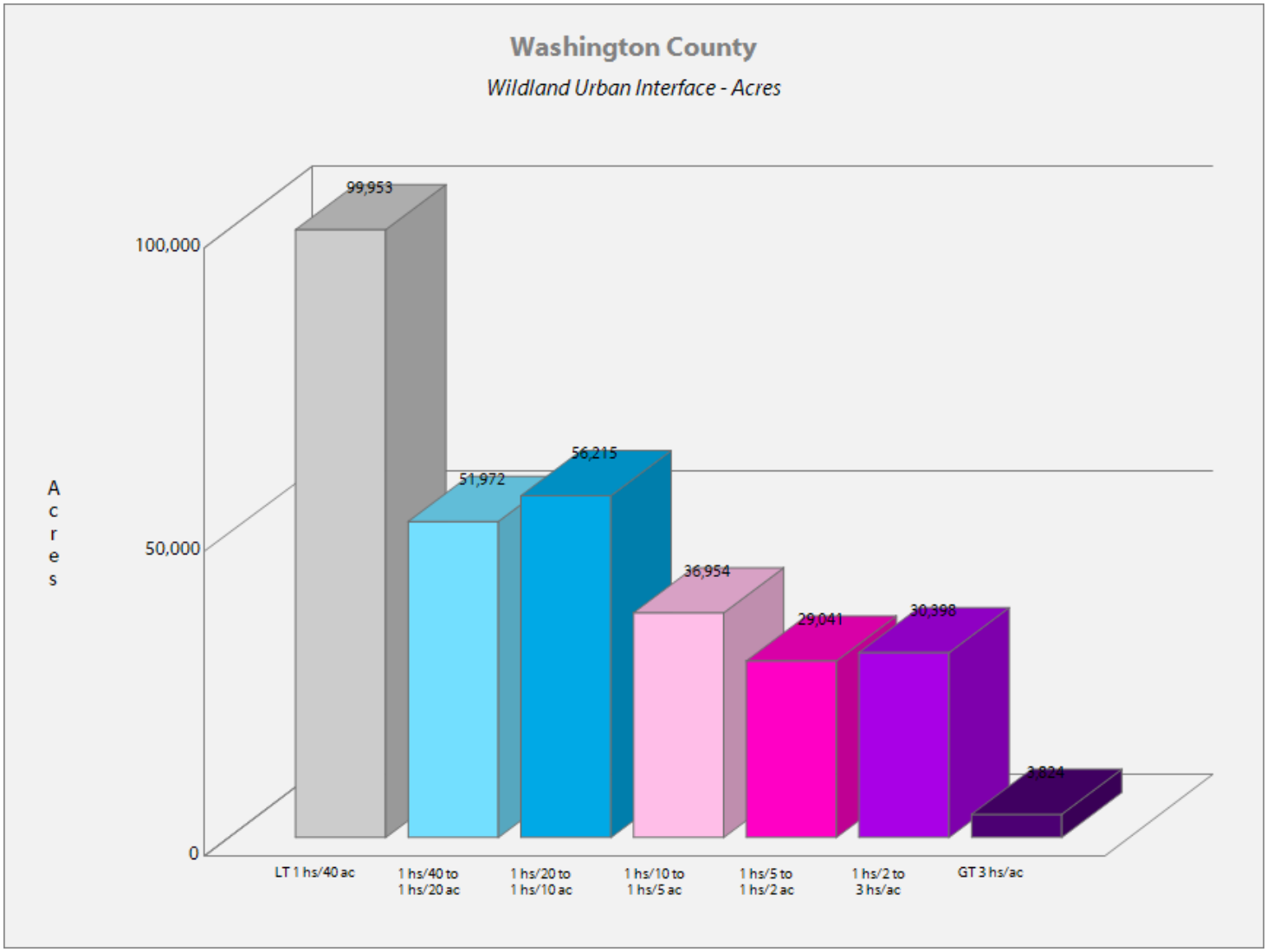
WUI housing density is categorized based on the standard Federal Register and U.S. Forest Service SILVIS data set categories, long considered a de facto standard for depicting WUI. However, in the SWRA WUI data the number of housing density categories is extended to provide a better gradation of housing distribution to meet specific requirements for fire protection planning activities. While units of the actual data set are in *houses per sq. km*., the data is presented as the *number of houses per acre* to aid with interpretation and use by fire planners in the South.

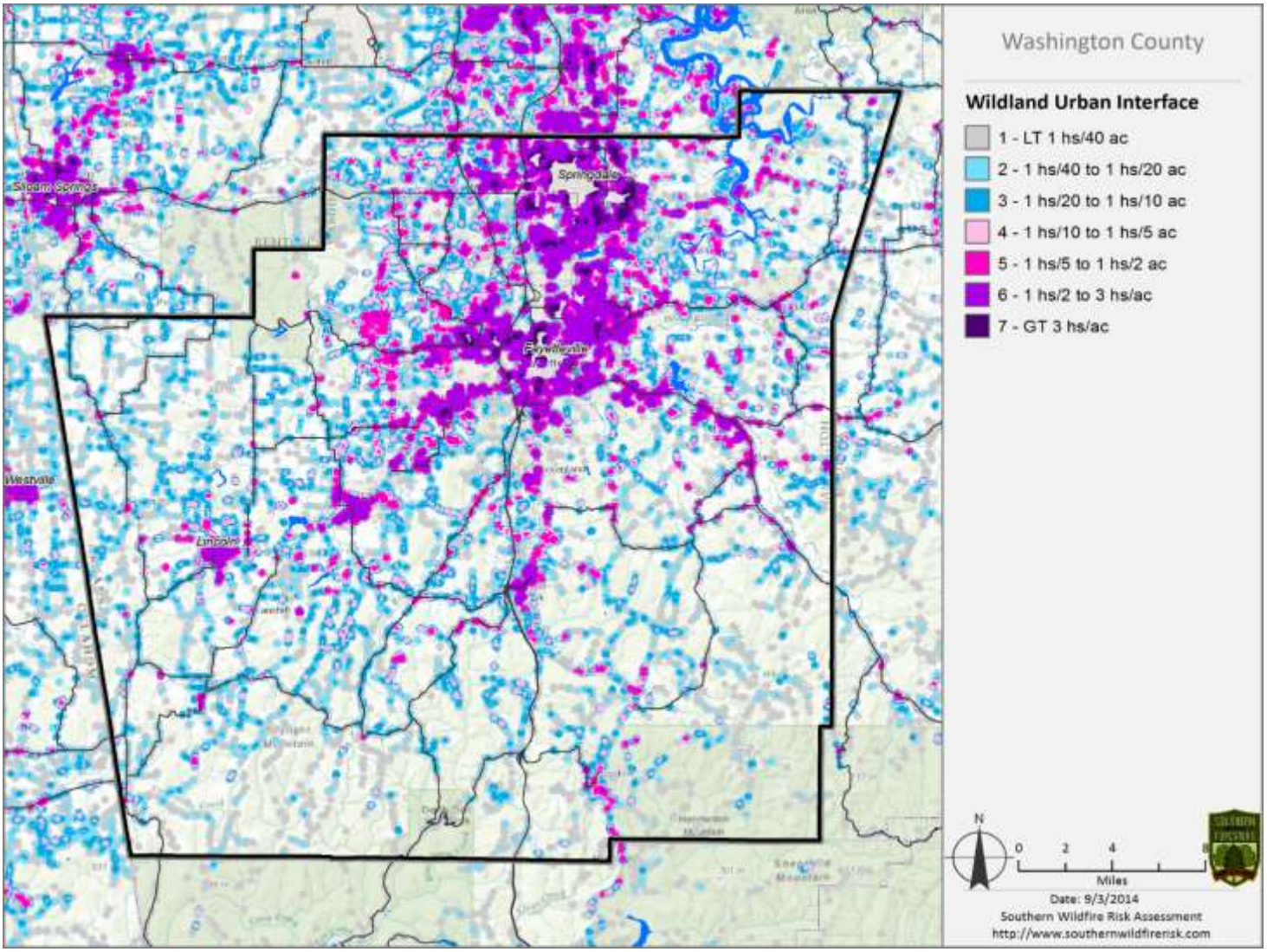
In the past, conventional wildland urban interface data sets, such as USFS SILVIS, have been used to reflect these concerns. However, USFS SILVIS and other existing data sources do not provide the level of detail for defining population living in the wildland as needed by Southern state WUI specialists and local fire protection agencies.

The new SWRA WUI 2012 dataset is derived using advanced modeling techniques based on the SWRA Where People Live (housing density) dataset and 2012 LandScan population count data available from the Department of Homeland Security, HSIP Freedom Data Set. WUI is simply a subset of the Where People Live dataset. The primary difference between the WPL and WUI is that populated areas surrounded by sufficient non-burnable areas (i.e. interior urban areas) are removed from the Where People Live data set, as these areas are not expected to be directly impacted by a wildfire. Simply put, the SWRA WUI is the SWRA WPL data with the urban core areas removed.

Data is modeled at a 30-meter cell resolution, which is consistent with other SWRA layers. The following table shows the total population for each WUI area within the project area.


Washington County
Wildland Urban Interface - Population
Population
100,000
50,000
0
1,872
3,367
8,116
10,881
18,903
92,506
43,242
LT 1 hs/40 ac
1 hs/40 to 1 hs/20 ac
1 hs/20 to 1 hs/10 ac
1 hs/10 to 1 hs/5 ac
1 hs/5 to 1 hs/2 ac
1 hs/2 to 3 hs/ac
GT 3 hs/ac


Washington County
Wildland Urban Interface - Acres
Acres
100,000
50,000
0
99,953
51,972
56,215
36,954
29,041
30,398
3,824
LT 1 hs/40 ac
1 hs/40 to 1 hs/20 ac
1 hs/20 to 1 hs/10 ac
1 hs/10 to 1 hs/5 ac
1 hs/5 to 1 hs/2 ac
1 hs/2 to 3 hs/ac
GT 3 hs/ac


Washington County
Wildland Urban Interface
1 - LT 1 hs/40 ac
2 - 1 hs/40 to 1 hs/20 ac
3 - 1 hs/20 to 1 hs/10 ac
4 - 1 hs/10 to 1 hs/5 ac
5 - 1 hs/5 to 1 hs/2 ac
6 - 1 hs/2 to 3 hs/ac
7 - GT 3 hs/ac
Springdale
Fayetteville
Westside
Lincoln
N
0 2 4 8
Miles
Date: 9/3/2014
Southern Wildfire Risk Assessment
http://www.southernwildfirerisk.com

WUI Risk Index

Description

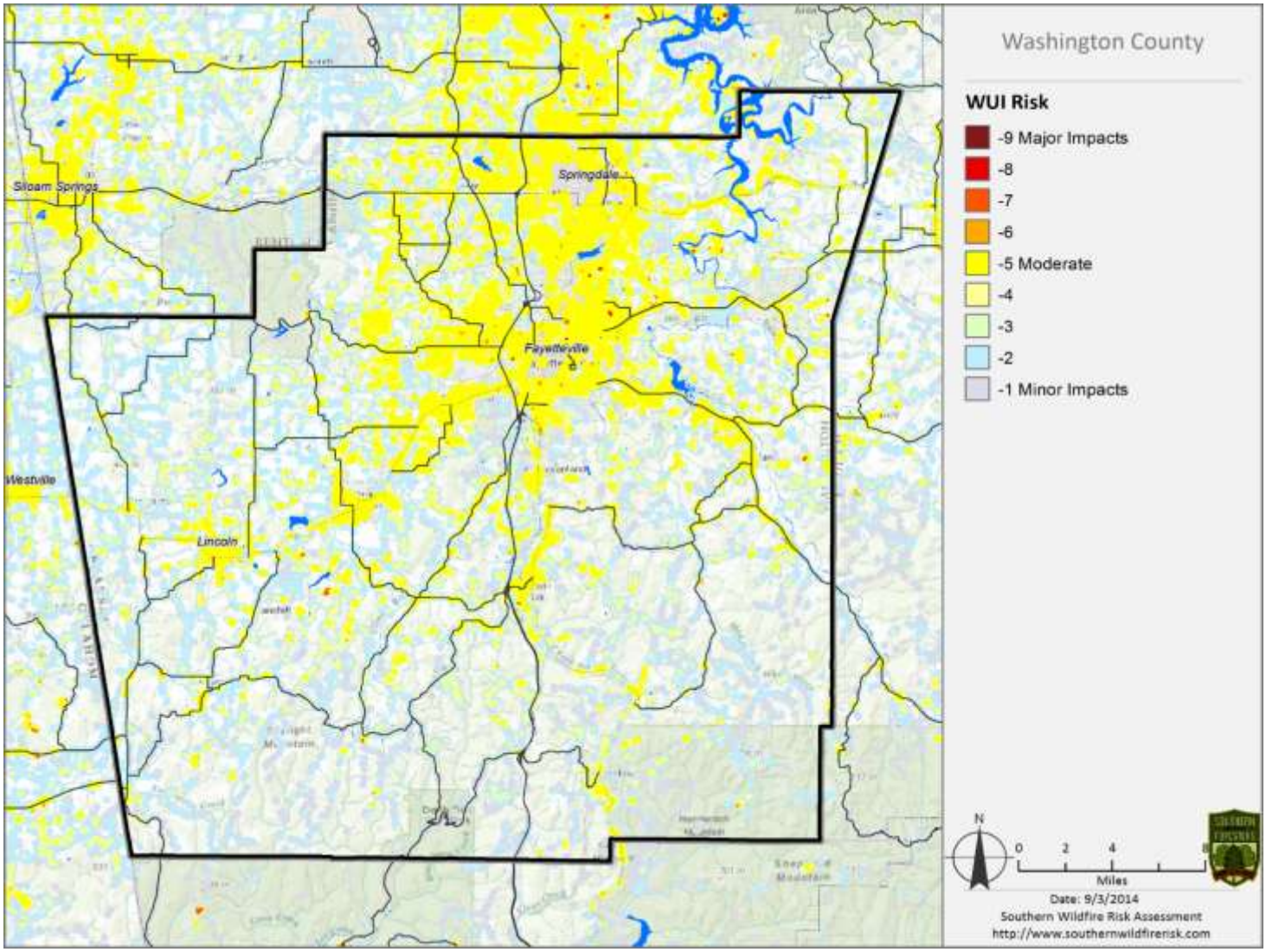
The Wildland Urban Interface (WUI) Risk Index layer is a rating of the potential impact of a wildfire on people and their homes. The key input, WUI, reflects housing density (houses per acre) consistent with Federal Register National standards. The location of people living in the Wildland Urban Interface and rural areas is key information for defining potential wildfire impacts to people and homes.

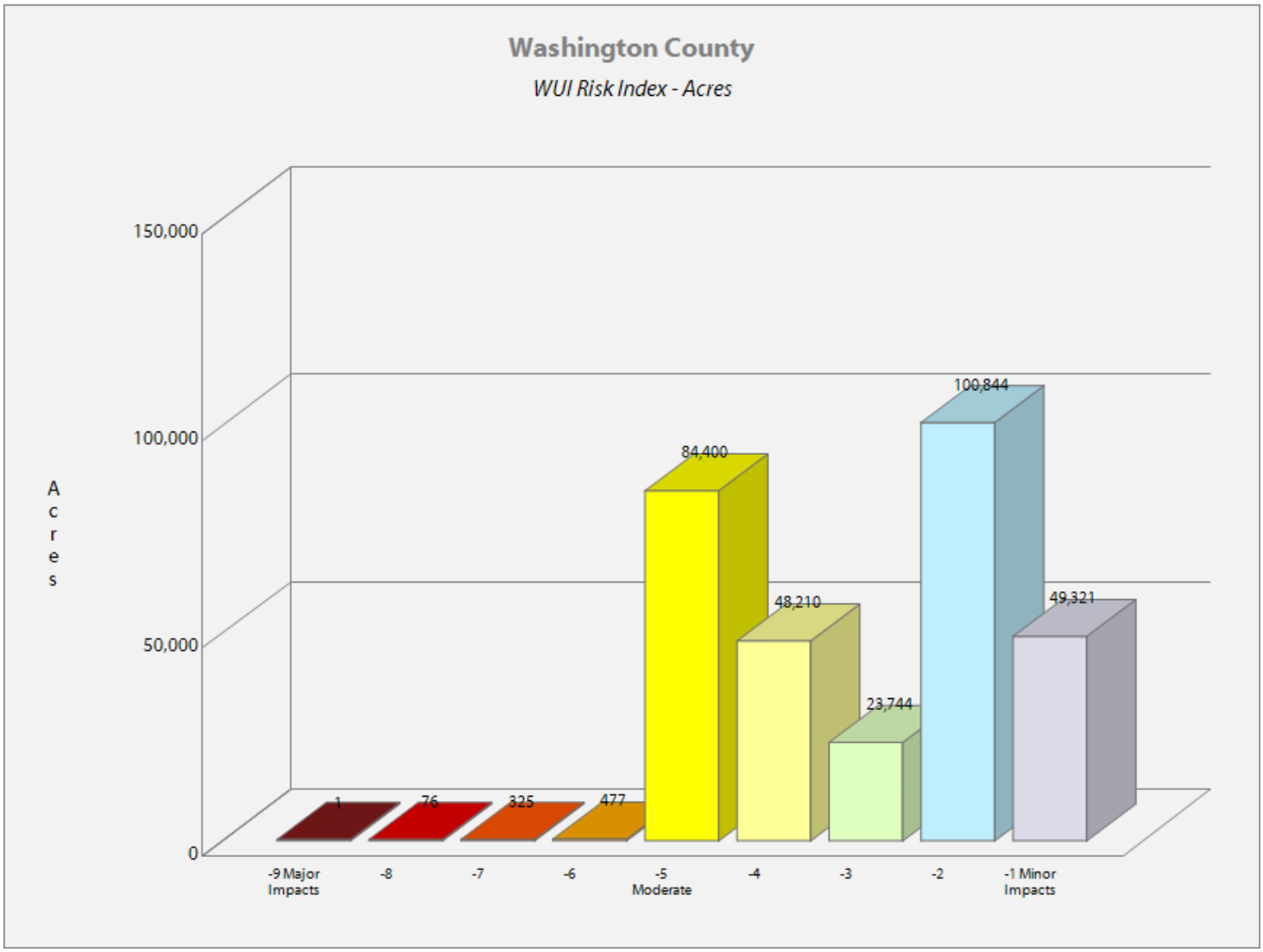
The WUI Risk Rating is derived using a Response Function modeling approach. Response functions are a method of assigning a net change in the value to a *resource* or *asset* based on susceptibility to fire at different intensity levels, such as flame length. The range of values is from -1 to -9, with -1 representing the least negative impact and -9 representing the most negative impact. For example, areas with high housing density and high flame lengths are rated -9 while areas with low housing density and low flame lengths are rated -1.

To calculate the WUI Risk Rating, the WUI housing density data was combined with Flame Length data and response functions were defined to represent potential impacts. The response functions were defined by a team of experts based on values defined by the SWRA Update Project technical team. By combining flame length with the WUI housing density data, you can determine where the greatest potential impact to homes and people is likely to occur.

Fire intensity data is modeled to incorporate penetration into urban fringe areas so that outputs better reflect real world conditions for fire spread and impact in fringe urban interface areas. With this enhancement, houses in urban areas adjacent to wildland fuels are incorporated into the WUI risk modeling. All areas in the South have the WUI Risk Index calculated consistently, which allows for comparison and ordination of areas across the entire region. Data is modeled at a 30-meter cell resolution, which is consistent with other SWRA layers.

Class	Acres	Percent
-9 Major Impacts	1	0.0%
-8	76	0.0%
-7	325	0.1%
-6	477	0.2%
-5 Moderate	84,400	27.5%
-4	48,210	15.7%
-3	23,744	7.7%
-2	100,844	32.8%
-1 Minor Impacts	49,321	16.0%
Total	**307,398**	**100.0%**


Washington County
WUI Risk
-9 Major Impacts
-8
-7
-6
-5 Moderate
-4
-3
-2
-1 Minor Impacts
Siloam Springs
Springdale
Fayetteville
Westville
Lincoln
N
0
2
4
Miles
Date: 9/3/2014
Southern Wildfire Risk Assessment
http://www.southernwildfirerisk.com


Washington County
WUI Risk Index - Acres
Acres
150,000
100,000
50,000
0
1
76
325
477
84,400
48,210
23,744
100,844
49,321
-9 Major Impacts
-8
-7
-6
-5 Moderate
-4
-3
-2
-1 Minor Impacts

Previous Wildfire Occurrences

Washington County reported 166 wildfires that burned 1,807 acres with an average fire size of 11.0 acres in the past 10 years. Wildfire responsible for $50,000 worth of damage in the town of Johnson, where it damaged 3 homes.

Washington County Wildfires		
Year	**Fires**	**Acres**
2003	11	430
2004	17	100
2005	13	267
2006	27	144
2007	9	114
2008	10	195
2009	10	175
2010	13	38
2011	27	197
2012	29	147
10 year average	16.6	180.7

Future Probability

[(Current Year) 2014] subtracted by [(Historical Year) 2004] = 10 Years on Record
[(Years on Record) 10] divided by [(Number of Historical Events) 12] = 0.833
[(Number of Historical Events) 12] divided by [(Years on Record) 10] = 1.2

The historic frequency calculates that there is over 100% chance of a wildfire occurring in Washington County every 0.83 years.

Locations

Each jurisdiction in Washington County has an equal susceptibility to wildfire events. Therefore wildfires are reported at the county level and not at the individual jurisdictional level. The following section will describe how all jurisdictions can be affected.

Jurisdictional Asset Values

Jurisdiction	*Criticial Facilities Assessed Capital*
Unincorporated Washington County	$4,500,000
Elkins	$39,700,000
Elm Springs	$1,570,000
Farmington	$59,700,000
Fayetteville	$1,491,990,044
Goshen	$1,675,000
Greenland	$28,400,000
Johnson	$1,925,000
Lincoln	$58,640,000
Prairie Grove	$148,850,000
Springdale	$1,499,475,000
Tontitown	$3,075,000
West Fork	$36,175,000
Winslow	$40,175,000
Elkins School	$35,800,000
Farmington School	$56,000,000
Fayetteville School	$230,683,160
Greenland School	$26,500,000
Lincoln School	$42,500,000
Prairie Grove School	$31,800,000
Springdale School	$744,200,000
West Fork School	$30,900,000

Wildfire Analysis

	Wildfire	
Jurisdiction	**Occurrences**	**Property Damage**
Washington County	**1**	**$50,000**

Since 2004, Washington County has had 1 occurrence of wildfire, resulting in $50,000 in property damage. Wildfire has the potential to impact crops, livestock, forested land, structures, infrastructure, health and safety.

Health and Safety: Extreme temperature have the potential to cause bodily harm or death. Inhaling smoke for a short amount of time can cause instantaneous effects. Smoke irritates the eyes, nose, and throat, and its odor has the potential to cause nausea. Smoke inhalation has the ability to temporarily change lung functions, resulting in breathing difficulties. Exposure to smoke may also have other chronic health effects. Wildfire also carries the potential for burns ranging from first degree to third degree.

Burns also have the potential for infection, shock, hypothermia, hypovolemia, and can have chronic effects on the nervous system. Infections in the body, such as Sepsis, have the potential to cause shock or death. Building and Infrastructure: Wildfire has the potential to impact the community and its critical assets. The one occurrence of wildfire reported by Washington County, 2014, caused damage to homes in the town of Johnson and resulted in $50,000 in property damage. Wildfires have the potential to affect infrastructure by burning down power poles and cell towers. Homes and other structures are also at risk of damage or destruction.

Over a 10 year period, Washington County has experienced low value loss, but has the potential to experience a greater loss in the future. The overall impact of wildfire for Washington County is considered to be low, meaning that there are minimal or unknown recorded occurrences.

Wildfire Vulnerability Analysis

The school districts of Springdale, Farmington, Fayetteville, Greenland, Prairie Grove, West Fork, and Elkins currently does not have fire protection to prevent fires from spreading towards school campuses. The bus routes of the West Fork school district, Greenland school district, Springdale school district, and Lincoln school district have to travel through heavy wild land areas to transport students that could be hazardous. There is a lack of student education on wildfire prevention in the Farmington school district.

The city of Fayetteville, Springdale, Lincoln, Greenland, West Fork, and Winslow has a large amount of wild land – urban interfaces. The city of Elm Springs, Elkins, Tontitown, and Greenland do not have sufficient resources, such as fire apparatuses and fire suits to respond to small or large wild fires. The city of Elm Springs has not adopted the WUI code. The fire department of the city of Prairie Grove and Farmington lack adequate manpower to deal with large scale wild fires and grass fires. The city of Johnson, Winslow, Elkins, and Goshen has dense vegetation in areas of the town that would allow fires to spread. The University of Arkansas would face susceptibility of loss of agriculture, research, and buildings. The unincorporated areas of Washington County have the potential to lose many homes that are being built in the woodland areas.

Pandemic Hazard Profile

An epidemic, or an unexpected outbreak, that becomes extremely widespread and affects a whole region, a continent, or the world due to a vulnerable population. Pandemics have the potential to cause a high degree of mortality.

Previous Pandemic Occurrences

Over the last 10 years Washington County has not experienced pandemic events.

Future Probability

[(Current Year) 2014] subtracted by [(Historical Year) 2004] = 10 Years on Record
[(Years on Record) 10] divided by [(Number of Historical Events) 12] = 0.833
[(Number of Historical Events) 12] divided by [(Years on Record) 10] = 1.2

The historic frequency calculates that there is over 100% chance of a pandemic occurring in Washington County every 0.83 years.

Locations

Each jurisdiction in Washington County has an equal susceptibility to pandemic events. Therefore pandemics are reported at the county level and not at the individual jurisdictional level. The following section will describe how all jurisdictions can be affected.

Jurisdictional Asset Values

Jurisdiction	*Criticial Facilities Assessed Capital*
Unincorporated Washington County	$4,500,000
Elkins	$39,700,000
Elm Springs	$1,570,000
Farmington	$59,700,000
Fayetteville	$1,491,990,044
Goshen	$1,675,000
Greenland	$28,400,000
Johnson	$1,925,000
Lincoln	$58,640,000
Prairie Grove	$148,850,000
Springdale	$1,499,475,000
Tontitown	$3,075,000
West Fork	$36,175,000
Winslow	$40,175,000
Elkins School	$35,800,000
Farmington School	$56,000,000
Fayetteville School	$230,683,160
Greenland School	$26,500,000
Lincoln School	$42,500,000
Prairie Grove School	$31,800,000
Springdale School	$744,200,000
West Fork School	$30,900,000

Pandemic Analysis

	Pandemic	
Jurisdiction	Occurrences	Property Damage
Washington County	0	$0

Since 2004, Washington County has had no occurrences of a pandemic. A pandemic has the potential to affect the health and safety of the population, structure, and infrastructure.

Health and Safety: A pandemic possess the potential to cause illness or death. Which could result in drastic decreases in population. Special populations are at great risks. Populations with limited mobility, problems with understanding or practicing preventative measures, or unable to communicate symptoms are at a greater risk of infection.

Building and Infrastructure: Pandemic has the potential to impact the community and its critical assets. A pandemic would affect the economy and daily life; which would become difficult when people who provide services; such as power, transportation, and communications, could not show up for work.

Over a 10 year period, Washington County has experienced no valued loss, but has the potential to experience a great loss in the future. The overall impact of pandemic for Washington County is considered **low**, meaning that there are minimal or unknown recorded occurrences.

Pandemic Vulnerability Analysis

There is a high threat to the school districts of Greenland, Fayetteville, West Fork, Elkins, Prairie Grove, Lincoln, Farmington, and Springdale to a pandemic outbreak. There is no hot water for washing hands, and different minorities do not get the proper vaccinations. In the event of an outbreak, there will be a loss of educational time for students and a workforce loss. There would also be a high number of deaths.

There is a high threat of a pandemic outbreak to University of Arkansas due to the close proximity of students and staff during different times of day all week. The health and safety of the community is at extreme risk.

The city of Tontitown, West Fork, Elkins, Farmington, Greenland, Winslow, Johnson, and the unincorporated areas of Washington County lack the proper training, education, and personal protective equipment for a pandemic outbreak. The city of Goshen would have mass chaos from fear of public during a pandemic. There is no significant medical support or facilities in the city of Lincoln, Prairie Grove, Elm Springs, and Springdale to respond to the public, in the event of a pandemic outbreak. There is no plan in place for a pandemic outbreak for the city of Elm Springs. The city of Fayetteville has many vulnerable populations that will be affected during the event of a pandemic. The pandemic plan for the unincorporated areas of Washington County need to be updated to cover all virus and disease threats.

Capability Assessment

Existing Institutions, Plans, Policies and Ordinances

This table provides a summary of the plans, codes, policies, and ordinances currently in place in each participating jurisdiction. Existing programs and policies were reviewed in order to identify those that may weaken or enhance the hazard mitigation objectives outlined in this document. This list does not necessarily reflect every plan, ordinance, or other guidance document within each jurisdiction; however, this is a summary of the guidance documents known to and recommended for review by members of the planning committee. The checkmark (√) indicates that the jurisdiction reported having the authority to implement the specified regulatory tool and that the tool is currently in place.

Legal and Regulatory Capability Inventory												
Jurisdiction	Building Code	Zoning Ordinance	Subdivision Ordinance	Special Purpose Ordinance	Growth Mgmt Ordinance	Site Plan Review Requirements	Comprehensive Plan	Capital Improvements Plan	Economics Development Plan	Emergency Response Plan	Post-Disaster Recovery Ordinance	Real Estate Disclosure Ordinance
Washington County		✓	✓	✓			✓	✓	✓	✓	✓	
Elkins, City of	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	
Elm Springs, City of	✓	✓	✓	✓		✓	✓					
Farmington, City of	✓	✓	✓	✓		✓	✓			✓		
Fayetteville, City of	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Goshen, City of	✓	✓	✓	✓						✓	✓	
Greenland, City of	✓	✓	✓	✓	✓	✓						
Johnson, City of	✓	✓	✓	✓		✓	✓	✓	✓	✓		
Lincoln, City of	✓	✓	✓			✓				✓		
Prairie Grove, City of	✓	✓	✓	✓	✓	✓	✓			✓		
Springdale, City of	✓	✓	✓	✓		✓	✓	✓				
Tontitown, City of	✓	✓	✓	✓		✓		✓	✓	✓		
West Fork, City of	✓	✓	✓			✓	✓			✓		
Winslow, City of						✓						
Elkins Schools	✓					✓	✓	✓			✓	
Farmington Schools						✓	✓	✓		✓	✓	
Fayetteville Schools	✓	✓	✓			✓	✓	✓		✓		
Greenland Schools							✓	✓		✓		
Lincoln Schools							✓			✓		
Prairie Grove Schools	✓	✓	✓			✓	✓	✓		✓		
Springdale Schools	✓	✓	✓			✓	✓	✓		✓		
West Fork Schools	✓					✓		✓		✓		
University of	✓	✓				✓	✓	✓	✓	✓		

Arkansas												

Legal and Regulatory Capabilities

As indicated in the previous table, Washington County and its incorporated jurisdictions have several policies, programs, and capabilities, which help to prevent and minimize future damages resulting from hazards. These tools are valuable instruments in pre and post disaster mitigation as they facilitate the implementation of mitigation activities through the current legal and regulatory framework. These policies, programs, and capabilities are described in greater detail for Washington County and the participating jurisdictions, as well as the State and Federal levels.

Building Code

Building codes regulate construction standards and are developed for specific geographic areas of the country. They consider the type, frequency, and intensity of hazards present in the region. Structures built to applicable building codes are inherently resistant to many hazards such as strong winds, floods, and earthquakes, up to certain levels of severity. Due to the location specific nature of the building codes, these are very valuable tools for mitigation.

Zoning Ordinance

Zoning is a useful tool to consider when developing a mitigation strategy. It can be used to restrict new development, require low-density development, and designate specific uses (e.g. recreational) in the hazard prone areas. Private property rights must be considered, but enacting a zoning ordinance can reduce or potentially eliminate damages from future hazard events. According to the State Multi-Hazard Mitigation Plan, all local communities in the State of Arkansas are encouraged to incorporate mitigation standards in zoning and land use ordinances.

Subdivision Ordinance

Subdivision ordinances offer an opportunity to account for natural hazards prior to the development of land as they formulate regulations when the land is subdivided. Subdivision design that incorporates mitigation principles can reduce the exposure of future development to hazard events.

Special Purpose Ordinance

A special purpose ordinance is a form of zoning in which specific standards dependent upon the special purpose or use must be met. For example, many special purpose ordinances include basic development requirements such as setbacks and elevations. The community's floodplain management ordinance may be a special purpose ordinance. The special purpose ordinance is a useful mitigation technique particularly when implemented to reduce damages associated with flooding.

Growth Management Ordinance

Growth management ordinances are enacted as a means to control the location, amount, and type of development in accordance with the larger planning goals of the jurisdiction. These

ordinances often designate the areas in which certain types of development is limited and encourage the protection of open space for reasons such as environmental protection and limitation of sprawl.

Site Plan Review Requirements

Site plan review requirements are used to evaluate proposed development prior to construction. An illustration of the proposed work, including its location, site elevations, exact dimensions, existing and proposed buildings, and many other elements are often included in the site plan review requirements. The site plan reviews offer an opportunity to incorporate mitigation principles, such as ensuring that the proposed development is not in an identified hazard area and that appropriate setbacks are included.

Comprehensive Plan

A comprehensive plan is a document which illustrates the overall vision and goals of a community. It serves as a guide for the community's future and often includes anticipated demographics, land use, transportation, and actions to achieve desired goals. Integrating mitigation concepts and policies into a comprehensive plan provides a means for implementing initiatives through legal frameworks and enhances the opportunity to reduce the risk posed by hazard events.

Capital Improvement Plan

Capital Improvement Plans schedule the capital spending and investments necessary for public improvements such as schools, roads, libraries, and fire services. These plans can serve as an important mechanism to manage development in identified hazard areas through limited public spending.

Economic Development Plan

Economic development plans offer a comprehensive overview of the local or regional economic state, establish policies to guide economic growth, and include strategies, projects, and initiatives to improve the economy in the future. Economic development plans, similar to capital improvement plans, offer an opportunity to reduce development in hazard prone areas by encouraging economic growth in areas less susceptible to hazard events.

Emergency Response Plan

Emergency response plans provide an opportunity for local governments to anticipate an emergency and plan the response accordingly. In the event of an emergency, a previously established emergency response plan can reduce negative effects as the responsibilities and means by which resources are deployed has been previously determined.

Post-Disaster Recovery Plan

A post disaster recovery plan guides the physical, social, environmental, and economic recovery and reconstruction procedures after a disaster. Hazard mitigation principles are often incorporated into post disaster recovery plans in order to reduce repetitive disaster losses. The post disaster recovery plan is included as a chapter of the comprehensive plan.

Real Estate Disclosure Ordinance

A real estate disclosure ordinance requires individuals selling real estate to inform potential buyers of the hazards to which the property and/or structure is vulnerable prior to the sale. Such a requirement ensures that the new property owner is aware of the hazards to which the property is at risk of damage.

Administrative and Technical Capability

The ability of a local government to develop and implement mitigation projects, policies, and programs is contingent upon its staff and resources. Administrative capability is determined by evaluating whether there are an adequate number of personnel to complete mitigation activities. Similarly, technical capability can be evaluated by assessing the level of knowledge and technical expertise of local government employees, such as personnel skilled in surveying and Geographic Information Systems.

The table below provides a summary of the administrative and technical capabilities currently in place in each participating jurisdiction. The checkmark (√) indicates that the local government reported maintaining a staff member for the given function.

Administrative and Technical Capability										
Jurisdiction	Planner(s) or Engineer(s) with knowledge of land development and management practices	Engineer(s) or professional(s) trained in construction practices related to buildings and/or infrastructure	Planner(s) or Engineer(s) with an understanding of natural and/or human caused hazards	Floodplain manager	Surveyors	Staff with education or expertise to assess the communities vulnerability to hazards	Personnel skilled in GIS and/or HAZUS	Scientists familiar with the hazards of the community	Emergency Manager	Grant writers
Washington County	✓	Contract only	✓	✓	✓	✓	✓	✓	✓	✓
Elkins, City of				✓		✓		✓		
Elm Springs, City of	✓	✓		✓		✓		✓		✓
Farmington, City of	✓	✓		✓				✓		✓
Fayetteville, City of	✓	✓	✓	✓		✓	✓		✓	✓
Goshen, City of				✓					✓	
Greenland, City of	✓	✓	✓	✓						
Johnson, City of	✓	✓	✓	✓					✓	
Lincoln, City of				✓						✓
Prairie Grove, City of	✓	✓	✓	✓		✓		✓		

Springdale, City of	✓	✓	✓	✓	✓	✓	✓	✓		
Tontitown, City of	✓	✓	✓	✓		✓	✓	✓	✓	
West Fork, City of	✓	✓		✓					✓	✓
Winslow, City of										
Elkins Schools	✓	✓							✓	✓
Farmington Schools	✓	✓	✓							✓
Fayetteville Schools	✓	✓	✓						✓	✓
Greenland Schools	✓	✓	✓							✓
Lincoln Schools	✓	✓	✓							✓
Prairie Grove Schools	✓	✓	✓	✓		✓	✓		✓	✓
Springdale Schools	✓	✓	✓						✓	✓
West Fork Schools	✓	✓	✓						✓	✓
University of Arkansas	✓	✓	✓	✓		✓	✓	✓	✓	✓

Staffing Resources
Having a planner or engineer trained in land development, construction practices, or one who has an understanding of natural or man-made hazards are great resources to a community. Having their level of knowledge and expertise will help in the process of assessing and mitigating risks while limiting risk to new development or redevelopment.

Floodplain Management
By employing floodplain management, the jurisdiction can protect its citizens against much of the devastating financial loss resulting from flood disasters. Careful local management of development in the floodplains results in construction practices that can reduce flood losses and the high costs associated with flood disasters to all levels of government.

Surveyors
Surveyors gather information that is needed by the city engineers or city projects that involve development or redevelopment. A surveyor records geographic conditions and man-made features as they currently exist. Other noted information might include: terrain, drainage, property boundaries and ownership, soil condition, and other physical features.

GIS/HAZUS
GIS (Geographical Information Systems) and HAZUS are powerful resources that the jurisdictions can be used to identify important facts about the community. GIS technology can be used to improve transparency about specific risks to the community, in community planning, and resource management. HAZUS is methodology for estimating potential losses from earthquakes, hurricane winds and floods. HAZUS uses GIS technology to estimate physical, economic, and social impacts of disasters.

Emergency Manager
An emergency manager performs administrative and technical work in the development, implementation, and coordination of the community's emergency management program. This

position also acts as the authority in disaster recovery efforts, oversees the disaster training, exercises and public awareness programs, and performs related duties as assigned.

Financial Capabilities

Financial Capability								
Jurisdiction	Capital Improvements Project Funding	Authority to levy taxes for specific purposes	Water, Sewer, Gas, or Electric Service Fees	Impact fees for new development	Incur debt through general obligation funds and/or special tax bonds	Community Development Block Grant	Federal funding programs	State funding programs
Washington County	✓	✓			✓		✓	✓
Elkins, City of	✓	✓	✓	✓	✓	✓		✓
Elm Springs, City of			✓					✓
Farmington, City of	✓	✓		✓	✓		✓	✓
Fayetteville, City of	✓	✓	✓	✓	✓	✓	✓	✓
Goshen, City of	✓	✓	✓	✓			✓	✓
Greenland, City of	✓	✓	✓	✓	✓	✓	✓	✓
Johnson, City of			✓				✓	✓
Lincoln, City of	✓	✓	✓		✓	✓	✓	✓
Prairie Grove, City of	✓	✓	✓	✓		✓		✓
Springdale, City of	✓				✓	✓		
Tontitown, City of	✓	✓					✓	✓
West Fork, City of	✓	✓		✓		✓	✓	✓
Winslow, City of	✓		✓					
Elkins Schools	✓	✓			✓			
Farmington Schools	✓	✓			✓		✓	
Fayetteville Schools	✓	✓			✓		✓	✓
Greenland Schools	✓	✓			✓			
Lincoln Schools	✓	✓			✓		✓	✓
Prairie Grove Schools	✓	✓			✓		✓	✓
Springdale Schools	✓	✓			✓		✓	✓
West Fork Schools	✓				✓		✓	✓
University of Arkansas	✓			✓	✓		✓	✓

Education & Outreach Capability

Education & Outreach Capability						
Jurisdiction	Local citizen groups/Non-profit organizations willing to assist with mitigation activities	Ongoing public education or information programs	Natural disaster or safety related school programs	StormReady Certification	Firewise Communities Certification	Public-Private partnership initiatives addressing disaster-related issues
Washington County	✓	✓	✓	✓		✓
Elkins, City of	✓	✓	✓	✓		✓
Elm Springs, City of	✓	✓	✓			
Farmington, City of	✓	✓	✓	✓		✓
Fayetteville, City of	✓	✓	✓	✓	✓	✓
Goshen, City of	✓	✓				✓
Greenland, City of	✓	✓	✓	✓		✓
Johnson, City of	✓					
Lincoln, City of	✓	✓	✓			
Prairie Grove, City of	✓	✓	✓			✓
Springdale, City of	✓	✓				
Tontitown, City of	✓	✓				✓
West Fork, City of						
Winslow, City of						
Elkins Schools	✓	✓	✓			✓
Farmington Schools	✓	✓	✓			
Fayetteville Schools	✓	✓	✓	✓		✓
Greenland Schools	✓	✓	✓			
Lincoln Schools			✓			
Prairie Grove Schools	✓	✓	✓			✓
Springdale Schools			✓			
West Fork Schools	✓	✓	✓	✓		
University of Arkansas	✓	✓	✓			✓

StormReady

StormReady is a national voluntary program, administered through the National Weather Service, which gives communities the skills and education needed to cope with and manage potential weather-related disasters, before, and during the event. The program encourages communities to take a new pro-active approach.

Firewise

Firewise communities are those that have taken appropriate measures to become more resistant to wildfire structural damage. Firewise techniques include minimizing the risk of home ignition by carefully landscaping around residential structures such as thinning trees and brush and choosing fire-resistant plants, selecting ignition-resistant building materials and positioning structures away from slopes.

Capability Assessment Conclusion

Mitigation requires capabilities necessary to reduce loss of life and property by lessening the impacts of disasters. Each jurisdiction has demonstrated a set of capabilities unique to their community. The capability assessment finds that Washington County and the participating jurisdictions collectively have a significant level of legal, technical, and fiscal tools and resources necessary to implement hazard mitigation strategies. All of the jurisdictions but Winslow have the legal capabilities or ordinances and codes in place that might help reduce loss due to a disaster. The jurisdictions including school districts have a range of staff trained or have knowledge about hazards and their impacts. While some jurisdictions lack an emergency manager in their community, there is the Washington County Emergency Management Department that can provide assistance. All participating jurisdictions have financial resources that can be used towards mitigation. Most of those resources are capital improvement funds or tax bonds. While the city of Johnson and city of Winslow do not have capital improvement funds, they take advantage of utility fees and state funding programs. All communities in Washington County have local citizen groups that are willing to assist in emergency management efforts. While most jurisdictions participate in the safety related school programs, very few jurisdictions are StormReady certified and only the city of Fayetteville is a FireWise community.

National Flood Insurance Program

National Flood Insurance: In Washington County, 14 jurisdictions participate in the National Flood Insurance Program (NFIP). Flood insurance is required as a condition of certain types of federal aid and most bank loans and mortgages for buildings located in the 100 year floodplain identified on the FEMA Flood Insurance Rate Maps. The table below shows each jurisdictions' date of entry into the NFIP, their current effective map, the number of policies, and the total amount of coverage.

CID	Jurisdiction	NFIP Entry Date	Current Effective Map	Number of Policies	Amount of Coverage
050212 #	Unincorporated Washington County	18-Sep-91	16-May-08	107	$21,905,900
050214 #	Elkins	18-Sep-91	16-May-08	17	$3,501,900
050213 #	Elm Springs	30-Apr-86	16-May-08	13	$1,681,100
050215 #	Farmington	24-Aug-82	16-May-08	50	$7,406,500
050216 #	Fayetteville	20-Jan-82	16-May-08	688	$135,774,400
050594 #	Goshen	18-Sep-91	16-May-08	13	$4,135,000
050217 #	Greenland	18-Sep-91	16-May-08	11	$1,260,700
050218 #	Johnson	16-Jul-80	16-May-08	20	$4,247,000
050338 #	Lincoln	18-Sep-91	16-May-08	1	$140,000
050587 #	Prairie Grove	18-Sep-91	16-May-08	3	$595,000
050219 #	Springdale	15-Jun-88	16-May-08	39	$26,338,700
050293 #	Tontitown	01-Feb-88	16-May-08	3	$627,000
050220 #	West Fork	02-Jul-80	16-May-08	17	$2,974,000
050300 #	Winslow	01-Jun-88	16-May-08	1	$36,300

Continued Participation in the NFIP

Each of the jurisdictions continue their participation in the NFIP by having their floodplain administrator identify and map any floodplains. The participating communities also engage in public education and outreach in public schools and EAST programs, while also sending letters and notices out to city officials, city water/utilities, local realtors, insurance agents, and mortgage lenders. The city of Fayetteville has adopted a Flood Damage Prevention Code which ensures that each building or grading permit that is submitted is checked to determine if the location is within a regulated special flood hazard area (SFHA). The location is marked for review by the floodplain administrator. The city of Fayetteville also posts resources on their city website regarding the NFIP, flood damage prevention code, frequently asked questions about the NFIP, flood safety information, and GIS maps indicating the known special flood hazard areas in the city. The cities of Lincoln and Springdale also continue their participation in

the NFIP with permit reviews, inspections, and posting NFIP information on their city websites. By continuing their involvement, participating communities will gain additional credit points under FEMA's Community Rating System (CRS) program, which provides discounts on National Flood Insurance Program (NFIP) flood insurance premiums for residents of communities that voluntarily participate in this program.

Mitigation Strategies

Mitigation Actions Considerations

The County Hazard Mitigation Planning Team identified a comprehensive range of possible mitigation actions intended to reduce the effects of the 11 hazard types posing a risk for the area.

The actions were selected based upon their potential effects on the overall risk to life and property (particularly new and existing buildings and infrastructure), ease of implementation, community and agency support, consistency with local jurisdictions' plans and capabilities, and availability of funding.

Mitigation Action Prioritization

All jurisdictions of Washington County were tasked with prioritizing their own mitigation strategies based on several criteria, such as overall benefit to the community, total cost and availability of funding, practicality, community support, and desire of community stakeholders.

Each jurisdiction was encouraged to take ownership of this process. The jurisdictional stakeholders met with members of the planning team and were instructed about the importance of prioritizing their mitigation strategies based on the factors in the aforementioned paragraph. The planning team recommended the jurisdictional stakeholders implement a numerical ranking system to prioritize their mitigation strategies. Under this system, a ranking of "1" was the most important mitigation strategy and then descended in importance thereafter.

Unincorporated Washington County Mitigation Actions									
Priority	Hazard	Project Title	Description	Who Benefits?	Responsible Agent/Dept.	Cost Estimate	Potential Funding	Time Frame	Status
1	Tornado	Code Red Education	Promote Code Red (county alert and warning system) to the public and educate through signs, media, and event booths.	Public and County	County Emergency Management	$2,500	General budget	6 mos. – 1 year	Will begin
1	Thunderstorms	Code Red Education	Promote Code Red (county alert and warning system) to the public and educate through signs, media, and event booths.	Public and County	County Emergency Management	$2,500	General budget	6 mos. – 1 year	Will begin
1	High Winds	Code Red Education	Promote Code Red (county alert and warning system) to the public and educate through signs, media, and event booths.	Public and County	County Emergency Management	$2,500	General budget	6 mos. – 1 year	Will begin

2	High Winds	Backup System Maintenance	Maintain the backup system for radio system and replace old parts	All county responders	County Emergency Management	$50,000	General budget/ grants	2 years	Will begin
3	Winter Weather	Winter Weather Awareness	Inform the public of about severe winter weather impacts with media and publications	Public	County Emergency Management	$500	General budget	Long-term	Will begin
4	Floods	Water Bridges	Raise low water bridges	Public	County Road Department	$2 million	Grants/ state & federal aid/ Budget	3-5 years	Will begin
5	Tornado	Safe Rooms	Install safe rooms within the buildings of the county offices	Employees of County	County Emergency Management	>$2.5 million	Grants/ Tax Dollars	1-5 years	Will begin
6	Thunderstorms	Backup Servers	Install backup servers in county buildings that are capable of storing large amounts of data and add additional generators for the facilities that lack them	County Government	County Information Technology	$100,000	Grants/ General Budget	3-5 years	Will begin
7	Extreme Temperatures	Heating and Cooling Centers	Assign heating and cooling centers and improve the facilities that will be used as these centers. Add generators to the centers that lack them.	Public	County Emergency Management/ Local Red Cross	$500,000	Grants/ General Budget	3-5 years	Will begin
8	Floods	Turn Around Don't Drown	Install signs on low lying roadways and hold public flood awareness courses	Public	County Road Department	$10,000	General Budget	1-2 years	Will begin
9	Extreme Temperatures	Awareness on Extreme Temps	Educate citizens regarding the dangers of extreme heat and cold and measures they can take to protect themselves	Public	County Emergency Management	$500	General Budget	1-2 years	Will begin
10	Dam Failure	Dam Failure Awareness	Educate citizens regarding the dangers of dam failure	Public	Dam Regulators	$500	General Budget	1 year	Will begin

11	Dam Failure	Dam Regulations	Write a county plan to ensure that dams are up to specifications	Public	Dam Regulators	$1,000	General Budget	Long-term	Will begin
12	Pandemic	Update Plan	Update the pandemic plan to cover all pandemics and not just flu	Public	County Emergency Management/ Department of Health	$500	General Budget	6 mos. – 1 year	Will begin
13	Pandemic	Pandemic Awareness Program	Educate citizens on pandemics and measures they can take	Public	County Emergency Management/ Department of Health	$500	General Budget	6 mos. – 1 year	Will begin
14	Wildfire	Fire Equipment	Purchase personal wildfire protection equipment for county fire departments	County	Fire Service	$250,000	Fire Department/ Grants	2-4 years	Will begin
15	Wildfire	Wildfire Awareness	Educate citizens on fire fuels they should control and encourage Firewise	Public	County Emergency Management/ Fire Services	$500	General Budget	Long-term	Will begin
16	Drought	New City Restriction	Restrict new cities from joining Beaver Lake water system and develop new methods to hold water in the county	Public/ County	Water Departments	$0	n/a	Long-term	Will begin
17	Drought	Drought Awareness	Educate the citizens on water-saving techniques	Public/ County	County Emergency Management	$500	General Budget	1 year	Will begin
18	Earthquake	Earthquake Awareness	Increase earthquake risk awareness by educating citizens about safety techniques	Public	County Emergency Management	$500 - $1,000	General Budget	1-2 years	Will begin
19	Earthquake	Sheltering	Build a sheltering facility for neighboring communities and citizens to stay after an earthquake	Public	Sheltering Facilities	$1 million	General Budget/ Grants/ Red Cross	2-3 years	Will begin
20	Winter Weather	Utility Line Burial	Protect power lines by burying overhead power lines	Public/ Utility Companies	Utility Companies	$5 million	Grants/ Utility Company Budget/ Federal Aid	4-5 years	Will begin

Jurisdictional Mitigation Strategies

City of Elkins Mitigation Actions									
Priority	Hazard	Project Title	Description	Who Benefits?	Responsible Agent/Dept.	Cost Estimate	Potential Funding	Time Frame	Status
1	Tornado	City Hall	Install and maintain a back-up generator at city hall to be utilized as an additional public shelter.	Public	City Mayor	$30,000	General budget	1-3 years	Will begin
2	Thunderstorm	Sirens	Install and maintain a back-up generator for the warning siren.	Public	Fire Department	$30,000	Grant/ general budget	3-5 years	Will begin
3	Earthquake	Generators	Install and maintain generators on all critical facilities	Public	City council	$1 Million	Grants/ general budget	3-5 years	Will begin
4	Extreme Temperatures	Heating/cooling center	Use back-up generators to make the critical facilities heating and cooling centers during power outages.	Public	City council	$10,000	Grants/ city budget	Long term	Will begin
5	Tornado	Community Center	Remodel community center to be used as a public shelter	Public	City	$100,000	Grants/ city budget	3-5 years	Will begin
6	Thunderstorm	Community Center	Add shower, kitchen, and dressing rooms to the remodeled community center	Public	City	$400,000	Grants/ city budget	3-5 years	Will begin
7	High Winds	Improve Buildings	Add reinforced building materials to old structures	Public	City	$100,000	City budget	3-5 years	Will begin
8	High Winds	Equipment	Purchase and maintain equipment to clear debris and trees from roadway.	Public	City	$100,000	City budget	3-5 years	Will begin
9	Winter Weather	Equipment	Purchase and maintain additional equipment capable of clearing snow from roadways.	Public	Street Department	$50,000	Street Department	3-5 years	Will begin
10	Earthquake	Shelters	Provide public shelters	Public	City	$100,000	Grans/ city budget	3-5 years	Will begin
11	Drought	Storage Tanks	Purchase and install new storage tanks for additional resources	Public	Elkins Water	$1,000	General budget	6 months	Will begin

12	Flood	Signs	Provide road signs to indicate flood prone areas.	Public	City	$15,000	Grants/ general budget	2-5 years	Will begin
13	Wildfire	Firefighter Wildland Gear	Provide Elkins FD with proper PPE to protect fire men during a wildfire incident	Fire Fighters	Fire Department	$6,000	Grants/ budget	3-5 years	Will begin
14	Drought	Water Project	Plans to communicate and educate the citizens about rationing and conserving water.	Public	City	$3,000	City budget	1-5 years	Will begin
15	Flood	Flood Education	Educate the public on the dangers of rapidly rising water in low lying areas and roadways.	Public	City	$1,000	City Budget	1 year	Will begin
16	Winter Weather	Winter Weather Education	Educate the public on winterizing their homes (wrapping exposed pipes, insulation, etc.) and use of alternative heat sources	Public	City council	$500	General budget	1-3 years	Will begin
17	Extreme Temperatures	Temperature Education	Educate the public on safety measures to follow with indoor space heaters and proper ventilation	Public	City	$500	General budget	1-3 years	Will begin
18	Wildfire	Wildfire Education	Educate the public on proper burning of trash and foliage. Also, on the meaning of red flag and burn bans	Public	City	$1,000	General budget	1-3 years	Will begin
19	Pandemic	Plan	Develop and adopt a city wide plan to deal with a pandemic outbreak.	Public	City	$3,000	General budget	1 year	Will begin
20	Pandemic	Education	Educate the community of the importance of remaining sanitary and how to prevent the spread of a	Public	City	$1,000	General budget	Long term	Will begin

			pandemic virus throughout the community.						
21	Dam Failure								
22	Dam Failure								

Jurisdictional Mitigation Strategies

Elkins School Districts Mitigation Actions									
Priority	Hazard	Project Title	Description	Who Benefits?	Responsible Agent/Dept.	Cost Estimate	Potential Funding	Time Frame	Status
1	Winter Weather	Generators	Purchase and install generators on all buildings to provide heat and electricity.	School District/ Community if needed for shelter	Maintenance	$50,000	General budget	2-5 years	Will begin
2	Tornado	Plan to get HS/MS students to shelter	Develop a plan of how to transport the high school and middle school kids to the storm shelter and practice that plan.	HS/MS faculty and staff	School District	$500	General budget	Long term	Following completion of storm shelter
3	Thunderstorms	Equipment Protection	Installing and maintaining battery backups on servers and network equipment, and surge protection on all critical equipment.	School District	Technology Department	$10,000	Technology Budget	1-4 years	Will begin
4	Earthquake	Plan for Refugees from other parts of the state	Write a district wide plan on how to accommodate an additional 50-200 students and provide	Public	School District	$1 million	School District/ State	1-3 years	Will begin

			them with food, clothing, shelter& education.						
5	High Winds	Replace Old Roofs	Improving roof coverings, by replacing the roofs of the older buildings.	School District	School District/ School Board	$3 million	Grants/ school district	2-3 years	Will begin
6	Extreme Temperatures	Frozen Pipes	Adopt a district energy policy to leave heat on, heat tape, and water dripping to prevent pipes from freezing during extreme cold temperatures.	School District	Maintenance	$500	School District	0-5 years	Will begin
7	Thunderstorms	Lightning Rods	Installing lightning protection devices and methods, such as lightning rods and grounding, on all school buildings.	All schools	Maintenance Department	$1 million	General budget	1-2 years	Will begin
8	High Winds	Football field bleachers/ signs	Inspecting and retrofitting existing bleachers and signs. Also, possibly building a new stadium more up to standards.	School District/ Community	Maintenance	$2 million	School District and community support	1-3 years	Will begin
9	Winter Weather	Chains for bus tires	Purchase chains for a couple of buses to use to transport students home if necessary.	School District	Transportation Department	$10,000	School District	1-2 years	Will begin
10	Flood	Bridge behind middle school	Construct a bridge behind the middle school in a low lying area to prevent the kids from playing/walking in the water.	School District	Maintenance	$10,000	School District	1-5 years	Will begin
11	Flood	Fence around bridge	Construct a fence around the bridge to prevent student access to the water.	School District	Maintenance	$12,000	School District	1-3 years	Will begin
12	Extreme Temperatures	Employee training	Train employees on what to watch for during extreme temperatures to prevent any damage or injuries.	School District	Maintenance	$500	General budget	Long term	Will begin
13	Earthquake	Earthquake education	Educate students & teachers on	School District	School District	$500	General budget	Long term	Will begin

			earthquake awareness.						
14	Drought	Watering Rationing	Using paper products to keep the amount of water used in dish washing at a minimum.	School District	Food Service	$5,000	School District	Long term	Will begin
15	Drought	Drinking Water	Developing agreements with local distributors for secondary water sources (bottled water) that may be used during drought conditions	School District	Food Service	$5,000	School District	Long term	Will begin
16	Wildfire	Extra Trees Behind High School	Preventing or alleviating wildfires by proper maintenance of trees behind high school.	High School	Maintenance	$5,000	General budget	0-5 years	Will begin
17	Wildfire	Sprinkler System/ Hydrant Access	Installing fire mitigation systems such as interior and exterior sprinkler systems, and properly functioning fire hydrants near wooded areas.	School District	Maintenance	$10,000	School District	0-5 years	Will begin
18	Tornado	Tornado Education	Teaching the children about tornado safety and conducting tornado drills to get everyone to the storm shelter.	School District	School District	$500	General budget	Long term	Will begin
19	Pandemic	Plan	Develop and improve upon a plan on how the school will handle and hopefully prevent a pandemic of any type from occurring within the schools	School District	School Nurse/ Administration	$1,000	General budget	1 year	Will begin
20	Pandemic	Education	Educate the students and staff about what a pandemic is, how to prevent the spread of a disease, and how to protect themselves during sick times.	School District	School Nurse	$500	General budget	Long term	Will begin
21	Dam Failure								
22	Dam Failure								

Jurisdictional Mitigation Strategies

Elm Springs Mitigation Actions									
Priority	Hazard	Project Title	Description	Who Benefits?	Responsible Agent/Dept.	Cost Estimate	Potential Funding	Time Frame	Status
1	Tornado	Warning System	Construct a community warning system to inform the public about tornados.	Public	Mayor's Office	$50,000	Grants	4-5 years	Will begin
2	Wildfire	Fire Equipment	Add Additional Fire Truck in order to prevent wildfires from spreading beyond the control of the Cave Springs fire department.	Public	Cave Springs Fire Department	$50,000	Grants	2 years	Will begin
3	Thunderstorm	Back-up Generator	Obtain a back-up generator for City Shop & Fire Station to keep them operational if the power is cut off during a storm.	Public	Mayor's Office	$50,000	Grants	1 year	Will begin
4	Extreme Temperature	Generator for City Hall	City Hall does not have a generator to power the building in the event it is used as a shelter during extreme temperature events.	Public	Mayor's Office	$25,000	Grants	1 year	Will begin
5	Winter Weather	Insulate City Buildings	By insulating City Hall, Police Building, and the Court Building city employees and equipment will be protected from very cold temperatures that could damage sensitive equipment or cause illness.	City Buildings Staff, Community	Mayor's Office	$50,000	Grants	5 years	Will begin
6	Extreme Temperatures	Upgrade City Facilities	Upgrade city facilities by adding insulation to the buildings, adding	Public	Mayor's Office	$60,000	Grants	5 years	Will begin

			auxiliary heaters for the warming station shelter, and adding electrical outlets for citizens to use during shelter-in-place events at city facilities.						
7	High Wind	Equipment for Mitigation Activities	Provide the Street Department with power equipment to proactively remove dead tree & limbs around the city to prevent damage to property or people during high winds.	Public	Street Department	$10,000	City	1 year	Will begin
8	Winter Weather	Preventing Ice Storm Damage	Proactively remove ice and snow from roadways and parking lots to prevent accidents and injury to people or destruction of property.	Public	Street Department	$10,000	Grants	5 years	Will begin
9	Drought	Water Conservation	Develop and adopt ordinances for water conservation during drought.	Public	Mayor's Office	$100	City	1 year	Will begin
10	Pandemic	Isolate First Responders	Isolate first responders after responding to a pandemic to eliminate the spread of the disease.	First Responders	Mayor's Office	$25,000	Grants	2-5 years	Will begin
11	Dam Failure	Coordination/MOU with Arkansas Game and Fish	Coordinate with Arkansas Game & Fish to prevent possible failure because the dam is not city-owned.	City	Mayor's Office	$100	City	2-3 years	Will begin
12	Wildfire	Adopt Wildfire Code	Adopt and implement ordinances to establish clear guidelines	Public	Mayor's Office	$250	City	2-3 years	Will begin

			about burning and fire usage within the community.						
13	Pandemic	Pandemic Plan	Create a pandemic plan in order to establish orders of succession, delegations of authority, and community guidance about how to handle a pandemic.	Public	Mayor's Office	$1,000	Grants	2-3 years	Will begin
14	Flood	Coordination/MOU with Arkansas Game & Fish	Coordinate with Arkansas Game & Fish to control flooding on Lower Brush creek.	Public	Mayor's Office	$100	City	2-3 years	Will begin
15	Flood	Education	Use FEMA resources to distribute essential flood information to the community.	Public	Police, Planning, Building Inspector, MS-4 Coordinator	$1,000	City	2-3 years	Will begin
16	Earthquake	Education	Educate the public about the need for 72-hour kits to be self-sustainable in the event of a disaster in order to prevent casualties in the event of an earthquake.	Public	Mayor's Office	$1,000	Grants	1 year	Will begin
17	Drought	Education	Coordinate with county extension service to educate farmers on overgrazing and pasture management	Public	Mayor's Office	$250	Grants	1 year	Will begin
18	High Wind	Enforcement of Building Codes	Obtain a grant needed for public education regarding various codes	Public	Mayor's Office	$1,000	Grants	1 year	Will begin
19	Thunderstorm	Protecting City-Owned Buildings	Undertake a project to retrofit or replace old roofs to prevent roof damage on city-owned buildings.	Public	Mayor's Office	$50,000	Grants	3-5 years	Will begin

20	Earthquake	Education	Educate the public to buy earthquake insurance. Send out newsletters, update Facebook and provide information on the webpage.	Public	Mayor's Office	$1,000	Grants	1 year	Will begin
21	Tornado	Education	Educate the community about precautions to implement if there is the possibility of a tornado.	Public	Mayor's Office	$1,000	Grants	1 year	Will Begin
22	Dam Failure	Education	Partner with Arkansas Game & Fish to work toward the installment of a dam failure warning system.	Public	Mayor's Office	$5,000	Grants	3-5 years	Will Begin

Jurisdictional Mitigation Strategies

Farmington Mitigation Actions									
Priority	Hazard	Project Title	Description	Who Benefits?	Responsible Agent/Dept.	Cost Estimate	Potential Funding	Time Frame	Status
1	Tornado	Safe Room	Construct safe rooms for community use if a tornado threatens the lives and property of citizens.	Citizens	City Council	$600,000	General Fund	3-5 years	Will begin
2	Thunderstorm	Safe Room	Construct safe rooms for community use if thunderstorms, lightning or hail threatens the lives and property of citizens.	Citizens	City Council	$600,000	General Fund	3-5 years	Will begin
3	High Wind	Safe Room	Construct safe rooms for community use if dangerous high winds threaten the lives and property of citizens.	Citizens	City Council	$600,000	General Fund	3-5 years	Will begin
4	Extreme Temperatures	Community Shelter	Construct a handicap	Citizens	City Council	$2 million	General Fund	3-5 years	Will begin

			accessible, animal friendly, short-term shelter for citizens to use in the event they are displaced from their residences and require a safe, temperature-controlled place to stay.						
5	Tornado	Community Shelter	Construct a handicap accessible, animal friendly, short-term shelter for citizens to use in the event they are displaced from their residences and require a safe, temperature-controlled place to stay.	Citizens	City Council	$2 million	General Fund	3-5 years	Will begin
6	Extreme Temperatures	Shelter Generators	Obtain generator back-up power in order to run electricity for the shelter to power heat/air systems, lights, and cooking systems.	Citizens	City Council	$10,000	General Fund	3-5 years	Will begin
7	Earthquake	Retrofit Bridges	Retrofit problem bridges to be earthquake resistant in order to prevent damage or destruction.	Citizens	City Council	$20 million	General Fund	3-5 years	Will begin
8	Flood	Retrofit Bridges and Drains	Retrofit problem bridges to be flood-resistant in order to prevent damage or destruction, and improve drainage to more easily direct the flow of water away from roads, residences and businesses.	Citizens	City Council	$20 million	General Fund	3-5 years	Will begin
9	High Winds	Prevention Equipment	Obtain power equipment to use to trim back dead or	Citizens	City Council	$100,000	General Fund	3-5 years	Will begin

			dying tree limbs and clear lift able debris away from roads, businesses and city property.						
10	Winter Weather	Safe Roadways	Obtain a truck with a plow/spreader to remove snow and ice from roadways to prevent accidents in Farmington.	Citizens	City Council	$50,000	General Fund	3-5 years	Will begin
11	Winter Weather	Snow/Ice Preparedness	Obtain additional equipment such as road chemicals and removal tools in order to clear roadways and parking lots so accidents will not occur.	Citizens	City Council	$10,000	General Fund	3-5 years	Will begin
12	Wildfire	Barricades	Obtain 5 locking barricades to keep anyone from crossing the roads in 4 areas.	Citizens	City Council	$40,000	General fund	2-5 years	Will begin
13	Flood	Turn Around, Don't Drown	Educate the public about the Turn Around, Don't Drown campaign by obtaining 20 reflective signs to place around the city.	Citizens	City Council	$4,000	General Fund	1-2 years	Will begin
14	Thunderstorm	Solar-Powered Mobile Signs	Obtain solar-powered mobile signs to move around the city to inform people about potential dangers from thunderstorms, lightning and hail and to direct them to shelter in place or go to community shelters.	Citizens	City Council	$50,000	General Fund	1-2 years	Will begin
15	Wildfire	Full-time City Employee	Create a position for a full-time city employee to help the city plan to prevent wildfires and	Citizens	City Council	$60,000 per year	General Fund	2-3 years	Will begin

			implement strategies to reduce wildfire risk.						
16	Drought	Full-time City Employee	Create a position for a full-time city employee to help the city plan to prevent drought and implement strategies to reduce drought risk.	Citizens	City Council	$60,000 per year	General Fund	2-3 years	Will begin
17	Drought	Drought Education	Education the public about water conservation efforts to prevent drought.	Citizens	City Council	$5,000	General Fund	1-2 years	Will begin
18	Earthquake	Community Preparedness Education	Create kits to warn people of the potential of earthquakes and teach them how to protect themselves if an earthquake occurred.	Citizens	City Council	$2,000	General Fund	1-2 years	Will begin
19	Pandemic	Pandemic Plan	Create a pandemic plan	Citizens	City Council	$2,000	General Fund	2-3 years	Will begin

			to establish orders of succession, a delegation of authority, and a guide to help the city in the event of a pandemic.						
20	Pandemic	Pandemic Education	Educate the public about the dangers of a pandemic and how to promote habits of cleanliness.	Citizens	City Council	$2,000	General Fund	2-3 years	Will begin
21	Dam Failure								Will begin
22	Dam Failure								Will begin

Jurisdictional Mitigation Strategies

Farmington School District Mitigation Actions									
Priority	Hazard	Project Title	Description	Who Benefits?	Responsible Agent/Dept.	Cost Estimate	Potential Funding	Time Frame	Status
1	Tornado	Safe Rooms	Install safe rooms at all school locations	School District	School Board	$2 Million	Building Fund	3-5 years	Will begin
2	Tornado	Education	Educate students and staff about tornado safety and how to properly get to the safe room by conducting drills	Students and Faculty	School Board	$1,000	General Fund	Long term	Will begin
3	Thunderstorm	Window and Roof Reinforcement	Install and/or improve roofing and windows to prevent hail damage	School District	Maintenance	$500,000	General Fund	3-5 years	Will begin
4	Thunderstorm	Help a Friend	Create and install signs to help visitors and non-English speaking populations to know where the safe areas are.	School District	Maintenance	$5,000	General Fund	1-2 years	Will begin
5	Winter Weather	Power Outage	Purchase and install generators protect food and other commodities in the freezers.	Students and Staff	Maintenance	$10,000	Operating Fund	1-2 years	Will begin
6	Winter Weather	Power Buses	Install power capabilities to have power in the bus parking area to allow diesel buses to be plugged in.	Students and Staff	Transportation	$110,000	Operating Fund	2-4 years	Will begin
7	Flood	Floor Level	Construct and install a structure to raise the level of the floor to above ground level.	School District	Maintenance	$50,000	Building Fund	4-5 years	Will begin
8	Flood	Slow Flood	Plant trees to decrease and of slow down run-off.	School District	Maintenance	$5,000	Operating Fund	1-2 years	Will begin
9	Pandemic	Washing Hands	Decrease the spread of germs by promoting hand washing and disease prevention.	Students and Staff	Principal, Teachers, and Nurse	$5,000	Operating Fund	Long term	Will begin
10	Pandemic	COOP Plan	Update Coop Plan to include pandemic	School District	School Board	$5,000	Operating Fund	2-3 years	Will begin
11	High Winds	Greenhouse	Reinforce the doors and windows within the	Students and Staff	Agriculture Department	$2,500	Operating Fund	1-2 years	Will begin

			greenhouse to withstand strong winds.						
12	High Winds	Education	Plan, practice, and educate the students and staff to ensure that they can remain safe if they need to refuge in a certain area of the school	Students and Staff	Principals	$2,000	Operating Fund	Long term	Will begin
13	Extreme Temperatures	Power Outages	Purchase and install backup generators to be used to provide heating and air to the school during extreme temperatures	School District	Maintenance	$10,000	Operating Fund	2-3 years	Will begin
14	Extreme Temperatures	Education	Educate the students on the importance of protecting their bodies when temperatures become extreme.	Students	School Board	$1,000	Operating Fund	Long term	Will begin
15	Drought	Plan	Develop a drought emergency plan	School District	East Lab Facilitator	$2,000	Operating Fund	1-2 years	Will begin
16	Drought	Education	Educate students on the importance of conserving water. Also, educate the agriculture department on proper conservation of water during shortages.	School District	School Board	$5,000	Operating Fund	Long term	Will begin
17	Wildfire	Fire Stop	Identify areas of risk and existence of wildfire hazards. Then create fire breaks to prevent a fire from reaching a school	School District	School Board	$2,000	Operating Fund	1-3 years	Will begin
18	Wildfire	Education	Provide educational information to students and staff about all the possibilities of wildfire and how they can help prevent them.	Students and Staff	Principals	$2,000	Operating Fund	Long term	Will begin
19	Earthquake	Windows	Replace old windows with	School District	Maintenance	$1 Million	Building Fund	4-5 years	Will begin

			new windows that are used to help prevent the shattering of glass.						
20	Earthquake	Education	Provide students and staff with information and demonstrations on how to be prepared and what to do in case of an earthquake.	School District	Principals and Teachers	$1,000	Operating Fund	Long Term	Will begin
21	Dam Failure								
22	Dam Failure								

Jurisdictional Mitigation Strategies

City of Fayetteville Mitigation Actions									
Priority	Hazard	Project Title	Description	Who Benefits?	Responsible Agent/Dept.	Cost Estimate	Potential Funding	Time Frame	Status
1	Tornado	Safe Room Awareness	Promote the construction and use of safe rooms in citizen homes	Public	Fire Department/ City Development Services	$0	n/a	Long-term	Will begin
2	Tornado	Wind-resistant techniques	Require wind engineering measures and construction techniques such as structural bracing, anchor bolts, and window shutters on new buildings	Public	City Development Services	$0	n/a	Long-term	Will begin
3	Floods	Local Planning	Incorporate flood mitigation into local planning	Public	Floodplain Engineer	$0	n/a	1-2 years	Will begin
4	Floods	Drainage System maintenance	Conduct regular maintenance for drainage systems and flood control structures	Public	Transportation Department	$1 million	NCIP/ general funds	Long-term	Will begin
5	High Winds	Standards	Require site and building design	Public	City Development Services	$70,000	General funds	Long-term	Will begin

			standards to minimize wind damage						
6	High Winds	Power Line/ Maintenance	Protect power lines and infrastructure by tree pruning and burying power lines	Public	City Transportation/ AEP Utilities	$75,000	General funds/ private utilities	3-5 years	Will begin
7	Extreme Temperatures	Awareness	Increase citizen awareness of extreme temperature risk and safety	Public	City Communications Department	$0	n/a	6 mos. – 1 year	Will begin
8	Extreme Temperatures	Freezing Pipe Awareness	Educate homeowners on freezing pipes and how they avoiding bursting pipes	Public	City Communications Department	$0	n/a	6 mos. – 1 year	Will begin
9	Drought	Drought Conditions	Monitor drought conditions by identifying local drought indicators, such as precipitation, temperature, surface water levels, and soil moisture	City	Fire Service/ Forestry Commission	$0	n/a	Long-term	Will begin
10	Drought	Water Conservation	Require water conservation during drought conditions	Public	Water and Sewer	$0	n/a	Long-term	Will begin
11	Severe Winter Weather	Power Lines	Protect power lines by establishing standards for all utilities regarding tree pruning around lines and burying overhead power lines.	Public	Electric Utilities (AEP)	$300 million	Grants/ Private Utilities	10 years+	Will begin
12	Severe Winter Weather	Roadways	Reduce impacts to roadways by planning for and maintaining adequate road and debris clearing capabilities.	Public	City Transportation Department	$3 million	General funds/ Capitol Improvement Funds	Long-term	Will begin
13	Wildfire	Fire-Resistant Techniques	Require fire-resistant construction techniques	Public	Building Services	$0	n/a	Long-term	Will begin
14	Wildfire	Fire-wise	Participate in Fire-wise program	Public	Fire Department/ Urban Forestry Board	$30,000	General funds/ Grants	Long-term	Will begin
15	Pandemic	Monitoring	Monitor emergency rooms/ medical transportations/ types of calls	Public	City Board of Health	$0	n/a	Long-term	Will begin

			for potential threats						
16	Pandemic	Local Planning	Plan protective measures and incorporate pandemic plans into local planning	Public	Fire Department/ EMS/ Emergency Management/ Hospitals	$100,000	General Funds	0-3 mos.	Will begin
17	Dam Failure	Monitor Conditions	Monitor dam and maintain conditions	Public	Dam Engineer	$100,000	Grants	Long-term	Will begin
18	Dam Failure	Monitor levels	Monitor Lake Fayetteville water levels	Public	Dam Engineer	$0	n/a	Long-term	Will begin
19	Earthquake	Educational Awareness	Provide information on extreme temperatures in athletic programs	Students, Faculty, Staff, Visitors	Athletics	$2,500	Budget	1-3 months	Will begin

Fayetteville Schools									
Priority	Hazard	Project Title	Description	Who Benefits?	Responsible Agent/Dept.	Cost Estimate	Potential Funding	Time Frame	Status
1	Pandemic	Pandemic Education	Educate staff's students on all pandemic cleaning, hand washing; send home flyers.	Students/staffs	School, Nurse, School level	5,000.00	Grants/school budget	5 years	Will begin
2	Pandemic	Prevention	School Nurse keep records on student's shots, health to be sent home for review with family.	Staff and students	School nurse/School level	5,000.00	Grants/School Budget	5 years	Will begin
3	Tornado	Safe Room Construction	Requiring of safe room in schools support building.	Staff's students	School board/dr. Hewitt	500,000.00	Grants/school budget	5 years	Will begin
4	Thunderstorms/Hail	Generator in facility	Install generator in schools	Staff and students	Maintenance department	250,000	Grant/School budget	5 years	Will begin
5	Winter Weather	Generator Placement	Install generator in our school for power outage to	Students and staff	Maintenance department	250,000	Grant, maintenance budget	5 years	Will begin

			help keep our cooler up and running.						
6	Extreme Temperature	Generator Replacement	Install generator in all schools in case of power outage during extreme temperatures to keep all A/C or heat up and working	Students and staff	Maintenance department	250,000	Grants/School budget	5 years	Will begin
7	Winter Weather	Equipment upgrade	Rent or buy snow plow or blades for our mowers	Student and staff	Maintenance department	10,000.00	Maintenance Budget	5 years	Will begin
8	Thunderstorm/Hail	Hail Protect	Reinforce windows, hail guard for HUAC coils, improving roof sheeting to prevail hail.	Staff and students	Maintenance department	3 million	Grants, school budget	5 years	Will begin
9	High winds	Windows Improvement	Hire engineers to design plans	Staff and students	Maintenance department	1 million	Grants, school budget	5 years	Will Begin
10	Wildfire	Debris clean up	Keep area around school clean of debris, cut fire breaks, and maintain safe access for fire apparatus.	Staff and students	Maintenance department	25,000	Grants, school budget	5 years	Will begin
11	Tornado	Tornado Awareness	Educating student with flyers and guest speakers	Staff and students	Dept. heads.	10,000		5 years	Will begin
12	Wildfire	Increase wildfire awareness	Educate students on wildfire by sending home flyers or a fire wise workshop	Staff and students	Principles, school level	5,000	Grants/School budget	5 years	Will begin
13	High Winds	Window Safety	Educate teachers and students on what to do for window breakage due to storms	Staff and students	Principals department head	5,000	School budget, grant	5 years	Will Begin
14	Flood	Drainage	Design Better drainage	Staff	Maintenance department	100,000	School budget	5 years	Will Begin
15	Flood	Educate Students	Educate students on keeping trash and debris out of storm drains. Prove	Staff and students	Principals and department heads	5,000	Grants, school budget	5 years	Will begin

			awareness for flood safety.						
16	Earthquake	Earthquake education	Educate students by flyers and guest speakers	Staff and students	Principals, school level	5,000	Grants, school budget	5 years	Will Begin
17	Earthquake	Building readiness	Work on designs for building to reinforce roof, windows, and structures	Staff and students	Maintenance department	500,000	Grand/School budget	5 years	Will begin
18	Drought	Plan for Drought	Install irrigation system or sprinkler for school lawns	Staff and students	Maintenance department	1 million	Grants/school budgets	5 years	Will begin
19	Drought	Plan Drought Emergency plan	Develop drought emergency plan	Staff and students	Maintenance department	5,0000	Grants, school budgets	5 years	Will Begin
20	Extreme Temperature	Temperature Education	Educate students on frost bit and heat stroke in cold and hot weather	Staff and students	Principal, school level	5,000	Grants, school budget	5 years	Will begin

Jurisdictional Mitigation Strategies

Goshen Mitigation Actions									
Priority	Hazard	Project Title	Description	Who Benefits?	Responsible Agent/Dept.	Cost Estimate	Potential Funding	Time Frame	Status
1	Tornado	Safe Room Acquisition	Construct safe room for citizens to use as a place to shelter in the event of an imminent tornado.	Citizens	City Council	$500,000	Grants	5 years	Will begin
2	Tornado	Education for Early Warning System	Educate and advertise for Code Red.	Citizens	City	$1,200 per year	General fund	Upon plan implementation, and ongoing thereafter	Will begin
3	Flood	Flood Plain Enforcement	Better enforcement on flood plain administration.	City, Citizens	City	N/A	N/A	Immediate	Will begin
4	Flood	Turn Around, Don't Drown	Educate the public on safety issues arising from flash floods.	Citizens	City	$1,000	Grants	Upon plan implementation, and ongoing thereafter	Will begin
5	Thunderstorm	Install Lightning Rods	Install lightning rods on city buildings to protect computers and radio equipment from electrical destruction	City	City	$5,000	General Funds/Grants	5 years	Will begin

6	Thunderstorm	Communication	Use Code Red for as a thunderstorm early warning system for citizens.	Citizens	City	$900 per year	General Fund	1-3 years, then ongoing thereafter	Will begin
7	Winter Weather	Improve Streets	Obtain spreader truck and blade to prevent the accumulation of ice/snow on roadways within the city.	Citizens	City	$60,000	Grants/Tax	5 years, then ongoing thereafter	Will begin
8	Winter Weather	Material Storage & Handling	Build shed for storing salt and ice/snow chemicals, and obtaining loader to load truck.	Citizens	City	$70,000	Grants	5 years	Will begin
9	Extreme Temperatures	Shelters	Renovate structures to accommodate the public during extreme temperature events.	Citizens	City	$30,000	Grants	5 years	Will begin
10	Extreme Temperatures	Education	Educate the public on actions individuals can take to prepare for extreme heat and cold weather.	Citizens	City	$1,000	Grants	Upon plan implementation, and ongoing thereafter	Will begin
11	Drought	No Waste	Educate the public on water conservation during times of drought.	Citizens	City	$1,000	Grants	Upon plan implementation, and ongoing thereafter	Will begin
12	Drought	Water Storage	Obtain storage tanks for shuttling water to provide to citizens.	Citizens	City	$1 million	Grants	5 years	Will begin
13	Wildfire	Fire Prevention	Enforcement of ordinances regulating vegetation growth.	Citizens	City	N/A	N/A	Immediate, and ongoing thereafter	Will begin
14	Wildfire	Fire Education	Firewise community implementation.	Citizens	City	$1,500 per year	Grants	Upon plan implementation, and ongoing thereafter	Will begin
15	Pandemic	Pandemic Plan	Set up pandemic plan to guide operations during a pandemic event.	Citizens	City	$500	Grants	5 years	Will begin
16	Pandemic	Education	Educate the public on ways to prevent disease transmission and actions to take if a pandemic is afflicting the area.	Citizens	City	$1,500	Grants	Upon plan implementation, and ongoing thereafter	Will begin
17	High Winds	Back-up Power	Obtain generators for	City	City	$10,000	Grants	5 years	Will begin

			critical city buildings						
18	High Winds	Underground Power Lines	Create ordinance to require underground power lines.	Citizens & City	City	N/A	Ordinance	Upon plan implementation, and ongoing thereafter	Will begin
19	Earthquake	Shelters	Build shelter to meet needs of displaced citizens	Everyone	City	$500,000	Grants	5 years	Will begin
20	Earthquake	City Infrastructure	Acquire generators for power loss resulting from an earthquake	City	City	$20,000	Grants	5 years	Will begin

Jurisdictional Mitigation Strategies

Greenland Mitigation Actions									
Priority	Hazard	Project Title	Description	Who Benefits?	Responsible Agent/Dept.	Cost Estimate	Potential Funding	Time Frame	Status
1	Flood	Highway 71 Flood Prevention	Buy right-of-way to private land where problematic channel floods Highway 71. Clear the channel that floods so it will not flood as frequently or severely.	Community, but all commuters on Highway 71 through Greenland.	City	$200,000	Grants	5 years	Will begin
2	Flood	City Creek Flood Prevention	Improve drainage on creek and surrounding tributaries so City Creek stops overflowing onto sidewalks. Consult engineer to make professional assessment and suggest improvements.	Community	City	$200,000	Grants	5 years	Will begin
3	Tornado	Early Warning System	Construct a Tornado Early	Community	Police	$150,000	Grants	5 years	Will begin

			Warning Siren system that will allow Greenland to alert the public about grounded tornadoes or the imminent threat of tornadoes.						
4	Thunderstorm	Rewire City Hall	City Hall and Police HQ need to be rewired because the wiring is 50 years old and susceptible to lightning that could destroy computers, even despite surge protectors that are in place.	City of Greenland	City	$10,000	Grants	5 years	Will begin
5	High Wind	Power Equipment & Tool Acquisition	Acquire chainsaws and other power tools for the proactive removal of dead or dying trees that could destroy property or endanger lives in the event of high winds	Community	City	$5,000	Grants	5 years	Will begin
6	Tornado	Community Safe Room for Western Greenland	Construct a safe room for the west side of town where there are no shelters or safe rooms for any type of disaster.	Community, but particularly the western side of Greenland.	City	$1 million	Grants	5 years	Will begin
7	Thunderstorm	Disaster Education	Educate citizens how to reduce danger from thunderstorms, lightning and hail by staying indoors, parking their vehicles in garages or carports, trimming tree limbs away from buildings, etc.	Community	City	$5,000-10,000	Grants	5 years	Will begin
8	High Wind	Disaster Education	Educate citizens to remove their dangerous or dead trees and limbs from their properties,	Community	City	$5,000-10,000	Grants	5 years	Will begin

			residencies and businesses. Educate people not to get near downed power lines.						
9	Winter Weather	Snow &Ice Pre-Treat	Acquire snowplow and spreader to prevent citizens from wrecking during a snow or ice event. This includes a vehicle to push the plow.	Community	City	$35,000	Grants	5 years	Will begin
10	Winter Weather	Power Outage Disaster Education	Educating the public about trimming trees back and keeping a 72 hour kit to be self-sustainable in the event of a power outage due to ice/snow. Also, inform people about the community warming	Community	City	$5,000-10,000	Grants	5 years	Will begin

			shelters in eastern Greenland.						
11	Wildfire	Proactive Flammable Debris Removal	Proactively remove debris and flammable material from abandoned lots and fields.	Community	City	$500- Pass an ordinance to require citizens to do this on their own property	Grants	1 year	Will begin
12	Wildfire	Protective Equipment & MOU	Purchase personal protection equipment to protect firefighters responding to dangerous wildland fires. Establish a joint MOU with West Fork firefighters, as Greenland does not have a dedicated fire department.	Firefighters, Community	City	$30,000	Grants	5 years	Will begin
13	Extreme Temperature	Disaster Education	Educate people to the effects of extreme temperatures to property	Community	City	$5,000-10,000	Grants	5 years	Will begin

			owners, such as to better insulate their properties, do not light fires indoors, etc.						
14	Extreme Temperature	Community Shelter	Construct a cooled and heated shelter in the West side of Greenland to protect the citizens from extreme temperatures if they are transient or without a place to stay.	Community	City	$1 million	Grants	5 years	Will begin
15	Drought	Memorandums of Understanding	Regional agreements to supply water within Washington County so that water will always be available even if a drought occurs.	Community	City	$100,000	Grants	3 years	Will begin
16	Drought	Disaster Education	Educate the public to be well-supplied with 72 hour disaster kits and to have a stockpile of bottled water.	City Government	City	$5,000-10,000	Grants	5 years	Will begin
17	Earthquake	Displaced Persons Shelter	Keep shelters stocked and available for an influx of people from the east side of Arkansas in the event of an earthquake.	Community	City	$1 Million	Grants	5 years	Will begin
18	Earthquake	Generator	The city will obtain generators to maintain critical infrastructure systems in the event an earthquake sends them offline.	City Government	City	$500,000	Grants	5 years	Will begin
19	Pandemic	Pandemic Education	Educate the public about ways to prevent pandemics.	Community	City	$5,000-10,000	Grants	5 years	Will begin
20	Pandemic	Pandemic Plan	Create a pandemic plan for Greenland and establish orders of succession and delegations of authority.	Community	City	$5,000	Grants	5 years	Will begin

Greenland School District's Mitigation Actions									
Priority	Hazard	Project Title	Description	Who Benefits?	Responsible Agent/Dept.	Cost Estimate	Potential Funding	Time Frame	Status
1	Flood	Flood Control	Construct storm water retainage structures and levees. Install storm drain system.	School District	School Board	$500,000	Grants	4-5 years	Will begin
2	Flood	Storm Water Removal	Utilize water pumps to quickly remove flood water prior to excessive mold and water damage.	School District	Greenland Schools	$50,000	Grants	3-5 years	Will begin
3	Tornado	Weather Radios	Purchase and distribute weather radios to main buildings and offices.	School District	School Board	$60,000	Grants	1-3 years	Will begin
4	Tornado	Safe room Maintenance	Make needed repairs and updates to safe rooms	School District	Greenland Schools	$800,000	Grants	2-5 years	Will begin
5	Thunderstorms	Backup generators	Install generators for each of the school buildings.	School District	Greenland Schools	$200,000	Grants	3-5 years	Will begin
6	Thunderstorms	Lightning Protection	Install lightning rods and grounding devices to protect buildings and equipment.	School District	Greenland Schools	$300,000	Grants	2-4 years	Will begin
7	High Winds	Roof and Window	Add or replace roofs and windows to be better protected from damage.	School District	Greenland Schools	$1 Million	Grants	4-5 years	Will begin
8	High Winds	Assess Vulnerability	Determine the needs of the district to repair or replace lose objects that could potentially be air borne debris.	School District	Greenland School	$200,000	Grants	2-3 years	Will begin
9	Winter Weather	Transportation	Come up with plans and equipment for buses to be able to transport students safely in the event of snow and ice.	School District	Transportation	$5,000	Grants/ Local revenue	1-5 years	Will begin
10	Winter Weather	Food and Shelter	Purchase and store food rations, cots,	School District	Greenland Schools	$100,000	Grants/ General Fund	1-5 years	Will begin

			and blankets to provide food and shelter to students in the event of a sudden winter weather event that leaves students stranded.						
11	Wildfire	Evacuation	Provide transportation for an evacuation route, and locations for temporary school and shelter.	School District	Greenland Schools	$2,000	Grants/ General budget	1-2 years	Will begin
12	Wildfire	Fire Breaks	Construct and install and barrier (fire break) between the wooded area and the buildings.	School District	Greenland Schools	$5,000	Grants	1-4 years	Will begin
13	Extreme Temperatures	Hydration	Provide adequate amounts of drinking water to students who are practicing	Students/ Coaches	Greenland Schools	$5,000	Grants	Long term	Will begin
			outside in extreme heat						
14	Extreme Temperatures	Sun Protection	Provide shade in outdoor areas where activities take place by planting trees or putting in other objects for shelter.	Students/ Coaches	Greenland Schools	$5,000	Grants/ General budget	1-3 years	Will begin
15	Drought	Education	Educate students and staff about the importance of conserving water so that the water supply does not go away when a drought becomes severe.	School District	Greenland Schools	$1,000	General budget	Long term	Will begin
16	Drought	Adopt	Adopt a plan with a community center that will allow school to occur there if the schools water supply is lost.	School District	Greenland Schools	$2,000	General budget/ grants	1-2 years	Will begin.

17	Earthquake	Shelter & Evacuation	Train students and staff on how to protect themselves during an earthquake. Also, utilize a plan for efficient evacuation.	School District	Greenland Schools	$1,000	Grants/ General budget	Long term	Will begin
18	Earthquake	Utilities Shut Off	Train appropriate staff on how proper procedures and how to properly shut off utilities within the school.	School District	Greenland Schools	$1,000	General Budget	Long term	Will begin
19	Pandemic	Quarantine Curriculum	Provide technology for students to continue their education if they have to be quarantined because of a pandemic virus.	School District	Greenland Schools	$300,000	Grants/ General Budget	1-2 years	Will begin
20	Pandemic	Personal Protection	Provide appropriate haz mat equipment to protect individuals from spreading or contracting a pandemic virus.	School District	Greenland Schools	$100,000	General budget/ Grants	1-4 years	Will begin
21	Dam Failure								
22	Dam Failure								

Jurisdictional Mitigation Strategies

City of Johnson Mitigation Actions									
Priority	Hazard	Project Title	Description	Who Benefits?	Responsible Agent/Dept.	Cost Estimate	Potential Funding	Time Frame	Status
1	Tornado	Safe Room	Renovate a building to provide a safe room to the public.	Community	City	$100,000	Grants	4-5 years	Will begin
2	Thunderstorms	Generators	Install generators to the critical facilities to provide utilities during power outages.	Community	City	$20,000	Grants/ General fund	1-2 years	Will begin
3	High Winds	Equipment	Purchase equipment to clear debris and trees from road ways.	Community	City	$50,000	Grants	1-2 years	Will begin
4	Winter Weather	Equipment	Purchase additional equipment to help aid in the clearing of wintery precipitation from roadways.	Community	City	$20,000	Grants	1-2 years	Will begin
5	Floods	Drainage Project	Improve drainage systems throughout the city to prevent flooding on low lying areas and roads.	Community	City	$100,000	Grants	1-4 years	Will begin
6	Extreme Temperatures	Shelters	Provide heating and cooling centers within community buildings for the citizens.	Community	City	$100,000	Grants	1-3 years	Will begin
7	Winter Weather	Shelter	Provide proper shelters within the community with the appropriate supplies to ensure that no citizen is left alone to freeze to death when winter storms occur.	Community	City	$50,000			
8	Earthquake	Sheltering	Provide shelters for the people that have to migrate to the west from the impacted areas.	Community	City	$30,000	Grants	1-5 years	Will begin

9	Drought	Storage Tanks	Provide 150,000 gallon water tank to aid in water supply.	Community	City	$85,000	Grants/ General budget	1-5 years	Will begin
10	Dam Failure	Notification	Implement a warning system that will notify the community as early as possible about the possibly of a breached dam, that could potentially cause flooding for the city.	Community	City	$5,000	Grants/ General budget	4-5 years	Will begin
11	Pandemic	Plan	Develop and adopt a city wide plan to deal with a pandemic outbreak.	Community	City	$3,000	Grants/ General budget	1-2 years	Will begin
12	Wildfire	PPE	Purchase wildfire protection equipment for the firefighters to wear as protection.	Fire fighters	Fire Department	$25,000	Grants/ Fire Department	1 year	Will begin
13	Tornado	Education	Educate the public about the importance of signing up for the Code Red warning system, and general awareness.	Community	City	$500	General budget	Long term	Will begin
13	Thunderstorms	Education	Educate the public about the importance of signing up for the Code Red warning system, and general awareness.	Community	City	$500	General budget	Long term	Will begin
15	High Winds	Clean-up Program	Develop a program that gets the community involved with cutting back trees and picking up debris to limit the amount of debris flying around when strong winds pass through.	Community	City	$1,000	Grants/ budget	1 year	Will begin
16	Flood	Turn Around, Don't Drown	Educate the public on the danger of driving	Community	City	$500	General budget	Long term	Will begin

			through flooded areas.						
17	Extreme Temperatures	Education	Educate the public on safety measures for extreme temperatures.	Community	City	$500	General budget	Long term	Will begin
18	Drought	Drought Education	Educate the public on the importance of conserving water.	Community	City	$500	General budget	Long term	Will begin
19	Earthquake	Education	Educate the public on the how to be protected during and after an earthquake	Community	City	$500	General budget	Long term	Will begin
20	Dam Failure	Evacuation	Provide road signs throughout the city of alternate routes.	Community	City	$5,000	General Budget/ Grants	Long term	Will begin
21	Wildfire	Education	Educate the public on proper burning policies, and safety awareness.	Community	City	$500	General budget	Long term	Will begin
22	Pandemic	Education	Educate the community of the	Community	City	$1,000	General budget	Long term	Will begin

			importance of remaining sanitary and how to prevent the spread of a pandemic virus throughout the community.						

Jurisdictional Mitigation Strategies

Lincoln Mitigation Actions									
Priority	Hazard	Project Title	Description	Who Benefits?	Responsible Agent/Dept.	Cost Estimate	Potential Funding	Time Frame	Status
1	Flood	Curb& Gutters	Add curb and gutters to flood prone areas, replace existing draining with better designed or engineered solution and a correct elevation issues.	Community	City manager	$25,000	Budget and grants	1-5 years	Will begin
2	Thunderstorm	Road Improvements	Provide sidewalks with curb and gutters to reduce flooding and provide safe passage with elevated sidewalks.	Community	City manager	$30,000	Budget and grants	1-5 years	Will begin
3	Winter Weather	Readiness Program	Assist vulnerable populations through procuring of food and resources, additional generators and acquiring transport to shelters.	Community	City manager	$50,000	Grant	1-5 years.	Will begin
4	Tornado	Safe Room Site Evaluation	Evaluate and determine safe room locations	Community	City manager	$15,000	Grants	1-5 years	Will begin
5	High Winds	Enhancing Community Buildings	Retrofit and restore community buildings for emergency use.	Community	City manager	$50,000	Grant	1-5 years	Will begin
6	Drought	Water/Waste water	Identify inflow or leaks of water and waste water to prevent loss of water from ground to sewer and loss of water from water systems (drinking) to ground.	Community	City manager	$250,000	Budget/Grant	1-5 years	Will begin
7	Winter Weather	Storm Shelters	Infrastructure re-enforcement to add additional locations of shelters, prevent municipals building from damage while increasing safety.	Community	City manager	$100,000	Grant, Cap . Improvement	1-5 years	Will begin

8	Extreme heat/cold	Cooling and heat centers	"ETS" organize outreach to vulnerable populations, establish cooling or heating centers. Require minimum temperatures by land lords, create a date base of vulnerable populations.	At risk community	City manager	$25,000	Grant	1-5 years	Will begin
9	Wildfire	Equipment Upgrades	Obtain fire equipment and additional equipment, including breathing equipment that is specific to wildfire prevention and preparedness.	Community/ Fire Fighters	Fire department	$50,000	Grant	1-5 years	Will begin
10	Pandemic	Map community risks	Assess and map community risks, establish a GIS department, teach protection strategies, obtain hazard data and use GIS to map various hazards.	Community/City Government	ISD	$125,000	Grant	5 years	Will begin
11	Dam Failure	Flood safety program	Regular inspections of dam with oversight by the FPM. Walking of influent areas by log FPM to access changes in levels, monitoring of flood levels in relation to dam.	Community	Flood plain administrator	$5,000	Budget	1-5 years	Will begin
12	Pandemic	Education	Create education to make community aware of hazards via the website, social media and educational handouts.	Community	ISD	$1,000	Budget	1-5 years	Will begin
13	Wildfire	Fuels Management "WF9"	Provide fuel management, prescribed burns, identify and check fuel loads by	Community	City manager	$150,000	Grants, budget	1-5 years	Will begin

			clearing trees, create firebreaks, implement slash and clean days, develop a vegetation management program.						
14	Drought	Drought Monitor	Identify indicators and monitor levels, doing so no a monthly basis. Issue alerts via code red and social media.	Community	City manager	$5,000	Budget, grant	1-5 years	Will begin
15	Thunderstorm	Education	Provide technical education of hazards to community via the web, social media and handouts	Community	ISD	$1,000	Budget	1 year	Will begin
16	Dam Failure	Awareness	Provide awareness to community and impact areas of potential hazards and how to prepare. Issue warnings and alerts through code red.	Community	FPM/ISD	$5,000	Budget, Grant	1-5 years	Will begin
17	Earthquake	EQ3 – Map and access	Develop an assessment of public or commercial buildings that may be vulnerable to earthquake damage, including pre 1940 homes. Collect data on hazards, establish HAZUS. Develop a database.		ISD	$15,000	Grant, Budget	1-5 years	Will begin
18	Flood	Awareness	Provide education of floods to community, hold outreach sessions to educate individuals on flood safety and prevention.	Community	ISD	$1,000	Budget	1-5 years	Will begin
19	Earthquake	Earthquake awareness	Establish a plan of education and outreach program to make community	Community	ISD	$5,000	Grant, Budget	1-5 years	Will begin

			receives education through social media, web, and live events.						
20	Extreme heat/cold	Education	Provide education on hold/cold weather, safety and preparedness in both extremes. Provide online education programs.	Community	ISD	$1,000	Budget, grant	1-5 years	Will begin
21	Tornado	Educational Awareness	Provide web-based education to the community.	Community	ISD	$1,000	ISD	1 year	Will begin
22	High Winds	Education	Provide web, social media and Code Red flash announcements for education about high winds.	Community	ISD	$1,000	ISD	1-5 years	Will begin

Jurisdictional Mitigation Strategies

Lincoln Schools Mitigation Actions									
Priority	Hazard	Project Title	Description	Who Benefits?	Responsible Agent/Dept.	Cost Estimate	Potential Funding	Time Frame	Status
1	Tornado	Construct Safe Room	Construct an 850-person capacity safe room that doubles as a PE gym	Students, Faculty, Community	School District	$850,000	Local Funds	2 years	Will begin
5	Pandemic	Pandemic Plan	Develop a written pandemic plan with orders of succession, delegations of authority, and instructions on how to prevent the spread of disease.	Students, Faculty, Community	School District	$1,000	Local Funds	6 months	Will begin
6	Winter Weather	Winter Weather Action Plan	Develop Winter Weather Action Plan to include transportation snow routes and alternate education delivery	Students, Faculty, Community	School District	$500	Local Funds	6 months	Will begin

			including the Internet.						
1	Winter Weather	Construct Safe Room	Construct an 850-person capacity safe room that doubles as a PE gym.	Students, Faculty, Community	School District	$850,000	Local Funds	2 years	Will begin
7	Flood	Flood Plan	Develop a flood plan in order to ensure safety of students & faculty, which will include alternate transportation routes and shelter plans.	Students, Faculty, Community	School District	$500	Local Funds	2 years	Will begin
14	Drought	Irrigate Athletic Fields	Add an irrigation system to water athletic fields during periods of drought	Students, Community	School District	$10,000	Local Funds	2 years	Will begin
1	Thunderstorm	Construct Safe Room	Construct an 850-person capacity safe room that doubles as a PE gym	Students, Faculty, Community	School District	$850,000	Local Funds	2 years	Will begin
13	Earthquake	Secure Movable Furniture	Secure movable furniture in classrooms	Students, Faculty, Community	School District	$5,000	Local Funds	3 years	Will begin

			and offices to prevent injuries in the event of an earthquake						
1	High Winds	Construct Safe Room	Construct an 850-person capacity safe room that doubles as a PE gym	Students, Faculty, Community	School District	$850,000	Local Funds	2 years	Will begin
8	Flood	Education	Educate students, faculty and the community about the safety plan in the event of a flood.	Students, Faculty, Community	School District	$500	Local Funds	1 year	Will begin
9	Tornado	Code Red	Implement Code Red to inform schools when a tornado is imminent	Students, Faculty, Community	School District	$0	N/A	1 year	Will begin
10	Thunderstorm	Alternate Power Plan	Obtain generators to keep critical systems active if power is shut off, including cafeteria and medical freezers &	Students, Faculty, Community	School District	$5,000	Local Funds	1 year	Will begin

			refrigerators, school emergency lighting, and key computer or intercom systems?						
12	Extreme Temperatures	Pipe Insulation	Insulate pipes to prevent them from bursting during extreme cold	Students, Faculty, Community	School District	$10,000	Local Funds	3 years	Will begin
17	Extreme Temperatures	Education	Increase awareness of extreme temperature risk and safety by educating students, staff and patrons about how they can protect themselves when extreme temperatures occur.	Students, Faculty, Community	School District	$500	Local Funds	3 years	Will begin
16	Drought	Education	Educate staff, students, and patrons on water-saving techniques.	Students, Faculty, Community	School District	$500	Local Funds	2 years	Will begin
15	Pandemic	Education	Educate staff and patrons about what to do in the event of a pandemic, and train them to notice signs that point to the initiation of a pandemic event	Students, Faculty, Community	School District	$500	Local Funds	1 year	Will begin
11	High Winds	Education	Increase severe wind risk awareness through outreach activities regarding shelter and evacuation routes.	Students, Faculty, Community	School District	$500	Local Funds	2 years	Will begin
18	Earthquake	Education	Increase earthquake awareness regarding earthquake risk and mitigation activities.	Students, Faculty, Community	School District	$500	Local Funds	2 years	Will begin
19	Wildfire	Risk Assessment	Identify wildfire hazards and areas of risks on our school campuses and eliminate or reduce them	Students, Faculty, Community	School District	$1,000	Local Funds	2 years	Will begin

20	Wildfire	Education	Increase wildfire risk awareness among staff, students, and patrons.	Students, Faculty, Community	School District	$500	Local Funds	2 years	Will begin
21	Dam Failure	N/A	N/A	Students, Faculty, Community	School District	N/A	N/A	N/A	Will begin
22	Dam Failure	N/A	N/A	Students, Faculty, Community	School District	N/A	N/A	N/A	Will begin

Jurisdictional Mitigation Strategies

Prairie Grove Mitigation Actions									
Priority	Hazard	Project Title	Description	Who Benefits?	Responsible Agent/Dept.	Cost Estimate	Potential Funding	Time Frame	Status
1 (Not Prioritized in List: I prioritized these)	Wildfire	Public Education	Educate the public on when and how to burn and the importance of permits.	Citizens	City	$500	General Revenue	3-6 months	Will begin
2	Wildfire	Additional Fire Staff	The city needs to add full time fire staff.	Citizens	City	$100,000	Grants, Loans, General Revenue	3-5 years	Will begin
3	Tornado	Safe Rooms	Work toward additional safe room construction.	Citizens	City	$1.5 million	Grants/ Loans	3-5 years	Will begin
4	Tornado	Public Education	Educate the public on benefits of home storm shelters and inform them of grants that can fund these projects.	Citizens	City	$100	City Funds	6 months	Will begin
5	Thunderstorms	Emergency Generators	Provide emergency generators at all critical sites for the city	City Governm ent & Emergenc y Operation s	City	$100,000	Grants/Loans/General Revenue	3-5 years	Will begin

6	Thunderstorms	Electrical Surge Protectors	Develop protection for surge protection and lightning arrestors at all critical sites.	City critical facilities	City	$10,000	General Revenue	1-3 years	Will begin
7	High Wind	Education	Educate the public on the need to trim trees away from homes, buildings, and residential overhead power lines.	Citizens	City	$1,000	General Revenue	3-6 months	Will begin
8	High Wind	Equipment	Acquire additional equipment in order to proactively remove dead or dangerous tree limbs or debris that could become projectiles in high winds.	Citizens	City	$40,000	Grants, Loans, General Revenue	1-3 years	Will begin
9	Flood	Drainage Improvements	Continue to plan and improve drainage ways in critical areas prone to flooding.	Citizens	City	$3 million	Grants, Loans, General Revenue	3-5 years	Will begin
10	Flood	Flood Protection	Work with other agencies to improve and protect key highways, transportation routes, and bridges prone to flooding.	Citizens	City	$50,000	Grants, Loans, General Revenue	3-5 years	Will begin
11	Winter Weather	Snow/Ice Removal Equipment	Acquire additional equipment to improve snow & ice removal on key roads to diminish the potential for car wrecks during winter weather.	Citizens	City	$50,000	Grants, Loans, General Revenue	3-5 years	Will begin
12	Winter Weather	Shelters	Create a network of available facilities to be used as emergency shelters during cold weather.	Citizens	City	$1,000	General Revenue, MOUs with established organizations such as churches, senior centers, etc.	3-5 years	Will begin
13	Extreme Temperature	Identifying High Risk Individuals	Work with the senior center, churches and the public to develop a list	Citizens	City	$500	General Revenue	1-2 years	Will begin

			of individuals that are at high risk to extreme temperatures.						
14	Extreme Temperature	Fan Provision	Work with area churches and other organizations to provide fans to the elderly before heat waves or extreme heat occurs.	Elderly citizens & at-risk, needy citizens	City	$2,000	General Revenue	1-2 years	Will begin
15	Earthquake	Public Education	Educate the public on precautions to take in case of an earthquake, including turning off utilities and locating safe shelter-in-place locations.	Citizens	City	$500	General Revenue	3-6 months	Will begin
16	Earthquake	Training	Develop additional training for code enforcement regarding earthquakes and building structures.	City Building Officials, Citizens	City	$500	General Revenue	3-5 years	Will begin
17	Drought	Watershed Protection	Educate the public about steps they can take to help protect watersheds	Citizens	City	$500	General Revenue	3-6 months	Will begin
18	Drought	Water Source Development	Work with legislators to ensure water supplies protect public water use as a top priority in area water supplies.	Citizens	City	$500	General Revenue	3-6 months	Will begin
19	Dam Failure	Dam Improvements	Improve Prairie Grove Lake Dam to prevent damage to facilities down stream	Citizens	City	$2 million	Grants, Loans, General Revenue	3-5 years	Will begin
20	Dam Failure	Education	Develop public education advising property owners in inundation areas of potential risks of dam failures.	Citizens	City	$500	General Revenue	3-6 months	Will begin

21	Pandemic	Education	Develop a citizen advisory bulletin offering information on pandemic prevention strategies	Citizens	City	$500	Grants/General Revenue	3-5 years	Will begin
22	Pandemic	Flu Clinic	Develop city-wide flu clinic initiative to provide reduced or free flu shots to the public	Citizens	City	$5,000	Grants/General Revenue	3-5 years	Will begin

Jurisdictional Mitigation Strategies

Prairie Grove School District Mitigation Actions									
Priority	Hazard	Project Title	Description	Who Benefits?	Responsible Agent/Dept.	Cost Estimate	Potential Funding	Time Frame	Status
1	Tornado	Tiger Shelter	Construct two additional safe rooms.	School District	Assistant Superintendent	$1.8 Million	Grants/ Community	4-5 years	Will begin
2	Tornado	Awareness	Educate the students with handouts, the web-site, drills, and meetings.	Staff and Students	Principals at each school	$1,000	Local-general fund	Long term	Will begin
3	Thunderstorms	Stay On	Purchase and Install generators at each site.	School District	Technology Department	$30,000	Local funds	4-5 years	Will begin
4	Thunderstorms	Stop Damage	Reinforce windows and secure outside structures	School District	Maintenance	$50,000	General fund	4-5 years	Will begin
5	Flood	Bed Down	Provide a dry place for students and staff to stay when flooding has made it impossible for them to return home.	Staff and Students	Principals at each site	$10,000	General fund	1-2 years	Will begin
6	Flood	Safe Trips	Develop alternative routes to and from school	School District	Transportation Supervisor	$5,000	General fund	1-2 years	Will begin

			during times of flooding.						
7	High Winds	Keep Lid On	Replace and retrofit roofs with material that will withstand high velocity winds.	School District	School Board	$500,000	Building Fund	3-5 years	Will begin
8	High Winds	Strap It Down	Anchor all equipment and facilities down to withstand high winds.	School District	School Board	$50,000	General Fund	3-5 years	Will begin
9	Earthquake	Keep Roof On	Inspect, Retrofit, and Repair all facilities for cracks or any signs of stress.	School District	School Board	$500,000	Building Fund	3-5 years	Will begin
10	Earthquake	Safety Shake	Perform drill with students and staff on how to evacuate the building to a safe location.	Staff and Students	Principals	$1,000	General Fund	Long Term	Will begin
11	Pandemic	Protect the Kids	Provide facilities for vaccinations and health screenings of students and staff.	Staff and Students	School Board	$10,000	Grants/ General Funds	1-2 years	Will begin
12	Pandemic	I Stop the Bug	Provide facilities for medical staff to setup emergency sites for the sick and a control point for people to come to before being moved to a permanent location.	Prairie Grove	School Board	$75,000	Grants/ General Fund	3-5 years	Will begin
13	Drought	Stay Green	Rotate watering at night to avoid evaporation and only use enough water to keep from losing sod.	School District	Maintenance	$1,000	General Fund	3-4 years	Will begin
14	Drought	Survive with less	Educate students and staff on water saving techniques to use at home and at school.	School District	Principals and Teachers	$1,000	General Fund	Long term	Will begin
15	Winter Weather	No Freeze	Plan on how to wrap all pipes that are exposed to the weather	School District	Maintenance	$5,000	General Fund	1 year	Will begin
16	Winter Weather	Not Freezing	Purchase and maintain an	School District	Maintenance	$30,000	General Fund	3-5 years	Will begin

			alternative heat source for when electricity is out.						
17	Extreme Temperatures	Protect Streets	Plan out how to pre-scale cracks in asphalt before extreme temperatures increase the size of the cracks.	School District	Maintenance	$30,000	General Fund	3-4 years	Will begin
18	Extreme Temperatures	Take Care	Provide plenty of water on buses and ball fields during the hot times of the year.	School District	Transportation and Athletic Departments	$20,000	General Fund	Long term	Will begin
19	Wildfire	Stay Clean	Design a plan for transporting to remove students from campus if smoke becomes a health hazard.	School District	Transportation Department	$5,000	General Fund	1-2 years	Will begin
20	Wildfire	Stay Cool	Provide training and instruction to staff and students on how to protect themselves	School District	Principals	$1,000	General Fund	Long term	Will begin

			and their property during wildfires.						
21									
22									

Jurisdictional Mitigation Strategies

Springdale Mitigation Actions									
Priority	Hazard	Project Title	Description	Who Benefits?	Responsible Agent/Dept.	Cost Estimate	Potential Funding	Time Frame	Status
1	Thunderstorm	Educational Sessions	Provide education opportunities to the public to learn about severe storms	Citizens	City	$10,000	Grants	1-3 years	Will begin
2	Thunderstorm	Back-up Power	Severe critical infrastructures as well as shelters do not have back-up generators and need to have that capability	Citizens	City	$500,000	Grants	3-5 years	Will begin
3	High Winds	Overhead Power Lines	Overhead power lines will be better served if buried for high winds	Citizens	Power Companies	$10 million	Grants/rate increases	5 years	Will begin
4	High Winds	Sustainable Buildings	Build newer facilities to meet stricter building codes	Citizens	Code Enforcement	$10,000	Permits	3 years	Will begin
5	Winter Weather	Overhead Power Lines	The City would be less	Citizens	Power Companies	$10 million	Bonds/rate increases	3 years	Will begin
12	Flooding	Reduce buildings in 100-year flood plain	Reduce buildings in 100-year flood plain	Citizens	City	$2 million	Bonds/grants	3-5 years	Will begin
13	Drought	Impact Study	Gathering and analyzing data on water and climate to better understand potential impacts of drought	Citizens	Beaver Lake Water	$1 million	Bonds/grants	3 years	Will begin
14	Drought	Fire Risk	Reduce fire risk with events of drought by proactively maintaining at-risk lands	Citizens	City- Fire Department	$100,000	Grants	2 years	Will begin
15	Dam Failure	Alternate Water Supply	Determine if we can identify or develop an alternate water supply	Citizens	City	$5 million	Grants/bonds	3-5 years	Will begin
16	Dam Failure	Maintaining Dam and Making Repairs	Work at Beaver Dam to secure and maintain Dam to reduce risk of failure	Citizens	Beaver Dam District	$2 million	Grant/bonds	3 years	Will begin
17	Wildfire	WUI Education	Deliver/Develop education programs for education of residents in those additions effected	Citizens	City- Fire Department	$5,000	Grants/IRFC	1-2 years	Will begin

18	Wildfire	Equipment Upgrade	Upgrade wild land firefighting capabilities with never wild land apparatus and equipment	Citizens	City- Fire Department	$250,00	Grants/bonds	1-3 years	Will begin
19	Earthquake	Hospital Reinforcement	Physically reinforce critical systems and infrastructure at the hospital	Citizens	Hospital	$1 million	Rate increase/grants	3 years	Will begin
20	Earthquake	Infrastructure Protection	Retrofit infrastructure of buildings within city to withstand earthquakes	Citizens	City Codes (code enforcement)	$5 million	Bonds/grants	5 years	Will begin
21	Pandemic	Surge Capacity of Hospital	Develop surge capacity for our one hospital	Citizens	Health Department	$350,000	Grants/donations/rates	1-3 years	Will begin
22	Pandemic	Surge Capacities for EMS	Develop plan for surge capabilities for EMS response to community during pandemic	Citizens	City- Fire Department	$300,000	Grants/bonds/taxes	1-3 years	Will begin

Jurisdictional Mitigation Strategies

Springdale School District Mitigation Actions									
Priority	Hazard	Project Title	Description	Who Benefits?	Responsible Agent/Dept.	Cost Estimate	Potential Funding	Time Frame	Status
1	Tornado	Safe Room	Install some safe rooms at schools throughout the district	School District	Support Services	$1 Million	General Budget	3-5 years	Will begin
2	Tornado	Safe Place	Retrofit and Construct interior classrooms of buildings to be a safer place for students to shelter.	School District	Support Services	$750,000	General Budget	1-3 years	Will begin
3	Pandemic	Hot Water	Purchase and maintain hot water heaters to make sure all schools have hot water to use when washing hands.	School District	Maintenance	$500,000	General Budget	1-2 years	Will begin
4	Pandemic	Educate	Provide students with information, demonstrations, and signs on sanitation and getting the proper vaccinations to prevent	School District	Support Services: Department of School Health	$1,000	General Budget	Long term	Will begin

			common diseases. These would need to be in multiple languages.						
5	Thunderstorms	Lightning High	Install lightning rods with grounding at both high schools.	Both High Schools	Maintenance	$100,000	General Budget	1-2 years	Will begin
6	Thunderstorms	Portables	Provide proper protection and develop a plan to keep the students that have class in these trailers safe from lightning, hail, winds, and winter weather.	School District	Support Services	$500,000	General Budget	1-3 years	Will begin
7	High Winds	New Roof	Install Standing Seam Metal Roof on the older buildings to prevent the possibility of roof damage.	School District	Support Services	$2 Million	General Budget	1-4 years	Will begin
8	Winter Weather	New Roof	Install Standing Seam Metal Roof on some of the older buildings because the old roofs are not capable of supporting heave snow.	School District	Support Service	$2 Million	General Budget	1-4 years	Will begin
9	High Winds	New Windows	Replace windows of older schools with Lexan glass windows to prevent glass shattering.	School District	Maintenance	$2 Million	General Budget	1-3 years	Will begin
10	Winter Weather	Update Main Road	Develop a way to better provide the information in the plan to non-English speakers. This plan is used when roads are hazardous and buses can only travel on main roads.	School District	Support Services	$1,000	General Budget	1-2 years	Will begin
11	Extreme Temperatures	Hot/ Cold Plan	Develop a plan to accommodate the extreme temperatures since school buses do not have air conditioning. Plan to include possible different hours.	School District	Support Service	$1,000	General Budget	1-2 years	Will begin
12	Extreme Temperatures	Education	Educate students on	School District	Support Services	$1,000	General Budget	Long term	Will begin

			how to protect their bodies during extreme temperatures. Also, provide information for parents on how reduce the effects of the extreme temperatures on the students.						
13	Wildfire	Fire Safe	Purchase equipment to use to keep fires from spreading toward the schools.	School District	Support Services	$50,000	General Budget	1-2 years	Will begin
14	Wildfire	Fire Plan	Develop a plan to include alternate routes to schools so that if woodland areas are having a fire employees and students can be safe on the way to school.	School District	Support Services	$2,000	General Budget	1-3 years	Will begin
15	Earthquake	Shelter	Designate safe places within the school buildings, with signs, that	School District	Support Services	$2,000	General Budget	1-2 years	Will begin

			students could go to in case of an earthquake.						
16	Earthquake	Shake Education	Educate students about the importance of protecting themselves during an earthquake. Also, educate them on what to expect with an earthquake.	School District	Support Services	$500	General Budget	Long Term	Will begin
17	Dam Failure	Fail Proof Plan	Develop a plan to be able to get water from somewhere else in case they can not longer get water from beaver lake.	School District	Support Services	$1,000	General Budget	1-3 years	Will begin
18	Dam Failure	Educate	Develop ways to educate the students about what to do if a dam fails and water becomes limited in some areas and floods other areas.	School District	Support Services	$1,000	General Budget	Long term	Will begin
19	Flood	Alternate Route	With roads flooding very fast across springdale they	School District	Support Services	$1,000	General Budget	1-2 years	Will begin

			need a plan to send buses on different routes to avoid areas that flood regularly.						
20	Flood	Turn Around Don't Drown	Educate students about the importance of turning around and not attempting to drive through flooded roadways, no matter how much water covers the road.	School District	Support Services	$500	General Budget	Long Term	Will begin
21	Drought	Protect Agriculture	Develop a plan on how to keep the agriculture and landscaping alive if water rationing occurs, and it becomes difficult to water.	School District	Support Services	$2,000	General Budget	1-2 years	Will begin
22	Drought	Water Rationing Education	Educate students and faculty of the importance of conserving water to keep	School District	Support Services	$1,000	General Budget	Long Term	Will begin
			level from rising.						

Jurisdictional Mitigation Strategies

Tontitown Mitigation Actions									
Priority	Hazard	Project Title	Description	Who Benefits?	Responsible Agent/Dept.	Cost Estimate	Potential Funding	Time Frame	Status
1	Tornado	Warning Sirens	This jurisdiction needs community warning sirens to alert the public when tornados have been spotted	Public	Police/Fire	$100,000	General Funds	3-5 years	Will begin
2	Tornado	Community Shelter	This jurisdiction desires a community shelter for citizens to be able to utilize in the event of a tornado	Public	Public Works/Police & Fire	$800,000	Grants	3-5 years	Will begin
2	Extreme Temperatures	Community Shelter	This jurisdiction desires a community shelter for citizens to go to in the event extreme temperatures afflict the public and they need somewhere to go	Public	Public Works	$800,000	Matching Funds	3-5 years	Will begin
2	Earthquake	Community Shelter	This jurisdiction desires a community shelter for citizens to use as a temporary shelter in the event an earthquake	Public	Public Works	$800,000	Matching Funds	3-5 years	Will begin

			destroys homes or displaces people						
3	Drought	Water Tower	In the event of a drought, Tontitown wishes to build a 500,000 gallon water tower to be able to supply water for the citizens	Public	Public Works	$2 millions	Matching Grant	3-5 years	Will begin
4	Wildfire	Wildland Fire Gear	The Fire Department needs Personal Protective Gear to fight Wildland fires to better protect firefighters	Firefighters	Fire Department	$12,000	Matching Funds	3-5 years	Will begin
5	Thunderstorm	Generators	Each of the 3 city buildings needs a back-up power generator in the event a thunderstorm disrupts power to the buildings	City Government	Public Works	$60,000-75,000	Matching Funds	3-5 years	Will begin
6	High Winds	Bucket Truck	The city needs a bucket truck to trim back high and dangerous limbs or dead trees away from roads, buildings and vehicles so that high winds do not create expanded damages	Public	Public Works	$60,000	Matching Grants	3-5 years	Will begin
7	High Winds	Tree Trimming Equipment	The city needs hydraulic-pump saws and trimmers to use with the bucket truck or by hand to trim back dead or over grown limbs	City Government/Citizens	Public Works	$10,000	Matching Funds	3-5 years	Will begin
8	Winter Weather	Large Truck to Pre-treat Roads	A large truck with a tank & sprayer, along with pre-treatment chemicals, will prevent wrecks on roads if applied before winter weather creates dangerous roadways	Public	Public Works	$75,000	Matching Funds	3-5 years	Will begin
9	Winter Weather	Small Truck with Slide-in Sprayer	A small truck with a slide-in sprayer unit can be used to pre-treat additional roads around the city	Public	Public Works	$25,000	Matching Funds	3-5 years	Will begin
10	Wildfire	Secondary Brush Truck	The city needs a brush truck to use to prevent the spread of wildfires to occupied structures	Public	Fire Department	$200,000	Matching Funds	3-5 years	Will begin
11	Flood	Swift Water Rescue Boat, Truck & Trailer	A swift-water rescue boat is needed to remove people from potential flood	Public	Fire Department	$60,000	Matching Funds	3-5 years	Will begin

			zones if it looks like their homes might flood. A truck and trailer are needed to pull the boat						
12	Flood	Swift water rescue training & equipment	Education for the use of the boat and equipment are needed in order to maximize effectiveness when evacuating citizens	Public	Fire Department	$10,000	Matching Funds	3-5 years	Will begin
13	Extreme Temperatures	Portable Heaters & AC units	The city will loan space heaters & air conditioner window units to the elderly & needy citizens in expectation of extreme temperatures	Public	Public Works	$10,000	Matching Grants	3-5 years	Will begin
14	Earthquake	Earthquake Education & Safety Kits	The city will promote earthquake education and provide 72-hour kits to citizens to teach them how to prevent unnecessary emergencies during an earthquake	Public	Public Works	$7,000	Matching Funds	3-5 years	Will begin
15	Drought	Water Conservation Education	The city will educate citizens about what to do in the event of a drought and how to prevent additional emergencies during a drought	Public	Public Works	$5,000	Matching Funds	3-5 years	Will begin
16	Thunderstorm	Surge Protectors	The city will provide all city buildings with a total of 9 surge protectors to prevent lightning strikes from crippling critical computer systems	City Government	Public Works	$10,000	Matching Funds	3-5 years	Will begin
17	Pandemic	Personal Protection Equipment	The city will invest in chemical/biological personal protection equipment suits to prevent bodily fluids or illness from being transmitted to health officials	Police/Fire and other employees/officials that screen people for illness	Fire Department	$60,000	Matching Funds	3-5 years	Will begin
18	Pandemic	Pandemic Training & Education	The city will provide training and education for police/fire and health officials	Public Officials	Fire & Police Departments	$10,000	Matching Funds	3-5 years	Will begin
19	DAM FAILURE??								
20	DAM FAILURE???								
21									
22									

West Fork Mitigation Actions									
Priority	Hazard	Project Title	Description	Who Benefits?	Responsible Agent/Dept.	Cost Estimate	Potential Funding	Time Frame	Status
1 (REQUIRES Prioritization from West Fork)	Tornado	Generators	Purchase two additional generators	Public	City	$60,00	Grants/city general fund	2-4 years	Will begin
2	Tornado	Contracts	Create contracts with surrounding companies for tree cutting and clearing services/city could purchase chainsaws	Public	City	$5,000	General fund	2-4 years	Will begin
3	Thunderstorms	Code RED	Provide code RED weather warnings to the public to prepare to take shelter	Public	City	$1,500/ year	General fund	2-4 years	Will begin
4	Thunderstorms	Weather Radio	Provide citizens, police, fire with weather radio	Public	City	$4,000	Grants/general fund	2 years	Will begin
5	High Winds	Public Education	Explaining and teaching the public about the importance of keeping trees cut back and away from power lines	Public	City	$5,000	General fund/grants/loans	2-4 years	Will begin
6	High Winds	Enforce City code	City to maintain identifying hazardous tree limbs and trees that may fall on power line or other trees	Public	City Street Department	$25,000	General Fund	Ongoing	Will begin upon plan implementation, and ongoing thereafter
7	Flooding	Waterway	Maintain keeping waterways clean, trash will cause blockage of drain	Public	City Street Department	$25,000	Grants/general fund/street department	60 days	Will begin
8	Flooding	Drainage Improvement	Removal of trees that grow in drainage ditches and streams; enlarge box culverts	Public	City Street Department	$30,000-$40,000	Street department/ general funds/loans of forgiveness/grants	60 days	Will begin
9	Winter Weather	Alternate Power Sources	Obtain additional power generators at water pumping station, sewage	Public	Utilities	$90,000	Grants	2-4 years	Will begin

			treatment and city hall						
10	Winter Weather	Tree Trimming	Keep trees trimmed that overhang public roads	Public	Utilities	$200,000	Utilities budget/ grants	12 months	Will begin
11	Extreme Temperature	Warming Center	Obtain emergency generators for HS's warming center	Public	Mayor/Utilities	$40,000	General fund	2-4 years	Will begin
12	Extreme Temperature	Water Lines	Dig up water lines and lower them deeper into the ground	Public	Utilities	$100,000	Utilities/grants	2-4 years	Will begin
13	Earthquake	Safe rooms	Provide/construct safe room for public's use during/following an earthquake	Public	City	$1 million	Grants	5 years	Will begin
14	Earthquake	Bridge Replacement	Replace older bridges	Public	City Street Department	$750,000/bridge	Grants	6 months	Will begin
15	Drought	Public Education	Educate public via water bills about fire	Public	Water Department	$0	n/a	2-4 weeks	Will begin
16	Drought	Drought Emergency Plan	Develop a drought emergency plan	Public	Mayor/city administration	$0	n/a	6 months	Will begin
17									
18									

19	Wildfire	Debris removal	Remove debris from forest, vacant lots, and undeveloped city sections	Public	City Street Department	$60,000-70,000	Grants	6 months	Will begin
20	Wildfire	Public Education	Educate public regarding wildlife potential	Public	City	$500	Grants/general budget	6 months	Will begin
21	Pandemic	Pandemic plan	The City of West Fork will develop a pandemic plan	Public	City	$500	Grant	5 years	Will begin
22	Pandemic	Pandemic education	Educate public on how to prevent the spread of a pandemic, and protect themselves	Public	City	$500	Grant	6 months	Will begin

Jurisdictional Mitigation Strategies

West Fork School Districts Mitigation Actions									
Priority	Hazard	Project Title	Description	Who Benefits?	Responsible Agent/Dept.	Cost Estimate	Potential Funding	Time Frame	Status
1	Tornado	Safe Rooms	The district would like to build safe rooms at all 3 schools to insure the students have a safe place to get during severe weather.	School District	Superintendent	$2 Million	Grants and Building Fund	2-5 years	Will begin
2	Extreme Temperatures	HVAC System Replacement	Replace old and outdated HVAC systems at each school building.	School District	Superintendent	$2 Million	Grants/ Operating Fund	1-3 years	Will begin
3	Thunderstorms	Gas Generators	Install back-up gas generators to lessen the impact of power outages	School District	Maintenance	$100,000	Grants/ General Fund	1-3 years	Will begin
4	Flood	Improve Storm water management	Take out storm drains that are too small and replace them with larger storm drains.	School District	Maintenance	$10,000	Grants/ Operating Fund	1 year	Will begin
5	Flood	Flash Flooding Awareness	Educate students on the dangers of flash flooding and how it can happen quickly on school grounds.	Students	Building Principals	$1,000	Grants/ Operating Fund	Long term	Will begin
6	Winter Weather	Student Transportation	The district will come up with alternate bus routes to be designated as snow routes to insure students get to and from safely.	Students	Superintendent and Maintenance	$500	Operating Fund	6 months	Will begin
7	Winter Weather	Snow Removal	Purchase snow remove equipment and materials (salt, gravel, blades for tractors, and shovels) to aid in snow removal.	Students and Staff	Maintenance	$5,000	Grants/ Operating Fund	1 year	Will begin
8	Earthquake	Implement Structural Techniques	Purchase and install shutoff values and emergency connector	School District	Maintenance	$5,000	Operating Fund	1 year	Will begin

			hoses where necessary.						
9	Earthquake	Earthquake Risk Awareness	Educate students and staff on the possibility of earthquakes and safety techniques to follow during and after an earthquake.	School District	Building Administration	$500	Operating Fund/ Grants	Long term	Will begin
10	Pandemic	Plan	Develop and improve upon a plan on how the school will handle and hopefully prevent a pandemic of any type from occurring within the schools	School District	School Nurse/ Administration	$1,000	Grants/ Operating Fund	1 year	Will begin
11	Pandemic	Education/ Protection	Educate the students and staff about what a pandemic is, how to prevent the spread of a disease, and how to protect themselves during sick times.	School District	School Nurse	$500	Operating Fund	Long term	Will begin
12	Thunderstorm	Surge Protectors	Purchas and install surge protection on the critical technical equipment.	School District	Maintenance	$10,000	Grants/ Operating Fund	6 months-1 year	Will begin
13	Extreme Temperatures	Education	Develop education techniques to educate students and staff regarding the dangers of extreme temperatures and the steps necessary to protect themselves	Students and Staff	Health Teachers and Nurse	$250	Operating Fund	Long term	Will begin
14	Tornado	Education	Develop and continue educating faculty and students on tornado preparedness, and plan to have monthly tornado drills	School District	Superintendent	$1,000	Operating Fund	Long term	Will begin
15	High Winds	Removing fallen trees and limbs	Purchase and maintain equipment necessary to	Students	Maintenance	$5,000	Grants/ Operating Fund	1 year	Will begin

			remove fallen debris around campus and on bus routes.						
16	High Winds	Improve roofing systems	Retrofit roofing systems on the district's critical facilities	School District	Superintendent	$250,000	Grants/ bonds	1-4 years	Will begin
17	Drought	Water Saving Techniques	Educate students and staff on the importance of conserving water all the time, and ways to conserve water further is water becomes limited.	School District	Administration	$500	Operating Fund/ Grants	Long term	Will begin
18	Drought	Force Water Conservation	The district's Board of Education will adopt policies and procedures to prioritize or control water use during drought conditions.	School District	Superintendent	$250	Operating Fund	1 year	Will begin
19	Wildfire	Education	Educate the students and staff on what a wild fire is and ways that they can prevent a wildfire.	Students and Staff	School Board	$500	Operating Fund	Long term	Will begin
20	Wildfire	Protection	Purchase necessary equipment to put up that will act as a barrier between forested areas and school buildings to prevent fires from approaching the buildings.	School District	Maintenance	$5,000	Operating Fund/ Grants	1-2 years	Will begin
21	Dam Failure								
22	Dam Failure								

Jurisdictional Mitigation Strategies

City of Winslow Mitigation Actions									
Priority	Hazard	Project Title	Description	Who Benefits?	Responsible Agent/Dept.	Cost Estimate	Potential Funding	Time Frame	Status
1	Tornado	Sheltering	Renovate a city building to make it a safe room/shelter for all citizens.	Community	City Council	$200,000	Grants	4-5 years	Will begin
2	Flood	Update	Update the city flood management plan.	Community	City	$5,000	Grants	1-2 years	Will begin
3	Tornado	Education	Educate the public about the benefit of signing up for Code Red and having weather radios in their homes.	Community	City	$200	Grants/ General Fund	Long term	Will begin
4	Flood	Education	Educate the public via mail outs with utility bills on the ways to stay safe during floods. Include information about Turn Around Don't Drown.	Community	City	$200	General Fund	Long term	Will begin
5	Wildfire	PPE	Purchase wildland firefighting equipment for the fire fighters.	Fire Fighters	Fire Department	$20,000	Grants	1 year	Will begin
6	Wildfire	Education	Educate the public on how to clear areas around their homes in order to prevent their homes from being damaged by wildfires.	Community	City	$200	General Budget	Long term	Will begin
7	Winter Weather	Reduce Impacts to Roadways	Create a plan that will help with getting people into town to clear debris and maintain proper roadway conditions.	Community	City	$20,000	General Budget/ Grants	2 years	Will begin
8	Winter Weather	Education	Educate the public about severe winter weather impacts and preparedness information	Community	City	$200	General Budget	Long term	Will begin

9	Extreme Temperatures	Generators	Develop one of the facilities as a heating and cooling center.	Community	City	$50,000	Grants	4-5 years	Will begin
10	Extreme Temperatures	Education	Educate the public about extreme temperature risk and safety.	Community	City	$200	Grants	Long term	Will begin
11	Drought	Monitor Water Supply	Regularly monitoring and checking the water supplies.	Community	City	$500	General budget	Long term	Will begin
12	Drought	Education	Educate the community about the importance of conserving water.	Community	City	$200	General budget	Long term	Will begin
13	Thunderstorms	Generator	Purchase backup generators to run city structures and water supply during power outages, and the main priority pump stations.	Community	City	$50,000	Grant/ General budget	1-2 years	Will begin
14	Thunderstorms	Education	Educate residents about how to protect themselves during severe weather with handouts in their monthly water bill.	Community	City	$200	General budget	Long term	Will begin
15	High Winds	Generators	Purchase and install backup generators on important infrastructure and utilities.	Community	City	$50,000	Grant/ General fund	1-2 years	Will begin
16	High Winds	Protect Power Lines	Bury power lines and inspect structures for defects.	Community	Utility Companies	$50,000	Grants/ General fund	4-5 years	Will begin
17	Earthquake	Generators	Using backup generators in different city facilities to provide sheltering for residents and migrated people.	Community	City	$50,000	Grants	3-5 years	Will begin
18	Earthquake	Education	Educating the public on safety techniques during and after an earthquake.	Community	City	$200	General budget	Long term	Will begin

19	Pandemic	Plan	Develop and adopt a city wide plan to deal with a pandemic outbreak.	Community	City	$3,000	Grants/ General budget	1-2 years	Will begin
20	Pandemic	Education	Educate the community of the importance of remaining sanitary and how to prevent the spread of a pandemic virus throughout the community.	Community	City	$1,000	General budget	Long term	Will begin
21	Dam Failure								
22	Dam Failure								

Jurisdictional Mitigation Strategies

University of Arkansas, Fayetteville Mitigation Actions									
Priority	Hazard	Project Title	Description	Who Benefits?	Responsible Agent/Dept.	Cost Estimate	Potential Funding	Time Frame	Status
1	Tornado	Safe Room Identification	Hire a structural engineer to identify safe rooms in all academic buildings	Students, Faculty, Staff	Facilities Management	$20,000	Grants	6 mos. – 1 year	Will begin
2	Tornado	Campus CERT	Create a campus CERT program to respond to incidents. Hire an assistant for leading campus CERT.	Students, Faculty, Staff	Emergency Management	$50,000	University One Time Use Funds	6 months	Will begin
3	Earthquake	Building Safety	Conduct inspections and employ structural engineers rate all campus buildings for what they can withstand	Students, Faculty, Staff	Facilities Management	$30,000	Grants	6 mos. – 1 year	Will begin
4	Earthquake	Campus CERT	Create a campus CERT program to respond to incidents. Hire an assistant for	Students, Faculty, Staff	Emergency Management	$50,000	University One Time Use Funds	6 months	Will begin

			leading campus CERT.						
5	Winter Weather	Generators	Purchase generators and install at the Health Center, Student Union, and Administration building	Students, Faculty, Staff	Facilities Management	$7 million	Grants	1-3 years	Will begin
6	Thunderstorms	Generators	Establish alternate power source by installing generators in Health Center, Student Union, and Administration building	Students, Faculty, Staff	Facilities Management	$7 million	Grants	1-3 years	Will begin
7	Winter Weather	Ice Removal	Purchase proper equipment for ice removal	Students, Faculty, Staff	Facilities Management	$100,000	Grants	3-6 months	Will begin
8	Thunderstorms	Preventative Maintenance	Keep trees trimmed as preventative maintenance	Students, Faculty, Staff	Facilities Management	$15,000	Grants	Long-term	Will begin
8	High Winds	Preventative Maintenance	Keep trees trimmed as preventative maintenance	Students, Faculty, Staff	Facilities Management	$15,000	Grants	Long-term	Will begin
9	Pandemic	Pandemic Training	Train and equip treatment staff	Students, Faculty, Staff	Health Center	$5,000	Grants	6 months	Will begin
			regarding pandemics						
10	Pandemic	Pandemic Awareness	Campus-wide pandemic awareness program in cooperation with Arkansas Department of health and CDC	Students, Faculty, Staff	Health Center	$0	n/a	1-3 months	Will begin
11	High Winds	Radio Tower	Install 2nd radio tower for digital passport system	Students, Faculty, Staff	Campus Police Department	$100,000	Grants	1 year	Will begin
12	Floods	Alternate Routes	Identify alternate routes and purchase alternate vehicles for flooded roadways	Students, Faculty, Staff	Transit and Parking	$250,000 per vehicle	Grants	6 mos. – 1 year	Will begin
13	Wildfire	Wildfire Education	Educate staff, faculty, and researchers on the wildfire dangers	Students, Faculty, Staff	Emergency Management	$4,000	Grants	6 months	Will begin
14	Wildfire	Fire Department Campus Tours	Partner with local fire departments to pre-plan to reduce response and identify	Students, Faculty, Staff	Emergency Management	$0	n/a	3 months	Will begin

			potential wildfire areas						
15	Drought	Water Supply	Ensure self-sustaining water supply on campus farms	Agriculture and Farms	Facilities Management	$30,000	Grants	1-3 years	Will begin
16	Drought	Irrigation on Farms	Purchase equipment to irrigate campus farms	Agriculture and Farms	Facilities Management	$20,000	Grants	1-3 years	Will begin
17	Floods	Sand Stockpile	Stockpile of sand and bags to prevent flooding into buildings	Students, Faculty, Staff	Facilities Management	$500	Grants	6 months	Will begin
18	Extreme Temperatures	Cooling/ Warming Centers	Supply established cooling/ warming center with ice misters and blankets	Students, Faculty, Staff	Emergency Management	$10,000	Budget	6 months	Will begin
19	Extreme Temperatures	Educational Awareness	Provide information on extreme temperatures in athletic programs	Students, Faculty, Staff, Visitors	Athletics	$2,500	Budget	1-3 months	Will begin

Incorporation into Existing Planning Mechanisms

The Hazard Mitigation Plan Evaluation Committee will provide a mechanism for ensuring that the actions identified in the plans are incorporated into ongoing county planning activities.

Washington County currently guides and controls development in the County. It will be responsible for ensuring that mitigation goals, objectives, and strategies are incorporated in all future county planning activities.

There are several planning processes and mechanisms in Washington County that will either use the risk assessment information presented in this document to inform decisions or will integrate the mitigation strategy directly into capital improvement, infrastructure enhancement, training projects, prevention campaigns, and land use and development plans. The following is a list of mechanisms potentially available to each jurisdiction for incorporating the mitigation requirements:

<u>Washington County Mechanisms</u>

- Comprehensive Plan
- Emergency Operations Plan
- Continuity of Operations Plan
- Building Codes and Ordinances
- Departmental Budgets

<u>Jurisdictional Mechanisms</u>

- Transportation Plans
- City Budgets
- Zoning Maps
- Building Codes and Ordinances
- Site Master Plans
- School Districts' Crisis Plans

<u>Hospital District Mechanisms</u>

- Emergency Operations Plan

Annual Budget
Operational Protocols

Agencies and other Organization Mechanisms

State of Arkansas Hazard Mitigation Plan
Annual Budget
Prevention Programs
Training Programs
Long Term Land Use Plans

Participants incorporating the Washington County Hazard Mitigation Plan into their existing plans will set up meetings to discuss which areas in the Washington County Hazard Mitigation Plan pertain to them. After these discussions, each incorporating mechanism will follow their local laws or guidelines necessary for implementation through open forum public meetings. Each incorporating party will monitor the progress of any incorporated mitigation strategies and report the success or failure to the Emergency Operations Council for inclusion in its annual report. After each update of the Washington County Hazard Mitigation Plan, each incorporating participant will be informed of the changes so they can reflect these changes in their plans also.
More specifically, the Washington County Hazard Mitigation Plan will be incorporated into the State of Arkansas Hazard Mitigation Plan. The risk assessment and mitigation strategies will be incorporated into the State Hazard Mitigation Plan during their updating process every three years. Washington County will be incorporating the Washington County Hazard Mitigation Plan into the Washington County Emergency Operations Plan and county land use ordinances and/or plans by following the laws set forth by the county government. This process takes place monthly during regular quorum court meetings.

County will encourage local municipalities to address hazards in their comprehensive plans and land use regulations. The Washington County Planning Department will conduct periodic reviews of the jurisdiction's comprehensive plans and land use policies, analyze any plan amendments, and provide technical assistance to other local municipalities in implementing these requirements.

Plan Revisions

2014 Update

Since the plan was last in place, there has been no new development or conditions that have changed or affected the participating jurisdictions' risk and vulnerability. The soil expansion hazard was removed from this plan update because through lengthy discussion, the planning team decided that there has never been any risks in Washington County due to soil expansion. Other hazards that were not natural hazards such as HazMat, utility failure, cyber, and terrorism were also taken out of the plan as it was discussed by the planning team that FEMA, as of now, only requires that natural hazards be included in the mitigation plan.

The University of Arkansas, Fayetteville was also added as a jurisdiction in this plan update. Risk and capability assessments were completed for the university and that relevant information was incorporated into the plan.

Completed mitigation actions can be found in Appendix C. Any incomplete mitigation actions were incorporated into the mitigation strategies of this updated plan.

Appendix A

Jurisdiction	Nature of Participation/Involvement
Unincorporated Washington County Director of Emergency Management John Luther 105 N. Mill Avenue Fayetteville, AR 72701	Washington County staff assisted in planning meetings, coordinating retention of jurisdictional involvement, and represented the unincorporated areas of the county. Received invitation to updating meeting held March 26, 2013. Completed Capability and Vulnerability Assessment in coordination with Washington County and Arkansas Tech University.
City of Elkins Mayor Bruce Ledford 1874 Stockenbury Rd Elkins, AR 72727	Received invitation to updating meeting held March 26, 2013. Completed Capability and Vulnerability Assessment in coordination with Washington County and Arkansas Tech University.
City of Elm Springs Mayor Ben Wall P.O. Box 74 Elm Springs, AR 72728	Received invitation to updating meeting held March 26, 2013. Completed Capability and Vulnerability Assessment in coordination with Washington County and Arkansas Tech University.
City of Farmington Mayor Ernie L. Penn, Jr. 113 W. Mountain Fayetteville, AR 72701	Received invitation to updating meeting held March 26, 2013. Completed Capability in coordination with Washington County and Arkansas Tech University.
City of Fayetteville Mayor Lioneld Jordan 113 W. Mountain Fayetteville, AR 72701	Received invitation to updating meeting held March 26, 2013. Attended updating meeting and completed Capability and Vulnerability Assessment in coordination with Washington County and Arkansas Tech University.
City of Goshen Mayor Joe Benson P.O. Box 7 Goshen, AR 72735	Received invitation to updating meeting held March 26, 2013. Completed Capability and Vulnerability Assessment in coordination with Washington County and Arkansas Tech University.
City of Greenland Mayor Bill Groom	Received invitation to updating meeting held March 26, 2013. Completed Capability in coordination with Washington County and

P.O. Box 67 Greenland, AR 72737	Arkansas Tech University.
City of Johnson Mayor Buddy Curry P.O. Box 563 Johnson, AR 72741	Received invitation to updating meeting held March 26, 2013. Completed Capability and Vulnerability Assessment in coordination with Washington County and Arkansas Tech University.
City of Lincoln Mayor Rob Hulse P.O. Box 967 Lincoln, AR 72744	Received invitation to updating meeting held March 26, 2013. Completed Capability in coordination with Washington County and Arkansas Tech University.
City of Prairie Grove Mayor Sonny Hudson P.O. Box 944 Prairie Grove, AR 72753	Received invitation to updating meeting held March 26, 2013. Completed Capability in coordination with Washington County and Arkansas Tech University.
City of Springdale Mayor Doug Sprouse 201 N. Spring St. Springdale, AR 72764	Received invitation to updating meeting held March 26, 2013. Attended updating meeting and completed Capability in coordination with Washington County and Arkansas Tech University.
City of Tontitown Mayor Jack Bedford P.O. Box 305 Tontitown, AR 72770	Received invitation to updating meeting held March 26, 2013. Completed Capability in coordination with Washington County and Arkansas Tech University.
City of West Fork Mayor Frances Hime P.O. Box 339 West Fork, AR 72774	Received invitation to updating meeting held March 26, 2013. Completed Capability and Vulnerability Assessment in coordination with Washington County and Arkansas Tech University.
City of Winslow Mayor Randy Jarnagan 108 N. Winslow Blvd Winslow, AR 72959	Received invitation to updating meeting held March 26, 2013. Completed Capability in coordination with Washington County and Arkansas Tech University.

Elkins School District Superintendent Witonski P.O. Box 322 Elkins, AR 72727	Received invitation to updating meeting held March 26, 2013Completed Vulnerability Assessment in coordination with Washington County and Arkansas Tech University.
Farmington School District Superintendent Law 42 S. Double Spring Rd. Farmington, AR 72730	Received invitation to updating meeting held March 26, 2013. Completed Vulnerability Assessment in coordination with Washington County and Arkansas Tech University.
Fayetteville School District Superintendent Thomas P.O. Box 849 Fayetteville, AR 72702	Received invitation to updating meeting held March 26, 2013. Attended updating meeting in coordination with Washington County and Arkansas Tech University.
Greenland School District Superintendent Cudney P.O. Box 57 Greenland, AR 72737	Received invitation to updating meeting held March 26, 2013. Completed Vulnerability Assessment in coordination with Washington County and Arkansas Tech University.
Lincoln School District Superintendent Hendrix P.O. Box 1127 Lincoln, AR 72744	Received invitation to updating meeting held March 26, 2013. Attended updating meeting in coordination with Washington County and Arkansas Tech University.
Prairie Grove School District Superintendent Williams 110 School Street Prairie Grove, AR 72753	Received invitation to updating meeting held March 26, 2013. Attended updating meeting and completed Vulnerability Assessment in coordination with Washington County and Arkansas Tech University.
Springdale School District Superintendent Rollins	Received invitation to updating meeting held March 26, 2013. Completed Vulnerability Assessment in coordination with Washington

804 W. Johnson Ave Springdale, AR 72764	County and Arkansas Tech University.
West Fork School District Superintendent Karnes 359 School Ave West Fork, AR 72774	Received invitation to updating meeting held March 26, 2013. Completed Vulnerability Assessment in coordination with Washington County and Arkansas Tech University.

Marilyn Edwards
County Judge

John Luther
Director

WASHINGTON COUNTY, ARKANSAS

Department of Emergency Management

Homeland Security

February 28, 2013

Mayor Bruce Ledford
1874 Stockenbury Rd
Elkins, AR 72727

Dear Mayor,

You are receiving this letter because your city was previously included in a county wide Hazard Mitigation Plan that was created in 2008. The plan must be revised by 2014 to meet the Arkansas Department of Emergency Management and Federal Emergency Management Agency's requirements to be eligible for mitigation funding. The county has contracted with the Center for Preparedness and Recovery at Arkansas Tech University in Russellville Arkansas to update and revise the plan. Funding for the plan update and revision has been made available by Washington County. We would like for you to remain a part of the county wide Hazard Mitigation Plan. If you would like to be excluded from the revised mitigation plan please notify our office. You can simply request that your city be excluded from the new plan. However, if you choose to be excluded please remember that you may not be eligible for state and/or federal mitigation funding in the future.

There will be a Hazard Mitigation Kick off meeting March 26 in the Washington County Courthouse. The meeting will be open for you to stop by between the hours of 3:00 pm and 8:00 pm. If you have any concerns or if you would like any additional information please contact our office at (479) 444-1722.

Sincerely,

John Luther

105 N. Mill Ave • Fayetteville, Arkansas 72701
Telephone: (479) 444-1722 • Fax: (479) 973-8726
jluther@co.washington.ar.us

Arkansas Democrat Gazette

STATEMENT OF LEGAL ADVERTISING

ATU/CENTER FOR PREPAREDNESS
402 W O DEAN HALL ROM 110 ST
RUSSELLVILLE AR 72801

ATTN: Heather Franks

DATE : 03/24/13 INVOICE #: 2819601
ACCT #: L6007735 P.O. #:

REMIT TO:
ARKANSAS DEMOCRAT-GAZETTE, IN
P.O. BOX 2221
LITTLE ROCK, AR 72203

BILLING QUESTIONS CALL 378-38

STATE OF ARKANSAS, }
COUNTY OF PULASKI, } ss.

I, Elizabeth Myers do solemnly swear that I am the Legal Billing Clerk of the 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 in 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.

DATE	DAY	LINAGE	RATE	DATE	DAY	LINAGE	RATE
03/15	Fri	49	1.25				
03/16	Sat	49	1.25				
03/17	Sun	49	1.45				
03/22	Fri	49	1.25				
03/23	Sat	49	1.25				
03/24	Sun	49	1.45				

TOTAL COST ---------- 387.10
Billing Ad #: 71877414

Subscribed and sworn to me this 25 day of March, 20 13

Notary Public

OFFICIAL SEAL - # 12381354
BENNIE J. FULLER
NOTARY PUBLIC - ARKANSAS
PULASKI COUNTY
MY COMMISSION EXPIRES: 3-21-2021

AD COPY

WASHINGTON COUNTY MITIGATION PLAN TO BE UPDATED

Washington County will begin updating the County Hazard Mitigation Plan with a public meeting to be held at 5:00pm on March 26th at the Washington County Courthouse at 250 N. College Ave Northeast Conference Room 5B floor. There will be a presentation at 5:00 followed by time for questions and comments until 6:00 pm. The Disaster Mitigation Act of 2000 (DMA 2000) requires local governments to prepare and adopt hazard mitigation plans as a condition of receiving Hazard Mitigation Grant Program (HMGP) project grants and other forms of non-emergency disaster assistance. The current Hazard Mitigation Plan is available for review at http://www.co.washington.ar.us/index.aspx?page=665. The plan is being updated to reflect the current hazards to the county and to continue fulfilling the requirements for the HMGP. Any residents of Washington County or neighboring communities are invited to attend the meeting on March 26th at 5pm. For more information, call the Washington County Department of Emergency Management at (479) 444-1722.

71877414/

Washington County LEPC Meeting:
The following are the sign-in sheet, handout, and agenda for the Washington County LEPC Meeting on Tuesday July 23, 2013 at 10:00 am.

Washington County DEM
Sign-In Sheet

Meeting: LEPC
Date: 7/23/13
Time: 10:00am

Name	Email	Contact #
Eric Richter	richter1024@gmail.com	(870)359-4571
Gary Clayton	gary.clayton@georges.inc.com	479-530-8587
Rick Johnson	[illegible]	479-444-[illegible]
Faith Newton	fnewton@atu.edu	870.688.5369
Ann Henry	ann.henry@dh.gov	479-583-5307
Terry Lawson	tlawson1@wregional.com	479-442-3665
Kurt Cypert	cypertphillips@air-evac.com	479-871-2934
Steve Hussison	shussison@centralems.org	479-521-5801
Jim Vaughan	jvaughan@springdale AR.gov	479-751-4510
John C. Luther	[illegible]	479-[illegible]
Mary Alice Semfini	mseraf1@uark.edu	479.575.[illegible]
Frank Douginger	[illegible]	479-841-5[illegible]
Connie Edmonston	cedmonston@ci.fayetteville.ar.us	479-444-3493
Jay Harter	jharter@ci.fayetteville.ar.us	575-8355
Marjette Anderson	manderson@co.washington.ar.us	444-1775

Washington County Hazard Mitigation Plan Update Meeting
Washington County OEM
Tuesday, September 24, 2013

Name	Email	Organization
Rick Johnson	rjohnson@co.washington.ar.us	WCOEM
Clint Jones	cjones@farmcards.org	Farmington Schools
Margette Anderson	manderson@co.washington.ar.us	WCOEM
Nate Whitehead	Nate.whitehead1@yahoo.com	Elkins Fire Dept.
JD DeMotte	jddemotte@elkinsarkansas.gov	Elkins Fire
Kyle S. Curry	kcurry@ci.fayetteville.ar.us	Fayetteville FD
Daryl Pemberton	dpemberton@co.washington.ar.us	WC 911
Don Cryder	doncryder@elkins.ar.gov	Elkins Planning
Charles Cudney	ccudney@greenlandsd.com	Greenland Schools
Doyle Kuhn	dkuhn@elkinsdistrict.org	Elkins Schools
Buddy Cuery	johnsonmayor@live.com	Johnson
Gerald Russell		Johnson
Shawn Witt	Shawn.witt@pgtigers.org	Prairie Grove Schools
Faith Newton	fnewton@atu.edu	ATU CFPR
Aaron Evans	aevans7@atu.edu	ATU CFPR
Frances Hupe	mayor@westforkar.gov	City of West Fork
Ben Wall	mayor@elmsprings.net	City of Elm Springs
Gary Compton	gcompton@sdale.org	Springdale Schools
Karen Beeks	Kbeeks@co.washington.ar.us	Washington County
Marilyn Edwards	medwards@co.washington.ar.us	Washington County
David Edwards	Goshen marshal@SBCglobal.net	City of Goshen
John Karnes	jkarnes@wffigers.org	Sup't. - West Fork S.D.
John C. Luther	jluther@co.washington.ar.us	W.C. DEM

Washington County Hazard Mitigation Strategies Meeting Tuesday November 19, 2013 Washington County DEM EOC - Planning Committee			
Name	Organization	E-mail	Signature
John Luther	WCDEM	jluther@co.washington.aru.us	
Rick Johnson	WCDEM	rjohnson@co.washington.aru.us	
Dan Short	WC Judge's Office	dshort@co.washington.ar.us	
Wayne Blankenship	WC Grant's Coordinator	wblankenship@co.washington.ar.us	
David Tate	Fayetteville	david.tate@fayar.net	
David Dayringer	Fayetteville	ddayringer@fayetteville-ar.gov	
Mike Irwin	Springdale	mirwin@springdale.gov	✓ Kain McDonald on behalf of Chief Ir
Marqette Anderson	WCDEM	manderson@co.washington.ar.us	
Faith Newton	ATUCFPR	fnewton@atu.edu	
JO Bailey	ATUCFPR	jbailey10@atu.edu	
Aaren Kirkwood	ATUCFPR	aevans7@atu.edu	

Washington County Hazard Mitigation Public Survey:
The following is the public notice and link for the survey and a copy of the survey.

Public Survey Available through the Washington County Website

Arkansas Tech University Center for Preparedness and Recovery is facilitating the update of the Washington County Hazard Mitigation Plan. This plan when updated, will provide strategies to guide the county in mitigating hazards that pose a threat to the community. Your thoughts and ideas for the plan and potential hazards, are a valuable addition to overall planning activities. Would you please take a few minutes to answer the questions below? All responses will be anonymous and confidential. Results will only be reported in the aggregate as part of the plan structure.

Please select your jurisdiction from the list below. You may only select one jurisdiction for each survey completed. If you belong to more than one jurisdiction in this list, please complete multiple surveys.

1. Washington County
2. City of Elkins
3. City of Elm Springs
4. City of Farmington
5. City of Fayetteville
6. City of Goshen
7. City of Greenland
8. City of Johnson
9. City of Lincoln
10. City of Prairie Grove
11. City of Springdale
12. City of Tontitown
13. City of West Fork
14. City of Winslow
15. Elkins School District
16. Farmington School District
17. Fayetteville School District
18. Greenland School District
19. Lincoln School District
20. Prairie Grove School District
21. Springdale School District
22. West Fork School District

How long have you been a resident in this jurisdiction?

Have you ever experienced a natural disaster? Check all that apply.

1. Tornado
2. Severe Winter Storm
3. Flood
4. Severe Thunderstorm
5. High Wind
6. Wildfire
7. Severe Hailstorm
8. Drought
9. Extreme Heat
10. Landslide
11. Earthquake

Have you ever experienced a man-made disaster? Check all that apply.

1. Dam Failure
2. Utility Failure
3. SEFOR Problems
4. HazMat
5. Active Shooter
6. Cyber Attack
7. Terrorism
8. Pandemic
9. Structure Collapse
10. Air/Water Pollution
11. Financial Issues
12. Economic Issues
13. Communication Failures

Are there any other hazards that you believe should be considered?

Rank the following natural hazards from unlikely to catastrophic.

	Unlikely	Possible	Damaging	Catastrophic
Tornado	☐	☐	☐	☐
Severe Winter Storm	☐	☐	☐	☐
Flood	☐	☐	☐	☐
Severe Thunderstorm	☐	☐	☐	☐
High Wind	☐	☐	☐	☐
Wildfire	☐	☐	☐	☐
Severe Hailstorm	☐	☐	☐	☐
Drought	☐	☐	☐	☐
Extreme Heat	☐	☐	☐	☐
Landslide	☐	☐	☐	☐
Earthquake	☐	☐	☐	☐

Rank the following manmade hazards from unlikely to catastrophic.

	Unlikely	Possible	Damaging	Catastrophic
Dam Failure	❑	❑	❑	❑
Utility Failure	❑	❑	❑	❑
SEFOR Problems	❑	❑	❑	❑
HazMat	❑	❑	❑	❑
Active Shooter	❑	❑	❑	❑
Cyber Attack	❑	❑	❑	❑
Terrorism	❑	❑	❑	❑
Pandemic	❑	❑	❑	❑
Structure Collapse	❑	❑	❑	❑
Air/Water Pollution	❑	❑	❑	❑
Financial Issues	❑	❑	❑	❑
Economic Issues	❑	❑	❑	❑
Communication Failures	❑	❑	❑	❑

Rank the following preventative activities on a scale of 1 to 10 with 1 being unimportant and 10 being extremely important.

- Planning _____
- Upgrade building infrastructure _____
- Educational campaigns _____
- Preparation activities _____
- Community training _____
- Purchasing equipment _____
- Specialized equipment _____
- Developing shelters _____
- Warning systems _____

Additional comments on any other issue that the Washington County Hazard Mitigation Planning Committee should consider in developing a strategy to reduce further losses caused by hazard events.

HAZARD MITIGATION MEETING

SIGN-IN SHEET

Wednesday, September 17, 2014

Name	Town/School	Time In	Time Out / Title	Email
Rick Johnson	Washington County			rjohnson@co.washington.ar.us
Margette Anderson	Washington County	9:00am		manderson@co.washington.ar.
Brian Kendall	ATU	9:30AM		bKendall1@atu.edu
Tina Phoutharong	ATU	9:30 AM		tphoutharong@atu.e
Kandace McDaniel	ATU	9:30AM		kmcdaniel4@atu.edu
Clayton Frazier	ATU	9:30		CFrazier2@atu.edu
Debbie Kunz	Elkins SD	9:45	Technology Director	dkunz@elkinsdistric
DAVID TATE	Fayetteville School	9:45	Physical Plant Services	David.Tate@fayar.net
Melissa McCarville	Farmington	9:50	City Business Manager	melissamccarville@cityoffa ar.
Matt Mills	U of A	0950	Captain UA PD	mrmills@uark.edu
Larry Oelrich	Prairie Grove	9:55	City Manager	pgwater@pgtc.com
Val Woods	" " School	9:55	Super.	val.woods@pgti
Marilyn Edwards	Co. Judge	9:55		
Bryan Law	Farmington Superintendent	9:55		blaw@farmingtonsd.o
[illegible]	Lincoln	10:10	IT/Field Engineering	ISD@lincolnarkansas.c
John C. Luther	Wash Co. DEM	10:00		JLuther@cowashington.ar.us
Nicole Rea	ATU / Washington Co. DEM			nrea@atu.edu nrea@co.washington.
Sandy Smith	ATU	9:30am		ssmith107@atu.edu

HAZARD MITIGATION MEETING

SIGN-IN SHEET

Wednesday, September 17, 2014

Name	Town/School	Time In	Time Out / Title	Email
MICHAEL E. BARTHOLOMEW	WEST FORK	9:00	Water / Sewer	CITY@WESTFORKAR.GOV
Randy Jarnagan	Mayor Winslow	9:00	Mayor	Winslow City@Centurylin
LOREL HOFFMAN	ELM SPRINGS	9:00	BLD INSP	LHOFFMAN@ELMSPR
Jennifer Oakley	ADEM	2:00		jennifer.oakley@adem.arkansas.gov
Gary Ricker	Greenland	0900	Chief of Police	GGRicker@Greenland-AR.com
David Deyringer	Fayetteville	0905	Fire Chief	ddeyringer@fayetteville-ar.gov
Jennifer Oakley	ADEM	9:15		jennifer.oakley@adem.arkansas.gov
Sandy Smith	ATU	8:55		ssmith107@atu.edu
Kandace McDaniel	ATU	8:55		kmcdaniel4@atu.edu
Margette Anderson	WC DEM	8:55am		manderson@co.washington.ar.us
Rick Johnson	Washo. DEM	8:55		rjohnson@co.washington.ar.us
Clayton Frazier	ATU	8:55		CFrazier2@atu.edu
Brian Kendall	ATU	8:55		bKendall12@atu.edu
Tina Phouthavong	ATU	8:55		tphouthavong@atu.edu

Washington County Hazard Mitigation Plan Meeting Sign-In Sheet

Monday, October 6, 2014

Name	Jurisdiction	Title	E-mail	Time In	Time Out
Sonny Hudson	Prairie Grove	Mayor		9:20	11:15
Larry Oelrich	Prairie Grove	City Manager		9:20	11:15
Don Cryder	Elkins	planning Admin		9:35	11:15
JD DeMotte	Elkins FD	Fire Chief		9:35	11:15
Debbie Kunz	Elkins Schools	Tech Director		9:45	11:45
Al Ulbrich	Lincoln AR	Tech DIR.		9:45	1:30
Kris Arthur	Tontitown	Police/fire chief		10:00	11:20
JAMES CLARK	TONTITOWN	PUB. WKS. DIR		10:00	11:20
Joey McCormick	Tontitown	Police Cpt.		10:00	11:20
MIKE KWIN	SPRINGDALE	FIRE CHIEF		10:55	12:15
DAVID TATE	Fayetteville School	Mkt. Dir		10:55	12:15
Gary Compton	Springdale Schools	Asst Supt	gcompton@sdale.org	11:00	12:15
Lorel Hoffman	ELM SPRINGS	BLDG. INSP.		11:30	12:10

Washington County Hazard Mitigation Plan Meeting Sign-In Sheet

Monday, October 6, 2014

Name	Jurisdiction	Title	E-mail	Time In	Time Out
Ben Wall	Elm Springs	Mayor	mayor@elmsprings[illegible]	11:30	12:10
Melissa McCarnle	Farmington	Business Manager		12:45	2:28
Bryan Law	Farmington	Superintendent	blaw@farmcards.org	12:45	3:15
[illegible] Woods	Prairie Grove	Assist. Supt	volowoods@pgtigers.org	1:00	2:00
Larry Ben	Greenland	Superintendent	lben@greenlandsd.com	1:04	2:10
Rick Gales	Greenland	Facilities	rgales@greenlandsd.com	1:05	2:10
David Edwards	Goshen	Police Chief	goshenmarshal@sbcglobal.net	1:00	2:15
MICHAEL BARTHOLOMEW	WEST FORK	UTILITIES MGR	CITY@WESTFORKAR.GOV	1:30	3:00
Gary Ricker	Greenland	Police chief	GGRicker@Greenland-AR.com	1:30	3:15
John Karnes	West Fork	Supt.	jkarnes@wftigers.org	1:45	3:50
[illegible] Spears	Lincoln	Supt	mspears@lincolnsd.com	3:00	3:50
Wayne Blankenship	WC	GRANT ADMINISTRATOR	WBLANKENSHIP@CO.WASHINGTON.AR.US	2:30	4:00
David Dayringer	City of Fayetteville	Fire Chief	ddayringer@fayetteville-ar.gov	1600	1700

Washington County Hazard Mitigation Plan Meeting Sign-In Sheet

Monday, October 6, 2014

Name	Jurisdiction	Title	E-mail	Time In	Time Out
Kandace McDaniel	ATU	GA	kmcdaniel4@atu.edu	9:15	5:30
Nicole Rea	ATU / Washington County DEM	Intern	nrea@atu.edu	8:00.	5:30
Clayton Frazier	ATU	Graduate Assistant	Cfrazier2@atu.edu	9:15	5:30
Brian Kendall	ATU	G.A.	bKendall1@atu.edu	9:15	5:30
Tina Phouthavong	ATU	Student worker	tphouthavong@atu.edu	9:15	5:30
John Luther	WC DEM	Director	Jluther@co.washington.ar.us	8:00	5:30
Sandy Smith	ATU	Dept Head	ssmith107@atu.edu	9:15	5:30
Rick Johnson	WCDEM	Deputy PIO	rjohnson@co.washington.ar.us	8:00	5:30

Marilyn Edwards
County Judge

JOHN LUTHER
Director

WASHINGTON COUNTY, ARKANSAS

Department of Emergency Management

Homeland Security

September 10, 2014

For Immediate Release

Public Meeting to develop the Hazard Mitigation Plan

Washington County will hold public meetings for updating the County Hazard Mitigation Plan on September 17th at 10:00am, 2:00pm, and 6:00pm at the Washington County Emergency Operations Center at 105 N Mill Ave Fayetteville, AR 72701.

The Disaster Mitigation Act of 2000 requires local governments to prepare and adopt hazard mitigation plans as a condition of receiving Hazard Mitigation Grant Program grants. The plan will be updated to reflect current hazards to the county, its cities and school districts. Any residents of Washington County are encouraged to attend one of the sessions on September 17th.

Representatives from Arkansas Tech University and the Arkansas Department of Emergency Management will be present to answer any questions you might have. For more information, please call the Washington County Department of Emergency Management at (479)444-1722.

105 N. Mill Ave • Fayetteville, Arkansas 72701
Telephone: (479) 444-1722 • Fax: (479) 973-8726
jluther@co.washington.ar.us

Appendix B

Washington County Past Thunderstorm Wind Occurrences								
Year	Month	Day	Time	Magnitude	Fatalities	Injuries	Property Damage	Location
2004	03	04	18:05	61 kts. EG	0	0	10K	West Fork
2004	04	20	22:10	52 kts. EG	0	0	0	Goshen
2004	04	22	18:20	61 kts. EG	0	0	25K	Morrow
2004	07	02	23:35	52 kts. EG	0	0	2K	Goshen
2005	01	12	18:39	61 kts. EG	0	0	0	Goshen
2005	02	21	01:55	61 kts. EG	0	0	1K	Winslow
2005	05	23	01:25	61 kts. EG	0	0	0	Springdale
2005	05	23	01:45	61 kts. EG	0	0	0	West Fork
2005	05	23	04:00	61 kts. EG	0	0	0	Springdale
2005	06	06	15:10	52 kts. EG	0	0	0	Mayfield
2005	06	13	20:40	61 kts. EG	0	0	0	Winslow
2005	07	23	13:45	61 kts. EG	0	0	5K	Prairie Grove
2005	09	28	15:15	61 kts. EG	0	0	2K	Prairie Grove
2005	11	27	17:50	52 kts. EG	0	0	5K	Springdale
2006	05	09	06:45	61 kts. EG	0	0	0	Lincoln
2006	08	14	14:55	52 kts. EG	0	0	0	Morrow
2006	08	15	14:54	61 kts. EG	0	0	0	Lincoln
2006	08	21	13:11	61 kts. EG	0	0	3K	Lincoln
2006	08	21	13:38	61 kts. EG	0	0	5K	Fayetteville
2006	08	21	13:45	61 kts. EG	0	0	1K	Johnson
2006	08	21	13:47	52 kts. EG	0	0	0	Springdale
2006	08	21	14:06	61 kts. EG	0	0	0	Goshen
2006	09	22	20:39	61 kts. EG	0	0	0	Farmington
2006	09	23	04:34	52 kts. EG	0	0	0	Cincinnati
2007	06	01	18:10	52 kts. EG	0	0	0	Tontitown
2007	09	06	04:16	52 kts. EG	0	0	0	Elm Springs
2007	10	17	21:00	52 kts. EG	0	0	0	Tontitown
2007	10	17	21:01	52 kts. EG	0	0	0	Savoy
2007	10	17	21:31	50 kts. EG	0	0	10K	Fayetteville
2008	05	02	03:25	61 kts. EG	0	0	0	Lincoln
2008	05	02	03:40	61 kts. EG	0	0	0	Sonora
2008	05	10	17:42	52 kts. EG	0	0	0	Odell
2008	05	25	14:34	57 kts. EG	0	0	0	Fayetteville

2008	06	15	20:10	61 kts. EG	0	0	0	Sonora
2008	06	15	20:45	61 kts. EG	0	0	0	Prairie Grove
2008	06	15	21:10	61 kts. EG	0	0	0	Evansville
2008	06	15	21:28	52 kts. EG	0	0	0	Strickler
2008	06	22	10:47	52 kts. EG	0	0	2K	Lincoln
2008	07	12	19:15	61 kts. EG	0	0	0	Fayetteville
2008	12	27	10:20	61 kts. EG	0	0	5K	Odell
2009	03	24	10:48	55 kts. EG	0	0	0	Springdale
2009	06	12	11:00	52 kts. EG	0	0	0	Fayetteville
2009	06	12	11:22	61 kts. EG	0	0	0	Farmington
2009	07	27	16:41	52 kts. EG	0	0	0	Farmington
2009	08	05	18:16	61 kts. EG	0	0	0	Wedington
2009	09	21	17:25	52 kts. EG	0	0	0	Lincoln
2009	10	08	18:35	52 kts. EG	0	0	0	Prairie Grove
2009	10	08	18:52	61 kts. EG	0	0	0	Sonora
2010	05	13	05:33	61 kts. EG	0	0	4K	Elm Springs
2010	05	13	05:37	52 kts. EG	0	0	0	Springdale
2010	05	13	13:20	52 kts. EG	0	0	0	Winslow
2010	12	31	06:26	56 kts. EG	0	0	0	Odell
2011	02	27	23:20	61 kts. EG	0	0	0	Fayetteville
2011	04	10	23:30	52 kts. EG	0	0	0	Goshen
2011	05	11	18:20	61 kts. EG	0	0	0	Springdale
2011	05	11	18:25	52 kts. EG	0	0	0	Elm Springs
2011	05	11	18:25	52 kts. EG	0	0	0	Springdale
2011	05	12	17:56	52 kts. EG	0	0	5K	Fayetteville
2011	05	24	23:15	52 kts. EG	0	0	0	Elkins
2011	07	02	16:44	52 kts. EG	0	0	0	Tontitown
2012	02	29	01:21	52 kts. EG	0	0	0	Fayetteville
2012	03	19	21:15	56 kts. EG	0	0	10K	Efay
2012	04	15	09:03	65 kts. EG	0	0	0	Summers
2012	04	15	09:08	52 kts. EG	0	0	0	Lincoln
2012	06	03	15:20	70 kts. EG	0	0	0	West Fork
2012	06	03	15:35	52 kts. EG	0	0	0	Baldwin
2012	06	03	15:40	70 kts. EG	0	0	0	Harris
2012	07	07	13:35	52 kts. EG	0	0	5K	Fayetteville
2012	07	07	13:35	52 kts. EG	0	0	0	Baldwin
2012	07	07	14:05	70 kts. EG	0	0	0	Goshen
2012	07	19	17:40	52 kts. EG	0	0	0	Fayetteville
2012	07	26	13:50	61 kts. EG	0	0	0	Springdale
2012	07	26	14:25	70 kts. EG	0	0	0	Efay
2012	07	26	14:26	70 kts. EG	0	0	0	Mayfield
2012	07	26	14:35	61 kts. EG	0	0	0	Elkins
2012	08	08	11:15	70 kts. EG	0	0	5K	Springdale
2012	09	07	16:23	56 kts. EG	0	0	0	Fayetteville
2012	09	07	16:28	70 kts. EG	0	0	0	Fayetteville
2012	09	07	16:29	70 kts. EG	0	0	0	Baldwin

2012	09	07	16:30	61 kts. EG	0	0	5K	Fayetteville
2012	09	07	16:40	52 kts. EG	0	0	0	Elkins
2012	09	07	16:45	52 kts. EG	0	0	0	Durham
2013	05	09	05:25	51 kts. EG	0	0	0	Fayetteville
2013	05	09	05:31	65 kts. EG	0	0	10K	Elkins
2013	05	09	05:50	70 kts. EG	0	0	0	Elkins
2013	05	20	18:06	56 kts. EG	0	0	20K	Tontitown
2013	05	20	18:13	56 kts. EG	1	0	2K	Springdale
2013	05	20	18:15	60 kts. EG	0	0	0	Springdale
2013	05	20	18:17	61 kts. EG	0	0	0	Springdale
2013	05	20	18:21	61 kts. EG	0	0	0	Wedington
2013	05	20	18:29	75 kts. EG	0	0	15K	Mayfield
2013	05	30	22:00	70 kts. EG	0	0	0	Savoy
2013	06	01	00:39	65 kts. EG	0	0	5K	Elkins
2013	07	10	18:43	57 kts. EG	0	0	5K	Farmington
2013	07	10	18:45	65 kts. EG	0	0	10K	Farmington
2014	04	27	21:34	52 kts. EG	0	0	0	Elkins

Washington County Past Hail Occurrences								
Year	Month	Day	Time	Magnitude	Fatalities	Injuries	Property Damage	Location
2004	03	17	19:10	0.75 in.	0	0	0	Farmington
2004	03	17	19:18	1.00in.	0	0	0	Fayetteville
2004	04	22	17:58	1.00 in.	0	0	0	Lincoln
2004	04	22	18:02	1.75 in.	0	0	0	Canehill
2004	04	22	18:20	1.75 in.	0	0	0	Morrow
2004	04	22	18:45	1.75 in.	0	0	0	Greenland
2004	04	30	22:12	0.75 in.	0	0	0	Fayetteville
2004	04	30	22:30	1.75 in.	0	0	0	Goshen
2004	05	30	13:44	0.75 in.	0	0	0	Winslow
2004	06	02	11:50	0.75 in.	0	0	0	Farmington
2004	06	02	14:42	1.00 in.	0	0	0	Elm Springs
2005	02	21	01:58	1.00 in.	0	0	0	Winslow
2005	03	21	21:45	0.75 in.	0	0	0	West Fork
2005	04	05	19:25	0.75 in.	0	0	0	Cincinnati
2005	07	15	15:35	0.75 in.	0	0	0	Fayetteville
2005	07	23	13:44	0.75 in.	0	0	0	Prairie Grove
2006	01	12	20:10	0.75 in.	0	0	0	Cincinnati
2006	03	09	14:05	0.75 in.	0	0	0	Winslow
2006	03	13	00:50	0.88 in.	0	0	0	Viney Grove
2006	03	13	01:80	0.75 in.	0	0	0	Fayetteville
2006	04	01	18:12	0.75 in.	0	0	0	Odell
2006	04	06	16:02	0.88 in.	0	0	0	Winslow
2006	04	06	19:50	0.88 in.	0	0	0	Winslow
2006	05	02	02:06	0.75 in.	0	0	0	Greenland
2006	08	21	13:47	0.75 in.	0	0	0	Fayetteville
2006	09	22	14:10	0.88 in.	0	0	0	Winslow
2006	09	22	16:29	1.00 in.	0	0	0	Lincoln
2006	09	22	20:39	0.75 in.	0	0	0	Farmington
2006	09	22	21:21	1.75 in.	0	0	0	Lincoln
2007	06	19	19:30	0.75 in.	0	0	0	Lincoln
2008	02	05	14:42	0.75 in.	0	0	0	Greenland
2008	02	05	15:26	0.75 in.	0	0	0	Blackburn
2008	03	14	22:30	1.00 in.	0	0	0	Morrow
2008	03	14	22:38	0.75 in.	0	0	0	Lincoln
2008	03	14	22:55	0.88 in.	0	0	0	Strickler

2008	03	14	22:57	1.00 in.	0	0	0	West Fork
2008	03	31	16:15	0.75 in.	0	0	0	Strickler
2008	04	03	15:10	0.75 in.	0	0	0	Strickler
2008	04	22	13:55	1.00 in.	0	0	0	Prairie Grove
2008	04	22	14:03	2.00 in.	0	0	75K	Farmington
2008	04	22	14:14	1.75 in.	0	0	50K	Prairie Grove
2008	04	22	17:42	0.75 in.	0	0	0	Winslow
2008	04	23	16:30	0.75 in.	0	0	0	Lincoln
2008	04	23	17:13	0. 75 in.	0	0	0	Prairie Grove
2008	04	23	19:06	1.00 in.	0	0	0	Tontitown
2008	05	10	12:04	1.00 in.	0	0	0	Lincoln
2008	05	10	12:10	1.00 in.	0	0	0	Farmington
2008	05	10	12:12	0.75 in.	0	0	0	Fayetteville
2008	05	10	17:08	0.88 in.	0	0	0	Cincinnati
2008	05	25	14:30	1.00 in.	0	0	0	Greenland
2008	05	25	14:55	0.75 in.	0	0	0	Elkins
2008	06	01	04:42	0.88 in.	0	0	0	West Fork
2008	06	01	04:45	1.00 in.	0	0	0	West Fork
2008	06	01	07:02	0.75 in.	0	0	0	Springdale
2008	06	01	09:14	0.75 in.	0	0	0	Greendale
2008	06	01	09:14	0.75 in.	0	0	0	West Fork
2008	06	15	20:10	1.00 in.	0	0	0	Sonora
2008	10	31	7:05	0.75 in.	0	0	0	Springdale
2009	04	09	18:18	1.00 in.	0	0	0	Fayetteville
2009	05	12	16:34	0.75 in.	0	0	0	Prairie Grove
2009	06	12	23:48	0.88 in.	0	0	0	Winslow
2009	06	14	00:41	1.00 in.	0	0	0	Savoy
2009	06	14	00:45	2.50 in.	0	0	100K	Savoy
2009	08	05	17:35	3.00 in.	0	0	500K	Fayetteville
2009	08	05	17:37	0.88 in.	0	0	0	Farmington
2009	08	05	17:53	1.00 in.	0	0	0	Farmington
2009	08	05	18:24	1.75 in.	0	0	25K	Fayetteville
2009	09	21	17:45	0.75 in.	0	0	0	Prairie Grove
2009	09	21	18:05	1.00 in.	0	0	0	West Fork
2010	04	30	14:43	1.75 in.	0	0	0	Prairie Grove
2010	05	10	20:13	1.00 in.	0	0	0	Winslow
2011	04	10	22:00	1.50 in.	0	0	10K	Fayetteville
2011	04	19	15:25	0.75 in.	0	0	0	Fayetteville
2011	04	19	15:36	1.00 in.	0	0	0	Fayetteville
2011	04	19	15:40	1.75 in.	0	0	25K	Fayetteville
2011	04	19	15:45	3.00 in.	0	0	25K	Goshen
2011	04	19	17:11	1.00 in.	0	0	0	Goshen
2011	04	21	12:27	1.75 in.	0	0	25K	Fayetteville
2011	04	21	12:55	1.75 in.	0	0	25K	Fayetteville
2011	04	21	13:00	2.00 in.	0	0	30K	Springdale

2011	04	21	13:00	2.75 in.	0	0	100K	Fayetteville
2011	04	21	13:04	2.00 in.	0	0	30K	Springdale
2011	04	21	13:05	1.00 in.	0	0	0	Fayetteville
2011	04	21	13:05	1.50 in.	0	0	15K	Johnson
2011	04	23	21:54	0.75 in.	0	0	0	Savoy
2011	04	26	17:00	0.88 in.	0	0	0	Elm Springs
2011	04	27	07:33	1.00 in.	0	0	0	Strickler
2011	04	02	17:15	0.88 in.	0	0	0	Fayetteville
2012	06	03	15:28	0.88 in.	0	0	0	Prairie Grove
2012	06	03	16:39	1.00 in.	0	0	0	West Fork
2012	07	26	14:08	1.00 in.	0	0	0	Johnson
2012	07	26	14:17	1.00 in.	0	0	0	Fayetteville
2012	07	26	14:35	0.88 in.	0	0	0	Elkins
2012	08	08	12:00	0.75 in.	0	0	0	Morrow
2012	08	08	12:05	0.75 in.	0	0	0	Clyde
2012	08	08	12:05	0.75 in.	0	0	0	Morrow
2012	08	12	22:32	2.50 in.	0	0	25K	Tontitown
2013	05	30	21:26	1.00 in.	0	0	0	Tontitown
2013	05	30	21:30	1.00 in.	0	0	0	Springdale
2014	03	27	20:50	1.00 in.	0	0	0	Fayetteville
2014	04	03	17:38	1.25 in.	0	0	0	Cincinnati
20014	04	03	18:13	0.88 in.	0	0	0	Springdale

Washington County Past Tornado Occurrences								
Year	Month	Day	Time	Magnitude	Fatalities	Injuries	Property Damage	Location
2004	04	22	18:22	EF1	0	0	0	Strickler
2008	04	10	04:28	EF2	0	0	75K	Evansville
2008	04	10	04:50	EF2	0	0	125k	Black Oak
2008	05	10	12:28	EF0	0	0	0	Elkins
2010	05	13	05:24	EF1	0	0	0	Savoy
2010	12	31	06:08	EF3	4	7	1.5M	Cincinnati
2010	12	31	06:19	EF2	0	0	0	Wedington
2010	12	31	06:23	EF2	0	1	100K	Harmon
2011	05	20	07:20	EF0	0	0	1K	Baldwin
2012	03	19	21:20	EF0	0	0	5K	Efay
2013	01	29	15:34	EF0	0	0	500K	Harris
2013	05	20	17:45	EF1	0	0	100K	Cincinnati

Washington County Past Excessive Heat Occurrences								
Year	Month	Day	Time	Fatalities	Injuries	Property Damage	Crop Damage	Location
2011	08	02	06:00	0	0	0	0	Washington County Zone
2012	07	30	14:30	0	0	0	0	Washington County Zone
2012	08	01	00:00	1	0	0	0	Washington County Zone

Washington County Past Flash Flood Occurrences							
Year	Month	Day	Time	Fatalities	Injuries	Property Damage	Location
2004	04	22	19:45	0	0	7M	Countywide
2004	07	03	2:20	0	0	100K	Countywide
2007	07	05	17:20	0	0	0	Canehill
2007	7	20	18:22	0	0	0	Lincoln
2008	03	03	9:45	0	0	0	Elkins
2008	03	18	8:40	1	0	0	Johnson
2008	03	31	15:00	0	0	0	Springdale
2008	04	10	00:30	0	0	100K	Goshen
2008	04	22	16:00	0	0	0	Morrow
2008	09	03	12:15	0	0	0	Johnson
2008	09	14	01:30	0	0	0	Fayetteville
2009	06	09	23:15	0	0	0	Springdale
2009	08	05	18:30	0	0	0	Farmington
2009	10	08	19:42	0	0	45K	Tontitown
2009	10	29	18:00	0	0	0	West Fork
2010	07	08	10:45	0	0	0	Tontitown
2010	07	08	12:30	0	0	0	Summers
2010	07	12	23:01	0	0	0	Efay
2010	07	13	00:03	0	0	0	Johnson
2010	07	13	01:00	0	0	20K	Wedington
2010	07	13	01:30	0	0	40K	Farmington
2010	07	13	01:30	0	0	0	Fayetteville
2010	07	13	01:30	0	0	0	Springdale
2010	07	15	21:38	0	0	10K	Farmington
2010	07	15	22:00	0	0	10K	Wheeler
2010	07	15	22:28	0	0	5K	Johnson
2010	07	15	23:10	0	0	0	Farmington
2010	07	15	23:30	0	0	0	Fayetteville
2010	09	09	08:00	0	0	0	West Fork
2011	04	23	18:43	0	0	0	Winslow
2011	04	24	20:43	0	0	0	Elm Springs
2011	04	25	00:00	0	0	0	Baldwin
2011	04	25	12:17	0	0	0	Johnson
2011	04	25	13:30	0	0	0	Fayetteville
2011	04	25	13:30	0	0	50K	Lincoln
2011	04	25	14:16	0	0	100K	Fayetteville
2011	04	25	14:18	0	0	0	Winslow
2011	04	25	15:45	0	0	0	Winslow
2011	04	25	16:25	1	0	0	Moffit
2011	05	23	14:14	0	0	0	Prairie Grove
2011	05	23	15:00	0	0	0	Fayetteville
2012	03	19	21:15	0	0	0	Efay
2012	03	19	23:00	0	0	0	Fayetteville
2012	03	19	23:20	0	0	0	Johnson

2012	03	20	02:00	0	0	0	West Fork
2013	04	18	06:00	0	0	0	Johnson
2013	05	10	01:30	0	0	0	Johnson
2013	07	31	01:30	0	0	200K	Johnson
2013	08	08	05:30	0	0	0	Elm Springs
2013	08	08	05:30	0	0	0	Springdale

Washington County Past High Winds Occurrences								
Year	Month	Day	Time	Fatalities	Injuries	Magnitude	Property Damage	Location
2005	11	27	20:19	0	0	52kts.	0	Washington County Zone
2008	01	29	12:48	0	0	52kts.	0	Washington County Zone
2008	09	14	01:30	0	0	52kts.	0	Washington County Zone

Washington County Past Lightning Occurrences								
Year	Month	Day	Time	Fatalities	Injuries	Property Damage	Crop Damage	Location
2006	09	22	16:50	1	1	0	0	Prairie Grove
2011	04	24	18:30	0	0	150K	0	Harmon
2012	08	16	20:30	0	0	150K	0	Goshen
2013	06	05	07:45	0	0	100K	0	Prairie Grove

Washington County Past Winter Weather Occurrences								
Year	Month	Day	Time	Fatalities	Injuries	Property Damage	Crop Damage	Location
2006	02	18	04:30	0	0	0	0	Washington County Zone
2006	11	29	21:00	0	0	0	0	Washington County Zone
2007	01	12	21:00	0	0	0	0	Washington County Zone
2009	12	24	18:00	0	0	0	0	Washington County Zone
2010	01	28	13:00	0	0	0	0	Washington County Zone
2010	02	07	21:00	0	0	0	0	Washington County Zone
2010	03	20	17:00	0	0	0	0	Washington County Zone
2011	01	20	00:00	0	0	0	0	Washington County Zone
2011	02	01	03:00	0	0	0	0	Washington County Zone
2011	02	04	10:00	0	0	0	0	Washington County Zone
2011	02	08	23:00	0	0	0	0	Washington County Zone
2013	02	20	09:00	0	0	0	0	Washington County Zone
2013	12	05	08:00	0	0	0	0	Washington County Zone
2014	01	05	02:00	0	0	0	0	Washington County Zone
2014	03	02	03:00	0	0	0	0	Washington County Zone

Appendix C

Mitigation Action/Project	Associated Objective	Associated Hazard	Cost/Benefit or Economic Considerations	Rationale for Priority	Assigned Priority	Assigned Action Item #	Implementation Jurisdiction	Responsible Agency/ Personnel	Status
Leveraging current hazard mitigation planning, arrange meetings among jurisdictions to identify opportunities for cooperation & coordination.	1.1	Multi-Hazard DF, DR, EH, EQ, ES, FL, HL, HW, LD, TS, TN, WF,WS	Costs minimal. Ultimate costs & benefits will depend on actions identified and undertaken.	Though a rather open-ended endeavor, this is believed to me an important part of ongoing planning process.	High	MH-10	County	County OEM & all jurisdictions in county	Complete
Establish a Web site focused on hazard mitigation.	1.1	Multi-Hazard DF, DR, EH, EQ, ES, FL, HL, HW, LD, TS, TN, WF,WS	Although benefits not readily quantifiable increased information releases to citizens via Web should more than offset costs. Site would provide readily available & convenient means for many citizens to provide input.	Engages and communicates to citizens about county's hazard mitigation plans & projects, though not considered as potentially effective as preceding actions.	High	MH-3	County	County OEM & IT departments, Web design consultant	Complete
Implement at least one mitigation activity that realizes jurisdictional cooperation.	1.2	Multi-Hazard DF, DR, EH, EQ, ES, FL, HL, HW, LD, TS, TN, WF,WS	Cost and benefits not determinable until activity is identified. Cost / Benefit will be determined then.	It is important that jurisdictions commit to working together cooperatively. Need to demonstrate that more can be accomplished jointly than separately.	High	MH-11	County & Involved Jurisdictions	County OEM, involved jurisdictions	Complete
Meet with local Home Builders Association about the benefits and costs of building wind-resistant homes; meet with mobile home dealers regarding proper tie-downs for mobile homes.	2.3	Tornado & High Wind (also addresses new & existing buildings)	If action proves effective in influencing wind-resistant construction, benefits will greatly outweigh public sector's cost; however, additional costs borne by builders & dealers or passed to home-owners may prove unacceptable to the parties.	Low-cost and may realize some concrete results, but as important informs building industry about need for incorporating mitigation measures, highlighting need for stronger building codes.	Very High	T-4	County	County OEM	Complete
Encourage local governments to adopt wind resistant building code requirements relating to wind resistance for home construction & mobile home anchoring.	2.3	Tornado & High Wind	Studies show that considerable wind resistance can be achieved at relatively little extra cost. The potential economic returns would be considerable in the event of damaging tornado or high wind events.	Relatively low-cost after initial staff training with potentially significant benefits in reduced loss of property & life from tornado & high wind.	Very High	T-5	County & city governments in county	County OEM	Complete
Consider installation of additional tornado alert sirens in un- and under-covered areas of county.	2.4	Tornado & High Wind	Cost / Benefit unknown and would need to be determined if action is to be further considered.	County willing to study but most populated areas now covered, cost effectiveness is questionable.	Medium	T-7	County	County OEM	Complete
Meet with local media & selectedbusinesses & public institutionsabout possible improvements to theeffectiveness of winter storm alerts.	3.1	Severe WinterStorm	Cost relatively low and benefitsfrom possible improvements toalerts potentially significant.	Low-cost with potentialto improve stormnotifications. Countywilling to pursue this.	High	WS-1	County	County OEM,local media,selectedbusinesses &publicinstitutions, NationalWeatherBureau	Complete

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Meet with Arkansas State Highway Transportation Department (AHTD) regarding use of transportation "smart technologies" in the event of winter storms & other hazard conditions.	3.2	Severe Winter Storm	Cost / Benefit unknown because project has yet to be well defined.	Low-cost but lacks definitiveness and thus questionable requirements and results.	Medium	WS-2	County, EDD Staff	County OEM, EDD Trans. Plng. Director, AR AHTD	Complete
Establish heating centers or shelters for vulnerable populations, not only for residents, but also for stranded motorists/travelers.	3.3	Severe Winter Storm	Cost of initial inventory low, but cost of securing, maintaining and updating supplies remains to be determined.	Low cost; usually existing today to provide the service	Medium	WS-3	DEM	DEM	Complete
Arrange for floodplain management workshops & training for local jurisdictions to improve program administration & effectiveness and qualifications of managers.	4.1 & 4.2	Flood	Benefits of better administered floodplain programs far outweigh investments of staff time.	Relatively low-cost efforts for potentially significant improvements in NFIP administration and effectiveness.	Very High	F-2	County and cities of Elkins, Elm Springs, Farmington, Fayetteville, Goshen, Greenland, Johnson, Lincoln, Prairie Grove, Springdale, Tontitown, West Fork and Winslow	County OEM/Floodplain Admin., State & area certified trainers, floodplain administrators with respective cities	Complete
Identify & evaluate alternative floodplain management means for small towns lacking personnel for this job through meetings between town officials & county.	4.3	Flood	Better managed floodplain programs would be positive for localities; costs to achieve improvements will have to be determined.	Low-cost and may result in improvements to small towns' management of programs.	High	F-3	County	County OEM / Floodplain Admin., officials of interested small towns	Complete
Conduct professional evaluations relating to vulnerability of county's critical facilities to lightning to achieve identification and possibly implementation of mitigation measures.	5.1 & 5.2	Severe Storms (addresses new & existing critical facilities)	Cost of study should be minimal due to established relationships with professionals. Costs of any mitigation measures yet to be determined so cost / benefit of outcomes not known at this time.	Questionable that investigations will provide any new mitigation measures, but lightning is a serious threat and cost of undertaking action is projected to be low.	Medium	TS-1	County	County OEM & officials responsible for facilities	Complete
Review county records relating to past hail damage to county property, including insurance claims & county costs; identify and determine cost-effectiveness of possible measures to reduce damages, damage costs and insurance premiums costs.	5.1	Severe Storms	Because costs and benefits of this activity are not known at this time, cost/benefit cannot be determined.	Questionable results from a full investigation; county willing to perform initial evaluation to determine whether further consideration is warranted.	Medium	HS-1	County	County OEM	Complete
Determine status of area water utilities' actual and potential interconnectivity between systems and current and potential for back-up supply arrangements in the event of water shortages.	8.1	Severe Drought	Cost / Benefit of outcome not determinable at this time. Economic considerations include interest in and cost of making necessary interconnections versus perceived need for and benefits of backup supplies.	County prepared to commit staff for initial meetings but further consideration appropriately needs to be led by the water utilities.	High	D-1	County & Area Water Utilities	County OEM, staff of water utilities in county	Complete

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For future reference & referral and to determine any gaps in help available, compile list of present resources for persons in area vulnerable to the effects of extreme heat.	9.1	Extreme Heat	Take-off from preceding action if determined feasible. Cost small. Benefits expected are identification of gaps in assistance needed and comprehensive resource list for assistance.	Though few deaths are attributed to heat, it is a very real threat and concern. County is willing to facilitate initial meetings relating to this issue.	High	H-2	County	County OEM, Area Agency on Aging, AR Social Services Office, AHEC, Senior Citizens Centers	Complete
Meet with area health and social agencies to determine nature & severity of extreme heat to people; determine what additional services & assistance are needed.	9.1	Extreme Heat	Cost minimal. Benefits expected are agreement on problems & need relating to issue among agencies.	Though few deaths are attributed to heat, it is a very real threat and concern. County is willing to facilitate initial meetings relating to this issue.	High	H-1	County	County OEM, Area Agency on Aging, AR Social Services Office, AHEC, Senior Citizens Centers	Complete
Identify data limitations, need, source & means to achieve for data sets needed to improve county's hazard mitigation planning and plan maintenance.	11.1	Multi-Hazard DF, DR, EH, EQ, ES, FL, HL, HW, LD, TS, TN, WF,WS	Activities requirements and thus its costs are not yet determinable. Benefits will be better data sets for improved disaster planning & response.	Data needed to improve county's mitigation planning, maintenance & emergency response programs.	Very High	MH-4	County	County OEM	Complete
Identify and implement enhancements to county-wide GIS mapping systems that will improve and facilitate hazard mitigation planning.	11.2	Multi-Hazard DF, DR, EH, EQ, ES, FL, HL, HW, LD, TS, TN, WF,WS	Activities requirements and thus its costs are not yet determinable. Benefits will be better map data for improved disaster planning & response, which is valuable.	Data needed to improve county's mitigation planning, maintenance & emergency response programs.	Very High	MH-5	County OEM	County OEM, County HM Planning Team, GIS staff.	Complete
Identify and acquire reliable and current information relating to existing & new buildings and infrastructure, especially critical facilities, as needed for hazard mitigation planning.	11.3	Multi-Hazard (addresses new & existing buildings & infrastructure) DF, DR, EH, EQ, ES, FL, HL, HW, LD, TS, TN, WF,WS	Using existing staff, cost should be minimal. Better data will significantly improve mitigation planning and disaster response efforts.	Data needed to improve county's mitigation planning, maintenance & emergency response programs.	Very High	MH-6	County and jurisdictions with needed information	County OEM, jurisdictions with critical facilities & other data	Complete
When new critical facilities are being constructed or existing ones remodeled, plan structural designs that are hazard resistant.	12.2	Multi-Hazard (addresses new & existing buildings & infrastructure) DF, DR, EH, EQ, ES, FL, HL, HW, LD, TS, TN, WF,WS	Costs are not determinable until specific buildings are being considered for construction or remodeling. The costs of incorporating mitigation features into new buildings and for some remodeling are relatively minor compared to overall cost of projects. Benefits are proven to be greatly increased hazard resistance.	Relatively low-cost with high potential return. Essential considering high threat of tornados.	Very High	MH-8	County	County OEM, jurisdictions proposing new / remodeled facilities	Complete
Encourage and assist communities in identifying and securing funding for retrofitting and building new hazard resistant critical facilities.	12.3	Multi-Hazard (addresses new & existing buildings & infrastructure) DF, DR, EH, EQ, ES, FL, HL, HW, LD, TS, TN, WF,WS	Costs to notify and assist in securing funding are relatively low, but effort does require commitments to planning & local resources by prospective owners of facilities. Benefits are securing of needed funding to undertake improvements.	Relatively low-cost with high potential return. Essential considering high threat of tornados.	Very High	MH-9	County, EDD, jurisdictions	County OEM, EDD, jurisdictions	Complete

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Appendix D

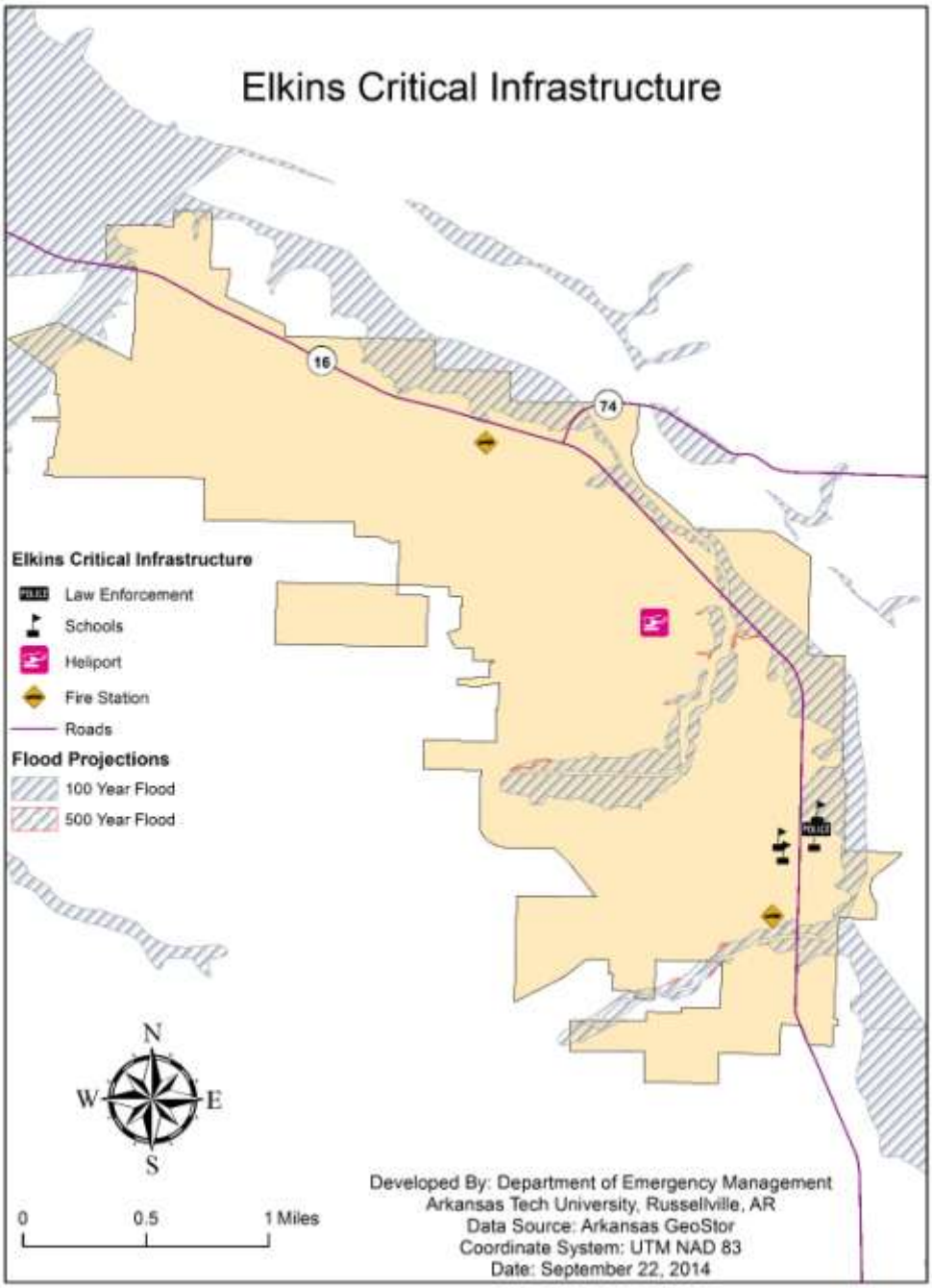
References

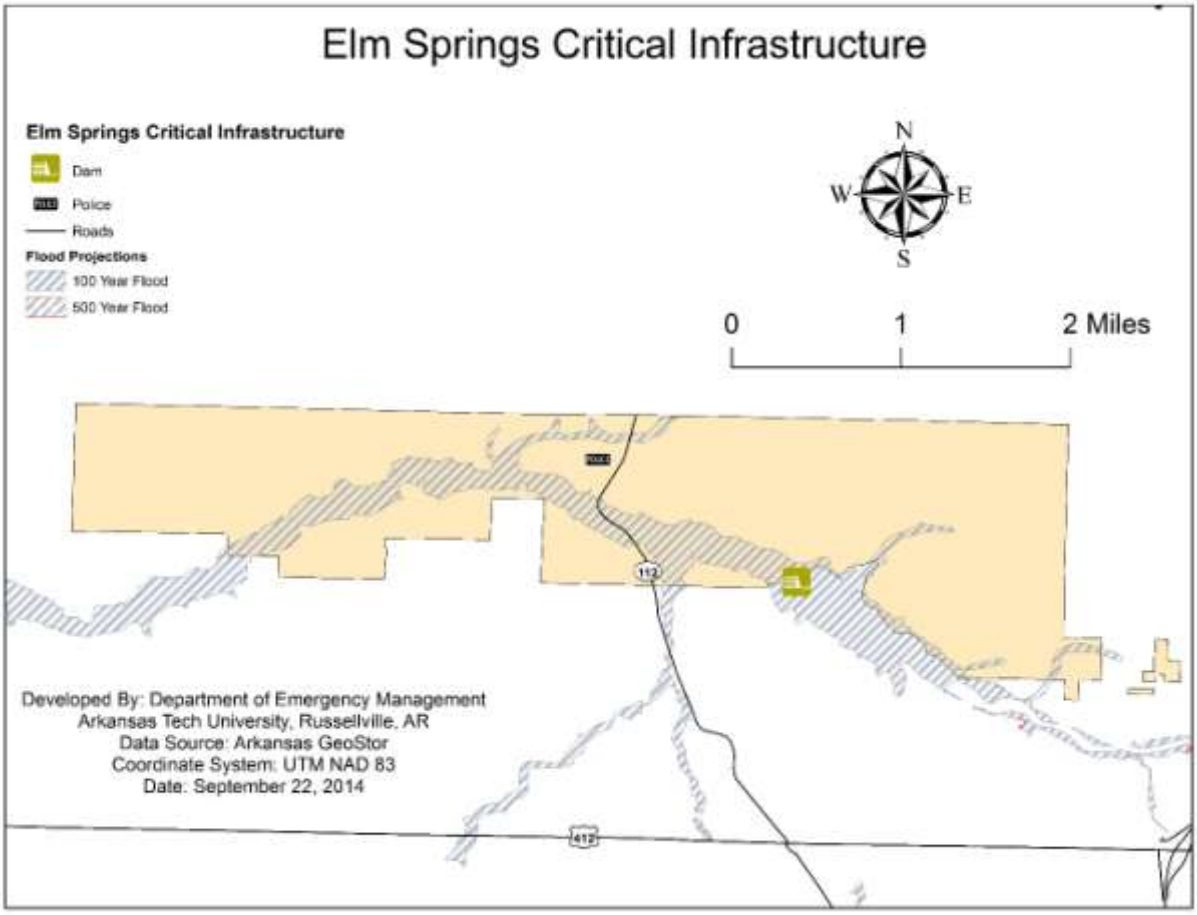
- Arkansas GeoStor
- Arkansas Historic Preservation Program
- City of Elkins website
- City of Elm Springs, AR website
- City of Farmington, AR website
- City of Fayetteville, AR website
- City of Goshen, AR website
- City of Greenland, AR website
- City of Johnson, AR website
- City of Lincoln, AR website
- City of Prairie Grove, AR website
- City of Springdale, AR website
- City of Tontitown, AR website
- City of West Fork, AR website
- City of Winslow, AR website
- ESRI ArcMap 10.0
- Elkins, AR School District website
- Farmington, AR School District website
- Fayetteville, AR Emergency Operations Plan (EOP)
- Fayetteville, AR School District website
- Federal Emergency Management Agency (FEMA)
- FEMA Community Status Book Report
- FEMA GeoDamBreach
- FEMA Local Mitigation Planning Handbook- March 2013
- FEMA Mitigation Ideas- January 2013
- Greenland, AR School District website
- Lincoln, AR School District website
- National Climatic Data Center (NCDC)
- National Climatic Data Center : Storm Events Database
- National Oceanic and Atmospheric Administration (NOAA)
- National Severe Storms Laboratory
- National Weather Service
- National Weather Service Regional Office: Central Region Headquarters
- Prairie Grove, AR School District
- Southern Wildfire Risk Assessment Portal (SouthWRAP)
- Springdale, AR EOP
- Springdale, AR School District website

- Street Maps USA Dataset
- United States Drought Monitor
- U.S. Drought Portal
- United States Geological Survey (USGS)
- University of Arkansas website
- University of North Carolina at Chapel Hill: Beaufort Scale
- Washington County, AR Continuity of Operations Plan (COOP)
- Washington County, AR website
- West Fork, AR School District website

Appendix E

Critical Infrastructure Maps

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Elm Springs Critical Infrastructure
Dam
Police
Roads
Flood Projections
100 Year Flood
500 Year Flood
N
W
E
S
0
1
2 Miles
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412
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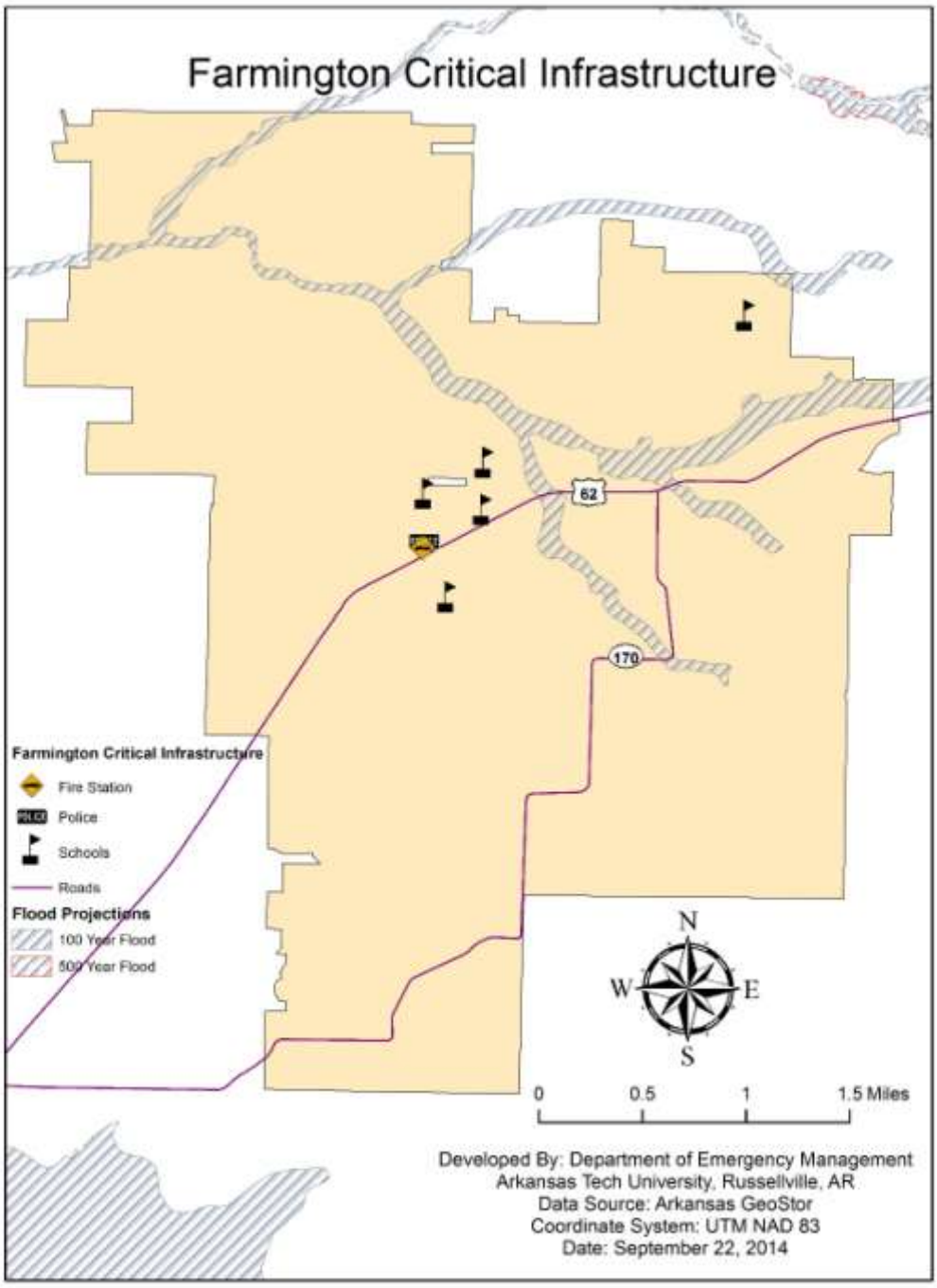
Arkansas Tech University, Russellville, AR
Data Source: Arkansas GeoStor
Coordinate System: UTM NAD 83
Date: September 22, 2014


Farmington Critical Infrastructure
62
170
Farmington Critical Infrastructure
Fire Station
Police
Schools
Roads
Flood Projections
100 Year Flood
500 Year Flood
N
W
E
S
0
0.5
1
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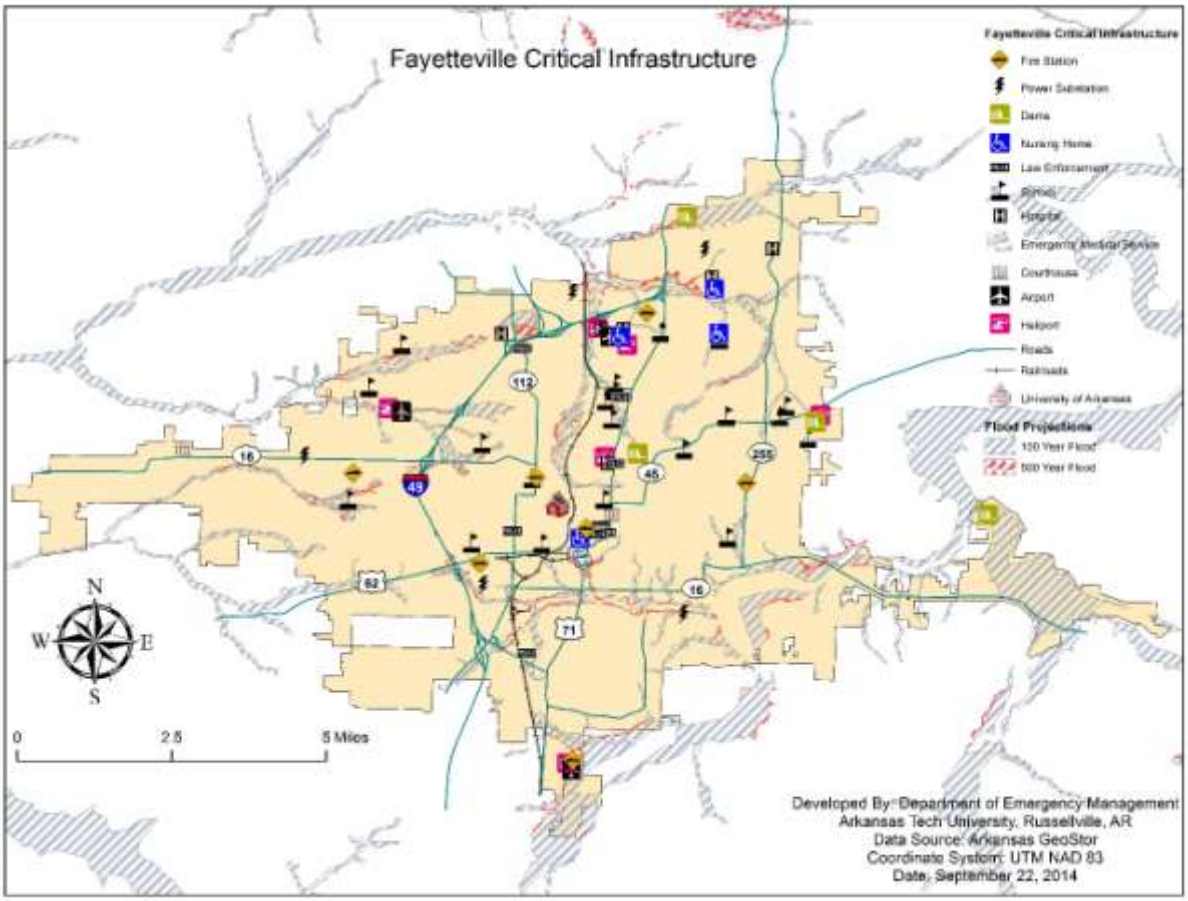
Fayetteville Critical Infrastructure
Fayetteville Critical Infrastructure
Fire Station
Power Substation
Dams
Nursing Home
Law Enforcement
Schools
Hospital
Emergency Medical Service
Courthouses
Airport
Heliport
Roads
Railroads
University of Arkansas
Flood Projections
100 Year Flood
500 Year Flood
N
W
E
S
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2.5
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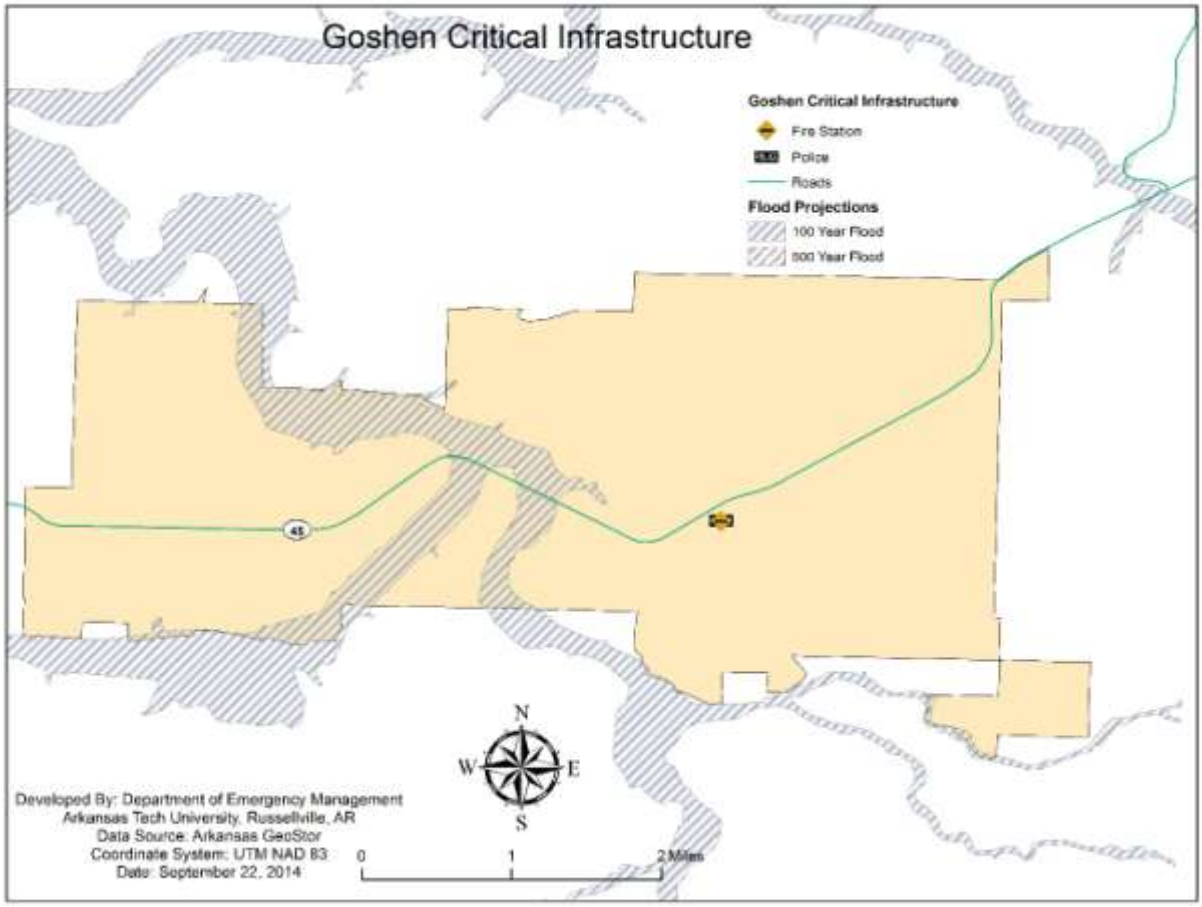
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Fire Station
Police
Roads
Flood Projections
100 Year Flood
500 Year Flood
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N
W
E
S
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Arkansas Tech University, Russellville, AR
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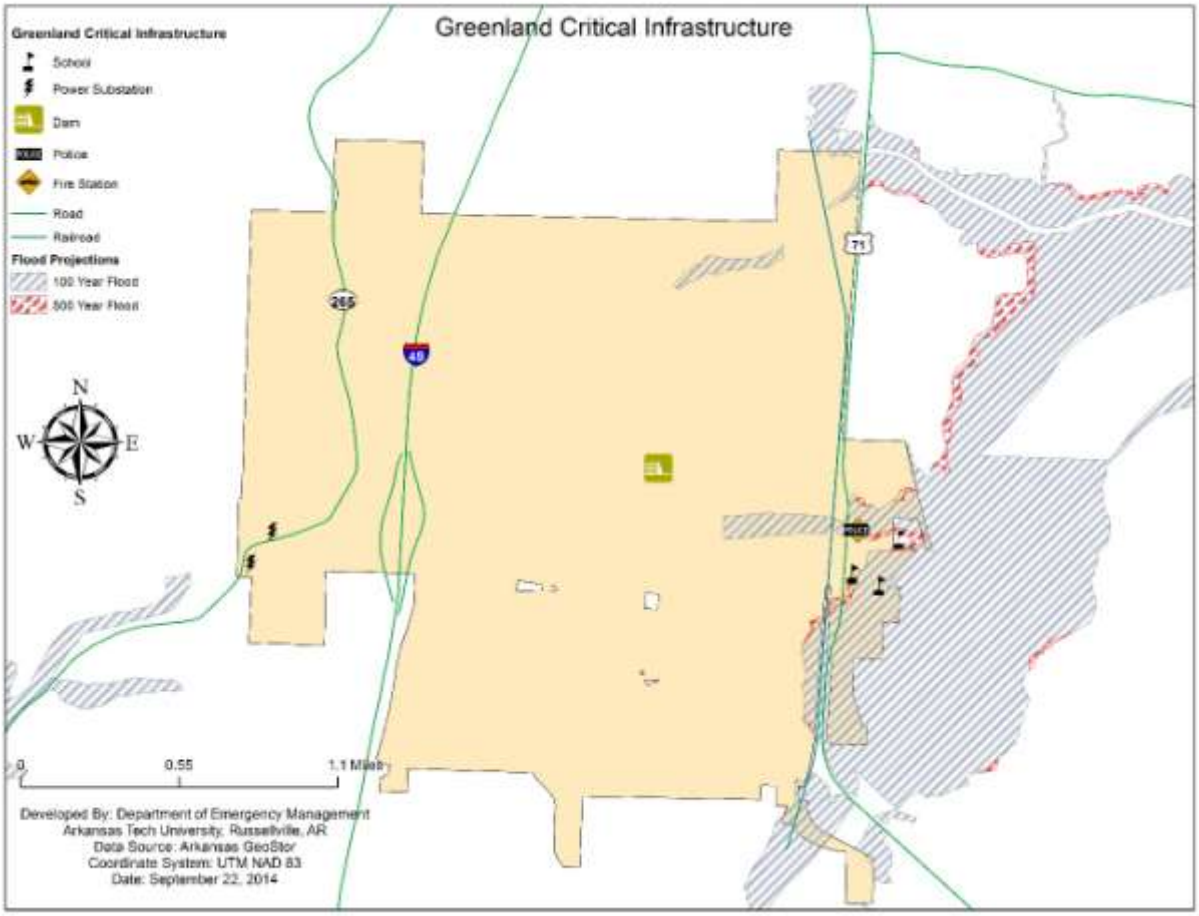
0
1
2 Miles


Greenland Critical Infrastructure
Greenland Critical Infrastructure
School
Power Substation
Dam
Police
Fire Station
Road
Railroad
Flood Projections
100 Year Flood
500 Year Flood
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40
71
N
W
E
S
0
0.55
1.1 Miles
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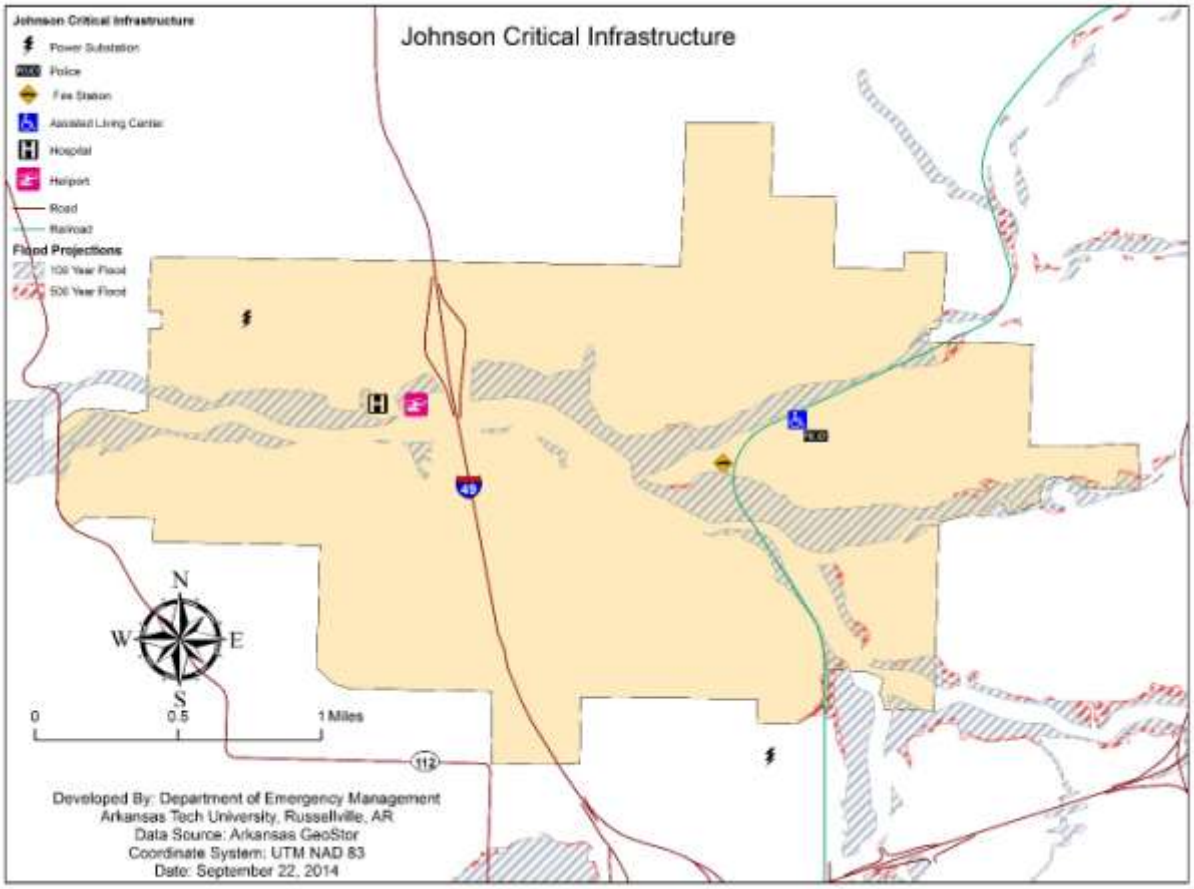
Johnson Critical Infrastructure
Johnson Critical Infrastructure
Power Substation
Police
Fire Station
Assisted Living Center
Hospital
Heliport
Road
Railroad
Flood Projections
100 Year Flood
500 Year Flood
N
W
E
S
0
0.5
1 Miles
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112
Developed By: Department of Emergency Management
Arkansas Tech University, Russellville, AR
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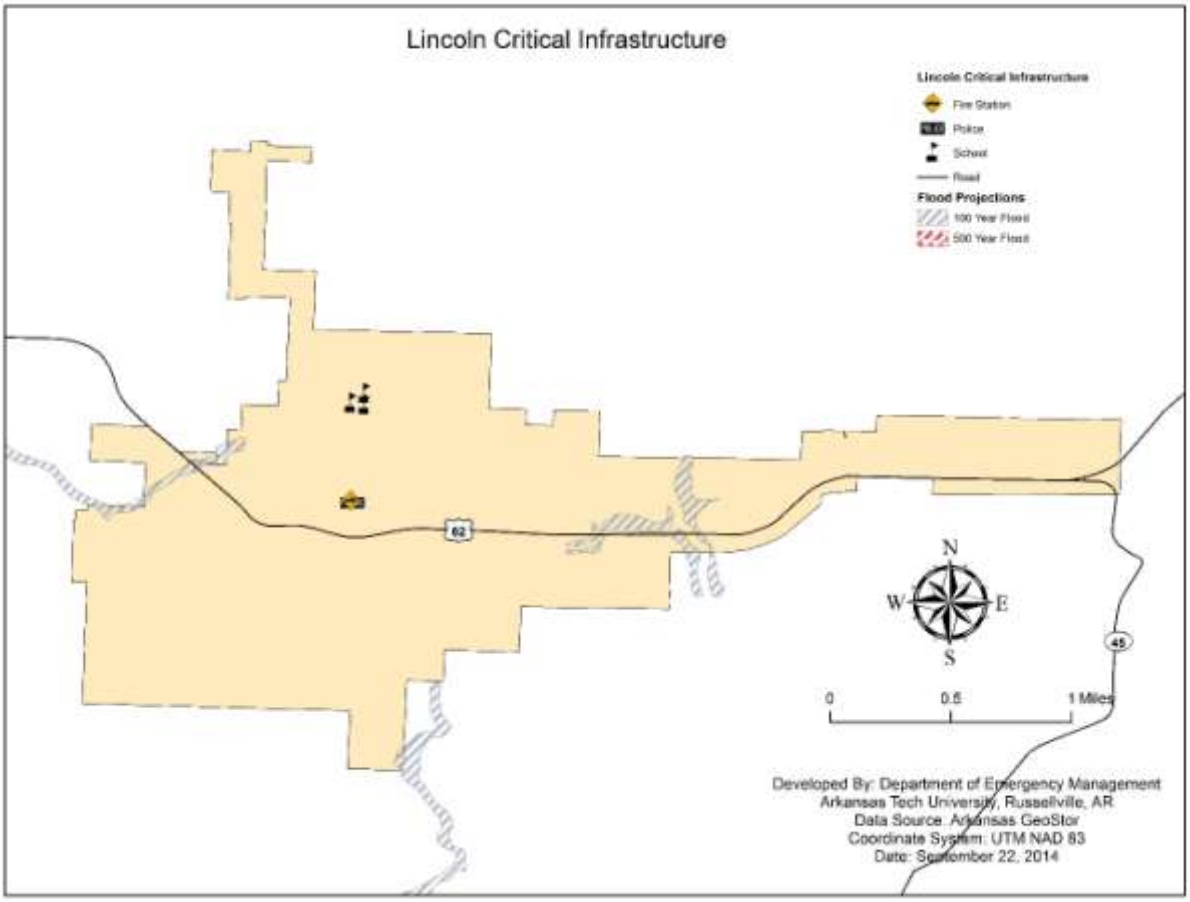
Lincoln Critical Infrastructure
Lincoln Critical Infrastructure
Fire Station
Police
School
Road
Flood Projections
100 Year Flood
500 Year Flood
62
45
N
W
E
S
0
0.5
1 Miles
Developed By: Department of Emergency Management
Arkansas Tech University, Russellville, AR
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Coordinate System: UTM NAD 83
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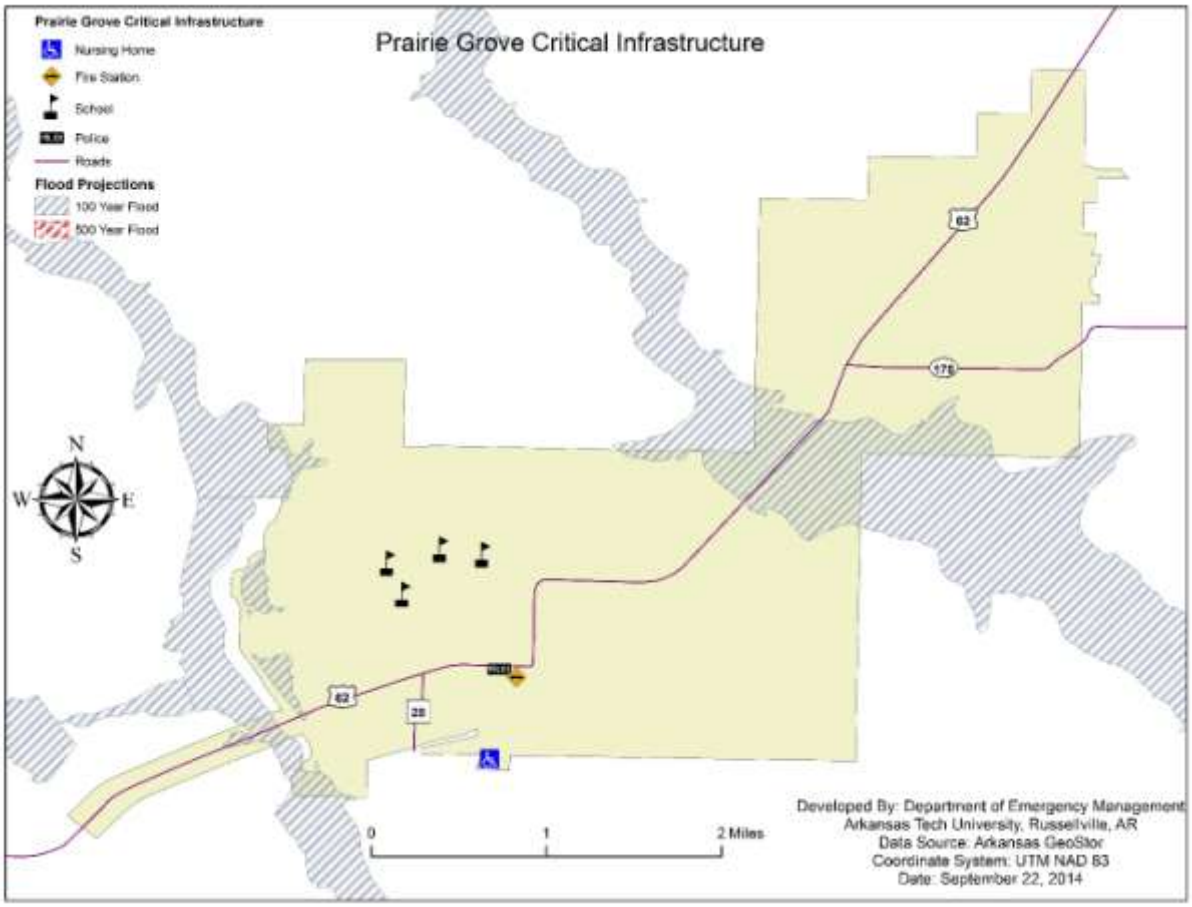
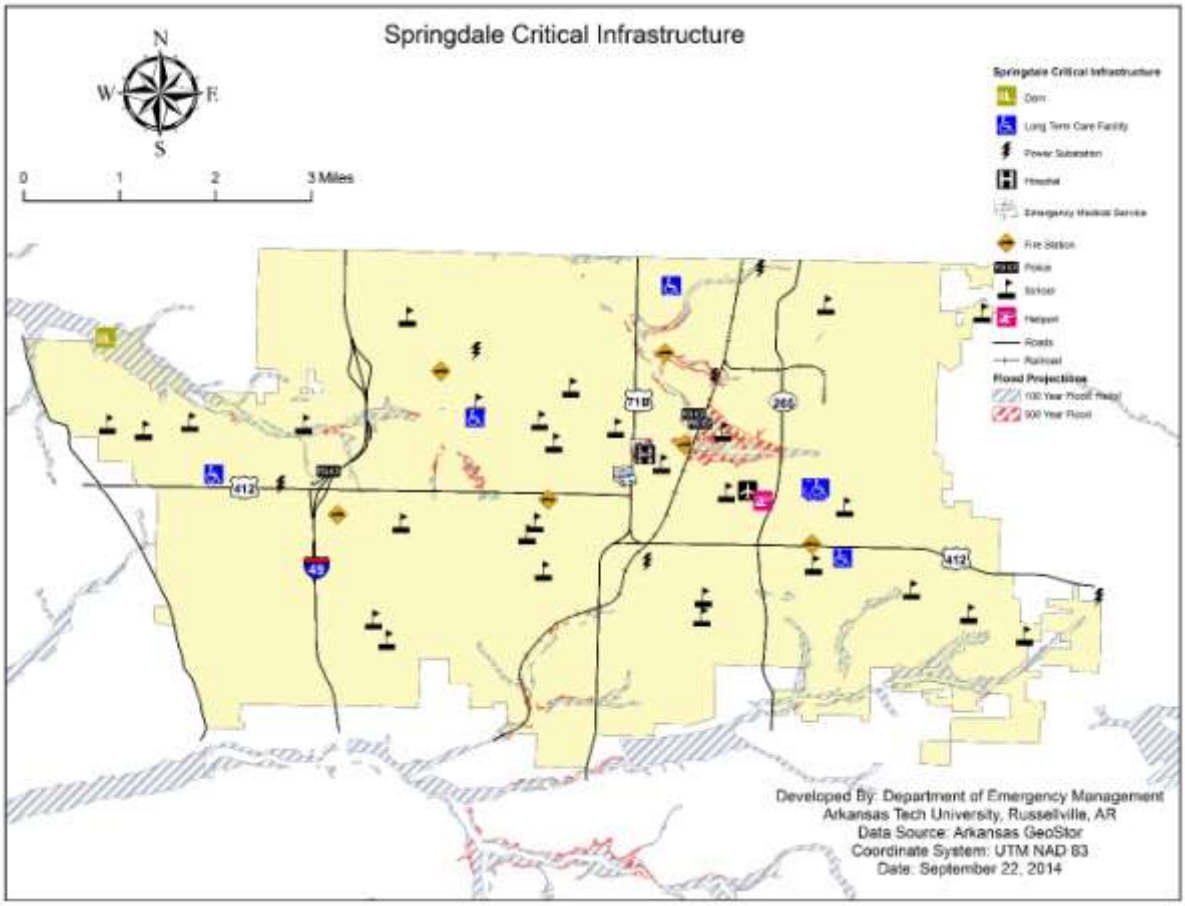
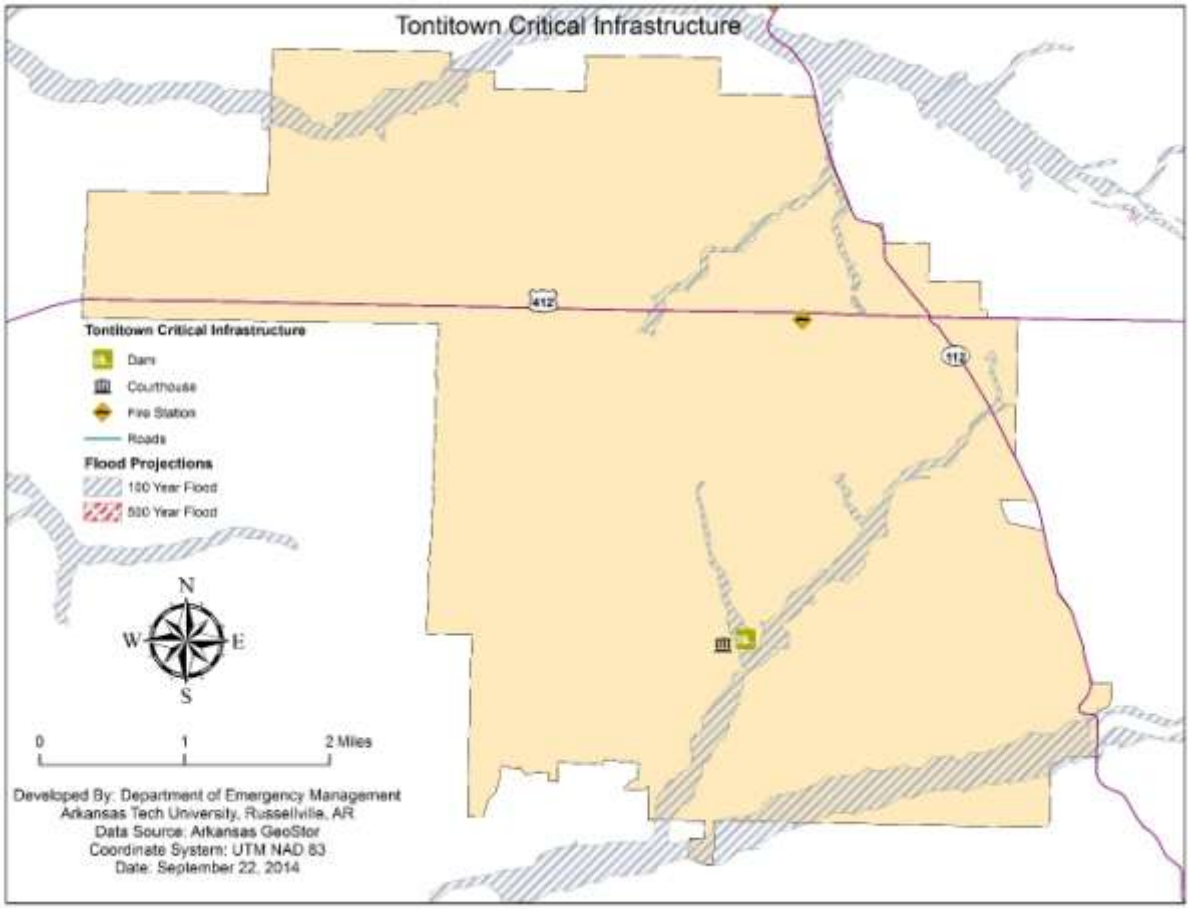
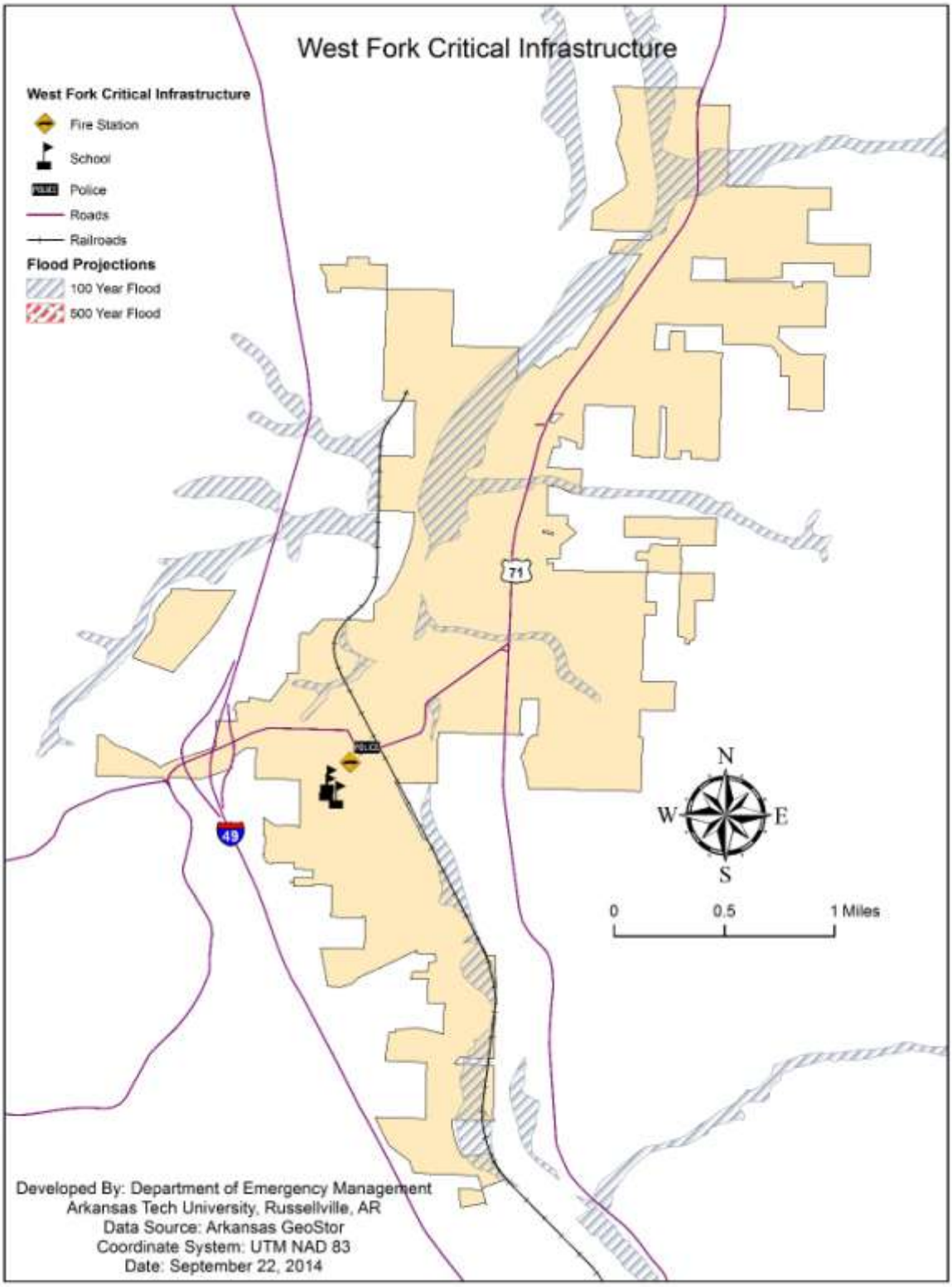

Prairie Grove Critical Infrastructure
Prairie Grove Critical Infrastructure
Nursing Home
Fire Station
School
Police
Roads
Flood Projections
100 Year Flood
500 Year Flood
N
W
E
S
0
1
2 Miles
Developed By: Department of Emergency Management
Arkansas Tech University, Russellville, AR
Data Source: Arkansas GeoStor
Coordinate System: UTM NAD 83
Date: September 22, 2014


Springdale Critical Infrastructure
N
W
E
S
0
1
2
3 Miles
Springdale Critical Infrastructure
Dam
Long Term Care Facility
Power Substation
Hospital
Emergency Medical Service
Fire Station
Police
School
Heliport
Roads
Railroad
Flood Projections
100 Year Flood Plain
500 Year Flood
71B
265
412
49
Developed By: Department of Emergency Management
Arkansas Tech University, Russellville, AR
Data Source: Arkansas GeoStor
Coordinate System: UTM NAD 83
Date: September 22, 2014


Tontitown Critical Infrastructure
412
112
Tontitown Critical Infrastructure
Dam
Courthouse
Fire Station
Roads
Flood Projections
100 Year Flood
500 Year Flood
N
W
E
S
0
1
2 Miles
Developed By: Department of Emergency Management
Arkansas Tech University, Russellville, AR
Data Source: Arkansas GeoStor
Coordinate System: UTM NAD 83
Date: September 22, 2014


West Fork Critical Infrastructure
West Fork Critical Infrastructure
Fire Station
School
Police
Roads
Railroads
Flood Projections
100 Year Flood
500 Year Flood
71
49
N
W
E
S
0
0.5
1 Miles
Developed By: Department of Emergency Management
Arkansas Tech University, Russellville, AR
Data Source: Arkansas GeoStor
Coordinate System: UTM NAD 83
Date: September 22, 2014