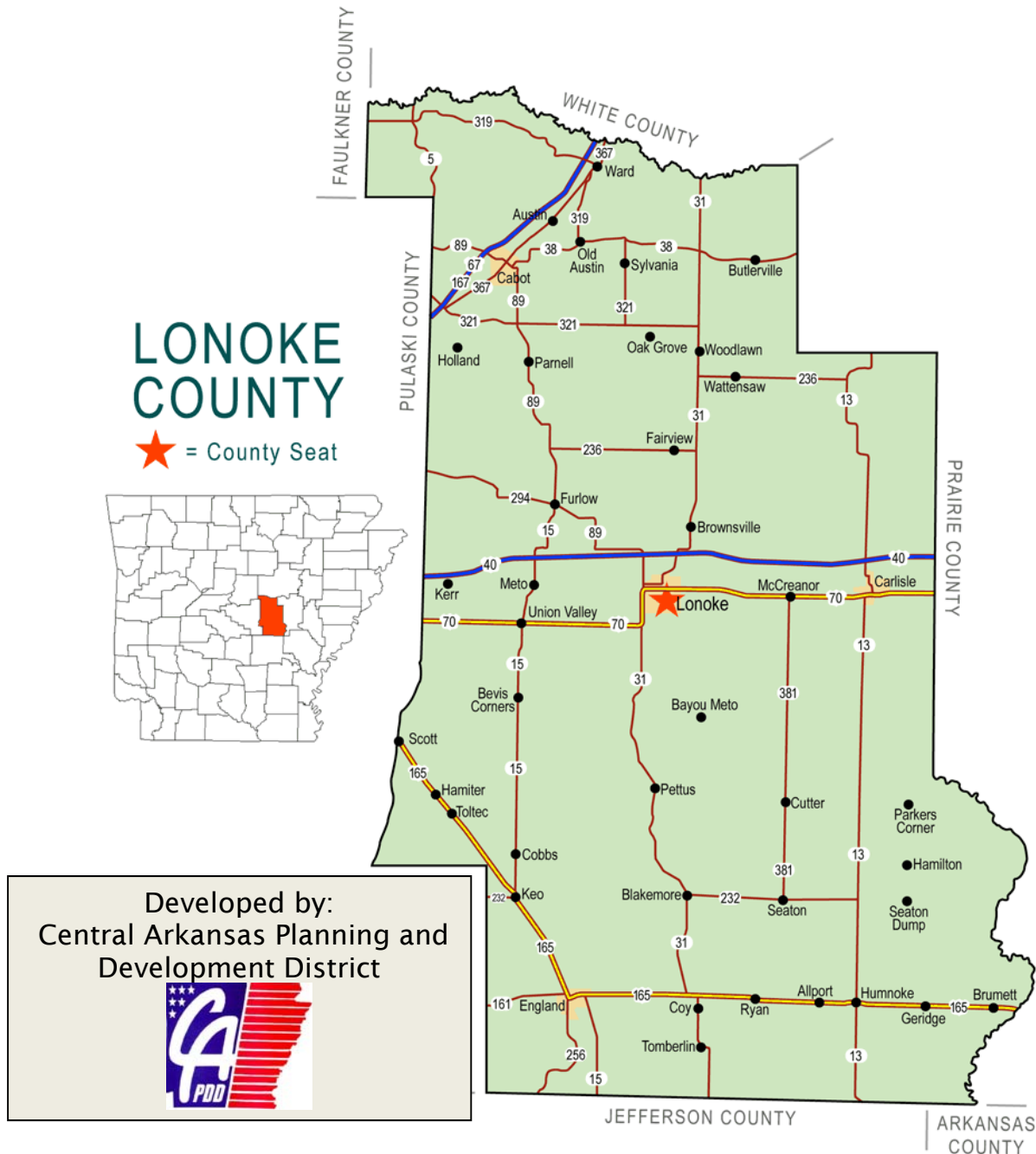


# Lonoke County Hazard Mitigation Plan 2017 Update



Lonoke County | Allport | Austin | Cabot | Carlisle | Coy | England |  
Humnoke | Keo | Lonoke | Ward | Cabot School District | Carlisle  
School District | England School District | Lonoke School District

Draft ~~June 20~~ July 23, 2018

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**RESOLUTION #**

**A RESOLUTION ADOPTING THE LONOKE COUNTY HAZARD MITIGATION PLAN FOR THE CITY/COUNTY/SCHOOL DISTRICT LONOKE COUNTY ARKANSAS.**

**WHEREAS**, certain areas of Lonoke County are subject to periodic flooding and other natural and man-caused hazards with the potential to cause damages to people's properties with the area; and

WHEREAS, the City/County/School District desires to prepare and mitigate for such circumstances; and  
WHEREAS, under the Disaster Mitigation Act of 2000, the United States Federal Emergency Management Agency (FEMA) required that local jurisdictions have in place a FEMA-approved Hazard Mitigation Action Plan as a condition of receipt of certain future Federal mitigation funding after November 1, 2004; and

WHEREAS, to assist cities and counties in meeting this requirement, Lonoke County, with the assistance of Central Arkansas Planning and Development District, has initiated development of County wide, multi-jurisdiction Hazard Mitigation Plan the County and all jurisdictions in the County, specifically the cities and school districts;

NOW, THEREFORE, BE IT RESOLVED BY THE City/Quorum/Board of City/County/School District.

That the City/County/School District, Arkansas adopts those portions of the Plan relating to and protecting its jurisdictional area against all hazards (date) and

Appoints the Emergency Management Director to assure that the Hazard Mitigation Plan be reviewed at least annually and that any needed adjustment to the Hazard Mitigation Plan be developed and presented to the governing board for consideration; and

Agrees to take such other official action as may be reasonably necessary to carry out the objectives of the Hazard Mitigation Plan.

APPROVED and ADOPTED on this \_\_\_\_ day of \_\_\_\_, 2016

APPROVED:

\_\_\_\_\_  
Mayor/Judge/Superintendent

ATTEST:

\_\_\_\_\_  
Secretary

# SECTION 1

## *Planning Process*

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### **1.1 Plan Introduction**

The purpose of the Lonoke County Hazard Mitigation Plan is to provide guidance for hazard mitigation activities in Lonoke County. The Lonoke 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 (“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 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 Lonoke 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.

Lonoke County initiated the Hazard Mitigation planning process by securing a FEMA Pre-Disaster Mitigation (PDM) grant to complete the Plan. Lonoke County hired Central Arkansas Planning and Development District, Inc. (CAPDD) to author the plan. Lonoke County Office of Emergency Management and CAPDD worked together to engage the county, cities, communities and school districts in the planning process.

The Lonoke County Hazard Mitigation Plan is being developed to assess the ongoing natural hazard mitigation activities in Lonoke 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 with a planning area that includes all of unincorporated Lonoke County and the municipalities within the County including the Cities of Allport, Austin, Cabot, Carlisle, Coy, England, Humnoke, Keo, Lonoke, and Ward. This plan also includes the School Districts located in Lonoke County: Cabot, Carlisle, England, and Lonoke School Districts.

Formal adoption and implementation of a hazard mitigation plan presents many benefits to Lonoke County and its residents. By identifying problems and possible solutions in advance of a disaster, Lonoke County, 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 Lonoke County’s eligibility for assistance from FEMA’s Flood Mitigation Assistance (FMA) program. Lonoke 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, Lonoke 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. The priorities of the Lonoke County Hazard Mitigation Plan Update (this plan) remain consistent with the 2008 FEMA approved Lonoke County Hazard Mitigation Plan. This version is a complete rewrite. The priorities of the county have not changed.

#### **1.1.1 Parts of the Plan**

The Lonoke County Hazard Mitigation Plan is divided into sections to address FEMA requirements for a local multi-jurisdictional plan. These sections are:

1. Planning Process
2. Planning Area and Resources
3. Hazard Identification and Risk Assessment
4. Mitigation Strategy
5. Acronyms
6. Plan Adoption
7. Appendix

This plan is multi-jurisdictional with a planning area that includes all of unincorporated Lonoke County and the municipalities within the County including the cities of Allport, Austin, Cabot, Carlisle, Coy, England, Humnoke, Keo, Lonoke, and Ward. This plan also includes the School Districts located in Lonoke County: Cabot, Carlisle, England, and Lonoke School Districts. When referring to “the County,” “the cities” or “all participating cities,” and “the schools/school districts,” it is related to the respective group as a whole.

All jurisdictions listed above actively participated in the planning process from its inception. Each jurisdiction provided a representative to participate on the planning team or if a representative was unable to attend, they chose to be represented by the Lonoke County Office of Emergency Management. Planning team members actively participated in meetings, solicited input from members of their communities, and ensured that all jurisdiction information was reflected in the plan.

### **1.1.2 Involvement of Local Governments**

Lonoke County’s mitigation planning process was initiated in January 2015, when the County, through the efforts of the Lonoke County Office of Emergency Management (LCOEM), was awarded a Pre-Disaster Mitigation Grant Program (PDM) grant by FEMA through ADEM, under Lonoke County Judge Doug Erwin. Lonoke County negotiated a subcontract with Central Arkansas Planning and Development District to facilitate their mitigation planning efforts. Central Arkansas Planning and Development District served as facilitator as well as the Director of the Lonoke County OEM, led the planning effort.

Once all participating cities and school districts for which the Lonoke County OEM is responsible formally agreed to participate, an initial planning team comprised of representatives from Lonoke County and participating jurisdiction was organized. This initial team was instructed to solicit interested persons from their community to participate on the planning team. This solicitation led to the addition of several additional planning team members. The planning team members include representatives from County government, local city governments, public works officials, emergency management officials, local floodplain managers, code enforcement officers, fire departments, school districts, police departments and school districts personnel. All participating jurisdictions actively participated in the planning process through soliciting input from their communities and participation in meetings. If a city or school district could not attend a meeting, all minutes and materials were mailed out to the jurisdiction. The Lonoke County Mitigation Planning Team (LCMPT) also discussed mitigation actions, projects, and past hazard occurrences with CAPDD during conference calls and one-on-one calls, emails and meetings.

Two planning events were scheduled throughout the planning process. Training events began the planning process. The Central Arkansas Planning and Development District also utilized technical assistance provided by the Arkansas Department of Emergency Management by receiving training at workshops provided by ADEM and FEMA. Technical Assistance regarding the NFIP was provided by the Arkansas Natural Resources Commission. Technical Assistance regarding the Firewise Program was provided by the Arkansas Forestry Commission. Guidelines for the mitigation plan were discussed as well as training for entering data and how to locate and research the data needed for the mitigation plan. It was stressed to have public involvement and to work together with cities, schools, and County.

Natural Hazard Mitigation Questionnaires were distributed via plan meetings, for which the public was invited. Those who attended the meetings submitted questionnaires. However, the planning team members were the only attendees, and no one from the general public attended the meetings. Hence, no questionnaires were received from the general public.

### **1.1.3 Neighboring Community Involvement**

During the Mitigation Planning Process for Lonoke County, neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development were personally invited via planning team members to participate in the planning team meetings or to complete questionnaires. Lacye Blake of the Arkansas Department of Emergency Management was involved as the State's point of contact. The Director of the Lonoke County Office of Emergency Management, Rita Schmitz, was brought into the discussion of prioritizing hazards mitigation projects for Lonoke County. In summary, the planning process consisted of the following items:

- County appointed a planning committee consisting of mayors and city personnel, school personnel, fire department members, emergency workers, planning and development district employees, and LEPC/Citizens Corp Members. This committee is also referred to as the "Hazard Mitigation Planning Team (HMPT)" or the "Lonoke County Mitigation Planning Team (LCMPT)"
- County engaged Central Arkansas Planning and Development District (CAPDD), the regional planning organization, to provide staff support in conducting the planning process and preparing the plan.
- Meetings were held with committee members to understand and agree on planning processes and steps required, including organizing resources, assess hazards, develop a mitigation plan, and implement the plan and monitor progress.
- County and City personnel invited local planning and zoning board members to attend the mitigation plan meetings.
- Central Arkansas Planning and Development District staff attended workshops presented by FEMA and ADEM on the preparation of the mitigation plan.
- Central Arkansas Planning and Development District staff also had numerous subsequent discussions about the planning process with ADEM staff. The CAPDD staff also discussed planning process issues with others in the state that were involved in the preparation of other hazard mitigation plans such as other Planning and Development Districts.
- The Lonoke County OEM reached out via mail and phone calls to the OEMs of the surrounding Counties of Pulaski, White, Prairie, Jefferson and Faulkner to invite their participation in the planning process.
- There were two public plan meetings. Notices were posted at the Lonoke County Courthouse and the Lonoke County Courthouse Annex for two weeks prior to each meeting. Letters were sent to each mayor and school superintendent not only inviting them to the meetings, but encouraging them to share the invitation with the public, business, academia, and other private and non-profit interests.

The Planning Committee utilized these technical documents:

- Arkansas Hazard Mitigation Plan was used as a guidance tool for past occurrences and risk assessments.
- Lonoke County Land Use Plan was used to prevent land-use conflicts during developing mitigation actions.
- Lonoke County Emergency Operations Plan was used to better understand how Lonoke County responds to emergencies and disasters while providing for the safety and welfare of its citizens. Plan provided information about critical facilities in the County.
- CAPDD Comprehensive Economic Development Strategy was used to review Disaster and Resiliency procedures from natural disasters that helped during the mitigation actions process.
- Lonoke County Floodplain Ordinance was used to maintain compliance of the NFIP ordinance during mitigation actions.
- Lonoke County Arkansas Continuity of Operations Plan was utilized in the capability assessment to incorporate how the departments and agencies in Lonoke County continue the operations of their essential functions under a broad range of circumstances including all-hazard emergencies as well as natural, man-made, and technological threats and national security emergencies
- 2008 Lonoke County Hazard Mitigation Plan
- FEMA Local Mitigation Planning Handbook (March 2013)
- FEMA G318 Local Mitigation Planning Workshop Student Manual (May 2013)
- FEMA Local Mitigation Plan Review Guide (October 1, 2011)

## Timeline:

1. Meeting of County Judge Doug Erwin, Lonoke County Office of Emergency Director Rita Schmitz, and Central Arkansas Planning and Development District Program Manager Josh Rogers was held on January 27, 2015. Discussion included the planning area, planning team and how/when to set up the first meeting.
2. First organized planning meeting was held February 18, 2016 at the Lonoke County Office of Emergency Services. Each person in attendance received a copy of the PowerPoint “Overview of the Mitigation Planning Process” excerpts from the FEMA’s Local Mitigation Planning Handbook March 2013; Tasks 4- Community Capabilities, Task 5- Risk Assessment and Critical Facilities Task 6-Development a Mitigation Strategy and Task 7- Procedures to Keep Plan Updated. The PowerPoint was presented, and then the floor was opened for a questions and answer session.  
Lonoke County Hazard Mitigation Questionnaires were handed out and participants were asked to forward this information to co-workers and public.
3. Second Meeting was held March 3, 2017 - A PowerPoint addressed Task 5- Risk Assessment and Critical Facilities. Jurisdictions were given critical facility map from previous plan along with materials to make and changes/updates. Information on risk assessment development, risks and impacts, the location areas, extent of the magnitude and discussion of probably of future events and identifying the community assets. It also included Task 6 and 7- Develop a Mitigation Strategy and Procedures to Keep Plan Updated and 7 were covered. Mitigation Goals, Mitigation Action, and Action Plan were the main topic of planning meeting. Each jurisdiction was given a copy of the previous version of the mitigation action table. CAPDD then emailed the planning team and set up one-on-one meetings with jurisdictions in order to update the action table once the jurisdiction had time to review it.
4. A final draft of the Plan was provided to the LCMPT for review before official FEMA approval or adoption as an opportunity to provide additional input to affect the plan’s content.

Meeting materials are available from CAPDD upon request.

### **1.1.4 Public Review**

During the development of the plan update, the HMPT was provided a three page survey titled “Lonoke County Natural Hazards Questionnaire” to distribute to the community, businesses, non-profits and neighboring communities for input. In addition, a Public Notice was posted at the Lonoke County Courthouse and the Lonoke County Courthouse Annex. The notice provided a link to the original Lonoke County Hazard Mitigation Plan, and invited citizens to attend the upcoming HMPT meeting. The notice also gave contact information for questions or more information.

No surveys/questionnaires were returned from the general public.

After the completion of the planning meetings, the draft plan was provided on the Central Arkansas Planning and Development District (CAPDD) website <http://www.capdd.org/index.php/fema-hazard-mitigation-plans.html> for any additional input from surrounding communities, the public, businesses, state and local agencies, and anyone else wishing to review. A notice of the draft being available for review was posted at the Lonoke County Courthouse and Lonoke County Annex, on the CAPDD and the Lonoke School District websites.

Planning members were made aware of the requirement that the Lonoke County Hazard Mitigation Plan must be submitted to the Arkansas Department of Emergency Management for review prior to the State submitting plans to FEMA.

### **1.1.5 Plan Developers**

#### ***Lonoke County Hazard Mitigation Planning Team (LCMPT)-***

<b>Jurisdiction</b>	<b>Participation/Involvement</b>
Lonoke County, unincorporated areas and state agencies	County Judge Doug Erwin <i>County Judge received hazard mitigation workbook, attended planning meetings, completed questionnaires, and participated in historical natural disasters.</i>

Jurisdiction	Participation/Involvement
	<p>Lonoke County Office of Emergency Management; Rita Schmitz, Director  <i>All members of LCOEM received hazard mitigation workbook, attended planning meetings, completed and distributed hazard questionnaires, participated in collection of historical natural disasters information. Participated in phone calls, emails, and other correspondence with facilitator and school districts, cities, and fire departments.</i></p> <p>Arkansas Department of Emergency Management; Lacye Blake, State Hazard Mitigation Officer  <i>Addressed questions from HMPT about hazard mitigation. Provided Technical Assistance to CAPDD and Lonoke County as needed.</i></p> <p>Arkansas Natural Resources Commission; Veronica Villalobos-Pogue, Program Coordinator  <i>Provided Technical Assistance to CAPDD and Lonoke County as needed, especially related to Floodplain and NFIP.</i></p>
City of Allport	<p>Mayor Ulyssis Ingram  <i>Mayor attending planning meetings, completed questionnaires and participated in open discussions and natural hazards events.</i></p>
City of Austin	<p>Mayor Bernie Chamberlain  <i>Mayor attended planning meetings, received hazard mitigation workbooks, participated in open discussions about historical storm events and completed questionnaires.</i></p> <p><u>Bill Duerson, Austin Police Chief</u>  <i>Attended planning meetings, completed questionnaires, provided information about historical events, and participated in discussions.</i></p>
City of Cabot	<p>Mayor Bill Cypert  <i>Attended planning meetings, completed community capabilities assessment and natural hazard questionnaire, received hazard mitigation workbook assisted with Risk Assessment, and participated in open discussion of historical storm events.</i></p> <p><u>Phil Robinson, Cabot Fire Chief</u>  <i>Attended planning meetings, completed questionnaires, distributed Firewise information to County Volunteer Fire Departments and participated in Risk Assessment discussions.</i></p> <p><u>Brian Burroughs, Cabot Public Works Director</u>  <i>Attended planning meetings, completed questionnaires, provided historical flood information and participated in discussions.</i></p> <p><u>Karen Knebel, Cabot Floodplain Management</u>  <i>Attended planning meetings, completed questionnaires, provided historical flood information and participated in discussions.</i></p>
City of Carlisle	<p>Mayor Ray Glover  <i>Attended planning meetings, completed community capabilities assessment and natural hazard questionnaires, received hazard mitigation workbook assisted with Risk Assessment, and participated in open discussion of historical storm events.</i></p>
City of Coy	<p>Mayor Ralph Jones  <i>Attended planning meetings, completed community capabilities assessment and natural hazard questionnaires, received hazard mitigation workbook assisted with Risk Assessment, and participated in open discussion of historical storm events.</i></p>
City of England	<p>Mayor Danny Maynard, Sr.  <i>Attended planning meetings, completed community capabilities assessment and natural hazard questionnaires, received hazard mitigation workbook assisted with Risk Assessment, and participated in open discussion of historical storm events.</i></p>
City of Humnoke	<p>Mayor Bill Morris  <i>Attended planning meetings, completed community capabilities assessment and natural hazard questionnaires, received hazard mitigation workbook assisted with Risk Assessment, and participated in open discussion of historical storm events.</i></p> <p><u>Artislee Morris, Alderman</u>  <i>Attended planning meetings, received hazard mitigation workbook assisted with Risk Assessment, and participated in open discussion of historical storm events.</i></p>
City of Keo	<p>Mayor James Pearson  <i>Attended planning meetings, completed community capabilities assessment and natural hazard questionnaires, received hazard mitigation workbook assisted with Risk Assessment, and participated in open discussion of historical storm events.</i></p>
City of Lonoke	<p>Mayor Wayne McGee  <i>Attended planning meetings, completed community capabilities assessment and natural hazard</i></p>



<b>Jurisdiction</b>	<b>Participation/Involvement</b>
	<p>questionnaires, received hazard mitigation workbook assisted with Risk Assessment, and participated in open discussion of historical storm events.</p> <p><u>Jim Ed Ransom, Lonoke Public Works</u>  <u>Attended planning meetings, received hazard mitigation workbook assisted with Risk Assessment, and participated in open discussion of historical storm events.</u></p>
City of Ward	<p>Mayor Art Brooke  Attended planning meetings, completed community capabilities assessment and natural hazard questionnaires, received hazard mitigation workbook assisted with Risk Assessment, and participated in open discussion of historical storm events.</p> <p><u>Charles Gastineau, Deputy Operations Director and Ward City Council Alderman</u>  <u>Attended planning meetings, received hazard mitigation workbook assisted with Risk Assessment, and participated in open discussion of historical storm events.</u></p> <p><u>Jason McKee, City of Ward Code Enforcement</u>  <u>Attended planning meetings, received hazard mitigation workbook assisted with Risk Assessment, and participated in open discussion of historical storm events.</u></p>
Cabot School District	<p>Supt. Dr. Tony Thurman  <u>Michael Byrd, Director of Student Services</u>  <u>and Keri Jackson, Director of Safety and Security</u>  Attended planning meetings, received hazard mitigation workbook, completed inclement weather questionnaire for school district, completed natural hazards questionnaire assisted with Risk Assessment, and participated in open discussion of historical storm events.</p>
Carlisle School District	<p>Supt. Jason Clark  Attended planning meetings, received hazard mitigation workbook, completed inclement weather questionnaire for school district, completed natural hazards questionnaire assisted with Risk Assessment, and participated in open discussion of historical storm events.</p>
England School District	<p>Supt. Barry Scott  <u>And Brandie Williams, Principal</u>  Attended planning meetings, received hazard mitigation workbook assisted with Risk Assessment, and participated in open discussion of historical storm events.</p>
Lonoke School District	<p>Supt. Suzanne Bailey  <u>Nathan Morris, Athletic Director</u>  <u>And Marc Sherrell, Athletic Director</u>  Attended planning meetings, received hazard mitigation workbook assisted with Risk Assessment, and participated in open discussion of historical storm events.</p>
Central Arkansas Planning and Development	<p>Josh Rogers, Program Manger  Amanda Adaire, Program Manager  Facilitators of the Lonoke County Hazard Mitigation Planning process.</p>

## **1.2 ~~Plan~~ 1.2 Plan Maintenance Process**

### **1.2.1 Monitoring, Evaluation and Updating the Plan**

Although FEMA regulations require a plan update within five years, Lonoke County has developed a method to ensure that monitoring, evaluation, and updating of the Lonoke County Hazard Mitigation Plan occurs annually or as needed. The plan will be submitted to FEMA within five-years for review. The County will form a Hazard Mitigation Plan Evaluation Sub-Committee of the existing Lonoke 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, school administration and emergency medical personnel, elected officials, and owners and operators of covered facilities. Each participating jurisdiction of this mitigation plan provides a representative for the LEPC. It is the responsibility of each City's Mayor and each School's Superintendent to do so. The Director of the Lonoke County Office of Emergency Management will be the initial Chair of the sub-committee or Planning Team Leader. The Planning Team Leader will contact the planning team committee, set up meeting dates, and ensure that each community will maintain a representative on the team.



The responsible party for overseeing and assuring plan updates is the Lonoke County Office of Emergency Management. At this time, the maintenance procedures for the Mitigation Plan will be conducted at the LEPC meeting, which are held quarterly. Each community's representative will be responsible for monitoring and evaluating the progress of the mitigation strategies in the plan. The team members will monitor the plan by providing a mitigation planning update at each quarterly meeting.

During the last LEPC meeting of each year, the sub-committee will meet to review and evaluate each goal and objective to determine their relevance to changing situations in Lonoke County, as well as changes in State or Federal policy, and to ensure that they are addressing current and expected conditions. The Sub-committee will also review and evaluate the risk assessment portion of the plan to determine if this information should be updated or modified. The parties or agencies responsible for the various implementation actions (identified in Section 4) will report on the status of their projects and will evaluate which implementation processes worked well, any difficulties encountered, how coordination efforts were proceeding, and which strategies should be revised.

The Lonoke County Office of Emergency Management will then have three months to update and make changes to the plan before submitting it to the Sub-Committee members and the State Hazard Mitigation Officer. If no changes are necessary, the State Hazard Mitigation Officer will be given a justification for this determination. Comments and recommendations offered by Sub-Committee members and the State Hazard Mitigation Officer will be incorporated into the plan update.

The Hazard Mitigation Plan will take into account any changes in these plans and incorporate the information accordingly in its next update.

The Planning Committee will make every attempt to ensure the public will be able to directly comment on, and provide feedback about the Plan by posting the agenda and submitting meeting notice to the local media through newspaper articles, County website and postings in public locations. This process will inform the County citizens on any changes or revisions of the Lonoke County Hazard Mitigation Plan.

Since future plans and government regulations might need to be adopted into the Hazard Mitigation Plan, Lonoke County Quorum Court will be informed of any necessary changes to the plan by the Team Leader, to be adopted into the Plan by County resolution. The Arkansas Department of Emergency Management will be contacted as necessary for professional and technical advice as needed.

### **1.2.2 Incorporation into Existing Planning Mechanisms**

The Lonoke County Hazard Mitigation Plan will be integrated into other plans. Integrating hazard mitigation into the local comprehensive plan thereby establishes resilience as an overarching value of a community and provides the opportunity to continuously manage development in a way that does not lead to increased hazard vulnerability.

Jurisdiction	Planning Mechanism & How Incorporated
Lonoke County	<p><b>Comprehensive / Master Plans:</b> The risk assessment will inform all strategic strategies of hazard areas. The data and maps will be used as supporting documentation to encourage political agendas to deter from development and activity in hazard areas. Integrating mitigation concepts and policies will provide a means for implementing initiatives through legal frameworks and enhances the opportunity to reduce the risk posed by hazard events.</p> <p><b>Emergency Operation Plan (EOP):</b> The Lonoke County HMP will be annexed into the Lonoke County EOP.</p> <p><b>COOP:</b> The risk assessment will inform the risk analysis in the COOP, and the vulnerable structures will inform the COOP of places to avoid when selecting alternate locations.</p> <p><b>County Forman/Road Department:</b> Risk assessment will inform committees and leadership to adopt policies that will direct growth away from known hazard areas. It</p>

Jurisdiction	Planning Mechanism & How Incorporated
	<p>will also insure that county roads and other critical infrastructure are designed to withstand the probable extent of known hazards so they function in the event of an emergency or disaster. The monthly report that is submitted every month detailing roads and bridges needing repairs will also feed the mitigation plan to prioritize mitigation when repairing roads and bridges with concrete stabilization and correcting erosion. There are 770 miles of county and public access roads that the county oversees and encourages public complaints and suggestions when mitigation roads.</p> <p><b>Storm Water Management:</b> Lonoke County will require permits for sewer systems and construction to guide storm waters in designated Regulated Small (Small MS4) areas.</p> <p><b>Grant Applications:</b> Data and maps will be used as supporting documentation in grant applications. Risk assessment will be used to identify hazard areas for community development and critical facilities in need of repair and renovation.</p> <p><b>Budget:</b> The local budget will be fund hazard mitigation goals and objectives as budge allows. The mitigation strategies will inform city councils of most important construction projects to be completed.</p> <p><b>Emergency Manager:</b> Will be the liaison between county and city leadership and ADEM and FEMA to encourage and monitor regional recovery, response, mitigation, and readiness by conduction training sessions and informing leadership and staff of available training like ICS, NIMS, and flood plain management.</p> <p><b>Flood Plain Administrator:</b> County Foreman is the CFM. Will attend regular meetings to inform leadership and community of the water source out of Lake Brewer. He assists in filling out addendum forms and permits for those building in flood plains. Monitors the county’s compliance with the NFIP.</p> <p><b>Development Ordinance:</b> Will provide an opportunity to account for the natural hazards described in the risk assessment prior to the development of land as they formulate regulations when the land is subdivided. Also, A variety of building and zoning regulations are used to restrict the uses of land and establish building specifications. Prior to land use, zoning changes, or development permitting, the county will review the hazard mitigation plan to ensure consistent and compatible land use.</p> <p><b>Fire Department ISO Rating:</b> The mitigation actions will employ effective fire prevention practices without unduly affecting those who have not yet adopted such measures.</p> <p><b>Economic Development Plans:</b> The risk assessment will inform these plans and guide commercial or industrial expansion in areas that are not vulnerable to damage or disruption form hazards and by making community resilience a key feature in attracting, expanding, and retaining businesses and industry.</p> <p><b>Ongoing public education or information program:</b> The county received funds for a radio tower for the public’s use of NOAA radios. The county will continue to encourage use of these radios and bettering the service by purchasing a repeater.</p> <p><b>Maintenance Programs to Reduce Risk:</b> The county Foreman oversees the maintenance program. The Foreman ensures all trees along roads are trimmed and maintained. Also monitors drainage systems to ensure that debris is not causing flooding. Also purchases signs for dangerous roads during flooding that reads “Unsafe when Underwater”</p>
Allport	<p><b>Grant Applications:</b> Data and maps will be used as supporting documentation in grant applications. Risk assessment will be used to identify hazard areas for community development and critical facilities in need of repair and renovation</p> <p><b>Building Codes:</b> The risk assessment will identify the type, frequency, and intensity of hazards present in specific geographic areas. The building codes will in turn use this information to develop and regulate construction standards in order to increase</p>

Jurisdiction	Planning Mechanism & How Incorporated
	<p>the structure's resiliency to the specified hazards.</p> <p><b>Subdivision Management:</b> Will provide an opportunity to account for the natural hazards described in the risk assessment prior to the development of land as they formulate regulations when the land is subdivided.</p> <p><b>Budget:</b> The local budget will be fund hazard mitigation goals and objectives as budge allows. The mitigation strategies will inform city councils of most important construction projects to be completed.</p> <p><b>Fire Department ISO Rating:</b> The mitigation actions will employ effective fire prevention practices without unduly affecting those who have not yet adopted such measures.</p>
Austin	<p><b>Grant Applications:</b> Data and maps will be used as supporting documentation in grant applications. Risk assessment will be used to identify hazard areas for community development and critical facilities in need of repair and renovation</p> <p><b>Subdivision Management:</b> Will provide an opportunity to account for the natural hazards described in the risk assessment prior to the development of land as they formulate regulations when the land is subdivided.</p> <p><b>Building Codes:</b> The risk assessment will identify the type, frequency, and intensity of hazards present in specific geographic areas. The building codes will in turn use this information to develop and regulate construction standards in order to increase the structure's resiliency to the specified hazards.</p> <p><b>Budget:</b> The local budget will be fund hazard mitigation goals and objectives as budge allows. The mitigation strategies will inform city councils of most important construction projects to be completed.</p> <p><b>Fire Department ISO Rating:</b> The mitigation actions will employ effective fire prevention practices without unduly affecting those who have not yet adopted such measures.</p>
Carlisle	<p><b>Grant Applications:</b> Data and maps will be used as supporting documentation in grant applications. Risk assessment will be used to identify hazard areas for community development and critical facilities in need of repair and renovation</p> <p><b>Subdivision Management:</b> Will provide an opportunity to account for the natural hazards described in the risk assessment prior to the development of land as they formulate regulations when the land is subdivided.</p> <p><b>Budget:</b> The local budget will be fund hazard mitigation goals and objectives as budge allows. The mitigation strategies will inform city councils of most important construction projects to be completed.</p> <p><b>Fire Department ISO Rating:</b> The mitigation actions will employ effective fire prevention practices without unduly affecting those who have not yet adopted such measures.</p> <p><b>Building Codes:</b> The risk assessment will identify the type, frequency, and intensity of hazards present in specific geographic areas. The building codes will in turn use this information to develop and regulate construction standards in order to increase the structure's resiliency to the specified hazards. The codes the County uses are those from the State of Arkansas.</p>
Cabot	<p><b>Grant Applications:</b> Data and maps will be used as supporting documentation in grant applications. Risk assessment will be used to identify hazard areas for community development and critical facilities in need of repair and renovation</p> <p><b>Subdivision Management:</b> Will provide an opportunity to account for the natural hazards described in the risk assessment prior to the development of land as they formulate regulations when the land is subdivided.</p> <p><b>Fire Department ISO Rating:</b> The mitigation actions will employ effective fire prevention practices without unduly affecting those who have not yet adopted such measures.</p>

Jurisdiction	Planning Mechanism & How Incorporated
	<p><b>Budget:</b> The local budget will be fund hazard mitigation goals and objectives as budge allows. The mitigation strategies will inform city councils of most important construction projects to be completed.</p> <p><b>Building Codes:</b> The risk assessment will identify the type, frequency, and intensity of hazards present in specific geographic areas. The building codes will in turn use this information to develop and regulate construction standards in order to increase the structure’s resiliency to the specified hazards. The codes the County uses are those from the State of Arkansas.</p>
Coy	<p><b>Grant Applications:</b> Data and maps will be used as supporting documentation in grant applications. Risk assessment will be used to identify hazard areas for community development and critical facilities in need of repair and renovation</p> <p><b>Subdivision Management:</b> Will provide an opportunity to account for the natural hazards described in the risk assessment prior to the development of land as they formulate regulations when the land is subdivided.</p> <p><b>Fire Department ISO Rating:</b> The mitigation actions will employ effective fire prevention practices without unduly affecting those who have not yet adopted such measures.</p> <p><b>Budget:</b> The local budget will be fund hazard mitigation goals and objectives as budge allows. The mitigation strategies will inform city councils of most important construction projects to be completed.</p> <p><b>Building Codes:</b> The risk assessment will identify the type, frequency, and intensity of hazards present in specific geographic areas. The building codes will in turn use this information to develop and regulate construction standards in order to increase the structure’s resiliency to the specified hazards. The codes the County uses are those from the State of Arkansas.</p>
England	<p><b>Grant Applications:</b> Data and maps will be used as supporting documentation in grant applications. Risk assessment will be used to identify hazard areas for community development and critical facilities in need of repair and renovation</p> <p><b>Subdivision Management:</b> Will provide an opportunity to account for the natural hazards described in the risk assessment prior to the development of land as they formulate regulations when the land is subdivided.</p> <p><b>Fire Department ISO Rating:</b> The mitigation actions will employ effective fire prevention practices without unduly affecting those who have not yet adopted such measures.</p> <p><b>Budget:</b> The local budget will be fund hazard mitigation goals and objectives as budge allows. The mitigation strategies will inform city councils of most important construction projects to be completed.</p> <p><b>Building Codes:</b> The risk assessment will identify the type, frequency, and intensity of hazards present in specific geographic areas. The building codes will in turn use this information to develop and regulate construction standards in order to increase the structure’s resiliency to the specified hazards. The codes the County uses are those from the State of Arkansas.</p>
Humnoke	<p><b>Grant Applications:</b> Data and maps will be used as supporting documentation in grant applications. Risk assessment will be used to identify hazard areas for community development and critical facilities in need of repair and renovation</p> <p><b>Subdivision Management:</b> Will provide an opportunity to account for the natural hazards described in the risk assessment prior to the development of land as they formulate regulations when the land is subdivided.</p> <p><b>Fire Department ISO Rating:</b> The mitigation actions will employ effective fire prevention practices without unduly affecting those who have not yet adopted such measures.</p> <p><b>Budget:</b> The local budget will be fund hazard mitigation goals and objectives as</p>

Jurisdiction	Planning Mechanism & How Incorporated
	<p>budge allows. The mitigation strategies will inform city councils of most important construction projects to be completed.</p> <p><b>Building Codes:</b> The risk assessment will identify the type, frequency, and intensity of hazards present in specific geographic areas. The building codes will in turn use this information to develop and regulate construction standards in order to increase the structure’s resiliency to the specified hazards. The codes the County uses are those from the State of Arkansas.</p>
Keo	<p><b>Grant Applications:</b> Data and maps will be used as supporting documentation in grant applications. Risk assessment will be used to identify hazard areas for community development and critical facilities in need of repair and renovation</p> <p><b>Subdivision Management:</b> Will provide an opportunity to account for the natural hazards described in the risk assessment prior to the development of land as they formulate regulations when the land is subdivided.</p> <p><b>Fire Department ISO Rating:</b> The mitigation actions will employ effective fire prevention practices without unduly affecting those who have not yet adopted such measures.</p> <p><b>Budget:</b> The local budget will be fund hazard mitigation goals and objectives as budge allows. The mitigation strategies will inform city councils of most important construction projects to be completed.</p> <p><b>Building Codes:</b> The risk assessment will identify the type, frequency, and intensity of hazards present in specific geographic areas. The building codes will in turn use this information to develop and regulate construction standards in order to increase the structure’s resiliency to the specified hazards. The codes the County uses are those from the State of Arkansas.</p>
Lonoke	<p><b>Grant Applications:</b> Data and maps will be used as supporting documentation in grant applications. Risk assessment will be used to identify hazard areas for community development and critical facilities in need of repair and renovation</p> <p><b>Subdivision Management:</b> Will provide an opportunity to account for the natural hazards described in the risk assessment prior to the development of land as they formulate regulations when the land is subdivided.</p> <p><b>Fire Department ISO Rating:</b> The mitigation actions will employ effective fire prevention practices without unduly affecting those who have not yet adopted such measures.</p> <p><b>Budget:</b> The local budget will be fund hazard mitigation goals and objectives as budge allows. The mitigation strategies will inform city councils of most important construction projects to be completed.</p> <p><b>Building Codes:</b> The risk assessment will identify the type, frequency, and intensity of hazards present in specific geographic areas. The building codes will in turn use this information to develop and regulate construction standards in order to increase the structure’s resiliency to the specified hazards. The codes the County uses are those from the State of Arkansas.</p>
Ward	<p><b>Grant Applications:</b> Data and maps will be used as supporting documentation in grant applications. Risk assessment will be used to identify hazard areas for community development and critical facilities in need of repair and renovation</p> <p><b>Subdivision Management:</b> Will provide an opportunity to account for the natural hazards described in the risk assessment prior to the development of land as they formulate regulations when the land is subdivided.</p> <p><b>Fire Department ISO Rating:</b> The mitigation actions will employ effective fire prevention practices without unduly affecting those who have not yet adopted such measures.</p> <p><b>Budget:</b> The local budget will be fund hazard mitigation goals and objectives as budge allows. The mitigation strategies will inform city councils of most important</p>



Jurisdiction	Planning Mechanism & How Incorporated
	<p>construction projects to be completed.</p> <p><b>Building Codes:</b> The risk assessment will identify the type, frequency, and intensity of hazards present in specific geographic areas. The building codes will in turn use this information to develop and regulate construction standards in order to increase the structure's resiliency to the specified hazards. The codes the County uses are those from the State of Arkansas.</p>
All participating School Districts	<p><b>Grant Applications:</b> Data and maps will be used as supporting documentation in grant applications. Risk assessment will be used to identify hazard areas for community development and critical facilities in need of repair and renovation</p> <p><b>Building Codes:</b> The risk assessment will identify the type, frequency, and intensity of hazards present in specific geographic areas. The building codes will in turn use this information to develop and regulate construction standards in order to increase the structure's resiliency to the specified hazards.</p> <p><b>Budget:</b> The local budget will be fund hazard mitigation goals and objectives as budge allows. The mitigation strategies will inform the school board of most important construction projects to be completed.</p> <p><b>Natural Disaster or Safety Related School Programs:</b> School districts will provide FEMA brochures for StormReady and Turn Around Don't Drown brochures to students that will enlighten them and their families of hazards identified.</p>

The Lonoke County Hazard Mitigation Plan will be available for public view on the Central Arkansas Planning and Development District's website <http://www.capdd.org/index.php/fema-hazard-mitigation-plans.html> for any entity or citizen who wishes to view or make a copy of it. The Lonoke County ~~OEM~~OEM and all jurisdictions will keep copies of the plan and make available to the public.

Lonoke County Quorum Court, City Councils of Allport, Austin, Cabot, Carlisle, England, Humnoke, Keo, Lonoke, & Ward will adopt the approved mitigation plan through resolution. The ~~Board of Directors~~School Boards of the school districts of Cabot, Carlisle, England, & Lonoke will be adopting the approved Hazard Mitigation Plan by formal adoption or resolution in their existing plans that are relevant to Hazard Mitigation. The same process will also be followed when parts of the Lonoke County Hazard Mitigation Plan are incorporated into community planning mechanisms.

-Any participant without previous plans in place will be encouraged to develop zoning plans and other land ordinance plans to incorporate mitigation strategies. Participants incorporating the Lonoke 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 Local Emergency Planning Committee for inclusion in its annual report. After each update of the Lonoke County Hazard Mitigation Plan, each incorporating participant will be informed of the changes so they can reflect these changes in their plans also. Incorporating the plan into other plans will be done by vote at the regular quorum court meetings and passed by resolution.

All participating jurisdictions will use the risk assessment that was conducted for the mitigation plan for creating strategies when dealing with hazards as well as the budget. The data and maps will be used as supporting documentation to encourage participating jurisdictions to address the hazards that affect their areas and organizations and can be used in grant applications.

Lonoke County will be incorporating the Lonoke County Hazard Mitigation Plan into the Lonoke County Continuity of Operations Plan, and any future county land use ordinances and/or plans by following the laws set forth by the county government. Incorporating the plan (and any plan) into other county plans will be done by vote at the regular quorum court meetings and passed by resolution.

The participating school districts will consider incorporating the Lonoke County Hazard Mitigation Plan into their existing emergency preparedness, response and recovery plans, such as a Continuity of Operations Plan, where applicable by following the rules set forth by each school board. Incorporating the plan into any existing or future plans will be done at regular school board meetings by resolution of the School Board.

### **1.2.3 Continuous Public Involvement**

Lonoke County is dedicated to involving the public directly in the continual reshaping and updating of the Lonoke County Hazard Mitigation Plan. The Hazard Mitigation Plan Evaluation Sub-Committee members are responsible for the annual monitoring, evaluation, and update of the plan. Although they represent the public to some extent, the public will be able to directly comment on and provide feedback about the plan.

Contained in the plan are the address, phone number, and e-mail of the Director of the Lonoke County Office of Emergency Management, the primary point of contact for the plan. The Lonoke County Hazard Mitigation Plan will be available for public view on the Central Arkansas Planning and Development District's website <http://www.capdd.org/index.php/fema-hazard-mitigation-plans.html> for any entity or citizen who wishes to view or make a copy of it. Copies will also be made available at public libraries, the Lonoke County Courthouse in Lonoke, the Lonoke County Office of Emergency Management, the city halls of Allport, Austin, Cabot, Carlisle, Coy, England, Humnoke, Keo, Lonoke, and Ward, and the offices of the Cabot, Carlisle, England and Lonoke School Districts.

A public announcement inviting all interested parties will be made prior to each quarterly LEPC meeting, including the December LEPC meeting during which the Hazard Mitigation Planning Sub-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 Lonoke County Office of Emergency Management and the Lonoke County LEPC will publicize and host this meeting. Following the meeting, the evaluation committee will review the comments and make changes to the plan, as appropriate.

# SECTION 2

## Planning Area and Resources

### 2.1 General Land Use/Analyzing Development Trends

There has been growth in population and development that has increased the impact of natural disasters to the community's infrastructure, people, and economy. There have been changes in the area due to the mitigation actions in the previous mitigation plan. Where it is applicable, the changes in land use and development will be addressed in the hazard profile. If there is not a summary identifying the changes in land use and development trends, then there is no applicable change that impacts community's infrastructure, people, and economy in respect to that hazard.

### 2.2 Capability Assessment

Jurisdiction	Planning and Regulatory Capabilities									
	Comprehensive / Master Plans	Local Emergency Operations Plan	Continuity of Operations Plan	Road Foreman	Stormwater Management Plan	Community Wildfire Protection Plan	Building Codes	Fire Department ISO Rating	Development Ordinance	Site Review Requirements
Lonoke County	X	X	X	X	X	X	X	X	x	X
Allport		X	X	X			X	X	X	X
Austin		X	X	X	X		X	X	X	X
Carlisle		X	X	X	X		X	X	X	X
Cabot	X	X	X	X	X	X	X	X	X	X
Coy		X	X	X			X	X	X	X
England	X	X	X	X	X		X	X	X	X
Humnoke		X	X	X	X		X	X	X	X
Keo		X	X	X			X	X	X	X
Lonoke	X	X	X	X	X		X	X	X	X
Ward		X	X	X			X	X	X	X
Carlisle S.D.		X	X							X
Cabot S.D.		X	X							X
England S.D.		X	X							X
Lonoke S.D.		X	X							X



Jurisdiction	Administrative and Technical Capabilities								
	Planning Commission	Maintenance Programs to Reduce Risk	Mutual Aid Agreements	GIS Analysts	Warning Systems/Services	Hazard Data and Information	Grant Writers	Emergency Manager	Floodplain Administrator
Lonoke County	X	X	X	X	X	X	X	X	X
Allport	X	X	x		X		X		X
Austin	X	X	X		X		X		X
Carlisle	X	X	X		X		X		X
Cabot	X	X	X		X	X	X		X
Coy	X	X	X		X		X		X
England	X	X	X		X		X		X
Humnoke	X	X	X		X		X		X
Keo	X	X	X		X		X		X
Lonoke	X	X	X		X		X		X
Ward	X	X	X		X		X		X
Carlisle S.D.	X	X	X				X		
Cabot S.D.	X	X	X				X		
England S.D.	X	X	X				X		
Lonoke S.D.	X	X	X				X		

Jurisdiction	Financial Capabilities					
	General Improvements Project Funding	Authority to levy taxes/millage for purposes	Community Development Block Grant	Federal Funding Programs	State funding programs	fees for new development
Lonoke County	X	X	X	X	X	X
Allport	X	X	X	X	X	X
Austin	X	X	X	X	X	X
Carlisle	X	X	X	X	X	X
Cabot	X	X	X	X	X	X
Coy	X	X	X	X	X	X
England	X	X	X	X	X	X
Humnoke	X	X	X	X	X	X
Keo	X	X	X	X	X	X
Lonoke	X	X	X	X	X	X
Ward	X	X	X	X	X	X
Carlisle S.D.	X	X	X	X	X	
Cabot S.D.	X	X		X	X	
England S.D.	X	X		X	X	
Lonoke S.D.	X	X		X	X	

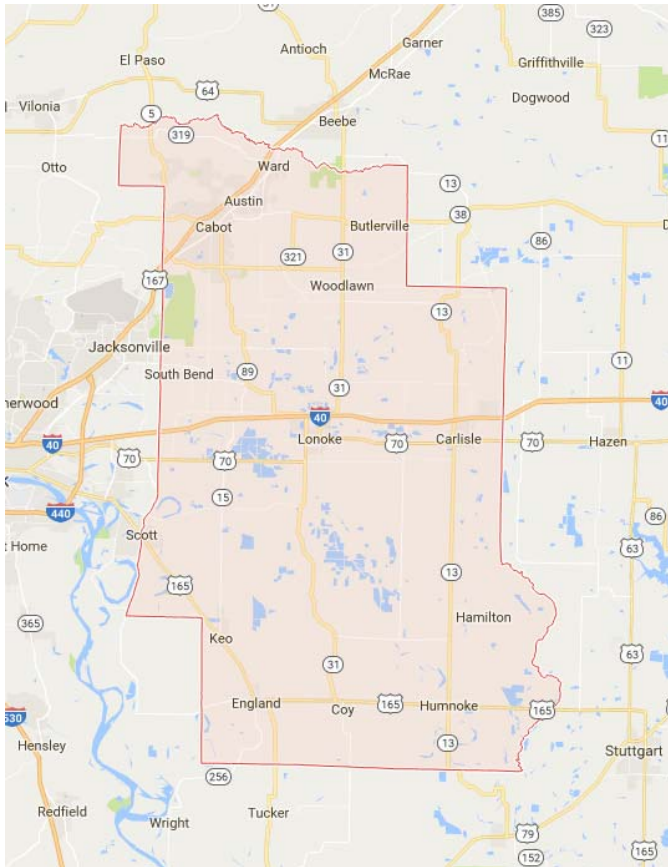
Jurisdiction	Education and Outreach Capabilities					
	Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations	Ongoing public education or information program	Natural disaster or safety related school programs	StormReady certification	Firewise Communities certification	Public-private partnership initiatives addressing disaster-related issues
Lonoke County	X	X		X		X
Allport		X				X
Austin		X				X
Carlisle		X				X
Cabot	X	X				X
Coy		X				X
England		X				X
Humnoke		X				X
Keo		X				
Lonoke	X	X				
Ward		X				
Carlisle S.D.		X	X			X
Cabot S.D.		X	X			X
England S.D.		X	X			X
Lonoke S.D.		X	X			X

### 2.2.1 Improving Capabilities

Leadership and representatives in all participating jurisdictions are very receptive to mitigation. The Lonoke County Judge, Lonoke County OEM, and County Foreman make mitigation a first priority. Representatives are actively seeking additional funding to improve the readiness and preparedness of their communities. Ways the communities are improving capabilities are:

- Becoming StormReady Certified and organizing a Community Emergency Response Team (CERT).
- Becoming ~~FireWise~~Firewise Communities.
- Regularly attend state-wide full-scale drills for evacuation.
- Participate in the Great Arkansas Shake-Out.
- Increase GIS capabilities.
- Expand upon education and outreach by establishing and promoting cooling centers and shelters.
- Expand the Road Department Budget to improve culverts, box tiles, and water crossings.
- Representatives to attend training through ADEM and FEMA to include ICS and NIMS.
- Create a Transportation Plan to include in the Master Plan.

### 2.2.2 NFIP Participation



**Lonoke County** is a member of the National Flood Insurance Program, Community Identification Number 050448.

**NFIP Participation-** Lonoke County participates in the NFIP by assisting the residences by assisting with the filling out documents for the NFIP and educating citizens about the NFIP program. Permits are issued for those wishing to build in the floodplain, then the floodplain manager monitors the construction process to ensure compliance. The county plans to continue to participating through continuing floodplain education, and staying in compliance with NFIP.

**Staff Resources-** Lonoke County has a Certified Floodplain Manager who oversees the floodplain management. The NFIP administrative services include floodplain maps, permit reviews and inspections.

If floodplain resources are needed that the county cannot provide, the County's CFM request assistance from the Arkansas Natural Resource Conservation Service and FEMA.

**Compliance History-** Lonoke County is in good standing with the NFIP, and there are no outstanding compliance issues.

Lonoke County intends to maintain compliance with the NFIP by continuing ensure all constructing, locating, substantially altering or changing the use of any structure or land after the effective date of the County's floodplain ordinance.

#### Community Overview

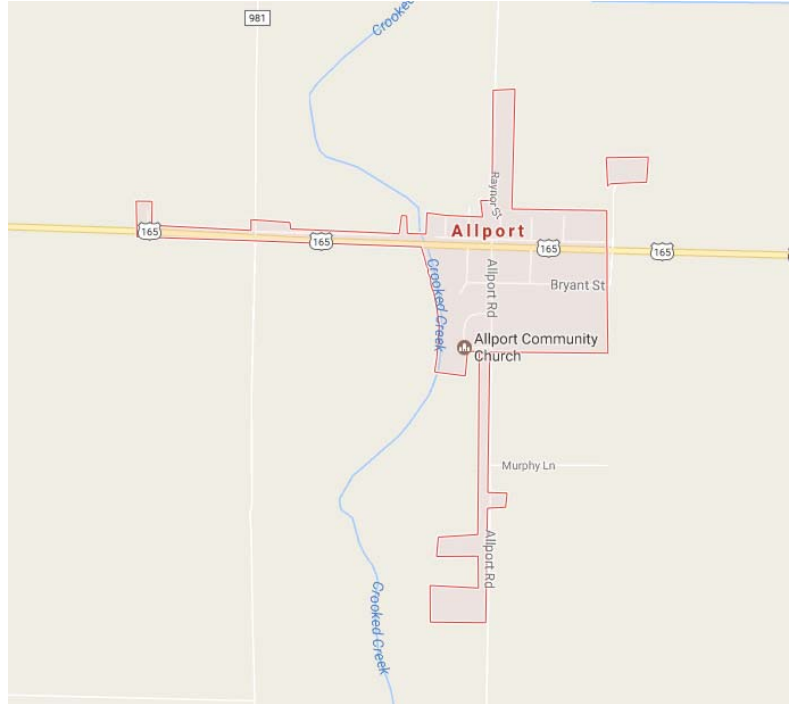
Community: LONOKE COUNTY*		State: ARKANSAS	
County: LONOKE COUNTY		CID: 050448	
Program:	Regular	Emergency Entry:	Regular Entry:
Status:	PARTICIPATING		Status Effective:
Current Map:	02/20/2008	Study Underway:	NO
FIRM Status:	REVISED		Level of Regs:
FHBM Status:	SUPERCEDED BY FIRM		Initial FIRM:
			Initial FHBM:
Probation Status:		Probation Ended:	
Probation Effective:		Reinstated Effective:	
Suspension Effective:		Reinstated Effective:	
Withdrawal Effective:			
CRS Class / Discount:		Policies in Force:	141
Effective Date:		Insurance in Force:	\$26,217,600.00
CAV Date:	06/11/2014	No. of Paid Losses:	30
CAC Date:	07/25/2011	Total Losses Paid:	\$559,481.41
		Sub. Damage Claims Since 1978:	4
Community Website:			
<input type="checkbox"/> Tribal Community <input type="checkbox"/> Upton Jones Claims <input checked="" type="checkbox"/> ICC Claims		<input type="checkbox"/> HMGP Projects <input type="checkbox"/> FMA Projects	

## City of Allport

**City of Allport** is a member of the National Flood Insurance Program, Community Identification Number 050379.

**NFIP Participation-** The City assists the residences with the filling out documents for the NFIP and educates the citizens about the NFIP program. Permits are issued for those wishing to build in the floodplain, and then the floodplain manager monitors the construction process to ensure compliance. The city plans to continue to participating through continuing floodplain education, and staying in compliance with NFIP. The city maintains elevation certificates.

**Staff Resources-** The city is very small with limited resources and is new to the NFIP program.

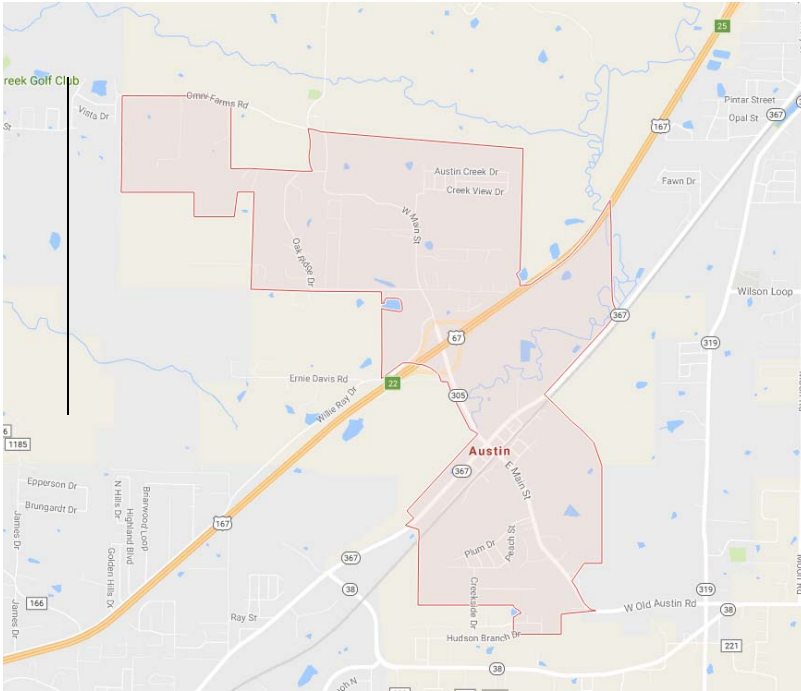


If floodplain resources are needed that the city cannot provide, the City will request assistance from the Lonoke County Office of Emergency Services, Lonoke County Floodplain Manager, Arkansas Natural Resources Commission or FEMA.

**Compliance History-** Allport is a new member, and in good standing with the NFIP, and there are no outstanding compliance issues.

Allport intends to maintain compliance with the NFIP by continuing education, ensure all constructing, locating, substantially altering or changing the use of any structure or land after the effective date of the city's floodplain ordinance.

Community: ALLPORT, TOWN OF		State: ARKANSAS	
County: LONOKE COUNTY		CID: 050379	
Program:	Regular	Emergency Entry:	01/16/1980
Status:	PARTICIPATING	Regular Entry:	10/05/1982
		Status Effective:	10/23/2012
Current Map:	06/16/2006	Study Underway:	NO
FIRM Status:	ALL ZONE A, C AND X - NO ELEVATION DETERMINED	Level of Regs:	
FHBM Status:	SUPERCEDED BY FIRM	Initial FIRM:	10/05/1982
		Initial FHBM:	10/29/1976
Probation Status:			
Probation Effective:		Probation Ended:	
Suspension Effective:	08/16/1988	Reinstated Effective:	10/23/2012
Withdrawal Effective:		Reinstated Effective:	
CRS Class / Discount:		Policies in Force:	
Effective Date:		Insurance in Force:	
CAV Date:		No. of Paid Losses:	
CAC Date:	09/22/2016	Total Losses Paid:	
	Workshop Date:	Sub. Damage Claims Since 1978:	
	GTA Date:		
	Community Website:		
<input type="checkbox"/> Tribal Community		<input type="checkbox"/> HMGP Projects	
<input type="checkbox"/> Upton Jones Claims		<input type="checkbox"/> FMA Projects	
<input type="checkbox"/> ICC Claims			



## City of Austin

The City of Austin is a member of the National Flood Insurance Program #050383.

**NFIP Participation-** The City assists the residences with the filling out documents for the NFIP and educates the citizens about the NFIP program. Permits are issued for those wishing to build in the floodplain, and then the floodplain manager monitors the construction process to ensure compliance. The city plans to continue to participating through continuing floodplain education, and staying in compliance with NFIP. The city maintains elevation certificates.

**Staff Resources-** The city is very small with limited resources and is new to the NFIP program.

If floodplain resources are needed that the city cannot provide, the City will request assistance from the Lonoque County Office of Emergency Services, Lonoque County Floodplain Manager, Arkansas Natural Resources Commission or FEMA.

**Compliance History-** Allport is a new member, and in good standing with the NFIP, and there are no outstanding compliance issues.

Allport intends to maintain compliance with the NFIP by continuing education, ensure all constructing, locating, substantially altering or changing the use of any structure or land after the effective date of the city's floodplain ordinance.

Community: AUSTIN, CITY OF		State: ARKANSAS	
County: LONOQUE COUNTY		CID: 050383	
Program:	Regular	Emergency Entry:	01/13/1976
Status:	PARTICIPATING	Regular Entry:	04/15/1982
Current Map:	02/20/2008	Status Effective:	04/15/1982
FIRM Status:	REVISED	Level of Regs:	D
FHBM Status:	RESCINDED	Initial FIRM:	06/16/2006
		Initial FHBM:	04/18/1975
Probation Status:		Probation Ended:	
Probation Effective:		Reinstated Effective:	
Suspension Effective:		Reinstated Effective:	
Withdrawal Effective:			
CRS Class / Discount:		Policies in Force:	24
Effective Date:		Insurance in Force:	\$3,685,400.00
CAV Date: 06/30/2005	Workshop Date:	No. of Paid Losses:	
CAC Date: 09/22/2016	GTA Date: 03/09/2010	Total Losses Paid:	
Community Website: <a href="http://austin-ar.com/Default.aspx">http://austin-ar.com/Default.aspx</a>		Sub. Damage Claims Since 1978:	
<input type="checkbox"/> Tribal Community			
<input type="checkbox"/> Upton Jones Claims	<input type="checkbox"/> HMGP Projects		
<input type="checkbox"/> ICC Claims	<input type="checkbox"/> FMA Projects		

## City of Cabot

**The City of Cabot** is a member of the National Flood Insurance Program, Community Identification Number 050309.

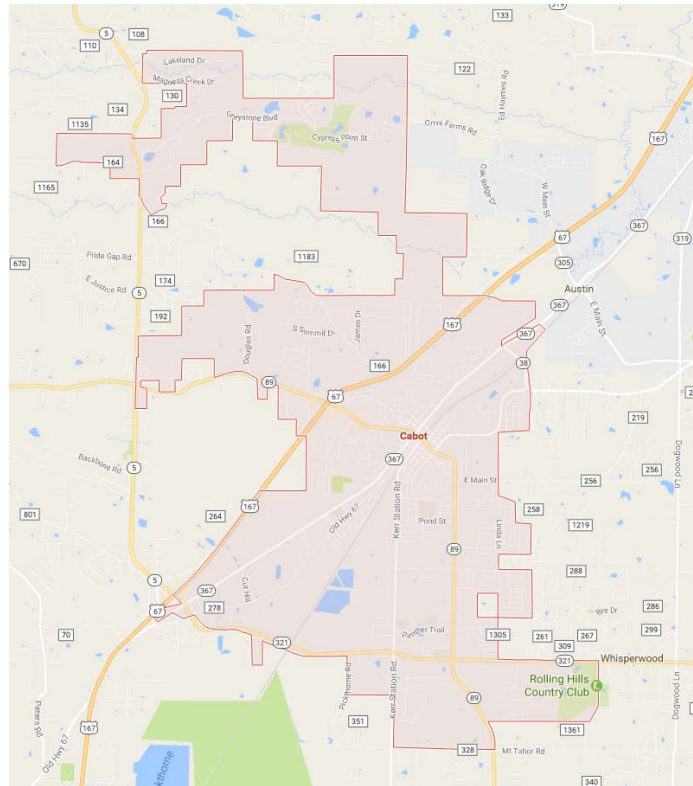
**NFIP Participation-** The City of Cabot participates in the NFIP by assisting the residences by assisting with the filling out documents for the NFIP and educating citizens about the NFIP program. Permits are issued for those wishing to build in the floodplain, then the floodplain manager monitors the construction process to insure compliance. The city plans to continue to participating through continuing floodplain education, and staying in compliance with NFIP.

**Staff Resources-** The Floodplain Manager and oversees the floodplain management. The NFIP administrative services include floodplain maps, permit reviews and inspections.

If floodplain resources are needed that the city cannot provide, the City will request assistance from the Lonoke County Office of Emergency Services, Lonoke County Floodplain Manager, Arkansas Natural Resources Commission or FEMA.

**Compliance History-** Cabot is in good standing with the NFIP, and there are no outstanding compliance issues. The Community Assistance Visit (CAV) or Community Assistance visits once every three years.

Cabot intends to maintain compliance with the NFIP.



Community: CABOT, CITY OF County: LONOKE COUNTY		State: ARKANSAS CID: 050309			
Program: Status:	Regular PARTICIPATING	Emergency Entry:	09/26/1975	Regular Entry: Status Effective:	04/19/1983 04/19/1983
Current Map: FIRM Status: FHBM Status:	02/20/2008 REVISED SUPERCEDED BY FIRM	Study Underway:	YES	Level of Regs: Initial FIRM: Initial FHBM:	D 04/19/1983 06/03/1977
Probation Status:					
Probation Effective:		Probation Ended:			
Suspension Effective:		Reinstated Effective:			
Withdrawal Effective:		Reinstated Effective:			
CRS Class / Discount:			Policies in Force:		
Effective Date:			Insurance in Force:		
CAV Date: 09/10/2010			No. of Paid Losses:		
CAC Date: 07/22/2011			Total Losses Paid:		
Community Website: <a href="http://www.cabotar.gov/">http://www.cabotar.gov/</a>			Sub. Damage Claims Since 1978:		
<input type="checkbox"/> Tribal Community					
<input type="checkbox"/> Upton Jones Claims			<input type="checkbox"/> HMGP Projects		
<input type="checkbox"/> ICC Claims			<input type="checkbox"/> FMA Projects		



## City of Carlisle

**The City of Carlisle is a member of the National Flood Insurance Program, Community Identification Number 050312.**

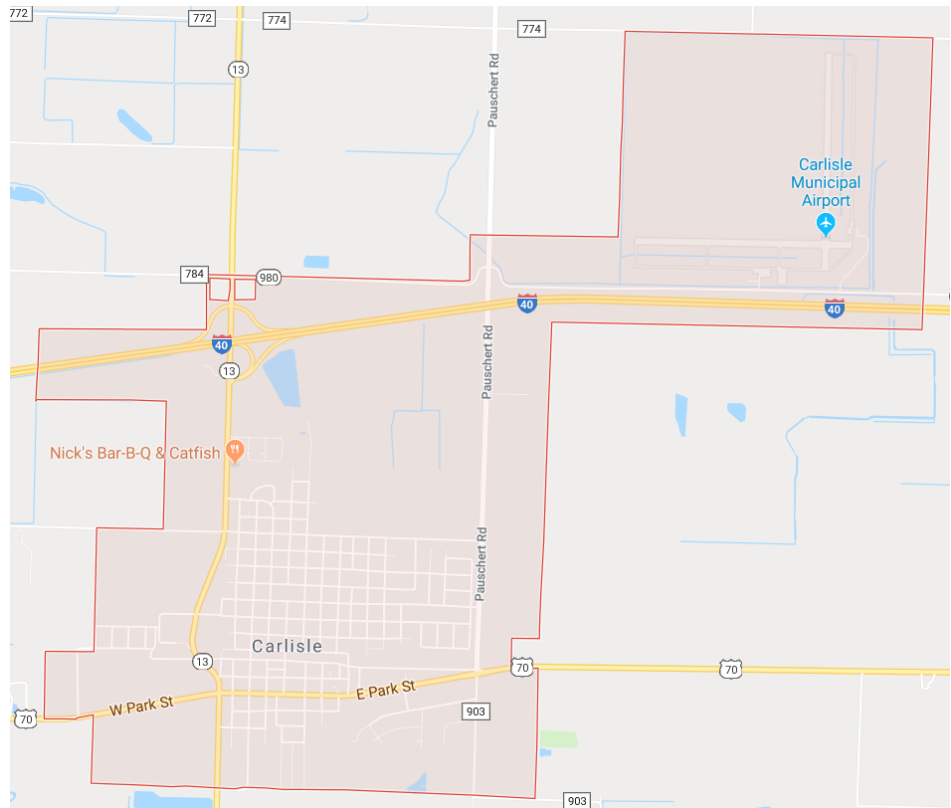
**NFIP Participation-** Carlisle participates in the NFIP by assisting the residences by assisting with the filling out documents for the NFIP and educating citizens about the NFIP program.

***Staff Resources-*** The city has limited staffing and resources for floodplain management.

If floodplain resources are needed that the city cannot provide, the City will request assistance from the Lonoke County Office of Emergency Services, Lonoke County Floodplain Manager, Arkansas Natural Resources Commission or FEMA.

***Compliance History-*** Carlisle is in good standing with the NFIP, and there are no outstanding compliance issues.

Carlisle intends to maintain compliance with the NFIP.



Community: CARLISLE, CITY OF County: LONOKE COUNTY		State: ARKANSAS CID: 050312	
Program: Status:	Regular PARTICIPATING	Emergency Entry: 04/16/1975	Regular Entry: 12/12/1978 Status Effective: 12/12/1978
Current Map: FIRM Status:	06/16/2006 ALL ZONE A, C AND X - NO ELEVATION DETERMINED	Study Underway: NO	Level of Regs: D Initial FIRM: 12/12/1978
FHBM Status:	SUPERCEDED BY FIRM		Initial FHBM: 01/10/1975
Probation Status: Probation Effective: Suspension Effective: Withdrawal Effective:		Probation Ended: Reinstated Effective: Reinstated Effective:	
CRS Class / Discount: Effective Date: CAV Date: 07/12/2005 Workshop Date: 03/29/2016 CAC Date: 08/25/2016 GTA Date: 04/28/2010 Community Website: <a href="http://www.carlislear.org/">http://www.carlislear.org/</a>		Policies in Force: 10 Insurance in Force: \$1,595,400.00 No. of Paid Losses: Total Losses Paid: Sub. Damage Claims Since 1978:	
<input type="checkbox"/> Tribal Community <input type="checkbox"/> Upton Jones Claims <input type="checkbox"/> ICC Claims		<input type="checkbox"/> HMGP Projects <input type="checkbox"/> FMA Projects	



## City of Coy



**The City of Coy** is not a member of the NFIP due to lack of community resources and the small size of the floodplain existing in the community.

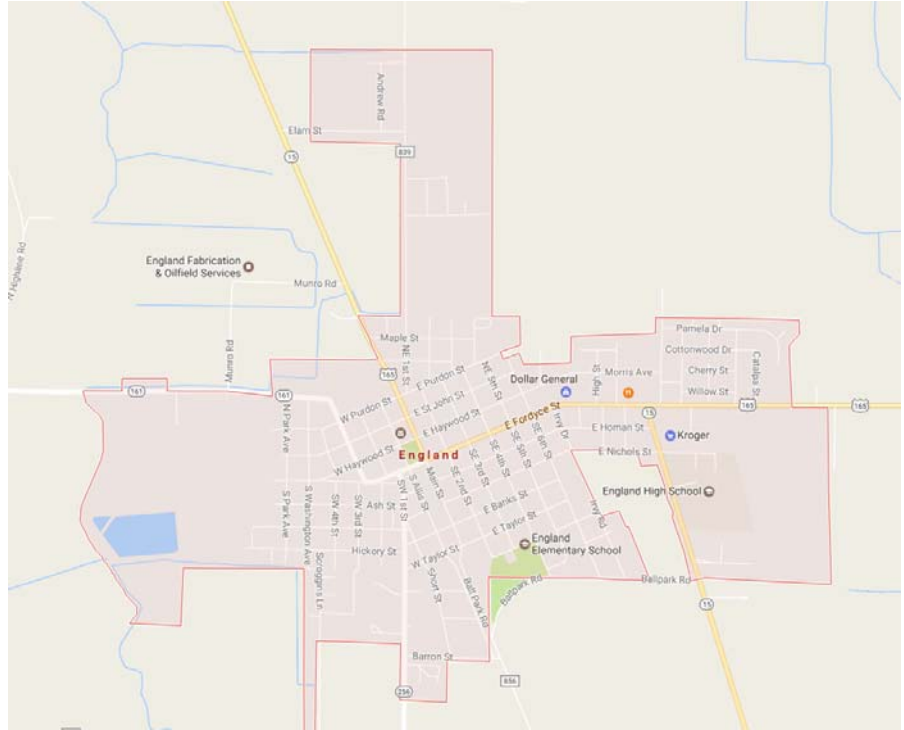
Community: County:		COY, TOWN OF LONOKE COUNTY		State: CID:		ARKANSAS 050402	
Program: Status:		NOT PARTICIPATING		Emergency Entry:		Regular Entry: Status Effective:	
						06/25/1977	
Current Map:		06/16/2006		Study Underway:		NO	
FIRM Status:		REVISED		Level of Regs:		Initial FIRM:	
FHB Status:		SUPERCEDED BY FIRM				06/16/2006	
				Initial FHB:		06/25/1976	
Probation Status:				Probation Ended:			
Probation Effective:				Reinstated Effective:			
Suspension Effective:				Reinstated Effective:			
Withdrawal Effective:							
CRS Class / Discount:				Policies in Force:			
Effective Date:				Insurance in Force:			
CAV Date:				No. of Paid Losses:			
CAC Date:				Total Losses Paid:			
				Sub. Damage Claims Since 1978:			
Workshop Date:				03/26/2010			
GTA Date:							
Community Website:							
<input type="checkbox"/> Tribal Community <input type="checkbox"/> Upton Jones Claims <input type="checkbox"/> ICC Claims				<input type="checkbox"/> HMGP Projects <input type="checkbox"/> FMA Projects			

## City of England

The City of England is a member of the National Flood Insurance Program, Community Identification Number 050133.

**NFIP Participation-** England participates in the NFIP by assisting the residences ~~by assisting~~ with the filling out of documents for the NFIP and educating citizens about the NFIP program. Permits are issued for those wishing to build in the floodplain, and then the floodplain manager monitors the construction process to ensure compliance. The city plans to continue to participating through continuing floodplain education, and staying in compliance with NFIP. The city maintains elevation certificates.

**Staff Resources-** The city has limited staffing and resources for floodplain management.



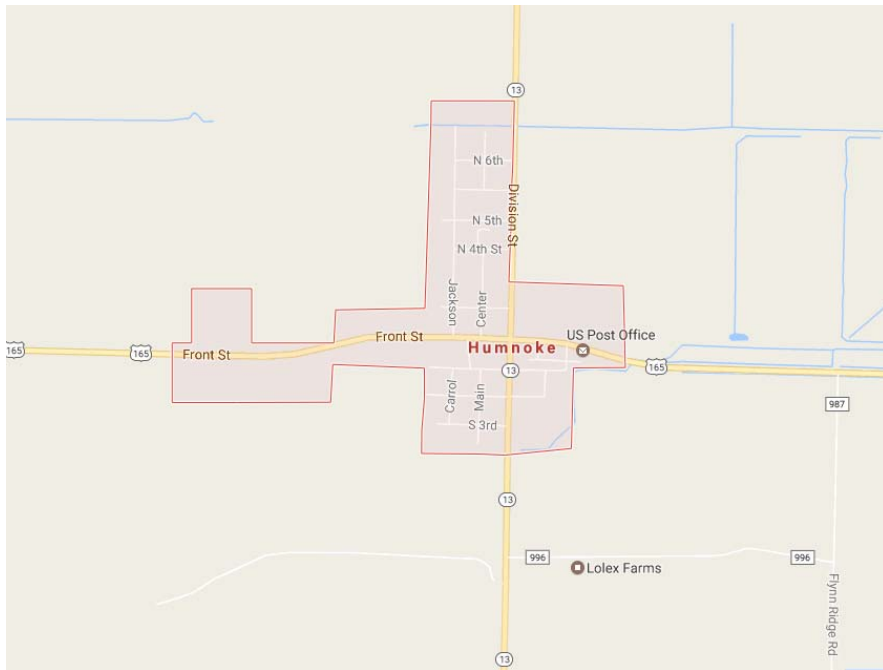
If floodplain resources are needed that the city cannot provide, the City will request assistance from the Lonoke County Office of Emergency Services, Lonoke County Floodplain Manager, Arkansas Natural Resources Commission or FEMA.

**Compliance History-** England is in good standing with the NFIP, and there are no outstanding compliance issues.

England intends to maintain compliance with the NFIP.

Community: ENGLAND, CITY OF		State: ARKANSAS	
County: LONOKE COUNTY		CID: 050133	
Program:	Regular	Emergency Entry:	05/06/1975
Status:	PARTICIPATING	Regular Entry:	01/03/1986
		Status Effective:	01/03/1986
Current Map:	06/16/2006	Study Underway:	YES
FIRM Status:	REVISED	Level of Regs:	D
FHBM Status:	SUPERCEDED BY FIRM	Initial FIRM:	01/03/1986
		Initial FHBM:	05/10/1974
Probation Status:		Probation Ended:	
Probation Effective:		Reinstated Effective:	
Suspension Effective:		Reinstated Effective:	
Withdrawal Effective:			
CRS Class / Discount:		Policies in Force:	
Effective Date:		Insurance in Force:	
CAV Date: 07/12/2005 Workshop Date: 05/03/2016		No. of Paid Losses:	
CAC Date: 01/23/2017 GTA Date: 03/19/2010		Total Losses Paid:	
Community Website: <a href="http://www.cityofengland.org">http://www.cityofengland.org</a>		Sub. Damage Claims Since 1978:	
<input type="checkbox"/> Tribal Community <input type="checkbox"/> Upton Jones Claims <input type="checkbox"/> ICC Claims		<input type="checkbox"/> HMGP Projects <input type="checkbox"/> FMA Projects	
		17	
		\$2,071,000.00	
		1	
		\$1,070.85	
		0	

## City of Humnoke



**The City of Humnoke is a member of the National Flood Insurance Program, Community Identification Number 050258.**

**NFIP Participation-** The City assists the residences with the filling out documents for the NFIP and educates the citizens about the NFIP program. Permits are issued for those wishing to build in the floodplain, and then the floodplain manager monitors the construction process to ensure compliance. The city plans to continue to participating through continuing floodplain education, and staying in compliance with NFIP. The city maintains elevation certificates. The City participates in the NFIP by assisting the residences by assisting with the filling out documents for the NFIP and educating citizens about the NFIP program.

*Staff Resources-* The city has limited staffing and resources for floodplain management.

If floodplain resources are needed that the city cannot provide, the City will request assistance from the Lonoke County Office of Emergency Services, Lonoke County Floodplain Manager, Arkansas Natural Resources Commission or FEMA.

*Compliance History-* The City is in good standing with the NFIP, and there are no outstanding compliance issues.

The City intends to maintain compliance with the NFIP by continuing to regulate development in designated areas with the consideration of water issues.

Community: HUMNOKE,CITY		State: ARKANSAS	
County: LONOKE COUNTY		CID: 050258	
Program:	Regular	Emergency Entry:	02/11/1976
Status:	PARTICIPATING	Regular Entry:	02/01/1987
		Status Effective:	02/01/1987
Current Map:	06/16/2006	Study Underway:	YES
FIRM Status:	REVISED	Level of Regs:	D
FHBM Status:	SUPERCEDED BY FIRM	Initial FIRM:	02/01/1987
		Initial FHBM:	07/11/1975
Probation Status:			
Probation Effective:		Probation Ended:	
Suspension Effective:		Reinstated Effective:	
Withdrawal Effective:		Reinstated Effective:	
CRS Class / Discount:		Policies in Force:	
Effective Date:		Insurance in Force:	
CAV Date:	07/12/2005	Workshop Date:	
CAC Date:	07/25/2011	GTA Date:	03/08/2016
Community Website:		Total Losses Paid:	
<input type="checkbox"/> Tribal Community		Sub. Damage Claims Since 1978:	
<input type="checkbox"/> Upton Jones Claims		10	
<input type="checkbox"/> ICC Claims		\$503,500.00	
		No. of Paid Losses:	
		2	
		Total Losses Paid:	
		\$13,520.09	
		Sub. Damage Claims Since 1978:	
		0	
		<input type="checkbox"/> HMGP Projects	
		<input type="checkbox"/> FMA Projects	

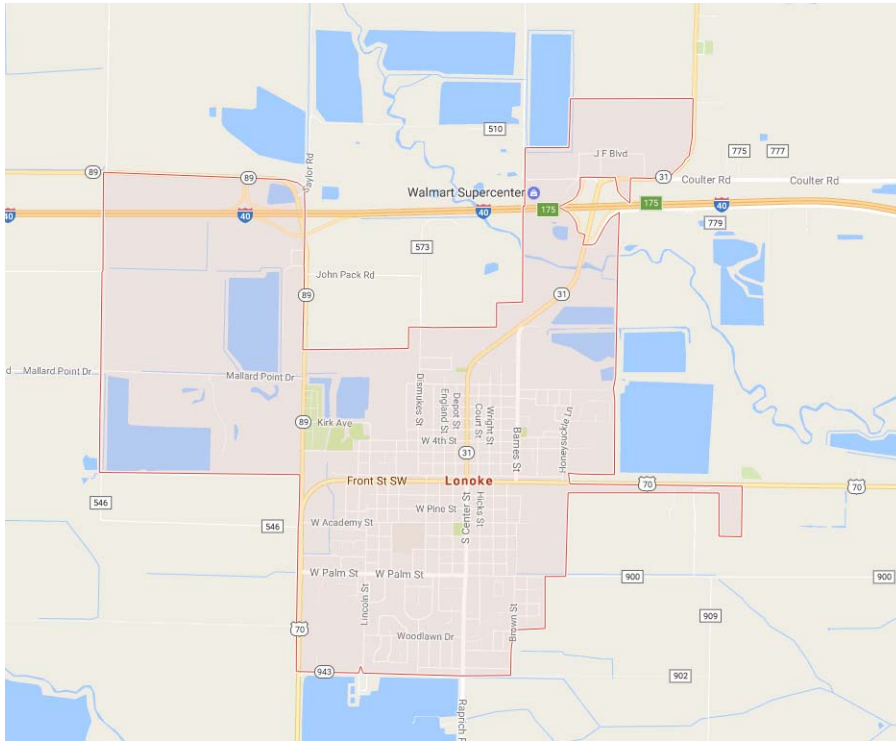
## City of Keo

**The City of Keo** is not a member of the NFIP due to lack of community resources and the small size of the floodplain existing in the community.



Community: KEO, TOWN OF		State: ARKANSAS	
County: LONOKE COUNTY		CID: 050259	
Program Status: NOT PARTICIPATING		Emergency Entry:	
Current Map: 06/16/2006		Study Underway: NO	
FIRM Status: REVISED		Level of Regs:	
FHBM Status: NEVER MAPPED		Initial FIRM: 06/16/2006	
Initial FHBM:			
Probation Status:		Probation Ended:	
Probation Effective:		Reinstated Effective:	
Suspension Effective:		Reinstated Effective:	
Withdrawal Effective:			
CRS Class / Discount:		Policies in Force:	
Effective Date:		Insurance in Force:	
CAV Date: Workshop Date:		No. of Paid Losses:	
CAC Date: 04/21/2008 GTA Date: 08/27/2014		Total Losses Paid:	
Community Website: <a href="http://www.keoar.com/">http://www.keoar.com/</a>		Sub. Damage Claims Since 1978:	
<input type="checkbox"/> Tribal Community <input type="checkbox"/> Upton Jones Claims <input type="checkbox"/> ICC Claims		<input type="checkbox"/> HMGP Projects <input type="checkbox"/> FMA Projects	

## City of Lonoke



**The City of Lonoke is a member of the National Flood Insurance Program, Community Identification Number 050341.**

**NFIP Participation-** The City assists the residences with the filling out documents for the NFIP and educates the citizens about the NFIP program. Permits are issued for those wishing to build in the floodplain, and then the floodplain manager monitors the construction process to ensure compliance. The city plans to continue to participating through continuing floodplain education, and staying in compliance with NFIP. The city maintains elevation certificates. The City participates in the NFIP by assisting the residences by assisting with the filling out documents for the NFIP and educating citizens about the NFIP program.

**Staff Resources-** The city has limited staffing and resources for floodplain management.

If floodplain resources are needed that the city cannot provide, the City will request assistance from the Lonoke County Office of Emergency Services, Lonoke County Floodplain Manager, Arkansas Natural Resources Commission or FEMA.

**Compliance History-** The City is in good standing with the NFIP, and there are no outstanding compliance issues.

The City intends to maintain compliance with the NFIP.

Community: LONOKE, CITY OF		State: ARKANSAS	
County: LONOKE COUNTY		CID: 050341	
Program: Regular	Emergency Entry: 05/06/1985	Regular Entry: 05/06/1985	
Status: PARTICIPATING		Status Effective: 05/06/1985	
Current Map: 06/16/2006	Study Underway: NO	Level of Regs: D	
FIRM Status: REVISED		Initial FIRM: 03/15/1982	
FHBM Status: SUPERCEDED BY FIRM		Initial FHBM: 03/26/1976	
Probation Status:	Probation Ended:		
Probation Effective:	Reinstated Effective:		
Suspension Effective:	Reinstated Effective:		
Withdrawal Effective:			
CRS Class / Discount:		Policies in Force:	1
Effective Date:		Insurance in Force:	\$140,000.00
CAV Date: 07/12/2005 Workshop Date: 05/03/2016		No. of Paid Losses:	3
CAC Date: 08/28/2013 GTA Date: 06/08/2016		Total Losses Paid:	\$155,232.55
<input type="checkbox"/> Tribal Community	Community Website:	Sub. Damage Claims Since 1978:	0
<input type="checkbox"/> Upton Jones Claims			
<input type="checkbox"/> ICC Claims			
	<input type="checkbox"/> HMGP Projects		
	<input type="checkbox"/> FMA Projects		

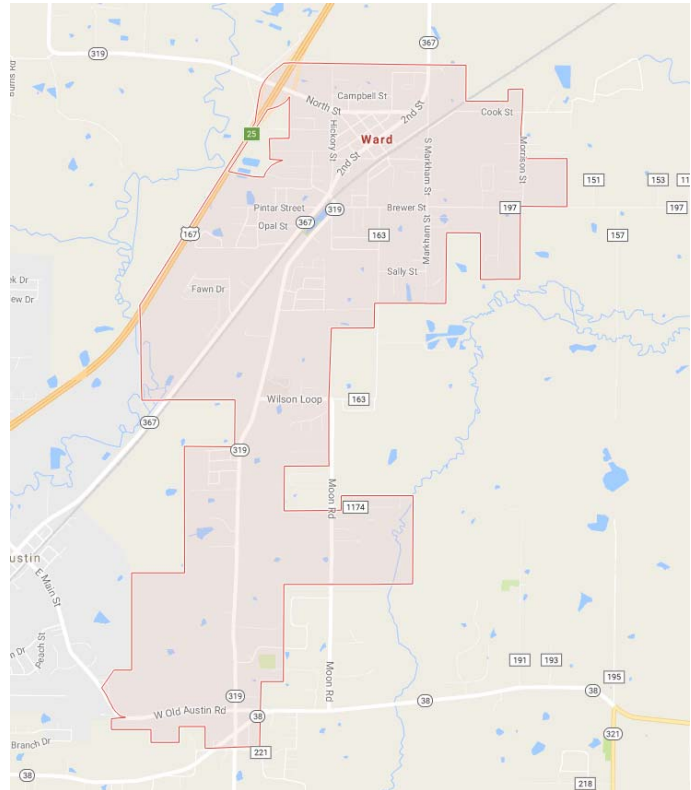
## City of Ward

**The City of Ward** is a member of the National Flood Insurance Program, Community Identification Number 050372.

**NFIP Participation-** The City assists the residences with the filling out documents for the NFIP and educates the citizens about the NFIP program. Permits are issued for those wishing to build in the floodplain, and then the floodplain manager monitors the construction process to ensure compliance. The city plans to continue to participating through continuing floodplain education, and staying in compliance with NFIP. The city maintains elevation certificates. The City participates in the NFIP by assisting the residences by assisting with the filling out documents for the NFIP and educating citizens about the NFIP program.

**Staff Resources-** The city has limited staffing and resources for floodplain management.

If floodplain resources are needed that the city cannot provide, the City will request assistance from the Lonoke County Office of Emergency Services, Lonoke County Floodplain Manager, Arkansas Natural Resources Commission or FEMA.



**Compliance History-** The City is in good standing with the NFIP, and there are no outstanding compliance issues.

The City intends to maintain compliance with the NFIP.

Community: County:		WARD, CITY OF LONOKE COUNTY		State: CID:		ARKANSAS 050372	
Program: Status:		Regular PARTICIPATING		Emergency Entry: 09/08/1975		Regular Entry: Status Effective: 09/05/1978 09/05/1978	
Current Map: FIRM Status: FHBM Status:		02/20/2008 REVISED SUPERCEDED BY FIRM		Study Underway: NO		Level of Regs: D Initial FIRM: 09/05/1978 Initial FHBM: 04/18/1975	
Probation Status:				Probation Ended:			
Probation Effective:				Reinstated Effective:			
Suspension Effective:				Reinstated Effective:			
Withdrawal Effective:				Reinstated Effective:			
CRS Class / Discount:				Policies in Force:			
Effective Date:				Insurance in Force:			
CAV Date: 07/14/2010 Workshop Date: 04/14/2010				\$3,059,400.00			
CAC Date: 07/22/2011 GTA Date: 03/17/2010				No. of Paid Losses: 1			
Community Website: http://www.bestofward.com/home.html				Total Losses Paid: \$668.95			
<input type="checkbox"/> Tribal Community				Sub. Damage Claims Since 1978: 0			
<input type="checkbox"/> Upton Jones Claims				<input type="checkbox"/> HMGP Projects			
<input type="checkbox"/> ICC Claims				<input type="checkbox"/> FMA Projects			



**School Districts:**

There are four school districts in Lonoke County with campuses: Carlisle, Cabot, England, and Lonoke.

National Flood Insurance Program (NFIP) School Districts are not required to be a member of the NFIP, but they are located in Lonoke County and cities that are members.

### **2.2.3 Fire Districts**

None of the fire districts in Lonoke County are “Firewise” at this time, but plans are being discussed to become Firewise Communities in the future.

### **2.2.4 Transportation**



As shown above: Two major thoroughfares (Interstate 40, and Highway 167) run through Lonoke County. The section of I-40 is a highly traveled roadway between Little Rock, AR and Memphis, TN. Hwy 167 is a four lane highway identical to an interstate system. It is situated between Little Rock and Jonesboro, AR and is also a main routes used to travel to St. Louis, MO.

Interstate 40 passes through the middle of the county in an east/west direction. Lonoke and Carlisle are located just off its exits. This is a main thoroughfare for travel across the United States, and sees cargo, recreational, commuter, and hazardous waste travel each day.

The Carlisle Municipal Airport is located in the City of Carlisle, which is the only public airport in the County. There are 14 other private air strips, which mostly exist to support the agricultural community.



# SECTION 3

## Hazard Identification and Risk Assessment

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### **3.1 Hazard Identification and Prioritization**

Hazard identification, the process of identifying hazard that threatens a given area, is the first step in the risk assessment process. Lonoke County has identified several natural hazards that, because they pose a threat to the County and its residents, have warranted a complete profile in this hazard mitigation plan.

Please note that the update period of this plan is January 1, 2009, through June 30, 2017.

The following hazards were identified from historical information provided by planning team members, newspapers, review of plans and reports, internet research, the State Mitigation Plan, and FEMA publication “Multi-Hazard-Identification and Risk Assessment”, and information provided by FEMA and ADEM. The following chart is a cumulative overview of the hazard events that affected all participating jurisdictions in the planning area.

Hazards	Hazard Events during the update period
Dam Failure	No dam failures for Lonoke County.
Drought	16 events reported
Earthquake	0 events reported
Extreme Heat	3 events reported
Flood	6 flood events and 21 days with flash flood events reported
Thunderstorm	81 events reported
Tornado	11 events reported
Wildfire	56 events reported
Winter Storm	9 winter storm events, 1 ice storm event

Landslide – There is information from the USGS on Landslides in Arkansas. David Johnston at the Arkansas Geological Survey and he said that they have no record of information for Lonoke County. There was information on the Arkansas Geological Survey website for other areas in Arkansas but not for Lonoke County. This was addressed in the planning meeting and Lonoke County is not a high risk area for landslides.

Expansive Soils- This hazard was profiled in the original Lonoke County Hazard Mitigation Plan, but will be removed from the plan update for the following reasons: 1) lack of any significant impact, and they are not profiled in the Arkansas All-Hazard Mitigation Plan (version 2013) because “they occur infrequently and their impacts are minimal.” Although the planning team agreed that expansive soils may occur, the extreme lack of impact led the team to omit the hazard.

Land Subsidence - David Johnston at the Arkansas Geological Survey said that they have no records or information for Lonoke County. Further research shows that data and past occurrences are not available therefore Land Subsidence will be omitted from this Plan.

### **Presidential Disaster Declarations in Lonoke County from 2000 to current date**

Disaster Declaration	Date	Incident Description
1758	05/02/2008	Severe Storms, Tornadoes, and Flooding
1793	09/18/2008	Severe Storms and Flooding associated with Hurricane Gustav
1845	06/16/2009	Severe Storms, Tornadoes, and Flooding
1872	02/04/2010	Severe Storms, Tornadoes, and Flooding

Disaster Declaration	Date	Incident Description
1975	05/02/2011	Severe Storms, Tornadoes, and Flooding
4100	01/29/2013	Severe Winter Storm

### **3.2 Vulnerability and Risk Assessment by Hazard**

The Lonoke County Hazard Mitigation Plan includes a description or profile, location, and extent of all natural hazards that can affect each jurisdiction.

**Description** describes the natural hazard that can affect the jurisdictions in the planning area.

**Location** (Geographic Area Affected) is where geographic areas in the planning area that are affected by the hazard, and when possible maps were used to illustrate the location. But for some hazards, such as tornados, the plan stated that the entire planning area is equally at risk to that hazard.

**Previous Occurrences** lists past hazard events for each jurisdiction.

**Probability of Future Events** means the likelihood of the hazard occurring in the future and may be defined in terms of general descriptors, historical frequencies, and statistical probabilities. Statistical probabilities often refer to events of a specific size or strength. Hazard likelihood can also be compared using general descriptions or rankings. For the purpose of this plan we will use the general descriptors to describe the likelihood of hazard events based on historical frequency.

**Unlikely:** Less than 1 percent probability of occurrence in the next year or a recurrence interval of greater than every 100 years.

**Possible:** 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 1 year.

A description of each identified hazard's impact on the community as well as an overall summary of the community's vulnerability for each jurisdiction is included.

**Impact and Overall Jurisdictional Vulnerability**— is the consequence or effect of the hazard on the community and its assets. Impacts will be described by referencing historical disaster impacts and/or an estimate of potential future losses, such as percent damage of total exposure. It will identify structures, systems, populations or other community assets as defined by the community that are susceptible to damage and loss from hazard events. It is a list of key issues or problem statements that clearly describes the community's greatest vulnerabilities and that will be address in the mitigation strategy. Each jurisdictions review of a hazard's impact and vulnerability will be explained in its respective section. If the impact and vulnerability is equal among all jurisdictions, the plan will state that. If a jurisdiction has any unique impact or vulnerability, it will be summarized in that section.

**Repetitive Loss Properties and Severe Repetitive Loss Properties**- addresses NFIP insured structures describing the types (residential, commercial, institutional, etc.) and estimates the number of repetitive loss properties located in the identified flood hazard areas.

### **3.3 Methodology used in Estimating Potential Loss**

The methodology used in this plan for the potential loss estimate was developed by using past hazard events data from The National Climatic Data Center (NCDC) Storm Events Database, HAZUS-MH, and available 911 information. If information was not able to be obtained of a certain type past hazard event, an estimate of potential loss was not completed due to the lack of information.

### **3.4 Natural Hazards Affecting Lonoke County**

This mitigation plan addresses the natural hazards that can affect the participating jurisdictions. The hazards which have occurred in the past or could possibly affect in the near future are dam failure, drought, extreme heat, earthquake, flooding, thunderstorms, tornadoes, wildfire, and winter storms.

#### **3.4.1. Dam Failure**

##### **Description of Dam Failure**

According to the Association of State Dam Safety Officials, the term dam is defined in the rules as “any barrier, including one for flood detention, designed to impound liquid volumes.” A dam failure is the collapse, breach, or other failure resulting in downstream flooding. A dam impounds water in the upstream area, referred to as the reservoir. The amount of water impounded is measured in acre-ft. An acre-foot is the volume of water that covers an acre of land to a depth of one foot. As a function of upstream topography, even a very small dam may impound or detain many acre-ft. of water. Two factors influence the potential severity of a full or partial dam failure: the amount of water impounded, and the density, type, and value of development and infrastructure located downstream.

According to the Arkansas Natural Resource Commission (ANRC) Title 7, Sections 705.3 – 705.4, the criteria for size classifications are based on height of dam and impoundment capacity, and hazard classifications, which are used in this plan to describe the level of risk and severity associated with dam failure.

Section 705.3 provides detail on the size classification criteria for dams based on either height of the dam or maximum storage. The classifications are shown in the table below:

<b>Category</b>	<b>Maximum Storage (ac-ft)</b>	<b>Height (Feet)</b>
Small	50 to 1,000	25-40
Intermediate	1,000 and <50,000	40 and <100
Large	50,000	100

### Location of Dams:

There are a total of 23 dams throughout the entire Lonoke County planning area, and all are rated as a low or significant hazard.

Record	Dam Name	Other Dam Name	NID ID	River	NID Height	NID Storage	Year Completed	Drainage Area	Hazard	County	Longitude	Latitude
1553	<a href="#">PARKER LAKE DAM</a>		<a href="#">AR00052</a>	BAYOU TWO LONOKE-OS	10.00	175.00	1954	0.78	L	LONOKE	-91.7267	34.6867
1557	<a href="#">PETERSON LAKE DAM</a>		<a href="#">AR00056</a>	BAYOU TWO LONOKE-TR	10.00	700.00	1950	0.68	L	LONOKE	-91.6678	34.6275
1558	<a href="#">THOMPSON LAKE DAM</a>		<a href="#">AR00057</a>	JACKSNIPE BRANCH	17.00	80.00	1953	0.00	S	LONOKE	-92.0372	35.0433
1594	<a href="#">CATFISH LAKE DAM</a>		<a href="#">AR00096</a>	JACKSNIPE BRANCH	27.00	140.00	1971	0.50	L	LONOKE	-92.0517	35.0400
1612	<a href="#">MOUND LAKE DAM</a>	MOUND LAKE DAM	<a href="#">AR00115</a>	PLUM BAYOU-TR	10.00	700.00	1950	0.00	L	LONOKE	-92.0817	34.6417
1667	<a href="#">YOUNG S RESERVOIR NO 1 DAM</a>		<a href="#">AR00175</a>	WATTENSAW BAYOU-TR	19.00	242.00	1955	0.46	L	LONOKE	-91.7400	34.8933
1668	<a href="#">COOPER LAKE DAM</a>	COOPER LAKE	<a href="#">AR00176</a>	BAYOU TWO LONOKE-TR	22.00	100.00	1950	0.00	S	LONOKE	-92.0486	34.9950
1669	<a href="#">INDIAN LAKE-SOUTH DAM</a>		<a href="#">AR00177</a>	DEANS BRANCH	32.00	280.00	1942	0.19	L	LONOKE	-92.1183	35.0450
1670	<a href="#">ARNONAME 4 DOUGHERTY S DAM</a>		<a href="#">AR00178</a>	DEANS BRANCH	18.00	80.00	1942	0.00	S	LONOKE	-92.1153	35.0433
1671	<a href="#">LAKE LEMAY DAM</a>		<a href="#">AR00179</a>	PIGEON ROOST CREEK-TR	20.00	130.00	1963	0.30	S	LONOKE	-91.9417	34.9383
1672	<a href="#">MCCALLIE-SOUTH LAKE DAM</a>		<a href="#">AR00182</a>	WATTENSAW BAYOU-TR-OS	15.00	170.00	1950	0.21	L	LONOKE	-91.7470	34.8767
1673	<a href="#">MCCALLIE-NORTH LAKE DAM</a>		<a href="#">AR00183</a>	WATTENSAW BAYOU-TR-OS	16.00	190.00	1947	0.18	L	LONOKE	-91.7483	34.8819
1674	<a href="#">SNIDER S. POND DAM</a>		<a href="#">AR00189</a>	BAYOU TWO LONOKE-TR	15.00	154.00	1950	0.00	L	LONOKE	-91.7700	34.8133

Record	Dam Name	Other Dam Name	NID ID	River	NID Height	NID Storage	Year Completed	Drainage Area	Hazard	County	Longitude	Latitude
2573	<a href="#">KELLER LAKE DAM</a>	KELLER LAKE DAM	<a href="#">AR01301</a>	BAYO METO-TR	11.00	80.00	1955	0.00	L	LONOKE	-92.0483	34.8133
2574	<a href="#">TATON LAKE DAM</a>	TATON LAKE DAM	<a href="#">AR01302</a>	BAYOU TWO LONOKE-TR	22.00	57.00	1970	0.00	S	LONOKE	-92.0367	34.9817
2575	<a href="#">DAVIS LAKE DAM</a>		<a href="#">AR01303</a>	BRUSH CREEK-TR	16.00	178.00	1972	0.18	S	LONOKE	-91.8886	34.9817
2576	<a href="#">MINTON S LAKE DAM</a>		<a href="#">AR01304</a>	LICK CREEK-TR	16.00	85.00	1961	0.31	S	LONOKE	-91.9300	34.9783
2577	<a href="#">RICHMOND POND DAM</a>	RICHMOND POND DAM	<a href="#">AR01305</a>	MILL CREEK-TR	14.00	94.00	1952	0.36	S	LONOKE	-91.9650	34.9664
2578	<a href="#">BIG POND DAM</a>		<a href="#">AR01306</a>	WATTENSAW BAYOU-TR	16.00	101.00	1965	0.50	L	LONOKE	-91.7317	34.9133
2579	<a href="#">LITTLE POND DAM</a>	LITTLE POND DAM	<a href="#">AR01307</a>	WATTENSAW BAYOU-TR	14.00	67.00	1969	0.08	L	LONOKE	-91.7300	34.9133
2585	<a href="#">RICK LAKE DAM</a>		<a href="#">AR01313</a>	ROCKY BRANCH	18.00	112.00	1960	0.00	L	LONOKE	-92.0167	35.0417
2586	<a href="#">OMNI LAKE DAM</a>		<a href="#">AR01314</a>	MAGNESS CREEK-OS	20.00	76.00	1973	0.00	L	LONOKE	-92.0317	35.0250
2587	<a href="#">OMNI LAKE NO 2 DAM</a>		<a href="#">AR01315</a>	MAGNESS CREEK-TR	21.00	102.00	1974	0.00	L	LONOKE	-92.0433	35.0250

## **Extent**

The following calculations do not reflect the physical conditions of the dams, but rather describe areas downstream of the dams that could be impacted in the event of failure. According to ANRC Title 7, the rate of risk for dam failure is calculated as follows:

Low Hazard Dams	No loss of life and minimal economic loss are expected. (No significant structures, pastures, woodland, or largely undeveloped land); less than \$ 100,000.
Significant Hazard Dams	Loss of life is possible, but not expected. Economic loss would be appreciable. (Significant structures, industrial, or commercial development, or cropland); \$100,000 to \$500,000.
High Hazard Dams	Loss of life is expected, and economic damage would be excessive. (Extensive public, industrial, commercial, or agricultural development); over \$500,000.

According to the Arkansas State Hazard Mitigation Plan, there are a total of 23 dams throughout the entire county of Lonoke. There are 15 dams rated as a low hazard, and eight ranked significant hazard. If a dam is rated as a High Hazard, it is required to have an Emergency Action Plan (EAP) completed. This EAP will also require inundation studies that will detail the extent of a dam failure for a particular dam. However, there are no High Risk dams within the planning area. There are no EAPs or inundation studies for any of the dams in the planning area.

For the 15 Low Hazard Dams in the planning area, no loss of life and minimal economic losses are expected (less than \$100,000).

For the 8 Significant Hazard Dams in the planning area, loss of life is not expected. Economic loss would be appreciable to structures, industrial or commercial development or cropland. Losses would potentially be between \$100,000 and \$500,000, and expected more-so for the significant hazard dams near developed areas as detailed below.

Because all of the dams in the planning area are listed as “Low” or “Significant” Hazard, and none are “High” Hazard, there are no existing inundation studies available to detail the amount of water that could be released, at what speed, or at what depth. The HMPT will seek to remedy this data deficiency before the next plan update.

## **Previous Occurrences**

There are no previous occurrences of dam failure in all participating jurisdictions of Lonoke County.

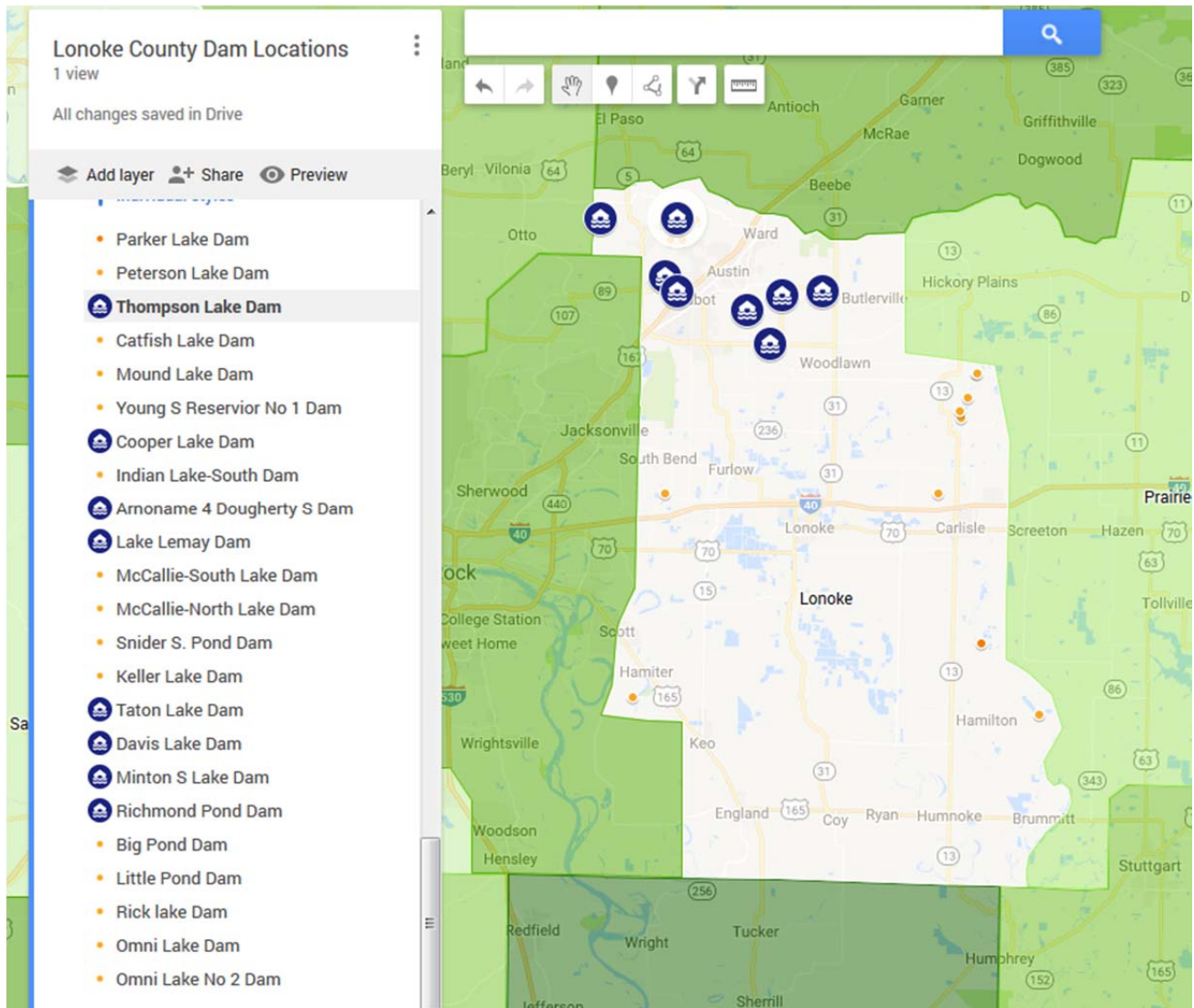
## **Probability of Future Events**

Because there are no known dam failures to have occurred in Lonoke County, a future event is “unlikely” to happen in the next year.

## **Impact and Vulnerability**

On the below map, the blue icons represent the “Significant” Hazards dams. The orange dots represent the “Low” Hazard dams. None of the low hazard dams are located near any developed areas or incorporated cities, and are not expected to affect any roads, structures or people were they to breach. Therefore, the low hazard dams will not be profiled further.

Cropland and low-lying structures are most vulnerable to dam failure. They could be inundated with water for a prolonged period of time causing loss of crops and slight damage to the low-lying structures.

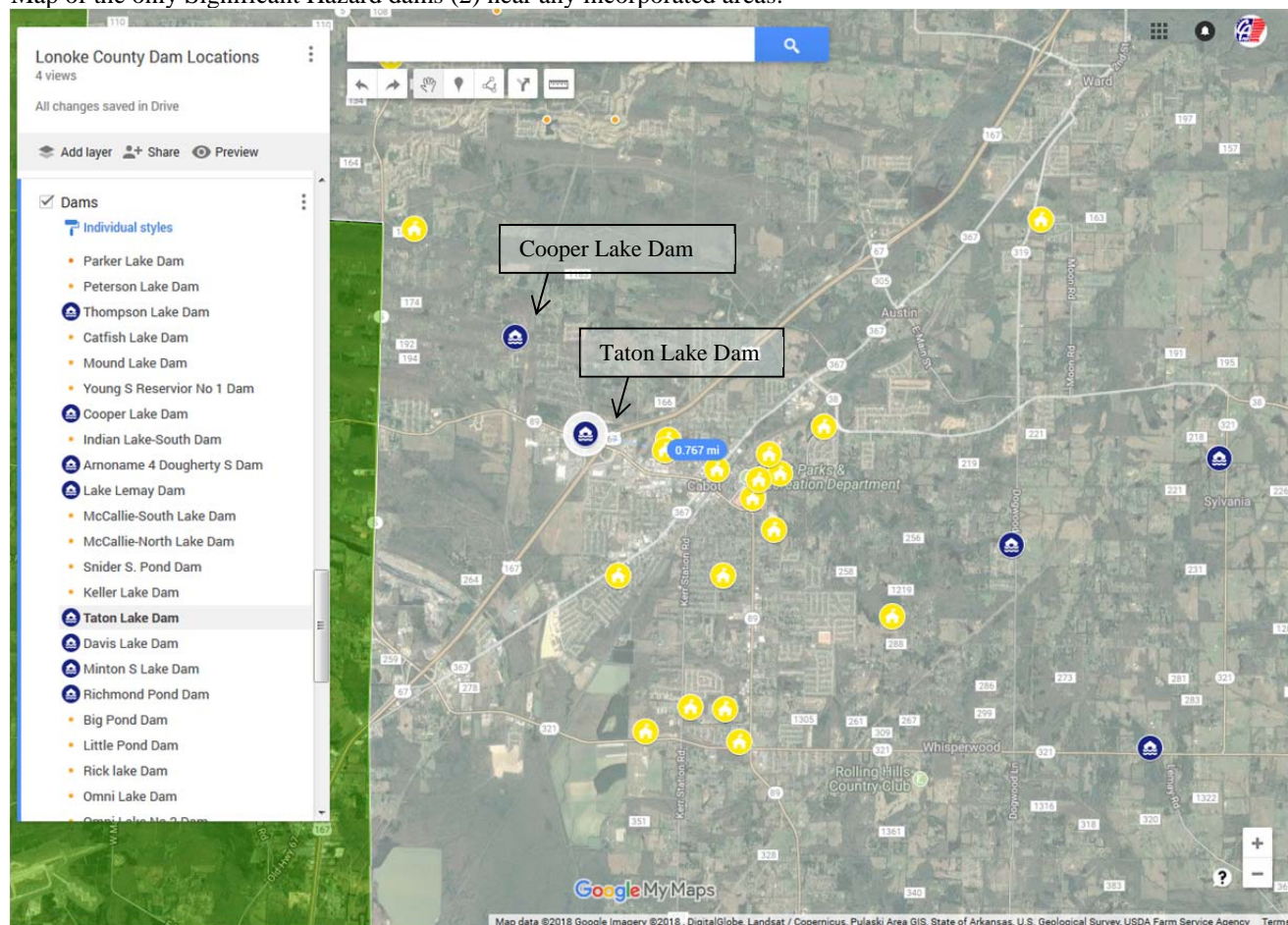


All of the “Significant” Hazard dams are located in the northern part of Lonoke County. Two of the significant hazard dams are near the City of Cabot, which is the most populated city in Lonoke County. They are the Cooper Lake Dam and the Taton Lake Dam. The other 6 significant hazard dams are in unincorporated areas of Lonoke County that are mostly undeveloped, and are not expected to affect any roads, structures or people were to breach. They are all classified as “small” under ANRC Title 7, Section 705.3, and the maximum acre-feet of water stored at any of these 6 Significant Hazard dams are 178 acre-feet or less. Therefore the HMPT does not expect any damages to occur should any of these 6 Significant Hazard Dams fail.

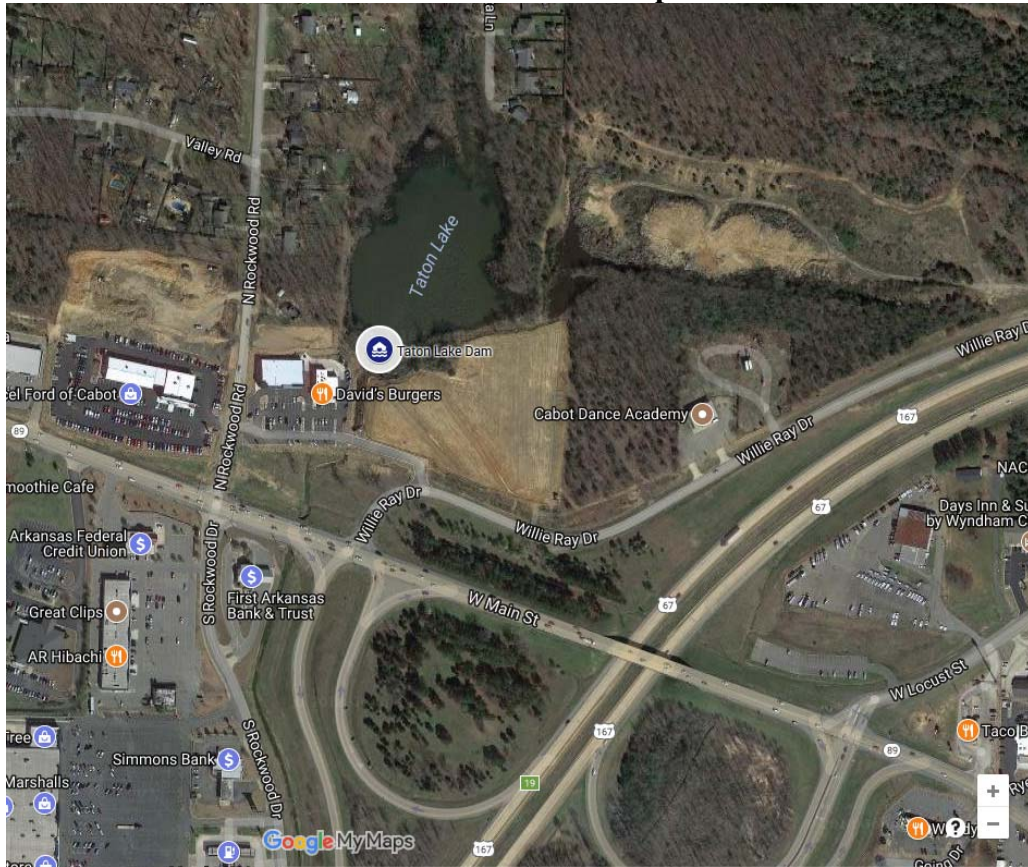
None of the dams are in close proximity to any Carlisle, England or Lonoke School Districts facilities. The Cabot School District facilities are indicated in yellow on the below map, which is a zoom-in of the above map. None of the school facilities (Cabot Schools) are closer than 0.77 miles from a “significant” hazard dam, Taton Lake Dam. Additionally, Taton Lake Dam shows a drainage area of 0.00 miles. Therefore no damages are expected to occur at any planning area school facilities should a breach occur.



Map of the only Significant Hazard dams (2) near any incorporated areas:



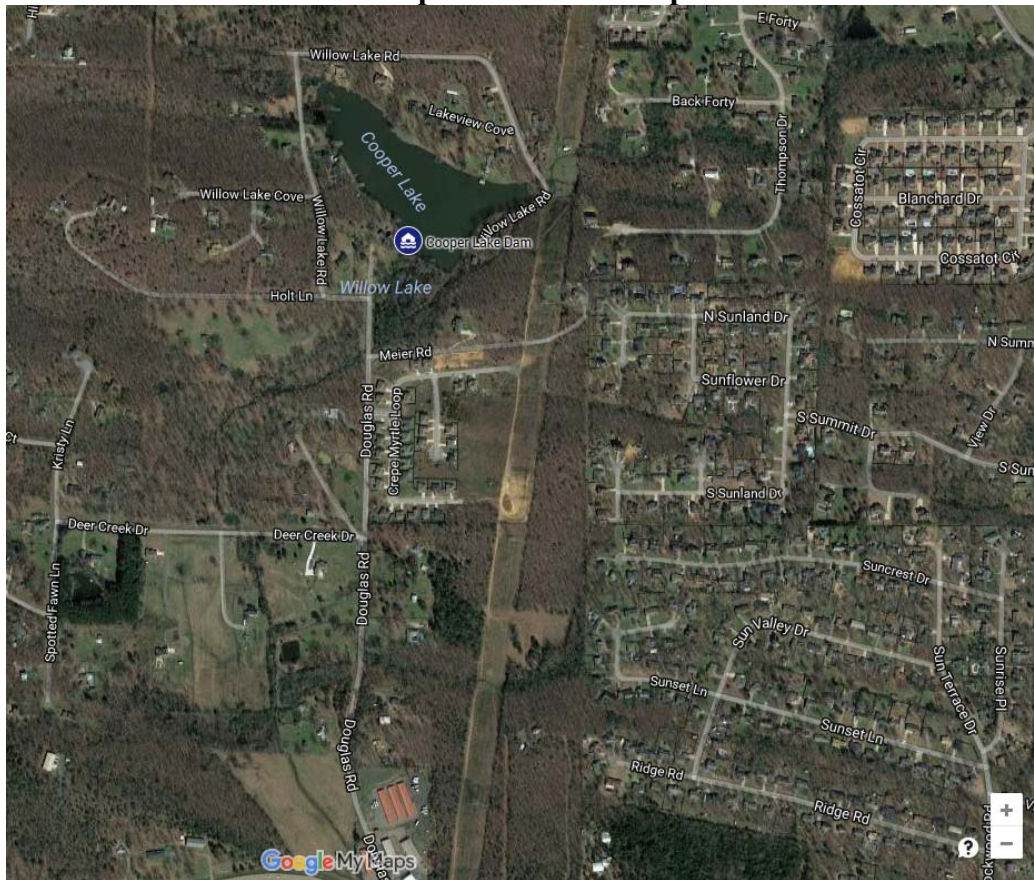
## Taton Lake Dam Map



A breach of Taton Lake Dam could potentially flood of up to 25 businesses, causing economic losses; and could temporarily overtop city streets and an access road to State Highway 67/167, rendering them unusable. This could cause emergency services to be rerouted and could potentially endanger lives and property. People attempting to drive on the overtopped roads could be swept away in their cars causing damage and/or injury.



### Cooper Lake Dam Map



Although the drainage area is listed as 0.00, should a breach occur of Cooper Lake Dam, the Willow Lake Subdivision houses and roads could experience flooding. The residents of this subdivision could also experience a temporary disconnection from emergency services which could cause injury or death. People attempting to drive on the overtopped roads could be swept away in their cars causing damage and/or injury.

There is insufficient data to provide a more thorough evaluation of the vulnerabilities and impacts of dam failure in the planning area. The HMPT will seek to remedy this data deficiency before the next plan update.

#### **3.4.2 Drought**

##### **Description of Drought**

A drought is a period of unusually persistent dry weather that persists long enough to cause serious deficiencies in water supply (surface or underground). Droughts are slow onset hazard, but over time they can severely affect crops, municipal water supplies, recreation resources and wildlife. If drought conditions extend over a number of years, the direct and indirect economic impacts can be significant. High temperatures, high winds, and low humidity can worsen drought conditions and make areas more susceptible to wildfire. In addition, human actions and demands for water resources can accelerate drought-related impacts.

##### **Location of Drought Events:**

All planning jurisdictions are equally likely to experience severe drought, there is no defined geographic hazard boundary. The entire planning area is susceptible to this hazard.

### **Changes in Land Use**

Row Crop, Livestock and product sales continue to be a significant source of farm income for Lonoke County farmers. A drought's risk on the livelihood of farmers and the overall economy increases as the dependency and increasing trends to grow annually. Also, the population growth in the Northwestern portion of the County (around Austin, Ward, and Cabot) has resulted in a suburban community.

### **Previous Occurrences**

There have been 16 events during the update period. These events occurred between the years of 2011-2014. No damages to property or crops ~~were recorded~~are known. No deaths or injuries were recorded.

### **Extent, Magnitude or Severity of Drought**

Drought Severity Classification								
		RANGES						
Category	Description	Possible Impacts	Palmer Drought Index	CPC Soil Moisture Model (Percentiles)	USGS Weekly Streamflow (Percentiles)	Percent of Normal Precip	Standardized Precipitation Index (SPI)	Satellite Vegetation Health Index
D0	Abnormally Dry	Going into drought: short-term dryness slowing planting, growth of crops or pastures; fire risk above average. Coming out of drought: some lingering water deficits; pastures or crops not fully recovered.	-1.0 to -1.9	21-30	21-30	<75% for 3 months	-0.5 to -0.7	36-45
D1	Moderate Drought	Some damage to crops, pastures; fire risk high; streams, reservoirs, or wells low, some water shortages developing or imminent, voluntary water use restrictions requested	-2.0 to -2.9	11-20	11-20	<70% for 3 months	-0.8 to -1.2	26-35
D2	Severe Drought	Crop or pasture losses likely; fire risk very high; water shortages common; water restrictions imposed	-3.0 to -3.9	6-10	6-10	<65% for 6 months	-1.3 to -1.5	16-25
D3	Extreme Drought	Major crop/pasture losses; extreme fire danger; widespread water shortages or restrictions	-4.0 to -4.9	3-5	3-5	<60% for 6 months	-1.6 to -1.9	6-15
D4	Exceptional Drought	Exceptional and widespread crop/pasture losses; exceptional fire risk; shortages of water in reservoirs, streams, and wells, creating water emergencies	-5.0 or less	0-2	0-2	<65% for 12 months	-2.0 or less	1-5

All participating jurisdictions could experience a drought that is rated between a D0 and D2 in any given year.

### **Drought Severity Classification**

Source: U.S. National Drought Mitigation Center

### **Probability of Future Events:**

The probability that the entire planning area will experience a countywide drought event every year is likely.

### **Impact and Vulnerability:**

The primary and most devastating effect for all jurisdictions would be the lack of water. As a dry period progresses and water supplies dwindle, existing water supplies are overtaxed and dry up. If the drought is long term, it may result in permanent changes in settlement, social, and living patterns in these jurisdictions. During a past drought event, the water utility companies serving these jurisdictions instituted mandatory water restrictions. Cascading effects also include major ecological changes such as increased flash flooding and desertification. All populations in these jurisdictions are vulnerable during a drought event; however, children and elderly are the biggest concerns for the communities. They may suffer from dehydration before other populations.

The unincorporated areas of Lonoke County are mostly rural with a large amount of timber plantations, farmland, and pasture for farm animals. As water supplies dwindle in these jurisdictions, the crops and fodder will deplete. If the drought occurs during the summer months when farmers are depending upon rain for their crops, they would have to resort to pumping groundwater to supplement the lack of rainwater. Having to pump water can have a costly effect on the farmers of the region in Lonoke County.

The cities in the planning area have a higher population concentration than the unincorporated areas of the planning area. A drought could require residents to reduce their water usage within, and around, their homes. This could hinder the ability to water any vegetation on their properties. Dried vegetation is more susceptible to burning if caught on fire.

Severe droughts will elevate the potential to wildfires. While all populations are considered vulnerable during a drought event, farmers are uniquely at risk of losing crops or livestock.

The school districts of Cabot, Carlisle, England, and Lonoke may also be affected by the dwindling water supply. School schedules could be hindered, or canceled altogether. ~~The students, faculty, staff are the vulnerable populations during a drought event. These populations are at risk of dehydration and famine during drought events.~~

### **3.4.3 Earthquake**

#### **Description of Earthquake:**

An earthquake is what happens when two blocks of the earth suddenly slip past one another. The surface where they slip is called the fault or fault plane. The location below the earth's surface where the earthquake starts is called the hypocenter, and the location directly above it on the surface of the earth is called the epicenter.

Sometimes an earthquake has foreshocks. These are smaller earthquakes that happen in the same place as the larger earthquake that follows. Scientists can't tell that an earthquake is a foreshock until the larger earthquake happens. The largest, main earthquake is called the mainshock. Mainshocks always have aftershocks that follow. These are smaller earthquakes that occur afterwards in the same place as the mainshock. Depending on the size of the mainshock, aftershocks can continue for weeks, months, and even years after the mainshock.

#### **Locations affected by Earthquake and Previous Occurrences**

Lonoke County has no recorded earthquake epicenters according to the Arkansas Geological Survey. However, the aftershocks can affect the entire planning area.

#### **Extent, Magnitude or Severity of Extreme Earthquake Events:**

No earthquake activity has been reported for Lonoke County. However, it is possible that epicenters in neighboring counties can affect life and property in Lonoke County. Events ranging from a 1.7 – 4.2 magnitude have been *felt* in Lonoke County. The Planning team cannot rule out that an earthquake could occur in the planning area. With the epicenters in nearby counties, the planning area may experience an earthquake with a magnitude ranging from 0.0 – 4.2.

### Richter Scale

Magnitude	Description	Earthquake effects	Frequency of occurrence
Less than 2.0	Micro	Micro earthquakes, not felt. <sup>[13]</sup>	Continual
2.0–2.9	Minor	Generally not felt, but recorded.	1,300,000 per year (est.)
3.0–3.9		Often felt, but rarely causes damage.	130,000 per year (est.)
4.0–4.9	Light	Noticeable shaking of indoor items, rattling noises. Significant damage unlikely.	13,000 per year (est.)
5.0–5.9	Moderate	Can cause major damage to poorly constructed buildings over small regions. At most slight damage to well-designed buildings.	1,319 per year
6.0–6.9	Strong	Can be destructive in areas up to about 160 kilometres (99 mi) across in populated areas.	134 per year
7.0–7.9	Major	Can cause serious damage over larger areas.	15 per year
8.0–8.9	Great	Can cause serious damage in areas several hundred kilometres across.	1 per year
9.0–9.9		Devastating in areas several thousand kilometres across.	1 per 10 years (est.)
10.0+	Massive	Never recorded, widespread devastation across very large areas; see below for equivalent seismic energy yield.	Extremely rare (Unknown/May not be possible)

### Probability of Future Events

It is unlikely that any jurisdiction will experience an earthquake event in the next year.

### Impact and Vulnerability of Earthquake

The Arkansas State Mitigation Plan describes the regions with high probability of future earthquakes in the State of Arkansas are along the New Madrid Fault. The portion of Arkansas that is likely to experience damage is located in the northeast portion of the state. Lonoke County is not located in this area. However, jurisdictions in Lonoke County have felt earthquakes with epicenters outside of the county. The Arkansas Geological Survey confirms that damage is not a concern unless a quake has a magnitude of at least a 4.0.

The cities would be most affected by an earthquake (stronger than a 4.0) due to the building density in the urban areas. There are vulnerable commercial structures located downtown areas of the cities that are constructed with unreinforced masonry. During a 4.2 magnitude earthquake, the walls of the buildings would shake, and windows might break. All furniture, equipment, and material inside the buildings would be shaken, but damage would be negligible. Equipment in structures that are not strapped down would be displaced or turned over. The Fire Departments within the jurisdictions in the entire planning area are suspected to have negligible damage. Most equipment in the fire departments is contained or strapped down, so they are not expected to be displaced. Children present at the schools would be vulnerable to falling ~~structures-objects~~ and moving furniture/equipment inside the buildings. ~~Due to the number of children to adults, children are also at higher risk to being lost or missing. Fear might be prevalent in children and cause widespread panic. Additionally, an earthquake could create stress or take an emotional toll on this population for fear of future events.~~

Infrastructure such as roads, bridges, power lines, etc. are not expected to be vulnerable to a future earthquake event.

### **3.4.4 Extreme Heat**

#### **Description of Extreme Heat:**

Temperatures that hover 10 degrees or more above the average high temperature (during summer months) for the region and lasts for several weeks are defined as extreme heat. Humid or muggy conditions, which add to the discomfort of high temperatures, occur when a "dome" of high atmospheric pressure traps hazy, damp air near the ground.

#### **Locations Affected by Extreme Heat:**

There is no defined geographic hazard boundary for extreme heat. Extreme heat generally affects people rather than property. All planning areas are equally likely to experience an extreme heat event.

#### **Previous Occurrences**

There have been 3 extreme heat events since the original plan development. Two were recorded in the month of August in 2010 and 2011. One was recorded in July 2015, which also included a death of an elderly citizen due to the extreme heat.

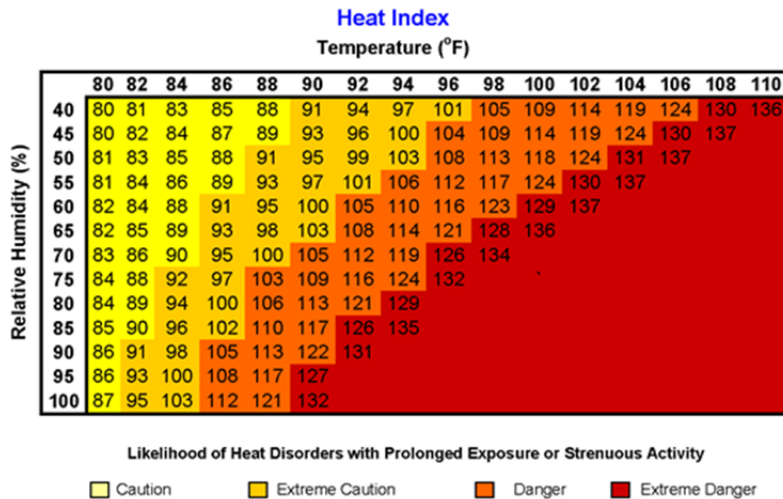
#### **Extent, Magnitude or Severity of Extreme Heat Events**

All participating jurisdictions are affected seasonally by summer heat, with summer temperatures averaging 80 degrees and maximum around 92 degrees. However, a 2010 heat wave made extremely hot summers with temperatures in Lonoke County ranging from 100 degrees or greater. Temperature readings of 115 were recorded on August 10, 1936, and July 31, 1986 and 115 is also the official record for August 4, 2011. The past occurrences help predict that the participating jurisdictions mentioned above are likely to expect extreme heat up to 115 degrees Fahrenheit.

The magnitude or intensity of an extreme heat event is measured according to temperature in relation to the percentage of humidity. According to the National Oceanic Atmosphere Administration (NOAA) this relationship is referred to as the "Heat Index" which is shown below. The Heat Index measures how hot it feels outside when humidity is combined with high temperatures.



## NOAA's National Weather Service



**IMPORTANT:** Since heat index values were devised for shady, light wind conditions, **exposure to full sunshine can increase heat index values by up to 15°F**. Also, **strong winds**, particularly with very hot, dry air, can be extremely hazardous.

### Probability of Future Extreme Heat Events

It is highly likely that the participating jurisdictions will experience an extreme heat event in the next year or a recurrence interval of 1 year.

### Impact and Vulnerability of Extreme Heat:

The entire planning area has vulnerable populations of children under 5 years and elderly over 62 years. Prolonged exposure to temperatures above 100 degrees Fahrenheit can cause significant health-related ailments that include heat stroke and even death. Infrastructure is not affected by extreme heat events.

The unincorporated areas of Lonoke County and all of the cities have areas that provide shade to buildings and sidewalks. However, populations of children under 5 years and elderly over 62 years remain vulnerable to heat injuries. The school district campuses have limited shade other than covered walkways, and shade from buildings. The students, faculty, and staff are vulnerable to heat injuries during recess, and transition from building to building. Prolonged periods of time increase the populations risk to heat injury.

Continuing with the unincorporated areas of Lonoke County, the County is concerned about the agriculture crops, livestock, water supply, and timber populations during extreme heat events. As temperatures rise, people and animals need more water to maintain their health. Many important economic activities like raising livestock require plenty of water. This trend remains a vulnerability of the farmers and the economy that relies on the product sales during extreme heat events.

During extreme heat, warmer temperatures make crops grow more quickly, also while warmer temperatures can reduce yields. For some crops, such as grains, faster growth reduces the amount of time that seeds have to grow and mature. Also, more extreme temperatures prevent crops from growing.

Heat waves directly threaten livestock. Heat stress can increase vulnerability to disease, reduce fertility, and reduce milk production. Pasture and feed supplies will deplete. Extreme heat will reduce the amount of quality forage available to grazing livestock. Animals that rely on grain will have a lack of feed. All the while, the prevalence of parasites and diseases will rise.

For timber plantations and forestry, the climate will influence the structure and function of forest ecosystems and plays an essential role in forest health. Increased temperature may worsen many of the threats to forests through the increase of pest outbreaks, fires, and drought.

### **3.4.5 Flooding**

#### **Description of Flooding:**

A flood is the partial or complete inundation of normally dry land. The various types of flooding include riverine flooding, and shallow flooding in Lonoke County. Common impacts of flooding include damage to personal property, buildings, and infrastructure; bridge and road closures; service disruptions; and injuries or even fatalities.

A Flash Flood is a rapid and extreme flow of high water into a normally dry area, or a rapid water level rise in a stream or creek above a predetermined flood level, beginning within six hours of the causative event (e.g., intense rainfall, dam failure, ice jam). However, the actual time threshold may vary in different parts of the country. Ongoing flooding can intensify to flash flooding in cases where intense rainfall results in a rapid surge of rising flood waters.

#### **Land Use and Development Trends:**

Lonoke County has a diverse landscape, which directly correlates to development trends. The southern 60% of the County is mostly row crop farmland, and development is minimal. The northern 40%, especially in Cabot, Austin, and Ward, have experienced significant growth and development since the 2008 Hazard Mitigation Plan. With population growth comes the development of housing, businesses, and infrastructure, which increase the risk of flash flooding since this type of development adds non-permeable surfaces to the landscape. This is referred to as “runoff”. Oftentimes flooding can be a result of the condition of the land’s ability to absorb precipitation. Concrete and other construction materials do not absorb the amount of rain or flood waters as do the land’s natural conditions, thus causing the waters to quickly run through these areas as gravity causes them to seek a stopping point until they are eventually absorbed into the land or evaporate. The cities in these areas realize the need to set development regulations in order to prevent development from creating new risks.

#### **Location of Flooding Events:**

The current effective Flood Insurance Rates Maps (FIRM) are located in the Appendix of this plan.

The FIRMs identify the locations of flood zones within each jurisdiction. No school campuses are located in the floodplain or floodway.

Flood severity categories used by the NWS include minor flooding, moderate flooding, and major flooding. Each category has a definition based on property damage and public threat. Any of the planning area could see any of the below categories of flooding.

- **Minor Flooding-** minimal or no property damage, but possibly some public threat or inconvenience
- **Moderate Flooding-** some inundation of structures and roads near streams. Some evacuations of people and/or transfer of property to high elevations are necessary
- **Major Flooding-** extensive inundation of structures and roads. Significant evacuations of people and/or transfer of property to higher elevations.

According to the Arkansas State All-Hazards Mitigation Plan (2013)<sup>1</sup>, should a 1% annual (100-year) flood event occur in Lonoke County, the following losses would occur:

Residential Building Losses	\$25,314,000
Residential Contents Losses	\$16,137,000

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<sup>1</sup> HAZUS Estimated Losses

Commercial Building Losses	\$1,587,000
Commercial Content Losses	\$9,137,000
Other Building Losses	\$1,040,000
Other Contents Losses	\$3,967,000
Total Contents Losses	\$29,241,000
Total Building Losses	\$27,941,000
Business Disruption Losses	\$1,796,000
Total Losses	\$58,978,000

This same source also estimates crop exposure value at \$118,946,000, and an annual estimated crop damages at \$338,663.

### **Previous Occurrences**

There have been 6 flooding events with \$4.4 million in property damage, and \$7 million in crop damage. There have been 21 days with flash flood events, with \$2.5 million in property damage, and \$50 million in Crop damage.

### **Extent, Magnitude or Severity of Flooding:**

~~The unincorporated jurisdictions and all cities can expect flash flooding events when receiving 3" or more of rainfall. In six hours, these jurisdictions can expect to receive 2.6 inches of rainfall. All affected jurisdictions are expected to receive the same amount of rainfall. Flash flooding can occur in some places with as little as an inch of rain in a short amount of time.~~

~~Flood elevation data is not available for any of the planning area to determine how high the water can get and how much rainfall equates to a flash flood for the planning area. The HMPT will seek to remedy this data deficiency before the next plan update.~~

~~Areas of incorporated Lonoke County can experience flooding in the following areas, but are not limited to just these areas:~~

- ~~• Kerr Road between Graham and Highway 284 has experienced flooding over the road~~
- ~~• Schaefer Road between Northcut and Bennett Road has experienced flooding over the road~~
- ~~• Ray Young Road from Highway 13 North to Doug Jackson Road has experienced flooding over the road~~
- ~~• Carroll Road off of Highway 31 South has experienced flooding over the road~~
- ~~• A portion of Dismukes Road has experienced flooding and major erosion from flooding~~
- ~~• Coleman Road in the drainage area of Lonoke Bayou II has experienced flooding over the road~~
- ~~• Kayer Road at the 100 Block has experienced flooding over the road~~
- ~~• Hefner Road off of Highway 321 Spur at the 500 Block has experienced flooding over the road~~
- ~~• O'Cain Road to Ferguson Road has experienced flooding over the road~~
- ~~• Northcut Road at Lonoke Bayou II Bridge North of I-40 has experienced flooding over the road~~
- ~~• Some properties in the Kerr Community have experienced flooding~~

~~The City of Carlisle can experience flooding in the following areas, but are not limited to just these areas:~~

- ~~• East 8<sup>th</sup> Street between Highway 13 and Pauschert Road has experienced flooding over the road~~
- ~~• Mt. Tabor Road just west of the LeMay Road Intersection has experienced flooding over the road~~
- ~~• Highway 70 between Victory Street and Raborn Road and the southern portion of Eastwood Subdivision have experienced flooding over the roads~~

~~The City of England can experience flooding in the following areas, but are not limited to just these areas:~~

- ~~• Windy Lynn Road has experienced flooding over the road~~
- ~~• Southeast Fourth and Nicols has experienced flooding over the road~~
- ~~• Southeast Fifth and Banks has experienced flooding over the road~~
- ~~• Southeast Second to the City Limits has experienced flooding over the road~~
- ~~• Haywood between Second and Fourth has experienced flooding over the road~~
- ~~• Irvy Drive to Nicols and out to Highway 15 has experienced flooding over the road~~

- Carriage Court Estates subdivision properties have experienced repetitive flood damages

The City of Humnoke can experience flooding in the following areas, but are not limited to just these areas:

- Highway 165 has experienced flooding over the road
- East of Highway 13, some houses have been inundated by flood waters

The City of Lonoke can experience flooding in the following areas, but are not limited to just these areas:

- Roads and houses have flooded in the Branch Street and Rosemary Lane area
- South Center and Hamburg Street have experienced flooding over the road

The City of Ward can experience flooding in the following areas, but are not limited to just these areas:

- Morrison Road has experienced flooding over the road
- Properties on Brewer and Markham Roads have experienced flooding

### **Probability of Future Flooding:**

The probability of theThe jurisdictions identified within the flood hazard area are likely to experience an occurrence in the next year or a recurrence interval of 1 to 10 years. It is likely that the planning area will experience a flash flood before in the next 1 to 5 years.

### **Impact and Vulnerability of Flooding:**

Most of the county's flooding and drainage problems are found in communities in the less hilly areas, such as Allport, Austin, Cabot, and Carlisle. Flash floods are most common in this area due to this area exhibiting high to moderate relief, steep to moderate slopes, and bedrock with low permeability. All factors facilitate rapid runoff and the consequent potential for flash floods. Urban development in this part of the county exacerbates the flash flooding problem. Intense rainfall events, often accompanying the large thunderstorms that occur in Lonoke County several times a year, may result in water flowing rapidly into lower areas, collecting in, and sometimes overtopping the valley streams. There have also been issues with the maintenance and clearing of drainage channels in this area that have resulted in obstructions restricting the flow of water during a storm.

In all jurisdictions, flood waters will interrupt gas, electricity and water services and contaminate the water supply, making drinkable water unavailable. Homes, personal belongings and businesses can be damaged or lost entirely as a result of ravages of flooding. Residents and home owners who do not have flood insurance are vulnerable. They will suffer a great financial hardship from the expenses of clean up and rebuilding.

Environmental- Flat areas that do not have trees or rocks to prevent erosion are often swept away. Farm fields, which typically are located in flat areas, become washed out and crops are lost. Contaminants from sewer back-ups and other waste may be washed into the water supply, resulting in water that is unsafe for residents to use. The shelters of animals in the area are also washed out, resulting in many homeless animals that can cause problems for their owners. Listed below are other means in which flooding can affect Lonoke County (and all plan participants):

Economic- Residential loss or repair could have an impact. Businesses also suffer, not only from the loss of property, but the lack of customers during the flood and for a while during recovery. Farmers also suffer from the loss of their crops.

Financial- Some residents who do not carry flood insurance suffer a great financial hardship. Those who do not have insurance get help with the clean-up, but some costs may still come out of pocket. Towns and cities that are impacted by flood carry the financial burden of fixing the public buildings, roads and other structures damaged by the flood waters. People who are impacted by the flood may also lose wages because the business they work for suffered damages or they are unable to get to work.

Health- Flood waters can also damage the health of those living and working in the area. Because flood waters can wash dangerous waste into water supplies, tap water may become unsafe to use if the local authorities do not issue a boil advisory warning everyone to boil water before ingesting it. Mold is also likely to grow in homes and other buildings that were engulfed by the flood waters. It is important to search all homes for mold and remove it completely before moving back in. Breathing the mold spores is dangerous for your health. A flood can also contribute to other health problems from human waste that contaminates the ground.

Safety- Once flooding begins, strong currents can pull a grown man beneath the water to drown. Once the flood waters have settled, it is still unsafe to wander through the water by car or on foot. Deep spots may be undetectable and there may be electric currents running through the water as well. Low spots on County roads, city roads and state highways are vulnerable to flooding in Lonoke County.

Soil Flooding results in poor soil aeration, leading to poor plant growth. Soil becomes more acidic following flooding. In addition, flooding can lead to soil erosion or soil contamination from such man-made pollutants as oils (on roadways), fertilizers (in yards and farms) and paints.

Rural Impact Floods damage farmland by burying crops in silt, uprooting crops by the force of the water or drowning crops. Flood waters can drown livestock as well. Flooding devastates wetlands and other wildlife habitats by depositing massive amounts of silt or leaving behind toxic substances such as petroleum products, fertilizers and pesticides and other man-made chemicals. This can kill animals and lead to water and land pollution.

Disease Flooding increases human exposure to dysentery and other diseases. Flooded sewage treatment plants contaminate drinking water supplies. Contaminated drinking water is a greater problem in developing countries.

Data is available from a HAZUS run for those parts of the planning area that are in the Lower Arkansas Maumelle Watershed in FEMA's Flood Risk Report for the Lower Arkansas-Maumelle Watershed, 11110207 Report Number 001 Dated April 24, 2013. The watershed includes England (including England Schools), Keo and the approximate 5% of Lonoke County unincorporated land area. The remaining plan participants do not have this type of data available, but could be acquired through a flood study, a HAZUS run or future RiskMAP data. The HMPT will seek to gather this information for the next plan update. This type of data is not available for the remainder of the planning area.

	City of England Estimated Potential Losses for Flood Event Scenarios											
	Total Inventory		10% (10-yr)		2% (50-yr)		1% (100-yr)		0.2% (500-yr)		Annualized (\$/yr)	
	Estimated Value	% of Total	Dollar Losses <sup>1</sup>	Loss Ratio <sup>2</sup>	Dollar Losses <sup>1</sup>	Loss Ratio <sup>2</sup>	Dollar Losses <sup>1</sup>	Loss Ratio <sup>2</sup>	Dollar Losses <sup>1</sup>	Loss Ratio <sup>2</sup>	Dollar Losses <sup>1</sup>	Loss Ratio <sup>2</sup>
Residential Building and Contents	\$117,300,000	75%	\$300,000	< 1%	\$400,000	< 1%	\$400,000	< 1%	\$500,000	< 1%	\$40,000	< 1%
Commercial Building and Contents	\$21,900,000	14%	\$50,000	< 1%	\$60,000	< 1%	\$60,000	< 1%	\$70,000	< 1%	\$0	< 1%
Other Building and Contents	\$17,000,000	11%	\$0	< 1%	\$0	< 1%	\$0	< 1%	\$0	< 1%	\$0	< 1%
Total Building and Contents <sup>3</sup>	\$156,200,000	100%	\$400,000	< 1%	\$500,000	< 1%	\$500,000	< 1%	\$500,000	< 1%	\$40,000	< 1%
Business Disruption <sup>4</sup>	\$0	N/A	\$0	N/A	\$10,000	N/A	\$10,000	N/A	\$10,000	N/A	\$0	N/A
TOTAL <sup>5</sup>	\$156,200,000	N/A	\$400,000	N/A	\$500,000	N/A	\$500,000	N/A	\$500,000	N/A	\$40,000	N/A

Source: Hazus analysis results stored as the Flood Risk Assessment Dataset in the Flood Risk Database.

<sup>1</sup>Losses shown are rounded to nearest \$10,000 for values under \$100,000 and to the nearest \$100,000 for values over \$100,000.

<sup>2</sup>Loss ratio = A Return Period's Dollar Losses / Estimated Value. Loss Ratios are rounded to the nearest integer percent.

<sup>3</sup>Total Building + Contents Loss = (Residential Building + Contents Loss) + (Commercial Building + Contents Loss) + (Other Building + Contents Loss).

<sup>4</sup>Business Disruption = Inventory Loss + Relocation Cost + Income Loss + Rental Income Loss + Wage Loss + Direct Output Loss.

<sup>5</sup>Total Loss = Total Building + Contents + Business Disruption.

**NOTE:** SFHAs from the AAL data impact only a small portion of the City of England. A value of \$0 in the Potential Losses table may indicate some loss, but due to the rounding rules used to display the data and results, these show as a \$0.

	Town of Keo Estimated Potential Losses for Flood Event Scenarios											
	Total Inventory		10% (10-yr)		2% (50-yr)		1% (100-yr)		0.2% (500-yr)		Annualized (\$/yr)	
	Estimated Value	% of Total	Dollar Losses <sup>1</sup>	Loss Ratio <sup>2</sup>	Dollar Losses <sup>1</sup>	Loss Ratio <sup>2</sup>	Dollar Losses <sup>1</sup>	Loss Ratio <sup>2</sup>	Dollar Losses <sup>1</sup>	Loss Ratio <sup>2</sup>	Dollar Losses <sup>1</sup>	Loss Ratio <sup>2</sup>
Residential Building and Contents	\$20,900,000	64%	\$0	N/A	\$0	N/A	\$0	N/A	\$0	N/A	\$0	N/A
Commercial Building and Contents	\$9,400,000	29%	\$0	N/A	\$0	N/A	\$0	N/A	\$0	N/A	\$0	N/A
Other Building and Contents	\$2,300,000	7%	\$0	N/A	\$0	N/A	\$0	N/A	\$0	N/A	\$0	N/A
Total Building and Contents <sup>3</sup>	\$32,500,000	100%	\$0	N/A	\$0	N/A	\$0	N/A	\$0	N/A	\$0	N/A
Business Disruption <sup>4</sup>	\$0	N/A	\$0	N/A	\$0	N/A	\$0	N/A	\$0	N/A	\$0	N/A
TOTAL <sup>5</sup>	\$32,500,000	N/A	\$0	N/A	\$0	N/A	\$0	N/A	\$0	N/A	\$0	N/A

Source: Hazus analysis results stored as the Flood Risk Assessment Dataset in the Flood Risk Database.

<sup>1</sup>Losses shown are rounded to nearest \$10,000 for values under \$100,000 and to the nearest \$100,000 for values over \$100,000.

<sup>2</sup>Loss ratio = A Return Period's Dollar Losses / Estimated Value. Loss Ratios are rounded to the nearest integer percent.

<sup>3</sup>Total Building + Contents Loss = (Residential Building + Contents Loss) + (Commercial Building + Contents Loss) + (Other Building + Contents Loss).

<sup>4</sup>Business Disruption = Inventory Loss + Relocation Cost + Income Loss + Rental Income Loss + Wage Loss + Direct Output Loss.

<sup>5</sup>Total Loss = Total Building + Contents + Business Disruption.

**NOTE:** The Town of Keo is impacted by insignificant SFHAs according to the AAL analysis, so all potential losses are shown as \$0. More detailed analysis may indicate losses from local flooding conditions.



	Lonoke County Unincorporated Areas Estimated Potential Losses for Flood Event Scenarios											
	Total Inventory		10% (10-yr)		2% (50-yr)		1% (100-yr)		0.2% (500-yr)		Annualized (\$/yr)	
	Estimated Value	% of Total	Dollar Losses <sup>1</sup>	Loss Ratio <sup>2</sup>	Dollar Losses <sup>1</sup>	Loss Ratio <sup>2</sup>	Dollar Losses <sup>1</sup>	Loss Ratio <sup>2</sup>	Dollar Losses <sup>1</sup>	Loss Ratio <sup>2</sup>	Dollar Losses <sup>1</sup>	Loss Ratio <sup>2</sup>
Residential Building and Contents	\$33,100,000	72%	\$300,000	1%	\$500,000	2%	\$500,000	2%	\$600,000	2%	\$40,000	< 1%
Commercial Building and Contents	\$6,600,000	14%	\$50,000	1%	\$90,000	1%	\$90,000	1%	\$90,000	1%	\$10,000	< 1%
Other Building and Contents	\$6,000,000	14%	\$50,000	1%	\$80,000	1%	\$80,000	1%	\$90,000	2%	\$0	< 1%
Total Building and Contents <sup>3</sup>	\$45,800,000	100%	\$400,000	1%	\$600,000	1%	\$700,000	1%	\$700,000	2%	\$50,000	< 1%
Business Disruption <sup>4</sup>	\$0	N/A	\$20,000	N/A	\$30,000	N/A	\$30,000	N/A	\$40,000	N/A	\$0	N/A
TOTAL <sup>5</sup>	\$45,800,000	N/A	\$400,000	N/A	\$700,000	N/A	\$700,000	N/A	\$800,000	N/A	\$50,000	N/A

Source: Hazus analysis results stored as the Flood Risk Assessment Dataset in the Flood Risk Database.

<sup>1</sup>Losses shown are rounded to nearest \$10,000 for values under \$100,000 and to the nearest \$100,000 for values over \$100,000.

<sup>2</sup>Loss ratio = A Return Period's Dollar Losses / Estimated Value. Loss Ratios are rounded to the nearest integer percent.

<sup>3</sup>Total Building + Contents Loss = (Residential Building + Contents Loss) + (Commercial Building + Contents Loss) + (Other Building + Contents Loss).

<sup>4</sup>Business Disruption = Inventory Loss + Relocation Cost + Income Loss + Rental Income Loss + Wage Loss + Direct Output Loss.

<sup>5</sup>Total Loss = Total Building + Contents + Business Disruption.

**Note:** Lonoke County Unincorporated Areas has limited impact from SFHAs according to the AAL analysis as there is only a small portion in the LAM Watershed. Analysis of an adjacent watershed may show more significant losses. A value of \$0 in the Potential Losses table may indicate some loss, but due to the rounding rules used to display the data and results, these show as a \$0.

### **Addressing Repetitive Loss Properties:**

Per 2015 HMA Guidance, a **severe repetitive loss property** is a structure that:

- (a) Is covered under a contract for flood insurance made available under the NFIP
  - (b) Has incurred flood related damage-
    - i. For which 4 or more separate claims payments (includes building and contents) have been made under flood insurance coverage with the amount of each such claim exceeding \$5,000, and which the cumulative amount of such claims payments exceeding \$20,000
- OR
- ii. For which at least 2 separate claims payments (includes only building) have been made under such coverage, with the cumulative amount of such claims exceeding the market value of the insured structure.

A **repetitive loss property** is a structure covered by a contract for flood insurance made available under the NFIP that:

- (a) Has incurred flood-related damage on 2 occasions, in which the cost of the repair, on the average, equaled or exceeded 25 percent of the market value of the structure at the time of each such flood event
- AND
- (b) At the time of the second incidence of flood-related damage, the contract for flood insurance contains increased cost of compliance coverage

There are no Severe Repetitive Loss properties in Lonoke County Unincorporated or participating jurisdictions. There are no Repetitive Loss Properties in Allport, Austin, Carlisle, Coy, England, Humnoke, Keo, Lonoke or Ward.

The City of Cabot has three Repetitive Loss Properties that are Single Family Residences.

Lonoke County Unincorporated has seven Repetitive Loss Properties; six are Single Family Residences and one is classified as "Other: Non-Residential", but it appears to be a church.

Of the ten total Repetitive Loss Properties in Lonoke County a total of \$489,225 has been paid in 25 flood claims.



### **3.4.6 Thunderstorms**

#### **Description of Thunderstorm Events:**

A **thunderstorm**, also known as an **electrical storm**, a **lightning storm**, **thundershower** or simply a **storm**, is a form of turbulent weather characterized by the presence of lightning and its acoustic effect on the Earth's atmosphere known as thunder. The meteorologically assigned cloud type associated with the thunderstorm is the cumulonimbus. Thunderstorms are usually accompanied by **strong winds**, heavy rain and sometimes snow, sleet, hail, or no precipitation at all. Those that cause hail to fall are called **hailstorms**. Thunderstorms may line up in a series or rainbands, known as a squall line. Strong or severe thunderstorms may rotate, known as supercells. While most thunderstorms move with the mean wind flow through the layer of the troposphere that they occupy, vertical wind shear causes a deviation in their course at a right angle to the wind shear direction.

**Lightning-** Lightning is a channel of electrical charge called a stepped leader that zigzags downward in roughly 50-yard segments in a forked pattern. This step leader is invisible to the human eye, and shoots to the ground in less time than it takes to blink. As it nears the ground, the charged step leader is attracted to a channel of opposite charge reaching up, a streamer, normally through something tall, such as a tree, house, or telephone pole. When the oppositely-charged leader and streamer connect, a powerful electrical current begins flowing. A bright return stroke travels about 60,000 miles per second back towards the cloud. A flash consists of one or perhaps as many as 20 return strokes. We see lightning flicker when the process rapidly repeats itself several times along the same path.

The actual diameter of a lightning channel is one-to-two inches.

**Hail-** Hail is a form of precipitation that occurs when updrafts in thunderstorms carry raindrops upward into extremely cold areas of the atmosphere where they freeze into balls of ice. Hail can damage aircraft, homes and cars, and can be deadly to livestock and people.

According to data from the FEMA 1997 publication “Multi-Hazard - Identification and Risk Assessment,” Arkansas is within a part of the country that averages two to three hailstorms annually.

**Strong Winds-** Damaging winds are often called “straight-line” winds to differentiate the damage they cause from tornado damage. Strong thunderstorm winds can come from a number of different processes. Most thunderstorm winds that cause damage at the ground are a result of outflow generated by a thunderstorm downdraft. Damaging winds are classified as those exceeding 50-60 mph.

Damage from severe thunderstorm winds account for half of all severe reports in the lower 48 states and is more common than damage from tornadoes. Wind speeds can reach up to 100 mph and can produce a damage path extending for hundreds of miles.

#### **Location of Thunderstorm Events:**

AllThe entire planning areas experiences Thunderstorms, lightning, strong winds and hail events and are all equally at risk.

#### **Extent, Magnitude or Severity of Thunderstorm Events:**

All jurisdictions are equally subject to thunderstorms ranging from weak to extreme that includes up to 5 inches of rainfall within a 24 hour period. The entire planning area is subject to thunderstorms ranging from weak to extreme that includes up to a T-5 on the chart below.

***Modified Extreme Weather Madness Thunderstorm Criteria published by AccuWeather:***

THUNDERSTORM CRITERIA							
THUNDERSTORM TYPES	RAINFALL RATE/HR	MAX WIND GUST	HAIL SIZE	PEAK TORNADO	LIGHTNING FREQUENCY	DARKNESS FACTOR	STORM IMPACT
T-1 Weak Thunderstorms or Thundershowers	.03" .10"	25 MPH	None	None	Only a few strikes during the storm	Slightly Dark. Sunlight may be seen under the storm.	1. No Damage 2. Gusty Winds at times
T-2 Moderate Thunderstorms	.10" .25"	25-40 MPH	None	None	Occasional 1 -10	Moderately Dark. Heavy downpours may cause the need for car lights.	1. Heavy Downpours. 2. Occasional lightning. 3. Gusty winds. 4. Very little damage. 5. Small tree branches may break. 6. Lawn furniture moved around
T-3 Heavy Thunderstorms 1. Singular or lines of storms	.25" .55"	40-57 MPH	1/4"-3/4"	EF 0	Occasional to Frequent 10-20	Dark. Car lights used. Visibility low in heavy rains.	1. Minor Damage 2. Downpours that produce some flooding. 3. Frequent lightning 4. Hail occurs with the downpours 5. Small branches are broken. 6. Shingles are blown off roofs.
T-4 Intense Thunderstorms 1. Weaker Supercells 2. Bow echos or lines of storms	.55" 1.25"	57-70 MPH	1" - 1.5"	EF 0 to EF 2	Frequent 20-30	Very Dark. Car lights are used and street lights come on.	1. Moderate Damage 2. Heavy rains can cause flooding to streams, creeks, and roadways. 3. Wind damage to trees and buildings 4. Tornado damage 5. Power outages
T-5 Extreme Thunderstorms 1. Supercells with family of tornadoes 2. Derecho Windstorms	1.25" 4"	Over 70 MPH	Over 1.5" to 4"	EF 3 to EF5	Frequent to Continuous < 30	Pitch Black with the need for street lights and housing lights.	1. Severe damage to trees and property. Damage is widespread. 2. Flooding rains. 3. Damaging hail. 4. Damaging wind gusts to trees and buildings. 5. Tornadoes F3-F5 or family of tornadoes can occur and cause total devastation. 6. Widespread power outage

### **Previous Thunderstorm Events**

There have been 81 events reported from 2008 to 2017 resulting in 1 death, 1 injuries and \$10.519M in property damages.

### **Probability of Future Thunderstorm Events:**

The probability of future thunderstorm events is highly likely. There is a 90 to 100 percent probability of occurrence in the next year or a recurrence interval of 1 year.

### **Impact and Vulnerability of Thunderstorm Events:**

The ~~threat~~threats of thunderstorms, strong winds, lightning and hailstorms ~~effects~~affect all the planning areas and jurisdictions. In all participating jurisdictions, structures and their contents are vulnerable to damage by thunderstorms winds. Strong winds can down trees onto power lines, damage mobile homes that are not anchored, and rip off roofing. Winds can cause death and injuries by lifting unanchored objects. Lightning strikes can cause structural, timberland, and grass fires. It can cause damage to the communication towers throughout the jurisdictions and disrupt service. Hailstorms will cause damage to all structures, mainly roof shingles which can lead to roof leaks and further damage to the structure interiors. All types of real estate and personal property are vulnerable to hail; such as cars, trailers, boats, and crops. Hailstorms can cause bodily injury if caught outside without protection.

Unincorporated areas of Lonoke County:

Populations housed in manufactured, unreinforced masonry homes or without safe rooms are at risk to injury or death during thunderstorms, especially the elderly and children. Travelers and campers also without shelter or safe rooms nearby are extremely vulnerable to death and injury. Timberland is at risk to lightning, which can cause fires and destroy several acres.

There are also tens of thousands of acres of row crop farmland in the County. Severe thunderstorms, including strong wind and hail, can damage crops, which can result in a great loss in the local economy.

All cities:

Real and private property will receive damage from the elements of a thunderstorm. Residential and commercial properties that are constructed with unreinforced masonry, and manufactured housing will could be damaged or destroyed. Populations residing or working in these buildings without safe rooms are nearby high-wind shelters are vulnerable to injury or death, especially the elderly and children. There are no critical facilities that would receive major impact that would impede their abilities to respond and provide support during a thunderstorm event.

Unique risks to cities:

In jurisdictions that are vulnerable to flooding, rain from thunderstorms can increase the risk of flooding. Also, electrical power lines can be disrupted as a result of heavy winds that are associated with thunderstorms. This would have a greater effect on larger cities because of a larger population served by the utility companies.

A total of 15,347 structures valued at \$2,481,601,000 are vulnerable to this hazard. According to the 2013 Arkansas All-Hazards Mitigation Plan, HAZUS Data for Lonoke County indicates \$118,946,000 in crop exposure, and a total of \$834,420 in annualized property loss and crop claims. Those structures not properly constructed or anchored could be damaged.

### **3.4.7 Tornado**

#### **Description of a Tornado:**

A tornado is a rapidly rotating vortex or funnel of air extending groundward from a cumulonimbus cloud. Most of the time, vortices remain suspended in the atmosphere (Golden and Snow, 1991). When the lower tip of the vortex touches earth, the tornado becomes a force of destruction. Approximately 1,000 tornadoes are spawned by severe thunderstorms each year.

Tornadoes are related to larger vortex formations and therefore often form in convective cells such as thunderstorms or in the right forward quadrant of a hurricane, far from the hurricane eye. The strength and number of tornadoes are not related to the strength of the hurricane that generates them. In addition to hurricanes, events such as earthquake induced fire and fires from atomic bombs or wildfires may produce tornadoes.

The path of a single tornado generally is less than 0.6 mi (1km). The path length of a single tornado can range from a few hundred meters to dozens of kilometers. A tornado typically moves at speeds between 30 and 125 mph (50 and 200 km/h) and can generate internal winds exceeding 300 mph (500km/h). However, the lifespan of a tornado rarely is longer than 30 minutes.

#### **Land Use and Development Trends:**

Lonoke County has a diverse landscape, which directly correlates to development trends. The southern 60% of the County is mostly row crop farmland, and development is minimal. The northern 40%, especially in Cabot, Austin, and Ward, have experienced significant growth and development since the 2008 Hazard Mitigation Plan. With population growth comes the development of housing, businesses, and infrastructure. While this development has increased the vulnerability, these cities have all adopted building codes to reduce the impacts of tornado in any new structures.

#### **Locations of Tornado Events**

There is no defined geographic hazard boundary for tornado. A tornado can occur anywhere in the entire planning area.

#### **Previous Occurrences**

In Lonoke County there have been 11 tornado events within the planning area between January 2009 and June 2017. They ranged from EF0 to EF2, caused \$27 million in damage.

## **Probability of Future Tornadoes**

The probability of future events is likely. There a 10 to 90 percent probability of tornado occurrence in the next year in ~~any~~ given jurisdictionthe planning area. “Highly Likely” was not given because history suggests that it is not probable that *each* jurisdiction will experience a tornado *each* year.

## **Impact, Extent, and Vulnerability of Tornado**

All areas, residents, structures, and critical facilities in the planning area are of high risk of tornado events. Because there is no defined geographic hazard boundary, all people and property in Lonoke County are exposed to the risk of damage from tornadoes. All structures are vulnerable to tornadoes.

The Enhanced Fujita Scale below is used to illustrate extent and the degree of damage to structures. The entire planning area can expect an EF0 to an EF5.

Enhanced Fujita Scale		
Category	Wind Speed	Potential Damage
EF0	105–137 km/h 65–85 mph	Light damage. Peels surface off roofs; some damage to chimneys; branches broken off trees; shallow-rooted trees pushed over; mobile homes pushed off foundations or overturned; sign boards damaged.
EF1	138–179 km/h 86–110 mph	Moderate damage. Roofs torn off frame houses; windows and glass doors broken; moving autos blown off roads; mobile homes demolished; boxcars overturned.
EF2	180–217 km/h 111–135 mph	Considerable damage. Roofs torn off well-constructed houses; foundations of frame homes shifted; large trees snapped or uprooted; light-object missiles generated; cars lifted off ground.
EF3	218–266 km/h 136–165 mph	Severe damage. Some walls torn off well-constructed houses; trains overturned; most trees in forest uprooted; heavy cars lifted off the ground and thrown; structures with weak foundations blown away some distance.
EF4	267–324 km/h 166–200 mph	Devastating damage. Well-constructed houses and whole frame houses completely leveled; structures with weak foundations blown away some distance; trees debarked; cars thrown and small missiles generated.
EF5	>324 km/h >200 mph	Incredible damage. Strong frame houses leveled off foundations and swept away; with strongest winds, brick houses completely wiped off foundations; automobile-sized missiles fly through the air in excess of 100 m (109 yd); cars thrown and large missiles generated; incredible phenomena will occur.

### Associated hazards include:

- Wind- Tornadoes consist of strong, often destructive winds that can uproot trees and damage buildings and cars
- Rain/Hail-Tornadoes are associated with thunderstorms and may be preceded or followed by heavy rainfall or hail. Depending on the hydrological conditions, flash flooding may occur.
- Obstacles to Response- Damage or destruction of public facilities, including hospitals, can complicate emergency response efforts. Additionally, debris may block roadways, there may be extensive damage to electric and telephone lines, utility lines may be broken, and communication may be cut off because of damaged or destroyed cell, radio and television towers.

Utilities most vulnerable to tornado winds are electrical power (e.g. power generation facility, above ground transmission lines and sub-stations) and communication structures (radio towers, cell phone towers). Arcing power lines can cause power surges with can damage electrical components and equipment that are plugged in. Most transportation systems such as highways, railways are not highly vulnerable to tornadoes, but downed power lines and trees and limbs can delay travel until roads are cleared. This would not only affect the day to day traffic but also critical services such as emergency police, fire, and ambulance.

Vulnerable populations including retirement homes, schools and child care centers without the benefit of a safe room could

suffer injury or death. Damages to these buildings could also cause displacement of these vulnerable populations.

Businesses and local government infrastructure often suffer extensive damage in tornados as well as the death of people, wildlife and livestock. Employment is often affected because of businesses that close due to the tornado damage and loss of business. Even with the advances in meteorology, tornado warning times may be issued in a short period of time. Utilities most vulnerable to tornado winds are electrical power lines and communication structures.

All of the planning area ~~All jurisdictions~~ would be affected due to the lost power, water, sewer, gas, and communications. Power and water outages would cause food spoilage and sanitation problems for communities. Hospitals, grocery stores and other critical need and economically important facilities are damaged and closed for extended periods. The School Districts located in Lonoke County could be closed for extended periods due to these outages or possible damage to building structures on school campuses. The school buses are also vulnerable to damage or may face disruption due to unclear roadways and bridges. Employment would be affected from school closings.

Manufactured homes, unreinforced masonry, and wood structures are more vulnerable to damage from a tornado. Residents that have installed storm shelters at their homes reduce their loss of life risk. However, tornado safe rooms, and underground structures are less likely to experience damage compared to other structures that exist above ground.

Uniquely, the cities of Carlisle and Cabot have installed a public safe room to protect the lives residents near the downtown area. The Lonoke School District has also built safe rooms at the High School and for the Middle School/Elementary Campus. These safe rooms are accessible by residents after school hours in the event of a tornado.

All school districts could be closed for extended periods due to power and water outages, or possible damage to building structures on school campuses. Unreinforced masonry, metal shops/outbuildings, and wood structures are more vulnerable to tornadoes. Destroyed school buses could cause a short-term closure of school.

Building stock exposure by general occupancy in the Lonoke County planning area. The number of structures in each jurisdiction is shown. Data from HAZUS-MH Data and updated per the County's 911 database.

	<b>Total Number of Structures</b>	<b>Residential</b>	<b>Commercial</b>	<b>Industrial</b>	<b>Agriculture</b>	<b>Religion</b>	<b>Government</b>	<b>Education</b>
<b>Allport</b>	59	59	0	0	0	0	0	0
<b>Austin</b>	227	227	0	0	0	0	0	0
<b>Cabot</b>	6,348	6,264	44	10	0	9	2	19
<b>Carlisle</b>	1,039	1,030	6	0	0	0	0	3
<b>Coy</b>	53	53	0	0	0	0	0	0
<b>England</b>	1,279	1,275	0	0	0	0	0	4
<b>Humnoke</b>	130	130	0	0	0	0	0	0
<b>Keo</b>	117	115	2	0	0	0	0	0
<b>Lonoke</b>	1,756	1,727	12	8	0	0	0	9
<b>Ward</b>	1,079	1,079	0	0	0	0	0	0
<b>Lonoke County (Uninc.)</b>	10,113	10,101	7	2	1	2	0	0
<b>Totals</b>	<b>22,200</b>	<b>22,060</b>	<b>71</b>	<b>20</b>	<b>1</b>	<b>11</b>	<b>2</b>	<b>35</b>

Building stock exposure by general occupancy in the Lonoke County planning area. The value of structures (x \$1000) in each jurisdiction is shown. Data from HAZUS-MH Data

	Total Value of Structures	Residential	Commercial	Industrial	Agriculture	Religion	Government	Education
<b>Allport</b>	\$6,819	\$6,819	\$0	\$0	\$0	\$0	\$0	\$0
<b>Austin</b>	\$31,823	\$30,344	\$522	\$204	\$0	\$753	\$0	\$0
<b>Cabot</b>	\$1,117,639	\$968,753	\$99,765	\$27,741	\$936	\$17,027	\$2,396	\$1,021
<b>Carlisle</b>	\$170,517	\$154,574	\$11,875	\$2,723	\$514	\$110	\$721	\$0
<b>Coy</b>	\$6,980	\$6,983	\$0	\$0	\$0	\$0	\$0	\$0
<b>England</b>	\$197,261	\$178,631	\$13,221	\$1,200	\$1,147	\$1,038	\$0	\$2,024
<b>Humnoke</b>	\$15,510	\$15,017	\$493	\$0	\$0	\$0	\$0	\$0
<b>Keo</b>	\$18,925	\$13,024	\$4,458	\$0	\$613	\$650	\$0	\$0
<b>Lonoke</b>	\$316,617	\$275,252	\$22,665	\$16,294	\$235	\$1,266	\$497	\$408
<b>Ward</b>	\$130,889	\$126,995	\$2,309	\$0	\$0	\$444	\$0	\$1,141
<b>Unincorporated Lonoke County</b>	\$1,247,229	\$1,190,876	\$36,443	\$9,286	\$3,879	\$4,356	\$452	\$1,939
<b>Totals</b>	\$3,260,209	\$2,967,448	\$191,751	\$57,448	\$7,324	\$25,644	\$4,066	\$6,533



Building stock exposure by construction type in the Lonoke County planning area. The number of structures in each jurisdiction is shown. Data from HAZUS-MH Data.

	Total Number of Structures	Wood Structures	Steel Structures	Concrete Structures	Masonry Structures	Manufactured Housing
<b>Allport</b>	59	43	0	0	4	12
<b>Austin</b>	227	162	0	0	25	40
<b>Cabot</b>	6,348	4,964	14	30	803	537
<b>Carlisle</b>	1,039	765	3	2	134	135
<b>Coy</b>	53	44	0	0	6	3
<b>England</b>	1,279	998	1	7	163	110
<b>Humnoke</b>	130	90	0	0	12	28
<b>Keo</b>	117	91	1	1	10	14
<b>Lonoke</b>	1,756	1,402	6	10	233	105
<b>Ward</b>	1,079	680	0	0	108	291
<b>Unincorporated Lonoke County</b>	10,113	6,174	5	10	1,002	2,922
<b>Totals</b>	<b>22,200</b>	<b>15,413</b>	<b>30</b>	<b>60</b>	<b>2,500</b>	<b>4,197</b>

Building stock exposure by construction type in the Lonoke County planning area. Value of structures (x \$1000) in each jurisdiction is shown. Data from HAZUS-MH Data.

	Total Value of Structures	Wood Structures	Steel Structures	Concrete Structures	Masonry Structures	Manufactured Housing
<b>Allport</b>	\$6,819	\$5,528	\$0	\$0	\$843	\$448
<b>Austin</b>	\$31,967	\$25,420	\$148	\$331	\$4,707	\$1,361
<b>Cabot</b>	\$1,141,643	\$864,659	\$29,312	\$43,312	\$185,870	\$18,490
<b>Carlisle</b>	\$170,520	\$127,703	\$5,910	\$4,330	\$27,543	\$5,034
<b>Coy</b>	\$6,980	\$5,989	\$0	\$0	\$893	\$98
<b>England</b>	\$197,261	\$154,808	\$2,457	\$5,323	\$30,964	\$3,709
<b>Humnoke</b>	\$15,511	\$12,328	\$50	\$148	\$2,004	\$981
<b>Keo</b>	\$18,925	\$11,615	\$1,438	\$1,619	\$3,423	\$830
<b>Lonoke</b>	\$130,888	\$101,919	\$501	\$953	\$17,948	\$9,567
<b>Ward</b>	\$130,888	\$101,919	\$501	\$953	\$17,948	\$9,567
<b>Unincorporated Lonoke County</b>	\$2,223,107	\$940,349	\$11,41	\$16,177	\$159,283	\$95,497
<b>Totals</b>	\$4,260,241	\$2,481,601	\$66,334	\$87,289	\$485,016	\$139,641

### **3.4.8 Wildfire**

#### **Description of Wildfire:**

A wildfire is any outdoor fire that is not controlled, supervised, or arranged that spreads through vegetative fuels, exposing and possibly consuming structures. Naturally occurring and non-native species of grasses, brush, and trees fuel wildfires. There are essentially two types of fires. They are known as wildland fires and Wildland-Urban Interface (WUI) fires. A wildland fire is a wildfire in an area in which development is essentially nonexistent, except for roads, railroads, power lines and similar facilities. A WUI fire is a wildfire in a geographical area where structures and other human development meet or intermingle with wildland or vegetative fuels. Areas with a large amount of wooded, brush and grassy areas are at highest risk of wildfires. Additionally, areas anywhere that have experienced prolonged droughts or are excessively dry are also at risk of wildfires. WUI is further 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.

## **Land Use and Development Trends:**

Lonoke County has a diverse landscape, which directly correlates to development trends. The southern 60% of the County is mostly row crop farmland, and development is minimal. The northern 40%, especially in Cabot, Austin, and Ward, have experienced significant growth and development since the 2008 Hazard Mitigation Plan. With population growth comes the development of housing, businesses, and infrastructure. While this development has increased the vulnerability, these cities have all adopted building codes to reduce the impacts of wildfire in any new structures. Additionally, all of the fire departments in the planning area receive regular training, and all will consider joining the Firewise program.

## **Location of Wildfire**

The Wildland Urban Interface (WUI) Risk Index 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.

Lonoke County and any jurisdiction located in zones that inhibit the primary factors of fuel, topography, and weather are susceptible to wildfire. These three factors can predict wildfire behavior in WUI areas and wildland areas. Large amount of wooded, brush, and grassy areas are considered fuel that promotes the spread of wildfires. Topography affects the movement of air over the ground surface, and the slopes of terrain will change the rate of speed that the fire spreads. Lastly, areas that have experienced prolonged droughts or excessive dry spells can predict wildfires. For WUI fires, any location that intermixes with wildland fuel and human development along with topography and weather are at risk to wildfire. The entireForty-seven point six percent (47.6%) of the county planning area possesses some type of fuel, whether grass, agriculture, forestry, shrubs, structures, or other vegetation types. For the entire Lonoke County, it is estimated that 86,043 people or 96% of the total population live within the WUI.

## **Extent, Magnitude or Severity of Wildfire**

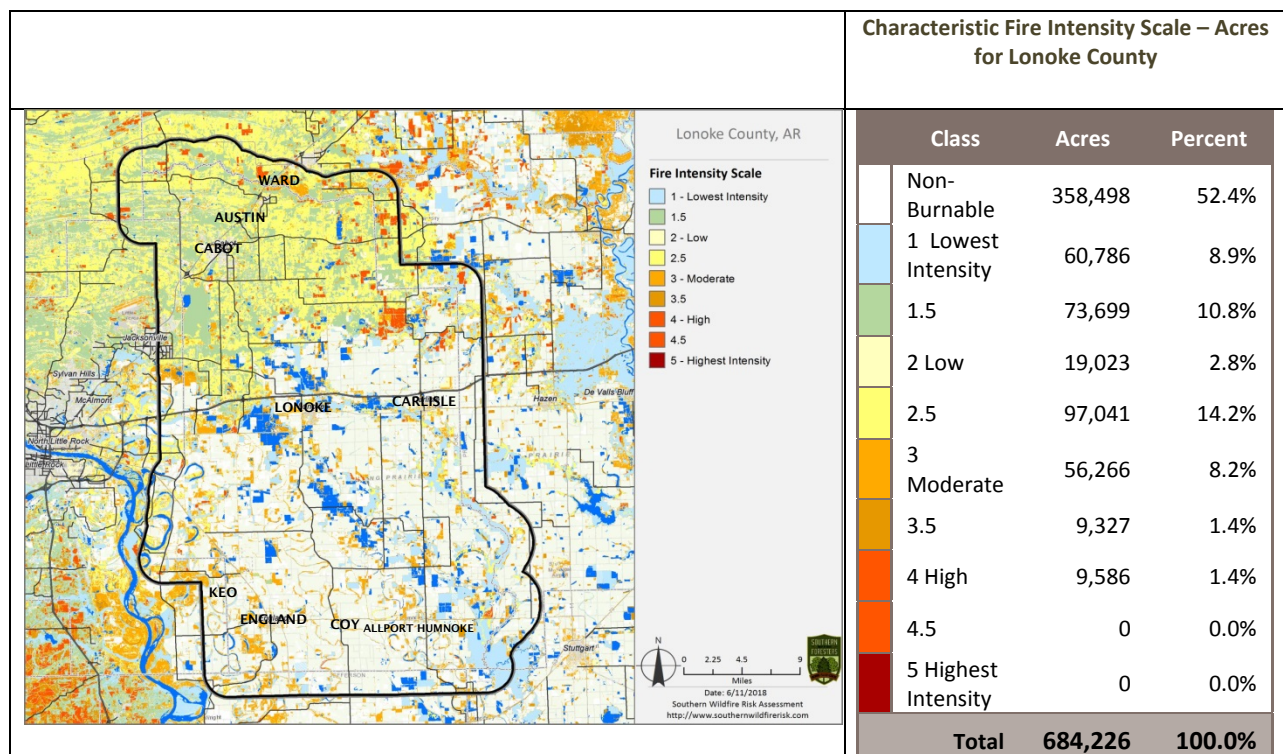
Based on Arkansas Forestry Commission data from 2011 through 2015, 565 acres have burned in Lonoke County. The most acres burned in a year in the County were 435 acres in 2015; the #1 cause of the fires that year (State-wide) was “debris”. The fewest acres burned in a year were 5 acres in 2013, which was likely caused by “debris”.

The Fire Intensity Scale (FIS) Scale, retrieved from the Southern Wildfire Risk Assessment, specifically identifies areas where significant fuel hazards and associated dangerous fire behavior potential exist based on weighted average of four percentile weather categories. Fire intensity scale is a fire behavior output, which is influenced by three environmental factors - fuels, weather, and topography. Weather is by far the most dynamic variable as it changes frequently. To account for this variability, four percentile weather categories were created from historical weather observations to represent low, moderate, high, and extreme weather days for each weather influence zone in the planning area. A weather influence zone is an area where, for analysis purposes, the weather on any given day is considered uniform.

Similar to the Richter scale for earthquakes, FIS provides a standard scale to measure potential wildfire intensity. FIS consist of 5 classes where the order of magnitude between classes is ten-fold. The minimum class, Class 1, represents very low wildfire intensities and the maximum class, Class 5, represents very high wildfire intensities. Refer to descriptions below.

Fire Intensity Scale (FIS)		
Class 1	Very Low Fire Intensity	Small flames, usually less than two feet long; small amount of very short range spotting possible. Fires are easy to suppress by trained firefighters with protective equipment and specialized tools.
Class 2	Low Fire Intensity	Small flames, usually less than two feet long; small amount of very short range spotting possible. Fires are easy to suppress by trained firefighters with protective equipment and specialized tools.
Class 3	Moderate Fire Intensity	Flames up to 8 feet in length; short-range spotting is possible. Trained firefighters will find these fires difficult to suppress without support from aircraft or engines, but dozer and plows are generally effective.  Increasing potential to cause harm or damage to life and property.
Class 4	High Fire Intensity	Large Flames, up to 30 feet in length; short-range spotting common; medium range spotting possible. Direct attack by trained firefighters, engines, and dozers is generally ineffective, indirect attack may be effective.  Significant potential for harm or damage to life and property.
Class 5	Very High Fire Intensity	Very large flames up to 150 feet in length; profuse short-range spotting, frequent long-range spotting; strong fire-induced winds. Indirect attack marginally effective at the head of the fire. Great potential for harm or damage to life and property.

The Fire Intensity Scale for Lonoke County, the cities of Allport, Austin, Cabot (including the campuses of the Cabot School District), Carlisle (including the campuses of the Carlisle School District), Coy, England (including the campuses of the England School District), Humnoke, Keo, Lonoke (including the campuses of the Lonoke School District), and Ward, shows the locations, impact and vulnerability of wildfire. As indicated on the below map, the planning area could see a Class 1-4 on the FIS.

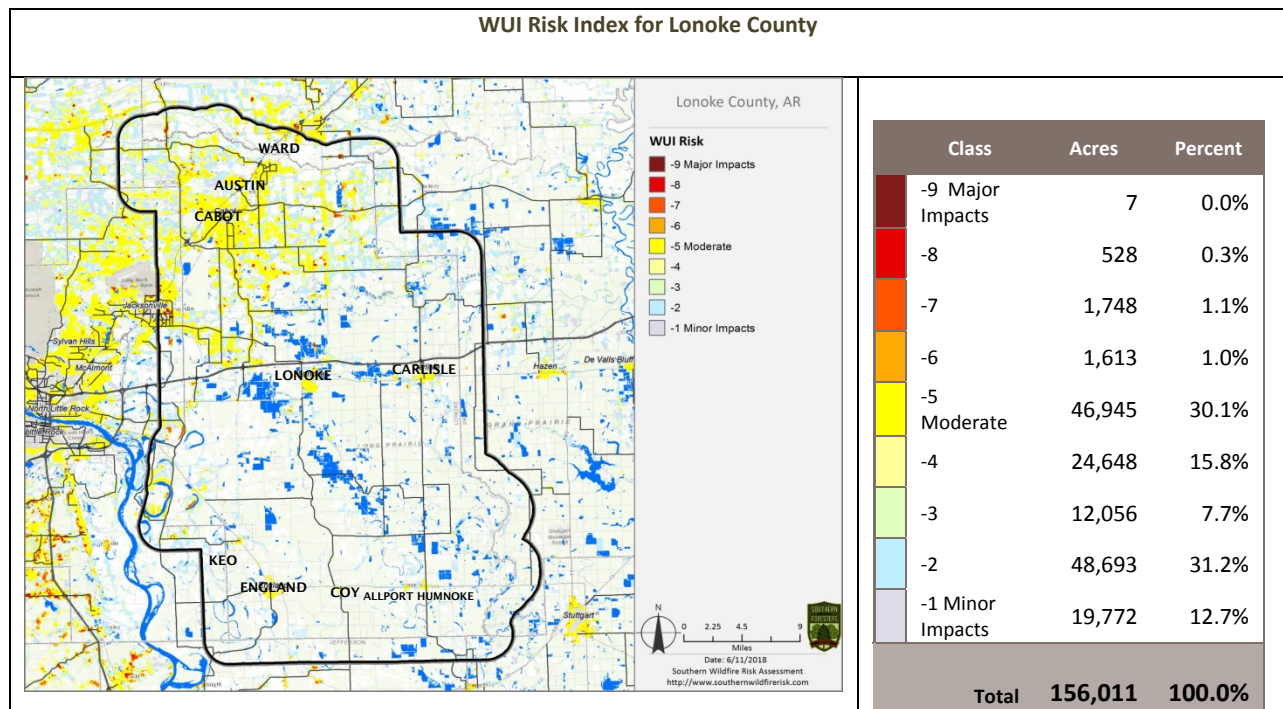


The WUI Risk Index is derived using a Response Function modeling approach. Response functions are a method of assigning a net change in the value to a resource or asset based on susceptibility to fire at different intensity levels, such as flame length. The WUI Risk Index range of values is from -1 to -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 Index, the WUI housing density data was combined with Flame Length data and response functions were applied to represent potential impacts for all unique conditions of WUI housing density and flame length. The response functions were defined by a team of experts based on values defined by the SWRA Update 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.

Flame Length is used as a measure of fire intensity. With the WUI Risk Index the analysis incorporates penetration into urban fringe areas so that outputs better reflect real world conditions for fire spread and impact in urban interface areas. With this enhancement, houses in urban areas adjacent to wildland fuels are incorporated into the WUI risk modeling.<sup>2</sup>

A summary of the WUI Risk Index for the entire planning area (Lonoke County as a whole) is provided in the table below. The majority of the planning area is at a 2-5 risk index level. Risk indexes for each participating jurisdiction are depicted in the following maps.



<sup>2</sup> Data from The Southern Group of State Foresters Wildfire Risk Assessment Portal <https://www.southernwildfirerisk.com/map/index/public> Assessed 6/11/18 The risk output maps are derived at a 30 meter resolution. This scale of data was chosen to be consistent with the accuracy of the primary surface fuels dataset used in the assessment. While not appropriate for site specific analysis, it is appropriate for regional, county or local protection mitigation or prevention planning.





## SOUTHERN GROUP OF STATE FORESTERS WILDFIRE RISK ASSESSMENT PORTAL

lonoke county, arkansas

HOME

SUPPORT

CONTACT

HIDE TOOLS

LAYER INFO

MEASURE

COORDINATES

SWIPE LAYERS

GETTING STARTED ?

WHAT'S YOUR RISK? ?

EXPLORE MAP THEMES ?

PRINT MAP ?

SEARCH RESULTS ?

Select a result to zoom to that location

No searches in queue

LEGEND ?

### Boundaries

States

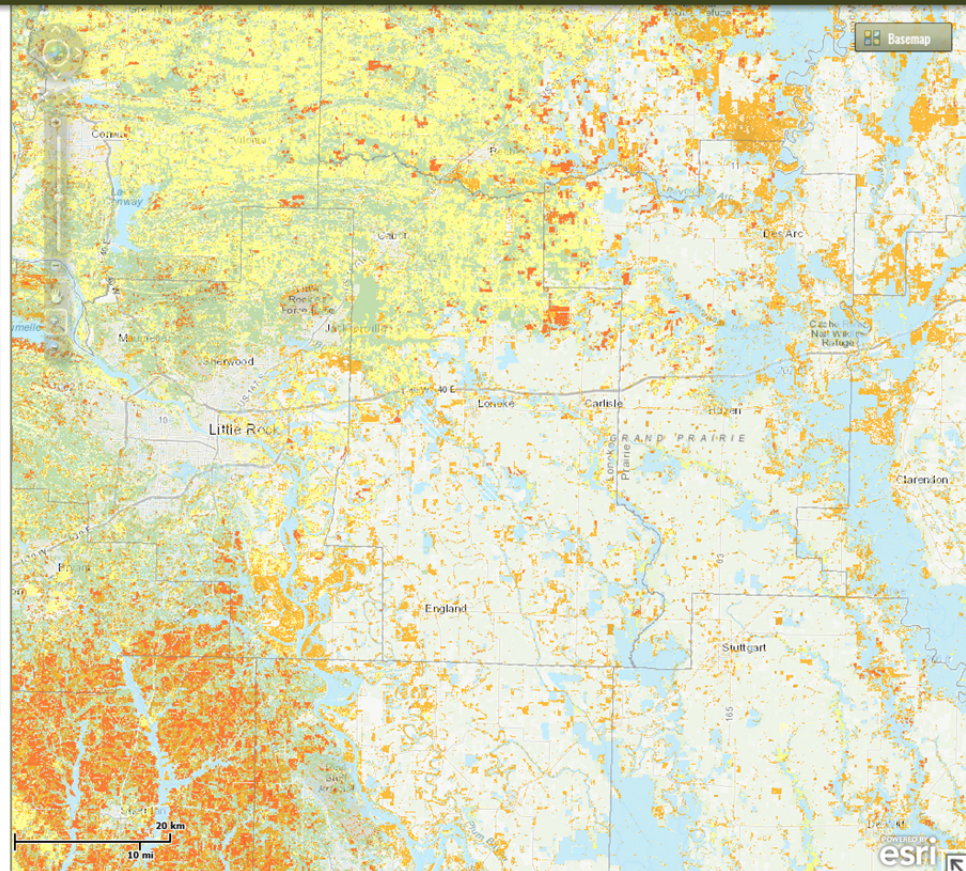
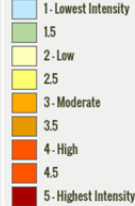


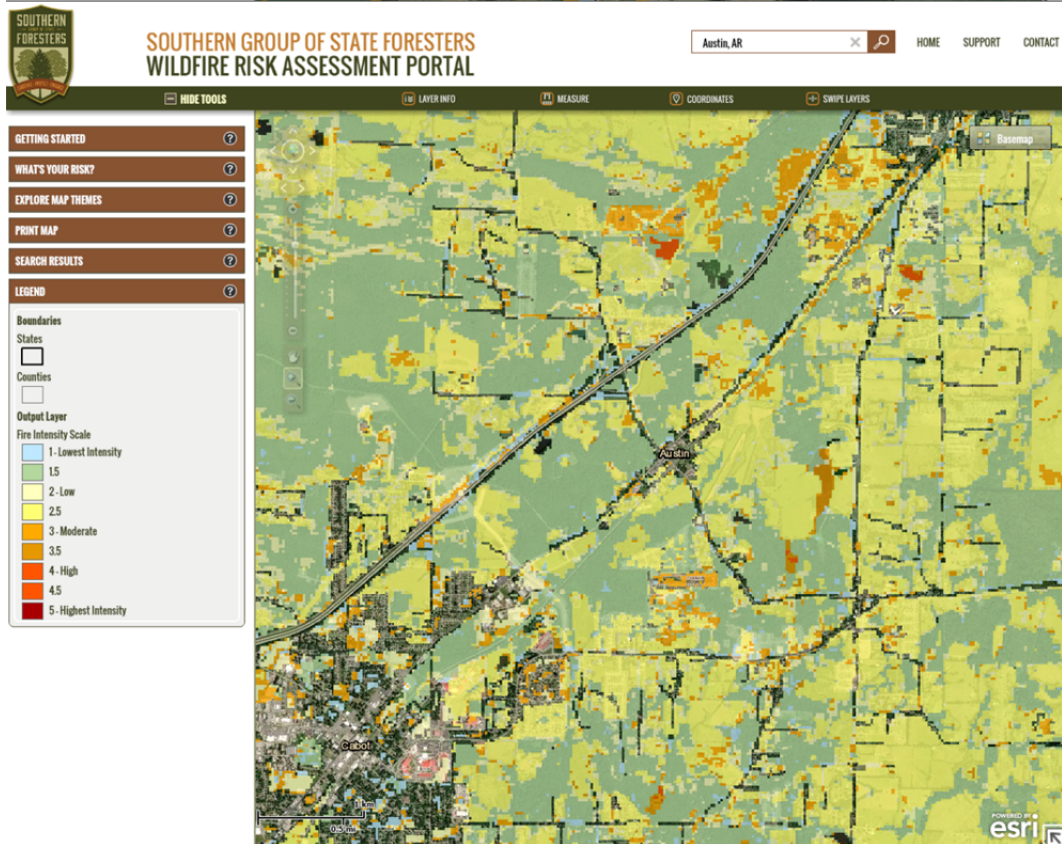
Counties



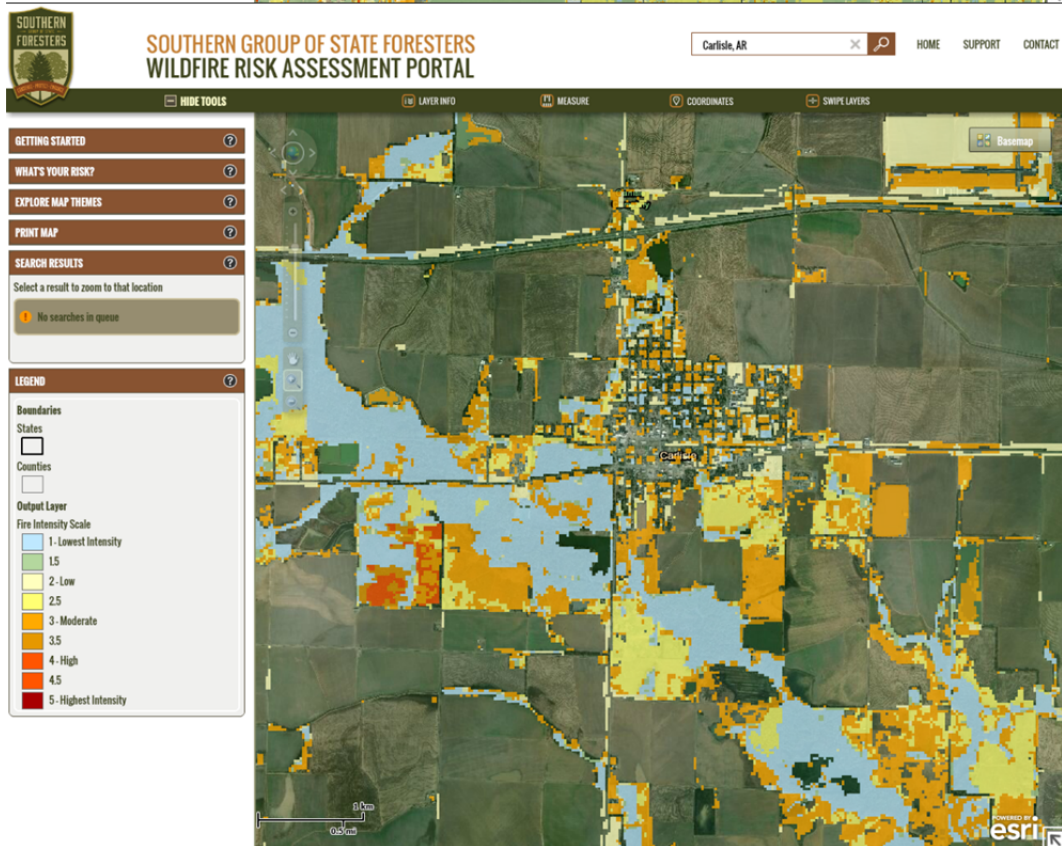
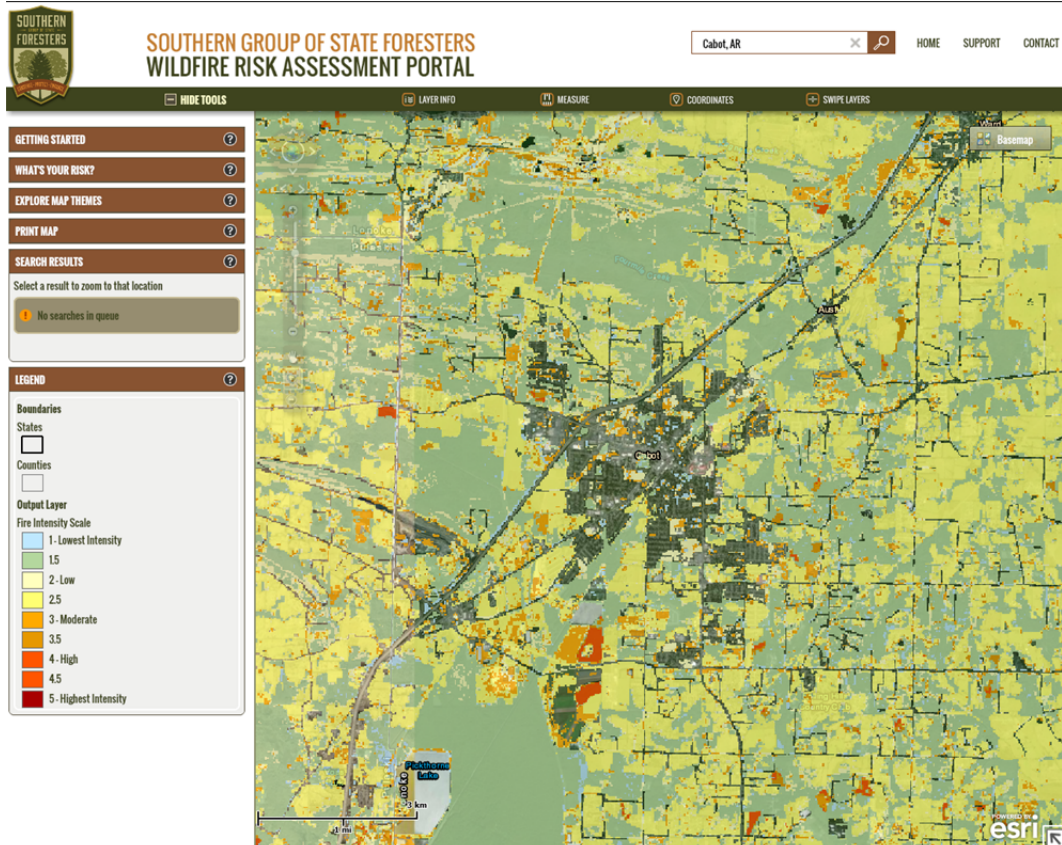
### Output Layer

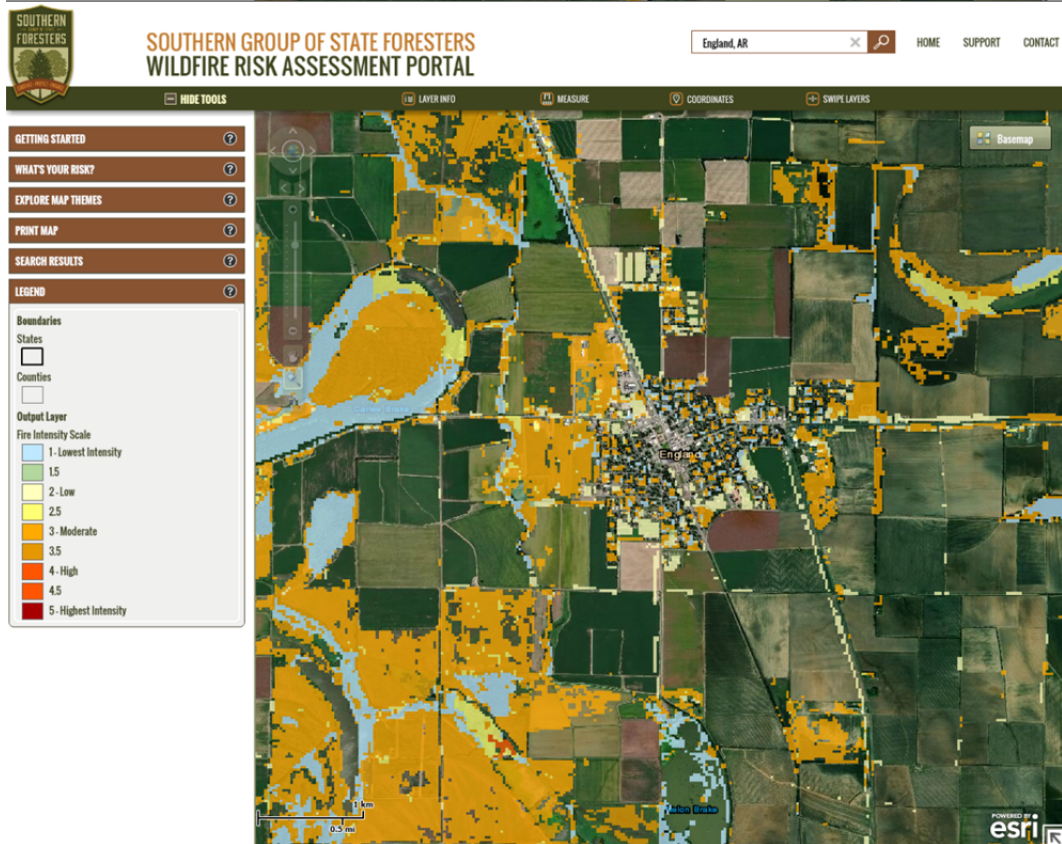
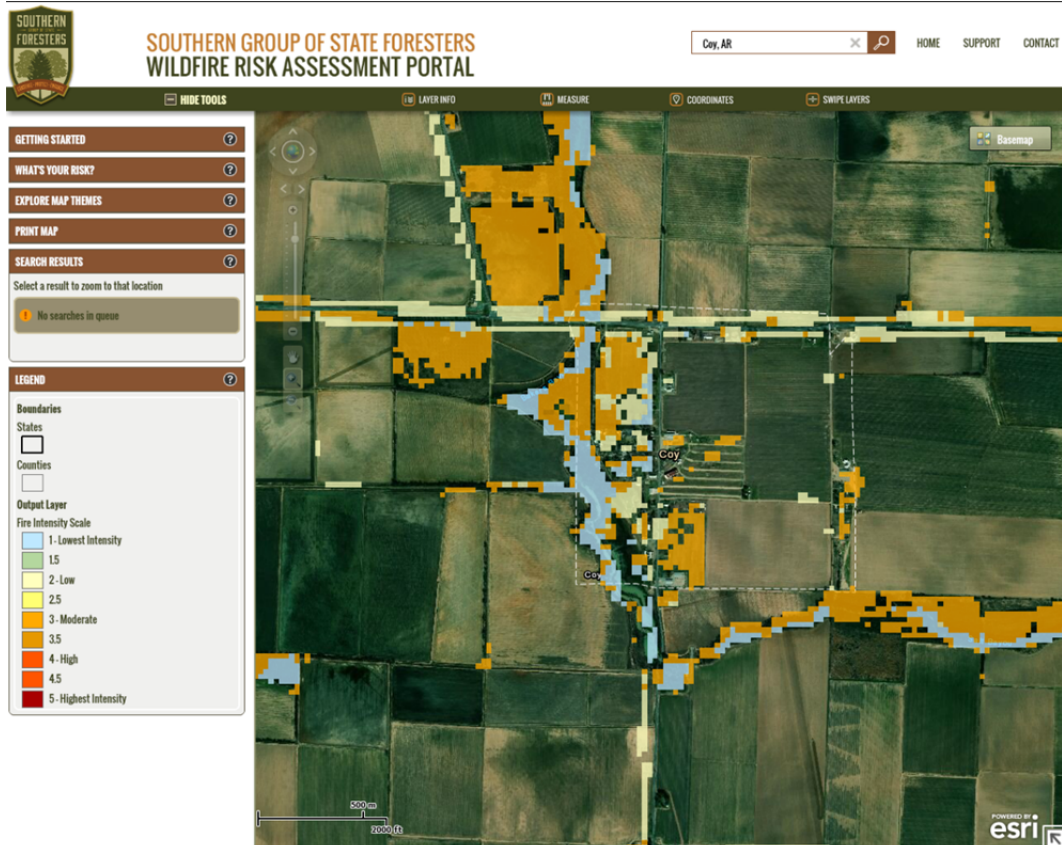
Fire Intensity Scale



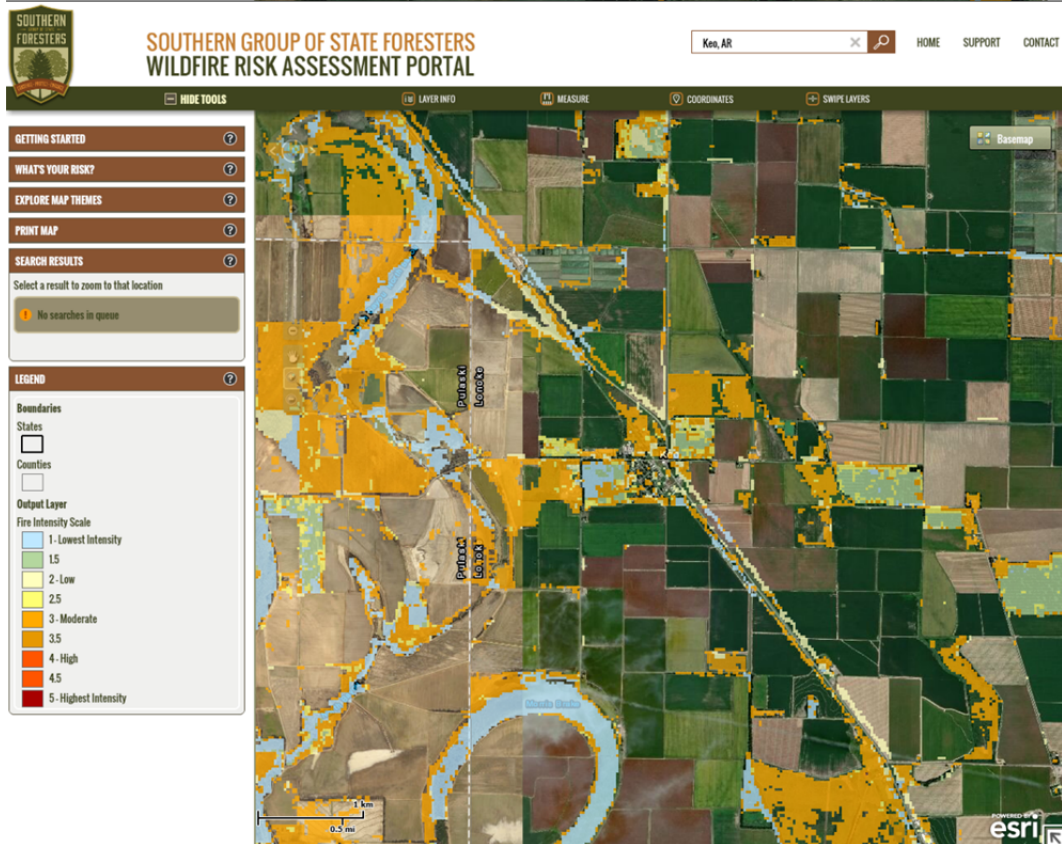
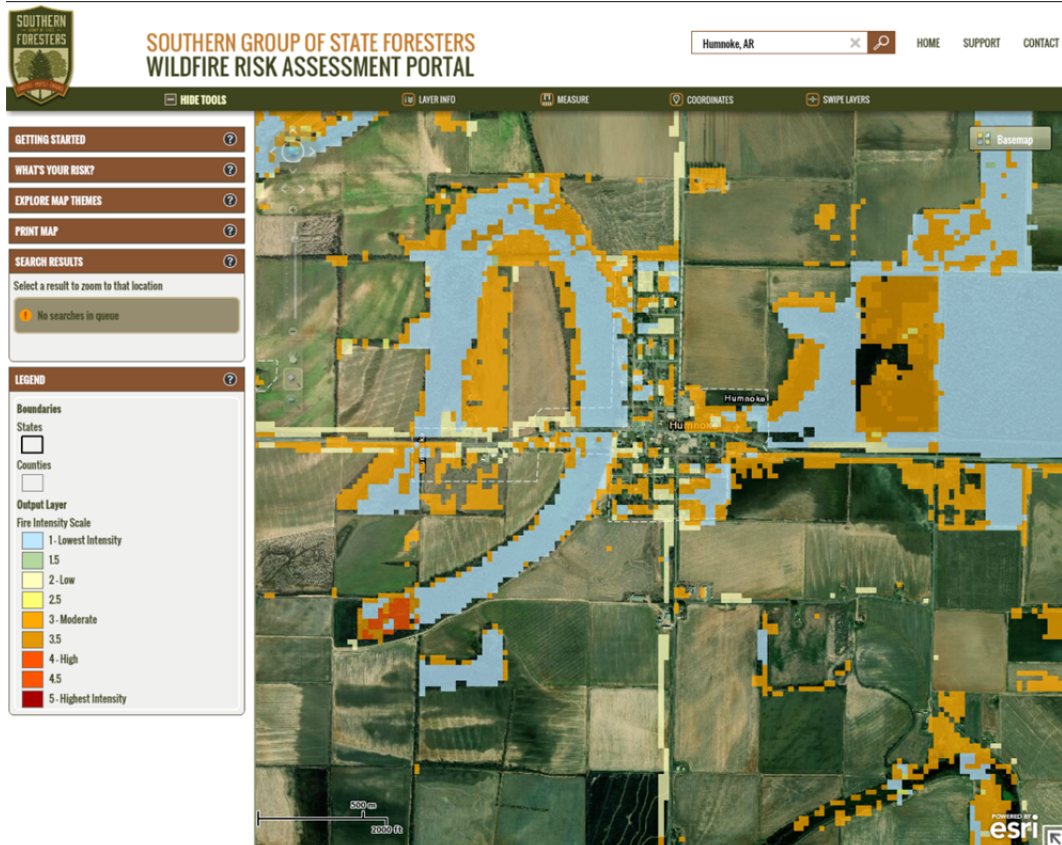


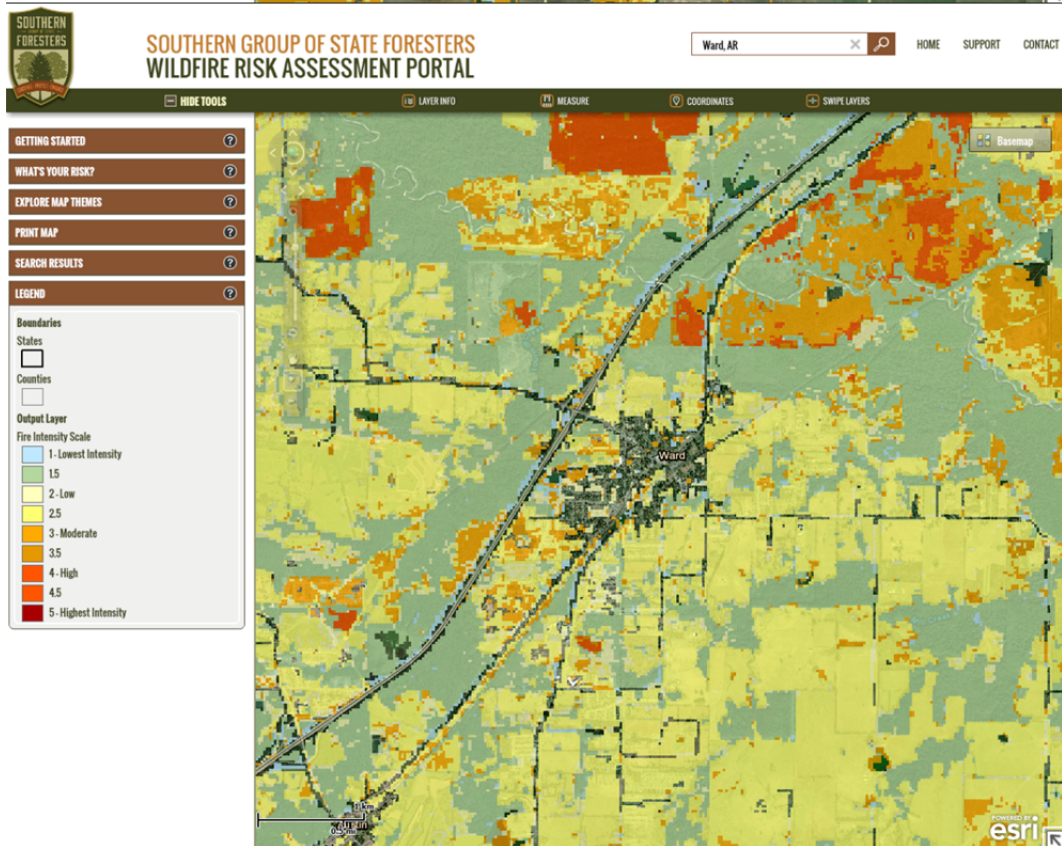
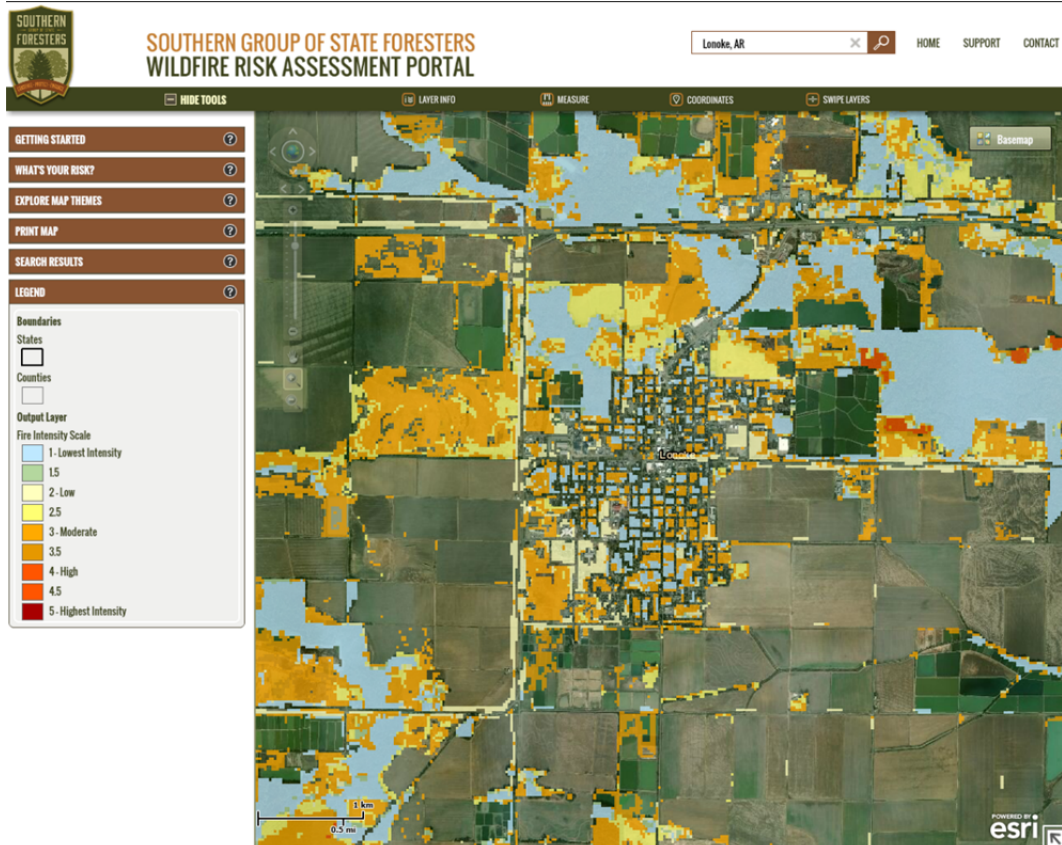














## Previous Occurrences

According to the Arkansas Forestry Commission, there have been 56 wildfire events during the update period, which burned a total of 1,251 acres. This is an average of 22 acres per event. According to NCDC data, on July 4<sup>th</sup>, 2012, mobile home, two barns, and several vehicles were destroyed. Fireworks were determined to be the cause of the fire.

## Probability of Future Wildfire Occurrences

The probability of future events is Likely. Within the entire planning area, there is a 10 to 90 percent probability of occurrence in the next year or a recurrence interval of 1 to 10.

## Impact and Vulnerability of Wildfire

For the Lonoke County project area, it is estimated that 86,043 people, or 96% of the of the total project area population live within the WUI. There are 22,060 Housing units in Lonoke County with a total value of \$2,967,448 that could be affected by wildfire.

**WUI- Population and Acres<sup>3</sup>**

	Housing Density	WUI Population	Percent of WUI Population	WUI Acres	Percent of WUI Acres
	LT 1hs/40ac	2,127	2.5%	103,465	45.2%
	1hs/40ac to 1hs/20ac	2,409	2.8%	35,454	15.5%
	1hs/20ac to 1hs/10ac	4,432	5.2%	29,923	13.1%
	1hs/10ac to 1hs/5ac	7,351	8.5%	23,763	10.4%
	1hs/5ac to 1hs/2ac	13,916	16.2%	19,332	8.4%
	1hs/2ac to 3hs/1ac	50,217	58.4%	16,552	7.2%
	GT 3hs/1ac	5,591	6.5%	606	0.3%
	<b>Total</b>	<b>86,043</b>	<b>100.0%</b>	<b>229,094</b>	<b>100.0%</b>

The majority of the planning area's WUI population (50,217) is in a density area of 1 house /2 acres to 3 houses/1 acre, meaning the majority of the planning area's population is vulnerable to wildfire.

<sup>3</sup> Excerpts from the Southern Wildfire Risk Assessment Summary Report for Lonoke County: 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.

Fire Fighters are the most vulnerable populations during wildfires. Other vulnerable populations are those that live in a High Intensity area, and those that reside in wood frame structures or manufactured homes, especially the elderly and children.

The most vulnerable structures in Wildfire occurrences are wood frame structures and manufactured homes. There are 15,413 wood structures, and 4,187 manufactured housing units in Lonoke County.

### **3.4.9 Winter Storm**

#### **Description of Winter Storm:**

Severe winter storms, which may include heavy snowfall, sleet, freezing rain, or a mix of these wintry forms of precipitation. Severe winter weather can down trees, cause widespread power outages, damage property, and cause fatalities and injuries

The National Weather Service (NWS) defines **snow** as a steady fall of snow for several hours or more. **Heavy snow** is defined as either a snowfall accumulating to 4 inches in depth in 12 hours or less, or snowfall accumulation to 6 inches or more in depth in 24 hours or less. In states such as Arkansas, where lesser accumulations can cause significant impacts, lower thresholds may be used. A **blizzard** means that the following conditions prevail for a period of three hours or longer: 1) sustained wind or frequent gusts to 35 miles an hour or greater; and 2) considerable falling and/or blowing snow (i.e., reducing visibility to less than 1/4 mile). **Sleet** is defined as pellets of ice composed of frozen or mostly frozen raindrops or refrozen partially melted snowflakes. These pellets of ice usually bounce after hitting the ground or other hard surfaces. **Heavy sleet** is a relatively rare event defined as the accumulation of ice pellets covering the ground to a depth of 0.5 inch or more.

**Freezing rain** or **freezing drizzle** occurs when rain or drizzle freezes on surfaces such as the ground, trees, power lines, vehicles, streets, highways, etc. Small accumulations of ice can cause driving and walking difficulties while heavy accumulations produce extremely dangerous and damaging conditions. An **ice storm** is used to describe occasions when damaging accumulations of ice are expected during freezing rain situations. Significant accumulations of ice pull down trees and utility lines resulting in loss of power and communication. These accumulations of ice make walking and driving extremely dangerous. Significant ice accumulations are usually accumulations of 0.25 inches or greater.

A combination of severe winter weather types occurring over a wide area is usually called a **winter storm**. Winter-storm formation requires below freezing temperatures, moisture, and lift to raise the moist air to form the clouds and cause precipitation. Lift is commonly provided by warm air colliding with cold air along a weather front. Various causes exist for winter storms in the United States. Winter storms in Midwestern and plains states typically develop over southeast Colorado on the lee side of the Rockies. These storms move east or northeast and use both the southward plunge of cold air from Canada and the northward flow of moisture from the Gulf of Mexico to produce ice, snow, and sometimes blizzard conditions. These fronts may push deep into the interior regions, sometimes as far south as Florida.

#### **Location of Winter Storm Events:**

A Winter Storm event can occur anywhere in the planning area. There is no geographic boundary.

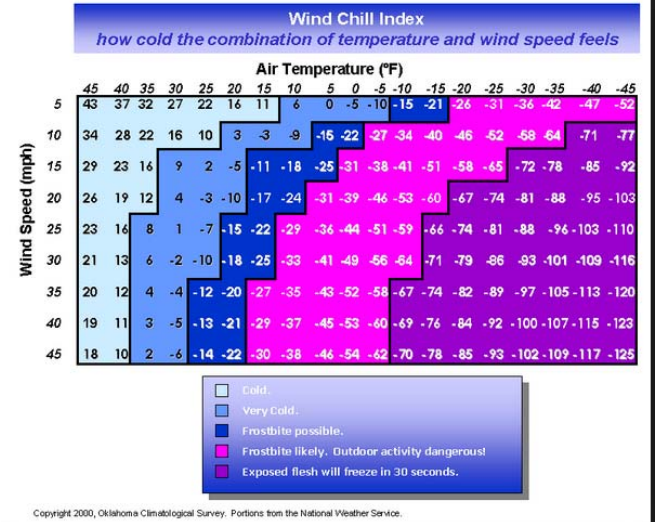
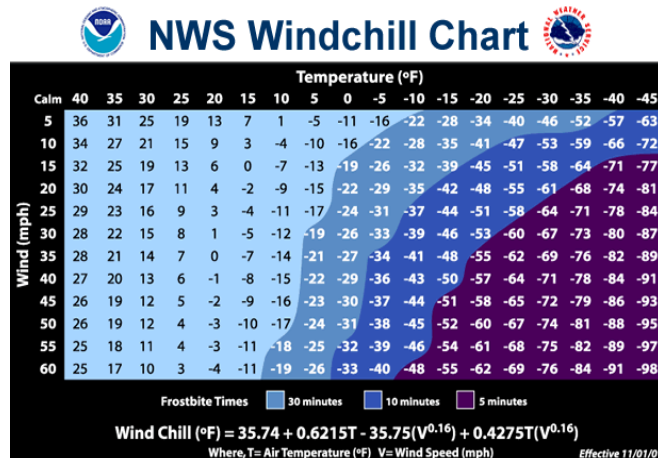
#### **Extent, Magnitude or Severity of Winter Storms**

According to National Climatic Data Center (NCDC) and National Weather Service Data, ~~snow accumulations in Lonoke County during heavy snow and winter storm events ranges from 1 inch to 8 inches. Typical ice storm accumulations range from 1/10 of one inch to 1/2 of an inch.~~ Lonoke County and all participating jurisdictions



typically see between 1" and 2" of snow and 1/10 to ¼ inch of ice accumulation. ~~When severe winter storm events do occur (the worse typically associated with ice), they are usually wide spread over the area and impede the movement of vehicles — limiting regular movement of traffic, causing accidents and limiting responsiveness of emergency services — and can down power and communications lines and seriously damage some structures, thus creating potentially critical conditions for the entire area.~~

~~Students may be kept inside by the determination of the building principals if there are extreme cold temperatures. Wind chill would be the determining factor in keeping students inside. Some districts initiate monitoring for wind chill is below 32 degrees, some 40 degrees.~~



### Previous Occurrences

There have been 9 countywide winter storm events between since 2008. There was 1 Ice Storm event between in the same period.

The National Climatic Data Center provides historical detail about past hazard events in the County.

Winter/Ice Events 2008-2017	Fatalities	Injuries x \$1 M	Combined Fatalities, Injuries Personal Property, and Crop Damage Value	Average Cost per Event
10	0	0	\$3.540M	\$354K

### Probability of Future Winter Storms

The probability of future events is likely. There is a 10 to 90 percent probability of occurrence within any planning jurisdiction in the next year or a recurrence interval of 1 to 10 years.

### Impact of Winter Storms

The unincorporated areas can be somewhat isolated the further away from the cities, and without adequate supply of fuel, equipment, and food. Also, when utilities and communication is disrupted during a winter storm event, these areas are the last to receive support or returned power because these areas are less populated than the cities. That means these populations will go a week or more without heat and fresh food. During very icy conditions, residents in these areas are extremely vulnerable. They can be trapped at home without utilities or other services. The elderly

are the most vulnerable and account for the largest percentage of hypothermia victims. House fires in these areas are common during winter storms from using alternate heating sources without caution. The rural areas also account for a large number of farms and livestock. The cold will damage vegetation and kill livestock. Poultry houses are vulnerable to loss of poultry products. As for structures, past experience proves that an estimated twenty or thirty structures will be impacted by winter storm events, resulting in only minor damage due to limbs breaking and falling on roofs. County roads will be impassible. The fire districts belonging to these jurisdictions are not equipped with plows or other equipment for clearing roads and sidewalks. In these areas, water supplies may freeze, and impede firefighting efforts.

Winter storms will immobilize the greater part of the cities. The highways will be impassible for one or two days. The County Road Department has access to equipment for clearing roads, and has mutual aid agreements with private services and other counties for support. When major roads are affected, it affects the travel flow and the availability of essential services throughout all participating jurisdictions.

Trees can be brought down by the weight of wet snow, snap power lines and damage buildings and houses when they fall. For houses that are poorly insulated will have pipes that freeze and bust inside these homes. Winter storms can cut off heat, power and communications for several days. This city will have priority to restored utilities due to the more populated area and more critical facilities. The elderly account for the most percentage of hypothermia victims. Water supplies may freeze, and impede firefighting efforts. Even small accumulations of ice may cause extreme hazards to motorists and pedestrians.

Affected roads can close school, as well as power outages. The buildings on school campuses may have freezing pipes due to lack of heating or insulation. Trees may fall and down power lines and damage the rooves. Students attending and staff employed at these districts are vulnerable to the impacts of a winter storm. Cancellations will disrupt schedules and education programs.

Winter Storms could shut down major roadways in the County (ex. Hwy, 165, Hwy 167, and Interstate 40). This may cause several traffic accidents and delay/detour travel across the nation. This can slow the delivery of goods and services among other areas outside the planning area as well as inside the area. It may also put a strain on local responders by have to respond to a significant increase of emergency calls.

When severe winter storm events do occur (the worse typically associated with ice), they are usually wide-spread over the area and impede the movement of vehicles – limiting regular movement of traffic, causing accidents and limiting responsiveness of emergency services – and can down power and communications lines and seriously damage some structures, thus creating potentially critical conditions for the entire area.

Students may be kept inside by the determination of the building principals if there are extreme cold temperatures. Wind chill would be the determining factor in keeping students inside. Some districts initiate monitoring for wind chill is below 32 degrees, some 40 degrees.

# SECTION 4

## Mitigation Strategy

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The Lonoke County Hazard Mitigation plan includes a mitigation strategy that provides the Lonoke County's blueprint for reducing the potential losses identified in the risk assessment, based on existing authorities, policies, programs and resources, and its ability to expand on and improve these existing tools by funding through county, city and school district taxes, yearly budgets and passing ordinances.

The following capabilities describe what the County, Cities and School District may or may not have to implement and maintain mitigation efforts, are addressed in the existing authorities, policies, programs and resources available to accomplish hazard mitigation;

Each is different in terms of staffing, funding, policies and program giving them the ability to carry out their local hazard mitigation goals. Each city has the capability to be an active member in the NFIP, to pass mitigation ordinances for their local government, regulate and limit the development in wildfire hazard areas and flood prone areas through land use planning implement retrofit construction plans, brace equipment, and provide emergency preparedness information to area residents through FEMA brochures.

Lonoke County, all cities, and school districts are largely dependent upon grant funding to assist with larger mitigation projects, such as safe rooms and heavy-duty generators to back up and maintain electrical power for critical facilities. The Cities would need assistance in financing drought communication and early warning systems, heating and cooling centers. Funds would also be needed for flood inundation studies and conduct inspections, maintenance and enforcement programs on significant risk dams in the County.

### **4.1 Mitigation Goals and Objectives for Each Hazard**

Based upon the results of the local and State risk assessments, the Lonoke County Hazard Mitigation Planning Team, with input from local jurisdictions and officials, developed hazard mitigation goals and objectives and selected those that were determined to be of greatest benefit. These goals and objectives represent what Lonoke County believes is a long-term vision for reduction and enhancement of mitigation capabilities:

**Goal 1. Reduce the potential for loss of life, injury and economic damage created by exposure to natural hazard for residents of Lonoke County due to natural disasters.**

**Objective 1** Enhance and maintain county capability to implement a comprehensive countywide hazard loss reduction strategy.

**Objective 1.1** Integrate overall mitigation strategies into the community's current and future capital improvements program and planning efforts to ensure that new projects have a minimal associated risk.

**Objective 1.2** Formulate strategies using state of the art knowledge to reduce vulnerability to natural hazards

**Objective 1.3** Identify Mitigation grant opportunities for Lonoke County and city governments, non-profit agencies, and the general public, and provide effective technical support in pursuit of grants for hazard mitigation measures.

**Objective 2** Implement public education initiatives to improve understanding of natural hazards and hazard mitigation.

**Objective 2.1** Design mitigation website for Lonoke County with link to public view of the Lonoke County Mitigation Plan and mitigation strategies.

**Objective 2.2** Lonoke County and all jurisdictions included in the mitigation plan should participate in the National Flood Insurance Program (NFIP), the Community Rating System (CRS), the Firewise Communities/USA program, the National Weather Service StormReady Program, Disaster Resistant Community Council and FEMA's Cooperating Technical Partners (CTP) program (participation in the above programs is part of the State ranking criteria for funding mitigation proposals).

**Objective 2.3** Educate the public about the risks associated with natural hazards and the steps they can take to be prepared.

**Objective 2.4** Initiate programs to promote on-going partnerships within the community to address mitigation and emergency management.

**Objective 3** Implement public works projects that improve the protection of important developed areas in the community.

**Objective 3.1** Implement voluntary and regulated programs to ensure the continued improvement to building structures, locations and on-going emergency planning initiatives that improve the protection of critical infrastructure and county emergency management facilities.

**Objective 3.2** Create a Community Assets Database of all County properties and all properties owned or managed by communities in the multi-jurisdictional mitigation plan.

**Objective 3.4** Continually assess and evaluate the requirements for new structural projects that aid in the reduction of risk to the community.

#### **4.2 Implementation of Mitigation Actions**

The mitigation actions are prioritized based upon their effect on the overall risk to life and property. Ease of implementation, community and agency support and ease of obtaining funding. The County and participating jurisdictions have used the STAPLEE method to prioritize mitigation actions. This method has the benefit that the Mitigation actions are considered in discrete categories of Social, Technical, Administrative, Political, Economic and Environmental. Prioritization can therefore be made taking each of these categories into account, so that nothing is overlooked when considering which actions may be best for each jurisdiction to consider.

Criteria used for prioritization and review of mitigation actions based on STAPLEE

Evaluation Category	Sources of Information
Social	Members of Local governments and the County Government were members of the Hazard Mitigation Planning Team and had input throughout the planning process. It must be noted that many small town political leaders are also business or professional persons. They are also members of the LEPC. Existing community plans were and will be relied on wherever possible. Members of the media were contacted and invited to all attend all HMPT meetings.
Technical	The following persons/agencies were consulted as to the technical feasibility of the various projects: Arkansas Geological Commission, University of Arkansas Extension Service, Arkansas Soil and Water Conservation Commission, Arkansas Health Department, Arkansas Highway and Transportation Department, Arkansas Department of Environmental Quality, Arkansas Governor's Pre-Disaster Advisory Council, Arkansas Governor's Earthquake Advisory Council, and Arkansas Forestry Service. Arkansas Department of Emergency Management. All of these had their comments and suggestions incorporated.
Administrative	Staffing for proper implementation of the plan currently will rely largely on existing members of the various agencies involved. Technical assistance is available from various local and state agencies. Some local jurisdictions have incorporated Hazard Mitigation efforts into their Capital Improvement Plans. Operations costs are under discussion by the

	appropriate agency or department heads.
<b>Political</b>	The County Quorum Court has passed resolutions in support of mitigation activities involving floodplain ordinances, mitigation planning, and fire districts, among others. The Governor of Arkansas issued an Executive Order in August of 2004 (EO 04-02) instructing all state agencies to assist ADEM in mitigation planning and implementation of mitigation goals.
<b>Legal</b>	Members of the HMPT discussed legal issues, and it was their opinion that no significant legal issues were involved in the projects that were selected by the HMPT. However, where legalities may be an issue, this is noted.
<b>Economic</b>	Economic and benefit cost issues were the predominant topics discussed by all concerned. Each entity felt that the projects selected would have positive effects, but yet realized that actions often have costs, sometimes hidden, imposed on the community, residents and businesses. Funding for the various activities was a major concern as local budgets are always under pressures with existing and competing projects and activities. Where necessary, particularly for costly capital projects, outside grants would be relied on heavily.
<b>Environmental</b>	The Arkansas Geological Survey, Arkansas Department of Environmental Quality, Arkansas Forestry Commission, and Arkansas Soil and Water Conservation Commission were all consulted as to the environmental impact of the various projects and it was felt that there would be no negative impact. Local environmental issues and concerns were also taken into consideration.

There were no changes to the priorities for this update.

The Lonoke County Office of Emergency Management (LCOEM) will be responsible for evaluating actions among competing actions. The Planning Team prioritized the list of mitigation actions by conducting a cost-benefit review. This review was conducted by; first considering the number of people who would be affected by a chosen project, determining the area the project would cover, considering how critical the structures were within in the project area, and which structure were most critical, and finally how would it benefit the entire community. The Planning Team shall evaluate actions based on funding availability, comparative value to mitigation objectives, and consideration of economic benefits and environmental concerns of the communities. Actions are prioritized in three different categories; **Very High** need for immediate action, **High** need for action, **Medium** lacking in urgency.

All Lonoke County actions are the responsibility of the director of Lonoke County Office of Emergency Management. The participating cities actions are the responsibility of their Mayors. The School Districts will be the responsibility of their Board Administration.

The Responsible Agency for each mitigation action will identify resources. Their responsibility will be to examine resources from all levels of government. The responsible parties will integrate the requirements of the mitigation plan into other plans when appropriate. This also, includes funding and support for enacting and enforcing building codes and zoning ordinances, and developing public education programs to alert residents to risks and how they can reduce hazard losses. Plans will be made to earmark resources for implementing these actions. Each jurisdiction and school district within the County that participated in the planning process has at least two actions that will benefit the jurisdiction.

For the purpose of developing the Lonoke County Hazard Mitigation Plan, mitigation actions are categorized into six groups;

- Actions that will keep problems from getting worse (Prevention).
- Actions that address individual buildings (Property protection)
- Actions that will inform the public (Public education and awareness)
- Actions that will protect natural resources (Natural resource protection)
- Actions that will protect emergency services before, during, and immediately after an occurrence (Emergency services protection)
- Actions that will control the hazard (Structural projects)

### **4.3 Previous Mitigation Actions**

Below is a summary of progress of the mitigation actions determined in the 2008 Lonoke County Mitigation Plan. Those not completed were deferred due to lack of resources. The “Update Status” is as follows:

- **C**=Completed
- **PC**= Partially Complete; some action is still a need, and was partially deferred due to lack of resources
- **NLR**= No Longer Relevant
- **D**= Deferred

Action #	Actions	Priority Level	Projected Timeline	Responsible Jurisdiction	Update Status
D-1 (Drought)	Work with Arkansas Natural Resource Commission to determine losses in Lonoke County due to drought	Medium	2 years	Lonoke County and all participating jurisdictions	D
EH-01 (Extreme Heat)	Create and update a Lonoke County Special Needs Population Database to provide first responders a list of people to contact via phone or in person in an extreme heat wave to avoid fatal heat exposure.	Medium	3 years	Lonoke County and participating Cities	NLR
ES-1 (Expansive Soils)	Encourage Arkansas Geological Survey & Arkansas Highway and Transportation Department to improve risk assessment by mapping expansive soils and determining losses due to disruptions due to expansive soils	Medium	2 years	Lonoke County and all participating jurisdictions	NLR
F-01 (Flood)	Lonoke County – Flooding occurs on Kerr Road between Graham and Hwy 284 even during small rain events. Drainage needs to be upgraded and roads built up.	Very High	1 year	Lonoke County	D
F-02 (Flood)	Lonoke County – Flooding occurs on Schaefer Road between Northcut and Bennett Road.	Very High	1 year		D
F-03 (Flood)	City of Lonoke – Flooding occurs in the Branch Street and Rosemary Lane area. Pack Brach overflows its banks on a regular basis eroding the roads and flooding houses.	Very High	1 year	Lonoke County and City of Lonoke	D
F-04 (Flood)	City of Humnoke – Flooding occurs on Hwy 165 and East of Hwy 13. Homes are threatened several times a year.	Very High	1 year	Lonoke County and City of Humnoke	D
F-05 (Flood)	Encourage Property owners to engage in Beaver control projects.	Very High	Ongoing	Lonoke County and all participating jurisdictions	PC
F-06 (Flood)	City of Ward – Morrison Road Floods several times a year. This is the main drainage ditch	Very High	1 year	Lonoke County and City of Ward	D



Action #	Actions	Priority Level	Projected Timeline	Responsible Jurisdiction	Update Status
	through town. Need to upgrade drainage to handle larger rain events.				
F-07 (Flood)	Provide support for structural and non-structural mitigation measures for properties in the 1%-annual-chance floodplain.	Very High	Ongoing	Lonoke County and all participating jurisdictions	PC
F-08 (Flood)	Improve the methods, standards and procedures for floodplain management. Seek to adopt ordinances to limit floodplain development.	Very High	Ongoing	Lonoke County and all participating jurisdictions	PC
F-09 (Flood)	City of England – Flooding on Windy Lynn Road. Drainage improvements needed and road should be raised.	Very High	2 years	Lonoke County and City of England	D
F-10 (Flood)	Lonoke County – Flooding occurs on Ray Young Road from Hwy 13 N to Doug Jackson Road. Road needs to be raised and Drainage upgraded.	Very High	2 years	Lonoke County	D
F-11 (Flood)	Lonoke County – Flooding occurs on Carroll Road off of Hwy 31 S. Road needs to be raised and Drainage upgraded.	Very High	2 years	Lonoke County	D
F-12 (Flood)	City of Lonoke – Flooding occurs on South Center and Hamburg Street – Drainage needs improvement.	Very High	2 years	Lonoke County and City of Lonoke	D
F-13 (Flood)	City of Carlisle – Flooding occurs on Pauschert Road Between I-40 & E 8th Street. Flooding causes emergency response to be cut-off from residents.	Very High	2 years	Lonoke County and City of Carlisle	D
F-14 (Flood)	City of Carlisle – Flooding occurs on Eas <sup>t</sup> 8th Street between Hwy 13 and Pauschert Road.	High	2 years	Lonoke County and City of Carlisle	D
F-15 (Flood)	City of Lonoke – Flooding on Dismukes Road is causing major erosion problems. New design on drainage is needed.	High	2 years	Lonoke County and City of Lonoke	D
F-16 (Flood)	Lonoke County –Lonoke Bayou II overflows its banks at Coleman Road causing flooding. Drainage improvement needed as well as the road needs to be raised.	High	2 years	Lonoke County	D
F-17 (Flood)	Lonoke County – Continual flooding occurs in the Kerr Community on Hwy 70, about ¼ mile east of the Pulaski County Line. Problem caused by Bayou overflowing its banks. Drainage is needed.	High	3 years	Lonoke County	D
F-18 (Flood)	Lonoke County – Flooding occurs on a regular basis on Mt. Tabor Road just west of the LeMay Road Intersection. Drainage needed as well as	High	3 years	Lonoke County and all participating jurisdictions	D

Action #	Actions	Priority Level	Projected Timeline	Responsible Jurisdiction	Update Status
	some road improvements.				
F-19 (Flood)	Lonoke County – Flooding occurs on Kayer Road at the 100 Block. Drainage and Road improvements needed.	High	3 years	Lonoke County and all participating jurisdictions	D
F-20 (Flood)	City of Carlisle – Flooding occurs on Hwy 70 between Victory Street and Raborn Road and the southern portion of Eastwood Subdivision. Drainage improvements needed.	High	3 years	Lonoke County and all participating jurisdictions	D
F-21 (Flood)	Lonoke County – Flooding occurs on Hefner Road off of Hwy 321 Spur, at the 500 Block. Drainage and Road improvements needed.	High	3 years	Lonoke County	D
F-22 (Flood)	City of Ward Brewer & Markham roads flood. Inundates homes. Drainage improvements needed.	High	3 years	Lonoke County and City of Ward	D
F-23 (Flood)	Lonoke County – Flooding occurs on Rochelle from O’Cain Rd. to Ferguson Rd. Drainage and Road improvements are needed.	Medium	3 years	Lonoke County	D
F-24 (Flood)	Lonoke County – Northcut Road floods at Lonoke Bayou II Bridge to North of I-40. Drainage and Road improvements are needed.	Medium	3 years	Lonoke County	D
F-25 (Flood)	County will evaluate current zoning laws and floodplain development regulations and will adopt new laws to government regulations as deemed necessary.	Medium	Ongoing	Lonoke County and Cities	D
F-26 (Flood)	City of England – Flooding occurs in the following areas due to drainage problems: SE Fourth & Nichols, SD Fifth & Banks, SE Second to City Limits, Haywood between Second and Fourth and Irvy Drive to Nichols and out to Hwy 15.	Medium	3 years	Lonoke County and City of England	D
F-27 (Flood)	Design and implement in-stream erosion reduction program.	Medium	3 years	Lonoke County and all participating jurisdictions	D
F-28 (Flood)	Promote an increase in at-risk structures covered by NFIP.	Medium	Ongoing	Lonoke County and all participating jurisdictions	D
F-29 (Flood)	City of Cabot- Highlands off of Willie Ray Drive. Drainage improvements needed. Repetitive loss property.	Medium	1 year	City of Cabot	C
F-30 (Flood)	City of Austin – Carriage Court Estates. J Drainage improvements needed to mitigate repetitive damage to property.	Medium	1 year	City of Austin	D

Action #	Actions	Priority Level	Projected Timeline	Responsible Jurisdiction	Update Status
MH-01 (Earthquake, Flood, Dam Failure, Severe Thunderstorm, Hail, Lightning Tornado Winter Storm, Wildfire, Expansive Soil, Drought, High Wind, Extreme Heat)	Upgrade Communication Equipment	Very High	Ongoing	Lonoke County and all participating jurisdictions	NLR
MH-02 (Earthquake, Flood, Dam Failure, Severe Thunderstorm, Hail, Lightning Tornado Winter Storm, Wildfire, Expansive Soil, Drought, High Wind, Extreme Heat)	Develop brochures, a website, educational programs, and public services announcements to increase public awareness of hazards to which Lonoke County residents are exposed and potential mitigation measures that may be undertaken.	Very High	Ongoing	Lonoke County and all participating jurisdictions	PC
MH-03 (Earthquake, Flood, Dam Failure, Severe Thunderstorm, Hail, Lightning Tornado Winter Storm, Wildfire, High Wind, Extreme Heat)	Acquire generators for all Lonoke County shelters, city halls, emergency operations centers, and other critical facilities that do not presently have them to maintain power and water during a disaster to protect against further damage	Very High	1 Year	Lonoke County and all participating jurisdictions	PC
MH-04 (Earthquake, Flood, Dam Failure, Severe Thunderstorm, Hail, Lightning Tornado Winter Storm, Wildfire, Expansive Soil, Drought, High Wind, Extreme Heat)	Ensure proposed mitigation projects are in conformance with the State of Arkansas Hazard Mitigation Plan and State mitigation priorities.	Very High	Ongoing	Lonoke County and all participating jurisdictions, CAPDD,	PC
MH-05 (Earthquake, Severe Thunderstorm, Tornado, High Wind)	Advertise and generate participation in State of Arkansas saferoom program.	Very High	1 year	Lonoke County and all participating jurisdictions Encourage assistance from non-profits	C, NLR
MH-06 (Earthquake, Flood, Dam Failure, Severe Thunderstorm, Hail, Lightning Tornado, Winter Storm, Wildfire, Expansive Soil, Drought, High Wind, Extreme Heat)	Ensure that the current version of the Lonoke County Hazard Mitigation Plan is easily accessible to the general public (e.g., online, in local libraries) for input on plan update	Very High	1 year	Lonoke County and all participating jurisdictions, CAPDD Staff	C
MH-07 (Earthquake, Flood, Dam Failure, Severe Thunderstorm, Hail, Lightning Tornado, Winter Storm, Wildfire, Expansive Soil, Drought, High Wind, Extreme Heat)	Identify and maintain outside water sources in neighborhoods such as small ponds, cisterns, wells, pools, hydrants, etc.	Very High	1 year	Lonoke County and all participating jurisdictions	PC

Action #	Actions	Priority Level	Projected Timeline	Responsible Jurisdiction	Update Status
MH-08 (Earthquake, Flood, Dam Failure, Severe Thunderstorm, Hail, Lightning Tornado, Winter Storm, Wildfire, Expansive Soil, Drought, High Wind, Extreme Heat)	Upgrade Sirens. Many areas have an inadequate number of sirens but most need new updated versions.	Very High	1 year	Lonoke County and all participating jurisdictions	PC
MH-09 (Tornado, High Winds, Thunderstorm, Earthquake)	Obtain funding for safe-room construction in County, City and school facilities.	Very High	1 year	Lonoke County and all participating jurisdictions	PC
MH-10 (Tornado, High Winds, Thunderstorm, Earthquake)	Encourage the use of clips and anchors in new construction and retrofitting existing structures.	Very High	Ongoing	Lonoke County and all participating jurisdictions	D
MH-11 (Tornado, High Winds, Thunderstorm, Earthquake)	City of Carlisle – City is in need of a new Emergency Services building. Would like to build safe-room inside.	Very High	2 year	Lonoke County and City of Carlisle	NLR
MH-12 (Earthquake, Flood, Dam Failure, Severe Thunderstorm, Hail, Lightning Tornado, Winter Storm, Wildfire, Expansive Soil, Drought, High Wind, Extreme Heat)	Identify and protect emergency response lifelines.	High	Ongoing	Lonoke County and all participating jurisdictions	NLR
MH-13 (Earthquake, Flood, Dam Failure, Severe Thunderstorm, Hail, Lightning Tornado, Winter Storm, Wildfire, Expansive Soil, Drought, High Wind, Extreme Heat)	The LCLEPC will encourage adoption of building codes to ensure safe construction.	High	Ongoing	Lonoke County and all participating jurisdictions	D
MH-14 (Earthquake, Flood, Dam Failure, Severe Thunderstorm, Hail, Lightning Tornado, Winter Storm, Wildfire, Expansive Soil, Drought, High Wind, Extreme Heat)	Include mitigation awareness efforts in all LCLEPC meetings.	High	1 year	Lonoke County and all participating jurisdictions	NLR
MH-15 (Earthquake, Flood, Dam Failure, Severe Thunderstorm, Hail, Lightning Tornado, Winter Storm, Wildfire, Expansive Soil, Drought, High Wind)	Increase road-clearing capabilities	High	1 year	Lonoke County and Cities	NLR
MH-16 (Earthquake, Flood, Dam Failure, Severe Thunderstorm, Hail, Lightning Tornado, Winter Storm, Wildfire, High Wind, Extreme Heat)	City of Cabot – A new Fire station is needed in the north west part of Cabot which will be used as a command post.	High	1 year	Lonoke County and City of Cabot	NLR

Action #	Actions	Priority Level	Projected Timeline	Responsible Jurisdiction	Update Status
MH-17 (Earthquake, Flood, Dam Failure, Severe Thunderstorm, Hail, Lightning Tornado, Winter Storm, Wildfire, High Wind, Extreme Heat)	City of Cabot – A mobile command center is needed for use in disasters. This would also benefit the Cities of Ward and Austin.	High	2 year	Lonoke County and City of Cabot	NLR
MH-18 (Earthquake, Flood, Tornado, Winter Storm, High Wind and Thunderstorm)	City of Cabot – Haz-Mat truck is needed. City of Cabot is the main railway for two major rails. Hazardous Material is transported though the town several times every day. The Haz-Mat truck could also be utilized when needed on Hwy 167 which bisects the city.	High	3 years	Lonoke County and City of Cabot	NLR
MH-19 (Earthquake, Flood, Dam Failure, Severe Thunderstorm, Hail, Lightning Tornado, Winter Storm, Wildfire, Expansive Soil, Drought, High Wind, Extreme Heat)	The LCLEPC will promote the acquisition of all-hazard radios for all schools, city halls, large businesses, churches, and other locations where large numbers of people congregate.	Medium	Ongoing	Lonoke County and all participating jurisdictions	PC
MH-20 (Tornado, Earthquake, Thunderstorm, High Winds)	Bury or otherwise protect electric and other utility lines.	Medium	Ongoing	Lonoke County and all participating jurisdictions	D
SW-01 (Severe Winter Weather)	Ensure public facilities have severe weather action plans.	Very High	Ongoing	Lonoke County and all participating jurisdictions	NLR
SW-02 (Severe Winter Weather)	City of Ward is very limited in equipment to handle ice. Emergency Response Vehicles need to be equipped with Hydraulic “On Spot” Chains. Automatic tire chains.	Very High	1 year	Lonoke County City of Ward	NLR
SW-03 (Severe Winter Weather)	City of Ward is the furthest city from Lonoke County and is the last to receive assistance from the county equipment. A Sand Spreader is needed for the dump truck to attend to the overpass and 3 rail road crossing as well as the roads through the town.	High	2 years	Lonoke County and City of Ward	NLR
T-04 (Tornado)	Encourage anchoring manufactured and mobile structures to permanent foundations.	High	Ongoing	Lonoke County and all participating jurisdictions	PC
T-06 (Tornado)	The LCLEPC will study efficacy of tornado warning sirens and continually monitor siren status.	Medium	1 years	Lonoke County and all participating jurisdictions	NLR
WF-01 (Wildfire)	City of Lonoke – City needs a grass truck and a tanker slide unit.	Very High	1 year	Lonoke County and City of Lonoke	NLR
WF-02 (Wildfire)	City of Carlisle – City needs tanker truck to better serve the community.	Very High	1 year	Lonoke County and City of Carlisle	NLR

Action #	Actions	Priority Level	Projected Timeline	Responsible Jurisdiction	Update Status
WF-03 (Wildfire)	Work with Arkansas Forestry Commission to improve risk assessment by determining losses due to wildland fires in the County	Very High	2 years	Lonoke County and all participating jurisdictions	NLR
WF-04 (Wildfire)	All communities should join Fire Wise program at firewise.org.	High	Ongoing	Lonoke County and all participating jurisdictions	D
WF-05 (Wildfire)	Ensure that structures are surrounded by defensible space buffer zones; enact codes to require homeowners to clear dead vegetation which can fuel wildfires.	High	Ongoing	Lonoke County and all participating jurisdictions	D
WF-06 (Wildfire)	Encourage formation of neighborhood wildfire safety coalitions.	Medium	3 years	Lonoke County and all participating jurisdictions	D
WF-07 (Wildfire)	Encourage installation of smoke detectors and fire extinguishers.	Medium	Ongoing	Lonoke County and all participating jurisdictions	NLR



#### Mitigation Actions conducted and/or attempted during the update period

- County has sought after grant funds for small drainage projects on rural area roads.
- Lonoke School District installed safe rooms at the High School and the Middle School.
- The Cities of Cabot, Carlisle and Lonoke installed a community shelter in their respective cities.
- City of Lonoke received a grant to reduce standing water in the Privett Park area on the southwest corner of town.
- City of Cabot sought FEMA funds for a drainage project to alleviate flooding in the Highland Subdivision area.

#### Striking Previous Actions

Some actions on the previous plan would not pass for “mitigation” under the current rules. Several of them are considered “preparedness,” or do not have constructive language, but some of the identified actions have been accomplished. Some actions were stricken from this plan update because of the reasons mentioned. These are labeled “NLR” on the above table.

#### 4.4 Mitigation Actions/Projects

For the purpose of this plan, and this section, the term “All participating jurisdictions” or “All jurisdictions” refers to the unincorporated Lonoke County, all of the cities, and School Districts listed as a planning team member under section 1.1.5 of this plan (except for CAPDD and State Partners). “Participating cities” refers to the cities listed as a planning team member under section 1.1.5, and “all participating schools” refers to school districts listed as a planning team member under section 1.1.5.

Mitigation Actions
<p><b>D-1</b> <b><i>Work with Arkansas Soil and Water Conservation Commission to determine losses in Lonoke County due to drought.</i></b> <b>Associated Hazard:</b> Drought <b>Type of Action:</b> Prevention <b>Contribution to Mitigation Objective:</b> Protect against loss of life and property. <b>Priority:</b> Medium <b>Rationale of Priority:</b> Determining losses can lead to stronger mitigation actions <b>Addresses New or Existing buildings:</b> New and Existing <b>Cost Benefit:</b> Benefits outweighs cost. Possible grants for construction. <b>TimeLine:</b> 1.5 years <b>Projected Resources:</b> Existing County and Local Resources <b>Responsible Party:</b> Lonoke County &amp; all participating cities <b>Action adopted by:</b> Lonoke County &amp; all participating cities <b>STAPLEE:</b> Meets all Criteria</p>
<p><b>D-2</b> <b><i>Implement xeriscaping practices at public facilities to reduce dependence on irrigation.</i></b> <b>Associated Hazard:</b> Drought <b>Type of Action:</b> Natural Resources Protection <b>Contribution to Mitigation Objective:</b> Protect against loss of resource. <b>Priority:</b> Low <b>Rationale of Priority:</b> Lessen or eliminate impacts of drought <b>Addresses New or Existing buildings:</b> N/A <b>Cost Benefit:</b> Benefits outweighs cost. <b>TimeLine:</b> 1 year <b>Projected Resources:</b> Existing County and Local Resources <b>Responsible Party:</b> All participating jurisdictions <b>Action adopted by:</b> All participating jurisdictions <b>STAPLEE:</b> Meets all Criteria</p>
<p><b>D-3</b> <b><i>Implement water conservation measures for localized drought conditions like the installation of low-flow wa</i></b></p>

~~pressure regulators, and the elimination of leaks or breaks.~~

**Associated Hazard:** Drought

**Type of Action:** Structure and Infrastructure

**Contribution to Mitigation Objective:** Protect against loss of resource.

**Priority:** Low

**Rationale of Priority:** Lessen or eliminate impacts of drought

**Addresses New or Existing buildings:** N/A

**Cost Benefit:** Benefits outweighs cost.

**TimeLine:** 1-5 years

**Projected Resources:** Existing County and Local Resources

**Responsible Party:** All participating jurisdictions

**Action adopted by:** All participating jurisdictions

**STAPLEE:** Meets all Criteria

#### **D-4**

***Adopt water rationing codes to conserve water during times of extreme drought.***

**Associated Hazard:** Drought

**Type of Action:** Natural Resources Protection

**Contribution to Mitigation Objective:** Protect against loss of resource.

**Priority:** Low

**Rationale of Priority:** Lessen or eliminate impacts of drought

**Addresses New or Existing buildings:** N/A

**Cost Benefit:** Benefits outweighs cost.

**TimeLine:** 3 months

**Projected Resources:** Existing County and Local Resources

**Responsible Party:** Lonoke County and all participating cities.

**Action adopted by:** Lonoke County and all participating cities.

**STAPLEE:** Meets all Criteria

#### **DF-1**

***Adopt Ordinances that limit development in areas that could be affected by flooding caused by dam failure.***

**Associated Hazard:** Dam Failure

**Type of Action:** Prevention, property protection

**Contribution to Mitigation Objective:** Protect against loss of life and property

**Priority:** Low

**Rationale of Priority:** Lessen or eliminate impacts of dam failure

**Addresses New or Existing buildings:** New and Existing

**Cost Benefit:** Benefits outweighs cost.

**TimeLine:** 1 year

**Projected Resources:** Existing County and Local Resources

**Responsible Party:** Lonoke County and ~~all participating cities~~ the City of Cabot.

**Action adopted by:** Lonoke County and ~~all participating cities~~ the City of Cabot.

**STAPLEE:** Meets all Criteria

#### **~~DF-2~~**

**~~*Conduct flood inundation studies of Significant Hazard Dams to determine the extent, impact and vulnerability of dam failure.*~~**

~~**Associated Hazard:** Dam Failure~~

~~**Type of Action:** Prevention, property protection~~

~~**Contribution to Mitigation Objective:** Protect against loss of life and property~~

~~**Priority:** Low~~

~~**Rationale of Priority:** Lessen or eliminate impacts of dam failure~~

~~**Addresses New or Existing buildings:** New and Existing~~

~~**Cost Benefit:** Benefits outweighs cost.~~

~~**TimeLine:** 1 year~~

~~**Projected Resources:** Existing County and Local Resources~~

~~**Responsible Party:** All plan participants.~~

~~**Action adopted by:** All plan participants.~~

~~**STAPLEE:** Meets all Criteria~~

#### **EH-1**

***Establish accessible cooling centers/shelters for vulnerable, special-needs and at-risk population.***

**Associated Hazard:** Extreme Heat

**Type of Action:** Prevention, Structural

<p><b>Contribution to Mitigation Objective:</b> Protect against extreme heat.</p> <p><b>Priority:</b> Low</p> <p><b>Rationale of Priority:</b> Lessen or eliminate impacts of the hazard</p> <p><b>Addresses New or Existing buildings:</b> N/A</p> <p><b>Cost Benefit:</b> Benefits outweighs cost.</p> <p><b>TimeLine:</b> 1 month</p> <p><b>Projected Resources:</b> Existing County and Local Resources</p> <p><b>Responsible Party:</b> All participating jurisdictions</p> <p><b>Action adopted by:</b> All participating jurisdictions</p> <p><b>STAPLEE:</b> Meets all Criteria</p>
<p><b>EQ-1</b></p> <p><b><i>Implement non-structural mitigation of public facilities (window film, bracing of cabinets, <del>emergency gas shut-offs, etc.</del>)</i></b></p> <p><b>Associated Hazard:</b> Earthquake</p> <p><b>Type of Action:</b> Prevention, Structural</p> <p><b>Contribution to Mitigation Objective:</b> Protect against earthquake.</p> <p><b>Priority:</b> Low</p> <p><b>Rationale of Priority:</b> Lessen or eliminate impacts of the hazard</p> <p><b>Addresses New or Existing buildings:</b> New and Existing</p> <p><b>Cost Benefit:</b> Benefits outweighs cost.</p> <p><b>TimeLine:</b> 6 months</p> <p><b>Projected Resources:</b> Existing County and Local Resources</p> <p><b>Responsible Party:</b> All participating jurisdictions</p> <p><b>Action adopted by:</b> All participating jurisdictions</p> <p><b>STAPLEE:</b> Meets all Criteria</p>
<p><b>F-1</b></p> <p><b><i>Conduct drainage project and elevate roadway to mitigate flooding on Kerr Road between Graham and Hwy 284.</i></b></p> <p><b>Associated Hazard:</b> Flood</p> <p><b>Type of Action:</b> Structural Project</p> <p><b>Contribution to Mitigation Objective:</b> Protect against loss of life and property.</p> <p><b>Priority:</b> Very High</p> <p><b>Rationale of Priority:</b> Lessen or eliminate damage from flooding</p> <p><b>Addresses New or Existing buildings:</b> New and Existing</p> <p><b>Cost Benefit:</b> Benefits outweighs cost.</p> <p><b>TimeLine:</b> 6 months</p> <p><b>Projected Resources:</b> Existing County and Local Resources. Possible grant funds.</p> <p><b>Responsible Party:</b> Lonoke County</p> <p><b>Action adopted by:</b> Lonoke County</p> <p><b>STAPLEE:</b> Meets all Criteria</p>
<p><b>F-2</b></p> <p><b><i>Conduct drainage improvements and elevate Schaefer Road between Northcut and Bennett Road in order to mitigate flooding.</i></b></p> <p><b>Associated Hazard:</b> Flood</p> <p><b>Type of Action:</b> Structural Project</p> <p><b>Contribution to Mitigation Objective:</b> Protect against loss of life and property.</p> <p><b>Priority:</b> Very High</p> <p><b>Rationale of Priority:</b> Lessen or eliminate damage from flooding</p> <p><b>Addresses New or Existing buildings:</b> New and Existing</p> <p><b>Cost Benefit:</b> Benefits outweighs cost..</p> <p><b>TimeLine:</b> 6 months</p> <p><b>Projected Resources:</b> Existing County and Local Resources. Possible grant funds.</p> <p><b>Responsible Party:</b> Lonoke County</p> <p><b>Action adopted by:</b> Lonoke County</p> <p><b>STAPLEE:</b> Meets all Criteria</p>
<p><b>F-3</b></p> <p><b><i>Join the National Flood Insurance Program and adopt a local floodplain ordinance.</i></b></p> <p><b>Associated Hazard:</b> Flood</p> <p><b>Type of Action:</b> Prevention</p> <p><b>Contribution to Mitigation Objective:</b> Protect against loss of life and property.</p> <p><b>Priority:</b> High</p>

<p><b>Rationale of Priority:</b> Lessen or eliminate damage from flooding  <b>Addresses New or Existing buildings:</b> New and Existing  <b>Cost Benefit:</b> Benefits outweighs cost.  <b>TimeLine:</b> 6 months  <b>Projected Resources:</b> Existing Local Resources  <b>Responsible Party:</b> City Governments of Coy and Keo  <b>Action adopted by:</b> City of Coy, City of Keo  <b>STAPLEE:</b> Meets all Criteria</p>
<p><b>F-4</b>  <b>Conduct drainage improvements along Hwy 165 and East of Hwy 13 near Humnoke.</b>  <b>Associated Hazard:</b> Flood  <b>Type of Action:</b> Structural Project  <b>Contribution to Mitigation Objective:</b> Protect against loss of life and property.  <b>Priority:</b> Very High  <b>Rationale of Priority:</b> Lessen or eliminate damage from flooding  <b>Addresses New or Existing buildings:</b> New and Existing  <b>Cost Benefit:</b> Benefits outweighs cost.  <b>TimeLine:</b> 6 months  <b>Projected Resources:</b> Existing County and Local Resources. Possible grant funds.  <b>Responsible Party:</b> City of Humnoke  <b>Action adopted by:</b> City of Humnoke  <b>STAPLEE:</b> Meets all Criteria</p>
<p><b>F-5</b>  <b>Conduct drainage improvements in the Branch Street and Rosemary Lane area. Pack Brach overflows its banks on a regular basis eroding the roads and flooding houses.</b>  <b>Associated Hazard:</b> Flood  <b>Type of Action:</b> Structural Project  <b>Contribution to Mitigation Objective:</b> Protect against loss of life and property.  <b>Priority:</b> Very High  <b>Rationale of Priority:</b> Lessen or eliminate damage from flooding  <b>Addresses New or Existing buildings:</b> New and Existing  <b>Cost Benefit:</b> Benefits outweighs cost.  <b>TimeLine:</b> 6 months  <b>Projected Resources:</b> Existing County and Local Resources. Possible grant funds.  <b>Responsible Party:</b> City of Lonoke  <b>Action adopted by:</b> City of Lonoke  <b>STAPLEE:</b> Meets all Criteria</p>
<p><b>F-6</b>  <b>Improve drainage to the main ditch through town in order to mitigate flooding along Morrison Road in Ward.</b>  <b>Associated Hazard:</b> Flood  <b>Type of Action:</b> Structural Project  <b>Contribution to Mitigation Objective:</b> Protect against loss of life and property.  <b>Priority:</b> Very High  <b>Rationale of Priority:</b> Lessen or eliminate damage from flooding  <b>Addresses New or Existing buildings:</b> New and Existing  <b>Cost Benefit:</b> Benefits outweighs cost.  <b>TimeLine:</b> 6 months  <b>Projected Resources:</b> Existing County and Local Resources. Possible grant funds.  <b>Responsible Party:</b> City of Ward  <b>Action adopted by:</b> City of Ward  <b>STAPLEE:</b> Meets all Criteria</p>
<p><b>F-7</b>  <b>Conduct drainage improvements and elevate Windy Lynn Rd to mitigate flooding.</b>  <b>Associated Hazard:</b> Flood  <b>Type of Action:</b> Structural Project  <b>Contribution to Mitigation Objective:</b> Protect against loss of life and property.  <b>Priority:</b> Very High  <b>Rationale of Priority:</b> Lessen or eliminate damage from flooding  <b>Addresses New or Existing buildings:</b> New and Existing  <b>Cost Benefit:</b> Benefits outweighs cost..</p>

<p><b>TimeLine:</b> 6 months  <b>Projected Resources:</b> Existing County and Local Resources. Possible grant funds.  <b>Responsible Party:</b> City of England  <b>Action adopted by:</b> City of England  <b>STAPLEE:</b> Meets all Criteria</p>
<p><b>F-8</b>  <b>Improve drainage and elevate roadway on Ray Young Road from Hwy 13 N to Doug Jackson Road.</b>  <b>Associated Hazard:</b> Flood  <b>Type of Action:</b> Structural Project  <b>Contribution to Mitigation Objective:</b> Protect against loss of life and property.  <b>Priority:</b> Very High  <b>Rationale of Priority:</b> Lessen or eliminate damage from flooding  <b>Addresses New or Existing buildings:</b> New and Existing  <b>Cost Benefit:</b> Benefits outweighs cost.  <b>TimeLine:</b> 6 months  <b>Projected Resources:</b> Existing County and Local Resources. Possible grant funds.  <b>Responsible Party:</b> Lonoke County  <b>Action adopted by:</b> Lonoke County  <b>STAPLEE:</b> Meets all Criteria</p>
<p><b>F-9</b>  <b>Upgrade drainage structures and elevate roadway on Carroll Road off of Hwy 31 S in order to mitigate flooding.</b>  <b>Associated Hazard:</b> Flood  <b>Type of Action:</b> Structural Project  <b>Contribution to Mitigation Objective:</b> Protect against loss of life and property.  <b>Priority:</b> Very High  <b>Rationale of Priority:</b> Lessen or eliminate damage from flooding  <b>Addresses New or Existing buildings:</b> New and Existing  <b>Cost Benefit:</b> Benefits outweighs cost.  <b>TimeLine:</b> 6 months  <b>Projected Resources:</b> Existing County and Local Resources. Possible grant funds.  <b>Responsible Party:</b> Lonoke County  <b>Action adopted by:</b> Lonoke County  <b>STAPLEE:</b> Meets all Criteria</p>
<p><b>F-10</b>  <b>Conduct drainage improvements on South Center and Hamburg Street to mitigate flooding during heavy rainfall.</b>  <b>Associated Hazard:</b> Flood  <b>Type of Action:</b> Structural Project  <b>Contribution to Mitigation Objective:</b> Protect against loss of life and property.  <b>Priority:</b> Very High  <b>Rationale of Priority:</b> Lessen or eliminate damage from flooding  <b>Addresses New or Existing buildings:</b> New and Existing  <b>Cost Benefit:</b> Benefits outweighs cost..  <b>TimeLine:</b> 6 months  <b>Projected Resources:</b> Existing County and Local Resources. Possible grant funds.  <b>Responsible Party:</b> City of Lonoke  <b>Action adopted by:</b> City of Lonoke  <b>STAPLEE:</b> Meets all Criteria</p>
<p><b>F-11</b>  <b>Conduct a drainage project on East 8th Street between Hwy 13 and Pauschert Road to mitigate flooding.</b>  <b>Associated Hazard:</b> Flood  <b>Type of Action:</b> Structural Project  <b>Contribution to Mitigation Objective:</b> Protect against loss of life and property.  <b>Priority:</b> Very High  <b>Rationale of Priority:</b> Lessen or eliminate damage from flooding  <b>Addresses New or Existing buildings:</b> New and Existing  <b>Cost Benefit:</b> Benefits outweighs cost.-  <b>TimeLine:</b> 6 months  <b>Projected Resources:</b> Existing County and Local Resources. Possible grant funds.  <b>Responsible Party:</b> City of Carlisle  <b>Action adopted by:</b> City of Carlisle</p>

STAPLEE: Meets all Criteria
<p><b>F-12</b>  <b>Conduct a drainage project on Dismukes Road in order to mitigate the major erosion resulting from flooding.</b>  <b>Associated Hazard:</b> Flood  <b>Type of Action:</b> Structural Project  <b>Contribution to Mitigation Objective:</b> Protect against loss of life and property.  <b>Priority:</b> High  <b>Rationale of Priority:</b> Lessen or eliminate damage from flooding  <b>Addresses New or Existing buildings:</b> New and Existing  <b>Cost Benefit:</b> Benefits outweighs cost.-  <b>TimeLine:</b> 6 months  <b>Projected Resources:</b> Existing County and Local Resources. Possible grant funds.  <b>Responsible Party:</b> Lonoke County  <b>Action adopted by:</b> Lonoke County  <b>STAPLEE:</b> Meets all Criteria</p>
<p><b>F-13</b>  <b>Conduct a drainage project and elevate roadway at Coleman Rd in order to mitigate flooding from Lonoke Bayou II.</b>  <b>Associated Hazard:</b> Flood  <b>Type of Action:</b> Structural Project  <b>Contribution to Mitigation Objective:</b> Protect against loss of life and property.  <b>Priority:</b> High  <b>Rationale of Priority:</b> Lessen or eliminate damage from flooding  <b>Addresses New or Existing buildings:</b> New and Existing  <b>Cost Benefit:</b> Benefits outweighs cost.-  <b>TimeLine:</b> 6 months  <b>Projected Resources:</b> Existing County and Local Resources. Possible grant funds.  <b>Responsible Party:</b> Lonoke County  <b>Action adopted by:</b> Lonoke County  <b>STAPLEE:</b> Meets all Criteria</p>
<p><b>F-14</b>  <b>Conduct drainage project and elevate roadway to mitigate flooding that occurs on Mt. Tabor Road just west of the LeMay Road Intersection.</b>  <b>Associated Hazard:</b> Flood  <b>Type of Action:</b> Structural Project  <b>Contribution to Mitigation Objective:</b> Protect against loss of life and property.  <b>Priority:</b> High  <b>Rationale of Priority:</b> Lessen or eliminate damage from flooding  <b>Addresses New or Existing buildings:</b> New and Existing  <b>Cost Benefit:</b> Benefits outweighs cost.-  <b>TimeLine:</b> 6 months  <b>Projected Resources:</b> Existing County and Local Resources. Possible grant funds.  <b>Responsible Party:</b> City of Carlisle  <b>Action adopted by:</b> City of Carlisle  <b>STAPLEE:</b> Meets all Criteria</p>
<p><b>F-15</b>  <b>Conduct Drainage project and elevate roadway to mitigate flooding that occurs on Kayer Road at the 100 Block.</b>  <b>Associated Hazard:</b> Flood  <b>Type of Action:</b> Structural Project  <b>Contribution to Mitigation Objective:</b> Protect against loss of life and property.  <b>Priority:</b> High  <b>Rationale of Priority:</b> Lessen or eliminate damage from flooding  <b>Addresses New or Existing buildings:</b> New and Existing  <b>Cost Benefit:</b> Benefits outweighs cost.-  <b>TimeLine:</b> 6 months  <b>Projected Resources:</b> Existing County and Local Resources. Possible grant funds.  <b>Responsible Party:</b> Lonoke County  <b>Action adopted by:</b> Lonoke County  <b>STAPLEE:</b> Meets all Criteria</p>



**F-16**

**Conduct Drainage project on Hwy 70 between Victory Street and Raborn Road and the southern portion of Eastwood Subdivision to mitigate flooding.**

**Associated Hazard:** Flood

**Type of Action:** Structural Project

**Contribution to Mitigation Objective:** Protect against loss of life and property.

**Priority:** High

**Rationale of Priority:** Lessen or eliminate damage from flooding

**Addresses New or Existing buildings:** New and Existing

**Cost Benefit:** Benefits outweighs cost.

**TimeLine:** 6 months

**Projected Resources:** Existing County and Local Resources. Possible grant funds.

**Responsible Party:** City of Carlisle

**Action adopted by:** City of Carlisle

**STAPLEE:** Meets all Criteria

**F-17**

**Conduct Drainage project on Hefner Road off of Hwy 321 Spur, at the 500 Block.**

**Associated Hazard:** Flood

**Type of Action:** Structural Project

**Contribution to Mitigation Objective:** Protect against loss of life and property.

**Priority:** High

**Rationale of Priority:** Lessen or eliminate damage from flooding

**Addresses New or Existing buildings:** New and Existing

**Cost Benefit:** Benefits outweighs cost.

**TimeLine:** 6 months

**Projected Resources:** Existing County and Local Resources. Possible grant funds.

**Responsible Party:** Lonoke County

**Action adopted by:** Lonoke County

**STAPLEE:** Meets all Criteria

**F-18**

**Conduct Drainage project where flooding inundates properties near Brewer & Markham roads.**

**Associated Hazard:** Flood

**Type of Action:** Structural Project

**Contribution to Mitigation Objective:** Protect against loss of life and property.

**Priority:** High

**Rationale of Priority:** Lessen or eliminate damage from flooding

**Addresses New or Existing buildings:** New and Existing

**Cost Benefit:** Benefits outweighs cost.

**TimeLine:** 6 months

**Projected Resources:** Existing County and Local Resources. Possible grant funds.

**Responsible Party:** City of Ward

**Action adopted by:** City of Ward

**STAPLEE:** Meets all Criteria

**F-19**

**Conduct Drainage project to mitigate flooding from O'Cain Rd. to Ferguson Rd.**

**Associated Hazard:** Flood

**Type of Action:** Structural Project

**Contribution to Mitigation Objective:** Protect against loss of life and property.

**Priority:** High

**Rationale of Priority:** Lessen or eliminate damage from flooding

**Addresses New or Existing buildings:** New and Existing

**Cost Benefit:** Benefits outweighs cost.

**TimeLine:** 6 months

**Projected Resources:** Existing County and Local Resources. Possible grant funds.

**Responsible Party:** Lonoke County

**Action adopted by:** Lonoke County

**STAPLEE:** Meets all Criteria

**F-20**

**Conduct Drainage project where Northcut Road floods at Lonoke Bayou II Bridge to North of I-40.**

**Associated Hazard:** Flood

<p><b>Type of Action:</b> Structural Project  <b>Contribution to Mitigation Objective:</b> Protect against loss of life and property.  <b>Priority:</b> High  <b>Rationale of Priority:</b> Lessen or eliminate damage from flooding  <b>Addresses New or Existing buildings:</b> New and Existing  <b>Cost Benefit:</b> Benefits outweighs cost.  <b>TimeLine:</b> 6 months  <b>Projected Resources:</b> Existing County and Local Resources. Possible grant funds.  <b>Responsible Party:</b> Lonoke County  <b>Action adopted by:</b> Lonoke County  <b>STAPLEE:</b> Meets all Criteria</p>
<p><b>F-21</b>  <b>Conduct Drainage projects within these areas in the City of England to mitigate flooding problems: SE Fourth &amp; Nichols, <del>SD</del> Fifth &amp; Banks, SE Second to City Limits, Haywood between Second and Fourth and Irvy Drive to Nichols and out to Hwy 15.</b>  <b>Associated Hazard:</b> Flood  <b>Type of Action:</b> Structural Project  <b>Contribution to Mitigation Objective:</b> Protect against loss of life and property.  <b>Priority:</b> High  <b>Rationale of Priority:</b> Lessen or eliminate damage from flooding  <b>Addresses New or Existing buildings:</b> New and Existing  <b>Cost Benefit:</b> Benefits outweighs cost.  <b>TimeLine:</b> 6 months  <b>Projected Resources:</b> Existing County and Local Resources. Possible grant funds.  <b>Responsible Party:</b> City of England  <b>Action adopted by:</b> City of England  <b>STAPLEE:</b> Meets all Criteria</p>
<p><b>F-22</b>  <b>Conduct Drainage projects within the Carriage Court Estates subdivision necessary to mitigate repetitive flood damage to property.</b>  <b>Associated Hazard:</b> Flood  <b>Type of Action:</b> Structural Project  <b>Contribution to Mitigation Objective:</b> Protect against loss of life and property.  <b>Priority:</b> High  <b>Rationale of Priority:</b> Lessen or eliminate damage from flooding  <b>Addresses New or Existing buildings:</b> New and Existing  <b>Cost Benefit:</b> Benefits outweighs cost.  <b>TimeLine:</b> 6 months  <b>Projected Resources:</b> Existing County and Local Resources. Possible grant funds.  <b>Responsible Party:</b> City of England  <b>Action adopted by:</b> City of England  <b>STAPLEE:</b> Meets all Criteria</p>
<p><b>F-23</b>  <b>Conduct Drainage projects within these areas in the City of England to mitigate flooding problems: SE Fourth &amp; Nichols, SD Fifth &amp; Banks, SE Second to City Limits, Haywood between Second and Fourth and Irvy Drive to Nichols and out to Hwy 15.</b>  <b>Associated Hazard:</b> Flood  <b>Type of Action:</b> Structural Project  <b>Contribution to Mitigation Objective:</b> Protect against loss of life and property.  <b>Priority:</b> High  <b>Rationale of Priority:</b> Lessen or eliminate damage from flooding  <b>Addresses New or Existing buildings:</b> New and Existing  <b>Cost Benefit:</b> Benefits outweighs cost.  <b>TimeLine:</b> 6 months  <b>Projected Resources:</b> Existing County and Local Resources. Possible grant funds.  <b>Responsible Party:</b> City of England  <b>Action adopted by:</b> City of England  <b>STAPLEE:</b> Meets all Criteria</p>
<p><b>F-24</b>  <b>Design and implement in-stream erosion reduction program.</b></p>

<p><b>Associated Hazard:</b> Flood  <b>Type of Action:</b> Property protection  <b>Contribution to Mitigation Objective:</b> Protect against loss of life and property.  <b>Priority:</b> Low  <b>Rationale of Priority:</b> Lessen or eliminate damage from flooding  <b>Addresses New or Existing buildings:</b> New and Existing  <b>Cost Benefit:</b> Benefits outweighs cost.  <b>TimeLine:</b> 1 year  <b>Projected Resources:</b> Existing County and Local Resources  <b>Responsible Party:</b> Lonoke County &amp; participating cities  <b>Action adopted by:</b> Lonoke County &amp; participating cities  <b>STAPLEE:</b> Meets all Criteria</p>
<p><b>F-25</b>  <b>Conduct a drainage project to mitigate the flooding in the community of Kerr.</b>  <b>Associated Hazard:</b> Flood  <b>Type of Action:</b> Structural Project  <b>Contribution to Mitigation Objective:</b> Protect against loss of life and property.  <b>Priority:</b> Low  <b>Rationale of Priority:</b> Lessen or eliminate damage from flooding  <b>Addresses New or Existing buildings:</b> New and Existing  <b>Cost Benefit:</b> Benefits outweighs cost.  <b>TimeLine:</b> 6 months  <b>Projected Resources:</b> Existing County and Local Resources. Possible grant funds  <b>Responsible Party:</b> Lonoke County  <b>Action adopted by:</b> Lonoke County  <b>STAPLEE:</b> Meets all Criteria</p>
<p><b>F-26</b>  <b>Acquire and demolish, elevate, relocate or flood proof flood-prone structures.</b>  <b>Associated Hazard:</b> Flood  <b>Type of Action:</b> Structural Project  <b>Contribution to Mitigation Objective:</b> Protect against loss of life and property.  <b>Priority:</b> Medium  <b>Rationale of Priority:</b> Lessen or eliminate damage from flooding  <b>Addresses New or Existing buildings:</b> Existing  <b>Cost Benefit:</b> Benefits outweighs cost.  <b>TimeLine:</b> On-going  <b>Projected Resources:</b> Existing County and Local Resources. Possible grant funds.  <b>Responsible Party:</b> Lonoke County and all participating cities.  <b>Action adopted by:</b> Lonoke County and all participating cities.  <b>STAPLEE:</b> Meets all Criteria</p>
<p><b>F-27</b>  <b>Upgrade drainage structures such as culverts, detention ponds, drains and bridges for increased water capacity allowing for flood prevention.</b>  <b>Associated Hazard:</b> Flood  <b>Type of Action:</b> Structural Project  <b>Contribution to Mitigation Objective:</b> Protect against loss of life and property.  <b>Priority:</b> Medium  <b>Rationale of Priority:</b> Lessen or eliminate damage from flooding  <b>Addresses New or Existing buildings:</b> Existing  <b>Cost Benefit:</b> Benefits outweighs cost.  <b>TimeLine:</b> On-going  <b>Projected Resources:</b> Existing County and Local Resources. Possible grant funds.  <b>Responsible Party:</b> Lonoke County and all participating cities.  <b>Action adopted by:</b> Lonoke County and all participating cities.  <b>STAPLEE:</b> Meets all Criteria</p>
<p><b>F-28</b>  <b>Participate in the Community Rating System (CRS), which rewards communities that exceed the minimum NFIP requirements.</b>  <b>Associated Hazard:</b> Flood  <b>Type of Action:</b> Structural Project</p>

**Contribution to Mitigation Objective:** Protect against loss of life and property.

**Priority:** Low

**Rationale of Priority:** Lessen or eliminate damage from flooding

**Addresses New or Existing buildings:** New and Existing

**Cost Benefit:** Benefits outweighs cost.

**TimeLine:** On-going

**Projected Resources:** Existing County and Local Resources.

**Responsible Party:** Lonoke County and cities of Allport, Austin, Cabot, Carlisle, England, Humnoke, Lonoke and Ward.

**Action adopted by:** Lonoke County and cities of Allport, Austin, Cabot, Carlisle, England, Humnoke, Lonoke and Ward.

**STAPLEE:** Meets all Criteria

#### **F-29**

**Obtain information via HAZUS or a flood study to correct flood data deficiency for inundation, including rain fall levels.**

**Associated Hazard:** Flood

**Type of Action:** Prevention (Local Plans and Regulations)

**Contribution to Mitigation Objective:** Actions that will keep problems from getting worse.

**Priority:** High

**Rationale of Priority:** Lessen or eliminate damage from flooding

**Addresses New or Existing buildings:** New and Existing

**Cost Benefit:** Benefits outweighs cost.

**TimeLine:** 2018-2023

**Projected Resources:** Existing County and Local Resources.

**Responsible Party:** Lonoke County and all participating cities.

**Action adopted by:** Lonoke County and all participating cities.

**STAPLEE:** Meets all Criteria

#### **MH-1**

**Construct safe rooms within new and existing public buildings, such as schools, libraries, and community centers.**

**Associated Hazard:** Thunderstorm, Tornado

**Type of Action:** Structural Project

**Contribution to Mitigation Objective:** Prevent the loss of life by providing shelter during pre/post disasters.

**Priority:** Very High

**Rationale of Priority:** Prevents the loss of life during storms and also minimizes the effects post hazard events. Ranked high due to past storm events

**Addresses New or Existing buildings:** New and Existing

**Cost Benefit:** Benefits outweighs cost. Possible grants for construction.

**TimeLine:** 2 years

**Projected Resources:** HMGP, PDM funding

**Responsible Party:** All participating jurisdictions

**Action adopted by:** All participating jurisdictions

**STAPLEE:** Meets all Criteria

#### **MH-2**

**Acquire generators for all shelters, city halls, emergency operations centers, and other critical facilities that do not presently have them to maintain power and water during disasters (protect against further damage)**

**Associated Hazard:** All Hazards

**Type of Action:** Structural & Prevention

**Contribution to Mitigation Objective:** Prevent loss of critical functions.

**Priority:** Very High

**Rationale of Priority:** Provides necessary facility and equipment capabilities for administrators, first responders, and life-saving facilities.

**Addresses New or Existing buildings:** New and Existing

**Cost Benefit:** Benefits outweighs cost. Possible grants for construction.

**TimeLine:** 6 months

**Projected Resources:** HMGP, State grant funds, local resources

**Responsible Party:** All participating jurisdictions.

**Action adopted by:** All participating jurisdictions.

**STAPLEE:** Meets all Criteria

#### **MH-3**

**Enact manufactured home regulations to ensure use of tie-downs and anchoring in new and existing mobile structures.**

**Associated Hazard:** Tornado, Thunderstorm, Earthquake

<p><b>Type of Action:</b> Prevention</p> <p><b>Contribution to Mitigation Objective:</b> Protect against loss of life and property.</p> <p><b>Priority:</b> High</p> <p><b>Rationale of Priority:</b> Lessen or eliminate damage from earthquakes, <u>thunderstorms</u> and tornadoes to new and existing buildings</p> <p><b>Addresses New or Existing buildings:</b> New and Existing</p> <p><b>Cost Benefit:</b> Benefits outweighs cost. Possible grants for construction.</p> <p><b>TimeLine:</b> 2 years</p> <p><b>Projected Resources:</b> Existing County and Local Resources</p> <p><b>Responsible Party:</b> Lonoke County &amp; participating cities</p> <p><b>Action adopted by:</b> Lonoke County &amp; participating Cities</p> <p><b>STAPLEE:</b> Meets all Criteria</p>
<p><b>MH-4</b></p> <p><i>Promote the acquisition of all-hazard radios for all schools, city halls, large businesses, churches, and other locations where large numbers of people congregate and how to obtain them.</i></p> <p><b>Associated Hazard:</b> All Hazards</p> <p><b>Type of Action:</b> Prevention</p> <p><b>Contribution to Mitigation Objective:</b> Protect against loss of life and property.</p> <p><b>Priority:</b> High</p> <p><b>Rationale of Priority:</b> Lessen or eliminate damage from earthquakes and tornadoes to new and existing buildings</p> <p><b>Addresses New or Existing buildings:</b> New and Existing</p> <p><b>Cost Benefit:</b> Benefits outweighs cost. Possible grants for construction.</p> <p><b>TimeLine:</b> 1-5 years</p> <p><b>Projected Resources:</b> Existing County and Local Resources</p> <p><b>Responsible Party:</b> All participating jurisdictions.</p> <p><b>Action adopted by:</b> All participating jurisdictions.</p> <p><b>STAPLEE:</b> Meets all Criteria</p>
<p><b>MH-5</b></p> <p><i>Ensure proposed mitigation projects are in conformance with the State of Arkansas Hazard Mitigation Plan and State mitigation priorities.</i></p> <p><b>Associated Hazard:</b> All Hazards</p> <p><b>Type of Action:</b> Prevention</p> <p><b>Contribution to Mitigation Objective:</b> Public Education and Awareness</p> <p><b>Priority:</b> Medium</p> <p><b>Rationale of Priority:</b> Provides legal justification for mitigation activities</p> <p><b>Addresses New or Existing buildings:</b> New and Existing</p> <p><b>Cost Benefit:</b> Benefits outweighs cost. Possible grants for construction.</p> <p><b>TimeLine:</b> Ongoing</p> <p><b>Projected Resources:</b> Existing County and Local Resources</p> <p><b>Responsible Party:</b> Lonoke County &amp; participating cities</p> <p><b>Action adopted by:</b> Lonoke County &amp; participating Cities</p> <p><b>STAPLEE:</b> Meets all Criteria</p>
<p><b>MH-6</b></p> <p><i>Include mitigation awareness efforts in all LCLEPC and Inter-governmental Council meetings.</i></p> <p><b>Associated Hazard:</b> All Hazards</p> <p><b>Type of Action:</b> Public Education and Awareness</p> <p><b>Contribution to Mitigation Objective:</b> Protect against loss of life and property.</p> <p><b>Priority:</b> Medium</p> <p><b>Rationale of Priority:</b> Lessen or eliminate damage from flooding</p> <p><b>Addresses New or Existing buildings:</b> New and Existing</p> <p><b>Cost Benefit:</b> Benefits outweighs cost.</p> <p><b>TimeLine:</b> Ongoing</p> <p><b>Projected Resources:</b> Existing County and Local Resources</p> <p><b>Responsible Party:</b> All participating jurisdictions</p> <p><b>Action adopted by:</b> All participating jurisdictions</p> <p><b>STAPLEE:</b> Meets all Criteria</p>
<p><b>MH-7</b></p> <p><i>Bury or otherwise protect electric and other utility lines.</i></p> <p><b>Associated Hazard:</b> Tornado, Severe Winter Weather, Wildfire, Thunderstorms</p> <p><b>Type of Action:</b> Structural projects</p> <p><b>Contribution to Mitigation Objective:</b> Protect against loss of life and property.</p>

**Priority:** Medium

**Rationale of Priority:** Lessen or eliminate impacts and damages from flooding from tornado, severe winter weather, wildfire and thunderstorms

**Addresses New or Existing buildings:** New and Existing

**Cost Benefit:** Benefits outweighs cost. Possible grants for construction.

**TimeLine:** 10 years

**Projected Resources:** Existing County and Local Resources

**Responsible Party:** ~~All participating jurisdictions.~~ Utility companies that own the power lines

**Action adopted by:** All participating jurisdictions.

**STAPLEE:** Meets all Criteria

#### **MH-8**

*Develop brochures, a website, educational programs, and public service announcements to increase public awareness of hazards to which Lonoke County residents are exposed and potential mitigation measures that may be undertaken.*

**Associated Hazard:** All Hazards

**Type of Action:** Public Education & Awareness

**Contribution to Mitigation Objective:** Protect against loss of life and property.

**Priority:** Medium

**Rationale of Priority:** Links mitigation with preparedness

**Addresses New or Existing buildings:** New and Existing

**Cost Benefit:** Benefits outweighs cost.

**TimeLine:** 3 months

**Projected Resources:** Existing County and Local Resources

**Responsible Party:** All participating jurisdictions

**Action adopted by:** All participating jurisdictions

**STAPLEE:** Meets all Criteria

#### **MH-9**

*Use GIS Mapping to identify past hazard locations and identify emergency response lifelines that are to be protected. The data can be used to identify locations which are vulnerable to future hazards. Any new facilities constructed will be built to mitigate identified hazards when possible.*

**Associated Hazard:** All Hazards

**Type of Action:** Prevention

**Contribution to Mitigation Objective:** Protect against loss of life and property.

**Priority:** Medium

**Rationale of Priority:** Lessen or eliminate damage from future disasters

**Addresses New or Existing buildings:** New and Existing

**Cost Benefit:** Benefits outweighs cost.

**TimeLine:** 1 year

**Projected Resources:** Existing County and Local Resources

**Responsible Party:** All participating jurisdictions

**Action adopted by:** All participating jurisdictions

**STAPLEE:** Meets all Criteria

#### **MH-10**

*Identify and maintain alternative water resources in neighborhoods (small ponds, cisterns, wells, pools, hydrants, etc.) to promote efficiency in use of the water during times of drought to reduce impacts on agriculture and livestock, and potential use during wildfire events.*

**Associated Hazard:** Drought, Wildfire

**Type of Action:** Prevention

**Contribution to Mitigation Objective:** Protect against loss of life and property.

**Priority:** Medium

**Rationale of Priority:** Lessen or ~~eliminate damage from flooding~~ reduce impacts from drought and wildfire

**Addresses New or Existing buildings:** N/A

**Cost Benefit:** Benefits outweighs cost.

**TimeLine:** 6 months

**Projected Resources:** Existing County and Local Resources

**Responsible Party:** Lonoke County & participating cities

**Action adopted by:** Lonoke County & participating cities

**STAPLEE:** Meets all Criteria

#### **MH-11**

*Conduct a ~~study to determine potential flood inundation to determine the extent, impact, and property~~*



***loss vulnerability due to dam failure for significant risk dams to identify at risk infrastructure, property and people.***

**Associated Hazard:** Dam Failure, Flood

**Type of Action:** Prevention

**Contribution to Mitigation Objective:** Protect against loss of life and property.

**Priority:** Medium

**Rationale of Priority:** Lessen or eliminate damage ~~from earthquakes and tornadoes to new and existing buildings~~from dam failure and flood

**Addresses New or Existing buildings:** New and Existing

**Cost Benefit:** Benefits outweighs cost. Possible grants for construction.

**TimeLine:** 2 years

**Projected Resources:** Existing County and Local Resources

**Responsible Party:** Lonoke County & participating cities

**Action adopted by:** Lonoke County & participating Cities

**STAPLEE:** Meets all Criteria

#### ***W-1***

***Enact codes, or policies, to require homeowners and/or facilities to clear dead vegetation which can fuel wildfires, ensuring that structures are surrounded by defensible space buffer zones.***

**Associated Hazard:** Wildfire

**Type of Action:** Prevention

**Contribution to Mitigation Objective:** Protect against loss of life and property.

**Priority:** High

**Rationale of Priority:** Reduce structures' vulnerability to wildfires.

**Addresses New or Existing buildings:** New and Existing

**Cost Benefit:** Benefits outweighs cost. Possible grants for construction.

**TimeLine:** 3 months

**Projected Resources:** Existing County and Local Resources

**Responsible Party:** All participating jurisdictions

**Action adopted by:** All participating jurisdictions

**STAPLEE:** Meets all Criteria

#### ***W-2***

***Work with Arkansas Forestry Commission to improve risk assessment by determining losses due to wildland fires in the County.***

**Associated Hazard:** Wildfire

**Type of Action:** Structural projects

**Contribution to Mitigation Objective:** Protect against loss of life and property.

**Priority:** Medium

**Rationale of Priority:** Lessen or eliminate damage from wildfires

**Addresses New or Existing buildings:** New and Existing

**Cost Benefit:** Benefits outweighs cost.

**TimeLine:** 2 years

**Projected Resources:** Existing County and Local Resources

**Responsible Party:** Lonoke County & participating cities

**Action adopted by:** Lonoke County & participating cities

**STAPLEE:** Meets all Criteria

#### ***W-3***

***Join Fire Wise program.***

**Associated Hazard:** Wildfire

**Type of Action:** Prevention

**Contribution to Mitigation Objective:** Protect against loss of life and property.

**Priority:** High

**Rationale of Priority:** Lessen or eliminate damage from wildfire

**Addresses New or Existing buildings:** New and Existing

**Cost Benefit:** Benefits outweighs cost.

**TimeLine:** 1 year

**Projected Resources:** Existing County and Local Resources

**Responsible Party:** Lonoke County & participating cities

**Action adopted by:** Lonoke County & participating cities

**STAPLEE:** Meets all Criteria



# SECTION 5

## Acronyms

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ADEM	Arkansas Department of Emergency Management
ANRC	Arkansas Natural Resources Commission
BCA	Benefit-Cost Analysis
BMPs	Best Management Practices
CAPDD	Central Arkansas Planning and Development District
CAV	Community Assistance Visit
CERT	Community Emergency Response Team
CFM	Certified Floodplain Manager
CFR	Code of Regulations
COOP	Continuity of Operations Plan
CRS	Community Rating System
DMA 2000	Disaster Mitigation Act of 2000
EAP	Emergency Action Plan
EOP	Emergency Operations Plans
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FIS	Flood Insurance Study or Fire Intensity Scale
FR	Final Rule
GIS	Geographic Information System
HAZUS	Hazards US (FEMA Software Program)
HMA	Hazard Mitigation Assistance (FEMA Grant Program)
HMGP	Hazard Mitigation Grant Program
HMP	Hazard Mitigation Plan
HMPT	Hazard Mitigation Planning Team
IBC	Internal Building Code
ICS	Incident Command System
ISO	Insurance Services Office
LCMPT	Lonoke County Mitigation Planning Team
LCOEM	Lonoke County Office of Emergency Management
LCOES	Lonoke County Office of Emergency Services
LEPC	Local Emergency Planning Committee
MOU	Memorandum of Understanding
NCDC	National Climatic Data Center

NFIP	National Flood Insurance Program
NIMS	National Incident Management System
NOAA	National Oceanic and Atmospheric Administration
NWS	National Weather Service
PDM	Pre-Disaster Mitigation Program
PGA	Peak Ground Acceleration
SD	School District
SHMO	State Hazard Mitigation Officer
STAPLEE	Social, Technical, Administrative, Political, Legal, Economic
SWRA	Southern Wildfire Risk Assessment
USGS	United States Geological Survey
WUI	Wildland Urban Interface

# SECTION 6

## *Plan Adoption*

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Attached are approved resolutions the County, cities and school districts passed after FEMA approved the Lonoke County Hazard Mitigation Plan.

### **6.1 Resolutions**

*(To be added after FEMA approves DRAFT copy of Hazard Mitigation Plan)*

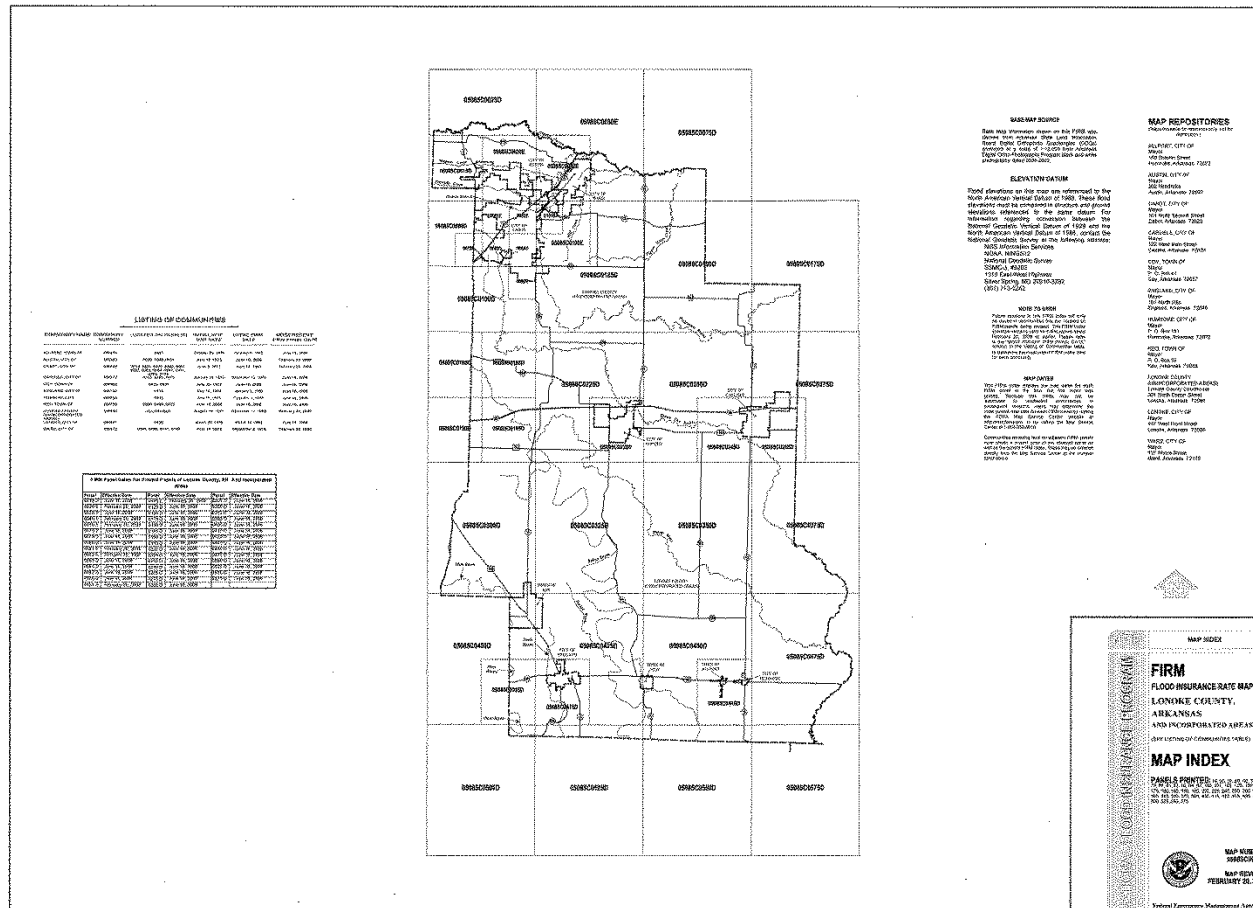
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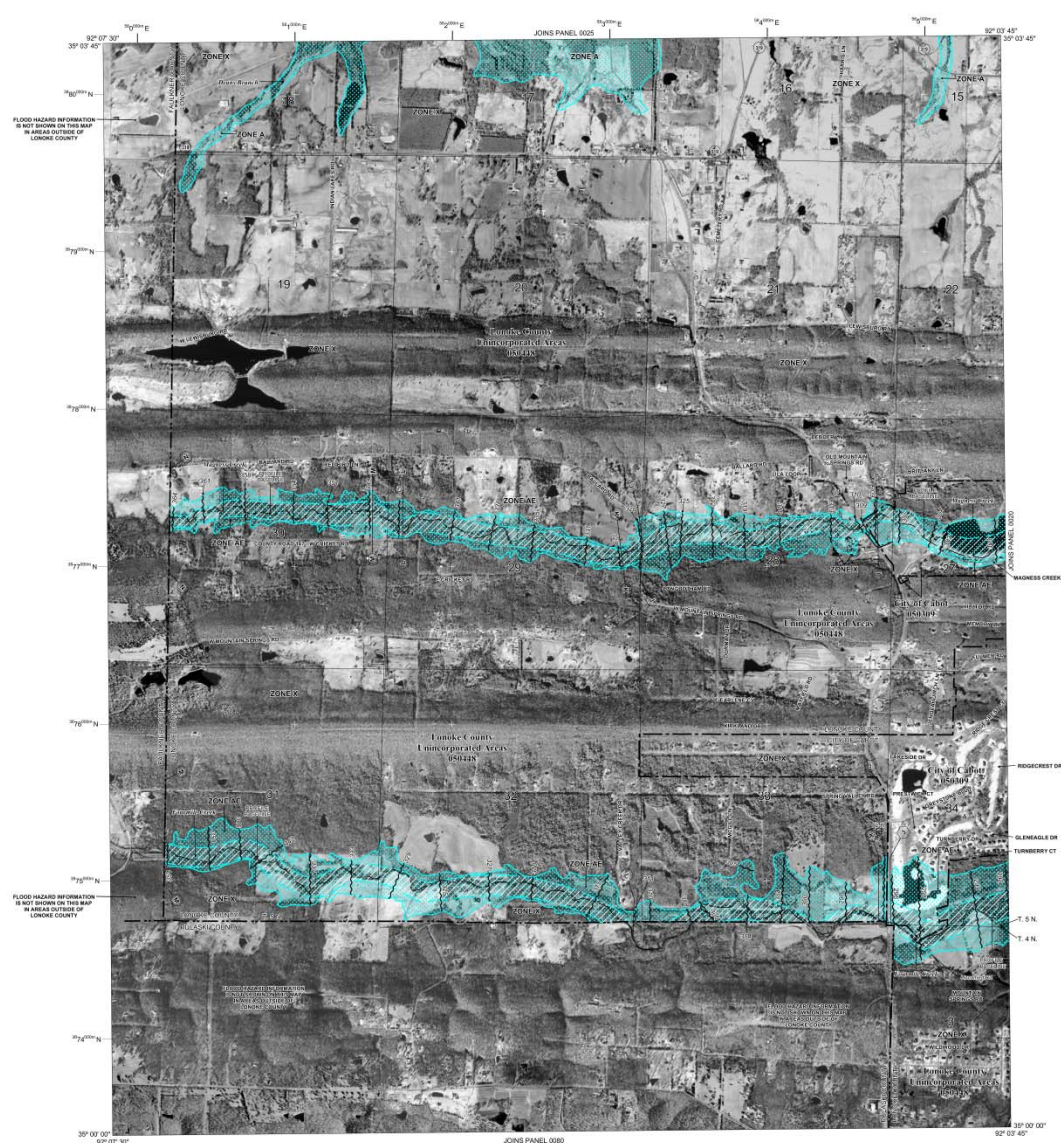


## SECTION 7

## Appendix


## Effective FIRM Panels



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<b>NFP</b> <b>NATIONAL FLOOD INSURANCE PROGRAM</b>	<b>PANEL 0015D</b>			
	<b>FIRM</b>			
	<b>FLOOD INSURANCE RATE MAP</b>			
	<b>LONOKE COUNTY, ARKANSAS</b>			
	<b>AND INCORPORATED AREAS</b>			
	<b>PANEL 15 OF 575</b>			
	(SEE MAP INDEX FOR FIRM PANEL LAYOUT)			
	<b>CONTINUE</b>			
	<b>COMMUNITY</b>	<b>NUMBER</b>	<b>PANEL</b>	<b>SUFFIX</b>
	CANOT CITY OF LONOKE COUNTY	000209	015	D
	000448	015	D	

Notice to User: The **Map Number** shown above should be used when ordering maps. The **Community Number** shown above should be used on insurance applications. The **Map Number** and **Community Number** should be used on all correspondence with the Federal Emergency Management Agency.

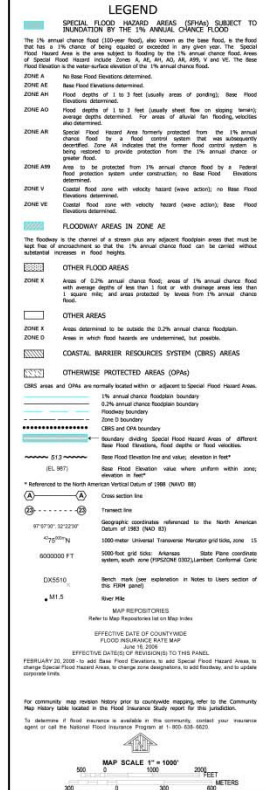


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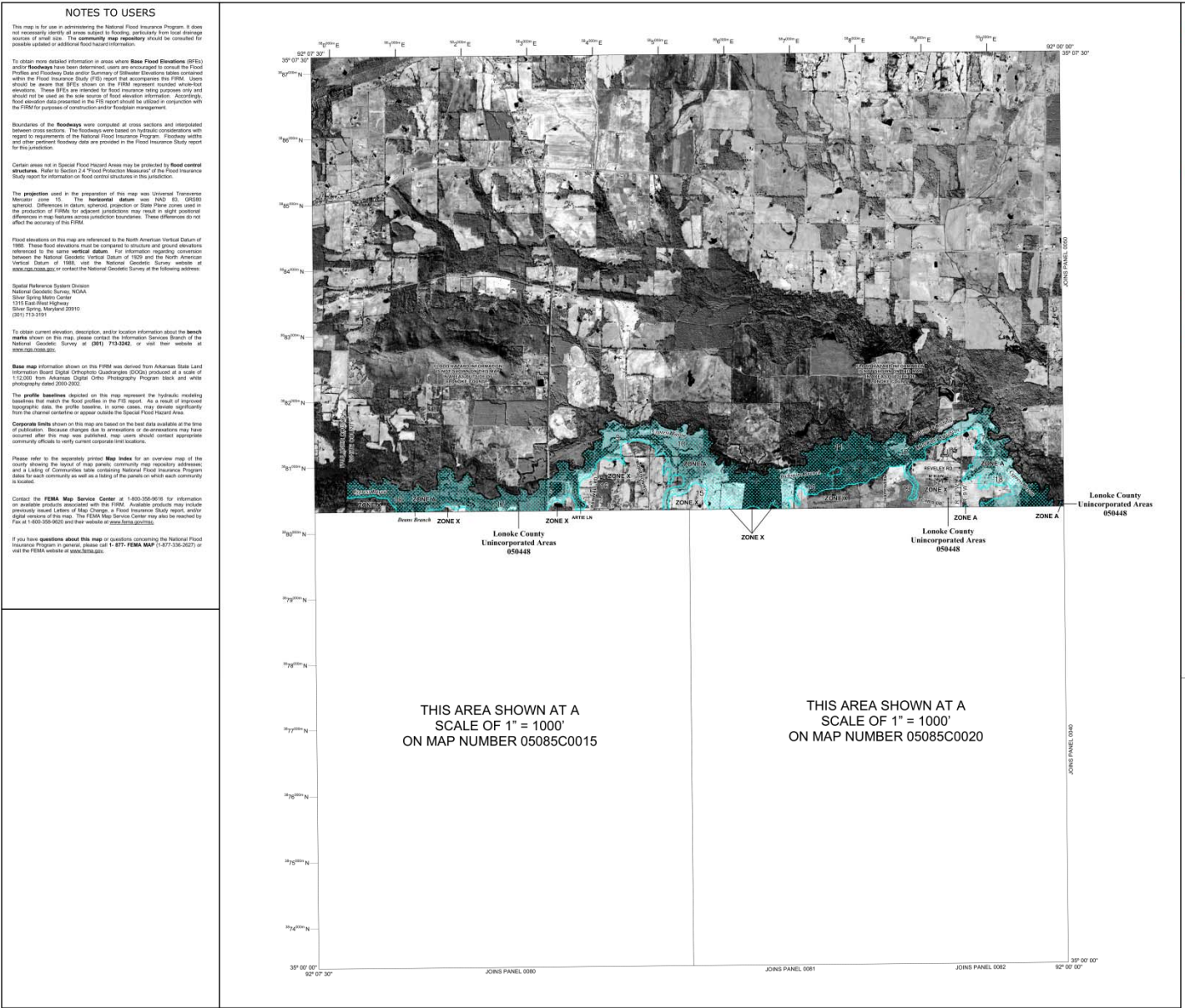
**EFFECTIVE DATE**  
**JUNE 16, 2009**

**Federal Emergency Management Agency**



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**LEGEND**

**SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD**

The 1% annual chance flood (1% ACF) is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. The Base Flood Elevation is the water surface elevation of the 1% annual chance flood.

**Zone A**  
No Base Flood Elevation determined.  
Base Flood Elevation determined.

**Zone AE**  
Flood depths of 1 to 3 feet (locally areas of ponding). Base Flood Elevation determined.

**Zone AD**  
Flood depths of 1 to 3 feet (locally, about flow on slapping "barrels"). Average depths determined. For areas of about the flooding, wetlands are determined.

**Zone AR**  
Special Flood Hazard areas (areas protected from the 1% annual chance flood) in flood zones where the flood is determined to be less than 1 foot of protection from the 1% annual chance or greater flood.

**Zone AV**  
Areas to be protected from the 1% annual chance flood by a holding flood protection system under construction, in Base Flood Elevation determined.

**Zone VE**  
Coastal flood zone with velocity hazard (wave action). Base Flood Elevation determined.

**FLOODWAY AREAS IN ZONE AE**

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of obstructions so that the 1% annual chance flood can be carried without substantial increases in flood heights.

**OTHER FLOOD AREAS**

**Zone B**  
Areas determined to be outside the 0.2% annual chance floodway.

**Zone D**  
Areas in which flood hazards are undetermined and possible.

**COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS**

**OTHERWISE PROTECTED AREAS (OPAs)**

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

1% annual chance flood boundary  
0.2% annual chance flood boundary  
Floodway boundary  
Zone D boundary  
CBRS area boundary  
Boundary defining Special Flood Hazard Areas of different base flood elevations, but within a flood elevation in feet  
Base Flood Elevation line and value, elevation in feet  
Base Flood Elevation value where uniform within area, elevation in feet

Referenced to the North American Vertical Datum of 1988

Cross section line

Truncated line

Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere

2000-meter Universal Transverse Mercator grid values, zone 18

Bench mark (see explanation in Notes to Users section of the FIS report)

Map Index

**MAP REVISIONS**

Refer to listing of Map Revisions on Map Index

**EFFECTIVE DATE OF COMMUNITY FLOOD INSURANCE RATE MAP**

JUNE 16, 2006

**EFFECTIVE DATES OF REVISIONS TO THIS PANEL**

For community map update history prior to current mapping, refer to the Community Map History information in the Flood Insurance Study report for the jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or the National Flood Insurance Program at 1-800-435-8630.

**MAP SCALE 1" = 2000'**

1000 2000 4000 6000 8000 FEET

0 0 0 0 0 METERS

**NATIONAL FLOOD INSURANCE PROGRAM**

**PANEL 0025D**

**FIRM**

**FLOOD INSURANCE RATE MAP**

**LONOKE COUNTY, ARKANSAS AND INCORPORATED AREAS**

**PANEL 25 OF 575**

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

**COMMUNITY**

LONOKE COUNTY

**COMMUNITY PANEL**

00048

**SUFFIX**

0

**Notice to User:** The **Map Number** shown below should be used when placing map orders. The **Community Number** shown above should be used on insurance applications for the subject community.

**MAP NUMBER**

05085C0025D

**EFFECTIVE DATE**

JUNE 16, 2006

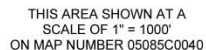
Federal Emergency Management Agency





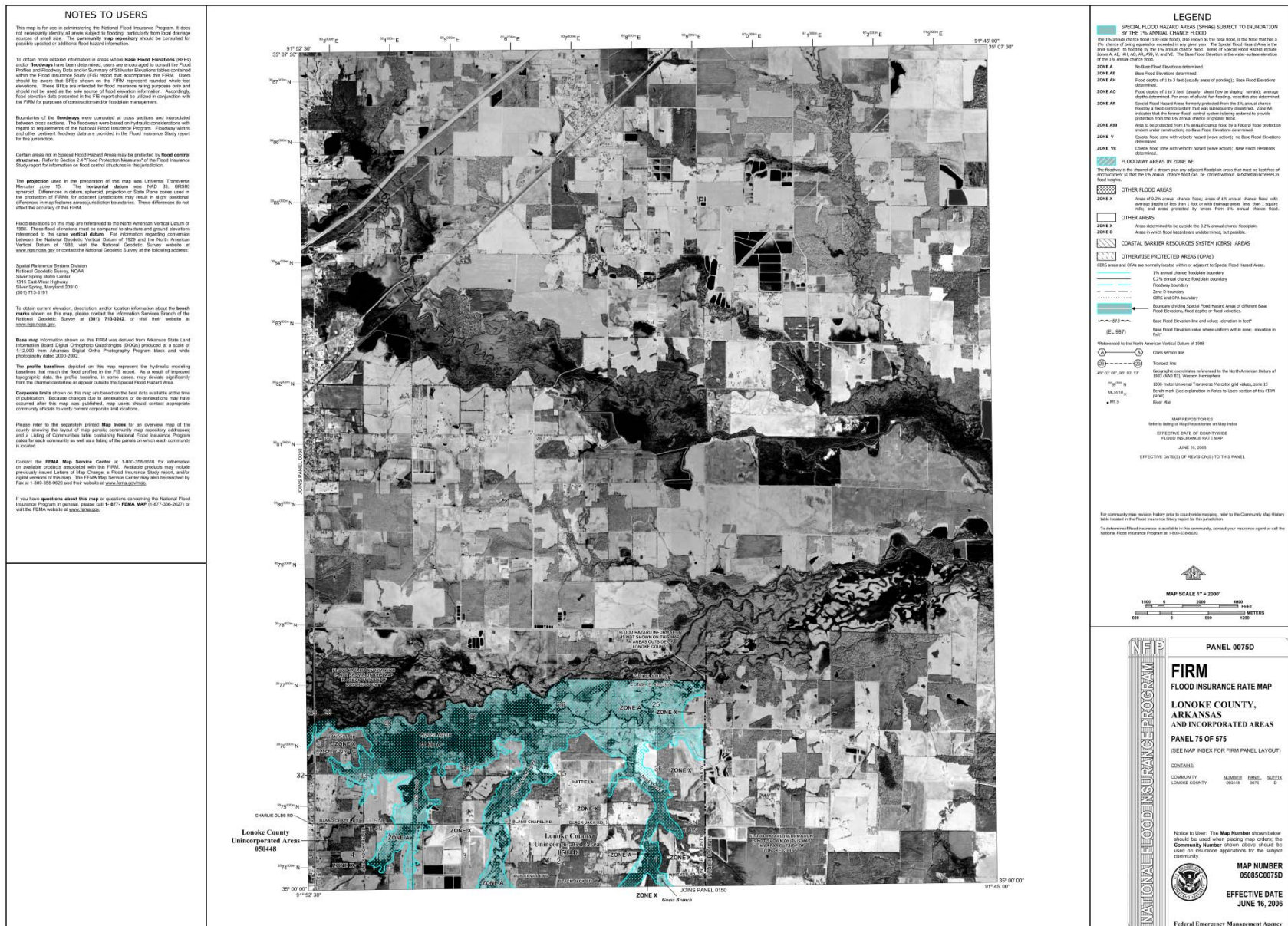


If you have questions about this map or questions concerning the National Flood Insurance Program in general, please call 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA website at <http://www.fema.gov/>.

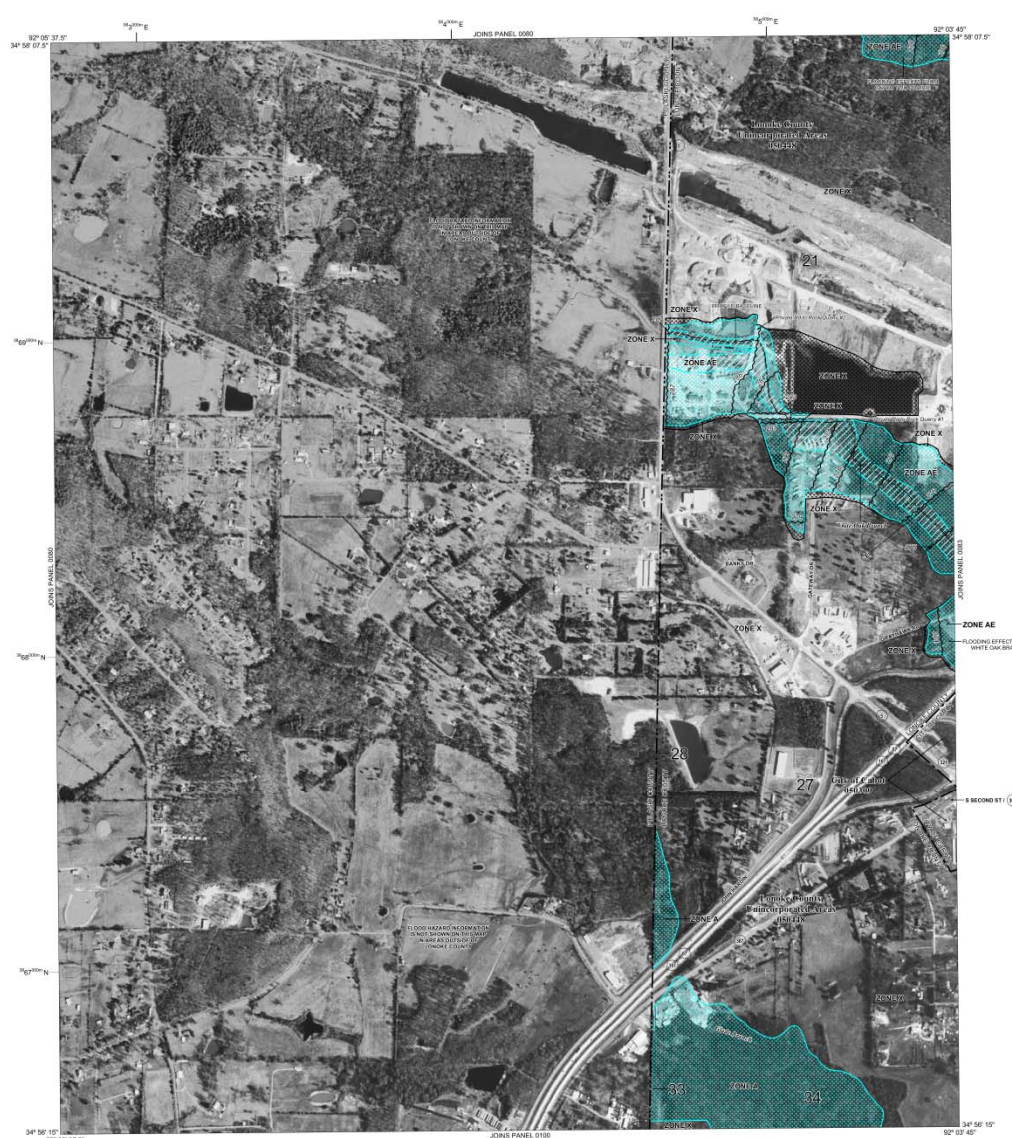


<b>NATIONAL FLOOD INSURANCE PROGRAM</b>	<b>PANEL 0050E</b>		
	<b>FIRM</b>		
	<b>FLOOD INSURANCE RATE MAP</b>		
	<b>LONOKE COUNTY,</b>		
	<b>ARKANSAS</b>		
	<b>AND INCORPORATED AREAS</b>		
	<b>PANEL 50 OF 57S</b>		
	(SEE MAP INDEX FOR FIRM PANEL LAYOUT)		
	<b>CONTAINS:</b>		
	<b>COMMUNITY</b>	<b>NUMBER</b>	<b>PANEL</b>
LONOKE COUNTY	050448	0050	E
NAMED CITY OF	000072	0050	E
MAP NUMBER <b>05083C0050E</b>			
MAP REVISED <b>FEBRUARY 29, 2008</b>			
Federal Emergency Management Agency			







[illegible]

**SPECIAL FLOOD HAZARD AREAS SUBJECT TO SUBMERGION**  
**IN THE 1% ANNUAL CHANCE FLOOD**  
 The Special Flood Hazard (SFH) Areas, as shown in the Base Map, of the Flood Hazard Map are defined by the Federal Emergency Management Agency (FEMA) and are based on the 1% Annual Chance Flood. Areas of Special Flood Hazard include the 1% Annual Chance Flood, the 0.2% Annual Chance Flood, and the 0.01% Annual Chance Flood. The Flood Hazard Map is the water elevation and depth map.

**ZONE A**  
 No Base Flood Protection (determined).

**ZONE B**  
 Flood Hazard Protection (determined).

**ZONE A&B**  
 Flood Heights of 1 to 3 feet (usually open water). Base Flood Direction (determined).

**ZONE A&B (1 to 3 feet)** (usually open water; depth of standing water); average depth usually exceeds one foot or of standing water; water is contained.

**Special Flood Hazard Areas** (usually protected from the 1% Annual Chance Flood by a levee, flood control system or some substantially equivalent structure). Zone A&B indicates that the former Flood Control system is being retained to provide protection from the 1% Annual Chance Flood or greater Flood.

**ZONE A&B (3 to 6 feet)** (usually open water; depth of standing water); average depth usually exceeds three feet.

**ZONE A&B (6 to 12 feet)** (usually open water; depth of standing water); average depth usually exceeds six feet.

**ZONE A&B (12 to 15 feet)** (usually open water; depth of standing water); average depth usually exceeds twelve feet.

**ZONE A&B (15 to 20 feet)** (usually open water; depth of standing water); average depth usually exceeds fifteen feet.

**ZONE A&B (20 to 25 feet)** (usually open water; depth of standing water); average depth usually exceeds twenty feet.

**ZONE A&B (25 to 30 feet)** (usually open water; depth of standing water); average depth usually exceeds twenty-five feet.

**ZONE A&B (30 to 35 feet)** (usually open water; depth of standing water); average depth usually exceeds thirty feet.

**ZONE A&B (35 to 40 feet)** (usually open water; depth of standing water); average depth usually exceeds thirty-five feet.

**ZONE A&B (40 to 45 feet)** (usually open water; depth of standing water); average depth usually exceeds forty feet.

**ZONE A&B (45 to 50 feet)** (usually open water; depth of standing water); average depth usually exceeds forty-five feet.

**ZONE A&B (50 to 55 feet)** (usually open water; depth of standing water); average depth usually exceeds fifty feet.

**ZONE A&B (55 to 60 feet)** (usually open water; depth of standing water); average depth usually exceeds fifty-five feet.

**ZONE A&B (60 to 65 feet)** (usually open water; depth of standing water); average depth usually exceeds sixty feet.

**ZONE A&B (65 to 70 feet)** (usually open water; depth of standing water); average depth usually exceeds sixty-five feet.

**ZONE A&B (70 to 75 feet)** (usually open water; depth of standing water); average depth usually exceeds seventy feet.

**ZONE A&B (75 to 80 feet)** (usually open water; depth of standing water); average depth usually exceeds seventy-five feet.

**ZONE A&B (80 to 85 feet)** (usually open water; depth of standing water); average depth usually exceeds eighty feet.

**ZONE A&B (85 to 90 feet)** (usually open water; depth of standing water); average depth usually exceeds eighty-five feet.

**ZONE A&B (90 to 95 feet)** (usually open water; depth of standing water); average depth usually exceeds ninety feet.

**ZONE A&B (95 to 100 feet)** (usually open water; depth of standing water); average depth usually exceeds ninety-five feet.

**ZONE A&B (100 to 105 feet)** (usually open water; depth of standing water); average depth usually exceeds one hundred feet.

**ZONE A&B (105 to 110 feet)** (usually open water; depth of standing water); average depth usually exceeds one hundred five feet.

**ZONE A&B (110 to 115 feet)** (usually open water; depth of standing water); average depth usually exceeds one hundred ten feet.

**ZONE A&B (115 to 120 feet)** (usually open water; depth of standing water); average depth usually exceeds one hundred fifteen feet.

**ZONE A&B (120 to 125 feet)** (usually open water; depth of standing water); average depth usually exceeds one hundred twenty feet.

**ZONE A&B (125 to 130 feet)** (usually open water; depth of standing water); average depth usually exceeds one hundred twenty-five feet.

**ZONE A&B (130 to 135 feet)** (usually open water; depth of standing water); average depth usually exceeds one hundred thirty feet.

**ZONE A&B (135 to 140 feet)** (usually open water; depth of standing water); average depth usually exceeds one hundred thirty-five feet.

**ZONE A&B (140 to 145 feet)** (usually open water; depth of standing water); average depth usually exceeds one hundred forty feet.

**ZONE A&B (145 to 150 feet)** (usually open water; depth of standing water); average depth usually exceeds one hundred forty-five feet.

**ZONE A&B (150 to 155 feet)** (usually open water; depth of standing water); average depth usually exceeds one hundred fifty feet.

**ZONE A&B (155 to 160 feet)** (usually open water; depth of standing water); average depth usually exceeds one hundred fifty-five feet.

**ZONE A&B (160 to 165 feet)** (usually open water; depth of standing water); average depth usually exceeds one hundred sixty feet.

**ZONE A&B (165 to 170 feet)** (usually open water; depth of standing water); average depth usually exceeds one hundred sixty-five feet.

**ZONE A&B (170 to 175 feet)** (usually open water; depth of standing water); average depth usually exceeds one hundred seventy feet.

**ZONE A&B (175 to 180 feet)** (usually open water; depth of standing water); average depth usually exceeds one hundred seventy-five feet.

**ZONE A&B (180 to 185 feet)** (usually open water; depth of standing water); average depth usually exceeds one hundred eighty feet.

**ZONE A&B (185 to 190 feet)** (usually open water; depth of standing water); average depth usually exceeds one hundred eighty-five feet.

**ZONE A&B (190 to 195 feet)** (usually open water; depth of standing water); average depth usually exceeds one hundred ninety feet.

**ZONE A&B (195 to 200 feet)** (usually open water; depth of standing water); average depth usually exceeds one hundred ninety-five feet.

**ZONE A&B (200 to 205 feet)** (usually open water; depth of standing water); average depth usually exceeds two hundred feet.

**ZONE A&B (205 to 210 feet)** (usually open water; depth of standing water); average depth usually exceeds two hundred five feet.

**ZONE A&B (210 to 215 feet)** (usually open water; depth of standing water); average depth usually exceeds two hundred ten feet.

**ZONE A&B (215 to 220 feet)** (usually open water; depth of standing water); average depth usually exceeds two hundred fifteen feet.

**ZONE A&B (220 to 225 feet)** (usually open water; depth of standing water); average depth usually exceeds two hundred twenty feet.

**ZONE A&B (225 to 230 feet)** (usually open water; depth of standing water); average depth usually exceeds two hundred twenty-five feet.

**ZONE A&B (230 to 235 feet)** (usually open water; depth of standing water); average depth usually exceeds two hundred thirty feet.

**ZONE A&B (235 to 240 feet)** (usually open water; depth of standing water); average depth usually exceeds two hundred thirty-five feet.

**ZONE A&B (240 to 245 feet)** (usually open water; depth of standing water); average depth usually exceeds two hundred forty feet.

**ZONE A&B (245 to 250 feet)** (usually open water; depth of standing water); average depth usually exceeds two hundred forty-five feet.

**ZONE A&B (250 to 255 feet)** (usually open water; depth of standing water); average depth usually exceeds two hundred fifty feet.

**ZONE A&B (255 to 260 feet)** (usually open water; depth of standing water); average depth usually exceeds two hundred fifty-five feet.

**ZONE A&B (260 to 265 feet)** (usually open water; depth of standing water); average depth usually exceeds two hundred sixty feet.

**ZONE A&B (265 to 270 feet)** (usually open water; depth of standing water); average depth usually exceeds two hundred sixty-five feet.

**ZONE A&B (270 to 275 feet)** (usually open water; depth of standing water); average depth usually exceeds two hundred seventy feet.

**ZONE A&B (275 to 280 feet)** (usually open water; depth of standing water); average depth usually exceeds two hundred seventy-five feet.

**ZONE A&B (280 to 285 feet)** (usually open water; depth of standing water); average depth usually exceeds two hundred eighty feet.

**ZONE A&B (285 to 290 feet)** (usually open water; depth of standing water); average depth usually exceeds two hundred eighty-five feet.

**ZONE A&B (290 to 295 feet)** (usually open water; depth of standing water); average depth usually exceeds two hundred ninety feet.

**ZONE A&B (295 to 300 feet)** (usually open water; depth of standing water); average depth usually exceeds two hundred ninety-five feet.

**ZONE A&B (300 to 305 feet)** (usually open water; depth of standing water); average depth usually exceeds three hundred feet.

**ZONE A&B (305 to 310 feet)** (usually open water; depth of standing water); average depth usually exceeds three hundred five feet.

**ZONE A&B (310 to 315 feet)** (usually open water; depth of standing water); average depth usually exceeds three hundred ten feet.

**ZONE A&B (315 to 320 feet)** (usually open water; depth of standing water); average depth usually exceeds three hundred fifteen feet.

**ZONE A&B (320 to 325 feet)** (usually open water; depth of standing water); average depth usually exceeds three hundred twenty feet.

**ZONE A&B (325 to 330 feet)** (usually open water; depth of standing water); average depth usually exceeds three hundred twenty-five feet.

**ZONE A&B (330 to 335 feet)** (usually open water; depth of standing water); average depth usually exceeds three hundred thirty feet.

**ZONE A&B (335 to 340 feet)** (usually open water; depth of standing water); average depth usually exceeds three hundred thirty-five feet.

**ZONE A&B (340 to 345 feet)** (usually open water; depth of standing water); average depth usually exceeds three hundred forty feet.

**ZONE A&B (345 to 350 feet)** (usually open water; depth of standing water); average depth usually exceeds three hundred forty-five feet.

**ZONE A&B (350 to 355 feet)** (usually open water; depth of standing water); average depth usually exceeds three hundred fifty feet.

**ZONE A&B (355 to 360 feet)** (usually open water; depth of standing water); average depth usually exceeds three hundred fifty-five feet.

**ZONE A&B (360 to 365 feet)** (usually open water; depth of standing water); average depth usually exceeds three hundred sixty feet.

**ZONE A&B (365 to 370 feet)** (usually open water; depth of standing water); average depth usually exceeds three hundred sixty-five feet.

**ZONE A&B (370 to 375 feet)** (usually open water; depth of standing water); average depth usually exceeds three hundred seventy feet.

**ZONE A&B (375 to 380 feet)** (usually open water; depth of standing water); average depth usually exceeds three hundred seventy-five feet.

**ZONE A&B (380 to 385 feet)** (usually open water; depth of standing water); average depth usually exceeds three hundred eighty feet.

**ZONE A&B (385 to 390 feet)** (usually open water; depth of standing water); average depth usually exceeds three hundred eighty-five feet.

**ZONE A&B (390 to 395 feet)** (usually open water; depth of standing water); average depth usually exceeds three hundred ninety feet.

**ZONE A&B (395 to 400 feet)** (usually open water; depth of standing water); average depth usually exceeds three hundred ninety-five feet.

**ZONE A&B (400 to 405 feet)** (usually open water; depth of standing water); average depth usually exceeds four hundred feet.

**ZONE A&B (405 to 410 feet)** (usually open water; depth of standing water); average depth usually exceeds four hundred five feet.



**ZONE A&B (410 to 415 feet)** (usually open water; depth of standing water); average depth usually exceeds four hundred ten feet.

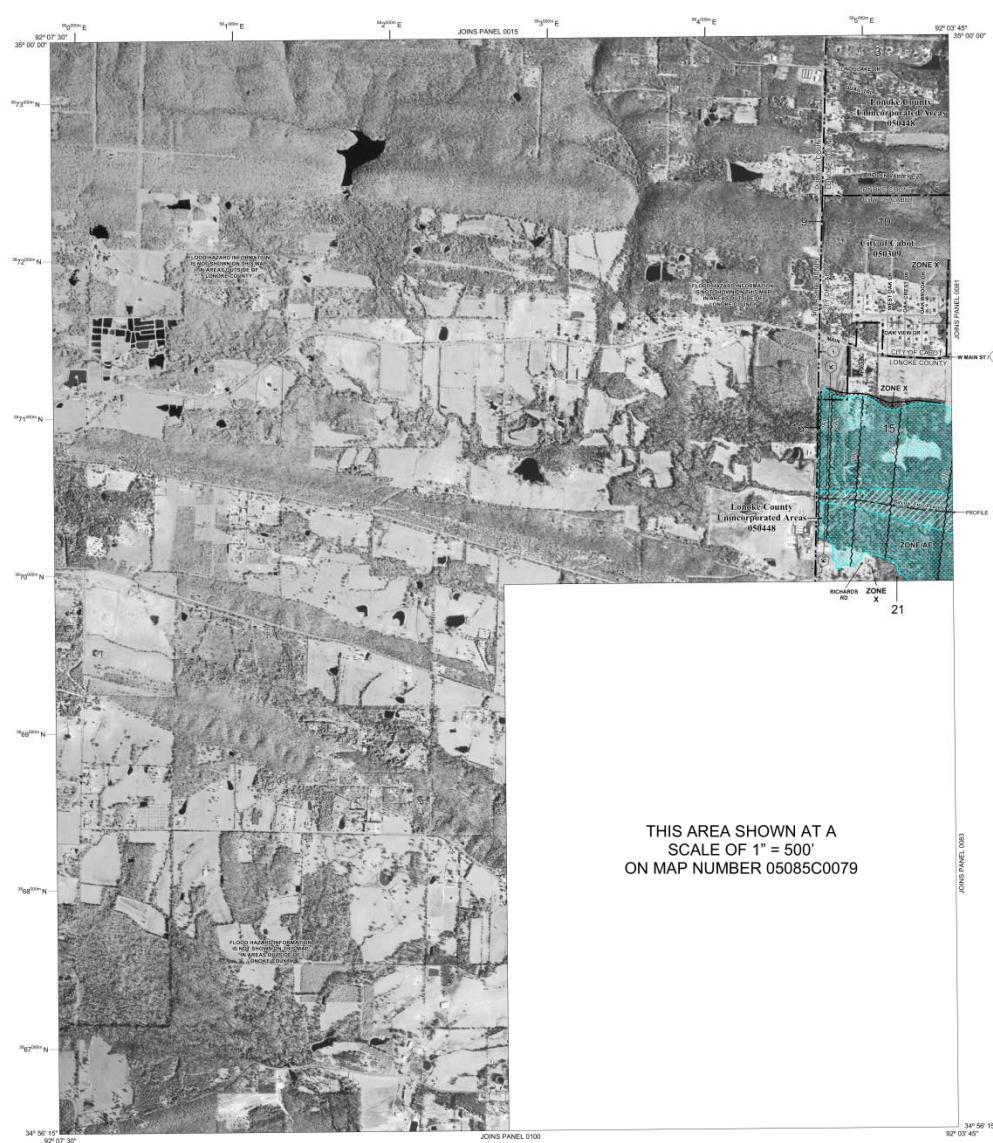
**ZONE A&B (415 to 420 feet)** (usually open water; depth of standing water); average depth usually exceeds four hundred fifteen feet.

**ZONE A&B (420 to 425 feet)** (usually open water; depth of standing water); average depth usually exceeds four hundred twenty feet.

**ZONE A&B (425 to 430 feet)** (usually open water; depth of standing water); average depth usually exceeds four hundred twenty-five feet.

**ZONE A&B (430 to 435 feet)**

<div style="text-align: center;">    <b>NATIONAL FLOOD INSURANCE PROGRAM</b> </div>	<b>PANEL 0079D</b>			
	<div style="font-size: 2em; font-weight: bold;">FIRM</div> <b>FLOOD INSURANCE RATE MAP</b>			
	<b>LONOKE COUNTY, ARKANSAS AND INCORPORATED AREAS</b>			
	<b>PANEL 79 OF 575</b>			
	(SEE MAP INDEX FOR FIRM PANEL LAAYOUT)			
	<b>CONTINUE</b>			
	COMMUNITY CANNOT CITY OF LONOKE COUNTY	NUMBER 000000	PANEL 0079	PREFIX D
	NOTICE TO USER: The <b>Map Number</b> shown below should be used when placing new orders, the <b>Community Number</b> shown above should be used on insurance applications and for rating community.			
	<div style="display: flex; justify-content: space-around; align-items: center;">  <div style="text-align: center;"> <b>MAP NUMBER</b>  <b>0508SC0079D</b> </div> </div>			
	<b>EFFECTIVE DATE</b> <b>JUNE 16, 2006</b>			
<b>Federal Emergency Management Agency</b>				

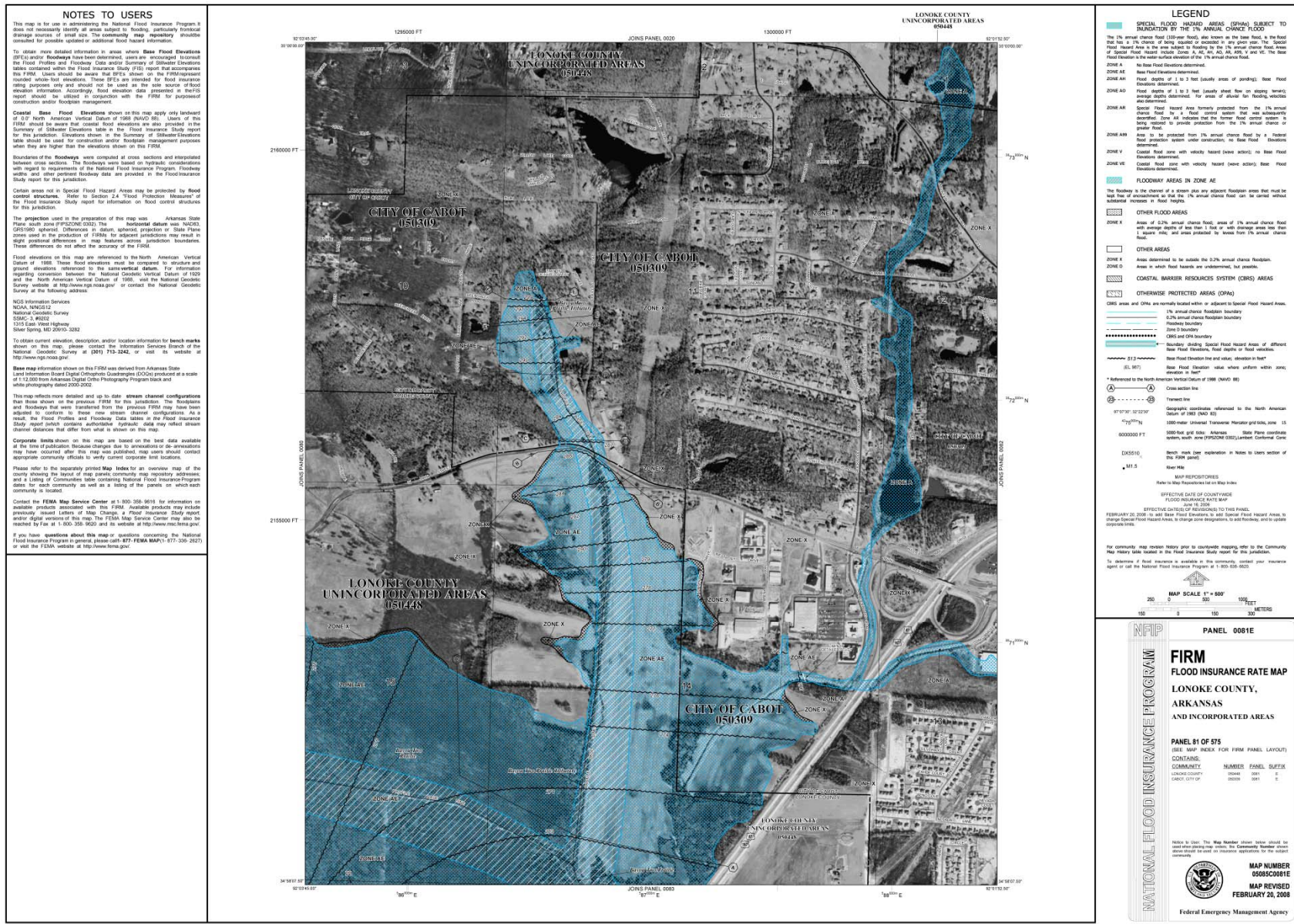
[illegible]

THIS AREA SHOWN AT A  
SCALE OF 1" = 500'  
ON MAP NUMBER 05085C0079

[illegible]

<b>NFP</b> <b>NATIONAL FLOOD INSURANCE PROGRAM</b>	<b>PANEL 0080D</b>			
	<b>FIRM</b> <b>FLOOD INSURANCE RATE MAP</b>			
	<b>LONOKE COUNTY,          ARKANSAS          AND INCORPORATED AREAS</b>			
	<b>PANEL 80 OF 575</b> (SEE MAP INDEX FOR FIRM PANEL LAAYOUT)			
	<b>COMMUNITY</b> CARROT CITY OF LONOKE COUNTY			
	<b>NUMBER</b> 000000	<b>PANEL</b> 0080	<b>SUFFIX</b> 00 D	
	Notice to User: The Map Number shown below should be used when placing map orders. The Community Number shown above should be used for insurance applications by the subject community.			
	<b>MAP NUMBER</b> <b>0505SC0080D</b>			
	<b>EFFECTIVE DATE</b> <b>JUNE 16, 2006</b>			
	<b>Federal Emergency Management Agency</b>			







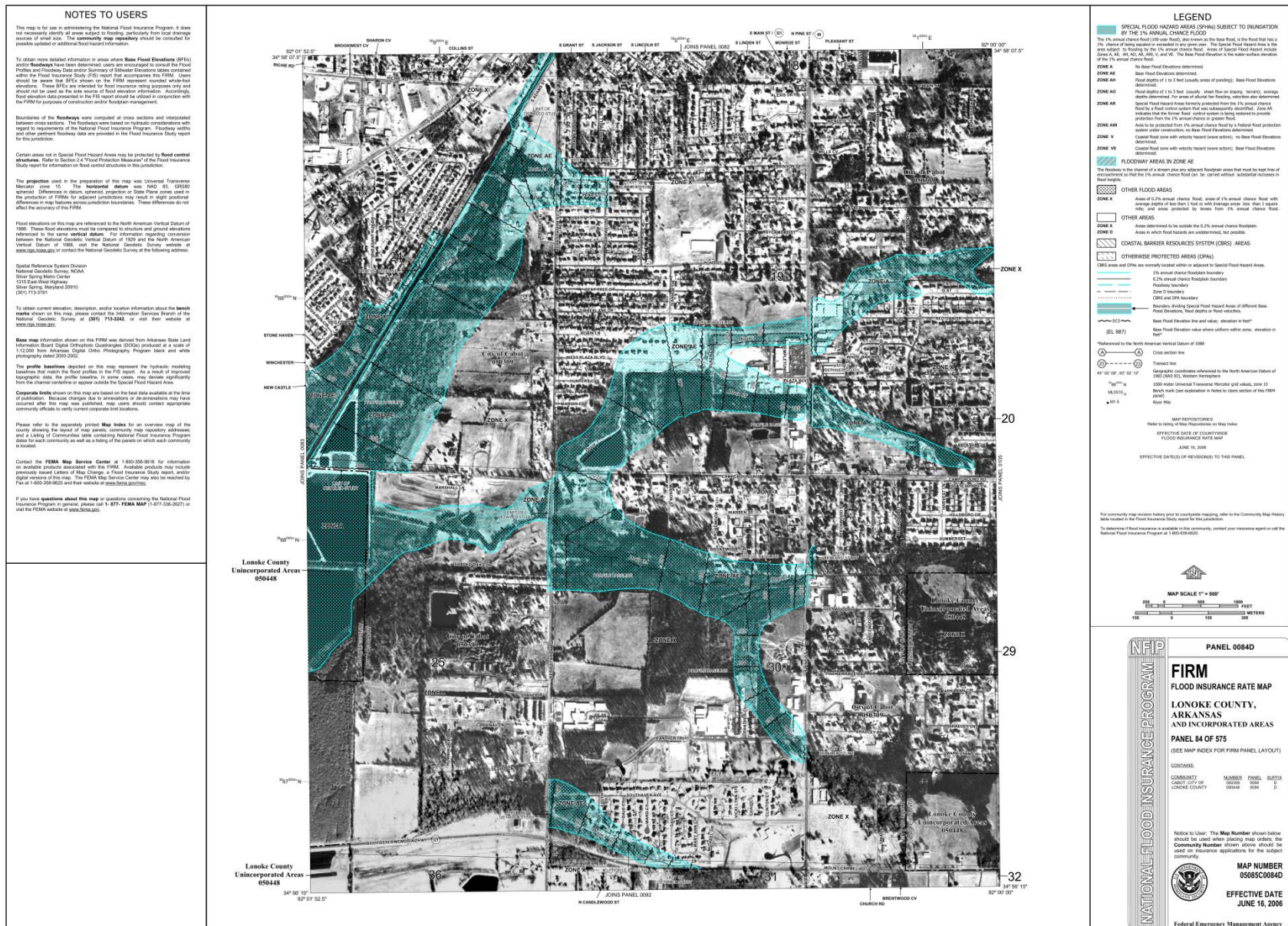
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<b>NATIONAL FLOOD INSURANCE PROGRAM</b>	<b>PANEL 0082E</b>			
	<b>FIRM</b>			
	<b>FLOOD INSURANCE RATE MAP</b>			
	<b>LOOKE COUNTY,</b>			
	<b>ARKANSAS</b>			
	<b>AND INCORPORATED AREAS</b>			
	<b>PANEL 82 OF 575</b> (USE MAP INDEX FOR FIRM PANEL LAYOUT)			
	<b>CONTAINS:</b>			
	<b>COMMUNITY</b> 000000	<b>NUMBER</b> 000000	<b>PANEL</b> 0002	<b>SUFFIX</b> E
	<b>UNIQUE COUNTY</b> 000000			







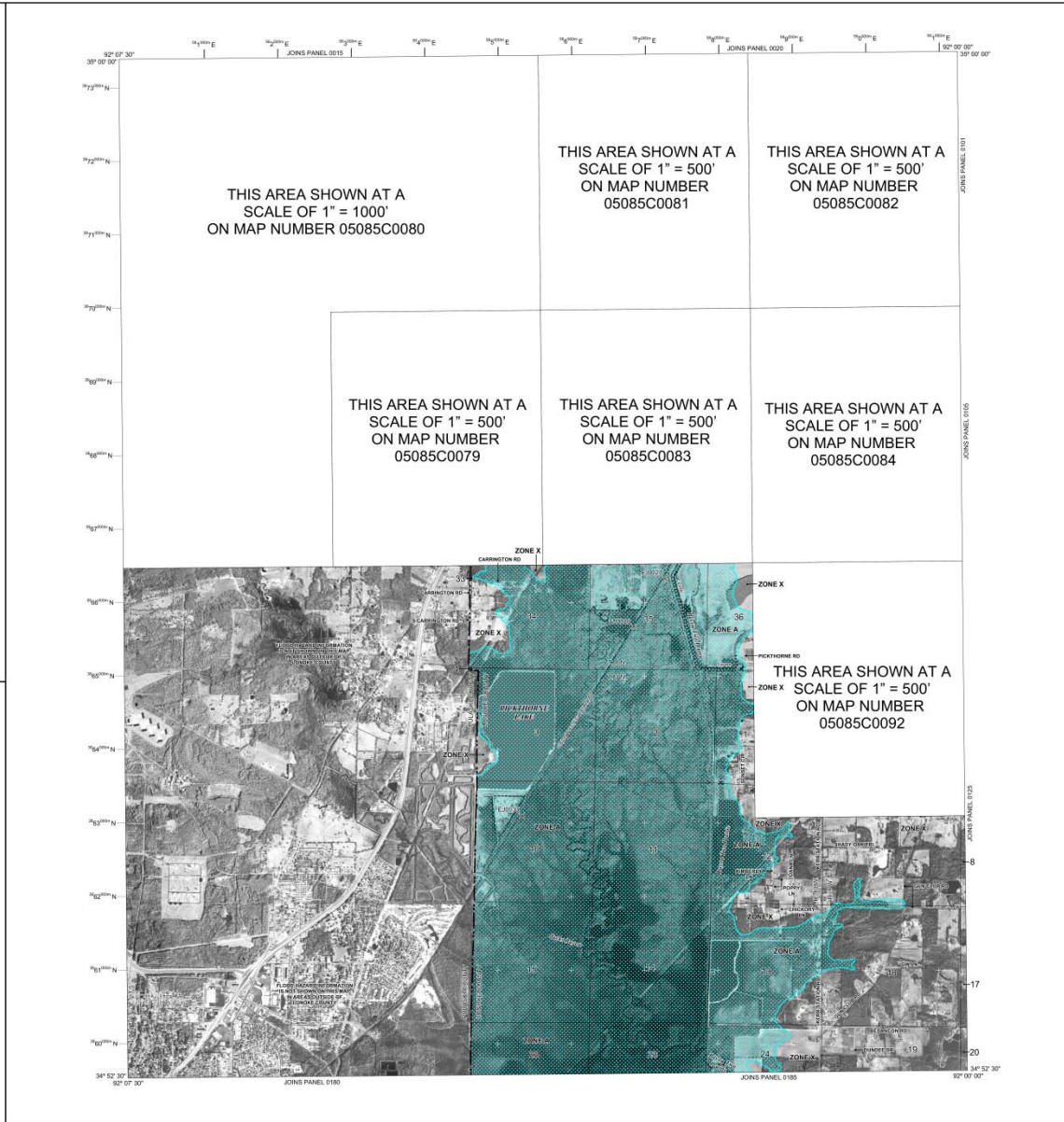






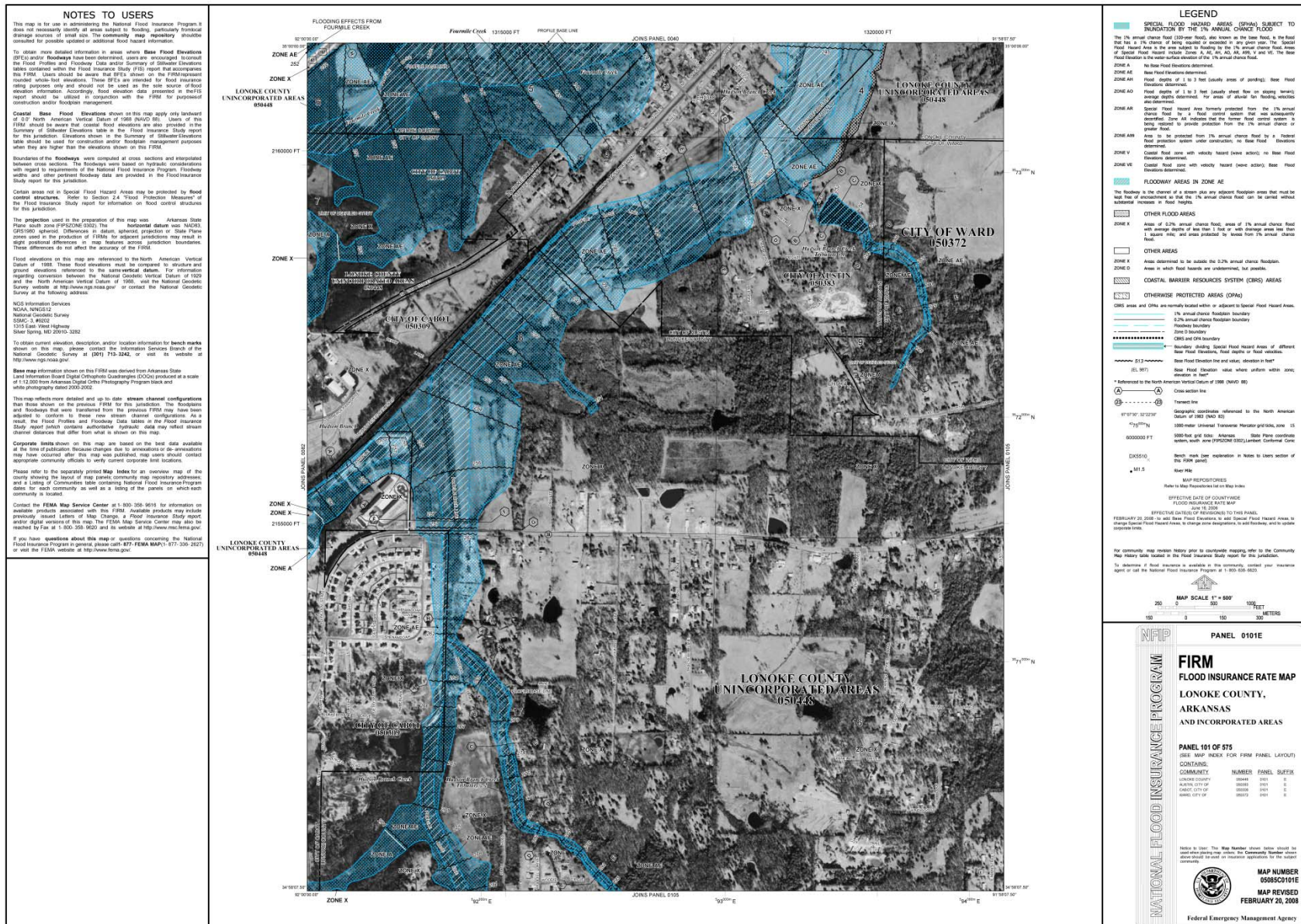
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 <b>NATIONAL FLOOD INSURANCE PROGRAM</b>	<b>PANEL 0092D</b>			
	<b>FIRM</b> <b>FLOOD INSURANCE RATE MAP</b>			
<b>LOONE COUNTY,          ARKANSAS          AND INCORPORATED AREAS</b>				
<b>PANEL 92 OF 575</b> (SEE MAP INDEX FOR FIRM PANEL LAYOUT)				
<b>CONTAINS:</b>				
COMMUNITY CAROT CITY OF LOONE COUNTY	NUMBER 000000	PANEL 0002	SUFFIX 00	D
Notice to User: The Map Number shown above should be used when placing rate orders. The Community Number shown above should be used for insurance applications. Do not subject community.				
		<b>MAP NUMBER</b> <b>0008SC0092D</b>		
		<b>EFFECTIVE DATE</b> <b>JUNE 16, 2006</b>		
Federal Emergency Management Agency				

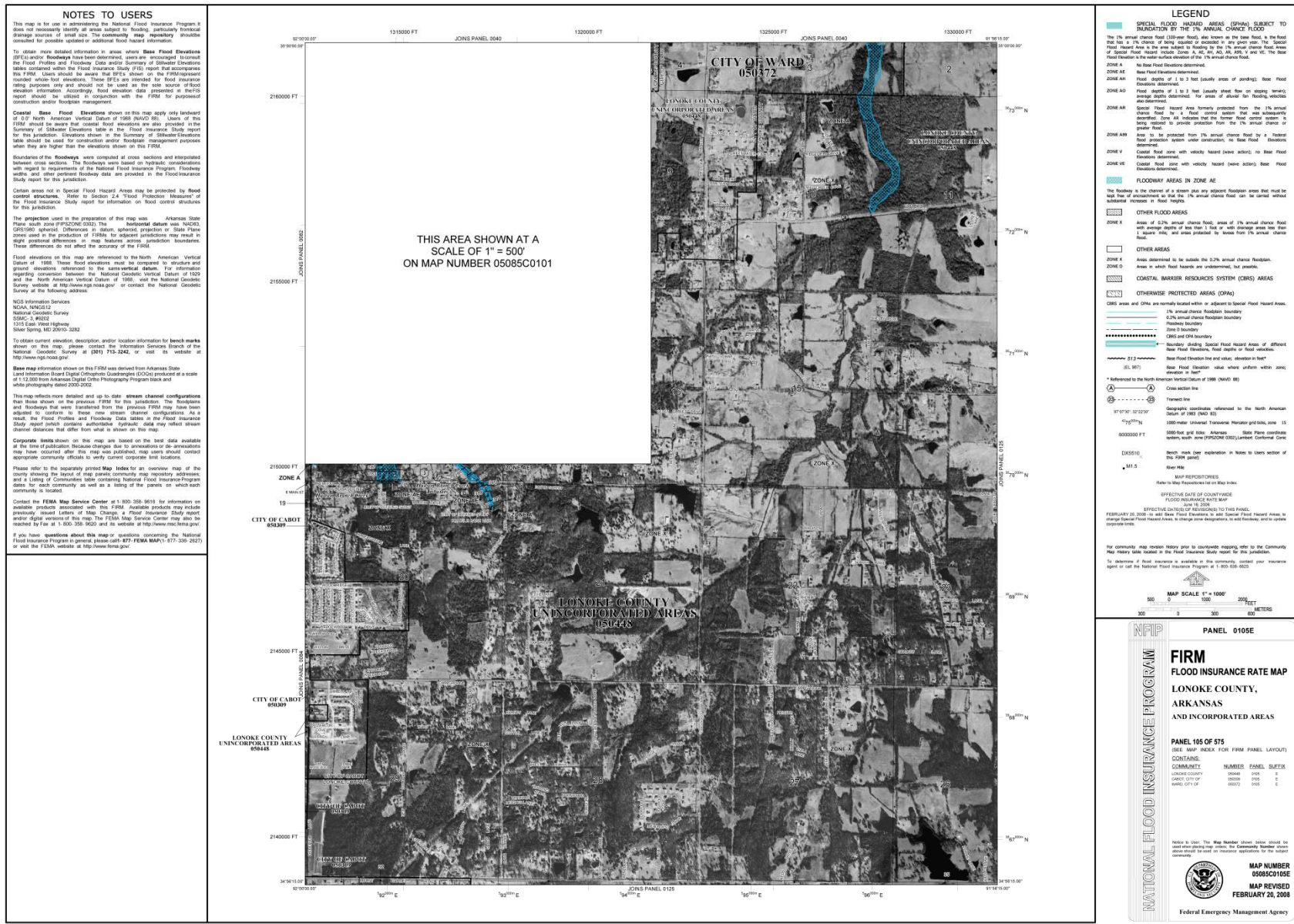
[illegible][illegible]

NATIONAL FLOOD INSURANCE PROGRAM NFIP	PANEL 01000			
	<h1>FIRM</h1>			
	<h2>FLOOD INSURANCE RATE MAP</h2>			
	<h3>LONOKE COUNTY, ARKANSAS AND INCORPORATED AREAS</h3>			
	<h4>PANEL 100 OF 575</h4>			
	(SEE MAP INDEX FOR FIRM PANEL LAYOUT)			
	GZCZONE:			
	COMMUNITY LONOKE COUNTY	NUMBER 00000	PANEL 100	SHEETS 575
	<p>           Notice to User: The <b>Map Number</b> shown below            should be used when ordering the <b>Firm Panel</b>. The  <b>Community Number</b> shown above should be            used on insurance applications for the subject            community.         </p>			
	<div style="text-align: center;"> </div>			
<div style="text-align: right;"> <b>MAP NUMBER</b>  <b>0505SC0100D</b>  <b>EFFECTIVE DATE</b>  <b>JUN 16, 2006</b> </div>				
Federal Emergency Management Agency				



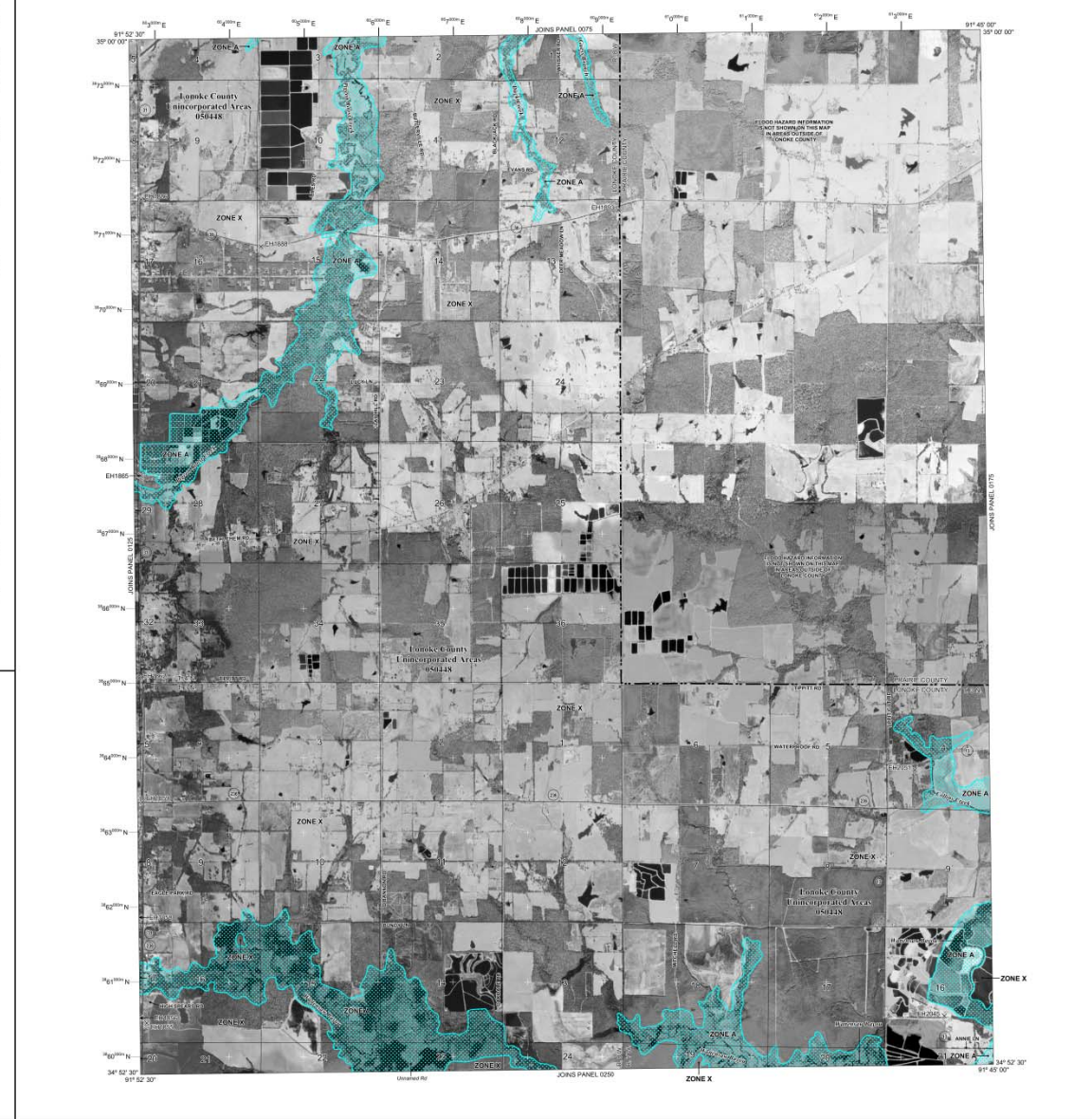




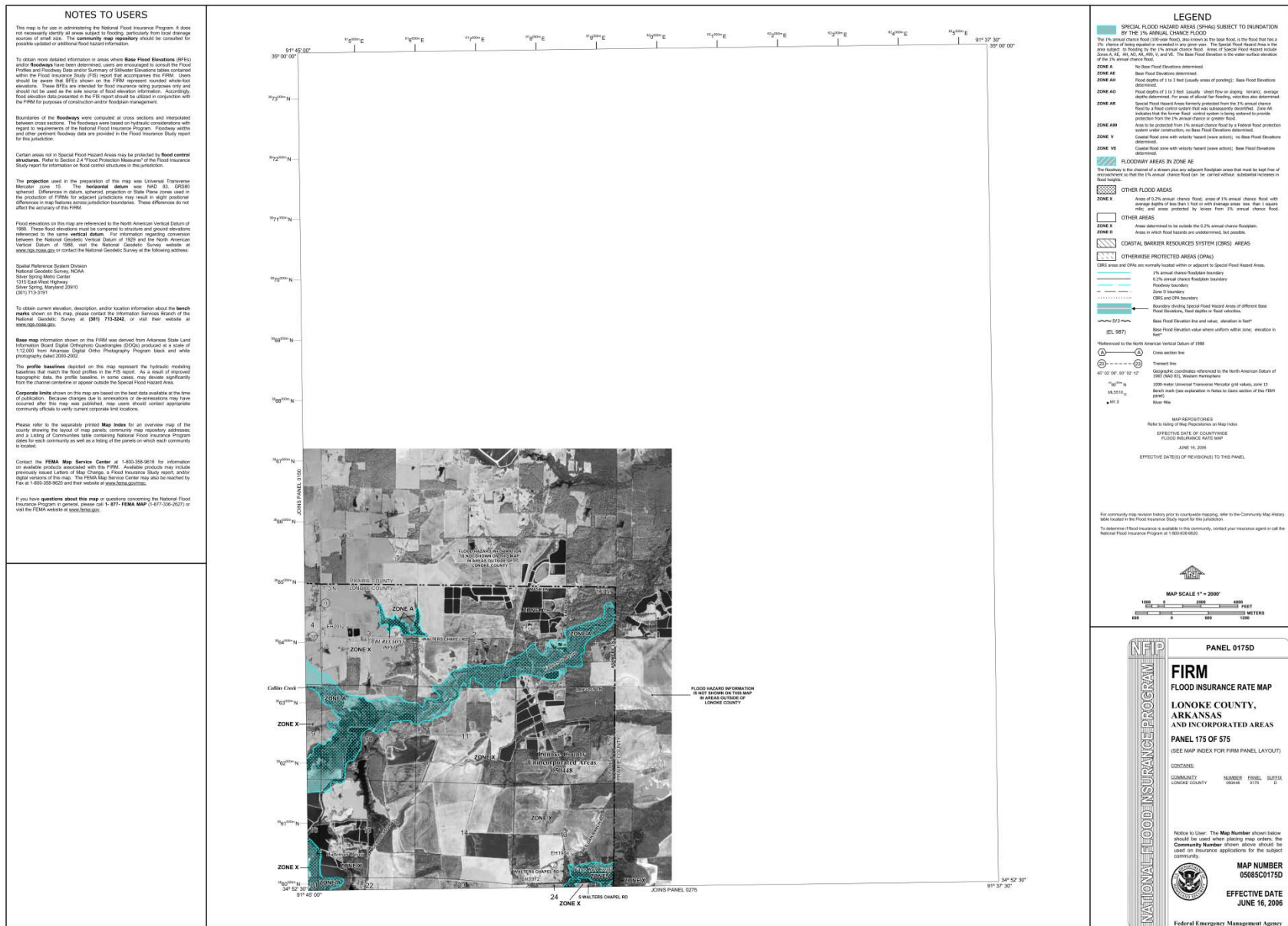






[illegible][illegible]

The logo for the National Flood Insurance Program (NFP) is located on the left side of the document. It features a vertical banner with the text "NATIONAL FLOOD INSURANCE PROGRAM" in a bold, sans-serif font. To the right of the banner is a large, stylized letter "F" that incorporates the word "FIRM" in a bold, sans-serif font. Below the "F" is the text "FLOOD INSURANCE RATE MAP" in a bold, sans-serif font. Below this is the text "LOONE COUNTY, ARKANSAS AND INCORPORATED AREAS" in a bold, sans-serif font. Below this is the text "PANEL 150 OF 575" in a bold, sans-serif font. Below this is the text "(SEE MAP INDEX FOR FIRM PANEL LAYOUT)" in a bold, sans-serif font. Below this is the text "CONTAINS:" in a bold, sans-serif font. Below this is the text "COMMUNITY LOONE COUNTY" in a bold, sans-serif font. Below this is the text "NUMBER 150/45" in a bold, sans-serif font. Below this is the text "PANEL 1502" in a bold, sans-serif font. Below this is the text "SHEET D" in a bold, sans-serif font. Below this is the text "Notice to User: The Map Number shown below should not be used when placing new orders, the Community Number shown above should not be used on insurance applications or to submit community." in a bold, sans-serif font. Below this is the text "MAP NUMBER 05089C0150D" in a bold, sans-serif font. Below this is the text "EFFECTIVE DATE JUNE 16, 2006" in a bold, sans-serif font. Below this is the text "Federal Emergency Management Agency" in a bold, sans-serif font. Below this is the text "FIRM" in a bold, sans-serif font. Below this is the text "FLOOD INSURANCE RATE MAP" in a bold, sans-serif font. Below this is the text "LOONE COUNTY, ARKANSAS AND INCORPORATED AREAS" in a bold, sans-serif font. Below this is the text "PANEL 150 OF 575" in a bold, sans-serif font. Below this is the text "(SEE MAP INDEX FOR FIRM PANEL LAYOUT)" in a bold, sans-serif font. Below this is the text "CONTAINS:" in a bold, sans-serif font. Below this is the text "COMMUNITY LOONE COUNTY" in a bold, sans-serif font. Below this is the text "NUMBER 150/45" in a bold, sans-serif font. Below this is the text "PANEL 1502" in a bold, sans-serif font. Below this is the text "SHEET D" in a bold, sans-serif font. Below this is the text "Notice to User: The Map Number shown below should not be used when placing new orders, the Community Number shown above should not be used on insurance applications or to submit community." in a bold, sans-serif font. Below this is the text "MAP NUMBER 05089C0150D" in a bold, sans-serif font. Below this is the text "EFFECTIVE DATE JUNE 16, 2006" in a bold, sans-serif font. Below this is the text "Federal Emergency Management Agency" in a bold, sans-serif font.






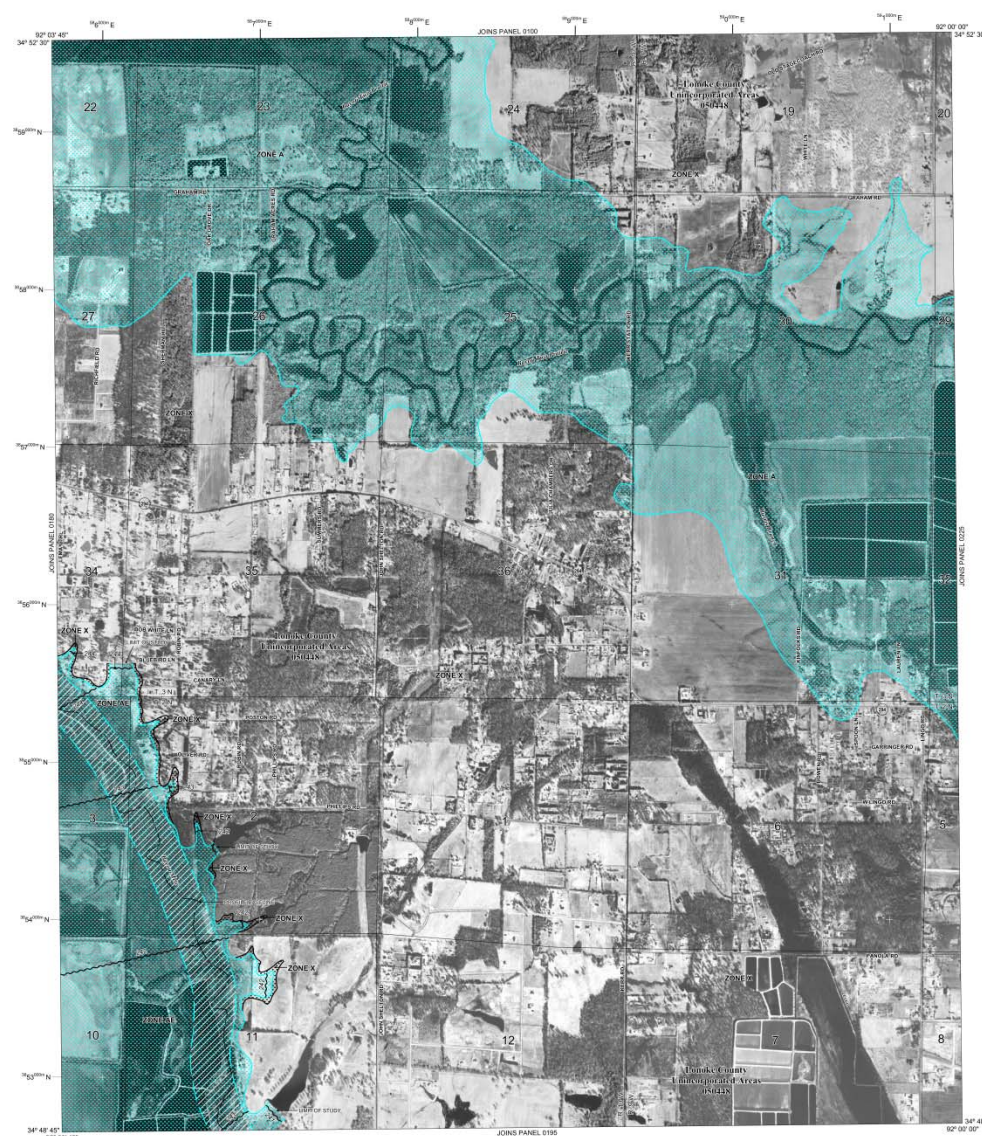
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**SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD**

The 1% annual chance flood (100-year flood), also known as the 1% annual flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to inundation by the 1% annual chance flood. The Special Flood Hazard Area is divided into zones A, AE, AH, AO, A1, A2, A3, A4, A5, A6, A7, A8, A9, A10, A11, A12, A13, A14, A15, A16, A17, A18, A19, A20, A21, A22, A23, A24, A25, A26, A27, A28, A29, A30, A31, A32, A33, A34, A35, A36, A37, A38, A39, A40, A41, A42, A43, A44, A45, A46, A47, A48, A49, A50, A51, A52, A53, A54, A55, A56, A57, A58, A59, A60, A61, A62, A63, A64, A65, A66, A67, A68, A69, A70, A71, A72, A73, A74, A75, A76, A77, A78, A79, A80, A81, A82, A83, A84, A85, A86, A87, A88, A89, A90, A91, A92, A93, A94, A95, A96, A97, A98, A99, A100, A101, A102, A103, A104, A105, A106, A107, A108, A109, A110, A111, A112, A113, A114, A115, A116, A117, A118, A119, A120, A121, A122, A123, A124, A125, A126, A127, A128, A129, A130, A131, A132, A133, A134, A135, A136, A137, A138, A139, A140, A141, A142, A143, A144, A145, A146, A147, A148, A149, A150, A151, A152, A153, A154, A155, A156, A157, A158, A159, A160, A161, A162, A163, A164, A165, A166, A167, A168, A169, A170, A171, A172, A173, A174, A175, A176, A177, A178, A179, A180, A181, A182, A183, A184, A185, A186, A187, A188, A189, A190, A191, A192, A193, A194, A195, A196, A197, A198, A199, A200, A201, A202, A203, A204, A205, A206, A207, A208, A209, A210, A211, A212, A213, A214, A215, A216, A217, A218, A219, A220, A221, A222, A223, A224, A225, A226, A227, A228, A229, A230, A231, A232, A233, A234, A235, A236, A237, A238, A239, A240, A241, A242, A243, A244, A245, A246, A247, A248, A249, A250, A251, A252, A253, A254, A255, A256, A257, A258, A259, A260, A261, A262, A263, A264, A265, A266, A267, A268, A269, A270, A271, A272, A273, A274, A275, A276, A277, A278, A279, A280, A281, A282, A283, A284, A285, A286, A287, A288, A289, A290, A291, A292, A293, A294, A295, A296, A297, A298, A299, A300, A301, A302, A303, A304, A305, A306, A307, A308, A309, A310, A311, A312, A313, A314, A315, A316, A317, A318, A319, A320, A321, A322, A323, A324, A325, A326, A327, A328, A329, A330, A331, A332, A333, A334, A335, A336, A337, A338, A339, A340, A341, A342, A343, A344, A345, A346, A347, A348, A349, A350, A351, A352, A353, A354, A355, A356, A357, A358, A359, A360, A361, A362, A363, A364, A365, A366, A367, A368, A369, A370, A371, A372, A373, A374, A375, A376, A377, A378, A379, A380, A381, A382, A383, A384, A385, A386, A387, A388, A389, A390, A391, A392, A393, A394, A395, A396, A397, A398, A399, A400, A401, A402, A403, A404, A405, A406, A407, A408, A409, A410, A411, A412, A413, A414, A415, A416, A417, A418, A419, A420, A421, A422, A423, A424, A425, A426, A427, A428, A429, A430, A431, A432, A433, A434, A435, A436, A437, A438, A439, A440, A441, A442, A443, A444, A445, A446, A447, A448, A449, A450, A451, A452, A453, A454, A455, A456, A457, A458, A459, A460, A461, A462, A463, A464, A465, A466, A467, A468, A469, A470, A471, A472, A473, A474, A475, A476, A477, A478, A479, A480, A481, A482, A483, A484, A485, A486, A487, A488, A489, A490, A491, A492, A493, A494, A495, A496, A497, A498, A499, A500, A501, A502, A503, A504, A505, A506, A507, A508, A509, A510, A511, A512, A513, A514, A515, A516, A517, A518, A519, A520, A521, A522, A523, A524, A525, A526, A527, A528, A529, A530, A531, A532, A533, A534, A535, A536, A537, A538, A539, A540, A541, A542, A543, A544, A545, A546, A547, A548, A549, A550, A551, A552, A553, A554, A555, A556, A557, A558, A559, A560, A561, A562, A563, A564, A565, A566, A567, A568, A569, A570, A571, A572, A573, A574, A575, A576, A577, A578, A579, A580, A581, A582, A583, A584, A585, A586, A587, A588, A589, A590, A591, A592, A593, A594, A595, A596, A597, A598, A599, A600, A601, A602, A603, A604, A605, A606, A607, A608, A609, A610, A611, A612, A613, A614, A615, A616, A617, A618, A619, A620, A621, A622, A623, A624, A625, A626, A627, A628, A629, A630, A631, A632, A633, A634, A635, A636, A637, A638, A639, A640, A641, A642, A643, A644, A645, A646, A647, A648, A649, A650, A651, A652, A653, A654, A655, A656, A657, A658, A659, A660, A661, A662, A663, A664, A665, A666, A667, A668, A669, A670, A671, A672, A673, A674, A675, A676, A677, A678, A679, A680, A681, A682, A683, A684, A685, A686, A687, A688, A689, A690, A691, A692, A693, A694, A695, A696, A697, A698, A699, A700, A701, A702, A703, A704, A705, A706, A707, A708, A709, A710, A711, A712, A713, A714, A715, A716, A717, A718, A719, A720, A721, A722, A723, A724, A725, A726, A727, A728, A729, A730, A731, A732, A733, A734, A735, A736, A737, A738, A739, A740, A741, A742, A743, A744, A745, A746, A747, A748, A749, A750, A751, A752, A753, A754, A755, A756, A757, A758, A759, A760, A761, A762, A763, A764, A765, A766, A767, A768, A769, A770, A771, A772, A773, A774, A775, A776, A777, A778, A779, A780, A781, A782, A783, A784, A785, A786, A787, A788, A789, A790, A791, A792, A793, A794, A795, A796, A797, A798, A799, A800, A801, A802, A803, A804, A805, A806, A807, A808, A809, A810, A81

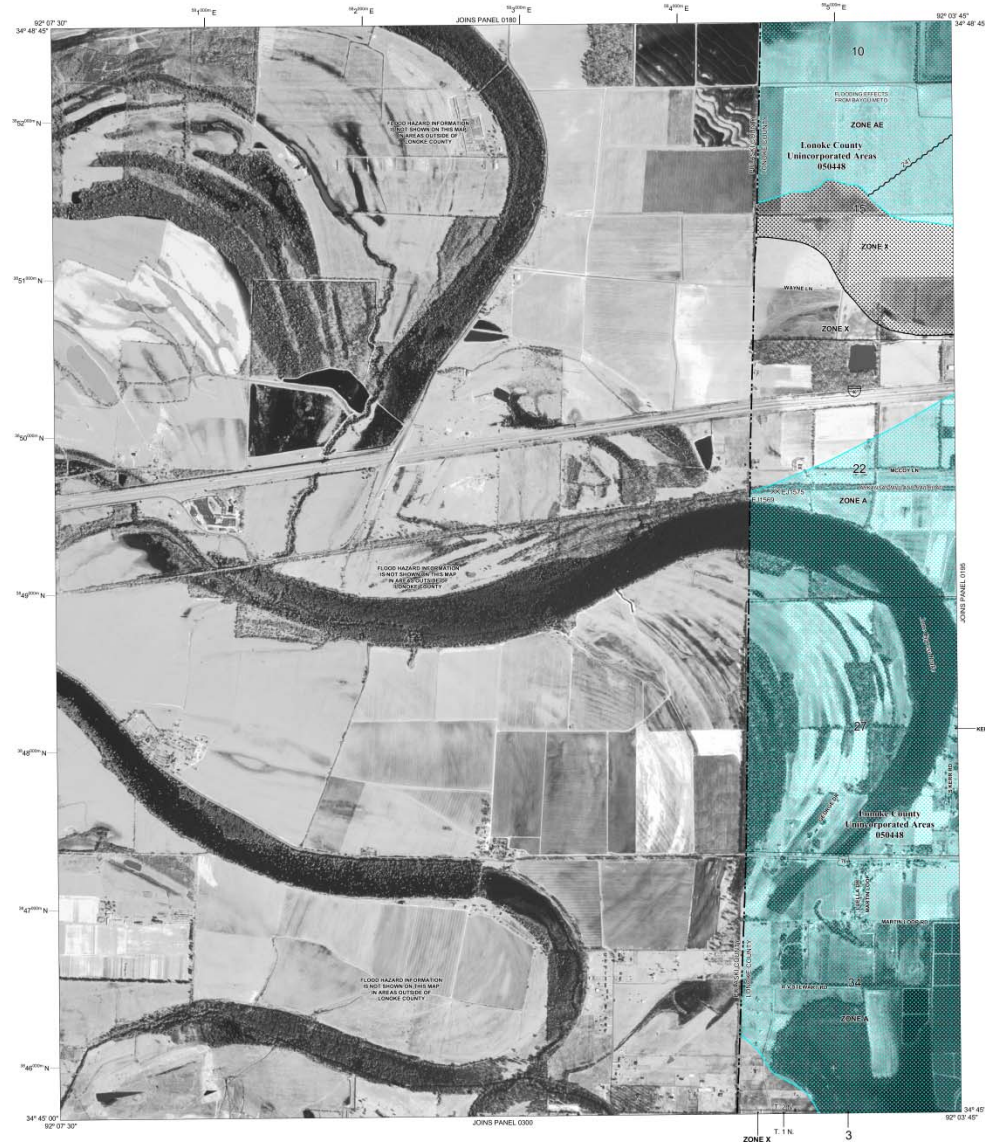
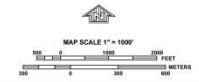
<b>NATIONAL FLOOD INSURANCE PROGRAM</b>	<b>PANEL 0180D</b>			
	<b>FIRM</b>			
	<b>FLOOD INSURANCE RATE MAP</b>			
	<b>LOONE COUNTY, ARKANSAS</b>			
	<b>AND INCORPORATED AREAS</b>			
	<b>OF 575</b>			
	<b>(SEE MAP INDEX FOR FIRM PANEL LAAYOUT)</b>			
	<b>CONTAINS:</b>			
	<b>COMMUNITY:</b> LOONE COUNTY	<b>NUMBER:</b> 000448	<b>PANEL:</b> 0180	<b>SUFFIX:</b> D
	<p>Notice to User: The <b>Map Number</b> shown below should be used when placing any orders, the <b>Community Number</b> shown above should be used for insurance applications and/or underwriting currently.</p>			
<div style="display: flex; justify-content: space-between; align-items: center;">  <div> <b>MAP NUMBER</b>  <b>0505SC0180D</b> </div> </div>				
<b>EFFECTIVE DATE</b> <b>JUNE 16, 2006</b>				
<b>Federal Emergency Management Agency</b>				





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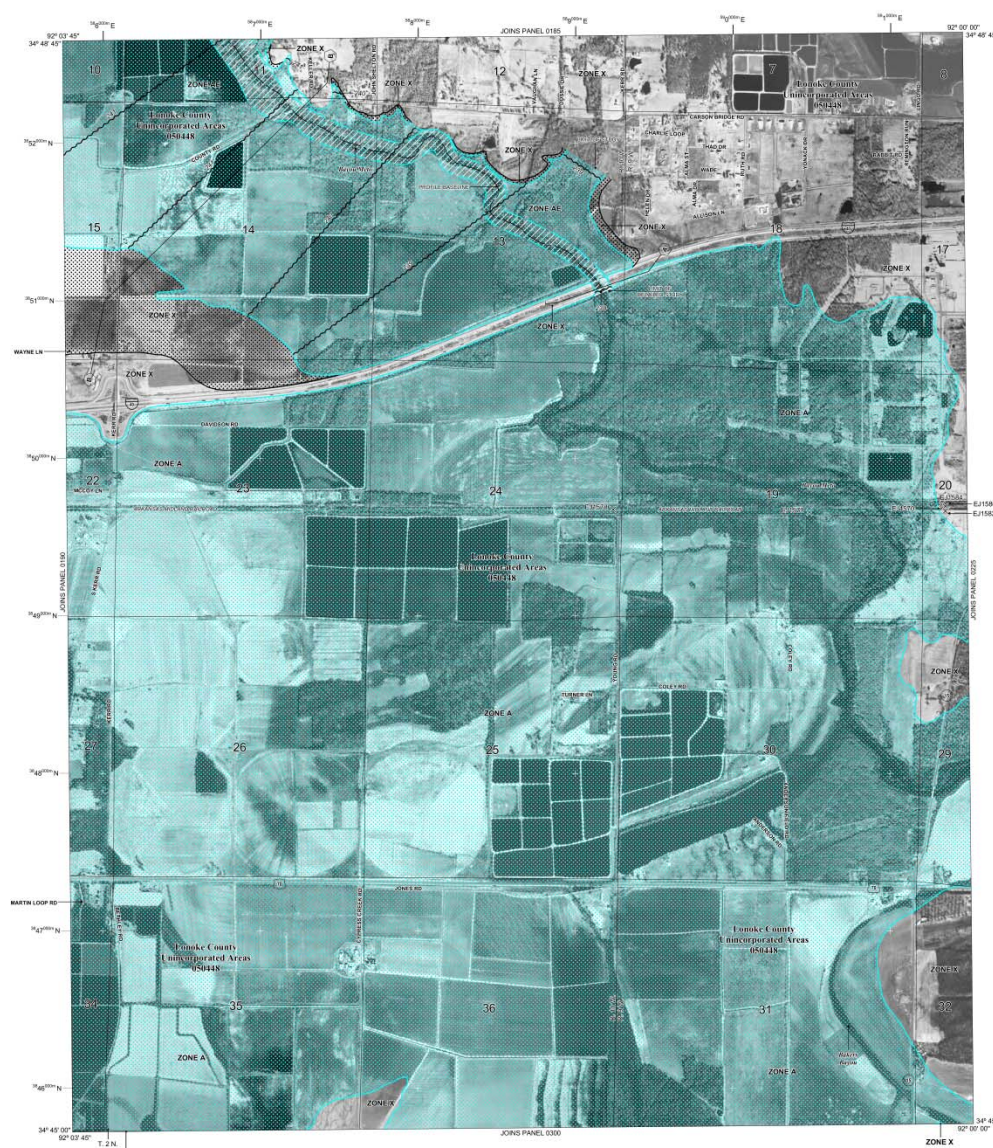
<div style="display: flex; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-weight: bold; padding: 5px;">NATIONAL FLOOD INSURANCE PROGRAM</div> <div style="margin-left: 10px;"> <div style="border: 2px solid black; padding: 5px; font-weight: bold; font-size: 1.2em;">NFP</div> <div style="border: 1px solid black; padding: 5px; font-weight: bold; font-size: 1.2em;">FIRM</div> </div> </div>	<div style="border: 1px solid black; padding: 2px;">PANEL 0185D</div>									
	<div style="font-size: 1.5em; font-weight: bold; margin-bottom: 10px;">FLOOD INSURANCE RATE MAP</div> <div style="font-size: 1.2em; font-weight: bold; margin-bottom: 10px;">LONOKE COUNTY, ARKANSAS AND INCORPORATED AREAS</div> <div style="font-size: 1.2em; font-weight: bold; margin-bottom: 10px;">PANEL 185 OF 575</div> <div style="font-size: 0.9em;">(SEE MAP INDEX FOR FIRM PANEL LAYOUT)</div>									
<div style="margin-bottom: 10px;"> <b>CONTAINS:</b> </div> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <b>COMMUNITY:</b>            LONOKE COUNTY         </div> <div style="width: 45%;"> <table border="0" style="width: 100%;"> <tr> <td style="width: 33%;"><b>NUMBER</b></td> <td style="width: 33%;"><b>PANEL</b></td> <td style="width: 33%;"><b>SUFFIX</b></td> </tr> <tr> <td>200448</td> <td>2185</td> <td>D</td> </tr> </table> </div> </div>					<b>NUMBER</b>	<b>PANEL</b>	<b>SUFFIX</b>	200448	2185	D
<b>NUMBER</b>	<b>PANEL</b>	<b>SUFFIX</b>								
200448	2185	D								
<p style="font-size: 0.8em;">Notice of User: The Map Number shown below should be used when placing new orders. The Community Number shown above should be used on insurance applications for the indicated community.</p> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 20px;">  <div style="text-align: center;"> <div style="border: 1px solid black; padding: 5px; font-weight: bold; font-size: 0.9em;">MAP NUMBER</div> <div style="border: 1px solid black; padding: 5px; font-weight: bold; font-size: 1.1em;">05085C0185D</div> </div> </div> <div style="text-align: center; margin-top: 20px;"> <div style="border: 1px solid black; padding: 5px; font-weight: bold; font-size: 1.1em;">EFFECTIVE DATE</div> <div style="border: 1px solid black; padding: 5px; font-weight: bold; font-size: 1.1em;">JUNE 16, 2006</div> </div>										
<b>Federal Emergency Management Agency</b>										




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 <b>NATIONAL FLOOD INSURANCE PROGRAM</b>	<b>PANEL 01900</b>			
	<b>FIRM</b>			
	<b>FLOOD INSURANCE RATE MAP</b>			
	<b>LONOKE COUNTY, ARKANSAS AND INCORPORATED AREAS</b>			
	<b>PANEL 190 OF 575</b>			
	(SEE MAP INDEX FOR FIRM PANEL LAYOUT)			
	<b>CONTAINS:</b>			
	<b>COMMUNITY</b> LONOKE COUNTY	<b>NUMBER</b> 000448	<b>PAGES</b> 1705	<b>SUFFIX</b> 
	Notice to User: This Map Number should only be used when placing any order; the <b>Community Number</b> shown above shall be used on insurance applications for the subject community.			
		<b>MAP NUMBER</b> 0508SC01900		
<b>EFFECTIVE DATE</b> JUNE 16, 2006				



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<b>NATIONAL FLOOD INSURANCE PROGRAM</b>	<b>PANEL 0195D</b>			
	<b>FIRM</b>			
	<b>FLOOD INSURANCE RATE MAP</b>			
	<b>LOHNEKE COUNTY, ARKANSAS AND INCORPORATED AREAS</b>			
	<b>PANEL 195 OF 575</b>			
	(SEE MAP INDEX FOR FIRM PANEL LAYOUT)			
	<b>CONTAINS:</b>			
	<b>COMMUNITY</b> LOHNEKE COUNTY	<b>NUMBER</b> 00048	<b>PANEL</b> 17105	<b>SUFFIX</b> D
	<p>           Notice to User: The Map Number shown above should be used when placing new orders, the Community Number shown above should be used on insurance applications to adjust community.         </p>			
	<div style="text-align: center;">  </div>			
<div style="text-align: center;"> <b>MAP NUMBER</b>  <b>9508SC0195D</b>  <b>EFFECTIVE DATE</b>  <b>JUNE 16, 2006</b> </div>				
<b>Federal Emergency Management Agency</b>				



This map is for use in administering the National Flood Insurance Program. It does not constitute a warranty, nor does it constitute a representation of the accuracy of the information shown. The map is for informational purposes only and is not intended for use in any other manner. The map is not intended to be used in any way that would constitute a warranty, nor is it intended to be used in any way that would constitute a representation of the accuracy of the information shown. The map is for informational purposes only and is not intended for use in any other manner.

To obtain more detailed information in areas where **Flood Hazard Elevations (FHEs)** or **Roofloadings** have been determined, users are encouraged to consult the Flood Insurance Rate Map (FIRM) for the community. The FIRM provides more detailed information about the Flood Insurance Program, including the Flood Insurance Rate Map (FIRM) and the Flood Insurance Study (FIS) report that accompanies the FIRM. Users are encouraged to consult the FIRM for more detailed information about the Flood Insurance Program, including the Flood Insurance Rate Map (FIRM) and the Flood Insurance Study (FIS) report that accompanies the FIRM. Users are encouraged to consult the FIRM for more detailed information about the Flood Insurance Program, including the Flood Insurance Rate Map (FIRM) and the Flood Insurance Study (FIS) report that accompanies the FIRM.

For purposes of the **Roofloadings**, were computed at cross sections and integrated along cross sections. The **Roofloadings** were based on hydraulic computations with the Flood Insurance Study (FIS) report that accompanies the FIRM. Users are encouraged to consult the FIRM for more detailed information about the Flood Insurance Program, including the Flood Insurance Rate Map (FIRM) and the Flood Insurance Study (FIS) report that accompanies the FIRM.

Certain areas, not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Special Flood Hazard Areas (SFHA) of the Flood Insurance Study (FIS) report that accompanies the FIRM for more detailed information about the Flood Insurance Program, including the Flood Insurance Rate Map (FIRM) and the Flood Insurance Study (FIS) report that accompanies the FIRM.

The **projection** used in the preparation of this map was Universal Transverse Mercator zone 15. The **horizontal datum** was NAD 83. GPO is not responsible for any errors or omissions in this map. The map is for informational purposes only and is not intended for use in any other manner. The map is not intended to be used in any way that would constitute a warranty, nor is it intended to be used in any way that would constitute a representation of the accuracy of the information shown. The map is for informational purposes only and is not intended for use in any other manner.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. The map is for informational purposes only and is not intended for use in any other manner. The map is not intended to be used in any way that would constitute a warranty, nor is it intended to be used in any way that would constitute a representation of the accuracy of the information shown. The map is for informational purposes only and is not intended for use in any other manner.

For more information about the Flood Insurance Program, please contact the Federal Emergency Management Agency (FEMA) at (800) 358-3434 or visit the FEMA website at [www.fema.gov](http://www.fema.gov).

**Special Reference System Division**  
National Oceanic and Atmospheric Administration  
National Ocean Service  
Silver Spring, Maryland 20910  
(301) 713-2323

To obtain current elevation, description and location information about the **beach nourishment**, please contact the Federal Emergency Management Agency (FEMA) at (800) 358-3434 or visit the FEMA website at [www.fema.gov](http://www.fema.gov).

**Base map information** shown on this map was derived from **Airphoto** State Lands Information Series Digital Orthophoto Quadrants (DOQs) produced at a scale of 1:25,000. The map is for informational purposes only and is not intended for use in any other manner. The map is not intended to be used in any way that would constitute a warranty, nor is it intended to be used in any way that would constitute a representation of the accuracy of the information shown. The map is for informational purposes only and is not intended for use in any other manner.

The **profile** illustrates changes in the map area's topography and elevation. The profile is for informational purposes only and is not intended for use in any other manner. The profile is not intended to be used in any way that would constitute a warranty, nor is it intended to be used in any way that would constitute a representation of the accuracy of the information shown. The profile is for informational purposes only and is not intended for use in any other manner.

Please refer to the appropriate **print index** for an overview map of the community and a listing of communities that includes National Flood Insurance Program (NFIP) communities as well as a listing of the communities that are not in the NFIP. The map is for informational purposes only and is not intended for use in any other manner. The map is not intended to be used in any way that would constitute a warranty, nor is it intended to be used in any way that would constitute a representation of the accuracy of the information shown. The map is for informational purposes only and is not intended for use in any other manner.

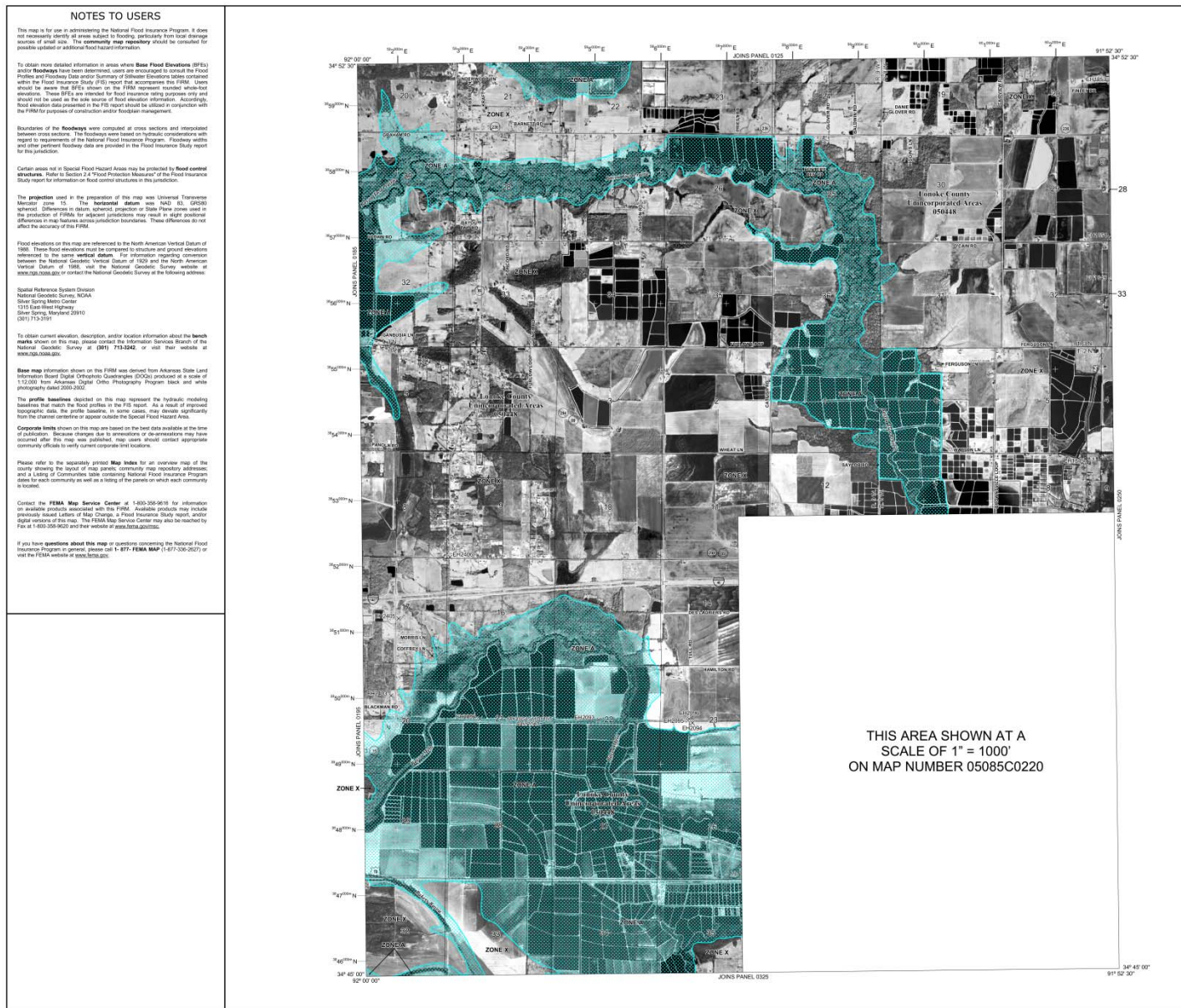
Contact the **FEMA Map Service Center** at 1-800-358-3434 for information about the map. The map is for informational purposes only and is not intended for use in any other manner. The map is not intended to be used in any way that would constitute a warranty, nor is it intended to be used in any way that would constitute a representation of the accuracy of the information shown. The map is for informational purposes only and is not intended for use in any other manner.

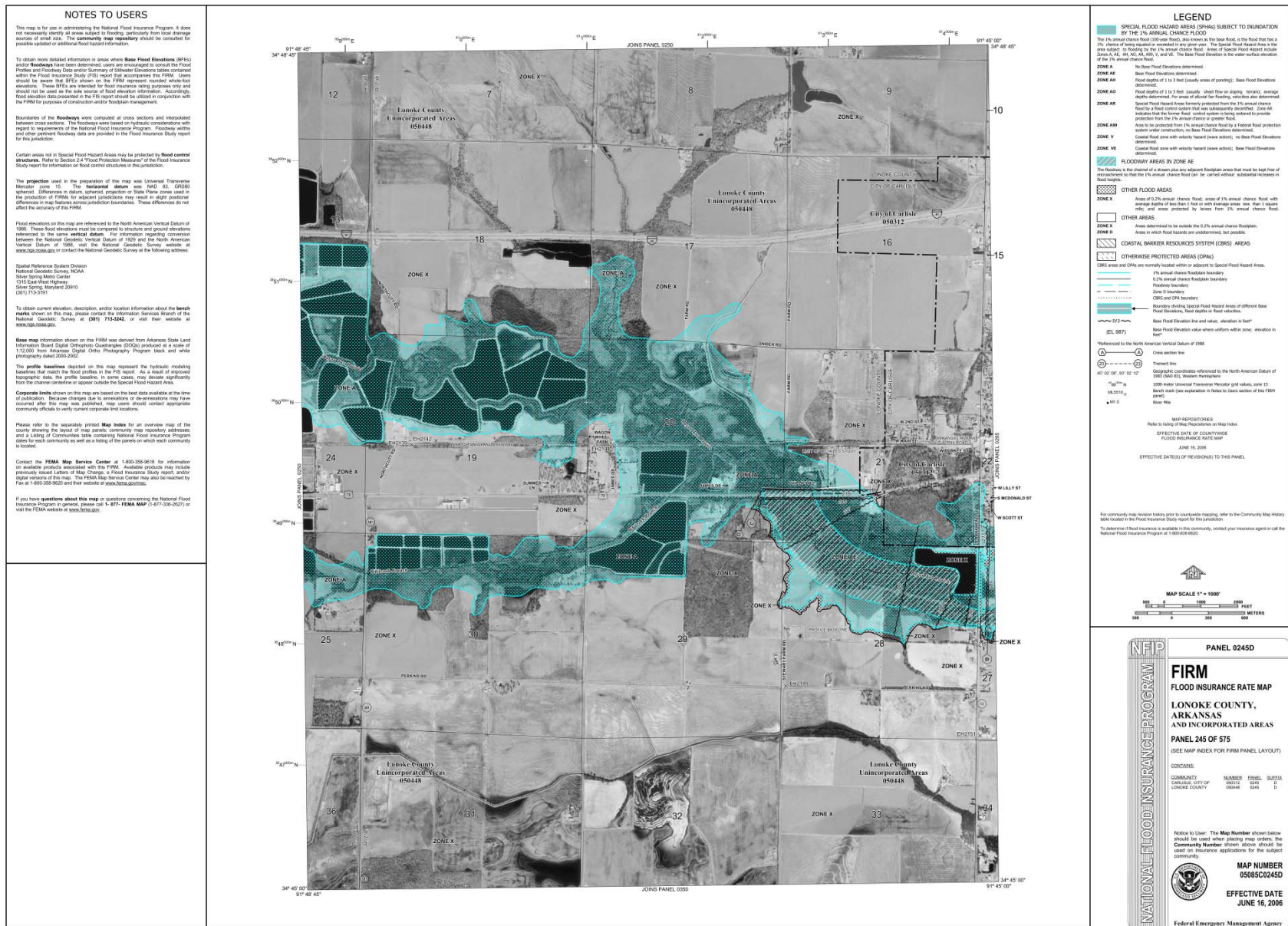
If you have **questions** about this map or **questions** concerning the National Flood Insurance Program, please contact the Federal Emergency Management Agency (FEMA) at (800) 358-3434 or visit the FEMA website at [www.fema.gov](http://www.fema.gov).



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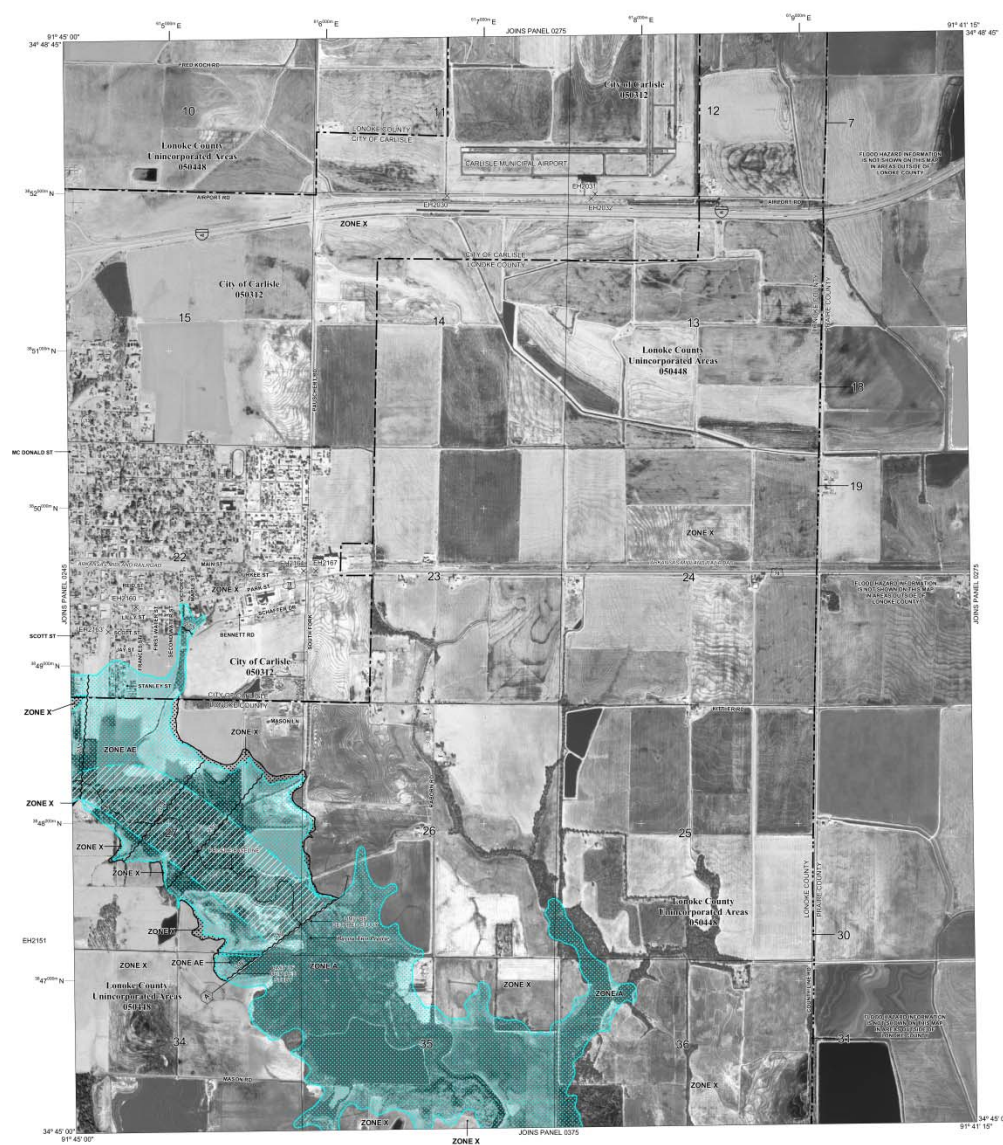
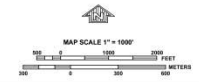




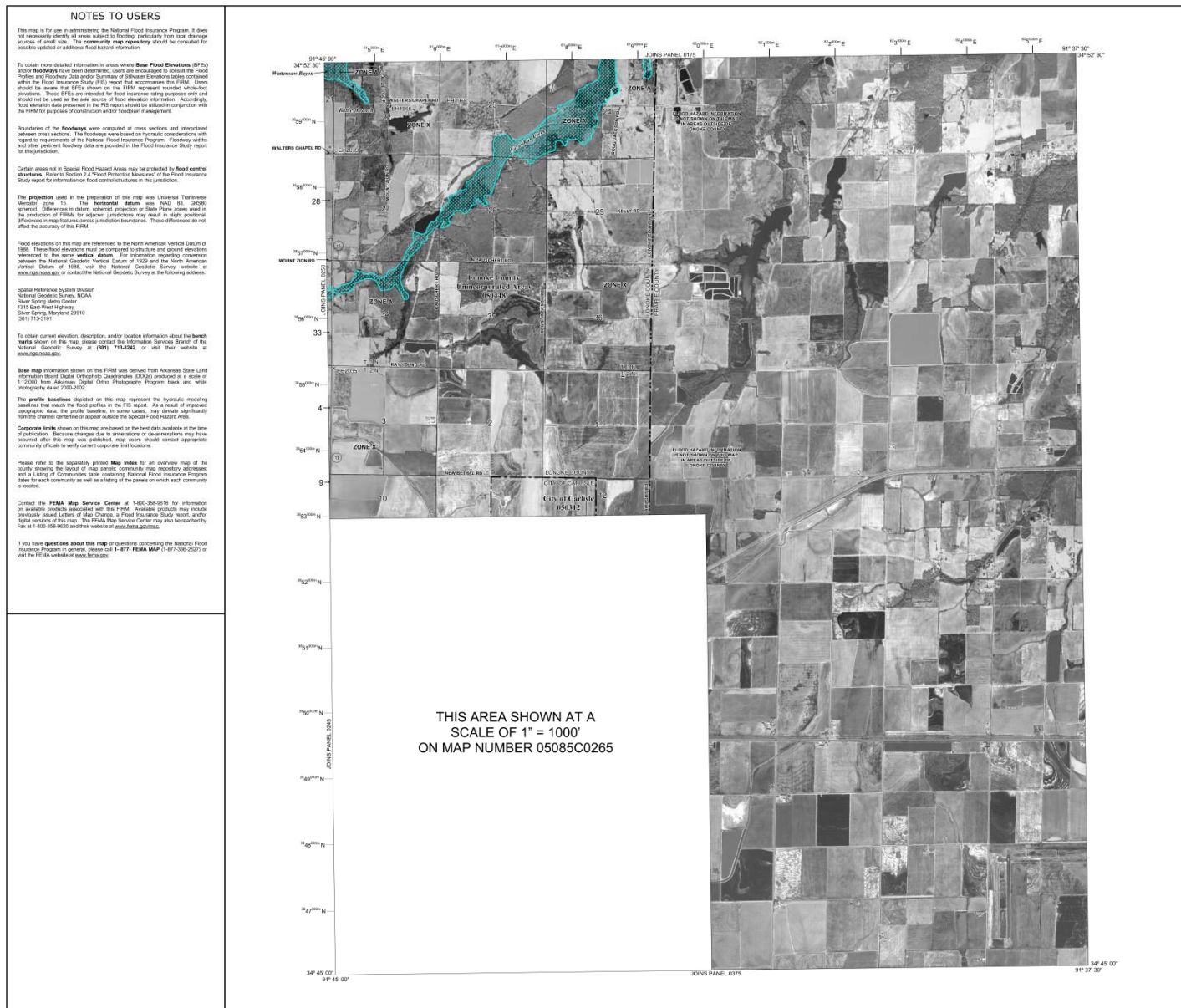




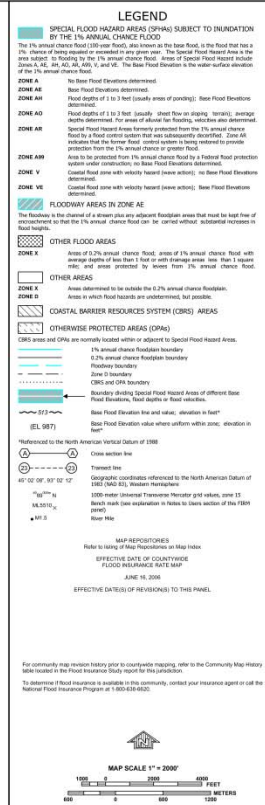



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# NATIONAL FLOOD INSURANCE PROGRAM

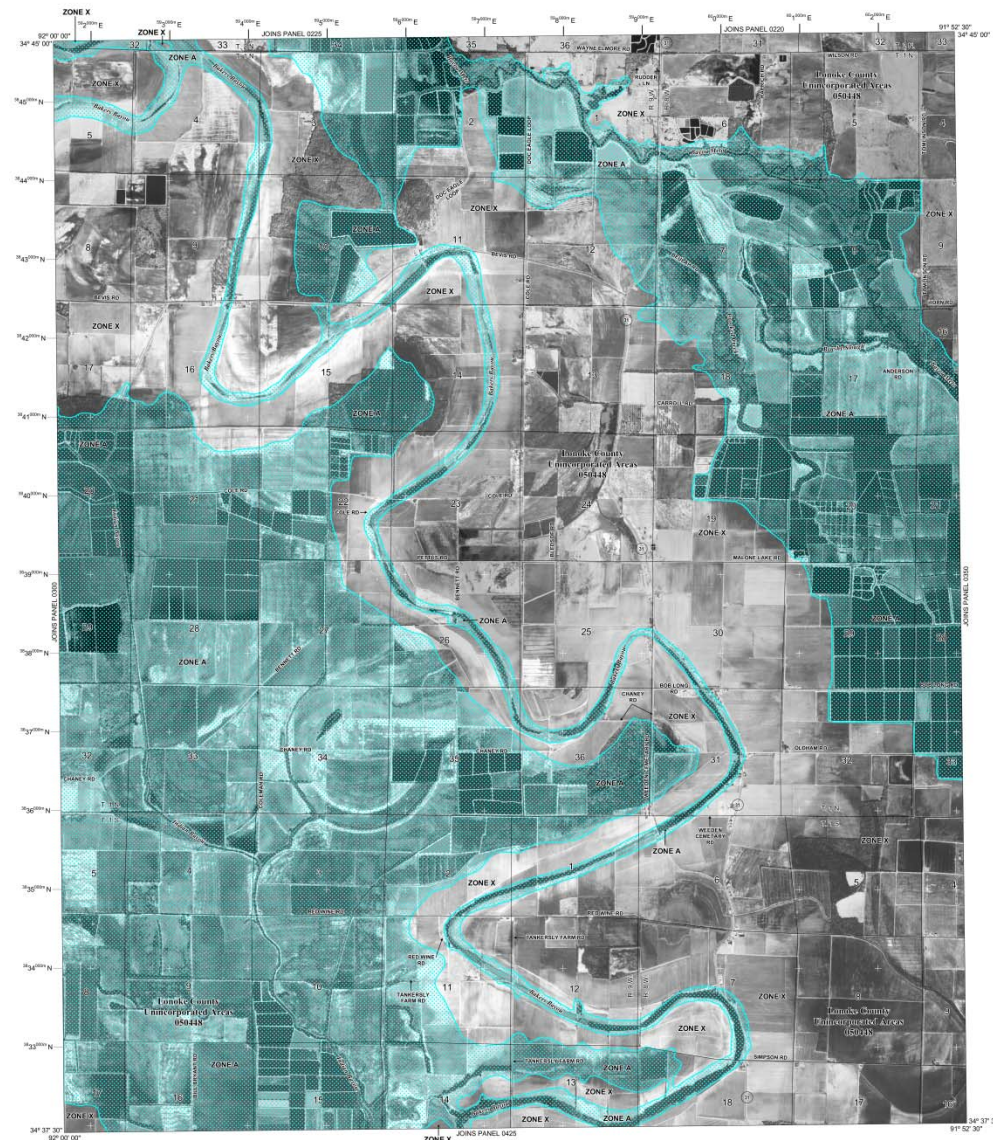





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NFP		PANEL 0300D					
<div style="display: flex; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-weight: bold; margin-right: 10px;">NATIONAL FIRE INSURANCE PROGRAM</div> <div> <h1 style="margin: 0;">FIRM</h1> <h2 style="margin: 0;">FLOOD INSURANCE RATE MAP</h2> <h3 style="margin: 0;">LOONE COUNTY, ARKANSAS AND INCORPORATED AREAS</h3> <h3 style="margin: 0;">PANEL 300 OF 575</h3> <p style="margin: 0;">(SEE MAP INDEX FOR FIRM PANEL LAYOUT)</p> </div> </div>							
				CONTINUE			
				COMMUNITY KEY TOWN OF LOONE COUNTY			
				<table border="1"> <thead> <tr> <th>NUMBER</th> <th>PANEL</th> <th>SUFFIX</th> </tr> </thead> <tbody> <tr> <td>000000</td> <td>0300</td> <td>D</td> </tr> </tbody> </table>		NUMBER	PANEL
NUMBER	PANEL	SUFFIX					
000000	0300	D					
<p>Notice to User: The Map Number shown below should not be used when placing new orders. The Community Number shown above should be used for insurance applications and subsequent community.</p>							
		MAP NUMBER <b>0508SC0300D</b>					
		EFFECTIVE DATE <b>JUNE 16, 2006</b>					
Federal Emergency Management Agency							



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<b>NFP</b> <b>NATIONAL FLOOD INSURANCE PROGRAM</b>	<b>PANEL 325D</b>			
	<b>FIRM</b> <b>FLOOD INSURANCE RATE MAP</b>			
	<b>LOONE COUNTY,</b> <b>ARKANSAS</b> <b>AND INCORPORATED AREAS</b>			
	<b>PANEL 325 OF 575</b>			
	<b>(SEE MAP INDEX FOR FIRM PANEL LAYOUT)</b>			
	<b>SOURCES:</b>			
	COMMUNITY	NUMBER	PANEL	SUFFIX
	LOONE COUNTY	080448	325D	D
	Notice to User: The Map Number shown above should be used when placing new orders, the Community Number shown above should be used for insurance applications and for rating purposes currently.			
			<b>MAP NUMBER</b> <b>0508SC0325D</b>	
<b>EFFECTIVE DATE</b> <b>JUNE 16, 2006</b>				
<b>Federal Emergency Management Agency</b>				







This map is for use in administering the National Flood Insurance Program. It does not constitute an offer of insurance, nor does it constitute a finding, particularly from flood damage studies of this map or any other. The **community map repository** should be consulted for additional information.

To obtain more detailed information in areas where **Base Flood Elevation (BFEs)** and/or **Special Flood Hazard Areas** have been determined, users are encouraged to consult the Flood Insurance Study (FIS) and/or **Community Flood Hazard Insurance Study** for the area within the Flood Insurance Study (FIS) report that accompanies the FIS. Users are encouraged to consult the FIS for more information about the study area and the conditions. These BFEs are estimated for flood insurance rating purposes only and are not intended to be used for any other purpose. The FIS and/or FIS report may contain information on the community and the FEMA for purposes of construction and/or other management.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to representative flood flow conditions. Flood insurance rating purposes for this jurisdiction's floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to **Section "Flood Protection Measures"** of the Flood Insurance Study report for information on flood control structures in this jurisdiction.

The **projection used** in the preparation of this map was **National Geographic Mercator Zone 15**. The **horizontal datum** was **NAD 83**. GPOSS coordinates were used to determine the location of the community. The community was produced by the FIS for adjacent jurisdictions may be used in right-of-way planning and other purposes. The community was produced by the FIS for adjacent jurisdictions may be used in right-of-way planning and other purposes.

Flood elevations on this map are referenced to the **National American Vertical Datum of 1988**. The community was produced by the FIS for adjacent jurisdictions may be used in right-of-way planning and other purposes. The community was produced by the FIS for adjacent jurisdictions may be used in right-of-way planning and other purposes.

For more information on the community, please contact the Information Systems Branch of the National Flood Insurance Program. For more information on the community, please contact the Information Systems Branch of the National Flood Insurance Program. For more information on the community, please contact the Information Systems Branch of the National Flood Insurance Program.

**Special Reference Station**  
National Geographic Mercator Zone 15  
Silver Spring, Maryland 20910  
Silver Spring, Maryland 20910  
Silver Spring, Maryland 20910  
Silver Spring, Maryland 20910

To obtain current elevation, description and/or location information about the **bench marks** shown on this map, please contact the Information Systems Branch of the National Flood Insurance Program. For more information on the community, please contact the Information Systems Branch of the National Flood Insurance Program. For more information on the community, please contact the Information Systems Branch of the National Flood Insurance Program.

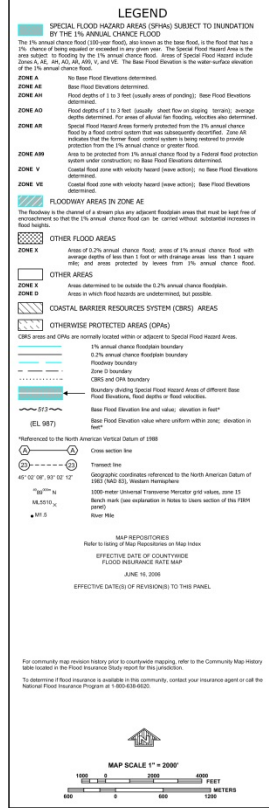
**Base map** information shown on this FIS was derived from **Airphoto Stereo Imagery** (National Geographic Digital Orthophoto Quadrangles (DOQs)) produced at a scale of 1:25,000. The community was produced by the FIS for adjacent jurisdictions may be used in right-of-way planning and other purposes. The community was produced by the FIS for adjacent jurisdictions may be used in right-of-way planning and other purposes.

**Corporate entities** shown on this map are based on the best data available at the time of publication. The community was produced by the FIS for adjacent jurisdictions may be used in right-of-way planning and other purposes. The community was produced by the FIS for adjacent jurisdictions may be used in right-of-way planning and other purposes.

Please refer to the accompanying **map index** for an overview map of the county showing the layout of maps; community map metadata addresses; and community information as well as a listing of the maps and/or other information.

Contact the **FEMA Map Service Center** at 1-800-356-9616 for information on available products associated with this FIS. Available products may include community maps, FIS reports, and other information. For more information on the community, please contact the Information Systems Branch of the National Flood Insurance Program. For more information on the community, please contact the Information Systems Branch of the National Flood Insurance Program.

If you have **questions about this map** or **questions about the National Flood Insurance Program** in general, please call 1-877-FEMA MAP (1-877-362-6271) or visit the FEMA website at [www.fema.gov](http://www.fema.gov).



*Lonoke County Draft Hazard Mitigation Plan*



**LEGEND**

**SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD**

The 1% annual chance flood (1% ACF) is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zone A, AE, X, V, and VE.

**Zone A**  
No Base Flood Elevation determined.  
Flood depths of 1 to 3 feet (local areas of ponding); Base Flood Elevation determined.

**Zone AE**  
Base Flood Elevation determined.  
Flood depths of 1 to 3 feet (local areas of ponding); Base Flood Elevation determined.

**Zone X**  
Special Flood Hazard areas (X) are protected from the 1% annual chance flood by a flood wall or other structure. The 1% annual chance flood is not shown in these areas.

**Zone V**  
Coastal flood areas with velocity hazard (V) are protected from the 1% annual chance or greater flood. Areas to be protected by the 1% annual chance flood by a flood wall or other structure under construction; no Base Flood Elevation determined.

**Zone VE**  
Coastal flood areas with velocity hazard (VE) are protected from the 1% annual chance or greater flood. Areas to be protected by the 1% annual chance flood by a flood wall or other structure under construction; no Base Flood Elevation determined.

**FLOODWAY AREAS IN ZONE AE**

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of obstructions to permit the 1% annual chance flood to be carried without substantial increases in flood heights.

**OTHER FLOOD AREAS**

**Zone X**  
Areas determined to be outside the 1% annual chance flood.

**Zone AE**  
Areas in which flood heights are undetermined, but possible.

**COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS**

**OTHERWISE PROTECTED AREAS (OPAs)**

OPAs are normally located within or adjacent to Special Flood Hazard Areas.

1% annual chance floodplain boundary

0.2% annual chance floodplain boundary

Floodway boundary

Zone X boundary

Zone AE boundary

CBRS and OPA boundary

Boundary defining Special Flood Hazard Areas of different base flood elevations; flood depths are not shown.

Base Flood Elevation line and values; elevation in feet

Rise Flood Elevation value where within zone; elevation in feet

Horizontal to the North American Vertical Datum of 1988

Vertical section line

Trained line

Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere

100-foot contour (National Hydrographic Survey values, zone 18)

North arrow (see explanation in Notes to Users section of this FIS report)

Map Scale

**MAP REPRODUCTION**

Refer to listing of Map Reproduction on Map Index

**EFFECTIVE DATE OF COMMUNITY FLOOD INSURANCE RATE MAP**

JUNE 16, 2006

**EFFECTIVE DATE OF REVISIONS TO THIS PANEL**

JUNE 16, 2006

For community map revision history prior to community mapping, refer to the Community Map History information in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or visit the National Flood Insurance Program at 1-800-635-6020.

**MAP SCALE 1" = 1000'**

0 100 200 300 400 500 600 700 800 900 1000 FEET

0 100 200 300 400 500 600 700 800 900 1000 METERS

**NATIONAL FLOOD INSURANCE PROGRAM**

**PANEL 0395D**

**FIRM**

**FLOOD INSURANCE RATE MAP**

**LONOKE COUNTY, ARKANSAS, AND INCORPORATED AREAS**

**PANEL 395 OF 575**

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

**COMMUNITY:** LONOKE COUNTY

**COMMUNITY CODE:** 00048

**SUFFIX:** D

**MAP NUMBER:** 05085C0395D

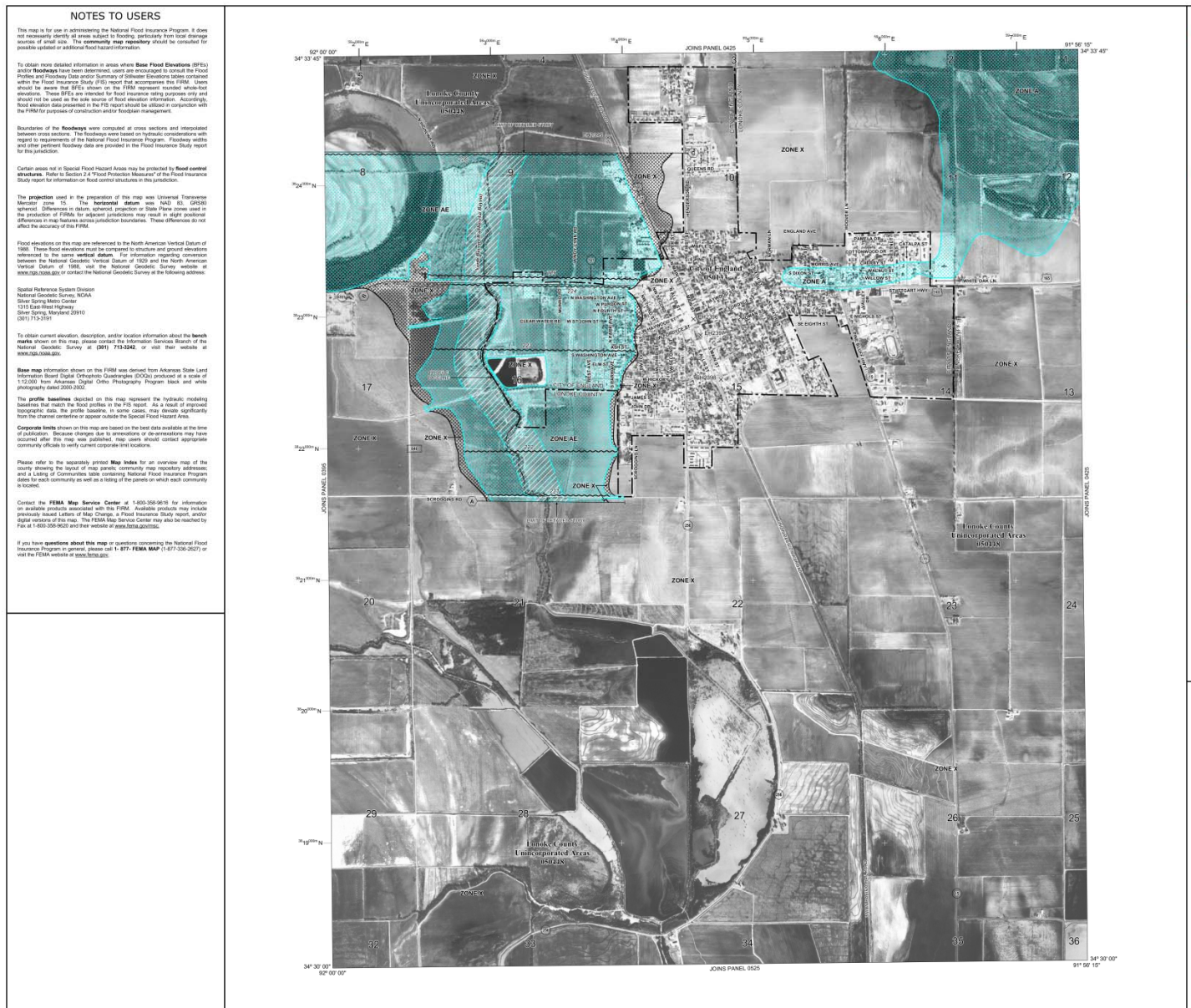
**EFFECTIVE DATE:** JUNE 16, 2006

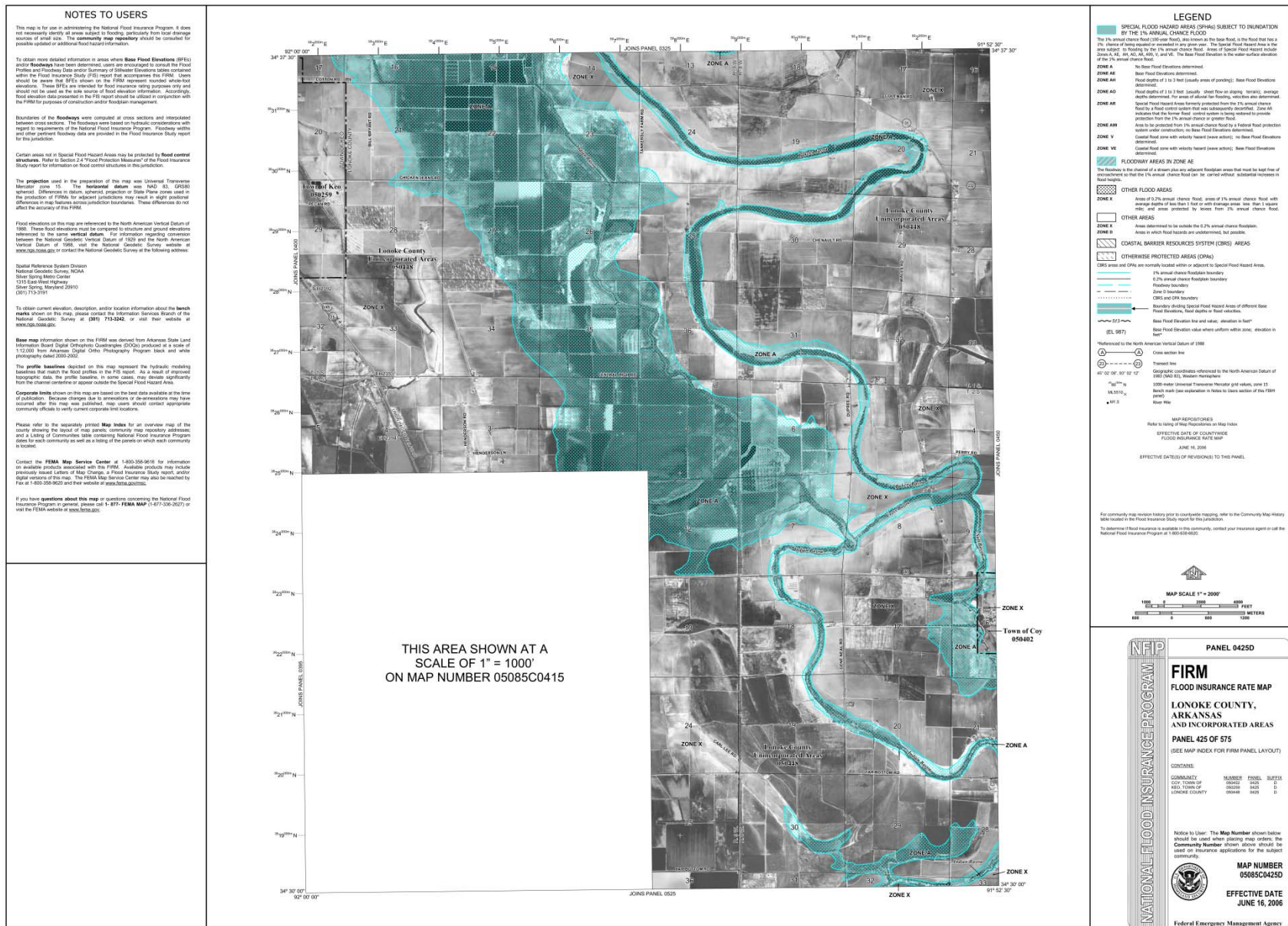
**Federal Emergency Management Agency**













**NOTES TO USERS**

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources or wind action. The community may wish to consult this map for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations (BFEs)** are shown, users should refer to the Flood Insurance Study (FIS) report that accompanies this map. Users should also refer to the FIS report for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be subject to comparison with the FIS report for purposes of correction and/or flood management.

Boundaries of the **Flowage** were compiled at cross sections and interpolated between cross sections. The flowage were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Flowage widths and other pertinent flowage data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures in this jurisdiction.

The projection used in the preparation of this map was Universal Transverse Mercator (UTM) zone 18. The horizontal datum was NAD 83 (G2011) spheroid. Differences in datum, spheroid, projection or State Plane zones used in the production of FISs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIS.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at [www.ngs.noaa.gov](http://www.ngs.noaa.gov) or contact the National Geodetic Survey at the following address:

National Geodetic Survey  
Silver Spring, Maryland 20910  
12155 East-West Highway  
Silver Spring, Maryland 20910  
(301) 713-3359

To obtain current elevation, description, and/or location information about the **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3362 or visit their website at [www.ngs.noaa.gov](http://www.ngs.noaa.gov).

**Base map** information shown on this FIS was derived from Arkansas State Land Information System Digital Orthophoto Quadrangles (DOQs) produced at a scale of 1:12,000 from Arkansas Digital Orthophoto Projection black and white photography dated 2003-2007.

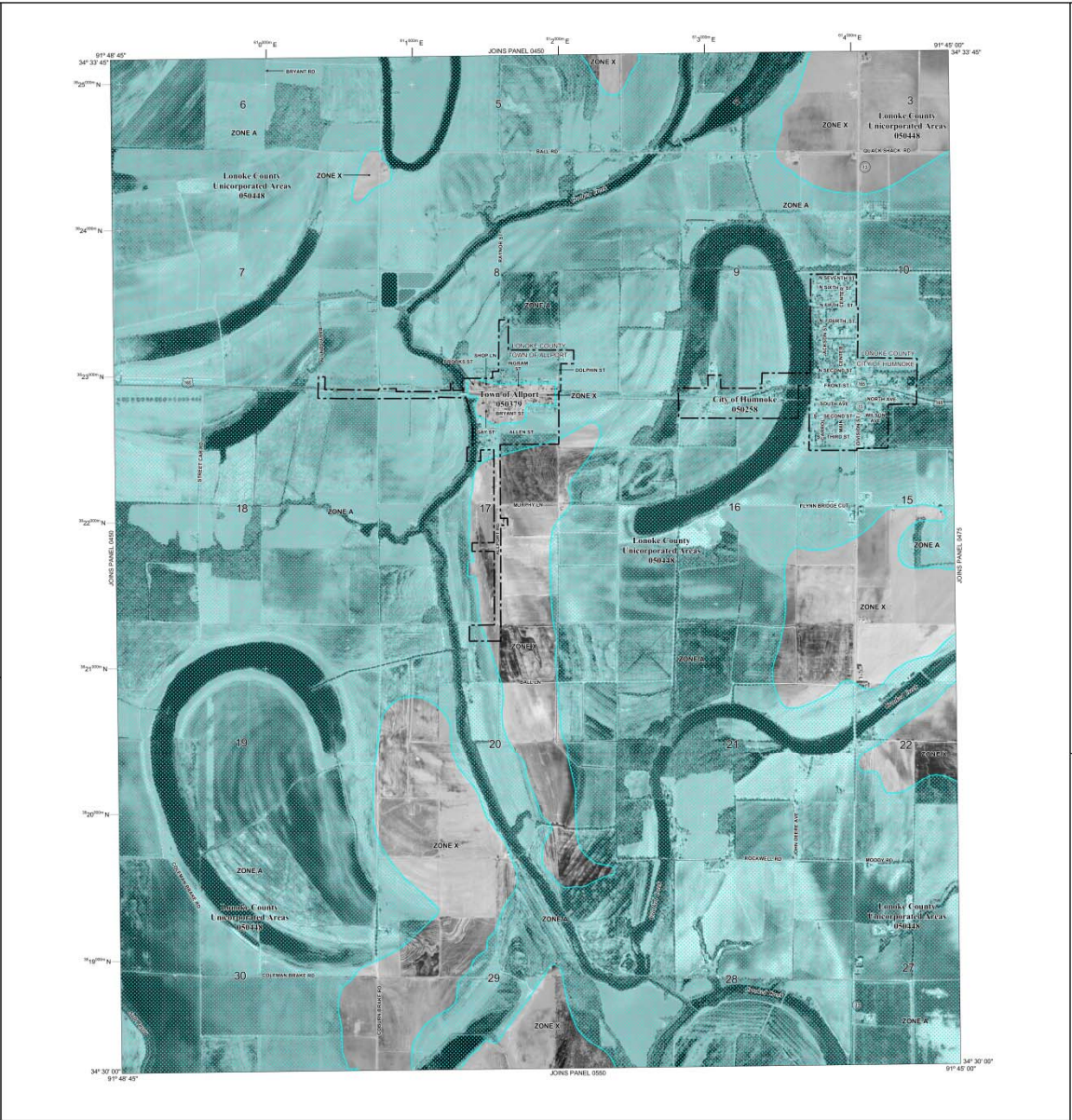
The **profile lines** depicted on this map represent the hydraulic modeling technique that results in the flood profile in the FIS report. As a result of improved topographic data, the profile lines, in some cases, may deviate slightly from the channel centerline or appear outside the Special Flood Hazard Area.

**Corporate limits** shown on this map are based on the latest data available at the time of publication. Because changes due to annexation or deannexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the location of map sheets, community map inventory addresses, and a listing of communities participating in the National Flood Insurance Program as well as a listing of the panels on which each community is located.

Contact the **FEMA Map Service Center** at 1-800-358-9616 for information on available products associated with this FIS. Available products may include previously issued editions of this FIS, the FIS report, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and their website at [www.fema.gov](http://www.fema.gov).

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call 1-877-FEMA-Map (1-877-336-2627) or visit the FEMA website at [www.fema.gov](http://www.fema.gov).



**LEGEND**

**SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD**

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachments to allow the 1% annual chance flood to be carried without substantial increases in flood heights.

**OTHER FLOOD AREAS**

**Zone A:** Areas of 1% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile, and areas protected by levees from the 1% annual chance flood.

**Zone B:** Areas determined to be outside the 1% annual chance floodplain; areas in which flood heights are undetermined, but possible.

**COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS**

**OTHERWISE PROTECTED AREAS (OPAs)**

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard areas.

**Flowage:** The boundary of a flowage is the boundary of the 1% annual chance floodplain boundary.

**Zone D boundary:** Zone D boundary.

**CBRS and OPA boundary:** CBRS and OPA boundary.

**Base Flood Elevation (BFE) and water elevation in feet:** Base Flood Elevation values shown within white circles; elevation in feet.

**Map Scale:** 1" = 100'

**Map Index:** Refer to listing of Map Index for an overview map of the county showing the location of map sheets, community map inventory addresses, and a listing of communities participating in the National Flood Insurance Program as well as a listing of the panels on which each community is located.

**Effective Date of Community Flood Insurance Rate Map:** JUNE 16, 2006

**Effective Date of Revisions to This Panel:** JUNE 16, 2006

**For community map inventory listing to coordinate mapping, refer to the Community Map Inventory listing in the Flood Insurance Study report for this jurisdiction.**

**To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-8625.**

**NATIONAL FLOOD INSURANCE PROGRAM**

**PANEL 0445D**

**FIRM**

**FLOOD INSURANCE RATE MAP**

**LONOKE COUNTY, ARKANSAS AND INCORPORATED AREAS**

**PANEL 445 OF 575**

**(SEE MAP INDEX FOR FIRM PANEL LAYOUT)**

**CONTAINS:**

COMMUNITY	NUMBER	PANEL	SUFFIX
ALPHEA TOWN OF	050276	0445	12 D
HUMBLET CITY OF	050258	0445	12 D
LONOKE COUNTY	050448	0445	12 D

**Notice to User:** The Map Number shown below should be used when placing map orders. The Community Number shown above should be used on insurance applications for the subject community.

**MAP NUMBER**  
05085C0445D

**EFFECTIVE DATE**  
JUNE 16, 2006

**Federal Emergency Management Agency**







## NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage basins or small creeks. The community may reasonably desire to consider for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevation (BFE)** is shown, refer to the **Base Flood Elevation (BFE)** data and the **Base Flood Elevation (BFE)** data and the **Base Flood Elevation (BFE)** data. These BFEs are provided for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data shown on this map should be used in conjunction with the BFE for purposes of construction and flood management.

Boundaries of the floodways were computed at cross sections and associated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway walls and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures in this jurisdiction.

The projection used in the preparation of this map was Universal Transverse Mercator (UTM) zone 15. The horizontal datum was NAD 83 (GRS80) spheroid. Differences in datum, spheroid, projection or State Plane zones used in the production of BFEs for adjacent jurisdictions may result in slight additional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this BFE.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structures and ground elevations referenced to the same vertical datum. For information regarding conversion between the National Geospatial Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geospatial Survey website at [ngeo.gov/vertical](http://ngeo.gov/vertical) or contact the National Geospatial Survey at the following address:

Special Reference System Division  
National Geospatial Survey, NOAA  
Silver Spring Metro Center  
1215 East-West Highway  
Silver Spring, Maryland 20910  
(301) 713-2957

To obtain current elevation, description, and/or location information about the **bench marks** shown on this map, please contact the Information Services Branch of the National Geospatial Survey at (301) 713-2442, or visit their website at [ngeo.gov/bench](http://ngeo.gov/bench).

**Base map** information shown on this map was derived from Arkansas State Land Information System Digital Orthophoto Quarter-Scale (DOQs) produced at a scale of 1:12,000 from Arkansas Digital Orthophoto Program black and white photography dated 2003-2002.

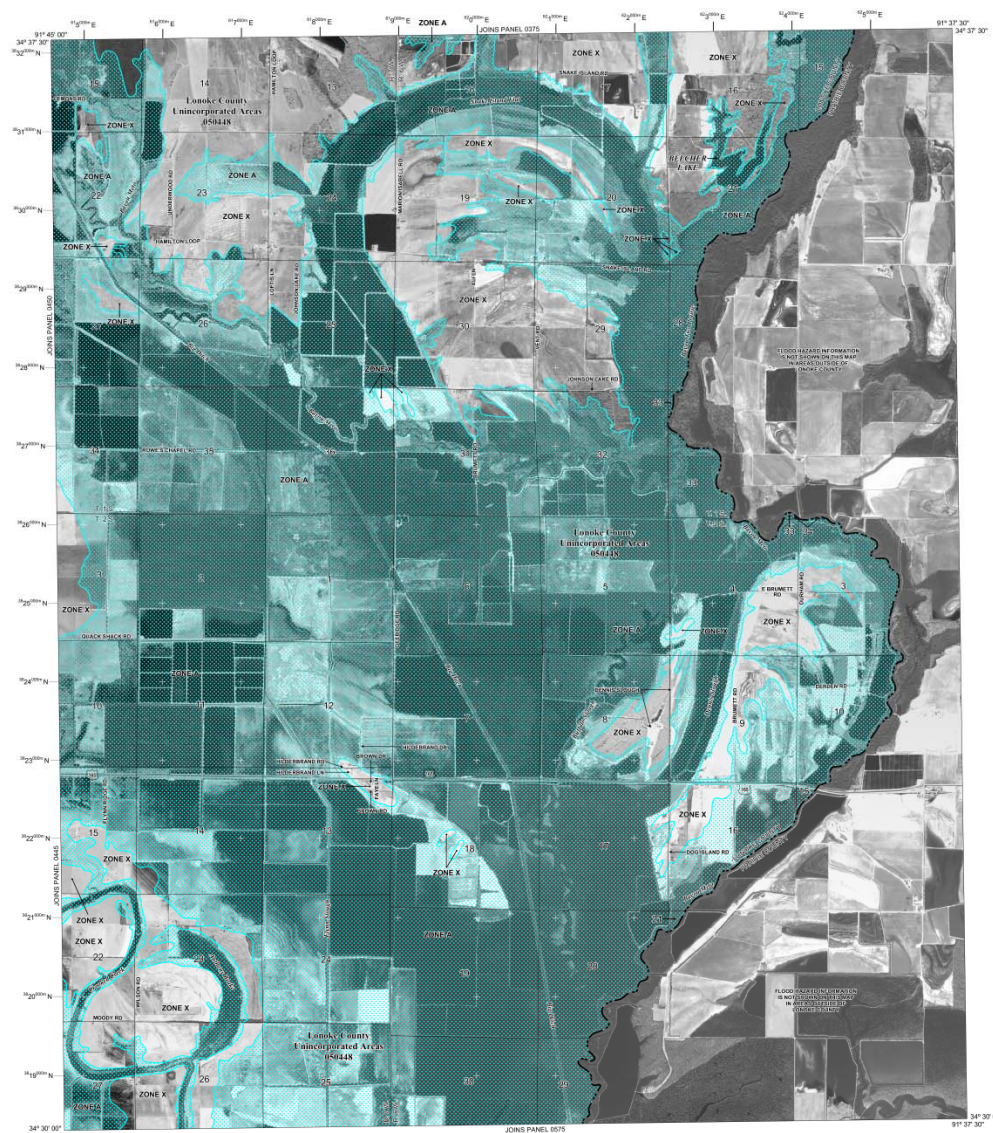
The **profile baselines** depicted on this map represent the hydraulic modeling baselines that result in the flood profile in the BFE report. As a result of improved topographic data, the profile baselines, in some cases, may change significantly from the channel centerline or other outside the Special Flood Hazard Area.

**Corporate limits** shown on this map are based on the best data available at the time of publication. Boundary changes due to annexation or de-annexation may have occurred after this map was published. Map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the location of map sheets, community map repository addresses, and a listing of Communities with National Flood Insurance Program status for each community as well as a listing of the panels on which each community is located.

Contact the **PFMA Map Service Center** at 1-800-358-0616 for information on available products associated with this BFE. Available products may include previously issued Letters of Map Change or Flood Insurance Study report, and/or digital version of this map. The PFMA Map Service Center may also be reached by Fax at 1-800-358-0620 and their website at [www.pfma.gov](http://www.pfma.gov).

If you have questions about this map or questions concerning the National Flood Insurance Program in general, please call 1-877-FEMA-MAP (1-877-368-6227) or visit the PFMA website at [www.pfma.gov](http://www.pfma.gov).



## LEGEND

### SPECIAL FLOOD HAZARD AREAS (SFHA) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (also known as the base flood) is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard subject to the 1% annual chance flood are shown on this map.

**Zone A:** Areas with a base flood elevation (BFE) of 1 to 3 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone X:** Areas with a base flood elevation (BFE) of 4 to 6 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone V:** Areas with a base flood elevation (BFE) of 7 to 9 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone D:** Areas with a base flood elevation (BFE) of 10 to 12 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone S:** Areas with a base flood elevation (BFE) of 13 to 15 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone C:** Areas with a base flood elevation (BFE) of 16 to 18 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone E:** Areas with a base flood elevation (BFE) of 19 to 21 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone F:** Areas with a base flood elevation (BFE) of 22 to 24 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone G:** Areas with a base flood elevation (BFE) of 25 to 27 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone H:** Areas with a base flood elevation (BFE) of 28 to 30 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone I:** Areas with a base flood elevation (BFE) of 31 to 33 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone J:** Areas with a base flood elevation (BFE) of 34 to 36 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone K:** Areas with a base flood elevation (BFE) of 37 to 39 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone L:** Areas with a base flood elevation (BFE) of 40 to 42 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone M:** Areas with a base flood elevation (BFE) of 43 to 45 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone N:** Areas with a base flood elevation (BFE) of 46 to 48 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone O:** Areas with a base flood elevation (BFE) of 49 to 51 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone P:** Areas with a base flood elevation (BFE) of 52 to 54 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone Q:** Areas with a base flood elevation (BFE) of 55 to 57 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone R:** Areas with a base flood elevation (BFE) of 58 to 60 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone S:** Areas with a base flood elevation (BFE) of 61 to 63 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone T:** Areas with a base flood elevation (BFE) of 64 to 66 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone U:** Areas with a base flood elevation (BFE) of 67 to 69 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone V:** Areas with a base flood elevation (BFE) of 70 to 72 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone W:** Areas with a base flood elevation (BFE) of 73 to 75 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone X:** Areas with a base flood elevation (BFE) of 76 to 78 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone Y:** Areas with a base flood elevation (BFE) of 79 to 81 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone Z:** Areas with a base flood elevation (BFE) of 82 to 84 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone AA:** Areas with a base flood elevation (BFE) of 85 to 87 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone AB:** Areas with a base flood elevation (BFE) of 88 to 90 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone AC:** Areas with a base flood elevation (BFE) of 91 to 93 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone AD:** Areas with a base flood elevation (BFE) of 94 to 96 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone AE:** Areas with a base flood elevation (BFE) of 97 to 99 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone AF:** Areas with a base flood elevation (BFE) of 100 to 102 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone AG:** Areas with a base flood elevation (BFE) of 103 to 105 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone AH:** Areas with a base flood elevation (BFE) of 106 to 108 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone AI:** Areas with a base flood elevation (BFE) of 109 to 111 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone AJ:** Areas with a base flood elevation (BFE) of 112 to 114 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone AK:** Areas with a base flood elevation (BFE) of 115 to 117 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone AL:** Areas with a base flood elevation (BFE) of 118 to 120 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone AM:** Areas with a base flood elevation (BFE) of 121 to 123 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone AN:** Areas with a base flood elevation (BFE) of 124 to 126 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone AO:** Areas with a base flood elevation (BFE) of 127 to 129 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone AP:** Areas with a base flood elevation (BFE) of 130 to 132 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone AQ:** Areas with a base flood elevation (BFE) of 133 to 135 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone AR:** Areas with a base flood elevation (BFE) of 136 to 138 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone AS:** Areas with a base flood elevation (BFE) of 139 to 141 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone AT:** Areas with a base flood elevation (BFE) of 142 to 144 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone AU:** Areas with a base flood elevation (BFE) of 145 to 147 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone AV:** Areas with a base flood elevation (BFE) of 148 to 150 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone AW:** Areas with a base flood elevation (BFE) of 151 to 153 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone AX:** Areas with a base flood elevation (BFE) of 154 to 156 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone AY:** Areas with a base flood elevation (BFE) of 157 to 159 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone AZ:** Areas with a base flood elevation (BFE) of 160 to 162 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone BA:** Areas with a base flood elevation (BFE) of 163 to 165 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone BB:** Areas with a base flood elevation (BFE) of 166 to 168 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone BC:** Areas with a base flood elevation (BFE) of 169 to 171 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

**Zone BD:** Areas with a base flood elevation (BFE) of 172 to 174 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.

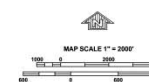
**Zone BE:** Areas with a base flood elevation (BFE) of 175 to 177 feet (locally areas of ponding). Base Flood Elevation (BFE) is shown on this map.









[illegible][illegible]

PANEL 0550D

# FIRM

## FLOOD INSURANCE RATE MAP

LOONEKE COUNTY,  
ARKANSAS  
AND INCORPORATED AREAS

MAP NUMBER 550 OF 575

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

### CONTROLS:

COMMUNITY	NUMBER	PANEL	SUFFIX
LOONEKE COUNTY	00448	0550	D

Notice of User: The Map Number shown below should be used when placing any orders. The Community Number shown above should be used on insurance applications to be subject community.

MAP NUMBER  
05083C0550D

EFFECTIVE DATE  
JUNE 15, 2006

Federal Emergency Management Agency



