RESOLUTION # _____

A RESOLUTION ADOPTING THE SALINE COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN FOR BRYANT, SALINE COUNTY ARKANSAS.

WHEREAS, certain areas of Saline 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 Bryant City Council 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, Saline County, with the assistance of Central Arkansas Planning and Development District, has initiated development of a 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 Bryant City Council

That the Bryant City Council of Bryant, Arkansas adopts those portions of the Plan relating to and protecting its jurisdictional area against all hazards 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 _____, 2025

ATTEST: APPROVED:

_____ _____

City Clerk Mark Smith Mayor Chris Treat

Saline County Multi-Jurisdictional Hazard Mitigation Plan Update

A joint effort between Saline County, City of Alexander, Bauxite, Benton, Bryant, Haskell, Shannon Hills, Traskwood, and the Bauxite, Benton, Bryant, Harmony Grove and Sheridan School Districts.

Coordinated by Central Arkansas Planning and Development District

Approved Pending Adoption

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A: PLANNING PROCESS

A1. Plan Preparation and Participants.

The original Saline County Multi-Jurisdictional Plan was developed by Saline County with the assistance of Central Arkansas Planning and Development District and approved by FEMA on April 28, 2009. Saline County initiated the Hazard Mitigation planning process by securing a FEMA HMGP grant to complete the Plan. Saline County contracted with Central Arkansas Planning and Development District (CAPDD) to author the plan. Saline County Office of Emergency Management and CAPDD worked together to engage the county, cities, communities, and school district in the planning process.

The Saline County Hazard Mitigation Plan Update will be used to develop and assess the ongoing natural hazard mitigation activities in Saline 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 the unincorporated Saline County and the municipalities within the County including the Cities of Alexander, Bauxite, Benton, Bryant, Haskell, Shannon Hills and Traskwood. This plan also includes the School Districts located within Saline County: Bauxite, Benton, Bryant, Harmony Grove and Sheridan School Districts.

Those who actively participated in the Saline County Plan Update.

First Name	Last Name	Title	Jurisdiction	Mailing Address	Physical Address	City	Zip	Phone
Samantha	Leach	Mitigation Planner	ADEM	Building #9501 Camp Joseph T. Robinson	Building #9501 Camp Joseph T. Robinson	NLR	72199	501-683-2727
Doug	Quinn	Director of Student/Support Services	Bauxite School District	800 School Street	800 School Street	Bauxite	72011	
Matt	Donaghy	Superintendent	Bauxite School District	800 School Street	800 School Street	Bauxite	72011	501-557-5453
Mike	Skelton	Superintendent	Benton School District	207 W. Conway	207 W. Conway	Benton	72015	501-778-4861
Greg	Little	Benton School District	Benton School District	207 W. Conway	207 W. Conway	Benton	72015	501-778-4861
Karen	Walters	Superintendent	Bryant School District	200 NW 4th Street	1511 N. Reynolds Road	Bryant	72022	501-847-5600
Todd	Sellers	Deputy Superintendent	Bryant School District	200 NW 4th Street	1511 N. Reynolds Road	Bryant	72022	501-847-5600
Tanya	Childers	Program Manager	Central Arkansas Planning & Dev. District	P. O. Box 300	902 N. Center Street	Lonoke	72086	501-676-2721
Leigh	Pool	Director of Enviro. Mgmt.	Central Arkansas Planning & Dev. District	P. O. Box 300	902 N. Center St	Lonoke	72086	501-676-2721
Crystal	Herrmann	Mayor	City of Alexander	P. O. Box 610	15605 Alexander Road	Alexander	72002	501-455-2585
Eddie	Jones	Mayor	City of Bauxite	P. O. Box 303	6055 Stanley Circle	Bauxite	72011-9998	501-557-5184
Tom	Farmer	Mayor	City of Benton	P. O. Box 607	114 S. East Street	Benton	72018-0607	501-776-5905
John	Ritchey	City of Benton	City of Benton	P. O. Box 607	114 S. East Street	Benton	72018-0607	501-776-5990
Chris	Treat	Mayor	City of Bryant	210 S. W. Third	210 S. W. Third	Bryant	72022	501-943-0422

Clyde	Crookman, Jr.	Mayor	City of Haskell	3905 Hwy 229	2520 Hwy 229	Benton	72015	501-776-2666
Nancy	Duren	Public Works Director	City of Haskell	3905 Hwy 229	2520 Hwy 229	Benton	72015	479-651-0423
Mike	Kemp	Mayor	City of Shannon Hills	10401 High Road East	10401 High Road East	Shannon Hills	72103	501-455-2003
Kimberly	Gammill	Mayor	City of Traskwood	P. O. Box 36	118 Walnut St.	Traskwood	72167	501-860-7757
Heath	Bennett	Superintendent	Harmony Grove School District	2621 Highway 229	2621 Highway 229	Benton	72015	501-778-6271
Matt	Brumley	County Judge	Saline County	200 North Main Street, Suite 117	200 North Main Street, Suite 117	Benton	72015	501-303-5640
Trevor	Villines	Saline Co Communications Director	Saline County	200 North Main	200 North Main	Benton	72015	501-326-4591
Jerry	Cohen	Director	Saline County OEM	102 S Main St, Level B	102 S Main St, Level B	Benton	72015	501-303-5649
Jolene	Palmer	Administrative Asst.	Saline County OEM	102 S Main St, Level B	102 S Main St, Level B	Benton	72015	501-303-5649
Stuart	Duke	Deputy Director	Saline County OEM	102 S Main St, Level B	102 S Main St, Level B	Benton	72015	501-722-2580
Jeff	Stroud	Road Superintendent	Saline County Road Department	5555 Cynamide Road	555 Cynamide Road	Benton	72015	501-317-2408
Brett	Koder	Assistant Road Superintendent	Saline County Road Department	5555 Cynamide Road	555 Cynamide Road	Benton	72015	501-326-0792
Chad	Pitts	Superintendent	Sheridan School District	400 North Rock Street	400 North Rock Street	Sheridan	72150	870-942-3135
Dennis	Emerson	Sheridan School District	Sheridan School District	400 North Rock Street	400 North Rock Street	Sheridan	72150	870-942-5522

A2. Participation Opportunities

Saline County's mitigation planning process was initiated on January 14, 2022, when Saline County was awarded a Hazard Mitigation Grant Program (HMGP) grant by FEMA through Arkansas Division of Emergency Management, under Saline County Judge. Saline County negotiated a contract with Central Arkansas Planning and Development District to facilitate their mitigation planning efforts. Central Arkansas Planning and Development District served as facilitator and Saline County OEM Director led the planning effort.

Once all participating cities and school districts which fall within the borders of Saline County formally agreed to participate, an initial Hazard Mitigation Planning Team (HMPT) comprised of representatives from Saline County and participating jurisdiction was organized. This initial team was instructed to solicit interested people from their community to participate in the HMPT. This solicitation led to the addition of several HMPT members. The HMPT members include representatives from County government, local city governments, public works officials, emergency management officials, local floodplain managers, communication specialists, fire districts and school districts. All participating jurisdictions actively participated in the planning process through soliciting input from their communities and participation in meetings. If a participant could not attend a meeting, all minutes and materials were mailed out to the jurisdiction. The Saline County Hazard Mitigation Planning Team also discussed mitigation actions, projects, and past hazard occurrences with CAPDD during virtual meetings, conference calls and one-on-one calls and meetings.

Three 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 Division of Emergency Management (ADEM) by receiving training at workshops provided by ADEM and FEMA. Technical assistance regarding 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 in hard copy by the HMPT members, posted on various websites and available for online completion.

In summary, the planning process consisted of the following items:

- County appointed a Hazard Mitigation Planning Team (HMPT) consisting of mayors and city personnel, school personnel, local floodplain managers, fire department members, emergency workers, street and road departments, planning and development district employees, and LEPC/Citizens Corp Members.
- County engaged the 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 HMPT to understand and agree on planning processes and steps required, including organizing resources, assessing hazards, developing a mitigation plan, and implementing the plan and monitoring progress.

- 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 Saline County OEM reached out directly via email to the OEMs of the surrounding Counties of Pulaski, Grant and Faulkner inviting their participation and providing a draft of the plan for review.
- Public Notices including an invitation to the next HMPT Meeting and a link to an online survey for public, business, academia, and other private and non-profit interests was posted on the CAPDD website, Saline County website. The notice was also published on websites by some of the participating jurisdictions.

The Planning Committee utilized these technical documents:

- The Arkansas Hazard Mitigation Plan was used as a guidance tool for past occurrences and risk assessments.
- Local Floodplain Ordinances for each NFIP Participating jurisdiction to maintain compliance, especially for mitigation actions.
- Saline County Emergency Operations Plan was used to better understand how Saline 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.
- 2017 Saline County Hazard Mitigation Plan
- FEMA Local Mitigation Planning Policy Guide (April 2023)
- FEMA Local Mitigation Planning Handbook (May 2023)
- FEMA Local Mitigation Plan Review Guide (2023)

Timeline:

1. A FEMA Pre-Disaster Mitigation Planning Grant was awarded on January 14, 2022.

2. The contract between Saline County and CAPDD was executed on January 20, 2022.

3. Memorandum of Understanding was signed between Saline County and the Arkansas Department of Emergency Management on January 19, 2022.

4. The first organized planning meeting was held April 13, 2022, via zoom and in person at the office of CAPDD, 902 N. Center Street, Lonoke, AR 72086. Each person in attendance received or was emailed a workbook containing a copy of the PowerPoint, a HMPT Survey and Community Surveys to distribute to the community (and the link for social media/websites). The PowerPoint including an overview of the planning process was presented, and then the floor was opened for discussion and a questions and answer session. Saline County Hazard Mitigation Questionnaires were dispersed, and participants were asked to forward this information to co-workers and the public.

5. The second meeting was held August 10, 2022, at 9:00 am, held at the Saline County OEM office located at 102 S. Main Street in Benton. A PowerPoint addressing Task 5- Risk Assessment and Critical Facilities, Task 6 Develop a Mitigation Strategy and Task 7 Keeping Plan Updated was

covered. Jurisdictions were given critical facility maps from the previous plan along with materials to make any changes/updates. Information on risk assessment development, risks and impacts, the location areas, extent of the magnitude and discussion of probability of future events and identifying the community assets. Mitigation Goals, Mitigation Action, and Action Plan were also discussed. Each jurisdiction was given a copy of the previous version of the mitigation action table and provided input regarding the status of those actions. The HMPT also developed their new mitigation actions at this meeting. For those not able to attend the meeting, the materials discussed were email. As was a reminder to complete and submit Surveys. And a spreadsheet with Mitigation Action asking for updated information was emailed as well.

6. The third meeting was held April 3, 2024, at 9:30 am at the Saline County OEM office located at 102 S. Main Street in Benton. The purpose of the meeting was to discuss and confirm that the Plan covers all hazards affecting Saline County. Much of the meeting was spent discussing what Mitigation Actions should be added or carried over to the updated Plan.

7. A final draft of the Plan was provided to the HMPT for review before official FEMA approval or adoption as an opportunity to provide even more input to affect the plan's content.

Meeting Materials are available upon request from Central Arkansas Planning and Development District.

Each jurisdiction and public schools were directly invited to participate and asked to invite other stakeholders to join in the planning process. Each jurisdiction was provided with a survey at which time they were asked to provide contact information for stakeholders and planning team recommendations. Public notices were submitted to the Benton Courier, the local newspaper, and promoted through Saline County OEM and CAPDD's website and Social Media. Initial jurisdiction notified and participated in the Kick-off meeting.

First Name	Last Name	Title	Jurisdiction
Jeff	Arey	County Judge	Saline County
Paul	Mitchell	Mayor	City of Alexander
Harold	Jones	Mayor	City of Bauxite
Tom	Farmer	Mayor	City of Benton
Roy	Carman	Mayor	City of Haskell
Allen	Scott	Mayor	City of Bryant
Mike	Kemp	Mayor	City of Shannon Hills
Michael	Nash	Mayor	City of Traskwood
Doug	Quinn	Deputy Superintendent	Bauxite School District
Matt	Donaghy	Superintendent	Bauxite School District
Mike	Skelton	Superintendent	Benton School District
Karen	Walters	Superintendent	Bryant School District
Heath	Bennett	Superintendent	Harmony Grove School District
Chad	Pitts	Superintendent	Sheridan School District
Tanya	Childers	Program Manager	CAPDD
Jennifer	Oakley	Mitigation Planner	ADEM
Brandon	Guillot	Director	Saline County

A3. Public Participation

As stated above, the meetings were published in the paper and shared on the County OEM Website and social media.

During the development of the plan update, the HMPT was provided with a three-page survey titled "Saline County Natural Hazards Questionnaire" to distribute to the community, businesses, nonprofits and neighboring communities, underserved areas and vulnerable populations for input. In addition, a Public Notice was posted in the Saline County Courier (a weekly county-wide newspaper), the Central Arkansas Planning & Development, Saline County (OEM) Website and Saline County Facebook page and the Central Arkansas Planning and Development District website. Notices were provided to all the attendees and potential participants at the first meeting and were asked to distribute to citizens, businesses, neighboring communities, Community Organizations and Nonprofits. The notice provided a link for people to complete the survey on the web, a link to the original Saline County Hazard Mitigation Plan, and invited citizens to attend the August 10, 2022, HMPT meeting. The notice also gave contact information for questions or more information.

There were 102 people who participated in the questionnaire. The questionnaire included the following:

Timestamp, Please indicate the municipality you reside in:
School District you reside in:
You are responding as a:
Have you ever experienced or been impacted by a disaster? Yes or No; If yes, please explain.,
How concerned are you about the possibility of your neighborhood being impacted by a disaster?
Please explain your answer above.
Is your home located in a FEMA designated floodplain?
Do you have a flood insurance policy for your home?
If you do not have flood insurance, why not?
What is the most effective way for you to receive information about protecting your family and preparing your home from hazard events?

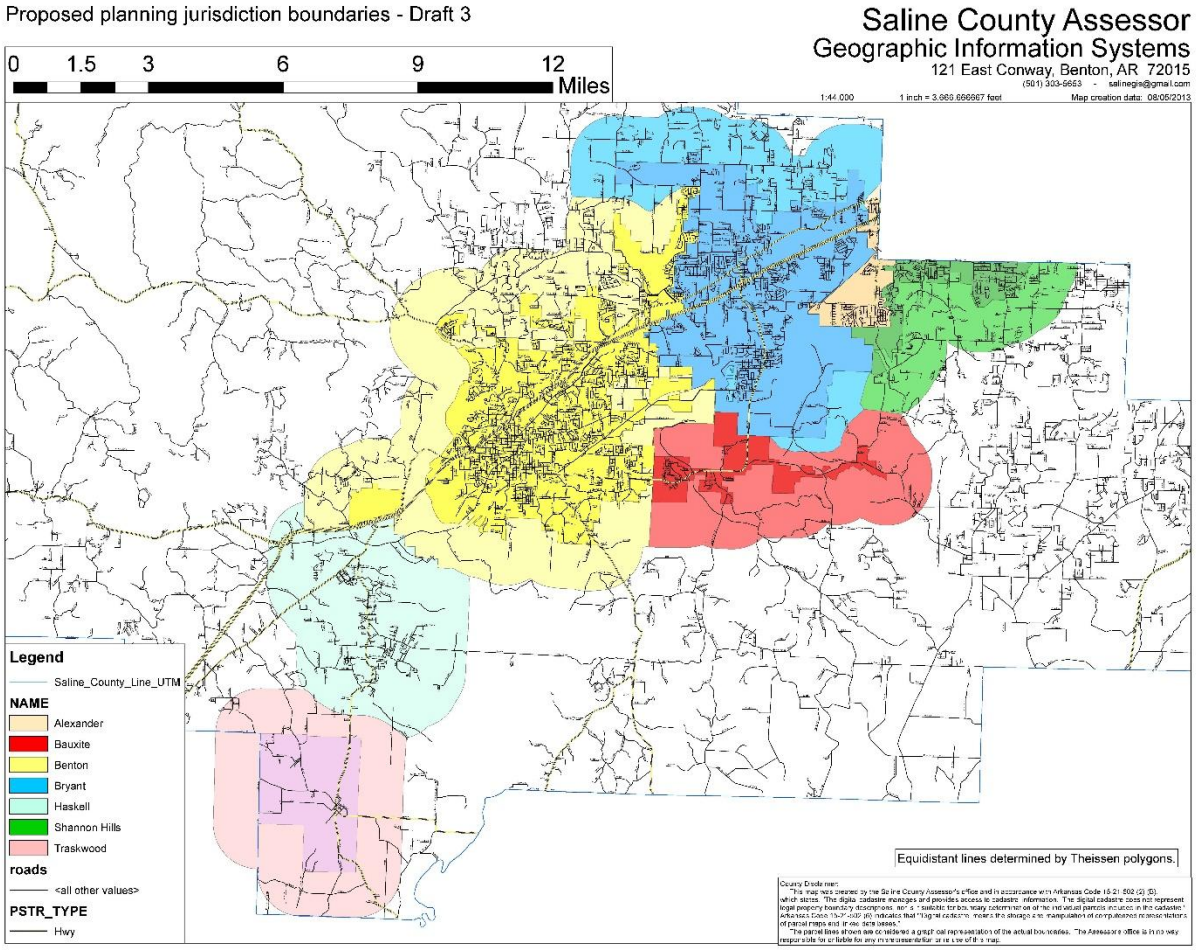
The questionnaire then asked participants to rate the level of concern for each targeted natural hazard: rating them 1 to 5, lowest concern being 1. Then continued with if there were any other hazards that should be considered and specific questions regarding the hazards and how they would mitigate against such disasters. The full Questionnaire with responses can be found in Appendix C.

The natural hazards that concerned the public were drought, floods, tornadoes, thunderstorm winds, lightning and hail, and winter storms. The information from these questionnaires was given to the planning members, and mitigation actions were developed from these natural hazards.

After the completion of the planning meetings, the draft plan was provided on the Central Arkansas Planning and Development District (CAPDD) website www.capdd.org under "resources", FEMA Mitigation Plans – Saline County DRAFT for any additional input from surrounding communities, the public, businesses, state and local agencies, and anyone else wishing to review.

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

A4. Planning Area and Resources



A4.1 General Land Use/Analyzing Development Trends

There has been significant growth in population and development that has increased the impact of natural disasters on the community's infrastructure, people, and economy. All areas of Saline County have experienced growth. This obviously increases the risk because more property and lives are exposed to hazards. The number of residential structures, businesses, public buildings, as well as school district facilities increased in all jurisdictions. However, the planning jurisdictions are careful to evaluate the potential impacts development will have for its jurisdiction. In other words, new developments go through a rigorous authorization process before a building permit is given. There have also been changes in the area due to the mitigation actions in the previous mitigation plan, and they have resulted in a reduced vulnerability to the hazards. 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 affects the impact to the community's infrastructure, people, and economy in respect to that hazard.

A4.2 Capabilities Assessment

Personnel:

Saline County has an Emergency Manager and associated emergency management program. The Saline County Office of Emergency Services has the capability to conduct mitigation planning, apply for grant funding and oversee mitigation projects. Augmenting local emergency management capabilities, Area Coordinator acts as ADEM's liaison to the county for state and federal mitigation and emergency management initiatives and available funding opportunities.

The smaller cities within Saline county typically work through their police and fire departments to assist with natural disasters and other emergencies. These partnerships are necessary to successfully prepare, respond and mitigate the effects of natural disasters.

Technical:

Saline County has technical capabilities related to planning, engineering, mapping and response and offers technical assistance to the smaller cities.

Fiscal:

The county and cities have limited funding sources for mitigation initiatives and rely on available state or federal grant programs.

Building Codes:

Building codes set a reference point for the design and construction of all structures, providing minimum safe building practices to ensure occupant safety and structure resiliency. Enforced building codes are one of the most effective hazard mitigation tools available against a wide variety of hazards.

The following chart indicates the plans that each jurisdiction follows

Jurisdiction	Planning and Regulatory Capabilities													
	Comprehensive / Master Plans	Local Emergency Operations Plan	Continuity of Operations Plan	Road Foreman/ St. Dept.	Stormwater Management Plan	Community Wildfire Protection Plan	Building Codes	Fire Department ISO Rating	Development Ordinance	Site Plan Review Requirements	Master Road and Land Use Plan	Floodplain Management Plan	Hazard Data & Info Database	Community Zoning and Land Use Plan
Saline County	X	X	X	X	X		X	X				X	X	
Alexander	X	X	X	X	X		X	2		X		X		X
Bauxite	X	X		X	X		X			X				
Bryant	X	X	X	X	X		X	1	X	X		X	X	X
Benton	X	X		X	X		X	X	X	X	X	X		X
Haskell	X	X		X	X		X			X		X		
Shannon Hills	X	X		X	X		X	4		X		X		
Traskwood	X	X		X	X		X	X		X				
Bryant S. D.			X											
Bauxite S. D.			X											
Benton S. D.														
Harmony Grove S. D.	X	X	X				X							
Sheridan S. D.			X											

Floodplain Development:

The following chart shows the information for each county/city and their status in the National Flood Insurance Program.

CID	Community Name	County	Init FHBM Identified	Init FIRM Identified	Curr Eff Map Date	Reg-Emer Date	CRS	CRS Entry Date	Curr Eff Date	Curr Class
050377B	Alexander, City of	Saline	4/18/1975	1/20/1982	6/5/2020	1/20/1982	no			
050527B	Bauxite, Town of	Saline		6/19/2012	6/5/2020	2/7/2018	no			
050192B	Benton, City of	Saline	11/16/1973	12/15/1981	6/5/2020	12/15/1981	no			
050308B	Bryant, City of	Saline	6/27/1975	6/28/1977	6/15/2020	6/28/1977	yes	10/1/1992	5/1/2016	10
050416B	Haskell, City of	Saline	6/27/1975	8/19/1987	6/5/2020	8/19/1987	no			
050191B	Saline County	Saline	8/9/1977	11/17/1982	6/5/2020	11/17/1982	no			
050573B	Shannon Hills, City of	Saline		5/17/1982	6/5/2020	5/17/1982	no			
050294B	Traskwood, City of	Saline	4/18/1982	10/12/1982	6/5/2020	06/20/12(s)	no	(suspended from program)		

{The City of Traskwood is under new leadership and will be working toward reinstatement into the program.}

- Local floodplain ordinances are often used to prevent inappropriate development in floodplains and to reduce flood hazards. In general, they allow the jurisdiction:
- Minimize the extent of floods by preventing obstructions that inhibit water flow and increase flood height and damage
- Prevent and minimize loss of life, injuries and property damage in flood hazard areas.
- Promote the public health, safety and welfare of citizens in flood hazard areas.
- Manage planned growth
- Grant permits for use in development within special flood hazard areas that are consistent with the community ordinance and the NFIP under 44 CFR 60.3.

Local floodplain ordinances also make certain that the jurisdiction meets the minimum requirements of participation in the NFIP. The incentive for local governments adopting such ordinances is that they will afford their residents the ability to purchase flood insurance

through the NFIP. In addition, communities with such ordinances in place may be given priority in the consideration of applications for loans and grants.

Education and Awareness:

Hazard awareness programs, designed to inform citizens as to the nature and extent potential of hazards, is an effective way to inform citizens on mitigation related topics. As citizens are made more aware of potential hazards and the local and regional process to mitigate against their impacts, it was believed that they would take a stronger role in making their homes, neighborhoods, schools and business safer from the potential effects of natural hazards. Public outreach efforts were conducted as part of the hazard mitigation planning and continue through each required update.

A4.3. Incorporation of Existing Plans

The Saline County Hazard Mitigation Plan is an overarching document that is both composed of and contributes to various other local plans. In creating this HMP, all the planning documents identified below were consulted and reviewed in turn, when each of these other plans were updated, they will be measured against the contents of the SCHMP.

Below is a list of the local participants' various planning efforts, sole or jointly administered programs and documents. While each plan can stand alone, their review and functional understanding was pivotal in the development of this plan and further strengthened and improves the participant's resilience to disasters. Hazard Mitigation principles, risk information and mitigation actions have been integrated into other community plans. Mitigation Actions are used in planning budgets for Public Works Departments.

- Comprehensive Master Plan
- Land Use Plan
- Local Emergency Operations Plan
- Stormwater Management Plan
- Stream Management Plan
- Subdivision Management Plan
- Community Wildfire Protection Plan
- Economic Development Plan

Jurisdiction	Existing Plans
Saline County	Hazard Mitigation Plan, Emergency Response Plan, Continuity of Operations Plan, Upper Saline Watershed 9-Element Plan, Saline County Stormwater Management Plan, Saline County Master Road Plan (Land Use)
City of Alexander	Saline Co. HMP, Community Land Use Plan, Comprehensive/Master Plans, Local Emergency Operations Plan, Site Review Plan,
City of Bauxite	Hazard Mitigation Plan, Emergency Response Plan, Continuity of Operations Plan
City of Benton	Hazard Mitigation Plan, Emergency Response Plan, Continuity of Operations Plan

City of Haskell	Hazard Mitigation Plan, Emergency Response Plan, Continuity of Operations Plan
City of Bryant	Saline Co. HMP, Community Land Use Plan, Comprehensive/Master Plan, Continuity of Operations Plan, Floodplain Management Plan, Hurricane Lake Estates Hurricane Lake Dam Emergency Action Plan
City of Shannon Hills	Hazard Mitigation Plan, Emergency Response Plan, Continuity of Operations Plan
City of Traskwood	Hazard Mitigation Plan, Emergency Response Plan, Continuity of Operations Plan
Bauxite School District	Saline Co. HMP, Safe Room Operations Plan
Benton School District	Saline Co. HMP, Safe Room Operation's Plan,
Bryant School District	Saline Co. HMP, Safe Room Operations Plan, Continuity of Operations Plan,
Harmony Grove School District	Saline Co. HMP, Safe Room Operations Plan, Comprehensive/Master Plan updated 2022, Continuity of Operations Plan updated 2022.
Sheridan School District	Saline Co. HMP, Safe Room Operations Plan

The Saline County Hazard Mitigation Plan Update will be reviewed and integrated into existing plans by approval from the Quorum/City Council/School Board. The Hazard Mitigation Plan can also be used when developing the jurisdiction's annual budget for Mitigation education and awareness, new and existing construction, infrastructure improvements and for prioritizing grant development projects which also would need approval from the jurisdictional authority.

B: RISK ASSESSMENT

B1: Risk Assessment Identification

B1.1 Dam Failure

Description:

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." Dam Failures are most likely to happen for one of five reasons:

1) Overtopping caused by water spilling over the top of a dam. Overtopping of a dam is often a precursor of dam failure. National statistics show that overtopping due to inadequate spillway design, debris blockage of spillways, or settlement of dam crests account for approximately 34% of all U. S. dam failures.
2) Foundation Defects, including settlement and slope instability, cause about 30% of all dam failures.
3) Cracking caused by movements like the natural settling of a dam.
4) Inadequate maintenance and upkeep

5) Piping is when seepage through a dam is not properly filtered, and soil particles continue to progress and form sinkholes in the dam. Another 20% of U.S. dam failures have been caused by piping (internal erosion caused by seepage. Seepage often occurs around hydraulic structures, such as pipes and spillways; through animal burrows; around roots of woody vegetation; and through cracks in dams, dam appurtenances, and dam foundations.

According to the Arkansas Department of Agriculture – Natural resources Division, 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 Size classification criteria. Size classification is based on the more stringent of two categories, with height of dam or maximum storage.

	SIZE CLASSIFICATIONS	
Size	**Maximum storage (acre-feet)**	**Height (feet)**
Small	50 to 1000	24 to 40
Intermediate	≥ 1000 and ≤ 50000	≥ 40 and ≤ 100
Large	≥ 50000	≥ 100

Location:

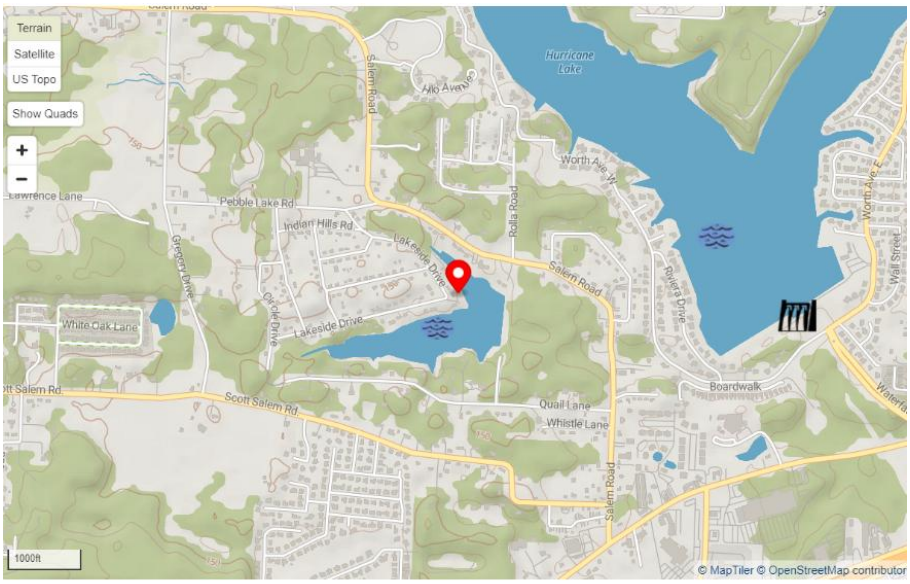
*Information obtained from www.anyplaceamerica.com.

Hurricane Lake Dam

Hurricane Lake Estates, Property Owners Association in Bryant has adopted an Emergency Action Plan for Hurricane Lake Dam. This plan identifies potential emergency conditions at the dam and describes procedures to be followed to minimize property damage and loss of life.

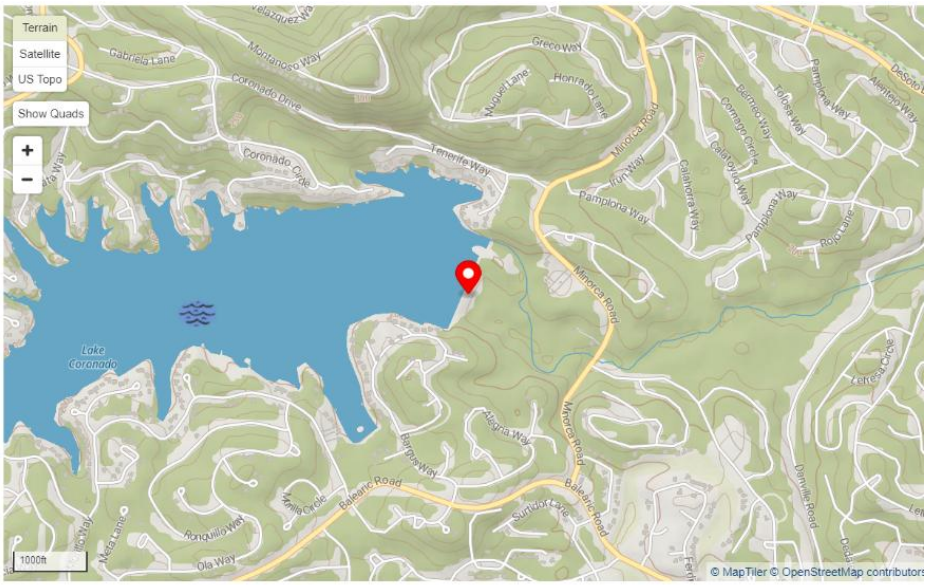
- Latitude: 34.6175928°, Longitude: -92.5298816°, Elevation 410 ft.
- Nearest Cities
    - Salem, AR 1.79 miles
    - Bryant, AR 2.76 miles
    - Bauxite, AR 4.31 miles
    - Benton, AR 4.89 miles
    - Alexander, AR 5.11 miles

- Pebble Lake Dam

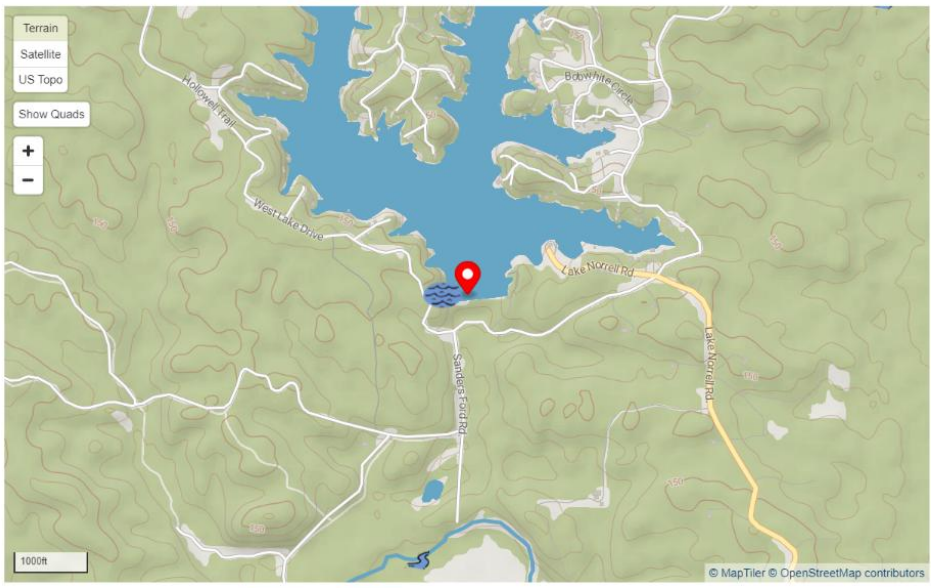


- Latitude: 34.618426°, Longitude -92.54516°, Elevation 423 ft.
- Nearest Cities:
    - Salem, AR 1.04 miles
    - Bryant, AR 3.55 miles
    - Benton, AR 4.41 miles
    - Bauxite, AR 4.55 miles
    - Avilla, AR 4.98 miles

- Lake Coronado Dam



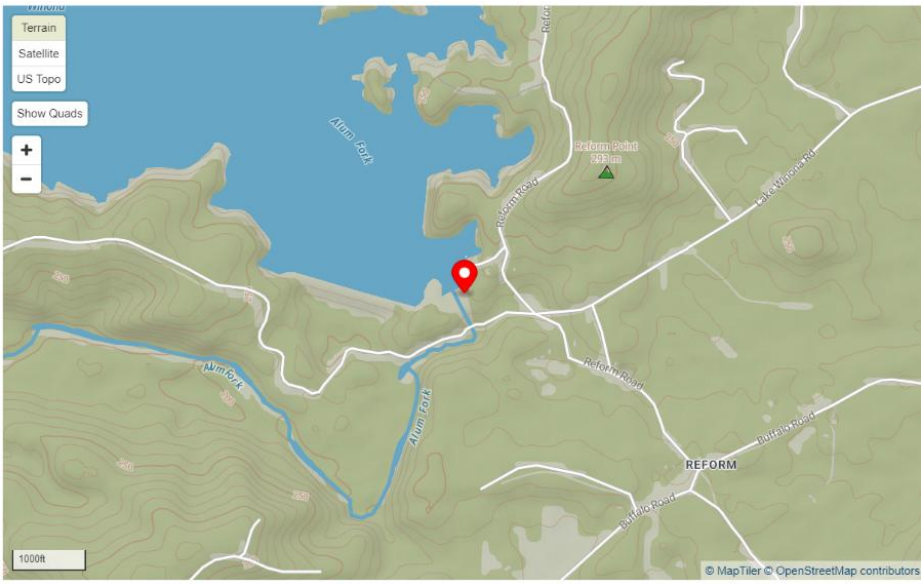
- Latitude**:** 34.6550911°, Longitude -92.9535088°, Elevation: 650 ft.
- **Nearest Cities**
  - Hot Springs Village, AR 2.83 miles
  - Fountain Lake, AR 6.00 miles
  - Lonsdale, AR 11.25 miles
  - Euclid Heights, AR 11.37 miles
  - Hot Springs, AR 11.95 miles
  -
- Lake Norrell Dam



- Latitude: 34.7184249°, Longitude -92.6451632°**,** Elevation: 404 ft

- Nearest Cities
    - Avilla, AR 4.21 miles
    - Salem, AR 7.91 miles
    - Benton, AR 11.14 miles
    - Bryant, AR 12.26 miles
    - Alexander, AR 13.11 miles

- Lake Winona Dam



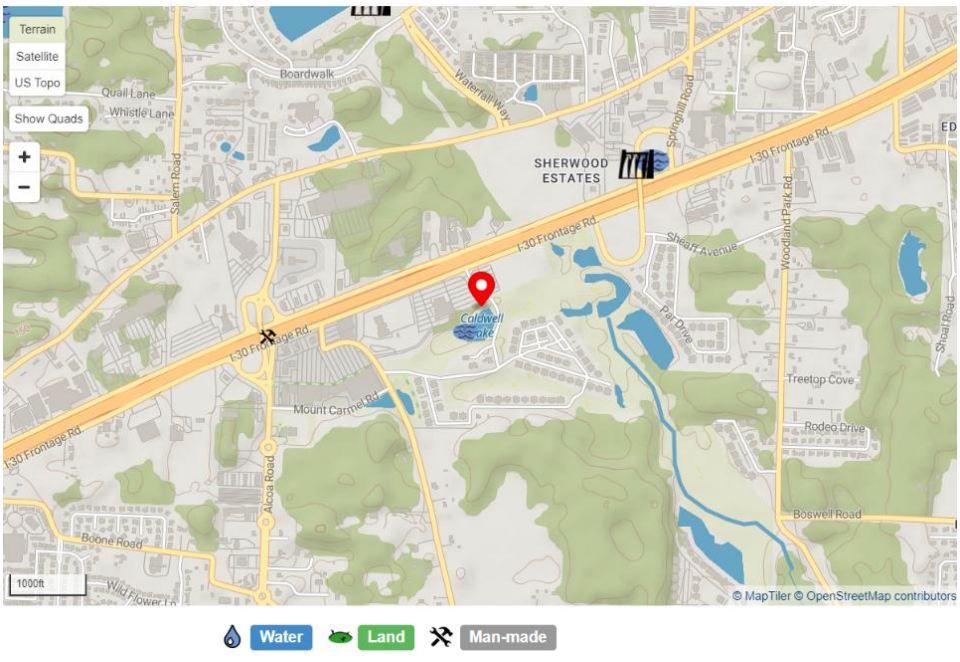
Water Land Man-made

- Latitude: 34.796202°, Longitude -92.8446147, Elevation: 741 ft.
- Nearest Cities
    - Hot Springs Village, AR 12.26 miles
    - Perryville, AR 14.61 miles
    - Avilla, AR 16.69 miles
    - Adona, AR 16.99 miles
    - Fountain Lake, AR 17.44 miles

- Lake New Moon Dam

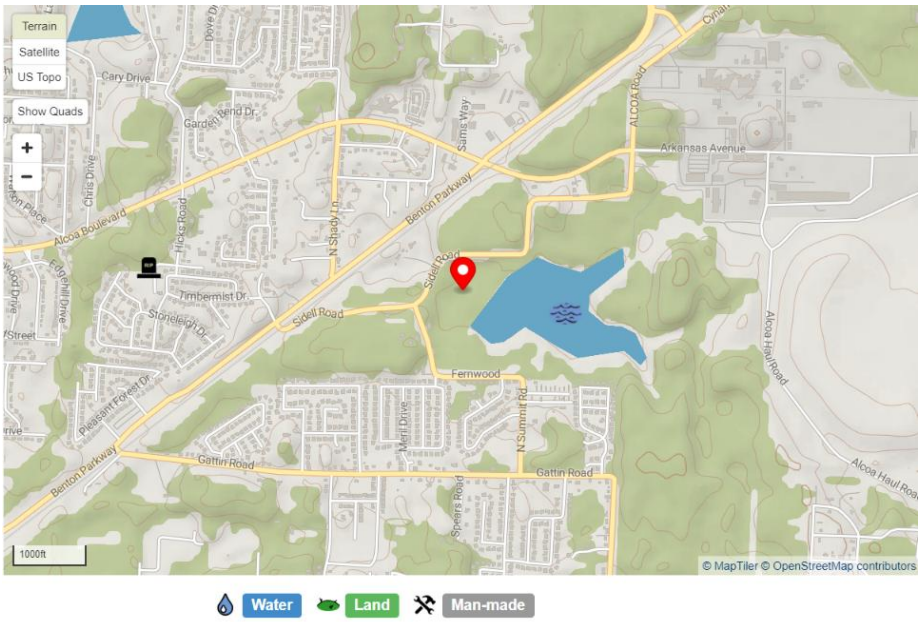
- Latitude: 34.7517583**,** Longitude 92.6001618°**,** Elevation 518 ft.
- **Nearest Cities**
  - Avilla, AR 4.85 miles
  - Salem, AR 8.81 miles
  - Natural Steps, AR 10.40 miles
  - Roland, AR 11.80 miles
  - Alexander, AR 12.36 miles

- Caldwell Lake Dam



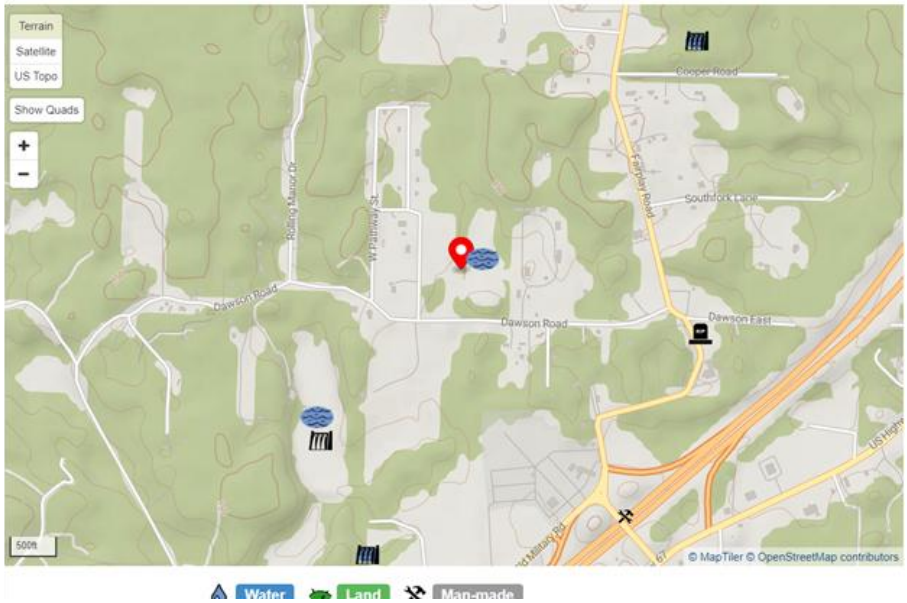
- Latitude 34.6067596**,** Longitude 92.5251593**°,** Elevation: 397 ft.
- **Nearest Cities**
    - Bryant, AR 2.19 miles
    - Salem, AR 2.43 miles
    - Bauxite, AR 3.54 miles
    - Benton, AR 4.56 miles
    - Alexander, AR 5.02 miles

- Chemical Products Fresh Water Lake Dam aka Alcoa Lake Dam



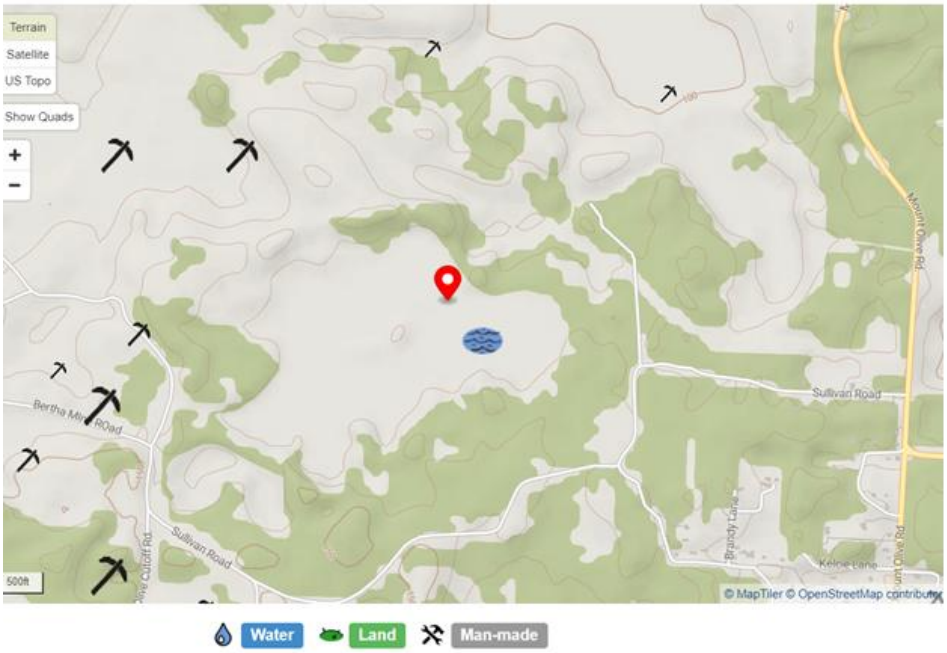
- Latitude: 34.5700931, Elevation 92.5434932°, Elevation**:** 361 ft
- **Nearest Cities**
    - Bauxite, AR 1.61 miles
    - Benton, AR 2.50 miles
    - Bryant, AR 3.57 miles
    - Salem, AR 4.15 miles
    - Haskell, AR 7.11 miles

- Pathway Youth Camp Lake Dam



- Latitude**:** 34.4900921°**,** Longitude -92.7301663°**,** Elevation: 459 ft.
- **Nearest Cities**
  - Traskwood, AR 5.17 miles
  - Haskell, AR 5.39 miles
  - Lonsdale, AR 5.82 miles
  - Magnet Cove, AR 6.97 miles
  - Rockport, AR 8.92 miles

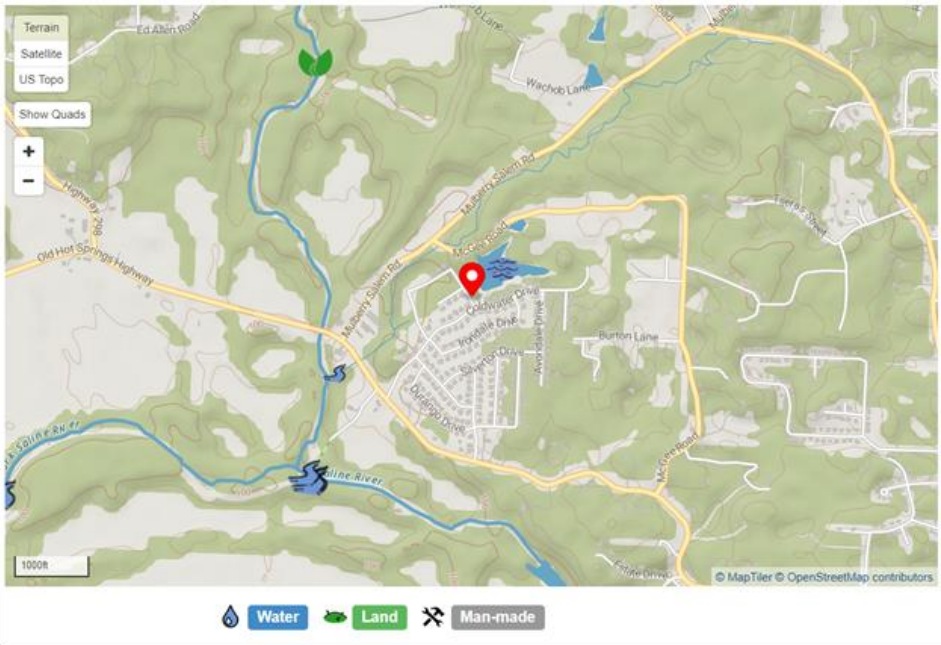
- Old Brown Mud Lake Dam



- Latitude**:** 34.5450936°**,**

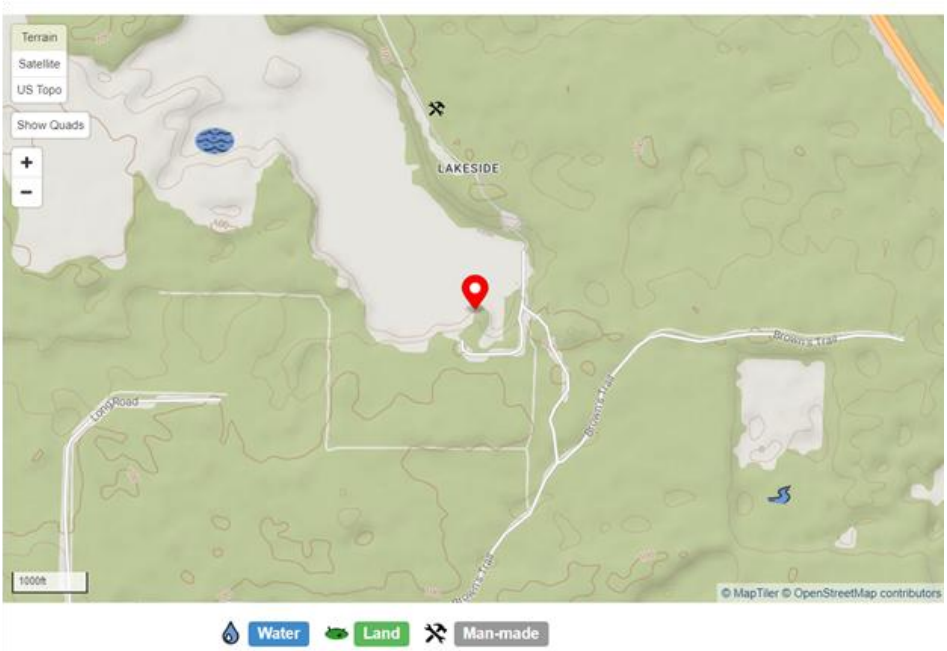
- **Nearest Cities,** Longitude: -92.4801577, Elevation: 427 ft**.**
    - Bauxite, AR 2.45 miles
    - Bryant, AR 3.55 miles
    - Benton, AR 6.22 miles
    - Alexander, AR 6.24 miles
    - Shannon Hills, AR 7.08 miles

- Cecil Jones Lake Dam



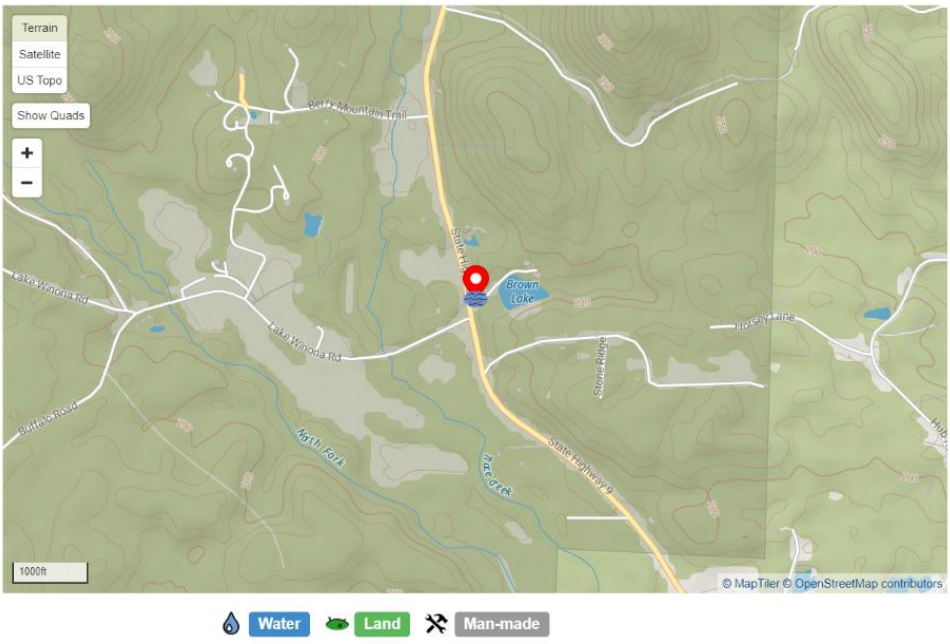
- Latitude: 34.6067591, Longitude: -926118289, Elevation: 341 ft
- **Nearest Cities**
    - Benton, AR 3.25 miles
    - Salem, AR 3.41 miles
    - Avilla, AR 5.45 miles
    - Bauxite, AR 6.25 miles
    - Bryant, AR 7.02 miles

- Ferguson Lake Dam



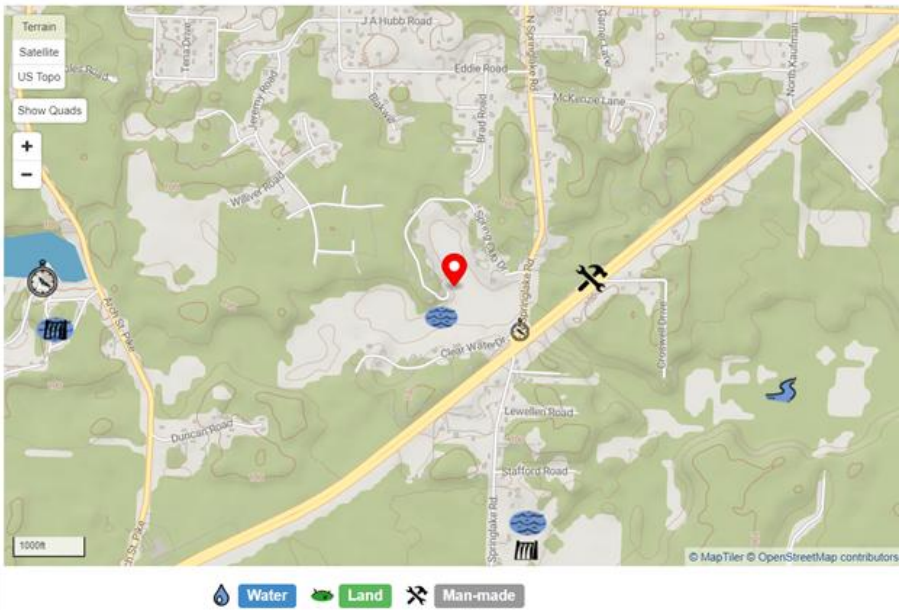
- Latitude**:** 34.5317608**°,** Longitude**:** -92.2651502, Elevation 249 ft.
- **Nearest Cities**
  - Woodson, AR 3.09 miles
  - Hensley, AR 3.84 miles
  - East End, AR 4.51 miles
  - Iron Springs, AR 5.27 miles
  - Wrightsville, AR 5.60 miles

- Browns Lake Dam



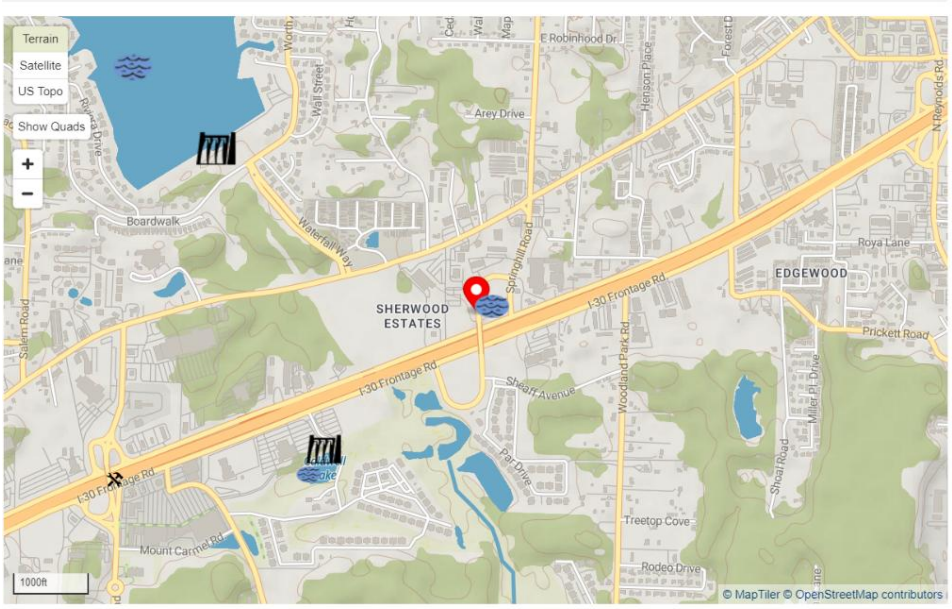
- Latitude: 34.8050905**,** Longitude: -92.7785008, Elevation 477 ft.
- **Nearest Cities**
    - Avilla, AR 13.86 miles
    - Perryville, AR 13.87 miles
    - Hot Springs Village, AR 15.52 miles
    - Fourche, AR 15.81 miles
    - Bigelow, AR 15.95 miles

- Spring Lake Dam



- Latitude: 34.5384273**,** Longitude**:** -92.3218189, Elevation: 262 ft.
-
- **Nearest Cities**
    - East End, AR 1.38 miles
    - Iron Springs, AR 3.54 miles
    - Landmark, AR 5.03 miles
    - Parkers, AR 5.54 miles
    - Woodson, AR 6.34 miles

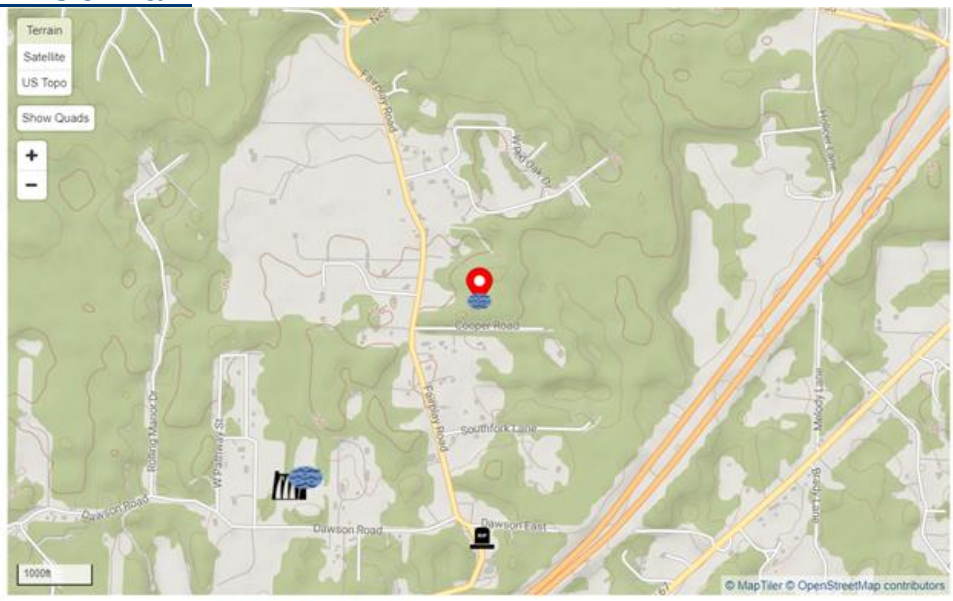
- Ledbetter Lake Dam



Water Land Man-made

- Latitude: 34.6117596°, Longitude: -92.5184924°, Elevation: 387 ft.
- **Nearest Cities**
  - Bryant, AR 2.00 miles
  - Salem, AR 2.55 miles
  - Bauxite, AR 3.88 miles
  - Alexander, AR 4.56 miles
  - Benton, AR 5.08 miles

- Lake Krislor Dam

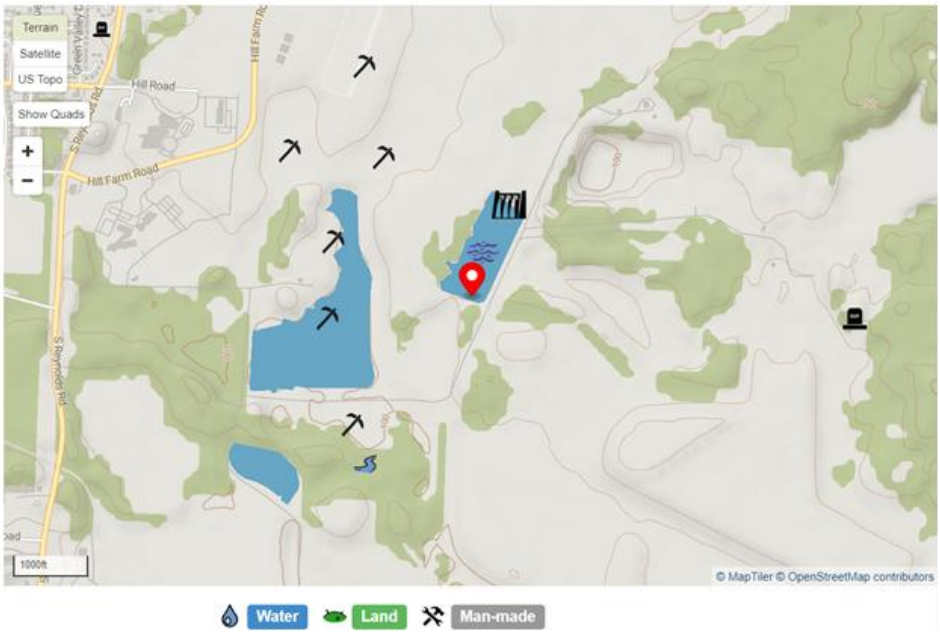


Water Land Man-made

- Latitude: 34.4967588, Longitude -92.7218327, Elevation 466 ft.
- **Nearest Cities**

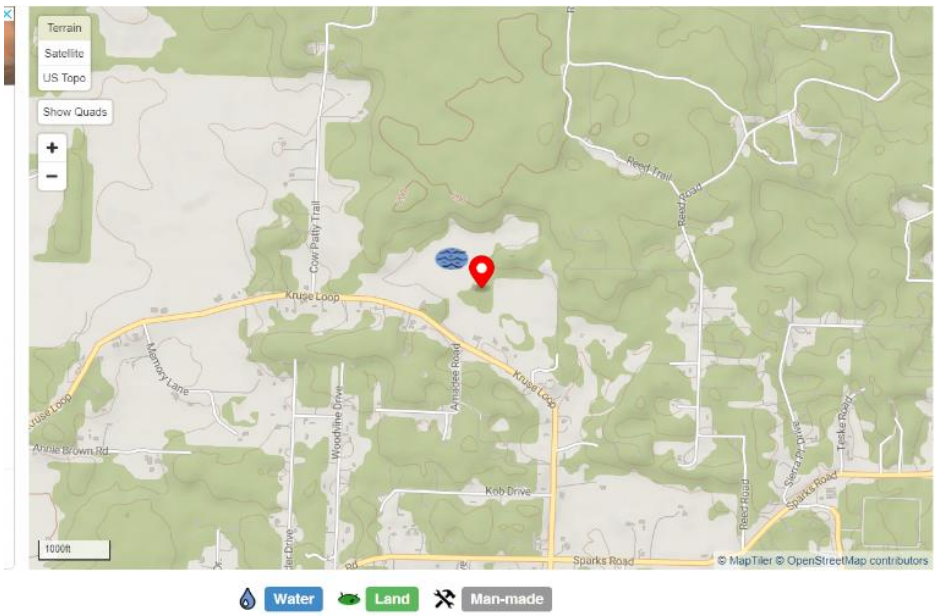
- Haskell, AR 4.87 miles
- Traskwood, AR 5.07 miles
- Lonsdale, AR 5.92 miles
- Magnet Cove, AR 7.59 miles
- Tull, AR 8.95 miles

- Surge Pond Dam



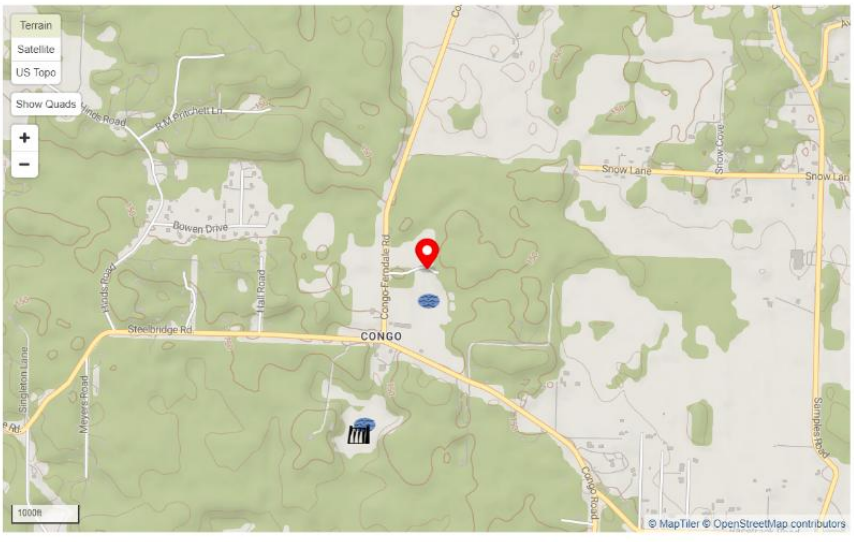
- Latitude: 34.57676, Longitude – 92.4768243, Elevation 377 ft.
- **Nearest Cities**
  - Bryant, AR 1.50 miles
  - Bauxite, AR 2.92 miles
  - Alexander, AR 4.17 miles
  - Shannon Hills, AR 5.51 miles
  - Salem, AR 5.87 miles

- Fletcher Lake Dam



- Latitude: 34.6884255, Longitude: -92.5468267, Elevation 568 ft
- **Nearest Cities**
  - Avilla, AR 2.22 miles
  - Salem, AR 4.16 miles
  - Bryant, AR 7.19 miles
  - Alexander, AR 7.25 miles
  - Benton, AR 8.86 miles

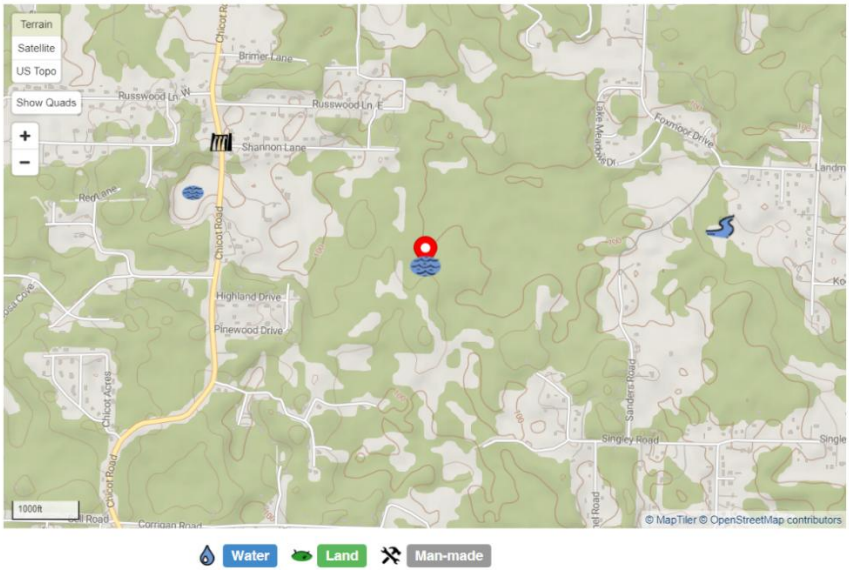
- Helmich Lake Dam



- Latitude: 34.6617589, Longitude: -92.5851613, Elevation 566 ft.
- **Nearest Cities**
  - Avilla, AR 1.44 miles
  - Salem, AR 2.73 miles
  - Benton, AR 6.72 miles

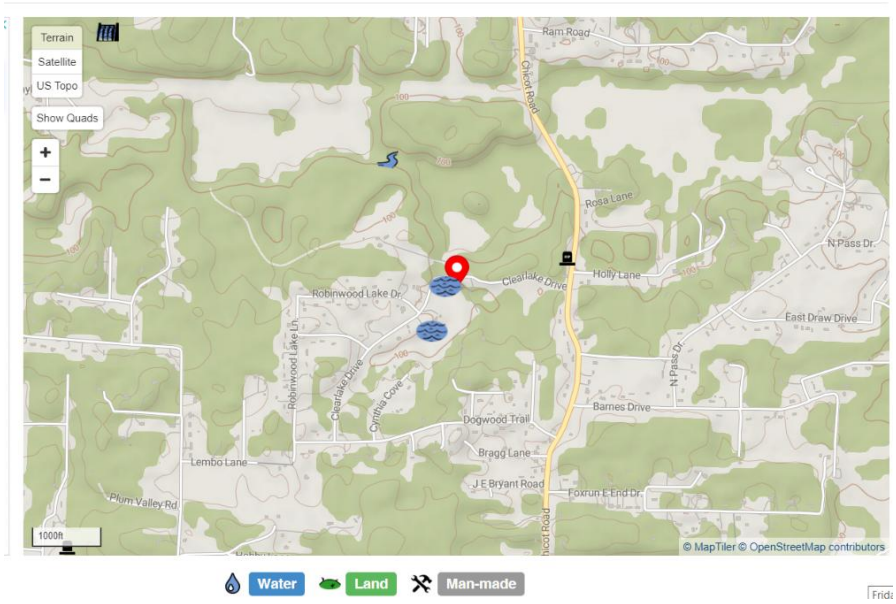
- Bryant, AR 7.11 miles
- Bauxite, AR 8.18 miles

- Bloomfield Lake Dam



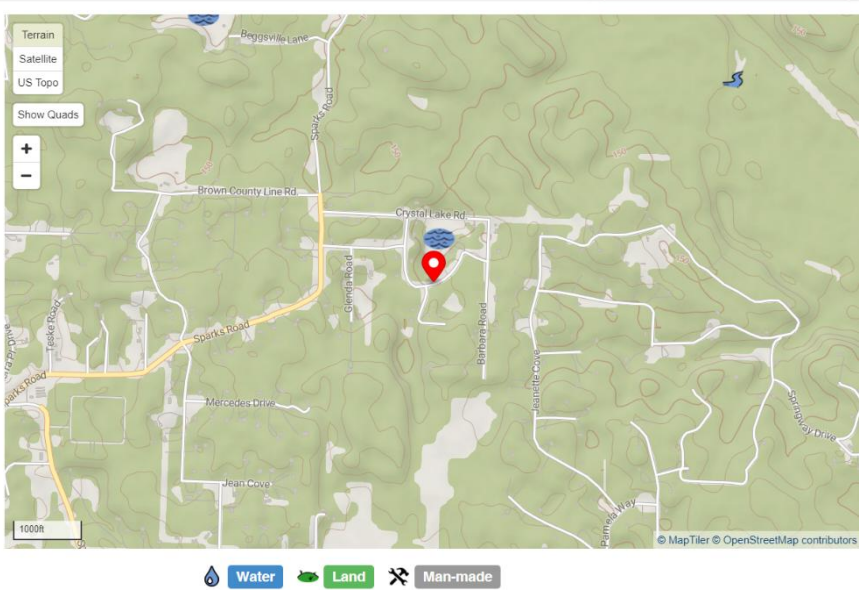
- Latitude: 34.600000933, Longitude: -923551532, Elevation 335 ft.
- **Nearest Cities**
  - Iron Springs, AR 1.83 miles
  - Landmark, AR 2.16 miles
  - Parkers, AR 2.58 miles
  - Shannon Hills, AR 2.68 miles
  - East End, AR 3.51 miles

- Clearlake Dam



- Latitude: 34.57550935, Longitude: -92.3718206, Elevation 302 ft.
-
- **Nearest Cities**
  - East End, AR 2.44 miles
  - Iron Springs, AR 2.81 miles
  - Shannon Hills, AR 3.39 miles
  - Landmark, AR 3.88 miles
  - Parkers, AR 4.38 miles

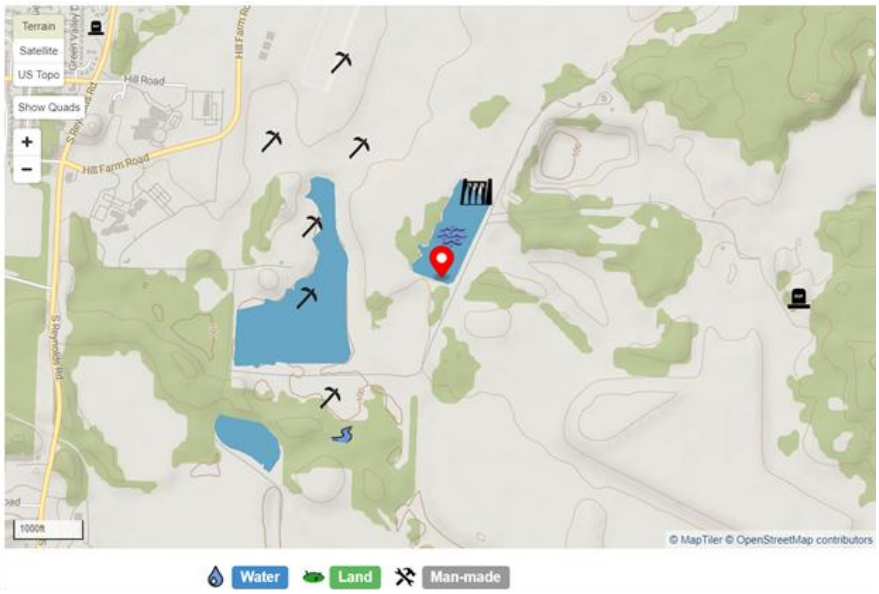
- Crystal Lake Dam



- Latitude: 34.6850924, Longitude: -92.5118256, Elevation: 456 ft.
- **Nearest Cities**
  - Avilla, AR 4.17 miles

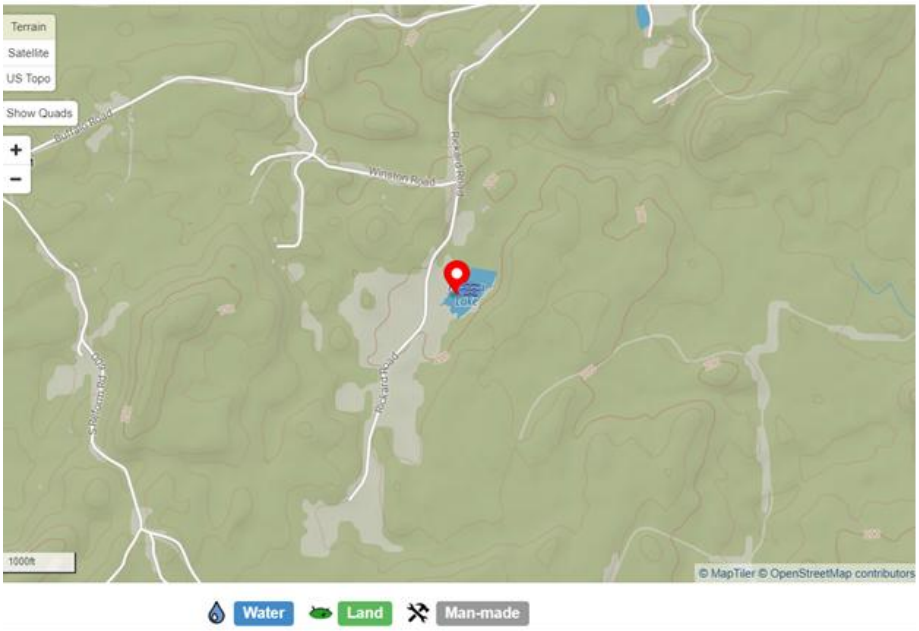
- Salem, AR 4.69 miles
- Alexander, AR 5.55 miles
- Bryant, AR 6.30 miles
- Shannon Hills, AR 8.00 miles

- Surge Pond Dam



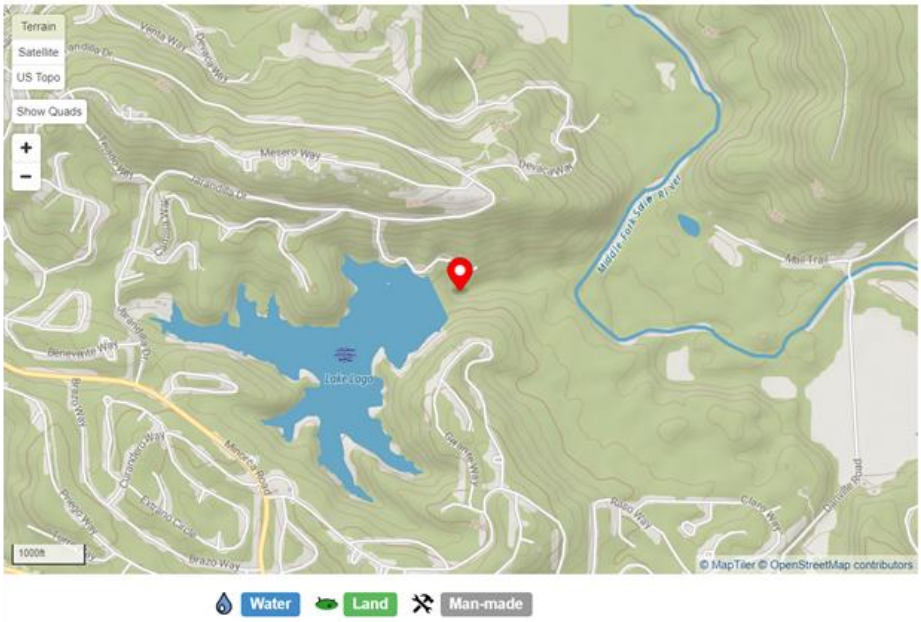
- Latitude: 34.5800933, Longitude: -92.4751575, Elevation: 387 ft**.**
- **Nearest Cities**
  - Bryant, AR 1.35 miles
  - Bauxite, AR 3.12 miles
  - Alexander, AR 3.92 miles
  - Shannon Hills, AR 5.31 miles
  - Salem, AR 5.81 miles

- Hansen Lake Dam



- Latitude: 34.7850909, Longitude: -92.8135024, Elevation: 627 ft.
- **Nearest Cities**
  - Hot Springs Village, AR 13.10 miles
  - Avilla, AR 14.77 miles
  - Perryville, AR 15.19 miles
  - Lonsdale, AR 16.62 miles
  - Fountain Lake, AR 17.69 miles

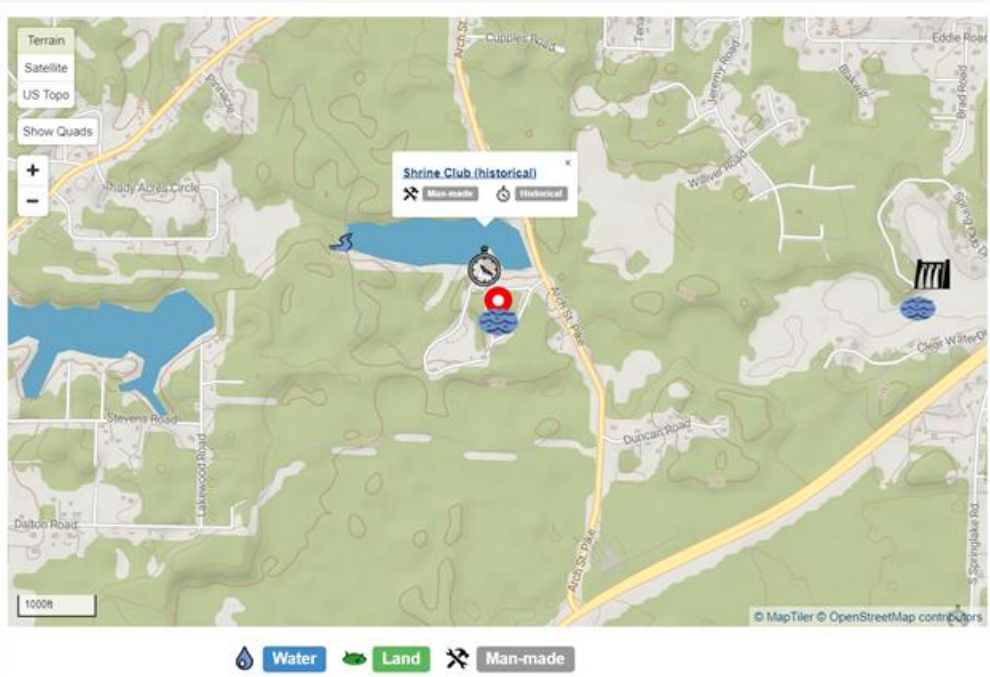
- Lake Lago Dam



- Latitude: 34.6800913, Longitude: 92.9418417, Elevation 551 ft.
- **Nearest Cities**

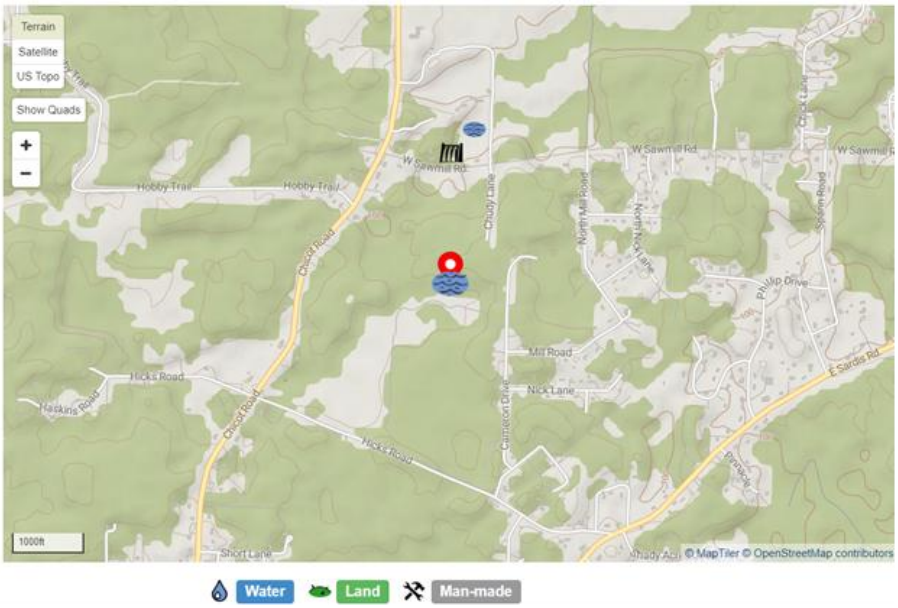
- Hot Springs Village, AR 3.28 miles
- Fountain Lake, AR 7.85 miles
- Lonsdale, AR 12.06 miles
- Euclid Heights, AR 13.22 miles
- Hot Springs, AR 13.79 miles

- Mary Lake Dam



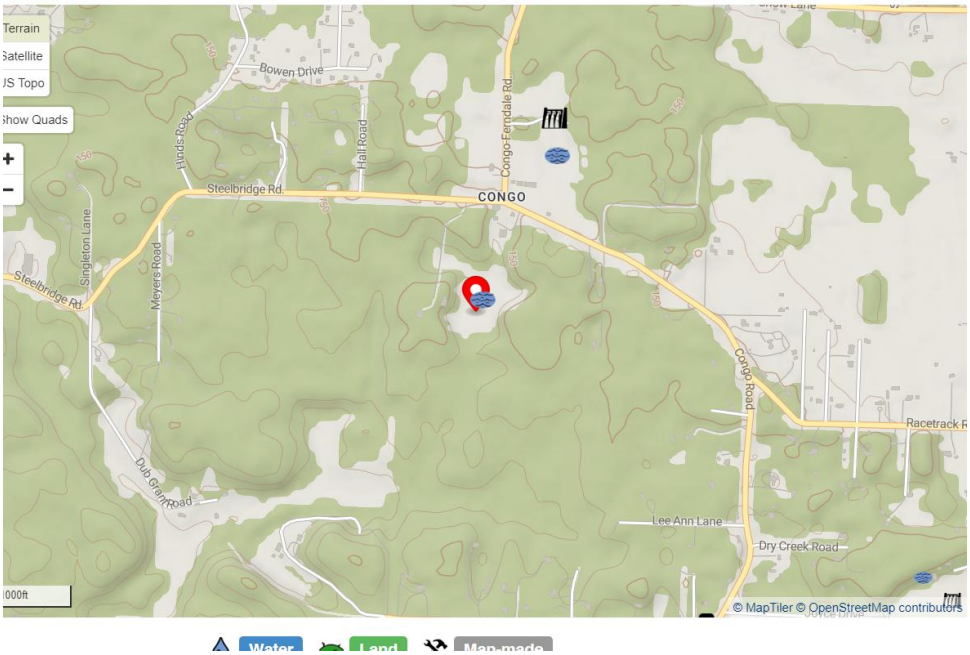
- Latitude: 34.5367606, Longitude: -92.3401528, Elevation 312 ft.
- **Nearest Cities**
  - East End, AR 0.96 miles
  - Iron Springs, AR 3.74 miles
  - Landmark, AR 5.28 miles
  - Parkers, AR 5.81 miles
  - Shannon Hills, AR 6.56 miles

- Mashburn Lake Number One Dam



- Latitude: 34.5517605, Longitude: -92.3651537, Elevation: 354 ft.
- **Nearest Cities**
  - East End, AR 1.38 miles
  - Iron Springs, AR 3.44 miles
  - Landmark, AR 4.86 miles
  - Shannon Hills, AR 5.03 miles
  - Parkers, AR 5.40 miles

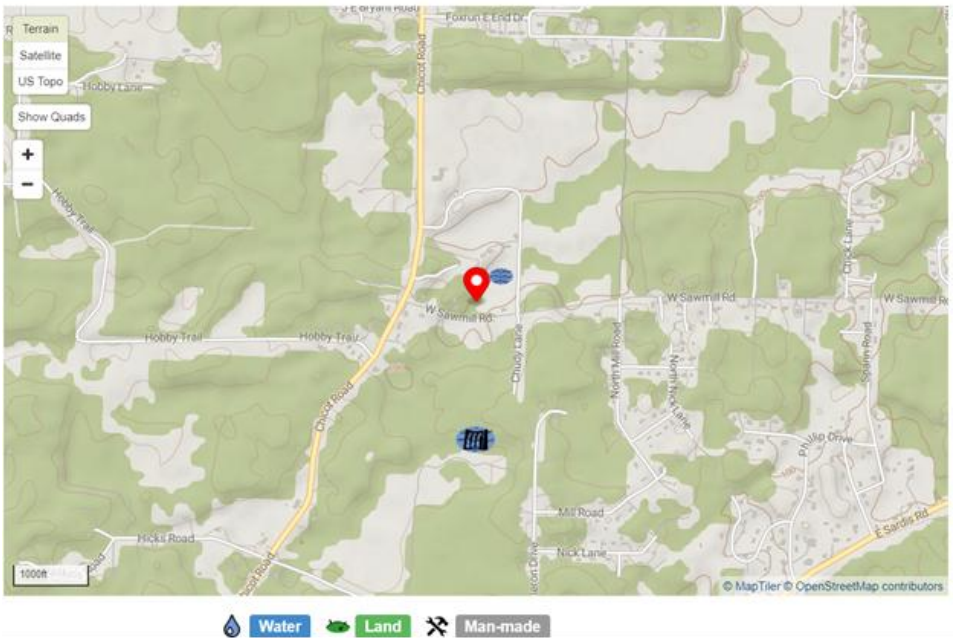
- Congo Lake Dam



- Latitude: 34.6550922, Longitude: -92.5884947, Elevation: 440 ft.
- **Nearest Cities**

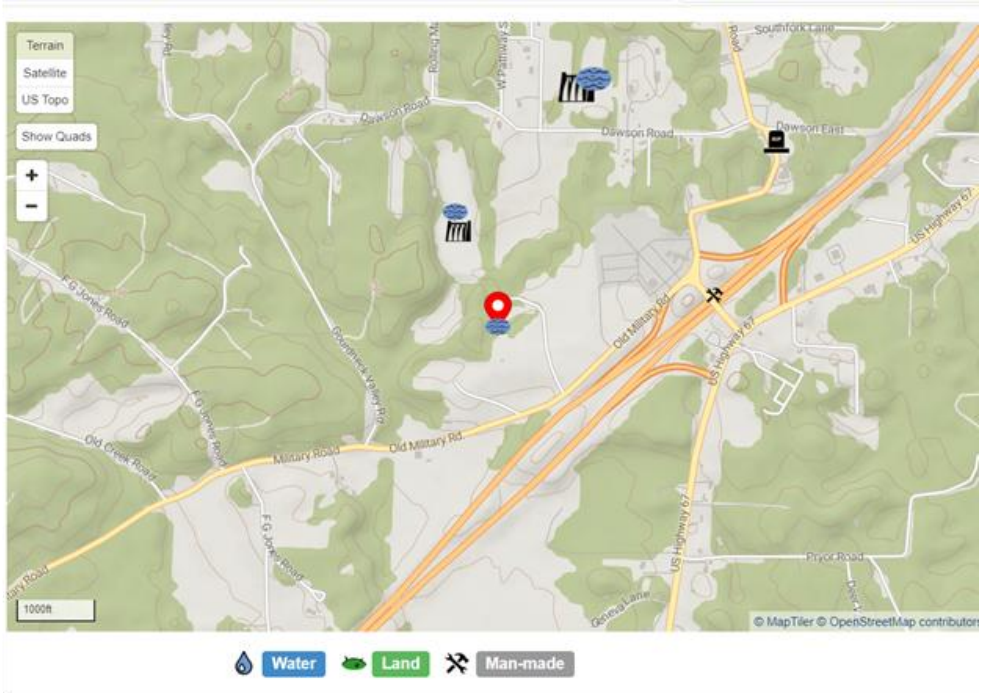
- Avilla, AR 1.91 miles
- Salem, AR 2.49 miles
- Benton, AR 6.26 miles
- Bryant, AR 6.98 miles
- Bauxite, AR 7.86 miles

- Mashburn Lake Number Two Dam



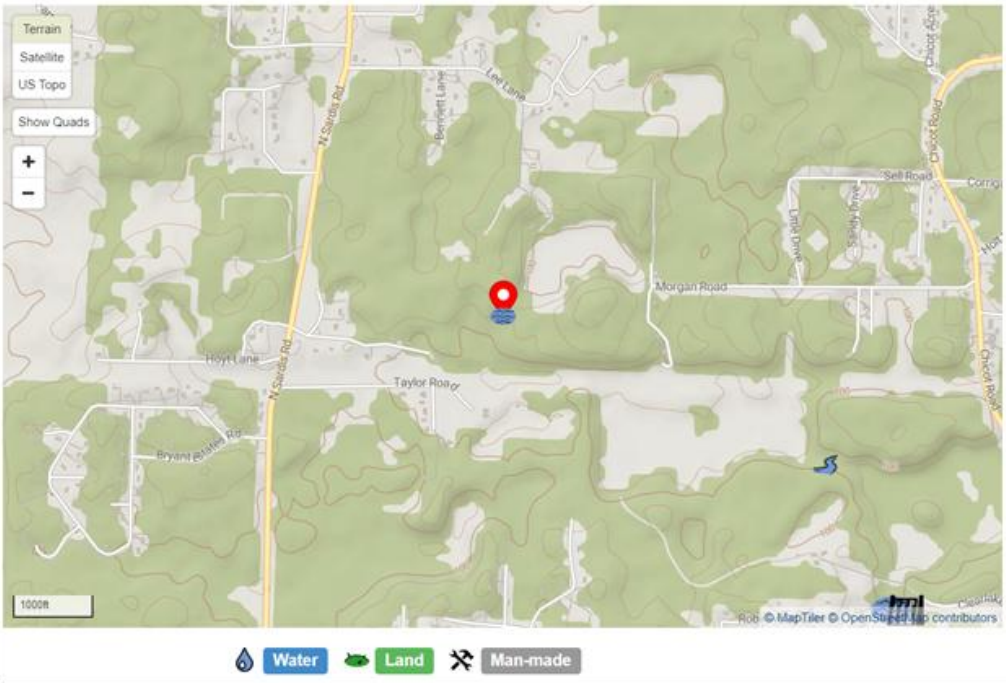
- Latitude: 34.5567604, Longitude: -92.3651536, Elevation: 315 ft.
- **Nearest Cities**
  - East End, AR 1.44 miles
  - Iron Springs, AR 3.19 miles
  - Landmark, AR 4.57 miles
  - Shannon Hills, AR 4.70 miles
  - Parkers, AR 5.11 miles

- Barr Lake Dam



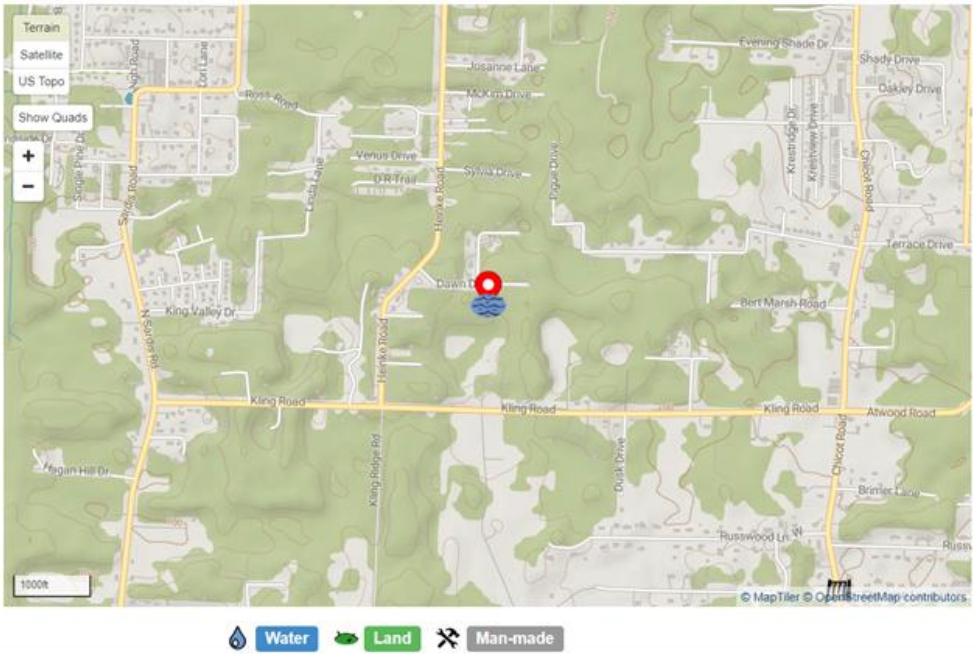
- Latitude: 34.4817589, Longitude: -92.7334996, Elevation: 427 ft.
- **Nearest Cities**
  - Traskwood, AR 5.05 miles
  - Haskell, AR 5.69 miles
  - Lonsdale, AR 6.08 miles
  - Magnet Cove, AR 6.61 miles
  - Rockport, AR 8.35 miles

- King Lake Dam



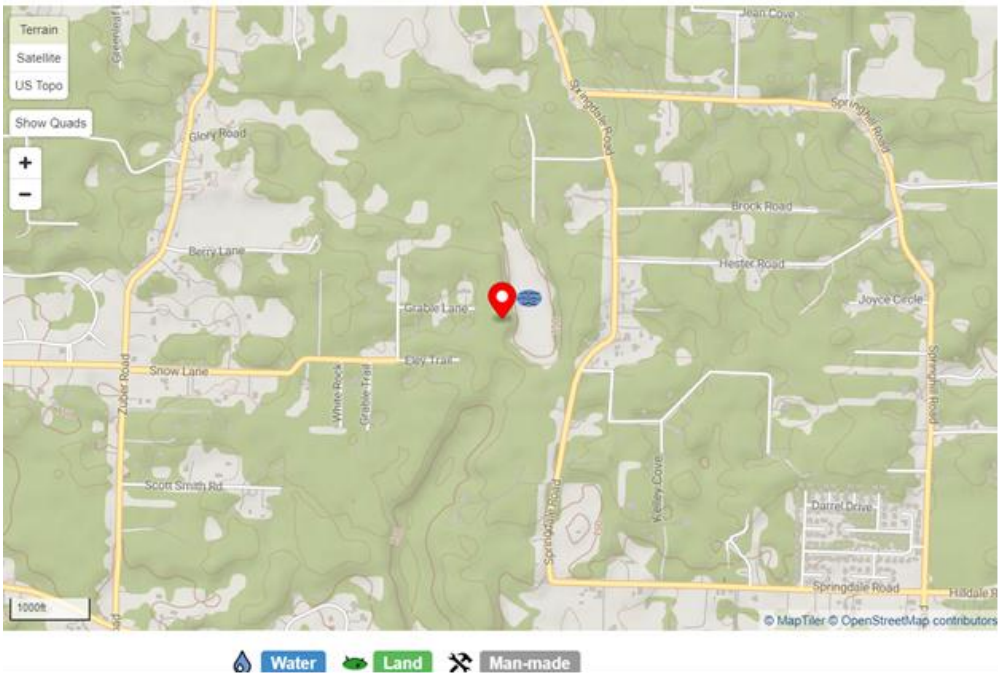
- Latitude: 34.5850934, Longitude: -92.3884877, Elevation: 335 ft.
- **Nearest Cities**
    - Shannon Hills, AR 2.45 miles
    - Iron Springs, AR 3.58 miles
    - East End, AR 3.60 miles
    - Alexander, AR 4.29 miles
    - Landmark, AR 4.31 miles

- Styres Lake Dam
-



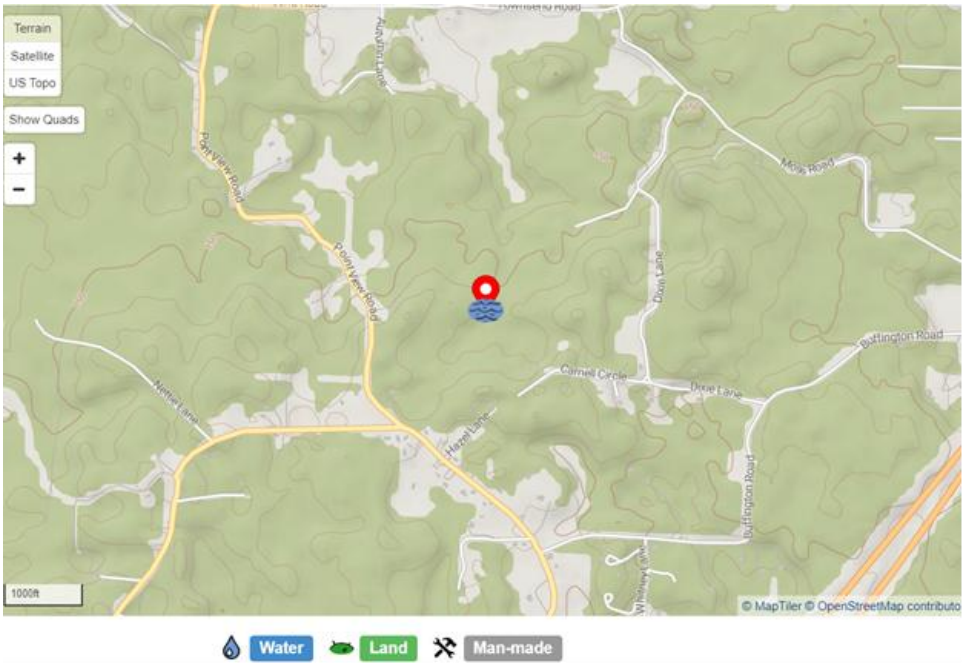
- Latitude: 34.6150932, Longitude: -92.3801541, Elevation: 334 ft.
- **Nearest Cities**
    - Shannon Hills, AR 0.93 miles
    - Landmark, AR 3.45 miles
    - Iron Springs, AR 3.56 miles
    - Alexander, AR 3.62 miles
    - Parkers, AR 3.67 miles

- Hester Lake Dam



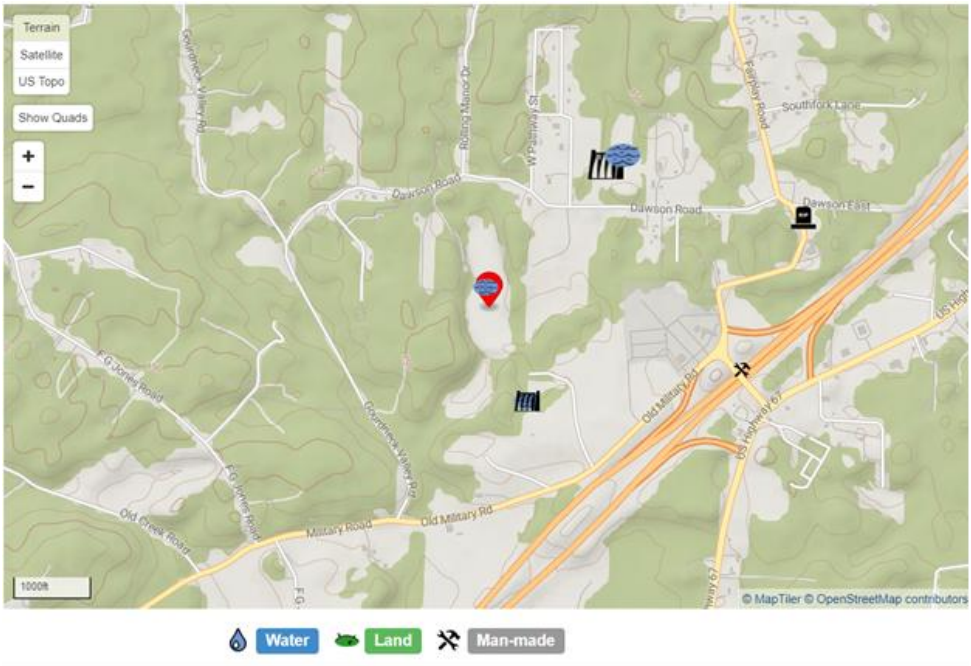
- Latitude: 34.6667591, Longitude -02.5318262, Elevation: 486 ft.
- **Nearest Cities**
  - Salem, AR 3.01 miles
  - Avilla, AR 3.22 miles
  - Bryant, AR 5.47 miles
  - Alexander, AR 5.75 miles
  - Bauxite, AR 7.70 miles

- Buffington Lake Dam



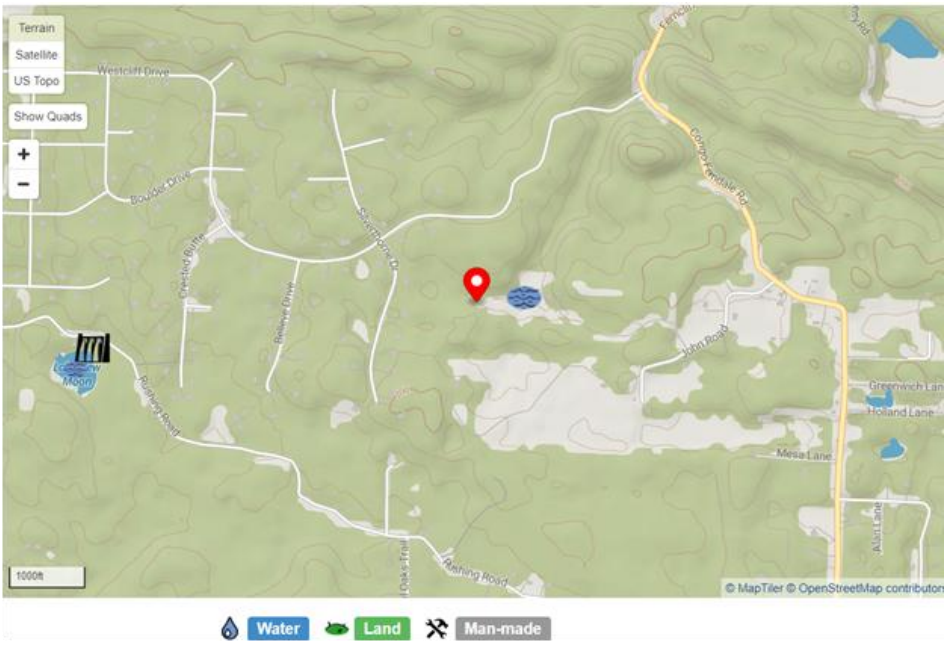
- Latitude: 34.5217588, Longitude: -02.7101656, Elevation: 449 ft.
- **Nearest Cities**
    - Haskell, AR 4.42 miles
    - Lonsdale, AR 5.80 miles
    - Traskwood, AR 5.94 miles
    - Benton, AR 7.62 miles
    - Magnet Cove, AR 8.97 miles

- Dawson Lake Dam



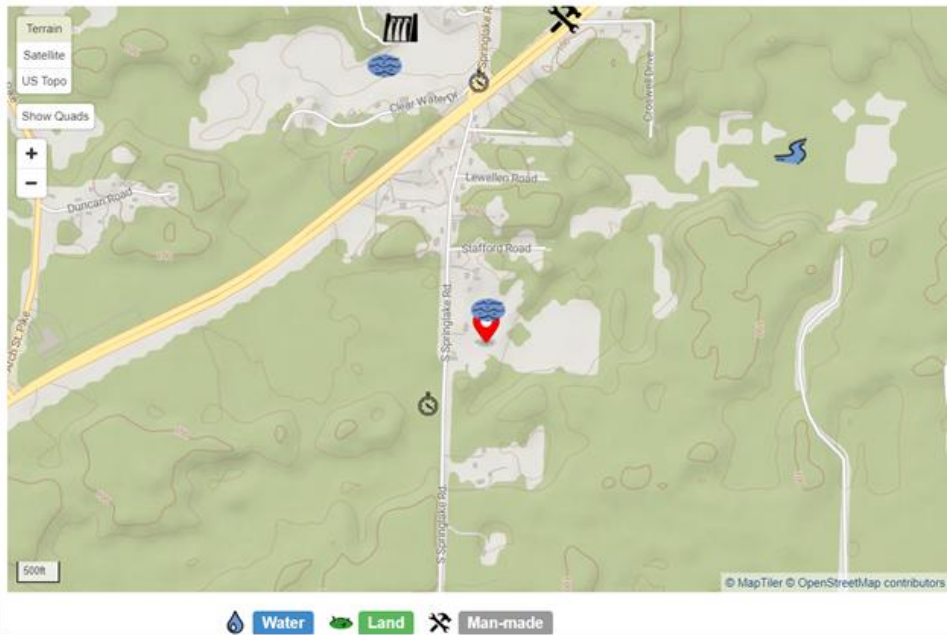
- Latitude: 34.4850921, Longitude: -92.7351664, Elevation: 410 ft.
- **Nearest Cities**
    - Traskwood, AR 5.24 miles
    - Haskell, AR 5.73 miles
    - Lonsdale, AR 5.85 miles
    - Magnet Cove, AR 6.59 miles
    - Rockport, AR 8.48 miles

- Happy Valley Lake Dam



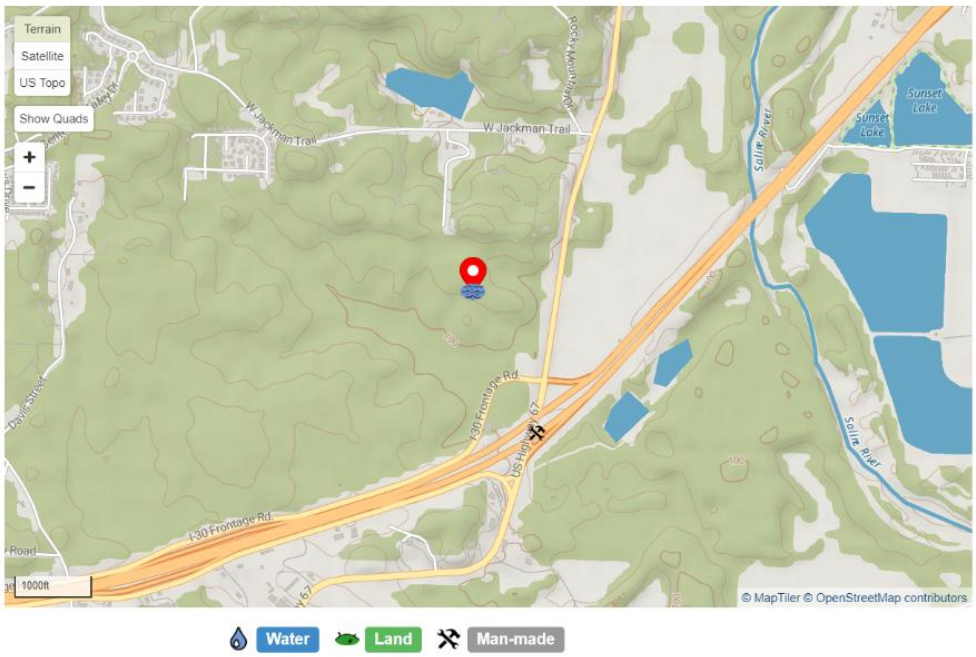
- Latitude: 34.7534249, Longitude: -92.5834945, Elevation 525 ft.
- **Nearest Cities**
  - Avilla, AR 4.90 miles
  - Salem, AR 8.72 miles
  - Natural Steps, AR 9.69 miles
  - Roland, AR 11.26 miles
  - Alexander, AR 11.77 miles

- Mills Lake Dam



- Latitude: 34.5284274, Longitude: -92.3184854, Elevation 279 ft.
- **Nearest Cities**
    - East End, AR 2.00 miles
    - Iron Springs, AR 4.24 miles
    - Landmark, AR 5.72 miles
    - Woodson, AR 6.12 miles
    - Parkers, AR 6.22 miles

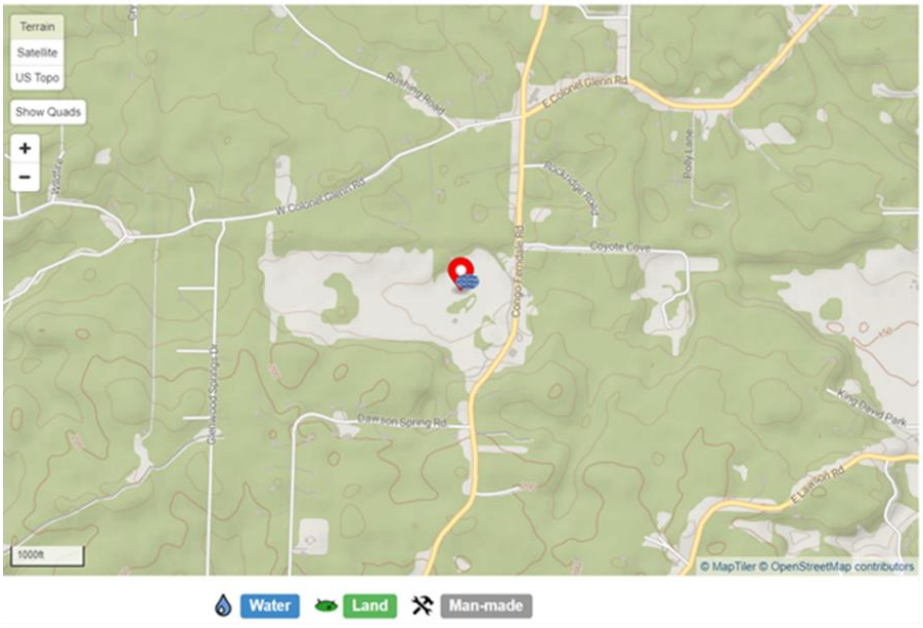
- Wise Lake Dam



Water Land Man-made

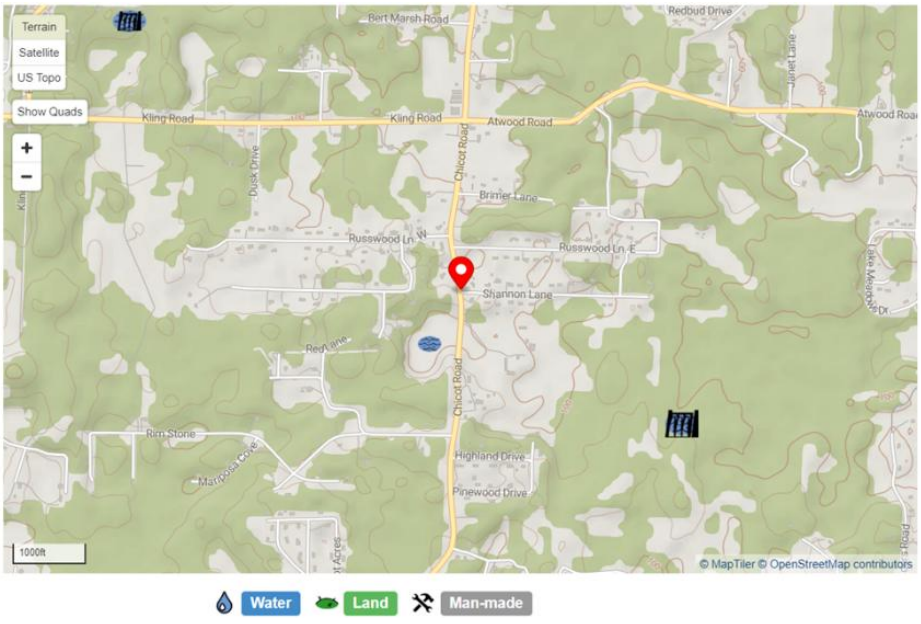
- Latitude: 34.5500925°, Longitude: -92.6334962°, Elevation: 367 ft.
- **Nearest Cities**
    - Benton, AR 2.84 miles
    - Haskell, AR 3.36 miles
    - Bauxite, AR 6.40 miles
    - Salem, AR 6.93 miles
    - Traskwood, AR 7.06 miles

- Inman Lake Number Two Dam



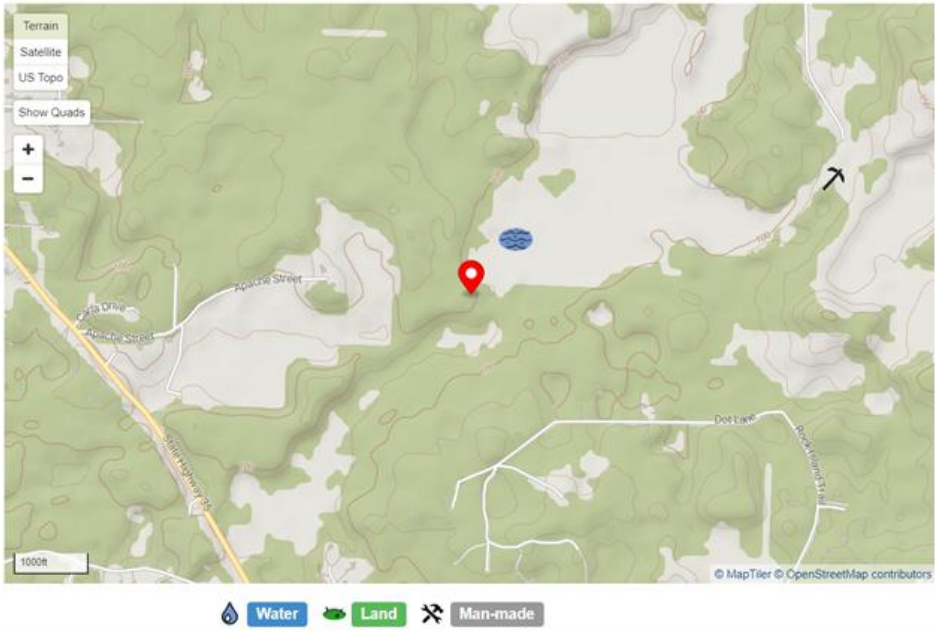
- Latitude: 34.7317585°, Longitude: -92.5718276°, Elevation: 541 ft.
- **Nearest Cities**
  - Avilla, AR 3.48 miles
  - Salem, AR 7.14 miles
  - Alexander, AR 10.24 miles
  - Bryant, AR 10.50 miles
  - Natural Steps, AR 10.53 miles

- Parker Lake Dam



-
- Latitude: 34.6050933, Longitude: -02.3651536, Elevation 312 ft.
- **Nearest Cities**
    - Shannon Hills, AR 2.01 miles
    - Iron Springs, AR 2.49 miles
    - Landmark, AR 2.63 miles
    - Parkers, AR 2.96 miles
    - East End, AR 4.01 miles

- Holding Pond Number 2 Dam



- Latitude: 34.530934, Longitude: -02.5351596, Elevation: 282 ft.
- **Nearest Cities**
    - Bauxite, AR 1.63 miles
    - Benton, AR 3.58 miles
    - Bryant, AR 4.96 miles
    - Haskell, AR 6.22 miles
    - Tull, AR 6.47 miles

Extent:

All dams will be classified or reclassified as required to assure appropriate safety considerations. Hazard classification shall be based on the more stringent of either potential loss of human life or economic loss in accordance with Table 2 of this section. If doubt exists concerning classification, the more hazardous category must be selected. NOTE: The hazard classification does not indicate the physical condition of a dam.

	Hazard Classification	
Category	**Loss of Human Life**	**Economic Loss**
Low	No	Minimal (No significant structures; pastures, woodland, or largely undeveloped land); less than $100,000.
Significant	No	Appreciable (Significant structures, industrial, or commercial development, or cropland); $100,000 to $500,000.
High	Yes	Excessive (Extensive public, industrial, commercial, or agricultural development); over $500,000.
NOTE: Loss of life is based upon presence of habitable structures.		

Name	Condition	Hazard Potential Classification	Owner Type	Primary Purpose	Nearest City/Town (Miles)	Max. Storage (Acre-Ft)	Height	Emergency Action Plan EAP	Inundation Map
Section 20 Treatment Plant Pond 2	Not Rated	Low	Private	Other	NONE (0)	156.0	20	N/A	N/A
Styres Lake Dam	Not Rated	Low	Private	Recreation	EAST END (0)	72.0	None	N/A	N/A
Lake New Moon Dam	Not Rated	Low	Private	Water Supply	NONE (None)	54.0	None	N/A	N/A
Surge Pond	Not Rated	Low	Private	Other	GOODMAN (0)	73.0	19	N/A	N/A
Inman Lake No 2 Dam	Not Rated	Low	Private	Water Supply	NONE (None)	125.0	21	N/A	N/A

Lawson Road Dam #1	Not Rated	Significant	Not Listed			0.0	None	Yes However, Plan was not available to Planning Team	No
Mills Lake Dam	Not Rated	Low	Private	Other	NONE (0)	77.0	None	N/A	N/A
Crystal Lake Dam	Not Rated	Low	Private	Recreation	NONE (0)	122.0	18	N/A	N/A
Parker Lake Dam	Not Rated	Significant	Private	Recreation	NONE (None)	72.0	None	Not Required	No
Dawson Lake Dam	Not Rated	Low	Private	Recreation	GLEN ROSE (None)	152.0	24	N/A	N/A
Spring Lake Dam	Not Rated	Low	Private	Recreation	NONE (None)	200.0	None	N/A	N/A
Mashburn Lake No 1 Dam	Not Rated	Low	Private	Recreation	EAST END (0)	60.0	None	N/A	N/A
Mashburn Lake No 2 Dam	Not Rated	Low	Private	Recreation	EAST END (0)	78.0	18	N/A	N/A
Lawson Road Dam #2	Not Rated	Significant	Not Listed			0.0	None	EAP not required	No
Meyers LakeDam	Not Rated	Low	Private	Recreation	BRYANT (0)	51.0	None	N/A	N/A
Helmich Lake Dam	Not Rated	Low	Private	Fire Protection, Stock, Or Small Fish Pond	BRYANT (None)	52.0	None	N/A	N/A
Happy Valley Lake Dam	Not Rated	Low	Private	Recreation	FERNDALE (0)	92.0	24	N/A	N/A

Cecil Jones Lake Dam	Not Rated	Low	Private	Fire Protection Stock, Or Small Fish Pond	BENTON (None)	110.0	37	N/A	N/A
Big Ridge Properties-Main Dam	Not Rated	Low	Private	Recreation	NONE (0)	464.0	48	N/A	N/A
Maertens Lake Dam	Not Rated	Low	Private	Recreation	BENTON	132.0	33	N/A	N/A
Old Brown Mud Lake Dam	Not Rated	Low	Private	Recreation	SARDIS (0)	3,540.0	58	N/A	N/A
Big Ridge Properties-West Dam	Not Rated	Low	Private	Recreation	NONE (0)	464.0	55	N/A	N/A
Brown Mud Lake No.4	Not Rated	Significant	Private	Other	SARDIS (0)	1,670.0	62	EAP Not Required	NO
Lake Chance Dam	Not Rated	Significant	Private	Recreation	BENTON (None)	138.0	26	EAP Not Required	No
Chenault Reservoir Dam	Not Rated	High	Local Government	Water Supply	BENTON (0)	2,400.0	29	EAP	No
Lake Sophia Dam	Not Rated	Low	Private	Recreation		420.7	26	N/A	N/A
Lake Granada Dam	Not Rated	Low	Private	Recreation		827.0	69	N/A	N/A
Lake Lago Dam	Not Rated	Low	Private	Water Supply	HOT SPRINGS VILLAGE (0)	4,500.0	130	N/A	N/A
Lake Maria Dam	Not Rated	Low	Private	Recreation		328.9	27	N/A	N/A
Lake Norrell Dam	Not Rated	Low	Local Government	Water Supply	BENTON (0)	5.936.0	92	N/A	N/A
Mary Lake Dam	Not Rated	Low	Private	Recreation	NONE (None)	210.0	14	N/A	N/A
Clearlake Dam	Not Rated	Low	Not Listed	Recreation	NONE (0)	64.0	16	N/A	N/A

Lake Bloomfield Dam	Not Rated	High	Private	Recreation	BRYANT (0)	56.0	14		
Ferguson Lake Dam	Not Rated	Low	Private	Recreation	NONE (0)	1,360.0	17	N/A	N/A
Hester Lake Dam	Not Rated	Low	Private	Recreation	NONE (0)	100.0	18	N/A	N/A
Pathway Youth Camp Lake Dam	Not Rated	Low	Private	Recreation	GLEN ROSE (None)	91.0	17	N/A	N/A
Barr Lake Dam	Not Rated	Low	Private	Fire Protection, Stock, Or Small Fish Pond	GLEN ROSE (None)	62.0	None	N/A	N/A
King Lake Dam	Not Rated	Low	Private	Recreation	NONE (None)	150.0	25	N/A	N/A
Lake Pauline Dam	Not Rated	High	Private	Recreation	BENTON (0)	387.0	25	EAP	No
Hurricane Lake Dam	Not Rated	High	Private	Recreation	BRYANT (0)	10,386.0	46	EAP	No
Surge Pond Dam	Not Rated	Low	Private	Other	GOODMAN (0)	110.0	24	N/A	N/A
Hansen Lake Dam	Not Rated	Low	Private	Recreation	PARON (0)	64.0	None	N/A	N/A
Fletcher Lake Dam	Not Rated	Low	Local Government	Recreation	NONE (None)	160.0	18	N/A	N/A
Ledbetter Lake Dam	Not Rated	High	Private	Recreation	BRYANT (0)	51.0	15	EAP	No
Buffington Lake Dam	Not Rated	Significant	Private	Recreation	HASKELL (None)	160.0	18	EAP not required	No
Browns Lake Dam	Not Rated	Significant	Private	Recreation	PARON (0)	72.0	None	EAP not required	No

Source of Information: Inventory of Dams – Only High or Significant has information showing if there is an Emergency Action Plan. None of the dams in Arkansas have Inundation Maps which have been added in the Mitigation Action section of this plan. The Plan that had an EAP, the plan was not available to the Planning Team. This will be added to Mitigation Actions.

History:

There are no documented Dam Failures listed for Saline County.

Probability:

Since there have been no dam failures in Saline County, we will utilize the probability analysis from the State Hazard Mitigation Plan. Historically there have been nine reported dam failure events in Arkansas over an 88-year period. There have been six reported levee failure events in Arkansas over a 15-year period. Using the binomial probability equation, this would give a 10 percent probability for a dam failure each year.

Impact and Vulnerability:

Facilities located within five miles of significant and high hazard dams were determined to be most vulnerable to potential dam failures as they would be within potential failure inundation zones. A failure of the Hurricane Lake dam could potentially affect 23 residential structures, 9 commercial structures, 2 mobile home parks (estimate 70 mobile homes) and 1 water treatment facility. The loss of life and property would vary depending on the severity of the dam breach. Hwy 5, a heavily used thoroughfare, may possibly be closed for a short period of time. A failure of the Pebble Lake dam would affect three businesses, approximately 30 homes, and then flow into Hurricane Creek below the Hurricane Lake Dam. It is possible that Hwy 5 would be closed if Hurricane Creek was already at a high-water level.

Every jurisdiction is listed as having a dam near them.

Name of Area	Number of Dams listed as "nearby"
Alexander	14
Bauxite	14
Benton	15
Bryant	17
Haskell	9
Shannon Hills	12
Traskwood	6
Unincorporated areas	18

Climate Change:

There is a distinction that needs to be made when it comes to the relationship between climate change and extreme environmental events. Climate change has not been proven to directly cause individual extreme environmental events, but it has been shown to make these events more destructive, and likely happen more frequently, than they normally would. This drastic change is due to the increase in greenhouse gas emissions – primarily through the burning of fossil fuels for transportation, heat and electricity – in the past 150 years. Greenhouse gases, such as carbon dioxide, methane, and nitrous oxide, trap heat within Earth's atmosphere, making the planet warmer. A warmer atmosphere affects the water cycle because warmer air can hold more water vapor. In fact, the air's capacity to hold water vapor increases by 7 percent within an increase in temperature of 1 degree Celsius. This, along with warmer

ocean temperatures, leads to heavier precipitation. Heavy precipitation can cause problems like flooding and landslides – where large amounts of soil or rockslide down a slope.

According to the National Climate Assessment, global warming is already causing some regions to become wetter and increasing the frequency of extreme storms. These extreme events have a direct affect on dams.

B1.2 Drought

Description: Drought is generally defined as "a deficiency of precipitation over an extended period of time (usually a season or more), resulting in a water shortage."

Drought is the absence of precipitation, rather than the presence of an event such as a hurricane, tornado, or fire. It's often described as a "creeping phenomenon" because it slowly impacts many sectors of the economy and operates on many different timescales. It is difficult to predict and monitor – particularly when marking the beginning and end of a period of drought. Drought's effects also vary from region to region. Due to climatic differences, what might be considered a drought in one part of the country may not be a drought somewhere else.

*Information obtained from www.drought.gov.

Location: The data obtained for drought covers the entire County of Saline and all the jurisdictions within the county including Cities of Alexander, Bauxite, Benton, Bryant, Haskell, Shannon Hills and Traskwood. It also includes the School Districts of Bauxite, Benton, Bryant, Harmony Grove, and Sheridan.

Extent:

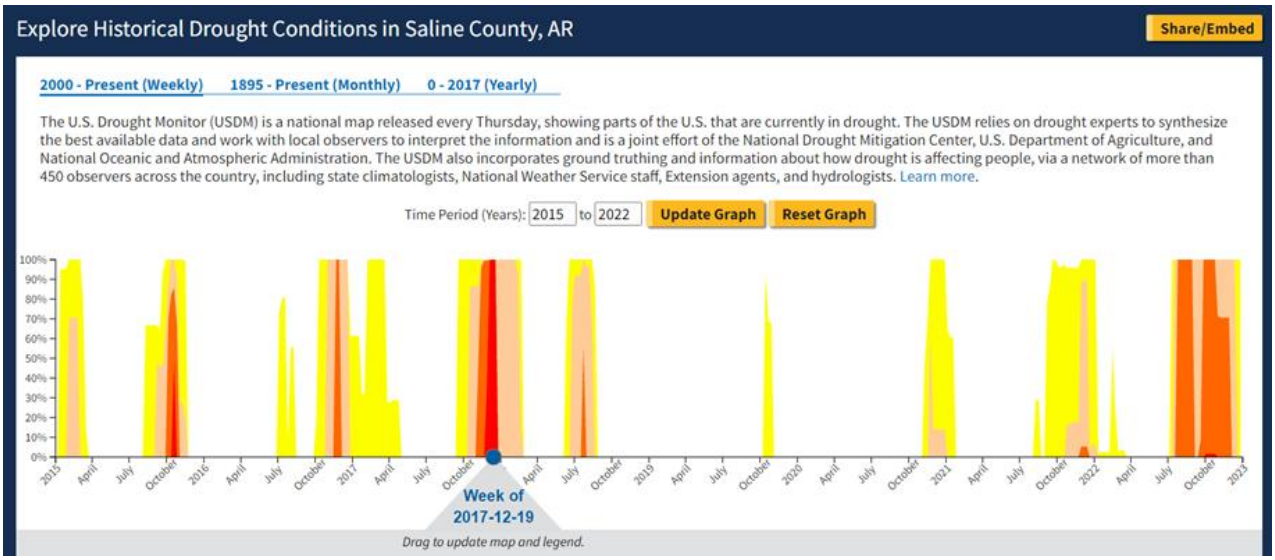
All participating jurisdictions could experience a drought that is rated between a D0 and D3 in any given year.

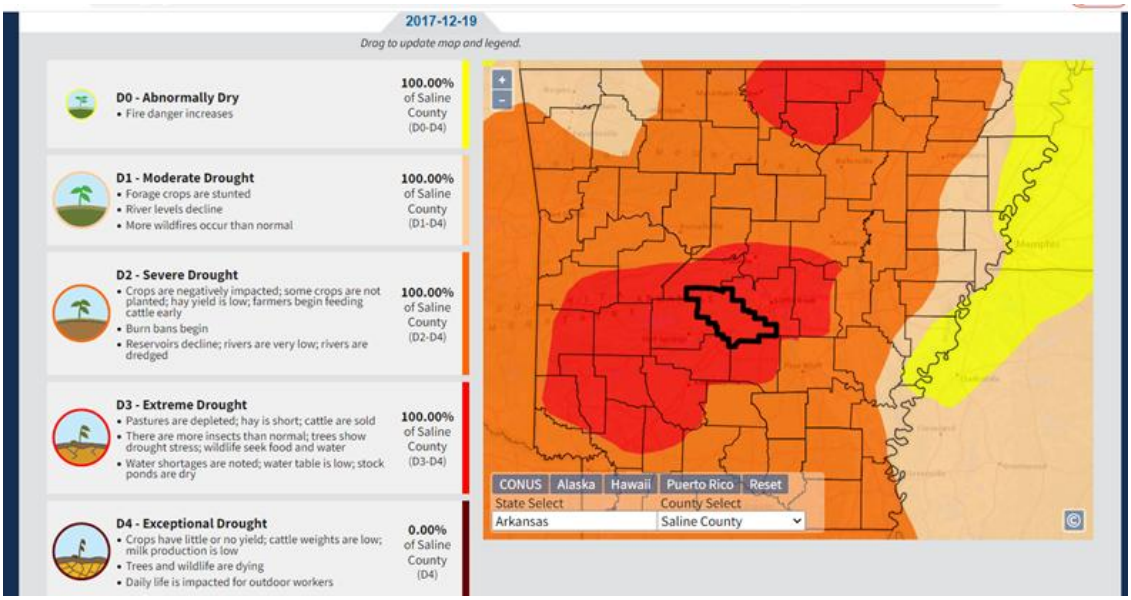
DO-Abnormally Dry	• Fire danger increases
D1-Moderate Drought	• Forage crops are stunted • River levels decline • More wildfires occur than normal
D2-Severe Drought	• Crops are negatively impacted; some crops are not planted; hay yield is low; farmers begin feeding cattle early • Burn bans begin • Reservoirs decline, rivers are very low; rivers are dredged
D3-Extreme Drought	• Pastures are depleted; hay is short; cattle are sold • There are more insects than normal; trees show drought stress; wildlife seeks food and water • Water shortages are noted; water table is low; stock ponds are dry

D4-Exceptional Drought	• Crops have little or no yield; cattle weights are low; milk production is low • Trees and wildlife are dying • Daily life is impacted for outdoor workers

History:

According to the drought conditions noted in www.drought.gov using data from 2015 to 2023; the week of December 18, 2017, was the greatest event of drought which was determined to be a D3.





Probability:

The probability that the county will experience a countywide drought event every year is likely.

Impact & 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 the 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 greatest for the communities. They may suffer from dehydration before other populations.

Changes in Land Use:

Livestock and product sales continue to be a significant source of farm income for Saline County farmers. A drought's risk on the livelihood of farmers and the overall economy increases as the dependency and increasing trends grow annually.

Climate change: According to the USGS, climate change has further altered the natural pattern of droughts, making them more frequent, longer and more severe. Since 2000, the western United State is experiencing some of the driest conditions on record. The southwestern U. S. is going through an unprecedented period of extreme drought. This will have lasting impacts on the environment and those who rely on it. Drought is a serious environmental threat across the United States. Climate change exacerbates droughts by making them more frequent, longer and more severe. The USGS works with state and federal partners to study, monitor and help mitigate the drought impacts across the U. S. now and into the future.

B1.3 Earthquake

Description:

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 the earthquake is a foreshock until the larger earthquake happens. The largest, main earthquake is called the main shock. 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.

Location:

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

Extent:

No earthquake activity has been reported for Saline County. However, it is possible that epicenters in neighboring counties can affect life and property in Saline County. Events ranging from a 1.7-4.2 magnitude have been felt in Saline County. The Planning team cannot rule out that an earthquake could

occur in Saline County. With the epicenter in every neighboring county, Saline may experience an earthquake with a magnitude ranging from 0.0-4.2.

Understanding the Richter Scale:

Richter Magnitude	Feels like KG of TNT	Extra Information
0-1	0.6-20 kilograms of dynamite	We can not feel these
2	600 kilograms of dynamite	Smallest Quake people can normally feel
3	20,000 kilograms of dynamite	People near the epicenter feel this quake
4	60,000 kilograms of dynamite	This will cause damage around the epicenter. It is the same as a small fission bomb
5	20,000,000 kilograms of dynamite	Damage done to weak buildings in the area of the epicenter
6	60,000,000 kilograms of dynamite	Can cause great damage around the epicenter
7	20 bilion kilograms of dynamite	Creates enough energy to heat New York city for one year. Can be detected all over the world. Causes serious damage
8	60 bilion kilograms of dynamite	Causes death and major destruction. Destroyed San Francisco in 1906
9	20 trillion kilograms of dynamite	Rare, but would causes unbelievable damage!

The Richter ratings only give you a rough idea of the actual impact of an earthquake. An earthquake's destructive power varies depending on the composition of the ground in a area and the design and placement of man-made structures. The extent of damage is rated on the Mercalli Intensity Scale.

I. Instrumental	Not felt by many people unless in favourable conditions.
II. Weak	Felt only by a few people at best, especially on the upper floors of buildings. Delicately suspended objects may swing.
III. Slight	Felt quite noticeably by people indoors, especially on the upper floors of buildings. Many to do not recognise it as an earthquake. Standing motor cars may rock slightly. Vibration similar to the passing of a truck. Duration estimated.
IV. Moderate	Felt indoors by many people, outdoors by a few people during the day. At night, some awakened.
V. Rather Strong	Felt outside by most, may not be felt by some people in non-favourable conditions. Dishes and windows may break and large bells will ring. Vibrations like train passing close to house.
VI. Strong	Felt by all; many frightened and run outdoors, walk unsteadily. Windows, dishes, glassware broken; books fall off shelves; some heavy furniture moved or overturned; a few instances of fallen plaster. Damage slight.
VII. Very Strong	Difficult to stand; furniture broken; damage negligible in building of good design and construction; slight to moderate in well-built ordinary structures; considerable damage in poorly built or badly designed structures; some chimneys broken. Noticed by people driving motor cars.
VIII. Destructive	Damage slight in specially designed structures; considerable in ordinary substantial buildings with partial collapse. Damage great in poorly built structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture moved.
IX. Violent	General panic; damage considerable in poorly designed structures, well designed frame structures thrown out of plumb. Damage great in substantial buildings, with partial collapse. Buildings shifted off foundations.
X. Intense	Some well build wooden structures destroyed; most masonry and frame structures destroyed with foundation. Rails bent.
XI. Extreme	Few, if any masonry structures remain standing. Bridges destroyed. Rails bent greatly.
XII. Cataclysmic	Total destruction – everything is destroyed. Lines of sight and level distorted. Objects thrown into the air. The ground moves in waves or ripples. Large amounts of rock move position. Landscape altered, or leveled by several meters. In some cases, even the routes of rivers are changed.

History:

As indicated by the Arkansas Geology maps, for south central Arkansas, there have been no earthquakes occurring in the Saline County area.

Probability:

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

Impact and Vulnerability of Earthquake:

The State Mitigation Plan describes the most vulnerable area for earthquakes in the northeast part of the state. Saline is in Zone VII and isn't listed in their Vulnerability Data.

According to the Earthquake Hazard and Emergency Management Course "Nature of Earthquake Disaster Vulnerability". Earthquake vulnerability essentially is a measure of the effect of the potential hazard upon the disaster. Earthquake vulnerability, in its most general sense, stems from Communities being in seismic-prone regionals and Infrastructure that is not designed to resist earthquake shaking. Even though newer buildings may be constructed using updated codes that take earthquakes into account, most of the

buildings and infrastructure in these communities are not designed and constructed at a time when these requirements were in place.

There is an obvious connection between the increase in losses from a disaster and increases in population. If there are more people and structures in a location where an earthquake strikes, there is likely to be more of an impact.

	Sq Mile	Population	people per sq mi	Vulnerable (1 being the greatest	Impact (1 being the greatest)
Saline Co	730.46	125233	171	7	7
Benton	23.4	37214	1590	2	1
Bryant	21.1	20410	967	4	2
Haskell	5.4	4076	755	5	3
Shannon Hills	3.1	3657	1180	3	4
Bauxite Area	2.6	573	220	6	5
Alexander	2.2	3385	1539	1	6

Conclusion: Alexander would be the most vulnerability because of the people per square mile that would be affected and because they have over 51% of their population which are of low to moderate income. Poverty generally makes people more vulnerable to the impact of hazards.

Benton is vulnerable but likely to have the greatest impact because they are a much larger city with more homes, buildings and infrastructure. The schools are included in the data but not tracked separately.

Climate Change: There's no data that has tied climate change to earthquakes

B1.4 Extreme Heat

Description:

Temperatures that hover 10 degrees or more above the average high temperature for the region and last 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.

Location:

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 extreme heat events.

Extent:

All areas of the planning area are affected seasonally by summer heat, with summer temperatures averaging 80 degrees and maximum around 92 degrees. However, in late June, early July 2023 the temperatures exceeded the 100-degree mark.

When the summer months arrive in Arkansas, the heat can become unbearable at times. Factoring in high humidity, it feels warmer than it is. More specifically, the body is not able to cool as effectively through sweating.

On a dry day, sweat evaporates into the air, which creates cooling. Adding moisture to the atmosphere cuts down on evaporation. Over time, the body temperature rises and shuts down.

Heat is the number one weather related killer across the country (more than hurricanes, floods, lightning, and tornadoes).

The "heat index" considers the effects of heat and humidity. When these variables combine to make it feel like 105 degrees or greater, it is considered dangerous.

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

For example, using the chart above, a temperature of 96 degrees with a relative humidity of 50% net a heat index of 108 degrees. Other than the chart, there is a Meteorological Calculator that can be found at this link [NWS Little Rock, AR - Meteorological Calculator (weather.gov)]

When heat index values meet or exceed 105 degrees over a large area (and/or temperatures are 103 degrees or greater), the National Weather Service will usually issue a **Heat Advisory**.

When heat index values reach 110 degrees over a large area (and/or temperatures are 105 degrees or greater), an **Excessive Heat Warning** may be posted. *Information provided from the National Weather Service Website*

History:

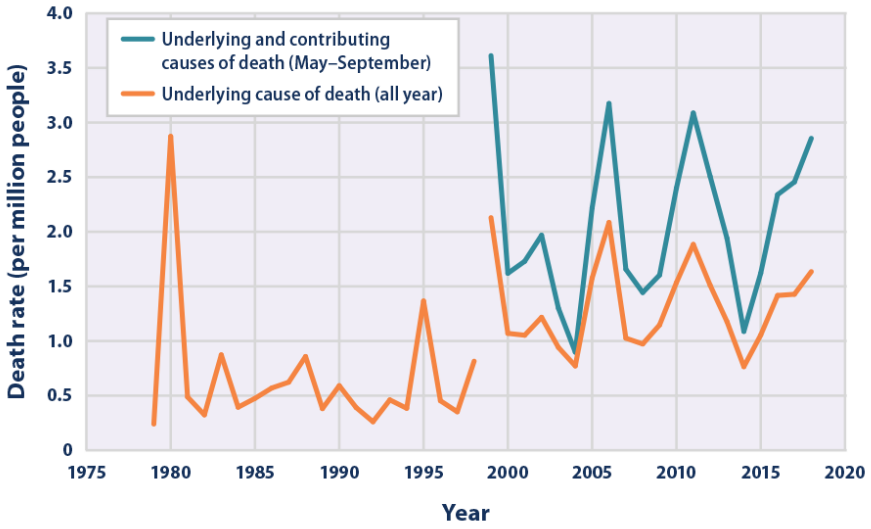
According to the Arkansas State Climate Summary, the temperatures in Arkansas have risen by 0.5 degrees Fahrenheit since the beginning of the 20th century, less than a third of the warming for the contiguous United States, but the warmest consecutive 5-year interval was 2015-2019 Historically unprecedented

warming is project during this century. The National Centers for Environmental Information from the National Oceanic and Atmospheric Administration (NOAA) do not have any "events" for Excessive Heat listed for Saline County, Arkansas.

Probability:

The chance of having a dangerous heat event in the future can be expected. The Environmental Protection Agency conducted a study of Climate Change Indicators: Heat Related Deaths. This indicator presents data on deaths classified as "heat-related" in the United States.

Figure 1. Deaths Classified as "Heat-Related" in the United States, 1979–2018 Line graph showing the rate for heat-related deaths per million U.S. population from 1979 to 2018.



This figure shows the annual rates for deaths classified as "heat-related" by medical professionals in the 50 states and the District of Columbia. The orange line shows deaths for which heat was listed as the main (underlying) cause. * The blue line shows deaths for which heat was listed as either the underlying or contributing cause of death during the months from May to September, based on a broader set of data that became available in 1999.

* Between 1998 and 1999, the World Health Organization revised the international codes used to classify causes of death. As a result, data from earlier than 1999 cannot easily be compared with data from 1999 and later.

Data source: CDC, 202010,11 [Climate Change Indicators: Heat-Related Deaths | US EPA]

Web update: April 2021

Impact & Vulnerability:

In the unincorporated areas of Saline County, cities of Alexander, Bauxite, Bryant, Benton, Haskell, Shannon Hills, Traskwood; School Districts of Bryant, Bauxite, Benton, Harmony Grove and Sheridan all have 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.

The unincorporated areas of Saline County and all the cities have areas that can 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 increase the population's risk to heat injury.

Continuing with the unincorporated areas of Saline 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 product sales during extreme heat events.

Infrastructure is impacted by extreme temperatures, the asphalt will dry and crack during extreme heat and become soft, rain can then seep into the cracks and when the temperature drops, ice will cause the asphalt to crumble.

Climate Change: Climate change affects global temperature and precipitation patterns. These effects, in turn, influence the intensity and in some cases the frequency of extreme environmental events, such as forest fires, hurricanes, heat waves, floods, droughts and storms. Climate change caused by the emission of greenhouse gases from human activities affects global temperature and precipitation. Records from the Intergovernmental Panel on Climate Change indicate that the global average temperature ha increased by at least 0.4 degrees Celsius (0.72 degrees Fahrenheit) since the 1970s, and that by 2100, it could increase to around 4 degrees Celsius (7.2 degrees Fahrenheit) above the preindustrial temperatures. While the global effects of climate change may seem too small to be noticed by people living around the world, we have already experienced the effects of climate change through severe weather events, including forest fires, hurricanes, droughts, heatwaves, floods and storms. Computer modelling of real data has shown that the frequency and intensity of these events are influenced by climate change.

B1.5 Flood

Description:

A flood is an overflow of water that submerges land that is usually dry. In the sense of "flowing water", the word may also be applied to the inflow of the tide. Floods are an area of study of the discipline hydrology and are of significant concern in agriculture, civil engineering, and public health.

Floods are most common in seasons of rain and thunderstorms. Floods that threaten Saline County can be generally classified under two categories:

- Flash Flood: The product of heavy, localized precipitation in short time over a given location.
- Riverine Flood: Occurs when precipitation over a given river basin for a long period causes the overflow of rivers, streams, lakes and drains.

Location:

The Flood Insurance Rate Maps (FIRM) can be located on the FEMA Flood Map Service Center www.fema.gov/portal/home , and they identify the location of flood zones within each jurisdiction. All have a watershed. The watershed is the area of land that drains or sheds water into a specific receiving waterbody, such as a lake or river. The 2 main watershed for Saline County are the Upper Saline Watershed and the Lower Arkansas-Maumelle Watershed.

Extent:

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 can expect to receive a similar amount of rainfall.

History:

According to the NOAA Storm Event Database between the years of 2017 and 2013 there were 5 floods reported (4 in Benton and 1 in Grape) There were a total of 25 flash floods reported (Avilla – 2, New Summit – 2, Traskwood – 2, Brooks – 1, West Bauxite – 1, Benton – 5, Collegeville – 3, Alexander – 1, Bryant – 5, Vimy Ridge – 1, Slocomb – 1, Alum Fork 1)

Probability:

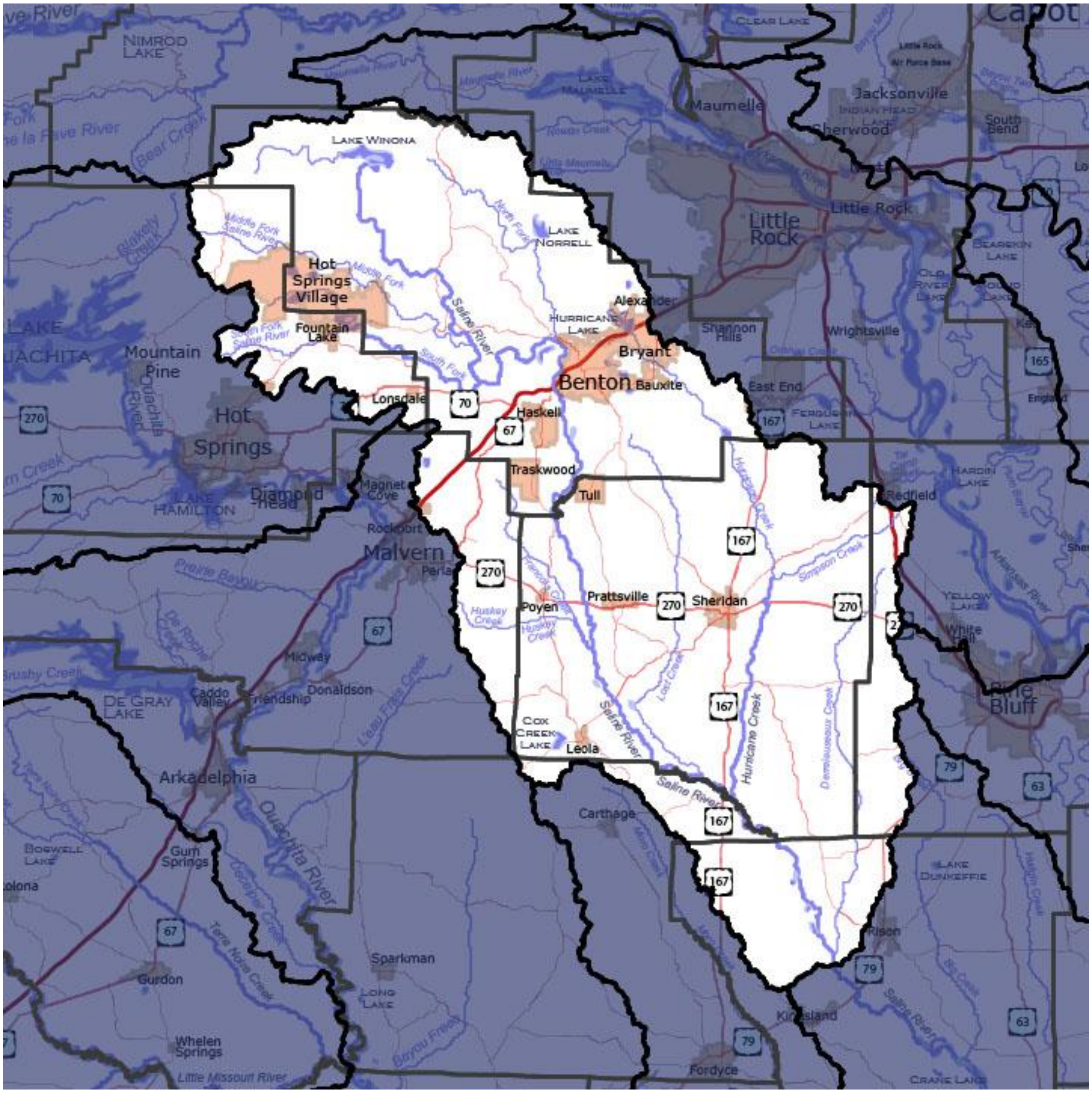
The probability of the jurisdictions identified within the flood hazard areas are likely to experience an occurrence in the next year or a recurrence interval of 1 to 10 years.

Impact and Vulnerability of Flooding:

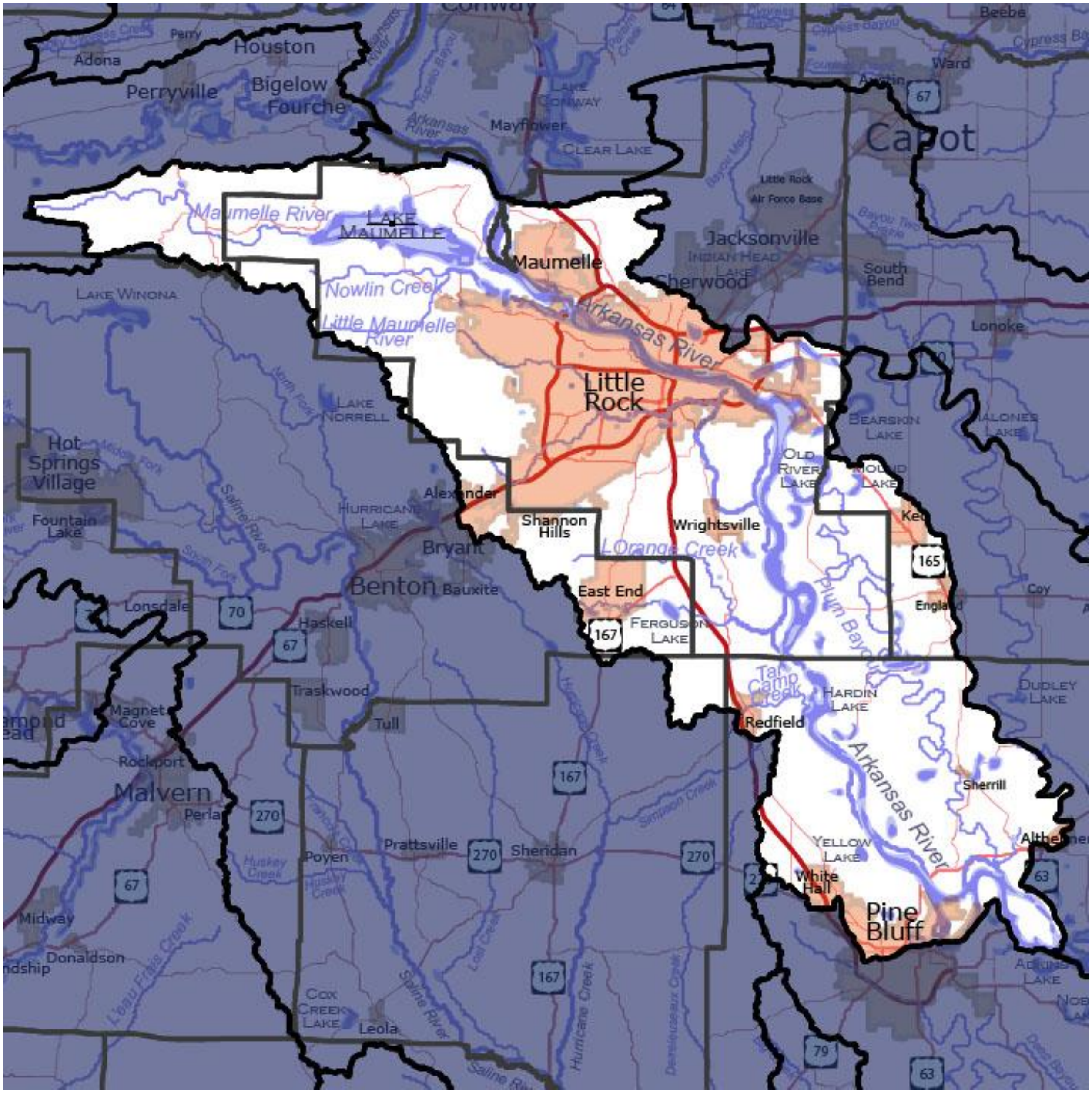
Flash floods are most common in this area due to this area exhibiting high to moderate relief, steep to moderate slopes, and bedrock with low permeability. All factors facilitate rapid runoff and the consequent potential for flash floods. Urban development in this part of the county exacerbates the flash flooding problem. Intense rainfall events, often accompanying the large thunderstorms that occur in Saline County, all cities and all school districts, 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 because of the ravages of flooding. Residents and homeowners who do not have flood insurance are vulnerable. They will suffer great financial hardship from the expenses of cleaning up and rebuilding.

The watersheds provided Estimated Potential Losses for Flood Event Scenarios for the local Jurisdictions. This information came from the Flood Risk Reports for the Upper Saline Watershed and the Lower Arkansas Maumelle Watershed.



Lake Winona
Lake Norrell
Hot Springs Village
Fountain Lake
Hurricane Lake
Alexander
Bryant
Benton
Bauxite
Lonsdale
Haskell
Traskwood
Tull
Prattsville
Sheridan
Poyen
Cox Creek Lake
Leola
Saline River
Hurricane Creek
Malvern
Little Rock
Maumelle
Jacksonville
Sherwood
Shannon Hills
Wrightsville
East End
Redfield
Mountain Pine
Hot Springs
Magnet Cove
Rockport
Arkadelphia
Carthage
Sparkman
Gurdon
Fordyce
Rison
Kingsland
Donaldson
Friendship
Midway
Whelen Springs
Ouachita River


Houston
Perryville
Bigelow
Fourche
Mayflower
Clear Lake
Cabot
Maumelle River
Lake Maumelle
Maumelle
Jacksonville
Sherwood
Nowlin Creek
Little Maumelle River
Arkansas River
Little Rock
Lake Winona
Lake Norrell
Hot Springs Village
Alexander
Shannon Hills
Wrightsville
Bryant
Benton
Bauxite
East End
Haskell
Traskwood
Tull
Redfield
Malvern
Prattsville
Sheridan
Poyen
Pine Bluff
White Hall
Arkansas River
Lonoke
South Bend
Leola
Donaldson
Midway

Upper Saline Watershed
Town of Bauxite

	Total Inventory		Estimated Potential Losses for Flood Event Scenarios									
			10% (10-yr)		2% (50-yr)		1% (100-yr)		0.2% (500-yr)		Annualized ($/yr)	
	Estimated Value	% of Total	Dollar Losses[1]	Loss Ratio[2]	Dollar Losses[1]	Loss Ratio[2]	Dollar Losses[1]	Loss Ratio[2]	Dollar Losses[1]	Loss Ratio[2]	Dollar Losses[1]	Loss Ratio[2]
Residential Building and Contents Losses	$33,300,000	49%	$70,000	< 1%	$100,000	< 1%	$100,000	< 1%	$100,000	< 1%	$10,000	< 1%
Commercial Building and Contents Losses	$6,900,000	10%	$10,000	< 1%	$20,000	< 1%	$20,000	< 1%	$30,000	< 1%	$0	< 1%
Other Building and Contents Losses	$28,100,000	41%	$1,600,000	6%	$2,700,000	10%	$2,800,000	10%	$3,500,000	13%	$200,000	1%
Total Building and Contents Losses	$68,300,000	100%	$1,700,000	3%	$2,800,000	4%	$3,000,000	4%	$3,700,000	5%	$200,000	< 1%
Business Disruption	$0	N/A	$200,000	N/A	$400,000	N/A	$400,000	N/A	$400,000	N/A	$30,000	N/A
TOTAL	$68,300,000	N/A	$1,900,000	3%	$3,200,000	5%	$3,300,000	5%	$4,100,000	6%	$300,000	< 1%

Source: Hazus analysis results stored as the Flood Risk Assessment Dataset in the Flood Risk Database.
[1]Losses shown are rounded to nearest $10,000 for values under $100,000 and to the nearest $100,000 for values over $100,000.
[2]Loss ratio = Dollar Losses ÷ Estimated Value. Loss Ratios are rounded to the nearest integer percent.
[3]Total Building and Contents Losses = Residential Building and Contents Losses + Commercial Building and Contents Losses + Other Building and Contents Losses.
[4]Business Disruption = Inventory Loss + Relocation Cost + Income Loss + Rental Income Loss + Wage Loss + Direct Output Loss.
[5]Total Loss = Total Building and Contents Losses + Business Disruption

Lower Arkansas-Maumelle
Watershed
City of Bryant

	Total Inventory		City of Bryant Estimated Potential Losses for Flood Event Scenarios									
			10% (10-yr)		2% (50-yr)		1% (100-yr)		0.2% (500-yr)		Annualized ($/yr)	
	Estimated Value	% of Total	Dollar Losses[5]	Loss Ratio[1,6]	Dollar Losses[5]	Loss Ratio[1,6]	Dollar Losses[5]	Loss Ratio[1,6]	Dollar Losses[5]	Loss Ratio[1,6]	Dollar Losses[5]	Loss Ratio[1,6]
Residential Building/Contents	$565,200,000	75%	$50,000	0.0%	$60,000	0.0%	$60,000	0.0%	$80,000	0.0%	$10,000	0.0%
Commercial Building/Contents	$147,800,000	20%	$30,000	0.0%	$40,000	0.0%	$40,000	0.0%	$50,000	0.0%	$0	0.0%
Other Building/Contents	$43,200,000	6%	$10,000	0.0%	$10,000	0.0%	$10,000	0.0%	$20,000	0.0%	$0	0.0%
Total Building/Contents[2]	$756,200,000	100%	$90,000	0.0%	$100,000	0.0%	$100,000	0.0%	$200,000	0.0%	$10,000	0.0%
Business Disruption[3]	$0	N/A	$0	N/A	$0	N/A	$0	N/A	$0	N/A	$0	N/A
TOTAL[4]	$756,200,000	N/A	$90,000	0.0%	$100,000	0.0%	$100,000	0.0%	$200,000	0.0%	$10,000	0.0%

Source: Hazus analysis results stored as the Flood Risk Assessment Dataset in the Flood Risk Database.
[1]Loss ratio = Dollar Losses / Estimated Value
[2]Total Building/Contents Loss = Residential Building/Contents Loss + Commercial Building/Contents Loss + Other Building/Contents Loss.
[3]Business Disruption = Inventory Loss + Relocation Cost + Income Loss + Rental Income Loss + Wage Loss + Direct Output Loss.
[4]Total Loss = Total Building/Contents + Business Disruption
[5]Losses shown are rounded to nearest $10,000 for values under $100,000 and to the nearest $100,000 for values over $100,000.
[6]Loss Ratios are rounded to nearest tenth for values under 1% and to the nearest percent for values over 1%.

Upper Saline Watershed
City of Benton

	Total Inventory		Estimated Potential Losses for Flood Event Scenarios									
			10% (10-yr)		2% (50-yr)		1% (100-yr)		0.2% (500-yr)		Annualized ($/yr)	
	Estimated Value	% of Total	Dollar Losses[1]	Loss Ratio[2]	Dollar Losses[1]	Loss Ratio[2]	Dollar Losses[1]	Loss Ratio[2]	Dollar Losses[1]	Loss Ratio[2]	Dollar Losses[1]	Loss Ratio[2]
Residential Building and Contents Losses	$2,168,900,000	77%	$23,200,000	1%	$27,000,000	1%	$30,100,000	1%	$33,100,000	2%	$2,600,000	< 1%
Commercial Building and Contents Losses	$428,300,000	15%	$3,100,000	1%	$3,800,000	1%	$4,300,000	1%	$5,100,000	1%	$400,000	< 1%
Other Building and Contents Losses	$207,100,000	7%	$900,000	< 1%	$1,000,000	< 1%	$1,200,000	1%	$1,200,000	1%	$100,000	< 1%
Total Building and Contents Losses	$2,804,200,000	100%	$27,100,000	1%	$31,800,000	1%	$35,600,000	1%	$39,500,000	1%	$3,000,000	< 1%
Business Disruption	$0	N/A	$400,000	N/A	$500,000	N/A	$600,000	N/A	$600,000	N/A	$40,000	N/A
TOTAL	$2,804,200,000	N/A	$27,500,000	1%	$32,300,000	1%	$36,100,000	1%	$40,100,000	1%	$3,100,000	< 1%

Source: Hazus analysis results stored as the Flood Risk Assessment Dataset in the Flood Risk Database.
[1]Losses shown are rounded to nearest $10,000 for values under $100,000 and to the nearest $100,000 for values over $100,000.
[2]Loss ratio = Dollar Losses ÷ Estimated Value. Loss Ratios are rounded to the nearest integer percent.
[3]Total Building and Contents Losses = Residential Building and Contents Losses + Commercial Building and Contents Losses + Other Building and Contents Losses.
[4]Business Disruption = Inventory Loss + Relocation Cost + Income Loss + Rental Income Loss + Wage Loss + Direct Output Loss.
[5]Total Loss = Total Building and Contents Losses + Business Disruption

Upper Saline Watershed
City of Bryant

	Total Inventory		Estimated Potential Losses for Flood Event Scenarios									
			10% (10-yr)		2% (50-yr)		1% (100-yr)		0.2% (500-yr)		Annualized ($/yr)	
	Estimated Value	% of Total	Dollar Losses[1]	Loss Ratio[2]	Dollar Losses[1]	Loss Ratio[2]	Dollar Losses[1]	Loss Ratio[2]	Dollar Losses[1]	Loss Ratio[2]	Dollar Losses[1]	Loss Ratio[2]
Residential Building ÷ Contents	$442,400,000	76%	$1,900,000	< 1%	$2,700,000	1%	$3,100,000	1%	$3,300,000	1%	$200,000	< 1%
Commercial Building ÷ Contents	$65,600,000	11%	$900,000	1%	$1,200,000	2%	$1,300,000	2%	$1,500,000	2%	$100,000	< 1%
Other Building ÷ Contents	$71,800,000	12%	$2,000,000	3%	$2,400,000	3%	$2,600,000	4%	$2,700,000	4%	$200,000	< 1%
Total Building ÷ Contents	$579,800,000	100%	$4,800,000	1%	$6,400,000	1%	$6,900,000	1%	$7,500,000	1%	$600,000	< 1%
Business Disruption	$0	N/A	$500,000	N/A	$600,000	N/A	$700,000	N/A	$700,000	N/A	$50,000	N/A
TOTAL	$579,800,000	N/A	$5,300,000	1%	$7,000,000	1%	$7,600,000	1%	$8,200,000	1%	$600,000	< 1%

Source: Hazus analysis results stored as the Flood Risk Assessment Dataset in the Flood Risk Database.
[1]Losses shown are rounded to nearest $10,000 for values under $100,000 and to the nearest $100,000 for values over $100,000.
[2]Loss ratio = Dollar Losses ÷ Estimated Value. Loss Ratios are rounded to the nearest integer percent.
[3]Total Building ÷ Contents Loss = Residential Building ÷ Contents Loss + Commercial Building ÷ Contents Loss + Other Building ÷ Contents Loss.
[4]Business Disruption = Inventory Loss + Relocation Cost + Income Loss + Rental Income Loss + Wage Loss + Direct Output Loss.
[5]Total Loss = Total Building ÷ Contents + Business Disruption

Upper Saline Watershed
City of Haskell

	Total Inventory		Estimated Potential Losses for Flood Event Scenarios									
			10% (10-yr)		2% (50-yr)		1% (100-yr)		0.2% (500-yr)		Annualized ($/yr)	
	Estimated Value	% of Total	Dollar Losses[1]	Loss Ratio[2]	Dollar Losses[1]	Loss Ratio[2]	Dollar Losses[1]	Loss Ratio[2]	Dollar Losses[1]	Loss Ratio[2]	Dollar Losses[1]	Loss Ratio[2]
Residential Building and Contents Losses	$167,500,000	82%	$0	N/A	$0	N/A	$0	N/A	$0	N/A	$0	< 1%
Commercial Building and Contents Losses	$12,300,000	6%	$0	N/A	$0	N/A	$0	N/A	$0	N/A	$0	< 1%
Other Building and Contents Losses	$23,300,000	11%	$0	N/A	$0	N/A	$0	N/A	$0	N/A	$0	< 1%
Total Building and Contents Losses	$203,000,000	100%	$0	N/A	$0	N/A	$0	N/A	$0	N/A	$0	< 1%
Business Disruption	$0	N/A	$0	N/A	$0	N/A	$0	N/A	$0	N/A	$0	N/A
TOTAL	$203,000,000	N/A	$0	N/A	$0	N/A	$0	N/A	$0	N/A	$0	< 1%

Source: Hazus analysis results stored as the Flood Risk Assessment Dataset in the Flood Risk Database.
[1]Losses shown are rounded to nearest $10,000 for values under $100,000 and to the nearest $100,000 for values over $100,000.
[2]Loss ratio = Dollar Losses ÷ Estimated Value. Loss Ratios are rounded to the nearest integer percent.
[3]Total Building and Contents Losses = Residential Building and Contents Losses + Commercial Building and Contents Losses + Other Building and Contents Losses.
[4]Business Disruption = Inventory Loss + Relocation Cost + Income Loss + Rental Income Loss + Wage Loss + Direct Output Loss.
[5]Total Loss = Total Building and Contents Losses + Business Disruption

Upper Saline Watershed
City of Traskwood

	Total Inventory		Estimated Potential Losses for Flood Event Scenarios									
			10% (10-yr)		2% (50-yr)		1% (100-yr)		0.2% (500-yr)		Annualized ($/yr)	
	Estimated Value	% of Total	Dollar Losses[1]	Loss Ratio[2]	Dollar Losses[1]	Loss Ratio[2]	Dollar Losses[1]	Loss Ratio[2]	Dollar Losses[1]	Loss Ratio[2]	Dollar Losses[1]	Loss Ratio[2]
Residential Building and Contents Losses	$30,200,000	87%	$700,000	2%	$900,000	3%	$1,000,000	3%	$1,200,000	4%	$80,000	< 1%
Commercial Building and Contents Losses	$1,400,000	4%	$20,000	2%	$40,000	2%	$40,000	3%	$50,000	4%	$0	< 1%
Other Building and Contents Losses	$3,000,000	9%	$30,000	1%	$40,000	1%	$50,000	2%	$60,000	2%	$0	< 1%
Total Building and Contents Losses	$34,600,000	100%	$800,000	2%	$900,000	3%	$1,000,000	3%	$1,300,000	4%	$90,000	< 1%
Business Disruption	$0	N/A	$10,000	N/A	$10,000	N/A	$10,000	N/A	$20,000	N/A	$0	N/A
TOTAL	$34,600,000	N/A	$800,000	2%	$1,000,000	3%	$1,100,000	3%	$1,300,000	4%	$90,000	< 1%

Source: Hazus analysis results stored as the Flood Risk Assessment Dataset in the Flood Risk Database.
[1]Losses shown are rounded to nearest $10,000 for values under $100,000 and to the nearest $100,000 for values over $100,000.
[2]Loss ratio = Dollar Losses ÷ Estimated Value. Loss Ratios are rounded to the nearest integer percent.
[3]Total Building and Contents Losses = Residential Building and Contents Losses + Commercial Building and Contents Losses + Other Building and Contents Losses.
[4]Business Disruption = Inventory Loss + Relocation Cost + Income Loss + Rental Income Loss + Wage Loss + Direct Output Loss.
[5]Total Loss = Total Building and Contents Losses + Business Disruption

Upper Saline Watershed
Saline County

	Total Inventory		Estimated Potential Losses for Flood Event Scenarios									
			10% (10-yr)		2% (50-yr)		1% (100-yr)		0.2% (500-yr)		Annualized ($/yr)	
	Estimated Value	% of Total	Dollar Losses[1]	Loss Ratio[2]	Dollar Losses[1]	Loss Ratio[2]	Dollar Losses[1]	Loss Ratio[2]	Dollar Losses[1]	Loss Ratio[2]	Dollar Losses[1]	Loss Ratio[2]
Residential Building and Contents Losses	$2,172,500,000	86%	$35,700,000	2%	$44,500,000	2%	$48,900,000	2%	$56,600,000	3%	$4,100,000	< 1%
Commercial Building and Contents Losses	$196,200,000	8%	$6,000,000	3%	$7,300,000	4%	$7,800,000	4%	$9,000,000	5%	$700,000	< 1%
Other Building and Contents Losses	$145,700,000	6%	$2,900,000	2%	$3,900,000	3%	$4,200,000	3%	$4,900,000	3%	$300,000	< 1%
Total Building and Contents Losses	$2,514,400,000	100%	$44,600,000	2%	$55,700,000	2%	$60,800,000	2%	$70,500,000	3%	$5,100,000	< 1%
Business Disruption	$0	N/A	$900,000	N/A	$1,100,000	N/A	$1,200,000	N/A	$1,300,000	N/A	$70,000	N/A
TOTAL	$2,514,400,000	N/A	$45,500,000	2%	$56,700,000	2%	$62,000,000	2%	$71,900,000	3%	$5,200,000	< 1%

Source: Hazus analysis results stored as the Flood Risk Assessment Dataset in the Flood Risk Database.
[1]Losses shown are rounded to nearest $10,000 for values under $100,000 and to the nearest $100,000 for values over $100,000.
[2]Loss ratio = Dollar Losses ÷ Estimated Value. Loss Ratios are rounded to the nearest integer percent.
[3]Total Building and Contents Losses = Residential Building and Contents Losses + Commercial Building and Contents Losses + Other Building and Contents Losses.
[4]Business Disruption = Inventory Loss + Relocation Cost + Income Loss + Rental Income Loss + Wage Loss + Direct Output Loss.
[5]Total Loss = Total Building and Contents Losses + Business Disruption

Lower Arkansas-Maumelie
Watershed
Saline County

	Total Inventory		Saline County Unincorporated Areas Estimated Potential Losses for Flood Event Scenarios									
			10% (10-yr)		2% (50-yr)		1% (100-yr)		0.2% (500-yr)		Annualized ($/yr)	
	Estimated Value	% of Total	Dollar Losses[5]	Loss Ratio[1,6]	Dollar Losses[5]	Loss Ratio[1,6]	Dollar Losses[5]	Loss Ratio[1,6]	Dollar Losses[5]	Loss Ratio[1,6]	Dollar Losses[5]	Loss Ratio[1,6]
Residential Building/Contents	$960,400,000	86%	$2,500,000	0.3%	$3,600,000	0.4%	$4,300,000	0.4%	$5,800,000	0.6%	$300,000	0.0%
Commercial Building/Contents	$103,100,000	9%	$200,000	0.2%	$300,000	0.3%	$500,000	0.5%	$700,000	0.7%	$30,000	0.0%
Other Building/Contents	$59,500,000	5%	$100,000	0.2%	$200,000	0.3%	$200,000	0.3%	$300,000	0.5%	$10,000	0.0%
Total Building/Contents[2]	$1,123,000,000	100%	$2,800,000	0.2%	$4,100,000	0.4%	$5,000,000	0.4%	$6,800,000	0.6%	$300,000	0.0%
Business Disruption[3]	$0	N/A	$30,000	N/A	$50,000	N/A	$80,000	N/A	$100,000	N/A	$0	N/A
TOTAL[4]	$1,123,000,000	N/A	$2,800,000	0.2%	$4,100,000	0.4%	$5,000,000	0.4%	$6,800,000	0.6%	$300,000	0.0%

Source: Hazus analysis results stored as the Flood Risk Assessment Dataset in the Flood Risk Database.
[1]Loss ratio = Dollar Losses / Estimated Value
[2]Total Building/Contents Loss = Residential Building/Contents Loss + Commercial Building/Contents Loss + Other Building/Contents Loss.
[3]Business Disruption = Inventory Loss + Relocation Cost + Income Loss + Rental Income Loss + Wage Loss + Direct Output Loss.
[4]Total Loss = Total Building/Contents + Business Disruption
[5]Losses shown are rounded to nearest $10,000 for values under $100,000 and to the nearest $100,000 for values over $100,000.
[6]Loss Ratios are rounded to nearest tenth for values under 1% and to the nearest percent for values over 1%.

Land Use and Development Trends:

Along the Saline River in the unincorporated areas, there is minimal housing with mostly pasture or forested land bordering the river. In the town of Benton, most developments have been on the bluff side of the river and has been exposed to the risk of flooding via the Saline River. However, population growth and land development in the cities of Benton, Bryant, Bauxite and Alexander have put more life and properties near areas prone to flooding. Over the course of this plan update, the cities have worked to correct flooding issues in newly developed areas. This has lessened the impact of flash flooding and riverine flooding.

Repetitive Loss Properties:

According to Shawn Jackson, the State NFIP Coordinator. This is the information she could share for Saline County:

	Policies in Force	Insurance in Force	No. of Paid Losses	Total Losses Paid	Sub. Damage Claims since 1978
Alexander	0	0	0	0	0
Bauxite	0	0	0	0	0
Traskwood	suspended 6/20/2012				
Saline County	71	$19,717,400.00	82	$1,938,269.90	4

CAPDD contacted Whiney Montague, Engineer Supervisor at the Arkansas Department of Agriculture in Little for assistance with obtaining the information that was requested In Element B of the RFI. "Requesting the type of structure for the repetitive loss properties identified…". Correspondence with Ms. Montague, she stated that she requested access to PIVOT; however, the information that we had requested will no toad. She is trying to reach someone in PIVOT to determine if it is a system error or if they have erroneously restricted her access. So Unfortunately, we do not have any updated information at this time.

Community Repetitive Loss

COMMUNITY : BENTON, CITY OF

Community | State | Regional | National

	AE, A1-30, AO, AH, A	VE, V1-30, V	B, C, X	TOTAL
RL Buildings (Total)	17	0	6	23
RL Buildings (Insured)	0	0	3	3
RL Losses (Total)	25	0	10	35
RL Losses (Insured)	0	0	7	7
RL Payments (Total)	$602,391.56	$.00	$1,388,075.83	$1,990,467.39
Building	$483,134.72	$.00	$1,116,929.37	$1,600,064.09
Contents	$119,256.84	$.00	$271,146.46	$390,403.30
RL Payments (Insured)	$.00	$.00	$843,864.82	$843,864.82
Building	$.00	$.00	$843,864.82	$843,864.82
Contents	$.00	$.00	$.00	$.00

Post - FIRM SFHA RL Buildings:	0
Insured Buildings with 4 or More Losses:	0
Insured Buildings with 2-3 Losses > Building Value:	3
Total Target RL Buildings:	3

Community Repetitive Loss

COMMUNITY : BRYANT, CITY OF

Community | State | Regional | National

	AE, A1-30, AO, AH, A	VE, V1-30, V	B, C, X	TOTAL
RL Buildings (Total)	2	0	7	9
RL Buildings (Insured)	0	0	2	2
RL Losses (Total)	2	0	11	13
RL Losses (Insured)	0	0	3	3
RL Payments (Total)	$27,734.27	$.00	$273,766.27	$301,500.54
Building	$27,734.27	$.00	$206,841.50	$234,575.77
Contents	$.00	$.00	$66,924.77	$66,924.77
RL Payments (Insured)	$.00	$.00	$54,562.53	$54,562.53
Building	$.00	$.00	$54,479.43	$54,479.43
Contents	$.00	$.00	$83.10	$83.10

Post - FIRM SFHA RL Buildings: 0

Insured Buildings with 4 or More Losses: 0
Insured Buildings with 2-3 Losses > Building Value: 1
Total Target RL Buildings: 1

Haskell

Community | State | Regional | National

	AE, A1-30, AO, AH, A	VE, V1-30, V	B, C, X	TOTAL
RL Buildings (Total)	13	0	9	22
RL Buildings (Insured)	0	0	0	0
RL Losses (Total)	18	0	16	34
RL Losses (Insured)	0	0	0	0
RL Payments (Total)	$142,058.76	$.00	$1,434,857.99	$1,576,916.75
Building	$109,934.26	$.00	$614,116.63	$724,050.89
Contents	$32,124.50	$.00	$820,741.36	$852,865.86
RL Payments (Insured)	$.00	$.00	$.00	$.00
Building	$.00	$.00	$.00	$.00
Contents	$.00	$.00	$.00	$.00

Post - FIRM SFHA RL Buildings: 0

Insured Buildings with 4 or More Losses: 0
Insured Buildings with 2-3 Losses > Building Value: 0
Total Target RL Buildings: 0

Community Repetitive Loss

COMMUNITY : SHANNON HILLS, CITY OF

Community | State | Regional | National

	AE, A1-30, AO, AH, A	VE, V1-30, V	B, C, X	TOTAL
RL Buildings (Total)	21	0	4	25
RL Buildings (Insured)	4	0	0	4
RL Losses (Total)	32	0	5	37
RL Losses (Insured)	6	0	0	6
RL Payments (Total)	$532,124.57	$.00	$63,372.48	$595,497.05
Building	$440,011.54	$.00	$53,783.04	$493,794.58
Contents	$92,113.03	$.00	$9,589.44	$101,702.47
RL Payments (Insured)	$97,127.05	$.00	$.00	$97,127.05
Building	$96,538.54	$.00	$.00	$96,538.54
Contents	$588.51	$.00	$.00	$588.51

Post - FIRM SFHA RL Buildings:	0
Insured Buildings with 4 or More Losses:	0
Insured Buildings with 2-3 Losses > Building Value:	1
Total Target RL Buildings:	1

Climate Change: There is a distinction that needs to be made when it comes to the relationship between climate change and extreme environmental events: Climate change has not been proven to directly cause individual extreme environmental events, but it has been shown to make these events more destructive, and likely happen more frequently, than they normally would be.

An increase in intense precipitation comes with an increase in intense dry periods as well. Essentially, climate change causes wet places to become wetter and dry places to become drier by altering large-scale atmospheric circulation patterns. Warmer temperatures on land lead to reduced snowpack, earlier snow melt and evaporation of water from freshwater bodies. There is little doubt that extreme rainfall events are getting more frequent., The fourth National Climate Assessment, issued in 2018, showed that the number of heavy precipitation two-day events has increased in all regions except the southwest since the early 1900s. And since 1950, extreme events increased by more than 50 percent in the Midwest.

B1.6 Severe Thunderstorm/High Winds

Description:

A thunderstorm, also known as an electrical storm, a lightning storm, thunder shower 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 is called hailstorms. Thunderstorms may line up in a series or rain bands, 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.

Location:

All areas covered by this Plan experience thunderstorms, lightning, strong winds and hail events and are equally at risk.

Extent:

All jurisdictions are equally subject to thunderstorms ranging from weak to extreme that includes up to 4 inches of rainfall. Weather Madness Thunderstorm Criteria from https://weathermadness.com/weather-madness-thunderstorm-criteria/

Thunderstorm Criteria

THUNDERSTORM TYPES	RAINFALL RATE/HR	MAX WIND GUST	HAIL SIZE	PEAK TORNADO POSSIBILITY	LIGHTNING FREQUENCY (5 min Intervals)	DARKNESS FACTOR	STORM IMPACT
TS1 – 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.
TS2 – 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
TS3 – Heavy Thunderstorms 1. Singular or lines of storms.	.25"-.55"	41-57 MPH	1/4 " to ¾"	EF0	Occasional to Frequent 10-20	Dark. Car lights used. Visibility low in heavy rains. Cars may pull off the road.	1. Minor Damage. 2. Downpours that produce some flooding on streets. 3. Frequent lightning could cause house fires. 4. Hail occurs within the downpours. 5. Small branches are broken. 6. Shingles are blown off roofs.
TS4 – Intense Thunderstorms 1. Weaker supercells 2. Bow Echos or lines of Storms	.55" – 1.25"	58 to 70 MPH	1" to 1.5"	EF1 to EF2	Frequent 20-30	Very Dark. Car lights used. Some street lights come on..	1. Moderate Damage. 2. Heavy rains can cause flooding to streams and creeks. Roadway flooding. 3. Hail can cause dents on cars and cause crop damage. 3. Wind damage to trees and buildings. 4. Tornado damage. 5. Power outages
TS5 – Extreme Thunderstorms 1. Supercells with family of tornadoes. 2. Derecho Windstorms	1.25" – 4"	Over 70 Mph	Over 1.5" to 4"	EF3 to EF5	Frequent to Continuous. > 30	Pitch Black, Street Lights come on. House lights maybe used	1. Severe Damage to Trees and Property. Damage is widespread. 2. Flooding rains. 3. Damaging hail. 4. Tornadoes EF3-EF5 or family of tornadoes can occur. Tornadoes can cause total devastation. 5. Widespread power outages.

History:

According to ncdc.noaa.gov there were 25 Thunderstorm Wind events that occurred since 2018 and 5 of those events noted property damages.

Probability:

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

Impact & Vulnerability of Thunderstorm Events:

The threat of thunderstorms, strong winds, lightning, and hailstorms affect all the participating jurisdictions including the unincorporated areas of Saline County, cities of Alexander, Bauxite, Benton and Bryant and school districts of Benton, Bauxite, Harmony Grove, and Sheridan.

In all participating jurisdictions, structures and their contents are vulnerable to damage by thunderstorm 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.

Climate change: Some studies predict that climate change could provide the opportunity for more severe thunderstorms to form. However, this does not necessarily mean that more tornados will occur, especially in light of the fact that only about 20 precent of supercell thunderstorms produce tornadoes.

B1.7 Tornado

Description:

A tornado is a rapidly rotating vortex or funnel of air extending to the ground ward 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. Often, the weakest of hurricanes produce the most tornadoes. 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 miles (1 km). 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 (500 km/h) However, the lifespan of a tornado rarely is longer than 30 minutes.

Location:

Because there is no defined geographic hazard boundary, all people and property in Saline County are exposed to the risk of damage from tornadoes.

Extent:

The Enhanced Fujita Scale or EF Scale, which became operational on February 1, 2007, is used to assign a tornado a 'rating' based on estimated wind speeds and related damage. When tornado-related damage is surveyed, it is compared to a list of Damage Indicators (DIs) and Degrees of Damage (DoD) which help estimate better the range of wind speeds the tornado likely produced. From that, a rating (from EF0 to EF5) is assigned.

The EF Scale was revised from the **original Fujita Scale** to reflect better examinations of tornado damage surveys so as to align wind speeds more closely with associated storm damage. The new scale has to do with how most structures are designed.

EF SCALE	
EF Rating	**3 Second Gust (mph)**
0	65-85
1	86-110

2	111-135
3	136-165
4	166-200
5	Over 200

***** IMPORTANT NOTE ABOUT EF SCALE WINDS**: The EF scale still is a set of wind estimates (not measurements) based on damage. Its uses three-second gusts estimated at the point of damage based on a judgment of 8 levels of damage to the 28 indicators listed below. These estimates vary with height and exposure. Important: The 3 second gust is not the same wind as in standard surface observations. Standard measurements are taken by weather stations in open exposures, using a directly measured, "one minute mile" speed.

History:

In Saline County there have been 3 tornadoes between 1/1/2017 and 5/31/2023. There was one EF1 tornado in the Nance community. There were two EF2 tornadoes, one in the Glen Rose Community and one in Sardis, which is low, compared to the previous Mitigation Plan update that showed eleven events.

Probability:

The probability of future events is highly likely. There is a 90 to 100 percent probability of tornado occurrence in the next 5 years.

Impact & Vulnerability:

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 Saline County are exposed to the risk of damage from tornadoes. All structures in Saline County are vulnerable to tornadoes.

The most vulnerable to tornadoes are wood frame structures and manufactured homes. Damage to residential structures could cause hundreds to be without shelter or try to live in unsafe conditions.

Input from local communities:

Unincorporated areas of Saline County:

Populations housed in 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 of lightning, which can cause fires and destroy several acres.

Bauxite School District:

The buildings on campus are vulnerable to the elements of a thunderstorm. They could be damaged or destroyed, including the contents instead such as computers, gym equipment, desks, chairs, and records. FEMA funds were received to construct a safe room on campus that reduces or eliminates death and injury to all populations located on the campus. The local population is welcome to use the safe room after school hours.

All other school districts. Benton, Bryant, Harmony Grove, and Sheridan School Districts: The buildings on campus are vulnerable to the elements of a thunderstorm. They could be damaged or destroyed, including the contents instead such as computers, gym equipment, desks, chairs, and records.

City of Benton:

In the City of Benton, commercial buildings located downtown are vulnerable to destruction or damage. The county fairgrounds are vulnerable to damage to the concession stand, exhibition building, restrooms, and sports fields. Populations located on the county fairgrounds during fairs and other activities are vulnerable to injury or death during thunderstorms. Approximately 1,500 structures are vulnerable to damage or destruction due to the construction materials. If there are any disruptions to the power generation facilities that support them, there can be a loss of services they provide to those injured from the elements. Saline Memorial Hospital is a critical facility that could be affected during a severe weather event. The City Hall, Police Station, Main Fire Station, and OEM office are in the same areas, as well as the courthouse, and County offices. A significant event in this area could disrupt normal business activities.

City of Alexander:

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

City of Bauxite:

In the past, the city of Bauxite has received thousands of dollars of property damage due to hail. Resident homes are mostly unreinforced masonry (17) or manufactured homes (70) which is over half of the structures located in Bauxite. These structures will be damaged or destroyed from the elements of a thunderstorm and will pose serious risk of death or injury to occupants inside. There are few homes with safe rooms or high wind shelters that reduce the risk of injury or death. There are no major commercial properties or critical facilities located in the rural City of Benton.

City of Bryant:

In the City of Bryant, there are several businesses located along Interstate 30, Hwy 5, and Reynolds Road. A tornado safe room was recently constructed near the Civitan Center to provide shelter during severe weather threats. Real and private property will receive damage from the elements of a thunderstorm. Resident and commercial property that are constructed with unreinforced masonry will be damaged or destroyed. Populations residing or working in these buildings without safe rooms nearby high-wind shelters are vulnerable to injury or death, especially the elderly and children. There or no critical facilities that would receive major impact that would impede their abilities to respond and provide support during a thunderstorm event.

County Structural Vulnerability Data for Tornadoes

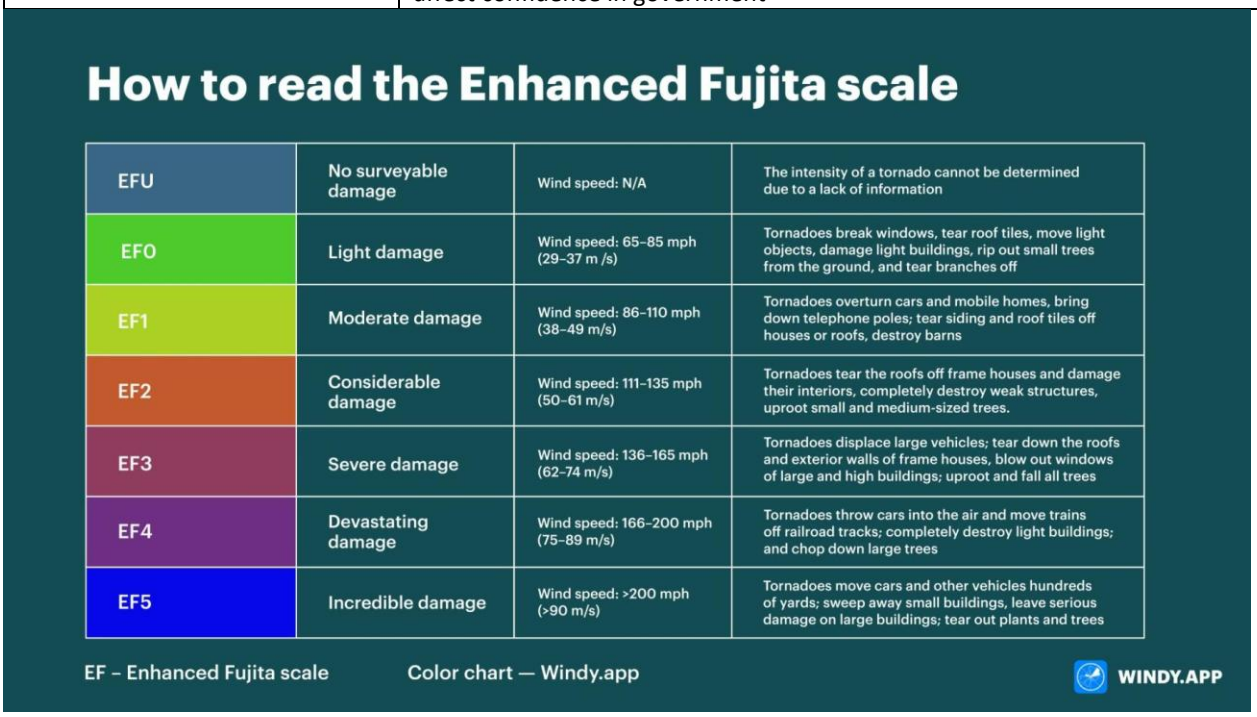
COUNTY	HAZU BUILDING VALUATION	NCDC STRUCTURE DAMAGE, TORNADOES, 2013-2017	PERCENTAGE OF BUILDING VALUATION DAMAGED BY TORNADOES
Saline	$10,250,000	$1,225,000	11.951%

Saline County has 25% of housing stock as mobile homes which may increase vulnerability to tornado events.

Tornado Consequence Analysis {Data Source: State Mitigation Plan}

Subject	Impacts of Tornado

Health and Safety of the Public	Impact of the immediate area could be severe depending on whether individuals were able to seek shelter and get out of the trajectory of the tornado. Casualties are dependent on warning systems and warning times
Health and Safety of Responders	Impact to responders is expected to be minimal unless responders live within the affected area.
Continuity of Operations	Temporary to permanent relocation may be necessary if government facilities experience damage
Property, Facilities, and Infrastructure	Localized impact could be severe in the trajectory path. Roads, buildings, and communications could be adversely affected. Damage could be severe.
Environment	Impact will be severe for the immediate impacted area. Impact will lessen as distance increases from the immediate incident area
Economic Conditions	Impacts to the economy will greatly depend on the trajectory of the tornado. If a jurisdiction takes a direct hit, then the economic conditions will be severe. With an indirect hit the impact could be low to severe.
Public Confidence in the Jurisdiction's Governance	Public confidence could be eroded if response and recovery are not timely and effective. Warning systems in place and the timeliness of those warnings could affect confidence in government



The table below describes the impact of tornados to residential homes in the participating jurisdictions:

RESIDENTAL HOME DAMAGE CLASSES		
Degree of Damage (DOD)		Expected Wind Speed Value (mph)
1	Threshold of visible damage	65
2	Loss of roof covering material (<20%), gutters, and/or awning: loss of vinyl or metal siding	79
3	Broken glass in doors and windows	90
4	Uplift of roof deck and loss of significant roof covering material (>20%); collapse of chimney, garage doors; collapse inward, failure of porch or carport.	97
5	Entire house shifts off foundation	121
6	Large sections of roof structure removed; most walls remain standing	122
7	Exterior walls collapsed	132

8	Most walls collapsed, except small interior rooms	152
9	All walls collapsed	170
10	Destruction of engineered and/or well-constructed residence; slab swept clean	200

Source: FEMA.GOV

The following losses have resulted from 3 tornadoes in Saline County based on the Enhanced Fujita Scale:

Year	Number	Magnitude F/EF2	Magnitude F/EF1	Deaths	Injuries	Property Damages
2017	1	1		0	0	400.00K
2017	1		1	0	0	300.00K
2022	1	1		0	0	0.00K
TOTALs						700.00K

Utilities most vulnerable to tornado winds are electrical power lines and communication structures. Most transportation systems such as highways and 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. 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 can be damaged and closed for extended periods.

Residential homes constructed with unreinforced masonry will be damaged or destroyed during a tornado event and will pose serious risk of death or injury to occupants inside. There are few homes with safe rooms or high wind shelters that reduce the risk of injury or death. It is reasonable to assess that communities listed below with the less population would have less vulnerability due to fewer structures.

Location	Population
City of Alexander	3,385
City of Bauxite	629
City of Benton	35,014
City of Bryant	20,663
City of Haskell	3,956
City of Shannon Hills	4,490
City of Traskwood	495

Bauxite Middle School received funding on January 27, 2016, to construct a safe room. A community safe room was constructed next to the Civitan Non-profit using FEMA Funds on May 10, 2016. Harmony Grove Schools in Haskell received funding for a safe room in 2022. These structures are open to the public when a tornado warning is sounded for their area. Bryant School and Benton Schools have retrofitted and/or free-standing safe rooms as well.

Climate Change: National Geographic has performed specific studies on the changing climate and their relationship to tornadoes. Tornadoes have been recorded all over the world, but the United States experiences around a thousand of them each year, which is far more than anywhere else on the planet.

Most of these occur in "Tornado Alley," an area of the Great Plains region, where the atmospheric conditions are just right for massive, tornado-spawning thunderstorms. The resulting tornadoes leave a trail of destruction in their wake, often with deadly consequences. There have been changes in tornado patterns in recent years. Research has shown that there are fewer days with at least one tornado but more days with over thirty, even as the total number of tornadoes per year has remained relatively stable. In other words, tornado events are becoming more clusters.

B1.8 Wildfire

Description:

A wildfire is any outdoor fire that is not controlled, supervised, or arranged which 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 force of nature that can be nearly as impossible to prevent, and as difficult to control, as hurricanes, tornadoes and floods. The WUI is the zone of transition between unoccupied land and human development. Areas with a large amount of wooded, brush and grassy areas are at the highest risk of wildfires. Additionally, areas anywhere that have experienced prolonged droughts or are excessively dry are also at risk of wildfires.

Location:

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 amounts of wood, 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 has 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. For the entire Saline County, including the unincorporated areas, and the cities of Bauxite, Alexander, Bryant, Benton, and the school districts of Bauxite, Benton and Bryant, Southern Wildfire Risk Assessment (SWRA) estimates that 95 percent of the area population live within the WUI.

The Fire Intensity Scale for Saline County, the cities of Bauxite, Alexander, Benton and Bryant, including the campus of the Bauxite, Benton, Bryant School Districts, Harmony Grove and Sheridan shows the locations of wildfire.

Extent:

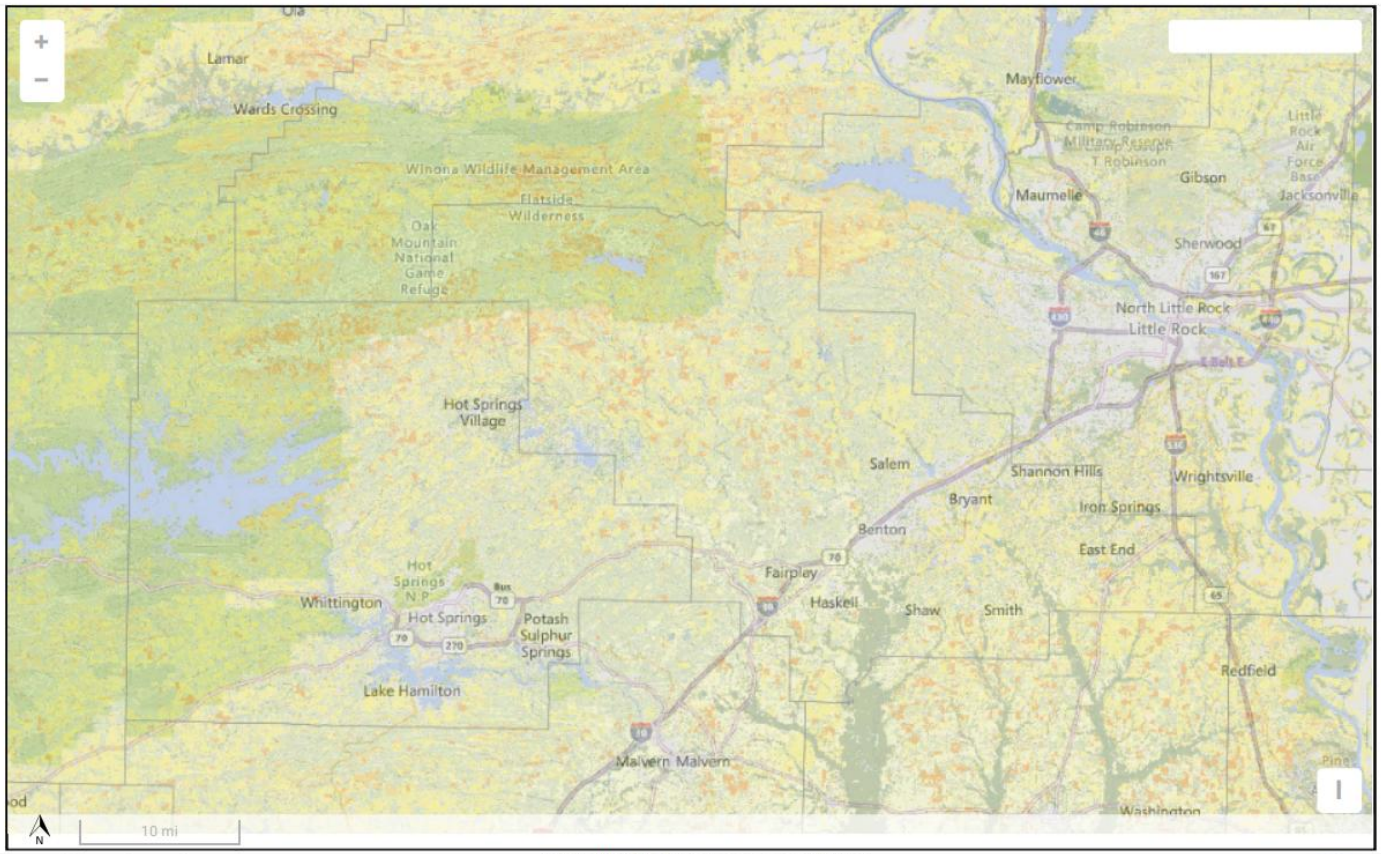
The "Characteristic Fire Intensity Scale" is retrieved from the Arkansas Advanced Viewer https://wrap.southernwildfirerisk.com/Map/Public/#whats-your-risk is included for each individual jurisdiction depicting the location and extent of a wildfire. This section is included to identify location, severity and extent.

The chart below indicates the intensity of the probable wildfires for each map. Some of the maps will show a number at the bottom of the page of the overall intensity rate for the area.

A low to Moderate Fire Intensity. Short-range spotting is possible. Flames will be up to 8 feet in length. Trained firefighters will find these fires difficult to suppress without support from aircraft or engines, bulldozers and plows are generally effective.

Saline County

Characteristic fire Intensity Scale



Report Created:
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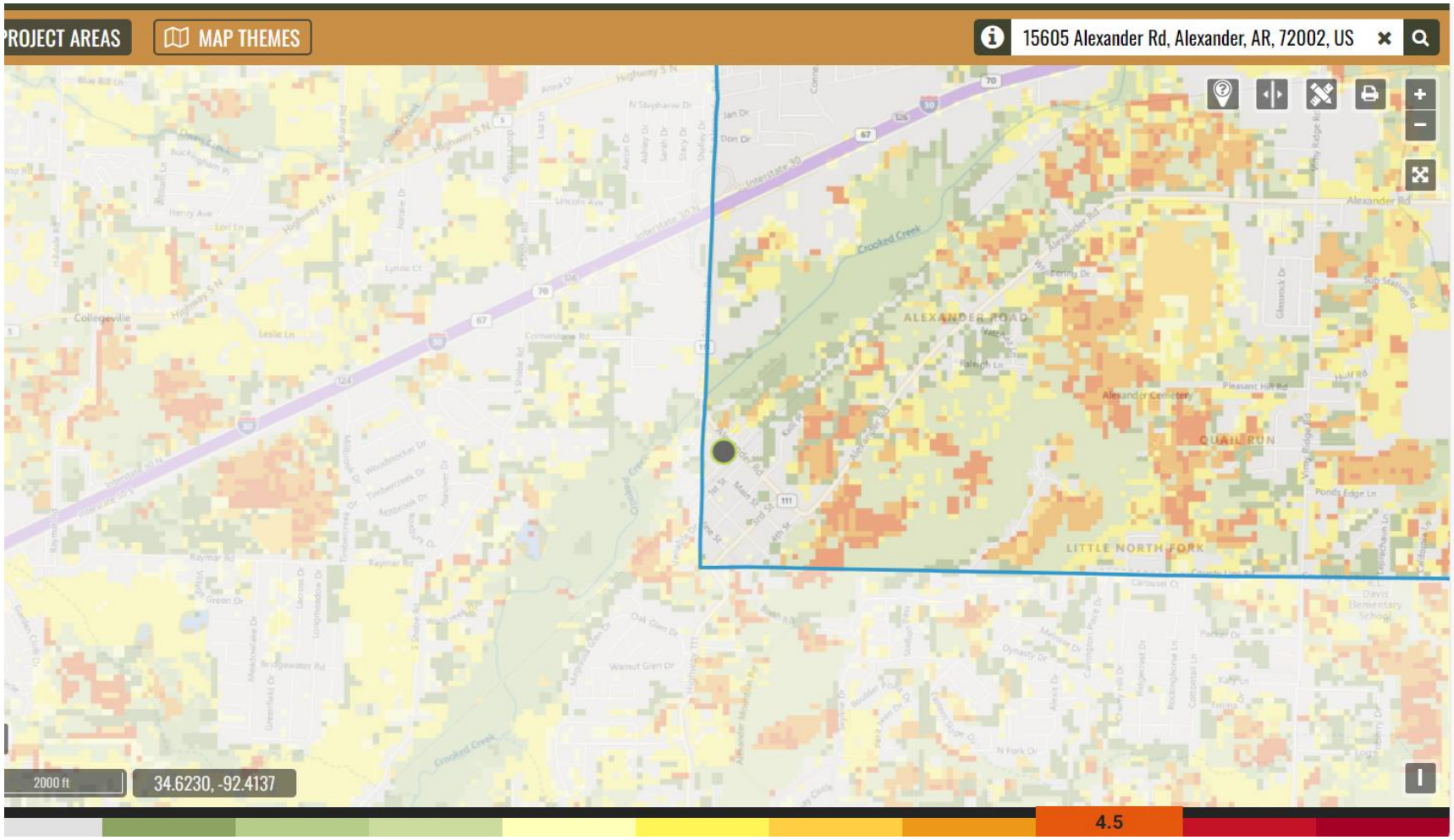
SGSF Wildfire Risk Assessment Portal
https://wrap.southernwildfirerisk.com

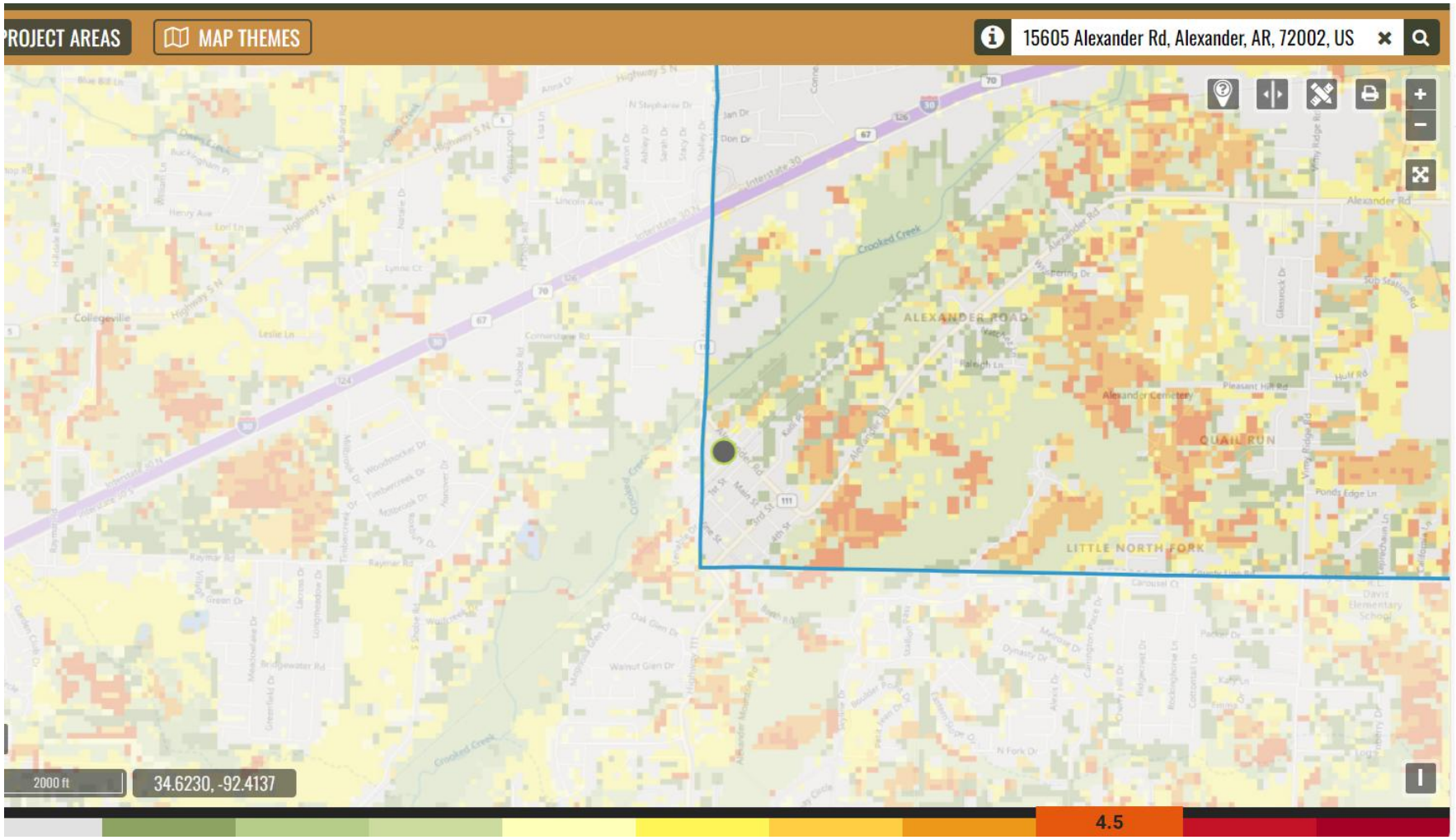
Unincorporated Areas of Saline County:

The unincorporated areas of Saline County have a High Fire Intensity. These areas will experience some short-range spotting, and medium range spotting is possible. The flames are large, up to 300 feet in length. Direct attacks by trained firefighters, engines, and dozers are generally ineffective, indirect attacks may be effective.

City of Alexander:



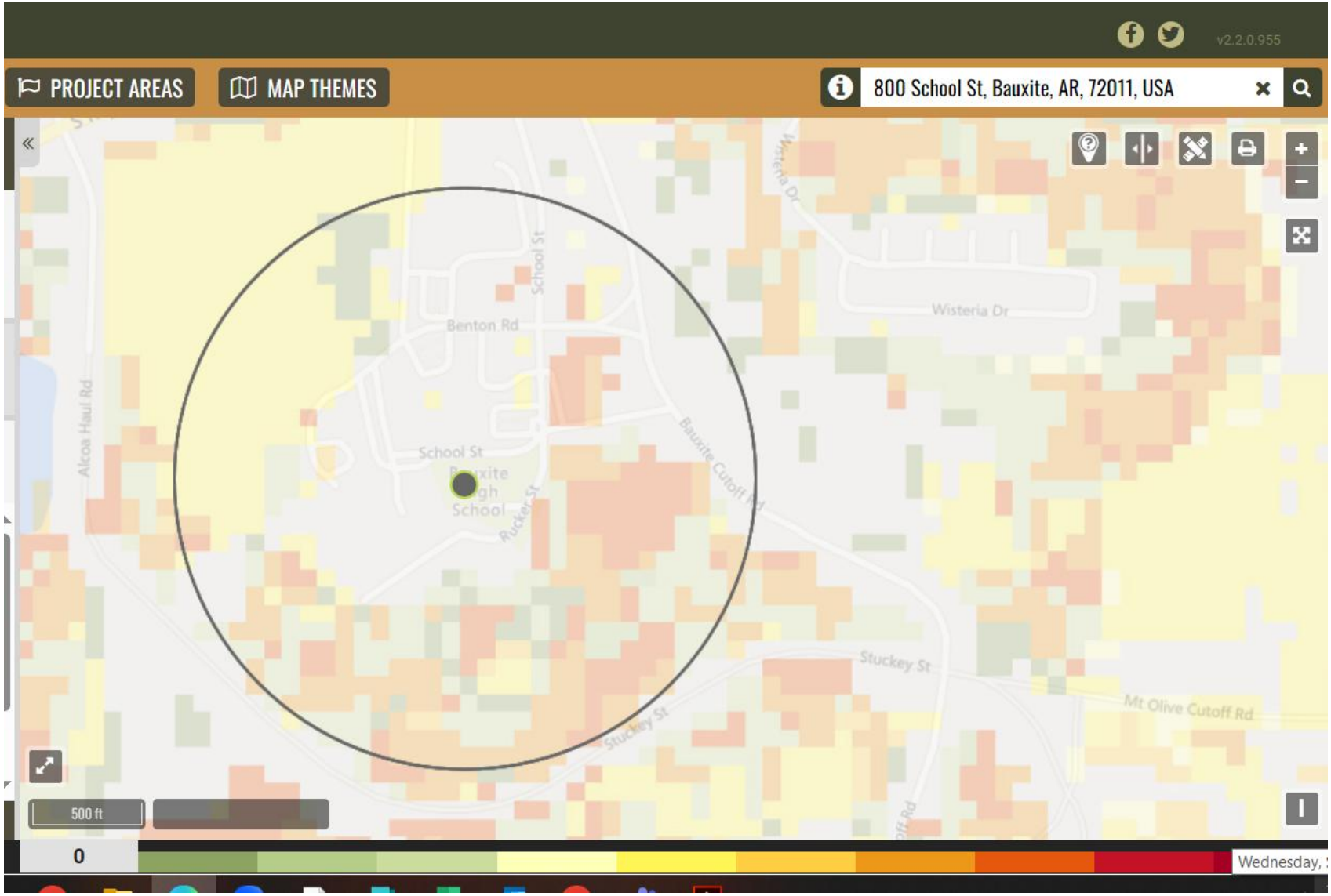
City of Bauxite:



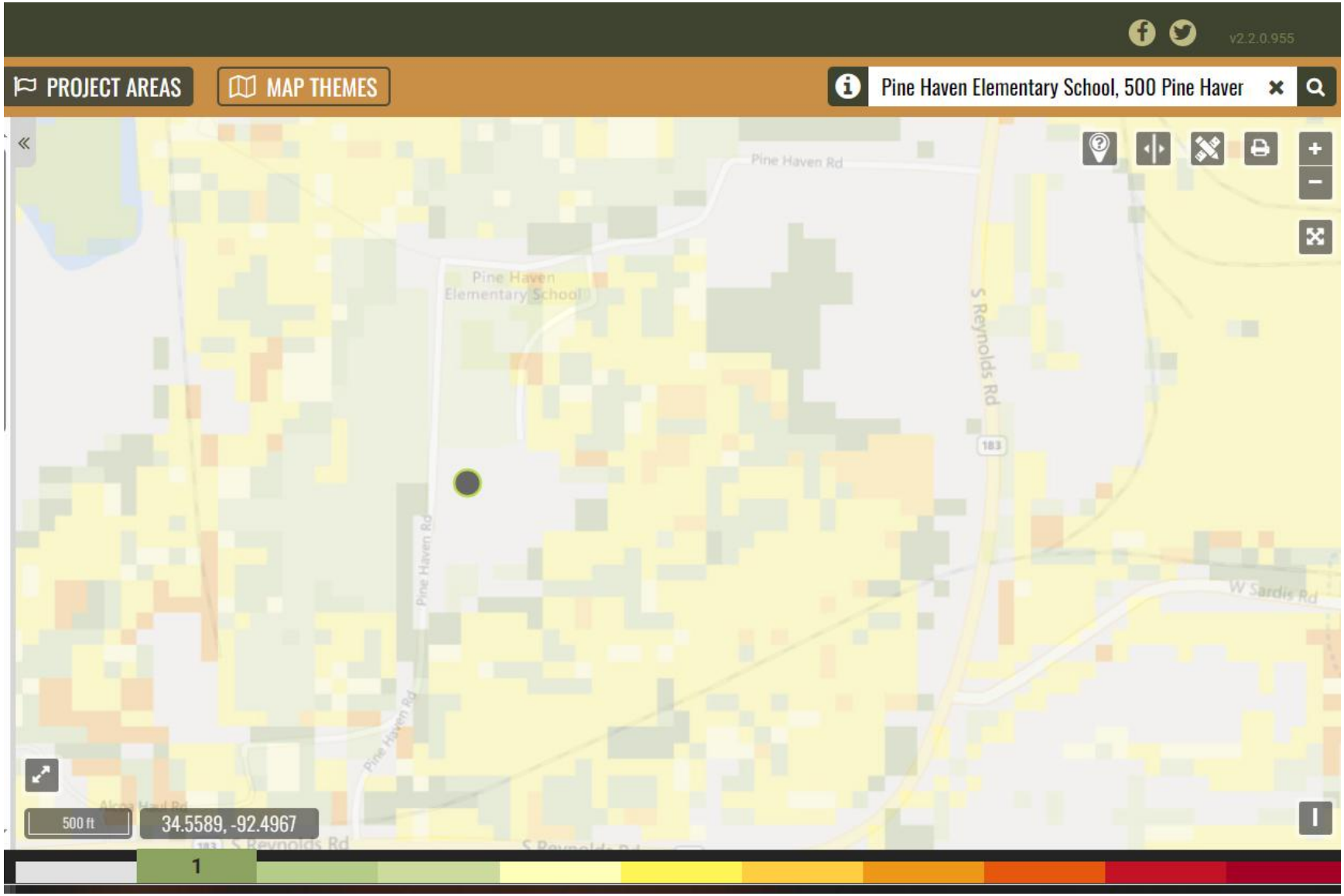
The city of Bauxite is mostly a forested area bordering vast amounts of timberland. Being directly impacted by a wildfire.

Bauxite School District:

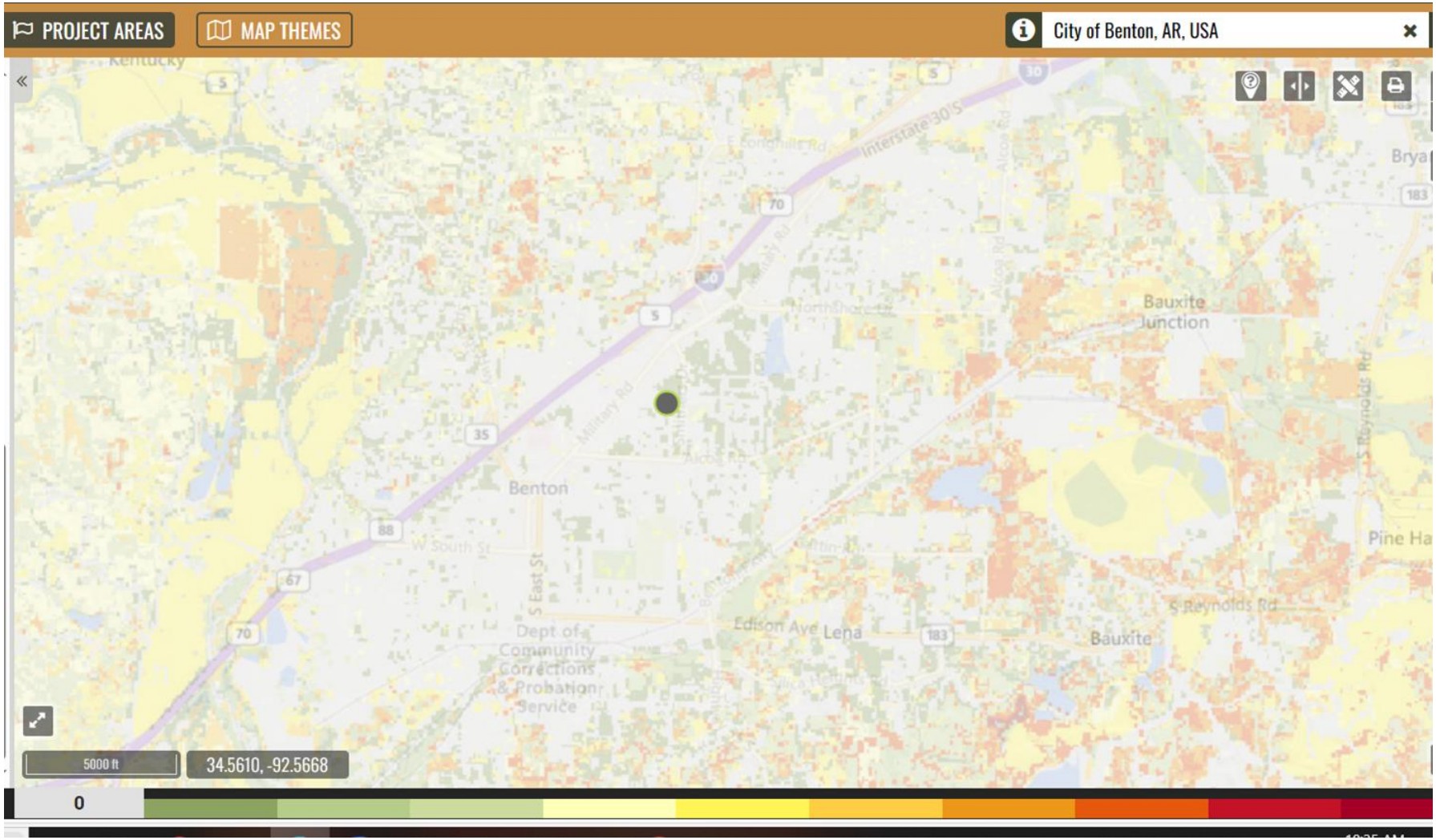
Middle School, Miner Academy, High School



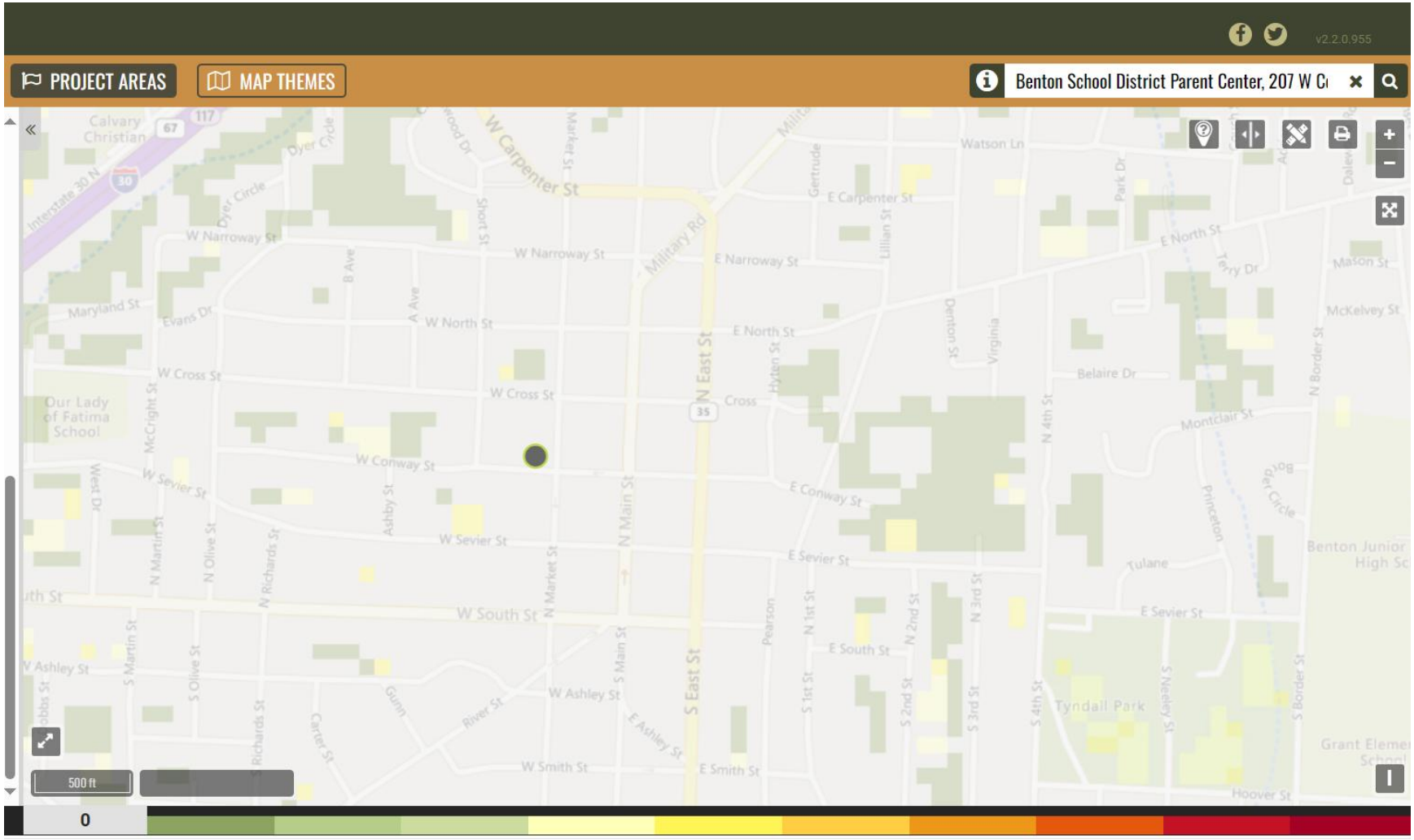
Pine Haven Elementary School – Bauxite School District

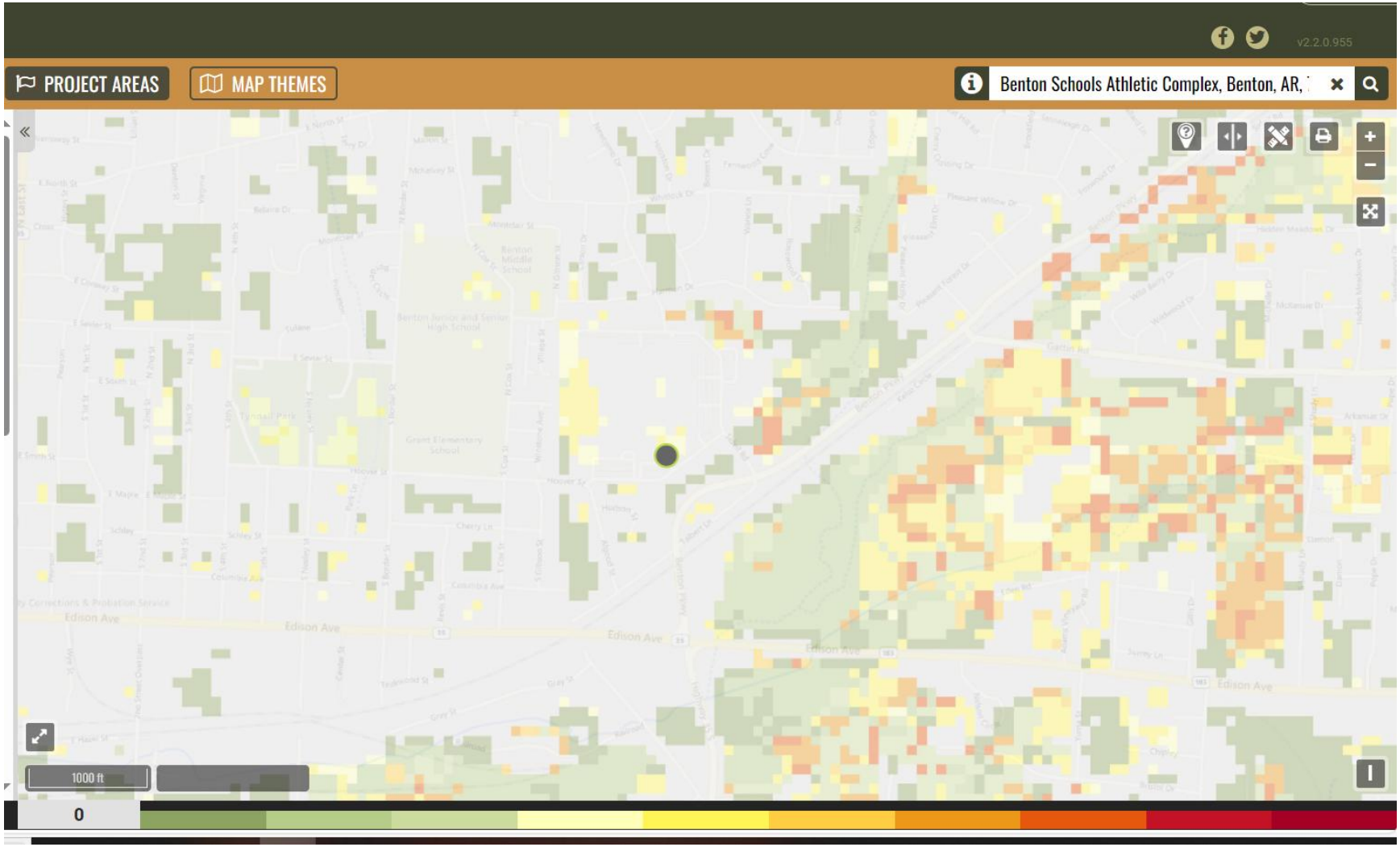

v2.2.0.955
PROJECT AREAS
MAP THEMES
Pine Haven Elementary School, 500 Pine Haver
Pine Haven Rd
Pine Haven Elementary School
S Reynolds Rd
183
Pine Haven Rd
W Sardis Rd
500 ft
34.5589, -92.4967
1

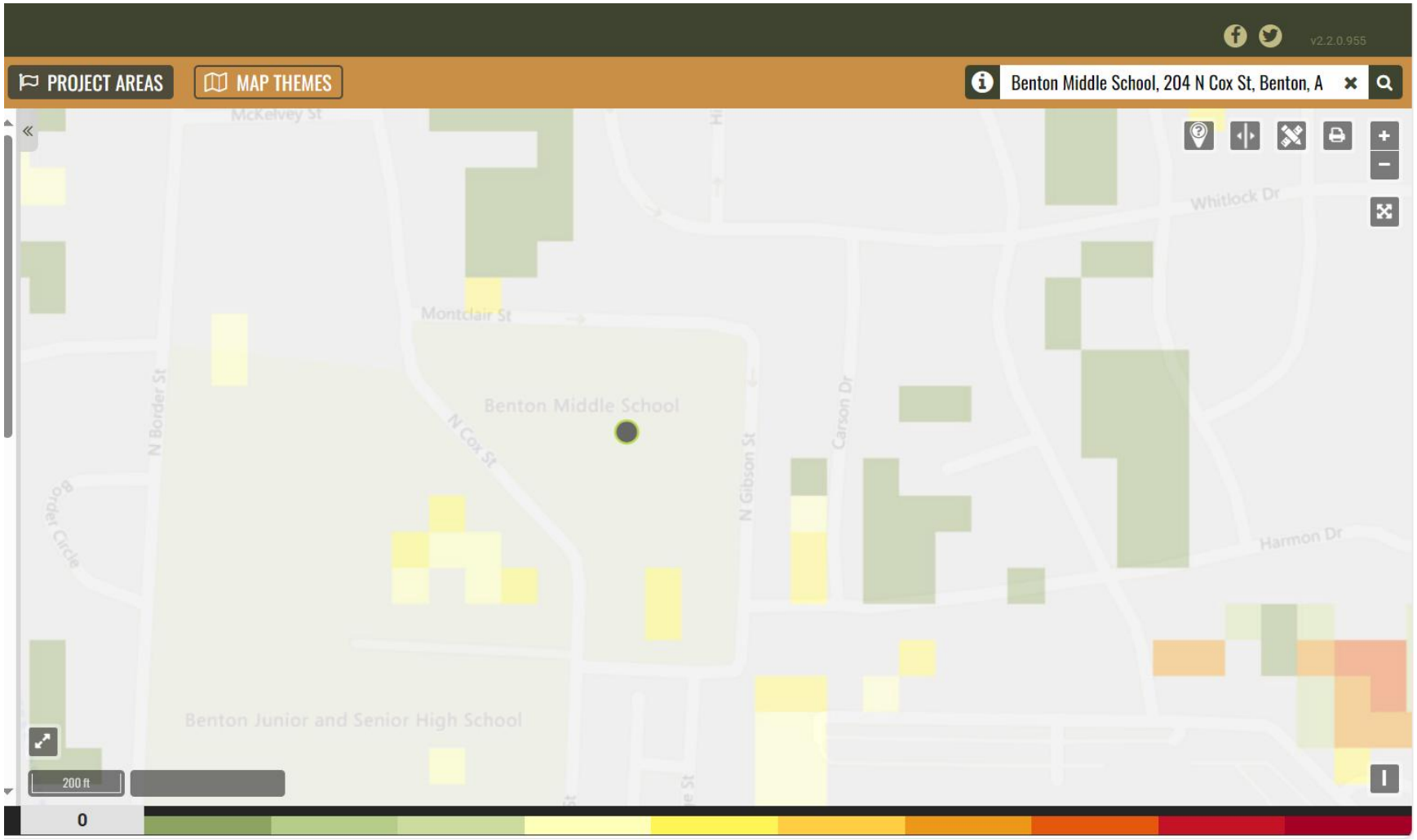
City of Benton:

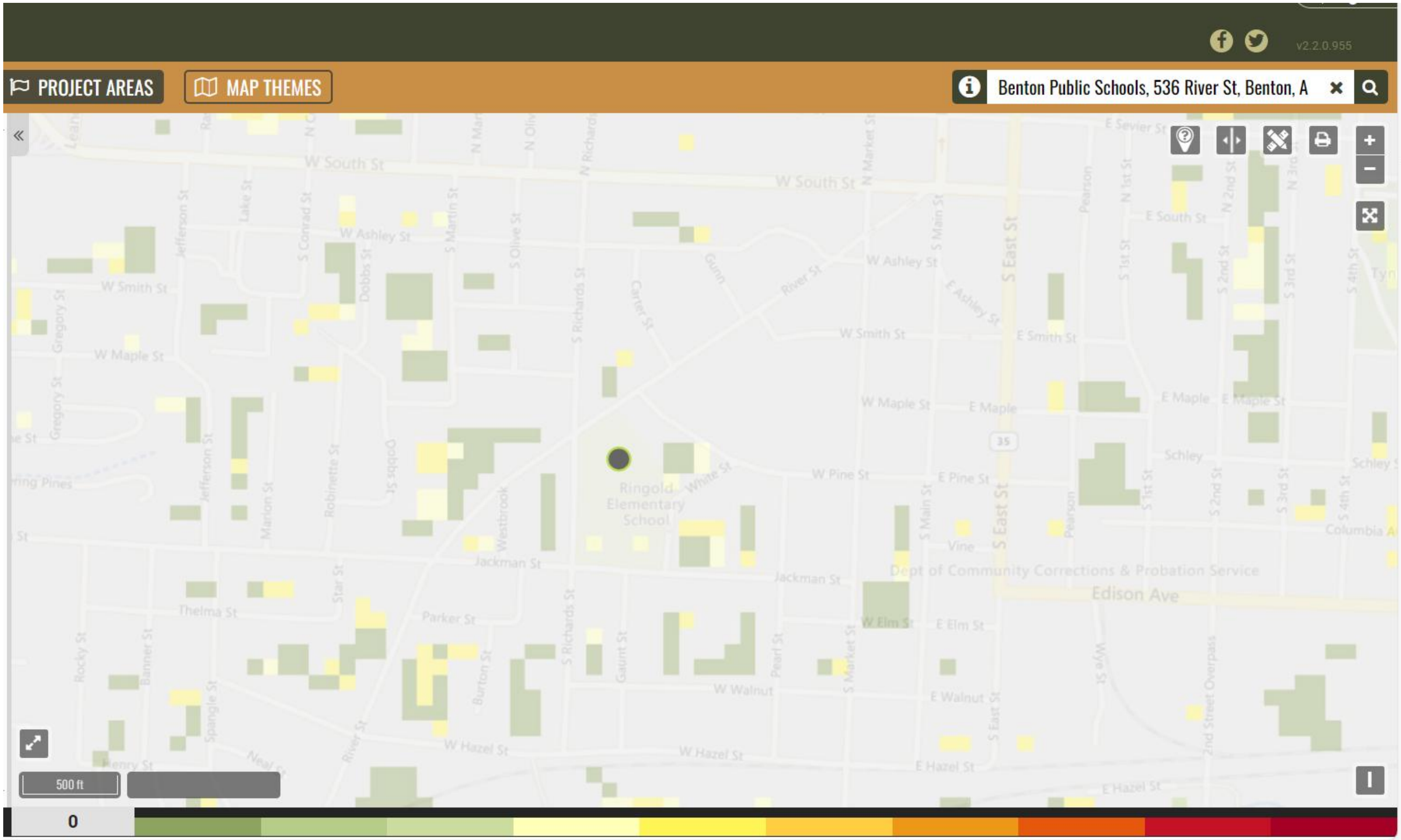


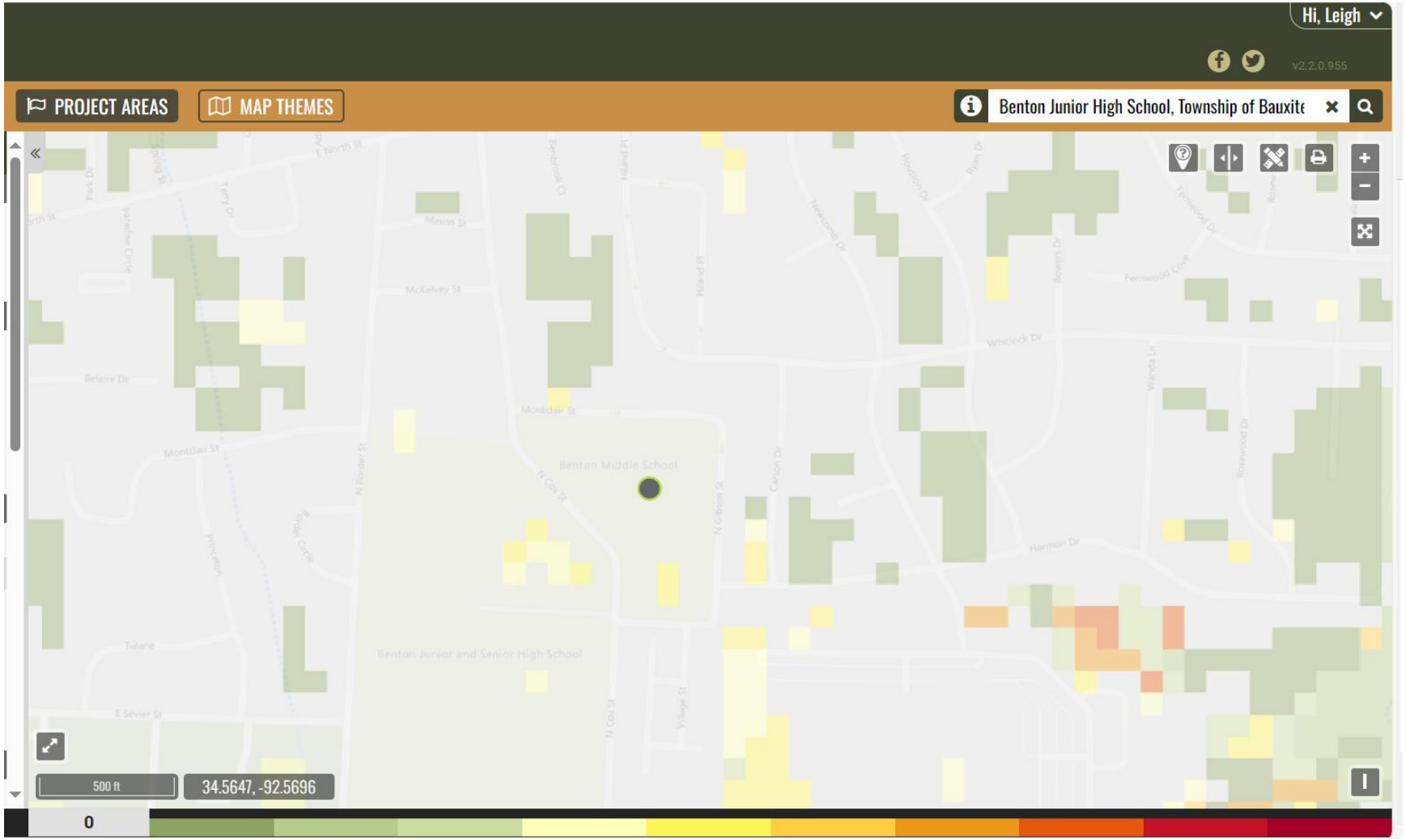
The city of Benton has a Low to Moderate Fire Intensity. Short range spotting is possible, and flames will be up to 8 feet in length.

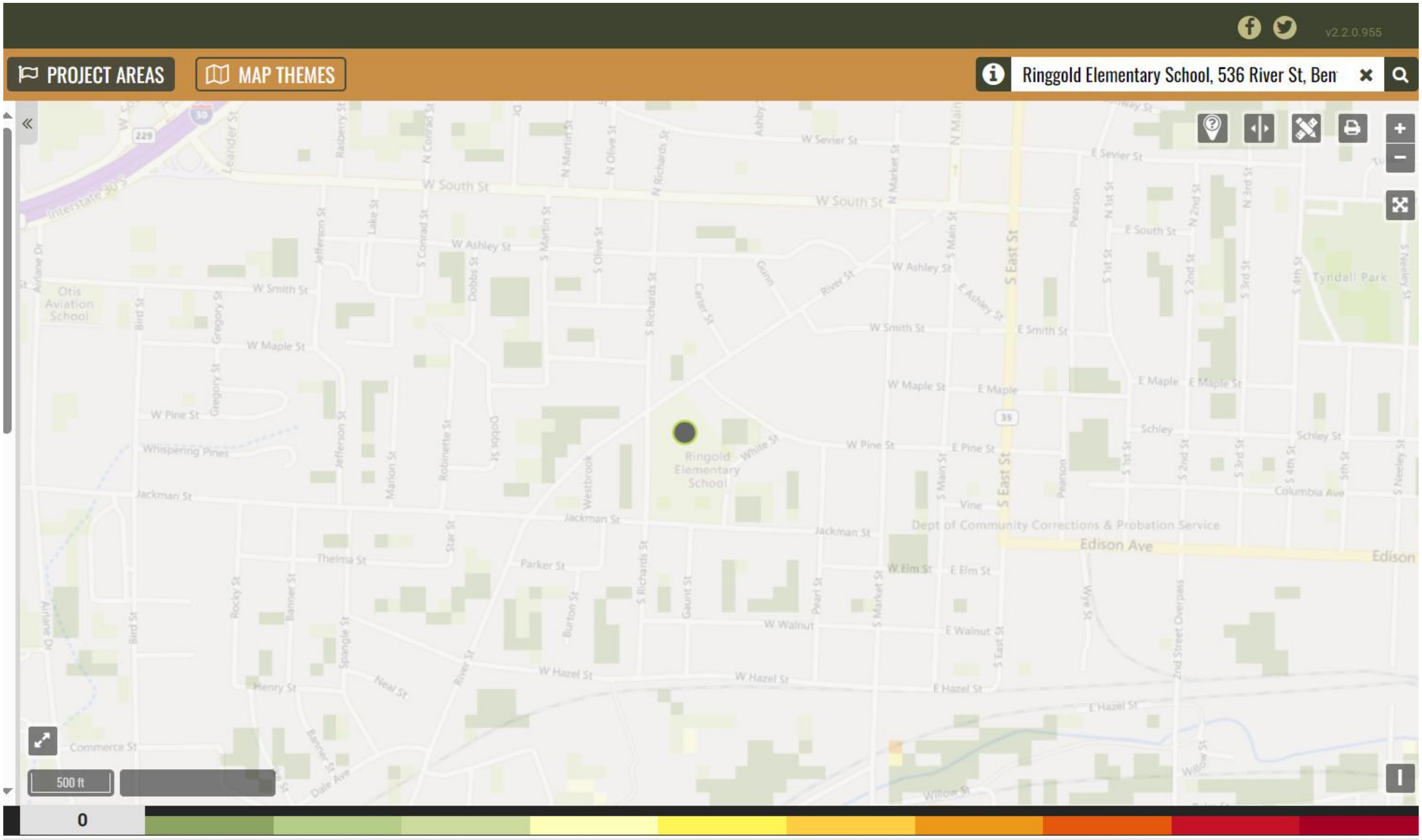

PROJECT AREAS
MAP THEMES
Benton School District Parent Center, 207 W C
v2.2.0.955
W Carpenter St
E Carpenter St
W Narroway St
E Narroway St
W North St
E North St
W Cross St
E Cross St
W Conway St
E Conway St
W Sevier St
E Sevier St
W South St
E South St
W Ashley St
E Ashley St
W Smith St
E Smith St
N East St
S East St
N Main St
S Main St
Military Rd
Watson Ln
Belaire Dr
Montclair St
Tulane
Tyndall Park
Benton Junior High Sc
Grant Eleme School
Hoover St
Our Lady of Fatima School
Calvary Christian
Interstate 30 N
500 ft
0


PROJECT AREAS
MAP THEMES
Benton Schools Athletic Complex, Benton, AR,
v2.2.0.955
Edison Ave
1000 ft
0


PROJECT AREAS
MAP THEMES
Benton Middle School, 204 N Cox St, Benton, A
v2.2.0.955
McKelvey St
Montclair St
Whitlock Dr
Harmon Dr
N Border St
N Cox St
N Gibson St
Carson Dr
Benton Middle School
Benton Junior and Senior High School
200 ft
0


v2.2.0.955
PROJECT AREAS
MAP THEMES
Benton Public Schools, 536 River St, Benton, A
W South St
W Ashley St
W Smith St
W Maple St
River St
W Pine St
E Pine St
E Maple
E Smith St
E South St
S East St
Ringold Elementary School
Jackman St
Thelma St
Parker St
W Walnut
E Walnut St
W Hazel St
E Hazel St
E Elm St
Dept of Community Corrections & Probation Service
Edison Ave
500 ft
0


Hi, Leigh
v2.2.0.955
PROJECT AREAS
MAP THEMES
Benton Junior High School, Township of Bauxite
Benton Middle School
Benton Junior and Senior High School
500 ft
34.5647, -92.5696
0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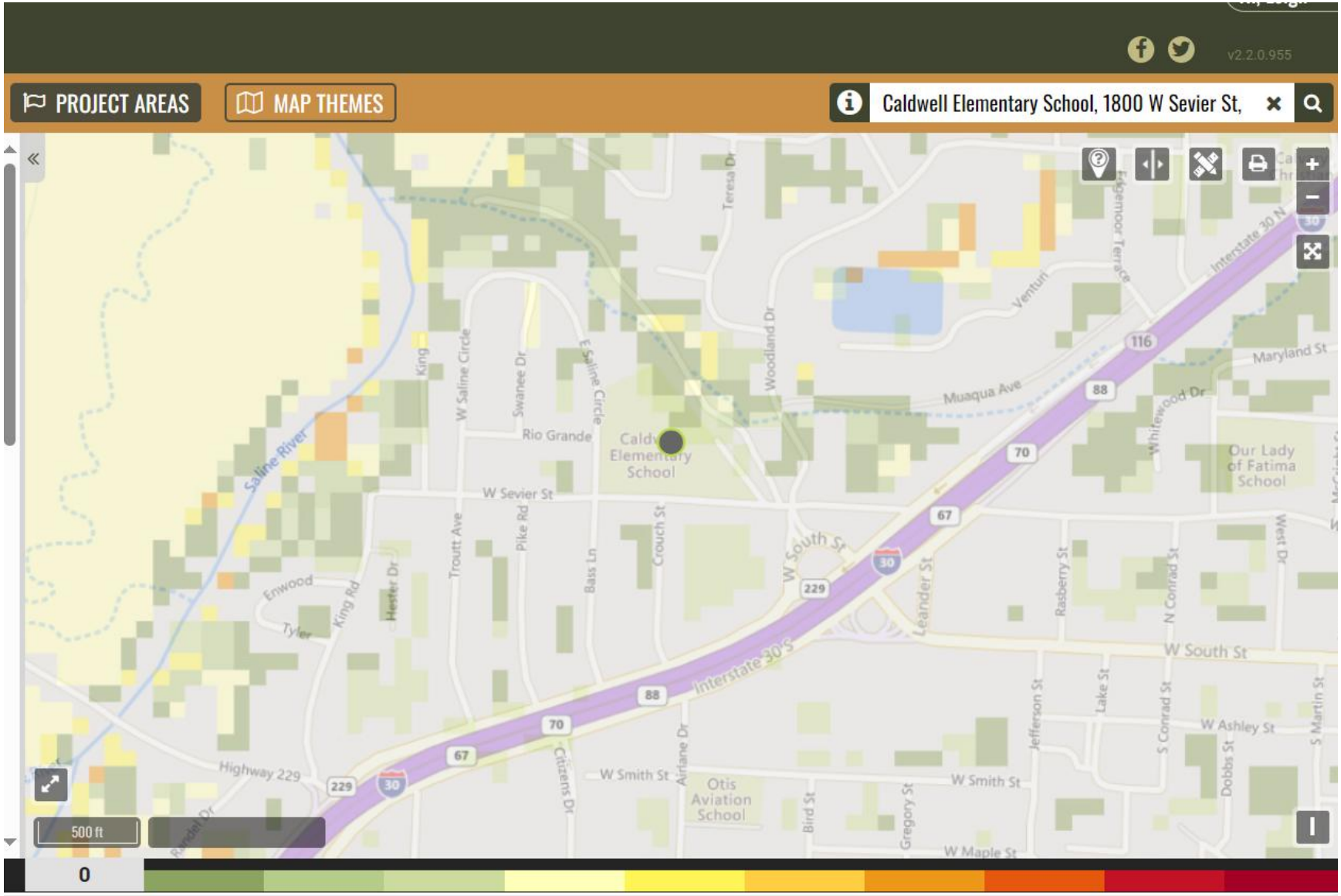
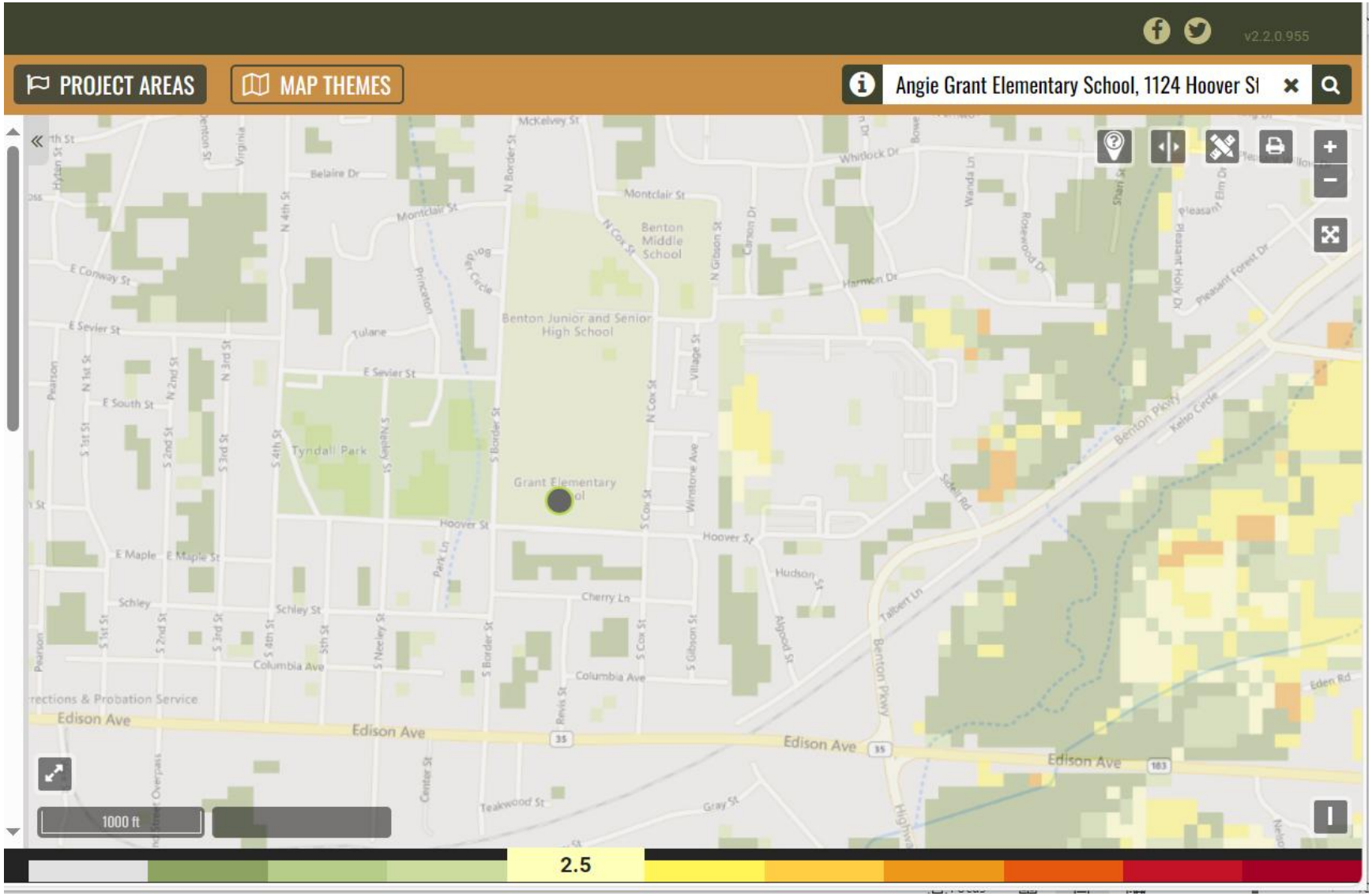
PROJECT AREAS
MAP THEMES
Ringgold Elementary School, 536 River St, Ben
W South St
W Sevier St
E Sevier St
W Ashley St
W Smith St
E Smith St
W Maple St
E Maple
W Pine St
E Pine St
Jackman St
Parker St
Thelma St
W Walnut
E Walnut St
W Hazel St
E Hazel St
W Elm St
E Elm St
Edison Ave
S East St
River St
Otis Aviation School
Ringgold Elementary School
Tyndall Park
Whispering Pines
Dept of Community Corrections & Probation Service
Commerce St
Interstate 30
500 ft
0


PROJECT AREAS
MAP THEMES
Caldwell Elementary School, 1800 W Sevier St,
v2.2.0.955
Saline River
Rio Grande
Caldwell Elementary School
W Sevier St
Muaqua Ave
Our Lady of Fatima School
Otis Aviation School
W South St
W Smith St
W Ashley St
W Maple St
Highway 229
Interstate 30 S
Interstate 30 N
Enwood
Tyler
King Rd
Hester Dr
Troutt Ave
Pike Rd
Bass Ln
Crouch St
Citizens Dr
Airlane Dr
Bird St
Gregory St
Leander St
Rasberry St
Jefferson St
Lake St
S Conrad St
N Conrad St
Dobbs St
S Martin St
West Dr
Whitewood Dr
Maryland St
Woodland Dr
Venturi
Edgemoor Terrace
Teresa Dr
E Saline Circle
Swanee Dr
W Saline Circle
King
Rendel Dr
500 ft
0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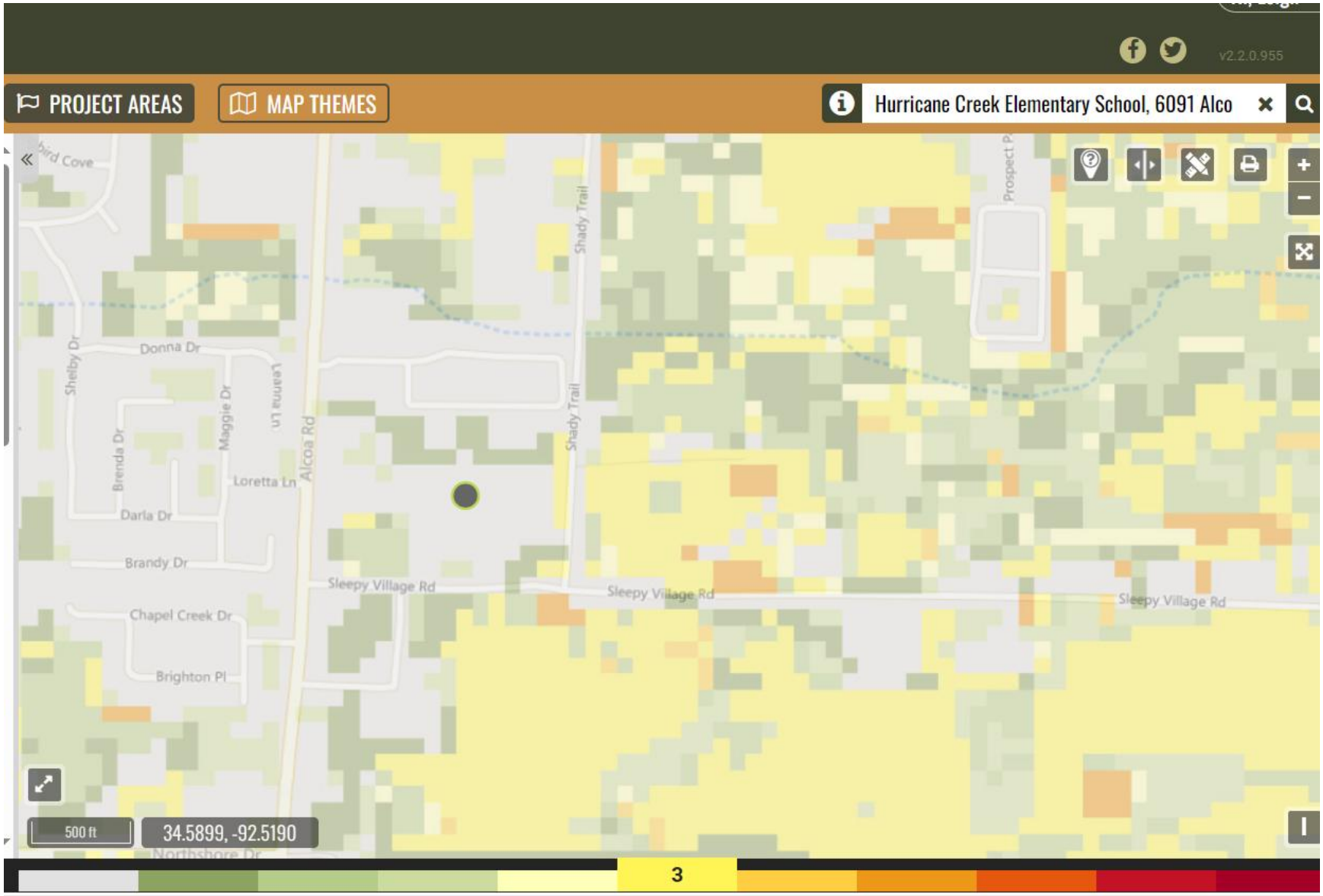
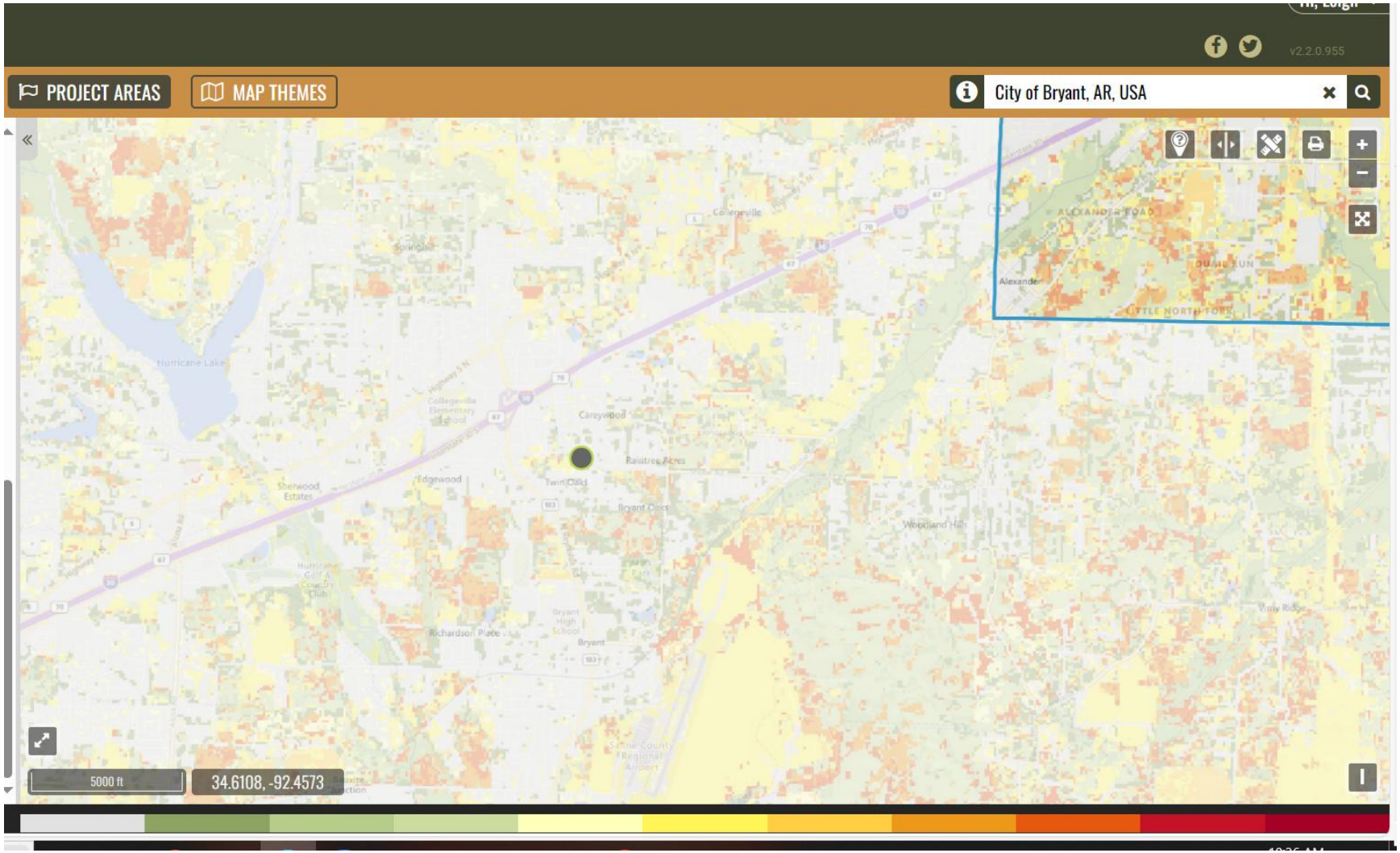
PROJECT AREAS
MAP THEMES
Angie Grant Elementary School, 1124 Hoover St
Benton Middle School
Benton Junior and Senior High School
Tyndall Park
Grant Elementary
Hoover St
Edison Ave
Columbia Ave
Schley
E Maple
E Sevier St
E South St
Cherry Ln
Benton Pkwy
Eden Rd
1000 ft
2.5

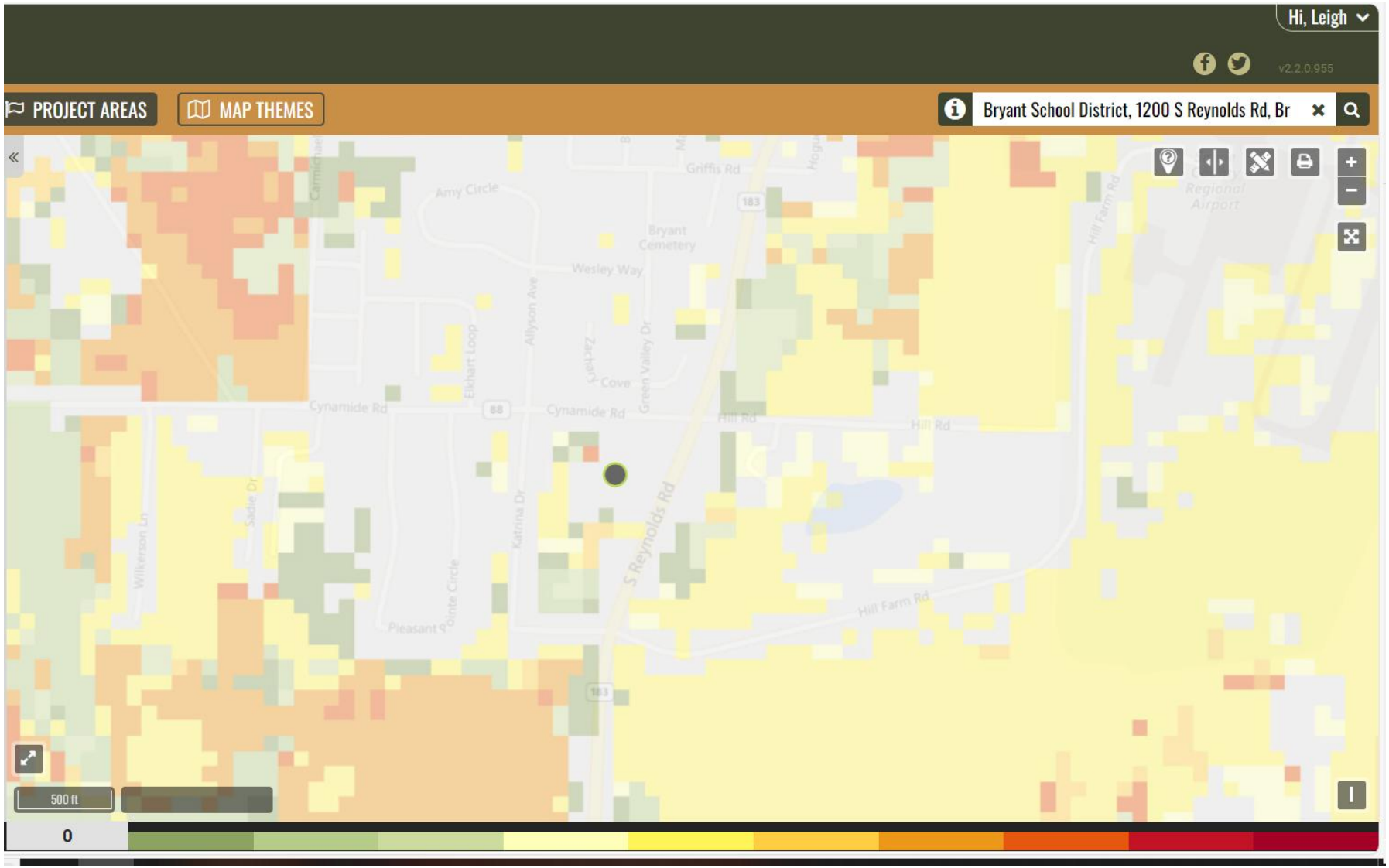

v2.2.0.955
PROJECT AREAS
MAP THEMES
Hurricane Creek Elementary School, 6091 Alco
Donna Dr
Shelby Dr
Maggie Dr
Brenda Dr
Loretta Ln
Alcoa Rd
Shady Trail
Darla Dr
Brandy Dr
Sleepy Village Rd
Chapel Creek Dr
Brighton Pl
Northshore Dr
500 ft
34.5899, -92.5190
3

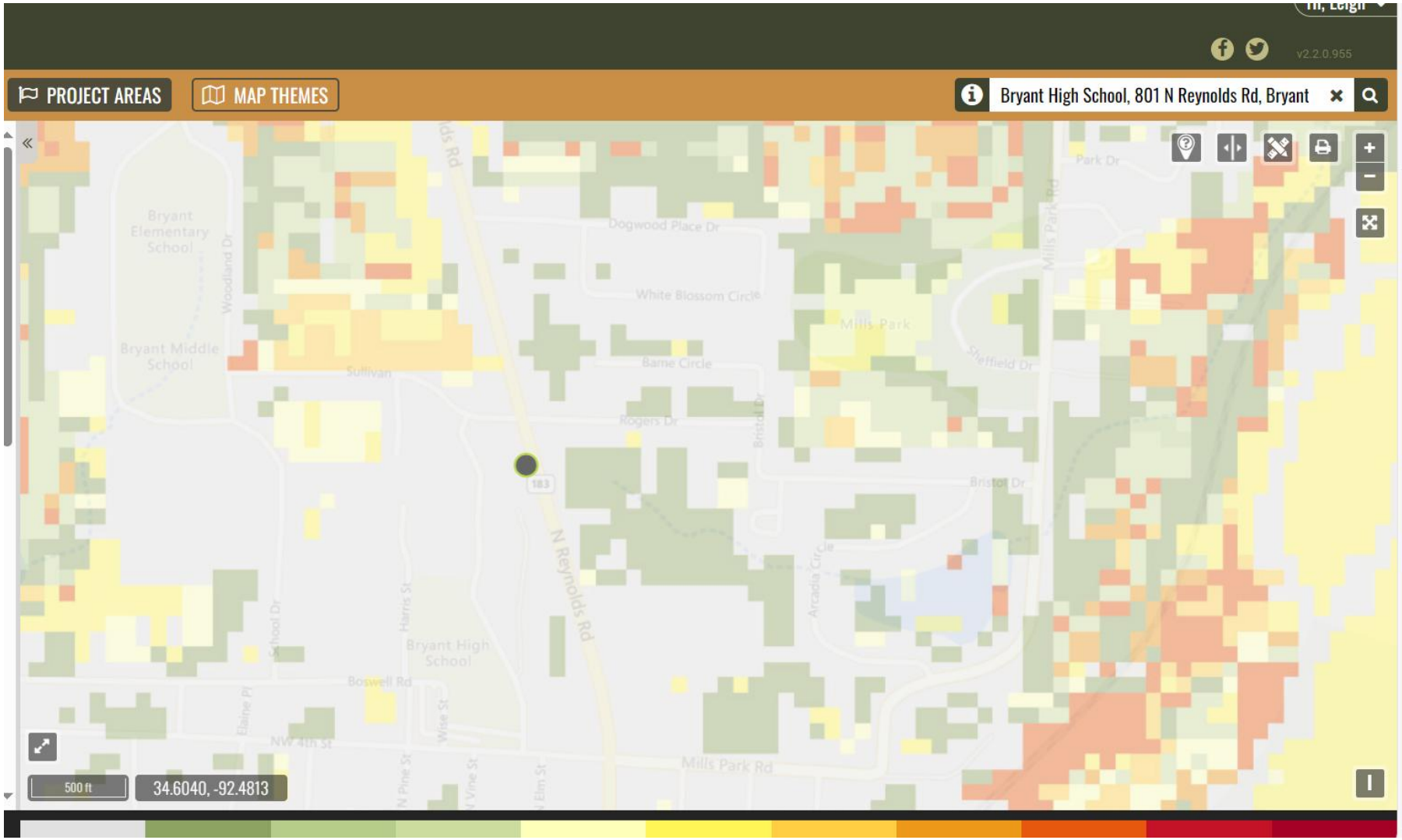
City of Bryant:

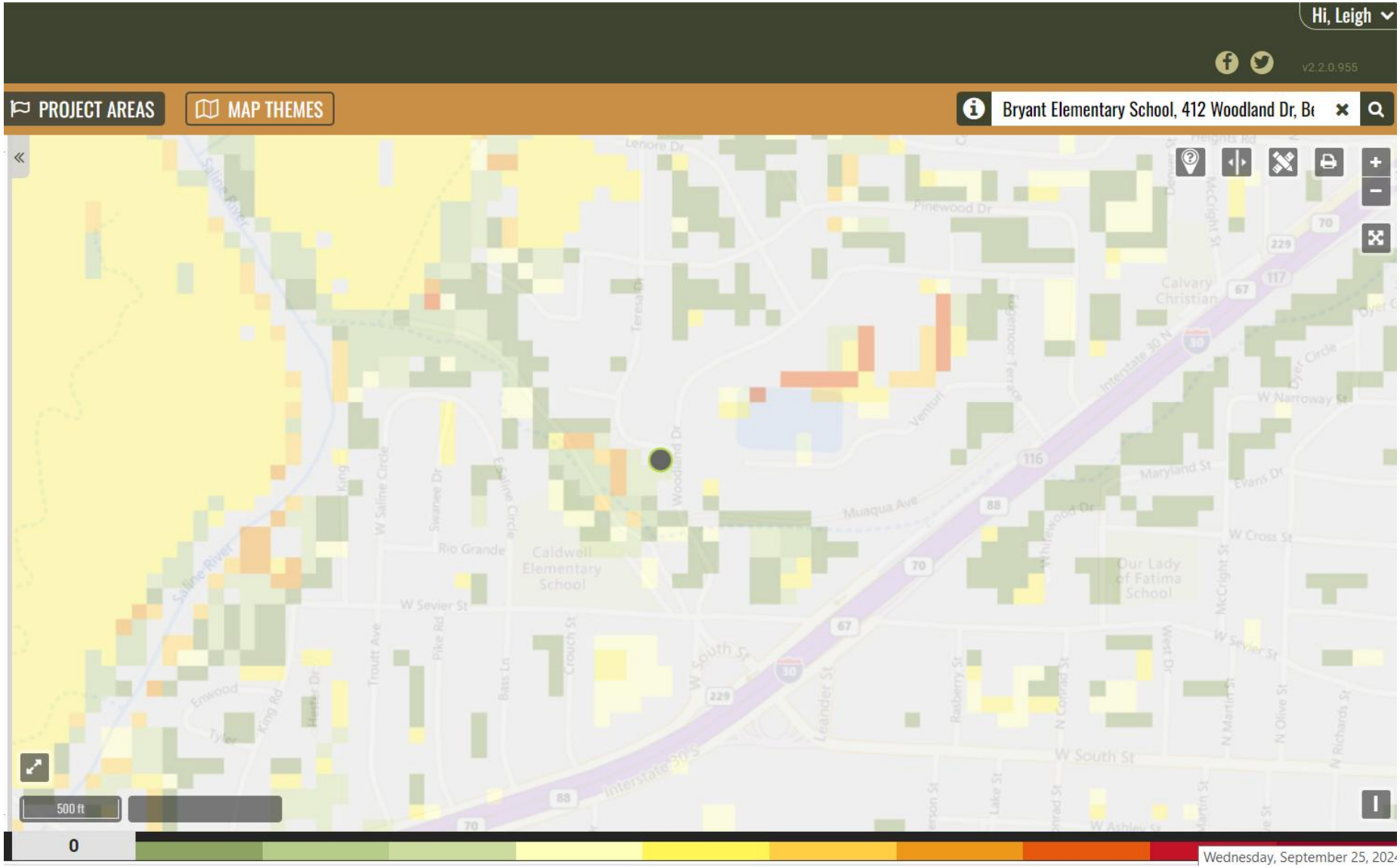


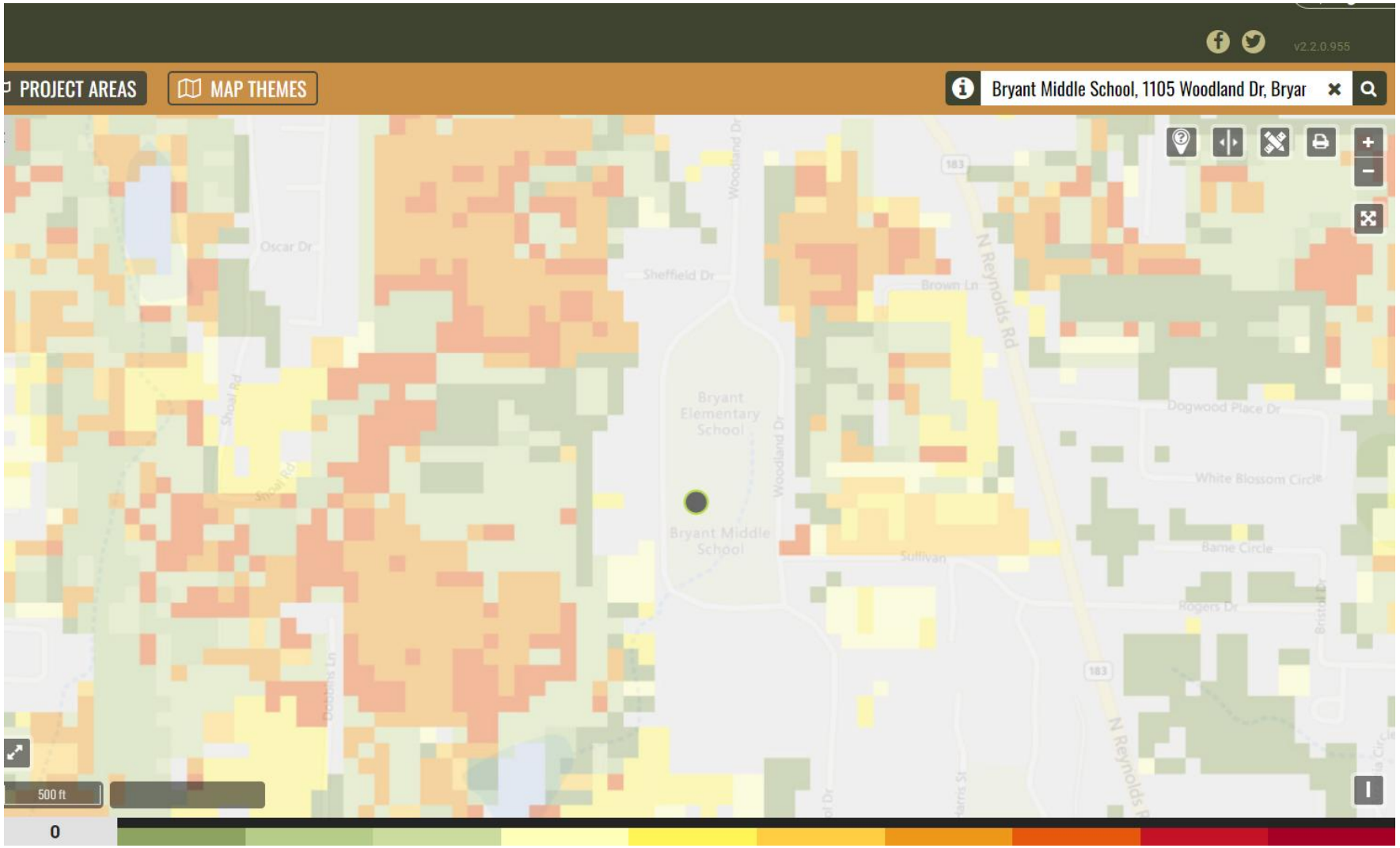
The City of Bryant has a Low Fire Intensity. Flames will be small and less than two feet long. It is possible for a small amount of very short-range spotting. Fire is easy to suppress by trained firefighters with protective equipment and specialized tools.

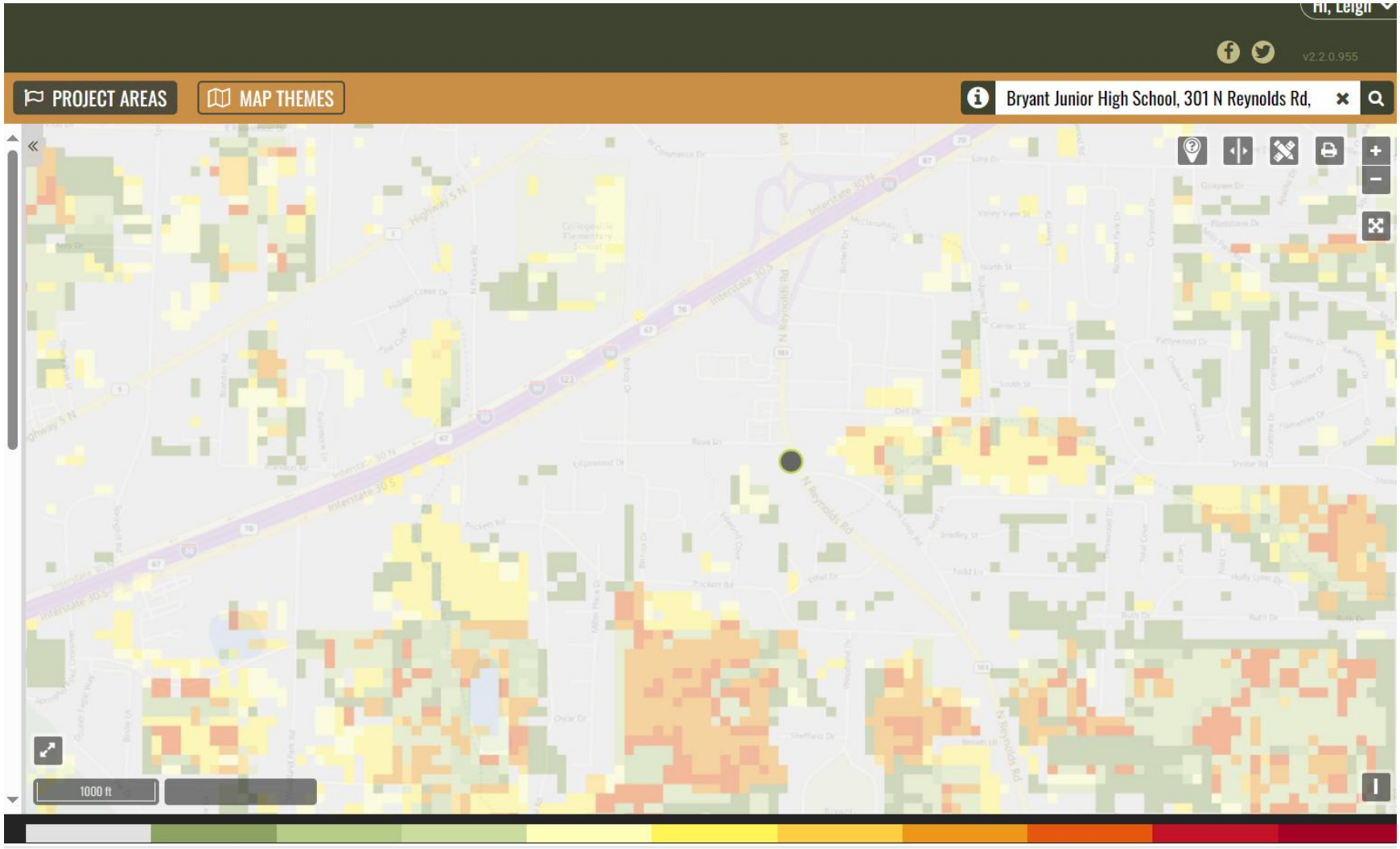
Bryant School District Campuses:

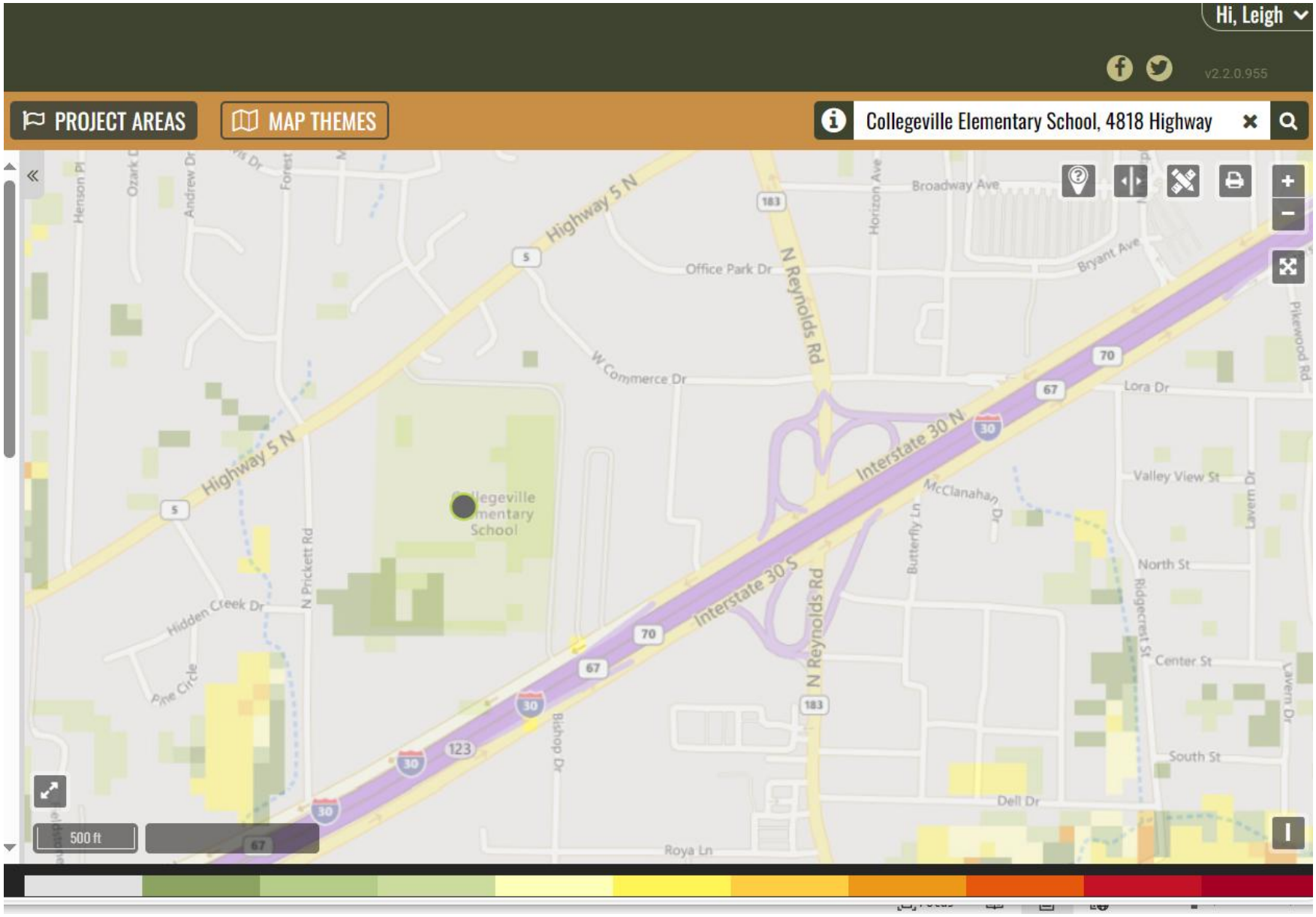

Hi, Leigh
v2.2.0.955
PROJECT AREAS
MAP THEMES
Bryant School District, 1200 S Reynolds Rd, Br
Amy Circle
Griffis Rd
Bryant Cemetery
Wesley Way
Allyson Ave
Elkhart Loop
Green Valley Dr
Cynamide Rd
Hill Rd
Hill Farm Rd
S Reynolds Rd
Katrina Dr
Pleasant Pointe Circle
Wilkerson Ln
Sadie Dr
Regional Airport
183
88
500 ft
0

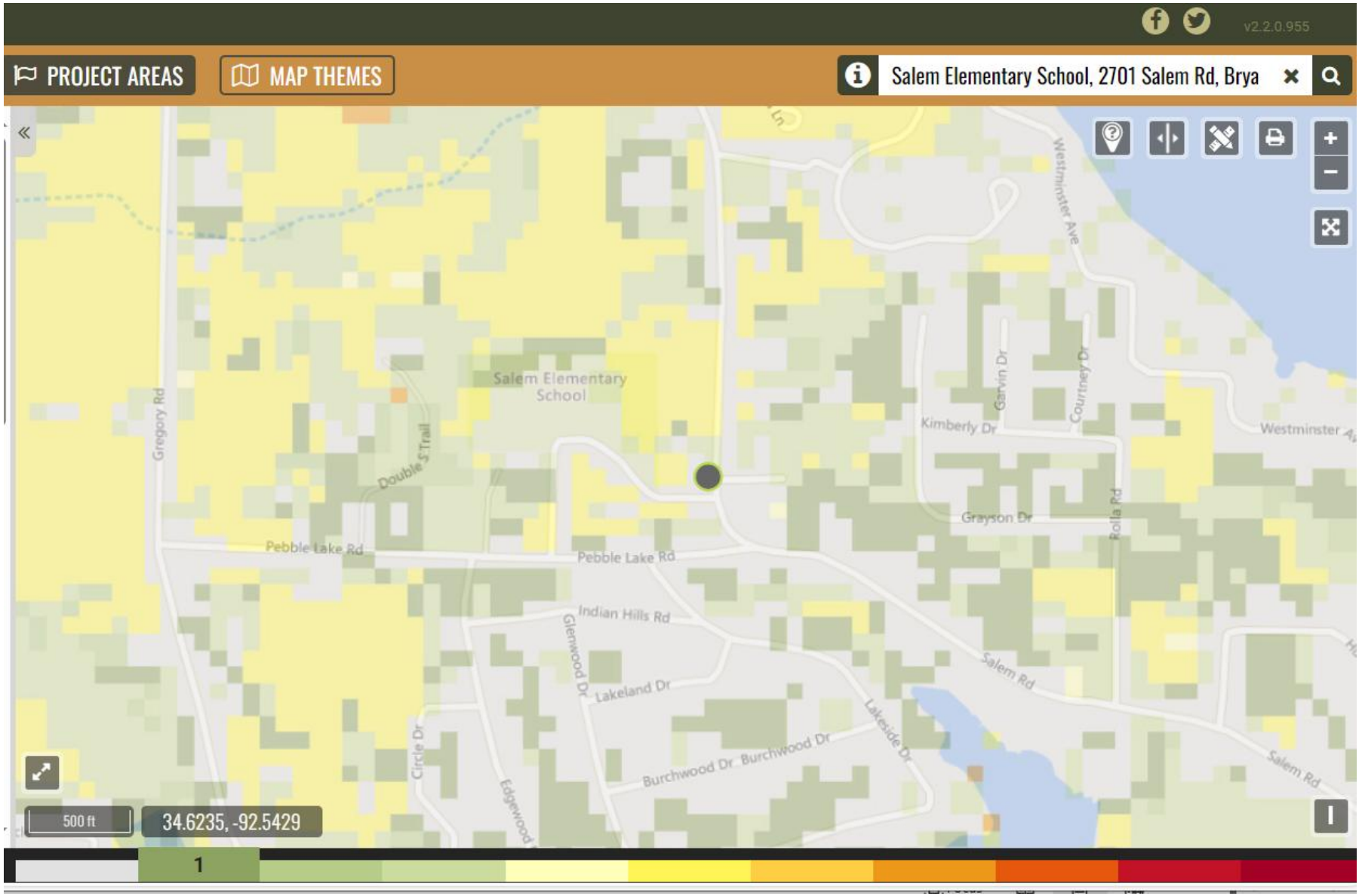

PROJECT AREAS
MAP THEMES
Bryant High School, 801 N Reynolds Rd, Bryant
v2.2.0.955
Bryant Elementary School
Bryant Middle School
Bryant High School
Dogwood Place Dr
White Blossom Circle
Barne Circle
Rogers Dr
Sullivan
Mills Park
Sheffield Dr
Park Dr
Mills Park Rd
Bristol Dr
Arcadia Circle
N Reynolds Rd
Boswell Rd
Mills Park Rd
Harris St
Wise St
Elaine Pl
NW 4th St
183
500 ft
34.6040, -92.4813

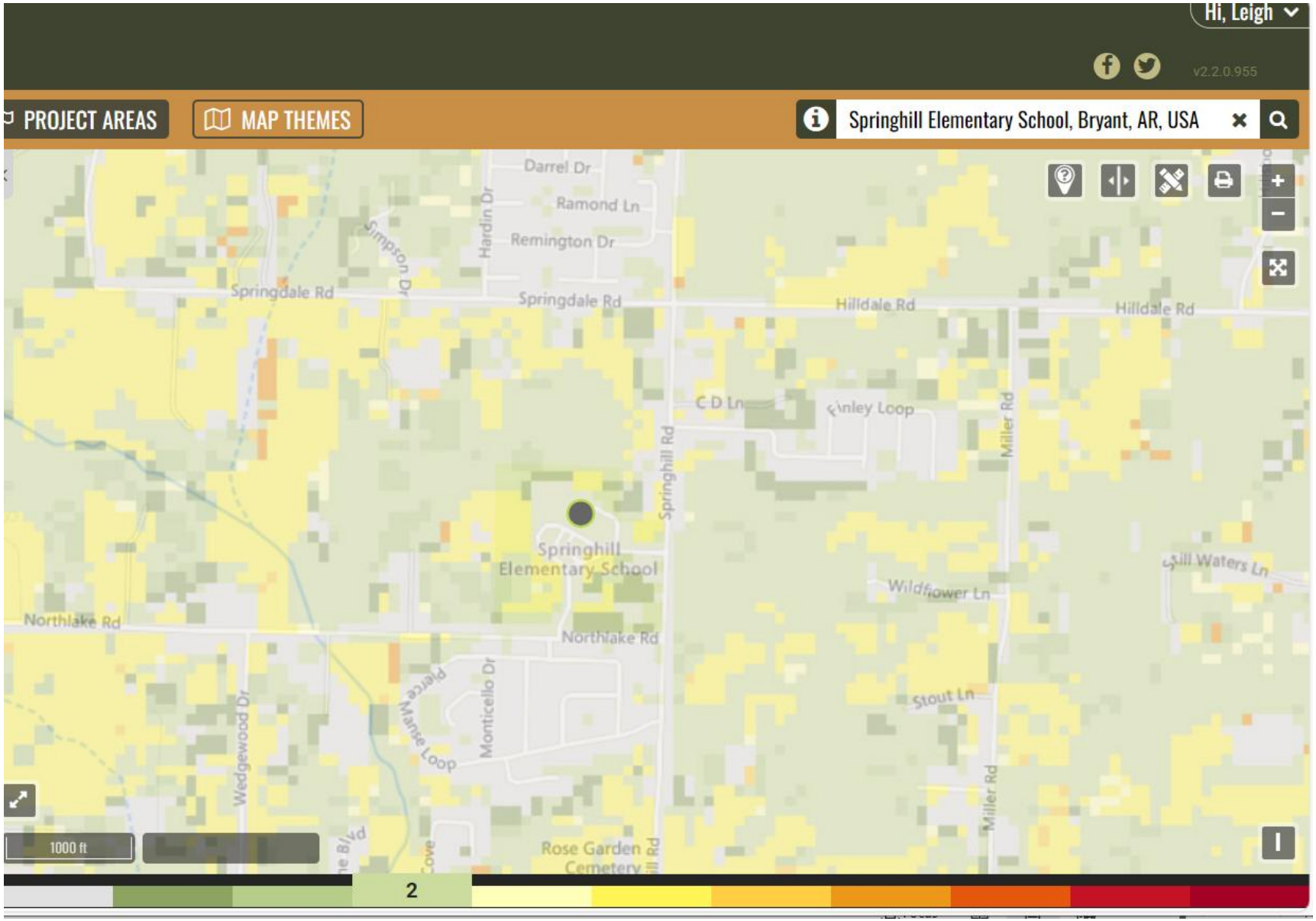

Hi, Leigh
v2.2.0.955
PROJECT AREAS
MAP THEMES
Bryant Elementary School, 412 Woodland Dr, Be
Lenore Dr
Pinewood Dr
Calvary Christian
Interstate 30 N
W Narroway St
Maryland St
Evans Dr
Musqua Ave
W Cross St
Our Lady of Fatima School
Saline River
W Saline Circle
Swanee Dr
Woodland Dr
Rio Grande
Caldwell Elementary School
W Sevier St
Trout Ave
Pike Rd
Bass Ln
Crouch St
W South St
Interstate 30 S
Leander St
Rasberry St
N Olive St
N Richards St
Enwood
King Rd
500 ft
0
Wednesday, September 25, 202

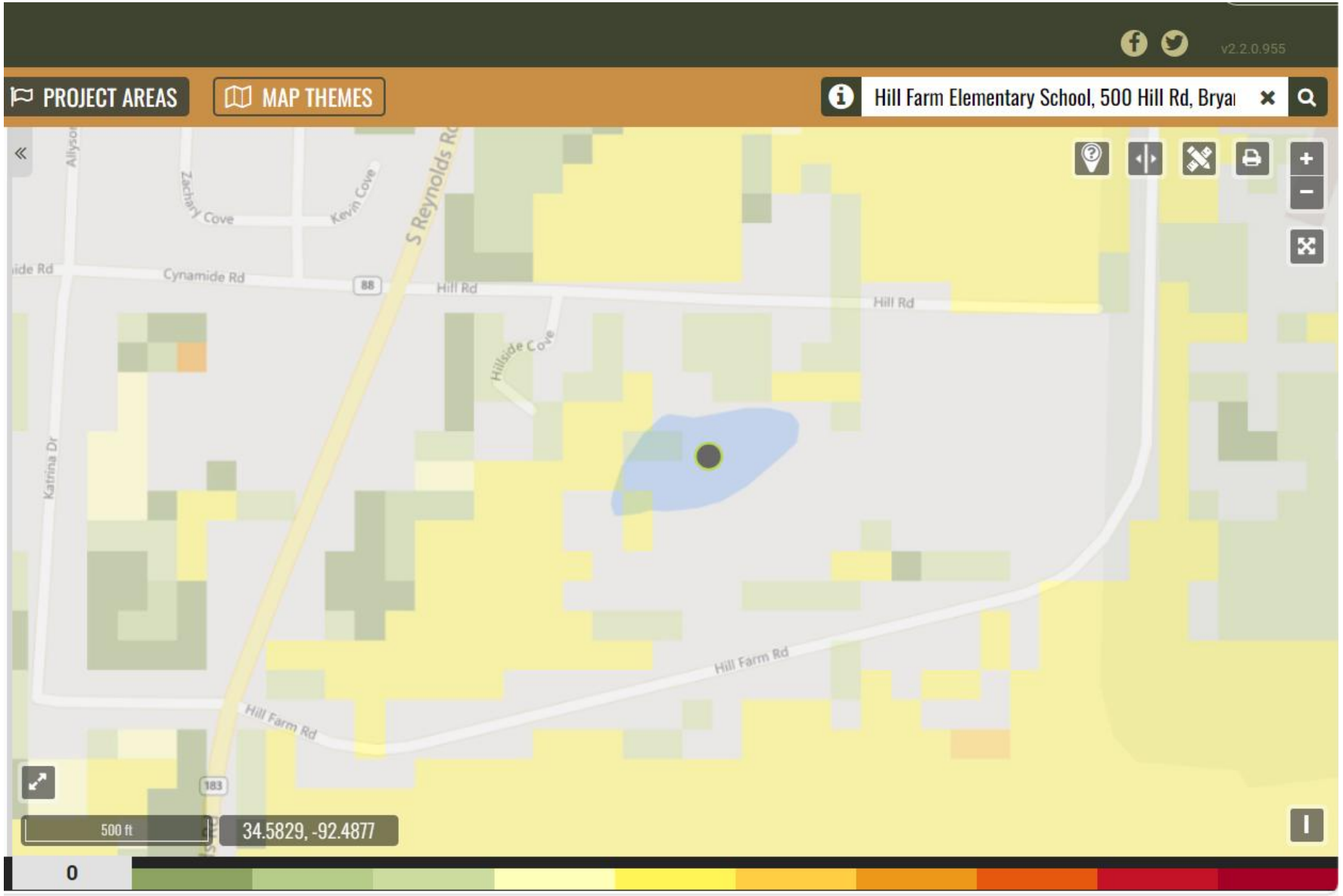

PROJECT AREAS
MAP THEMES
Bryant Middle School, 1105 Woodland Dr, Bryar
v2.2.0.955
Oscar Dr
Sheffield Dr
Woodland Dr
Brown Ln
N Reynolds Rd
Bryant Elementary School
Dogwood Place Dr
White Blossom Circle
Bryant Middle School
Sullivan
Bame Circle
Rogers Dr
183
500 ft
0

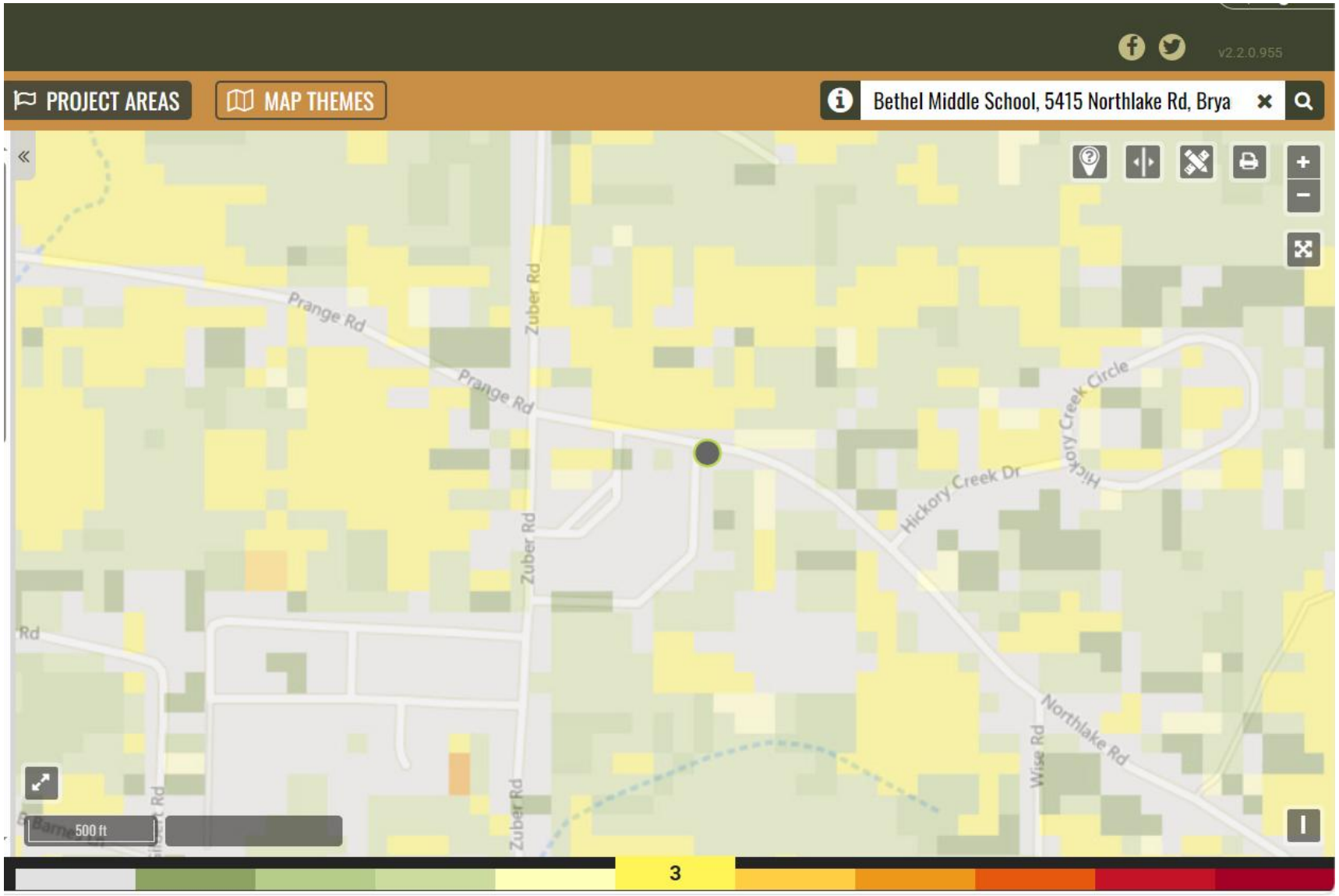

PROJECT AREAS
MAP THEMES
Bryant Junior High School, 301 N Reynolds Rd,
v2.2.0.955
1000 ft


Hi, Leigh
v2.2.0.955
PROJECT AREAS
MAP THEMES
Collegeville Elementary School, 4818 Highway
Highway 5 N
Office Park Dr
N Reynolds Rd
Broadway Ave
Horizon Ave
Bryant Ave
W Commerce Dr
Lora Dr
Interstate 30 N
Interstate 30 S
McClanahan Dr
Valley View St
Butterfly Ln
North St
Ridgecrest St
Center St
South St
Dell Dr
Roya Ln
Bishop Dr
N Prickett Rd
Hidden Creek Dr
Pine Circle
Pikewood Rd
Lavern Dr
Henson Pl
Ozark Dr
Andrew Dr
Forest Dr
500 ft

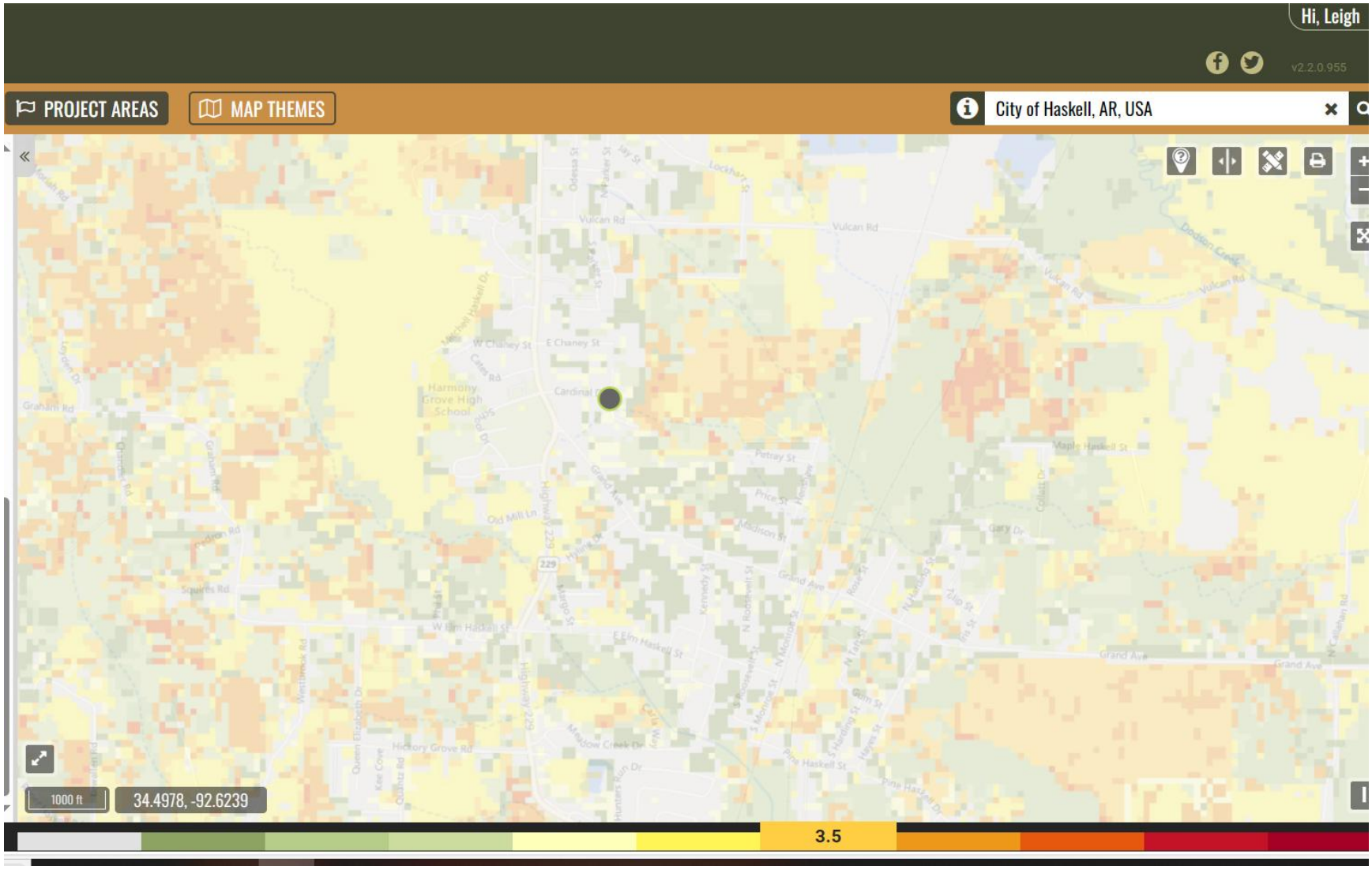

v2.2.0.955
PROJECT AREAS
MAP THEMES
Salem Elementary School, 2701 Salem Rd, Brya
Salem Elementary School
Gregory Rd
Double S Trail
Pebble Lake Rd
Pebble Lake Rd
Indian Hills Rd
Glenwood Dr
Lakeland Dr
Circle Dr
Edgewood
Burchwood Dr
Burchwood Dr
Lakeside Dr
Salem Rd
Salem Rd
Kimberly Dr
Garvin Dr
Courtney Dr
Westminster Ave
Westminster A
Grayson Dr
Rolla Rd
500 ft
34.6235, -92.5429
1


Hi, Leigh
v2.2.0.955
PROJECT AREAS
MAP THEMES
Springhill Elementary School, Bryant, AR, USA
Darrel Dr
Ramond Ln
Remington Dr
Springdale Rd
Springdale Rd
Hilldale Rd
Hilldale Rd
Simpson Dr
Hardin Dr
C D Ln
Springhill Rd
Miller Rd
Springhill Elementary School
Wildflower Ln
Still Waters Ln
Northlake Rd
Northlake Rd
Stout Ln
Monticello Dr
Wedgewood Dr
Miller Rd
Rose Garden Cemetery
1000 ft
2


PROJECT AREAS
MAP THEMES
Hill Farm Elementary School, 500 Hill Rd, Bryar
v2.2.0.955
Zachary Cove
Kevin Cove
S Reynolds Rd
Cynamide Rd
88
Hill Rd
Hill Rd
Hillside Cove
Katrina Dr
Hill Farm Rd
Hill Farm Rd
183
500 ft
34.5829, -92.4877
0

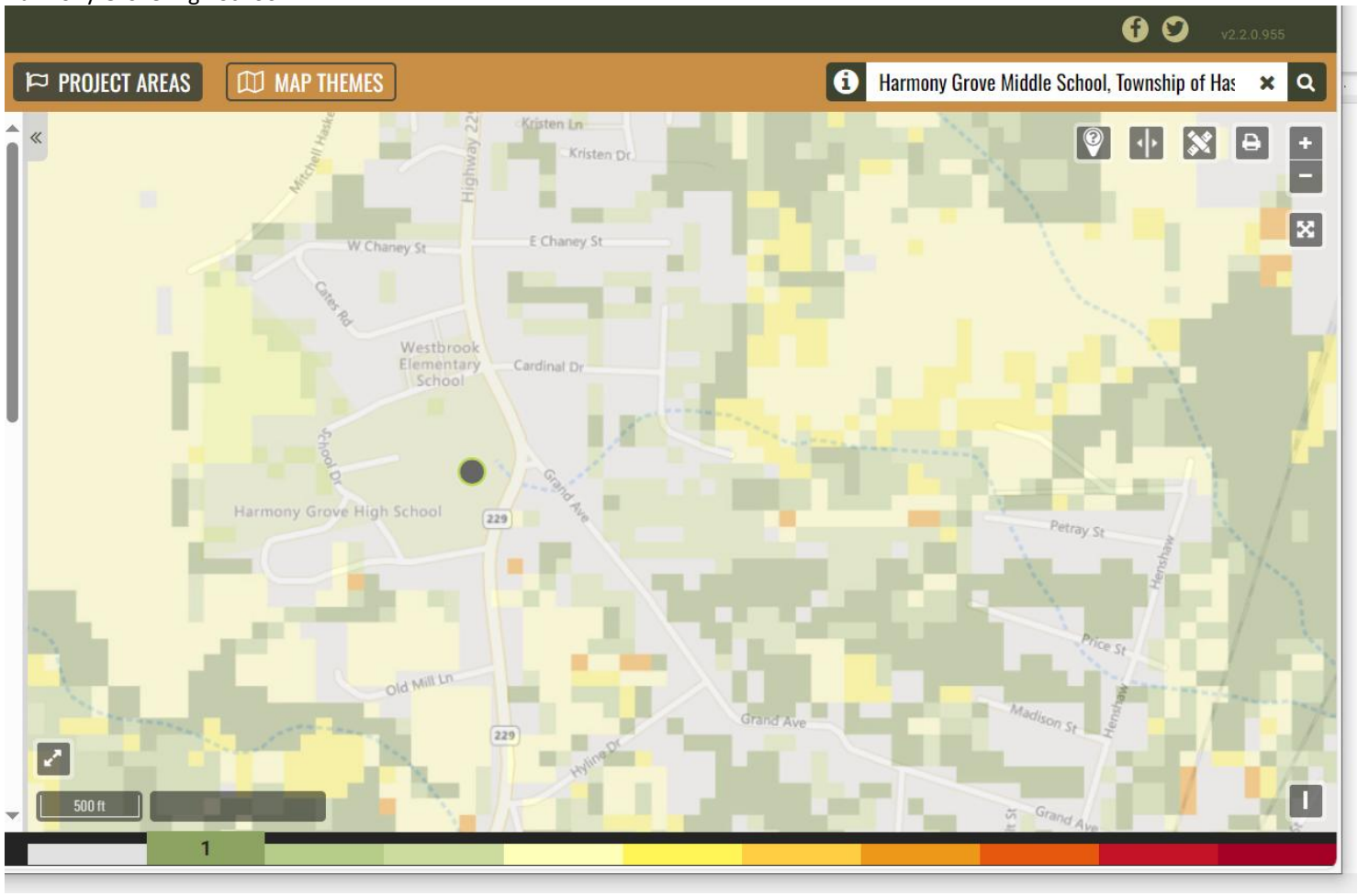

v2.2.0.955
PROJECT AREAS
MAP THEMES
Bethel Middle School, 5415 Northlake Rd, Brya
Prange Rd
Prange Rd
Zuber Rd
Zuber Rd
Zuber Rd
Hickory Creek Dr
Hickory Creek Circle
Northlake Rd
Wise Rd
Rd
500 ft
3

City of Haskell:



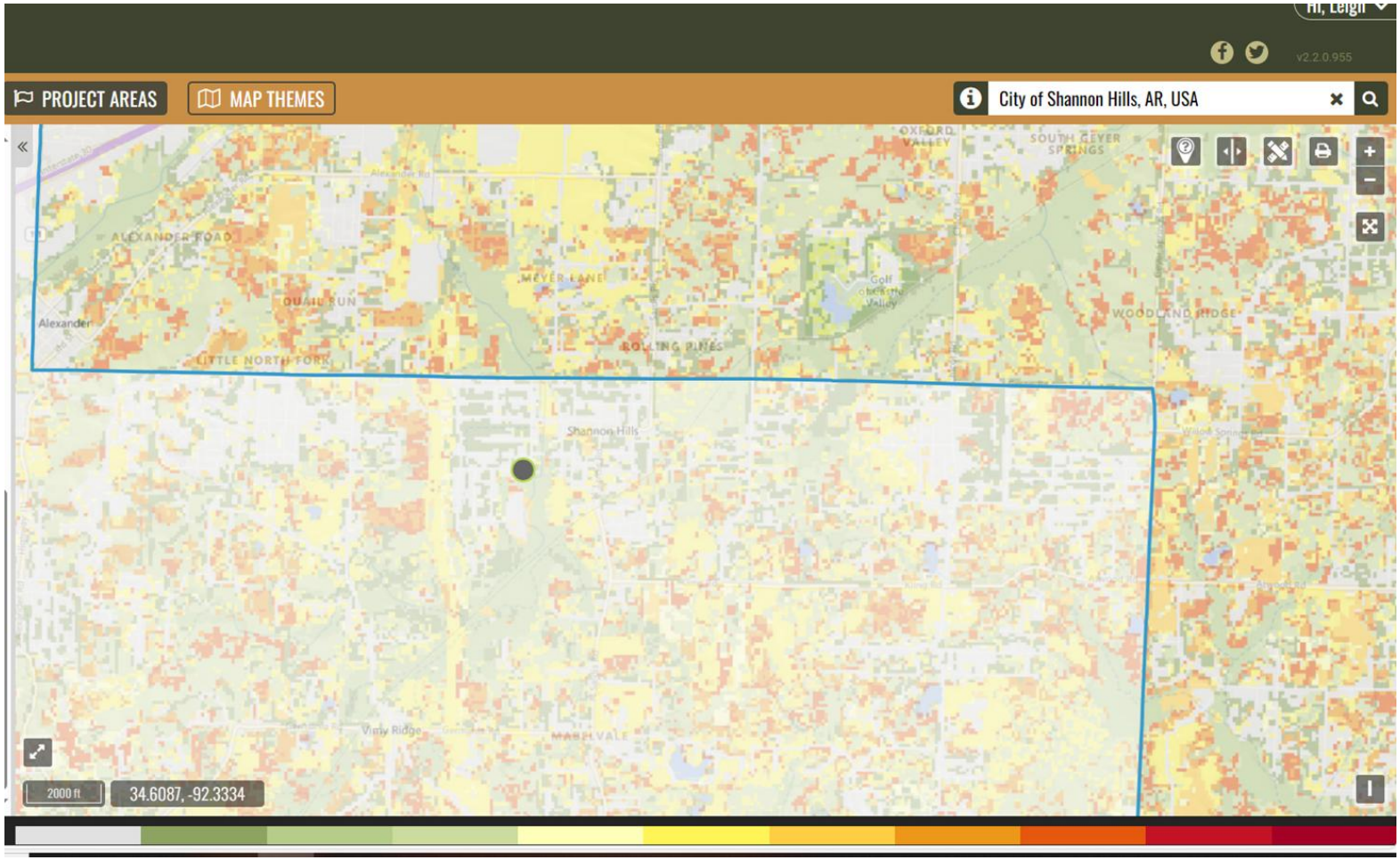
The city of Haskell has a Low Fire Intensity. Flames will be small and less than two feet long. It is possible for a small amount of very short-range spotting. Fire is easy to suppress by trained firefighters with protective equipment and specialized tools.

Haskell School District Campuses: (Same Map)
Harmony Grove Middle.
Westbrook Elementary School
Harmony Grove High School

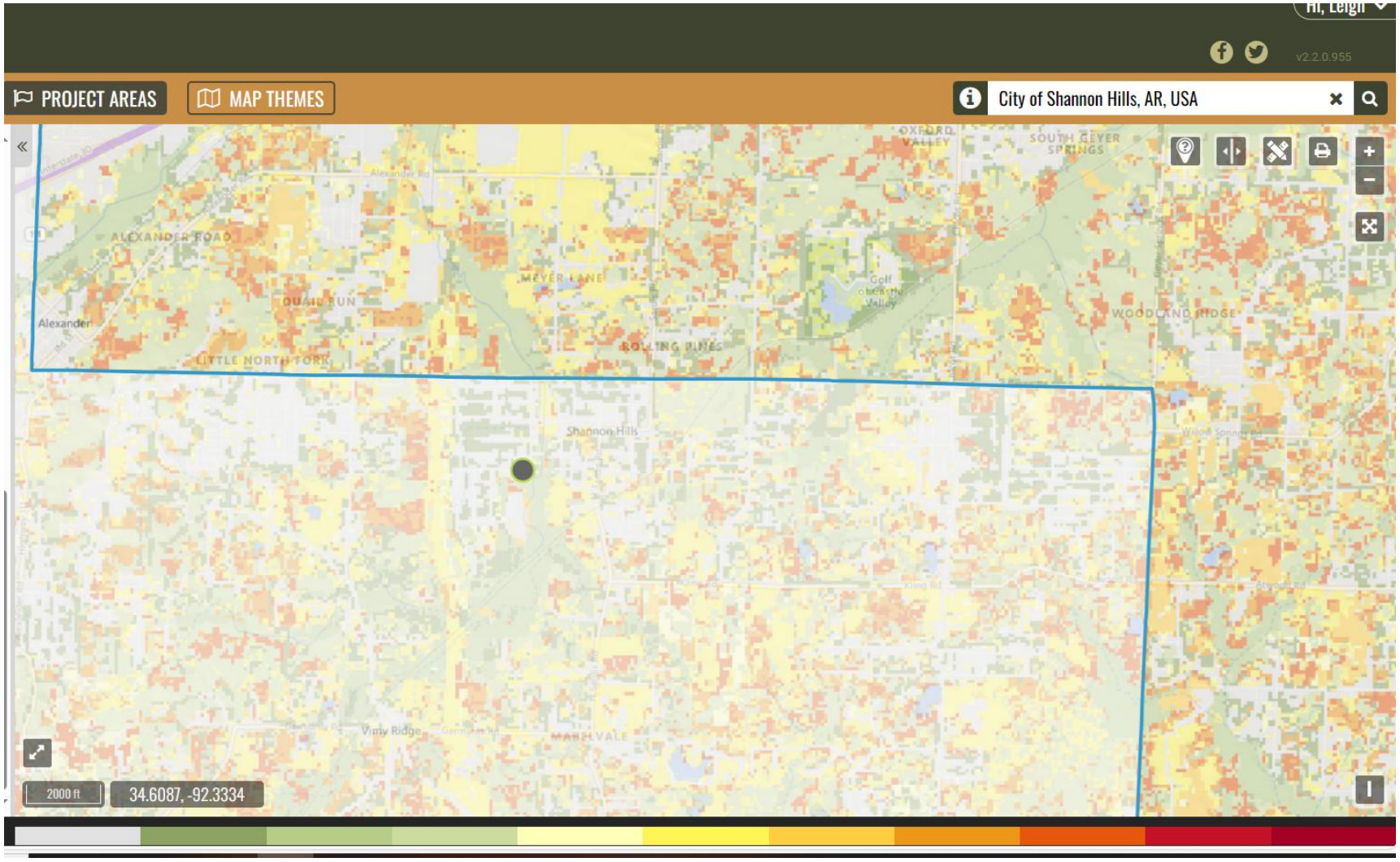


City of Shannon Hills:

The city of Shannon Hills has a Low Fire Intensity. Flames will be small and less than two feet long. It is possible for a small amount of very short-range spotting. Fire is easy to suppress by trained firefighters with protective equipment and specialized tools. **Location of Bryant School District campus:** 17. Robert L. Davis Elementary School.



City of Traskwood:



The city of Traskwood has a High Fire Intensity. These areas will experience some short-range spotting, and medium range spotting is possible. The flames are large, up to 300 feet in length. Direct attacks by trained firefighters, engines, and dozers are generally ineffective, indirect attacks may be effective.

Bauxite School Campuses:
The campus has Low to Moderate Fire Intensity. Short range spotting is possible with flames up to 8 feet in length.

Benton School Campuses:
The campus has Low Fire Intensity. Short range spotting is possible with flames up to 8 feet in length.

Bryant School Campuses:
The campus has Low Fire Intensity. Flames will be small and less than two feet long. It is possible for a small amount of very short-range spotting. Fire is easy to suppress by trained firefighters with protective equipment and specialized tools.

Harmony Grove:
The campus of Harmony Grove has Low to Moderate Fire Intensity. Short range spotting is possible with flames up to 8 feet in length.

History:

Five major wildfire events. There have been no recorded fire events in the last 5 years.:

- 1/17/2009- A wildfire burned 140 acres in timberlands of extreme eastern Saline County. The fire occurred between Brown's Trail and Hensley Mail Route Road. Most of the fire burned low to the ground. The fire threatened five residences but was stopped by local fire departments and the Arkansas Forestry Commission.
- 10/10/2010- A wildfire began about a mile south of Traskwood during the morning hours of the 10th. The fire escaped containment lines during the afternoon and spread considerably, eventually burning 486 acres. At least 21 fire departments fought the fire, along with the Arkansas Forestry Commission. Equipment deployed by the Forestry Commission included eight bulldozers and four air tankers. Two additional bulldozers were provided by a timber company. As the fire grew and threatened structures, Saline County declared a disaster and requested the assistance of the Arkansas National Guard. Arkansas Governor Mike Beebe approved the use of the Guard, and a helicopter was deployed to drop water on the fire. As the fire threatened residences, approximately 575 people were evacuated from the Traskwood, Martin Cutoff, and Holly Creek townships.
- 6/28/2012- An attempt to burn a pile of bamboo led to a 5-acre wildfire at East End in Saline County on the 28th. Seven fire departments fought the blaze. Two firefighters suffered heat exhaustion. Because a burn ban was in effect at the time of the fire, the landowner was issued a citation with a fine of $1100.
- 6/30/2012- The Spring Lake Road fire 4 miles east of East End in Saline County burned 100 acres on the 30th. Sixty people were evacuated at the height of the fire, but the fire was stopped before any structures burned. Five fire departments and the Arkansas Forestry Commission fought the fire. The fire was ruled to be arson.
- 11/24/2012- The Round Mountain fire began on the 24th about 3 miles southeast of Williams Junction in Perry County and burned into Saline County before being controlled on the 25th. Altogether, 330 acres burned.

Probability:

The probability of future events is Likely. There is a 10 to 90 percent probability of occurrence in the next year or a recurrence interval of 1 to 10.

Impact & Vulnerability:

Cause	Most At-risk	Past Events
What causes events in Saline County? Human, natural, technological	• Population – See WUI Map • Locations – See WUI Map	Number of Occurrences – 5 Presidential Declared Disasters - 0

The chart below outlines the number of structures, their value, acre and percentage in each level of wildland fire risk. The structures are a combination of all participating jurisdictions. Please note that this report concerns all fires located within the planning area.

Fire Fighters are the most vulnerable populations during wildfires. Saline County has experienced three deaths of firefighters in one wildfire due to heat exhaustion. 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.

All personal and real property are vulnerable to wildfire, as well as all human lives. The most vulnerable structures in Wildfire occurrences are wood frame structures and manufactured homes. Jurisdiction	Wood/Frame Structures	Manufactured Homes
Entire County	24,143	8,198
Unincorporated Areas	10,067	5,499
Alexander	249	698
Bauxite	78	70
Benton	7,853	733
Bryant	4,460	699
Shannon Hills	736	113
Haskell	698	386

Potential Effects of Climate Change	
Changes in Temperature	Warmer periods can increase the possibility of a wildfire especially during a dry period
Changes in Precipitation	Decrease in rainfall or drought conditions as a result can lead to increased risk of wildfire
Extreme Weather	Extreme weather such as thunderstorms with lightning can cause wildfires to occur. Especially if the storm occurs after prolonged warm dry period with limited precipitation

Key Sectors Vulnerability and Exposure: Populations will be limited to those that live in forested areas or communities that have large areas of forest. Government Impact would be limited since most facilities are not located in forested areas. (page 146 in State Plan)

Climate Change: Studies from the USGS have shown that while they are working to improve fire management, they are also dealing with the compounding issue of climate change. Many regions of the United States are now experiencing prolonged periods of drought and record temperatures. These areas often also have an excessive buildup of fallen leaves and understory brush. Conditions remain ripe to drive intense wildfires that damage natural areas and sadly, nearby communities.

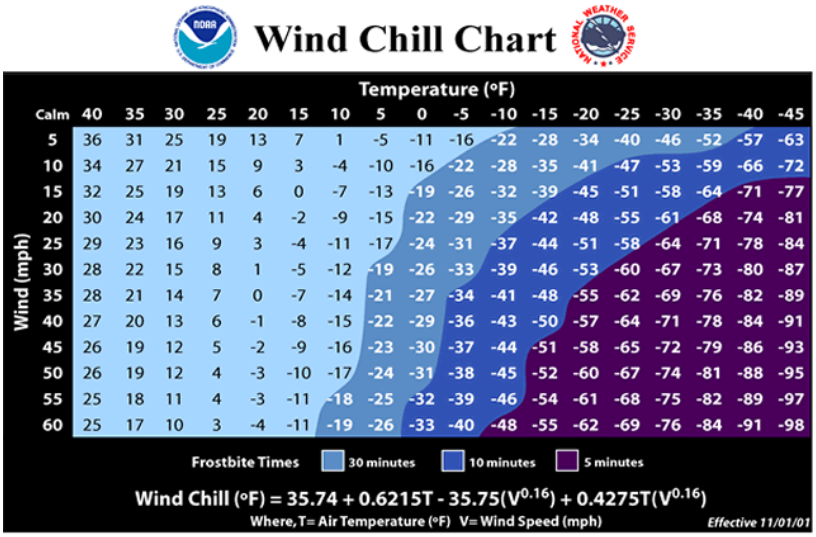
B1.9 Winter/Ice Storms

Description:

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

Location:

All areas of Saline County are equally susceptible to severe winter storm events.



WIND CHILL INDEX °F								
	WIND SPEED (MPH)							
TEMP (°F)	5	10	15	20	25	30	35	40
-25	-40	-47	-51	-55	-58	-60	-62	-64
-20	-34	-41	-45	-48	-51	-53	-55	-57
-15	-28	-35	-39	-42	-44	-46	-48	-50
-10	-22	-28	-32	-35	-37	-39	-41	-43
-5	-16	-22	-26	-29	-31	-33	-34	-36
0	-11	-16	-19	-22	-24	-26	-27	-29
5	-5	-10	-13	-15	-17	-19	-21	-22
10	1	-4	-7	-9	-11	-12	-14	-15
15	7	3	0	-2	-4	-5	-7	-8
20	13	9	6	4	3	1	0	-1
25	19	15	13	11	9	8	7	6
30	25	21	19	17	16	15	14	13
35	31	27	25	24	23	22	21	20

The "wind chill index" is considered dangerous when temperature and wind speed combine to make it feel like 0 degrees or lower. For example, using the chart above, a temperature of 15 degrees with a wind speed of 25 mph net a wind chill index of -4 degrees.

Extent:

Comparative Climatic Data and National Weather Service Data, snow accumulations in Saline County during heavy snow and winter storm events ranges from 1 inch to 8 inches. Typical ice storm accumulation rages from 1/10 of one inch to ½ of an inch. Saline County and all participating jurisdictions typically see between 1" to 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 principles if there are extreme cold temperatures. Wind chill would be the determining factor in keeping students inside. Some districts initiate monitoring for wind chills below 32 degrees, some 40 degrees.

History:

Winter Storms NCDC Data

Hail

Number of County/Zone areas affected:	1
Number of Days with Event:	20
Number of Days with Event and Death:	0
Number of Days with Event and Death or Injury:	0
Number of Days with Event and Property Damage:	1

Number of Days with Event and Crop Damage:	0
Number of Event Types reported:	1
Estimated Property Damages	5.00K
Estimated Crop Damages	0.00K

Heavy Snow

Number of County/Zone areas affected:	1
Number of Days with Event:	2
Number of Days with Event and Death:	0
Number of Days with Event and Death or Injury:	0
Number of Days with Event and Property Damage:	0
Number of Days with Event and Crop Damage:	0
Number of Event Types reported:	1
Estimated Property Damage	0.00K
Estimated Crop Damage	0.00K

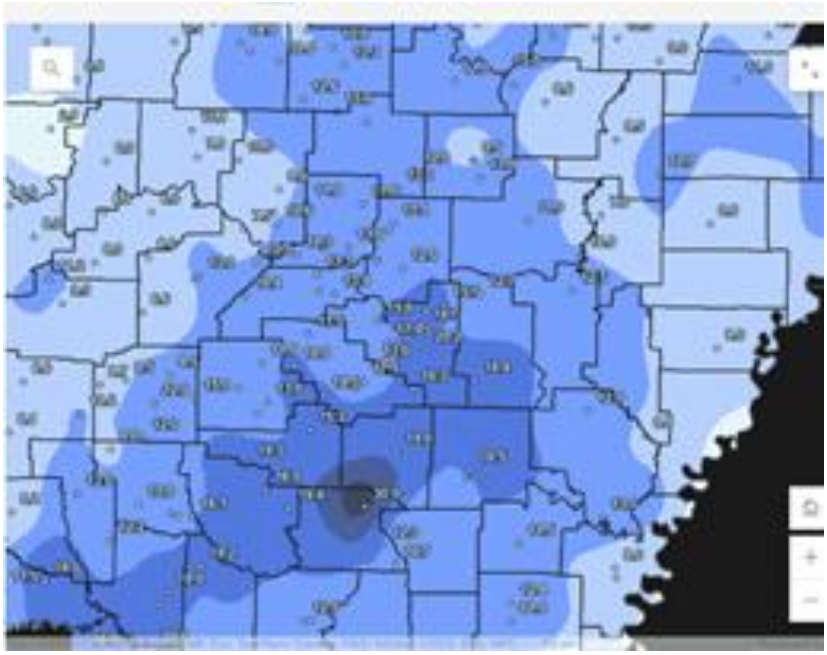
Winter Weather

Number of County/Zone areas affected:	1
Number of Days with Event:	8
Number of Days with Event and Death:	0
Number of Days with Event and Death or Injury:	0
Number of Days with Event and Property Damage:	0
Number of Days with Event and Crop Damage:	0
Number of Event Types reported:	1
Estimated Property Damage	0.00K
Estimated Crop Damage	0.00K

The following information was provided by the Arkansas Winter Storm Database

February 14-18, 2021

Within the span of five days, beginning on February 14th and lasting through the 18th, two significant winter storms affected Arkansas in a back-to-back fashion. The storms produced record snowfall and snow depths across the state. Additionally, record Arctic cold set in, with low temperatures below zero around most of the state. Note that the web map in this pane displays the storm total observed snow totals from both winter storms that struck the area in the five-day period.



Winter Storm 1

Very cold Arctic air moved in behind the system, with widespread below zero temperatures in much of the state. In the Little Rock metro area, temperatures were the coldest recorded since 1989. Most places recorded their coldest readings on the morning of the 16th.
The morning of the 16th brought the coldest temperatures of the Arctic Snap, however a prolonged period of high temperatures below freezing also preceded and accompanied the cold snap. Little Rock (Adams Field) did not record a high temperature above freezing for eight days in a row (2/11 - 2/18). The Little Rock WFO (North Little Rock Airport) did not record a high temperature above freezing for nine days in a row (2/10 - 2/18).

Winter Storm 2

The next round of heavy snow came primarily during the 17th-18th, with amounts of 10"-15" or more common from southwest into central Arkansas. In a few places, more than 20" fell.
Heavy and blinding snow fell across portions of I-30 and I-530 on the afternoon of the 17th, resulting in dangerous driving conditions. The Pine Bluff and Arkadelphia automated weather stations reported heavy snow and extremely reduced visibilities down to a half mile between 3-4 PM CST on the 17th.

February 3-4, 2022

On February 3-4, 2022, a winter storm brought heavy snowfall to portions of northern and northwestern Arkansas, and sleet and freezing rain to portions of central, eastern, and southern Arkansas.
Snow & Sleet (Left) / Freezing Rain (Right)
The greatest snow totals were seen over northwestern Arkansas, with totals of 4-8" of snow common, and a few locations recording 10" or more, including 11" near Norfork (Baxter County), Flippin (Marion County), and Viola (Fulton County), and 13" near Lead Hill (Boone County). Sleet was much more common in central, eastern, and southern Arkansas, with accumulations of 1-3" common around the region.

Sleet and freezing rain were the more predominant precipitation type in central and southern Arkansas with this winter storm. Ice accumulations of one-tenth to a half-inch were common, with the greatest accumulations noted over eastern and southeastern Arkansas. Damage from ice accumulation was also the most predominant in this area as well, as just over 20,000 power outages were reported on the afternoon of February 3rd.

February 24-25, 2022

On February 24-25, 2022, a setup that was like the events from just earlier that month impacted the state, however the primary differences were overall, much less snow, and greater coverage of primarily sleet and freezing rain, driving widespread travel impacts.

Snow and Sleet Accumulation

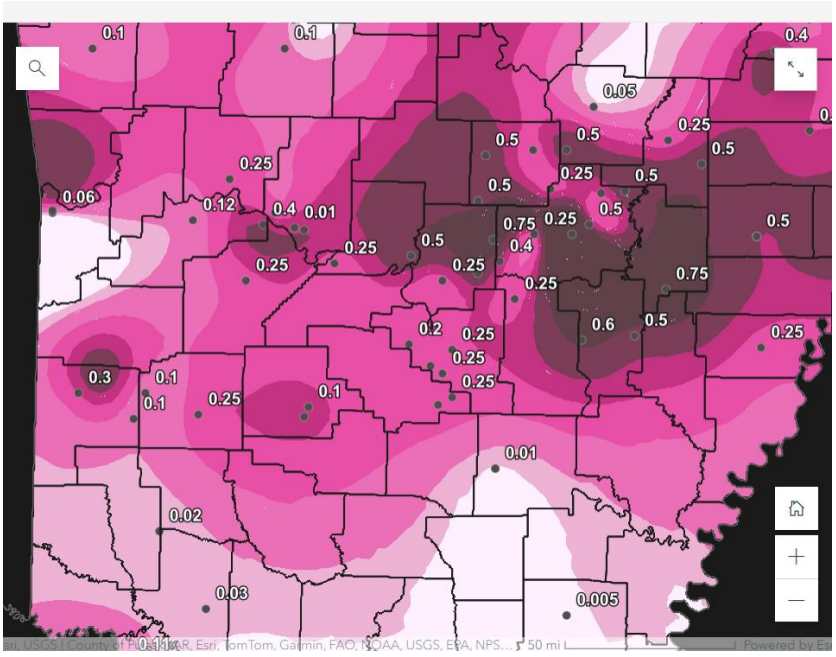
Mostly sleet fell over central Arkansas, with some snow accumulations noted in far northern Arkansas, and the higher terrain of the Ozarks.

Freezing Rain Accumulation

Of more significant impact was the coverage of freezing rain. The greatest ice accumulations were observed over central and eastern Arkansas, with ice accruals as thick as one-half inch to three-quarters of an inch common, and over one inch of ice reported near Searcy (White County), and a light glazing of ice more common elsewhere in the state.

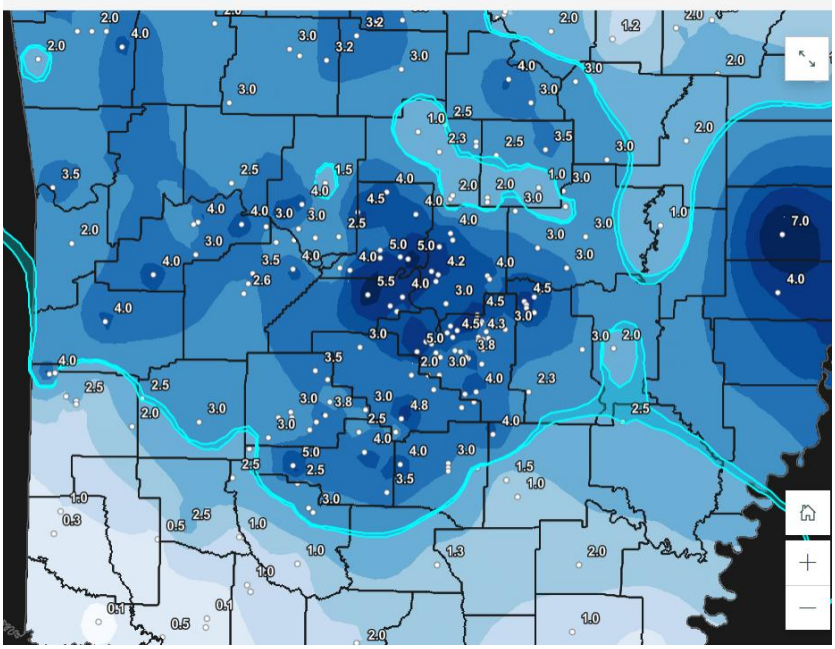
Significant travel impacts were noted along U.S. Highway 67 near Newport, as well as most of the thruway in Jackson and White Counties. Portions of the highway eventually had to be shut down due to hazardous road conditions.

In addition to travel impacts, over 30,000 power outages were reported over eastern Arkansas where ice accumulations were the most significant.



March 11, 2022

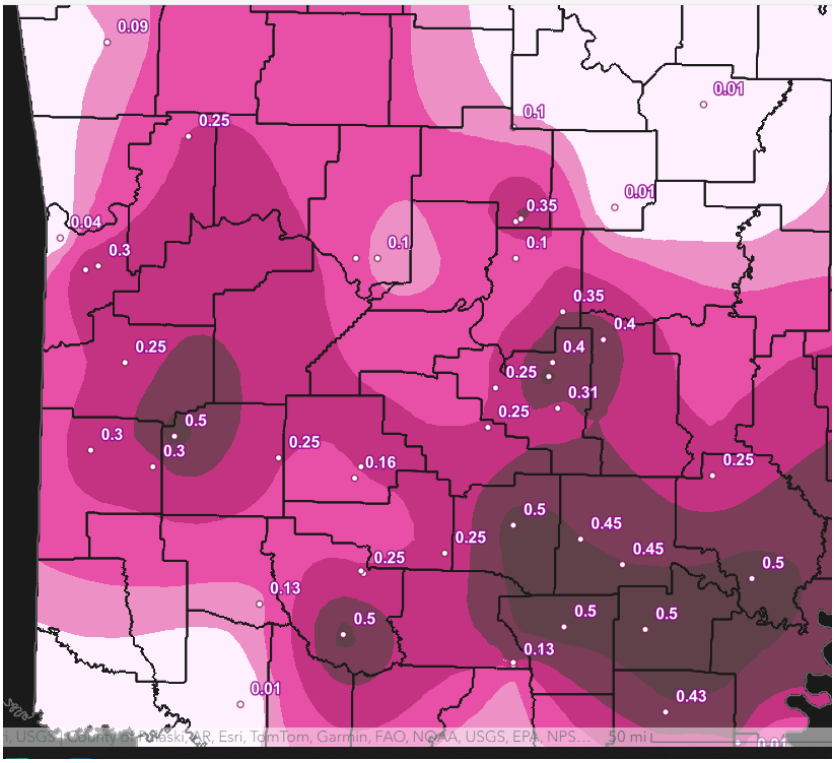
On March 11, 2022, a late-season winter weather event impacted much of the state, with the greatest snow totals observed over much of central Arkansas, and eastern portions of the state near the Mississippi River. Snow totals of 3 to 5 inches were common around the Little Rock and Conway metro areas, with most other locations receiving 2 to 3 inches of snow.



January 30 - February 3, 2023

Freezing Rain Accumulation in Southern Central Arkansas

A multi-day freezing rain event struck southern central Arkansas in late January/early February of 2023. Freezing rain continued to fall for 4 days consistently, though accumulation rates were not high, the persistent freezing rain brought significant damage to trees and infrastructure over portions of Grant, Jefferson, Dallas, Cleveland, and Lincoln Counties as there was no real break in precipitation and ice accumulation through the event.



Probability:

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

Vulnerability & Impact:

The unincorporated areas of Saline County, cities of Alexander, Bauxite, Benton, Bryant and school districts of Bauxite, Benton and Bryant and the campus of Harmony Grove are equally affected by winter storms. Winter storms are unique to particular areas of the County.

The Unincorporated areas of Saline County:

> These areas can be somewhat isolated further away from the cities, and without adequate supply of fuel, equipment, and food. Also, when utilities and communication are 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 many 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 impassable. 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.

The cities of Alexander, Benton, Bauxite, Bryant, Haskell, Shannon Hills, & Traskwood:

Winter storms will immobilize the greater part of the cities. The highways will be impassable 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. Houses that are poorly insulated will have pipes that freeze and burst inside these homes. Winter storms can cut off heat, power, and communications for several days. This city will have priority to restore 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.

Climate Change: Although winters are becoming warmer and somewhat milder overall, extreme weather events have also been on the increase, and especially in the Northeastern United States as pointed out in the journal Nature Climate Change. From the winter of 2008-9 until 2017-18, there were 72 major Northeast winter storms, three to four times the total s for each of the previous five decades.

One of factors potentially feeding storms is a warmer atmosphere, which can hold more water vapor; not only can that mean more precipitation, but when the vapor forms clouds, “It releases heat into the air, which provides fuels for storms” (as noted by Jennifer Francis, a senior scientist at the Wood well Climate Research Center.)

C: MITIAGATION STRATEGY

C1: Existing authorities, policies, programs, and resources

The Saline County Hazard Mitigation plan includes a mitigation strategy that provides the Saline 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.

Cities of Alexander, Bauxite, Benton, Bryant, Haskell, Shannon Hills, and Traskwood each are different in terms of staffing, funding, policies and programs 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.

Saline County, all cities, and school districts would be 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. Saline County would need funding assistance in correcting structural weaknesses in dams.

Funds would also be needed for flood inundation studies and conduct inspections, maintenance and enforcement programs on high-risk dams in the County.

C2: Jurisdiction's participation in the NFIP

Saline County and the Cities of Alexander, Benton, Bryant, Haskell, and Shannon Hills participate in the NFIP, and are in good standing. Information is addressed under Community Capabilities and NFIP in Section 2.3.1.

The School Districts of Bauxite, Benton and Bryant and Harmony Grove are not required to participate in the NFIP, but they are included with participating cities or county.

C3: Goals to reduce/avoid long-term vulnerabilities to hazards.

Based upon the results of the local and State risk assessments, the Saline 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 Saline 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 Saline 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 Saline County and city governments, non-profit agencies, and the 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 Saline County with link to public view of the Saline County Mitigation Plan and mitigation strategies.

Objective 2.2 Saline 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 3.3 Continually assess and evaluate the requirements for new structural projects that aid in the reduction of risk to the community.

C4: Prioritization 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 people. They are also members of the LEPC. Existing community plans were and will be relied upon wherever possible. Members of the media were contacted and invited to 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 Division 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.
Political	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.
Legal	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.
Economic	Economic and benefit cost issues were the predominant topics discussed by all concerned. Each entity felt that the projects selected would have positive effects, 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 pressure with existing and competing projects and activities. Where necessary, particularly for costly capital projects, outside grants would be relied on heavily.
Environmental	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 priorities on this update.

The Saline County Office of Emergency Management (SCOEM) 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 the project area, and which structures were most critical, and finally how it would

benefit the entire community. The SCOEM 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: High need for immediate action, Medium need for action, Low lacking in urgency.

All Saline County actions are the responsibility of the director of Saline County Office of Emergency Management. The Cities of Alexander, Bauxite, Benton, Bryant, Haskell, Shannon Hills, and Traskwood 's actions are the responsibility of their Mayors. The School Districts of Bauxite, Benton and Bryant and Harmony Grove 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 developing the Saline 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)

Saline County Mitigation Actions (Previous Plan Update)

Mark as follows:

C-Completed, PC-Partially Complete, D-Deferred, OG-On-going, N/A- No longer Applicable.

Action #	Actions	Associated Hazard	Contribution to Mitigation Objective	Priority	Rationale of Priority	Addresses New or Existing buildings	Projected Timeline	Projected Resources	Responsible Party	Current Status
M-1	Construct safe rooms within new and existing public buildings, such as schools, libraries and community centers.	Thunderstorm Winds, Tornado	Prevent the loss of life by providing shelter during pre/post disasters	High	Prevents the loss of life during storms and also minimizes the effects post hazard events. Ranked high due to past storm events	New and Existing	18 Months	HMGP, PDM funding	All participating jurisdictions	OG, Bauxite - C
M-2	Acquire generators for all Saline County 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)	Earthquake, Flood, Dam Failure, Severe Thunderstorm, Hail, Lightning, Tornado, Winter Storm, Wild-fire, Drought, High Winds, Extreme Heat	Prevent loss of critical functions	High	Provides necessary facility and equipment capabilities for administrators, first responders, and life-saving facilities.	New and Existing	24 Months	HMGP, State grant funds, local resources	All participating jurisdictions	OG

W-1	Adopt codes to require homeowners to clear dead vegetation which can fuel wildfires, ensuring that structures are surrounded by defensible space buffer zones.	Wildfire	Protect against loss of life and property.	High	Reduce structures' vulnerability to wildfires.	New and Existing	One Month	Existing County and Local Resources	Saline County & participating cities	OG
M-3	Adopt manufactured home regulations to ensure use of tie-downs and anchoring in new buildings and existing mobile structures.	Tornado, High Winds, Earthquake	Protect against loss of life and property.	High	Lessen or eliminate damage from earthquakes and tornadoes to new and existing buildings	New and Existing	One Month	Existing County and Local Resources	Saline County & participating cities	OG Alexander C
M-4	Study efficacy of tornado warning sirens while continually monitoring siren status.	Earthquake, Flood, Dam Failure, Severe Thunderstorm, Hail, Lightning, Tornado, Winter Storm, Wild-fire, Drought, High Winds, Extreme Heat	Protect against loss of life and property.	High	GIS best technology for risk identification and assessment (NFIP consideration: CRS 610 Flood warning Program)	New and Existing	12 Months	Existing County and Local Resources	Saline County & participating	OG
M-5	Acquire 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.	Tornado, Flood Severe Winter Weather, Wildland Fire, Thunderstorms, Dam Failure, Earthquake Dam Failure,	Protect against loss of life and property.	High	Lessen or eliminate damage from earthquakes and tornadoes to new and existing buildings	New and Existing	Ongoing	Existing County and Local Resources	Saline County & participating cities	OG

		High Winds. Extreme Heat								
M-6	Ensure proposed mitigation projects are in conformance with the State of Arkansas Hazard Mitigation Plan and State mitigation priorities.	Tornado, Flood Dam Failure, Severe Winter Weather, High Winds, Wildland Fire, Thunderstorms, Drought, Earthquake	Public Education and Awareness	High	Provides legal justification for mitigation activities.	New and Existing	Ongoing	Existing County and local Resources	All participating jurisdictions	OG
F-1	Complete a study to determine inundation locations, extent, vulnerability, and losses due to dam failure.	Dam Failure, Flood	Protect against loss of life and property.	High	Lessen or eliminate damage to new and existing buildings.	New and Existing	12 Months	Existing County and Local Resources	All participating jurisdictions	OG
F-2	Acquire, elevate, or relocate structures that have or may potentially experience flooding in the future from flooding or dam failure.	Flood, Dam Failure	Protect against loss of life and property.	High	Lessen or eliminate damage from flooding.	New and Existing	24 Months	Existing County and Local Resources	Saline County & participating Cities for flooding	OG
F-3	Conduct structural and non-structural mitigation measures for properties in the floodplain, and those located outside as well that are vulnerable to flooding.	Flood	Protect against loss of life and property.	High	Lessen or eliminate damage from flooding	New and Existing	12 Months	Existing County and Local Resources	Saline County & participating cities.	OG
F-4	Mitigate flooding along Old Hwy 291 and the Saline River. Water overflows the	Flood	Protect against loss of life and property.	High	Lessen or eliminate damage from flooding.	New and Existing	6 Months	Existing County and Local Resources	Saline County	OG

	road before the bridge. Flooding can be eliminated by elevating the roadway before the bridge									
F-5	Mitigate Flooding along South Sardis and Hurricane Creek. Creek overflows the road before the bridge. Roadway needs to be elevated.	Flood	Protect against loss of life and property.	High	Lessen or eliminate damage from flooding.	New and Existing	6 Months	Existing County and Local Resources	Saline County & participating cities.	OG
M-7	Make sure the current version of the Saline County Hazard Mitigation Plan is easily accessible to the general public (e.g., online, in local libraries) for Public Input on Plan Update.	Tornado, Flood, Dam Failure, Severe Winter Weather, High Winds, Wildland Fire, Thunderstorms, Drought, Earthquake	Involves Ongoing efforts on mitigation.	High	Lessen or eliminate damage from earthquakes and tornadoes to new and existing buildings	New and Existing	Ongoing	Existing County and Local Resources	Saline County & participating	OG
F-6	Mitigate flooding along Westbrook Road and Alum Fork Creek. Creek overflows the bridge. Must install larger bridge and raise elevation of bridge and road.	Flood	Protect against loss of life and property.	High	Lessen or eliminate damage from flooding.	New and Existing	6 Months	Existing County and Local Resources	Saline County	OG
F-8	Mitigate flooding along Goosepond Road and Middle Fork. Water overflows road obstructing access. Must raise roadway	Flood	Provides access for response and for mitigation activities.	High	Lessen or eliminate damage from flooding.	New and Existing	6 Months	Existing County and Local Resources	Saline County	OG

	before bridge.									
F-9	Mitigate flooding at Mt. Ida Road and Slum Fork. Creek overflow roadway flooding before bridge. Bridge needs elevated, increase opening of bridge and raise roadway.	Flood	Protect against loss of life and property.	High	Lessen or eliminate damage from flooding.	New and Existing	6 Months	Existing County and Local Resources	Saline County	OG
F-10	Mitigate flooding at Sulphur Springs Road along wet weather branch. Water overflows roadway at culvert. Upgraded culver needed as well as elevation of roadway.	Flood	Protect against loss of life and property.	High	Lessen or eliminate damage from flooding.	New and Existing	6 Months	Existing County and Local Resources	Saline County	OG
F-11	Flood-proof any outdoor recreational facilities that are on the eastern edge of the district's property near the football field.	Flood	Protect against loss of life and property.	Low	Lessen or eliminate damage from flooding	New and Existing	1 Year	Existing Resources	Benton Schools	OG
W-2	Improve risk assessment by determining losses due to wildland fires in the County.	Wildfire	Protect against loss of life and property.	High	Lessen or eliminate damage from wildfires.	New and Existing	2 Years	Existing County and Local Resources	Saline County & participating cities	OG
W-3	Join Fire Wise program.	Wildfire	Protect against loss of life and property.	High	Lessen or eliminate damage from wildfire.	New and Existing	18 Months	Existing County and Local Resources	Saline County & participating cities.	OG

F-12	Mitigate Flooding in The City of Benton along Salt Creek in the Valley Subdivision. The Saline river backs up into Salt Creek causing it to overflow its banks. At this time the only solution to the flooding would be to relocate the houses out of the area.	Flood	Protect against loss of life and property.	High	Lessen or eliminate damage from flooding.	New and Existing	6 Months	Existing County and Local Resources, HMGP, PDM, FMA	City of Benton	OG Saline PC-
M-8	Bury or otherwise protect electric and other utility lines.	Tornado, Severe Winter Weather, High Winds, Wildfire, Thunderstorms	Protect against loss of life and property.	Mediu m	Lessen or eliminate damage from flooding.	New and Existing	10 Years	Existing County and Local Resources	All participating jurisdictions	OG
D-1	Complete a study to determine losses in Saline County due to drought.	Drought	Protect against loss of life and property.	Mediu m	Lessen or eliminate damage from flooding.	New and Existing	24 Months	Existing County and Local Resources	Saline County & all participating cities	
W-4	Regulate development in wildfire hazard areas through land use planning to address density and quantity of development as well as emergency access, landscaping, and water supply to better mitigate wildfire vulnerability. School districts can choose to conduct the same type	Wildfire	Protect against loss of life and property.	Mediu m	Lessen or eliminate damage from wildfire	New and Existing	Ongoing	Existing County and Local Resources	All participating jurisdictions	OG

	of mitigation efforts.									
W-5	Develop neighborhood wildfire safety coalitions.	Wildfire	Protect against loss of life and property.	Medium	Lessen or eliminate damage from flooding	N/A	3 Years	Existing County and Local Resources	All participating jurisdictions	OG
M-9	Develop brochures, a website, educational programs, and public services announcements to increase public awareness of hazards to which Saline County residents are exposed and potential mitigation measures that may be undertaken.	Tornado, Flood, Dam Failure, Severe Winter Weather, High \Winds, Wildland Fire, Thunderstorms, Drought, Earthquake, Extreme Heat	Protect against loss of life and property.	Medium	Links mitigation with preparedness	New and Existing	Ongoing	Existing County and Local Resources	All participating jurisdictions	OG
F-13	Mitigate flooding at Vimey Ridge and West weather branch. Water overflows roadway. Upgrade existing pipe.	Flood	Protect against loss of life and property.	Medium	Lessen or eliminate damage from flooding.	New and Existing	6 Months	Exiting County and Local Resources	Saline County	OG
F-14	Mitigate flooding on Hensley Mail Route and Wet weather Branch. Water overflows roadway. Upgrade existing pipe.	Flood	Protect against loss of life and property.	Medium	Lessen of eliminate damage from flooding.	New and Existing	6 Months	Existing County and Local Resources	Saline County	OG
M-10	Identify and maintain alternative water resources in neighborhoods (small ponds, cisterns, wells, pools, hydrants, etc.) Thus, relieving impacts	Drought, Wildfire, Dam Failure	Protect against loss of life and property.	Medium	Lessen or eliminate damage from flooding.	N/A	1 Year	Existing County and Local Resources	Saline County & participating cities	OG Saline - PC

	on agriculture and livestock.									
M-11	Include mitigation awareness efforts in all SCLEPC and Inter-governmental Council meetings.	Tornado, Flood, Dam Failure, Severe Winter Weather, High Winds, Wildland Fire, Thunderstorms, Drought, Earthquake, Extreme Heat	Protect against loss of life and property.	Low	Lessen or eliminate damage from flooding.	New and Existing	Ongoing	Existing County and Local Resources	All participating jurisdictions	OG
F-15	Mitigate flooding at South Sardis Road and West weather branch. Roadway needs to be elevated and culvert needs upgraded to a larger size.	Flood	Protect against loss of life and property.	Low	Lessen or eliminate damage from flooding.	New and Existing	6 Months	Existing County and Local Resources	Saline County	OG
F-16	Mitigate flooding at Shaw Bridge Road and the Saline River. Elevating the roadway would eliminate the problem.	Flood	Protect against loss of life and property	Low	Lessen or eliminate damage from flooding.	New and Existing	6 Months	Existing County and Local Resources	Saline County	OG
F-17	Mitigate flooding at Samples Road and Hurricane Creek. The creek overflows its banks and floods the road obstructing access to the bridge. Road and Bridge needs to be elevated.	Flood	Protect against loss of life and property.	Low	Lessen or eliminate damage from flooding.	New and Existing	6 Months	Existing County and Local Resources	Saline County	OG

F-18	Mitigate flooding at Shimrod Road and Dry Creek. During large rain events, the creek will overflow the banks and flood the roadway. Roadway needs to be elevated as well as the opening of the bridge needs increased.	Flood	Protect against loss of life and property.	Low	Lessen or eliminate damage from flooding.	New and Existing	6 Months	Existing County and Local Resources	Saline County	OG
F-19	Mitigate flooding at East Avilla and Hurricane Creek. Creek overflows roadway. Roadway needs elevated and culverts need upgraded to a larger size.	Flood	Protect against loss of life and property.	Low	Lessen or eliminate damage from flooding.	New and Existing	6 Months	Existing County and Local Resources. Possible grant funds.	Saline County	OG
F-20	Adopt zoning laws and floodplain development regulations that, at a minimum, meet the State and federal requirements.	Flood, Dam Failure	Protect against loss of life and property.	Low	Lessen or eliminate damage from flooding.	New and Existing	Two Months	Existing County and Local Resources	City of Bauxite & Traskwood	Alexander-C, Saline-D
F-21	Design and implement in-stream erosion reduction program.	Flood	Protect against loss of life and property.	Low	Lessen or eliminate damage from flooding.	New and Existing	12 Months	Existing County and Local Resources	Saline County participating cities.	OG
F-22	Mitigate flooding along Depot Creek at Market Street, Hwy 35 and Edison Ave. The creek needs to be	Flood	Protect against loss of life and property.	Low	Lessen or eliminate damage from flooding.	New and Existing	6 Months	Existing County and Local Resources. Possible grant funds.	Saline County	OG

	cleaned out from one end to the other. The state is looking at upgrading the existing culverts.									
F-23	Mitigate flooding along Brook Rd. in Alexander. Crooked Creek overflows its banks. Road needs to be Raised.	Flood	Protect against loss of life and property.	Low	Lessen or eliminate damage from flooding.	New and Existing	6 Months	Existing County and Local Resources	Saline County	OG
F-24	Mitigate flooding along Peeler Bend Rd. Flooding occurs 1.5 miles of Hwy. 290. Existing culverts need upgraded.	Flood	Protect against loss of life and property.	Low	Lessen or eliminate damage from flooding.	New and Existing	6 Months	Existing County and Local Resources. Possible grant funds.	Saline County	OG
F-25	Acquire/demolition, acquire/relocate, elevate, or flood-proof homes on Clayton Drive.	Flood	Protect against loss of life and property.	Low	Lessen or eliminate damage from flooding.	New and Existing	2 Years	Existing County and Local Resources. Possible grant funds.	City of Shannon Hills	OG
F-26	Conduct drainage improvements at Stillman Loop, Union Pacific, and Hidden Creek.	Flood	Protect against loss of life and property.	Low	Lessen or eliminate damage from flooding.	New and Existing	12 Months	Existing County and Local Resources. Possible grant funds.	City of Bryant	OG
F-27	Conduct drainage projects in areas inside and outside the floodplain that require large drainage improvements, elevation of roadway, or any other type of flood mitigation	Flood	Protect against loss of life and property.	Low	Lessen or eliminate damage from flooding.	New and Existing	2 Years	Existing County and Local Resources. Possible grant funds.	All Participating jurisdictions	OG, Saline-PC

	project.									
D-2	Implement xeriscaping on public facilities.	Drought	Protect against loss of resource.	Low	Lessen or eliminate impacts of drought.	N/A	1 Years	Existing County and Local Resources	All participating jurisdictions	D
M-12	Remove/trim trees and tree limbs around power lines to help prevent power outages.	Severe Winter Weather, Tornado, High Winds, Severe Thunderstorm	Protect against loss of power.	Low	Lessen or eliminate impacts of severe winter weather.	New and Existing	12 Months	Existing County and Local Resources	All participating jurisdictions	N/A for utility co.
D-3	Adopt water conservation measures for localized drought conditions (Irrigation, fixture retrofits, etc.).	Drought	Protect against loss of resources.	Low	Lessen or eliminate impacts of drought	N/A	6 Months	Existing County and Local Resources	All participating jurisdictions	OG N/A for schools
D-4	Adopt water rationing codes to conserve water during times of extreme drought.	Drought	Protect against loss of resources.	Low	Lessen or eliminate impacts of drought	N/A	6 Months	Existing County and Local Resources	All participating jurisdictions	OG – N/A for schools
D-5	Enact measures that require public facilities to install low-flow faucets and fixtures.	Drought	Protect against loss of life and property.	Mediu m	Lessen or eliminate damage from flooding	New and Existing	Two Months	Existing County and Local Resources	All participating jurisdictions	OG Saline - PC
EH-1	Establish accessible cooling centers/shelters for vulnerable, special-needs and at-risk populations.	Extreme Heat	Protect against extreme heat.	Low	Lessen or eliminate impacts of the hazard	N/A	12 Months	Existing County and Local Resources	All participating jurisdictions	*add warming shelters OG
EQ-1	Adopt codes/measures that require new construction to evaluate and build	Earthquake	Protect against earthquakes.	Low	Lessen or eliminate impacts of the hazard	Both	12 Months	Existing County and Local Resources	All participating jurisdictions	D

	structures to better withstand effects of an earthquake.									
EQ-2	Conduct non-structural mitigation of public facilities (window film, bracing of cabinets, emergency gas shut offs, etc.)	Earthquake	Protect against earthquakes.	Low	Lessen or eliminate impacts of the hazard	N/A	1 Year	Existing County and Local Resources	All participating jurisdictions	OG

Saline County Mitigation Actions (Current Plan)									
Action #	**Actions**	**Associated Hazard**	**Type**	**Priority**	**Addresses New or Existing buildings**	**Projected Timeline**	**Projected Resources**	**Responsible Party**	**Jurisdiction**
D-01	Complete a study to determine losses in Saline County due to drought.	Drought	Local Plans & Regulations	Medium	New and Existing	2024-2029	Existing County and Local Resources	Local OEM, HMPT	Saline County & all participating cities
D-02	Implement xeriscaping on public facilities to reduce the need for irrigation.	Drought	Education & Awareness Programs	Low	New and Existing	2024-2029	Existing County and Local Resources	HMPT/Local Water Conservation/ Coop. Extension Offices	All participating jurisdictions
D-03	Adopt water conservation measures for localized drought conditions (Irrigation, fixture retrofits, etc.).	Drought	Local Plans & Regulations	Low	New and Existing	2024-2029	Existing County and Local Resources	Public Utilities	All participating jurisdictions
D-04	Adopt water rationing codes to conserve water during times of extreme drought.	Drought	Local Plans & Regulations	Low	N/A	2024-2029	Existing County and Local Resources	Public Utilities	All participating jurisdictions
D-05	Enact measures that require public facilities to install low-flow faucets and fixtures.	Drought	Local Plans & Regulations	Medium	New and Existing	2024-2029	Existing County and Local Resources	Building Mgr, construction Mgr.	All participating jurisdictions
EQ-01	Adopt codes/measures that require new construction to evaluate and build structures to better withstand effects of an earthquake.	Earthquake	Local Plans & Regulations	Low	New and Existing	2024-2029	Existing County and Local Resources	Planning Commission/ City Council, Quorum Court, School Board	All participating jurisdictions
EQ-02	Conduct non-structural mitigation of public facilities (window film,	Earthquake	Other	Low	New and Existing	2024-2029	Existing County and Local Resources	Road Dept	All participating jurisdictions

	bracing of cabinets, emergency gas shut-offs, etc.)								
F-01	Complete a study to determine inundation locations, extent, vulnerability, and losses due to Dam failure.	Dam failure, Flood	Local Plans & Regulations	High	New and Existing	2024-2029	Existing County and Local Resources, HMGP, BRIC FMA	City Street Dept, County Road Dept	Dam Board, City & Counties
F-02	Acquire, elevate, or relocate structures that have or may potentially experience flooding in the future from flooding or Dam failure.	Flood, Dam Failure	Structure & Infrastructure Projects	High	Existing	2024-2029	Existing County and Local Resources	Quorum Court & City Council	Saline County & participating Cities for flooding
F-03	Conduct structural and non-structural mitigation measures for properties in the floodplain, and those located outside as well that are vulnerable to flooding.	Flood	Structure & Infrastructure Projects	High	New and Existing	2024-2029	Private Resources (private property) or Existing County and Local Resources	homeowners or city/county construction managers	Saline County & participating cities.
F-04	Mitigate flooding along Old Hwy 291 and the Saline River. Water overflows the road before the bridge. Flooding can be eliminated by elevating the roadway before the bridge	Flood	Structure & Infrastructure Projects	High	New and Existing	2024-2029	Existing County and Local Resources	Road Dept	Saline County
F-05	Mitigate Flooding along South Sardis and Hurricane Creek. Creek overflows the road before the bridge. Roadway needs to be elevated.	Flood	Structure & Infrastructure Projects	High	New and Existing	2024-2029	Existing County and Local Resources	Road Dept	Saline County & participating cities.
F-06	Mitigate flooding along Westbrook Road and Alum Fork Creek. Creek overflows the bridge. Must install	Flood	Structure & Infrastructure Projects	High	New and Existing	2024-2029	Existing County and Local Resources	Road Dept	Saline County

	larger bridge and raise elevation of bridge and road.								
F-07	Upsize Culverts and wooden bridges as well as widening channel to mitigate repetitive flooding of the city/county infrastructure	Flood	Structure & Infrastructure Projects	high	New and Existing	2024-2029	Existing County and Local Resources, HMGP, BRIC FMA	City Street Dept, County Road Dept	Cities & County
F-08	Mitigate flooding along Goosepond Road and Middle Fork. Water overflows road obstructing access. Must raise roadway before bridge.	Flood	Structure & Infrastructure Projects	High	New and Existing	2024-2029	Existing County and Local Resources	Road Dept	Saline County
F-09	Mitigate flooding at Mt. Ida Road and Slum Fork. Creek overflow roadway flooding before bridge. Bridge needs elevated, increase opening of bridge and raise roadway.	Flood	Structure & Infrastructure Projects	High	New and Existing	2024-2029	Existing County and Local Resources	Road Dept	Saline County
F-10	Mitigate flooding at Sulphur Springs Road along wet weather branch. Water overflows roadway at culvert. Upgraded culvert needed as well as elevation of roadway.	Flood	Structure & Infrastructure Projects	High	N/A	2024-2029	Existing County and Local Resources, HMGP, BRIC FMA	City Street Dept, County Road Dept	Saline County
F-11	Flood-proof any outdoor recreational facilities that are on the eastern edge of the district's property near the football field.	Flood	Structure & Infrastructure Projects	Low	New and Existing	2024-2029	Existing Resources	School Construction Manager	Benton Schools
F-12	Mitigate Flooding in The City of Benton along Salt Creek in the Valley Subdivision. The Saline river backs up into Salt Creek causing it to overflow its banks. At this time the only solution to the flooding would	Flood	Structure & Infrastructure Projects	High	Existing	2024-2029	Existing County and Local Resources, HMGP, BRIC FMA	City Council	City of Benton

	be to relocate the houses out of the area.								
F-13	Mitigate flooding at Vimey Ridge and West weather branch. Water overflows roadway. Upgrade existing pipe.	Flood	Structure & Infrastructure Projects	Medium	New and Existing	2024-2029	Exiting County and Local Resources	County Road Dept	Saline County
F-14	Mitigate flooding on Hensley Mail Route and Wet weather Branch. Water overflows roadway. Upgrade existing pipe.	Flood	Structure & Infrastructure Projects	Medium	New and Existing	2024-2029	Existing County and Local Resources	County Road Dept	Saline County
F-15	Mitigate flooding at South Sardis Road and West weather branch. Roadway needs to be elevated and culvert needs upgraded to a larger size.	Flood	Structure & Infrastructure Projects	Low	New and Existing	2024-2029	Existing County and Local Resources	County Road Dept	Saline County
F-16	Mitigate flooding at Shaw Bridge Road and the Saline River. Elevating the roadway would eliminate the problem.	Flood	Structure & Infrastructure Projects	Low	New and Existing	2024-2029	Existing County and Local Resources	County Road Dept	Saline County
F-17	Mitigate flooding at Samples Road and Hurricane Creek. The creek overflows its banks and floods the road obstructing access to the bridge. Road and Bridge needs to be elevated.	Flood	Structure & Infrastructure Projects	Low	New and Existing	2024-2029	Existing County and Local Resources	County Road Dept	Saline County
F-18	Mitigate flooding at Shimrod Road and Dry Creek. During large rain events, the creek will overflow the banks and flood the roadway. Roadway needs to be elevated as well as the opening of the bridge needs increased.	Flood	Structure & Infrastructure Projects	Low	New and Existing	2024-2029	Existing County and Local Resources	County Road Dept	Saline County

F-19	Mitigate flooding at East Avilla and Hurricane Creek. Creek overflows roadway. Roadway needs elevated and culverts need upgraded to a larger size.	Flood	Structure & Infrastructure Projects	Low	New and Existing	2024-2029	Existing County and Local Resources. Possible grant funds.	County Road Dept	Saline County
F-20	Adopt zoning laws and floodplain development regulations that, at a minimum, meet the State and federal requirements.	Flood, Dam Failure	Local Plans & Regulations	Low	New	2024-2029	Existing County and Local Resources	Quorum Court & City Council	City of Bauxite & Traskwood
F-21	Design and implement in-stream erosion reduction program.	Flood	Local Plans & Regulations	Low	N/A	2024-2029	Existing County and Local Resources	Quorum Court & City Council	Saline County participating cities.
F-22	Mitigate flooding along Depot Creek at Market Street, Hwy 35 and Edison Ave. Drainage Improvement needed. The state is looking at upgrading the existing culverts.	Flood	Structure & Infrastructure Projects	Low	New and Existing	2024-2029	Existing County and Local Resources. Possible grant funds.	County Road Dept	Saline County
F-23	Mitigate flooding along Brookwood Rd. in Alexander. Crooked Creek overflows its banks. Road needs to be Raised.	Flood	Structure & Infrastructure Projects	Low	New and Existing	2024-2029	Existing County and Local Resources	County Road Dept	Saline County
F-24	Mitigate flooding along Peeler Bend Rd. Flooding occurs 1.5 miles of Hwy. 290. Existing culverts needs upgraded.	Flood	Structure & Infrastructure Projects	Low	New and Existing	2024-2029	Existing County and Local Resources. Possible grant funds.	County Road Dept	Saline County
F-25	Acquire/demolition, acquire/relocate, elevate, or flood-proof homes on Clayton Drive.	Flood	Structure & Infrastructure Projects	Low	Existing	2024-2029	Existing County and Local Resources. Possible grant funds.	City Council	City of Shannon Hills

F-26	Conduct drainage improvements at Stillman Loop, Union Pacific, and Hidden Creek.	Flood	Structure & Infrastructure Projects	Low	New and Existing	2024-2029	Existing County and Local Resources. Possible grant funds.	City Council/ Union Pacific RR	City of Bryant
F-27	Conduct drainage projects in areas inside and outside the floodplain that require large drainage improvements, elevation of roadway, or any other type of flood mitigation project.	Flood	Structure & Infrastructure Projects	Low	New and Existing	2024-2029	Existing County and Local Resources. Possible grant funds.	City Street Dept, County Road Dept	All Participating jurisdictions
F-28	Mitigate flooding at Nature Land on back side of Phillis Drive	Flood	Structure & Infrastructure Projects	Low	New and Existing	2024-2029	Existing County and Local Resources, HMGP, BRIC FMA	Road Dept	Saline County
F-29	Mitigate flooding at South Spring Lake Road just before Deerwood Road near bridge	Flood	Structure & Infrastructure Projects	Low	New and Existing	2024-2029	Existing County and Local Resources, HMGP, BRIC FMA	Road Dept	Saline County
F-30	Mitigate flooding at Hensley Mail Route road at big culverts	Flood	Structure & Infrastructure Projects	Low	New and Existing	2024-2029	Existing County and Local Resources, HMGP, BRIC FMA	Road Dept	Saline County
F-31	Mitigate flooding at Block Road at the lake	Flood	Structure & Infrastructure Projects	Low	New and Existing	2024-2029	Existing County and Local Resources, HMGP, BRIC FMA	Road Dept	Saline County
F-32	Mitigate flooding at S. Alexander Rd and Evergreen	Flood	Structure & Infrastructure Projects	Low	New and Existing	2024-2029	Existing County and Local Resources,	Street Dept	City of Alexander

							HMGP, BRIC FMA		
F-33	Mitigate erosion Issues on creek banks	Flood, Dam failure	Structure & Infrastructure Projects	Low	New and Existing	2024-2029	Existing County and Local Resources, HMGP, BRIC FMA	Street & Road Dept	Saline County & participating cities
F-34	Construct Retention/Retention Ponds for flooding mitigation	Flood	Structure & Infrastructure Projects	Low	New and Existing	2024-2029	Existing County and Local Resources, HMGP, BRIC FMA	Planning Commission/ City Council, Quorum Court, School Board	All participating jurisdictions
F-35	Mitigate drainage issues at Benton Schools	Flood	Structure & Infrastructure Projects	Low	New and Existing	2024-2029	Existing County and Local Resources, HMGP, BRIC FMA	City Street Dept, County Road Dept	Benton Schools, Saline County and City of Benton
F-36	Flood proof and mitigate flooding of Saline River at Lyndale Parks	Flood	Natural System Protection	Low	New and Existing	2024-2029	Existing County and Local Resources, HMGP, BRIC FMA	Street Dept	Benton
M-01	Construct safe rooms within new and existing public buildings, such as schools, libraries and community centers.	Thunderstorm Winds, Tornado	Local Plans & Regulations	High	New and Existing	2024-2029	HMGP, PDM funding	city/county/school construction managers	All participating jurisdictions
M-02	Acquire generators for all Saline County 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)	Earthquake, Flood, Dam Failure, Severe Thunderstorm, Hail, Lightning, Tornado, Winter Storm, Wild-fire, Drought, High Winds, Extreme Heat	Local Plans & Regulations	High	New and Existing	2024-2029	HMGP, State grant funds, local resources	County/City/School Critical Facility Department Heads	All participating jurisdictions

M-03	Adopt manufactured home regulations to ensure use of tie-downs and anchoring in new buildings and existing mobile structures.	Tornado, High Winds, Earthquake	Local Plans & Regulations	High	New and Existing	2024-2029	Existing County and Local Resources	Planning Commission/ City Council, Quorum Court	Saline County & participating cities
M-04	Study efficacy of tornado warning sirens while continually monitoring siren status.	Earthquake, Flood, Dam Failure, Severe Thunderstorm, Hail, Lightning, Tornado, Winter Storm, Wild-fire, Drought, High Winds, Extreme Heat	Local Plans & Regulations	High	N/A	2024-2029	Existing County and Local Resources	OEM Department	Saline County & participating
M-05	Acquire 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. An alternative is to subscribe to the local weather station alert systems.	Tornado, Flood Severe Winter Weather, Wildland Fire, Thunderstorms, Dam Failure, Earthquake, High Winds. Extreme Heat	Local Plans & Regulations/ Education & Awareness	High	N/A	2024-2029	Existing County and Local Resources	Fire & OEM	Saline County & participating cities
M-06	Ensure proposed mitigation projects are in conformance with the State of Arkansas Hazard Mitigation Plan and State mitigation priorities.	Tornado, Flood Dam Failure, Severe Winter Weather, High Winds, Wildland Fire, Thunderstorms, Drought, Earthquake	Local Plans & Regulations	High	N/A	2024-2029	Existing County and local Resources	LPT, OEM Office	All participating jurisdictions
M-07	Make sure the current version of the Saline County Hazard Mitigation Plan is easily accessible to the general public (e.g., online, in local	Tornado, Flood, Dam Failure, Severe Winter Weather, High Winds, Wildland Fire, Thunderstorms,	Education & Awareness Programs	High	N/A	2024-2029	Existing County and Local Resources	LPT, OEM Office	Saline County & participating

	libraries) for Public Input on Plan Update.	Drought, Earthquake							
M-08	Bury or otherwise protect electric and other utility lines.	Tornado, Severe Winter Weather, High Winds, Wildfire, Thunderstorms	Structure & Infrastructure Projects	Medium	New and Existing	2024-2029	Existing County and Local Resources	Utility Companies	All participating jurisdictions
M-09	Develop brochures, a website, educational programs, and public services announcements to increase public awareness of hazards to which Saline County residents are exposed and potential mitigation measures that may be undertaken.	Tornado, Flood, Dam Failure, Severe Winter Weather, High \Winds, Wildland Fire, Thunderstorms, Drought, Earthquake, Extreme Heat	Education & Awareness Programs	Medium	N/A	2024-2029	Existing County and Local Resources	LPT, OEM Office	All participating jurisdictions
M-10	Identify and maintain alternative water resources in neighborhoods (small ponds, cisterns, wells, pools, hydrants, etc.) Thus, relieving impacts on agriculture and livestock.	Drought, Wildfire, Dam Failure	Education & Awareness Programs	Medium	N/A	2024-2029	Existing County and Local Resources	State Conservation & Local Farmers	Fed/State entities
M-11	Include mitigation awareness efforts in all SCLEPC and Intergovernmental Council meetings.	Tornado, Flood, Dam Failure, Severe Winter Weather, High Winds, Wildland Fire, Thunderstorms, Drought, Earthquake, Extreme Heat	Education & Awareness Programs	Low	N/A	2024-2029	Existing County and Local Resources	LPT, OEM Office	All participating jurisdictions

M-12	Remove/trim trees and tree limbs around power lines to help prevent power outages.	Severe Winter Weather, Tornado, High Winds, Severe Thunderstorm	Other	Low	New and Existing	2024-2029	Existing County and Local Resources	Utility Companies	All participating jurisdictions
MH-13	Establish accessible cooling and warming centers/shelters for vulnerable, special-needs and at-risk populations.	Extreme Heat, Severe Winter Weather	Structure & Infrastructure Projects	high	New and Existing	2024-2029	Existing County and Local Resources	Local OEM	All participating jurisdictions
W-01	Adopt codes to require homeowners to clear dead vegetation which can fuel wildfires, ensuring that structures are surrounded by defensible space buffer zones.	Wildfire	Local Plans & Regulations	High	New and Existing	2024-2029	Existing County and Local Resources	Quorum Court & City Council	Saline County & participating cities
W-02	Improve risk assessment by determining losses due to wildland fires in the County.	Wildfire	Local Plans & Regulations	High	New and Existing	2024-2029	Existing County and Local Resources	Federal/State Agencies with local Fire Dept	Saline County & participating cities
W-03	Join FireWise program or other Fire Protection/Mitigation Programs	Wildfire	Education & Awareness Programs	High	N/A	2024-2029	Existing County and Local Resources	Fire Dept	Saline County & participating cities.
W-04	Regulate development in wildfire hazard areas through land use planning to address density and quantity of development as well as emergency access, landscaping, and water supply to better mitigate wildfire vulnerability. School districts can choose to conduct the same type of mitigation efforts.	Wildfire	Structure & Infrastructure Projects	Medium	New and Existing	2024-2029	Existing County and Local Resources	Quorum Court & City Council	Saline County & participating cities.
W-05	Develop neighborhood wildfire safety coalitions.	Wildfire	Education & Awareness Programs	Medium	N/A	2024-2029	Existing County and Local Resources	Fire Dept	All participating jurisdictions

DF-01	Work with state and Local officials to provide Dam Failure Inundation maps For High & Significant Dams	Dam Failure	Local Plans & Regulations	High	New & Existing	2024-2029	State and Local Resources	Local Officials and	
DF-02	Some Dams have Emergency Action Plan but were not available to Planning Team. Will work to see if they can be made available in the future	Dam Failure	Local Plans & Regulations	High	New & Existing	2024-2029	State and Local Resources	Local Officials and	

D: PLAN MAINTENANCE & UPDATE

D1: Monitoring, Evaluation and Updating the Plan

Although FEMA regulations suggest a plan update within five years, Saline County has developed a method to ensure that monitoring, evaluation, and updating of the Saline 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 Saline 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. The Director of the Saline 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 Saline 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 Saline 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 Saline 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 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 consider any changes to 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 of any changes or revisions of the Saline County Hazard Mitigation Plan.

Since future plans and government regulations might need to be adopted into the Hazard Mitigation Plan, Saline 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.

D2: Continuous Public Involvement

Saline County is dedicated to involving the public directly in the continual reshaping and updating of the Saline 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.

Copies of the FEMA approved Saline County Hazard Mitigation Plan will be available at http://www.capdd.org/index.php/fema-hazard-mitigation-plans.html . Contained in the plan are the address, phone number, and e-mail of the Director of the Saline County Office of Emergency Management, the primary point of contact for the plan.

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 with a forum for which the general public can express concerns, opinions, or ideas about the plan. The Saline County Office of Emergency Management and the Saline County LEPC will publicize and host this meeting. Following the meeting, the evaluation committee will review the comments and

E: PLAN ADOPTION

Attached are the approved resolutions the County, Cities and School District adopted after FEMA approved the Saline County Hazard Mitigation Plan Update.

Sample Resolution can be found in Appendix A

APPENDIX A: SAMPLE ADOPTION RESOLUTION

Participating Jurisdictions Resolutions

RESOLUTION #_____

A RESOLUTION ADOPTING THE SALINE COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN FOR (name of jurisdication) , SALINE COUNTY ARKANSAS.

WHEREAS, certain areas of Saline 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 (name of jurisdication) 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, Saline County, with the assistance of Central Arkansas Planning and Development District, has initiated development of a 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 BOARD OF DIRECTORS

That the (name of jurisdication), Arkansas adopts those portions of the Plan relating to and protecting its jurisdictional area against all hazards 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 _____, 2024

APPROVED:

_____
(authorized representative)

ATTEST:

_____
Secretary/Clerk

APPENDIX B: ACRONYMS AND DEFINITIONS

ADA	Average Daily Attendance
ADEM	Arkansas Department of Emergency Management
BCA	Benefit-Cost Analysis
BMPs	Best Management Practices
CFR	Code of Regulations
CRS	Community Rating System
DMA 2000	Disaster Mitigation Act of 2000
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FIS	Flood Insurance Study
GIS	Geographic Information System
HMC	Hazard Mitigation Committee
HMGP	Hazard Mitigation Grant Program
IBC	Internal Building Code
FR	Final Rule
LEPC	Local Emergency Planning Committee
MOU	Memorandum of Understanding
NFIP	National Flood Insurance Program
PDM	Pre-Disaster Mitigation Program
PGA	Peak Ground Acceleration
SHMO	State Hazard Mitigation Officer
STAPLEE	Social, Technical, Administrative, Political, Legal, Economic
UCC	Uniform Construction Code
WUI	Wildland Urban Interface
SCOEM	SALINE County Office of Emergency Management
SCOES	SALINE County Office of Emergency Services

APPENDIX C: SALINE CO NATURAL HAZARDS QUESTIONNAIRE RESPONSES