

**Taliaferro County, Georgia**  
**Multi-Hazard Pre-Disaster Mitigation Plan**  
**Original Plan Approval: 1/12/2010**  
**Update Plan Approval: ????**



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## TABLE OF CONTENTS

	<b>Page #</b>
Chapter One: Introduction to the Planning Process.....	1
I. Purpose and need of the plan, authority & statement of problem.....	1
II. Local Methodology, Plan Update Process and Participants.....	2
III. Original Plan Review and Revision.....	5
IV. Organization of the Plan.....	6
V. Local Hazard, Risk and Vulnerability.....	6
VI. Multi-Jurisdictional Considerations.....	9
VII. Adoption, Implementation, Monitoring & Evaluation.....	10
VIII. Community Data.....	10
Chapter Two: Local Natural Hazard, Risk & Vulnerability (HRV) .....	14
I. Flooding.....	14
II. Drought.....	19
III. Wildfire .....	24
IV. Severe Weather .....	26
V. Winter Storms.....	33
Chapter Three: Mitigation Strategy.....	36
I. Introduction to Mitigation.....	36
II. Natural Hazards.....	44
A. Flood.....	44
B. Drought.....	44
C. Wildfire .....	45
D. Severe Weather .....	45
E. Winter Storms.....	45
F. All Hazard Events.....	46
III. Mitigation Actions.....	47
Chapter Four: Plan Integration and Maintenance.....	58
I. Implementation Action Plan .....	58
II. Evaluation, Monitoring, Updating.....	60
III. Plan Update and Maintenance .....	61
Chapter Five: Conclusion.....	62
I. Summary.....	62
II. References.....	63
III. Additional Sources of Information.....	64
Appendices .....	68

## CHAPTER I. INTRODUCTION TO THE PLANNING PROCESS

Table 1.1 provides a brief description of each section in this chapter and a summary of the changes made.

**Table 1.1**

Chapter I Section	Updates to Section
I. Purpose and need of the plan, authority & statement of problem	Updated text of this section
II. Local methodology, Plan update process, and Participants	Updated the participants, planning process and how data was collected
III. Original Plan Review and revision	All sections of the original plan were analyzed and revised.
IV. Organization of the plan	The plan is organized by GEMA local planning Local Hazard Mitigation Plan Update Template and includes a timeline.
V. Local Hazard, Risk, and Vulnerability (HRV) summary, local mitigation goals and objectives	Added new information to summary, new purpose for plan.
VI. Multi-Jurisdictional special considerations	Reviewed and updated information regarding multijurisdictional concerns
VII. Adoption, implementation, monitoring and evaluation	This was evaluated and remains the same. Additional text was added to clearly delineate the task of implementation and monitoring. Plan was adopted after GEMA and FEMA reviewed and approved the update.
VIII. Community Data	Updated demographic and added additional information by jurisdiction.

### SECTION I. PURPOSE AND NEED OF THE PLAN, AUTHORITY AND STATEMENT OF PROBLEM

The Taliaferro County 2020 Update is the review and improvement to our Multi-Hazard Pre-Disaster Mitigation Plan approved on January 12, 2010 and reapproved on May 15, 2015. The update is written to comply with Section 409 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act Title 44 CFR as amended by Section 102 of the Disaster Mitigation Act of 2000. The act gives state and local governments the framework to evaluate and mitigate all hazards as a condition of receiving federal disaster funds. The act provides federal assistance to state and local emergency management and other disaster response organizations in an effort to reduce damage from disasters. The plan has involved multiple community partners including elected officials, city and county personnel, fire, emergency management, law enforcement, and public works. The ultimate goal of this plan is to identify natural hazards and develop strategies to lessen the impact on our community.

The update covers all of Taliaferro County to include the cities of Crawfordville and Sharon. The plan will identify all-natural disasters that could threaten the lives and properties of our

community. The scope of the update includes both short and long-term mitigation strategies, implementation policies and possible sources of project funding. It also identifies mitigation strategies implemented since the 2015 update.

The plan also contains the following information on:

- The vision of mitigation in our community;
- The profile of Taliaferro County, its geography, history, physical features and other community indicators;
- The planning process and the involvement of all municipal, state and federal governments, the public, industry and other community players;
- Taliaferro County's past and predicted exposure to natural hazards and the potential risks that include the impacts on critical infrastructure with anticipated losses was documented;
- An overview of Taliaferro County's capabilities to implement hazard mitigation goals and objectives, and policies that will effectively mitigate risks to our community;
- Procedures for maintaining an effective, long range hazard mitigation plan and strategy to implement;
- An assessment of Taliaferro County's current policies, goals and regulations that pertain to hazard mitigation;
- Documentation of the planning process;
- Updated hazard events that occurred since 2015;
- Updated critical facilities added since 2015;
- Documented current mitigation strategies implemented since 2015; and
- Examined and updated mitigation strategy goals, objectives and action steps.

The update is the product of the combined efforts of Taliaferro County, Crawfordville, and Sharon. Realizing that identifying the community's risks and working collectively toward the prevention of disasters in the community is in the county's best interest, the Taliaferro County Emergency Management Agency (EMA) took the lead role in the update. Under the agency's leadership, there has been an endorsement and a commitment by Taliaferro County, Crawfordville, and Sharon.

Continued mitigation planning is imperative to lessen the impacts of disasters in Taliaferro County, Crawfordville, and Sharon. This plan serves as an excellent method to organize and document current and ongoing mitigation strategies; however, the implementation of the plan and its components is vital to achieve a community that is resistant to the impact of a disaster. The objective is plan implementation which will result in a reduction of the loss of life and property, while allowing the county to prosper with minimal disruption of services to the community.

## **SECTION II. LOCAL METHODOLOGY, PLAN UPDATE PROCESS AND PARTICIPANTS**

The Taliaferro County Board of Commissioners (BOC) contracted with the Central Savannah River Area Regional Commission (RC) to assist in the plan update. The RC has assisted eleven counties in the completion and update of their Pre-Disaster Mitigation Plans. The RC is currently assisting six counties with their second update. The RC was tasked to review the current plan and identify new information to be incorporated into the update. The RC in conjunction with the EMA Director, supervised the project, organized the data, set meeting dates, documented in-kind services, and worked with GEMA to complete the update.

EMA Director David Foot assembled the Hazard Mitigation Planning Committee. Table 1.2 identifies the 2019 members.

**Table 1.2**

Name	Agency/Title	Jurisdiction
David Foot	EMA Director	Taliaferro County
Vicki Swann	Tax Commissioner	Taliaferro County
Jane Hubert	Board of Commissioners, Commissioner	Taliaferro County
Kenya Smith	Health Department, County Nurse Manager	Taliaferro County
Jane Kuehn	City Clerk	City of Sharon
Charles N Ware	Board of Commissioners Chair	Taliaferro County
Barbara A Twilley	UGA Extension Office, Extension Educator	Taliaferro County
Ruby Randolph	Board of Commissioners, County Clerk	Taliaferro County
Willie D Blockum Jr	Board of Commissioners, Chair	Taliaferro County
Joe Martin	Dancing Pines Farm, Citizen	Taliaferro County
Andrew Foot	Taliaferro County Fire Dept. Fire Fighter	Taliaferro County
Wanda Dingler	City Clerk	City of Crawfordville
Catherine Dorsey	Board of Commissioners, Commissioner	Taliaferro County
Clarris C. Stephens	Probate Court, Judge	Taliaferro County
Gaylane Bowman	Board of Commissioners Assistant Clerk	Taliaferro County
Sharita Gresham	Taliaferro County Transit, Director	Taliaferro County
Jackie Butts	County Development Authority, Chairman	Taliaferro County
Krystal Spencer	Taliaferro County Tax Assessor	Taliaferro County
Renee Brown	Mayor	City of Sharon
Jane Kuehen	Clerk	City of Sharon

The committee was responsible for the organization, data collection and information needed for the revision of the plan. It was the responsibility of the committee to include all pertinent departments within their respective governments and to request information as needed. The following agencies/departments/organizations provided specific information and support for the original plan and provided any new information for the update:

- Taliaferro County School District was responsible for providing structural replacement and content values for all schools as well as square footage and occupancy limits.
- Taliaferro County Sheriff's Office provided staff support to the PDM planning effort.
- Taliaferro County Health Department identified vulnerable populations. They also provided replacement value estimates for their properties.
- The Fire Department provided staff support to the PDM planning effort and assisted with identifying occupancy limits for some of the critical structures and replacement value estimates.
- Officials from the County, Crawfordville and Sharon provided information relative to their jurisdiction and provided replacement value estimates for their critical facilities.
- Georgia Forestry Commission provided data on wildfire events and assisted with the formulation of mitigation measures.
- Taliaferro County Tax Assessor's Office provided most of the aggregate values for the critical structures. The valuations had to be converted to full values since they are figured



at 40 percent of actual value. This information, combined with demographic data, is compiled on GEMA Worksheet #3a in Appendix A for all jurisdictions.

- The RC's Geographical Information System (GIS) Department produced several of the maps. Maps are located in Appendix A and C.

Several resources were consulted to facilitate the update. Data was collected from numerous sources, including the National Oceanic and Atmospheric Administration (NOAA) National Centers for Environmental Information (NCEI), Spatial Hazard Events and Losses Database for the United States (SHELDUS™), National Weather Service, US Geological Survey (USGS), Southeast Regional Climate Center (SERCC), US Census Bureau, Georgia Department of Natural Resources (DNR), Georgia Forestry Commission (GFC), Georgia Tornado History Project Database, Georgia Department of Community Affairs (DCA), US Department of Agriculture (USDA), local and regional newspaper articles, as well as personal interviews. Table 1.3 provides a list of existing planning documents used during the update.

**Table 1.3**

Existing planning mechanisms	Record of Review	
	Reviewed (Yes/No)	Method of use in Hazard Mitigation Plan
Taliaferro County Joint 2015-2025 Comprehensive Plan	Yes	Development trends, capability assessment, mitigation strategies
Local Emergency Operations Plan	Yes	Identifying hazards; Assessing vulnerabilities; Capability assessment
Georgia Emergency Operations Plan	Yes	Identifying hazards; Assessing vulnerabilities;
Flood Damage Protection Ordinance	Yes	Mitigation strategies, capability assessment
Building and Zoning Codes and Ordinances	Yes	Development trends; Future growth, capability assessment, mitigation strategies
Mutual Aid Agreements	Yes	Assessing vulnerabilities, determine assets added to disaster relief and response.
State Hazard Mitigation Plan	Yes	Risk assessment, review of recommended strategies
Land Use Maps	Yes	Assessing vulnerabilities; Development trends; Future growth
Critical Facilities Maps	Yes	Locations
Community Wildfire Protection Plan	Yes	Mitigation strategies, risk assessment
Flood Insurance Study	Yes	Review for historical Data and Information
The Taliaferro County Assets Index	Yes	Reviewed for assets data, tax information
CSRA Regional Plan 2035	Yes	Development trends; Future growth, regional concerns and data

The committee held seven meetings over a 24-month period to guide the development of the plan. Individual jurisdictions and/or agencies were contacted, as information was needed. The committee was responsible for developing the mission statement, as well as the goals, objectives, and action steps identified in the plan. The committee researched previous hazard information in the areas of flooding, wildfires, tornados, winter storms, hurricanes, high winds, dam failure, lightning, hail, and drought. However, some hazards were eliminated due to their low level of risk. Committee members collected critical facilities information based on their area of expertise or jurisdiction. The RC was responsible for assessing vulnerability and estimating potential losses

from the information collected. Potential losses include people, structures/properties, infrastructure, and other important community assets.

Table 1.4 provides the dates and synopsis of committee meetings. All meetings were open to the public and meeting notices posted at all governmental offices. Of the seven meetings, two were advertised in *The Advocate-Democrat*, the County's legal organ. This is the most efficient means to disseminate information to residents and organizations located in the county. In order to meet the requirement to afford an opportunity for neighboring communities, local and regional agencies, businesses, academia and other private and non-profit interests to be involved in the planning process, invitations were extended by email. Invitations were extended to the following counties: Burke, Columbia, Glascock, Hancock, Jefferson, Jenkins, Lincoln, McDuffie, Richmond, Washington, Warren, and Wilkes including all municipalities located within the counties. It is noted that no public comments or feedback was provided by the public. Copies of correspondence, emails and advertisements are in Appendix E.

**Table 1.4**

Meeting Date	Purpose of Meeting
February 2, 2018	Advertisement ran in <i>The Advocate-Democrat</i> for public meeting on February 7, 2018.
February 7, 2018	Kickoff meeting Shelby Meyers, from GEMA provided a presentation about the purpose and need of the plan along with changes to the process since the 2014 plan update.
June 20, 2018	This meeting was to ensure all data collected to date was correct for critical facilities and to reviewed mitigation strategies and action steps
February 20, 2019	Reviewed plan, mitigation strategies and HASUZ information.
June 12, 2019	Discussed strategies and mitigation accomplishments.
August 6, 2019	Reviewed plan draft to ensure all information was added and correct
October 4, 2019	This meeting was to ensure the committee and public had a final opportunity to provide input before submission to GEMA for review.
<i>To Be Added after FEMA Approval</i>	Advertisement ran in <i>The Advocate-Democrat</i> Advertising for public review and the final meeting <b><i>date will be added after FEMA approval</i></b>
<i>To Be Added after FEMA Approval</i>	After GEMA submitted the plan to FEMA and FEMA Approved Pending Adoption (APA), the public was invited to review the final plan prior to adoption during (will be added after APA) time frame. The meeting was held after the aforementioned review period to ensure that the public was afforded the opportunity provide input.

### SECTION III. ORIGINAL PLAN REVIEW AND REVISION

The Federal Disaster Mitigation Act of 2000 requires an update to the Pre-Disaster Mitigation Plan every five years. The EMA Director was responsible to meet this requirement. The committee, with the assistance of the RC, was involved in the planning process to ensure thorough data collection. All members of the committee were responsible for the evaluation of 2014 plan. During the review process, the committee noted mitigation accomplishments, updated and prioritized mitigation projects, added additional hazard information, developed new goals and objectives, solicited input from the public and made any needed or required revisions. The

evaluation included analyzing any changes in the needs and/or capabilities of Taliaferro County as well as the Cities of Crawfordville and Sharon.

#### **SECTION IV. ORGANIZATION OF THE PLAN**

The estimated time to complete the plan update was approximately 24 months. Plan completion is identified by adoption of resolution by all jurisdictions. The update contains a Hazard, Risk, and Vulnerability (HRV) Assessment describing the natural hazards typically occurring within the county, as well as a review of all mitigation goals, objectives, and related courses of action. In addition, plan implementation and maintenance are reviewed, which includes methods to provide opportunities for public involvement.

The hazards included in this plan are considered to have the highest probability of occurrence, vulnerability, potential loss/damages, and highest frequency of occurrence. The plan also identifies and prioritizes hazard mitigation opportunities in each vulnerable area based on the input from the committee members, relevant government agencies, local businesses, and Taliaferro County citizens.

#### **SECTION V. LOCAL HAZARD RISK AND VULNERABILITY, SUMMARY LOCAL MITIGATION PLANNING GOALS OBJECTIVES**

The committee, early in the update process, established a set of goals and objectives to ensure the effectiveness of this plan. These goals and objectives established the paradigm for the planning process and proved very successful by the many accomplishments since 2015. These goals and objectives are as follow:

- To actively involve and gain support from the cities of Crawfordville and Sharon and Taliaferro County for the reduction of disasters in our community.
- Prioritize identified mitigation projects.
- Seek and implement any grant funding for the reduction of disasters in Taliaferro County and cities of Crawfordville and Sharon.
- Monitor, evaluate, and update the progress of the plan as needed.
- To form partnerships among local, state, and federal agencies to make Taliaferro County more resistant to the effects of disasters.
- Strengthen our communities against the impacts of disasters through the development of new mitigation strategies and strict enforcement of current regulations that have proven effective.
- Reduce and where possible eliminate repetitive damage, loss of life and property from disasters.
- Bring greater awareness throughout the community about potential hazards and the need for community preparedness.
- To further enhance common mitigation projects and goals between Taliaferro County and cities of Crawfordville and Sharon.

An HRV assessment was accomplished by compiling and reviewing historical data on the location of specific hazards, the value of existing structures/properties in hazard locations, and analyzing the risk to life, property and the environment that could potentially result from future hazard



events. The committee accomplished the HRV goals and objectives by completing the following steps:

*Inventory of Critical Facilities:* Critical facilities are crucial for providing essential services necessary for preserving the safety and quality of life of its residents. In addition, these facilities fulfill important public safety, emergency response, and/or disaster recovery functions. All critical facilities were added to the Georgia Mitigation Information System (GMIS). Critical facilities for Taliaferro County and Cities of Crawfordville and Sharon were identified, updated, mapped, and illustrated in Appendix A.

*Hazard Identification:* Maps and historical data sources were studied and reviewed to identify the geographic extent, intensity, and probability of occurrence for various hazard events. The 2014 committee identified six major hazards that have the potential to affect Taliaferro County: flooding, dam failure, drought, wildfire, severe weather (tornados, tropical storms, thunderstorms and lightning) and winter storms. The update committee reviewed current hazard data and added hail to the already identified hazard. Appendix A provides an updated comprehensive table for each hazard event.

*Profiling Hazard Events:* The committee analyzed the causes and characteristics of each hazard, and its effect on Taliaferro County in the past to determine what segment of the population and infrastructure has historically been vulnerable to each specific hazard. A discussion of each hazard's updated profile is in Chapter 2.

*Vulnerability Assessment:* This step was accomplished by comparing each previously identified hazard with the inventory of affected critical facilities and population exposed to each hazard. An updated Worksheet #3a is provided in Appendix D.

*Estimating Losses:* Using the best available data, tax digest data, parcel maps and GMIS reports and maps for critical facilities allowed the committee to estimate damages and financial losses that might occur in a geographic area. Describing vulnerability in terms of dollar losses provides the county with a common framework in which to measure the effects of hazards on critical facilities. All information in this section has been updated (*Appendix A and Appendix D*).

*Mitigation Goals and Objectives:* After ensuring that all interested persons had been given ample opportunity to contribute to strategy development, mitigation action steps were next given priority status by committee members. To evaluate priorities, committee members used as a guide a planning tool prepared by FEMA known as STAPLEE (Social, Technical, Administrative, Political, Legal, Economic, and Environmental) criteria. Each mitigation strategy step was evaluated using STAPLEE criteria as the guiding principle to identify those steps best for Taliaferro County. Steps were ranked as high priority, medium priority, or low priority. Past occurrences of disasters and historical trend data aided committee members in assigning priorities. A copy of the STAPLEE is located in Appendix D.

## **SECTION VI. MULTI-JURISDICTIONAL SPECIAL CONSIDERATIONS**

Taliaferro County and Cities of Crawfordville and Sharon provided active participants in the planning process and have identified mitigation goals, objectives and action items specific to their

jurisdiction. The governing bodies for the county and all municipalities have formally adopted the Taliaferro County Multi-Hazard Pre-Disaster Mitigation Plan.

The municipalities were notified in August 2017 of the requirement concerning the update plan. Representatives from all jurisdictions have worked collectively over the past months to gather data that included researching old records, newspaper articles, databases, historical data, past and present flood plain data, and technical information for the plan. Collected data was forwarded to the RC for review and plan development. The committee held subsequent meetings in an effort to ensure that all information was correct and that all agencies and organizations input was included.

The EMA Director led activities for mitigation planning countywide. The committee goals are to work in partnership with municipal partners toward a common mitigation strategy that significantly reduces vulnerability of natural disasters. Most natural threats overlap jurisdictions and are all susceptible to their affects. Taliaferro County and the Cities of Crawfordville and Sharon share the same desire for protecting and reducing risk through the mitigation projects. Specific risks and areas were identified through working relationships and data collection from all areas of the county and are identified in this plan.

## **SECTION VII. ADOPTION, IMPLEMENTATION AND MONITORING AND EVALUATION**

### **Adoption Date**

<b>Jurisdiction</b>	<b>Adoption Date</b>
Taliaferro County	<i>To Be Added after FEMA Approval</i>
City of Crawfordville	<i>To Be Added after FEMA Approval</i>
City of Sharon	<i>To Be Added after FEMA Approval</i>

The plan was submitted to GEMA for review and then to FEMA for approval. Their respective governing bodies have formally adopted the 2020 update after GEMA and FEMA approval. The plan is intended to be implemented into policy and to enhance state and federal recommendations for the mitigation of natural hazards in the following ways:

- Substantially reduce the risk of life, injuries, and hardship from the destruction of natural disasters.
- Create awareness to the public about the need for individual preparedness and about building safer, disaster resistant communities.
- Develop strategies for long term community sustainability during community disasters.
- Develop governmental and business continuity plans that will continue essential private sector and governmental activities during disasters.

FEMA publishes many guidance documents for local governments for mitigating natural disasters. The plan fully recognizes, adopts, incorporates, and endorses the following principals.

- Develop a strategic mitigation plan for Taliaferro County.
- Enforce current building codes.
- Develop incentives to promote mitigation.
- Incorporate mitigation of natural hazards into land use plans.

- Promote awareness of mitigation opportunities throughout Taliaferro County community on a continual basis.
- Identify potential funding sources for mitigation projects.

The private sector is often an overlooked segment of the community during disasters. It is vital that this sector of a community is included in mitigation efforts that are consistent with state and federal recommendations as such:

- Develop mitigation incentives with insurance agencies and lending institutions.
- Encourage the creation of a business continuity plan for the continuance of commerce during disasters.
- Partner with businesses in effort to communicate with customers about the community hazards and possible solutions.

Individual citizens must be made aware of the hazards they face. Additionally, they must be educated in how to protect themselves from natural hazards. They must be shown mitigation is an important part of reducing loss of life and property in their community. Their support is critical to the success of any mitigation effort. The Taliaferro County Plan supports the following FEMA recommendations regarding individual citizens:

- Become educated on the hazards that your community and you may face.
- Become part of the process by supporting and encouraging mitigation programs that reduce vulnerability to disasters.
- That individual responsibility for safeguarding you and your family prior to a disaster is essential.

Chapter IV. Plan Integration and Maintenance details the formal process that will ensure that the plan remains an active and relevant document. The plan maintenance process includes monitoring and evaluating the plan annually and producing a revision every five year. Additionally, Taliaferro County will develop steps to ensure public participation throughout the plan maintenance process. Finally, this section describes how Taliaferro County will incorporate the mitigation strategies identified in this plan into other relevant planning documents such as the Taliaferro County Joint Comprehensive Plan, Short-Term Work program (STWP) and Local Emergency Operations Plan (LEOP).

## SECTION VIII. COMMUNITY DATA

### Political Boundaries - Taliaferro County



*Taliaferro County*



*GA Department of Community Affairs  
Region 7*



*Georgia*

**History:** Taliaferro County was formed on December 24, 1825 by taking portions of five other counties: Wilkes, Greene, Taliaferro, Oglethorpe, and Warren Counties. The county is most famous for being the birthplace and home of Alexander H. Stephens, who served as a senator from Georgia in the antebellum south, the Vice President of the Confederate States of America, and the governor of Georgia until his death. A state park near his home in Crawfordville, Georgia bears his name.

**Government:** Taliaferro County operates under a commission-based system of government in which three commissioners are elected to four-year terms. Other county officials are the County Attorney, Clerk of Superior Court, Probate Judge, Coroner, Magistrate Judge, Sheriff, and Tax Commissioner.

The City of Crawfordville operates a Mayor and City Council-based system of government with five elected council members. Other officials charged with presiding over activities within the City are the Clerk, Attorney, and Public Works Director.

The City of Sharon operates a Mayor and City Council-based system of government with five elected council members. Other officials charged with presiding over activities within the City are the Clerk and Attorney..

**Demographics:** Presently, Taliaferro County has a population of 1,717 persons.

Category	Taliaferro County	Crawfordville	Sharon
Population	1,717	534	140
Number of Households	741	356	73
Average Household Size	2.74	1.44	1.92
Race - White	37.8%	33.9%	25.6%
Race - Black	59.7%	58.1%	74.4%
Race - Hispanic	2.5%	5.7%	0
Race - Other	0.9%	2.3%	0
Median HH Income	\$30,500	\$31,932	\$24,167

*Source: US Census Bureau and 2017 American Community Survey*

**Economy:** In the year 2018, the average weekly wage for employment sectors was \$500, compared to the statewide average of \$993. The April 2019 unemployment rate was 4.3 percent. In 2018, the labor force in Taliaferro County totaled 585. Of the total work force, 9.8 percent were employed in the service providing sector, followed by 21.5 percent in the goods producing sector and 68.7 percent in the government sector.

The North American Industry Classification System (NAICS) is the standard used by Federal statistical agencies in classifying business establishments for the purpose of collecting, analyzing, and publishing statistical data related to the U.S. business economy. The table below provides a list of jobs, number of establishments and jobs along with average weekly wages per job for 2018 in Taliaferro County.

Annual Industry Distribution of Jobs and Average Wage in 2018 (NAICS)	Establishments	Jobs	Annual Average Wage Per Job
<b>Total Covered Employment and Wages</b>	<b>24</b>	<b>214</b>	<b>\$500</b>
<b>Total Private Sector</b>	<b>15</b>	<b>67</b>	<b>\$464</b>
<b>Total Government</b>	<b>9</b>	<b>147</b>	<b>\$516</b>
Agriculture, forestry, fishing, hunting	2	*	*
Mining, Quarrying, and Oil and Gas Extraction	0	0	\$0
Construction	0	0	\$0
Manufacturing	2	*	*
Wholesale trade	1	*	*
Retail trade	2	*	*
Transportation, warehousing	1	*	*
Utilities	0	0	\$0
Information	0	0	\$0
Finance and Insurance	1	*	*
Real Estate, rental, leasing	1	*	*
Professional, Scientific, Technical services	0	0	\$0
Mgmt. of companies, enterprises	0	0	\$0
Administrative and support and waste management and remediation services	0	0	\$0
Educational services	0	0	\$0
Health care, social assistance	1	*	*
Arts, entertainment, recreation	0	0	\$0
Accommodation and food services	1	*	*
Other services, except public administration	1	*	*
Unclassified-Industry not assigned	2	*	*

Source: Georgia Department of Labor \* Industry group does not meet criteria for disclosure

**Climate:** According to the National Weather Service, Taliaferro County gets 48 inches of rain per year. Snowfall is 1 inches. The number of days with any measurable precipitation is

101. On average, there are 218 sunny days per year. The July high is around 91 degrees. The January low is 33. Our comfort index, which is based on humidity during the hot months, is a 31 out of 100, where higher is more comfortable.

**Physical Features:** Taliaferro County encompasses an area of roughly 194 square miles and Crawfordville is the county seat. The Ogeechee and Little Rivers as well as several creeks are located throughout Taliaferro County. Taliaferro County lies within the Southern Piedmont Land Resource Area. These soils are classified “as steep to gently rolling thin, well-drained red soils with sandy loam surface layers over sandy clay to clay subsoils. In some areas, a red clay subsoil is exposed caused by agricultural erosion. Small grains and pastures are better adapted where topsoil is gone. Soybeans and forages are grown where topsoil remains. Fair to good suitability for building foundations; fair to poor suitability for septic tanks”. (Georgia Atlas, p. 36)

Although crop farming is no longer viable in Taliaferro County, forestry and cattle farming are profitable industries. Because of the lack of development in the County and Cities, this industry will not be threatened in the future.

## Transportation

*Vehicle Traffic:* Interstate 20 and GA highways 12, 22, 44, 47, and U.S. 278 all intersect a portion of the county and are the primary arterials in Taliaferro County. Most of the roadway network is rural, with only a handful of urban roads in Crawfordville.

Mileage by Route and Road System Report 445 for 2017			
	Total Road Mileage	Lane Mileage	Vehicle Miles Traveled (VMT)
State Route	57.984	136	315,809
County Road	164.558	329	34,480
City Street	10.764	22	3,190
<b>Total</b>	<b>233.306</b>	<b>487</b>	<b>353,479</b>

*Source: Georgia Department of Transportation, Office of Transportation Data, “445 Series Reports 2017.”*

*Public Transportation:* In addition to coordinated transportation through the Georgia Department of Human Resources, Taliaferro County Transit (TCT) provides transportation for senior citizens. There are two buses available and all transportation is done on appointment only.

*Rail Traffic:* CSX provides local rail service at Crawfordville. CSX and Norfolk Southern provide piggyback service at Atlanta (85 miles).

*Air Service:* The nearest local airport is 15 miles away in Green County while the nearest commercial air service is in Augusta, 50 miles away. Atlanta-Hartsfield International Airport, located in Atlanta approximately 105 miles from Crawfordville, provides major commercial airline service.

## Utilities

*Electricity:* Residential electrical service is provided by two companies: Georgia Power and Rayle EMC.



*Natural gas:* Natural Gas Services is provided by Atlanta Natural Gas and Tri-City Gas to the Cities of Crawfordville and Sharon.

*Water:* Public water supply is provided by the City of Crawfordville. The City operates two wells. Sharon has a water system that provides fire protection and water to city hall. Citizens of Sharon are on private wells. Residents of the unincorporated areas are on private wells also.

*Sewer:* Public sewer service is provided in Crawfordville. It operates a 100,000 gallons per day sewage plant. The City currently processes approximately 33,000 gallons of residential sewage per day. The unincorporated areas of the County and the City of Sharon are on septic tanks.

*Solid Waste:* Taliaferro County residents deposit their household waste into collection boxes at sixteen (16) sites within the County. Taliaferro County collects the solid waste from these sites and hauls it to the Wilkes County transfer station. It is subsequently transferred to the Oak Grove Landfill in Winder, Georgia with whom Wilkes County has an agreement. The county seat of Crawfordville contracts with a private collection company to provide curbside collection to its residents.

*Communications:* Taliaferro County's communication services is provided by Wilkes Telephone and they also provide cable television and internet service. Local print media consists of *The Augusta Chronicle* and *The Advocate-Democrat*. Taliaferro County is served by 13 AM radio stations and 16 FM radio stations. 7 television stations in metro Augusta television stations broadcast in Taliaferro County. They are WJBF, WAGT, WRDW, WAAU, WBPI, WCES, and WFXG.

## **Fire and Emergency Services**

*Response:* Enhanced 911 Service (E-911) is available 24-hours a day throughout the county and is operated and coordinated by the Sheriff's Department.

*Emergency Medical Services:* EMS service is provided by Wilkes County.

*Fire and Rescue:* Fire protection is provided by the Taliaferro County Vol. Fire Department with stations in Crawfordville, Sharon and Margaret Grove. The Georgia Forestry Commission maintains a county protection unit located on Hwy 17 two miles north of Washington about 20 miles northeast of the county to respond to wildfires throughout the county. The incorporated City of Crawfordville and Sharon are serviced by pressurized water systems with hydrants available.

*Law Enforcement:* The Taliaferro County Sheriff's Office provides service to the County as well as the Cities of Crawfordville and Sharon. They have 10 full-time officers and 14 vehicles: 11 patrol cars and three trucks.

## CHAPTER II. NATURAL HAZARD, RISK AND VULNERABILITY (HRV)

The committee identified all-natural hazards that could potentially affect Taliaferro County and all incorporated jurisdictions utilizing FEMA Worksheet #1 (Appendix D). Task A of Worksheet #1 instructed committee members to research newspapers and other historical records, existing community plans and reports, as well as internet websites to determine which hazards might occur. Task B then narrowed the list to only hazards most likely to impact the county by reviewing hazard websites to determine if Taliaferro County is located in a high-risk area.

As a result of the planning process, the committee determined that five natural hazards pose a direct, measurable threat: flooding, drought, wildfire, severe weather (to include tornados, tropical storms, thunderstorm winds, lightning and hail), and winter storms. The committee profiled each of these hazards using FEMA worksheet #2 and #3a. Of the five hazards mentioned, the entire County is exposed to four: severe weather, winter storms, wildfire and drought. Flooding is isolated to select areas within the floodplain. Each of these potential hazards is addressed with relevant supporting data.

**Table 2.1**

Chapter II. Section	Updates to Section
I. Flood	Updated events, critical facilities to GMIS, tax information. Recalculated hazard frequency data. Added information from Hazus-MH analyses.
II. Drought	Updated events, critical facilities to GMIS, tax information. Recalculated hazard frequency data.
III. Wildfire	Updated events, critical facilities to GMIS, tax information. Recalculated hazard frequency data.
IV. Severe Weather	Updated events, critical facilities to GMIS, tax information. Recalculated hazard frequency data. Added information from Hazus-MH analyses.
V. Winter Storms	Updated events, critical facilities to GMIS, tax information. Recalculated hazard frequency data.

### SECTION I. FLOODING

**A. Hazard Identification:** Flood plains are relatively flat lands that border streams and rivers that are normally dry but are covered with water during floods. The susceptibility of a stream to flooding is dependent upon several different variables. Among these are topography, ground saturation, rainfall intensity and duration, soil types, drainage, drainage patterns of streams, and vegetative cover. A large amount of rainfall over a short time period can result in flash flood conditions. A small amount of rain can also result in floods where the soil is saturated from a previous wet period or if rain is concentrated in an area of impermeable surfaces such as large parking lots, paved roadways, etc. Topography and ground cover are contributing factors for floods where water runoff is greater in areas with steep slopes and little or no vegetation. The severity of a flood is usually measured in terms of depth of flooding.

Flooding occurs when the volume of water exceeds the ability of a water body (stream, river, or lake) to contain it within its normal banks. Floodplains serve three major purposes: Natural water

storage and conveyance, water quality maintenance, and groundwater recharge. These three purposes are greatly inhibited when floodplains are misused or abused through improper and unsuitable land development. For example, if floodplains are filled to construct a building, valuable water storage and recharge areas are lost. This causes unnecessary flooding in previously dry areas and can damage buildings and other structures. The following table provides information about each jurisdiction participation level.

Taliaferro County and Crawfordville will continue to comply with NFIP requirements and intend to remain in compliance by enforcing flood plain ordinances that prohibit or severely limit development in floodplains. The City of Sharon does not participate since there are no designated flood plains within the City limits. If the City of Sharon decides to adopt the ordinance and participate after this plan is approved, the plan will be amended to reflect. Table 2.2 provides information about each jurisdiction's participation level.

**Table 2.2**

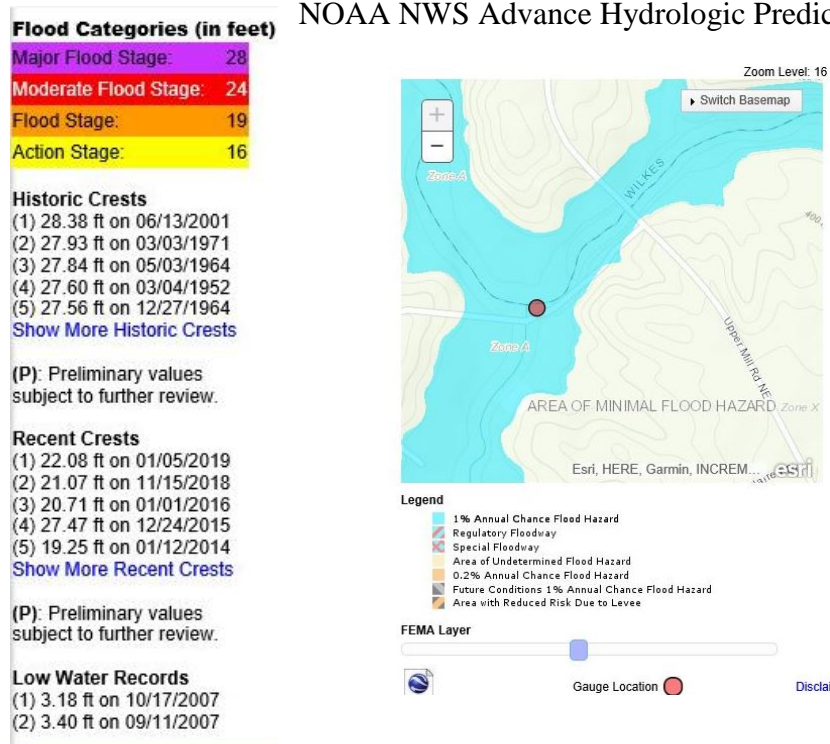
Community Name	Init FHBM Identified	Init. FIRM Identified	Curr. Eff. Map Date	Reg-Emer Date	Sanction Date
Taliaferro County	N/A	6/18/10	6/18/10(M)	6/18/10	
City of Crawfordville	N/A	6/18/10	6/18/10(M)	6/18/10	
City of Sharon	N/A				

Source: FEMA Community Status Book

- B. Hazard Profile:** Severe flooding within the county is a relatively infrequent event. The county has 33 rivers/streams and 3 reservoirs. Taliaferro County lies within the Southern Piedmont Land Resource Area. These soils are classified as steep to gently rolling thin well-drained red soils with sandy loam surface layers over sandy clay to clay sub-soils. The graphic below, provided by

NOAA NWS Advance Hydrologic Predication Service for river

gauge at Little River near Washington, shows the highest historic crest at 28.38 feet in 2001.



The committee examined historical data from the NCEI, USGS, SHELDUS<sup>TM</sup>, past newspaper articles and conducted interviews on the effects of past flooding events. In the last 69 years 10 events were recorded, where eight occurred countywide and two in the unincorporated area of the County. Table 2.3 is a result of information gathered from interviews, newspaper articles, and NCEI and SHELDUS<sup>TM</sup> databases.

**Table 2.3**

Details	Begin Date	Type	PrD	Cr D
	8/17/1994	Flooding	\$14,285	0.00
County EMA Director reported that several roads were flooded. A car was even washed off the road. Damage was caused to culverts and erosion weakened some road surfaces requiring repair. Unofficial reports of 10 inches of rain	6/12/2001	Flash Flood	\$125,000	0.00
WAGA Television, FOX 5 of Atlanta, reported that several roads were under water in the county.	6/12/2001	Urban/ Small Stream Flood	0.00	0.00
	6/13/2001	Flooding	\$25,000	0.00
The Taliaferro county 911 center reported that a number of roads were flooded across the county. Several roads had up to one foot of water flowing across the road. In addition, several creeks were well out of their banks.	7/13/2003	Flash Flood	0.00	0.00
Taliaferro County Sheriff reported that flooding was occurring throughout the county. Minor flooding was reported on several state roads and one county road was closed.	9/27/2004	Flood	0.00	0.00
The Taliaferro County Sheriff's Department observed a flash flood along a stream that flows into Lick Creek, approximately 1.7 miles northeast of Crawfordville. The stream washed out a portion of Old Sandy Road, a dirt and rock road. Severe erosion occurred around the drainage culvert pipe.	9/10/2008	Flash Flood	\$2,500	0.00
DR-4259 GA – Flooding due to severe storms 12.22.15 – 12.30.15	12/30/2015	Flash Flood	\$90,000	0.00
Emergency Manager reported Silas Mercer Road was damaged due to flowing water from flash flooding. Radar estimates indicate that 3 to 4 inches, and possibly locally higher amounts, were observed in this area.	11/15/2018	Flash Flood	0.00	0.00
Flash flooding as of heavy rains	01/04/2019	Flash Flood	\$20,000	.00

Source: EMA Director, NCEI and SHELDUS<sup>TM</sup>



01/04/2019 event Source EMA Director



12/30/2015 event Source EMA Director

Most flood events resulted in flash flooding which washed out several roads. Data pinpointing the depth of flood waters and exact locations of all washed out roads and bridges is limited. While severe flooding within the county is a very infrequent event, there is a potential for flooding. Flash flooding is the most prominent flooding event. There are no NFIP mitigated properties and no properties have encountered repetitive flooding. The GMIS flood hazard map assigns a flood zone rating of zero for the unincorporated parts of the County, Crawfordville and Sharon where there are no identified or undesignated flood hazards. FEMA flood maps, updated in 2010, show flood zones along known water ways.

The magnitude of a major flood event could have approximately 15 percent of the county experiencing some damage from flooding. Based on a 20-year hazard cycle the chance of an annual flooding event occurring is:

- 45 percent for all of Taliaferro County;
- 45 percent for unincorporated areas of Taliaferro County; and
- 35 percent for the Cities of Crawfordville and Sharon (*See Appendix A, Section I and Appendix D*).

**C. Assets Exposed to Hazard and Estimates of Potential Loss:** For determination of assets exposed to risk this plan used maps created from FEMA data and available parcel data. Based on FIRM, tax digests, parcel maps and FEMA Worksheet #3a for inventory of assets, the following assets are at risk during a flood event:

- Sharon has no identified flood plains, therefore, there are no structures or people in danger during a flood event;
- Crawfordville has 4 structures/properties valued at approximately \$111,551 with a population of zero; and
- Unincorporated Taliaferro County has 229 structures/properties valued at approximately \$11 million with an estimated population of 142.

All 233 structures/properties have been identified by federal flood plain maps and/or parcel maps. Not all structures that have been identified will experience damage from floods. Further studies, including professional surveys, would have to be conducted to determine exactly which structures



are at consistent risk from flooding. The extent of each flood varies according to the amount of rainfall in a given area. If a complete loss of the 233 structures/properties located within flood zones would result in approximately \$11 million in damages assuming 100% loss, a 75% loss would represent approximately \$8.25 million, a 50% loss would represent approximately \$5.5 million, and a 25% loss would represent approximately \$2.75 million.

The GMIS has 28 facilities have a hazard score of zero with a value of over \$34 million. Table 2.4 shows the breakdown of critical facilities by jurisdiction, flood hazard score, replacement value, content value, and daily occupancy.

**Table 2.4**

Jurisdiction	Hazard Score	# of Critical Facilities	Replacement Value \$	Content Value \$	Occupancy	
					Day	Night
Taliaferro County	0	15	26,817,300	4,690,000	393	6
Crawfordville	0	10	7,660,000	600,000	5	0
Sharon	0	3	215,000	260,000	0	0
<b>TOTAL</b>		<b>28</b>	<b>34,692,300</b>	<b>5,550,000</b>	<b>398</b>	<b>6</b>

Source: Georgia Mitigation Information System

The GMIS has no repetitive flooding NFIP property and no NFIP mitigated properties. There is no estimate for future structures since future development will be limited and regulated in areas where floodplains exist. (See Appendix A, Section I and Appendix D).

FEMA Hazus-MH Version 2.2 SP1 was used to analyze a probabilistic risk assessment of a 1% annual chance riverine flood event (100-Year Flood) for Taliaferro County. A copy of the complete report can be found in Appendix C. Land area covered by floodwaters of the base flood is identified as a Special Flood Hazard Area (SFHA). The County's flood risk assessment analyzed at risk structures in the SFHA. The results of the Riverine 1% Flood Scenario revealed that buildings are vulnerable to flooding from events equivalent to the 1% riverine flood. The economic and social impacts from a flood of this magnitude can be significant. The Hazus analysis generated information to building loss, essential facility loss, food and shelter requirements and debris because of the Riverine 1% Flood Scenario. The results of this scenario are as follows:

**Table 2.5**

Occupancy	Total Buildings in the Jurisdiction	Total Buildings Damaged in the Jurisdiction	Total Building Exposure in the Jurisdiction	Total Losses to Buildings in the Jurisdiction	Loss Ratio of Exposed Buildings to Damaged Buildings in the Jurisdiction
<b>Unincorporated</b>					
Residential	857	7	\$73,718,197	\$223,344	0.30%
Industrial	4	1	\$152,418	\$590	0.39%
		<b>County Total</b>			
	<b>861</b>	<b>8</b>	<b>\$73,870,615</b>	<b>\$223,934</b>	



- **Essential Facility Losses:** The analysis identified no essential facilities being subject to damage.
- **Flood Shelter Requirements:** The scenario estimates 17 households are subject to displacement. Displaced households represent 51 individuals, of which 1 may require short-term publicly provided shelter.
- **Flood Debris:** Hazus-MH estimates that an approximate total of 723 tons of debris might be generated by the flood. The model breaks debris into three general categories:
  - Finishes (dry wall, insulation, etc.) – 236 tons generated;
  - Structural (wood, brick, etc.) – 199 tons generated; and
  - Foundations (concrete slab, concrete block, rebar, etc.) – 289 tons generated.

It is noted that the difference between the FEMA Hazus-MH results and the FEMA worksheet #3a is because Hazus-MH is only looking at buildings. The FEMA flood maps and parcel maps include all parcels whether a building is on it or not. The community is rural, and agriculture is an important industry. All parcels are included in our analysis just not structures.

- C. Land Use and Development Trends:** The Taliaferro County Comprehensive Plan 2015-2025 presents future development scenarios for the County. The County has experienced very little growth over the past decade and future forecasts project relatively slow growth patterns. An analysis of the existing and future land use maps of Taliaferro County along with the cities of Crawfordville and Sharon, establishes no land use within the county has either increased or decreased more than two percent. There are currently no major changes expected to occur within the county or its two municipalities. Four goals were established for land use in Taliaferro County:
- Develop orderly and compatible land uses;
  - Minimize negative impacts associated with new development on environmentally sensitive areas;
  - Coordinate and new development with public facilities; and
  - Redevelop the downtown commercial and residential areas.

The vulnerability in terms of future buildings, infrastructure and critical facilities located in the identified hazard areas is not known at this time since no planned or approved future development exist. Thus, it is impossible to determine vulnerability in terms of future buildings, infrastructure and critical facilities within the County.

- D. Multi-Jurisdictional Concerns:** Taliaferro County and Crawfordville will continue to participate in the NFIP. The City of Sharon does not participate as there are no designated flood plains within the City limits. If the City of Sharon decides to adopt the ordinance and participate after this plan is approved, the plan will be amended to reflect. During a large-scale flood event, many portions of the County could potentially be impacted by flooding. However, the area's most prone to flooding have historically been those areas located within the 100-year floodplain. Since flooding has the potential to affect all of the County, any mitigation steps taken related to flooding should be undertaken on a countywide basis to include Crawfordville and Sharon.

- E. Hazard Summary:** Severe flooding within Taliaferro County is a relatively infrequent event. The county has 31 rivers/streams and 3 reservoirs. There have been 10 flooding events reported. These

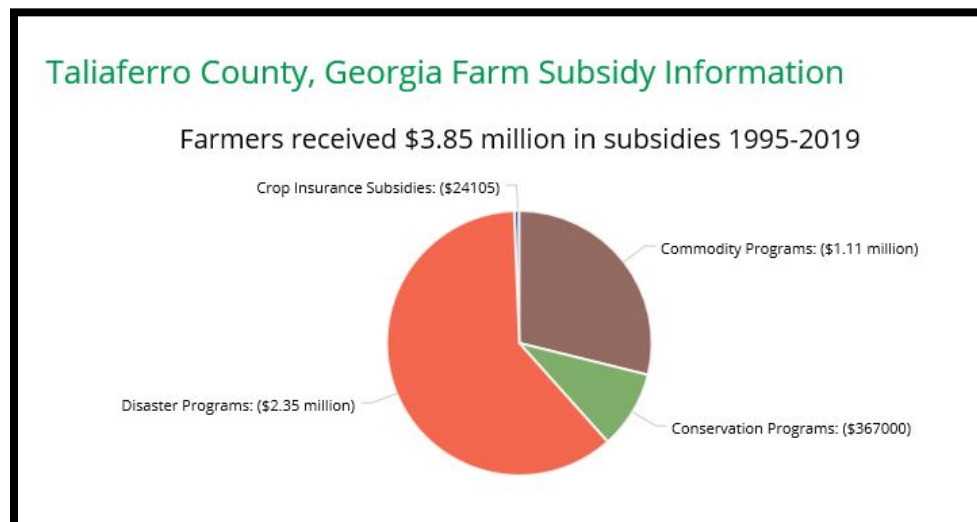
events resulted roads washing out, culvert damage and minimal property damage. The hazard frequency table calculates a 45% chance of an annual flooding event. Hazard frequency tables can be found in Appendix D for all jurisdictions.

Based on tax data, parcel and flood maps all or a portion of 233 known structures/properties valued at approximately \$11 million and a population of 142 located in known floodplains. The committee identified specific mitigation goals, objectives and action items related to flooding, which can be found in Chapter III, Section I.

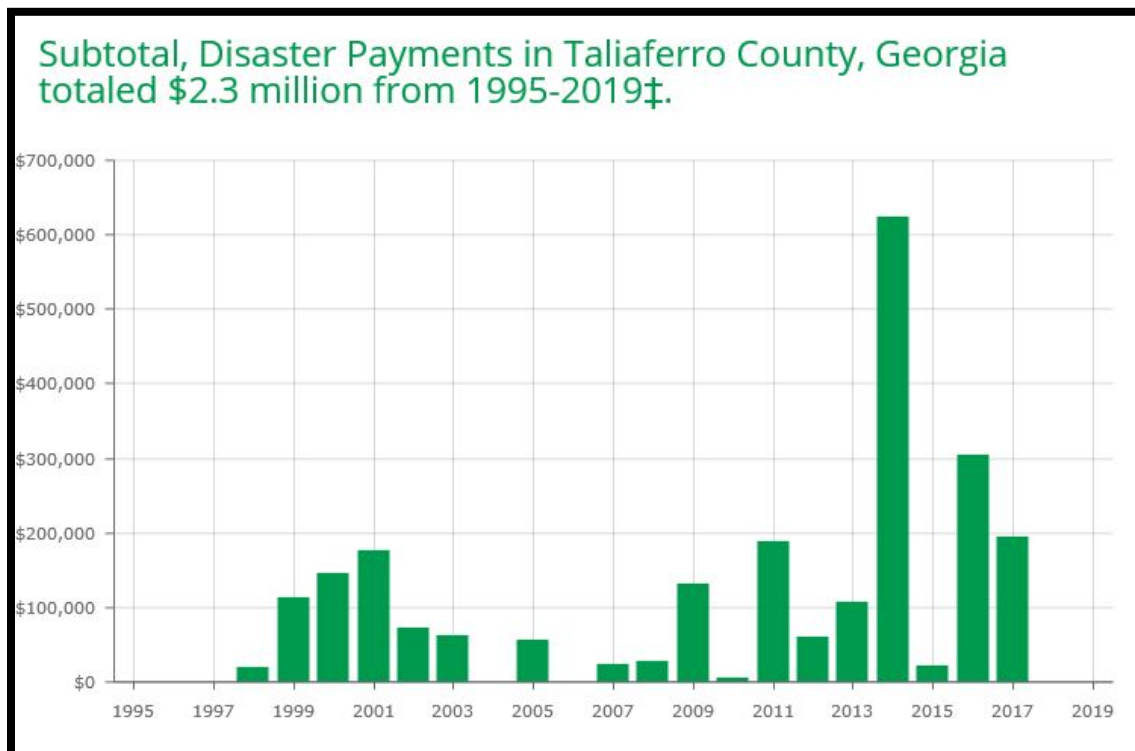
## SECTION II. DROUGHT

- A. Hazard Identification:** The committee reviewed historical data from the Palmer Drought Index, NCEI, DNR, and USDA in researching drought conditions in Taliaferro County. Drought conditions are identified by a prolonged period of moisture deficiency. Climatologists and hydrologists use five indicators of drought: rainfall, soil moisture, stream flows, lake levels and groundwater level. Drought conditions affect the cultivation of crops as well as water availability and water quality. Drought is also a key factor in wildfire development. Wildfire will be addressed in a separate HRV.
- B. Hazard Profile:** Drought is not spatially defined and has the potential to affect the entire planning area equally. Of the approximate 124,800 acres in the county, 120,466 (96.5%) are dedicated to agricultural and forestry uses. According to the USDA 2017 Census of Agriculture, Taliaferro County has 17,965 acres of agricultural land and 4,581 heads of cattle and 1,149,648 chickens. Agricultural losses due to drought have been the primary losses. No critical facilities have sustained any damage or functional downtime due to dry weather conditions. The last county-wide drought event began in November 2017 and ended in January 2018.

There have been 31 drought events in the county in the last 69 years with reported crop losses of approximately \$346,610. According to the EWG Farm Subsidies Database, from 1995-2019, farmers received 3.85 in subsidies of which \$2.5 million was for disaster assistance. The pie chart below depicts amounts and type of assistance. The graph provides annual information on disaster assistance.



Source: <https://farm.ewg.org>



Source: <https://farm.ewg.org>

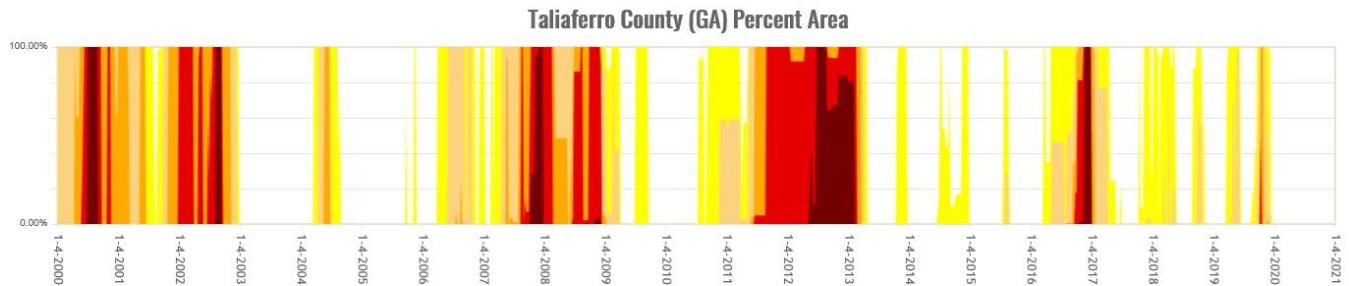
The Palmer Index is most effective in determining long-term drought, a matter of several months, and is not as good with short-term forecasts (a matter of weeks). The Palmer Index uses a zero abnormally dry, and drought is shown in terms of minus numbers; for example, minus two is severe drought, minus three is extreme drought, and minus four is exceptional drought.

NCEI data for surrounding counties and a review of The Palmer Index reveals there have been 31 drought events. One of the longest running droughts in recent history began in April 2011 and ended in January 2013. The County was in a moderate drought ran November 2017 to January 2018.

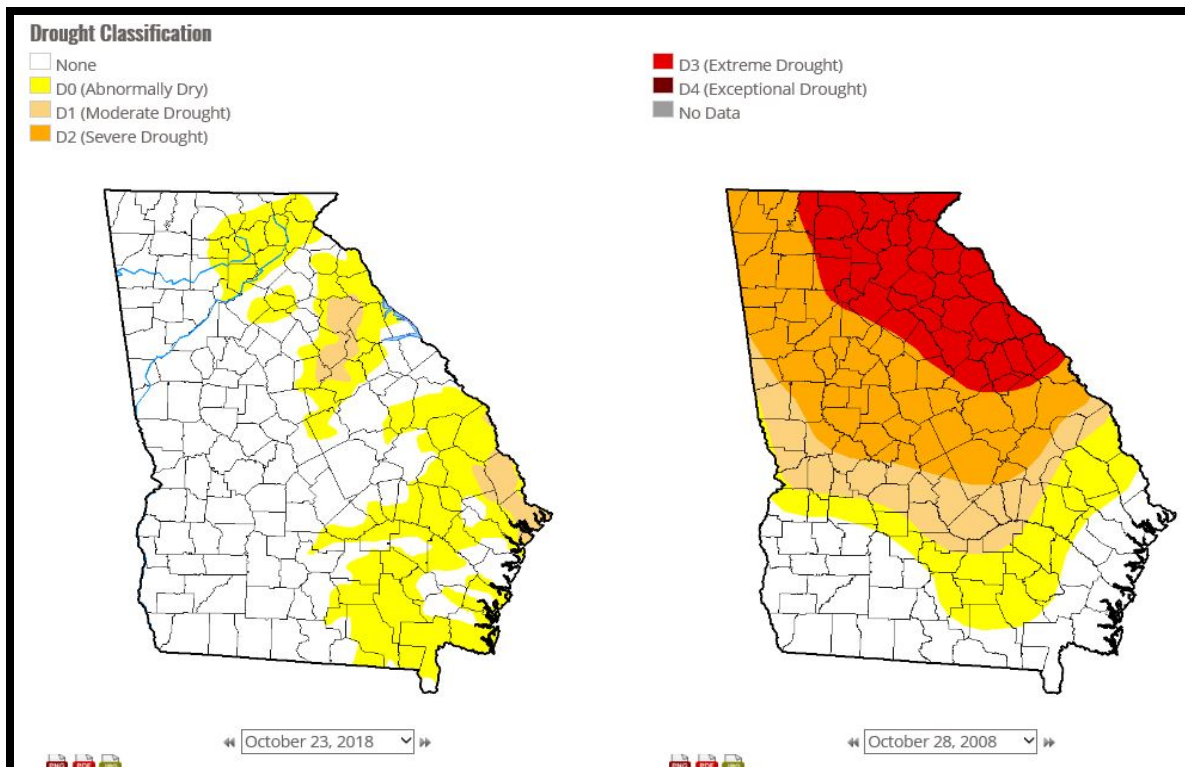
Data from <https://droughtmonitor.unl.edu/Data/DataDownload/ComprehensiveStatistics.aspx> reveals that from January 2000 to June 2019 the county experienced the following drought conditions:

- 180 weeks where all or a portion of the county has experienced of D0 - Abnormally Dry;
- 145 weeks where all or a portion of the county has experienced of D1 - Moderate Drought;
- 97 weeks where all or a portion of the county has experienced levels of D2 - Severe Drought;
- 119 weeks where all or a portion of the county has experienced levels of D3 - Extreme Drought; and
- 60 weeks where all or a portion of the county has experienced levels of D4 - Exceptional Drought. (US Drought Monitor Tables can be found in Appendix A.)

The drought monitor graph below demonstrates the drought extent from January 2000 to January 2020



The map below shows drought conditions for October 2008 and 2018.



<https://droughtmonitor.unl.edu/Maps/>

**Historical data is only for the county as a whole.** A severe, prolonged drought would mainly affect the 96.5% of the county that makes up the timber and agriculture business. This could result in loss of crops, livestock and create the conditions for a major wildfire event. This would also have an impact on Crawfordville as water restrictions would be enforced. Based on a 20-year hazard cycle history there is a 145% chance of an annual drought event. The chance for an annual drought event is the same for the county as well as all jurisdictions (*See Appendix A, Section III, and Appendix D.*)

- C. Assets Exposed to Hazard and Estimate of Potential Losses:** Drought conditions typically pose little or no threat to structures; however, fires can occur as a result of dry weather. The greatest threat to assets in the county is to forestry and agricultural properties and livestock. No damage to critical facilities is anticipated as a result of drought conditions. Crop damage cannot be accurately quantified due to several unknown variables: duration of the drought, temperatures during the

drought, severity of the drought, different crops require different amounts of rainfall, and different growing seasons. Based on FEMA Worksheet #3a the potential loss in agricultural and forestry properties for each jurisdiction is:

- Crawfordville has 107 agricultural properties valued at approximately \$2.9 million with estimated population of 15;
- Sharon has 74 agricultural/forestry properties valued at \$1,482,680 with an estimated population of 10;
- Unincorporated Taliaferro County has 2,476 agricultural/forestry properties valued at approximately \$154.8 million with an estimated population of 50.

There is a total of 2,657 agricultural/forestry properties in all of Taliaferro County valued at more than \$159 million with a population of 74 that are at the greatest risk due to a drought event (*Appendix A and Appendix D*).

**D. Land Use and Development Trends:** Taliaferro County currently has no land use or development trends related to drought conditions. When drought conditions do occur, Crawfordville follows the restrictions set forth by the Georgia DNR Drought Management Plan and the Statewide Outdoor Water Use Schedule.

The Georgia Water Stewardship Act went into effect statewide on June 2, 2010. It allows daily outdoor watering for purposes of planting, growing, managing, or maintaining ground cover, trees, shrubs, or other plants only between the hours of 4 p.m. and 10 a.m. by anyone whose water is supplied by a water system permitted by the Environmental Protection Division. The following outdoor water uses also are allowed daily at any time of the day by anyone:

- Commercial Agriculture
- Alternative sources of water (grey water, rain water, condensate, etc.)
- Irrigation of food gardens
- Irrigation of newly installed or reseeded turf for the first 30 days
- Drip irrigation or soaker hoses
- Hand watering with a shut off nozzle
- Water from a private well
- Irrigation of plants for sale
- Irrigation of athletic fields, golf courses or public recreational turf
- Hydroseeding

Outdoor water-use for any purposes other than watering of plants, such as power washing or washing cars, is still restricted to the current odd/even watering schedule.

- Odd-numbered addresses can water on Tuesdays, Thursdays and Sundays.
- Even-numbered and unnumbered addresses are allowed to water on Mondays, Wednesdays and Saturdays.

Limited growth or new development is expected in the County. The vulnerability in terms of future buildings, infrastructure and critical facilities located in the identified hazard areas is not known



since there is no planned or approved future development. Thus, it is impossible to determine vulnerability in terms of future buildings, infrastructure and critical facilities. Land use tables are in Appendix B.

- E. Multi-Jurisdictional Concerns:** Agricultural losses associated with drought are more likely to occur in the rural, less concentrated areas of the county. Although Crawfordville and Sharon are less likely to experience drought related losses, they should not be excluded from mitigation considerations. Drought creates a deficiency in water supply that affects water availability and water quality. Droughts can and have severely affected private wells, municipal and industrial water supplies, agriculture, stream water quality, recreation at major reservoirs hydropower generation, navigation, and forest resources
- F. Hazard Summary:** Drought is not spatially defined and equally affects the entire planning area. Droughts do not have the immediate effects of other natural hazards, but sustained drought can cause severe economic stress to not only the agricultural interests in Taliaferro County, but to the entire State of Georgia. The potential negative effects of sustained drought are numerous. *Historical data is available only for the county as a whole.* Based on a 20-year cycle hazard history along with available data there is a 145% chance of an annual drought event in Taliaferro County. In addition to an increased threat of wildfires, drought can affect municipal and industrial water supplies, stream-water quality, water recreation facilities, hydropower generation, as well as agricultural and forest resources.

In summary, there is a total of 2,657 agricultural/forestry properties in all of Taliaferro County valued at more than \$159 million that are at the greatest risk due to a drought event and include 4,581 heads of cattle and 1,149,648 chickens. There is a population of 1,717 and approximately 6,091 structures/properties in the county with a value just slightly more than \$224 million which could be affected if wildfires break out as a result of drought conditions. Drought mitigation goals and objectives are in Chapter III, Section III.

### SECTION III. WILDFIRE

- A. Hazard Identification:** A wildfire is any uncontrolled fire occurring on undeveloped land that needs fire suppression. The potential for wildfire is influenced by three factors: the presence of fuel, the area's topography and air mass. There are three different classes of wildland fires. A surface fire is the most common type and burns along the floor of a forest, moving slowly and killing or damaging trees. A ground fire is usually started by lightning and burns on or below the forest floor. Crown fires spread rapidly by wind and move quickly by jumping along the tops of trees. Wildfires are usually signaled by dense smoke that fills the area for miles around. Wildfires by lightning have a very strong probability of occurring during drought conditions. Drought conditions make natural fuels (grass, brush, trees, dead vegetation) more fire-prone.
- B. Hazard Profile:** Taliaferro County is comprised 124,800 acres in the county, 120,466 (96.5%) are dedicated to agricultural and forestry uses. Given the right weather conditions and variables, wildfire, due to natural causes, creates a potential threat to the lives of residents and property in the planning area. The NCEI has never reported a significant wildfire event in Taliaferro County.



The committee reviewed historical data from the Georgia Forestry Commission, which is not found in the NCEI database, to research wildfire events. The GFC provides wildfire data on man-made and natural wildfire occurrences for the county as a whole and not for individual jurisdictions. This plan will address only natural disasters. According to Georgia Forestry data, from 1957 to 2018, there have been 900 fire events burning a total of 4,608 acres for an average extent of 5.12 acres. Of these 900 fire events 44 were a result of lightning strikes which burned 834 acres. Based on best available data, the 44 wildfire events as a result of lightning occurred in the unincorporated areas of the county. Based on a 20-year hazard cycle there is a 160 percent chance of an annual wildfire due to a lightning strike or statistically the county can expect 1.6 wildfires as a result of lightning annually. The drier the condition the more susceptible the county is to wildfire. Fire Intensity Maps and GMIS Wildfire Maps for each jurisdiction can be found in Appendix A.

- C. Assets Exposed to Hazard and Estimate of Potential Losses:** While wildfires are more likely to occur in the county outside of the incorporated areas. The committee concluded that wildfires present a threat to all existing buildings, infrastructure and critical facilities since wildfires can spread throughout the county and into the urban areas. Damages as a result of a wildfire event are more likely to occur in areas of the county where forestry and woodland are prevalent. Wildfire does have the potential to spread into the incorporated areas and cause extensive damage to existing structures/properties. FEMA Worksheet #3a located in Appendix D shows the number and types of buildings found in Taliaferro County, as well as the value of these structures/properties and the population. The following assets by jurisdiction could potentially be exposed to wildfire hazard:

Table 2.6

Jurisdiction	Number of Structure/Properties	Value	Population
Taliaferro County (Unincorporated)	4,507	\$194,569,240	1,043
Crawfordville	1,249	\$25,575,878	534
Sharon	335	\$4,212,048	140
TOTAL FOR COUNTY	6,091	\$224,357,166.	1,717

Source: Taliaferro County Tax Assessor

The following table reveals all critical facilities in the county by jurisdiction, number of facilities, hazard score, replacement value, and daily occupancy exposed to wildfire hazard. A complete breakdown of each jurisdiction by hazard can be found in Appendix A.

Table 2.7

Jurisdiction	Hazard Score	# of Critical Facilities	Replacement Value \$	Content Value \$	Occupancy	
					Day	Night
Taliaferro County	3	13	\$26,302,300	\$4,190,000	393	6
Taliaferro County	1	1	\$95,000	\$250,000	0	0
Taliaferro County	0	1	\$420,000	\$250,000	0	0
Crawfordville	4	1	\$60,000	\$0.00	0	0
Crawfordville	3	6	\$2,820,000	\$600,000	5	0
Crawfordville	2	2	\$1,080,000	\$0.00	0	0

Jurisdiction	Hazard Score	# of Critical Facilities	Replacement Value \$	Content Value \$	Occupancy	
					Day	Night
Crawfordville	0	1	\$3,700,000	\$0.00	0	0
Sharon	3	2	\$120,000	\$10,000	0	0
Sharon	0	1	\$95,000	\$250,000	0	0
<b>TOTAL</b>		<b>28</b>	<b>\$34,692,300.</b>	<b>\$5,550,000.</b>	398	6

The GMIS has one critical facility with a hazard score of four (high), 21 with a hazard score of three (moderate), two with a hazard score of two (low) and one with a hazard score of one (very low probability). The remaining three critical facilities have a hazard score of zero. The 28 critical facilities with a wildfire hazard score greater than zero have an estimated potential loss of more than \$34 million. According to FEMA Worksheet #3a there are 6,091 structures/properties with a population of 1,717 with a value of slightly more than \$224 million worth of assets countywide. If a wildfire started, it is not likely that all of these structures/properties would be affected (*See Appendix A and Appendix D*).

- D. Land Use and Development Trends:** Taliaferro County currently has no land use or development trends related to wildfire conditions. Land use codes do provide for fire protection to any proposed major and minor developments connected to the public water supply system, and minimum fire flows shall be computed based on standards promulgated by the Taliaferro County Fire Department. For those proposed developments that will not have immediate access to the public water supply system, such standards and computations should be based on the National Fire Protection Association *Standards on Water Supply for Suburban and Rural Fire Fighting*.
- E. Multi-Jurisdictional Concerns:** The majority of Taliaferro County is timber, forest or agricultural land. Wildfire does have the potential to spread to urban areas thus affecting the entire county. As a result, any mitigation steps taken related to wildfire should be undertaken on a countywide basis and include all incorporated jurisdictions.
- F. Hazard Summary:** Taliaferro County is comprised 124,800 acres in the county, 120,466 (96.5%) are dedicated to agricultural and forestry uses. Given the right weather conditions and variables, wildfire due to natural causes creates a potential threat to the lives and property of residents in the planning area. According to Georgia Forestry data, from 1957 to 2018, there have been 900 fire events burning a total of 4,608 acres for an average extent of 5.12 acres. Of these 900 fire events 44 were a result of lightning strikes which burned 834 acres. Based on best available data, the 44 wildfire events as a result of lightning occurred in the unincorporated areas of the county. Based on a 20-year hazard cycle there is a 160 percent chance of an annual wildfire due to a lightning strike or statistically the county can expect 1.6 wildfires as a result of lightning annually..

The GMIS has one critical facility with a hazard score of four (high), 21 with a hazard score of three (moderate), two with a hazard score of two (low) and one with a hazard score of one (very low probability). The remaining three critical facilities have a hazard score of zero. The 28 critical facilities with a wildfire hazard score greater than zero have an estimated potential loss of more than \$34 million. According to FEMA Worksheet #3a there are 6,091 structures/properties with a

population of 1,717 with a value of slightly more than \$224 million worth of assets countywide. Mitigation Goals and Objectives concerning wildfires are in Chapter III, Section IV.

#### **SECTION IV. SEVERE WEATHER, INCLUDING TORNADOS, TROPICAL STORMS THUNDERSTORM WINDS, LIGHTNING, AND HAIL**

- A. Hazard Identification:** The committee reviewed historical data from the NCEI, SHELDUS™, newspapers and citizen interviews in researching the past effects of severe weather in Taliaferro County. The month of February marks the beginning of the severe weather season in the South, which can last until the month of August. Five types of severe weather were identified by the mitigation team: (1) tornados, (2) tropical storms, (3) thunderstorm winds, (4) lightning and (5) hail.

A tornado is a violent windstorm characterized by a twisting, funnel-shaped cloud. It is spawned by a thunderstorm or the result of a hurricane and is produced when cool air overrides a layer of warm air, forcing the warm air to rise rapidly. Tornados are among the most unpredictable and destructive of weather phenomena and can strike at any time of the year if the essential conditions are present. The damage from a tornado is a result of the high wind velocity and wind-blown debris. The positions of the subtropical and polar jet streams often are conducive to the formation of storms in the Gulf region. The table below shows the original Fujita Scale and the Enhanced Fujita Scale (in use since 2007) to rate the intensity of a tornado by examining the damage caused by the tornado after it has passed over a man-made structure.

**Table 2.8**

<b>FUJITA SCALE</b>			<b>DERIVED EF SCALE</b>		<b>OPERATIONAL EF SCALE</b>	
<b>F Number</b>	<b>Fastest 1/4-mile (mph)</b>	<b>3 Second Gust (mph)</b>	<b>EF Number</b>	<b>3 Second Gust (mph)</b>	<b>EF Number</b>	<b>3 Second Gust (mph)</b>
0	40-72	45-78	0	65-85	<b>0</b>	<b>65-85</b>
1	73-112	79-117	1	86-109	<b>1</b>	<b>86-110</b>
2	113-157	118-161	2	110-137	<b>2</b>	<b>111-135</b>
3	158-207	162-209	3	138-167	<b>3</b>	<b>136-165</b>
4	208-260	210-261	4	168-199	<b>4</b>	<b>166-200</b>
5	261-318	262-317	5	200-234	<b>5</b>	<b>Over 200</b>

*Source: NOAA*

The second type of severe weather is tropical storms. Tropical Storms are an organized system of strong thunderstorms with a defined surface circulation and maximum sustained winds of 39–73 MPH (34–63 knots). In this area they generally occur as a result of a hurricane or tropical system that has come inland.

The third severe weather event, thunderstorm winds, can cause death and injury, power outages, property damage, and can disrupt telephone service, severely affect radio communications and surface/air transportation which may seriously impair the emergency management capabilities of the affected jurisdictions.

Thunderstorm winds are winds that arise from convection (with or without lightning), with speeds of at least 50 knots (58 mph), or winds of any speed producing a fatality, injury, or damage. Severe

thunderstorms develop powerful updrafts and downdrafts. An updraft of warm, moist air helps to fuel a towering cumulonimbus cloud reaching tens of thousands of feet into the atmosphere. A downdraft of relatively cool, dense air develops as precipitation begins to fall through the cloud. Winds in the downdraft can reach in excess of 100 miles per hour. When the downdraft reaches the ground, it spreads out forming a gust front: the strong wind that kicks up just before the storm hits. As the thunderstorm moves through the area, the full force of the downdraft in a severe thunderstorm can be felt as horizontal, straight-line winds with speeds well over 50 miles per hour. Straight-line winds are often responsible for most of the damage associated with a severe thunderstorm. Damaging straight-line winds occur over a range of scales. At one extreme, a severe single-cell thunderstorm may cause localized damage from a microburst, a severe downdraft extending not more than about two miles across. In contrast, a powerful thunderstorm complex that develops as a squall line can produce damaging winds that carve a path as much as 100 miles wide and 500 miles long.

The fourth severe weather event is lightning. Lightning results from the buildup and discharge of electrical energy between positively and negatively charged areas. Rising and descending air within a thunderstorm separates these positive and negative charges. Water and ice particles also affect charge distribution. A cloud-to-ground lightning strike begins as an invisible channel of electrically charged air moving from the cloud toward the ground. When one channel nears an object on the ground, a powerful surge of electricity from the ground moves upward to the clouds and produces the visible lightning strike. Lightning often strikes outside of heavy rain and may occur as far as 10 miles away from any rainfall.

The final severe weather event is hail. Hailstones are created when strong rising currents of air called updrafts carry water droplets high into the upper reaches of thunderstorms where they freeze. These frozen water droplets fall back toward the earth in downdrafts. In their descent, these frozen droplets bump into and coalesce with unfrozen water droplets and are then carried back up high within the storm where they refreeze into larger frozen drops. This cycle may repeat itself several times until the frozen water droplets become so large and heavy that the updraft can no longer support their weight. Eventually, the frozen water droplets fall back to earth as hailstones.

Hail can also be a destructive aspect of severe thunderstorms. Hail causes more monetary loss than any other type of thunderstorm-spawned severe weather in the United States, annually producing about one billion dollars in crop damage. Storms that produce hailstones only the size of a dime can produce dents in the tops of vehicles, damage roofs, break windows and cause significant injury or even death.

- B. Hazard Profile:** Tornados, tropical storms, thunderstorm winds, lightning and hail can affect the entire county given the right conditions. Since the exact time and location of a severe weather event is not always predictable, all of Taliaferro County is vulnerable to the threats of severe weather.

Based on historical data there has never been a recorded tornado event by the NCEI or SHELDUS™. Research through the newspapers and interviews of citizens show that over the last 72 years, there have been 4 incidents of tornado touchdown. No injuries were reported and a total of \$12,000 in damages was reported. Using a 20-year hazard cycle, there is a less than one percent chance of an annual tornado event. *Data is not available for the incorporated areas of the County.* The table

below provides the best available information as to location, date, and magnitude as it relates to the Fujita scale and reported damages.

**Table 2.9**

Location	Details	Date	Mag	PrD
TALIAFERRO		2/13/1942	Unknown	
TALIAFERRO	Homes and farm buildings blown down	5/7/1948	Unknown	
TALIAFERRO		5/21/1948	Unknown	
TALIAFERRO	Trees fell on homes	11/23/1992	Unknown	\$12,000

Source: *The Advocate Democrat*

There have been 18 tropical storms reported by the NCEI and SHELDUS<sup>TM</sup> with reported property and crop damages of approximately \$50,000. Damages as a result of the storms were due to power outages, downed trees and flash flooding. The tropical storms affected the entire planning area. Using a 20-year hazard cycle, there is a 90 percent chance of an annual tropical storm event for county as a whole.

**Table 2.10**

Date	PrD	CrD	REMARKS
8/30/1964	1136	113	Hurricane Cleo
6/20/1972	0	314.	HURRICANE AGNES
6/11/2001	0.00	0.00	The remnants of Tropical Storm Allison, which originated in the Gulf of Mexico near the Texas coast during the first few days of June, brought heavy rain and flooding to many counties in central and east central Georgia.
9/14/2002	0.00	0.00	Tropical Storm Hanna moved inland near Mobile, Alabama around 5 pm EDT Saturday, September 14, 2002. Despite the heavy rainfall, flooding problems were minimal, since north and central Georgia had been in a 4-year drought.
7/1/2003	0.00	0.00	Tropical Depression Bill, which was earlier Tropical Storm Bill, tracked across north and central Georgia during the day bringing heavy rain, flooding, wind damage, and even an isolated tornado to the region.
9/6/2004	0.00	0.00	Hurricane Frances, at one point a category four hurricane (on the Saffir-Simpson scale) with sustained winds of 145 mph. The storm weakened to a Tropical Storm. Dozens to hundreds of trees were blown down, also bringing down dozens to hundreds of power lines.
9/16/2004	0.00	0.00	Hurricane Ivan, a classic long-lived Cape Verde hurricane and at three times within its life cycle a category five hurricane, developed from a tropical wave which moved off the African coast on August 31st. The system became a tropical depression on September 2nd, and tropical storm on September 3rd, and a hurricane early on September 5th. Later that same day, it became a major hurricane.
9/26/2004	0.00	0.00	Hurricane Jeanne was the third major southeast U.S. land falling hurricane to affect Georgia within a three week period, following just 10 days after Hurricane Ivan, which followed just 10 days after Hurricane Frances. Jeanne caused the least damage to north and central Georgia counties of the three tropical systems to affect the state during the month of September. Many homes that were in the stages of cleanup from Ivan, were severely impacted once again with major flooding.

Date	PrD	CrD	REMARKS
6/12/2005	0.00	0.00	Tropical Storm Arlene, which formed on June 8th near the northeast coast of Honduras, became a tropical storm. Damage to Georgia from the storm was minimal.
7/6/2005	0.00	0.00	Tropical Storm Cindy
7/10/2005	0.00	0.00	Hurricane Dennis, which began as a tropical depression near the southern Windward Islands on July 4th quickly gained strength as it tracked west-northwest across the Caribbean. Numerous thunderstorms, some with very heavy rain tracked east to west across central and north Georgia. Rainfall amounts of two to four inches were reported on the south and west side of Atlanta.
8/29/2005	0.00	0.00	Hurricane Katrina, a horrific category 4 hurricane with winds of 140 mph made landfall just east of New Orleans around 8 am August 29th, continued north-northeast as a hurricane across eastern Mississippi during the day on the 29th, then moved into western and middle Tennessee by early morning on August 30th. While this storm will be most remembered for the extensive devastation that was done to southeast Louisiana, particularly New Orleans, and eastward along the Mississippi Gulf Coast, Katrina was a very large and powerful storm with far reaching effects to the east.
10/5/2005	0.00	0.00	Tropical storm Tammy developed just east of the central Florida coast on the 5th of October as the result of a complex interaction between an upper-level low and a tropical wave. The rain that fell as a result of Tammy followed a period of nearly 40 days during which most of the region had received less than 0.10 inch of rain. Wind associated with this system across north and central Georgia was for the most part 15 mph or less.
8/21/2008	0.00	0.00	Tropical Storm Fay will be remembered from the catastrophic rainfall that it brought.
11/10/2009	0.00	0.00	Damages from Hurricane Ida to Georgia were confined to minor flooding, mostly adjacent to rivers, creeks, and streams. Some locations experienced flooding subsequently for several days.
9/4/2011	0.00	0.00	The remnants of Tropical Storm Lee impact north and central Georgia.
9/11/2017	\$50,000	0.00	as a result of Hurricane Irma
10/11/2018	0.00	0.00	As a result of Hurricane Michael

Source: NCEI and SHELDUSTM

Thunderstorms are much more prevalent and during the spring and summer months there are numerous storms that often carry strong winds. There have been 62 events recorded in the last 69 years with slightly more than \$278,000 in property and crop damages reported. Table 2.11 breaks down thunderstorm events by jurisdiction.

**Table 2.11**

Location	# of Events	County-Wide Events*	Total # of events per jurisdiction
Taliaferro County (Unincorporated)	5	51	56
Crawfordville	4	51	55
Sharon	2	51	53



<b>TOTAL FOR COUNTY</b>	<b>11</b>	<b>51</b>	<b>62</b>
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*\* It is assumed that all 51 county-wide events reported occurred in each jurisdiction. Source: NCEI and SHEL DUS™*

Using a 20-year hazard cycle, there is an annual chance for a thunderstorm event producing high winds as:

- 55% for the unincorporated areas of the county;
- 60% for Crawfordville;
- 55% for Sharon; and
- 85% for the entire County.

The fourth weather event is lightning. During the spring and summer months the county experiences numerous storms that can often produce lightning. There have been 12 reported lightning events in the past 69 years with more than \$52,000 in reported damages. There have been 44 lightning strikes recorded in the same time frame that resulted in wildfires. When these datasets are combined there has been 56 lightning strikes recorded. Based on a 20-year hazard cycle there is a 80 percent chance that a lightning strike will occur.

The fifth weather event is hail. In the last 69 years there have been 25 hail events reported to the NCEI and SHEL DUS™ databases with more than \$14,000 in property and crop damages and two injuries reported. Using a 20-year hazard cycle, there is an annual chance for a hail event at:

- 20% for the unincorporated areas of the county;
- 20% for Crawfordville;
- 10% for Sharon; and
- 50% for the entire County.

A complete list of all severe weather events is in Appendix A and hazard frequency tables for individual jurisdictions are in Appendix D.

- C. Assets Exposed to Hazard and Estimate of Potential Losses:** In evaluating assets exposed to the natural hazard, the committee determined that all critical facilities, as well as all public, private and commercial property, are susceptible to tornados, tropical storms, thunderstorm winds, lightning and hail events. The GMIS has the entire county with a wind hazard score of two, where wind speed is between 90 to 99 mph. Table 2.12 provides data from FEMA Worksheet #3a that estimates the potential loss for each jurisdiction.

**Table 2.12**

<b>Jurisdiction</b>	<b>Number of Structure/Properties</b>	<b>Value</b>	<b>Population</b>
Taliaferro County (Unincorporated)	4,507	\$194,569,240	1,043
Crawfordville	1,249	\$25,575,878	534
Sharon	335	\$4,212,048	140
<b>TOTAL FOR COUNTY</b>	<b>6,091</b>	<b>\$224,357,166.</b>	<b>1,717</b>

*Source: Taliaferro County Tax Assessor*

All 28 critical facilities have a wind hazard score of which has associated wind speeds of less than 90 mph. Table 2.13 shows the number of critical facilities by jurisdictions, hazard score, replacement value, content value and occupancy.

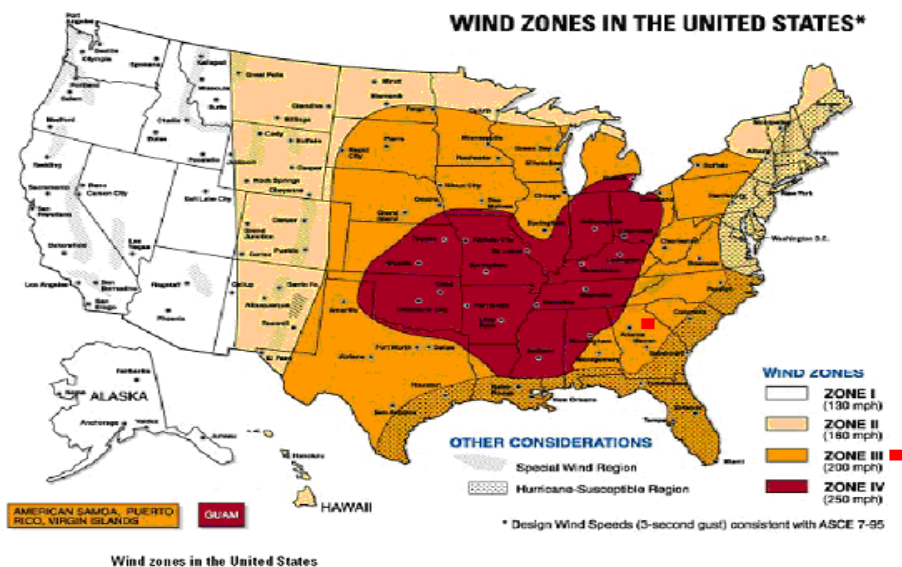
**Table 2.13**

Jurisdiction	Hazard Score	# of Critical Facilities	Replacement Value \$	Content Value \$	Occupancy	
					Day	Night
Taliaferro County	1	15	\$26,817,300	\$4,690,000	393	6
Crawfordville	1	10	\$7,660,000	\$600,000	5	0
Sharon	1	3	\$215,000	\$260,000	0	0
<b>TOTAL</b>		<b>8</b>	<b>\$34,692,300</b>	<b>\$5,550,000</b>	<b>398</b>	<b>6</b>

GMIS critical facility reports and maps, along with FEMA Worksheet #3a are in Appendix D for all jurisdictions.

**D. Land Use & Development Trends:** Taliaferro County is located in FEMA wind zone III, which is associated with 200-mph wind speeds. Currently, the county has no land use or development trends related to thunderstorm winds, tropical storm, tornados or lightning events. Information on current land use can be found in Appendix B.

**E. Multi-Jurisdictional Concerns** – All of Taliaferro County has the same design wind speed of 200 mph as determined by the American Society of Civil Engineers (ASCE) as evidenced by the map and table below.



		WIND ZONE			
		I	II	III	IV
NUMBER OF TORNADOES PER 1,000 SQUARE MILES	<1	LOW RISK	LOW RISK ★	LOW RISK ★	MODERATE RISK
	1 - 5	LOW RISK	MODERATE RISK ★	HIGH RISK	HIGH RISK
	6 - 10	LOW RISK	MODERATE RISK ★	HIGH RISK	HIGH RISK
	11 - 15	HIGH RISK	HIGH RISK	HIGH RISK	HIGH RISK
	>15	HIGH RISK	HIGH RISK	HIGH RISK	HIGH RISK

<b>LOW RISK</b>	<b>MODERATE RISK</b>	<b>HIGH RISK</b>
Need for high-wind shelter is a matter of homeowner preference	Shelter should be considered for protection from high winds	Shelter is preferred method of protection from high winds

★ Shelter is preferred method of protection from high winds if house is in hurricane-susceptible region

The entire county has the potential to be affected by tornados, tropical storms, thunderstorm winds, lightning and hail. As a result, any mitigation steps taken related for these five severe weather events should be considered on a county-wide basis to include all jurisdictions.

- F. Hazard Summary:** Overall, severe weather in the form of thunderstorm winds poses one of the greatest threats to Taliaferro County in terms of property damage, injuries, and loss of life. Therefore, the committee recommends that mitigation measures identified in this plan should be aggressively pursued. Tornados do not touch down as frequently; however, the unpredictability and the potential for excessive damage caused by tornados makes it imperative that mitigation measures identified in this plan receive full consideration.

**Table 2.14**

Weather Event	#	Fatalities	Injuries	Approximate Property/Crop Damage
Tornados	4	0	0	\$12,000
Tropical Storms	18	0	0	\$51,564
Thunderstorm Winds	62	0	0	\$278,320
Lightning	56	0	0	\$52,768
Hail	25	0	0	\$14,022

The GMIS has the entire county with a wind hazard score of one, where wind speed are less than 90 mph. All 28 critical facilities have a replacement cost of more than \$34 million. To summarize, there are approximately 6,091 structures/properties in the county totaling slightly more than \$224 million with a population of 1,717. A breakdown of information for individual jurisdictions can be found in Appendix A and Appendix D. Specific mitigation actions for each severe weather event are identified in Chapter III, Section V.

## SECTION V. WINTER STORMS

- A. Hazard Identification:** Southeastern snow or ice storms often form when an area of low pressure moves eastward across the northern Gulf of Mexico. To produce a significant winter storm in the south, not only must temperatures be cold enough, but there must also be enough moisture in the atmosphere to produce adequate precipitation. A major winter storm can last for several days and be accompanied by high winds, ice and freezing rain, heavy snowfall, and cold temperatures. These conditions can make driving conditions very dangerous, as well as bring down trees and power lines.
- B. Hazard Profile:** Winter storms are not spatially defined and affect the entire planning equally. The committee researched historical data from the NCEI, SHELDUS<sup>TM</sup>, and SERCC, as well as information from past newspaper articles relating to winter storms in Taliaferro County. There have been 43 winter storm events recorded in the county over the last 69 years with an more than \$693,000 in reported damages.

The ice storm on February 11-13, 2014, had freezing rain and sleet with accumulations of up to 1½ inches of ice across the area. Approximately 60 percent of local residents were without power at the height of the storm as ice accumulated on electric lines and falling trees and limbs brought them down. Some residents were without power for up to six days.

Although winter storms are infrequent in the south, they have the potential to cause excessive damage to a community and disrupt the lives of residents. Based on a 20-year hazard cycle there is a 100 percent chance of an annual winter storm event for the entire county.

- C. Assets Exposed to Hazard and Estimate of Potential Losses:** In evaluating assets that may potentially be impacted by the effects of winter storms, the committee determined that all critical facilities, as well as all public, private and commercial property, are susceptible. Table 2.15 shows assets by jurisdiction that could be at potential risk of damage from a winter storm event.

**Table 2.15**

Jurisdiction	Number of Structure/Properties	Value	Population
Taliaferro County (Unincorporated)	4,507	\$194,569,240	1,043
Crawfordville	1,249	\$25,575,878	534
Sharon	335	\$4,212,048	140
TOTAL FOR COUNTY	6,091	\$224,357,166.	1,717

*Source: Taliaferro County Tax Assessor*

The GMIS does not provide a report for winter storm damage but there is slightly more than \$224 million worth of assets with potential loss to winter storm hazards countywide. Table 2.16 shows the number of critical facilities by jurisdiction, replacement value, content value and occupancy (*See Appendix A, Section VI and Appendix D*).

**Table 2.16**

Jurisdiction	# of Critical Facilities	Replacement Value \$	Content Value \$	Occupancy	
				Day	Night
Taliaferro County	15	26,817,300	4,690,000	393	6
Crawfordville	10	7,660,000	600,000	5	0
Sharon	3	215,000	260,000	0	0
<b>TOTAL</b>	<b>28</b>	<b>34,692,300</b>	<b>5,550,000</b>	<b>398</b>	<b>6</b>

Source: Georgia Mitigation Information System

- D. Land Use & Development Trends:** Taliaferro County currently has no land use or development trends related to winter storms. Projected changes in land use based on the county's multi-jurisdictional comprehensive plan has minimal or no change to land use within the incorporated jurisdictions. The greatest change in land use and future development has a decrease in forest land that will be converted to residential. Since it is impossible to determine where future residents will move in the unincorporated areas of the county, vulnerability in terms of future buildings, infrastructure and critical facilities is not known at this time. It can be surmised that this will bring an increase in population and homes. Land use tables and projections can be found in Appendix B.
- E. Multi-Jurisdictional Concerns:** Taliaferro County currently has no land use or development trends related to winter storms. All of the county can potentially be negatively impacted by winter storms. As a result, any mitigation steps taken related to winter storms should be undertaken on a countywide basis and include all incorporated jurisdictions.
- F. Hazard Summary:** There have been 43 winter storm events recorded in the county over the last 69 years with more than \$693,000 in reported damages. There is a 100 percent chance of an annual winter storm event. Winter storms can be more accurately predicted than most other natural hazards, making it possible to give advance warning to communities. The National Weather Service issues winter storm warnings and advisories as these storms make their way south. Given the infrequency of these types of storms, southern communities are still not properly equipped to sustain the damage and destruction caused by severe winter storms. To summarize, there are approximately 6,091 structures/properties in the county totaling slightly more than \$224 million with a population of 1,717. The committee recognized the dangers posed by winter storms and identified specific mitigation actions in Chapter III, Section VI.

### CHAPTER III. MITIGATION STRATEGIES

Table 3.1 provides a brief description of each section in this chapter and a summary of the changes that have been made.

Chapter III. Section	Updates to Section
I. Flooding	Completed action steps were removed. All text was reviewed and edited as needed. Goals, Objective, and Actions Steps were updated.
III. Drought	Completed action steps were removed. All text was reviewed and edited as needed. Goals, Objective, and Actions Steps were updated.
IV. Wildfire	Completed action steps were removed. All text was reviewed and edited as needed. Goals, Objective, and Actions Steps were updated.
V. Severe Weather	Completed action steps were removed. All text was reviewed and edited as needed. Goals, Objective, and Actions Steps were updated.
VI. Winter	Completed action steps were removed. All text was reviewed and edited as needed. Goals, Objective, and Actions Steps were updated.
VII. All Hazards	Category added to take goals that apply to all Hazards to reduce redundancy.

#### SECTION I. INTRODUCTION TO MITIGATION STRATEGY

This chapter addresses the mitigation strategy requirements of 44 CFR Section 201.6 (c)(3): “A mitigation strategy that provides the jurisdiction’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. This section shall include:

- i) A description of mitigation goals to reduce or avoid long-term vulnerabilities to the identified hazards.
- ii) A section that identifies and analyzes a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each hazard, with particular emphasis on new and existing buildings and infrastructure. All plans approved by FEMA after October 1, 2008, must also address the jurisdiction’s participation in the NFIP, and continued compliance with NFIP requirements, as appropriate.
- iii) An action plan describing how the actions identified in paragraph (c)(3)(ii) of this section will be prioritized, implemented, and administered by the local jurisdiction. Prioritization shall include a special emphasis on the extent to which benefits are maximized according to a cost benefit review of the proposed projects and their associated costs.
- iv) For multi-jurisdictional plans there must be identifiable action items specific to the jurisdiction requesting FEMA approval or credit of the plan.”

#### A. Priority Changes from Previously Approved Plan

There have been no significant priority changes from the previous plan. The goal of Taliaferro County, Crawfordville and Sharon is to protect the safety, health and well-



being of all county citizens, and to protect public and private property and to lessen the overall effects of a hazard event.

There has been limited new development since the previous plan and no increase in population that would affect the overall vulnerability of the community from identified hazards. This has been no new adoption of development or building regulations to increase or decrease the overall vulnerability to hazard events.

## B. Capability Assessment

The County identified current capabilities for implementing hazard mitigation activities. The capability assessment identifies administrative, technical, legal and fiscal capabilities. This includes a summary of departments and their responsibilities associated with hazard mitigation as well as codes, ordinances, and plans already in place that contain mitigation activities or programmatic structure. The second part of the assessment examined the fiscal capabilities applicable to providing financial resources to implement identified mitigation action items. Taliaferro County has an annual budget of around \$3.9 million, Crawfordville is approximately \$650,000 and Sharon's budget is \$50,000. It should be noted that mitigation action steps with high dollar amounts cannot be completed without grant funds and careful budget planning by all jurisdictions.

While not all technical and administrative skills are found in-house, all jurisdictions have access to multiple staff through the RC and can contract out with private firms or any professional services needed. The three tables below identify administrative, technical, legal and fiscal capabilities of each jurisdiction.

**Table 3. 2 Legal and Regulatory Capability (Y/N)**

Regulatory Tools (ordinances, codes, plans)	Taliaferro County	Crawfordville	Sharon	Does State Prohibit
Building code	N	N	N	N
Zoning ordinance	Y	Y	N	N
Subdivision ordinance or regulations	Y	N	N	N
Special purpose ordinances (floodplain management, storm water management, soil erosion)	Y	Y	N	N
Growth management ordinances (also called "smart growth" or anti-sprawl programs)	N	N	N	N
Site plan review requirements	N	N	N	N
General or comprehensive plan	Y	Y	Y	N
A capital improvements plan	N	N	N	N
An economic development plan	N	N	N	N
An emergency response plan	Y	Y	Y	N
A post-disaster recovery plan	N	N	N	N
A post-disaster recovery ordinance	N	N	N	N
Real estate disclosure requirements	N	N	N	N

**Table 3.3 Fiscal Capability**

Financial Resources	Taliaferro County	Crawfordville	Sharon	Accessible or Eligible to Use (Yes/No)
Community Development Block Grants (CDBG)	Y	Y	Y	Y
Capital improvements project funding	N	N	N	Y
Authority to levy taxes for specific purposes	Y	Y	Y	Y – Vote required
Fees for water, sewer, gas, or electric service	N	Y	N	Y
Impact fees for homebuyers or developers for new developments/homes	N	N	N	N
Incur debt through general obligation bonds	Y	Y	Y	Y
Incur debt through special tax and revenue bonds	Y	Y	Y	Y – Vote required
Withhold spending in hazard-prone areas	N	N	N	N
Other Grants	Y	Y	Y	N

**Table 3.4 Administrative and Technical Capacity**

Staff/Personnel Resources	Taliaferro County	Crawfordville	Sharon	Dept./Agency and Position
Planner(s) or engineer(s) with knowledge of land development and land management practices	Y	Y	Y	CSRA RC/Contract as Needed
Engineer(s) or professional(s) trained in construction practices related to buildings and/or infrastructure	N	N	N	Contract as Needed
Planners or Engineer(s) with an understanding of natural and/or manmade hazards	Y	Y	Y	CSRA RC Staff
Floodplain manager	N	N	N	
Surveyors	N	N	N	Contracted as needed
Staff with education or expertise to assess the community's vulnerability to hazards	Y	Y	Y	Public Safety/EMA/ Sheriff
Personnel skilled in GIS and/or HAZUS	Y	Y	Y	CSRA RC/Contract as Needed
Emergency manager	Y	Y	Y	EMA
Grant writers	Y	Y	Y	CSRA RC/Contract as Needed

### C. Community Mitigation Goals

Collectively, the jurisdictions reviewed the hazard profiles and the loss estimates information in Section II and used it as a basis for developing mitigation goals, objectives and action steps. Mitigation goals are preventive measures to lessen the effect of and losses due to hazard events and are typically long-range visions adapted toward jurisdictional policy. Mitigation objectives are strategies to attain identified goals. Goals and objectives are formulated by reviewing hazard historical data, existing local plans, policy documents, regulations, and public input. Each jurisdiction developed objectives and actions unique to specific vulnerabilities or concerns within its boundaries.

Mitigation actions were developed as the means to carrying out the objectives and attain goals. All action steps should be compatible with the plans, policies, and regulations of each jurisdiction. The jurisdictions must also have the legal, administrative, fiscal, and technical capacities to perform each action.

The capabilities assessment above aided in forming realistic mitigation actions. This capabilities assessment can then incorporate results of the STAPLEE worksheet to identified obstacles that may hinder the completion actions. Each jurisdiction identified, and prioritized actions steps along with an implementation schedule, funding source, and coordinating individual or agency.

Based on the capability's assessment, the STAPLEE and six categories listed above the county and all jurisdictions identified the following goals:

- Goal 1: Protect the safety, health and well-being of all county citizens;
- Goal 2: Protect public infrastructure and private property;
- Goal 3: Educate the community about natural hazards;
- Goal 4: Manage development to minimize loss;
- Goal 5: Natural Resources Protection; and
- Goal 6: Structural modifications to reduce the impacts of hazard events.

### D. Identification & Analysis of Range of Mitigation Actions

The framework used to guide jurisdictions in identifying mitigation measures was developed by FEMA and is captured by the following six categories:

- **Prevention:** Government administrative or regulatory actions or processes that influence the way land and buildings are developed and built. These actions also include public activities that reduce hazard losses. Examples include building and construction code revisions; zoning regulation changes; and computer hazard modeling.
- **Property Protection:** Actions that involve the medications of existing buildings or structures to protect them from a hazard, or removal from the hazard area. Examples include roadway elevations, improving wind and impact resistance, and flood proofing.
- **Public Education and Awareness:** Action to inform and educate citizens, elected officials, and property owners about the hazards and potential ways to mitigate them.

- Examples include programs that target repetitive loss properties and vulnerable populations.
- **Natural Resources Protection:** Actions that, in addition to minimizing hazard losses also preserve or restore the function of natural systems. Examples include projects to create open space, green space, and stream restoration.
  - **Structural Projects:** Actions that involve the construction of structures to reduce the impact of a hazard. Examples include projects that control floodwater, reconstruction of dams, and construction of regional retention areas.
  - **Emergency Services:** Actions that protect people and property during and immediately after a disaster event or hazard event. Examples include enhancements that provide advanced warning and redundant communications.

i. **Structural and Non-Structural**

Mitigation relates to concrete actions which are put into practice to reduce the risk of destruction and casualties. Mitigation is generally split into two main types of activities: structural and non-structural. Structural mitigation refers to any physical construction to reduce or avoid possible impacts of hazards, which include engineering measures and construction of hazard-resistant and protective structures and infrastructure. Non-structural mitigation refers to policies, awareness, knowledge development, public commitment, and methods and operating practices, including participatory mechanisms and the provision of information, which can reduce risk with related impacts. Structural and non-structural actions are identified in Table 3.7.

ii. **Existing Polices, Regulations, Ordinances, and Land Use**

The *Joint Taliaferro County Comprehensive Plan 2015-2025* have been adopted by resolution by the Taliaferro County Board of Commissioners as well as Crawfordville's and Sharon's City Councils. The planning process examines the current and future trends and assess the strengths and opportunities available to achieve their community vision. This document drives the decision-making process for the County and the Cities of Crawfordville and Sharon. The Comprehensive Plan also examines existing land use and projects future land use.

iii. **Community Values, Historic & Special Considerations**

**Historical-Cultural**

There were 305 historic buildings recorded with 107 in Crawfordville, 44 in Sharon, and 154 in the county. A copy this survey is on file at HPD and at the CSRA RC with maps. This survey is useful as it recorded 70 percent of the extant buildings at that time.

The National Register of Historic Places (NRHP) is the nation's official list of historic buildings, structures, sites, objects and districts worthy of preservation. Buildings 50 years or older that are relatively intact in location, design, setting, materials,

workmanship, and association are generally eligible for listing. Taliaferro County has seven NRHP listings:

- Colonsay Plantation located in Raytown, the oldest community in Taliaferro County, developed around a plantation granted in 1784 to Marmaduke Mendenhall and his sister Hannah, both Quakers. The Mendenhalls named the property Colonsay Plantation, after an island near Scotland. Colonsay Plantation passed through several owners and is still privately owned. It was placed on the National Register of Historic Places in 1974.

- Alexander H. Stephens Memorial State Park and Liberty Hall, home of A.H. Stephens, circa 1875, are designated a National Historic Landmark. This quiet site combines the recreational fun of a state park with the educational resources of a historic site. Named after the vice president of the Confederacy and governor of Georgia, A.H. Stephens State Historic Park features a Confederate museum with one of the finest collections of Civil War artifacts in Georgia, including uniforms and documents. Stephens' home, Liberty Hall, is renovated to its 1875 style, fully furnished and open for tours.



- Taliaferro County Courthouse, built 1902, is designed in the High Victorian style. Added to the National Register of Historic Places in 1980, it is the county's second courthouse.



- Built in 1875 by W. J. Norton, the Chapman-Steed Home house was first occupied by William Robert Gunn, who served in the Georgia Volunteer Infantry. Built in the classic Georgian style, the simple lines of the two-story wood clapboard home captured her attention and her imagination. Located at 198 Broad St., the most prominent features of the house are its first- and second-story verandas



- The Roman Catholic “Church of the Purification” built in 1883 is listed as a Place in Peril by the Georgia Trust for Historic Preservation. The oldest history of the Archdiocese of Atlanta is written on the flyleaf of the 1844 sacramental register of the Purification Church by Bishop John England. Catholics began settling in the Locust Grove area of Georgia around 1790 and were originally part of the mission territory of the Diocese of Baltimore. John



1883

1822-

England (1786-1842) was the first Bishop of Charleston from 1820-1842 and visited Purification Church several times. The original register has been restored and is housed in the Office of Archives and Records.

- The Locust Grove Cemetery established in 1790, 1.4 miles southeast of Sharon is the oldest Roman Catholic cemetery in Georgia.
- Crawfordville Historic District, centered on downtown, including all building types. Crawfordville has been the downtown setting for 12 movies coordinated by the Georgia Department of Economic Development. Most recently released were “Sweet Home Alabama” in 2002 considered a blockbuster with Reese Witherspoon and “Get Low” in 2010 with Robert Duvall.



### **Recreation**

The Deerlick Astronomy Village is a group of amateur and professional astronomers living in a planned community near Sharon. The purpose of this community is to take advantage of star gazing in some of the darkest skies in Georgia and away from city lights. They maintain an 11-acre site for visitors to camp and have a website giving information about events. The Village is a Fire-Wise Community.

The Sharon-Raytown Garden Club is one of the oldest garden clubs in Georgia. It sponsors an annual wild game supper in September each year held in the Sharon-Raytown Community Clubhouse.

A. H. Stephens Park is best known for its equestrian facilities, Confederate museum and lakeside group camp. Horseback riders can explore 12 miles of trails and stay overnight in their own campground. Overnight guests can choose from lakeside cottages or a modern campground, while large groups can enjoy privacy in the park's group camp or pioneer campground.

Visitors can enjoy geocaching, fishing and boating, while also learning about a key officer in the American Civil War. Named after the vice president of the Confederacy and governor of Georgia, A.H. Stephens State Park features a Confederate museum with one of the finest collections of Civil War artifacts in Georgia. Stephens' home, Liberty Hall, is renovated to its 1875 style, fully furnished and open for tours.

#### **iv. Prioritization of Actions:**

Those Mitigation Actions given high priority are in two groups: life safety-related actions that can be accomplished relatively quickly and changes to protect critical facilities on which other emergency management systems are dependent, for example communications focal points. Those actions likely to require extended time frames to accomplish received medium priority status.



The committee used the STAPLEE worksheet to select and prioritize the most appropriate mitigation alternatives. This methodology requires that seven categories be considered when reviewing potential actions. This process helped ensure that the most equitable and feasible actions would be undertaken based on each jurisdiction's capability. Table 3.6 provides information regarding the review and selection criteria for alternatives.

**Table 3.6**
**STAPLEE REVIEW AND SELECTION CRITERIA FOR ALTERNATIVES**

- Is the proposed action acceptable by the community?
- Is the action compatible with current and future community values?
- Are equity concerns involved that would result in unjust treatment of any segment of the population?
- Will the proposed action cause social disruption?

**TECHNICAL**

- Will the proposed action achieve the stated objective and further mitigation goals?
- Will the proposed action create more problems than it solves?
- Does the proposed action resolve the problem completely or partially?
- It is the most useful action in light of other community values?

**ADMINISTRATIVE**

- Does the community have the capability to implement proposed action?
- Is there someone to lead or coordinate the proposed action?
- Is there sufficient funding, staff and technical support to implement the proposed action step?
- Are there ongoing administrative needs that are required?

**POLITICAL**

- Is the proposed action politically acceptable?
- Have political leaders participated in the planning process?
- Who are the stakeholders for this proposed action?
- Have all stakeholders been afforded an opportunity to participate in the planning process?
- Is there public support to implement and maintain the action?

**LEGAL**

- Does the community have the authority to implement the proposed action?
- Is there a clear legal basis for the proposed action?
- Are there legal side effects? (i.e. could the action be construed as a taking)
- Is the proposed action allowed in the general plan?
- Will the community be liable for action or lack thereof?
- Will the proposed action be challenged??

**ECONOMIC**

- What is the cost-benefit of the proposed action (do the benefits exceed the cost)?
- Have initial, maintenance and administrative costs been taken into account??
- Has funding been secured for the proposed action? If not have funding sources been identified?
- Will the proposed action affect the fiscal capabilities and/ or budget of the jurisdiction?
- Will the proposed action place a tax burden on the community?

- Does the proposed action contribute to other community goals? (capital improvements, economic development)

#### ENVIRONMENTAL

- Will the proposed action have a positive or negative effect on the environment?
- Does the proposed action require environmental regulatory approvals?
- Does the proposed action meet local and state regulations?
- Does the proposed action impact a threatened or endangered species?

### E. Introduction to Action Plan

The next two sections of Chapter III., Section II. Natural Hazards and Section III. Mitigation Actions comprise the strategies that Taliaferro County together with Crawfordville and Sharon have identified to reduce the effects of natural hazards. Mitigation actions given high priority are in two groups: (1) life safety-related actions that can be accomplished relatively quickly and (2) changes to protect critical facilities on which other emergency management systems are dependent, for example communications focal points. Those actions likely to require extended time frames to accomplish received medium priority status.

## SECTION II. NATURAL HAZARDS

### A. Flooding Action Plan

The committee determined that due to the presence of flood plains in the county efforts to reduce the level of exposure to flooding should be considered. In previous flooding instances, damage has been sustained primarily to roads, bridges and natural resources. Specific mitigation measures identified by the committee are designed to lessen the effects of such damage to new and existing structures in the future.

**Objective A1.** Improve the effectiveness of existing flood insurance programs.

**Objective A2.** Evaluate and improve the present drainage infrastructure.

**Objective A3.** Warn citizens when the potential for flooding exist.

**Objective A4.** Lessen the impact to existing buildings, critical facilities and infrastructure as a result of flooding.

**Objective A5.** Limit future development in flood prone areas.

**Objective A6.** Reduce the threat of water contamination caused by flooding.

### B. Drought Action Plan

As indicated in Chapter II, Section III, drought conditions can cause costly damage to the crops. However, from a danger or hazard perspective, the greatest threat posed by drought conditions is from potential wildfires. As 96.5% of the county is made up of forest and woodlands, the possibility for wildfires is distinct and poses a significant threat. In general, wildfires are the result of dry conditions combined with lightning or carelessness. The committee determined that mitigation goals were necessary to prevent crop damage, as well as damage to new and existing structures.

**Objective C1.** Ensure that there is an adequate water supply during periods of drought.

**Objective C2.** Educate citizens on water conservation issues.

### C. Wildfire Action Plan

As indicated in Chapter II, Section IV, wildfires have the potential to cause costly damage in Taliaferro County. From a danger or hazard perspective, the greatest threat posed by wildfire is the damage to forest, woodlands and agriculture property. The possibility for wildfires is distinct and poses a significant threat to the county. Forest fires are generally the result of dry conditions combined with lightning or carelessness. The committee determined that mitigation goals were necessary to prevent damage to undeveloped areas of the county as well as damage to new and existing structures caused by wildfires.

**Objective D1.** Ensure that adequate fire protection is available.

**Objective D2.** Reduce threat of wildfire occurrence.

**Objective D3.** Increase public awareness of wildfire dangers.

#### **D. Severe Weather (Tornados, Tropical Storms, Thunderstorm Winds, Lightning, Hail)**

As with many Georgia communities, if a tornado or tropical storm were to strike Taliaferro County, significant damage to both property and agricultural crops could result. In addition, the potential for injuries and loss of life is substantial due to the unpredictability and violent nature of these storms. The committee recognizes the important role advance planning plays in the mitigation process. There is great benefit in identifying appropriate steps that can be taken to help minimize losses to new and existing structures in Taliaferro County as a result of a severe weather event. As indicated in Chapter II, Section V, of all of the natural hazards profiled in this plan, tornados have the potential to inflict the greatest amount of damage while thunderstorm winds are the most frequently occurring natural hazard in the county and have the greatest chance of affecting the county each year. The committee has identified several courses of action that both local officials and citizens can use in their mitigation efforts against the effects of tornados, tropical storms, thunderstorm winds, lightning and hail to both new and existing structures.

**Objective E1.** Minimize damage to property from severe weather events.

**Objective E2.** Minimize damage to public buildings and critical facilities to ensure continual operations of vital services.

**Objective E3.** Protect vulnerable populations from the effects of severe weather events.

**Objective E4.** Educate the public including citizens and business owners on disaster preparedness and safety.

#### **E. Winter Storms Action Plan**

Within Taliaferro County, and the southeast region in general, there is great concern over the threat of winter storms. Although this area does not typically receive the amounts of snow and ice that other regions do, nor do they experience winter storms as frequently as other regions, Taliaferro County and other southeastern communities must be prepared for the damage caused by winter storms. The fact that winter storms hit Taliaferro County infrequently results in other problems, such as lack of equipment and supplies to combat treacherous winter storm conditions. In Taliaferro County, the formation of ice on roads and bridges, tree limbs, and power lines is the cause of most damage. In Chapter II, Section VI additional winter storm hazards are addressed, as well as information related to potential losses for the county. The Committee has determined that several steps could be undertaken to minimize the effects of winter storms to protect the health and safety of citizens, as well as damage to new and existing structures.

- Objective F1.** Educate the public on preparedness and safety issues for winter storm events.
- Objective F2.** Prevent property damage as a result of a winter storm event.
- Objective F3.** Minimize power outages during winter storms.

#### **F. All Hazard Action Steps**

The purpose of this section is to allow the committee to recommend mitigation measures within this plan that transcend individual hazards. Certain common mitigation measures are needed regardless of the specific hazard event. Rather than list these multiple times within each different hazard category, the committee decided to list these “all-hazards” mitigation measures within a separate section of the plan. The goal with these mitigation measures is again to minimize the loss of life and property, and to prevent disruption of services to the public to the greatest extent possible.

- Objective H1.** Ensure communication capabilities exist between all Emergency Service Personnel and Agencies.
- Objective H2.** Ensure the ability to travel for county residents, organizations, and providers of essential services such as Law Enforcement Personnel, hospitals and utilities after a hazard event.
- Objective H3.** Protect critical facilities from the effects due to power outages as a result of all hazards to ensure a continuation of all vital services.
- Objective H4.** Provide adequate notification to citizens of Taliaferro County pertaining to hazard event.
- Objective H5.** Guarantee all evacuation plans are up to date and adequate to meet the needs of the citizens of Taliaferro County.
- Objective H6.** Guarantee that all Emergency Response Plans are up to date and adequate to meet the needs of citizens of Taliaferro County.
- Objective H7.** Ensure all emergency shelters are ready to meet the needs of the population of Taliaferro County, Crawfordville, and Sharon.
- Objective H8.** Provide the citizens of Taliaferro County educational information on Emergency Preparedness.
- Objective H9.** Provide the citizens of Taliaferro County with accurate and timely information pertaining to Emergency Preparedness.
- Objective H10.** Collect accurate and complete data pertaining to hazard events within Taliaferro County and all jurisdictions.

## SECTION III. MITIGATION ACTIONS

Action #	Mitigation Action and Description	Jurisdiction	Implement Agency	Hazards Addressed	Objective Supported	Goal	Structural /Non-Structural	Estimated Project Cost	Possible Funding Source(s)	Timeframe	Status	Priority
1.	Continue to assess stormwater runoff.	Taliaferro County/ Crawfordville / Sharon	Road Depts.	Flood	A5, B2	2, 6	Non-Structural	Staff time	General Funds	Continual	Ongoing Done as part of public works job	High
2.	Construct as needed, more storm water retention facilities, storm drain improvements and channel improvements to protect existing and new developments.	Taliaferro County/ Crawfordville / Sharon	BOC/City Councils/ Public Works	Flood/ Drought	A3,	2, 6	Structural	\$2,000,000	General Funds CDBG, FEMA	Continual	Ongoing As funding becomes available	High
3.	Clear run-off and water retention ditches.	Taliaferro County/ Crawfordville / Sharon	Road Depts. /Public Works	Flood	A5	2, 1	Structural	Staff Time	General Funds	Continual	Ongoing Ditches are cleared by Road Dept. as part of their work load.	High
4.	Seek funding for communication towers and voice repeater systems.	Taliaferro County/ Crawfordville / Sharon	BOC/City Councils/ EMA	All hazards	F1, F9	1	Structural	\$750,000	General Fund, FEMA, CJCC, JAG, USDA, DOJ	Continual	Ongoing As funding becomes available	High
5.	Evaluate existing water system upgrade as needed	Crawfordville	Public Works	Flood/ Drought/ Wildfire	A7, B1, C1	1, 2, 6	Structural	\$1,500,000	General Fund, CDBG, USDA, EPA, DNR	Continual	Ongoing As funding becomes available	High
6.	Investigate methods to reduce non-point source pollution.	Taliaferro County/ Crawfordville / Sharon	BOC/City Councils/ Public Works	Flood	A1	1, 2, 5	Non-Structural	Staff Time	USDA, EPA, DNR	Ongoing	No projects have been identified	Low

**2020 Multi-Hazard Pre-Disaster Mitigation Plan Update**

Action #	Mitigation Action and Description	Jurisdiction	Implement Agency	Hazards Addressed	Objective Supported	Goal	Structural /Non-Structural	Estimated Project Cost	Possible Funding Source(s)	Timeframe	Status	Priority
7.	Enact a program to educate the residents about water conservation issues	Taliaferro County/ Crawfordville / Sharon	BOC/City Councils/ Public Works	Drought	B1, B2	1, 3	Non-Structural	\$2,000	USDA, EPA, DNR, General Funds	Continual	Stalled due to staff time	High
8.	Increase public awareness of watering restrictions and bans.	Taliaferro County/ Crawfordville / Sharon	Crawfordville Public Works	Drought	B1, B2	1, 3	Non-Structural	Staff Time	General Funds	Continual	This is done during state declared droughts	High
9.	Develop a public awareness campaign to promote water-saving campaigns (i.e. low-flow water saving devices)	Taliaferro County/ Crawfordville / Sharon	EMA/Public Works	Drought	B1, B2	1, 3	Non-Structural	Staff Time	General Funds	Continual	Stalled due to staff time	High
10.	Continue training of all firefighters to include wildland fire training.	Taliaferro County/ Crawfordville / Sharon	EMA/Fire Dept.	Wildfire	C1	1, 2	Non-Structural	\$15,000	General Funds, FEMA	Continual	Ongoing	High
11.	Seek funding for needed firefighting equipment	Taliaferro County/ Crawfordville / Sharon	BOC/City Council/ EMA/Fire Dept.	Wildfire	C1	1, 2	Non-Structural	\$500,000	General Funds, FEMA	Continual	Ongoing As funding becomes available	High
12.	Inventory and replace or install more fire hydrants as needed.	Taliaferro County/ Crawfordville / Sharon	Crawfordville/ Public Works/Fire Dept.	Wildfire	C1	1, 2	Structural	\$50,000	General Funds, FEMA	Continual	Ongoing As funding becomes available	High
13.	Seek funding fire engines, wildland brush truck, and tankers for local fire departments.	Taliaferro County/ Crawfordville / Sharon	BOC/City Councils/ EMA/Fire Dept.	Wildfire	C1	1, 2	Non-Structural	\$1,750,000	General Funds, FEMA	Continual	Ongoing As funding becomes available	High
14.	Implement the Firewise Community Initiative where appropriate	Taliaferro County/ Crawfordville / Sharon	EMA	Wildfire	C2, C3	1, 2, 3	Non-Structural	\$25,000	General Funds, GFC	3 years	Stalled as no communities have been identified to participate	Low



**2020 Multi-Hazard Pre-Disaster Mitigation Plan Update**

Action #	Mitigation Action and Description	Jurisdiction	Implement Agency	Hazards Addressed	Objective Supported	Goal	Structural /Non-Structural	Estimated Project Cost	Possible Funding Source(s)	Timeframe	Status	Priority
15.	Improve public awareness of wildfire techniques and awareness of wildfire dangers.	Taliaferro County/ Crawfordville / Sharon	EMA/Fire Dept.	Wildfire	C2, C3	1, 2, 3	Non-Structural	\$25,000.00	General Funds	Continual	Ongoing Info will be added to website and Facebook page as appropriate	High
16.	Adopt Building Codes	Taliaferro County/ Crawfordville / Sharon	BOC/City Councils	Flood, Severe Weather, Winter Storm	A5, A6, D1, D2, E2, E3	1, 2, 4, 6	Structural/ Non-Structural	Staff Time	General Fund	3 years	Ongoing Stalled due to no code enforcement staff will address as part of 2020 Comprehensive Plan update	Medium
17.	Adopt Zoning Regulations	Taliaferro County/ Crawfordville / Sharon	BOC/City Councils	Flood, Severe Weather, Winter Storm	A5, A6, D1, D2, E2, E3	1, 2, 4, 6	Structural/ Non-Structural	Staff Time	General Fund	3 years	Ongoing Stalled will address as part of 2020 Comprehensive Plan update	Medium
18.	Equip all county and city recreation parks with adequate early severe weather warning and lightning detection devices.	Taliaferro County Crawfordville / Sharon	Recreation Dept.	Severe Weather	D1, D2, D3	1, 2, 6	Structural	\$50,000	General Funds, FEMA	2 years	Ongoing As funding becomes available	High
19.	Inspects public buildings and critical facilities and retrofit to reinforce windows, doors, and roofs as needed	Taliaferro County/ Crawfordville / Sharon	EMA/Public Works	Severe Weather, Winter Storms	D1, D2, D3, E2, E3	1, 2, 6	Structural	\$100,000	General Funds, FEMA	Continual	Ongoing As funding becomes available and projects are identified	Medium
20.	Enforce building codes for all new buildings and critical facilities.	Taliaferro County/ Crawfordville / Sharon	County Clerk/EMA	Flood, Severe Weather, Winter Storm	A5, A6, D1, D2, E2, E3	1, 2, 6	Structural/ Non-Structural	Staff Time	General Funds, FEMA	1 year and Continual	Ongoing Stalled due to no code enforcement staff will	High

**2020 Multi-Hazard Pre-Disaster Mitigation Plan Update**

Action #	Mitigation Action and Description	Jurisdiction	Implement Agency	Hazards Addressed	Objective Supported	Goal	Structural /Non-Structural	Estimated Project Cost	Possible Funding Source(s)	Timeframe	Status	Priority
21.	Install lightning rods in high value critical facilities.	Taliaferro County/ Crawfordville / Sharon	BOC/City Councils/ EMA/	Severe Weather, Lightning	D1, D2, D3	1, 2, 6	Structural	\$100,000	General Funds, FEMA	2 years	Ongoing As funding becomes available	Medium
22.	Review current Emergency Response Plan and update when needed.	Taliaferro County	EMA	All hazards	F6, F8	1, 2, 3	Non-Structural	Staff Time	General Funds	continual	Was revised in Jan 2019/ Ongoing	High
23.	Review current evacuation plans paying particular attention to vulnerable populations and update as needed.	Taliaferro County	EMA/	Flood, Wildfire, Severe Weather, Winter Storm	F5, F8	1, 2, 3	Non-Structural	Staff Time	General Funds	2 years	Ongoing	High
24.	Develop a public awareness program about the installation of lightning grounding systems on critical infrastructure, residential and business properties.	Taliaferro County/ Crawfordville / Sharon	EMA/Public Works	Severe Weather, Lightning	D4	1, 2, 3	Non-Structural	Staff Time	General Funds	2 years	Stalled due to lack of staff	Medium
25.	Inventory all critical facilities and assess generator needs. Install generators where needed.	Taliaferro County/ Crawfordville / Sharon	BOC/City Councils/ EMA/Public Works	All hazards	F3	1, 2, 3, 6	Structural/ Non-Structural	\$200,000	General Funds, FEMA	continual	Ongoing As funding becomes available	High
26.	Seek funding to ensure all current and future emergency shelters have back-up generators.	Taliaferro County/ Crawfordville / Sharon	EMA	All hazards	F7	1, 2, 3, 6	Structural/ Non-Structural	\$50,000	General Funds, FEMA	continual	Ongoing As funding becomes available	High
27.	Educate the public on shelter locations and evacuation routes	Taliaferro County/ Crawfordville / Sharon	EMA/ Sheriff	Flood, Wildfire, Severe Weather, Winter Storm	F8, F9	3	Non-Structural	Staff Time	General Funds	continual	Information is posted on Facebook and EMA website as needed	High

**2020 Multi-Hazard Pre-Disaster Mitigation Plan Update**

Action #	Mitigation Action and Description	Jurisdiction	Implement Agency	Hazards Addressed	Objective Supported	Goal	Structural /Non-Structural	Estimated Project Cost	Possible Funding Source(s)	Timeframe	Status	Priority
28.	Develop public education and awareness programs regarding severe weather events to include home safety measures, purchase of weather radio and personal safety measures before, during and after an event.	Taliaferro County/ Crawfordville / Sharon	EMA/ Sheriff	Flood, Wildfire, Severe Weather, Winter Storm	F8, F9	3	Non-Structural	\$10,000	General Funds, FEMA	Continual	Information is posted on Facebook and EMA website as needed	High
29.	Implement a winter storm education program to include winterization of home and/or business and what to do before, during and after.	Taliaferro County/ Crawfordville / Sharon	EMA	Winter Storm	E1	3	Non-Structural	\$25,000	General Funds	Continual	Information is posted on Facebook and EMA website as needed	High
30.	Create a data base to record hazard event information.	Taliaferro County/ Crawfordville / Sharon	BOC/City Councils/ EMA/Fire Dept./ Sheriff	All hazards	F10	1, 2, 3,	Non-Structural	Staff Time	General Funds	2 years	Stalled due to lack of staff	Medium
31.	Inventory existing road equipment and purchase needed equipment to maintain roads before, during and after a hazard event.	Taliaferro County/ Crawfordville / Sharon	BOC/City Councils/ Public Works/ Road Dept.	Flood, Severe Weather, Winter Storm	F2	1, 2	Non-Structural	\$150,000	General Funds, FEMA	2 years	Ongoing As funding becomes available	Medium
32.	Develop coordinated management strategies for deicing, snow plowing, and clearing roads of fallen trees and debris	Taliaferro County/ Crawfordville / Sharon	BOC/City Councils/ Public Works/ Road Dept.	Flood, Severe Weather, Winter Storm	F2	1, 2	Non-Structural	Staff Time	General Funds	2 years	Stalled due to staff time	Medium
33.	Promote the construction of safe rooms in shelter areas and in public buildings.	Taliaferro County/ Crawfordville / Sharon	EMA	Flood, Wildfire, Severe Weather, Winter Storm	F3	1, 2, 6	Structural	\$100,000	General Funds, FEMA	4 years	Ongoing As funding becomes available	Medium

*2020 Multi-Hazard Pre-Disaster Mitigation Plan Update*

Action #	Mitigation Action and Description	Jurisdiction	Implement Agency	Hazards Addressed	Objective Supported	Goal	Structural /Non-Structural	Estimated Project Cost	Possible Funding Source(s)	Timeframe	Status	Priority
34.	Update 911 equipment as needed.	Taliaferro County/ Crawfordville / Sharon	EMA/Sheriff	All hazards	F1, F3	1, 2, 6	Structural	\$250,000	General Funds, FEMA	Continual	Ongoing	High
35.	Promote and participate in the following American Red Cross Programs • Disaster Resistant Neighborhoods Program • Business and Industry Preparedness Seminar • Community Disaster Education Preparedness presentations	Taliaferro County/ Crawfordville / Sharon	EMA	All hazards	F4, F8, F9	1, 2, 3	Non-Structural	\$10,000	General Funds, FEMA	2 year	Ongoing As funding becomes available	Medium
36.	Create an EMA website and Facebook Page with information pertaining to Emergency Preparedness.	Taliaferro County	EMA	All hazards	F4, F5, F6, F7, F8, F9.	1, 2, 3	Non-Structural	Staff Time	General Funds	1 year and Continual	New	High
37.	Implement GIS technology on fire and emergency management vehicles so data can be readily available in the field so more accurate, timely assessments for future mitigation planning activities.	Taliaferro County/ Crawfordville / Sharon	EMA/Fire Dept./ Sheriff	Flood, Wildfire, Severe Weather, Winter Storm	F9, F10	1, 2, 6	Non-Structural	\$50,000	General Funds, FEMA	1 year and Continual	Ongoing As funding becomes available	Medium
38.	Pave Roads in county that are unpassable due to flooding	Taliaferro County/	BOC/ Road Dept.	Flood, Severe Weather,	A7, D2,		Structural	\$1,500,000	General Funds T-SPLOST FEMA, DOT	Continual	Ongoing As funding becomes available	Medium

Action #	Mitigation Action and Description	Jurisdiction	Implement Agency	Hazards Addressed	Objective Supported	Goal	Structural /Non-Structural	Estimated Project Cost	Possible Funding Source(s)	Timeframe	Status	Priority
39.	Provide NOAA weather radios to elderly and handicap populations (moved to all hazards).	Taliaferro County/ Crawfordville / Sharon	EMA/Fire Dept./ Sheriff	Flood, Wildfire, Severe Weather, Winter Storm	G4, G8, G9	1, 2,3	Non-Structural	\$30,000	General Funds, FEMA	Continual	Ongoing As funding becomes available	Medium

- A. New Buildings and Infrastructure:** All objectives and action steps are applicable to new buildings and infrastructure.
- B. Existing Buildings and Infrastructure:** All objectives and action steps are applicable to existing buildings and infrastructure except adopt building codes. Enforcing building codes on existing buildings is not always feasible. Buildings maybe retrofitted but cannot always be brought up to stricter regulations.
- C. Special Multi-Jurisdictional Strategy and Considerations:** During a natural hazard it is imperative that all emergency personal can communicate with each other throughout the entire planning area. The County and its jurisdictions have numerous dead spots throughout the area due to topography and lack of adequate communication equipment. The County and its emergency personnel are dependent on the private sector for towers to use for signals. If these towers are ever removed the County will be without any adequate means to transmit signals. The County and all jurisdictions are aware of the need to develop communication capabilities that will serve their County.

Another concern is the lack of available data for the county and individual jurisdictions on hazard events. A database needs to be created and maintained that provides information on flooding events that occur. This database should include information such as location (road names, neighborhoods, GPS coordinates, etc.), damages reported, power outages, road closures, county and city personal that are dispatched to the area, etc.

- D. Completed and Deleted Action Steps and Unchanged or and Continual Actions Steps from Original Plan**

**Table 3.8**

**COMPLETED AND DELETED ACTION STEPS/ UNCHANGED AND/OR CONTINUAL ACTION STEPS**

Action #	Completed and Deleted Action Steps Unchanged and/or Continual Action Steps	Hazards	Status	Comments / Accomplishments
1.	Investigate greater participation Level in the CRS	Flood	Deleted	The cost of participation in the CRS is too costly for this small county
2.	Participate in the NFIP	Flood	Deleted	Crawfordville and Taliaferro County participate. Sharon has no flood hazards.
3.	Continue to assess stormwater runoff.	Flood	Continual/ Unchanged	
4.	Construct as needed, more storm water retention facilities, storm drain improvements and channel improvements to protect existing and new developments.	Flood/ Drought	Continual/ Unchanged	Completed Storm Water Improvements at Sandy Cross Rd, Center Hill Rd, Bethany Church Rd and Atkinson RD for \$102,000
5.	Clear run-off and water retention ditches.	Flood	Continual/ Unchanged	Ongoing by Road Department



Action #	Completed and Deleted Action Steps Unchanged and/or Continual Action Steps	Hazards	Status	Comments / Accomplishments
6.	Seek funding for communication towers and voice repeater systems.	All hazards	Continual/ Unchanged	
7.	Adopt ordinances to limit and control building and development in known flood prone areas.	Flood	Completed	Crawfordville and Taliaferro County participate. Sharon has no flood hazards.
8.	Promote the preservation of areas in and around watercourses.	Flood	Deleted	Development is limited due to flood ordinances.
9.	Add greenspace to known flood prone areas.	Flood	Deleted	
10.	Evaluate existing water system upgrade as needed	Drought/ Wildfire	Continual/ Unchanged	
11.	Investigate methods to reduce non-point source pollution.	Flood	Continual/ Unchanged	
12.	Promote increased surface water usage and surface artesian flow for irrigation.	Drought	Deleted	
13.	Enact a program to educate the residents about water conservation issues	Drought	Continual/ Unchanged	
14.	Increase public awareness of watering restrictions and bans.	Drought	Continual	GA EPD water restrictions are posted and advertised as required by law.
15.	Develop a public awareness campaign to promote water-saving campaigns (i.e. low-flow water saving devices)	Drought	Continual/ Unchanged	
16.	Continue training of all firefighters to include wildland fire training.	Wildfire	Continual/ Unchanged	All volunteer firefighters have completed annual fire training requirements
17.	Seek funding for needed firefighting equipment	Wildfire	Continual/ Unchanged	
18.	Inventory and replace or install more fire hydrants as needed.	Wildfire	Continual/	
19.	Seek funding fire engines and tankers for local fire departments.	Wildfire	Continual/ Unchanged	
20.	Enforce defensible space (30-ft minimum setbacks) between buildings and flammable brush and forestland where possible.	Wildfire	Completed	This is followed to the greatest extent possible
21.	Continue following GFC service of construction and maintenance of firebreaks around forests and structures, along abandoned roadbeds.	Wildfire	Completed	This is followed to the greatest extent possible
22.	Strictly follow GFC's guidelines for control burns and permits.	Wildfire	Completed	This is strictly enforced

Action #	Completed and Deleted Action Steps Unchanged and/or Continual Action Steps	Hazards	Status	Comments / Accomplishments
23.	Implement the Firewise Community Initiative where appropriate	Wildfire	Continual/Unchanged	
24.	Improve public awareness of wildfire techniques and awareness of wildfire dangers.	Wildfire	Continual/Unchanged	
25.	Adopt Building Codes	Flood, Severe Weather, Winter Storm	Continual/Unchanged	Will be addressed as part of the 2020 Comprehensive Plan update.
26.	Adopt Zoning Regulations	Flood, Severe Weather, Winter Storm	Continual/Unchanged	Will be addressed as part of the 2020 Comprehensive Plan update.
27.	To the greatest extent possible, identify all owners of inadequately installed manufactured homes offer a financial incentive to retrofit them with an appropriate level of anchoring and support.	Severe Weather	Deleted	No funding exists for this activity.
28.	Equip all county and city recreation parks with adequate early severe weather warning and lightning detection devices.	Severe Weather	Continual/Unchanged	
29.	Inspects public buildings and critical facilities and retrofit to reinforce windows, doors, and roofs as needed	Severe Weather, Winter Storms	Continual/Unchanged	
30.	Enforce building codes for all new buildings and critical facilities.	Flood, Severe Weather, Winter Storm	Continual/Unchanged	
31.	Inspect all county and municipal critical facilities for proper grounding.	Flood, Severe Weather, Winter Storm	Completed	
32.	Install lightning rods in high value critical facilities.	Severe Weather, Lightning	Continual/Unchanged	
33.	Install surge protectors on critical facilities' electronic equipment in essential county and city facilities.	Severe Weather, Lightning, Winter Storm	Completed	

Action #	Completed and Deleted Action Steps Unchanged and/or Continual Action Steps	Hazards	Status	Comments / Accomplishments
34.	Review current Emergency Response Plan and update when needed.	All hazards	Continual/ Unchanged	Plan was updated in January 2019
35.	Review current evacuation plans paying particular attention to vulnerable populations and update as needed.	Flood, Wildfire, Severe Weather, Winter Storm	Continual/ Unchanged	
36.	Provide boat owners with safety tie down procedures with boat registration.	Severe Weather, Winter Storm	Deleted	
37.	Develop a public awareness program about the installation of lightning grounding systems on critical infrastructure, residential and business properties.	Severe Weather, Lightning	Continual/ Unchanged	
38.	Inventory all critical facilities and assess generator needs. Install generators where needed.	All hazards	Continual/ Unchanged	Purchased to small generators for \$1,838. Installed a generator at AH Stephens Park \$15,000.
39.	Seek funding to ensure all current and future emergency shelters have back-up generators.	All hazards	Continual/ Unchanged	
40.	Educate the public on shelter locations and evacuation routes	Flood, Wildfire, Severe Weather, Winter Storm	Continual/ Unchanged	The EMA is in the process of creating a Facebook with educational information
41.	Develop public education and awareness programs regarding severe weather events to include home safety measures, purchase of weather radio and personal safety measures before, during and after an event.	Flood, Wildfire, Severe Weather, Winter Storm	Continual/ Unchanged	The EMA is in the process of creating a Facebook with educational information
42.	Implement a winter storm education program to include winterization of home and/or business and what to do before, during and after.			The EMA is in the process of creating a Facebook with educational information
43.	Review current codes to comply with and enforce the State building code with criteria for design snow load for buildings and structures.	Winter Storm	Deleted	
44.	Create a data base to record hazard event information.	All hazards	Continual/ Unchanged	

Action #	Completed and Deleted Action Steps Unchanged and/or Continual Action Steps	Hazards	Status	Comments / Accomplishments
45.	Inventory existing road equipment and purchase needed equipment to maintain roads before, during and after a hazard event.	Winter Storm, Severe Weather, Flood, Wildfire,	Continual/ Unchanged	Purchased two chainsaws for \$1,500 and an ATV Hauler trailer for \$1,099
46.	Develop coordinated management strategies for deicing, snow plowing, and clearing roads of fallen trees and debris	Flood, Severe Weather, Winter Storm	Continual/ Unchanged	
47.	Promote the construction of safe rooms in shelter areas and in public buildings.	Flood, Wildfire, Severe Weather, Winter Storm	Continual/ Unchanged	
48.	Update 911 equipment as needed.	All hazards	Continual/ Unchanged	\$30,000 worth of radio improvements.
49.	Request that all new education facilities be designed to serve as public shelters for emergency purposes.	All hazards	Continual/ Unchanged	
50.	Promote and participate in the following American Red Cross Programs • Disaster Resistant Neighborhoods Program • Business and Industry Preparedness Seminar • Community Disaster Education Preparedness presentations	All hazards	Continual/ Unchanged	
51.	Create an EMA website and Facebook Page with information pertaining to Emergency Preparedness.	All hazards	Continual/ Unchanged	The EMA is in the processes of creating a Facebook with educational information
52.	Work with local cable and radio providers to enhance and broadcast public education on Emergency Preparedness.	All hazards	Completed	The county and city have a good relationship with media
53.	Implement GIS technology on fire and emergency management vehicles so data can be readily available in the field so more accurate, timely assessments for future mitigation planning activities.	Flood, Wildfire, Severe Weather, Winter Storm	Continual/ Unchanged	

Action #	Completed and Deleted Action Steps Unchanged and/or Continual Action Steps	Hazards	Status	Comments / Accomplishments
54.	Purchase a portable sewer transfer pumping unit	Flood, Severe Weather, Winter Storm	Deleted	It is more cost effect to rent one if need than to won and have to maintain.
55.	Herman Nelson Warming System AIR HEATER w/TRAILER	Winter Storm	Deleted	Not cost effective.
56.	Pave Roads in county that are unpassable due to flooding	Flood	Continual	
57.	Provide NOAA weather radios to elderly and handicap populations (moved to all hazards).	Flood, Wildfire, Severe Weather, Winter Storm	Continual	
58.	Review existing comprehensive, development and land use plans to address flood prone areas.	Flood	In Progress	The Comprehensive plan is currently being updated. Set for completion in February 2020
59.	Preform procurement to contract with debris removal firm to have contract in place before hazards to ensure firm can move in immediately.	Winter Storm, Severe Weather, Flood, Wildfire,	Deleted	
60.	Run HAZUS scenarios once the software is updated and compatible to RC ArcGIS 10.2 update estimated losses.	Flood/ Severe Weather	Completed	A copy can be found in Appendix C
61.	Purchase needed Shelter Supplies.	Winter Storm, Severe Weather, Flood, Wildfire,	Continual	Purchased \$2,063 Bunk House shelter cart
62.	Purchase Emergency Management Trailer	All Hazards	Completed	Purchased and EMA trailer for \$4,412

## CHAPTER IV. PLAN INTEGRATION AND MAINTENANCE

Table 4.1 provides a brief description of each section in this chapter and a summary of the changes that have been made.

**Table 4.1**

Chapter I. Section	Updates to Section
I. Implementation Action Plan	General text edits based on current conditions and schedules; elaborated on how HMP is incorporated into other plans.
II. Evaluation, Monitoring, Updating Note whether the original method and schedule worked	Text edits based on previous experiences and future public involvement.
III. Plan update and maintenance	Regulated update and maintenance schedule and public involvement

### SECTION I. Implementation Action Plan

**A. Administrative Actions:** Taliaferro County Emergency Management Agency was responsible for overseeing the original planning process and the plan update. Facilitation of the planning process was conducted by the Central Savannah River Area Regional Commission. The Taliaferro County Board of Commissioners has authorized the submission of this plan to both GEMA and FEMA for their respective approvals. The Taliaferro County Board of Commissioners and the City Councils of Crawfordville and Sharon have formally adopted this plan after approval from GEMA and FEMA.

**B. Authority and Responsibility:** Upkeep and maintenance of the plan shall be the responsibility of the EMA Director, as determined during the planning process. It shall be the responsibility of the EMA Director to ensure that this plan is utilized as a guide for initiating the identified mitigation measures within the community. The Taliaferro County Board of Commissioners and the Mayors of all incorporated jurisdictions will be responsible for assigning appropriate staff members to implement the action steps identified in this plan for their jurisdictions. The EMA Director, or his designee, shall be authorized to call the committee to review and update this plan periodically (at least annually) throughout the useful life of the plan, not to exceed five years.

During the plan update process, the EMA Director and committee members shall identify projects that have been successfully undertaken in initiating mitigation measures within the community. These projects shall be noted within the planning document to indicate their completion. Additionally, the committee called together by the EMA Director shall discuss and identify any additional mitigation projects that are necessary in the community.

**C. Prioritization:** The mitigation goals, objectives and related action items were initially compiled from the input of the committee, as well as from others in the community. The committee prioritized the mitigation actions based on what would be perceived as most beneficial to the community, and the action steps have been listed in this plan as the



committee prioritized them. Several criteria were established to assist committee members in the prioritization of these suggested mitigation actions. Criteria included perceived cost benefit or cost effectiveness, availability of potential funding sources, overall feasibility, measurable milestones, multiple objectives, and both public and political support for the proposed actions.

1. **Methodology for prioritization:** To assist with the prioritization of mitigation actions, the STAPLEE worksheet and criteria recommended by FEMA was used. STAPLEE is a tool used to assess the costs and benefits and overall feasibility of mitigation actions. STAPLEE stands for the following:
  - i. **Social:** Will the action be acceptable to the community? Could it have an unfair effect on a particular segment of the population?
  - ii. **Technical:** Is the action technically feasible? Are there secondary impacts? Does it offer a long-term solution?
  - iii. **Administrative:** Are there adequate staffing, funding and maintenance capabilities to implement the project?
  - iv. **Political:** Will there be adequate political and public support for the project?
  - v. **Legal:** Does your jurisdiction have the legal authority to implement the action?
  - vi. **Economic:** Is the action cost-beneficial? Is there funding available: Will the action contribute to the local economy?
  - vii. **Environmental:** Will there be negative environmental consequences from the action? Does it comply with environmental regulations? Is it consistent with community environmental goals?

The committee was asked to review the STAPLEE score sheet and list of mitigation actions and assign a High, Medium or Low score to each item to help determine the item's priority. Each action item was discussed, and a consensus reached by the group on the importance of each item.

2. **Use of cost benefit refer to Worksheet #4:** Through the STAPLEE prioritization process, several projects emerged as being a greater priority than others. Some of the projects involved expending considerable amounts of funds to initiate the required actions. Other projects allowed the community to pursue completion of the project using potential grant funding. Still others required no significant financial commitment by the community.

The determination of the cost benefit of a project was based upon the anticipated cost in relation to the perceived benefit of the action taken. A proposed action with a high price tag, but minimal benefit to the community, was considered to have a low-cost benefit. Conversely, if minimal expenditures were required and the entire community would benefit, this received a favorable cost benefit rating. All proposed mitigation actions were evaluated to determine the favorability of the benefit in relation to the cost associated with completing the project. Determining the economic feasibility of mitigating hazards can provide decision makers with an understanding of the potential benefits and costs of an activity, as well as a basis upon which to compare alternative projects.

3. **Use of other calculations:** Estimation of potential damages and costs in the event of a natural hazard achieves two ends: (1) it enables the identification of critical economic targets for mitigation measures and (2) to enhance the ability to prioritize post-disaster response in aiding the community to recover.
4. **Use of other review structure:** All goals were discussed in detail to determine what was considered a priority for the EMA personnel.

**D. Incorporation of Local PDM Plan into other plans/planning measures:** The jurisdictions completed the update to their Joint Comprehensive plan and STWP in 2015. The 2015 plan was reviewed to determine if any of the mitigation activities need to be added to the above-mentioned documents. The County along with Crawfordville and Sharon worked jointly to produce these planning documents.

The STWP will be updated in 2020 and the Joint Comprehensive Plan is due for an partial update in 2020. The RC facilitates the planning process for both documents and updates both plans. The County takes the lead and all jurisdictions must participate to complete the comp plan and STWP. This Plan will be reviewed by the County along with all six jurisdictions. The requirements of this Hazard Mitigation Plan will be taken into consideration and will be incorporated into Comprehensive Plans, Five-Year Short-Term Work Program, Local Emergency Operations Plans, and all other such Plans as appropriate. This hazard plan will be reviewed and incorporated into the 2020 Joint Comprehensive plan and STWP update. In addition, relevant sections will be included in the revision of the LEOP which is currently being updated.

Once this plan is approved, it will be used by the consultants and planning committees responsible for the update process for the Joint Comprehensive Plan, Short-Term Work Programs, and all other plans that could incorporate the requirements of this plan. To facilitate inclusion of this plan, Taliaferro County will provide a copy of this plan to the persons and/or committees responsible for writing and updating plans.

## SECTION II. EVALUATION, MONITORING AND UPDATING

- A. Method:** The Plan is intended to be a ‘living’ document that informs stakeholders about hazard mitigation projects and plans undertaken by the county and their jurisdictions. In accordance with the requirements set forth in the Disaster Mitigation Act of 2000, Taliaferro County is required to review the PDM Plan annually and revise the plan every five years. The revision process will be consistent with the FEMA planning requirements as stipulated in the 44 CFR 201.6.
- B. Criteria to be used to monitor and evaluate the plan annually or after any natural disaster event.**
- a. Each hazard will be reviewed. Any new information pertaining to new and/or previous events will be added to the plan.
  - b. Any new critical facilities will be added to the plan.
  - c. Critical facilities information will be updated as needed.

- d. All mitigation goals, objectives and action steps will be reviewed for relevance and completion status. All mitigation goals, objectives and action steps that have been completed or are no longer relevant will be documented.
- e. New mitigation activities will be added if necessary.
- f. Public participation will be monitored and documented.

**C. Responsibility:** At the direction of the EMA Director, the committee shall be reconvened for the revision process which will include a schedule, timeline, and a list of the agencies or organizations participating in the plan revision. Taliaferro County and all incorporated jurisdictions have designated the following participants of the committee to guide plan maintenance and update activities to ensure that the information in the plan is current. The update committee will also be responsible for disseminating information to stakeholders within their respective jurisdictions.

**Table 4.2**

Jurisdiction	Hazard Mitigation Update Committee	Review
	Point-of-Contact	Schedule
Taliaferro County	Emergency Management Director	Annually
Crawfordville	City Clerk	Annually
Sharon	City Clerk	Annually

**D. Timeframe:** The committee has set the first Thursday of every June for the annual review of the plan update and within two months after any natural disaster event. A public notice will be submitted to the legal organ of each jurisdiction and the notice will be published at all government and community buildings.

### SECTION III. PLAN UPDATE AND MAINTENANCE

- A. Public involvement:** Taliaferro County is committed to having active public participation during reviews and updates of the PDM Plan. Public participation will follow the guidelines set forth in 44 CFR 201.6. Future public involvement of the community will be more stringent. The original method was not as successful as anticipated in ensuring community involvement. With this in mind, two weeks before the annual April review meeting, a notice will be published in the legal organ of Taliaferro County. Flyers will be placed at all government and community gathering places to ensure that citizens of the county are made aware of the annual review process. The new EMA website will also provide ongoing information about the plan and its implementation.
- B. Timeframe --** At the direction of the EMA Director, the committee will convene in order to accomplish the revisions the first Thursday of every October. The EMA Director will ensure the revised plan is presented to the Taliaferro County Board of Commissioners and its jurisdictions for formal adoption. In addition, all holders of the County plan will be notified of affected changes. No later than the conclusion of the five-year period following initial approval of the update plan, the EMA Director shall submit the update PDM Plan to the Georgia Emergency Management Agency and the Federal Emergency Management Agency for their review and coordination.

## CHAPTER V. Conclusion

### SECTION I. Summary

Through the update process of this plan, Taliaferro County has developed a more thorough hazard history, an inventory of critical facilities, and an updated contact list for emergency contacts at critical facilities. Natural hazards have been identified countywide. Goals, objectives and mitigation actions have been compiled and prioritized that would reduce the risk of lives and property as a result of the identified hazards. The committee has been able to work together effectively and efficiently to produce this document and establish a greater awareness of our risks and our mitigation strategies.

As a result of the update PDM planning process, Taliaferro County officials have obtained more complete and accurate information and knowledge regarding the County's disaster history, the presence of natural hazards, and the likelihood of each of these hazards occurring within the County, and the potential impacts and challenges these hazards present to the community.

All meetings were open to the public and advertised in *The Advocate-Democrat*, providing Taliaferro County citizens with the opportunity to comment on and offer suggestions concerning disaster mitigation actions within the community.

The committee found that it is difficult to predict the geographic threat, and therefore the resulting impact of some natural disasters as compared to others. Tornados and related severe weather strike randomly, usually affecting a small, localized area. On the other hand, natural disasters such as winter ice storms and drought can blanket the entire county, affecting all businesses, public facilities, and residents.

Recognizing this challenge, the committee identified both general and specific measures to aid in the mitigation of several natural hazards most likely to impact Taliaferro County. These measures include, but are not limited to, the protection of critical facilities and infrastructure, progressive governmental policies, and the proactive use of codes and regulations. It is worth noting that local government policies can often be the single most important and cost-efficient component of PDM.

The mission of the Taliaferro County Pre-Disaster Hazard Mitigation Planning Committee is to *"Make the citizens, businesses, communities and local governments of Taliaferro County less vulnerable to the effects of natural hazards through the effective administration of hazard mitigation grant programs, hazard risk assessments, wise floodplain management and a coordinated approach to mitigation policy through state, regional and local planning activities."*

The committee feels that this plan, when implemented, will help to make all of Taliaferro County a safer place to live and work for all of its citizens.

## SECTION II – REFERENCES

Numerous sources were utilized to ensure the most complete planning document could be assembled. In an effort to ensure that all data sources consulted are cited, references are listed in the following format: 1) Publications, 2) Web Sites, 3) Other Sources.

### **Publications:**

FEMA Pre-Disaster Mitigation *How-to Guides* #1, 2, 3, 7 (FEMA)

GEMA Supplements to FEMA Pre-Disaster Mitigation How-to Guides (GEMA)

*The Advocate-Democrat*

*The Augusta Chronicle*

Summary of Floods in the United States During 1990 and 1991

<http://pubs.er.usgs.gov/publication/wsp2474>

FLOODS IN GEORGIA. FREQUENCY AND MAGNITUDE. By. R. W. Carter.

<Http://pubs.usgs.gov/circ/1951/0100/report.pdf>

Georgia Archives University System of Georgia

<http://cdm.sos.state.ga.us:2011/cdm/search/searchterm/FLOOD/mode/all/order/subject/ad/desc>

### **Web Sites:**

FEMA [www.fema.gov](http://www.fema.gov)

GEMA [www.gema.state.ga.us](http://www.gema.state.ga.us)

Georgia Department of Community Affairs <http://www.dca.state.ga.us/>

Georgia Forestry Commission <http://weather.gfc.state.ga.us>

NOAA NCEI [www.ncdc.noaa.gov](http://www.ncdc.noaa.gov)

SHELDUS™ | Spatial Hazard Events and Losses Database for the United States

<https://sheldus.asu.edu/SHELDUS>

National Inventory of Dams <http://crunch.tec.army.mil/nid/webpages/nid.cfm>

<http://www.placenames.com>

New Georgia Encyclopedia <http://www.georgiaencyclopedia.org/nge/Home.jsp>

Georgia Archives University System of Georgia

<http://cdm.sos.state.ga.us:2011/cdm/search/searchterm/FLOOD/mode/all/order/subject/ad/desc>

United States Census Bureau <http://www.census.gov/>

United States Drought Monitor

<https://droughtmonitor.unl.edu/Data/DataDownload/WeeksInDrought.aspx>

USDA, NASS, 2017 CENSUS OF AGRICULTURE

[http://www.nass.usda.gov/Census\\_of\\_Agriculture/index.asp](http://www.nass.usda.gov/Census_of_Agriculture/index.asp)

<http://www.sercc.com/> The Southeast Regional Climate Center (SERCC)

<http://www.tornadohistoryproject.com/tornado/Georgia> Tornado History Project

### **Other Sources:**

American Red Cross

CSRA Regional Commission

Georgia Department of Natural Resources

Georgia Forestry Commission

Taliaferro County, Crawfordville and Sharon

Taliaferro County Board of Education

Taliaferro County Tax Assessor

## APPENDICES

### Appendix A – Hazard Identification, Risk Assessment and Vulnerability (HRV)

- I. Hazard A - Flood
  - a. Description
  - b. Data – GEMA Critical Facility Inventory Report
  - c. Maps
- II. Hazard B- Drought
  - a. Description
  - b. Data– GEMA Critical Facility Inventory Report
  - c. Maps
- III. Hazard C - Wildfire
  - a. Description
  - b. Data– GEMA Critical Facility Inventory Report
  - c. Maps
- IV. Hazard D – Severe Weather, Including Tornados, Tropical Storms, and Thunder Storms
  - a. Description
  - b. Data– GEMA Critical Facility Inventory Report
  - c. Maps
- V. Hazard E – Winter Storm
  - a. Description
  - b. Data– GEMA Critical Facility Inventory Report
  - c. Maps
- VI. All Hazards --
  - a. Description
  - b. Data– GEMA Critical Facility Inventory Report
  - c. Maps

### Appendix B –Growth and Development Trends Community Information

- I. Local Comp Plan Executive Summary
- II. Statistics/tables from Local Comp Plan
- III. Community Information

### Appendix C –Planning documents

- I. Executive Summary Local Emergency Operations
- II. Executive Summary GEMA State Emergency Operations
- III. Hazard Risk Analysis
- IV. Flood Insurance Study
- V. Community Wildfire Protection Plan
- VI. Timber Impact Assessment GFC
- VII. Executive Summary CSRA Regional Commission Regional Plan



Appendix D – Worksheets used in planning process

- I. Completed GEMA/local worksheets
- II. Blank GEMA/local worksheets
- III. Other misc. worksheets or planning process documents

Appendix E – Copies of Required Planning Documentation

- I. Public notice
- II. Meeting Agendas / Meeting Minutes
- III. Sign-in sheets
- IV. Local proclamations (copy of all resolution)
- V. GEMA/FEMA correspondence