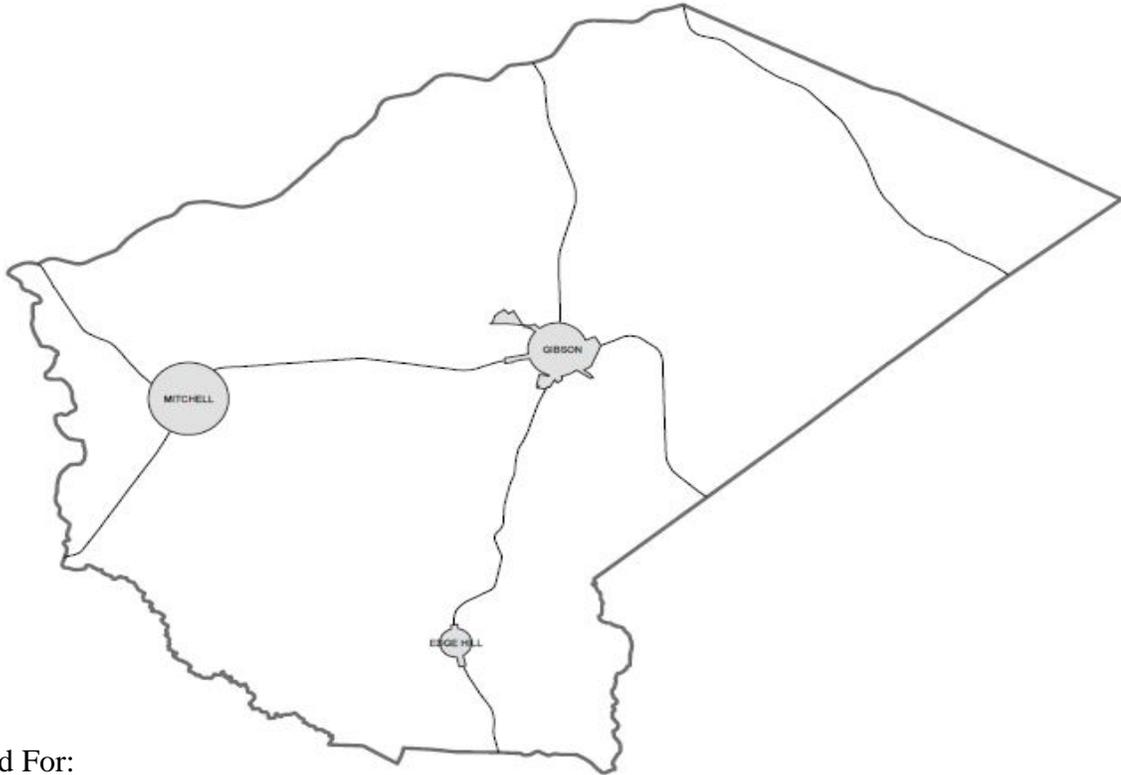


Glascok County, Georgia
Pre-Disaster Hazard Mitigation Plan Update
Original Approval: 11/21/2007
Update Approval: 11/04/2013
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CHAPTER I. INTRODUCTION TO THE PLANNING PROCESS

Table 1.1 provides a brief description of each chapter section 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, brief description of plan update process, Participants in update process | Updated the participants, planning process and how data collection was performed |
| III. Description of how each section of the original plan was reviewed and analyzed and whether it was revised | Since there have been numerous changes to the GEMA-PDM planning template since the 2013 approval all sections of the original plan were analyzed and revised. |
| IV. Organization of the plan | Organized updated by GEMA local planning template Local Hazard Mitigation Plan Update Template 5-23-12 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 (HRV, goals, special needs) | Added new information regarding multijurisdictional concerns. |
| VII. Adoption, implementation, monitoring and evaluation | Evaluated the chapter, added additional text clearly delineating the task for implementation, and monitoring. Adopted after GEMA and FEMA reviewed and approved the update. |
| VIII. Community Data (demographics, census, commerce, history, etc.) | Updated demographic and added additional information by jurisdiction. |

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

The Glascock County 2018 Update is a review and improvement of our Multi-Hazard Pre-Disaster Mitigation Plan Update approved on November 04, 2013. The plan fulfills the requirements of the Federal Disaster Mitigation Act of 2000 (DMA2K). The Georgia Emergency Management Agency (GEMA) and the Federal Emergency Management Agency (FEMA) administer the Act. 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 many community partners including elected officials along with city, county, fire, emergency management, and law enforcement personnel. The plan’s ultimate goal is to identify natural disasters that threaten our community and develop strategies to lessen the impact of these hazard events.

The 2018 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 2018 update covers all of Glascock County to include the Town of Mitchell and the Cities of Edge Hill and Gibson. The plan will identify all natural disasters that 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 2013 update.

The plan also contains the following information on:

- The vision of mitigation in our community;
- The profile of Glascock 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;
- Glascock 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 all four jurisdictions' 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 Glascock County's current policies, goals and regulations that pertain to hazard mitigation;
- Documentation of the planning process;
- Updated hazard events that occurred since 2013;
- Updated critical facilities that have been added since 2013;
- Documentation of mitigation strategies implemented since 2013; and
- Examined and updated mitigation strategy goals, objectives and action steps.

The update is the product of the combined efforts of Glascock County, Edge Hill, Gibson, and Mitchell. Realizing that identifying the community's risks and working collectively toward the prevention of disasters is in the county's best interest, the Glascock 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 all four jurisdictions.

Continued mitigation planning is imperative to lessen the impacts of disasters in all of Glascock County. This plan is 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 resistant to the impact of a disaster. The objective is plan implementation 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 Glascock County Board of Commissioners contracted with the Central Savannah River Area Regional Commission (RC) to assist in the update to the 2013 plan. The RC has assisted ten counties in the completion and update of their Pre-Disaster Mitigation Plans. The RC is currently assisting nine counties with their second update. The RC was tasked to review the current plan and to identify new information that needs 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.

The EMA Director, Mike Lyons assembled the Hazard Mitigation Planning Committee. Table 1.2 identifies the 2013:

Table 1.2

| Name | Agency | Jurisdiction |
|-------------------|-------------------------------------|---------------------|
| Alan Fowler | Glascock County Fire and Rescue | Glascock County |
| Angela Barrow | City of Edge Hill | Edge Hill |
| Audrey Chalker | Glascock County BOC | Glascock County |
| Barbara Hadden | Glascock County BOC | Glascock County |
| Billy Faulk | Jefferson Energy Cooperative | Glascock County |
| Brandi Pritchett | City of Gibson | Gibson |
| Connie Jackson | Glascock County Coroner | Glascock County |
| Dean Couch | Glascock County Sheriff's Office | Glascock County |
| Deann Simpson | Town of Mitchell | Mitchell |
| Donna H. Phillips | Glascock County DFCS | Glascock County |
| Gary Kitchens | City of Edge Hill | Edge Hill |
| Gregg Kelley | City of Gibson | Gibson |
| Gwyn Couch | Farm Bureau Insurance | Glascock County |
| James Chalker | Glascock County Fire | Glascock County |
| Jamie Kitchens | Gibson Water Department | Gibson |
| Jean Johnson | Glascock County DFCS | Glascock County |
| Jeremy Kelley | Glascock County Sheriff's Office | Glascock County |
| Jim Holton | Glascock County Consolidated School | Glascock County |
| Kathy Lyons | Cooperative Extension Service | Glascock County |
| Lori Boyen | Commission | Glascock County |
| Mark Shelton | Glascock County Fire | Glascock County |
| Michael Maye | Gibson-Glascock Fire Dept. | Glascock County |
| Mike Lyons | Glascock County EMA | Glascock County |
| Mike Neal | Glascock County BOC | Glascock County |
| Nona Lord | Glascock County Health Dept. | Glascock County |
| Dial Reed | Glascock County Road Dept. | Glascock County |
| Scott Lamb | Town of Mitchell | Mitchell |
| Shane Barrow | Georgia Forestry Commission | Glascock County |
| Steve Mathis | Gibson-Glascock Fire Dept. | Glascock County |
| Tracy Hutcheson | Glascock County BOC | Glascock County |

| Name | Agency | Jurisdiction |
|-------------------|--------------------------------|-----------------|
| W. Durham Milburn | City of Edge Hill | Edge Hill |
| Wanda Davis | Glascock Action Partners, Inc. | Glascock County |
| Wayne Williford | Glascock County BOC | Glascock County |

The 2013 planning committee members still employed by their respective jurisdictions received an invitation to participate in the update. The 2018 committee are identified in Table 1.3 by their respective organizations and political subdivisions.

Table 1.3

| Name | Title | Agency | Jurisdiction |
|-------------------|------------------------|----------------------------------|-----------------|
| Mike Lyons | EMA Director | Glascock County EMA | Glascock County |
| Gary Kitchens | Council Member | City of Edge Hill | Edge Hill |
| James Chalker | Volunteer Fire Fighter | Glascock County Fire | Glascock County |
| Jeremy Kelley | Sheriff | Glascock County Sheriff's Office | Glascock County |
| Mark Shelton | Volunteer Fire Fighter | Glascock County Fire | Glascock County |
| Lori Boyen | Chairman BOC | Glascock County BOC | Glascock County |
| Tammy Leonard | Contract Administrator | Glascock County DFCS | Glascock County |
| Nona Lord | County Nurse Manager | Glascock County Health Dept. | Glascock County |
| Angela Barrow | City Clerk | City of Edge Hill | Edge Hill |
| Lewis Berry | Mayor Pro-Tem | Town of Mitchell | Mitchell |
| Shane Barrow | Ranger 1/Forest Tech | Georgia Forestry Commission | Glascock County |
| Warren Pittman | Council Member | City of Gibson | Gibson |
| Wanda Davis | Executive Director | Glascock Action Partners, Inc. | Glascock County |
| Michael Maye | Volunteer Fire Fighter | Gibson-Glascock Fire Dept. | Glascock County |
| Alan Loque | Volunteer Fire Fighter | Glascock County Fire | Glascock County |
| Charles M Padgett | Volunteer Fire and EMT | Glascock County EMA | Glascock County |
| Frank McGahee | Volunteer Fire Fighter | Glascock County Fire | Glascock County |
| Jerry Wood | Volunteer Fire Fighter | Glascock County Fire | Glascock County |
| Ralph Franks | Volunteer Fire Fighter | Glascock County Fire | Glascock County |

The 2018 committee was responsible for the organization, data collection and completion of the plan. The committee requested information needed from all pertinent departments within their

respective governments. The following agencies/departments/organizations provided specific information and support for the original plan and provided any new information for the update:

- Glascock County Board of Education was responsible for providing structural replacement and content values for all schools as well as square footage and occupancy limits.
- Glascock County Sheriff’s Office provided staff support to the PDM planning effort.
- Glascock County Health Department identified vulnerable populations. They also provided replacement value estimates for their properties.
- All Fire Departments 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 Glascock County, Edge Hill, Gibson, and Mitchell 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.
- Glascock County Tax Assessor’s Office provided most of the aggregate values for the critical structures. The valuations were converted to full values since the values are calculated at 40%. This information, combined with demographic data, is located on GEMA Worksheet #3a in Appendix D for all jurisdictions.
- The RC’s Geographical Information System (GIS) Department produced several of the maps contained in the update. Maps are located in Appendix A.
- GEMA provided the HAZ-US report for Glascock County and provided guidance for the plans completion as needed.

Several resources were consulted to facilitate the development of the update. Data was collected from numerous sources, including the (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 1.4 provides a list of existing planning documents used during the update.

Table 1.4

| Existing planning mechanisms | Reviewed? (Yes/No) | Method of use in Hazard Mitigation Plan |
|--|-----------------------|--|
| Glascock County Joint 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 for Gibson only | Mitigation strategies, capability assessment |

| Existing planning mechanisms | Reviewed? (Yes/No) | Method of use in Hazard Mitigation Plan |
|--|-----------------------|---|
| 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 | The plan is being updated by the GFC and new plan will be incorporated once it is completed during the annual review. |
| Soil Survey for Glascock County | Yes | Physical Characteristics of the County |
| Flood Insurance Study | Yes | Review for historical Data and Information |
| Hazard Risk Analyses Supplement to the Glascock County Joint Hazard Mitigation Plan Provided by The Polis Center | Yes | Assessing vulnerabilities; Mitigation strategies, risk assessment |
| CSRA Regional Plan 2035 | Yes | Development trends; Future growth, regional concerns and data |
| Flood Mitigation Assistance Plan | No | The county does not have a Flood Mitigation Assistance Plan |

The committee held six meetings over a 20-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 earthquakes, 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 updated 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 1.5 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 six meetings, three were advertised in *The News and Farmer/The Jefferson Reporter*, 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, Hancock, Jefferson, Jenkins, Lincoln, McDuffie, Richmond, Taliaferro, Warren, Washington, and Wilkes including all municipalities located

within the counties. It is noted that no comments or feedback was provided by the public. Copies of correspondence, emails and advertisements are in Appendix E.

Table 1.5

| Meeting Date | Purpose of Meeting |
|---|---|
| August 17, 2016 | To solicit public input on the goals and objectives of the Plan Update. Scott Sherman and Shelby Meyers from GEMA provided a presentation about the purpose and need of the plan along with changes to the process since the 2013. Advertisement ran in <i>The News and Farmer/The Jefferson Reporter</i> for public meeting on August 11, 2016 |
| June 28, 2017 | Fire personnel meet to discuss mitigation strategies. |
| August 23, 2017 | This meeting was to ensure all data collected to date was correct for critical facilities and to reviewed mitigation strategies and action steps. |
| September 9, 2017 | Reviewed plan, mitigation strategies and Hazus information. |
| February 15, 2018 | An advertisement ran in the February 15, 2018 edition of <i>The News and Farmer/The Jefferson Reporter</i> advertising the public meeting on February 28, 2018 for public input before submission of plan. |
| February 28, 2018 | This meeting was to ensure the committee and public had a final opportunity to provide input before submission to GEMA for review. |
| TBD (will add date once approved by FEMA) | Advertisement ran in <i>The News and Farmer/The Jefferson Reporter</i> for public review period and the final meeting. |
| TBD (will add date once approved by FEMA) | Held final meeting after FEMA Approved Pending Adoption (APA). The final meeting was held after the 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 the current 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 Glascock County, Edge Hill, Gibson, and Mitchell.

SECTION IV. ORGANIZATION OF THE PLAN

The estimated time to complete the plan update was approximately 20 months. Plan completion was 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 were 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 Glascock 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 in order to ensure plan effectiveness. These goals and objectives established the paradigm for the planning process and proved very successful by the many accomplishments of the 2013 plan update. These goals and objectives are as follow:

- To actively involve and gain support from Edge Hill, Gibson, Mitchell, and unincorporated Glascock County to lessen the impacts of natural disasters in our community.
- Prioritize identified mitigation projects.
- Seek and implement any grant funding to lessen the impacts of natural disasters.
- Monitor, evaluate, and update the progress of the plan as needed.
- To form partnerships among local, state, and federal agencies to make Glascock 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 Glascock County, Edge Hill, Gibson, and Mitchell.

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

Glascock County, Edge Hill, Gibson, and Mitchell 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 2013 committee identified five major hazards that have the potential to affect Glascock County: flooding, drought, wildfire, severe weather (tornados, tropical storms, thunderstorms, lightning) and winter storms. The update committee reviewed current hazard data and added hail to the already identified hazard. Appendix D provides an updated comprehensive historical table for each hazard.

Profiling Hazard Events: The committee analyzed the causes and characteristics of each hazard, and its effect on Glascock 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 were given many opportunities 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 Glascock 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.

SECTION VI. MULTI-JURISDICTIONAL SPECIAL CONSIDERATIONS

Glascock County, Edge Hill, Gibson, and Mitchell provided active participants in the planning process. Specific mitigation goals, objectives and action items have been identified for each jurisdiction. The governing bodies for Glascock County, Edge Hill, Gibson, and Mitchell have formally adopted the Multi-Hazard Pre-Disaster Mitigation Plan.

Edge Hill, Gibson, and Mitchell were notified in June of 2016 of the requirement concerning the 2018 update. Representatives from Glascock County, Edge Hill, Gibson, and Mitchell 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 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 the vulnerability of natural disasters. Most natural threats overlap jurisdictions and are all susceptible to their affects. Glascock County, Edge Hill, Gibson, and Mitchell share the same passion and 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 VALUATION

Adoption Date

Table 1.6

| Jurisdiction | Adoption Date |
|---------------------|---------------------------------------|
| Glascock County | <i>(will add after FEMA Approves)</i> |
| City of Edge Hill | <i>(will add after FEMA Approves)</i> |
| City of Gibson | <i>(will add after FEMA Approves)</i> |
| Town of Mitchell | <i>(will add after FEMA Approves)</i> |

The plan was submitted to GEMA for review and then to FEMA for approval. The respective governing bodies for Glascock County, Edge Hill, Gibson, and Mitchell formally adopted the 2018 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 Glascock 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 Glascock 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.
- Collaborate with businesses in effort to communicate with customers about the community hazards and possible solutions.

Individual citizens must be made aware of the hazards and educated on how to protect themselves and their property. They must be shown mitigation is an important part of reducing loss of life and property. The public support is critical to the success of any mitigation effort. The Glascock 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 to ensure the plan remains an active and relevant document. The plan maintenance process includes monitoring and evaluating the plan annually, and producing a plan revision every five years. Additionally, Glascock County will develop steps to ensure public participation throughout the plan maintenance process. Finally, this section describes how Glascock County will incorporate the mitigation strategies identified in this plan into other relevant planning documents such as the Glascock County Joint Comprehensive Plan, Short-Term Work program (STWP) and Local Emergency Operations Plan (LEOP).

SECTION VIII. COMMUNITY DATA

Political Boundaries - Glascock County



Glascock County



*GA Department of Community Affairs
Region 7*



Georgia

History: Glascock County, established December 19, 1857, was named after Thomas Glascock, a soldier in the War of 1812, general in the First Seminole War, and a member of Congress from 1835 to 1839, native Georgian and distinguished lawyer, statesman, governor, and U.S. senator of South Carolina. Covering a total area of 144.2 square miles, it the fourth smallest county in Georgia. Glascock County is one of 13 counties that comprise the Central Savannah River Area (CSRA). There are three incorporated municipalities in Glascock County; Edge Hill, Gibson, and Mitchell.

Government: Glascock County operates under a commission-based system of government in which three commissioners are elected to four-year terms. Other county officials are the Sheriff, Coroner, Probate Judge, EMA Director and District Attorney.

Gibson is the County seat and operates under a Mayor and City Council-based system of government with four elected council members. Other officials charged with presiding over activities within the City are the City Clerk, City Attorney, Finance Officer, and Public Works Director.

Mitchell and Edge Hill also operate under a Mayor and Council-based system of government. Mitchell has four council members and a Mayor Pro-tem while Edge Hill has two council members. Other officials charged with presiding over activities within Mitchell are the Town Clerk, Town Attorney, and Water Superintendent. Officials in Edge Hill are the City Clerk, City Attorney, and the Water Superintendent.

Demographics: Presently, Glascock County has a population of 3,082 persons. The two tables below provide a comparison of the jurisdictions and a historical prospective of the population trends within the county.

Table 1.7

| Category | Glascock County | Edge Hill | Gibson | Mitchell |
|---------------------------------|-----------------|-----------|----------|----------|
| Population | 3,082 | 24 | 663 | 199 |
| Number of Households | 1,162 | 10 | 256 | 71 |
| Average Household Size | 2.58 | 2.4 | 2.24 | 2.8\$ |
| Race - White | 89.8% | 100% | 86.6% | 88.4% |
| Race - Black | 8.2% | 0.0% | 11.8% | 11.1% |
| Race - Hispanic | 1.1% | 0.0% | 0.3% | 0.3% |
| Race - Other | 0.9% | 0.0% | 1.3% | 0.2% |
| Median HH Income | \$40,759 | \$66,042 | \$31,250 | \$37,917 |
| Individuals below poverty level | 16.2% | 0.0% | 19.3% | 29.4% |

Source: 2010 -US Census Bureau, 2015 American Community Survey

Table 1.8

| Community | Population | | | | Growth (%) | | |
|-----------------|------------|------|------|------|------------|-----------|-----------|
| | 1980 | 1990 | 2000 | 2010 | 1980-1990 | 1990-2000 | 2000-2010 |
| Glascock County | 2382 | 2357 | 2556 | 3082 | -1.0% | 8.4% | 20.6% |
| Edge Hill | 53 | 22 | 30 | 24 | -58.5% | 36.4% | -20.0% |

| Community | Population | | | | Growth (%) | | |
|-----------|------------|-----|-----|-----|------------|-------|-------|
| Gibson | 730 | 679 | 694 | 663 | -7.0% | 2.2% | -4.4% |
| Mitchell | 214 | 181 | 173 | 199 | -15.4% | -4.4% | 15.0% |

Source: US Census Bureau

Economy: In the year 2016, the labor force for Glascock County was 1,275 and 1,197 were employed, giving the County an unemployment rate of 6.1%. The average weekly wage for employment sectors in Glascock County was \$490. The county’s per capita personal income was \$29,809.

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 2016 in Glascock County.

Table1.9

| Annual Industry Distribution of Jobs and Average Wage in 2013 (NAICS) | Establishments | Jobs | Weekly Average Wage Per Job |
|---|----------------|------------|-----------------------------|
| Total Covered Employment and Wages | 36 | 429 | 490 |
| Total Private Sector | 25 | 237 | 528 |
| Total Government | 11 | 191 | 442 |
| Agriculture, forestry, fishing, hunting | 3 | * | * |
| Mining | 0 | 0 | 0 |
| Construction | 1 | * | * |
| Manufacturing | 0 | 0 | 0 |
| Wholesale trade | 1 | * | * |
| Retail trade | 4 | 22 | 323 |
| Transportation, warehousing | 2 | * | * |
| Utilities | 0 | 0 | 0 |
| Information | 0 | 0 | 0 |
| Finance and Insurance | 1 | * | * |
| Real Estate, rental, leasing | 2 | * | * |
| Professional, technical services | 2 | * | * |
| Mgmt. of companies, enterprises | 0 | 0 | 0 |
| Administrative and support and waste management services | 0 | 0 | 0 |
| Educational services | 0 | 0 | 0 |
| Health care, social assistance | 3 | * | * |
| Arts, entertainment, recreation | 1 | * | * |
| Accommodation and food services | 3 | 28 | 171 |
| Other services, except public administration | 1 | * | * |

| | | | |
|------------------------------------|---|---|---|
| Unclassified-Industry not assigned | 1 | * | * |
|------------------------------------|---|---|---|

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

Climate: According to the National Weather Service, Central Georgia where Glascock County is located experiences all four seasons. Glascock County, GA, gets 46.3 inches of rain per year. The US average is 37. Snowfall is 0.2 inches. The average US city gets 25 inches of snow per year. The number of days with any measurable precipitation is 95. On average, there are 218 sunny days per year. The July high is around 91 degrees. The January low is 34.5.

Physical Features: Glascock County encompasses an area of roughly 144 square miles or 92,160 acres. The topography of Glascock County ranges from that of level in the low-lying flood plain areas to approximately 20% incline along the side slopes of some ridgelines. The county has numerous wetlands, 21 rivers and streams, 5 reservoirs, and bordered by the Ogeechee River. According to the GFC, Glascock County is approximately 68% or 62,668 acres of forestland.

Portions of Glascock County are located within the Carolina and Georgia Sand Hills Major Land Resource Area (MLRA), the Southern Piedmont MLRA, and Southern Coastal Plain MLRA. The Carolina and Georgia Sand Hills MLRA actually forms a very narrow band between the Southern Piedmont MLRA and the Coastal Plain MLRA.

Southern Piedmont - Characterized by steep to gently rolling thin and well drained red soil with sandy loam surface layers over sandy clay to clay subsoil. This area has fair to good suitability for building foundations and fair to poor suitability for septic tanks.

Carolina and Georgia Sand Hills - Consists of a belt of gently sloping to steep, well-drained soils originally derived from marine sands, loams, and clays. The area is largely covered with sparse forest of scrub oaks and pines, and has poor to good suitability for residential development and commercial-industry uses.

Southern Coastal Plain - Characterized by gently sloping well-drained sandy loam to sandy soils over friable and sandy clay loam to clay subsoils that are sticky when wet. This area has fair to good suitability for residential development and commercial industry uses. A map of the soil types, wetlands and flood plains are located in Appendix A.

A survey of Glascock County soil associations was conducted and approved by the Soil Conservation Service in 1994 and can be found at the following URL: https://www.nrcs.usda.gov/Internet/FSE_MANUSCRIPTS/georgia/glascock_jeffersonGA1994/Glascock.pdf. A map of the soil types, wetlands and flood plains are located in Appendix A.

Transportation

Vehicle Traffic: There are roughly 231 miles of roads in the County network. This mileage includes 82 miles of state highways, 364 miles of county roads, 17 miles of city streets (Edge Hill, Gibson, and Mitchell). State highways 80, 102, 123, and 171 are major transportation routes in the County. Currently Glascock County has no mass transit system.

Table 1.10

| Mileage by Route and Road System Report 445 for 2016 | | | |
|---|---------------------------|--------------|------------------------------|
| | Total Road Mileage (2016) | Lane Mileage | Vehicle Miles Traveled (VMT) |
| State Route | 41.01 | 82 | 32,885 |
| County Road | 182.10 | 364 | 35,679 |
| City Street | 8.44 | 17 | 3,627 |
| Total | 231.55 | 463 | 72,191 |

Source: Georgia Department of Transportation, Office of Transportation Data, "445 Series Reports."

Public Transportation: Glascock County, Gibson, Mitchell, and Edge Hill residents are served by the Glascock County Rural Transportation System. The transit service is available to all Glascock County residents by appointment (24-hour notice required) and can provide customers with access to facilities within all of Glascock County between the hours of 8:00 AM and 5:00 PM, Monday through Friday. The transit system also makes weekly trips to Wrens, Sandersville, and Augusta on Thursdays and Fridays by appointment. The Glascock County Rural Transportation System operates one van with a wheelchair lift. The system offers significantly lower fare box rates for residents 60 years or older than for younger segments of the population. Funding for the system comes from a mix of local sources – including operating revenues – and Federal Section 5311 funds. Agreements with the Georgia Department of Human Services and other state departments also allow the transit system to provide free trips to qualifying seniors and citizens with limited economic resources.

Rail Traffic: Glascock County does not have any working passenger, commuter, or freight rail lines. The closest freight line to Glascock County is in Warren County.

Air Service: Although Glascock County has no aviation facilities of its own, it is within close proximity to other general aviation airports of varying size and accommodation. Some Glascock County residents may find that one or more of the following airports may meet their aviation:

- Augusta Regional Airport at Bush Field
- Thomson-McDuffie County Regional Airport
- Atlanta Hartsfield-Jackson International Airport

Utilities

Electricity: Georgia Power and Jefferson Electric Membership Corporation provides electricity to the county.

Natural gas: Atlanta Gas Light Company provides natural gas to the county.

Water and Sewer: Gibson operates a public water system with a storage and treatment capacity of 175,000 gallons per day (gpd). The City also has three deep wells from which water is supplied. Mitchell operates a public water system with a storage and treatment capacity of 40,000 gpd. Edge Hill operates a public water system with two wells that supply the residents with water. The City of Gibson operates a public sewerage system. The number of customers in 1990 was 271. The current treatment capacity is 210,000 gpd compared to a 1991 average

demand of 42,358 gpd. Gibson treatment plant has a 120,000 gpd permitted capacity with an average discharge of 90,000 gpd.

Solid Waste: Glascock County has closed its landfill and has contracted with Advance Disposal for collecting solid waste at business dumpsters and collections sites in the County.

Communications: Glascock County's landline phone service primary provider is AT & T. The County has many media outlets that consist of print, radio, and television. Local print media consists of *The News and Farmer/The Jefferson Reporter* that serves as the legal organ of Glascock County and *The Augusta Chronicle*. Glascock County is served by 19 FM radio stations. All metro Augusta television stations broadcast in Glascock County. These are WRDW, WJBF, WAGT, 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 Glascock County EMA. CodeRED® is a new County service by which County officials can notify County residents by telephone about emergencies or critical community alerts. The system is capable of sending messages only to people affected or in the case of a widespread emergency like a tornado, to the County's entire population.

Fire and Rescue: Gibson, Mitchell, and Edge Hill are served by the Gibson-Glascock County Volunteer Fire Department with 20 volunteers. The Insurance Services Organization (ISO) rating in the County is 9, the cities it is 6.

Law Enforcement: The County Sheriff's Office currently is the sole provider of law enforcement services. The County has a 2500 sq. ft. building with no holding cells. Glascock County prisoners are housed in Thomson (McDuffie County). There is a sheriff, two full-time and two part-time deputies and a secretary. There are six police vehicles for officers.

Emergency Medical Service: McDuffie County Emergency Medical Service is a 24 hour emergency ambulance service that provides emergency pre-hospital advance life support and basic life support transportation to all ages of people within the boundaries of McDuffie and Glascock Counties. McDuffie County EMS is based at University Hospital McDuffie with a substation in the town of Dearing.

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

The committee identified all natural hazards that could potentially affect Glascock County, Edge Hill, Gibson, and Mitchell 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 in Glascock County. Task B then narrowed the list to only hazards most likely to affect the county by reviewing hazard websites to determine if Glascock County is located in a high-risk area.

Initially, the committee found that droughts, earthquakes, hurricanes, extreme heat, severe winter storms, tornados, wildfire, dam failure and windstorms might affect Glascock County. However, the committee later concluded that some of these hazards did not pose a significant threat. Because 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, which included obtaining a base map and recording hazard-event profile information. Of the five hazards mentioned, the entire County is exposed to four: severe weather, winter storms, wildfire and drought while flooding is isolated to select areas. Each of these potential hazards is addressed with relevant supporting data.

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

Gibson participates and will continue compliance with NFIP through review, adoption and updates to flood protection ordinances and to update flood maps as updates are available. Gibson will work towards database to record depth of flooding in order to determine extent and possible damage. Glascock County, Edge Hill and Mitchell do not participate in the NFIP. The County is reviewing the possibility of participating within the next year. These three jurisdictions do not participate, as there is no code enforcement or building inspection in the County. Until they can enforce the flood ordinances they will have a hard time participating. Edge Hill has only 24 residents and based on the Flood Insurance Study has no none flood prone areas. The following table provides information about each jurisdictions participation level.

| Jurisdiction | Init FHBM Identified | Init. FIRM Identified | Curr. Eff. Map Date | Reg-Emer Date | Sanction Date |
|-----------------|----------------------|-----------------------|---------------------|---------------|---------------|
| Glascock County | None | 06/18/2010 | 06/18/2010 | | |
| Edge Hill | None | N/A | N/A | | N/A |
| Gibson | 03/28/1975 | 06/18/2010 | 06/18/2010 | 07/17/86 | N/A |
| Mitchell | None | 06/18/2010 | 06/18/2010 | | 06/18/2011 |

Source: FEMA Community Status Book and Flood study

B. Hazard Profile: Severe flooding within Glascock County is a relatively infrequent event, there is a potential for flooding. The County has 5 reservoirs, and 21 river/streams. Slopes in Glascock County range from nearly level in the low-lying floodplain areas to approximately 20 percent along the side slopes of some ridgelines. The committee examined historical data from the NCEI, USGS, SHELDUS™, past newspaper articles and conducted interviews on the effects of past flooding events. In the last 67 years three flooding events were recorded, where all occurred in the unincorporated area of the County. The table below is a result of information gathered from interviews, newspaper articles, and the NCEI and SHELDUS™ databases.

| Date | Fatality | Inj | PrD | CrD | Event Narrative |
|------------|----------|-----|-------|-------|---|
| 8/16/1994 | 0 | 0 | 14k | 0.00k | Heavy rainfall fell across the county washing out several roads |
| 10/04/1995 | 0 | 0 | 0.00k | 0.00k | N/A |

| Date | Fatality | Inj | PrD | CrD | Event Narrative |
|----------|----------|-----|-------|-------|---|
| 7/7/2011 | 0 | 0 | 8.00K | 0.00K | Heavy rainfall of 5-6 inches in a 2-3 hour period across southern Warren and northern Glascock resulted in excessive runoff from Beechtree Branch Creek. The creek flooded/washed out a culvert on Log Cabin Road, a dirt road in the far northeastern part of the county |

Source: NCEI, SHELDUS and The Jefferson Reporter

Most flood events resulted in flash flooding which washed out several roads and wooden bridges. The average flood depth cannot be calculated for the county since Initial Flood Hazard Base Maps (FHBM) do not exist. Data pinpointing the depth of floodwaters and exact locations of all washed out roads and bridges is limited. The table above provides all known available data for the flood events. 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 as riverbanks overflow due to rainfall. The GMIS flood hazard map assigns a flood zone rating of zero for unincorporated parts of the County, Edgehill, Gibson and Mitchell where there are no identified or undesignated flood hazards. A hazard score of four has been assigned for known floodplain areas for unincorporated parts of the County, Edgehill, Mitchell and Gibson.

The magnitude of a major flood event could have approximately 50 percent of the county experiencing some damage from flooding. While data was collected looking at 67 years of data, frequency rate was calculated using a 20-year hazard cycle per guidance from GEMA. Based on a 20-year hazard cycle the chance of an annual flooding event occurring is five percent for all of Glascock County. No prediction can be made for the three incorporated jurisdictions of the county, as no data is available. (See Appendix A, Section I for, Historical Event Tables, Critical Facilities Reports, and Flood Maps and Appendix D for Hazard Frequency Tables and Worksheet 3A).

- C. Assets Exposed to Hazard and Estimates of Potential Loss:** For determination of assets exposed to risk, maps created from FEMA data and available parcel data were used. Based on FIRM, tax digests, and FEMA Worksheet #3a, it was determined that all or a portion of 105 structures/properties valued at more than \$1.1 million and a population of 185 are located in known flood prone areas within the County.

All 105 structures/properties have been identified by federal floodplain maps and/or parcel maps and not all structures/properties will experience damage from floods. The extent of each flood varies according to the amount of rainfall in a given area. If a complete loss of the 105 structures/properties located would result in approximately \$1.1 million in damages assuming 100 percent loss, a 75 percent loss would represent approximately \$ 825,000, a 50 percent loss would represent approximately \$550,000, and a 25 percent loss would represent approximately \$ 275,000.

The GMIS flood hazard map assigns a flood zone rating of zero for unincorporated parts of the County, Edgehill, Gibson and Mitchell where there are no identified or undesignated flood hazards. A hazard score of three has been assigned for known floodplain areas for unincorporated parts of the County, Mitchell and Gibson.

The table below shows the hazard scores assigned by the GMIS to critical facilities with replacement values content values and occupancy.

| Jurisdiction | Flood Hazard Score | # of Critical Facilities | Replacement Value \$ | Content Value \$ | Occupancy | |
|-----------------|--------------------|--------------------------|----------------------|------------------|-----------|-------|
| | | | | | Day | Night |
| Glascock County | 1 | 8 | \$6,953,660 | \$2,580,000 | 134 | 3 |
| Glascock County | 0 | 8 | \$12,139,717 | \$1,150,000 | 765 | 3 |
| Edge Hill | 1 | 3 | 1,025,000 | \$400,000 | 5 | 0 |
| Gibson | 1 | 2 | \$4,300,000 | \$60,000 | 0 | 0 |
| Gibson | 0 | 2 | \$1,099,640 | \$500,000 | 50 | 0 |
| Mitchell | 1 | 9 | \$3,725,530 | \$633,500 | 51 | 0 |
| Mitchell | 0 | 1 | \$150,000 | \$350,000 | 0 | 0 |
| TOTAL | | | \$29,393,547.00 | \$5,673,500.00 | 1,005 | 6 |

The GMIS has no repetitive flooding NFIP properties and no NFIP mitigated property. There is no estimate for future structures since future development will be limited in known floodplains. (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 Glascock 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 flood risk assessment analyzed at risk structures in the SFHA. The results of the Riverine 1% Flood Scenario revealed that buildings in County 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:

- **Building Losses:** Residential buildings 1,424 residential properties damaged at a loss of \$116,678,585.
- **Essential Facility Losses:** No essential facilities are subject to damage.
- **Flood Shelter Requirements:** The scenario estimates 54 households are subject to displacement. Displaced households represent 163 individuals, of which 63 may require short-term publicly provided shelter.
- **Flood Debris:** Hazus-MH estimates that an approximate total of 502 tons of debris might be generated by the flood. The model breaks debris into three general categories:
 - Finishes (dry wall, insulation, etc.) - 237 tons generated;
 - Structural (wood, brick, etc.) – 94 tons generated; and
 - Foundations (concrete slab, concrete block, rebar, etc.) - 172 tons generated.

D. Land Use and Development Trends: The Glascock County Joint Comprehensive Plan 2015-2035 presents future development scenarios for the County. The County should see future limited growth in the future. Most new development will be residential. The county should

strive to ensure no development in environmentally sensitive areas. According to the Georgia Department of Labor, the County's population is projected to increase by more than eight percent by 2025. A copy of the comprehensive plan on land use can be found in Appendix B.

- E. Multi-Jurisdictional Concerns:** During a natural hazard, it is imperative that all emergency personnel 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, along with the municipalities are aware of the need to develop communication capabilities that will serve their County. Since flooding has the potential to affect all of Glascock County, any mitigation steps taken related to flooding should be undertaken on a countywide basis to include Edge Hill, Gibson and Mitchell.
- F. Hazard Summary:** Based on interviews, data from the NCEI covering 67 years, and the local paper, *The Jefferson Reporter/News and Farmer*, there have been three reported flooding events. All of these events took place in the unincorporated areas of the county. These flooding events were the result of heavy rains. The rainfall resulted in flash flooding, washed out several roads and downed trees and power lines.

Based on a 20-year hazard cycle the chance of an annual flooding event occurring is five percent for all of Glascock County. Hazard frequency tables can be found in Appendix D. Severe flooding, although relatively rare in occurrence, has the potential to inflict significant damage. Mitigation of flood damage requires the community to know where flood-prone areas are, what roads and bridges may be affected, and which facilities fall below anticipated flood levels. The committee recognized the potential for losses caused by flooding and identified it as a hazard requiring mitigation measures.

Based on tax data, parcel and flood maps, all or a portion of 105 known structures/properties valued at approximately \$1.1 million and a population of 185 are 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

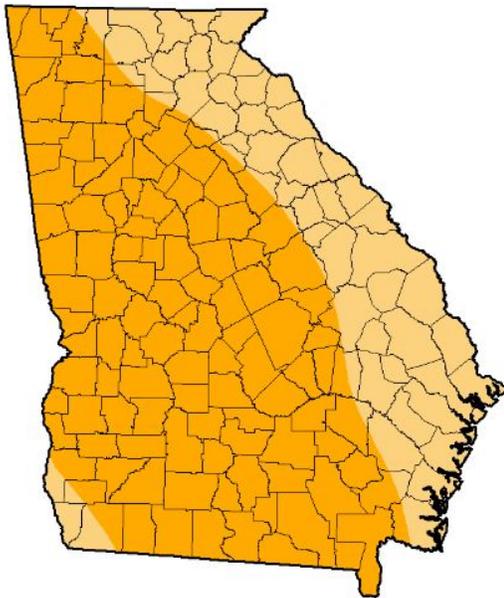
- A. Hazard Identification:** The committee reviewed historical data from the Palmer Drought Index, NCEI, DNR, USDA and GFC in researching drought conditions. Drought conditions are identified by a prolonged period of moisture deficiency. Climatologists and hydrologists use five indicators of drought: 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 92,160 acres in the county, 96% are dedicated

to agricultural and forestry uses. According to the USDA 2012 Census of Agriculture, Glascock County has 96 farms with a total acreage of 24,014 of agricultural land. Within the County, there are 4,342 head of livestock. There have been 26 reported drought events over the last 67 years. A table of drought events can be found in Appendix A. Losses due to drought conditions are primarily agricultural. No critical facilities have sustained any damage or functional downtime due to dry weather conditions.

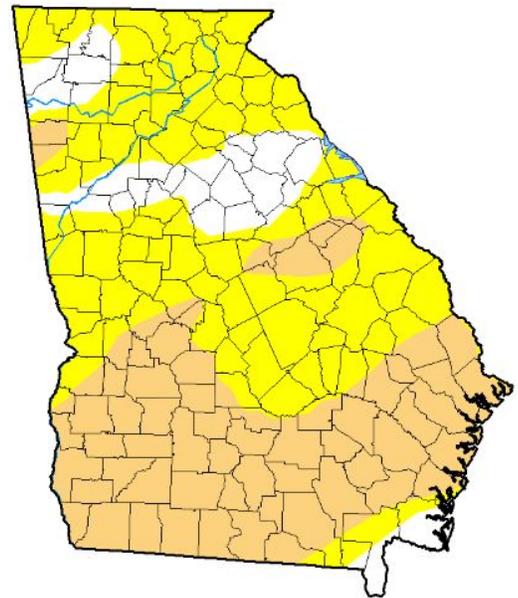
According to the NCEI, there have been no reported drought events in Glascock County. The Palmer Index is most effective in determining long-term drought, a matter of several months, and is not as good with short-term forecasts (a matter of weeks). The Palmer Index uses a zero abnormally dry, and drought 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 (from <https://www.NCEI.noaa.gov/temp-and-precip/drought/historical-palmers/>) reveals there have been 24 drought events since 1997. One of the longest running droughts in recent history began in January 2012 and ended in February 2013. The County was in exceptional drought conditions from January to July of 2012 and in extreme drought conditions from August 2012 to January 2013. The last drought ran from August 2016 to January 2017. The drought of 2016 the county ranged between a -2.00 (severe drought) and a -4.00 (exceptional drought) on the Palmer Index. The average based on historical data is a -3.00 on the Palmer Index. The maps below show drought conditions for January 2000 and January 2018.

Drought Classification



January 4, 2000

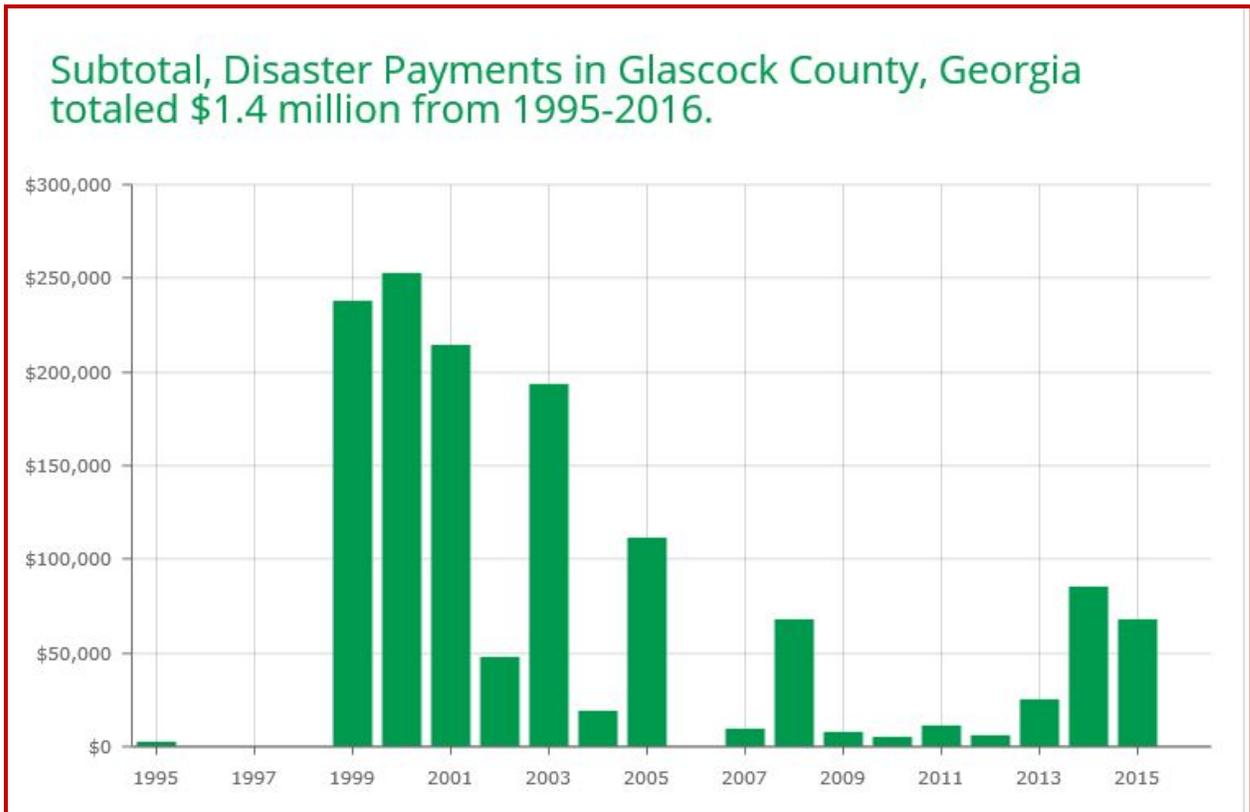


January 2, 2018

Based on the weekly data from the US Drought Monitor (<http://droughtmonitor.unl.edu/MapsAndData/MapsandDataServices/StatisticalData.aspx>) from January 2000 to January 2018 the county has experienced the following drought conditions:

- 164 weeks where all or a portion of the county has experienced of D0 - Abnormally Dry;
- 171 weeks where all or a portion of the county has experienced of D1 - Moderate Drought;
- 94 weeks where all or a portion of the county has experienced levels of D2 - Severe Drought;
- 161 weeks where all or a portion of the county has experienced levels of D3 - Extreme Drought; and
- 46 weeks where all or a portion of the county has experienced levels of D4 - Exceptional Drought. (US Drought Monitor and Extent Tables can be found in Appendix A.)

According to the USDA Farm Subsidies Database, there has been a total of \$ \$1,367,278 in disaster assistance from 1995-2016. The graph below depicts amounts and years of payments.



https://farm.ewg.org/progdetail.php?fips=13125&progcode=total_dis

Historical data is only for the county as a whole. A severe, prolonged drought would mainly affect the 96 percent 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 the incorporated cities, as water restrictions would be enforced. Based on a 20-year hazard cycle history there is a 125 percent chance of an annual drought event for the county as a whole. (See Appendix D for Hazard Frequency tables and Worksheet 3a.)

C. Assets Exposed to Hazard and Estimate of Potential Losses: Drought conditions typically pose little or no threat to structures; however, fires can occur because 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 because 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:

- Edge Hill has eight agricultural/forestry structures/properties valued at approximately \$213,655 with an estimated population of four.
- Gibson has 17 agricultural/forestry structures/properties valued at approximately \$576,245 with an estimated population of seven.
- Mitchell has 47 agricultural/forestry structures/properties valued at approximately \$1,571,652 with an estimated population of 11.
- Unincorporated Glascock County has 2,026 agricultural/forestry structures/properties valued at approximately \$93 million with an estimated population of 75.

There are 2,098 agricultural/forestry properties in countywide valued at approximately \$95.5 million with a population of 97 that are at the greatest risk due to a drought event (See Appendix A, Section III for Historical Event Tables, Drought Extent Tables and Drought Maps and Appendix D for Hazard Frequency Tables and Worksheet 3A..)

D. Land Use and Development Trends: The County currently has no land use or development trends related to drought conditions. When drought conditions do occur, all jurisdictions follow 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, rainwater, 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 can water on Mondays, Wednesdays and Saturdays.

Projected changes in land use based on the joint comprehensive plan, has minimal or no change. 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. Current and future land-use tables, maps and projections 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 Edge Hill, Gibson and Mitchell 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 affects the entire planning area equally. 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 Glascock 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 there is a 125 percent chance of an annual drought event in Glascock County. In addition to an increased threat of wildfires, drought can affect private wells, municipal and industrial water supplies, stream-water quality, water recreation facilities, hydropower generation, as well as agricultural and forest resources.

In summary, for Glascock County as a whole, there are 2,098 agricultural/forestry properties valued at approximately \$95.5 million and include 4,342 heads of livestock and an estimated population of 97 that have the greatest potential to be damaged by drought. There is a population of 3,082 and approximately 8,529 structures/properties in the county with a value just slightly more than \$249 million, which could be affected if wildfires break out due to drought conditions. Drought mitigation goals and objectives are in Chapter III, Section II.

All water departments have adopted the Georgia Water Stewardship Act that 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 enforcement of these restrictions helps to ensure an ample water supply during drought times. All citizens are informed of water restrictions as they occur.

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:** Glascock County's consist of 144 square miles. The county is comprised of 92,160 acres where 96 percent are dedicated to agricultural and forestry. 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 Glascock County.

The committee reviewed historical data from the GFC, which is not found in the NCEI database, to research wildfire events. The GFC provides wildfire data on manmade 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 2016, there have been 834 fire events burning a total of 3,506 acres for an average extent of 4.2 acres. Of these 834 fire events, only 54 were a result of a natural hazard event that burned 376 acres. Based on best available data, the 54-wildfire events due to the natural hazard of lightning all occurred in the unincorporated areas of the county. There is no data available for the Edge Hill, Gibson or Mitchell.

While data was collected looking at 60 years of data, frequency rate was calculated using a 20-year hazard cycle per guidance from GEMA. There were 23 wildfire events during the 20-year hazard cycle predicting a 115 percent chance of an annual wildfire due to a natural hazard event or statistically the county can expect one wildfire because of a natural hazard annually. The drier the condition the more susceptible the county is to wildfire (*See Appendix D*).

- Hazard score of two (low wildfire risk)
 - Unincorporated Glascock County – approximately 1%

- Hazard score of one (very low wildfire risk)
 - Unincorporated areas of the county – approximately 85%
 - City of Gibson – 100% of the city
 - Town of Mitchell- 100% of the town
- Hazard score of zero (no houses, agriculture, water, or city)
 - Unincorporated areas of the county – approximately 15%
 - City of Edge Hill – approximately 100% of the city

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 due to a wildfire event are more likely to occur in areas of the county where forestry and woodland are prevalent but does have the potential to spread into the incorporated areas and cause extensive damage. FEMA Worksheet #3a located in Appendix A shows the number and types of buildings found in Glascock County, as well as the value of these structures/properties and their population. The following assets by jurisdiction could potentially be exposed to wildfire hazard.

| Jurisdiction | Number of Structure/Properties | Value \$ | Population |
|----------------------------------|--------------------------------|--------------------|--------------|
| Glascock County (Unincorporated) | 6,714 | \$214,033,590 | 2,196 |
| Edge Hill | 107 | \$1,188,582 | 24 |
| Gibson | 1,165 | \$24,676,853 | 663 |
| Mitchell | 543 | \$9,107,680 | 199 |
| TOTAL FOR COUNTY | 8,529 | 249,006,705 | 3,082 |

Source: Glascock County Tax Assessor

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

| Jurisdiction | Wildfire Hazard Score | # of Critical Facilities | Replacement Value \$ | Content Value \$ | Occupancy | |
|-----------------|-----------------------|--------------------------|------------------------|-----------------------|--------------|----------|
| | | | | | Daily | Night |
| Glascock County | 1 | 13 | \$15,922,760 | \$3,580,000 | 891 | 4 |
| Glascock County | 0 | 3 | \$3,170,617 | \$150,000 | 8 | 2 |
| Edge Hill | 0 | 3 | \$1,025,000 | \$400,000 | 5 | 0 |
| Gibson | 1 | 4 | \$5,399,640 | \$560,000 | 50 | 0 |
| Mitchell | 1 | 9 | \$3,725,530 | \$633,500 | 51 | 0 |
| Mitchell | 0 | 1 | \$150,000 | \$350,000 | 0 | 0 |
| TOTAL | 3 | 33 | \$29,393,547.00 | \$5,673,500.00 | 1,005 | 6 |

According to FEMA Worksheet #3a, there are 8,529 structures/properties with a population of 3,082 with a value of slightly more than \$249 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, Section IV, for Historical Event Tables, Critical Facilities Reports and Wildfire Map, and Appendix D for Hazard Frequency Table and Worksheet 3A).

- D. Land Use and Development Trends:** Glascock 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 Glascock County Fire Services. 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:** Wildfire has the potential to affect the entire county. As a result, all mitigation steps taken related to wildfire should be undertaken by Glascock County, Edge Hill, Gibson and Mitchell. Also during a natural hazard, it is imperative that all emergency personnel can communicate with each other throughout the entire planning area. Another concern is the lack of available data for the county and individual jurisdictions. A database needs to be created and maintained that provides information on all past and future occurring wildfire events.
- F. Hazard Summary:** Glascock County's consist of 144 square miles. The county is comprised of 92,160 acres where 96 percent are dedicated to agricultural and forestry. The NCEI has never reported a significant wildfire event in Glascock County. According to Georgia Forestry data, from 1957 to 2016, there have been 834 fire events burning a total of 3,506 acres for an average extent of 4.2 acres. Of these 834 fire events, only 54 were a result of a natural hazard event that burned 376 acres.

According to FEMA Worksheet #3a, there are 8,529 structures/properties with a population of 3,082 with a value of slightly more than \$249 million worth of assets countywide. Mitigation Goals and Objectives concerning wildfires are in Chapter III, Section III.

The County continues to follow GFC guidelines to service the construction of firebreaks around forests and structures, maintain fuel breaks along abandoned roadbeds and recommends a defensible space (30-ft minimum setbacks) between buildings and strictly follow guidelines for control burns and permits.

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

- A. Hazard Identification:** The committee reviewed historical data from the county's own weather database, the NCEI, SHEL DUS™, newspapers and citizen interviews in researching the past effects of severe weather. 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. Tornadoes 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 manmade structure.

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

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 due to 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 that 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. Then they are 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.

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 Glascock County is vulnerable to the threats of severe weather. The first recorded incident of tornado touchdown in Glascock County was on March 23, 1875. As a result, two homes were demolished and twelve persons died. There is no data available as to the intensity of the event as it relates to the Fujita Scale.

Based on historic data, there have been five reported tornados in the planning area: four in the unincorporated areas of the county and one in Gibson. There are no records of a tornado in Edge Hill or Mitchell. The highest magnitude reported was an F3. The longest path was 15 miles. The tornado in February 2009 caused \$25,000 in damages across three counties; the two in April 2009 \$6,000 in property damage and the March 2013 caused \$250,000 in property damage.

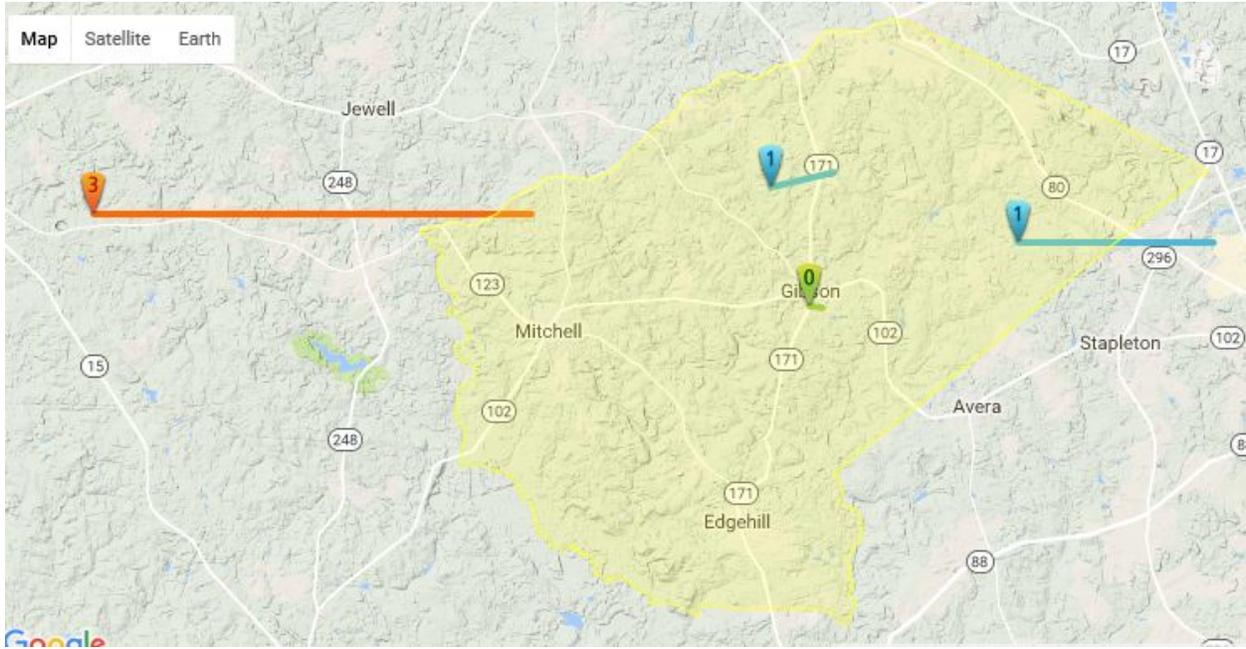
Tornados tend to strike in somewhat random fashion, making the task of calculating a recurrence interval extremely difficult. Using a 20-year hazard cycle, frequency tables calculates an annual chance for a tornado event at:

- 20 percent for Glascock County as a whole;
- 15 percent for Unincorporated Glascock County; and
- 5 percent for Gibson
- No calculation is available for Edge Hill or Mitchell

The following table shows the event, severity and estimated cost of damages reported. The map from the Georgia Tornado Projects shows the paths taken by the storms (See Appendix A, Section I and Appendix D).

| Date | Location | Deaths | Inj | Fujita | PD | CrD | Event Narrative |
|------------|--------------------------------------|--------|-----|--------|------|-----|---|
| 03-23-1875 | Unincorporated Glascock County | 12 | | | | | None Reported |
| 02/18/2009 | Unincorporated Glascock County | 1 | 3 | 3 | 25k | 0 | EF0 tornado had touched down just southeast of the city of Gibson and traveled approximately 1000 yards on an east-southeastward track. with a maximum path width of 150 yards with maximum winds of 100 mph. A number of large pine trees were uprooted or snapped along the path of the tornado. However, no structural damage noted. |
| 04/10/2009 | Gibson | | | 0 | 4k | 0 | The tornado had a maximum path width of 150 yards with maximum winds of 100 mph. A number of large pine trees were uprooted or snapped along the path of the tornado. no structural damage was noted |
| 04/10/2009 | Unincorporated Glascock County | | | 1 | 2k | 0 | an EF1 touched down in the far eastern part of the county, approximately 4.5 miles east-northeast of Gibson.. The maximum path width 200 yards with maximum winds estimated at 110 mph. Damage within county from this tornado was confined to several downed trees. |
| 03-05-2013 | Unincorporated Glascock County | | | 1 | 250k | | an EF-1 tornado touched down northwest of Gibson. Numerous trees were snapped and uprooted along the 1.5-mile path. As the tornado crossed Georgia State Highway 171, it ripped off 20 percent of the metal roof from a home residence, tossed a camper trailer 50 feet, and knocked two mobile homes off their foundations. The occupant of one home had to be rescued. The worst damage occurred near the intersection of Georgia Highway 171 and Magnolia Church Road where 60 percent of the Magnolia Baptist Church roof was ripped off, and the brick-walled fellowship hall on the west end of the church was completely destroyed. Numerous tombstones and other structures at the adjoining cemetery near the church were also damaged |

Sources: Interviews, The Jefferson Reporter, Georgia Tornado History Project, NCEI and SHELDUSTM



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

There have been 15 tropical storms reported by the NCEI and SHELUDUS™ with approximately \$76,000 property damage. These storms produced winds from 35-45 mph with gust up to 55 mph. Damages because of the storms were due to power outages, downed trees and flash flooding. The tropical storms affected the entire planning area. Data for each jurisdiction is not available. Using a 20-year hazard cycle there is a 65 percent chance of an annual tropical storm event for county as a whole (See Appendix D).

| Details | Date | PrD | CrD |
|------------------------------------|------------|--------|-------|
| Result of Hurricane Cleo | 8/28/1964 | 1.00k | 0.00K |
| Result of Hurricane Agnes | 6/19/1972 | 0.00K | 0.00K |
| Result of Tropical Storm Hannah | 09/14/2002 | 0.00K | 0.00K |
| Result of Tropical Depression Bill | 07/01/2003 | 0.00K | 0.00K |
| Result of Hurricane Francis | 09/06/2004 | 0.00K | 0.00K |
| Result of Hurricane Ivan | 09/16/2004 | 0.00K | 0.00K |
| Result of Hurricane Jeanne | 09/26/2004 | 0.00K | 0.00K |
| Result of Tropical Storm Arlene | 06/12/2005 | 0.00K | 0.00K |
| Result of Hurricane Dennis | 07/10/2005 | 0.00K | 0.00K |
| Result of Hurricane Katrina | 08/29/2005 | 0.00K | 0.00K |
| Result of Tropical Storm Tammy | 10/05/2005 | 0.00K | 0.00K |
| Result of Tropical Storm Fay | 08/21/2008 | 0.00K | 0.00K |
| Result of Hurricane Ida | 11/10/2009 | 0.00K | 0.00K |
| Result of Tropical Storm Lee | 09/04/2011 | 0.00K | 0.00K |
| Result of Hurricane Irma | 09/11/2017 | 75.00K | 0.00K |

Source: NCEI and SHELUDUS

Thunderstorms are much more prevalent during the spring and summer months. There have been 34 events reported by the NCEI and SHELDUS™ in the last 67 years with highest winds reported at 61 knots. These storms with more than \$286,000 in property and crop damages reported. The table below breaks down the thunderstorm events by jurisdiction. A complete table of thunderstorm wind events can be found in Appendix A.

| Location | # of Events | County-Wide Events* | Total # of events per jurisdiction |
|---------------------------------|-------------|---------------------|------------------------------------|
| Glascock County(Unincorporated) | 3 | 33 | 36 |
| Edge Hill | 1 | 33 | 34 |
| Gibson | 6 | 33 | 39 |
| Mitchell | 5 | 33 | 38 |
| TOTAL FOR COUNTY | 15 | 33 | 48 |

* It is assumed that all 54 countywide events reported occurred in each jurisdiction. Source: NCEI and SHELDUS

While data was collected looking at 67 years, frequency rate was calculated using a 20-year hazard cycle per guidance from GEMA. Using a 20-year hazard cycle, the frequency table calculates an annual chance for a thunderstorm event producing high winds is:

- 100 percent for Glascock County as a whole;
- 40 percent for Unincorporated Glascock County;
- 50 percent for Edge Hill;
- 45 percent for Gibson; and
- 50 percent for Mitchell.

Hazard frequency tables for individual jurisdictions are in Appendix D.

The fourth weather event is lightning. During the spring and summer months the county experiences numerous storms that can often produce lightning. The VAISALA National Lightning Detection Network has the average flash density per square mile between 6 and 12 from 2007-2016. A search of storm data on NCEI has only five reported lightning events in the past 67 years with slightly more than \$50,000 in property damages with no injury. Since 1950 there have been 54 lightning strikes recorded resulting in wildfires. When these datasets are combined there has been 59 lightning strikes recorded.

While data was collected looking at 67 years of data, hazard frequency rate was calculated using a 20-year hazard cycle per guidance from GEMA. Based on a 20-year hazard cycle, the annual chance for a lightning strike is:

- 120 percent for Glascock County as a whole;
- 115 percent for Unincorporated Glascock County;
- 5 percent for Gibson; and
- No data is available for Edge Hill and Mitchell.

The fifth weather event is hail. A combination of SHELDUS™ and NCEI data reports 28 hail events in the last 67 years with slightly more than \$26,700 in property and crop damages with injuries. Hailstones ranged in size from .75 to 1.75 inches.

| Location | # of Events | County-Wide Events* | Total # of events per jurisdiction |
|---------------------------------|-------------|---------------------|------------------------------------|
| Glascock County(Unincorporated) | 1 | 15 | 16 |
| Edge Hill | 3 | 15 | 18 |
| Gibson | 8 | 15 | 23 |
| Mitchell | 1 | 15 | 16 |
| | | | |
| TOTAL FOR COUNTY | 13 | 15 | 28 |

* It is assumed that all 15 countywide events occurred in all jurisdiction. Source: NCEI and SHELDUS™

While data was collected looking at 67 years of data, frequency rate was calculated using a 20-year hazard cycle per guidance from GEMA. Using a 20-year hazard cycle, the annual chance for a hail event is:

- 35 percent for Glascock County as a whole;
- 5 percent for Unincorporated Glascock County;
- 5 percent for Edge Hill;
- 25 percent for Gibson; and
- 5 percent for Mitchell.

Hazard frequency tables for individual jurisdictions are in Appendix D.

B. 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 70 percent of the county with a wind hazard score of two, where wind speed is between 90 to 99 mph. The remaining 30 percent with a hazard score of one, where wind speed is less than 90 mph. Edge Hill, Gibson and Mitchell have a hazard score of two. The table below provides data from FEMA Worksheet #3a that estimates the potential loss for each jurisdiction.

| Jurisdiction | Number of Structure/Properties | Value \$ | Population |
|----------------------------------|--------------------------------|--------------------|--------------|
| Glascock County (Unincorporated) | 6,714 | \$214,033,590 | 2,196 |
| Edge Hill | 107 | \$1,188,582 | 24 |
| Gibson | 1,165 | \$24,676,853 | 663 |
| Mitchell | 543 | \$9,107,680 | 199 |
| TOTAL FOR COUNTY | 8,529 | 249,006,705 | 3,082 |

Source: Glascock County Tax Assessor

Of the 33 critical facilities, 31 have a wind hazard score of two placing the critical facilities in Zone IV which has a wind speed of 90 to 99 mph and the remaining two have a hazard score of zero. GMIS critical facility reports for wind and FEMA Worksheet #3a are located in Appendix A for each individual jurisdiction and the county as a whole. The table below shows the number of critical facilities by jurisdictions, hazard score, replacement value, content value, and occupancy.

| Jurisdiction | Wind Hazard Score | # of Critical Facilities | Replacement Value \$ | Content Value \$ | Occupancy | |
|-----------------|-------------------|--------------------------|----------------------|------------------|-----------|-------|
| | | | | | Daily | Night |
| Glascoek County | 2 | 15 | \$18,998,377 | \$3,580,000 | 891 | 4 |
| Glascoek County | 0 | 1 | \$95,000 | \$150,000 | 8 | 2 |
| Edge Hill | 2 | 3 | \$1,025,000 | \$400,000 | 5 | 0 |
| Gibson | 2 | 4 | \$5,399,640 | \$560,000 | 50 | 0 |
| Mitchell | 2 | 9 | \$3,725,530 | \$633,500 | 51 | 0 |
| Mitchell | 0 | 1 | \$150,000 | \$350,000 | 0 | 0 |
| TOTAL | | 33 | \$29,393,547.00 | \$5,673,500.00 | 1,005 | 6 |

FEMA Hazus-MH Version 2.2 SP1 ran a hurricane scenario for probabilistic wind-damage risk assessment modeling a tropical storm with maximum winds of 72 mph. There were now shelter requirements for this scenario. Hurricane-wind building damage is shown in the table below:

| Storm Classification | Number of Damaged Buildings | Building Damages | Total Economic Loss | Loss Ratio |
|----------------------|-----------------------------|------------------|---------------------|------------|
| Tropical Storm | 4 | \$216,740 | \$300,300 | .14% |

Essential facilities are also vulnerable to storm events, and the potential loss of functionality may have significant consequences to the community. Hazus-MH identified the essential facilities that may be moderately or severely damaged by winds.

Wind-Damaged Essential Facility Losses

| Classification | Facilities At Least Moderately Damaged > 50% | Facilities Completely Damaged > 50% | Facilities with Expected Loss of Use (< 1 day) |
|----------------|--|-------------------------------------|--|
| Tropical Storm | 0 | 0 | 11 |

| Classification | Number |
|-----------------|--------|
| EOCs | 1 |
| Fire Stations | 3 |
| Care Facilities | 3 |
| Police Stations | 1 |
| Schools | 3 |

Hazus-MH estimates the amount of debris for this scenario by tons is:

- Reinforced Concrete and Steel Debris (none)
- Brick and Wood and Other Building Debris 20 tons
- Tree Debris 542 ton
- Other Tree Debris 13,320 tons

A hypothetical tornado scenario was ran using an EF3 tornado was modeled to illustrate the potential impacts of tornadoes of this magnitude in the county. The analysis estimated that approximately 421 buildings could be damaged, with estimated building losses of \$35

million dollars. The building losses are an estimate of building replacement costs multiplied by the percentages of damage. The table below shows estimated building losses by occupancy type.

| Occupancy Classification | Buildings Damaged | Building Losses |
|--------------------------|-------------------|--------------------|
| Residential | 172 | \$7,350,505 |
| Commercial | 34 | \$902,914 |
| Education | 28 | \$1,420,573 |
| Religious | 1 | \$109,539 |
| Total | 215 | \$9,783,531 |

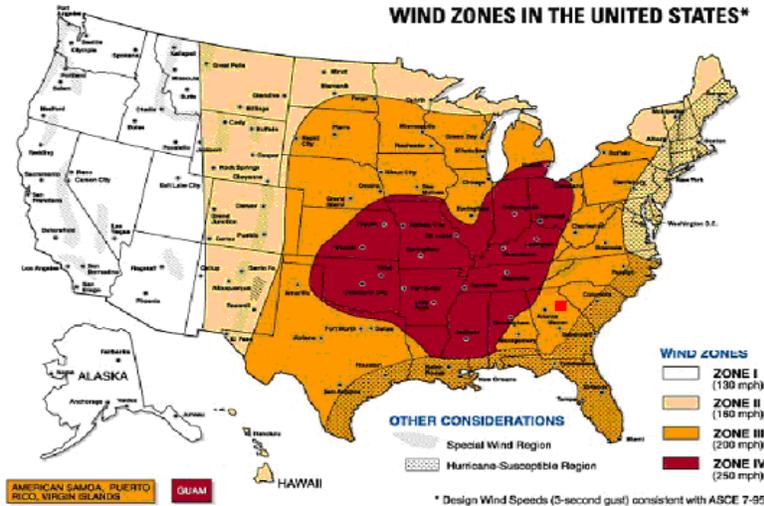
There were six essential facilities located in the tornado path – one school, one fire station, one police station, one Emergency Operations Center, and two care facilities.

Estimated Essential Facilities Damaged

| Facility | Amount of Damage |
|---|------------------|
| GlascocK County Sheriff’s Office | Major Damage |
| Tri-County Health System | Minor Damage |
| GlascocK County Gym - Emergency Shelter | Minor Damage |
| GlascocK County Health Dept. | Minor Damage |
| GlascocK County EOC | Minor Damage |
| Gibson-GlascocK County Fire Department | Minor Damage |

Depending on the time of day, a tornado strike as depicted in this scenario could result in significant injury and loss of life. In addition, arrangements would have to be made for the continued education of the students in another location. A complete copy of the FEMA Hazus-MH Version 2.2 SP1 can be found in Appendix C.

- C. Land Use & Development Trends:** GlascocK 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 tornados, tropical storm, thunderstorm winds, lightning, or hail events. Information on current and future land use projections can be found in Appendix B.
- D. Multi-Jurisdictional Concerns** – All of GlascocK 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 zones in the United States

| | | 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 |

LOW RISK
Need for high-wind shelter is a matter of homeowner preference

MODERATE RISK
Shelter should be considered for protection from high winds

HIGH RISK
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

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 bounce signals.

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 countywide basis to include Edge Hill, Gibson and Mitchell. A concern is the lack of available data for the county and the city. There is a need

for a database to provide information on all past and future for the five severe weather events.

E. Hazard Summary: Since the previous plan, there has been limited new development and no increase in population that would affect the overall vulnerability of the community to this hazard. This has been no new adoption of development or building regulations to increase or decrease the overall vulnerability to severe weather events.

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

| Weather Event | # | Fatalities | Injuries | Approximate Property/Crop Damage |
|--------------------|----|------------|----------|----------------------------------|
| Tornadoes | 5 | 13 | 3 | \$281,000 |
| Tropical Storms | 15 | 0 | 0 | \$76,000 |
| Thunderstorm Winds | 48 | 0 | 0 | \$286,000 |
| Lightning | 59 | 0 | 0 | \$50,000 |
| Hail | 28 | 0 | 0 | \$26,700 |

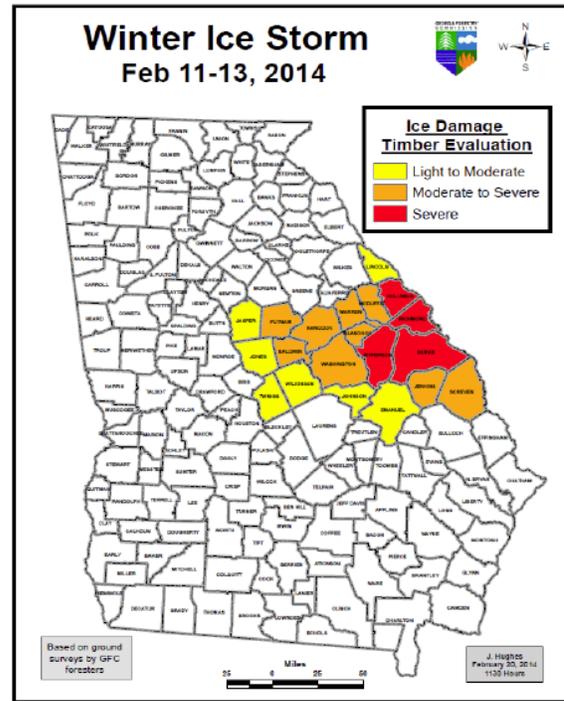
To summarize, there are 8,529 structures/properties with a population of 3,082 with a value of slightly more than \$249 million worth of assets countywide. A breakdown of information for individual jurisdictions can be found in Appendix A and Appendix D. Specific mitigation actions for tornadoes, tropical storms, thunderstorm winds, lightning and hail events are identified in Chapter III, Section IV.

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 ice and freezing rain, high winds, heavy snowfall, and cold temperatures. These conditions can make driving 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 area equally. The committee researched historical data from the NCEI, SHELDUS™, SERCC, as well as information from past newspaper articles relating to winter storms. There have been 25 winter storm events recorded in the county over the last 67 years with more than \$2 million property and crop damage.

The most recent ice storm on February 11-13, 2014, had freezing rain and sleet with accumulations of up to 1½ inches of ice and 2 inches of snow and sleet across the area. The heavy sleet and snow overloaded branches that came down on top of power lines when the storm hit late Tuesday, Feb. 11. Electrical service for almost 70 percent of the county was interrupted. In Glascock County, some customers were without power for up to a week.



The weight of the ice brought down trees, limbs and other vegetative debris that blocked roads and rights of way creating hazardous conditions. The timber industry was severely affected by the storm. Glascock was one of the nine counties hit by the storm and had moderate to severe timber damage according to the GFC. The GFC examined the levels of damage within two types of pine that were most frequently damaged: the young pine stands and pine stands on which a first thinning had recently occurred. The moderate to severe damage has branches and limbs broken from the trees with damage to the overall stand, having more than 25 percent of branches damaged.

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 the hazard frequency table located in Appendix D there is a 40 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. The table below shows assets by jurisdiction that could be at potential risk of damage from a winter storm event.

| Jurisdiction | Number of Structure/Properties | Value | Population |
|----------------------------------|--------------------------------|---------------|------------|
| Glascock County (Unincorporated) | 6,714 | \$214,033,590 | 2,196 |
| Edge Hill | 107 | \$1,188,582 | 24 |
| Gibson | 1,165 | \$24,676,853 | 663 |

| | | | |
|------------------|-------|-------------|-------|
| Mitchell | 543 | \$9,107,680 | 199 |
| TOTAL FOR COUNTY | 8,529 | 249,006,705 | 3,082 |

Source: Glascock County Tax Assessor

The GMIS does not provide a report for winter storm damage but there is slightly more than \$249 million worth of assets with potential loss to winter storm hazards countywide. The table below shows the number of critical facilities by jurisdiction, hazard score, replacement value, content value, and occupancy (See Appendix A, Section VI for Historical Event Tables, Winter Storm Maps and Appendix D for Hazard Frequency Tables and Worksheet 3A).

| Jurisdiction | # of Critical Facilities | Replacement Value \$ | Content Value \$ | Occupancy | |
|-----------------|--------------------------|----------------------|------------------|-----------|-------|
| | | | | Daily | Night |
| Glascock County | 16 | \$19,093,377 | \$3,730,000 | 899 | 6 |
| Edge Hill | 3 | \$1,025,000 | \$400,000 | 5 | 0 |
| Gibson | 4 | \$5,399,640 | \$560,000 | 50 | 0 |
| Mitchell | 10 | \$3,875,530 | \$983,500 | 51 | 0 |
| TOTAL | 33 | \$29,393,547.00 | \$5,673,500.00 | 1,005 | 6 |

D. Land Use & Development Trends: Glascock County currently has no land use or development trends related to winter storms. Projected changes in land use based on the joint 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 forestland 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. Current and future land use tables and projections can be found in Appendix B.

E. Multi-Jurisdictional Concerns: Glascock 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 to include Edge Hill, Gibson, and Mitchell.

Another major issue is countywide communications capabilities. During a natural hazard, it is imperative that all emergency personnel 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 removed, the county will be without any adequate means to bounce signals. The County, Edge Hill, Gibson, and Mitchell are aware of the need to develop communication capabilities that will serve the entire county.

F. Hazard Summary: Since the previous plan there has been limited new development and no increase in population that would affect the overall vulnerability of the community to this

hazard. This has been no new adoption of development or building regulations to increase or decrease the overall vulnerability to winter storm events.

There have been 25 winter storm events recorded in the county over the last 67 years with more than \$2 million property and crop damage. There is a 40 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 8,529 structures/properties in the county totaling slightly more than \$249 million with a population of 3,082. The committee recognized the dangers posed by winter storms and identified specific mitigation actions in Chapter III, Section V.

CHAPTER III. MITIGATION STRATEGIES

Table 3.1 provides a brief description of each section in this chapter and a summary of the changes to the 2013 update plan.

| Chapter III. Section | Updates to Section |
|---------------------------------|--|
| I. Flooding | Completed action steps were removed. Action Steps that apply to all jurisdictions were combined. New goals were added where necessary along with any existing or new multijurisdictional concerns. Goals, Objective, and Actions Steps were updated to new format. |
| II. Drought | Completed action steps were removed. Action Steps that apply to all jurisdictions were combined. New goals were added where necessary along with any existing or new multijurisdictional concerns. Goals, Objective, and Actions Steps were updated to new format. |
| III. Wildfire | Completed action steps were removed. Action Steps that apply to all jurisdictions were combined. New goals were added where necessary along with any existing or new multijurisdictional concerns. Goals, Objective, and Actions Steps were updated to new format. |
| IV. Severe Weather | Completed action steps were removed. Action Steps that apply to all jurisdictions were combined. New goals were added where necessary along with any existing or new multijurisdictional concerns. Goals, Objective, and Actions Steps were updated to new format. Added Lightning and Hail Events |
| V. Winter | Completed action steps were removed. Action Steps that apply to all jurisdictions were combined. New goals were added where necessary along with any existing or new multijurisdictional concerns. Goals, Objective, and Actions Steps were updated to new format. |
| VI. 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 Glascock County, Edge Hill, Gibson and Mitchell, 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

Glascock County, Edge Hill, Gibson, and Mitchell 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. Glascock County has an annual budget of around \$2 million, Edge Hill’s 2016 budget is 66,000, Gibson’s is 1.1 million and Mitchell’s 2016 budget is \$246,564. It should be noted that mitigation action steps with high dollar amounts couldn’t 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 identifies administrative, technical, legal and fiscal capabilities of each jurisdiction.

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

| Regulatory Tools (ordinances, codes, plans) | Glascock County | Edge Hill | Gibson | Mitchell | Does State Prohibit |
|---|-----------------|-----------|--------|----------|---------------------|
| Building codes | N | N | Y | N | N |
| Zoning ordinance | Y | N | Y | N | N |
| Subdivision ordinance or regulations | N | N | N | N | N |

| Regulatory Tools (ordinances, codes, plans) | Glasco ^c County | Edge Hill | Gibson | Mitchell | Does State Prohibit |
|--|----------------------------|-----------|--------|----------|---------------------|
| Special purpose ordinances (floodplain management, storm water management, soil erosion) | N | N | Y | N | N |
| Growth management ordinances (also called “smart growth” or anti- sprawl programs) | N | N | N | N | N |
| Site plan review requirements | N | N | N | N | N |
| General or comprehensive plan | Y | Y | Y | Y | N |
| A capital improvements plan | N | N | N | N | N |
| An economic development plan | Y | N | N | N | N |
| An emergency response plan | Y | Y | Y | Y | N |
| A post-disaster recovery plan | N | N | N | N | N |
| A post-disaster recovery ordinance | N | N | N | N | N |
| Real estate disclosure requirements | N | N | N | N | N |

Table 3.3 Fiscal Capability

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

Table 3.4 Administrative and Technical Capacity

| Staff/Personnel Resources | Glasco ^c County | Edge Hill | Gibson | Mitchell | Dept./Agency and Position |
|--|----------------------------|-----------|--------|----------|---|
| Planner(s) or engineer(s) with knowledge of land development and land management practices | Y | N | Y | N | Public Works CSRA RC/Contract as Needed |
| Engineer(s) or professional(s) trained in construction practices | Y | Y | Y | Y | CSRA RC/Contract as Needed |

| Staff/Personnel Resources | Glasco ^{ck} County | Edge Hill | Gibson | Mitchell | Dept./Agency and Position |
|--|-----------------------------|-----------|--------|----------|----------------------------|
| related to buildings and/or infrastructure | | | | | |
| Planners or Engineer(s) with an understanding of natural and/or manmade hazards | Y | Y | Y | Y | Public Works/CSRA RC Staff |
| Floodplain manager | N | N | N | N | |
| Surveyors | N | N | N | N | Contracted as needed |
| Staff with education or expertise to assess the community's vulnerability to hazards | Y | Y | Y | Y | Public Safety/EMA |
| Personnel skilled in GIS and/or HAZUS | Y | Y | Y | Y | CSRA RC |
| Emergency manager | Y | Y | Y | Y | EMA |
| Grant writers | Y | Y | Y | Y | CSRA RC |

C. Community Mitigation Goals

Collectively, the jurisdictions reviewed the hazard profiles and the loss estimates 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 are 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 capabilities 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 that are put into practice to reduce the risk of destruction and casualties. Mitigation is generally split into two main types of activities: 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

Gibson have adopted the following Mandatory codes:

- Georgia State Minimum Standard Building Code (International Building Code with Georgia State Amendments).

- Georgia State Minimum Standard One- and Two-Family Dwelling Code (International Residential Code for One- and Two-Family Dwellings with Georgia State Amendments).
- Georgia State Minimum Standard Fire Code (International Fire Code with Georgia State Amendments).
- Georgia State Minimum Standard Plumbing Code (International Plumbing Code with Georgia State Amendments).
- Georgia State Minimum Standard Mechanical Code (International Mechanical Code with Georgia State Amendments).
- Georgia State Minimum Standard Gas Code (International Fuel Gas Code with Georgia State Amendments).
- Georgia State Minimum Standard Electrical Code (National Electrical Code with Georgia State Amendments).
- Georgia State Minimum Standard Energy Code (International Energy Conservation Code with Georgia State Supplements and Amendments).
- Life Safety Code (NFPA 101).

They have also adopted the Permissive codes:

- International Property Maintenance Code.
- International Existing Building Code.

Other types of ordinances that have been adopted are:

The *Glascok County Joint Comprehensive Plan 2015-2035* was adopted by resolution by the Glascok County Board of Commissioners, Edge Hill, Gibson, and Mitchell. 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, Edge Hill, Gibson, and Mitchell. The Comprehensive Plan also examines existing land use and projects future land use. Existing and Future Land Use Maps can be found in Appendix B.

iii. Community Values, Historic & Special Considerations

Historical-Cultural: Glascok County has one site listed on the National Register of Historic Places.



Glascok County Courthouse is on Main Street in Gibson, Georgia, the county seat of Glascok County. The first county courthouse was built in 1858 with a donation from William Gibson, namesake of the county. It was removed for use as a residence when the currently used courthouse was built in 1919. The courthouse was designed by J.W. McMillian & Son.

Recreation: The Glascock County Recreation Department offers recreation programs that allow the residents an opportunity to pursue a healthy lifestyle. Programs change of a quarterly basis for everyone’s enjoyment. Programs include youth baseball, softball, soccer, and contact football. An adult softball league is also offered.

- 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 consultant used the STAPLEE worksheet (Social, Technical, Administrative, Political, Legal, Economic, Environmental) to select and prioritize the most appropriate mitigation alternatives and is in Appendix D. This methodology requires that seven categories outlined in the STAPLEE be considered when reviewing potential actions. This process helped ensure that the most equitable and feasible actions would be undertaken based on each jurisdictions capabilities. 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?
- Is it 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 Glascock County together with Edge Hill, Gibson, and Mitchell 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 periods 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 due to 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 crops. However, from a danger or hazard perspective, the greatest threat posed by drought conditions is from potential wildfires. As 96 percent 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 B1. Ensure that there is an adequate water supply during periods of drought.

Objective B2. Educate citizens on water conservation issues.

C. Wildfire Action Plan

As indicated in Chapter II, Section III, wildfires have the potential to cause costly damage in Glascock 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 C1. Ensure that adequate fire protection is available.

Objective C2. Reduce threat of wildfire occurrence.

Objective C3. 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 Glascock 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 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 Glascock County because of a severe weather event. As indicated in Chapter II, Section IV, of all 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 D1. Minimize damage to property from severe weather events.

Objective D2. Minimize damage to public buildings and critical facilities to ensure continual operations of vital services.

Objective D3. Protect vulnerable populations from the effects of severe weather events.

Objective D4. Educate the public including citizens and business owners on disaster preparedness and safety.

E. Winter Storms Action Plan

Within Glascock 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, Glascock County and other southeastern communities must be prepared for the damage caused by winter storms. The fact that winter storms hit Glascock County infrequently results in other problems, such as lack of equipment and supplies to combat treacherous winter storm conditions. In Glascock County, the formation of ice on roads and bridges, tree limbs, and power lines is the cause of most damage. In Chapter II, Section V 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 E1.** Educate the public on preparedness and safety issues for winter storm events.
- Objective E2.** Prevent property damage because of a winter storm event.
- Objective E3.** 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 F1.** Ensure communication capabilities exist between all Emergency Service Personnel and Agencies.
- Objective F2.** 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 F3.** Protect critical facilities from the effects due to power outages because of a hazard event to ensure a continuation of all vital services.
- Objective F4.** Provide adequate notification to citizens of Glascock County pertaining to hazard event.
- Objective F5.** Guarantee all evacuation plans are up to date and adequate to meet the needs of the citizens of Glascock County.
- Objective F6.** Guarantee that all Emergency Response Plans are up to date and adequate to meet the needs of citizens of Glascock County.
- Objective F7.** Ensure all emergency shelters are ready to meet the needs of the population of Glascock County, Edge Hill, Gibson and Mitchell.
- Objective F8.** Provide the citizens of Glascock County educational information on Emergency Preparedness.
- Objective F9.** Provide the citizens of Glascock County with accurate and timely information pertaining to Emergency Preparedness.
- Objective F10.** Collect accurate and complete data pertaining to hazard events within Glascock County, Edge Hill, Gibson and Mitchell.

SECTION III. MITIGATION ACTIONS

Table 3.7

| Action # | Mitigation Action and Description | Jurisdiction | Implement Agency | Hazards Addressed | Objective Supported | Goal | Structural/Non-Structural | Estimated Project Cost | Possible Funding Source(s) | Time Frame | Status | Priority |
|----------|---|---------------------------------------|--------------------------------|-------------------|---------------------|------------|---------------------------|------------------------|--|-----------------------|---|----------|
| 1. | Adopt Floodplain Ordinances and Participate in the NIFP | Glascock / Edge Hill / Mitchell | BOC/City Councils | Flood | A1, A2 | 1, 2, 4, 5 | Non-Structural | Staff Time | General Funds | 3 years | Ongoing Stalled due to lack of staff and enforcement capabilities | Low |
| 2. | Investigate greater participation Level in the CRS | Glascock / Edge Hill/Gibson/ Mitchell | BOC/City Councils | Flood | A1, A2 | 1, 2, 4, 5 | Non-Structural | Staff Time | General Funds | 3 years | Stalled due to funding | Low |
| 3. | Continue to assess storm water runoff. | Glascock / Edge Hill/Gibson/ Mitchell | Public Works | Flood | A5, B2 | 2, 6 | Non-Structural | Staff time | General Funds | 1 year and Continual | Ongoing | High |
| 4. | Construct as needed, more storm water retention facilities, storm drain improvements and channel improvements to protect existing and new developments. | Glascock / Edge Hill/Gibson/ Mitchell | BOC/City Council/ Public Works | Flood/ Drought | A3, | 2, 6 | Structural | 1,000,000 | General Funds | 2 years and Continual | Ongoing As projects are identified and when funding is available | High |
| 5. | Clear run-off and water retention ditches. | Glascock / Edge Hill/Gibson/ Mitchell | Public Works/Road Dept. | Flood | A5 | 2, 1 | Structural | Staff Time | General Fund, | 1 year and Continual | Ongoing | High |
| 6. | Seek funding for communication towers and voice repeater systems. | Glascock / Edge Hill/Gibson/ Mitchell | EMA/Police/ Sheriff | All hazards | F1, P9 | 1 | Structural | \$750,000 | General Fund, FEMA, CICC, JAG, USDA, DOJ | 2 years and Continual | Ongoing As funding becomes available | High |

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| Action # | Mitigation Action and Description | Jurisdiction | Implement Agency | Hazards Addressed | Objective Supported | Goal | Structural/Non-Structural | Estimated Project Cost | Possible Funding Source(s) | Time Frame | Status | Priority |
|----------|--|--|---------------------------------|--------------------------|---------------------|------------|---------------------------|------------------------|------------------------------------|----------------------|---------|----------|
| 7. | Promote the preservation of areas in and around watercourses. | Glascocok | BOC/ | Flood | A6 | 1, 2, 4, 5 | Non-Structural | Staff time | CDBG, USDA, EPA, DNR | Continual | Ongoing | Medium |
| 8. | Add greenspace to known flood prone areas. | Glascocok / Edge Hill/Gibson/ Mitchell | BOC/City Councils | Flood | A6 | 1, 2, 4, 5 | Non-Structural | Staff time | CDBG, USDA, EPA, DNR | Continual | Ongoing | Medium |
| 9. | Evaluate existing water system upgrade as needed | Glascocok / Edge Hill/Gibson/ Mitchell | Public Works | Flood/ Drought/ Wildfire | A7, B1 | 1, 2, 6 | Structural | \$500,000 | General Fund, CDBG, USDA, EPA, DNR | 1 year and Continual | Ongoing | High |
| 10. | Investigate methods to reduce non-point source pollution. | Glascocok / Gibson | BOC/City Council | Flood | A1 | 1, 2, 5 | Non-Structural | Staff Time | USDA, EPA, DNR | 2 years Continual | Ongoing | Low |
| 11. | Promote increased surface water usage for irrigation. | Edge Hill/Gibson/ Mitchell | BOC/City Councils/ Public Works | Drought | B1, B2 | 1, 3 | Non-Structural | Staff Time | General Funds | 1 year and Continual | Ongoing | High |
| 12. | Promote usage of surface artesian flow for irrigation. | Glascocok / Edge Hill/Gibson/ Mitchell | BOC/City Councils/ Public Works | Drought | B1, B2 | 1, 3 | Non-Structural | Staff Time | General Funds | 1 year and Continual | Ongoing | High |
| 13. | Enact a program to educate the residents about water conservation issues | Glascocok / Edge Hill/Gibson/ Mitchell | BOC/City Councils/ Water Dept. | Drought | B1, B2 | 1, 3 | Non-Structural | \$2,000.00 | USDA, EPA, DNR, General Funds | 1 year and Continual | Ongoing | High |
| 14. | Increase public awareness of watering restrictions and bans. | Glascocok / Edge Hill/Gibson/ Mitchell | BOC/City Councils/ Water Dept. | Drought | B1, B2 | 1, 3 | Non-Structural | Staff Time | General Funds | 1 year and Continual | Ongoing | High |

2018 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) | Time Frame | Status | Priority |
|----------|--|---|---------------------------------|-------------------|---------------------|---------|---------------------------|------------------------|----------------------------|----------------------|--------------------------------------|----------|
| 15. | Develop a public awareness campaign to promote water-saving campaigns (i.e. low-flow water saving devices) | Gascock / Edge Hill/Gibson/ Mitchell | BOC/City Councils/ Public Works | Drought | B1, B2 | 1, 3 | Non-Structural | Staff Time | General Funds | 1 year and Continual | Ongoing | High |
| 16. | Continue training of all firefighters to include wildland fire training. | Gascock /Edge Hill/Gibson/ Mitchell | EMA/Fire Depts. | Wildfire | C1 | 1, 2 | Non-Structural | 75,000 | General Funds, FEMA | 1 year and Continual | Ongoing | High |
| 17. | Seek funding for more paid firefighters | Gascock/ Gibson/ EMA | EMA/Fire Depts. | Wildfire | C1 | 1, 2 | Non-Structural | \$200,000 | General Funds, FEMA | 1 year and Continual | Ongoing As funding becomes available | High |
| 18. | Seek funding for needed firefighting equipment | Gascock / Edge Hill/Gibson/ Mitchell | EMA/Fire Depts. | Wildfire | C1 | 1, 2 | Non-Structural | 250,000 | General Funds, FEMA | 1 year and Continual | Ongoing As funding becomes available | High |
| 19. | Inventory and replace or install more fire hydrants as needed. | Gascock / Edge Hill/Gibson/ Mitchell | Public Works/ Fire Depts. | Wildfire | C1 | 1, 2 | Structural | 50,000 | General Funds, FEMA | 1 year and Continual | Ongoing As funding becomes available | High |
| 20. | Seek funding fire engines, burths trucks, equipment trucks and tankers for local fire departments. | Gascock / Edge Hill/Gibson/ Mitchell EMA/ | EMA/Fire Depts. | Wildfire | C1 | 1, 2 | Non-Structural | \$500,000 | General Funds, FEMA | 1 year and Continual | Ongoing As funding becomes available | High |
| 21. | Enforce defensible space (30-ft minimum setbacks) between buildings and flammable brush and forestland where possible. | Gascock / Edge Hill/Gibson/ Mitchell | BOC/City Councils/ | Wildfire | C2, C3 | 1, 2, 3 | Structural | Staff Time | General Funds, FEMA | 1 year and Continual | Ongoing | Medium |

2018 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) | Time Frame | Status | Priority |
|-----------------|---|--------------------------------------|---|-------------------------------|----------------------------|-------------|----------------------------------|-------------------------------|-----------------------------------|-----------------------|---|-----------------|
| 22. | Continue following GFC service of construction and maintenance of firebreaks around forests and structures, along abandoned roadbeds. | Gascock / Edge Hill/Gibson/ Mitchell | BOC/City Councils/ Planning and Zoning | Wildfire | C2, C3 | 1, 2, 3 | Non-Structural | Staff Time | General Fund | 1 year and Continual | Ongoing | High |
| 23. | Strictly follow GFC's guidelines for control burns and permits. | Gascock / Edge Hill/Gibson/ Mitchell | BOC/City Councils/ GFC | Wildfire | C2, C3 | 1, 2, 3 | Non-Structural | Staff Time | General Funds, FEMA | 1 year and Continual | Ongoing | High |
| 24. | Investigate the feasibility of Implementing the Firewise Community Initiative where appropriate | Gascock /Edge Hill/Gibson/ Mitchell | BOC/City Councils/ | Wildfire | C2, C3 | 1, 2, 3 | Non-Structural | \$25,000 | General Funds, GFC | 3 years | Ongoing | Medium |
| 25. | Improve public awareness of wildfire techniques and awareness of wildfire dangers. | Gascock / Edge Hill/Gibson/ Mitchell | EMA/ Fire Deps. | Wildfire | C2, C3 | 1, 2, 3 | Non-Structural | \$25,000 | General Funds | 2 years and Continual | Ongoing | High |
| 26. | Equip all county and city recreation parks with adequate early severe weather warning and lightning detection devices. | Gascock / Edge Hill/Gibson/ Mitchell | BOC/City Councils/ Recreation Dept. | Severe Weather | D1, D2, D3 | 1, 2, 6 | Structural | 10,000 | General Funds, FEMA | 2 years | Ongoing As funding becomes available | High |
| 27. | Inspects public buildings and critical facilities and retrofit to reinforce windows, doors, and roofs as needed | Gascock / Edge Hill/Gibson/ Mitchell | EMA/ Gibson Building Inspector | Severe Weather, Winter Storms | D1, D2, D3 | 1, 2, 6 | Structural | 150,000 | General Funds, FEMA | 3 years/ Continual | Ongoing No building has been identified to retrofit | Medium |
| 28. | Enforce building codes for all new buildings and critical facilities. | Gibson | Gibson Code Enforcement and Building Inspection | Flood, Severe Weather, Winter | A5, A6, D1, D2 | 1, 2, 6 | Structural/Non-Structural | Staff Time | General Funds, FEMA | 1 year and Continual | Ongoing | High |

2018 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) | Time Frame | Status | Priority |
|-----------------|---|---------------------------------------|--|---|----------------------------|-------------|----------------------------------|-------------------------------|-----------------------------------|-----------------------|---|-----------------|
| | | | | Storm | | | | | | | | |
| 29. | Install lightning rods in high value critical facilities. | Glascock / Edge Hill/Gibson/ Mitchell | EMA/ Gibson Code Enforcement /Public Works | Severe Weather, Lightning | D1, D2, D3 | 1, 2, 6 | Structural | 100,000 | General Funds, FEMA | 2 years | Ongoing As funding becomes available | High |
| 30. | Install surge protectors on critical facilities' electronic equipment in essential county and city facilities. | Glascock / Edge Hill/Gibson/ Mitchell | EMA/ Public Works | Severe Weather, Lightning, Winter Storm | D2, F1 | 1, 2, 6 | Structural | \$10,000 | General Funds | 1 year and continual | Ongoing As funding becomes available | High |
| 31. | Review current Emergency Response Plan and update when needed. | Glascock County EMA | EMA | All hazards | F6, F8 | 1, 2, 3 | Non-Structural | Staff Time | General Funds | 2 years and continual | Ongoing As funding becomes available | High |
| 32. | Review current evacuation plans paying particular attention to vulnerable populations and update as needed. | Glascock County EMA | EMA/BOE | Flood, Wildfire, Severe Weather, Winter Storm | F5, F8 | 1, 2, 3 | Non-Structural | Staff Time | General Funds | 2 years and continual | Ongoing | High |
| 33. | Provide boat owners with safety tie down procedures with boat registration. | Glascock / Edge Hill/Gibson/ Mitchell | EMA/ Recreation Dept. | Severe Weather, Winter Storm | E2, D1 | 1, 2, 3 | Non-Structural | 2,500 | General Funds | 1 year and continual | Ongoing | High |
| 34. | Develop a public awareness program about the installation of lightning grounding systems on critical infrastructure, residential and business properties. | Glascock / Edge Hill/Gibson/ Mitchell | BOC/City Councils/ EMA | Severe Weather, Lightning | D4 | 1, 2, 3 | Non-Structural | Staff Time | General Funds | 2 years and continual | Ongoing | High |
| 35. | Inventory all critical facilities and assess generator needs. Install generators where | Glascock / Edge Hill/Gibson/ Mitchell | EMA | All hazards | F3 | 1, 2, 3, 6 | Structural/Non-Structural | 150,000 | General Funds, FEMA | 1 year and continual | Ongoing | High |

2018 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) | Time Frame | Status | Priority |
|----------|--|--|---|---|---------------------|------------|---------------------------|------------------------|----------------------------|----------------------|---|----------|
| | needed. | | | | | | | | | | | |
| 36. | Seek funding to ensure all current and future emergency shelters have back-up generators. | Glascocok / Edge Hill/Gibson/ Mitchell | EMA | All hazards | F7 | 1, 2, 3, 6 | Structural/Non-Structural | 100,000 | General Funds, FEMA | 3 years | Ongoing As funding becomes available | High |
| 37. | Educate the public on shelter locations and evacuation routes | Glascocok / Edge Hill/Gibson/ Mitchell | BOC/ City Councils/ EMA/BOE | Flood, Wildfire, Severe Weather, Winter Storm | F8, F9 | 3 | Non-Structural | Staff Time | General Funds | 1 year and continual | Ongoing | High |
| 38. | 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. | Glascocok / Edge Hill/Gibson/ Mitchell | BOC/ City Councils/ EMA | Flood, Wildfire, Severe Weather, Winter Storm | F8, F9 | 3 | Non-Structural | \$10,000 | General Funds, FEMA | 2year and continual | Ongoing Stalled due to lack of staff and funds | High |
| 39. | Implement a winter storm education program to include winterization of home and/or business and what to do before, during and after. | Glascocok / Edge Hill/Gibson/ Mitchell | BOC/ City Councils/ EMA | Winter Storm | E1 | 3 | Non-Structural | \$25,000 | General Funds | 2 year and continual | Ongoing Stalled due to lack of staff and funds | High |
| 40. | Review current codes to comply with and enforce the State building code with criteria for design snow load for buildings and structures. | Glascocok /Edge Hill/Gibson/ Mitchell | BOC/ City Councils/ Planning and Zoning | Winter Storm | E2 | 1, 2, 3, | Non-Structural | Staff Time | General Funds | continual | Ongoing | Medium |

2018 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) | Time Frame | Status | Priority |
|-----------------|--|--|------------------------------------|---|----------------------------|-------------|----------------------------------|-------------------------------|-----------------------------------|----------------------|--|-----------------|
| 41. | Create a database to record hazard event information. | Glascocok / Edge Hill/Gibson/ Mitchell | EMA | All hazards | F10 | 1, 2, 3, | Non-Structural | Staff Time | General Funds | 2 years | Stalled due to lack of staff | Medium |
| 42. | Inventory existing road equipment and purchase needed equipment to maintain roads before, during and after a hazard event. | Glascocok / Edge Hill/Gibson/ Mitchell | BOC/ City Councils/ 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 |
| 43. | Develop coordinated management strategies for deicing, snow plowing, and clearing roads of fallen trees and debris | Glascocok / Edge Hill/Gibson/ Mitchell | BOC/ City Councils/ Road Dept./EMA | Flood, Severe Weather, Winter Storm | F2 | 1, 2 | Non-Structural | Staff Time | General Funds | 2 years | Ongoing | High |
| 44. | Promote the construction of safe rooms in shelter areas and in public buildings. | Glascocok / Edge Hill/Gibson/ Mitchell | BOC/ City Councils/ EMA | Flood, Wildfire, Severe Weather, Winter Storm | F3 | 1, 2, 6 | Structural | 1,000,000 | General Funds, FEMA | 4 years | Ongoing As funding becomes available | Medium |
| 45. | Install weather Service Radio Transmitter on existing towers to provide coverage of NWS transmissions | Glascocok/ EMA/ | EMA/ | All Hazards | F4, F8, F9 | 1, 2 | Structural | 150,000 | General Funds, FEMA | 2 years | Ongoing As funding becomes available | High |
| 46. | Update 911 equipment as needed. | Glascocok County | EMA/ Sheriff | All hazards | F1, F3 | 1, 2, 6 | Structural | 150,000 | General Funds, FEMA | 1 year and Continual | Ongoing As funding becomes available | High |
| 47. | Request that all new education facilities be designed to serve as public shelters for emergency purposes. | Glascocok / Edge Hill/Gibson/ Mitchell | BOC/ City Councils/ BOE | All hazards | F7 | 1, 2, 6 | Non-Structural | Staff Time | General Funds | 1 year and Continual | Ongoing No new facilities slated for construction at this time | High |

2018 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) | Time Frame | Status | Priority |
|-----------------|---|--|-------------------------|---|----------------------------|-------------|-----------------------------------|-------------------------------|-----------------------------------|-----------------------|--|-----------------|
| 48. | Promote and participate in the following American Red Cross Programs <ul style="list-style-type: none"> • Disaster Resistant Neighborhoods Program • Business and Industry Preparedness Seminar • Community Disaster Education Preparedness presentations | Glascocok / Edge Hill/Gibson/ Mitchell | BOC/ City Councils/ | All hazards | F4, F8, F9 | 1, 2, 3 | Non-Structural | 10,000 | General Funds, FEMA | 2 years and Continual | Ongoing Stalled due to lack of staff and funds | Medium |
| 49. | Work with local cable and radio providers to enhance and broadcast public education on Emergency Preparedness. | Glascocok / Edge Hill/Gibson/ Mitchell | BOC/ City Councils/ | All hazards | F8, F9 | 1, 2, 3 | Non-Structural | Staff Time | General Funds | 1 year and Continual | Ongoing | High |
| 50. | 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. | Glascocok / Edge Hill/Gibson/ Mitchell | BOC/ City Councils/ | Flood, Wildfire, Severe Weather, Winter Storm | F9, F10 | 1, 2, 6 | Non-Structural | 50,000 | General Funds, FEMA | 1 year and Continual | Ongoing | High |
| 51. | Pave Roads in county that are unpassable due to flooding | Glascocok County | BOC/ Road Dept. | Flood, Severe Weather, | A1, A2 | 1, 2, 4, 5 | Structural | \$1,500,000 | General Funds T-SPL/OST FEMA, DOT | 2 years | New | Medium |
| 52. | Provide NOAA weather radios to elderly and handicap populations (moved to all hazards). | Glascocok / Edge Hill/Gibson/ Mitchell | EMA | Flood, Wildfire, Severe Weather, Winter Storm | F4, F8, F9 | 1, 2, 3 | Non-Structural | \$50,000 | General Funds, FEMA | 2 years | Stalled due to funding | Medium |

2018 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) | Time Frame | Status | Priority |
|----------|---|---------------------------------------|---------------------|-------------------|---------------------|------------|---------------------------|------------------------|----------------------------|---------------------|---|----------|
| 53. | Review existing comprehensive, development and land use plans to address flood prone areas. | Glascock / Edge Hill/Gibson/ Mitchell | BOC/ City Councils/ | Flood | A1, A2 | 1, 2, 4, 5 | Non-Structural | Staff Time | General Funds | 3 years And ongoing | Ongoing Will review at next comp plan update. | 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 has 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.

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 from Original Plan:
Flood

- Identify flood prone properties and seek funding to acquire and convert to low impact uses. Removed as there are no repetitive flooding NFIP properties and no NFIP mitigated properties in the County. Also properties susceptible to flooding are in low impact areas.
- Identify and move property owners who are in areas continually subject to flooding. Removed as there are no repetitive flooding NFIP properties and no NFIP mitigated properties in the County
- Cap wells not in use and increase wellhead waterproofing. Deleted deals with private property. Added back as an education component.
- Ensure wellhead elevations are above known flooding levels. Handled by Health Dept.
- All Flood plain maps were updated by FEMA in 2010

Drought

- Identify and inventory all vulnerable agricultural properties to include livestock and develops a protective action plan. Removed, as this is private property.
- Study the range of federal support programs available to assist Glascock County's agriculture community. Removed as this is private property and all farmers know about assistance.
- Map all wells with a flow of 100 Gallons Per Minute (GPM) or more for use by Emergency Management during a drought. Removed these are on private property.

- Water Use Ordinances was removed from the plan. All jurisdictions have adopted GA EPD guidelines.
- Seek funding for wells that have gone dry and been removed. Funding does not exist for this activity as a grant. It is a loan and must be applied for by private citizens.

Severe Weather

- Inspect all county and municipal critical facilities for proper grounding. Completed.
- 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. Removed. No financial Incentive funding available.
- Review building codes for proper wind strength and safety regulations and for consistency with state and federal regulations. Completed
- Equip school buses with Automated Vehicle Location. Removed this decision will be made by the Board of Education.

Winter Storm

- Encourage harvesting of trees along utility and road corridors, preventing potential winter storm damage. Removed. This is done by electric companies.
- Place all utility lines underground in new subdivisions. There are no subdivision regulations in Glascock County. This was removed.

All Hazards

- Seek funding for Code-red. This was completed.
- Create an EMA website with information pertaining to Emergency Preparedness. Created a website and Facebook page.

E. Unchanged and/or Ongoing Action Steps: The following mitigation steps remain in the plan. It should be noted that several action steps listed as ongoing will be implemented when funding becomes available. Based on the STAPLEE Criteria these unchanged action steps were found to be relevant in limiting the damage to people and property from a natural hazard. All action steps have been reformatted to meet the action step criteria established by GEMA and FEMA after the original plan was approved. The new table format from GEMA Plan Update Guidance Template 2012 has been used to organize action steps. STAPLEE worksheet can be found in Appendix D for each action step.

Flood:

- Increase Participation Level in the NFIP and CRS. Were left in the plan but broken up into separate mitigation actions.
- Adopt Floodplain Ordinances was added to NFIP Action Step #1
- Continue to assess storm water run-off.
- Seek funding to construct more storm-water retention facilities, storm-drain improvements and channel improvements to protect existing and new developments.

- Recommend that run-off and water retention ditches be cleared.
 - This is being done by the Glascock County Road Department and is a continual goal.
- Promote the preservation of areas in and around watercourses.
- Add greenspace to known flood prone areas.

Drought

- Evaluate existing water system.
- Increase public awareness of watering restrictions.
 - Adopted 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.
- Educate citizens on water conservation.
- Promote increased surface water usage for irrigation.
- Promote usage of surface artesian flow for irrigation.

Wildfire

- Seek funding to install more fire hydrants.
- Review previous firefighter training and implements a schedule for the ongoing training of all firefighters to include wildland fire training.
- Seek funding for more paid firefighters
- Seek funding for needed firefighting equipment. Over the last five years 10 sets of firefighter protective clothing have been purchased for approximately\$ 6,000
- Seek funding for more fire tankers (2000 to 3000 gallons) for local fire departments. Increase public awareness of wildfire dangers by publishing articles in the local newspaper and providing bulletins to local churches and the schools.
- Recommend a defensible space (30-ft minimum setbacks) between buildings and strictly follow GFC guidelines for control burns and permits.
- Increase public awareness of wildfire dangers around the home and community, such as lighted matches, cigarettes, trash, and the process for obtaining burn permits by publishing articles in the local newspaper and providing bulletins to local schools.
- Participate in the Firewise Community Initiative where appropriate. Edge Hill has applied.
- Held educational activities the first week of October for fire prevention week.

Severe Weather

- Inspect public buildings and critical facilities and retrofit to reinforce windows, doors, and roofs as needed.
- Provide NOAA weather radios to elderly and handicap populations.
- Review current evacuation plans paying particular attention to vulnerable populations and update as needed.
- Review and current Emergency Response Plan and update when needed. Moved to all hazards

- Install generators where needed. Moved to all hazards
- Install generators on all new critical facilities. Moved to all hazards
- Seek funding to ensure all current and future emergency shelters have back-up generators. Moved to all hazards
- Educate the public on shelter locations and evacuation routes.
- 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 severe event weather.
- Promote and participate in the following American Red Cross Programs
 - i. Disaster Resistant Neighborhoods Program (educating communities)
 - ii. Business and Industry Preparedness Seminar (educating businesses on business continuity planning)
 - iii. Community Disaster Education Preparedness presentations

Winter Weather

- Implement a winter-storm education program to include winterization of home and/or business and what to do before, during and after the winter storm event.
- Install generators where needed. Moved to all hazards

All Hazards

- Install generators where needed. Installed generator at health department.
- Provided CPR and first aid training for 32 persons which included teachers and coaches.
- Install weather Service Radio Transmitter on existing towers to provide coverage of NWS transmissions

CHAPTER IV. PLAN INTEGRATION AND MAINTENANCE

The table below provides a brief description of each section in this chapter and a summary of the changes that have been made.

| Chapter 1 Section | Updates to Section |
|---|--|
| I. Implementation Action Plan | Revised to follow New GEMA planning template |
| II. Evaluation, Monitoring, Updating Note whether the original method and schedule worked | Revised to follow New GEMA planning template |
| III. Plan update and maintenance | Regulated update and maintenance schedule and public involvement |

SECTION I. Implementation Action Plan

A. Administrative Actions: Glascock County Emergency Management Agency was responsible for overseeing the original PDM planning process and the plan update. Facilitation of the planning process was conducted by the Central Savannah River Area Regional Commission. The Glascock County Board of Commissioners has authorized the submission of this plan to both GEMA and FEMA for their respective approvals. The Glascock County Board of Commissioners, the Town Council of Edge Hill, the City Council of Gibson, and the Town Council of Mitchell have formally adopted this plan after approval from GEMA and FEMA was obtained.

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 Glascock 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 with a 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 and update to their Joint Comprehensive plan and updated their STWP in 2015. The 2013 plan was reviewed to determine if any mitigation activities need to be added. Glascock County, Edge Hill, Gibson and Mitchell work jointly to produce these planning documents.

The STWP will be updated in 2020 and the Joint Comprehensive Plan is due for an update in 2025. The RC facilitates the planning process for both documents and updates both plans. Glascock County takes the lead and all jurisdictions must participate to complete the comp plan and STWP. This Plan will be reviewed by Glascock County, Edge Hill, Gibson and Mitchell. 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 Joint Comprehensive plan and STWP update as needed. In addition, relevant sections of the 2013 plan were included in the revision of the Glascock Local Emergency Operations Plan. This hazard plan update will also be reviewed by the EMA Director when updating the LEOP in 2018.

SECTION II. EVALUATION, MONITORING AND UPDATING

The original method for evaluation of the plan was unsuccessful. While the plan was discussed at EMA meetings, little attention was given to the monitoring and evaluation of the plan. Changes have been made to ensure a more successful and meaningful use of this plan.

- 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, Glascock County is required to review the 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 that will include a schedule, timeline, and a list of the agencies or organizations participating in the plan revision. Glascock 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.

| Jurisdiction | Hazard Mitigation Update Committee | Review |
|-----------------|------------------------------------|----------|
| | Point-of-Contact | Schedule |
| Glascock County | Emergency Management Director | Annually |
| Edge Hill | Mayor | Annually |
| Gibson | Mayor | Annually |
| Mitchell | Mayor | Annually |

D. Timeframe: The committee has set the second Wednesday 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: Glascock County is committed to having active public participation during reviews and updates of the PDM Plan. Future public involvement of the community will be more stringent. The original method of posting notices at the government office and posting twice in the paper was not as successful as anticipated in ensuring community involvement. With this in mind, two weeks before the annual June review meeting, a notice will be published in the legal organ of Glascock 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 flyer will also be given to community organizations. The process of providing information to community organizations and gathering places will ensure that the public is aware of the planning 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 second Wednesday of every June. The EMA Director will ensure the revised plan is presented to the Glascock County Board of Commissioners 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 GEMA and FEMA for their review and coordination.

CHAPTER V. Conclusion

SECTION I. Summary

Through the update process of this plan, Glascock 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 because 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, Glascock 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 Jefferson Reporter*, providing Glascock 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 Glascock 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 Glascock County Pre-Disaster Hazard Mitigation Planning Committee is to *"Make the citizens, businesses, communities and local governments of Glascock 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 Glascock County a safer place to live and work for all 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 Jefferson Reporter
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
GEMA 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>
National Climatic Data Center www.ncdc.noaa.gov
SHELDUS™ | Spatial Hazard Events and Losses Database for the United States
<http://webra.cas.sc.edu/hvri/products/sheldus.aspx>
National Inventory of Dams <http://crunch.tec.army.mil/nid/webpages/nid.cfm>
<https://www.anyplaceamerica.com/directory/ga/>
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/>
USDA, NASS, 2016 CENSUS OF AGRICULTURE
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
Glascok County
Glascok County, Edge Hill
Glascok County, Gibson
Glascok County, Mitchell
Glascok County Board of Education
Glascok 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 C - Drought
 - a. Description
 - b. Data– GEMA Critical Facility Inventory Report
 - c. Maps

- III. Hazard D - Wildfire
 - a. Description
 - b. Data– GEMA Critical Facility Inventory Report
 - c. Maps

- IV. Hazard E – Severe Weather, Including Tornados, Tropical Storms, Thunder Storms< Lightning and Hail
 - a. Description
 - b. Data– GEMA Critical Facility Inventory Report
 - c. Maps

- V. Hazard F – 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. Department of Labor Community Information
- IV. USDA 2012 Census Report Glascock County

Appendix C –Planning documents

- I. Executive Summary Local Emergency Operations
- II. State of Georgia Hazard Mitigation Strategy
- III. Hazard Risk Analysis
- IV. Flood Insurance Study
- V. Soil Survey Glascock and Jefferson Counties
- VI. Community Wildfire Protection Plan

- VII. Timber Impact Assessment GFC
- VIII. 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