Hancock County, Georgia
Multi-Hazard Pre-Disaster Mitigation Plan
Original Plan Approval: 10/29/2009
Update Plan Approval: March 9, 2015
Second Update Approval: ?????/2020





Prepared For:
Hancock County Board of Commissioners
12630 Broad Street
Sparta, Georgia 31087
(706) 444-5746
FAX (706) 444-6221

Prepared By:
Central Savannah River Area
Regional Commission
3626 Walton Way Ext. Suite 300
Augusta, Georgia 30909
(706) 210-2000
FAX (706) 210-2006

TABLE OF CONTENTS

CHAPTER I. INTRODUCTION TO THE PLANNING PROCESS

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

Table 1.1

Chapter I Section	Updates to Section
I. Purpose and need of the plan, authority & statement of problem	Updated text of this section
II. Local methodology, brief description of plan update process, Participants in update process	Updated the participants, planning process and how data was collected
III. Description of how each section of the original plan was reviewed and analyzed and whether it was revised	All sections of the original plan were analyzed and revised.
IV. Organization of the plan	The plan is organized by GEMA local planning Local Hazard Mitigation Plan Update Template with 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)	Reviewed and updated information regarding multijurisdictional concerns
VII. Adoption, implementation, monitoring and evaluation	This was evaluated and remains the same. Additional text was added to clearly delineate the task of implementation and monitoring. Plan was adopted after GEMA and FEMA reviewed and approved the update.
VIII. Community Data (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 Hancock County 2020 update is the review and improvement to our Multi-Hazard Pre-Disaster Mitigation Plan approved on October 29, 2009 and reapproved on March 9, 2015. The update is written to comply with Section 409 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act Title 44 CFR as amended by Section 102 of the Disaster Mitigation Act of 2000. The act gives state and local governments the framework to evaluate and mitigate all hazards as a condition of receiving federal disaster funds. The act provides federal assistance to state and local emergency management and other disaster response organizations in an effort to reduce damage from disasters. The plan has involved multiple community partners including elected officials, city and county personnel, fire, emergency management, law enforcement, and

public works. The ultimate goal of this plan is to identify natural hazards and develop strategies to lessen the impact on our community.

The update covers all of Hancock County to include the city of Sparta. The plan will identify all-natural disasters that could threaten the lives and properties of our community. The scope of the update includes both short- and long-term mitigation strategies, implementation policies and possible sources of project funding. It also identifies mitigation strategies implemented since the last update.

The plan also contains the following information on:

- The vision of mitigation in our community;
- The profile of Hancock 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;
- Hancock 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 Hancock County's capabilities to implement hazard mitigation goals and objectives, and policies that will effectively mitigate risks to our community;
- Procedures for maintaining an effective, long range hazard mitigation plan and strategy to implement;
- An assessment of Hancock County's current policies, goals and regulations that pertain to hazard mitigation;
- Documentation of the planning process;
- Updated hazard events that occurred since 2014;
- Updated critical facilities added since 2014;
- Documented current mitigation strategies implemented since 2014; and
- Examined and updated mitigation strategy goals, objectives and action steps.

The update is the product of the combined efforts of Hancock County and Sparta. Realizing that identifying the community's risks and working collectively toward the prevention of disasters in the community is in the county's best interest, the Hancock 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 Hancock County and Sparta.

Continued mitigation planning is imperative to lessen the impacts of disasters in Hancock County and Sparta. This plan serves as an excellent method to organize and document current and ongoing mitigation strategies; however, the implementation of the plan and its components is vital to achieve a community that is resistant to the impact of a disaster. The objective is implementation of this plan 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 Hancock County Board of Commissioners contracted with the Central Savannah River Area Regional Commission (RC) to assist in the update. The RC has assisted eleven counties in the completion and update of their Pre-Disaster Mitigation Plans. The RC has assisted six counties in the completion of their second update and is currently assisting seven 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. EMA Director Mario Chapple assembled the Hazard Mitigation Planning Committee. Table 1.2 below identifies the 2020 members.

Table 1.2

Name	Agency/Title	Jurisdiction
Mario Chapple	HC EMA Director	Hancock County
William Evans Jr	Mayor	City of Sparta
Tomyln Primus	HC Sheriff	Hancock County
Timmy Griffin	Public Works Director	City of Sparta
Jackie Barnum	Citizen	Hancock County
Virginia M. Brown	City Clerk	City of Sparta
Helen G. "Sistie" Hudson	Chairman HC Board of Commissioners	Hancock County
Borderick D. Foster	Clerk HC Board of Commissioners	Hancock County
Julia Vinton	Health Department Nurse	Hancock County
Shirley Tucker	County Nurse Manager Health Department	Hancock County
Robert Hudson	Citizen	Hancock County
Ben Reddick	GA Forestry Commission Ranger	Hancock County
Jim Brake	GA Forestry Commission Ranger	Hancock County
Bill Lee	Chief Ranger GA Forestry Commission	Hancock County
Jim Fraser	HC Fire Department Volunteer Firefighter	Hancock County
Leeland Warren	HC Fire Department Volunteer Firefighter	Hancock County
John Thurman	HC Fire Department Volunteer Firefighter	Hancock County
Christopher Marsh Letson	HC Fire Department Volunteer Firefighter	Hancock County
James Mashburn	HC Fire Department Volunteer Firefighter	Hancock County
Robert Bayer	HC Fire Department Volunteer Firefighter	Hancock County
Greg Avrett	HC Fire Department Volunteer Firefighter	Hancock County
Patrick Brake	HC Fire Department Volunteer Firefighter	Hancock County
Keith Webster	HC Fire Department Volunteer Firefighter	City of Sparta
Will Webster	HC Fire Department Volunteer Firefighter	City of Sparta

The 2019 committee was responsible for the organization, data collection and completion of the plan. It was the responsibility of the committee to include all pertinent departments within their respective governments and to request information as needed. A subcommittee, comprised of volunteer firefighters, examined all current and future mitigation strategies. The following

agencies/departments/organizations provided specific information and support for the original plan and provided any new information for the update:

- Hancock County Board of Education was responsible for providing structural replacement and content values for all schools as well as square footage and occupancy limits.
- Sparta Police Department staff support to the PDM planning effort and were responsible for providing structural replacement and content values for all critical facilities located in their respective cities as well as square footage and occupancy limits.
- Hancock County Sheriff's Office provided staff support to the PDM planning effort.
- Hancock 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.
- City officials from Sparta provided information relative to their jurisdiction and provided replacement value estimates for their critical facilities.
- Hancock County Code Enforcement Officer provided information about county government buildings including their respective replacement and content values and square footages.
- Hancock County Chamber of Commerce assisted in identifying major businesses.
- Georgia Forestry Commission provided data on wildfire events and assisted with the formulation of mitigation measures.
- Hancock County Tax Assessor's Office provided most of the aggregate values for the critical structures. The valuations had to be converted to full values since they are figured at 40 percent of actual value. This information, combined with demographic data, is compiled on GEMA Worksheet #3a in Appendix A for all jurisdictions.
- CSRA Regional Commission's Geographical Information System (GIS) Department produced several of the maps. Maps are located in Appendix A and C.

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

Table 1.3

Record of Review		
Existing planning mechanisms	**Reviewed (Yes/No)**	**Method of use in Hazard Mitigation Plan**
Hancock County 2016-2026 Comprehensive Plan	Yes	Development trends, capability assessment, mitigation strategies
Local Emergency Operations Plan	Yes	Identifying hazards; Assessing vulnerabilities;

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

The committee held seven meetings over a 24-month period to guide the development of the plan. The subcommittee held four additional meetings, spate from the full committee, to review and develop mitigation strategies. They also provided information pertaining to past disasters. Individual jurisdictions and/or agencies were contacted, as information was needed. The committee was responsible for developing the mission statement, as well as the goals, objectives, and action steps identified in the plan. The committee researched previous hazard information in the areas of flooding, wildfires, tornados, winter storms, hurricanes, high winds, dam failure, lightning, hail, and drought. Other hazards, such as Avalanche, Coastal Erosion, Coastal Storm, Earthquake, Expansive Soils, Extreme Heat, Land Slide, SLOSH (Sea, Lake and Overland Surges from Hurricanes), Tsunami, and Volcano, were examined and determined not to be of sufficient significance in the community to warrant their inclusion in the plan, based on past history and available data. Committee members collected critical facilities information based on their area of expertise or jurisdiction. The RC was responsible for assessing vulnerability and estimating potential losses from the information collected. Potential losses include people, structures/properties, infrastructure, and other important community assets.

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

Table 1.4

Committee Meeting Date	Purpose of Meeting
February 7, 2018	Advertisement ran on February 2, 2018 in *The Advocate-Democrat* for kick-off meeting. Kickoff meeting Shelby Meyers, from GEMA provided a presentation about the purpose and need of the plan along with changes to the process since the 2014 plan update.
June 20, 2018	This meeting was to ensure all data collected to date was correct for critical facilities and to reviewed mitigation strategies and action steps
February 13, 2019	Reviewed plan, mitigation strategies and HAZUS information.
June 12, 2019	Continued work on Mitigation Strategies and Completed Activities to date.
August 6, 2019	Completion of Mitigation Strategies.
December 5, 2019	A final opportunity to provide input before submission to GEMA for review.
To Be Added after FEMA Approval	Advertisement ran on (***date will be added after FEMA approval***) in *The Advocate-Democrat* Advertising for public review and the final meeting. After GEMA submitted the plan to FEMA and FEMA Approved Pending Adoption (APA), the public was invited to review the final plan prior to adoption during **(will be added after APA)** time frame. The meeting was held after the aforementioned review period to ensure that the public was afforded the opportunity provide input.
Subcommittee Meeting Date	**Purpose of Meeting**
August 20, 2019	Reviewed HAZUS information and began discussion of mitigation strategies.
September 3, 2019	Reviewed Current Plan and current mitigation strategies.
September 17, 2019	Discussion on mitigation strategies and needed equipment.
October 15, 2019	Mitigation strategies completed and new ones added.
December 17, 2019	Review of Final Plan before submission to GEMA

SECTION III. ORIGINAL PLAN REVIEW AND REVISION

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

SECTION IV. ORGANIZATION OF THE PLAN

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

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

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

The committee, early in the update process, established a set of goals and objectives to ensure the effectiveness of this plan. These goals and objectives established the paradigm for the planning process and proved very successful by the many accomplishments of the 2014 plan update. These goals and objectives are as follow:

- To actively involve and gain support from the City of Sparta and Hancock County for the reduction of disasters in our community.
- Prioritize identified mitigation projects.
- Seek and implement any grant funding for the reduction of disasters in Hancock County and Sparta.
- Monitor, evaluate, and update the progress of the plan as needed.
- To form partnerships among local, state, and federal agencies to make Hancock 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 Hancock County and Sparta.

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 Hancock County and Sparta were identified, updated, mapped, and illustrated in Appendix A.

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

Profiling Hazard Events: The committee analyzed the causes and characteristics of each hazard, and its effect on Hancock 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 A.

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

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

SECTION VI. MULTI-JURISDICTIONAL SPECIAL CONSIDERATIONS

Hancock County and Sparta provided active participants in the planning process and have identified mitigation goals, objectives and action items specific to their jurisdiction. The

municipalities were notified in October 2017 of the requirement concerning the update to the 2014 plan update. Representatives from both jurisdictions have worked collectively over the past months to gather data that included researching old records, newspaper articles, databases, historical data, past and present flood plain data, and technical information for the plan. Collected data was forwarded to the RC for review and plan development. The committee and subcommittee held subsequent meetings in an effort to ensure that all information was correct and 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 its municipal partner toward a common mitigation strategy that significantly reduces vulnerability of natural disasters. Most natural threats overlap jurisdictions and are all susceptible to their affects. Hancock County and Sparta 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, MONITORING, EVALUATION

Adoption Date

Jurisdiction	Adoption Date
Hancock County	***To Be Added after FEMA Approval***
City of Sparta	***To Be Added after FEMA Approval***

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

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

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

- Develop a strategic mitigation plan for Hancock 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 Hancock County community on a continual basis.
- Identify potential funding sources for mitigation projects.

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

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

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

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

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

SECTION VIII. COMMUNITY DATA

Political Boundaries - Hancock County

Hancock County

GA Department of Community Affairs Region 7

Georgia

History: Hancock County, established December 17, 1793, was named after John Hancock, the first signer of the Declaration of Independence. Hancock County is a rural county covering 479 square miles. Hancock County is one of 13 counties that comprise the Central Savannah River Area (CSRA). There is one incorporated municipality in Hancock County which is the City of Sparta.

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

The only municipality is the City of Sparta, which operates a Mayor and City Council-based system of government with five elected council members. Other officials charged with presiding over activities within the City are the City Manager, Clerk, Attorney, Finance Officer, Engineer, and Public Works Director.

Demographics: Presently, Hancock County has a population of 9,429 persons.

Category	Hancock County	Sparta
Population	9,429	1,400
Number of Households	2,907	572
Average Household Size	2.73	2.32
Race - White	25.4%	14.2%
Race - Black	73.0%	82.9%
Race - Hispanic	1.7%	1.0%
Race - Other	0.8%	1.9%
Median HH Income	$29,268	$24,818

Source: US Census Bureau and 2017 American Community Survey

Economy: In the year 2018, the average weekly wage for employment sectors was $668, compared to the statewide average of $993. The February 2019 unemployment rate was 6.3

percent. In 2018, the labor force in Hancock County totaled 2,479 with 2,330 employed and 149 unemployed. Of the total work force, 22.8 percent were employed in the service providing sector, followed by 28.2 percent in the goods producing sector and 48.6 percent in the government sector.

The North American Industry Classification System (NAICS) is the standard used by Federal statistical agencies in classifying business establishments for the purpose of collecting, analyzing, and publishing statistical data related to the U.S. business economy. Table 1.5 provides a list of jobs, number of establishments and jobs along with average weekly wages per job for 2018 in Hancock County.

Table 1.5

Annual Industry Distribution of Jobs and Average Wage in 2013 (NAICS)	Establishments	Jobs	Annual Average Wage Per Job
Total Covered Employment and Wages	**75**	**1,494**	**$668**
Total Private Sector	**62**	**768**	**$690**
Total Government	**13**	**726**	**$645**
Agriculture, forestry, fishing, hunting	1	*	*
Mining, Quarrying, and Oil and Gas Extraction	1	*	*
Construction	3	*	*
Manufacturing	1	*	*
Wholesale trade	1	*	*
Retail trade	19	91	$409
Transportation, warehousing	1	*	*
Utilities	1	*	*
Information	1	*	*
Finance and Insurance	3	38	$1,039
Real Estate, rental, leasing	3	7	$464
Professional, Scientific, Technical services	2	*	*
Mgmt. of companies, enterprises	0	0	$0
Administrative and support and waste management and remediation services	3	*	*
Educational services	1	*	*
Health care, social assistance	8	133	$587
Arts, entertainment, recreation	0	0	$0
Accommodation and food services	4	23	$168
Other services, except public administration	4	5	$347
Unclassified-Industry not assigned	5	7	$188

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

Climate: According to the National Weather Service, Central Georgia where Hancock County is located experiences all four seasons. Hancock County, GA, gets 46 inches of rain per year. The US average is 37. Snowfall is 0 inches. The average US city gets 25 inches of snow per year. The number of days with any measurable precipitation is 85. On average, there are 218 sunny days per year. The July high is around 92 degrees. The January low is 32. Our comfort index, which is based on humidity during the hot months, is a 27 out of 100, where higher is more comfortable. The US average on the comfort index is 44.

Physical Features: The climate of Hancock County is characterized by cool winters which are fairly short, and long hot summers. Prolonged droughts are rare and precipitation is relatively heavy with an average annual precipitation of 45 inches. Winter months average in the upper 40's while summer months average in the low 80's. Hancock County lies within two physiographic provinces and districts. The majority of the County, and the entire City of Sparta, lie in the Washington Slope District of the Piedmont Province. The Washington Slope District is characterized by rolling topography which contains gentle slopes, shallow valleys and rounded stream divides, with elevations of 500 to 700 feet.

At the southern end of the County lies the Fall Line Hills District which is part of the Coastal Plain Province. Here, stream rapids are common as the transition is made between the hard, resistant metamorphic rocks of the Piedmont and the soft, easily eroded sediments of the Coastal Plain. The Fall Line Hills District is characterized by a landscape highly dissected by streams, producing a roller coaster effect. Level land is uncommon except in areas which include marshes, flood plains and narrow stream terraces. Countywide, slopes range from level to 25 %.

Unfortunately, a complete survey of Hancock County soil associations has not been conducted by the Soil Conservation Service. There is, however, a general soils map of the County, developed by the Soil Conservation Service. Based on this information, there are 14 major soil associations present in the County. A map of the soil types are located in Appendix A.

Transportation

Vehicle Traffic: There are roughly 583 miles of roads in the County network. This mileage includes 75 miles of state highways, 498 miles of county roads, 10 miles of city streets (Sparta). Of this 583 miles, 294 miles of this are paved, approximately 51 percent. State highways which pass through Hancock County include state roads 15, 16, and 22. Transportation map is in Appendix A.

Table 1.6

Mileage by Route and Road System Report 445 for 2017			
	Total Road Mileage	Lane Mileage	Vehicle Miles Traveled (VMT)
State Route	74.973	159	136,764
County Road	498.246	996	127,311
City Street	14.455	29	7,949
Total	**587.674**	**1,184**	**272,024**

Source: Georgia Department of Transportation, Office of Transportation Data, "445 Series Reports 2017."

Public Transportation: Public transportation is made available to County residents through the Section 18 Program and is not a widespread system found in urban areas. This federally funded program apportions transit assistance funds to rural areas and places having fewer than 50,000 residents. It is administered by the County and the Georgia Department of Transportation (GDOT). Public buses are also used to assist the elderly, providing transportation to senior citizens centers for congregate meals and to deliver meals.

Rail Traffic: Rail service is provided to Hancock County and Sparta by CSX. Track was first laid in Hancock County in the 1860's. The CSX line connects Sparta with Milledgeville and Macon to the west and Warrenton and Augusta to the east. Piggyback service is available in Macon through Norfolk Southern and through CSX in Atlanta. The CSX line passes through Sparta north of downtown adjacent to Sparta Manufacturing, Inc.

Air Service: Hancock County does not contain a public airport. Commercial air service is available in Macon (54 miles southwest) Augusta's Bush Field, (73 miles east) and at Atlanta's Hartsfield International Airport (100 miles west). The nearest public airport is at Milledgeville. The Airport has a 5,000-*foot* lighted asphalt runway with a Non-Directional Beacon. The Airport also has aircraft tiedown, airframe and power plant repair and hanger services.

Utilities

Electricity: A part of Georgia's modern integrated electrical transmission system, Hancock County has excellent ability to supply industrial demands. Compared to 47% for the U.S., coal accounts for 84% of fuel used by the state's power generating plants. This assures long-term continuity. If demand exceeds 900kw, any supplier can step in and offer service.

Natural gas: Hancock County is served by Southern Natural Gas pipeline with local industries served by Atlanta Gas Light. Natural gas is available in industrial quantities on both a firm and an interruptible basis.

Water: Plant capacity: 750,000 gal/day. Consumption: 265,000 gal/day average, 300,000 gal/day maximum. Storage capacity: 575,000 gal. elevated, 140,000 gal. ground. Source: 1 deep well (stand-by only). Pumping capacity: 125,000 gal/min. Ford Creek & Lake Sinclair.

Sewer: No countywide sewerage system is available to residents. Due to rural settlement patterns and low density development, most homes rely on septic tanks for sewage treatment. The City of Sparta Plant Capacity: 200,000 gal/day; Plant Load: 200,000 gal/day; Secondary treatment plant.

Solid Waste Hancock County provides garbage collection for its residents and businesses. Hancock County owns two front-loader compactor trucks and 96 dumpsters spaced strategically throughout the county. Garbage is pickup up on a regular schedule and transported to the Sparta Sanitary Landfill. The City of Sparta provides garbage collection for the residents and businesses of Sparta. Sparta presently owns one garbage truck for dumpster and curbside pickup, and one trash truck for oversize garbage and limbs.

Communications: Hancock County's primary landline phone service provider is AT & T. Broadband is available as DSL from AT&T. Broadband cable is available through Comcast for the City of Sparta. The county has many media outlets that consist of print, radio, and television. Local print media consists of *The Sparta Ishmaelite* (which serves as the legal organ of the county) and *The Union Recorder* of Milledgeville.

Fire and Emergency Services

Enhanced 911 Service (E-911) is available 24-hours a day throughout the county and is operated and coordinated by the Hancock County EMA. CodeRED® is a new County service by which County officials can notify residents by telephone about emergency situations or critical community alerts. The system is capable of sending messages only to people affected by a particular situation, or, in the case of a widespread emergency like a tornado, to the County's entire population.

Fire and Rescue: Hancock County is protected by a joint city county fire department with stations in the cities of Sparta and Devereaux. There are two additional rural stations in the southeastern portion of the county serving the communities along Lake Sinclair and a Department of Corrections station at the Hancock State Prison. The Georgia Forestry Commission maintains a county protection unit located just southwest of Devereaux on Hwy 22 to respond to wildfires throughout the county. The city of Sparta is serviced by pressurized water systems with hydrants following Hwy 22 from the Baldwin county line north to the community of Culverton. There is also a water line and hydrants extending to the small community of Beulah.

Law Enforcement: The Hancock County Sheriff's Office is currently staffed with 11 deputies: 10 fulltime and one part-time. The county is also served by regional offices of the Georgia Bureau of Investigation and The Georgia State Patrol. There are eight full-time and four part-time E-911 dispatchers. The county has jurisdiction to arrest within the city limits of Sparta as well as the county. The City of Sparta has a Police Chief, three full-time officers, 3 part-times officers and six dispatchers.

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

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

As a result of the planning process, the committee determined that six natural hazards pose a direct, measurable threat: flooding, dam failure, drought, wildfire, severe weather (to include tornados, tropical storms, thunderstorm winds, lightning and hail), winter storms. The committee profiled each of these hazards using FEMA worksheet #2 and #3a, which included obtaining a base map and then recording hazard event profile information. Of the six hazards mentioned, the entire County is exposed to four: severe weather, winter storms, wildfire and drought. Flooding is isolated to select areas within the floodplain, while dam failure is isolated to areas downstream of the event. Each of these potential hazards is addressed with relevant supporting data.

Table 2.1

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

SECTION I. FLOODING

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

Flooding occurs when the volume of water exceeds the ability of a water body (stream, river, or lake) to contain it within its normal banks. Floodplains serve three major purposes: Natural water storage and conveyance, water quality maintenance, and groundwater recharge. These three purposes are greatly inhibited when floodplains are misused or abused through improper and unsuitable land development. For example, if floodplains are filled to construct a building, valuable water storage and recharge areas are lost. This causes unnecessary flooding in previously dry areas and can damage buildings and other structures.

Hancock County will continue to comply with NFIP requirements and intends to remain in compliance by enforcing flood plain ordinances that prohibit or severely limit development in floodplains. These ordinances are enforced by the Code enforcement Office. The City of Sparta has adopted the Model Floodplain Ordinance but has not made application to GaDNR. Sparta intends to correct this and participate in the NFIP within the next 6 months**.** Table 2.2 provides information about each jurisdiction's participation level.

Table 2.2

Community Name	Init FHBM Identified	Init. FIRM Identified	Curr. Eff. Map Date	Reg-Emer Date	Sanction Date
Hancock County		09/29/2010	09/29/2010(m)	09/29/2010	
Sparta		09/29/2010	09/29/2010		09/29/2011

Source: FEMA Community Status Book

B. Hazard Profile: Severe flooding within Hancock County is a relatively infrequent event. The county has one lake, 45 rivers/streams and 14 reservoirs. Countywide, slopes range from level to 25%. Floodplains are narrow except along the principal rivers which have a wide expanse of swamp bordering both sides of the channel. Elevations in the district range from 500 to 700 feet. The graphic below, provided by NOAA NWS Advance Hydrologic Predication Service for the gauge at Lake Oconee, shows the highest historic crest at 436 feet in 1998 and 435.96 in 2009.

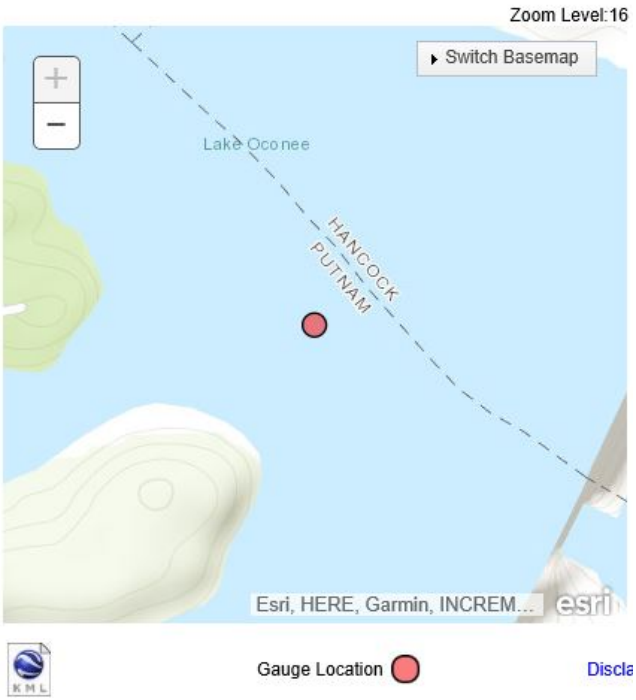
Flood Categories (in feet)

Flood Stage:	435.5
Action Stage:	435
Low Stage (in feet):	0

Historic Crests
(1) 436.00 ft on 02/05/1998
(2) 435.96 ft on 11/25/2009

(P): Preliminary values subject to further review.

Recent Crests
(1) 435.96 ft on 11/25/2009
(2) 436.00 ft on 02/05/1998



The committee examined historical data from the NCEI, USGS, SHELDUS™, newspaper articles and conducted past interviews on the effects of past flooding events. In the last 69 years three flooding events were recorded, where two occurred countywide, one in the unincorporated area of the County known as the Devereux Community. Table 2.3 is a result of information gathered from interviews, newspaper articles, and the NCEI and SHELDUS™ databases.

Table 2.3

Details	Begin	Type	PrD	CrD
Flood	8/17/1994	0	14,290	0
A few roads in the county were washed out	6/12/2001	0	75,000	0
HC EMA reported heavy rainfall of six to eight inches fell across much of the county. Georgia Highway 22 and 16 were both closed. In addition, several wooden bridges were washed out. Disaster funding was provided for road and bridge repair from FEMA to the county.	3/1/2007	0	300,000	0

Source: NCEI and SHELDUS

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

The magnitude of a major flood event could have approximately 25 percent of the county experiencing some damage from flooding. Based on a 20-year hazard cycle the chance of an annual flooding event occurring is:

- 10 percent for all of Hancock County;
- 10 percent for unincorporated areas of Hancock County; and
- 10 percent for Sparta

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

- Sparta has 7 structures/properties valued at approximately $491,635 with a population of 5;
- Unincorporated Hancock County has 56 structures/properties valued at approximately $3.9 million with an estimated population of 186.

All 63 structures/properties have been identified by federal flood plain maps and/or parcel maps. Not all structures that have been identified will experience damage from floods. Further studies, including professional surveys, would have to be conducted to determine exactly which structures are at consistent risk from flooding.

The extent of each flood varies according to the amount of rainfall in a given area. If a complete loss of the 63 structures/properties located within flood zones would result in approximately $4.4 million in damages assuming 100 percent loss, a 75 percent loss would represent approximately $3.3 million, a 50 percent loss would represent approximately $2.2 million, and a 25 percent loss would represent approximately $1.1 million.

The GMIS has 37 critical facilities with a hazard score of zero with a value of over $30 million. Table 2.4 shows the breakdown of critical facilities by jurisdiction, flood hazard score, replacement value, content value, and daily occupancy.

Table 2.4

Jurisdiction	Hazard Score	# of Critical Facilities	Replacement Value $	Content Value $	Occupancy	
					Day	Night
Hancock County	0	21	16,232,000	11,290,635	3,064	1,638
Sparta	0	16	4,886,120	0	108	45
TOTAL		**37**	**30,420,487**	**11,290,635**	**3,172**	**1,683**

The GMIS has no repetitive flooding NFIP property and no NFIP mitigated properties or properties that have encountered repetitive flooding where there was loss. There is no estimate for future structures since future development will be limited and regulated in areas where floodplains exist. *(See Appendix A 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 Hancock County. A copy of the complete report can be found in Appendix C. Land area covered by floodwaters of the base flood is

identified as a Special Flood Hazard Area (SFHA). The County's flood risk assessment analyzed at risk structures in the SFHA. The results of the Riverine 1% Flood Scenario revealed that buildings are vulnerable to flooding from events equivalent to the 1% riverine flood. The economic and social impacts from a flood of this magnitude can be significant. The Hazus analysis generated information to building loss, essential facility loss, food and shelter requirements and debris because of the Riverine 1% Flood Scenario. The results of this scenario are as follows:

Table 2.5

Occupancy	Total Buildings in the Jurisdiction	Total Buildings Damaged in the Jurisdiction	Total Building Exposure in the Jurisdiction	Total Losses to Buildings in the Jurisdiction	Loss Ratio of Exposed Buildings to Damaged Buildings in the
Sparta					
Residential	488	3	$73,268,362	$148,048	0.20%
Unincorporated					
Residential	3,558	70	$379,259,404	$2,316,196	0.61%
Commercial	82	4	$10,358,040	$83,350	0.80%
		County Total			
	4,128	**77**	**$462,885,806**	**$2,547,594**	

- **Essential Facility Losses:** The analysis identified no essential facilities being subject to damage.
- **Flood Shelter Requirements:** The scenario estimates 70 households are subject to displacement. Displaced households represent 211 individuals, of which 8 may require short-term publicly provided shelter.
- **Flood Debris:** Hazus-MH estimates that an approximate total of 1,409 tons of debris might be generated by the flood. The model breaks debris into three general categories:
  - Finishes (dry wall, insulation, etc.) – 532 tons generated;
  - Structural (wood, brick, etc.) – 450 tons generated; and
  - Foundations (concrete slab, concrete block, rebar, etc.) – 427 tons generated.

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

C. Land Use and Development Trends: The Hancock County Comprehensive Plan 2016-2026 present future development scenarios for Hancock County and its municipalities is in the form of "character areas". Characters areas not only identify existing and future land uses appropriate for a particular area, they can highlight a variety of other factors such as: the form, function and style of new development; existing features that should be incorporated into future development scenarios; and, relationships to adjacent development. The character areas recommended for Hancock County and Sparta areas that:

- Presently have unique or special characteristics that need to be preserved

- Have potential to evolve into unique areas
- Require special attention because of unique development issues

The conservation or reserve character area describes primarily undeveloped natural lands and environmentally sensitive areas that are not suitable for urban or suburban development. These areas include flood plains, wildlife management areas, public parks and other environmentally sensitive areas. The development pattern should seek to:

- Minimize impervious surfaces;
- Protect water quality;
- Preserve natural resources, habitats, views, and rural/agricultural character;
- Protect open space in a linear pattern, typically following the flood plain of river and stream corridors and accommodate greenways; and
- Provide opportunities for low-impact recreation (e.g. canoeing, fishing, hunting, hiking, etc.) and environmental education.

Primary land use should seek to:

- assure undeveloped areas are left in their natural state;
- promote passive parks; and
- promote agriculture.

The County has experienced very little growth over the past decade and future forecasts project relatively slow growth patterns. Despite the slow growth forecasts the county intends to work closely with the city to encourage and manage future growth.

The joint comprehensive plan discourages new development within known flood prone areas with the exception of very low impact usages, such as recreational facilities (i.e. trails, open fields, etc.). With this type of land use, the floodplains are utilized without disturbing their cycles. The vulnerability in terms of future buildings, infrastructure and critical facilities located in the identified hazard areas is not known at this time since no planned or approved future development exist. Thus, it is impossible to determine vulnerability in terms of future buildings, infrastructure and critical facilities within the county or Sparta.

D. Multi-Jurisdictional Concerns: During a large-scale flood event, many portions of the County could potentially be impacted by flooding. However, the area's most prone to flooding have historically been those areas located within the 100-year floodplain. Since flooding has the potential to affect all of Hancock County, any mitigation steps taken related to flooding should be undertaken on a countywide basis and Sparta.

E. Hazard Summary: Severe flooding within Hancock County is a relatively infrequent event. The county has one lake, 45 rivers/streams and 14 reservoirs. There have been three flooding events recorded in the last 69 years. These events resulted in school closings and roads washing out. The hazard frequency table calculates a 10 percent chance of an annual flooding event. Hazard frequency tables can be found in Appendix D. Severe flooding, although relatively rare in occurrence, has the potential to inflict significant damage in Hancock County. 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 63 known structures/properties valued at approximately $4.4 million and a population of 191 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 III.

SECTION II. DAM FAILURE

A. Hazard Identification: Dam failures and incidents involve unintended release or surges of impounded water. They can destroy property and cause injury and death downstream. While they may involve the total collapse of a dam, that is not always the case. Damaged spillways, overtopping of a dam or other problems may result in a hazardous situation. Dam failures may be caused by structural deficiencies in the dam itself. Dam failures may also come from other factors including but not limited to debris blocking spillways, flooding, improper operation and vandalism. Dam failures are potentially the worst flood events. When a dam fails, a large quantity of water is suddenly released downstream, destroying anything in its path and posing a threat to life and property.

Dams are classified into four categories:

- High Hazard – Dams where failure or disoperation will probably cause loss of human life.
- Significant Hazard – Dams where failure or disoperation will probably not result in loss of life, but can cause economic loss, environmental damage, and disruption of lifeline facilities or other concerns.
- Low Hazard – Dams where failure or disoperation will probably not result in loss of life and cause only low economic and/or environmental loss.
- Undetermined Hazard - Hazard level has not been determined.

B. Hazard Profile: Based on the current data from the 2018 National Inventory of Dams there are 15 low hazard dams located in Hancock County. The average dam age is 65 years and seven percent of the dams are regulated by state and zero percent are regulated by federal agencies. All are located in the unincorporated areas of the county. While there has never been a reported dam failure event to date, the committee felt that it was important to address the issue. A map and complete table of the dams can be found in Appendix A by classification and jurisdiction.

Based on interviews and best available data been no dam failure events within the last 69 years. Based on a 20-year hazard cycle the chance of an annual dam failure occurring is less than one percent for all of Hancock County. Further study needs to be conducted to determine the precise probability of an annual dam failure event (*See Appendix A and Appendix D).*

C. Assets Exposed to Hazard and Estimate of Potential Losses: The number of dams posing potential loss of life hazards to Hancock County residents and the number of residents living downstream from these potentially hazardous dams is unknown at this time. Based on best available data, the residents of Sparta do not appear to be at risk due to dam failure. Data is not available at this time for the committee to determine what assets are exposed to risk due to dam failure in the unincorporated areas of Hancock County.

The potential losses due to dam failure is unknown and cannot be estimated at this time. The GMIS report has 37 critical facilities with a replacement value at more than $30 million and a population of 3,172 daytime and 1,683 nighttime. The County has population of 9,429 and 28,230 structures/properties valued at more than $1 billion at risk of potential loss. (*See Appendix A Appendix D).*

D. Land Use and Development Trends: The County has experienced very little growth over the past decade and future forecasts project relatively slow growth patterns. Despite the slow growth forecasts the county intends to work closely with the city to encourage and manage future growth. Vulnerability in terms of future buildings, infrastructure and critical facilities is not known at this time. It can be surmised that this future development will bring an increase in population and efforts must be made to ensure that new homes are not built downstream where a dam break may occur. Since the previous plan was approved, there have not been any new developments, regulations, programs, or other changes in the community that would either increase or decrease the community's overall vulnerability to this hazard. Current and future land use tables are in Appendix B. A dam break analysis study is recommended in Chapter III, Section III to determine the exact assets exposed to risk as a result of a dam failure.

E. Multi-Jurisdictional Concerns: There is no way to determine with any statistical significance whether dams in one area of Hancock County are in danger of failure more than others (as most are similar in construction and age).

F. Hazard Summary: Dam failures and incidents involve unintended release or surges of impounded water. They can destroy property and cause injury and death downstream. While they may involve total collapse of a dam, that is not always the case. There have been no known dam failures events in the last 69 years. The committee deemed it important to address since there are 15 dams located in the county. The committee recognized the potential for losses caused by dam failure and identified it as a hazard requiring mitigation measures. To summarize, there are approximately 28,230 structures/properties in the county totaling more than $1 billion with a population of 9,429. The committee identified specific mitigation goals, objectives and action items related to dam failure, which can be found in Chapter III, Section III.

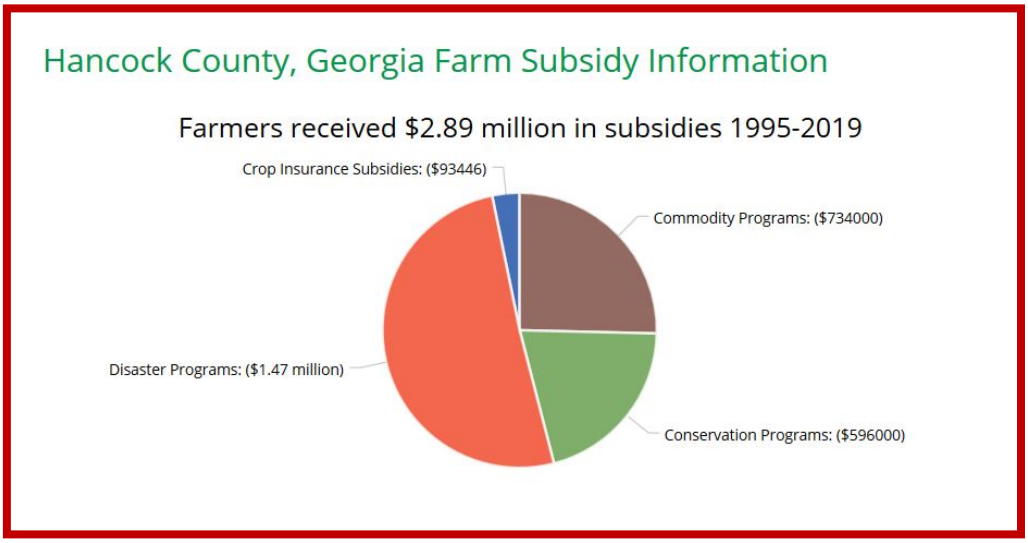
SECTION III. DROUGHT

A. Hazard Identification: The committee reviewed historical data from the Palmer Drought Index, NCEI, DNR, and USDA in researching drought conditions in Hancock County. Drought conditions are identified by a prolonged period of moisture deficiency. Climatologists and hydrologists use five indicators of drought: rainfall, soil moisture, stream flows, lake levels and groundwater level. Drought conditions affect the cultivation of crops as well as water availability and water quality. Drought is also a key factor in wildfire development. Wildfire will be addressed in a separate HRV.

B. Hazard Profile: Drought is not spatially defined and has the potential to affect the entire planning area equally. Hancock County's consist of 479 square miles with 6.8 of these miles being water. The county is comprised of 306,560 acres with acres 31,963 (10.4 percent) dedicated to agricultural and 258,542 acres (84.4 percent) dedicated to forestry. According to the USDA 2017 Census of Agriculture, there is 1,348 heads of livestock.

In the last 69 years, there have been 31 reported drought events, with four occurring since the last update. ***Historical data is only for the county as a whole***. Agricultural losses due to drought are the primary losses. No critical facilities have sustained any damage or functional downtime due to dry weather conditions.

According to the EWG Farm Subsidies Database, from 1995-2019, Hancock County received a total of $2.89 million in farm subsidy payments of which $1.47 million was for disaster assistance.



Source: https://farm.ewg.org

A severe, prolonged drought would mainly affect the 94.8 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 140 percent chance of an annual drought event for the county as a whole *(See Appendix A and Appendix D.)*

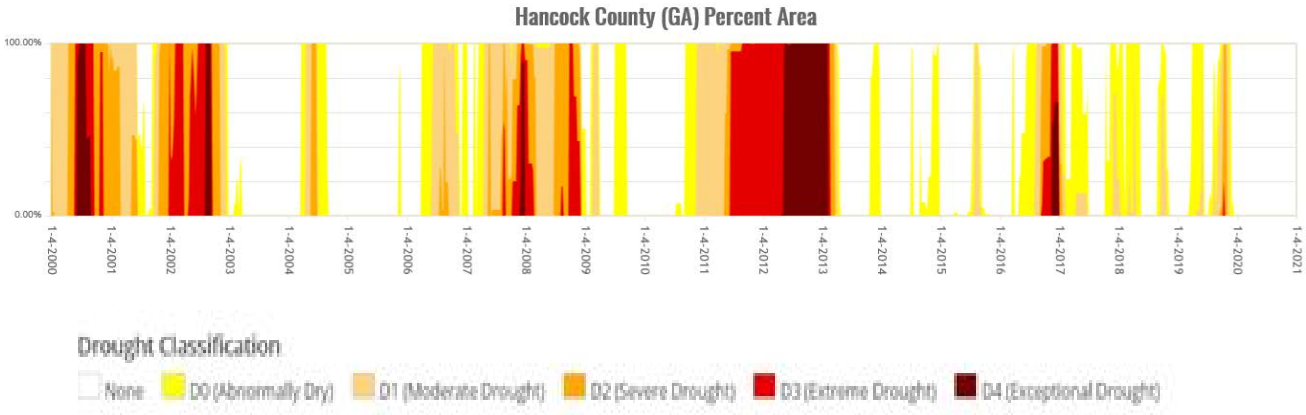
The Palmer Index is most effective in determining long-term drought, a matter of several months, and is not as good with short-term forecasts (a matter of weeks). NCEI data for surrounding counties and a review of The Palmer Index (from https://www.NCEI.noaa.gov/temp-and-precip/drought/historical-palmers/) reveals there have been 31 drought events. One of the longest running droughts in recent history began in April 2011 and ended in January 2013. The County was in extreme drought conditions from May 2011 to July 2012 and exceptional drought conditions from Augusta 2012 to January 2013. The last drought ran from September 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.

Based on the weekly data from the US Drought Monitor (https://droughtmonitor.unl.edu/Data/DataTables.aspx) from January 2000 to June 2019 the county has experienced the following drought conditions:

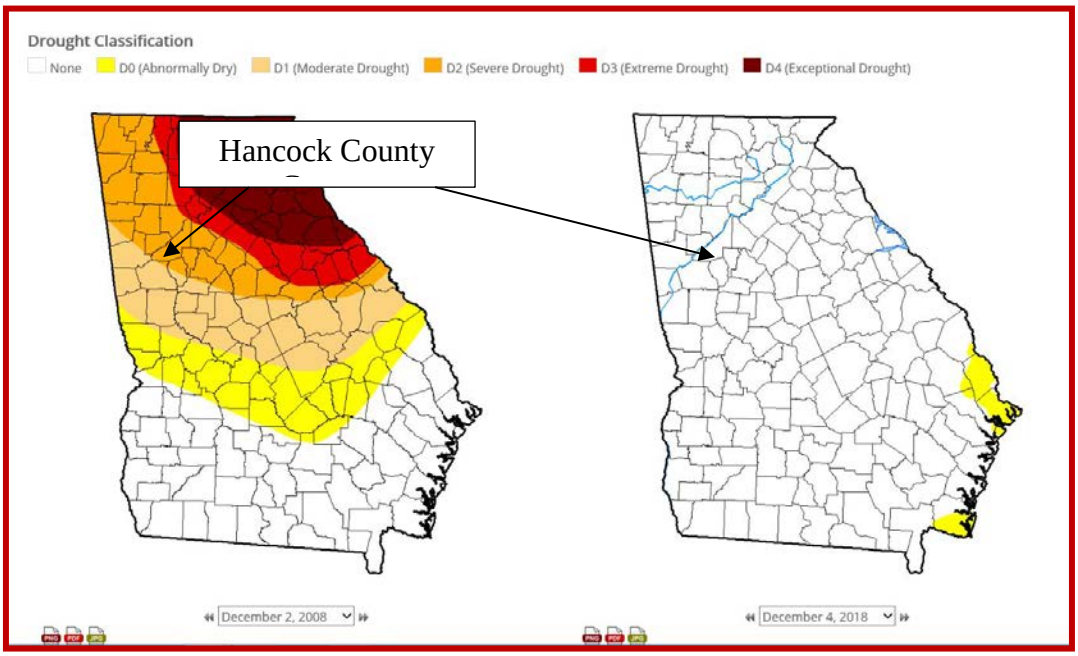
- 159 weeks where all or a portion of the county has experienced of D0 - Abnormally Dry;
- 140 weeks where all or a portion of the county has experienced of D1 - Moderate Drought;
- 103 weeks where all or a portion of the county has experienced levels of D2 - Severe Drought;

- 99 weeks where all or a portion of the county has experienced levels of D3 - Extreme Drought; and
- 61 weeks where all or a portion of the county has experienced levels of D4 - Exceptional Drought. *(US Drought Monitor Tables can be found in Appendix A)*

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



The maps below show drought conditions for December 2008 and 2018.



Historical data is only for the county. A severe, prolonged drought would mainly affect the 94.8 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 140 percent chance of an annual drought event for the county as well as Camak *(See Appendix A and Appendix D.)*

C. Assets Exposed to Hazard and Estimate of Potential Losses: Drought conditions typically pose little or no threat to structures; however, fires can occur as a result of dry weather. The greatest threat to assets in the county is to forestry and agricultural properties and livestock. No damage to critical facilities is anticipated as a result of drought conditions. Crop damage cannot be accurately quantified due to several unknown variables: duration of the drought, temperatures during the drought, severity of the drought, different crops require different amounts of rainfall, and different growing seasons. Based on FEMA Worksheet #3a the potential loss in agricultural and forestry properties for each jurisdiction is:

- Sparta has 19 agricultural/forestry structures/properties valued at approximately $947,582.5 with an estimated population of 8.
- Unincorporated Hancock County has 4,605 agricultural/forestry structures/properties valued at approximately $441 million with an estimated population of 127.

There is a total of 4,624 agricultural/forestry properties in all of Hancock County valued at more than $441 million with a population of 133 that are at the greatest risk due to a drought event *(Appendix A and Appendix D).*

D. Land Use and Development Trends: Hancock County currently has no land use or development trends related to drought conditions. When drought conditions do occur, the municipalities follow the restrictions set forth by the Georgia DNR Drought Management Plan and the Statewide Outdoor Water Use Schedule. These guidelines are enforced by all six water departments.

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

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

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

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

Limited growth or new development is expected in the County. Since the previous plan was approved, there have not been any new developments, regulations, programs, or other changes in the community that would either increase or decrease the community's overall vulnerability to this hazard. The vulnerability in terms of future buildings, infrastructure and critical facilities located in the identified hazard areas is not known since there is no planned or approved future development. Thus, it is impossible to determine vulnerability in terms of future buildings, infrastructure and critical facilities. Land use tables 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 Sparta is less likely to experience drought related losses, they should not be excluded from mitigation considerations. Drought creates a deficiency in water supply that affects water availability and water quality. Droughts can and have severely affected private wells, municipal and industrial water supplies, agriculture, stream water quality, recreation at major reservoirs hydropower generation, navigation, and forest resources

F. Hazard Summary: Drought is not spatially defined and equally affects the entire planning area. Droughts do not have the immediate effects of other natural hazards, but sustained drought can cause severe economic stress to not only the agricultural interests in Hancock County, but to the entire State of Georgia. The potential negative effects of sustained drought are numerous. ***Historical data is available only for the county as a whole.*** Based on a 20-year cycle hazard history along with available data there is a 140 percent chance of an annual drought event. In addition to an increased threat of wildfires, drought can affect municipal and industrial water supplies, stream-water quality, water recreation facilities, hydropower generation, as well as agricultural and forest resources.

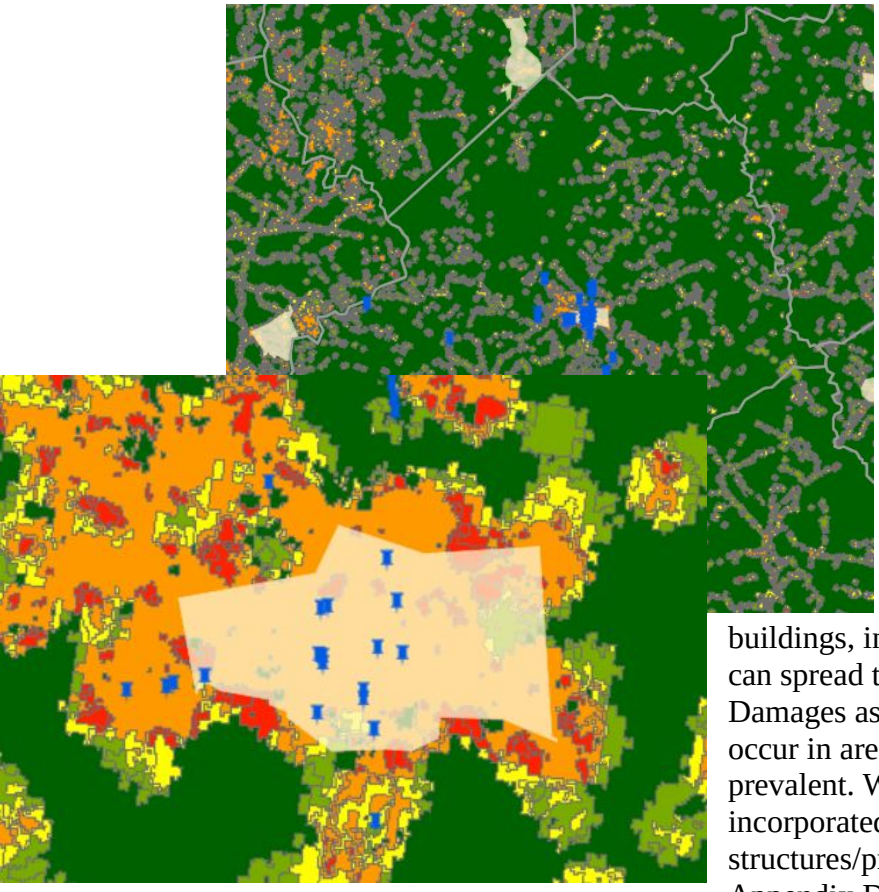
In summary, for Hancock County as a whole, there are a total of 4,624 agricultural/forestry properties valued at approximately $441 million and include 1,348 heads of livestock and an estimated population of 133 which have the greatest potential to be damaged by drought. There is a population of 9,429 and approximately 28,230 structures/properties in the county with a value just slightly more than $1 billion which could be affected if wildfires break out as a result of drought conditions. Drought mitigation goals and objectives are in Chapter III, Section III.

SECTION IV. 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: Hancock County is comprised of 306,560 acres with acres 31,963 (10.4 percent) dedicated to agricultural and 258,542 acres (84.4 percent) dedicated to 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 Hancock County.

The committee reviewed historical data from the Georgia Forestry Commission, which is not found in the NCEI database, to research wildfire events. The GFC provides wildfire data on man-made and natural wildfire occurrences for the county as a whole and not for individual jurisdictions. This plan will address only natural disasters. According to Georgia Forestry data, from 1957 to 2018, there have been 2,493 fire events burning a total of 17,730 acres for an average extent of 7.1 acres. Of these 2,493 fire events, 123 were a result of lightning strikes which burned 2,977 acres. Since the last update three wildfires as a result of lightning have occurred. Based on best available data, 123 wildfire events as a result of lightning occurred in the unincorporated areas of the county. Based on a 20-year hazard cycle there is a 245 percent chance of an annual wildfire due to a lightning strike or statistically the county can expect 2.45 wildfires as a result of lightning annually. The drier the condition the more susceptible the county is to wildfire (*See Appendix D).*



Score	Description
4	High
3	Moderate
2	Low
1	Very Low
0	No Houses
	Agriculture
	Water
	City

GMIS wildfire maps for Hancock County and Sparta

C. Assets Exposed to Hazard and Estimate of Potential Losses: While wildfires are more likely to occur in the county outside of the incorporated areas. The committee concluded that wildfires present a threat to all existing buildings, infrastructure and critical facilities since wildfires can spread throughout the county and into the urban areas. Damages as a result of a wildfire event are more likely to occur in areas of the county where forestry and woodland are prevalent. Wildfire does have the potential to spread into the incorporated areas and cause extensive damage to existing structures/properties. FEMA Worksheet #3a located in Appendix D shows the number and types of buildings found in Hancock County, as well as the value of these structures/properties and the population. Table 2.6 shows assets by jurisdiction that could potentially be exposed to wildfire hazard.

Table 2.6

Jurisdiction	Number of Structure/Properties	Value	Population
Hancock County (Unincorporated)	26,111	$1,058,838,315	8,029
Sparta	2,119	$60,204,597	1,400
TOTAL FOR COUNTY	28,230	$1,119,042,912	9,429

Source: Hancock County Tax Assessor

Table 2.7 shows all critical facilities by jurisdiction, number of facilities, hazard score, replacement value, and occupancy exposed. A complete breakdown of each jurisdiction by hazard can be found in Appendix A.

Table 2.7

Jurisdiction	Hazard Score	# of Critical Facilities	Replacement Value $	Content Value $	Occupancy	
					Day	Night
Hancock County	4	1	$450,000	$0	642	0
Hancock County	3	11	$19,583,080	$11,028,585	663	1
Hancock County	2	2	$275,000	$250,000	75	0
Hancock County	1	3	$193,364	$12,050	4	2
Hancock County	0	4	$25,534,367	$11,290,635	1,680	1,635
Sparta	4	1	$100,000	$0	0	0
Sparta	3	8	$2,636,120	$0	107	45
Sparta	2	1	$250,000	$0	0	0
Sparta	1	4	$1,050,000	$0	0	0
Sparta	0	2	$850,000	$0	1	0
TOTAL		**37**	**$30,420,487**	**$11,290,635**	**3,172**	**1,683**

Source: GMIS

The GMIS has two critical facilities with a hazard score of four (high), 19 with a hazard score of three (moderate), three with a hazard score of 2 (low) and 7 with a hazard score of one (very low probability). The remaining six critical facilities have a hazard score of zero. The 31 critical facilities with a wildfire hazard score greater than zero have an estimated potential loss of more than $24 million. The loss for all critical facilities is $30,420,487. According to FEMA Worksheet #3a there are 28,230 structures/properties with a population of 9,429 with a value of slightly more than $1 billion worth of assets countywide. If a wildfire started, it is not likely that all of these structures/properties would be affected (*See Appendix A and Appendix D).*

D. Land Use and Development Trends: Since the previous plan was approved, there have not been any new developments, regulations, programs, or other changes in the community that would either increase or decrease the community's overall vulnerability to this hazard. Hancock 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 Sparta-Hancock County Fire Department. For those proposed developments that will not have immediate access to the public water supply system, such standards and computations should be based on the

National Fire Protection Association *Standards on Water Supply for Suburban and Rural Fire Fighting*.

E. Multi-Jurisdictional Concerns: The majority of Hancock County is timber, forest or agricultural land. Wildfire does have the potential to spread to urban areas thus affecting the entire county. As a result, any mitigation steps taken related to wildfire should be undertaken on a countywide basis to include the city of Sparta.

F. Hazard Summary: Hancock County is comprised of 306,560 acres with acres 31,963 (10.4 percent) dedicated to agricultural and 258,542 acres (84.4 percent) dedicated to forestry. Given the right weather conditions and variables, wildfire due to natural causes creates a potential threat to the lives and property of residents in the planning area. According to Georgia Forestry data, from 1957 to 2018, there have been 2,493 fire events burning a total of 17,730 acres for an average extent of 7.1 acres. Of these 2,493 fire events, 123 were a result of lightning strikes which burned 2,977 acres. Based on best available data, 123 wildfire events as a result of lightning occurred in the unincorporated areas of the county. Based on a 20-year hazard cycle there is a 245 percent chance of an annual wildfire due to a lightning strike or statistically the county can expect 2.45 wildfires as a result of lightning annually.

The 31 critical facilities with a wildfire hazard score greater than zero have an estimated potential loss of more than $24 million. The loss for all critical facilities is $30,420,487. According to FEMA Worksheet #3a there are 28,230 structures/properties with a population of 9,429 with a value of slightly more than $1 billion worth of assets countywide. Mitigation Goals and Objectives concerning wildfires are in Chapter III, Section III.

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

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

A tornado is a violent windstorm characterized by a twisting, funnel-shaped cloud. It is spawned by a thunderstorm or the result of a hurricane and is produced when cool air overrides a layer of warm air, forcing the warm air to rise rapidly. Tornados are among the most unpredictable and destructive of weather phenomena and can strike at any time of the year if the essential conditions are present. The damage from a tornado is a result of the high wind velocity and wind-blown debris. The positions of the subtropical and polar jet streams often are conducive to the formation of storms in the Gulf region. Table 2.8 shows the original Fujita Scale and the Enhanced Fujita Scale (in use since 2007) to rate the intensity of a tornado by examining the damage caused by the tornado after it has passed over a man-made structure.

Table 2.8

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 as a result of a hurricane or tropical system that has come inland.

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

Thunderstorm winds are winds that arise from convection (with or without lightning), with speeds of at least 50 knots (58 mph), or winds of any speed producing a fatality, injury, or damage. Severe thunderstorms develop powerful updrafts and downdrafts. An updraft of warm, moist air helps to fuel a towering cumulonimbus cloud reaching tens of thousands of feet into the atmosphere. A downdraft of relatively cool, dense air develops as precipitation begins to fall through the cloud. Winds in the downdraft can reach in excess of 100 miles per hour. When the downdraft reaches the ground, it spreads out forming a gust front: the strong wind that kicks up just before the storm hits. As the thunderstorm moves through the area, the full force of the downdraft in a severe thunderstorm can be felt as horizontal, straight-line winds with speeds well over 50 miles per hour. Straight-line winds are often responsible for most of the damage associated with a severe thunderstorm. Damaging straight-line winds occur over a range of scales. At one extreme, a severe single-cell thunderstorm may cause localized damage from a microburst, a severe downdraft extending not more than about two miles across. In contrast, a powerful thunderstorm complex that develops as a squall line can produce damaging winds that carve a path as much as 100 miles wide and 500 miles long.

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

the visible lightning strike. Lightning often strikes outside of heavy rain and may occur as far as 10 miles away from any rainfall.

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

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

B. Hazard Profile: All five sever weather events 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 Hancock County is vulnerable to the threats of severe weather.

Based on 69 years of historical data, there have been 10 reported tornados in the planning area, with two occurring since the last update. The highest magnitude was an EF3. Property damages totaled more than $1.5 million with nine injuries and five fatalities. Using a 20-year hazard cycle, frequency tables calculates an annual chance for a tornado event at:

- 40 percent for Hancock County as a whole;
- 35 percent for Unincorporated Hancock County; and
- 5 percent for Sparta.

Table 2.9 was produced from interviews, *The Sparta Ishmaelite*, and the NCEI and SHELDUS™ databases and shows the event, severity and estimate cost of damages reported. *(See Appendix A and Appendix D).*

Table 2.9

Date	Location	Mag	Inj	Deaths	PD	CrD
8/12/1956	Hancock		0	0	$2,500	$0
12/25/1964	Hancock		1	8	$250,000	$0
5/20/2008	Eureka	EF0	0	0	$500	$0
2/18/2009	Culverton	EF3	3	1	$500,000	$0
4/10/2009	Sparta	EF0	0	0	$10,000	$0
4/10/2009	Granite Hill	EF0	0	0	$7,000	$0
4/10/2009	Sunshine	EF3	1	0	$500,000	$250,000
4/28/2011	Sandy Run	EF0	0	0	$15,000	$0
1/21/2017	Friendship	EF1	0	0	$5,000	$0
4/3/2017	Shoulderbone	EF0	0	0	$20,000	$0

Based on 69 years of historical data, 18 tropical storms have been reported by the NCEI and SHELDUS™ with property and crop damages of approximately $201,534. Damages as a result of the storms were due to power outages, downed trees and flash flooding. The tropical storms affected the entire planning area. ***Data for each jurisdiction is not available***. Based on the hazard frequency table there is an 80 percent chance of an annual tropical storm event for county as a whole (*See Appendix D).*

Table 2.8

Details	Date	PrD	CrD
A result of Hurricane Cleo	8/30/1964	1,114	110
A result of Hurricane Agnes	6/20/1972	0	310
The remnants of Tropical Storm Allison	6/11/2001	0	0
A result of Tropical Storm Hanna	9/14/2002	0	0
A result of Tropical Depression Bill	7/1/2003	0	0
A result of Hurricane Frances,	9/6/2004	0	0
A result of Hurricane Ivan,	9/16/2004	0	0
A result of Hurricane Jeanne	9/26/2004	0	0
A result of Tropical Storm Arlene	6/12/2005	0	0
A result of Tropical storm Cindy	7/6/2005	0	0
A result of Hurricane Dennis	7/10/2005	0	0
A result of Hurricane Katrina	8/29/2005	0	0
A result of Tropical storm Tammy	10/5/2005	0	0
A result of Tropical Storm Fay	8/21/2008	0	0
A result of Hurricane Ida	11/10/2009	0	0
The remnants of Tropical Storm Lee	9/4/2011	0	0
A result of Hurricane Irma	9/11/2017	50,000	0
A result of Hurricane Michael	10/10/2018	100,000	0

Source: NCEI and SHELDUS

Thunderstorms normally occur during the spring and summer months and often carry strong winds. There have been 86 events recorded in the last 69 years with 11 occurring since the last update. Winds speeds as high has 65 knots have reported. Property and crop damages were reported in excess of $681,000. Table 2.9 breaks down the thunderstorm events by jurisdiction. A complete table of thunderstorm wind events can be found in Appendix A.

Table 2.9

Location	# of Events	County-Wide Events*	Total # of events per jurisdiction
Hancock County (Unincorporated)	17	54	71
Sparta	15	54	69
TOTAL FOR COUNTY	**32**	**54**	**86**

Source: NCEI and SHELDUS

**** It is assumed that all 54 county-wide events reported occurred in each jurisdiction***

Using a 20-year hazard cycle, there is an annual chance for a thunderstorm event producing high winds of 140 percent for the unincorporated areas and 115 percent for Sparta. Hancock County as a whole has an overall probability of 185 percent for a significant thunderstorm event. 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. There have been 12 reported lightning events in the past 69 years with slightly more than $3,780 in reported damages with two injuries. There have been 123 lightning strikes recorded in the same time frame that resulted in wildfires. When these datasets are combined there has been 135 lightning strikes recorded. This data as to the exact location of the 12 reported events is not available. Based on a 20-year hazard cycle there is a 245 percent chance that a lightning strike will occur in Hancock County.

The fifth weather event is hail. In the last 69 years there have been 31 hail events reported to the NCEI and SHELDUS™ databases with $12,410 in property and crop damages with no injuries. Using a 20-year hazard cycle, frequency tables calculates an annual chance for a hail event at:

- 55 percent for the unincorporated areas of the county;
- 15 percent for the city of Sparta

Overall, there is a 65 percent chance of an annual hail event in Hancock County. A complete list of all hazards is in Appendix A and hazard frequency tables for individual jurisdictions are in Appendix D.

C. Assets Exposed to Hazard and Estimate of Potential Losses: In evaluating assets exposed to the natural hazard, the committee determined that all critical facilities, as well as all public, private and commercial property, are susceptible to tornados, tropical storms, thunderstorm winds, lightning and hail events. The GMIS has the entire county with a wind hazard score of two, where wind speed is between 90 to 99 mph. Table 2.10 provides data from FEMA Worksheet #3a that estimates the potential loss for each jurisdiction.

Table 2.10

Jurisdiction	Number of Structure/Properties	Value	Population
Hancock County (Unincorporated)	26,111	1,058,838,315	8,029
Sparta	2,119	60,240,597	1,400
TOTAL FOR COUNTY	28,230	1,119,042,912	9,429

Source: Hancock County Tax Assessor

Four critical facilities have a wind hazard score of two placing the critical facilities in Zone IV which has a wind speed of 90 to 99 mph. The remaining 33 critical facilities have a wind hazard score of one. Table 2.11 shows the number of critical facilities by jurisdictions, hazard score, replacement value, content value, and occupancy.

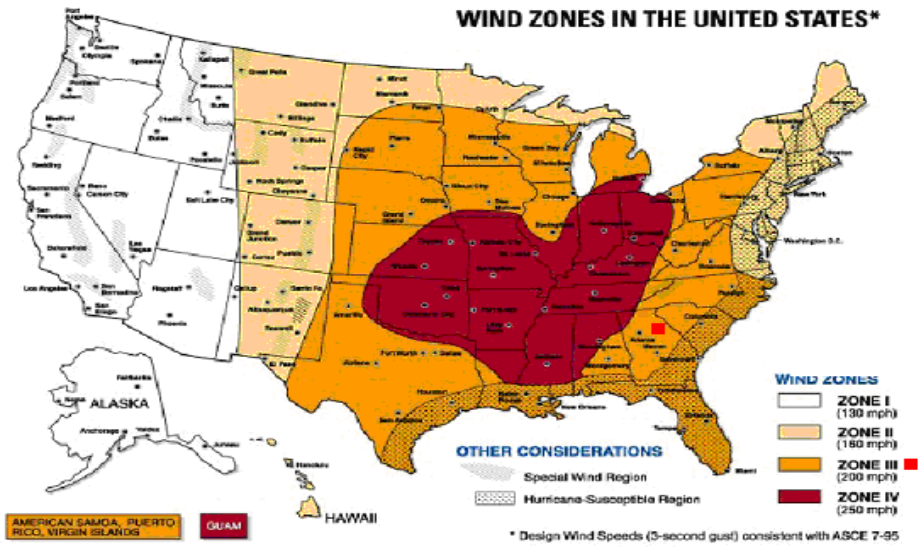
Table 2.11

Jurisdiction	Hazard Score	# of Critical Facilities	Replacement Value $	Content Value $	Occupancy	
					Day	Night
Hancock County (Unincorporated)	2	2	$1,550,000	$0	1,599	1,577
Hancock County (Unincorporated)	1	19	$23,984,367	$11,290,635	1,465	61
Sparta	2	2	$550,000	$0	0	0
Sparta	1	14	$4,336,120	$0	108	45
TOTAL FOR COUNTY		**37**	**$30,420,487**	**$11,290,635**	**3172**	**1683**

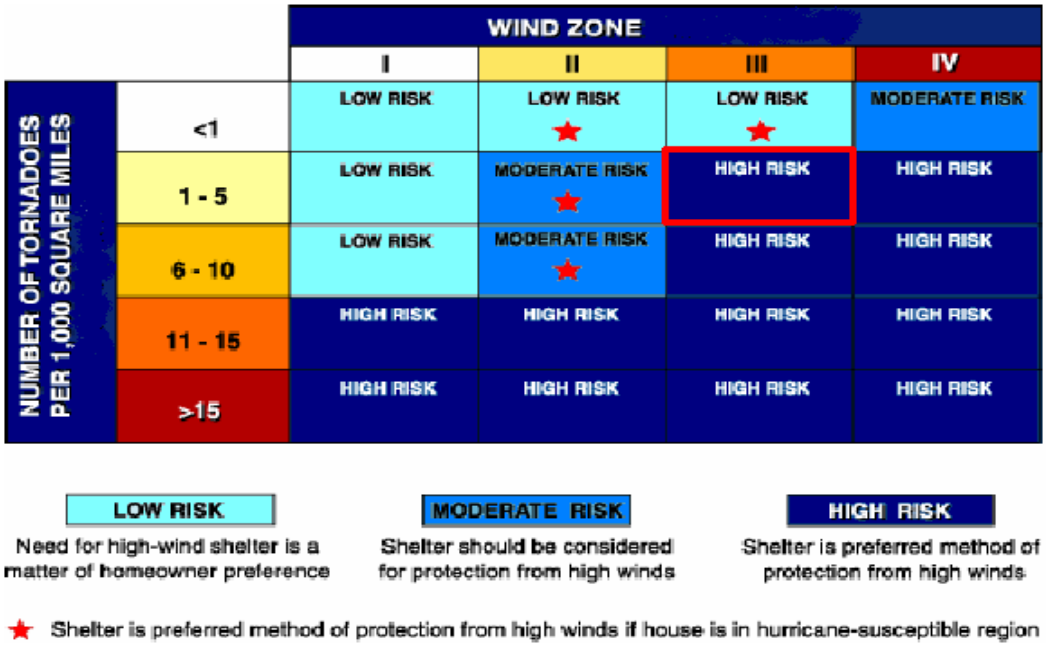
GMIS critical facility reports for wind are located in Appendix A and FEMA Worksheet #3a are located in Appendix D for all jurisdictions.

D. Land Use & Development Trends: Since the previous plan was approved, there have not been any new developments, regulations, programs, or other changes in the community that would either increase or decrease the community's overall vulnerability to this hazard. Hancock 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 land use and future land use projections can be found in Appendix B.

E. Multi-Jurisdictional Concerns – All of Hancock 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



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

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

Table 2.12

Weather Event	#	Fatalities	Injuries	Approximate Property/Crop Damage
Tornados	10	5	9	$1,400,000
Tropical Storms	18	0	0	$51,400
Thunderstorm Winds	86	0	1	$501,228
Lightning	135	0	0	$3,750
Hail	31	0	0	$12,000

The GMIS has the entire county with a wind hazard score of two, where wind speed is between 90 to 99 mph. All 37 critical facilities, four have a wind hazard score of two and 33 have a wind hazard score of one. The replacement cost of all critical facilities is more than $30 million**.** To

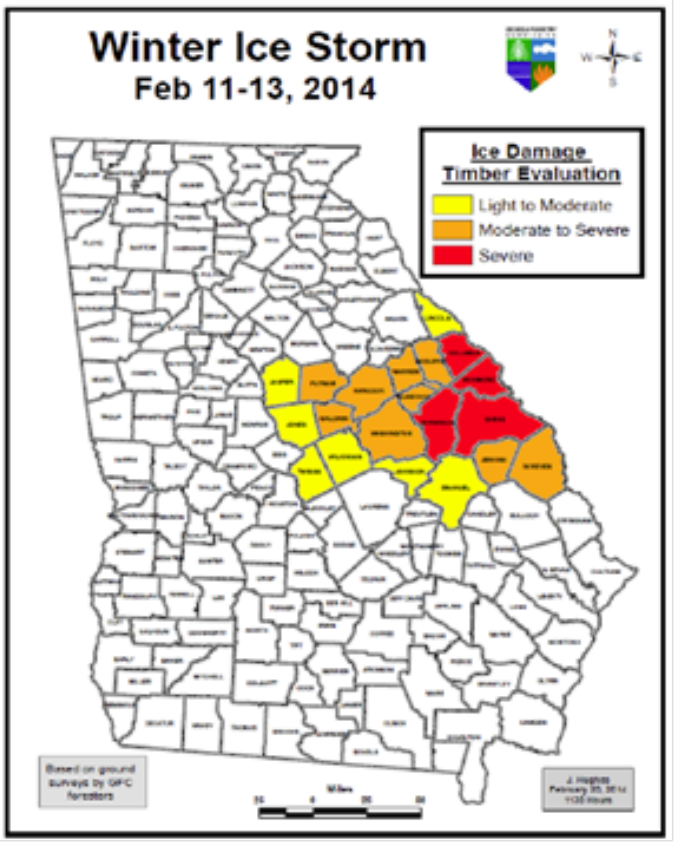
summarize, there are approximately 28,230 structures/properties in the county totaling more than $1.1 billion with a population of 9,429. A breakdown of information for individual jurisdictions can be found in Appendix A and Appendix D. Specific mitigation actions for tornados, tropical storms, thunderstorm winds, lightning and hail events are identified in Chapter III, Section III.

SECTION VI. WINTER STORMS

A. Hazard Identification: Southeastern snow or ice storms often form when an area of low pressure moves eastward across the northern Gulf of Mexico. To produce a significant winter storm in the south, not only must temperatures be cold enough, but there must also be enough moisture in the atmosphere to produce adequate precipitation. A major winter storm can last for several days and be accompanied by high winds, ice and freezing rain, heavy snowfall, and cold temperatures. These conditions can make driving conditions very dangerous, as well as bring down trees and power lines.

B. Hazard Profile: Winter storms are not spatially defined and affect the entire planning equally. The committee researched historical data from the NCEI, SHELDUS™, and SERCC, as well as information from past newspaper articles relating to winter storms in Hancock County. There have been 31 winter storm events, one occurring since the last update, recorded in the county over the last 69 years with reported damages of $463,505.

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 60 percent of the county was interrupted.



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. Hancock 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 75 percent chance of an annual winter storm event for the entire county.

C. Assets Exposed to Hazard and Estimate of Potential Losses: In evaluating assets that may potentially be impacted by the effects of winter storms, the committee determined that all critical facilities, as well as all public, private and commercial property, are susceptible. Table 2.13 shows assets by jurisdiction that could be at potential risk of damage from a winter storm event. (*See Appendix D for Worksheet 3a and Hazard Frequency Tables).*

Table 2.13

Jurisdiction	Number of Structure/Properties	Value	Population
Hancock County (Unincorporated)	26,111	1,058,838,315	8,029
Sparta	2,119	60,240,597	1,400
TOTAL FOR COUNTY	28,230	1,119,042,912	9,429

Source: Hancock County Tax Assessor

D. Land Use & Development Trends: Since the previous plan was approved, there have not been any new developments, regulations, programs, or other changes in the community that would either increase or decrease the community's overall vulnerability to this hazard. Hancock County currently has no land use or development trends related to winter storms. Projected changes in land use based on the county's multi-jurisdictional comprehensive plan has minimal or no change to land use within the incorporated jurisdictions. The greatest change in land use and future development has a decrease in forest land that will be converted to residential. Since it is impossible to determine where future residents will move in the unincorporated areas of the county, vulnerability in terms of future buildings, infrastructure and critical facilities is not known at this time. It can be surmised that this will bring an increase in population and homes. Land use tables and projections can be found in Appendix B.

E. Multi-Jurisdictional Concerns: Hancock County currently has no land use or development trends related to winter storms. All of the county can potentially be negatively impacted by winter storms. As a result, any mitigation steps taken related to winter storms should be undertaken on a countywide basis and include all incorporated jurisdictions.

F. Hazard Summary: There have been 31 recorded winter storms. There is a 75 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 28,230 structures/properties in the county totaling slightly more than $1.1 billion with a population of 9,429. The committee recognized the dangers posed by winter storms and identified specific mitigation actions in Chapter III, Section III.

CHAPTER III. MITIGATION STRATEGIES

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

Table 3.1

Chapter III. Section	Updates to Section
I. Flooding	Completed action steps were removed. All text was reviewed and edited as needed. Goals, Objective, and Actions Steps were updated.
II. Dam Failure	Completed action steps were removed. All text was reviewed and edited as needed. Goals, Objective, and Actions Steps were updated.
III. Drought	Completed action steps were removed. All text was reviewed and edited as needed. Goals, Objective, and Actions Steps were updated.
IV. Wildfire	Completed action steps were removed. All text was reviewed and edited as needed. Goals, Objective, and Actions Steps were updated.
V. Severe Weather	Completed action steps were removed. All text was reviewed and edited as needed. Goals, Objective, and Actions Steps were updated.
VI. Winter	Completed action steps were removed. All text was reviewed and edited as needed. Goals, Objective, and Actions Steps were updated.
VII. All Hazards	Completed action steps were removed. All text was reviewed and edited as needed. Goals, Objective, and Actions Steps were updated.

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 Hancock County and Sparta is to protect the safety, health and well-being of all county citizens, and to protect public and private property and to lessen the overall effects of a hazard event.

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

B. Capability Assessment

The County identified current capabilities for implementing hazard mitigation activities. The capability assessment identifies administrative, technical, legal and fiscal capabilities. This includes a summary of departments and their responsibilities associated with hazard mitigation as well as codes, ordinances, and plans already in place that contain mitigation activities or programmatic structure. The second part of the assessment examined the fiscal capabilities applicable to providing financial resources to implement identified mitigation action items. Hancock County has an annual budget of approximately $9,644,854 and Sparta's budget is $2,040,000. It should be noted that mitigation action steps with high dollar amounts cannot be completed without grant funds and careful budget planning by all jurisdictions.

While not all technical and administrative skills are found in-house, all jurisdictions have access to multiple staff through the RC and can contract out with private firms or any professional services needed. Jurisdictions can expand their capabilities measures such as adoption of zoning, land-use practices, and building codes. Additional staff can be hired when funding becomes available. The three tables below identify administrative, technical, legal and fiscal capabilities of each jurisdiction.

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

Regulatory Tools (ordinances, codes, plans)	Hancock County	Sparta	Does State Prohibit
Building code	Y	Y	N
Zoning ordinance	Y	Y	N
Subdivision ordinance or regulations	Y	Y	N
Special purpose ordinances (floodplain management, storm water management, soil erosion)	Y	Y	N
Growth management ordinances (also called "smart growth" or anti- sprawl programs)	N	N	N
Site plan review requirements	Y	N	N
General or comprehensive plan	Y	Y	N
A capital improvements plan	N	N	N
An economic development plan	Y	Y	N

Regulatory Tools (ordinances, codes, plans)	Hancock County	Sparta	Does State Prohibit
An emergency response plan	Y	Y	N
A post-disaster recovery plan	N	N	N
A post-disaster recovery ordinance	N	N	N
Real estate disclosure requirements	N	N	N

Table 3. 3 Fiscal Capability

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

Table 3.4 Administrative and Technical Capacity

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

C. Community Mitigation Goals

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

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

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

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

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

D. Identification & Analysis of Range of Mitigation Actions

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

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

effects. Examples include programs that target repetitive loss properties and vulnerable populations.

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

i. **Structural and Non-Structural**

Mitigation relates to concrete actions which are put into practice to reduce the risk of destruction and casualties. Mitigation is generally split into two main types of activities: structural and non-structural. Structural mitigation refers to any physical construction to reduce or avoid possible impacts of hazards, which include engineering measures and construction of hazard-resistant and protective structures and infrastructure. Non-structural mitigation refers to policies, awareness, knowledge development, public commitment, and methods and operating practices, including participatory mechanisms and the provision of information, which can reduce risk with related impacts. The committee has identified both structural and non-structural mitigation measures to ensure that the community adequately addresses all relevant dam failure issues. Structural and non-structural actions are identified in Table 3.6.

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

Sparta has 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.

The *Hancock County Comprehensive Plan 2016-2026* was adopted by resolution by the Hancock County Board of Commissioners. 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. 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

Hancock County has four districts listed on the National Register of Historic Places, as well as several individual sites and one archaeological site.

- The Jewell historic district was listed in 1979. Jewell is located along Georgia Route 16 in the Jewell's Mill community. This is a Victorian-era town on the Ogeechee River. The district, which surrounds a village green, includes historic churches, houses, and a unique 1880 school house.

- The Linton historic district which was listed in 1975 is located in Linton and its surrounding environs. The town centered around The Washington Institute, a finishing school founded in the 1850's. Due to its remote location, many of the structures remain much as they were in the mid- to late-19th century.

- The Sparta historic district, listed in 1974, is roughly bounded by Hamilton, Elm, W, and Burwell Streets. There are several significantly important structures within this district.

- The Sayre-Shivers-Alford House is Greek Revival in style and located on Broad Street. It was constructed between 1829 and 1839. The house contains marble mantels, plaster moldings and medallions, and mahogany woodwork.

- The Baxter-Wiley House is located on Maiden Lane. The original Federal style house was built in 1820. It had an L-shaped design with an entrance facing north on Short Street. French doors open across the front of the house for entertaining.
- The Baxter-Hudson House is located on Maiden Lane. This Plantation Plain style house was built around 1820. Its original owner is believed to have been Andrew Baxter.

- The DuBose-Peck-Hitchcock House in located at Boland Street and Linton Road. In 1853, Olney Ethridge patterned this house after a Swiss chalet. The structure features detailed scroll-saw work similar to that in the neighboring

Graves Barn. Mr. Ethridge was the superintendent of the Montour Cotton Factory at the time he built this house.

- The Cheely-Coleman House was listed in 1976. It is located south of Jewell, off Georgia Route 123, at the Ogeechee River.

- The Pearson, Stephen Edward House was listed in 1978. It is located on Pearson Chapel Road, in Devereux.

- The Shivers-Simpson House or Rock Mill, was listed in 1970. It is located on Mayfield Road, north of Jewell. This large Federal style house is two stories. It was built in either 1815 or 1820.

- The Drummer's Home located in Sparta, was at one time the famous LaFayette Hotel. A fine example of adaptive reuse, the hotel has been beautifully restored and converted to an elderly apartment complex. Drummer's Home is located next to the Hancock County Courthouse and stands on the site of the Old Eagle Tavern which was built in the late 18th century and was known for its hospitality and good cheer.

- Millmore, another gristmill, is located on Georgia Route 16, northwest of Sparta. It is a water-powered, stone ground gristmill on Shoulderbone Creek. It has been in continuous operation throughout its history. It was built around 1800 of hand-hewn timber and held together with pegs. The adjacent house, referred to as the old Vinson home, was constructed in 1820. It was moved to this location from Baldwin County.

- The Ogeechee Mill is located in Mayfield, northeast of Sparta, near Warren County and is not listed on the National Register of Historic Places. This is a water-powered gristmill which was constructed on the banks of the Ogeechee River in the early 1800's by William Shivers. He later built Rock Mill in Jewell.

- The Hancock County Courthouse, located on Broad Street, is a masterpiece of Victorian architecture. It was constructed from 1881 to 1883. The courthouse burned in 2014 and has been rebuilt.
- The Camilla-Zack Community Center historic district was listed in 1974. This district is located along Route 1, in Mayfield.

- Horeb Baptist Church, founded 1792 and located in Mayfield, is a white frame structure of simple design. The church was somewhat racially integrated until 1890 and is the oldest church in the entire County.

- Hickory Grove Baptist Church was founded in 1865 near the Shoals Road. Known for the large number of its members becoming ministers, the black church was one of the County's airless Baptist churches. In 1868 the church was dedicated.

- Rockby was listed on the National Register of Historic Places in 1978. This school for boys, begun by educator and author Richard Malcolm Johnston, was known for its liberal policies and lack of disciplinary action. Opened in 1862, the school prospered until after the Civil War.

- The Glen Mary Plantation was listed in 1974. It is located on Linton Road, south of Sparta. The main structure is a Greek Revival raised cottage, featuring a cranberry glass transom and sidelights, and ornamental plaster ceilings and medallions. It was once owned by Ethan Allen Hitchcock, grandson of Ethan Allen. This house was accorded the 1989 Restoration Award by Southern Living magazine.

- The John S. Jackson Plantation House and Outbuildings were listed in 1984. They are located off Georgia Route 16, near White Plains. The main structure is a Greek Revival mansion, built between 1848 and 1852. The house was bestowed the Georgia Trust Preservation Award in 1988 for its excellent restoration performed by its present owners. The plantation was used as the setting for a British film documentary on the antebellum South.

- The Covey Rise Farm is located on Covey Rise Road, off Georgia Route 22, northeast of Sparta. This farm originally was part of the Reynolds Plantation. It is Victorian in style with two stories. It was constructed in 1880.

- The Shoulderbone Indian Mounds were listed in 1976. They have a restricted location identification due to the archaeological significance and sensitivity of the material located there.

Recreation

Located in the central region of Georgia, on the Oconee River, Lake Sinclair stretches through the counties of Baldwin, Hancock, and Putnam. Lake Sinclair was created in 1953. With approximately 417 miles (671 km) of scenic shoreline, winding coves and inlets as well as several vast stretches of open water, Lake Sinclair offers recreational boating pleasure. The lake is made up of a 15,330-acre (6,200 ha) area of water and provides both electricity and recreation.

iv. **Prioritization of Actions:**

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

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

Table 3.5

STAPLEE REVIEW AND SELECTION CRITERIA FOR ALTERNATIVES
• Is the proposed action acceptable by the community? • Is the action compatible with current and future community values? • Are equity concerns involved that would result in unjust treatment of any segment of the population? • Will the proposed action cause social disruption?
TECHNICAL
• Will the proposed action achieve the stated objective and further mitigation goals? • Will the proposed action create more problems than it solves? • Does the proposed action resolve the problem completely or partially? • It is the most useful action in light of other community values?
ADMINISTRATIVE
• Does the community have the capability to implement proposed action? • Is there someone to lead or coordinate the proposed action? • Is there sufficient funding, staff and technical support to implement the proposed action step? • Are there ongoing administrative needs that are required?
POLITICAL
• Is the proposed action politically acceptable? • Have political leaders participated in the planning process? • Who are the stakeholders for this proposed action? • Have all stakeholders been afforded an opportunity to participate in the planning process? • Is there public support to implement and maintain the action?
LEGAL
• Does the community have the authority to implement the proposed action? • Is there a clear legal basis for the proposed action? • Are there legal side effects? (i.e. could the action be construed as a taking) • IS the proposed action allowed in the general plan? • Will the community be liable for action or lack thereof? • Will the proposed action be challenged??
ECONOMIC
• What is the cost-benefit of the proposed action (do the benefits exceed the cost)?

- Have initial, maintenance and administrative costs been taken into account??
- Has funding been secured for the proposed action? If not have funding sources been identified?
- Will the proposed action affect the fiscal capabilities and/ or budget of the jurisdiction?
- Will the proposed action place a tax burden on the community?
- Does the proposed action contribute to other community goals? (capital improvements, economic development)

ENVIRONMENTAL

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

E. Introduction to Action Plan

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

SECTION II. NATURAL HAZARDS

A. Flooding Action Plan

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

Objective A1. Improve the effectiveness of existing flood insurance programs.
Objective A2. Evaluate and improve the present drainage infrastructure.
Objective A3. Warn citizens when the potential for flooding exist.
Objective A4. Lessen the impact to existing buildings, critical facilities and infrastructure as a result of flooding.
Objective A5. Limit future development in flood prone areas.
Objective A6. Reduce the threat of water contamination caused by flooding.

B. Dam Failure Action Plan

Dam failure mainly affects areas that are downstream of the event. Further study of this type event is required to determine where property damage and loss of life has the greatest potential to occur. Critical facilities and vulnerable populations are located in all jurisdictions as well as the unincorporated areas of the County. As a result, any mitigation steps taken related to dam failure events should be undertaken on a countywide basis and specifically include all incorporated jurisdictions.

Objective B1. Identify at risk population and properties.

Objective B2. Develop proposal to regulate protective measures for dam breach zones

C. 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 94.8% of the county is made up of forest and woodlands, the possibility for wildfires is distinct and poses a significant threat. In general, wildfires are the result of dry conditions combined with lightning or carelessness. The committee determined that mitigation goals were necessary to prevent crop damage, as well as damage to new and existing structures.

Objective C1. Ensure that there is an adequate water supply during periods of drought.
Objective C2. Educate citizens on water conservation issues.

D. Wildfire Action Plan

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

Objective D1. Ensure that adequate fire protection is available.
Objective D2. Reduce threat of wildfire occurrence.
Objective D3. Increase public awareness of wildfire dangers.

E. Severe Weather (Tornados, Tropical Storms, Thunderstorm Winds, Lightning, Hail)

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

Objective E1. Minimize damage to property from severe weather events.
Objective E2. Minimize damage to public buildings and critical facilities to ensure continual operations of vital services.
Objective E3. Protect vulnerable populations from the effects of severe weather events.
Objective E4. Educate the public including citizens and business owners on disaster preparedness and safety.

F. Winter Storms Action Plan

Within Hancock 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, Hancock County and other southeastern communities must be prepared for the damage caused by winter storms. The fact that winter storms hit Hancock County infrequently results in other problems, such as lack of equipment and supplies to combat treacherous winter storm conditions. In Hancock County, the formation of ice on roads and bridges, tree limbs, and power lines is the cause of most damage. In Chapter II, Section VI additional winter storm hazards are addressed, as well as information related to potential losses for the county. The Committee has determined that several steps could be undertaken to minimize the effects of winter storms to protect the health and safety of citizens, as well as damage to new and existing structures.

Objective F1. Educate the public on preparedness and safety issues for winter storm events.

Objective F2. Prevent property damage as a result of a winter storm event.

Objective F3. Minimize power outages during winter storms.

G. 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 G1. Ensure communication capabilities exist between all Emergency Service Personnel and Agencies.

Objective G2. 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 G3. Protect critical facilities from the effects due to power outages as a result of all hazards to ensure a continuation of all vital services.

Objective G4. Provide adequate notification to citizens of Hancock County pertaining to hazard event.

Objective G5. Guarantee all evacuation plans are up to date and adequate to meet the needs of the citizens of Hancock County.

Objective G6. Guarantee that all Emergency Response Plans are up to date and adequate to meet the needs of citizens of Hancock County.

Objective G7. Ensure all emergency shelters are ready to meet the needs of the population of Hancock County and Sparta.

Objective G8. Provide the citizens of Hancock County educational information on Emergency Preparedness.

Objective G9. Provide the citizens of Hancock County with accurate and timely information pertaining to Emergency Preparedness.

Objective G10. Collect accurate and complete data pertaining to hazard events within Hancock County and all jurisdictions.

SECTION III. MITIGATION ACTIONS

Table 3.6

Action #	Mitigation Action and Description	Jurisdiction	Implement Agency	Hazards Addressed	Objective Supported	Goal	Structural/ Non-Structural	Estimated Project Cost	Possible Funding Source(s)	Timeframe	Status	Priority
1.	Participate in the NFIP	Sparta	City Council	Flood	A1, A2	1, 2, 4, 5	Non-Structural	Staff Time	General Funds	6 months	In progress	High
2.	Continue to assess stormwater runoff.	Hancock County/ Sparta	BOC/City Council	Flood	A5, C2	2, 6	Non-Structural	Staff time	General Funds	Continual	Ongoing As funding becomes available	High
3.	Construct as needed, more storm water retention facilities, storm drain improvements and channel improvements to protect existing and new developments.	Hancock County/ Sparta	BOC/City Council/ Public Works	Flood/ Drought	A3,	2, 6	Structural	1,500,000	General Funds	Ongoing/ Continual	Ongoing As funding becomes available	High
4.	Clear run-off and water retention ditches.	Hancock County/ Sparta	Public Works/ Road Dept.	Flood	A5	2, 1	Structural	Staff Time	General Funds	Ongoing/ Continual	Ongoing Ditches are cleared by Road Dept. as part of their work load	High
5.	Seek funding for communication towers and voice repeater systems.	Hancock County/ Sparta	BOC/City Council	All hazards	G1, G9	1	Structural	$750,000.	General Fund, FEMA, CJCC, JAG, USDA, DOJ	2 years and Continual	Ongoing As funding becomes available	High
6.	Evaluate existing water system upgrade as needed	Sparta	City Council/ Public Works	Flood/ Drought/ Wildfire	A7, C1	1, 2, 6	Structural	2,000,000	General Fund, CDBG, USDA, EPA, DNR	Continual	Ongoing As funding becomes available	High
7.	Investigate methods to reduce non-point source pollution.	Hancock County/ Sparta	BOC/City Council	Flood	A1	1, 2, 5	Non-Structural	1,000,000	USDA, EPA, DNR	Continual	No projects have been identified	Medium

Action #	Mitigation Action and Description	Jurisdiction	Implement Agency	Hazards Addressed	Objective Supported	Goal	Structural/ Non-Structural	Estimated Project Cost	Possible Funding Source(s)	Timeframe	Status	Priority
8.	Enact a program to educate the residents about water conservation issues	Hancock County/ Sparta	BOC/City Council	Drought	C1, C2	1, 3	Non-Structural	$2,000.00	USDA, EPA, DNR, General Funds	1 year and Continual	Ongoing As funding becomes available	High
9.	Increase public awareness of watering restrictions and bans.	Hancock County/ Sparta	BOC/City Council	Drought	C1, C2	1, 3	Non-Structural	Staff Time	General Funds	1 year and Continual	Ongoing As funding becomes available	High
10.	Develop a public awareness campaign to promote water-saving campaigns (i.e. low-flow water saving devices)	Hancock County/ Sparta	Public Works	Drought	C1, C2	1, 3	Non-Structural	Staff Time	General Funds	1 year and Continual	New	Low
11.	Continue training of all firefighters to include wildland fire training.	Hancock County/ Sparta	EMA	Wildfire	D1	1, 2	Non-Structural	$25,000	General Funds, FEMA	1 year and Continual	Ongoing Training is ongoing through the year	High
12.	Seek funding for needed firefighting equipment	Hancock County/ Sparta	BOC/City Council/ EMA	Wildfire	D1	1, 2	Non-Structural	$50,000	General Funds, FEMA	Continual	Ongoing As funding becomes available	High
13.	Inventory and replace or install more fire hydrants as needed.	Hancock County/ Sparta	Public Works	Wildfire	D1	1, 2	Structural	$25,000	General Funds, FEMA	Continual	Ongoing As funding becomes available	High
14.	Seek funding fire trucks brush trucks, tankers and rescue vehicles for joint fire department.	Hancock County EMA/ Sparta	BOC/City Council/ EMA	Wildfire	D1	1, 2	Non-Structural	$1,500,000	General Funds, FEMA	Continual	Ongoing As funding becomes available	High
15.	Implement the Firewise Community Initiative where appropriate	Hancock County/ Sparta	BOC/City Council/ EMA	Wildfire	D2, D3	1, 2, 3	Non-Structural	$25,000.00	General Funds, GFC	3 years	Stalled as no community has been identified to participate	Low

Action #	Mitigation Action and Description	Jurisdiction	Implement Agency	Hazards Addressed	Objective Supported	Goal	Structural/ Non-Structural	Estimated Project Cost	Possible Funding Source(s)	Timeframe	Status	Priority
16.	Improve public awareness of wildfire techniques and awareness of wildfire dangers.	Hancock County/ Sparta	EMA	Wildfire	D2, D3	1, 2, 3	Non-Structural	$2,500 and Staff Time	General Funds	2 years and Continual	Ongoing Info will be added to website and Facebook page as appropriate	Low
17.	Equip all county and city recreation parks with adequate early severe weather warning and lightning detection devices.	Hancock County/ Sparta	Public Works/ EMA	Severe Weather	E1, E2. E3	1, 2, 6	Structural	50,000	General Funds, FEMA	2 years	Ongoing As funding becomes available	High
18.	Inspects public buildings and critical facilities and retrofit to reinforce windows, doors, and roofs as needed	Hancock County/ Sparta	Building Inspector/ Code Enforcement	Severe Weather, Winter Storms	E1, E2. E3	1, 2, 6	Structural	150,000	General Funds, FEMA	3 years	Ongoing No facilities have been identified to retrofit to date.	Medium
19.	Enforce building codes for all new buildings and critical facilities.	Hancock County/ Sparta	Building Inspector/ Code Enforcement	Flood, Severe Weather, Winter Storm	A5, A6, E1, E2	1, 2, 6	Structural/ Non-Structural	Staff Time	General Funds, FEMA	1 year and Continual	Ongoing	High
20.	Inspect all county and municipal critical facilities for proper grounding.	Hancock County/ Sparta	Building Inspector/ Code Enforcement	Flood, Severe Weather, Winter Storm	E1, E2. E3	1, 2, 6	Structural/ Non-Structural	Staff Time	General Fund	1 year	Ongoing Stalled	High
21.	Install lightning rods in high value critical facilities.	Hancock County/ Sparta	Public Works/ EMA	Severe Weather, Lightning	E1, E2. E3	1, 2, 6	Structural	$100,000.	General Funds, FEMA	2 years	Ongoing As funding becomes available	High

Action #	Mitigation Action and Description	Jurisdiction	Implement Agency	Hazards Addressed	Objective Supported	Goal	Structural/ Non-Structural	Estimated Project Cost	Possible Funding Source(s)	Timeframe	Status	Priority
22.	Review current Emergency Response Plan and update when needed.	Hancock County EMA	EMA	All hazards	G6, G8	1, 2, 3	Non-Structural	Staff Time	General Funds	2 years	Updated as required. Last revision was August 2019	High
23.	Review current evacuation plans paying particular attention to vulnerable populations and update as needed.	Hancock County EMA	EMA/BOE	Flood, Wildfire, Dam Failure, Severe Weather, Winter Storm	G5, G8	1, 2, 3	Non-Structural	Staff Time	General Funds	2 years	Updated as required	High
24.	Develop a public awareness program about the installation of lightning grounding systems on critical infrastructure, residential and business properties.	Hancock County/ Sparta	BOC/City Council/ EMA	Severe Weather, Lightning	E4	1, 2, 3	Non-Structural	Staff Time	General Funds	2 years	Stalled due to lack of staff	Low
25.	Inventory all critical facilities and assess generator needs. Install generators where needed.	Hancock County/ Sparta	BOC/City Council/ EMA	All hazards	G3	1, 2, 3, 6	Structural/ Non-Structural	$200,000	General Funds, FEMA	1 year and continual	Ongoing As funding becomes available	High
26.	Seek funding to ensure all current and future emergency shelters have back-up generators.	Hancock County/ Sparta	BOC/City Council/ EMA	All hazards	G7	1, 2, 3, 6	Structural/ Non-Structural	$100,000	General Funds, FEMA	3 years	Ongoing As funding becomes available and new shelters are identified	Medium
27.	Educate the public on shelter locations and evacuation routes	Hancock County/ Sparta	BOC/City Council/ EMA/BOE	Flood, Wildfire, Dam Failure, Severe Weather, Winter Storm	G8, G9	3	Non-Structural	Staff Time	General Funds	1 year and continual	Information is posted on Facebook and EMA website as needed	High

Action #	Mitigation Action and Description	Jurisdiction	Implement Agency	Hazards Addressed	Objective Supported	Goal	Structural/ Non-Structural	Estimated Project Cost	Possible Funding Source(s)	Timeframe	Status	Priority
28.	Develop public education and awareness programs regarding severe weather events to include home safety measures, purchase of weather radio and personal safety measures before, during and after an event.	Hancock County/ Sparta	EMA	Flood, Wildfire, Dam Failure, Severe Weather, Winter Storm	G8, G9	3	Non-Structural	$10,000 and Staff time	General Funds, FEMA	2 years and continual	Information is posted on Facebook and EMA website as needed	Medium
29.	Implement a winter storm education program to include winterization of home and/or business and what to do before, during and after.	Hancock County/ Sparta	EMA	Winter Storm	F1	3	Non-Structural	$10,000 and Staff time	General Funds	2 years and continual	Information is posted on Facebook and EMA website as needed	Low
30.	Create a data base to record hazard event information.	Hancock County/ Sparta	BOC/City Council/ EMA	All hazards	G10	1, 2, 3,	Non-Structural	Staff Time	General Funds	2 years	Stalled due to lack of staff	Low
31.	Conduct dam breach analysis to identify assets and population at risk in the event of a failure.	Hancock County/ Sparta	BOC/City Council/	Dam Failure	B1, B2	1, 2,	Non-Structural	$200,000	General Funds, DNR	3 years	Stalled due to funding	Low
32.	Draft ordinance prohibiting development in dam breach zone.	Hancock County/ Sparta	BOC/City Council/	Dam Failure	B2	1, 2, 4	Non-Structural	Staff Time	General Funds	1 year	In progress	Medium
33.	Install dam failure alert systems.	Hancock County/ Sparta	Public Works/ EMA	Dam Failure	G4	1, 2, 6	Structural	$15,000	General Funds, DNR	4 years	Ongoing As funding becomes available	Medium
34.	Inventory existing road equipment and purchase needed equipment to maintain roads before, during and after a hazard event.	Hancock County/ Sparta	BOC/City Council/ Road Department	Flood, Severe Weather, Winter Storm	G2	1, 2	Non-Structural	$250,000	General Funds, FEMA	2 years	Ongoing As funding becomes available	Medium

Action #	Mitigation Action and Description	Jurisdiction	Implement Agency	Hazards Addressed	Objective Supported	Goal	Structural/ Non-Structural	Estimated Project Cost	Possible Funding Source(s)	Timeframe	Status	Priority
35.	Develop coordinated management strategies for deicing, snow plowing, and clearing roads of fallen trees and debris	Hancock County/ Sparta	BOC/City Council/	Flood, Severe Weather, Winter Storm	G2	1, 2	Non-Structural	Staff Time	General Funds	2 years	Stalled due to staff time	Low
36.	Promote the construction of safe rooms in shelter areas and in public buildings.	Hancock County/ Sparta	BOC/City Council/ EMA	Flood, Wildfire, Dam Failure, Severe Weather, Winter Storm	G3	1, 2, 6	Structural	$100,000	General Funds, FEMA	4 years	Ongoing As funding becomes available	Low
37.	Update 911 equipment as needed.	Hancock County/ Sparta	Police/ Sheriff/ EMA	All hazards	G1, G3	1, 2, 6	Structural	$175,000	General Funds, FEMA	1 year and Continual	Ongoing As funding becomes available	High
38.	Request that all new education facilities be designed to serve as public shelters for emergency purposes.	Hancock County/ Sparta	BOC/City Council/ BOE	All hazards	G7	1, 2, 6	Non-Structural	Staff Time	General Funds	1 year and Continual	Ongoing. No new schools have been designed	High
39.	Promote and participate in the following American Red Cross Programs • Disaster Resistant Neighborhoods Program • Business and Industry Preparedness Seminar • Community Disaster Education Preparedness presentations	Hancock County/ Sparta	BOC/City Council/ EMA	All hazards	G4, G8, G9	1, 2 ,3	Non-Structural	$10,000	General Funds, FEMA	2 years and Continual	Ongoing	Medium
40.	Create a Facebook Page with information pertaining to Emergency Preparedness.	Hancock County	EMA	All hazards	G4, G5, G6, G7, G8, G9.	1, 2 ,3	Non-Structural	Staff Time	General Funds	In progress	Ongoing Facebook should be ready in 6 months updated as needed	High

Action #	Mitigation Action and Description	Jurisdiction	Implement Agency	Hazards Addressed	Objective Supported	Goal	Structural/ Non-Structural	Estimated Project Cost	Possible Funding Source(s)	Timeframe	Status	Priority
41.	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.	Hancock County/ Sparta	BOC/City Council/ EMA	Flood, Wildfire, Dam Failure, Severe Weather, Winter Storm	G9, G10	1, 2, 6	Non-Structural	$50,000	General Funds, FEMA	1 year and Continual	Ongoing As funding becomes available	Low
42.	Purchase a Bucket Truck to Remove Limbs along county road rights-of-way.	Hancock County	BOC/ Road Department	Flood, Severe Weather, Winter Storm	G2	1, 2	Non-Structural	$150,000	General Funds, FEMA	2 years	Ongoing As funding becomes available	High
43.	Pave Roads in county that are unpassable due to flooding	Hancock County	BOC/ Road Department	Flood, Severe Weather,	G2	1,2	Structural	$1,500,000	General Funds, T-SPLOST FEMA, DOT	2 years	Ongoing As funding becomes available	Medium
44.	Provide NOAA weather radios to elderly and handicap populations (moved to all hazards).	Hancock County/ Sparta	BOC/City Council/ EMA	Flood, Wildfire, Dam Failure, Severe Weather, Winter Storm	G4, G8, G9	1, 2,3	Non-Structural	$50,000	General Funds, FEMA	2 years	Ongoing As funding becomes available	Medium
45.	Preform procurement to contract with debris removal firm to have contract in place before hazards to ensure firm can move in immediately.	Hancock County/ Sparta	BOC/City Council/	Winter Storm, Severe Weather, Flood, Wildfire,	A4, G2	1, 2	Non-Structural	Staff Time	General Funds	2 years	Stalled do to staff time	Low

A. New Buildings and Infrastructure: All objectives and action steps are applicable to new buildings and infrastructure.

B. Existing Buildings and Infrastructure: All objectives and action steps are applicable to existing buildings and infrastructure except adopt building codes. Enforcing building codes on existing buildings is not always feasible. Buildings maybe retrofitted but cannot always be brought up to stricter regulations.

C. Special Multi-Jurisdictional Strategy and Considerations: During a natural hazard it is imperative that all emergency personal can communicate with each other throughout the entire planning area. The County and its jurisdictions have numerous dead spots throughout the area due to topography and lack of adequate communication equipment. The County and its emergency personnel are dependent on the private sector for towers to use for signals. If these towers are ever removed the County will be without any adequate means to transmit signals. The County and the City are aware of the need to develop communication capabilities that will serve their County.

D. COMPLETED AND DELETED ACTION STEPS/ UNCHANGED AND/OR CONTINUAL ACTION STEPS

Table 3.7

Action #	Mitigation Action and Description	Hazards Addressed	Status	Comments / Accomplishments y
1	Investigate greater participation Level in the CRS	Flood	Deleted	The cost of participation in the CRS is too costly for this small city and county
2	Participate in the NFIP	Flood	In progress	Should be completed within the next 6 months
3	Continue to assess stormwater runoff.	Flood	Continual/ Unchanged	This is done regularly as part of county and city public works staff.
4	Construct as needed, more storm water retention facilities, storm drain improvements and channel improvements to protect existing and new developments. TO include but not limited to Broad and Bolin and Broad and Spring in Sparta.	Flood/ Drought	Continual/ Unchanged	Completed storm drainage repairs to culverts for $90,000 on C. Boone, Rock Quarry, Dunn, Smith, Fulsome Creek Roads, Oconee Drive and Beulah Hwy. ,
5	Clear run-off and water retention ditches.	Flood	Continual/ Unchanged	This is done regularly as part of county and city public works staff.
6	Seek funding for communication towers and voice repeater systems.	All hazards	Continual/ Unchanged	
7	Adopt ordinances to limit and control building and development in known flood prone areas.	Flood	Unchanged	Should be completed within the next 6 months The City of Sparta has adopted the Model Floodplain Ordinance but has not made application to GaDNR
8	Promote the preservation of areas in and around watercourses.	Flood	Deleted	Development is limited due to flood ordinances.
9	Add greenspace to known flood prone areas.	Flood	Flood	Deleted

Action #	Mitigation Action and Description	Hazards Addressed	Status	Comments / Accomplishments y
10	Evaluate existing water system upgrade as needed	Flood/ Drought/ Wildfire	Continual/ Unchanged	
11	Investigate methods to reduce non-point source pollution.	Flood	Continual/ Unchanged	
12	Promote increased surface water usage and surface artesian flow for irrigation.	Drought	Deleted	
13	Enact a program to educate the residents about water conservation issues	Drought	Continual/ Unchanged	
14	Increase public awareness of watering restrictions and bans.	Drought	Continual	GA EPD water restrictions are posted and advertised as required by law.
15	Develop a public awareness campaign to promote water-saving campaigns (i.e. low-flow water saving devices)	Drought	Continual/ Unchanged	
16	Continue training of all firefighters to include wildland fire training.	Wildfire	Continual/ Unchanged	All paid firefighters have had 240 hours of annual training. All volunteer firefighters have completed annual fire training requirements
17	Seek funding for needed firefighting equipment	Wildfire		Hancock County bought 10 turnout gears for 20,000
18	Inventory and replace or install more fire hydrants as needed.	Wildfire		Sparta repaired ten fire hydrants for $5,000
19	Seek funding fire engines and tankers for local fire departments.	Wildfire	Continual/ Unchanged	
20	Enforce defensible space (30-ft minimum setbacks) between buildings and flammable brush and forestland where possible.	Wildfire	Completed	This is followed to the greatest extent possible
21	Continue following GFC service of construction and maintenance of firebreaks around forests and structures, along abandoned roadbeds.	Wildfire	Completed	This is followed to the greatest extent possible
22	Strictly follow GFC's guidelines for control burns and permits.	Wildfire	Completed	This is strictly enforced
23	Implement the Firewise Community Initiative where appropriate	Wildfire	Continual/ Unchanged	
24	Improve public awareness of wildfire techniques and awareness of wildfire dangers.	Wildfire	Continual/ Unchanged	
25	Adopt Building Codes	Flood, Severe Weather,	Completed	Both Hancock County and Sparta have adopted building codes. These are revised and revised as needed and during the Comprehensive Plan Update

Action #	Mitigation Action and Description	Hazards Addressed	Status	Comments / Accomplishments y
		Winter Storm		
26	Adopt Zoning Regulations	Flood, Severe Weather, Winter Storm	Completed	Both Hancock County and Sparta have adopted zoning regulations. These are revised and revised as needed and during the Comprehensive Plan Update
27	To the greatest extent possible, identify all owners of inadequately installed manufactured homes offer a financial incentive to retrofit them with an appropriate level of anchoring and support.	Severe Weather	Deleted	No funding exists for this activity.
28	Equip all county and city recreation parks with adequate early severe weather warning and lightning detection devices.	Severe Weather	Continual/ Unchanged	
29	Inspects public buildings and critical facilities and retrofit to reinforce windows, doors, and roofs as needed	Severe Weather, Winter Storms	Continual/ Unchanged	
30	Enforce building codes for all new buildings and critical facilities.	Flood, Severe Weather, Winter Storm	Continual/ Unchanged	This is accomplished when new building permits are issued and inspections take place.
31	Inspect all county and municipal critical facilities for proper grounding.	Flood, Severe Weather, Winter Storm	Completed	All facilities have proper grounding
32	Install lightning rods in high value critical facilities.	Severe Weather, Lightning	Continual/ Unchanged	
33	Install surge protectors on critical facilities' electronic equipment in essential county and city facilities.	Severe Weather, Lightning, Winter Storm	Completed	All facilities have surge protectors.
34	Review current Emergency Response Plan and update when needed.	All hazards	Completed	LEOP as update 2016
35	Review current evacuation plans paying particular attention to vulnerable populations and update as needed.	Flood, Wildfire, Dam Failure, Severe Weather, Winter Storm	Continual/ Unchanged	
36	Provide boat owners with safety tie down procedures with boat registration.	Severe Weather, Winter Storm	Deleted	

Action #	Mitigation Action and Description	Hazards Addressed	Status	Comments / Accomplishments y
37	Develop a public awareness program about the installation of lightning grounding systems on critical infrastructure, residential and business properties.	Severe Weather, Lightning	Continual/ Unchanged	
38	Inventory all critical facilities and assess generator needs. Install generators where needed.	All hazards	Continual/ Unchanged	Received three generators for $75,000. A new generator was installed at the WPCP for Sparta for $125,000. Health Department received generator for $25,000
39	Seek funding to ensure all current and future emergency shelters have back-up generators.	All hazards	Continual/ Unchanged	
40	Educate the public on shelter locations and evacuation routes	Flood, Wildfire, Dam Failure, Severe Weather, Winter Storm	Continual/ Unchanged	The EMA has set up a website with educational information. Facebook site is underway
41	Develop public education and awareness programs regarding severe weather events to include home safety measures, purchase of weather radio and personal safety measures before, during and after an event.	Flood, Wildfire, Dam Failure, Severe Weather, Winter Storm	Continual/ Unchanged	The EMA has set up a website with educational information. Facebook site is underway
42	Implement a winter storm education program to include winterization of home and/or business and what to do before, during and after.	Winter Storm	Continual/ Unchanged	The EMA has set up a website with educational information. Facebook site is underway
43	Review current codes to comply with and enforce the State building code with criteria for design snow load for buildings and structures.	Winter Storm	Completed	Hancock County And Sparta adhere to State building Codes
44	Create a data base to record hazard event information.	All hazards	Continual/ Unchanged	
45	Conduct dam breach analysis to identify assets and population at risk in the event of a failure.	Dam Failure	Continual/ Unchanged	
46	Draft ordinance prohibiting development in dam breach zone.	Dam Failure	Continual/ Unchanged	
47	Install dam failure alert systems.	Dam Failure	Continual/ Unchanged	
48	Inventory existing road equipment and purchase needed equipment to maintain roads before, during and after a hazard event.	Flood, Severe Weather, Winter Storm	Continual/ Unchanged	

Action #	Mitigation Action and Description	Hazards Addressed	Status	Comments / Accomplishments y
49	Develop coordinated management strategies for deicing, snow plowing, and clearing roads of fallen trees and debris	Flood, Severe Weather, Winter Storm	Continual/ Unchanged	
50	Promote the construction of safe rooms in shelter areas and in public buildings.	Flood, Wildfire, Dam Failure, Severe Weather, Winter Storm	Continual/ Unchanged	
51	Update 911 equipment as needed.	All hazards	Continual/ Unchanged	
52	Request that all new education facilities be designed to serve as public shelters for emergency purposes.	All hazards	Continual/ Unchanged	
53	Promote and participate in the following American Red Cross Programs • Disaster Resistant Neighborhoods Program • Business and Industry Preparedness Seminar • Community Disaster Education Preparedness presentations	All hazards	Continual/ Unchanged	
54	Create an EMA website and Facebook Page with information pertaining to Emergency Preparedness.	All hazards	Continual/ Unchanged	EMA has been created and website is updated as needed. Facebook is underway
55	Work with local cable and radio providers to enhance and broadcast public education on Emergency Preparedness.	All hazards	Completed	The county and city have a good relationship with media
56	Implement GIS technology on fire and emergency management vehicles so data can be readily available in the field so more accurate, timely assessments for future mitigation planning activities.	Flood, Wildfire, Dam Failure, Severe Weather, Winter Storm	Continual/ Unchanged	
57	Purchase a portable sewer transfer pumping unit	Flood, Severe Weather, Winter Storm	Deleted	It is more cost effect to rent one if need than to own and have to maintain.
58	Herman Nelson Warming System AIR HEATER w/TRAILER	Winter Storm	Deleted	Not cost effective.
59	Purchase a Brush Fire Truck	Wildfire	Completed	**Moved to action step # 14 in Table 3.6**

Action #	Mitigation Action and Description	Hazards Addressed	Status	Comments / Accomplishments y
60	Purchase a Bucket Truck to Remove Limbs along county road right-of-ways	Flood, Severe Weather, Winter Storm	Completed	Limbs are removed by Electric Companies.
61	Pave Roads in county that are unpassable due to flooding	Flood, Severe Weather,	Continual/ Unchanged	**Moved to action step # 14 in Table 3.6**
62	Provide NOAA weather radios to elderly and handicap populations (moved to all hazards).	Flood, Wildfire, Dam Failure, Severe Weather, Winter Storm	Continual	As funding is available
63	Review existing comprehensive, development and land use plans to address flood prone areas.	Flood	Completed	
64	Preform procurement to contract with debris removal firm to have contract in place before hazards to ensure firm can move in immediately.	Winter Storm, Severe Weather, Flood, Wildfire,	Continual/ Unchanged	
65	Run HAZUS scenarios once the software is updated and compatible to RC ArcGIS 10.2 update estimated losses.	Flood/ Severe Weather	Completed	A copy can be found in Appendix C

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

SECTION I. Implementation Action Plan

A. Administrative Actions: Hancock County EMA was responsible for overseeing the original planning process and the plan update. Facilitation of the planning process was conducted by the Central Savannah River Area Regional Commission. The Hancock County Board of Commissioners has authorized the submission of this plan to both GEMA and FEMA for their respective approvals. The Hancock County Board of Commissioners and the City Council of Sparta formally adopted this plan after approval from GEMA and FEMA.

B. Authority and Responsibility: Upkeep and maintenance of the plan is the responsibility of the EMA Director. It is 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 Hancock County Board of Commissioners and the Mayor of Sparta will be responsible for assigning appropriate staff members to implement the action steps identified in this plan for their jurisdictions. The EMA Director, or his designee, shall be authorized to call the committee to review and update this plan periodically (at least annually) throughout the useful life of the plan, not to exceed five years.

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

C. Prioritization: The mitigation goals, objectives and related action items were initially compiled from the input of the committee, as well as from others in the community. The committee prioritized the mitigation actions based on what would be perceived as most beneficial to the community, and the action steps have been listed in this plan as the committee prioritized them. Several criteria were established to assist committee members in the prioritization of these suggested mitigation actions. Criteria included perceived cost benefit or cost effectiveness, availability of potential funding sources, overall feasibility,

measurable milestones, multiple objectives, and both public and political support for the proposed actions.

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

    The committee was asked to review the STAPLEE score sheet and list of mitigation actions. Each action item was discussed and a consensus reached by the group on the importance of each item. A score of high, medium or low was assigned to each to each item to help determine the priority level.
    - High: Strategies that would have a direct, large impact on mitigation of hazards. A project that meets multiple plan goals and objectives, benefits exceed cost, has funding secured under existing programs or authorizations, or is grant-eligible, and can be completed in 1 to 5 years. It may also be a project that just requires staff time but has great benefit, i.e., adoption of flood plain ordinances.
    - Medium: Strategies that meet at least one plan goal and objective, benefits exceed costs, funding has not been secured or requires substantial staff time and can be completed in 1 to 5 years.
    - Low: Strategies that are important but requires substantial staff time, or addition of staff and resources that are not readily available to implement.

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 2014 plan was reviewed to determine if any of the mitigation activities need to be added to the above-mentioned documents. The requirements of this Hazard Mitigation Plan were taken into consideration and incorporated into Comprehensive Plans, Five-Year Short-Term Work Program, Local Emergency Operations Plans, and all other such Plans as appropriate. The County along with Sparta worked jointly to produce these planning documents.

The STWP will be updated in 2021 and the Joint Comprehensive Plan is due for a partial an update in 2021 and a full update in 2026. The RC facilitates the planning process for both documents and updates both plans. The County takes the lead and all jurisdictions must participate to complete the comp plan and STWP. This update will be reviewed by the County along with all six jurisdictions. The requirements of this Hazard Mitigation Plan will be taken into consideration and will be incorporated into Comprehensive Plans, Five-Year Short-Term Work Program, Local Emergency Operations Plans, and all other such Plans as appropriate. This hazard plan will be reviewed and incorporated into the Joint Comprehensive plan and STWP update as needed. Mitigation strategies will be listed in the STWP to ensure their eligibility for funding from the state if available. In addition, relevant sections were included in the 2016 revision of the LEOP.

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

SECTION II. EVALUATION, MONITORING AND UPDATING

A. Method: The Plan is intended to be a ‘living’ document that informs stakeholders about hazard mitigation projects and plans undertaken by the county and their jurisdictions. In

accordance with the requirements set forth in the Disaster Mitigation Act of 2000, Hancock County is required to review the PDM Plan annually and revise the plan every five years. The revision process will be consistent with the FEMA planning requirements as stipulated in the 44 CFR 201.6.

B. Criteria to be used to monitor and evaluate the plan annually or after any natural disaster event.

a. Each hazard will be reviewed. Any new information pertaining to new and/or previous events will be added to the plan.
b. Any new critical facilities will be added to the plan.
c. Critical facilities information will be updated as needed.
d. All mitigation goals, objectives and action steps will be reviewed for relevance and completion status. All mitigation goals, objectives and action steps that have been completed or are no longer relevant will be documented.
e. New mitigation activities will be added if necessary.
f. Public participation will be monitored and documented.

C. Responsibility: At the direction of the EMA Director, the committee shall be reconvened for the revision process which will include a schedule, timeline, and a list of the agencies or organizations participating in the plan revision. Hancock 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
Hancock County	Emergency Management Director	Annually
Sparta	Mayor	Annually

D. Timeframe: The committee has set the first Thursday of every February 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: Hancock County is committed to having active public participation during reviews and updates of the PDM Plan. Public participation will follow the guidelines set forth in 44 CFR 201.6. Future public involvement of the community will be more stringent. The original method was not as successful as anticipated in ensuring community involvement. With this in mind, two weeks before the annual February review meeting, a notice will be published in the legal organ of Hancock County. Flyers will be placed at all government and community gathering places to ensure that citizens of the county are made aware of the annual review process. The new EMA website will also provide ongoing information about the plan and its implementation.

B. Timeframe -- Pursuant to the requirements set forth in the Disaster Mitigation Act of 2000, the community is again required to update and evaluate the plan no more than five years after its adoption. At least one year prior to the end of the required five-year update period, the EMA Director will begin the planning process for a new update to this plan. This will consist of establishing a new planning committee that will be tasked with completing the update following the same process used for this update.

No later than the conclusion of the five-year period following approval of the plan update, the EMA Director shall submit a revised Hazard Mitigation Plan to GEMA for its approval. It is important to note that the plan update process, as established by the planning committee, is subject to change, depending upon subsequent regulations and/or requirements set forth by GEMA and FEMA.

CHAPTER V. Conclusion

SECTION I. Summary

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

As a result of the update PDM planning process, Hancock 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 Sparta Ishmaelite,* providing Hancock 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 Hancock 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 Hancock County Pre-Disaster Hazard Mitigation Planning Committee is to "*Make the citizens, businesses, communities and local governments of Hancock 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 Hancock County a safer place to live and work for all of its citizens.

SECTION II – REFERENCES

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

Publications:

FEMA Pre-Disaster Mitigation *How-to Guides #1, 2, 3, 7* (FEMA)
GEMA Supplements to FEMA Pre-Disaster Mitigation How-to Guides (GEMA)
The Sparta Ishmaelite
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/subjec/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
NOAA NCEI www.ncdc.noaa.gov
SHELDUS™ | Spatial Hazard Events and Losses Database for the United States
https://sheldus.asu.edu/SHELDUS
National Inventory of Dams https://nid.sec.usace.army.mil/
http://www.placenames.com
New Georgia Encyclopedia http://www.georgiaencyclopedia.org/nge/Home.jsp
Georgia Archives University System of Georgia
http://cdm.sos.state.ga.us:2011/cdm/search/searchterm/FLOOD/mode/all/order/subjec/ad/desc
United States Census Bureau http://www.census.gov/
USDA, NASS, 2017 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
Hancock County, Sparta
Hancock County Board of Education
Hancock County Hospital
Hancock County Tax Assessor

APPENDICES

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

I. Hazard A - Flood
   a. Description
   b. Data – GEMA Critical Facility Inventory Report
   c. Maps

II. Hazard B– Dam Failure
   a. Description
   b. Data– GEMA Critical Facility Inventory Report
   c. Maps

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

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

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

VI. Hazard F – Winter Storm
   a. Description
   b. Data– GEMA Critical Facility Inventory Report
   c. Maps

Appendix B – Growth and Development Trends / Community Information

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

Appendix C –Planning documents

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

Appendix D – Worksheets used in planning process

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

Appendix E – Copies of Required Planning Documentation

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