Ben Hill County, Georgia

Hazard Mitigation Plan
2019-2024

Adopted
Dec. 3, 2019
Expires June 16, 2024

Including the City of Fitzgerald

This Plan produced for the Ben Hill County Board of Commissioners
by the Southern Georgia Regional Commission
through funding provided by the Federal Emergency Management Agency
and the Georgia Emergency Management Agency

Table of Contents

Chapter 1: Introduction to the Planning Process

Summary of changes:

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

CHAPTER 1 Section	Updates to Section
I. Purpose, Need, Authority, and Statement of Problem	• Language updated to reflect that this was an update to the existing plan
II. Local Methodology, Plan Update Process, and Participants	• Planning Committee reviewed each section and updated as necessary
III. Plan Review, Analysis, and Revision	• Planning Committee reviewed each section • Updates made using national, state, and local data
IV. Organization of Plan	• Consistent with original plan
V. Local Hazard, Risk and Vulnerability (HRV) Summary, Local Mitigation Goals, and Objectives	• Updates made using national, state, and local data
VI. Multi-Jurisdictional Special Considerations	• No major changes from original plan
VII. Adoption, Implementation, Monitoring, and Evaluation	• Evaluation method revised and updated.
VIII. Community Data	• Updates made using most recent available national, state, and local data

Table 1.1: Overview of updates to Chapter 1: Introduction to the Planning Process

Section I. Purpose and Need, Authority and Statement of Problem

This document is the official plan update to the previous Ben Hill County Pre-Disaster Mitigation Plan Update, as approved by the Georgia Emergency Management Agency (GEMA) and the Federal Emergency Management Agency (FEMA), which took effect on June 17, 2014 and expires on June 16, 2019.

The purpose of this document is to provide an overview of the hazards that may impact Ben Hill County and the City of Fitzgerald, and to outline the community's plans to mitigate the potential loss of life and damages to property and the economy that could occur with these events. Hazard Mitigation is a means to address and proactively reduce the potential damage that may be caused by natural or man-made disasters.

This Plan is a direct result of research and a planning and public involvement process undertaken by the local government officials and citizens of Ben Hill County and the City of Fitzgerald after they formed the Ben Hill County Hazard Mitigation Plan Update Committee (hereafter known as the HMPUC). This Plan is the result of their commitment to reduce the risks of natural hazards

and the effects of those natural hazards to their communities. The City of Fitzgerald is the only incorporated city located in Ben Hill County.

Authority for the development of this Plan was given by the Ben Hill County Commission as a result of their execution of the Grantee-Subgrantee Agreement for the Ben Hill County Hazard Mitigation Grant Program (HMGP) Planning Project; and by the City of Fitzgerald, located within Ben Hill County, through their participation in the planning project.

In order to initiate an outreach program to neighboring communities, governments, local and regional agencies, and to agencies authorized to regulate development, business, and the public, two Public Hearing Notices were published in the legal organ of the local newspaper. In addition, e-mail lists of stakeholders were kept updated and those on them were informed of meetings through e-mails, letters, and/or telephone calls. Surrounding county EMA Directors were notified of the plan update via phone calls and invited to participate in the process, but none participated. Additionally, several area county Hazard Mitigation Plans were being updated at the same time and an active meeting list was maintained for scheduling purposes.

Planning Division staff from the Southern Georgia Regional Commission, which represents eighteen counties in the region (including Ben Hill County), attended the Ben Hill County meetings. They participated in all aspects of the planning process and provided a regional perspective in the formation of the multi-jurisdictional Ben Hill County and City of Fitzgerald Hazard Mitigation Plan.

Through the above efforts, the multi-jurisdictional Ben Hill County and City of Fitzgerald Hazard Mitigation Plan was updated, including a comprehensive range of Mitigation Goals, Objectives, and Action Steps (see Chapter 4) which will assist the local governments in emphasizing a more direct approach to Hazard Mitigation. The long-term goal is to reduce potential natural disaster losses to life, property, and the economy through Hazard Mitigation efforts.

Section II. Local Methodology, Plan Update Process, and Participants

A. Overview

This Hazard Mitigation Plan Update encompasses the jurisdictions of Ben Hill County and the City of Fitzgerald, located in Southern Georgia. Each of these jurisdictions also participated in the previous Hazard Mitigation Plan update. The Southern Georgia Regional Commission provided technical assistance. A local Hazard Mitigation Plan Update Committee (Ben Hill County HMPUC) was formed, and a year-long planning effort was undertaken, the final product of which was a Plan Update containing updated Mitigation Goals, Objectives, and Action Steps to reduce or eliminate the potential for loss of life and damage to property and the economy caused by natural disasters (see Chapter 4).

Potential members of the Ben Hill County HMPUC were contacted by telephone or by letter/e-mail concerning their participation on the Committee. Southern Georgia Regional Commission (SGRC) staff provided technical assistance to the Ben Hill County HMPUC. The Ben Hill County HMPUC was comprised of representatives from Ben Hill County and the City of Fitzgerald and also included representatives from other groups and individuals, as shown below, who attended meetings and/or conducted research:

Jurisdiction	Title	Name
Ben Hill County BOC	Chairman	Mike Dinnerman
Ben Hill County BOC	County Administrator	Steve Taylor
Ben Hill County Chamber of Commerce	Executive Director	Neesa Williams
Ben Hill County EMA	Assistant	Brandon Fletcher
Ben Hill County EMA	Director	Lee Cone (Sheriff)
Ben Hill County Health Dept.	Nurse Manager	Christine Naylor
Ben Hill County Sheriff's Office	Sheriff	Lee Cone
Ben Hill County Sheriff's Office	Colonel	Randy Kendrick
Ben Hill County Volunteer Fire Dept.	Chief	Sheldon Conger
City of Fitzgerald	City Planner	Cam Jordan
City of Fitzgerald	Deputy Administrator	Kathy A. Young
City of Fitzgerald	Mayor	Jim Puckett
City of Fitzgerald Police Dept.	Chief	William Smallwood
Dorminy Medical Center	Engineering Director	Ronald Jordan
Dorminy Medical Center	Nurse Manager	Tracey Roberson
Dorminy Medical Center	PR/Marketing Director	Holley Lee
Georgia Emergency Management Agency	Hazard Mitigation Planner	Shelby Meyers
Georgia Forestry Division	Chief Ranger	Theo Craddock
Southern Georgia Regional Commission	Planner	Loretta Hylton

The Committee held the following meetings, the sign-in sheets of which are included in Appendix E:

- Kick-off public hearing – July 9, 2018
- First workshop – July 26, 2018
- Second workshop – September 20, 2018
- Final public hearing – November 7, 2019

Building upon the previous Plan, each chapter was reviewed chronologically with updated hazard, risk, and vulnerability data, as well as previous accomplishments of mitigation strategy efforts.

Open discussion was permitted at all public meetings for suggestions and/or comments regarding the plan update. Also, during general question and answer periods, comments (if any) were noted by the Southern Georgia Regional Commission staff and incorporated into the plan as appropriate.

Copies of the previous Plan were made available at each meeting, while relevant chapters and sections under discussion were photocopied and distributed to those in attendance for comments. Outside of the formal meetings, parts of the plan were e-mailed to certain individuals who were unable to attend the meetings, and their comments were sought. Copies of the previous Plan and the draft Plan Update document were also available on the Southern Georgia Regional Commission website and from the local EMA office, Fitzgerald City Hall, and the Ben Hill County Administration Building.

For the plan update, the Hazard Mitigation Plan Update Committee (HMPUC) used the prior Hazard Mitigation Plan as a basis, reviewing all chapters and sections and updating them as appropriate using national, state, and local data sources. The HMPUC reviewed the individual parts of the prior plan (with an emphasis on the hazards, goals, objectives, and action steps), and updated these elements through open discussion in which updates were noted by SGRC staff, who then used notes from the workshops to create the new Hazard Mitigation Plan document. The Wildfire section was updated using the Georgia Forestry Commission's "Community Wildfire Protection Plan" (see Appendix C). The CWPP was consulted to ensure consistency between the CWPP and HMP, and all action items from the CWPP that were still relevant were included as action steps in the HMP. Land use descriptions, information about zoning, and information about community services were updated using the current joint Comprehensive Plan for the County and City. Other documents used were the local Emergency Operations Plan (the goals from the LEOP were used as a basis for developing the objectives in this HMP, and the local government capabilities listed in the LEOP were used as a starting point for the discussion of local government capabilities in Chapter 4 of this HMP), the previous Hazard Mitigation Plan, the State of Georgia Hazard Mitigation Plan, and information from the National Climatic Data Center (NCDC). The State Hazard mitigation plan was consulted to ensure the HMP would be consistent with this plan, and data from the NCDC were used to create the Hazard Frequency Table and associated information regarding each hazard, which can be found in Chapter 2. The County and City do not have a Flood Mitigation Assistance Plan or a Flood Insurance Study.

B. Public Comment and Participation

The publication of a Public Notice in the legal organ is considered the legal method of notifying the public and inviting them to meetings.

The public was invited to attend and comment during two public hearings. The "kick-off" public hearing was advertised in the local newspaper (meeting advertisements and sign-in sheets are provided in Appendix E). A second and final public hearing was held on November 7, 2019 and was advertised in the local newspaper (see Appendix E). No public comments were made at either of these hearings.

In addition, an e-mail list of stakeholders was kept up to date, including all the attendees who wrote their e-mail address on the sign-in sheet at each meeting, as well as any other interested parties. Further reminders of meetings were provided as needed through telephone calls and in-person communication.

C. Mission and Vision Statements

The HMPUC decided on the following Mission Statement and Vision Statement in the original plan and re-confirmed them in this update to help guide them through the planning process.

Ben Hill County and the City of Fitzgerald
Hazard Mitigation Plan Update Committee
Mission Statement

This committee's mission is to make Ben Hill County and the City of Fitzgerald and their citizens, local governments, communities, residences, and businesses less vulnerable to the effects of natural hazards. This will be accomplished through the effective administration of Hazard Mitigation Programs, hazard risk assessments, wise floodplain management, and a coordinated approach to mitigation policy through state, regional, and local planning activities.

Ben Hill County and the City of Fitzgerald
Hazard Mitigation Plan Update Committee
Vision Statement

This committee's vision is to institutionalize a local Hazard Mitigation ethic through leadership, professionalism, and excellence, thus leading the way to a safe, sustainable way of life for Ben Hill County and City of Fitzgerald.

Due to Ben Hill County and the City of Fitzgerald being such close-knit communities, the Ben Hill County HMPUC chose not to break into subcommittees, but to address issues as a whole group. Various members of this group had direct knowledge relating to local infrastructure and agencies, emergency planning, hazard planning, and the operations of major departments and emergency services. Through their efforts, this Plan was developed.

The HMPUC was responsible for identifying natural hazard events and completing a profile, vulnerability assessment, potential loss estimation (see Chapter 2, Appendix A, and Appendix D), and updating the Georgia Mitigation Information System (GMIS) Critical Facilities Inventory (see Appendix F). They were also responsible for reviewing and updating the Mitigation Goals, Objectives, and Action Steps (see Chapter 4), among other responsibilities.

Section III. Plan Review, Analysis, and Revision

As mentioned above, the prior Hazard Mitigation Plan was used as a basis for the plan update. The Hazard Mitigation Plan Update Committee (HMPUC) reviewed all chapters and sections of the

prior plan and updated them as appropriate, using national, state, and local sources. Other documents consulted included:

- The Community Wildfire Protection Plan (see Appendix C)
- The current joint Comprehensive Plan for the County and City, which includes the five-year Community Work Program (relevant action items from that plan were included in this plan, and action items from both plans were reviewed together to make sure both plans were consistent).
- The Local Emergency Operations Plan (the goals from the LEOP were used as a basis for developing the objectives in this HMP, and the local government capabilities listed in the LEOP were used as a starting point for the discussion of local government capabilities in Chapter 4 of this HMP).
- The current State of Georgia Hazard Mitigation Strategy (this was used as an overall framework for the creation of this plan, and the draft plan was reviewed side by side with the state hazard mitigation strategy in order to ensure consistency).
- The local Service Delivery Strategy (this was reviewed to check for inconsistencies with the goals of the Hazard Mitigation Plan, and no inconsistencies were found).
- Data from the National Climatic Data Center (NCDC) (data from this database are included in this plan to show the frequency and severity of hazard events).

After organizing resources, an update of the risk assessment was performed. New forms, worksheets, and data (included in the Appendix) were also completed. Afterward, the Mitigation Goals, Objectives, and Action Steps were reviewed to determine if they were to remain the same or be added to, modified, or removed.

All chapters of this Plan have been updated to reflect the new material. See the tables at the beginnings of the chapters for further information regarding which items were changed and updated.

Section IV. Organization of the Plan

This Plan focuses on seven natural hazards chosen by the HMPUC that may affect and cause damage to Ben Hill County and the City of Fitzgerald. Chapter 2, Chapter 4, and Appendix A are each subdivided into Sections I through VII; these sections reflect the 7 natural hazards that were chosen. The natural hazards are as follows (in order of priority):

1. Hurricanes/Tropical Storms
2. Tornadoes
3. Floods
4. Lightning
5. Wildfires
6. Extreme Heat
7. Drought

Thunderstorms are a recurring event in Ben Hill County, but these were not included specifically as a hazard in this plan because the committee determined that the most significant hazards related to thunderstorms are tornadoes, floods, and lightning. Therefore, the committee determined that

the hazard of thunderstorms will be adequately addressed by the hazard profiles for tornadoes, flood, and lightning in this plan. Other hazards, such as Avalanche, Coastal Erosion, Coastal Storm, Dam Failure, Earthquake, Expansive Soils, Land Slide, SLOSH (Sea, Lake and Overland Surges from Hurricanes), Tsunami, Volcano, Winter Storms, and Winter Weather, were examined and determined not to be of sufficient significance in the community to warrant their inclusion in the present Hazard Mitigation Planning effort, based on past history and available data.

This Plan also contains a HAZUS report (see Appendix G), a comprehensive range of Mitigation Goals, Objectives, and Action Steps (Chapter 4), and information on implementation, monitoring, and plan update and maintenance (see Chapter 6), as well as other FEMA-required items and materials (included in various Chapters, Sections and Appendices).

Throughout the effective time period of this Plan, the County Commissioners and City Council Members will assign staff, as appropriate, to implement the comprehensive range of Mitigation Goals, Objectives, and Action Steps and other pertinent items that are contained in this Plan.

The Ben Hill County and City of Fitzgerald Hazard Mitigation Plan exists in one bound volume appended with various papers and documents, as well as a PDF document that is available on the SGRC website. The planning efforts of Ben Hill County and the City of Fitzgerald are intended to be an ongoing process and the Plan is to be amended as appropriate.

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Copies of the Plan are on file and may be examined at the County and City government offices, the County Emergency Management Agency, the Southern Georgia Regional Commission office (as well as the SGRC website, www.sgrc.us), and the Georgia Emergency Management and Homeland Security Agency (GEMHSA).

Section V. Local Hazard, Risk, and Vulnerability (HRV) Summary, Local Mitigation Goals, and Objectives

The HMPUC determined that the hazards established in the previous plan were still the most significant threats to the community, and their order of priority remains unchanged. A Hazard, Risk, and Vulnerability (HRV) Assessment has been formulated through a variety of information obtained during the planning process. Information has been obtained from online databases, published sources, and personal accounts regarding hazards, their history in the community, and when and where they were active. This summary is provided in Chapter 2.

The vulnerability of the community to natural hazards is also summarized in the Hazard Frequency Table (see Appendix D), and the Inventory of Assets and number of people exposed to each hazard is evaluated in GEMA Worksheet 3A (see Appendix A). Critical Facilities and Critical Infrastructure are also examined as to the present value and potential losses from natural hazards (see Appendix F).

A description that identifies and analyses a comprehensive range of Mitigation Goals, Objectives, and Action Steps to reduce the effects of each hazard (based on risk assessment findings, with identifiable comprehensive ranges for each jurisdiction) is included in Chapter 4, Sections I-VII. In Chapter 6, Section I, there is a description related to prioritization of these Mitigation Goals, Objectives, and Action Steps through the use of cost/benefit analysis, STAPLEE (Social, Technical, Administrative, Political, Legal, Economic and Environmental), and other criteria. Also in Chapter 6, there are sections on Implementing the Action Plan (see Section I), Evaluation, Monitoring, Updating (see Section II), and Plan Update and Maintenance (see Section III).

Section VI. Multi-Jurisdictional Special Considerations

Ben Hill County has a total area of 250.12 square miles of land area and 3.79 square miles of water area. It is the 118th-largest county in Georgia by land area and 122nd-largest by total area with a population density of 70.5 people per square mile (US Census Data). As such, certain services, including emergency services, may have large distances to cover when responding to an event, which may negatively influence emergency response times and strain resources. Ben Hill County contains one incorporated city, Fitzgerald, which is also the county seat.

All of Ben Hill County Fire Departments are staffed by volunteers. The City of Fitzgerald has a fire department consisting of approximately 22 fire fighters.

The following are the ISO Classes of fire districts in Ben Hill County and City of Fitzgerald:

Station	**ISO Class**
Ben Hill Volunteer Fire Department	Class 9
Fitzgerald Fire Department	Class 9

Section VII. Adoption, Implementation, Monitoring, and Evaluation

After all plan development workshops were concluded, the draft plan was submitted to all local governments for their review. The draft plan was then submitted to GEMA and FEMA for their review and approval. After their approval, and any recommended changes, a second and final public hearing was held on Nov. 7, 2019 in order to provide a further opportunity for public comment and review. Resolutions adopting the plan were passed on Oct. 8, 2019 (Ben Hill County) and Oct. 14, 2019 (City of Fitzgerald). Copies of the public hearing advertisements and resolutions are available in Appendix E.

The comprehensive range of Mitigation Goals, Objectives, and Action Steps (see Chapter 4), which contains items related to all local governments, will be implemented as soon as possible and/or as funds become available to do so.

All sections of the Plan will be monitored and evaluated annually by the County Emergency Management Agency. Incremental accomplishments of Mitigation Goals Objectives and Action Steps will be reported to the public through appropriate means (TV, website, social media, local newspapers, City Council meetings, County Commission meetings, etc.).

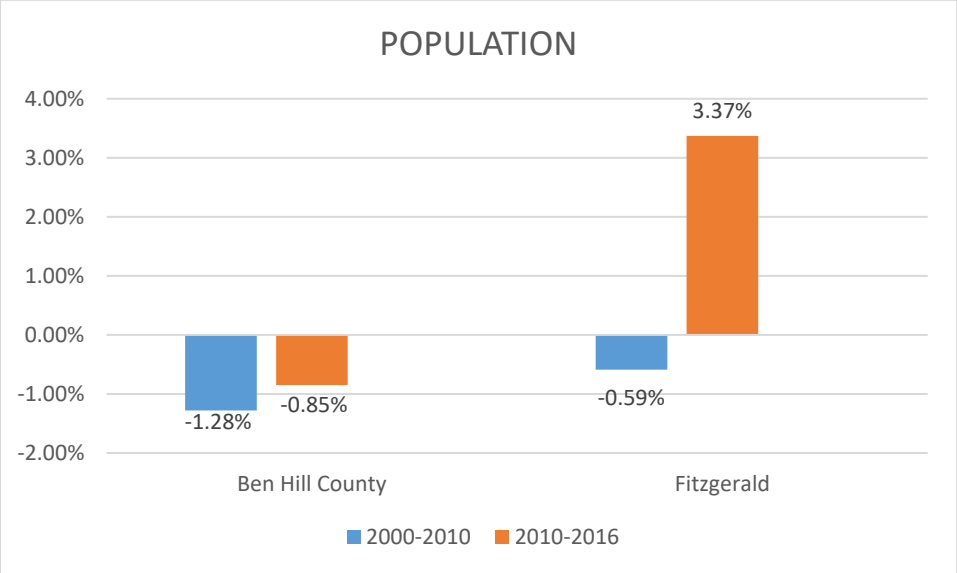
The method that the County EMA will use to monitor the plan will be to conduct quarterly telephone interviews with the various local governments and area agencies in order to chart their plan progress. Also, throughout the year, a series of informal meetings will be held in which various aspects of the plan are discussed. In addition, annual evaluations of the plan will take place on or near the anniversary of the date of Plan adoption. The annual evaluation will assess which of the goals, objectives, and action steps have been achieved; whether those goals, objectives, and action steps still address current and expected conditions; whether the nature or magnitude of risks has changed; whether current resources are appropriate for implementing the plan; and whether agencies and other parties have participates as originally proposed.

During this annual evaluation, problems (if any) with completing the action steps will be discussed, methods of resolving those problems (if any) will be formulated, the action steps will be updated (if necessary), and new actions steps will be developed (if necessary) in response to new problems that have developed throughout the year. If any changes or updates are needed to the other sections of the plan itself, these will also be discussed and noted. Critical Facilities and infrastructure changes and updates will also be discussed at this time and then added to the online GEMA database as required. New hazards in the area (if any) will be discussed and planned for and an assessment made as to whether community needs dictate additions to the materials of the plan. During annual plan maintenance, the public will be involved through meetings that are open to the public. The annual evaluation of the plan will be discussed at City Council and County Commission meetings and this will be listed on the meeting agenda made available beforehand in order to inform the public.

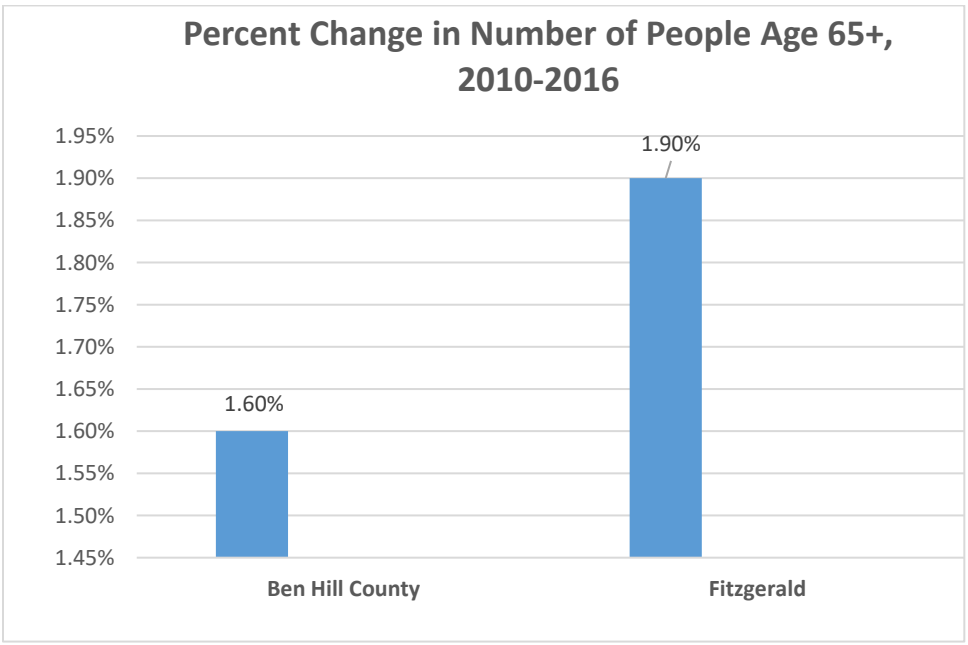
The major criteria to measure plan success will be the number of goals, objectives, and action steps, or components thereof, that have been completed, which in turn will result in savings of life, money, and property. For further details on plan execution, see Chapter 6.

The Plan will be updated by the EMA Director and chosen representatives of all of the local governments every five years, as required by FEMA. All sections of this Plan will be updated at that time. The Plan update will be reviewed by all jurisdictions and relevant stakeholders. The requirements of this Hazard Mitigation Plan will be taken into consideration and incorporated into Comprehensive Plans, Capital Improvement Plans, Local Emergency Operations Plans, and all other such Plans, as appropriate. This updating process will be publicly advertised and public comment solicited and incorporated as necessary and as appropriate.

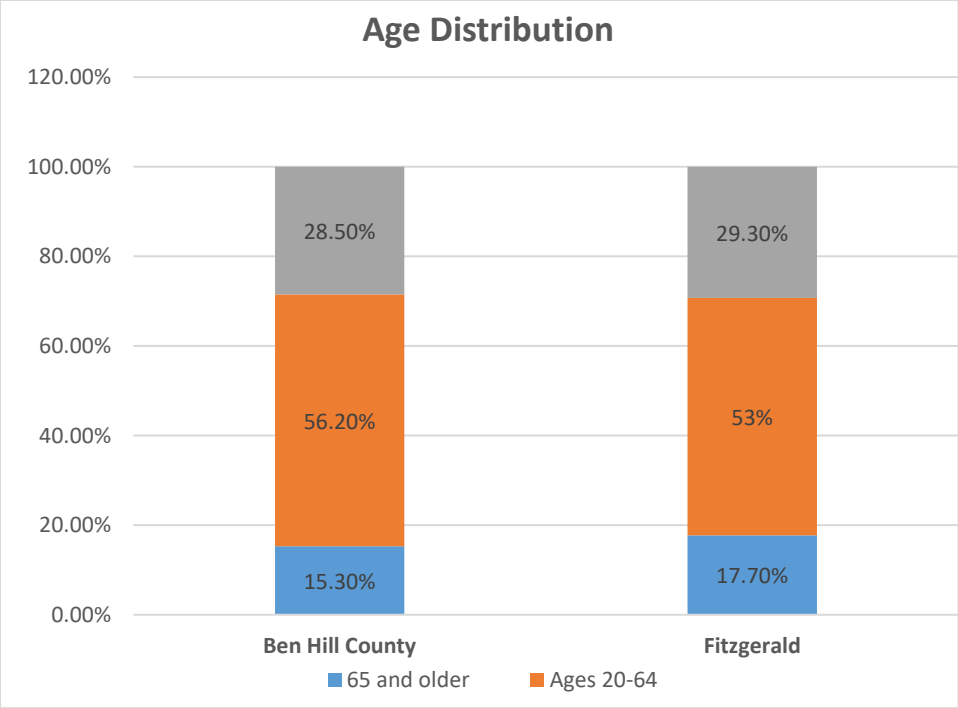
Section VIII. Community Data



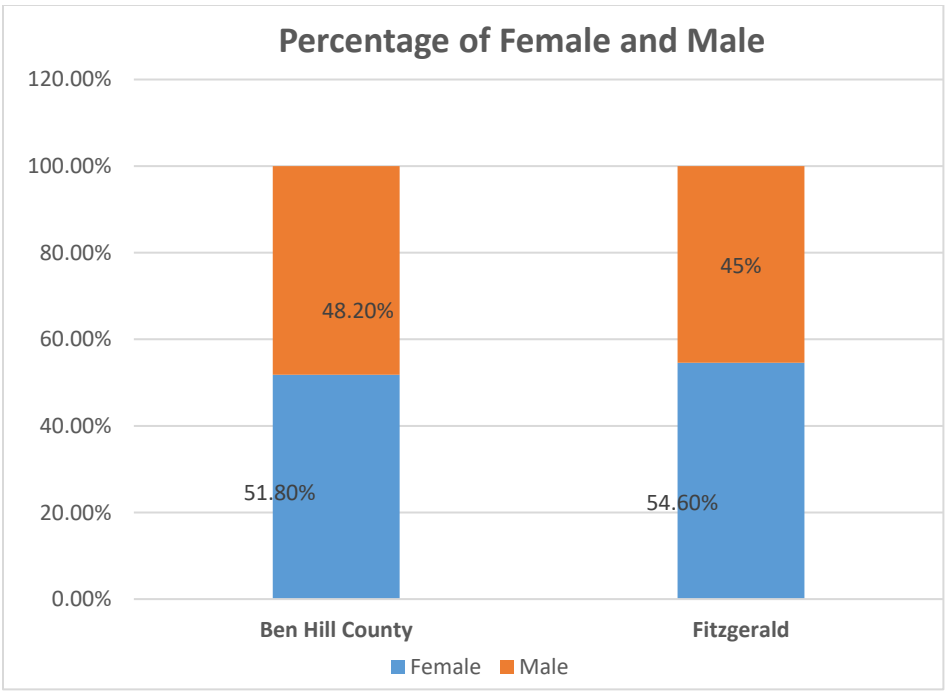
According to 2016 U.S. Census Bureau American Community Survey 5-year estimates, the population of Ben Hill County is 17,405, a decrease of -1.28% since 2010. The City of Fitzgerald's 2016 population is 9,006, a -0.59% decrease since 2010. Ben Hill County had a decrease in population between 2000 and 2010 at -0.85%, while the City of Fitzgerald's population increased by 3.37%.



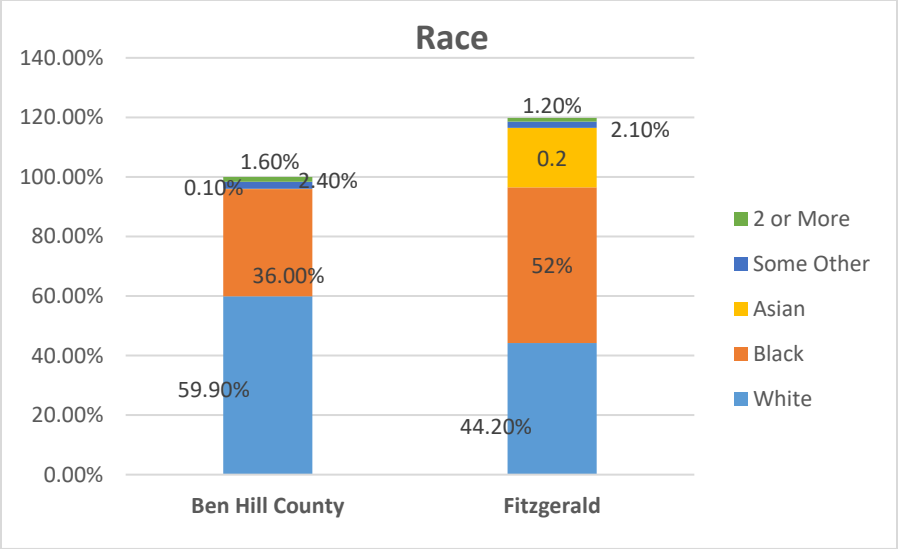
The total number of people aged 65 and older increased in Ben Hill County from 2010 to 2016 by 1.6%. The number of people aged 65+ increased in Fitzgerald by 1.9%.



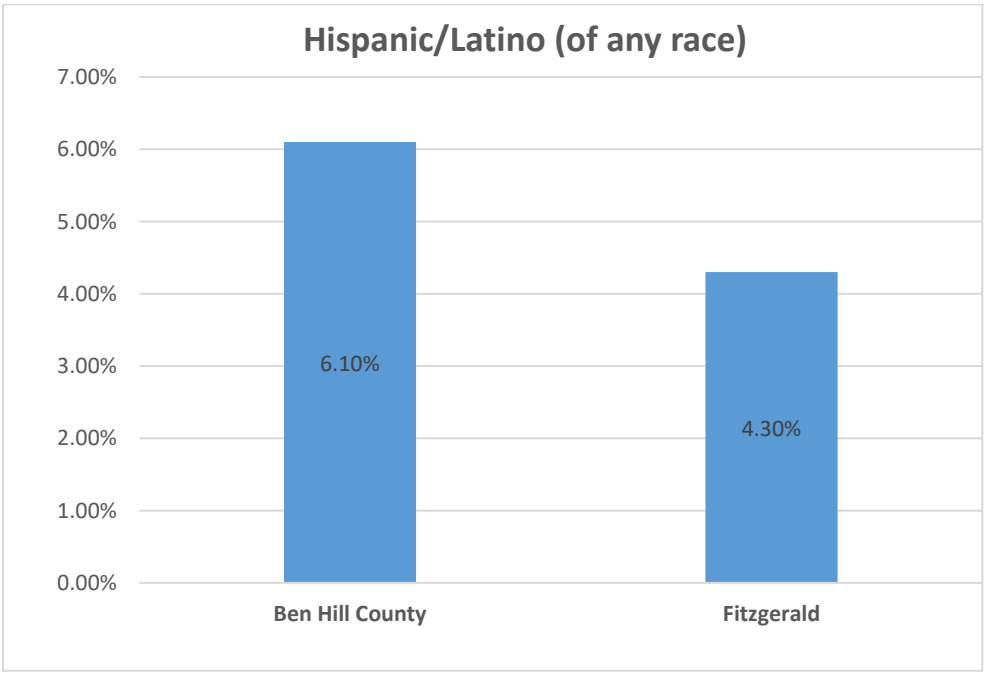
According to 2016 estimates, the age distribution in Ben Hill County is 15.3% ages 65 and over, 56.2% ages 20 to 64, and 28.5% ages 20 and under. In the City of Fitzgerald, the age distribution 17.7% ages 65 and over, 53.1% ages 20-64, and 29.3% ages 20 and under.



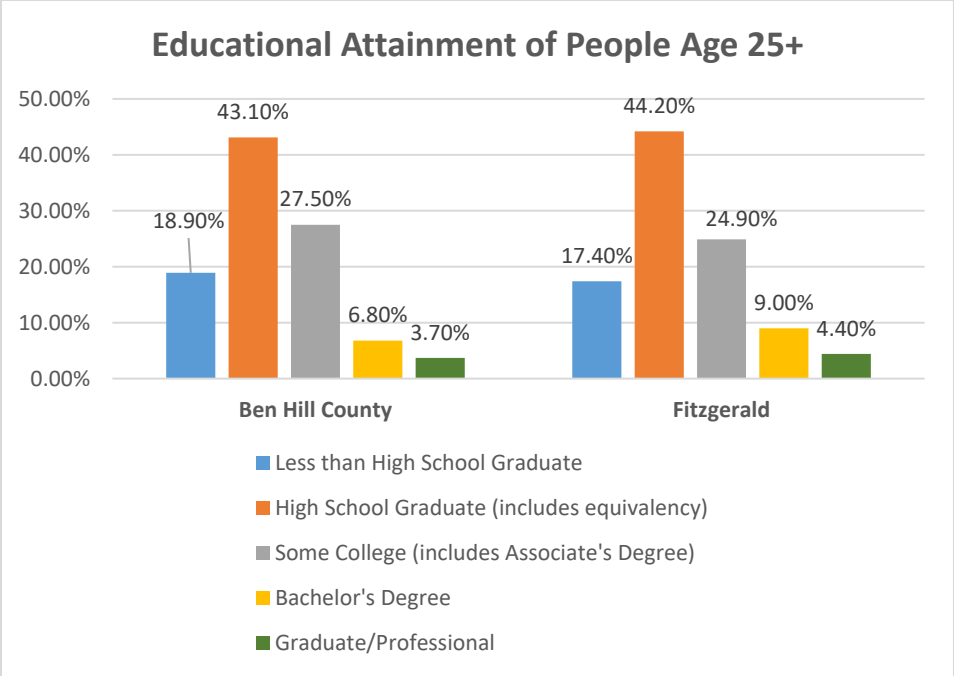
Ben Hill County's population is 51.8% female and 48.2% male and the City of Fitzgerald's population is 54.6% female and 45.4% male.



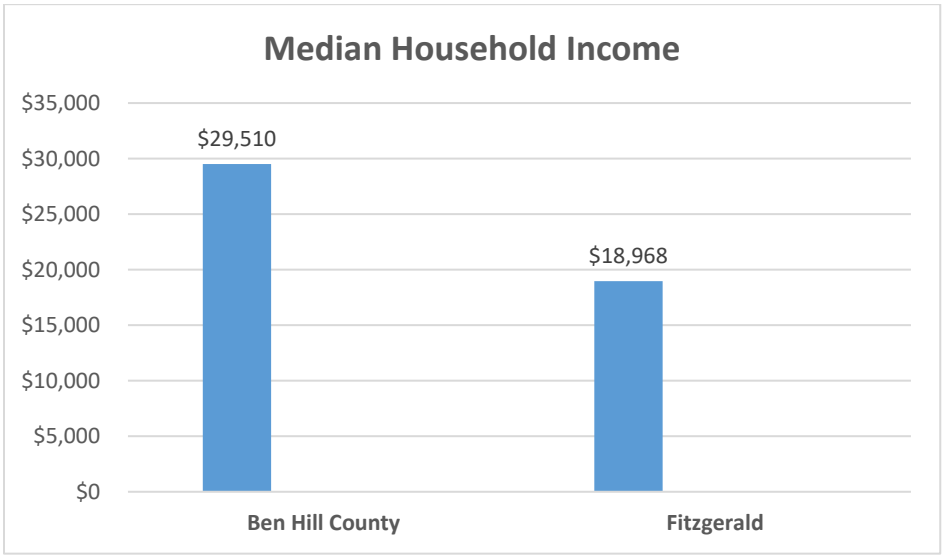
The population of Ben Hill County is 59.9% White/Caucasian, 36.0% Black/African American, 0.1% Asian, 2.4% some other race and 1.6% two or more races. The City of Fitzgerald's population is 52.3% Black/African American, 44.2% White/Caucasian, 0.2% Asian, 2.1% some other race and 1.2% two or more races.



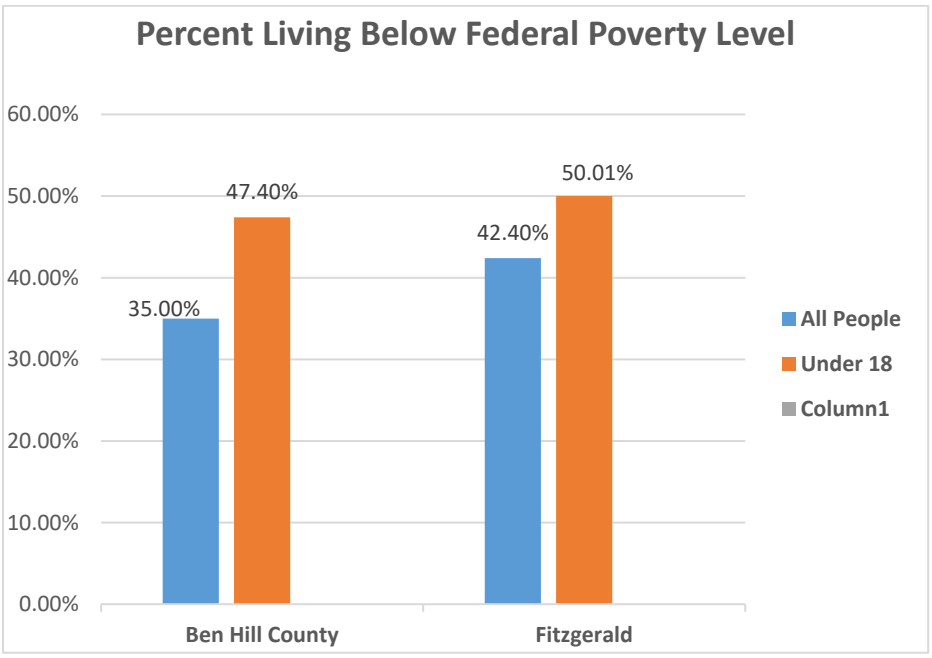
The percentage of the population that is Hispanic/Latino (of any race) is 6.1% in Ben Hill County and 4.3% in the City of Fitzgerald.



Among persons aged 25 or older, in Ben Hill County, 18.9% have no high school diploma, 43.1% are high school graduates (includes equivalency) with no further education, 27.5% have an associate's degree or some college, 6.8% have a bachelor's and 3.7% has a graduate or professional degree. Among persons aged 25 or older in the City of Fitzgerald, 17.4% have no high school diploma, 44.2% are high school graduates (includes equivalency) with no further education, 24.9% have an associate's degree or some college, 9.0% have a bachelor's and 4.4% has a graduate or professional degree.



As of 2016 (US Census Bureau American Community Survey 5-year estimates), the median household income in Ben Hill County is $29,510 and the median household income in the City of Fitzgerald is $18,396.



The percentage of the population living below the federal poverty level is estimated at 35.0% for Ben Hill County and 42.4% for the City of Fitzgerald. For persons under 18, the percent living below the poverty level is estimated at 47.4% in Ben Hill County and 50.1% in the City of Fitzgerald.

In 2016, according to the Bureau of Labor Statistics, the annual average seasonally-adjusted unemployment rate for Ben Hill County was 7.8% and 8.5% in the City of Fitzgerald. Georgia's 2016 unemployment rate was 8.5%.

Source for Community Data: U.S. Census Bureau (www.census.gov/americanfactfinder)

Chapter 2: Local Natural Hazard, Risk, And Vulnerability (HRV) Summary

Summary of changes:

During the plan update process, the HMPUC reviewed the hazards that may affect the community, and their priority. This updated plan includes the same seven natural hazards that were included in the previous plan, in the same order of priority. Table 2.1 provides a brief description of each section in this chapter and a summary of changes that have been made.

Chapter 2 Section	**Updates to Section**
I. Hurricane/Tropical Storms	Updated data and information; edited for clarity
II. Tornado	Updated data and information; edited for clarity
III. Flood	Updated data and information; edited for clarity
IV. Lightning	Updated data and information; edited for clarity
V. Wildfire	Updated data and information; edited for clarity
VI. Extreme Heat	Updated data and information; edited for clarity
VII. Drought	Updated data and information; edited for clarity

Table 2.1: Overview of updates to Chapter 2

Flood and wildfire are the only hazards for which the level of risk varies geographically within the county; the remaining hazards constitute an equal threat to all geographic areas of the community. For more information, including hazard maps, see Appendix A.

Other hazards, such as Avalanche, Coastal Erosion, Coastal Storm, Dam Failure, Earthquake, Expansive Soils, Land Slide, Winter Weather / Winter Storms, 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 present Hazard Mitigation Planning effort, based on past history and available data.

Section I. Hurricanes/Tropical Storms

A. Identification of Hazard

The threat of hurricanes/tropical storms has been chosen by the HMPUC as the most likely hazard to occur and cause damage in the community, based on past experience, the FEMA-described methodology, and other factors. Historic data have been examined from various sources, including the National Climatic Data Center (see Appendix F), as well as from local history and personal accounts, in order to determine the frequency of events. For further information, see the HAZUS Report in Appendix G.

Hurricanes and tropical storms are both types of tropical cyclones. Tropical cyclones are the general term used for all circulating weather systems over tropical water.[1] Tropical cyclones are destructive and have the potential to cause great damage and loss of life. They are divided into four major types: Hurricanes, Tropical Storms, Tropical Disturbances, and Tropical Depressions.

A hurricane, also known as a typhoon, is defined by NOAA's National Hurricane Center (http://www.nhc.noaa.gov/aboutgloss.shtml) as a tropical cyclone in which the maximum sustained surface wind (using the U.S. 1-minute average) is 64 kt (74 mph or 119 km/hr) or more. The term hurricane is used for Northern Hemisphere tropical cyclones east of the International Dateline to the Greenwich Meridian. The term typhoon is used for Pacific tropical cyclones north of the Equator west of the International Dateline.

A tropical storm is defined as tropical cyclone in which the maximum sustained surface wind speed (using the U.S. 1-minute average) ranges from 34 kt (39 mph or 63 km/hr) to 63 kt (73 mph or 118 km/hr).

A tropical disturbance is a discrete tropical weather system of apparently organized convection -- generally 100 to 300 nmi in diameter -- originating in the tropics or subtropics, having a nonfrontal migratory character, and maintaining its identity for 24 hours or more. It may or may not be associated with a detectable perturbation of the wind field.

A tropical depression is defined as tropical cyclone in which the maximum sustained surface wind speed (using the U.S. 1-minute average) is 33 kt (38 mph or 62 km/hr) or less.

The Saffir-Simpson Hurricane Wind Scale is a 1 to 5 categorization based on the hurricane's intensity at the indicated time. The scale provides examples of the type of damage and impacts in the United States associated with winds of the indicated intensity. The following table shows the scale broken down by winds:

[1] A tropical cyclone is defined by NOAA as "a warm-core non-frontal synoptic-scale cyclone, originating over tropical or subtropical waters, with organized deep convection and a closed surface wind circulation about a well-defined center. Once formed, a tropical cyclone is maintained by the extraction of heat energy from the ocean at high temperature and heat export at the low temperatures of the upper troposphere. In this they differ from extratropical cyclones, which derive their energy from horizontal temperature contrasts in the atmosphere (baroclinic effects)." (http://www.nhc.noaa.gov/aboutgloss.shtml)

SAFFIR-SIMPSON HURRICANE SCALE

(Source: NOAA http://www.nhc.noaa.gov/aboutgloss.shtml)

Category	Wind Speed	Damage
1	74 - 95	Very dangerous winds will produce some damage
2	96 - 110	Extremely dangerous winds will cause extensive damage
3	111 - 129	Devastating damage will occur
4	130 - 156	Catastrophic damage will occur
5	> 156	Catastrophic damage will occur

The official Atlantic hurricane season (which includes Gulf Coast and East Coast hurricanes) is June 1 through November 30, but hurricanes and tropical storms may also occur outside of those dates. Whether the hurricane/tropical storm is a short-term event or a long term event depends on many factors including category, strength, speed, and impact of other weather systems, including fronts and wind patterns.

Because of their location, Ben Hill County and the City of Fitzgerald are vulnerable to severe hurricanes/tropical storms forming in both the Atlantic Ocean and the Gulf of Mexico. Also due to location, hurricanes may degrade into tropical storms, tropical depressions, or tropical disturbances by the time they reach this area. These may or may not contain tornadoes or hail. In some cases, tropical storms, depressions, or disturbances may never reach hurricane strength before reaching the shore. The effects vary depending on the severity of the hurricane/tropical storm and the duration of the event.

B. Profile of Events, Frequency of Occurrences, Probability

According to the NOAA Storm Events Database (see Appendix F), there have been 7 hurricane/tropical storm events in Ben Hill County (including the City of Fitzgerald) between 01/01/1950 and 06/30/2019. Six of these events were classified as tropical storms when they affected this community, and 1 was classified as a hurricane; however, all seven events had originally been hurricanes and were only downgraded to tropical storms later.

Since the previous Hazard Mitigation Plan was adopted, three tropical storm events have occurred. The most recent Tropical Storm event was Hurricane Michael on Oct. 10, 2018. This storm caused widespread power outages, downed power lines, impassable roads due to fallen trees, and damage to homes and other structures estimated at $250,000. Winds were measured at 50 mph and approximately 4 inches of rain fell.

The Historic Recurrence Interval is 9.86 years. This is a 10.14% Historic Frequency Chance per year. The past 10-year Record Frequency Per Year is 0.3, the past 20-year frequency is 0.3, and the past 50-year frequency is 0.14 (see the Hazard Frequency Table in Appendix D).

Although the most complete available data were used for this analysis, the possibility remains that other hurricane/tropical storm events may have occurred in the community that went unreported or underreported.

C./D.: Inventory of Assets Exposed and Potential Loss

In Worksheet 3A: Inventory of Assets (appearing in Appendix A), we estimate that all of Ben Hill County and the City of Fitzgerald are equally vulnerable to hurricanes/tropical storms. Due to the lack of available data broken down by jurisdiction, this analysis was not broken down by jurisdiction. The County has a wind hazard score of 2 (91-100 mph gust). A map of the wind hazard scores and critical facilities is provided in Appendix A.

An estimated 100% of the Residential property (8,521 of 8,521) in Ben Hill County (including the City of Fitzgerald) could be affected by this hazard, with a total value of $424,651,736. Also, an estimated 100% of the Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education and Utility properties (2,900 of 2,900) in the community may be affected, with a total value of $1,800,693,024. The values are based on the most recent available tax roll data for Ben Hill County and the City of Fitzgerald.

Damage to crops is not taken into account in any of these figures. According to the Center for Agribusiness & Economic Development's 2017 Georgia Farm Gate Value Report (https://www.caes.uga.edu/content/caes-subsite/caed/publications/farm-gate.html), the total farm gate value of agricultural production in Ben Hill County is $54,870,060.

According to the inventory database reports and maps, all of the 34 Critical Facilities and Infrastructure for Ben Hill County (including the City of Fitzgerald) could be affected by this hazard. The total value of these Critical Facilities is $306,616,172, plus a content value of $965,445.

E. Land Use and Development Trends

Ben Hill County and the City of Fitzgerald have both seen a slight decrease in population over the last few years. From 2010 to 2017, according to U.S. Census Bureau estimates, the population of Ben Hill County decreased by 2.0% and the population of the City of Fitzgerald decreased by 1.9%.

Ben Hill County and the City of Fitzgerald both have zoning regulations. Ben Hill County and the City of Fitzgerald have mandatory building and fire codes which are enforced by a building inspector. The County and City participate in joint comprehensive planning and in the required updates of the Service Delivery Strategy.

There are no state hurricane evacuation routes in Ben Hill County. The nearest evacuation routes are Interstate 75 and US Route 82.

No other land use or development trends that relate to this hazard have been identified at this time.

F. Multi-Jurisdictional Differences

Hurricane/tropical storm events are usually area-wide, and no difference in severity is expected between Ben Hill County and the City of Fitzgerald. However, the impact may be more severe in

places with higher population density due to more people being in danger, more people needing to evacuated, more debris from damaged buildings, and other impacts associated with higher population density.

Ben Hill County and the City of Fitzgerald are members of the National Flood Insurance Program. (Source: https://www.fema.gov/cis/GA.html) Ben Hill County and the City of Fitzgerald do not participate in the Community Rating System (CRS) program. As of 2018, they were not eligible, according to FEMA. (Source: http://www.fema.gov/library/viewRecord.do?id=3629).

G. Overall HRV Summary of Events and Their Impact

Hurricanes/tropical storms have the potential to cause damage at any place, at any time, throughout Ben Hill County and the City of Fitzgerald. They are usually preceded by some watch or warning well in advance. The cost of the damage and potential loss of life may be higher if the path of the hurricanes/tropical storms covers populated areas as opposed to more sparsely populated or unpopulated areas.

The Ben Hill County HMPUC has developed a comprehensive range of Mitigation Goals, Objectives, and Action Steps to lessen the impacts from this hazard. These are contained in Chapter 4.

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.

Section II. Tornado

A. Identification of Hazard

The threat of tornadoes has been chosen by the HMPUC as the second most likely hazard to occur and cause damage in the community, based on past experience, the FEMA-described methodology, and other factors. Historic data has been examined from various sources, including the National Climatic Data Center (see Appendix F), as well as from local history and personal accounts, in order to determine the frequency of events. For further information, see the HAZUS Report in Appendix G.

A tornado is defined by NOAA (http://www.nssl.noaa.gov/education/svrwx101/tornadoes/) as a narrow, violently rotating column of air that extends from the base of a thunderstorm to the ground. Because wind is invisible, it is hard to see a tornado unless it forms a condensation funnel made up of water droplets, dust and debris. Tornadoes are the most violent of all atmospheric storms.

About 1,200 tornadoes hit the U.S. yearly. A tornado watch is issued when weather conditions are favorable for tornadoes. During a tornado watch, residents are advised to watch and prepare for severe weather and stay tuned to NOAA Weather Radio to know when warnings are issued. A tornado warning is issued when a tornado has been reported by spotters or indicated by radar and there is a serious threat to life and property to those in the path of the tornado. When a tornado warning is issued, residents must act immediately to find safe shelter. A warning can cover parts of counties or several counties in the path of danger.

The Enhanced Fujita Scale, implemented by the National Weather Service in 2007, is used to assign a tornado a rating based on estimated wind speeds and related damage. The wind speeds associated with the EF ratings are shown in the table below. Because of the difficulty of measuring wind speeds inside a tornado, wind speeds are estimated based on the type of damage that occurs; more information is available on the NOAA website at http://www.spc.noaa.gov/faq/tornado/ef-scale.html.

Tornadoes may occur at any time of year, although the peak "tornado season" for the Southern Plains is during May into early June. Tornadoes can occur due to inclement weather conditions, as a result of a passing front, or as part of thunderstorm or hurricane/tropical storm events. Tornadoes can occur at any time of the day or night, but according to NOAA (http://www.nssl.noaa.gov/education/svrwx101/tornadoes/), most tornadoes occur between 4:00 and 9:00 p.m. The path and severity of a tornado cannot be determined in advance. The best defense is to heed tornado warnings and seek appropriate shelter when a tornado has been sighted in the area or when conditions conducive to a tornado are present.

Ben Hill County and the Cities are all vulnerable to the effects of tornadoes. According to NOAA (https://www.ncdc.noaa.gov/climate-information/extreme-events/us-tornado-climatology), an average of 30 tornadoes occurs per month in Georgia.

ENHANCED FUJITA WIND DAMAGE SCALE

(Source: http://www.spc.noaa.gov/faq/tornado/ef-scale.html)

EF Number	3-Second Gust	Damage
EF-0	65 to 85 mph	Light damage. Some damage chimneys; branches broken off trees; shallow-rooted trees pushed over; sign boards damaged.
EF-1	86 to 110 mph	Moderate Damage. The lower limit is the beginning of hurricane wind speed; peels surface off roofs; mobile homes pushed off foundations or overturned; moving autos pushed off the roads; attached garages may be destroyed.
EF-2	111 to 135 mph	Significant Damage. Roofs torn off frame houses; mobile homes demolished; boxcars overturned; large trees snapped or uprooted; high rise windows broken and blown in; light-object missiles generated.
EF-3	136 to 165 mph	Severe Damage. Roofs and walls torn off well-constructed houses; trains overturned; most trees in forest uprooted; heavy cars lifted off the ground and thrown.
EF-4	166 to 200 mph	Devastating, damage. Well-constructed houses leveled; structures with weak foundations blown away some distance; cars thrown and large missiles generated.
EF-5	Over 200 mph	Incredible, damage. Strong frame houses lifted off foundations and carried considerable distances to disintegrate; automobile sized missiles fly through the air in excess of 100 m (109 yards); trees debarked; steel reinforced concrete structures badly damaged.

B. Profile of Events, Frequency of Occurrences, Probability

According to the NOAA Storm Events Database (see Appendix F), there are 13 reports of tornadoes occurring in Ben Hill County (including the City) between 01/01/1950 and 06/31/2019. The Historic Recurrence Interval is 5.31 years. This is a 18.84% Historic Frequency Chance per year. The past 10-year Record Frequency Per Year is 0.1, the past 20-year frequency is 0.15, and the past 50-year frequency is 0.2 (see the Hazard Frequency Table in Appendix D).

The most injuries reported from a tornado on record were from an F2 tornado on 06/14/1963 that injured two people. The highest level of estimated monetary damage from a single tornado occurred on 12/25/2006; during this F1 tornado event, two homes were destroyed, two homes were heavily damaged, and three irrigation pivots were destroyed. Damage was estimated at $300,000. No tornadoes have been recorded in the community since the previous Hazard Mitigation Plan was adopted.

Although the most complete available data were used for this analysis, the possibility remains that other events may have occurred in the community that went unreported or underreported.

C./D.: Inventory of Assets Exposed and Potential Loss

In Worksheet 3A: Inventory of Assets (appearing in Appendix A), we estimate that all of Ben Hill County and the City of Fitzgerald are equally vulnerable to this hazard. Due to the lack of available data broken down by jurisdiction, this analysis was not broken down by jurisdiction.

An estimated 100% of the Residential property (8,521 of 8,521) in Ben Hill County (including the City of Fitzgerald) could be affected by this hazard, with a total value of $424,651,736. Also, an estimated 100% of the Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education and Utility properties (2,900 of 2,900) in the community may be affected, with a total value of $1,800,693,024. The values are based on the most recent available tax roll data for Ben Hill County and the City of Fitzgerald.

Damage to crops is not taken into account in any of these figures. According to the Center for Agribusiness & Economic Development's 2017 Georgia Farm Gate Value Report (https://www.caes.uga.edu/content/caes-subsite/caed/publications/farm-gate.html), the total farm gate value of agricultural production in Ben Hill County is $54,870,060.

According to the inventory database reports and maps, all of the 34 Critical Facilities and Infrastructure for Ben Hill County (including the City of Fitzgerald) could be affected by this hazard. The total value of these Critical Facilities is $306,616,172, plus a content value of $965,445.

E. Land Use and Development Trends

Typically, mobile/manufactured homes are most vulnerable to tornado damage. According to 2016 Census Bureau estimates, 29.88% of occupied housing units in Ben Hill County are mobile homes (1,928 mobile homes and approximately 5,321 people based on the average household size of 2.76 persons per household in the County). In the City of Fitzgerald, 9.22% of occupied housing units are mobile homes (309 mobile homes and approximately 893 people).

Ben Hill County and the City of Fitzgerald have all seen a slight decrease in population over the last few years. From 2010 to 2017, according to U.S. Census Bureau estimates, the population of Ben Hill County decreased by 2.0% and the population of the City of Fitzgerald decreased by 1.9%.

Ben Hill County and the City of Fitzgerald both have zoning regulations. Ben Hill County and the City of Fitzgerald have mandatory building and fire codes which are enforced by a building inspector. The County and City participate in joint comprehensive planning and in the required updates of the Service Delivery Strategy.

No other land use or development trends that relate to this hazard have been identified at this time.

F. Multi-Jurisdictional Differences

Tornadoes tend to follow a straight path regardless of natural features or political boundaries, and no difference in severity is expected between Ben Hill County and the City of Fitzgerald. However, the impact may be more severe in places with higher population density due to more people being in danger, more people needing to evacuated, more debris from damaged buildings, and other impacts associated with higher population density. In areas with a large number of mobile homes, the damage can be expected to be more severe.

G. Overall HRV Summary of Events and Their Impact

Tornadoes have the potential to cause damage at any place, at any time, throughout Ben Hill County and the City of Fitzgerald. They can form quickly and residents may not have time to find adequate shelter, or else adequate shelter facilities may not be available. The cost of the damage and potential loss of life may be higher if the event strikes populated areas as opposed to more sparsely populated or unpopulated areas, or if the event strikes areas with a large number of mobile homes.

The HMPUC has developed a comprehensive range of Mitigation Goals, Objectives, and Action Steps to lessen the impacts from this hazard. These are contained in Chapter 4.

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.

Section III. Flood

A. Identification of Hazard

The threat of a flood has been chosen by the HMPUC as the third most likely hazard to occur and cause damage in the community, based on past experience, the FEMA-described methodology, and other factors. Historic data have been examined from various sources, including the National Climatic Data Center (see Appendix F), as well as from local history and personal accounts, in order to determine the frequency of events. Drainage ditches and canals that are improperly cleaned or maintained contribute significantly to flooding occurrences which require the homeowners to experience hours, if not days, of water filled yards, even in the cities.
For further information, see the HAZUS Report in Appendix G.

Floods may occur at any time, in many cases without warning, and their effects can range from minor inconvenience to wholesale destruction. Floods are most often caused by heavy rains associated with thunderstorms, hurricanes, or tropical storms. Flooding can result from a rise in the level of a body of water such as a river or a lake, or from rain falling faster than it can be absorbed by the ground (especially under weather conditions that make soil less pervious, for example after a period of drought). Flooding frequently occurs in urban areas when a large amount of rain, above the capacity of the urban drainage system, falls on impervious surfaces such as streets, buildings, and parking lots. Flooding can also result from the failure of man-made structures such as levees and dams.

Flash floods are floods that occur in short time-spans, often so quickly that people are caught off-guard. Flash floods can occur as a result of any of the causes mentioned above, but are most often due to extremely heavy rainfall from thunderstorms. More information is available at the National Weather Service (https://www.weather.gov/phi/FlashFloodingDefinition).

According to the National Weather Service (http://tadd.weather.gov/), more deaths occur each year due to flooding than from any other thunderstorm-related hazard. The Centers for Disease Control and Prevention report that over half of all flood-related drownings occur when a vehicle is driven into hazardous flood water. The next highest percentage of flood-related deaths is due to walking into or near flood waters. People underestimate the force and power of water. Many of the deaths occur in automobiles as they are swept downstream. Of these drownings, many are preventable, but too many people continue to drive around the barriers that warn you the road is flooded. A mere 6 inches of fast-moving flood water can knock over an adult. It takes just 12 inches of rushing water to carry away a small car, while 2 feet of rushing water can carry away most vehicles. It is never safe to drive or walk into flood waters.

Flood zones, as defined by FEMA, are described in the table on the following page.

Flood Zone Designations and Descriptions

Source: FEMA (https://hazards.fema.gov/onlinelomc/ext/Help/loadInstructions)

Zone Designations	Zone Descriptions
A	Areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage. Because detailed analyses are not performed for such areas, no depths or base flood elevations are shown within these zones.
AH	Areas with a 1% annual chance of shallow flooding, usually in the form of a pond, with an average depth ranging from 1 to 3 feet. These areas have a 26% chance of flooding over the life of a 30-year mortgage. Base flood elevations derived from detailed analyses are shown at selected intervals within these zones.
AO	River or stream flood hazard areas, and areas with a 1% or greater chance of shallow flooding each year, usually in the form of sheet flow, with an average depth ranging from 1 to 3 feet. These areas have a 26% chance of flooding over the life of a 30-year mortgage. Average flood depths derived from detailed analyses are shown within these zones.
A1-A30	These are known as numbered A Zones (e.g., A7 or A14). This is the base floodplain where the FIRM shows a BFE (old format).
A99	Areas with a 1% annual chance of flooding that will be protected by a Federal flood control system where construction has reached specified legal requirements. No depths or base flood elevations are shown within these zones.
AE	The base floodplain where base flood elevations are provided. AE Zones are now used on new format FIRMs instead of A1-A30 Zones.
AR	Areas with a temporarily increased flood risk due to the building or restoration of a flood control system (such as a levee or a dam). Mandatory flood insurance purchase requirements will apply, but rates will not exceed the rates for unnumbered A zones if the structure is built or restored in compliance with Zone AR floodplain management regulations.
V	Coastal areas with a 1% or greater chance of flooding and an additional hazard associated with storm waves. These areas have a 26% chance of flooding over the life of a 30-year mortgage. No base flood elevations are shown within these zones.
V1-V30	Coastal areas with a 1% or greater chance of flooding and an additional hazard associated with storm waves. These areas have a 26% chance of flooding over the life of a 30-year mortgage. Base flood elevations derived from detailed analyses are shown at selected intervals within these zones.
VE	Coastal areas with a 1% or greater chance of flooding and an additional hazard associated with storm waves. These areas have a 26% chance of flooding over the life of a 30-year mortgage. Base flood elevations derived from detailed analyses are shown at selected intervals within these zones.
B	Area of moderate flood hazard, usually the area between the limits of the 100-year and 500-year floods. Are also used to designate base floodplains of lesser hazards, such as areas protected by levees from 100-year flood, or shallow flooding areas with average depths of less than one foot or drainage areas less than 1 square mile.
C	Area of minimal flood hazard, usually depicted on FIRMs as above the 500-year flood level.
D	Areas with possible but undetermined flood hazards. No flood hazard analysis has been conducted. Flood insurance rates are commensurate with the uncertainty of the flood risk.
X Shaded	Area of moderate flood hazard, usually the area between the limits of the 100-year and 500-year floods. Are also used to designate base floodplains of lesser hazards, such as areas protected by levees from 100-year flood, or shallow flooding areas with average depths of less than one foot or drainage areas less than 1 square mile.
X Unshaded	Area of minimal flood hazard, usually depicted on FIRMs as above the 500-year flood level.

Ben Hill County and the City of Fitzgerald are all vulnerable to the effects of flooding. Areas within flood zones are naturally more vulnerable. For more information, see the maps in Appendix A.

B. Profile of Events, Frequency of Occurrences, Probability

According to the NOAA Storm Events Database (see Appendix F), there are 5 reports of floods occurring in Ben Hill County (including the City of Fitzgerald) between 01/01/1950 and 06/30/2019.

The Historic Recurrence Interval is 13.80 years. This is a 7.25% Historic Frequency Chance per year. The past 10-year Record Frequency Per Year is 0.2, the past 20-year frequency is 0.2, and the past 50-year frequency is 0.1 (see the Hazard Frequency Table in Appendix D).

One flood event has occurred since the previous hazard mitigation plan was adopted. The most recent flood event on record in the community occurred on 12/02/2018. Flooding was reported in a parking lot. In an earlier flood event, on 02/13/2013, there was flooding over portions of Highway 129 as well as several dirt roads in Ben Hill County. No structures were impacted. However, there have been more severe flood events in Ben Hill County and the City of Fitzgerald in the past. On 03/30/2000, a countywide flood event caused numerous roads to close, and there was water up to 3 feet deep in some downtown businesses. One family was rescued from their stranded pickup truck on Stuart Street in Fitzgerald. The Rainbow Irrigation warehouse and welding shop along the Ocilla highway were flooded.

Although the most complete available data were used for this analysis, the possibility remains that other events may have occurred in the community that went unreported or underreported.

C./D.: Inventory of Assets Exposed and Potential Loss

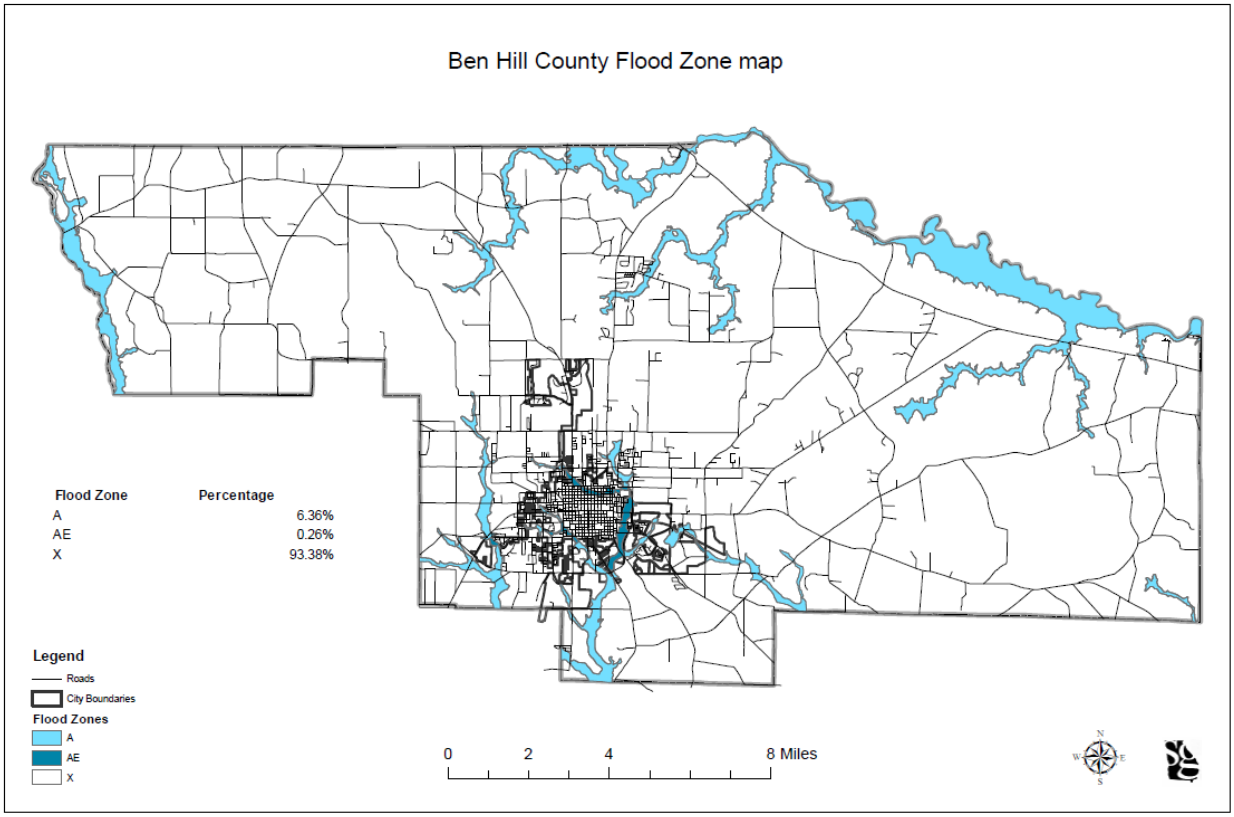
In Worksheet 3A: Inventory of Assets (appearing in Appendix A), we estimate that all of Ben Hill County and the City of Fitzgerald are equally vulnerable to this hazard. Due to the lack of available data broken down by jurisdiction, this analysis was not broken down by jurisdiction.

An estimated 2.7% of the Residential property (228 of 8,521) in Ben Hill County (including the City of Fitzgerald) could be affected by this hazard, with a total value of $10,932,478. Also, an estimated 6.0% of the Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education and Utility properties (180 of 2,900) in the community may be affected, with a total value of $56,152,316. The values are based on the most recent available tax roll data for Ben Hill County and the City of Fitzgerald.

Damage to crops is not taken into account in any of these figures. According to the Center for Agribusiness & Economic Development's 2017 Georgia Farm Gate Value Report (https://www.caes.uga.edu/content/caes-subsite/caed/publications/farm-gate.html), the total farm gate value of agricultural production in Ben Hill County is $54,870,060.

According to the inventory database reports and maps, all of the 34 Critical Facilities and Infrastructure for Ben Hill County (including the City of Fitzgerald) could be affected by this hazard. The total value of these Critical Facilities is $306,616,172, plus a content value of $965,445.

Many individuals do not have access to transportation and thus are susceptible to weather hazards. It is very important to notify these individuals through weather radios, radio stations, and other means so that they may seek shelter and/or make arrangements for transportation to shelter facilities. Therefore, a major consideration should be helping individuals, government, and non-profit organizations prepare for the pending flood hazard events.



The Ocmulgee River forms part of the northern boundary of Ben Hill County. The nearest locations for which the National Weather Service provides historic river crest data are at Abbeville (to the west) and Lumber City (to the east). Although these locations are not in Ben Hill County, their proximity to the County and similar geographic layout (relatively flat land, located on the other side of the river) gives us an estimate of the level of flood conditions that might be expected. At Abbeville, the highest recorded historic crest was 23.10 ft on 07/11/1994, and the most recent recorded crest was 12.84 ft on 01/11/2017. At Lumber City, the highest recorded historic crest was 26.30 ft on 01/21/1925, and the most recent recorded crest was 20.17 ft on 01/04/2016. There are many areas where the Ocmulgee's flood plain extends over a mile from the waterway into Ben Hill County. This river's flood potential, as well as that of other waterways in the community, should not be underestimated.

The GMIS reports list 1 Repetitive Loss/NFIP property in the community. This property is residential and is located in the City of Fitzgerald.

E. Land Use and Development Trends

Ben Hill County and the City of Fitzgerald have all seen a slight decrease in population over the last few years. From 2010 to 2017, according to U.S. Census Bureau estimates, the population of Ben Hill County decreased by 2.0% and the population of the City of Fitzgerald decreased by 1.9%.

Ben Hill County and the City of Fitzgerald both have zoning regulations. Ben Hill County and the City of Fitzgerald have mandatory building and fire codes which are enforced by a building inspector. The County and City participate in joint comprehensive planning and in the required updates of the Service Delivery Strategy.

No other land use or development trends that relate to this hazard have been identified at this time.

F. Multi-Jurisdictional Differences

According to FEMA data, 2.5% of the total area of Ben Hill County (4,062.9 acres) is within a flood zone (2.4% in Zone A and 0.1% in Zone AE). 4.8% of the total area of the City of Fitzgerald (274.1 acres) is within a flood zone (1.0% in Zone A and 3.8% in Zone AE). Ben Hill County and the City of Fitzgerald are members of the National Flood Insurance Program (source: https://www.fema.gov/cis/GA.html). As of 2018, these jurisdictions are in compliance with NFIP requirements and intend to remain in compliance by enforcing flood plain ordinances which prohibit or severely limit development in floodplains. The enforcement of these ordinances is overseen in Ben Hill County by the county's Zoning Department, and in the City of Fitzgerald by the city's Planning and Zoning Department. According to FEMA there are no flood protection measures known to exist within Ben Hill County (source: https://www.fema.gov/cis/GA.html).

Ben Hill County and the City of Fitzgerald do not participate in the Community Rating System (CRS) program. As of 2018, they were not eligible, according to FEMA (source: http://www.fema.gov/library/viewRecord.do?id=3629).

G. Overall HRV Summary of Events and Their Impact

Floods have the potential to cause damage at any place, at any time, throughout Ben Hill County and the City of Fitzgerald, and especially in flood-prone areas. Floods can happen quickly and residents may not have time to evade floodwaters. The cost of the damage and potential loss of life may be higher if the event strikes populated areas as opposed to more sparsely populated or unpopulated areas.

The HMPUC has developed a comprehensive range of Mitigation Goals, Objectives, and Action Steps to lessen the impacts from this hazard. These are contained in Chapter 4.
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.

Section IV. Lightning

A. Identification of Hazard

The threat of lightning has been chosen by the HMPUC as the fourth most likely hazard to occur and cause damage in the community, based on past experience, the FEMA-described methodology, and other factors. Historic data has been examined from various sources, including the National Climatic Data Center (see Appendix F), as well as from local history and personal accounts, in order to determine the frequency of events.

Lightning is a giant spark of electricity in the atmosphere or between the atmosphere and the ground. In the initial stages of development, air acts as an insulator between the positive and negative charges in the cloud and between the cloud and the ground; however, when the differences in charges becomes too great, this insulating capacity of the air breaks down and there is a rapid discharge of electricity that we know as lightning. Lightning most often strikes during thunderstorms, but can strike many miles from the center of the storm, or can even strike in areas not covered by a storm (this phenomenon is known as a "bolt from the blue").

According to NOAA (http://www.lightningsafety.noaa.gov/), lightning strikes the United States about 25 million times a year. Although most lightning occurs in the summer, people can be struck at any time of year. Lightning kills an average of 47 people in the United States each year, and hundreds more are severely injured.

Lightning can strike in any place at any time but, contrary to popular myth, is not attracted to metal. Tall, isolated structures with a pointy shape are most likely to be struck by lightning. When thunder and lightning are present, the best course of action is to seek shelter inside a robust building. Sheltering under a tree increases the risk of getting struck by lightning and is more dangerous than being out in the open. Most cars protect their occupants from lightning because they have metal roofs and sides; contrary to popular myth, it is not the car's rubber tires that protect the occupants. When sheltering inside a building, one should avoid metal objects (metal doors, plumbing, electronics, etc.). (Source: http://www.lightningsafety.noaa.gov/myths.shtml)

Ben Hill County and the City of Fitzgerald are all equally vulnerable to the effects of lightning.

B. Profile of Events, Frequency of Occurrences, Probability

According to the NOAA Storm Events Database (see Appendix F), there is 1 report of lightning occurring in Ben Hill County (including the Cities) between 01/01/1950 and 06/30/2019. The Historic Recurrence Interval is 69.00 years. This is a 1.45% Historic Frequency Chance per year. The past 10-year Record Frequency Per Year is 0.1, the past 20-year frequency is 0.05, and the past 50-year frequency is 0.02 (see the Hazard Frequency Table in Appendix D).

One lightning event is on record since the previous Hazard Mitigation Plan was adopted. It occurred on August 6, 2015. Lightning struck a tree limb, which then fell through a roof and struck a woman in the face. One injury was recorded, along with $5,000 in property damage.

Although the most complete available data were used for this analysis, the possibility remains that other events may have occurred in the community that went unreported or underreported.

According to the National Lightning Detection Network, Ben Hill County and the City of Fitzgerald had between 6 and 20 lightning strikes per square mile per year from 2009 to 2018 (see the map in Appendix A).

C./D.: Inventory of Assets Exposed and Potential Loss

In Worksheet 3A: Inventory of Assets (appearing in Appendix A), we estimate that all of Ben Hill County and the City of Fitzgerald are equally vulnerable to this hazard. Due to the lack of available data broken down by jurisdiction, this analysis was not broken down by jurisdiction.

An estimated 100% of the Residential property (8,521 of 8,521) in Ben Hill County (including the City of Fitzgerald) could be affected by this hazard, with a total value of $424,651,736. Also, an estimated 100% of the Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education and Utility properties (2,900 of 2,900) in the community may be affected, with a total value of $1,800,693,024. The values are based on the most recent available tax roll data for Ben Hill County and the City of Fitzgerald.

Damage to crops is not taken into account in any of these figures. According to the Center for Agribusiness & Economic Development's 2017 Georgia Farm Gate Value Report (https://www.caes.uga.edu/content/caes-subsite/caed/publications/farm-gate.html), the total farm gate value of agricultural production in Ben Hill County is $54,870,060.

According to the inventory database reports and maps, all of the 34 Critical Facilities and Infrastructure for Ben Hill County (including the City of Fitzgerald) could be affected by this hazard. The total value of these Critical Facilities is $306,616,172, plus a content value of $965,445.

E. Land Use and Development Trends

Ben Hill County and the City of Fitzgerald have all seen a slight decrease in population over the last few years. From 2010 to 2017, according to U.S. Census Bureau estimates, the population of Ben Hill County decreased by 2.0% and the population of the City of Fitzgerald decreased by 1.9%.

Ben Hill County and the City of Fitzgerald both have zoning regulations. Ben Hill County and the City of Fitzgerald have mandatory building and fire codes which are enforced by a building inspector. The County and City participate in joint comprehensive planning and in the required updates of the Service Delivery Strategy.

No other land use or development trends that relate to this hazard have been identified at this time.

F. Multi-Jurisdictional Differences

Lightning may happen at any place at any time, and no difference in severity is expected between Ben Hill County and the City of Fitzgerald. However, the impact may be more severe in places with higher population density due to more people being in danger, and other impacts associated with higher population density. No other multi-jurisdictional differences have been identified at this time.

G. Overall HRV Summary of Events and Their Impact

Lightning has the potential to cause damage at any place, at any time, throughout Ben Hill County and the City of Fitzgerald, especially during thunderstorms. Where lightning strikes cannot be predicted and residents may not have time to seek shelter. The cost of the damage and potential loss of life may be higher if the event strikes populated areas as opposed to more sparsely populated or unpopulated areas.

The HMPUC has developed a comprehensive range of Mitigation Goals, Objectives, and Action Steps to lessen the impacts from this hazard. These are contained in Chapter 4.

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.

Section V. Wildfires

A. Identification of Hazard

The threat of wildfire has been chosen by the HMPUC as the sixth most likely hazard to occur and cause damage in the community, based on past experience, the FEMA-described methodology, and other factors. Historic data have been examined from various sources, including the National Climatic Data Center and Georgia Forestry Commission (see Appendix F), as well as from local history and personal accounts, in order to determine the frequency of events.

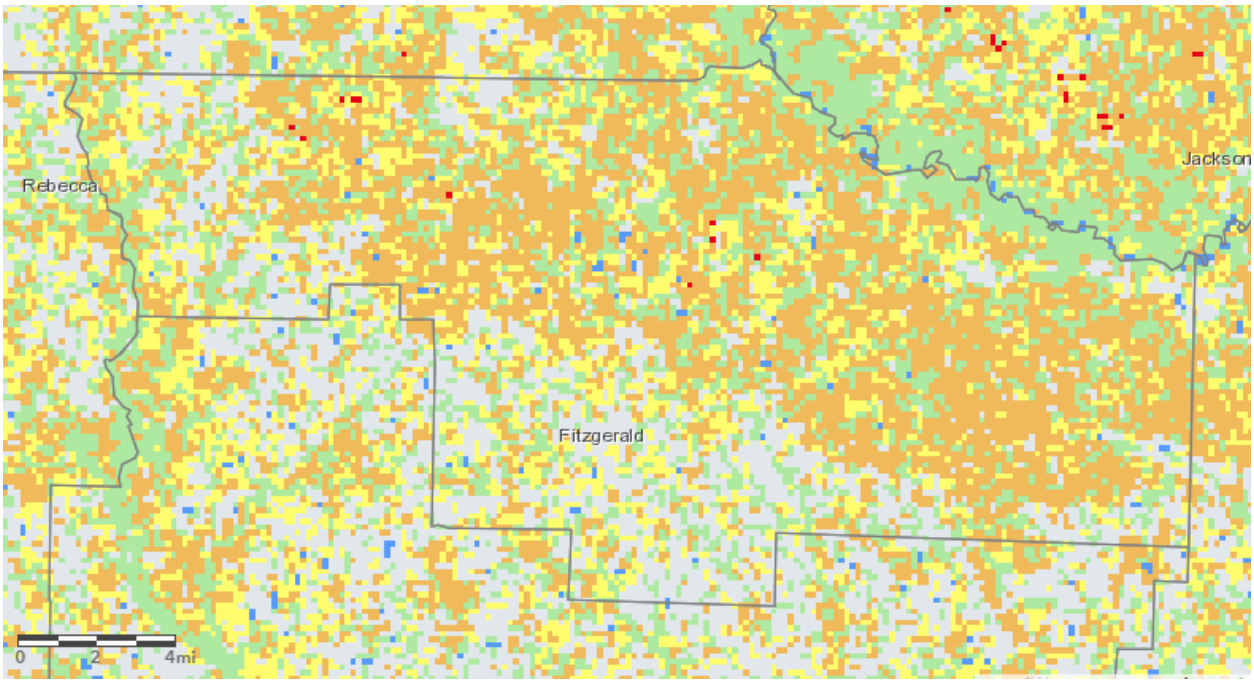
Much of southern Georgia is covered by forests, and fires play an important role in the health of forest ecosystems by breaking down organic matter into soil nutrients and helping seeds to germinate (source: NASA, https://earthobservatory.nasa.gov/Features/GlobalFire/fire_2.php). When naturally occurring wildfires are suppressed, combustible fuel (such as dead leaves and branches) accumulates in the forest. This increases the risk of larger, more destructive fire events in the future. Controlled, prescribed fires lower the risk of larger fire events and are beneficial to forest health (source: USDA, https://www.fs.usda.gov/detail/dbnf/home/?cid=stelprdb5281464).

Low humidity, lack of recent precipitation (or drought conditions), wind speed, and temperature are a combination of weather conditions that favor the kindling and spread of wildfires. A high fuel load (i.e. the accumulation of dead vegetation), in combination with the above, also provides for the kindling and spread of wildfires. Much of Ben Hill County, including some areas near the City, is forested with commercial and free-growing pine trees and other trees. These trees can and do catch fire frequently in both small and large fire events.

According to NASA (https://earthobservatory.nasa.gov/IOTD/view.php?id=89757), an estimated 84 percent of wildfires are caused by humans. Some common ways that people start fires include discarding cigarettes, leaving campfires unattended, and losing control of prescribed burns or crop fires. Sparks from railroads and power lines, as well as arson, also routinely cause wildfires.

When a residential area, whether it be a single home or an entire subdivision, is adjacent to an area containing vegetative fuels, such as a forest or other wooded area, this is referred to as a Wildland-Urban Interface area (WUI). These are the areas at greatest risk for property damage due to Wildfire.

Ben Hill County and the City of Fitzgerald are all vulnerable to the effects of wildfires. The USDA Forest Service assigns areas a Wildfire Hazard Potential (WHP) score of Very Low, Low, Moderate, High, or Very High. As the map below shows, most of Ben Hill County is scored either Low, Moderate, High, or Non-burnable.



USDA USFS Wildfire Hazard Potential

Wildfire Hazard Potential

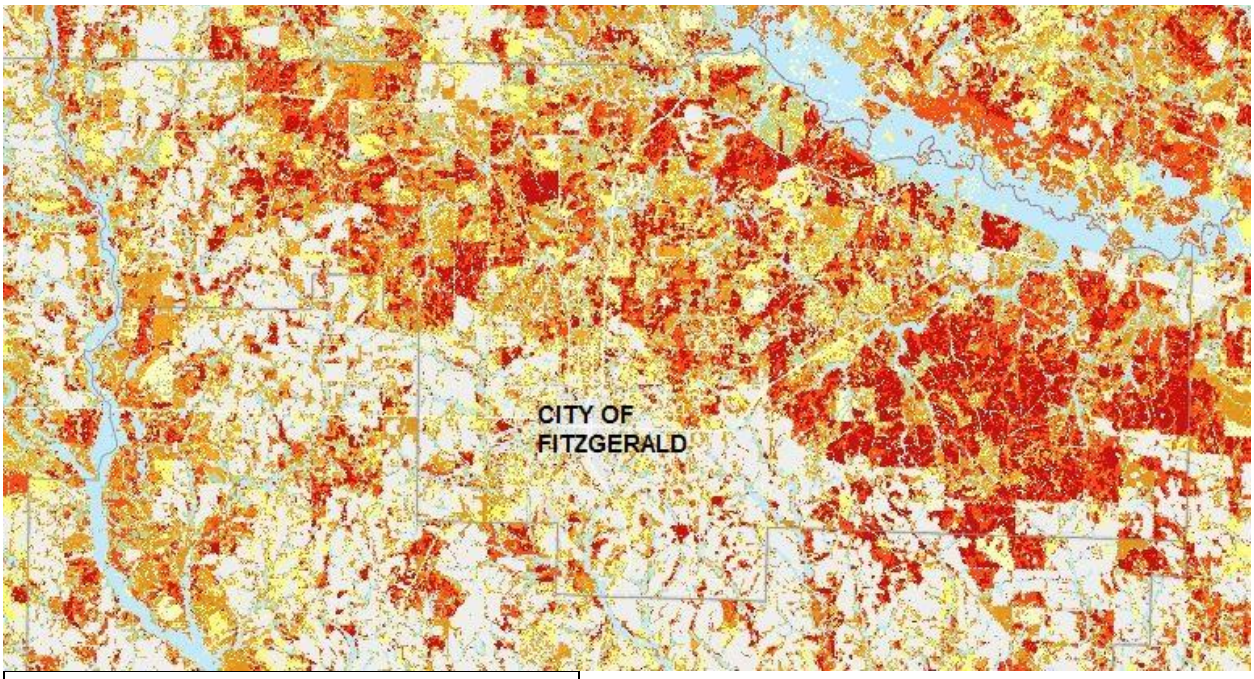
- Very Low
- Low
- Moderate
- High
- Very High
- Non-burnable
- Water

Data Source: USDA Forest Service and Fire Modeling Institute
https://www.arcgis.com/home/item.html?id=f291ac4840984de5a0cf842d8d7a0973

B. Profile of Events, Frequency of Occurrences, Probability

According to Georgia Forestry Commission data (see Appendix F), there are 3,038 reports of wildfires occurring in Ben Hill County (including the City) between 01/01/1968 and 12/31/2017 (the most recent date for which data are available). The Historic Recurrence Interval is 0.02 years. This is a 5,063.33% Historic Frequency Chance per year. The past 10-year Record Frequency Per Year is 45.7, the past 20-year frequency is 54.05, and the past 50-year frequency is 60.76 (see the Hazard Frequency Table in Appendix D). 143 wildfire events have been recorded since the previous Hazard Mitigation Plan was completed, and during this time an estimated 395 acres have burned.

The map below shows the Characteristic Fire Intensity Scale in Ben Hill County and the City of Fitzgerald.



Legend	
	No data
	1 – Lowest Intensity
	1.5
	2 – Low
	2.5
	3 – Moderate
	3.5
	4 – High
	4.5
	5 – Highest Intensity

(Data source: SGSF Wildfire Risk Assessment Portal, https://southernwildfirerisk.com/Map/Public/#map-themes).

Characteristic Fire Intensity Scale (FIS) specifically identifies areas where significant fuel hazards and associated dangerous fire behavior potential exist based on the weighted average of four percentile weather categories. Similar to the Richter scale for earthquakes, FIS provides a standard scale to measure potential wildfire intensity. FIS consist of 5 classes where the order of magnitude between classes is ten-fold. The minimum class, Class 1, represents very low wildfire intensities and the maximum class, Class 5, represents very high wildfire intensities.

1. Class 1, Very Low: Very small, discontinuous flames, usually less than 1 foot in length; very low rate of spread; no spotting. Fires are typically easy to suppress by firefighters with basic training and non-specialized equipment.

2. Class 2, Low: Small flames, usually less than two feet long; small amount of very short range spotting possible. Fires are easy to suppress by trained firefighters with protective equipment and specialized tools.

3. Class 3, Moderate: Flames up to 8 feet in length; short-range spotting is possible. Trained firefighters will find these fires difficult to suppress without support from aircraft or engines, but dozer and plows are generally effective. Increasing potential for harm or damage to life and property.

4. Class 4, High: Large Flames, up to 30 feet in length; short-range spotting common; medium range spotting possible. Direct attack by trained firefighters, engines, and dozers is generally ineffective, indirect attack may be effective. Significant potential for harm or damage to life and property.

5. Class 5, Very High: Very large flames up to 150 feet in length; profuse short-range spotting, frequent long-range spotting; strong fire-induced winds. Indirect attack marginally effective at the head of the fire. Great potential for harm or damage to life and property.

Although the most complete available data were used for this analysis, the possibility remains that other events may have occurred in the community that went unreported or underreported.

C./D.: Inventory of Assets Exposed and Potential Loss

In Worksheet 3A: Inventory of Assets (appearing in Appendix A), we estimate that all of Ben Hill County and the City of Fitzgerald are equally vulnerable to this hazard. Due to the lack of available data broken down by jurisdiction, this analysis was not broken down by jurisdiction.

An estimated 100% of the Residential property (8,521 of 8,521) in Ben Hill County (including the City of Fitzgerald) could be affected by this hazard, with a total value of $424,651,736. Also, an estimated 100% of the Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education and Utility properties (2,900 of 2,900) in the community may be affected, with a total value of $1,800,693,024. The values are based on the most recent available tax roll data for Ben Hill County and the City of Fitzgerald.

Damage to crops is not taken into account in any of these figures. According to the Center for Agribusiness & Economic Development's 2017 Georgia Farm Gate Value Report (https://www.caes.uga.edu/content/caes-subsite/caed/publications/farm-gate.html), the total farm gate value of agricultural production in Ben Hill County is $54,870,060.

According to the inventory database reports and maps, all of the 34 Critical Facilities and Infrastructure for Ben Hill County (including the City of Fitzgerald) could be affected by this hazard. The total value of these Critical Facilities is $306,616,172, plus a content value of $965,445.

E. Land Use and Development Trends

Ben Hill County and the City of Fitzgerald have all seen a slight decrease in population over the last few years. From 2010 to 2017, according to U.S. Census Bureau estimates, the population of

Ben Hill County decreased by 2.0% and the population of the City of Fitzgerald decreased by 1.9%.

Ben Hill County and the City of Fitzgerald both have zoning regulations. Ben Hill County and the City of Fitzgerald have mandatory building and fire codes which are enforced by a building inspector. The County and City participate in joint comprehensive planning and in the required updates of the Service Delivery Strategy.

No other land use or development trends that relate to this hazard have been identified at this time.

F. Multi-Jurisdictional Differences

Wildfires may happen at any place at any time, but are more likely in forested areas. Unincorporated Ben Hill County has more areas rated "High" for Wildfire Hazard Potential than the Cities, and unincorporated Ben Hill County is the only jurisdiction that has any areas rated "Very High." The impact of a wildfire would be more severe in places with higher population density due to more people being in danger and more potential for destruction of homes and other buildings.

All of Ben Hill County Fire Departments are staffed by volunteers, while the City of Fitzgerald has paid staff. Fitzgerald employs approximately 22 fire fighters. All the fire stations have an ISO Class of 9.

G. Overall HRV Summary of Events and Their Impact

Wildfires have the potential to cause damage at any place, at any time, throughout Ben Hill County and the City of Fitzgerald. They can spread quickly and residents may not have time to evacuate. The cost of the damage and potential loss of life may be higher if the event strikes populated areas as opposed to more sparsely populated or unpopulated areas.

The HMPUC has developed a comprehensive range of Mitigation Goals, Objectives, and Action Steps to lessen the impacts from this hazard. These are contained in Chapter 4.

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.

Section VI. Extreme Heat

A. Identification of Hazard

Extreme heat is defined as occurring when a Heat Advisory or Heat Warning is issued by the National Weather Service. The threat of extreme heat has been chosen by the HMPUC as the fifth most likely hazard to occur and cause damage in the community, based on past experience, the FEMA-described methodology, and other factors. Historic data have been examined from various sources, including the National Climatic Data Center (see Appendix F), as well as from local history and personal accounts, in order to determine the frequency of events.

The major hazard presented by heat waves is not so much to infrastructure as to the population. Despite the comparatively warm climate of this region, there are many residents who are not adequately prepared to handle extreme heat events (for example, those without air conditioning in their homes). The risk is particularly high for the elderly and the young. Extreme heat is a hazard that may result in loss of life or damage to property and the economy. Due to weather forecasting methods, most extreme heat events can be predicted with some level of accuracy ahead of time.

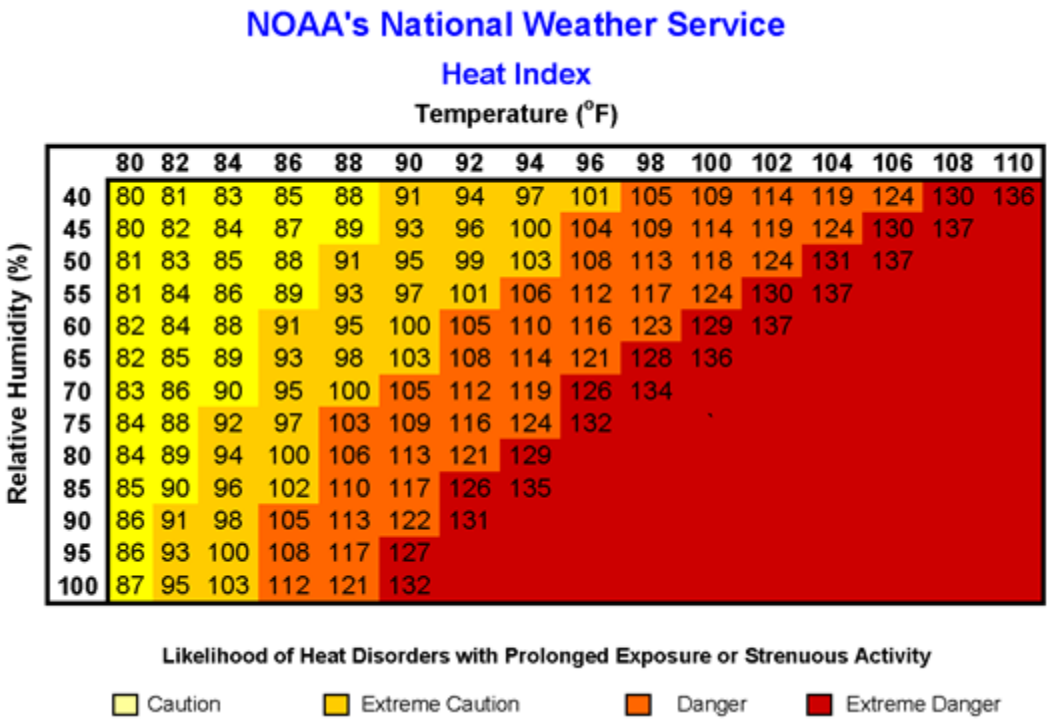
The heat index is a measure that combines the effects of heat and humidity. When heat and humidity combine to reduce the amount of evaporation of sweat from the body, outdoor exercise becomes dangerous even for those in good shape (source: National Weather Service, http://www.nws.noaa.gov/forecasts/wfo/definitions/defineHeatIndex.html).

The table below shows the levels of danger associate with the heat index as calculated by the National Weather Service (source: https://www.weather.gov/ama/heatindex).

Heat Index category and effects

Classification	Heat Index	Effect on the body
Caution	80°F - 90°F	Fatigue possible with prolonged exposure and/or physical activity
Extreme Caution	90°F - 103°F	Heat stroke, heat cramps, or heat exhaustion possible with prolonged exposure and/or physical activity
Danger	103°F - 124°F	Heat cramps or heat exhaustion likely, and heat stroke possible with prolonged exposure and/or physical activity
Extreme Danger	125°F or higher	Heat stroke highly likely

The Heat Index chart below shows Heat Index Values for various temperatures and humidity levels. As an example, if the air temperature is 96° F and the relative humidity is 65%, the heat index—i.e., how hot it feels—is 121° F.



For the National Weather Service's Tallahassee district (which includes Ben Hill County), an **Excessive Heat Watch** is issued when conditions are favorable for an excessive heat event in the next 24 to 72 hours. A Watch is used when the risk of a heat wave has increased but its occurrence and timing is still uncertain. A Watch provides enough lead time so that those who need to prepare can do so, such as city officials who have excessive heat event mitigation plans. The National Weather Service office in Tallahassee will issue this product if the heat index might reach or exceed 113°F.

A **Heat Advisory** is issued when an excessive heat event is expected in the next 24 hours. This products are issued when an excessive heat event is occurring, is imminent, or has a very high probability of occurring. An advisory is for less serious conditions that cause significant discomfort or inconvenience and, if caution is not taken, could lead to a threat to life. The National Weather Service will issue this product if the heat index might reach 108-112°F.

An **Excessive Heat Warning** is issued when an excessive heat event is expected in the next 24 hours. A warning is issued when an excessive heat event is occurring, is imminent, or has a very high probability of occurring. The warning is used for conditions posing a threat to life. The National Weather Service will issue this product if the heat index is expected to reach or exceed 113°F. (Source: Florida State University, https://emergency.fsu.edu/hazards/heat/about)

Ben Hill County and the City of Fitzgerald are all equally vulnerable to the effects of extreme heat.

B. Profile of Events, Frequency of Occurrences, Probability

According to National Weather Service data (see Appendix F), there are 33 reports of extreme heat events occurring in Ben Hill County (including the Cities) between 01/01/2006 and 12/31/2018.

The Historic Recurrence Interval is 0.36 years. This is a 275.00% Historic Frequency Chance per year. The past 10-year Record Frequency Per Year is 3.2, the past 20-year frequency is 1.65, and the past 50-year frequency is 0.66 (see the Hazard Frequency Table in Appendix D). 13 extreme events have been reported since the previous Hazard Mitigation Plan was completed. These were all heat advisories, but the county was also under heat warnings twice in 2012.

Although the most complete available data were used for this analysis, the possibility remains that other events may have occurred in the community that went unreported or underreported.

C./D.: Inventory of Assets Exposed and Potential Loss

In Worksheet 3A: Inventory of Assets (appearing in Appendix A), we estimate that all of Ben Hill County and the City of Fitzgerald are equally vulnerable to this hazard. Due to the lack of available data broken down by jurisdiction, this analysis was not broken down by jurisdiction.

An estimated 100% of the Residential property (8,521 of 8,521) in Ben Hill County (including the City of Fitzgerald) could be affected by this hazard, with a total value of $424,651,736. Also, an estimated 100% of the Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education and Utility properties (2,900 of 2,900) in the community may be affected, with a total value of $1,800,693,024. The values are based on the most recent available tax roll data for Ben Hill County and the City of Fitzgerald.

Damage to crops is not taken into account in any of these figures. According to the Center for Agribusiness & Economic Development's 2017 Georgia Farm Gate Value Report (https://www.caes.uga.edu/content/caes-subsite/caed/publications/farm-gate.html), the total farm gate value of agricultural production in Ben Hill County is $54,870,060.

According to the inventory database reports and maps, all of the 34 Critical Facilities and Infrastructure for Ben Hill County (including the City of Fitzgerald) could be affected by this hazard. The total value of these Critical Facilities is $306,616,172, plus a content value of $965,445.

However, as a countywide non-spatially defined hazard, extreme heat affects people more than structures. While all 17,405 County residents are at risk, the elderly and very low income populations are the most likely to not have air conditioning, making them the most vulnerable to extreme heat and high humidity. According to the 2016 Census, 2,655 persons (15.3%) who live in the County are aged 65 or older, and approximately 35.0% of the County's entire population are living below the poverty level. In the City of Fitzgerald, according to the 2016 Census, 1,592 persons (17.7%) are aged 65 or older and 42.4% of the total population lives below the poverty level.

E. Land Use and Development Trends

Ben Hill County and the City of Fitzgerald have all seen a slight decrease in population over the last few years. From 2010 to 2017, according to U.S. Census Bureau estimates, the population of

Ben Hill County decreased by 2.0% and the population of the City of Fitzgerald decreased by 1.9%.

Ben Hill County and the City of Fitzgerald both have zoning regulations. Ben Hill County and the City of Fitzgerald have mandatory building and fire codes which are enforced by a building inspector. The County and City participate in joint comprehensive planning and in the required updates of the Service Delivery Strategy.

No other land use or development trends that relate to this hazard have been identified at this time.

F. Multi-Jurisdictional Differences

Extreme heat may happen at any place at any time, and no difference in severity is expected between Ben Hill County and the City of Fitzgerald. However, the impact may be more severe in places with higher population density due to more people being in danger. Power failures exacerbate extreme heat events because of the ensuing lack of air conditioning. No other multi-jurisdictional differences have been identified at this time.

G. Overall HRV Summary of Events and Their Impact

Extreme heat has the potential to harm people throughout Ben Hill County and the City of Fitzgerald, especially during the summer months. The potential for damage to health and loss of life will be higher for people without air conditioning, and would be exacerbated by a power failure. Extreme heat is a far greater threat to public health than to buildings and infrastructure.

The HMPUC has developed a comprehensive range of Mitigation Goals, Objectives, and Action Steps to lessen the impacts from this hazard. These are contained in Chapter 4.

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.

Section VII. Drought

A. Identification of Hazard

A drought is a prolonged period of abnormally low rainfall, with an accompanying water shortage. The threat of drought has been chosen by the HMPUC as the seventh most likely hazard to occur and cause damage in the community, based on past experience, the FEMA-described methodology, and other factors. Historic data have been examined from various sources, including the National Climatic Data Center and U.S. Drought Monitor (see Appendix F), as well as from local history and personal accounts, in order to determine the frequency of events.

Although drought is associated with the summer months in many other parts of the United States, our region has a humid subtropical climate with more precipitation, on average, in the summer than in the winter. Drought can occur at any time, and its effects can last throughout the year and continue from year to year. These effects may include agricultural losses, increased wildfire and fire risk, lack of water for citizens and firefighting, increased flooding risk (because dry land can be less absorbent of rainfall), and other effects that influence other hazards and the safety of the community.

Crops (including trees) are usually most adversely affected by drought events, along with community residents whose water supplies are restricted or cut off (especially those using individual wells). Residents of unincorporated Ben Hill County have wells, which may go dry during drought periods, thus leaving those residents without water for extended periods of time. The City of Fitzgerald has a municipal water system.

The U.S. Drought Monitor (http://droughtmonitor.unl.edu), established in 1999, is a weekly map of drought conditions that is produced jointly by the National Oceanic and Atmospheric Administration, the U.S. Department of Agriculture, and the National Drought Mitigation Center (NDMC) at the University of Nebraska-Lincoln. The U.S. Drought Monitor website is hosted and maintained by the NDMC. The Drought Monitor summary map identifies general drought areas, labelling droughts by intensity, with D1 being the least intense and D4 being the most intense. Descriptions of these categories are provided in the table below (source: http://droughtmonitor.unl.edu/AboutUs/ClassificationScheme.aspx).

Category	Description	Possible Impacts
D0	Abnormally Dry	Going into drought: ▪ short-term dryness slowing planting, growth of crops or pastures Coming out of drought: ▪ some lingering water deficits ▪ pastures or crops not fully recovered
D1	Moderate Drought	▪ Some damage to crops, pastures ▪ Streams, reservoirs, or wells low, some water shortages developing or imminent ▪ Voluntary water-use restrictions requested
D2	Severe Drought	▪ Crop or pasture losses likely ▪ Water shortages common ▪ Water restrictions imposed
D3	Extreme Drought	▪ Major crop/pasture losses ▪ Widespread water shortages or restrictions
D4	Exceptional Drought	▪ Exceptional and widespread crop/pasture losses ▪ Shortages of water in reservoirs, streams, and wells creating water emergencies

Ben Hill County and the City of Fitzgerald are all equally vulnerable to the effects of drought.

B. Profile of Events, Frequency of Occurrences, Probability

According to NOAA Severe Weather Database (see Appendix F), there are 30 reports of drought events (D1, D2, D3, or D4) occurring in Ben Hill County (including the City) between 01/01/1950 and 06/30/2019. The Historic Recurrence Interval is 2.30 years. This is a 43.48% Historic Frequency Chance per year. The past 10-year Record Frequency Per Year is 2.9, the past 20-year frequency is 1.5, and the past 50-year frequency is 0.6 (see the Hazard Frequency Table in Appendix D).

Since the previous Hazard Mitigation Plan became effective, 3 drought events have been reported. The week of November 22, 2016, D2 (Severe) drought conditions began in Ben Hill County and by November 29, 2016 it became D3 (Extreme) drought conditions, continuing until December 1, 2016. Heavy rain ended the drought.

Although the most complete available data were used for this analysis, the possibility remains that other events may have occurred in the community that went unreported or underreported.

C./D.: Inventory of Assets Exposed and Potential Loss

In Worksheet 3A: Inventory of Assets (appearing in Appendix A), we estimate that all of Ben Hill County and the City of Fitzgerald are equally vulnerable to this hazard. Due to the lack of available data broken down by jurisdiction, this analysis was not broken down by jurisdiction.

An estimated 100% of the Residential property (8,521 of 8,521) in Ben Hill County (including the City of Fitzgerald) could be affected by this hazard, with a total value of $424,651,736. Also, an estimated 100% of the Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education and Utility properties (2,900 of 2,900) in the community may be affected, with a total value of $1,800,693,024. The values are based on the most recent available tax roll data for Ben Hill County and the City of Fitzgerald.

Damage to crops is not taken into account in any of these figures. According to the Center for Agribusiness & Economic Development's 2017 Georgia Farm Gate Value Report (https://www.caes.uga.edu/content/caes-subsite/caed/publications/farm-gate.html), the total farm gate value of agricultural production in Ben Hill County is $54,870,060.

According to the inventory database reports and maps, all of the 34 Critical Facilities and Infrastructure for Ben Hill County (including the City of Fitzgerald) could be affected by this hazard. The total value of these Critical Facilities is $306,616,172, plus a content value of $965,445.

E. Land Use and Development Trends

Ben Hill County and the City of Fitzgerald have all seen a slight decrease in population over the last few years. From 2010 to 2017, according to U.S. Census Bureau estimates, the population of Ben Hill County decreased by 2.0% and the population of the City of Fitzgerald decreased by 1.9%.

Ben Hill County and the City of Fitzgerald both have zoning regulations. Ben Hill County and the City of Fitzgerald have mandatory building and fire codes which are enforced by a building inspector. The County and City participate in joint comprehensive planning and in the required updates of the Service Delivery Strategy.

No other land use or development trends that relate to this hazard have been identified at this time.

F. Multi-Jurisdictional Differences

Residents of unincorporated Ben Hill County have wells, which may go dry during drought periods, thus leaving those residents without water for extended periods of time. The City of Fitzgerald has a municipal water system.

No other multi-jurisdictional differences have been identified at this time.

G. Overall HRV Summary of Events and Their Impact

Drought has the potential to harm people and the economy throughout Ben Hill County and the City of Fitzgerald, potentially at any time of the year, and most significantly in unincorporated areas not served by municipal water systems. Drought may increase the likelihood of wildfires and flooding. Water shortages can impede firefighting efforts at all levels.

The HMPUC has developed a comprehensive range of Mitigation Goals, Objectives, and Action Steps to lessen the impacts from this hazard. These are contained in Chapter 4.

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.

Chapter 3:
Local Technological Hazard, Risk, and Vulnerability (HRV) Summary

Section I. Hazardous Materials Release

A. Identification of Hazard

Hazardous materials are substances or materials that the Secretary of Transportation has determined is capable of posing an unreasonable risk to health, safety, and property when transported in commerce. When these materials are released they become dangerous. A release may occur by spilling, leaking, emitting toxic vapors, or any other process that enables the material to escape its container, enter the environment, and create a potential hazard.

The effects of hazardous material releases can occur very rapidly with little or no advance warning, in the form of explosions, fires, and immediate health impacts. Slower effects can include long-term environmental damage and long-term health problems resulting from exposure.

B. Profile of Events, Frequency of Occurrences, Probability

Hazardous material spills are common in areas where hazardous materials are fabricated, processed, and stored. Transportation of hazardous materials by truck is the cause of the greatest number of hazardous materials events. Many products containing hazardous chemicals are routinely used and stored in homes. These products are also shipped daily on the nation's highways, railroads, waterways, and in pipelines. In most cases, disasters involving hazardous materials are confined to a localized area, whether an accidental release occurs at a fixed facility or in association with a transportation incident. The United States Environmental Protection Agency categorizes wastes according to four characteristics: Ignitability, corrosivity, reactivity, and toxicity. Furthermore, the EPA categorizes hazardous wastes according to the following hazard codes (source: https://www.epa.gov/hw/defining-hazardous-waste-listed-characteristic-and-mixed-radiological-wastes)

(T) - Toxic Waste
(H) - Acute Hazardous Waste
(I) - Ignitable Waste
(C) - Corrosive Waste
(R) - Reactive Waste
(E) - Toxicity Characteristic Waste

The extent or severity of a hazardous materials release within the community is not predictable due to the varied nature of hazardous materials and the widespread area covered by the transportation network upon which such materials may be transported.

According to the USDOT Pipeline and Hazardous Materials Safety Administration's Office of Hazardous Materials Safety database (see Appendix F), there is 1 report of Hazardous Materials

Release events occurring in Ben Hill County (including the City) between 01/01/1978 and 09/30/2018. This occurred in 1993. While a cargo tank carrier was being unloaded, the cap on the outlet pipe split and cracked, spraying product onto asphalt. The spill was contained. The Historic Recurrence Interval is 50 years. This is a 2% Historic Frequency Chance per year. The past 10-year Record Frequency Per Year is 0.0, the past 20-year frequency is 0.05, and the past 50-year frequency is 0.02 (see the Hazard Frequency Table in Appendix D).

No hazardous materials release events have been recorded since the previous Hazard Mitigation Plan was completed.

Although the most complete available data were used for this analysis, the possibility remains that other events may have occurred in the community that went unreported or underreported.

C./D.: Inventory of Assets Exposed and Potential Loss

In Worksheet 3A: Inventory of Assets (appearing in Appendix A), we estimate that all of Ben Hill County and the City of Fitzgerald are equally vulnerable to this hazard. Due to the lack of available data broken down by jurisdiction, this analysis was not broken down by jurisdiction.

An estimated 100% of the Residential property (8,521 of 8,521) in Ben Hill County (including the City of Fitzgerald) could be affected by this hazard, with a total value of $424,651,736. Also, an estimated 100% of the Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education and Utility properties (2,900 of 2,900) in the community may be affected, with a total value of $1,800,693,024. The values are based on the most recent available tax roll data for Ben Hill County and the City of Fitzgerald.

Damage to crops is not taken into account in any of these figures. According to the Center for Agribusiness & Economic Development's 2017 Georgia Farm Gate Value Report (https://www.caes.uga.edu/content/caes-subsite/caed/publications/farm-gate.html), the total farm gate value of agricultural production in Ben Hill County is $54,870,060.

According to the inventory database reports and maps, all of the 34 Critical Facilities and Infrastructure for Ben Hill County (including the City of Fitzgerald) could be affected by this hazard. The total value of these Critical Facilities is $306,616,172, plus a content value of $965,445.

E. Land Use and Development Trends

Ben Hill County and the City of Fitzgerald have all seen a slight decrease in population over the last few years. From 2010 to 2017, according to U.S. Census Bureau estimates, the population of Ben Hill County decreased by 2.0% and the population of the City of Fitzgerald decreased by 1.9%.

Ben Hill County and the City of Fitzgerald both have zoning regulations. Ben Hill County and the City of Fitzgerald have mandatory building and fire codes which are enforced by a building

inspector. The County and City participate in joint comprehensive planning and in the required updates of the Service Delivery Strategy.

No other land use or development trends that relate to this hazard have been identified at this time.

F. Multi-Jurisdictional Differences

The facilities most vulnerable to a hazardous materials release are those located within a one-mile buffer of the major highways and railways in the community.

State highways carrying truck traffic pass through all the jurisdictions. SR 107, a 2-lane highway, passes from east to west through the southern portion of the county. US 129/SR 31/SR 125 intersect when entering Ben Hill County and US 319 is another arterial highway which carries freight traffic.

A CSX rail line passes northwest-southeast through the County, including the City of Fitzgerald.

G. Overall HRV Summary

A significant portion of the community could be vulnerable to a hazardous materials release. Preparation for such an event requires specific training for first responders and coordination among agencies to ensure a swift response and containment of hazardous materials in order to minimize the potential loss of life and property. Therefore, a key priority should be to train responders to fulfill their responsibilities and conduct periodic tests to be sure the response plan is realistic and responders are ready to carry it out.

Human error is the probable cause of most transportation incidents and associated consequences involving the accidental release of hazardous materials. Varying quantities of hazardous materials are manufactured, used, or stored in Ben Hill County. Due to the county's location on or near several major transportation routes, the potential exists for a catastrophic hazardous material release event due to a transportation accident.

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.

Chapter 4: Local Natural Hazard Mitigation Goals and Objectives

Summary of Changes:

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

Chapter 4 Section	Updates to Section
I. Hurricane/Tropical Storm	Updated Goals, Objectives, and Action Step Formatting, Numbering and Data Fields, Updated or Deleted Prior Action Steps and Added New Action Steps (if applicable)
II. Tornado	Updated Goals, Objectives, and Action Step Formatting, Numbering and Data Fields, Updated or Deleted Prior Action Steps and Added New Action Steps (if applicable)
III. Flood	Updated Goals, Objectives, and Action Step Formatting, Numbering and Data Fields, Updated or Deleted Prior Action Steps and Added New Action Steps (if applicable)
IV. Lightning	Updated Goals, Objectives, and Action Step Formatting, Numbering and Data Fields, Updated or Deleted Prior Action Steps and Added New Action Steps (if applicable)
V. Wildfire	Updated Goals, Objectives, and Action Step Formatting, Numbering and Data Fields, Updated or Deleted Prior Action Steps and Added New Action Steps (if applicable)
VI. Extreme Heat	Updated Goals, Objectives, and Action Step Formatting, Numbering and Data Fields, Updated or Deleted Prior Action Steps and Added New Action Steps (if applicable)
VII. Drought	Updated Goals, Objectives, and Action Step Formatting, Numbering and Data Fields, Updated or Deleted Prior Action Steps and Added New Action Steps (if applicable)

Table 4.1: Overview of updates to Chapter 4: Local Natural Hazards, Mitigation Goals and Objectives

Overall Community Mitigation Goals, Policies, and Values Narrative

This plan, as a joint effort between Ben Hill County and the City of Fitzgerald, will serve as a comprehensive mitigation plan. The mitigation strategies, hazard identification, and other information identified in this plan will be integrated into all comprehensive plans for Ben Hill County and the City of Fitzgerald in the future. In particular, aspects of this plan will be integrated into the Ben Hill County Comprehensive Plan during the next planning cycle.

Identified hazards and mitigation strategies of the previous Ben Hill County Hazard Mitigation plan were integrated into the Local Emergency Operations Plan, multiple County and City SOPs and SOGs, and future planning and zoning plans. Ben Hill County will integrate mitigation strategies identified in this plan into the Ben Hill County and City of Fitzgerald County Comprehensive Plan, Community Wildfire Protection Plan, Continuity of Operations Plan (when applicable), and other future plans. Strategies identified in the previous plan were applied to grant applications, building and zoning requirements, and development planning considerations for Ben Hill County and the City of Fitzgerald. Many of these strategies will be applied using previously identified policies and ordinances. All jurisdictions have the authority to adopt locally-binding ordinances and policies to enhance the mitigation strategies in their jurisdiction.

The Legal and Regulatory Capability Survey (below) describes the authorities available to the jurisdictions and/or enabling legislation at the state level affecting planning and land management tools that support local hazard mitigation planning efforts. The identified planning and land management tools are typically used by states and local jurisdictions to implement hazard mitigation activities.

Regulatory Tools/Plans	Regulatory Type: Ordinance, Resolution, Codes, Plans, Etc.	Local Authority	State Prohibited	Higher Authority
Building Codes	County/Municipal Code	Yes	No	No
Capital Improvements Plan	Ben Hill County and City of Fitzgerald Comprehensive Plan	Yes	No	No
Comprehensive Plan	Ben Hill County and the City of Fitzgerald Comprehensive Plan	Yes	No	No
Economic Development Plan	Ben Hill County and the City of Fitzgerald Comprehensive Plan	Yes	No	Yes
Emergency Response Plan	Ben Hill County Local Emergency Operations Plan (LEOP)	Yes	No	Yes
Zoning Ordinances	City of Fitzgerald Zoning Ordinance Ben Hill County Zoning Ordinance	Yes	No	No

The City of Fitzgerald offers many administrative and technical services to the community. City departments include: Administrative, Public Works, Water and Sewer, Garbage, Licensing and Permits, Police Department, and Fire Department.

Opportunities to integrate the requirements of this Plan into other local planning mechanisms shall continue to be identified. Although it is recognized that there are many possible benefits to integrating components of this Plan into other local planning mechanisms, the development and maintenance of this stand-alone Hazard Mitigation Plan is deemed by the Ben Hill County Hazard Mitigation Planning Committee to be the most effective and appropriate method to implement local hazard mitigation actions at this time.

While Ben Hill County and the City of Fitzgerald each operate autonomously, there is a high level of cooperation exhibited when it comes to hazard mitigation and emergency planning efforts. Each local government has designated representatives to participate in the emergency management process, whether it be during planning, response, or recovery phases. The local Emergency Management Agency hosts regular meetings to gather all of the relevant local, regional and state partners together to develop effective plans and strengthen relationships among all of the stakeholders. Working together, the jurisdictions have been able to access resources available through several state and federal sources that have been instrumental in improving the technical capabilities of these communities to more effectively mitigate hazards and provide more accurate warning and preparatory information to their citizens.

Overall, the priorities for each of the local communities have remained relatively unchanged. The hazards and risks associated with each have not changed, and many of the action steps identified during previous Hazard Mitigation Plans are still relevant and remain a priority in this plan as well.

Authority for the development of this Plan was given by the Ben Hill County Commission as a result of their execution of the Grantee-Subgrantee Agreement for the Ben Hill County Hazard Mitigation Grant Program (HMGP) Planning Project; and by the City of Fitzgerald, located in Ben Hill County, through their participation in the planning project. The Ben Hill County Emergency Management Agency is authorized to oversee emergency management within Ben Hill County and the City of Fitzgerald.

The jurisdictions have many current policies and programs related to hazard mitigation, which are described in detail in the goals, objectives, and action steps contained in Chapter 4 of this Plan. All jurisdictions (within the boundaries of their budgets) have the ability to expand and improve their existing policies and programs as evidenced by the new and existing goals, objectives, and action steps included in this plan. The amount of resources available to the jurisdictions for expansion and improvement of existing programs will depend on factors such as the local government budgets and the availability of state and federal funding to support hazard mitigation activities.

This chapter contains a description of the comprehensive range of Mitigation Goals, Objectives, and Action Steps that were developed by the HMPUC to reduce damages and improve safety through Hazard Mitigation. These have been arranged by the natural hazards contained in Chapter 2. There is particular emphasis on emergency preparedness and infrastructure.

The HMPUC discussed and identified the comprehensive range of Mitigation Goals, Objectives, and Action Steps contained in Chapter 4 of this Plan after identifying the hazards noted in Chapter 2 of this Plan. All areas of the community were taken into account in the development of the comprehensive range of Mitigation Goals, Objectives, and Action Steps. These were identified

after the weighing of many factors discovered during the planning process, including risk assessment, storm history, past damage, community resources, and other factors.

A list of the comprehensive range of Mitigation Goals, Objectives, and Action Steps was compiled from the input of the HMPUC, as well as from others within the community. Members of the HMPUC prioritized the identified comprehensive range of Mitigation Goals, Objectives, and Action Steps based on what was anticipated to be most beneficial to the community. The benefits of all action steps were determined to be greater than the costs involved.

Several criteria were established to assist the HMPUC members in the prioritization of these suggested Mitigation Goals, Objectives, and Action Steps. Criteria included perceived cost vs. benefit or cost-effectiveness, availability of potential funding sources, overall feasibility, measurable milestones, political support for the proposed actions, and the STAPLEE criteria.

Through this prioritization process, several projects emerged as having higher priority than others. Some of the projects involved expending considerable amounts of funds to initiate the required actions. The determination of the cost/benefit analysis (such as the FEMA B/CA model) of a project will be implemented at the time of project application or funding request. Other projects allowed the communities to pursue completion of the project using potential grant funding. Still others required no significant financial commitment by the communities.

In Chapter 6, Sections I-III, there is a description of the planning process involved in selecting the comprehensive range of Mitigation Goals, Objectives, and Action Steps. The Action Steps are given a rating of High, Medium, or Low Priority by the HMPUC based on a number of factors (with a primary emphasis on prioritized cost versus benefit review) identified in Chapter 6, Section I.

High Priority – H – is considered to be an action step that needs to be taken first due to the most harmful threat posed to Ben Hill County and City of Fitzgerald and/or due to the greatest repetitive damages caused by natural hazards in Ben Hill County and City of Fitzgerald.

Medium Priority – M – is considered to be an action step that needs to be accomplished after the High Priority Action Steps are met or when additional funding is available.

Low Priority – L – is considered to be an Action Step that is important but is the lowest priority in meeting the needs of Ben Hill County and City of Fitzgerald.
In projecting a timetable for implementation of the action steps, Ben Hill County and the City of Fitzgerald will strive to meet the following schedule: High priority action steps will be implemented in the first eighteen months following adoption of this plan; Medium priority action steps will be implemented in eighteen to thirty-six months; and Low priority action steps will be implemented in thirty-six to sixty months. Action steps will be implemented utilizing a combination of resources from agencies such as OHS-GEMA, FEMA, NOAA, and others. Following each action step in the mitigation strategy, the plan identifies the Office of Primary Responsibility (OPR), estimated cost, anticipated funding source(s), anticipated benefit, and projected timeline.

Relevant comprehensive ranges of Mitigation Goals, Objectives, and Action Steps are listed below throughout the chapter. The Ben Hill County EMA Director has been chosen by Ben Hill County and the City of Fitzgerald to oversee the projects. The Ben Hill County EMA has been designated by Ben Hill County and the City of Fitzgerald to be the coordinating agency for implementation and administration of these projects.

Section I.
Hurricanes/Tropical Storms

A. Community Mitigation Goals

As previously indicated in Chapter 2, hurricanes and tropical storms may cause substantial damage to life, property, and the economy in Ben Hill County and the City of Fitzgerald. They are usually accompanied by some advanced notice, giving the community time to prepare and/or evacuate. The HMPUC believes that, because these extreme weather events have the potential to cause great damage, injury, and loss of life, a comprehensive range of Mitigation Goals, Objectives, and Action Steps (contained in Section C below) should be implemented to reduce this hazard's potential impact on the community.

B. Identification and Analysis of Comprehensive Range of Mitigation Options

1. Structural and Non-Structural Mitigation:

This Hazard Mitigation Plan contains both structural and non-structural options. For more information, see the comprehensive range of Mitigation Goals, Objectives, and Action Steps contained in Section C below.

2. Existing Policies, Regulations, Ordinances and Land Use:

Chapter 2 of this plan contains information regarding existing policies, regulations, ordinances, and land use that are relevant to this hazard. For more information, see Chapter 2, Section I.

3. Community Values, Historic and Special Considerations:

Historic buildings exist in the community, a few of which are Critical Facilities. There are historic and special considerations that pose significant challenges with regard to the retrofitting of historic buildings in order to make them more resilient to natural hazards. The Fitzgerald Commercial Historic District is listed in the National Register of Historic Places, as are several individual properties in Ben Hill County. Ben Hill County Auditorium and Grammar School was added to the National Register of Historic Places in 1986.

4. New Buildings and Infrastructure:

The mitigation strategy and recommendations that follow include action steps designed to protect new buildings and infrastructure from the effects of this hazard.

5. Existing Buildings and Infrastructure:
The mitigation strategy and recommendations that follow include action steps designed to protect existing buildings and infrastructure from the effects of this hazard.

C. Mitigation Strategy and Recommendations

Goal 1.1: Enhance the community's ability to issue an early warning of hurricanes in an effective, dependable, and rapid manner.

Objective 1: Enhance the ability of the Ben Hill County Emergency Management Agency to respond effectively and efficiently to emergency needs during and after a hurricane event.

Task A. Ensure that community facilities and programs are in place to facilitate EMA's emergency response.

Action Step 1: Implement the "Community Emergency Response Team" (CERT) program.	
Responsible Department	EMA, County Manager
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Ben Hill County and City of Fitzgerald
Timeframe	2019-2024
Priority	Medium
Status	On-going

Goal 1.2: Reduce the risks and vulnerability of citizens and critical facilities to damage resulting from hurricanes.

Objective 1: **Protect life, health, and property of residents from the force of hurricanes.**

Task A. Advise the public about hurricane safety precautions.

*Action Step 2***:** Educate homeowners and builders on individual safe rooms.	
Responsible Department	EMA, Building Inspections Office
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Ben Hill County and City of Fitzgerald
Timeframe	2019-2024
Priority	Medium
Status	On-going

Action Step 3: Encourage the American Red Cross to teach the Citizen's Disaster Course on a frequent basis.	
Responsible Department	EMA
Anticipated Cost	$10,000
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Ben Hill County and City of Fitzgerald
Timeframe	2019-2024
Priority	Medium
Status	On-going

Action Step 4: Encourage businesses to develop emergency plans.	
Responsible Department	EMA
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Ben Hill County and City of Fitzgerald
Timeframe	2019-2024
Priority	Medium
Status	On-going

Action Step 5: Increase public awareness of the Early Warning Communication/Notification System, NOAA weather radios, and available community safe shelters by publishing articles in the local newspaper, holding town hall meetings, and providing bulletins to local churches and the schools.	
Responsible Department	EMA, County Manager, Local Media
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Ben Hill County and City of Fitzgerald
Timeframe	2019-2024
Priority	Medium
Status	On-going

Task B. Reduce the potential impact of hurricanes on new and existing facilities and infrastructure.

Action Step 6: Install auxiliary, mobile, and/or fixed generators (including transfer switches) where needed, including all designated evacuation and emergency shelters, community water systems, and critical facilities.	
Responsible Department	EMA, Ben Hill and Fitzgerald Building Inspector, Fitzgerald Water, Light & Bond, Irwin EMC and Georgia Power, Shelter Owners
Anticipated Cost	$80,000
Existing & Potential Funding Sources	GEMA, FEMA
Jurisdiction	Ben Hill County and City of Fitzgerald
Timeframe	2019-2024
Priority	Medium
Status	On-going

Action Step 7: Trim tree lines around roads, homes, utilities and businesses.	
Responsible Department	EMA, County Manager, Municipalities, Fitzgerald Water, Light & Bond, Georgia Power, Irwin EMC
Anticipated Cost	$50,000 a year
Existing & Potential Funding Sources	Local Operating Funds and business funding
Jurisdiction	Ben Hill County and City of Fitzgerald
Timeframe	2019-2024
Priority	Low
Status	On-going

Action Step 8: Seek funding to retrofit public buildings to reinforce windows, roofs and doors.	
Responsible Department	EMA, Building Inspections Office, Schools
Anticipated Cost	$40,000
Existing & Potential Funding Sources	GEMA, FEMA
Jurisdiction	Ben Hill County and City of Fitzgerald
Timeframe	2019-2024
Priority	Medium
Status	On-going

Action Step 9: Initiate an inspection program at critical facilities to identify construction weaknesses subject to high wind damage.	
Responsible Department	Building Inspections Office
Anticipated Cost	$10,000
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Ben Hill County and City of Fitzgerald
Timeframe	2019-2024
Priority	Medium
Status	On-going

D. Special Multi-Jurisdictional Strategy and Considerations:

Most of the strategies outlined above apply to and are intended to be carried out by each of the local jurisdictions. In some instances, where the action step may not apply to all jurisdictions, the applicable jurisdictions are noted in the table.

E. Local Public Information and Awareness Strategy:

All sections of the Plan shall be monitored and evaluated annually by the County Emergency Management Agency. Incremental accomplishments of Mitigation Goals, Objectives, and Action Steps will be reported to the public through appropriate means (news media, social media, web pages, City Council and County Commission meetings, etc.). By utilizing available resources, each jurisdiction will keep the public informed constantly of the development of these strategies and of how citizens can best assist with and take advantage of these efforts.

The major criteria to measure plan success will be the number of Goals, Objectives, and Action Steps, or components thereof, that have been completed, which in turn will result in savings of life, money, and property. For further details on plan execution, see Chapter 6.

F. Action Steps from Previous Plan:

Changed or Completed Action Steps
Action Step #1 - This has been changed from a High Priority to Medium.
Action Step #6 – Partially completed, but remains on-going.
Action Step #9 – Funding source has been changed from OHS-GEMA-FEMA, to Local Operating Funds.

Deleted Action Steps
Action Step #10 – Deleted.

Unchanged Action Steps
Action Step #2
Action Step #3
Action Step #4 –Social media and the Chamber of Commerce is used for this.
Action Step #5 – Code Red has also been put in place.
Action Step #7
Action Step #8

Action steps considered but ultimately not added
None.

Section II. Tornado

A. Community Mitigation Goals

As previously indicated in Chapter 2, this hazard may cause substantial damage to life, property, and the economy in Ben Hill County and the City of Fitzgerald. Tornadoes are unpredictable and can happen at any place and at any time. Because these tornadoes may be extremely powerful and cause great damage, the HMPUC believes that the comprehensive range of Mitigation Goals, Objectives, and Action Steps (contained in Section C below) should be implemented to reduce this hazard's potential impact on the community.

B. Identification and Analysis of Comprehensive Range of Mitigation Options

1. Structural and Non-Structural Mitigation:

This Hazard Mitigation Plan contains both structural and non-structural options. For more information, see the comprehensive range of Mitigation Goals, Objectives, and Action Steps contained in Section C below.

2. Existing Policies, Regulations, Ordinances and Land Use:

Chapter 2 of this plan contains information regarding existing policies, regulations, ordinances, and land use that are relevant to this hazard. For more information, see Chapter 2, Section II.

3. Community Values, Historic and Special Considerations:

Historic buildings exist in the community, a few of which are Critical Facilities. There are historic and special considerations that pose significant challenges with regard to the retrofitting of historic buildings in order to make them more resilient to natural hazards. The Fitzgerald Commercial Historic District is listed in the National Register of Historic Places, as are several individual properties in Ben Hill County. Ben Hill County Auditorium and Grammar School was added to the National Register of Historic Places in 1986.

4. New Buildings and Infrastructure:

The mitigation strategy and recommendations that follow include action steps designed to protect new buildings and infrastructure from the effects of this hazard.

5. Existing Buildings and Infrastructure:
The mitigation strategy and recommendations that follow include action steps designed to protect existing buildings and infrastructure from the effects of this hazard.

C. Mitigation Strategy and Recommendation:

Goal 2.1: Enhance the community's ability to issue an early warning of tornadoes in an effective, dependable, and rapid manner.

Objective 1: Enhance the ability of the Ben Hill County Emergency Management Agency to respond effectively and efficiently to emergency needs during and after a tornado event.

Task A. Ensure that community facilities and programs are in place to facilitate EMA's emergency response.

Action Step 1: Implement the "Community Emergency Response Team" (CERT) program	
Responsible Department	EMA, County Manager
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Ben Hill County, City of Fitzgerald
Timeframe	2019-2024
Priority	Medium
Status	On-going

Goal 2.2: Reduce the risks and vulnerability of citizens and critical facilities to tornado damage.

Objective 1: Protect the life, health, and property of residents from the force of tornadoes.

Task A. Advise the public about tornado safety precautions

Action Step 2: Educate homeowners and builders on individual safe rooms.	
Responsible Department	EMA, Building Inspections Office
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Ben Hill County and City of Fitzgerald
Timeframe	2019-2024
Priority	High
Status	On-going

Action Step 4: Encourage the American Red Cross to teach the Citizen's Disaster Course on a frequent basis.	
Responsible Department	EMA
Anticipated Cost	$10,000
Existing & Potential Funding Sources	OSH-GEMA-FEMA
Jurisdiction	Ben Hill County and City of Fitzgerald
Timeframe	2019-2024
Priority	Medium
Status	On-going

Action Step 5: Encourage businesses to develop emergency plans.	
Responsible Department	EMA
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Ben Hill County and City of Fitzgerald
Timeframe	2019-2024
Priority	Medium
Status	On-going

Action Step 6: Increase public awareness of the Early Warning Communication/Notification System, NOAA weather radios, and available community safe shelters by publishing articles in the local newspaper, holding town hall meetings, and providing bulletins to local churches and the schools.	
Responsible Department	EMA, County Manager and Media
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Ben Hill County and City of Fitzgerald
Timeframe	2019-2024
Priority	High
Status	On-going

Task B. Reduce the potential impact of a tornado event on new and existing facilities and infrastructure.

Action Step 7: Install auxiliary, mobile, and/or fixed generators (including transfer switches) where needed, including all designated evacuation and emergency shelters, community water systems, and critical facilities.	
Responsible Department	EMA, Building Inspector, Fitzgerald Water, Light & Bond
Anticipated Cost	$500,000
Existing & Potential Funding Sources	GEMA, FEMA
Jurisdiction	Ben Hill County and Cities
Timeframe	2019-2024
Priority	Medium
Status	On-going

Action Step 8: Trim tree lines around roads, homes, utilities and businesses.	
Responsible Department	EMA, County Manager, Municipalities, Fitzgerald Water, Light & Bond, Georgia Power, Irwin EMC
Anticipated Cost	$30,000
Existing & Potential Funding Sources	Local Operating Funds and business funding
Jurisdiction	Ben Hill County and City of Fitzgerald
Timeframe	2019-2024
Priority	Low
Status	On-going

Action Step 9: Seek funding to retrofit public buildings to reinforce windows, roofs and doors.	
Responsible Department	EMA, Building Inspections Office, BC Schools
Anticipated Cost	$40,000
Existing & Potential Funding Sources	GEMA, FEMA
Jurisdiction	Ben Hill County and Cities
Timeframe	2019-2024
Priority	Medium
Status	On-going

Action Step 10: Initiate an inspection program at critical facilities to identify construction weaknesses subject to high wind damage.	
Responsible Department	Building Inspections Office, County Manager, City Manager
Anticipated Cost	$10,000
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Ben Hill County and City of Fitzgerald
Timeframe	2019-2024
Priority	Medium
Status	On-going

D. Special Multi-Jurisdictional Strategy and Considerations:

Most of the strategies outlined above apply to and are intended to be carried out by each of the local jurisdictions. In certain cases, where the action step may not apply to all jurisdictions, the applicable jurisdictions are noted in the table.

E. Local Public Information and Awareness Strategy:

All sections of the Plan shall be monitored and evaluated annually by the County Emergency Management Agency. Incremental accomplishments of Mitigation Goals, Objectives, and Action Steps will be reported to the public through appropriate means (news media, social media, web pages, City Council and County Commission meetings, etc.). By utilizing available resources, each jurisdiction will keep the public constantly informed of the development of these strategies and of how citizens can best assist with and/or take advantage of these efforts.

The major criteria to measure plan success will be the number of Goals, Objectives, and Action Steps, or components thereof, that have been completed, which in turn will result in savings of life, money, and property. For further details on plan execution, see Chapter 6.

F. Action Steps from the Previous Plan:

Changed or Completed Action Steps
Action Step #1 – Changed from a High Priority to Medium.
Action Step #7 – Partially completed, but remains on-going.

Deleted Action Steps
Action Step #3 – Deleted
Action Step #11 - Deleted

Unchanged Action Steps
Action Step #2
Action Step #4
Action Step #5 – Social Media will be used for this.
Action Step #6 – Code Red has been put in place.
Action Step #8
Action Step #9
Action Step #10

Action steps considered but ultimately not added
None.

Section III. Flood

A. Community Mitigation Goals

As previously indicated in Chapter 2, this hazard may cause substantial damage to life, property, and the economy in Ben Hill County and the City of Fitzgerald. Floods are unpredictable and can happen at any place and at any time. Because of the damage and loss of life it may cause, the HMPUC believes that the comprehensive range of Mitigation Goals, Objectives, and Action Steps (contained in Section C below) should be implemented to reduce this hazard's potential impact on the community.

The major flooding sources in Ben Hill County are the Alapaha River sub-basin and Withlacoochee sub-basin of the Suwannee River and runs south through the county. Due to these facts, the Ben Hill County HMPUC believes that the comprehensive range of Mitigation Goals, Objectives, and Action Steps listed below should be implemented to reduce the threat of flood damage in Ben Hill County and the City of Fitzgerald. Banks Lake, which is a National Wildlife Refuge, is also located in Ben Hill County but it is a blackwater shallow lake and poses no potential flooding problems.

B. Identification and Analysis of the Comprehensive Range of Mitigation Options

F. Structural and Non-Structural Mitigation:

This Hazard Mitigation Plan contains both structural and non-structural options. For more information, see the comprehensive range of Mitigation Goals, Objectives, and Action Steps contained in Section C below.

2. Existing Policies, Regulations, Ordinances and Land Use:

Chapter 2 of this plan contains information regarding existing policies, regulations, ordinances, and land use that are relevant to this hazard. For more information, see Chapter 2, Section III.

3. Community Values, Historic and Special Considerations:

Historic buildings exist in the community, a few of which are Critical Facilities. There are historic and special considerations that pose significant challenges with regard to the retrofitting of historic buildings in order to make them more resilient to natural hazards. The Fitzgerald Commercial Historic District is listed in the National Register of Historic Places, as are several individual properties in Ben Hill County. Ben Hill County Auditorium and Grammar School was added to the National Register of Historic Places in 1986.

4. New Buildings and Infrastructure:

The mitigation strategy and recommendations that follow include action steps designed to protect new buildings and infrastructure from the effects of this hazard.

5. Existing Buildings and Infrastructure:

The mitigation strategy and recommendations that follow include action steps designed to protect existing buildings and infrastructure from the effects of this hazard.

C. Mitigation Strategy and Recommendations:

Goal 3.1: Minimize flood damage in Ben Hill County

Objective 1: **Minimize losses to existing and future structures due to flooding caused by excessive rainfall.**

Task A. Upgrade drainage facilities in identified flood-prone areas.

Action Step 1: Review data on storm events to determine where repetitive flooding occurs as a result of inadequate drainage infrastructure.	
Responsible Department	EMA, City Manager, County Manager
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Ben Hill County and City of Fitzgerald
Timeframe	2019-2024
Priority	Medium
Status	On-going

Action Step 2: Identify and pursue grant opportunities to upgrade deficient drainage systems.	
Responsible Department	EMA, City Manager, County Manager
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Ben Hill County and City of Fitzgerald
Timeframe	2019-2024
Priority	High
Status	On-going

Action Step 4: Continue membership in the NFIP by adopting updated ordinances and FIRM maps as updates become available.	
Responsible Department	EMA
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds, GEMA/FEMA
Jurisdiction	Ben Hill County and City of Fitzgerald
Timeframe	2019-2024
Priority	High
Status	On-going

D. Special Multi-Jurisdictional Strategy and Considerations:

Most of the strategies outlined above apply to and are intended to be carried out by each of the local jurisdictions. In certain cases, where the action step may not apply to all jurisdictions, the applicable jurisdictions are noted in the table.

E. Local Public Information and Awareness Strategy.

All sections of the Plan shall be monitored and evaluated annually by the County Emergency Management Agency. Incremental accomplishments of Mitigation Goals, Objectives, and Action Steps will be reported to the public through appropriate means (news media, social media, web pages, City Council and County Commission meetings, etc.). By utilizing available resources, each jurisdiction will keep the public constantly informed of the development of these strategies and of how citizens can best assist with and/or take advantage of these efforts.

The major criteria to measure plan success will be the number of Goals, Objectives, and Action Steps, or components thereof, that have been completed, which in turn will result in savings of life, money, and property. For further details on plan execution, see Chapter 6.

F. Action Steps from the previous plan:

Changed Action Steps

Action Step #1 – Changed from a High Priority to Medium.

Deleted Action Steps

Action Step #3 – Deleted – No funding available.
Action Step #5 – Deleted – No funding available.
Action Step #6 – Deleted – No funding available.
Action Step #7 – Deleted
Action Step #8 – Deleted
Action Step #9 – Deleted – No funding available.
Action Step #10 – Deleted – Not needed.
Action Step #11 – Deleted – No funding available.
Action Step #12 – Deleted – Too much liability for City and County.

H. Unchanged Action Steps:

Action Step #2
Action Step #4

Action steps considered but ultimately not added

None.

Section IV: Lighting

A. Community Mitigation Goals

As previously indicated in Chapter 2, this hazard may cause substantial damage to life, property, and the economy in Ben Hill County and the City of Fitzgerald. Lightning is unpredictable and can happen at any place and at any time. Because of the potential for injury, death, and property damage, the HMPUC believes that the comprehensive range of Mitigation Goals, Objectives, and Action Steps contained in Section C below should be implemented to reduce this hazard's potential impact on the community.

B. Identification and Analysis of Comprehensive Range of Mitigation Options

1. Structural and Non-Structural Mitigation:

This Hazard Mitigation Plan contains both structural and non-structural options. For more information, see the comprehensive range of Mitigation Goals, Objectives, and Action Steps contained in Section C below.

2. Existing Policies, Regulations, Ordinances and Land Use:

Chapter 2 of this plan contains information regarding existing policies, regulations, ordinances, and land use that are relevant to this hazard. For more information, see Chapter 2, Section IV.

3. Community Values, Historic and Special Considerations:

Historic buildings exist in the community, a few of which are Critical Facilities. There are historic and special considerations that pose significant challenges with regard to the retrofitting of historic buildings in order to make them more resilient to natural hazards. The Fitzgerald Commercial Historic District is listed in the National Register of Historic Places, as are several individual properties in Ben Hill County. Ben Hill County Auditorium and Grammar School was added to the National Register of Historic Places in 1986.

4. New Buildings and Infrastructure:

The mitigation strategy and recommendations that follow include action steps designed to protect new buildings and infrastructure from the effects of this hazard.

5. Existing Buildings and Infrastructure:

The mitigation strategy and recommendations that follow include action steps designed to protect existing buildings and infrastructure from the effects of this hazard.

C. Mitigation Strategy and Recommendation:

Goal 4.1: Protect Citizens of Ben Hill County from the threat of lightning strikes.

Objective 1: Provide tools necessary for warning of lightning strikes.

Task A: Research, evaluate and implement, if feasible, an automatic lightning warning arrangement for public outside recreational and public school activities.

Action Step 1: Provide every public outdoor recreation facility and every public school outdoor recreation facility with automatic warning device, if feasible.	
Responsible Department	EMA/Recreation
Anticipated Cost	$50,000
Existing & Potential Funding Sources	EMA Grant
Jurisdiction	Ben Hill County and City of Fitzgerald
Timeframe	2019-2024
Priority	Medium
Status	Ongoing

Action Step 2: Make lightning warning system information available to entities having significant outdoor activities such as businesses, airports, etc.	
Responsible Department	EMA
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Ben Hill County and City of Fitzgerald
Timeframe	2019-2024
Priority	Low
Status	Ongoing

Action Step 3: Educate public on the risks of lightning.	
Responsible Department	EMA
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Ben Hill County and City of Fitzgerald
Timeframe	2019-2024
Priority	High
Status	Ongoing

Action Step 4: Educate public on the risks of lightning. Ben Hill County public information officer, in coordination with Fitzgerald public information officer, will provide news media with press releases concerning lightning.	
Responsible Department	EMA, Public Information Officers
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Ben Hill County and City of Fitzgerald
Timeframe	2019-2024
Priority	Medium
Status	Ongoing

D. Special Multi-Jurisdictional Strategy and Considerations:

Most of the strategies outlined above apply to and are intended to be carried out by each of the local jurisdictions. In certain cases, where the action step may not apply to all jurisdictions, the applicable jurisdictions are noted in the table.

E. Local Public Information and Awareness Strategy:

All sections of the Plan shall be monitored and evaluated annually by the County Emergency Management Agency. Incremental accomplishments of Mitigation Goals, Objectives, and Action Steps will be reported to the public through appropriate means (news media, social media, web pages, City Council and County Commission meetings, etc.). By utilizing available resources, each jurisdiction will keep the public constantly informed of the development of these strategies and of how citizens can best assist with and/or take advantage of these efforts.

The major criteria to measure plan success will be the number of Goals, Objectives, and Action Steps, or components thereof, that have been completed, which in turn will result in savings of life, money, and property. For further details on plan execution, see Chapter 6.

F. Changes from the previous plan:

Changed Action Steps
Action Step #1 – Cost was changed from $5,000 to $50,000 and Funding Source was changed to EMA Grant.
Action Step #2 – Since there is no longer a golf course, the reference to a golf course was taken out.

Deleted Action Steps
None

Unchanged Action Steps
Action Step #3
Action Step #4

Action steps considered but ultimately not added
None.

Section V: Wildfire

A. Community Mitigation Goals

As previously indicated in Chapter 2, this hazard may cause substantial damage to life, property, and the economy in Ben Hill County and the City of Fitzgerald. Wildfires are unpredictable and can happen at any place and at any time. Due to the great damage it may cause, the HMPUC believes that the comprehensive range of Mitigation Goals, Objectives, and Action Steps (contained in Section C below) should be implemented to reduce this hazard's potential impact on the community.

B. Identification and Analysis of the Comprehensive Range of Mitigation Options

1. Structural and Non-Structural Mitigation:

This Hazard Mitigation Plan contains both structural and non-structural options. For more information, see the comprehensive range of Mitigation Goals, Objectives, and Action Steps contained in Section C below.

2. Existing Policies, Regulations, Ordinances and Land Use:

Chapter 2 of this plan contains information regarding existing policies, regulations, ordinances, and land use that are relevant to this hazard. For more information, see Chapter 2, Section V.

3. Community Values, Historic and Special Considerations:

Historic buildings exist in the community, a few of which are Critical Facilities. There are historic and special considerations that pose significant challenges with regard to the retrofitting of historic buildings in order to make them more resilient to natural hazards. The Fitzgerald Commercial Historic District is listed in the National Register of Historic Places, as are several individual properties in Ben Hill County. Ben Hill County Auditorium and Grammar School was added to the National Register of Historic Places in 1986.

4. New Buildings and Infrastructure:

The mitigation strategy and recommendations that follow include action steps designed to protect new buildings and infrastructure from the effects of this hazard.

5. Existing Buildings and Infrastructure:

The mitigation strategy and recommendations that follow include action steps designed to protect existing buildings and infrastructure from the effects of this hazard.

C. Mitigation Strategy and Recommendation

Goal 5.1: Protect Citizens of Ben Hill County from the threat of wildfire.

Objective 1: Minimize the threat of wildfires to persons and properties in Ben Hill County.

Action Steps

Action Step 1 (new): Create a minimum of 30 feet of defensible space around structures.	
Responsible Department	Residents will supply labor and fund required work on their own properties.
Anticipated Cost	$10,000 per year
Existing & Potential Funding Sources	Private Funds
Jurisdiction	Ben Hill County and City of Fitzgerald
Timeframe	2019-2024
Priority	Medium
Status	New

Action Step 2 (new): Reduce structural ignitability by cleaning flammable vegetation from roofs and gutters; appropriately storing firewood, installing skirting around raised structures, storing water hoses for ready access, replacing pine needles and mulch around plantings with less flammable material.	
Responsible Department	Residents will supply labor and fund required work on their own properties.
Anticipated Cost	$500 - $2,000 per structure
Existing & Potential Funding Sources	Private Funds
Jurisdiction	Ben Hill County and City of Fitzgerald
Timeframe	2019-2024
Priority	Medium
Status	New

Action Step 3 (new): Amend codes and ordinances to provide better driveway access, increased visibility of house numbers, properly stored firewood, minimum defensible space brush clearance, required Class A roofing materials and skirting around raised structures, planned maintenance of community lots.	
Responsible Department	Ben Hill County, City of Fitzgerald
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Ben Hill County and City of Fitzgerald
Timeframe	2019-2024
Priority	Medium
Status	New

Action Step 4 (new): Hold an annual Spring Cleanup Day and an annual National Wildfire Preparedness Day	
Responsible Department	Georgia Forestry Commission, Ben Hill County, City of Fitzgerald, Ben Hill EMA
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Ben Hill County and City of Fitzgerald
Timeframe	2019-2024
Priority	Medium
Status	New

Action Step 5 (new): Fuel reduction activities	
Responsible Department	Georgia Forestry Commission
Anticipated Cost	$35/acre
Existing & Potential Funding Sources	FEMA & USFS Grants
Jurisdiction	Ben Hill County and City of Fitzgerald
Timeframe	2019-2024
Priority	Medium
Status	New

D. Special Multi-Jurisdictional Strategy and Considerations:

Most of the strategies outlined above apply to and are intended to be carried out by each of the local jurisdictions. In certain cases, where the action step may not apply to all jurisdictions, the applicable jurisdictions are noted in the table.

E. Local Public Information and Awareness Strategy:

All sections of the Plan shall be monitored and evaluated annually by the County Emergency Management Agency. Incremental accomplishments of Mitigation Goals, Objectives, and Action Steps will be reported to the public through appropriate means (news media, social media, web pages, City Council and County Commission meetings, etc.). By utilizing available resources, each jurisdiction will keep the public constantly informed of the development of these strategies and of how citizens can best assist with and/or take advantage of these efforts.

The major criteria to measure plan success will be the number of Goals, Objectives, and Action Steps, or components thereof, that have been completed, which in turn will result in savings of life, money, and property. For further details on plan execution, see Chapter 6.

F. Changes from the Previous Plan

Completed Action Steps
Action Step #1
Action Step #2
Action Step #3

Deleted Action Steps
Action Step #4 – Deleted – Not feasible.

Unchanged Action Steps
None

New Action Steps
Action Step #1 (new)
Action Step #2 (new)
Action Step #3 (new)
Action Step #4 (new)
Action Step #5 (new)

Action steps considered but ultimately not added
None.

Section VI. Extreme Heat

A. Community Mitigation Goals

As previously indicated in Chapter 2, this hazard may cause substantial damage to life, property, and the economy in Ben Hill County and the City of Fitzgerald. Extreme Heat events can happen at any place and at any time. Because of the potential for injury and death, the HMPUC believes that the comprehensive range of Mitigation Goals, Objectives, and Action Steps contained in Section C below should be implemented to reduce this hazard's potential impact on the community.

B. Identification and Analysis of Comprehensive Range of Mitigation Options

1. Structural and Non-Structural Mitigation:

This Hazard Mitigation Plan contains both structural and non-structural options. For more information, see the comprehensive range of Mitigation Goals, Objectives, and Action Steps contained in Section C below.

2. Existing Policies, Regulations, Ordinances and Land Use:

Chapter 2 of this plan contains information regarding existing policies, regulations, ordinances, and land use that are relevant to this hazard. For more information, see Chapter 2, Section VI.

3. Community Values, Historic and Special Considerations:

Historic buildings exist in the community, a few of which are Critical Facilities. There are historic and special considerations that pose significant challenges with regard to the retrofitting of historic buildings in order to make them more resilient to natural hazards. The Fitzgerald Commercial Historic District is listed in the National Register of Historic Places, as are several individual properties in Ben Hill County. Ben Hill County Auditorium and Grammar School was added to the National Register of Historic Places in 1986.

4. New Buildings and Infrastructure:

The mitigation strategy and recommendations that follow include action steps designed to protect new buildings and infrastructure from the effects of this hazard.

5. Existing Buildings and Infrastructure:

The mitigation strategy and recommendations that follow include action steps designed to protect existing buildings and infrastructure from the effects of this hazard.

C. Mitigation Strategy and Recommendation:

Goal 5.1: Ensure the citizens of Ben Hill County are warned of conditions of extreme heat.

Objective 1: Minimize the threat of extreme heat to persons in Ben Hill County.

Action Steps

Action Step 1: Identify County facilities for "comfort station" locations	
Responsible Department	EMA, Ben Hill County
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Ben Hill County and City of Fitzgerald
Timeframe	2019-2024
Priority	High
Status	New

Action Step 2: Work with the faith-based community, the American Red Cross, and other community institutions to make "comfort station" locations and/or shelters (including animal shelter facilities) available in case of extreme heat events.	
Responsible Department	EMA, local non-governmental organizations
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Ben Hill County and City of Fitzgerald
Timeframe	2019-2024
Priority	Medium
Status	New

D. Special Multi-Jurisdictional Strategy and Considerations:

Most of the strategies outlined above apply to and are intended to be carried out by each of the local jurisdictions. In certain cases, where the action step may not apply to all jurisdictions, the applicable jurisdictions are noted in the table.

E. Local Public Information and Awareness Strategy:

All sections of the Plan shall be monitored and evaluated annually by the County Emergency Management Agency. Incremental accomplishments of Mitigation Goals, Objectives, and Action Steps will be reported to the public through appropriate means (news media, social media, web pages, City Council and County Commission meetings, etc.). By utilizing available resources, each jurisdiction will keep the public constantly informed of the development of these strategies and of how citizens can best assist with and/or take advantage of these efforts.

The major criteria to measure plan success will be the number of Goals, Objectives, and Action Steps, or components thereof, that have been completed, which in turn will result in savings of life, money, and property. For further details on plan execution, see Chapter 6.

F. Action Steps from the Previous Plan:

Changed or Completed Action Steps
Action Step #1 – Completed

Deleted Action Steps
Action Step # 2 – Deleted. Not feasible.

Unchanged Action Steps
None

New Action Steps
Action Step #1 (new)
Action Step #2 (new)

Action steps considered but ultimately not added
None.

Section VII: Drought

A. Community Mitigation Goals

As previously indicated in Chapter 2, drought may cause substantial economic, property, and personal damage in Ben Hill County and the City of Fitzgerald, particularly in the form of crop damage. Its effects can be long-term, with the damage increasing as time goes by. In addition, drought conditions can contribute to wildfires in the community. The HMPUC believes that, due to the damage drought can cause, a comprehensive range of Mitigation Goals, Objectives, and Action Steps (contained in Section C below) should be implemented to reduce this hazard's potential impact on the community.

B. Identification and Analysis of Comprehensive Range of Mitigation Options

1. Structural and Non-Structural Mitigation:

This Hazard Mitigation Plan contains both structural and non-structural options. For more information, see the comprehensive range of Mitigation Goals, Objectives, and Action Steps contained in Section C below.

2. Existing Policies, Regulations, Ordinances and Land Use:

Chapter 2 of this plan contains information regarding existing policies, regulations, ordinances, and land use that are relevant to this hazard. For more information, see Chapter 2, Section VII.

3. Community Values, Historic and Special Considerations:

Historic buildings exist in the community, a few of which are Critical Facilities. There are historic and special considerations that pose significant challenges with regard to the retrofitting of historic buildings in order to make them more resilient to natural hazards. The Fitzgerald Commercial Historic District is listed in the National Register of Historic Places, as are several individual properties in Ben Hill County. Ben Hill County Auditorium and Grammar School was added to the National Register of Historic Places in 1986.

4. New Buildings and Infrastructure:

The mitigation strategy and recommendations that follow include action steps designed to protect new buildings and infrastructure from the effects of this hazard.

5. Existing Buildings and Infrastructure:

The mitigation strategy and recommendations that follow include action steps designed to protect existing buildings and infrastructure from the effects of this hazard.

C. Mitigation Strategy and Recommendations

Goal 1: Protect Ben Hill County from the effects of drought conditions.

Objective 1: Ensure adequate drinking water supply is available during drought conditions

Action Steps

Action Step 1: Develop a tiered plan from the comprehensive study of underground water supplies serving the public and domestic water system to provide temporary water supplies for domestic consumption as needed.	
Responsible Department	EMA
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local operating funds
Jurisdiction	Ben Hill County and City of Fitzgerald
Timeframe	2019-2024
Priority	Low
Status	Ongoing

Action Step 2: Investigate effects of deep agricultural well drilling on local aquifer(s)	
Responsible Department	EMA, Health Dept.
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local operating funds
Jurisdiction	Ben Hill County and City of Fitzgerald
Timeframe	2019-2024
Priority	Low
Status	New

D. Special Multi-Jurisdictional Strategy and Considerations:

Most of the strategies outlined above apply to and are intended to be carried out by each of the local jurisdictions. In certain cases, where the action step may not apply to all jurisdictions, the applicable jurisdictions are noted in the table.

E. Local Public Information and Awareness Strategy:

All sections of the Plan shall be monitored and evaluated annually by the County Emergency Management Agency. Incremental accomplishments of Mitigation Goals, Objectives, and Action Steps will be reported to the public through appropriate means (news media, social media, web pages, City Council and County Commission meetings, etc.). By utilizing available resources, each jurisdiction will keep the public constantly informed of the development of these strategies and of how citizens can best assist with and/or take advantage of these efforts.

The major criteria to measure plan success will be the number of Goals, Objectives, and Action Steps, or components thereof, that have been completed, which in turn will result in savings of life, money, and property. For further details on plan execution, see Chapter 6.

F. Action Steps from the Previous Plan

Changed or Completed Action Steps

None.

Deleted Action Steps
Action Step # 1 – Deleted. Already being done by UGA and not feasible for City and County to do.
Action Step #2 – Deleted. Not a need.
Action Step #3 – Deleted.
Unchanged Action Steps
None

New Action Steps
Action Step #1 (new)
Action Step #2 (new)

Action steps considered but ultimately not added
None.

Chapter 5.
Local Technological Hazard Mitigation Goals and Objectives

Overall Community Mitigation Goals, Policies, and Values Narrative

The purpose of the Ben Hill County Hazard Mitigation Plan is to not only assess the vulnerability of the area to natural hazards, but to identify those action steps that may need to be undertaken to reduce the potential loss of life and property from identified technological hazards. As in the case of natural hazards, the development of this plan requires an overall set of community goals that clearly state the community's commitment to reducing or avoiding the long-term vulnerabilities to the identified hazards. With these overall goals in place, more specific goals, objectives, and action steps to protect the community from the identified hazards can then be developed. Using the findings from the Risk Assessment as a guide, the HMPUC has developed the following overall community mitigation goals:

Goal 1: Protect the public health and safety;

Goal 2: Eliminate or reduce exposure of critical community facilities to the hazards identified in the community risk assessment;

Goal 3: Where exposure to hazards cannot be limited, implement, to the extent resources are available, the action steps needed to reduce the potential loss of life and property;

Goal 4: Maintain and/or enhance the community's capacity to issue warnings and to respond promptly and effectively in a hazard event.

With these overall community mitigation goals in place, the following Goals, Objectives, and Action Steps have been developed to specifically address the technological hazards identified in Chapter 3. In addition, the same methodology as in Chapter 4 was utilized in ranking the priority of each action step.

There have not been any changes in the overall priorities since the previous plan was completed.

Section I. Hazardous Materials Release

A. Community Mitigation Goals

As previously indicated in Chapter 3, a hazardous materials release may cause substantial damage to life, property, and the economy in Ben Hill County and the City of Fitzgerald. Such events can occur with little or no warning, giving the community no time to prepare and/or evacuate. The HMPUC believes that, because these events have the potential to cause great damage, injury, and loss of life, a comprehensive range of Mitigation Goals, Objectives, and Action Steps (contained in Section C below) should be implemented to reduce this hazard's potential impact on the community.

B. Identification and Analysis of Comprehensive Range of Mitigation Options

1. Structural and Non-Structural Mitigation:

This Hazard Mitigation Plan contains both structural and non-structural options. For more information, see the comprehensive range of Mitigation Goals, Objectives, and Action Steps contained in Section C below.

2. Existing Policies, Regulations, Ordinances and Land Use:

Chapter 2 of this plan contains information regarding existing policies, regulations, ordinances, and land use that are relevant to this hazard. For more information, see Chapter 3, Section I.

3. Community Values, Historic and Special Considerations:

Historic buildings exist in the community, a few of which are Critical Facilities. There are historic and special considerations that pose significant challenges with regard to the retrofitting of historic buildings in order to make them more resilient to natural hazards. The Fitzgerald Commercial Historic District is listed in the National Register of Historic Places, as are several individual properties in Ben Hill County. Ben Hill County Auditorium and Grammar School was added to the National Register of Historic Places in 1986.

4. New Buildings and Infrastructure:

The mitigation strategy and recommendations that follow include action steps designed to protect new buildings and infrastructure from the effects of this hazard.

5. Existing Buildings and Infrastructure:

The mitigation strategy and recommendations that follow include action steps designed to protect existing buildings and infrastructure from the effects of this hazard.

C. Mitigation Strategy and Recommendations

Goal 1: Protect the health and safety of residents of Ben Hill County.

Objective 1: Enhance the ability of the Ben Hill County Emergency Management Agency to coordinate effectively and efficiently the emergency response during and after a hazardous materials release.

Task A. Ensure that community facilities and programs are in place to facilitate EMA's emergency response.

Action Step 1: Implement the "Community Emergency Response Team" (CERT) program.	
Responsible Department	EMA, County Manager
Anticipated Cost	Existing Staff
Existing & Potential Funding Sources	General Funds
Jurisdiction	Ben Hill County
Timeframe	2019-2024
Priority	Medium
Status	Ongoing

Objective 2: Minimize the effect of hazardous material spills.

Action Step 1: Maintain HazMat response training	
Responsible Department	EMA
Anticipated Cost	Staff time
Existing & Potential Funding Sources	General Funds, DOHS-GEMA/FEMA
Jurisdiction	Ben Hill County
Timeframe	2019-2024
Priority	High
Status	Ongoing

Action Step 2: Seek funding to expand HazMat training to first responders (fire, sheriff, EMS)	
Responsible Department	Ben Hill County EMA
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	EMA, City/County Managers, Fitzgerald/Ben Hill County Fire Depts.
Jurisdiction	Ben Hill County
Timeframe	2019-2024
Priority	High
Status	Ongoing

Action Step 4: Train local government officials on proper response procedures for hazardous material spill events.	
Responsible Department	Local Emergency Operations Planning Committee, EMA, Fitzgerald/Ben Hill County Fire Departments
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	General Funds, DOHS-GEMA/FEMA
Jurisdiction	Ben Hill County
Timeframe	2019-2024
Priority	High
	Ongoing

Action Step 6: Investigate, implement and train in methods to relocate residents if an event occurs.	
Responsible Department	Local Emergency Operations Planning Committee, EMA, Fitzgerald/Ben Hill County Fire Departments
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Funds
Jurisdiction	Ben Hill County
Timeframe	2019-2024
Priority	High
Status	Ongoing

Action Step 8: Review annually all hazardous material transportation routes (relocate routes if necessary).	
Responsible Department	State DOT, Local Emergency Operations Planning Committee, EMA
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	General Funds
Jurisdiction	Ben Hill County
Timeframe	2019-2024
Priority	Medium
Status	Ongoing

Action Step 9: Seek funding for sensors that can detect phosgene gas that is prevalent in meth labs.	
Responsible Department	Local Emergency Operations Planning Committee, and EMA
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	General Funds
Jurisdiction	Ben Hill County
Timeframe	2019-2024
Priority	Medium
Status	Ongoing

D. Special Multi-Jurisdictional Strategy and Considerations:

Most of the strategies outlined above apply to and are intended to be carried out by each of the local jurisdictions. In certain cases, where the action step may not apply to all jurisdictions, the applicable jurisdictions are noted in the table.

E. Local Public Information and Awareness Strategy:

All sections of the Plan shall be monitored and evaluated annually by the County Emergency Management Agency. Incremental accomplishments of Mitigation Goals, Objectives, and Action Steps will be reported to the public through appropriate means (news media, social media, web

pages and County Commission meetings, etc.). By utilizing available resources, each jurisdiction will keep the public constantly informed of the development of these strategies and of how citizens can best assist with and/or take advantage of these efforts.

The major criteria to measure plan success will be the number of Goals, Objectives, and Action Steps, or components thereof, that have been completed, which in turn will result in savings of life, money, and property. For further details on plan execution, see Chapter 6.

F. Action Steps from the Previous Plan:

Changed or Completed Action Steps
Action Step #1 – Changed from a High Priority to Medium.

Deleted Action Steps
Action Step #3 – Deleted. Part of Regional GEMA Plan.
Action Step #5 – Deleted.
Action Step #8 – Deleted. Industries provide this training.
Action Step #10 – Deleted. Not feasible.

Unchanged Action Steps
Action Step #2
Action Step #4
Action Step #6
Action Step #7
Action Step #9
Action Step #10
Action Step #11

Chapter 6: Executing The Plan

Summary of changes:

- Revised and updated language.

Section I.
Implementation of the Action Plan

A. Administrative Actions

The meetings and planning process of the HMPUC have been overseen by the Ben Hill County Emergency Management Agency. The Southern Georgia Regional Commission contracted with the Ben Hill County Commission to administer and facilitate the planning process. The Ben Hill County Commission and the City of Fitzgerald will adopt the Plan (on approval by GEMA and FEMA) by the resolutions contained in Appendix E.

B. Authority and Responsibility

The Ben Hill County Commission and the City of Fitzgerald have authorized the submission of this Plan to both GEMA and FEMA for approval.

As determined by the City and County governments and the HMPUC, the Ben Hill County EMA Director will be responsible for this Plan and its continued usage as a planning document. The EMA Director will oversee implementation, monitoring, and updates for all jurisdictions. The respective jurisdictions will be responsible for the implementation of their specific mitigation activities as proposed in this plan.

C. Prioritization

1. Methodology for Prioritization

In prioritizing the implementing of the action steps identified in this plan, those hazards deemed to pose the greatest threat will be given the primary consideration. In prioritizing the implementation feasibility of the action steps and projects, local governments will take into consideration the additional factors of cost and time. Those activities requiring smaller amounts of money and staff time to implement will be given highest implementation priority. Those steps requiring additional funding for equipment or staff time beyond the normal budgets of the communities will be incorporated into the budget process when possible based on the cost-benefit analysis described below.

2. Use of Cost Benefit Analysis

The data provided in Worksheet 3a will be utilized to quantify the number of persons and/or property at risk from each hazard. Combined with the criteria in Worksheet 4, this will allow local governments to assess the potential value of at-risk properties and the resulting benefits from the proposed action steps.

In prioritizing projects, the local governments will also utilize cost benefit analysis (CBA) to evaluate the feasibility of a major project. CBA is a well-established method for quantitatively comparing the benefits and costs of mitigation projects. The end result is a Benefit-Cost Ratio (BCR), which is derived from a project's total net present value of benefits divided by the total project cost estimate, which must include all documented project and maintenance costs. The benefits of mitigation projects are avoided damages, disruptions, losses, and casualties. Examples of common benefits include avoided or reduced damages to buildings, contents, or infrastructure; avoided or reduced economic impacts of loss of function of buildings; avoided or reduced displacement costs for temporary quarters; avoided or reduced loss of public services; avoided or reduced loss of net business income; avoided or reduced economic impacts of loss of function of infrastructure; avoided or reduced road or bridge closures; avoided or reduced loss of utility services; and avoided or reduced deaths and injuries.

3. Use of Other Calculations

Additional calculations that were performed included: Availability of potential funding sources; overall feasibility; measurable milestones; public and political support for the proposed actions; and the STAPLEE criteria.

4. Use of Other Review Structure

In addition to the cost-benefit analysis, other factors that may affect the prioritization of projects include the availability of special tax, grant, and/or loan funds which become available on a limited basis to finance project implementation, such as SPLOST funds or FEMA Pre-Disaster Mitigation Program funds.

D. Incorporation of Local Hazard Mitigation Plan into Other Plans/Planning Measures

This Plan will be reviewed by Ben Hill County and the City of Fitzgerald. 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, Capital Improvement Plans, Local Emergency Operations Plans, and all other such Plans as appropriate.

Once this plan is approved, it will be used by the consultants and planning committees responsible for the update process for the County and City Comprehensive Plans, Short-Term Work Programs, and all other plans that could incorporate the requirements of this plan.

To facilitate inclusion of this Plan, the Ben Hill County Commission and the City of Fitzgerald will provide a copy of this Plan to the persons and/or committees responsible for writing and updating plans. Those persons will consider the strategies, goals, objectives, and action steps in this Hazard Mitigation Plan when creating new plans, and will incorporate those strategies, goals, objectives, and action steps into other plans as appropriate. In all planning efforts, consistency with the Hazard Mitigation Plan will be ensured through a thorough review of the Hazard Mitigation Plan before new plans are created.

Section II.
Evaluation and Monitoring

A. Method

The Ben Hill County EMA Director will be charged with ensuring that this plan is monitored and periodically updated in subsequent years. The method that the Ben Hill County EMA will use to monitor the plan and evaluate implementation progress will be the following:

- The Ben Hill County EMA will conduct quarterly telephone interviews with the various local governments and area agencies in order to chart their plan progress.
- The EMA Director will hold formal public meetings at least once a year to monitor the progress of the plan implementation and allow the public a forum for expressing concerns, opinions, and ideas.
- Throughout the year, a series of informal meetings will be held in which various aspects of the plan, including monitoring and evaluation, are discussed.

B. Criteria Used To Monitor and Evaluate the Plan

The major criteria to measure plan success will be the number of goals, objectives, and action steps, or components thereof, that have been completed, which in turn will result in savings of life, money, and property.

Section III.
Plan Update and Maintenance

A. Public Involvement

Because the Hazard Mitigation Plan is intended to help ensure a safe and livable environment for all Ben Hill County and City of Fitzgerald residents, it is imperative that public involvement be an integral part of the planning process.

Since adoption of the original Ben Hill County Pre-Disaster Mitigation Plan, citizens have been kept involved and apprised of plan progress through such forums as regularly scheduled County Commission meetings, public hearings, and applicable newspaper coverage. This same level of public education and awareness and citizen involvement will continue over the next five years until the next required update of the Hazard Mitigation Plan. When specific issues dictate, public hearings will be conducted, and all other community planning efforts (Comprehensive Plan, Regional Plan, etc.) will afford citizens the opportunity to participate in and comment on the need to incorporate hazard mitigation initiatives.

To facilitate the goal of continued public involvement in the planning process, the EMA will assure that the following steps are taken:

- The public will be directly involved in the update and review of the Plan.
- Copies of the plan will be kept on hand at appropriate agencies throughout the community.

- The plan will be available City, County, and/or Regional Commission websites, and will contain an e-mail address and phone number the public can use for submitting comments and concerns about the plan.
- A public meeting will be held annually to provide the public with a forum for expressing concerns, opinions, and ideas. The EMA will set meeting schedules and dates and use County resources to publicize and host this meeting.

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 7:
Conclusion

Summary of changes:

- Revised and updated language.

Ben Hill County and the City of Fitzgerald have suffered considerable damage in the past from natural hazards. Planning ahead and undertaking structural and nonstructural action steps before a disaster occurs can save lives and property. This philosophy has been the driving force behind the preparation of the Ben Hill County Hazard Mitigation Plan.

Education of the population and enhanced warning can decrease the vulnerability of the county's citizens and visitors. Continued and improved public information and communication with the population are important parts of this plan. Because of this planning process, Ben Hill County and City of Fitzgerald officials have gained a better understanding of the hazards affecting the community.

As a result of the planning process described in Chapter 1 and the hazard, risk, and vulnerability assessment in Chapter 2, Ben Hill County and the City of Fitzgerald have a realistic perspective on the hazards to which the community is exposed. With the mitigation strategy outlined in Chapter 4 and the implementation plan included in Chapter 6, the local leaders have an "action plan" to follow when allocating resources to reduce their community's vulnerability to such hazards.

References

Ben Hill County Board of Tax Assessors (http://www.qpublic.net/ga/Ben Hill County/)

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Georgia Emergency Management Agency, Georgia Mitigation Information System (https://apps.itos.uga.edu/GEMA.GMIS/)

Georgia Emergency Management and Homeland Security Agency (http://www.gema.ga.gov/)

Georgia Forestry Commission (www.gatrees.org)

National Oceanic and Atmospheric Administration, National Centers for Environmental Information, Storm Events Database (http://www.ncdc.noaa.gov/stormevents/)

National Weather Service. Archived NWS Watch/Warnings at the Iowa State University Environmental Mesonet (https://mesonet.agron.iastate.edu/request/gis/watchwarn.phtml)

Southern Georgia Regional Commission (www.sgrc.us)

USDOT Pipeline and Hazardous Materials Safety Administration. Office of Hazardous Materials Safety database (https://hazmatonline.phmsa.dot.gov/IncidentReportsSearch/IncrSearch.aspx)

U.S. Drought Monitor (http://droughtmonitor.unl.edu/)

United States Census Bureau (www.census.gov)

Appendices

Contents

6. Extreme Heat – NOAA data
7. Drought – NOAA data

II. Critical Facilities Inventory

Appendix G. HAZUS Report