Coffee County, Georgia

Hazard Mitigation Plan

2024-2029

Including the Cities of Ambrose, Broxton, Douglas, and Nicholls

This Plan was produced for the Coffee 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

Effective April 1, 2024 - April 1, 2029

SOUTHERN GEORGIA
REGIONAL COMMISSION

Photo on the cover page provided by Coffee County EMA

Photos throughout the plan provided by Coffee County EMA and SGRC Staff

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 made.

CHAPTER 1 Section	Updates to Section
I. Purpose, Need, Authority, and Statement of Problem	The language was updated to reflect that this was an update to the existing plan
II. Local Methodology, Plan Update Process, and Participants	The Planning Committee reviewed each section and updated it 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 the 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 significant changes from the original plan
VII. Adoption, Implementation, Monitoring, and Evaluation	The evaluation method was revised and updated
VIII. Community Data	Updates made using the most recently 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 Coffee 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 May 6, 2019, and expires on May 6, 2024.

This document provides an overview of the hazards that may impact Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls. It outlines 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 man-made disasters may cause.

This Plan is a direct result of research and a planning and public involvement process undertaken by the local government officials and citizens of Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls after they formed the Coffee County Hazard Mitigation Plan Update Committee (hereafter known as the HMPUC). This Plan is the result of their commitment to reducing the risks of natural hazards and the effects of those natural hazards on their communities. Ambrose, Broxton, Douglas, and Nicholls are the only cities incorporated in Coffee County.

The Coffee County Commission gave authority for the development of this Plan as a result of their execution of the Grantee-Subgrantee Agreement for the Coffee County Hazard Mitigation Grant

Program (HMGP) Planning Project and by the Cities of Ambrose, Broxton, Douglas, and Nicholls, located within Coffee County, through their participation in the planning project.

To initiate an outreach program to neighboring communities, governments, local and regional agencies, and 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 by phone and invited to participate. Additionally, several area county Hazard Mitigation Plans were being updated simultaneously, and an active meeting list was maintained for scheduling purposes.

Planning Division staff from the Southern Georgia Regional Commission, representing eighteen counties in the region (including Coffee County), attended the Coffee County meetings. They participated in all aspects of the planning process. They provided a regional perspective forming the multi-jurisdictional Coffee County and Cities of Ambrose, Broxton, Douglas, and Nicholls Hazard Mitigation Plan.

Through the above efforts, the multi-jurisdictional Coffee County and Cities of Ambrose, Broxton, Douglas, and Nicholls Hazard Mitigation Plan were updated, including a comprehensive range of Mitigation Goals, Objectives, and Action Steps (see Chapter 3). This 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 Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls, 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 (Coffee County HMPUC) was formed. 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 3).

Potential members of the Coffee 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 Coffee County HMPUC. The Coffee County HMPUC was comprised of representatives from Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls and included representatives from other groups and individuals, as shown below, who attended meetings and/or conducted research:

NAME	ORGANIZATION	TITLE	EMAIL
Allmond, Tim	Wiregrass Georgia Technical College	Campus Police	timothy.allmond@wiregrass.edu
Adams, Bradley	Coffee County EMA	Deputy EMA Director	bradley607@gmail.com
Carver, Steve	Coffee County EMA	EMA Director	Steve.Carver@coffeecounty-ga.gov
Clements, Presika	Coffee Regional Medical Center	EMS captain	presika.clements@coffeeregional.com
Davis, Charles	City of Douglas	City Manager	cdavis@cityofdouglasga.gov
Davis, Kevin	ESG, Inc.	Engineer	kdavis@esgic.net
Dovers, A.J.	Coffee County	County Commissioner	ajdovers@gmail.com
Frost, Tamon	City of Nicholls	Mayor	tfrost@cityofnichollsga.gov
Goddard, Rodger	City of Douglas	Code Enforcement Officer	rgoddard@cityofdouglasga.gov
Grantham, Sandy	Coffee County Fire and EMA	Administrative Assistant	Sandy.grantham@coffeecounty-ga.gov
Henderson, Georgia	City of Douglas	Community Development Director	ghenderson@cityofdouglasga.gov
Hudson, Mike	City of Douglas	Utilities Director	mhudson@cityofdouglasga.gov
Johns, Raymond	Coffee County Fire and EMA	Assistant Fire Chief & Deputy Director EMA	Raymond.johns@coffeecounty-ga.gov
Leis, Dr. Morris	Coffee County Board of Education	School Superintendent	morris.leis@coffee.k12.ga.us
Littleton, Jimmy Day	City of Broxton	Mayor	Jimmy.littleton@cityofbroxton.com
McCulloch, Sonja	South Georgia State College	Campus Police Chief	sonja.mccullochsgsc.edu
Pruette, Brandon	City of Douglas	Chief of Police	bpruette@cityofdouglasga.gov
Smith, Jaimie	Georgia Forestry Commission	Chief Ranger	jsmith@gfc.state.ga.us
Stewart, Casey	Coffee County Health Department	Nurse Manager	casey.stewart@dph.ga.gov
Troupe, Jason	City of Broxton Police Dept.	Police Chief	Jason.troupe@cityofbroxton.com

Vickers, Brad	City of Ambrose	Mayor	jbradleyjbv@gmail.com
Vickers, Wesley	Coffee County	County Administrator	Wesley.Vickers@coffeecounty-ga.gov
Wright, Casey	City of Douglas Fire Department	Fire Chief	cwright@cityofdouglasga.gov
Whiddon, Jason	Coffee County	Code Enforcement	Jason.whiddon@coffeecountyga-ga.gov

Other entities and organizations that were invited and informed of the plan update but did not participate actively in the plan update process were the following:

Surrounding counties' EMAs and Boards of Commissioners (Ben Hill, Irwin, Berrien, Atkinson, Ware, Bacon, Jeff Davis, and Telfair Counties)

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

Kick-off public hearing – November 23, 2022
First workshop – April 20, 2023
Second workshop – May 18, 2023
Third workshop – November 9, 2023
Adoption – April 1, 2024

Building on the previous plan, each chapter was reviewed chronologically, with updated hazard, risk, and vulnerability data and previous accomplishments of mitigation strategy efforts.

An open discussion was permitted at all public meetings for suggestions and/or comments regarding the plan update. Also, comments (if any) were noted by the Southern Georgia Regional Commission staff during the general question and answer periods 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 the formal meetings, parts of the plan were e-mailed to specific individuals who could not attend the meetings, and their comments were sought. Copies of the previous Plan and the draft Plan Update document were available on the Southern Georgia Regional Commission website and from the local EMA and city and county government offices.

There was a final workshop, helping once again to invite the vulnerable population, including the homeless, and hand out a brochure with important information pertaining to Hazard Mitigation and contact information so they could receive additional information as needed. Brochures were available at city halls, county government, DFACS, Health Department, and local libraries. (See a copy of the brochure in Appendix H.)

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 descriptions. Zoning information and community services were updated using the joint Comprehensive Plan for the County and Cities, and community services were updated using the joint Comprehensive Plan for the County and Cities. Other documents used were the local Emergency Operations Plan, the previous Hazard Mitigation Plan, the State of Georgia Hazard Mitigation Plan, and information from the National Climatic Data Center (NCDC). Data from the NCDC were used to create the Hazard Frequency Table, and the associated information regarding each hazard is regarding 2. The county and cities do not have a Flood Mitigation Assistance Plan or a Flood Insurance Study.

The Chamber of Commerce, the Coffee County Health Department, the Department of Family and Children Services, and the local government's staff distributed and posted an informative flyer about the hazard mitigation process, participation, and how to get involved. The Southern Georgia Regional Commission distributed the brochures to the necessary departments so the vulnerable population could access the information. They were allowed time to receive any responses they may have. A copy of the brochure is included in the appendix.

B. Public Comment and Participation

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

The public was invited to attend and comment during the public hearings and workshops. The "kick-off" public hearing was advertised in the local newspaper (meeting advertisements and sign-in sheets are provided in Appendix E).

In addition, an e-mail list of stakeholders was kept up to date, including all attendees who wrote their e-mail addresses on the sign-in sheet at each meeting and 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 and Vision Statement in the original plan and re-confirmed them in this update to help guide them through the planning process.

Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls
Hazard Mitigation Plan Update Committee
Mission Statement

This committee's mission is to make Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls, 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 Pre-Disaster Mitigation Programs, hazard risk assessments, wise floodplain management, and a coordinated approach to mitigation policy through state, regional, and local planning activities.

Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls
Hazard Mitigation Plan Update Committee
Vision Statement

This committee's vision is to institutionalize a local Pre-Disaster Mitigation ethic through leadership, professionalism, and excellence, thus leading the way to a safe, sustainable way of life for Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls.

Due to Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls being such close-knit communities, the Coffee County HMPUC chose to avoid breaking into sub-committees but to address issues as a whole group. Various members of this group had direct knowledge of 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 3), 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 Cities, which includes the five-year Community Work Program
The Local Emergency Operations Plan
The current State of Georgia Hazard Mitigation Strategy
Local Service Delivery Strategy
Data from the National Climatic Data Center (NCDC).

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

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

Section IV. Organization of the Plan

This Plan focuses on eight natural hazards the HMPUC chose that may affect and cause damage to Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls. Chapter 2, Chapter 3, and Appendix A are subdivided into Sections I through VIII, reflecting the eight natural hazards chosen. The natural hazards are as follows (in order of priority):

Thunderstorm/Wind
Tornado
Drought
Flood
Hail
Wildfire
Hurricane/Tropical Storm
Severe Winter Storm

Other hazards, such as Avalanches, Coastal Erosion, Coastal Storms, Dam Failures, Earthquakes, Expansive Soils, Extreme Heat, Land Slide, SLOSH (Sea, Lake and Overland Surges from Hurricanes), Tsunamis, and Volcanoes, 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 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 3), and information on implementation, monitoring, and plan update and maintenance (see Chapter 4), as well as other FEMA-required items and materials (included in various Chapters, Sections, and Appendices).

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

The Coffee County and Cities of Ambrose, Broxton, Douglas, and Nicholls Hazard Mitigation Plan exists in one bound volume appended with various papers and documents and a PDF document available on the SGRC website. The planning efforts of Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls are intended to be ongoing. 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. Various information obtained during the planning process has been used to formulate a Hazard, Risk, and Vulnerability (HRV) Assessment. Data regarding hazards, their history in the community, and when and where they were active has been obtained from online databases, published sources, and personal accounts. This summary is provided in Chapter 2.

The Hazard Frequency Table summarizes the community's vulnerability to natural hazards (see Appendix D). GEMA Worksheet 3A evaluates the inventory of Assets and several people exposed

to each hazard (see Appendix A). Critical facilities and critical infrastructure are also examined regarding 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 3, Sections I-VII. In Chapter 4, Section I, there is a description related to the prioritization of these Mitigation Goals, Objectives, and Action Steps using cost/benefit analysis, STAPLEE (Social, Technical, Administrative, Political, Legal, Economic, and Environmental), and other criteria. In Chapter 4, Section I, 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

Coffee County has a total area of 575.10 square miles with a population density of 73.7 people per square mile (US Census data, 2010). As such, specific 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. Coffee County contains four incorporated cities: Ambrose, Broxton, Douglas (the county seat), and Nicholls.

The Coffee County Fire Department has 20 fire stations, the City of Douglas Fire Department has three fire stations, and the fire departments of the Cities of Ambrose, Broxton, and Nicholls have one fire station each. Coffee County's main fire station and the three City of Douglas fire stations are staffed by paid firefighters; volunteers staff the remaining fire stations in the community.

The following are the ISO Classes of fire districts in Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls.

STATION NO.	NAME	ISO CLASS
1	Douglas FD	2
2	Douglas FD	2
3	Douglas FD	2
6	Coffee County Oak Park FD-Main Station	4
7**	City of Ambrose VFD / County FD 7	5 / 5
8	Pridgen VFD	5
9	Green Acres VFD	5
10**	City of Broxton VFD / County Station 10	6 / 5
11	West Green VFD	5
12**	City of Nicholls VFD / County Station 12	5 / 5
13	Baker Highway VFD	5
14	Sinkhole Road VFD	5
15	Chattertown VFD	5
16	Wilsonville VFD	5
17	Bridgetown VFD	5

18	Bear Creek VFD	5
19	Satilla/Fales VFD	5
20**	Station 20 / SW Bowens Mill Road	5
21	Station 21 / Bushnell Chapel Road	5
22	Station 22 /Broxton-West Green Road	5
23	Station 23/Highway 158 East	5
24	Station 24 /Nicholls-Westgreen Road	5
25	Station 25 /Rocky Pond Road	5

NOTE: All county-maintained stations are ISO Class 5.

** The cities of Ambrose, Broxton, Douglas, and Nicholls have their own Fire Departments but share stations with the County Fire Department.

The City of Douglas has 3 stations numbered 1-3, and the county has 20 stations numbered 6-25; the numbers of the 3 smaller cities are the same as the county numbers for those stations. The above numbers also represent the station numbers; #6 is Station 6, and #7 is Station 7.

Section VII. Adoption, Implementation, Monitoring, and Evaluation

After all plan development workshops were concluded, the draft plan was submitted to all local governments for review. It was also submitted to GEMA and FEMA for review and approval. The Coffee County Commission adopted the plan on April 1, 2024. It was then adopted by the Cities of Ambrose, Broxton, Douglas, and Nicholls. After the adoption, the local governments passed resolutions adopting the plan. 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 3), which contains items related to all local governments, will be implemented as soon as possible and/or as funds become available.

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 (website, social media, local newspapers, City Council meetings, County Commission meetings, etc.).

The County EMA will monitor the plan and conduct quarterly telephone interviews with local governments and area agencies to chart their plan's progress. Also, several meetings will be held throughout the year to discuss various aspects of the plan. In addition, annual evaluations of the plan will occur on or near the anniversary of the plan's adoption date. The annual review 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 participated as initially 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 action steps will be developed (if required) in response to new problems that have developed throughout the year. If any changes or updates are needed to the other plan sections, these will also be discussed and noted. Critical Facilities and infrastructure changes and updates will also be addressed, and the online GEMA database, as required. New hazards in the area (if any) will be discussed and planned for, and an assessment will be made as to whether the community needs to dictate the material.

The primary criteria to measure plan success will be the number of goals, objectives, and action steps, or components thereof, that have been completed, resulting in savings of life, money, and property. For further details on plan execution, see Chapter 4.

The Plan will be updated by the EMA Director and chosen representatives of all local governments every five years, as FEMA requires. All sections of this plan will then be updated. All jurisdictions and relevant stakeholders will review the Plan update of this Hazard Mitigation Plan, which will be considered 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, solicit public comment, and be incorporated as necessary and appropriate.

Section VIII. Community Data

Data source: U.S. Census Bureau (www.census.gov)

POPULATION AND AGE DISTRIBUTION

(Population was for 2020)

Coffee County

According to 2020 U.S. Census Bureau American Community Survey 5-year estimates, the population of Coffee County is 43,092, a slight increase of 0.11% since 2016. According to 2021 estimates, the age distribution in Coffee County is 14.0% over 65, 58.5% ages 20-64, and 27.5% under 20. The median age in Coffee County is 37.5.

Ambrose

According to the 2020 Census, the City of Ambrose's population is 327 and is declining at -1.55% annually. The City's age distribution is 19.04% over 65, 51.2% ages 20-64, and 29.1% under 20. The median age is 39.8.

Broxton

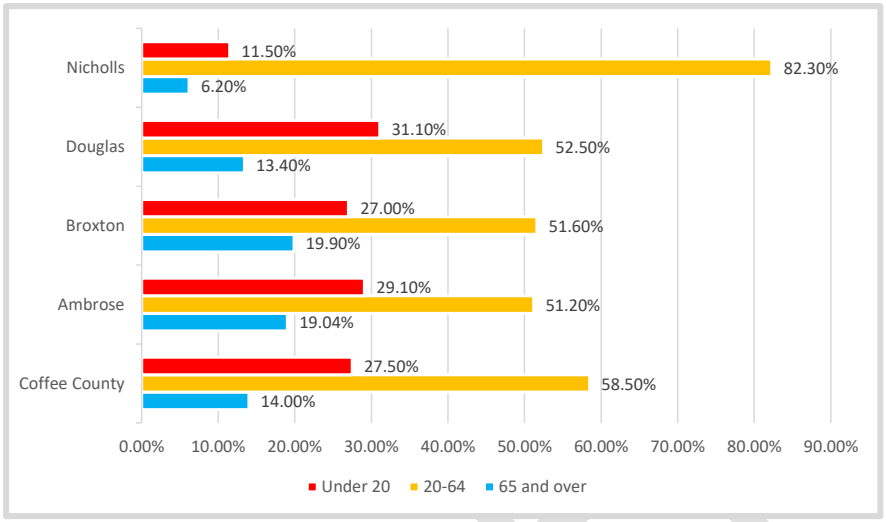
The City of Broxton's 2020 population is 1,060. Broxton has decreased in population every year since 2010. From 2010 to 2021, the population declined by approximately 13%. According to 2021 estimates, the age distribution in Broxton is 19.9% over 65, 51.6% ages 20-64, and 27.0% under 20. The median age in Coffee County is 49.6.

Douglas

The City of Douglas's 2020 population is 11,722. Douglas's current growth rate is 0.11% annually, but its population has increased by 0.22% since the most recent census. In the City of Douglas, the age distribution is 13.4% over 65, 52.5% ages 20-64, and 34.1% under 20. The median age is 37.3.

Nicholls

The City of Nicholls' 2020 population is 3,147. Nicholls is growing at 1.10% annually, but its population has decreased by -3.48% since the most recent census. The age distribution is 6.2% over 65, 82.30% 20-64, and 11.5% under 20. The median age is 37.



RACE AND ETHNICITY

Coffee County

The 2021 population of Coffee County is 59.0% White/Caucasian, 27.8% Black/African American, 6.9% some other race, 5.0% two or more races, 0.7% Asian, and 0.5% Native American. The Hispanic or Latino population is estimated at 12.6%.

Ambrose

The City of Ambrose's population is 57.8% White/Caucasian, 12.5% Black/African American, 0.3% Asian, 31.9% Hispanic, 26.6% some other race, and 2.75% two or more races.

Broxton

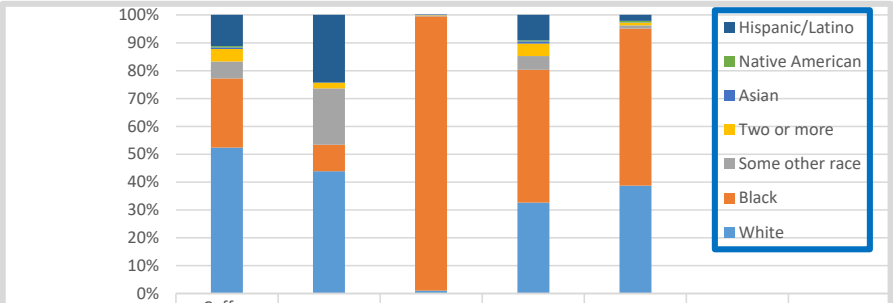
The City of Broxton's population is 40.2% White/Caucasian, 38.6% Black/African American, 11.43% some other race, 0.5% Asian, 0.5% Hispanic, and 6.8% two or more races.

Douglas

The City of Douglas's population is 35.86% White/Caucasian, 52.40% Black/African American, 0.37% Native American, 0.96% Asian, 10.02% Hispanic or Latino, 5.40% some other race, and 4.94% two or more races.

Nicholls

The City of Nicholls' population is 39.66% White/Caucasian, 57.86% Black/African American, 0.06% Native American, 0.13% Asian, 2.16% are Hispanic or Latino, 1.20% some other race, and 0.95% two or more races.



	Coffee County	Ambrose	Broxton	Douglas	Nicholls		
Hispanic/Latino	12.60%	31.90%	0.50%	10.02%	2.16%		
Native American	0.50%	0%	0%	0.37%	0.60%		
Asian	0.70%	0%	0.50%	0.96%	0.13%		
Two or more	5.00%	2.75%	6.80%	4.94%	0.95%		
Some other race	6.90%	26.60%	11.43%	5.40%	1.20%		
Black	27.80%	12.50%	38.6	52.40%	57.86%		
White	59.00%	57.80%	40.20%	35.86%	39.66%		

EDUCATION ATTAINMENT

Coffee County

As of 2021, of persons aged 25 or older in Coffee County, 22.8% have no high school diploma, 39.2% are high school graduates (includes equivalency) with no further education, 17.3% have some college with no degree, 6.7% have an associate degree, 19.3% have a bachelor's degree, and 4.7% have a graduate or professional degree.

Ambrose

Among persons aged 25 or older in the City of Ambrose, 18.9% have no high school diploma, 36.0% are high school graduates (includes equivalency) with no further education, 19.5% have some college with no degree, 13.0% have an associate degree, 7.9% have a bachelor's degree, and 4.7% a graduate or professional degree.

Broxton

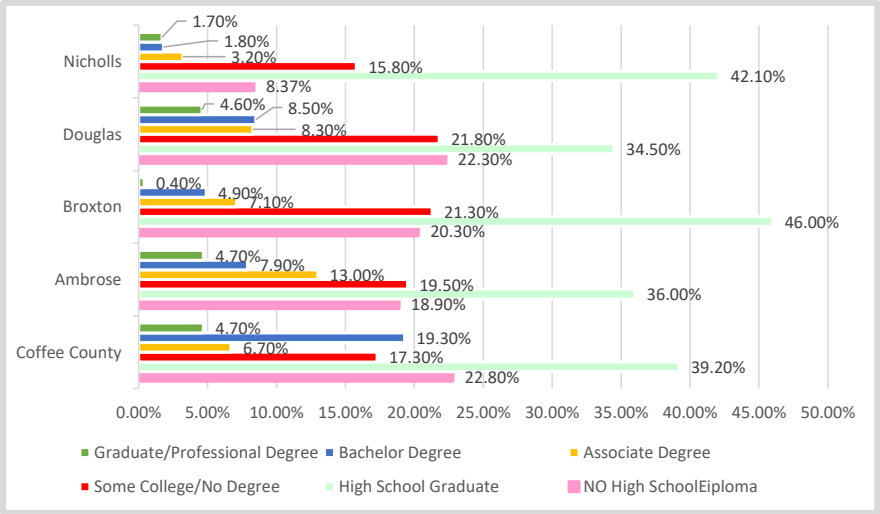
Among persons aged 25 or older in the City of Broxton, 20.3% have no high school diploma, 46.0% are high school graduates (includes equivalency) with no further education, 21.3% have some college with no degree, 7.1% have an associate degree, 4.9% have a bachelor's degree, and 0.4% have a graduate or professional degree.

Douglas

Among persons aged 25 or older in the City of Douglas, 22.3% have no high school diploma, 34.5% are high school graduates (includes equivalency) with no further education, 21.8% have some college with no degree, 8.3% have an associate degree, and 8.5% have a bachelor's degree, and 4.6% have a graduate or professional degree.

Nicholls

Among persons 25 or older in the City of Nicholls, 8.37% have no high school diploma, 42.1% are high school graduates (includes equivalency) with no further education, 15.8% have some college with no degree, 3.2% have an associate degree, 1.8% have a bachelor's degree, and 1.7% have a graduate or professional degree.



HOUSEHOLD INCOME AND POVERTY

Coffee County

As of 2021 (US Census Bureau American Community Survey 5-year estimates), the median household income is $44,450 in Coffee County.

According to the latest 2021 five-year Census Bureau American Community Survey estimates, 33.0% of the population under 18 lives in poverty, 21.4% higher than the national average and 19% higher than Georgia's.

Ambrose

In the City of Ambrose, the median household income is $32,885.

30.2% of the population in Ambrose under the age of 18 lives below the federal poverty level. This is 18.6% higher than the national average., 47.7%, and 35.25 Higher than Georgia's.

Broxton

In the City of Broxton, the median household income is $22,228.

31.5% of the population in Broxton is determined to be in poverty. This is 19.9% higher than the national poverty level. 46.4% under 18 live in poverty, and 17.5% are more elevated than Georgia's.

Douglas

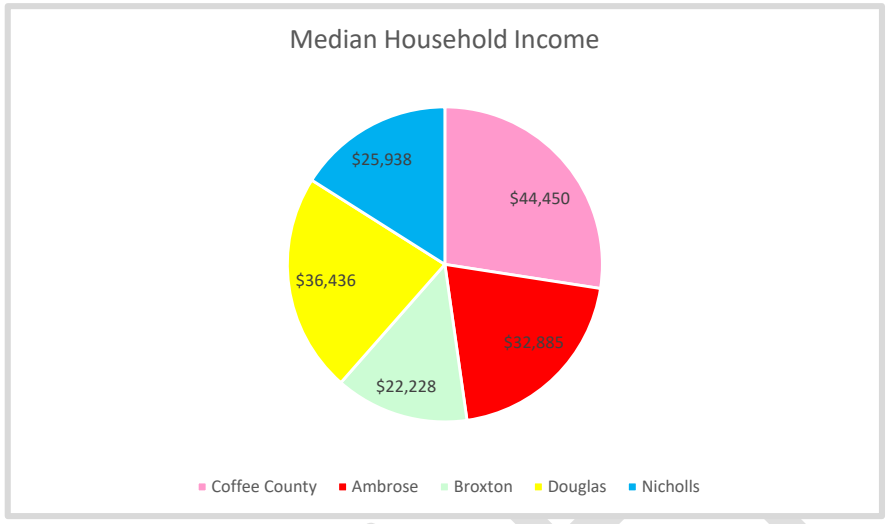
In the City of Douglas, the median household income is $36,436.

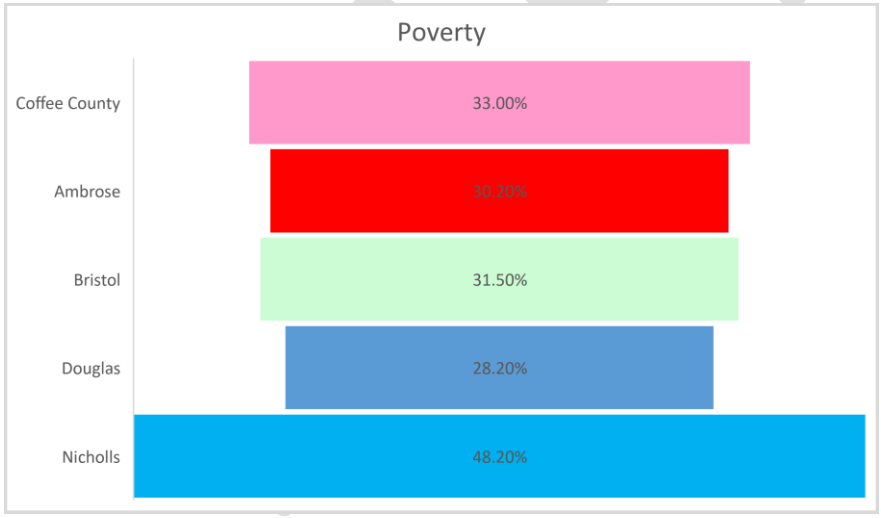
28.2% of the population 18 years and younger in Douglas are determined to be living in poverty. This number is 16.6% higher than the national poverty level and 14.2% higher than Georgia's.

Nicholls

In the City of Nicholls, the median household income is $25,938.

48.2% of the population, 18 years of age and under, live in poverty. This is 36.6% higher than the national poverty level and 4.2% higher than Georgia's.


Median Household Income
$25,938
$44,450
$36,436
$32,885
$22,228
Coffee County
Ambrose
Broxton
Douglas
Nicholls


Poverty
Coffee County
33.00%
Ambrose
30.20%
Bristol
31.50%
Douglas
28.20%
Nicholls
48.20%

HOUSING VALUES

Coffee County

There are 17,331 total housing units in Coffee County. The median property value is $107,900. 25.0% of the housing units are valued at less than $50,000, 22.1% are valued at $50,000 to $99,999, 17.0% are valued at $100,000 to $149,999, 14.5% are valued at $150,000 to $199,999, 13.3% are valued at $200,000 to $299,999, 6.8% are valued at $300,000 to $499,999, 1.1% are valued at $500,000 to $999,999, and 0.1% are valued at $1 million or more.

Ambrose

In 2021, the median property value in Ambrose was $83,800. The largest share of households ranges from $80K to $90K. 19.0% of the housing units are valued at less than $50,000, 35.3% are valued at $50,000 to $99,999, 20.0% are valued at $100,000 to $149,999, 13.5% are valued at $150,000 to $1999, 999, and 12.2% are valued at $200,000 to $299,999.

Broxton

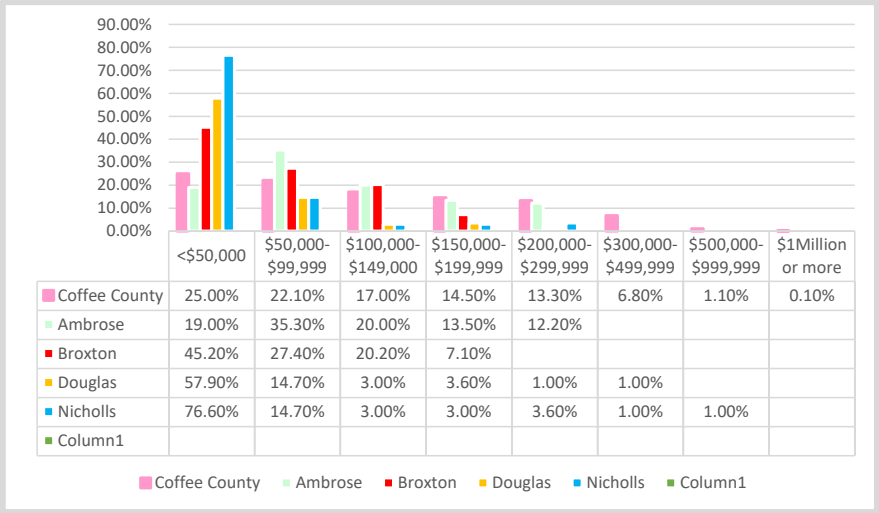
In 2021, the median property value in Broxton was $55,800. 45.2% of the housing units in Broxton are valued at less than $50,000. 27.4% are valued at $50,000 to $99,999, 20.2% are valued at $100,000 to $149,999, and 7.1% are valued at $150,000 to $199,999.

Douglas

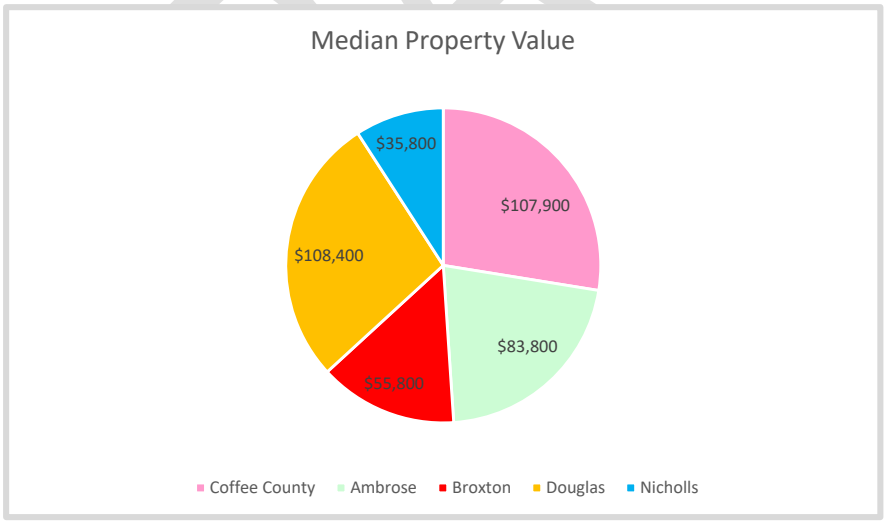
The median property value for 2021 in Douglas grew to $108,400 from the previous year's worth of $103,900. 57.9% of the housing units in Douglas are valued at less than $50,000. 23.6% are valued at $50,000 to $99,999, 4.2% are valued at $100,000 to $149,999, 3.5% are valued at $150,000 to $199,999, 0.8% are valued at $500,000 to $999,999.

Nicholls

Nicholls' 2021 median property value is $35,800. 76.6% of the housing units are valued at less than $50,000, 14.7% are valued at $50,000 to $99,999, 3.0% are valued at $100,000 to $149,999, 3.6% are valued at $200,000 to $299,999, 1.0% are valued at $300,000 to $499,999, and 1.0% are valued at $500,000 to $999,999.



	<$50,000	$50,000-$99,999	$100,000-$149,000	$150,000-$199,999	$200,000-$299,999	$300,000-$499,999	$500,000-$999,999	$1Million or more
Coffee County	25.00%	22.10%	17.00%	14.50%	13.30%	6.80%	1.10%	0.10%
Ambrose	19.00%	35.30%	20.00%	13.50%	12.20%			
Broxton	45.20%	27.40%	20.20%	7.10%				
Douglas	57.90%	14.70%	3.00%	3.60%	1.00%	1.00%		
Nicholls	76.60%	14.70%	3.00%	3.00%	3.60%	1.00%	1.00%	
Column1								



Chapter 2: Local Natural Hazards, Risks, 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 eight natural hazards listed in the previous plan. Table 2.1 provides a brief description of each section in this chapter and a summary of changes made.

CHAPTER 2 SECTION	UPDATES TO SECTION
Thunderstorm/Wind	Updated data and information; edited for clarity
Tornado	Updated data and information; edited for clarity
Drought	Updated data and information; edited for clarity
Flood	Updated data and information; edited for clarity
Hail	Updated data and information; edited for clarity
Wildfire	Updated data and information; edited for clarity
Hurricane/Tropical Storm	Updated data and information; edited for clarity
Severe Winter Storm	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 Avalanches, Coastal Erosion, Coastal Storms, Dam Failures, Earthquakes, Expansive Soils, Extreme Heat, Land Slide, SLOSH (Sea, Lake, and Overland Surges from Hurricanes), Tsunamis, and Volcanoes, 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 history and available data.

Section I. Thunderstorms/Wind

A. Identification of Hazard

The Coffee County HMPUC has chosen the threat of thunderstorms and wind as the most likely hazard to occur and cause damage in Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls; based on experience, the FEMA-described methodology and other mythology. Historical data have been examined from various sources, including the National Climatic Data Center (see Appendix F) and local history and personal accounts, to determine the frequency of events.

Thunderstorms are one of our atmosphere's most common weather products and should not be underestimated. They can cause serious injury, substantial property damage, and even death. Dangers associated with thunderstorms include lightning, hail, heavy rain, flooding, and strong winds. Thunderstorm wind speeds can exceed 100 mph and be as damaging as a tornado. Lightning associated with these events may be one of the leading causes of wildfires in the County. Lightning can also occur even if it is not raining.

NOAA defines thunderstorms as rain showers during which thunder is heard. The NOAA defines thunderstorms following are some of the most common thunderstorm types:
(Source: http://www.nssl.noaa.gov/education/svrwx101/thunderstorms/types/)

Single-cell thunderstorms, often called "popcorn" convection, are small, brief, weak storms that grow and die within an hour or so. They are typically driven by heat on a summer afternoon. Single-cell storms may produce brief heavy rain and lightning.

A **multi-cell storm** is an ordinary thunderstorm in which new updrafts form along the leading edge of rain-cooled air (the gust front). Individual cells usually last 30 to 60 minutes, while the system may last many hours. Multicell storms may produce hail, strong winds, brief tornadoes, and/or flooding.

A **squall line** is a group of storms arranged in a line, often accompanied by "squalls" of high wind and heavy rain. Squall lines pass quickly and are less prone to produce tornadoes than supercells. They can be hundreds of miles long but are typically only 10 or 20 miles wide.

A **supercell** is a long-lived (greater than 1 hour) and highly organized storm feeding off an updraft (a rising current of air) that is tilted and rotating. This rotating updraft - as large as 10 miles in diameter and up to 50,000 feet tall - can be present as much as 20 to 60 minutes before a tornado forms. Scientists call this rotation a mesocyclone when it is detected by Doppler radar. The tornado is a very small extension of this larger rotation. Most large and violent tornadoes come from supercells.

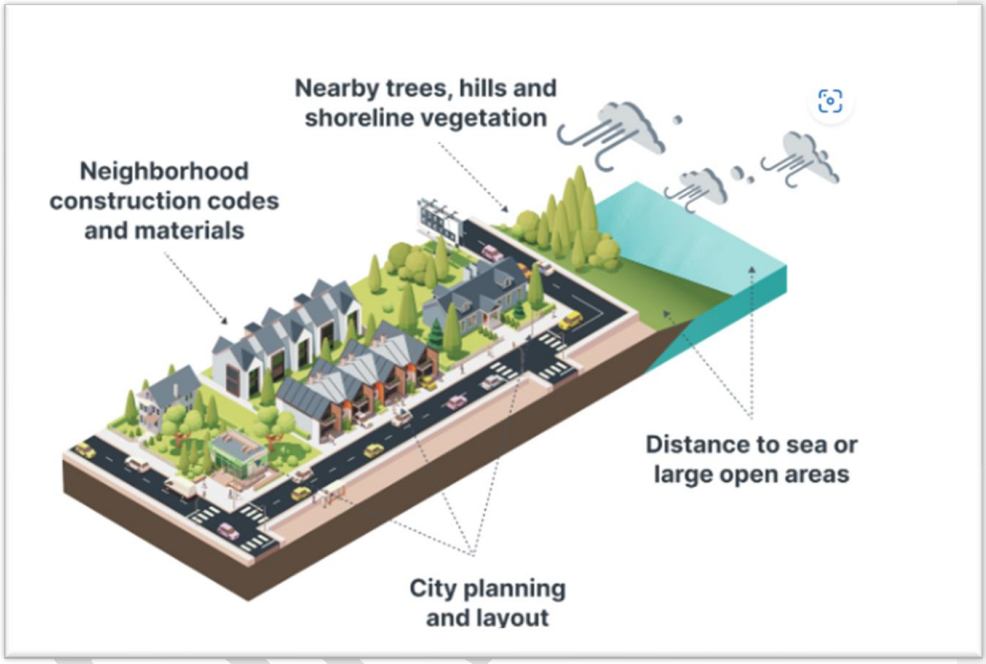
The wind is categorized, according to its strength and severity, using the Beaufort Wind Scale, developed in 1805 by Sir Francis Beaufort of the U.K. Royal Navy. The Beaufort Wind Scale is shown in the table below. (Source: http://www.spc.noaa.gov/faq/tornado/beaufort.html)

Beaufort Wind Scale

Force	Wind (Knots)	Wind (Mph)	World Meteorological Organization (WMO) Classification	The appearance of Wind Effects	
				On the Water	On Land
0	Less than 1	Less than 1	Calm	The sea surface is smooth and mirror-like	Calm, smoke rises vertically
1	1-3	1-3	Light Air	Scaly ripples, no foam crests	Smoke drift indicates wind direction, still wind vanes
2	4-6	4-7	Light Breeze	Small wavelets, crests glassy, no breaking	Wind felt on face, leaves rustle, vanes begin to move
3	7-10	8-12	Gentle Breeze	Large wavelet crests begin to break, scattered whitecaps	Leaves and small twigs constantly moving, light flags extended
4	11-16	13-18	Moderate Breeze	Small waves 1-4 ft. becoming longer, numerous whitecaps	Dust, leaves, and loose paper lifted, small tree branches move
5	17-21	19-24	Fresh Breeze	Moderate waves 4-8 ft taking longer form, many whitecaps, some spray	Small trees in leaf begin to sway
6	22-27	25-31	Strong Breeze	Larger waves 8-13 ft, whitecaps common, more spray	Larger tree branches moving, whistling in wires
7	28-33	32-38	Near Gale	Sea heaps up, waves 13-19 ft, white foam streaks off breakers	Whole trees moving, resistance felt walking against wind
8	34-40	39-46	Gale	Moderately high (18-25 ft) waves of greater length, edges of crests begin to break into spindrift, foam blown in streaks	Twigs breaking off trees generally impede progress
9	41-47	47-54	Strong Gale	High waves (23-32 ft), sea begins to roll, dense streaks of foam, spray may reduce visibility	Slight structural damage occurs, slate blows off roofs
10	48-55	55-63	Storm	Very high waves (29-41 ft) with overhanging crests, sea white with densely blown foam, heavy rolling, lowered visibility	Seldom experienced on land, trees broken or uprooted, "considerable structural damage"
11	56-63	64-72	Violent Storm	Exceptionally high (37-52 ft) waves, foam patches cover sea, visibility more reduced	Very rarely experienced; accompanied by widespread damage.
12	64+	73+	Hurricane	Air filled with foam, waves over 45 ft, sea completely white with driving spray, visibility greatly reduced	Devastation.

Topography, surface roughness, and proximity to the sea determine wind vulnerability. Several factors increase wind's effect, including the angle of incidence between a house and rushing winds. Damage can occur to roofs, walls, and windows of a structure.

Common vulnerability to wind damage includes, but is not limited to, the following:



https://riskfactor.com/city/douglas-ga

1. **Neighborhood construction materials**
   Having updated construction codes and building materials that have been tested against severe winds can help reduce damage.

2. **City planning and layout**
   How buildings are arranged and spaced relative to the sea and, each other can impact how winds impact the areas. Dense neighborhoods or near commercial buildings result in higher debris vulnerability, while sparser neighborhoods can have lower debris vulnerability.

3. **Distance to sea or large open areas**
   Being close to water or large open areas increases wind speed. Locations far from the shoreline are less likely to experience wind damage since friction and energy loss (evaporating water from the ocean surface) rob a hurricane of energy and slow wind speeds.

4. **Nearby trees, hills, and shoreline vegetation**
   Unlike manmade materials, trees, hills, dunes, and even plants between bodies of water and homes may block the wind from storms and reduce the damage to those homes.

A changing environment means warmer seas, new weather patterns, and stronger storms. As the atmosphere warms, more energy is available for storms to create high-intensity winds. This means warmer oceans can feed storms that develop at sea and make their way inland.

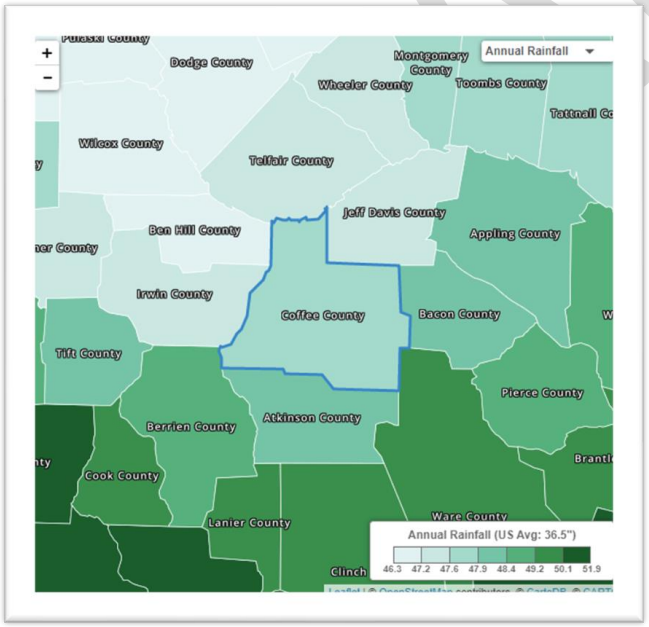
B. Profile of Events, Frequency of Occurrences, Probability

According to the NOAA Storm Events Database (see Appendix F), 227 reports of Thunderstorm/Wind events occurred in Coffee County (including the Cities) between 01/01/21950 and 12/31/2022. The Historic Recurrence Interval is 0.32 years (about 4 months). This is a 315.28% Historic Frequency Chance per year. The past 10-year Record Frequency Per Year is 15.6, the past 20-year frequency is 10 and the past 50-year frequency is 4.54 (see the Hazard Frequency Table in Appendix D). Nine events have been recorded with winds up to 60 knots, and many more events have been registered with wind speeds in the 45-55 knot range.

Since the previous Hazard Mitigation Plan became effective, 31 Thunderstorm/Wind events have occurred. The strongest storm happened on April 24, 2021, as a supercell thunderstorm crossed the southern tier of Coffee County and produced a tornado that impacted SW Douglas. Large trees were down, and extensive damage occurred in Baymeadows Estates, where numerous homes suffered wind and tree damage consistent with low-end EF2 tornado damage. Peak winds were estimated at 116 mph. Many other storms in Coffee County were heavy rain, hail, tropical storms, and funnel clouds from 2018-2022.

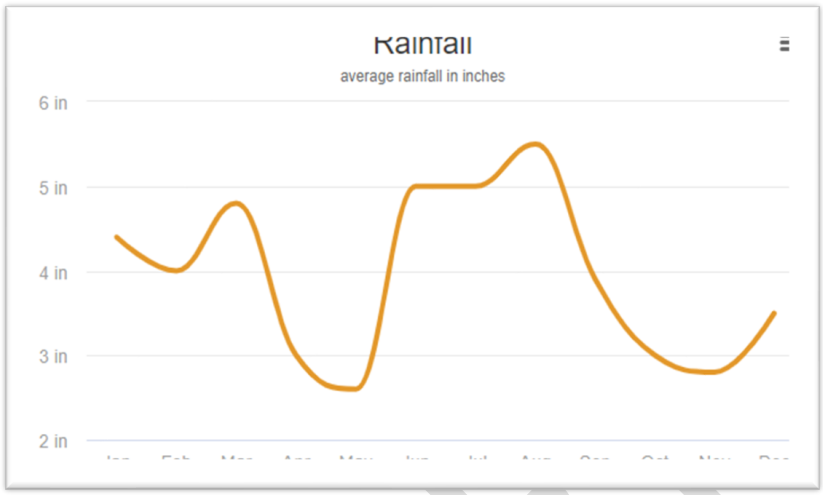
Although the complete available data was used for this analysis, other events that went unreported or underreported may have occurred in the community.

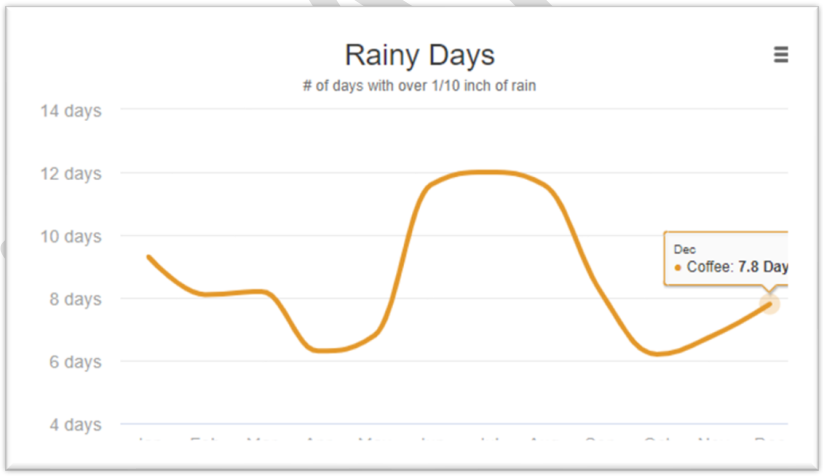
In November 2022, Coffee County had 3 inches of rain, 1" wetter than the average in November since 1985. On average, Coffee County gets 47 inches of rain per year. This annual rainfall makes Coffee County drier than most of the in Georgia. Coffee County, on average, gets 103 days per year of precipitation. August seems to be the wettest month of the year in Coffee County, with 5.5 inches of rain in 2022. Autumn is the wettest season, and 20% occurs in Winter. The Winter months are usually the driest season.



Rainy Days in Coffee County - 2022

January	9
February	8
March	8
April	6
May	7
June	12
July	12
August	12
September	8
October	6
November	7
December	8





According to Risk Factor, there have been 213 recorded wind events in Coffee County. The most severe event was due to Hurricane Irma, which occurred in 2017. Irma was registered as a Category 5 hurricane with 1-minute sustained wind speeds up to 178 mph and 3-second wind gusts up to 228 mph. 20,003 properties were impacted in Coffee County.

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

In Worksheet 3A: Inventory of Assets (appearing in Appendix A), we estimate that all of Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls are equally vulnerable to this hazard.

An estimated 100% of the Residential property (10,234 of 10,234) in Coffee County (including the Cities of Ambrose, Broxton, Douglas, and Nicholls) could be affected by this hazard, with a total value of $691,021,545. Also, an estimated 100% of the community's Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education, and Utility properties (2,804 of 2,804) may be affected, totaling $727,693,742. The values are based on the recently available tax roll data for Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls provided by the Coffee County Tax Assessor's Office.

Damage to crops is not considered in any of these figures. According to the Center for Agribusiness & Economic Development's 2021 Georgia Farm Gate Value Report (Farm Gate Value | Georgia Data), the total farm gate value of agricultural production in Coffee County is $307,975,080.

E. Land Use and Development Trends

Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls have seen considerable population changes over the last few years. Both the City of Douglas and the County have seen slight population gains. The City of Ambrose has seen significant population growth, the City of Broxton has seen a population decline, and the City of Nicholls has increased significantly, primarily due to the City's annexation of Coffee Correctional Facility, which has a capacity of approximately 3,000 inmates.

Coffee County and the Cities of Broxton, Douglas, and Nicholls have zoning regulations; Ambrose does not. All jurisdictions have mandatory building and fire codes that a building inspector enforces. On October 1, 1991, the Uniform Codes Act became effective in Georgia. On July 1, 2004, this Act was revised to make the following construction codes mandatory as the Georgia State Minimum Standard Codes. Listed below are the code editions in effect as of January 1, 2021, with amendments in 2020 and 2022:

- International Building Code – 2018 Edition
- International Residential Code – 2018 Edition
- International Plumbing Code – 2018 Edition
- International Mechanical Code – 2018 Edition
- International Fuel Gas Code – 2018 Edition
- International Energy Conservation Code – 205 Edition
- International Fire Code – 2018 Edition
- International Electric Code – 2020 Edition
- International Swimming Pool and Spa Code – 2018 Edition

The county and cities participate in joint comprehensive planning and the required updates of the Service Delivery Strategy. No other land use or development trends related to this hazard have been identified.

F. Multi-Jurisdictional Differences

Thunderstorm/Wind events are usually area-wide, and no difference in severity is expected between Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls. However, the impact may be more severe in places with higher population density due to more people being in danger, more people needing to be evacuated, more debris from damaged buildings, and other impacts associated with higher population density.

Coffee County and the City of Douglas are members of the National Flood Insurance Program; the Cities of Ambrose, Broxton, and Nicholls are not (source: https://www.fema.gov/cis/GA.html), due to the relatively small portion of those jurisdictions that is within a flood zone and due to decisions made at the discretion of local leaders. However, this plan calls for those Cities to join the program immediately. Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls do not participate in the Community Rating System (CRS) program. As of 2017, 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

Thunderstorms and wind events can cause damage anywhere, anytime, throughout Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls. This is especially true during thunderstorms, when 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 instead of more sparsely populated or unpopulated areas.

The HMPUC has developed a comprehensive range of Mitigation Goals, Objectives, and Action Steps to lessen the impacts of this hazard. These are contained in Chapter 3.

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.

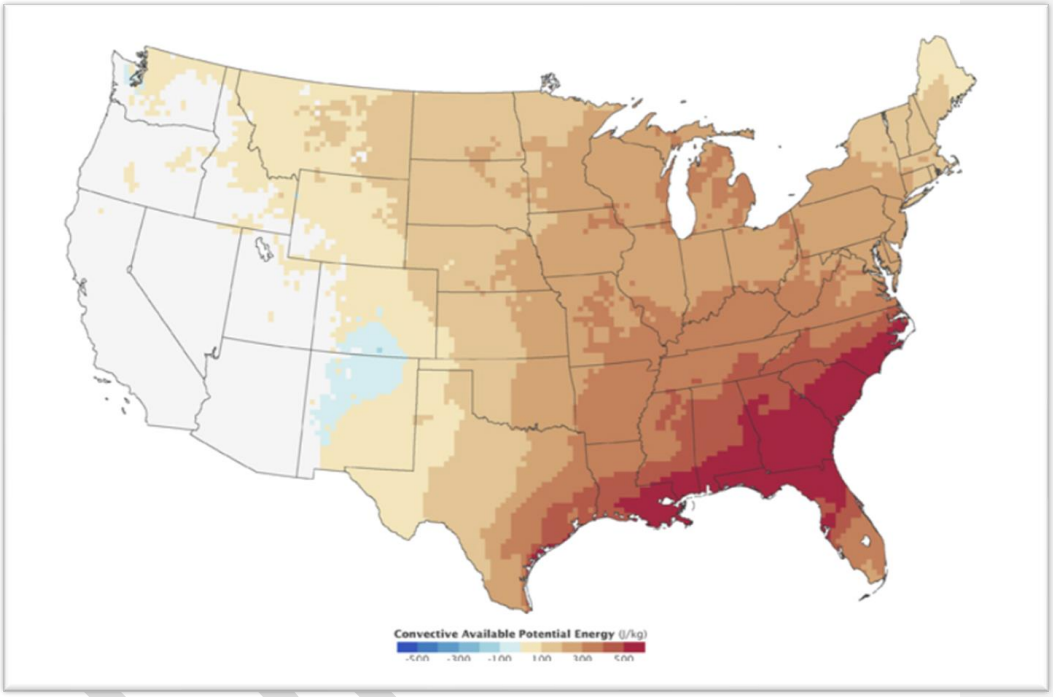
H. Impacts from Future Conditions

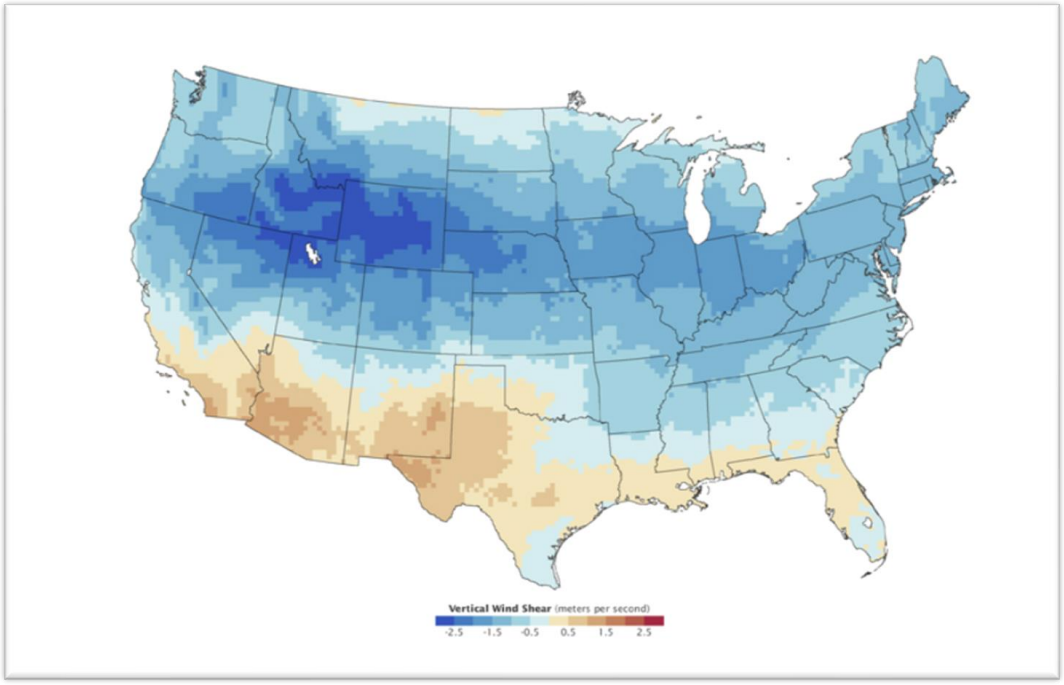
Thunderstorms

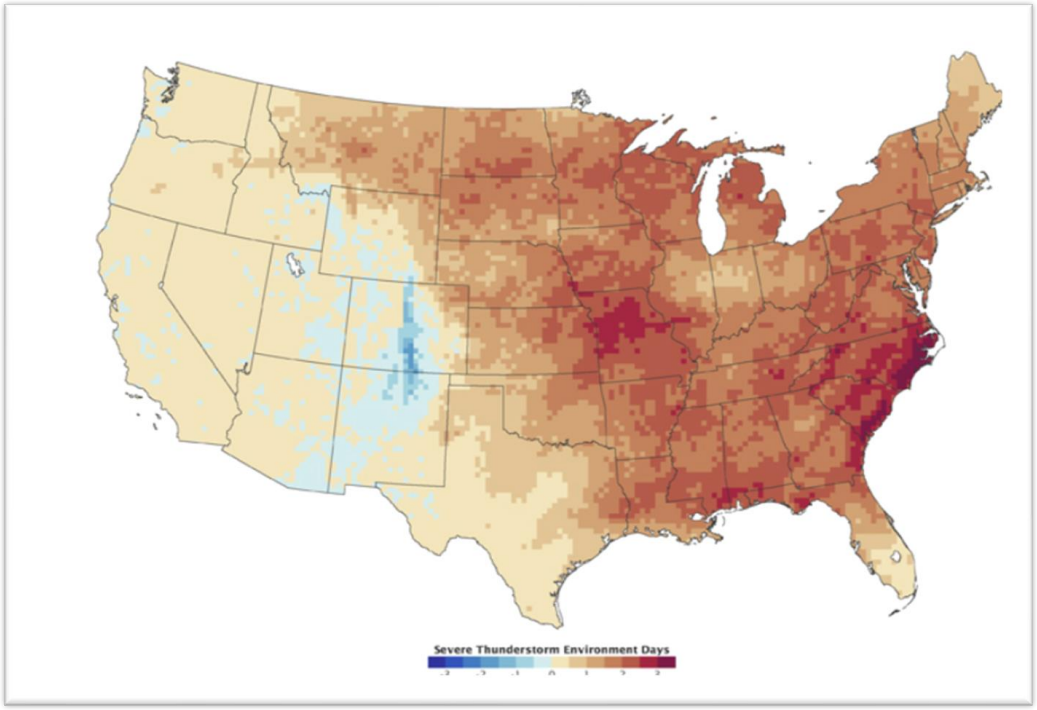
Scientists have evidence that global warming should increase CAPE* by warming the surface, putting more moisture in the air through evaporation, and producing stronger wind shear. This would produce severe thunderstorms and unusually large hail* CAPE (Convective Available Potential Energy). Storms may be fewer but stronger.

The maps below show the results of a model comparing the summer climate in 2072–2099 with the climate from 1962–1989. CAPE (top map) is predicted to rise enough to overwhelm a slight decrease in vertical wind shear (middle map), leading to an increase in severe thunderstorms (third

map), especially in Missouri and coastal North and South Carolina. The modeling suggests that the increase in CAPE will be the strongest in the Southeast, and the decrease in wind shear will be the strongest in the Mountain West. The eastern United States will see more of an increase in days favorable to severe thunderstorm formation than the western part of the country.
(Source: climate.nasa.gov)







Thunderstorms are the smallest type and are often part of the larger storm systems (tropical and extra-tropical cyclones). All storms require moisture, energy, and certain wind conditions to develop, but the combination of ingredients varies depending on the type of storm and local meteorological conditions.

Thunderstorms form when a trigger, a cold front, converging near-surface winds, or rugged topography destabilizes a mass of warm, humid air and causes it to rise. The air expands and cools as it ascends, increasing the humidity until the water vapor condenses into liquid droplets or ice crystals in precipitation-making clouds. Converting water vapor into liquid water or ice releases latent heat into the atmosphere. Storms feed off dormant heat, which is why scientists think global warming strengthens storms. Extra heat in the atmosphere or ocean nourishes storms; the more heat energy that goes in, the more vigorously a weather system can churn.

Wind

Coffee County has a **severe wind factor risk based on the projected likelihood and speed of hurricanes, tornadoes**, or severe storm winds impacting it. The average maximum wind speeds in Coffee County are higher now than 30 years ago, and 100% of homes in Coffee County have at least some risks.

Wind speeds this year

- **81mph**

1-minute sustained wind speed

- **104mph**

3-second wind gust speed

Wind speed in this city in 30 years

Wind speed in this city in 30 years

- **90mph**

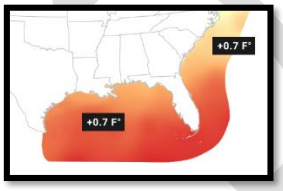
1-minute sustained wind speed

- **115mph**

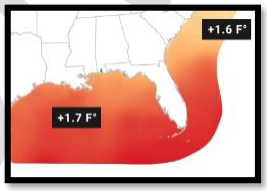
3-second wind gust speed

https://riskfactor.com/city/douglas-ga

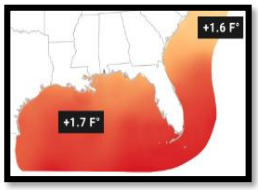
Winds this year



Winds in 15 years



Winds in 30 years



I. Underserved/Socially Vulnerable Population Risk

Coffee County has a large population of elderly individuals who live in assisted living facilities/nursing homes that may not receive emergency notifications through existing emergency notification systems. There is also a significant number of farm workers who are Hispanic and are living within the county. The Department of Family and Children Services (DFACS) participated in one workshop. DFACS keeps close contact with this group of people and informs them of

emergencies when necessary. The City of Douglas Police Department also works closely with the Hispanic population.

Flyers explaining the Hazard Mitigation process were distributed to be available at the county and city offices, as well as the Health Department and the Department of Family and Children Services (DFACS).

II. Tornadoes

A. Identification of Hazard

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

NOAA defines a tornado (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 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 severe threat to life and property to those in the path of the tornado. Residents must act immediately to find safe shelter when a tornado warning is issued. 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, assigns 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 measuring wind speeds inside a tornado is difficult, wind speeds are estimated based on the damage type; more information is available on the NOAA website at http://www.spc.noaa.gov/faq/tornado/ef-scale.html.

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 damaged 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.

Tornadoes may occur any time of year, although the Southern Plains' peak "tornado season" is from May into early June. Tornadoes can occur due to inclement weather conditions, due to a passing front, or as part of thunderstorms or hurricane/tropical storm events. Tornadoes can happen 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.

Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls 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 occur per month in Georgia.

B. Profile of Events, Frequency of Occurrences, Probability

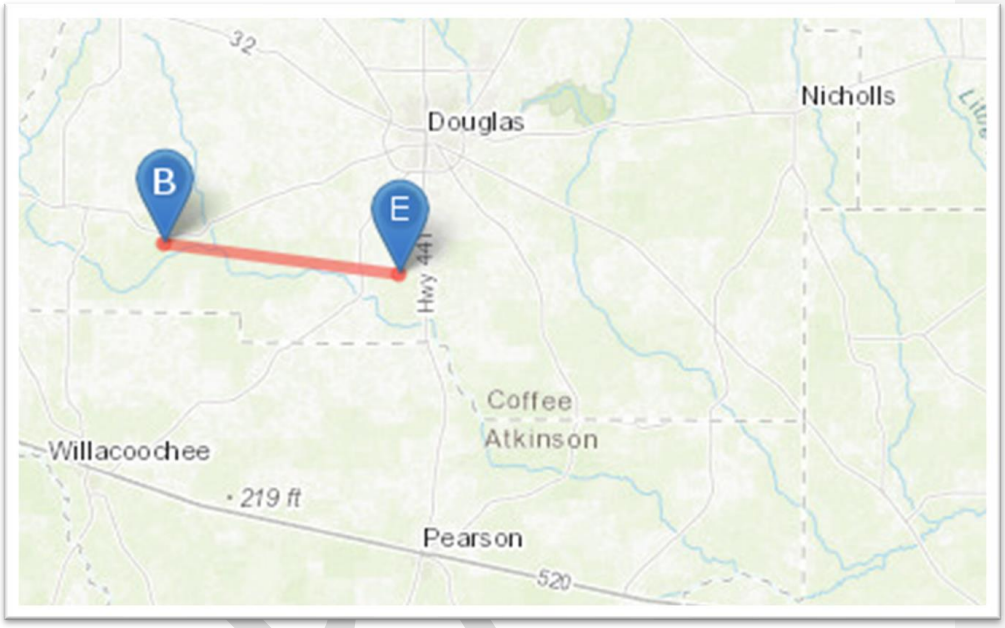
According to the NOAA Storm Events Database (see Appendix F), 24 reports of Tornadoes occurred in Coffee County (including the Cities) between 01/01/1950 and 12/31/2022. Since the previous plan, two (2) tornadoes have been NOAA through December 31, 2022. The Historic Recurrence Interval is 3.00 years. This is a 33.33% Historic Frequency Chance per year. The past 10-year Record Frequency Per Year is 0.5, the past 20-year frequency is 0.6, and the past 50-year frequency is 0.48 (see the Hazard Frequency Table in Appendix D).

The strongest EF-2 tornadoes recorded in the community have been F-2 tornadoes. There have been five of these recorded. The most recent one was on April 24, 2021. A supercell thunderstorm crossed the southern tier of Coffee County and produced a tornado that impacted SW Douglas. The debris included large, snapped trees and began near Hebron Church, south of GA Highway 158 in Willacoochee m. The most extensive damage occurred in Baymeadows Estates. In this community, numerous homes suffered wind and tree damage consistent with a low-end EF-2 tornado. The tornado maintained an ESE heading and impacted the Bear Creek Mobile home community, where numerous pine trees were snapped. Peak winds were estimated at 166 mph.

The damaged path comprised snapped trees eastward and ended near Carver Baptist Church. Peak winds were estimated at 166 mph. This tornado-warning storm raced to the east at 40 to 50 miles

per hour in Appling, Bacon, and Pierce Counties. No injuries were reported, but over 70 homes were seriously damaged, and nearly 1,000 customers were left without power.

Tornado Path



The following photos were taken at the Bay Meadows Subdivision on Hwy-158. The Bear Creek Mobile Home Park on Hwy-135 also took a direct hit.








(Source of photos: Coffee County, Ga. Police Scanner)

An EF-0 occurred on April 13, 2020. There was strong sheer and instability phased across SE GA during the morning hours where there were supercells, one of which produced two tornado touchdowns. Max winds of nearly 80 m touched down about 5 miles SE of Ambrose and traveled about 1.5 miles before lifting near Highway 32. Mobile homes were severely damaged, and an eighteen-wheeler was overturned near Bushnell.

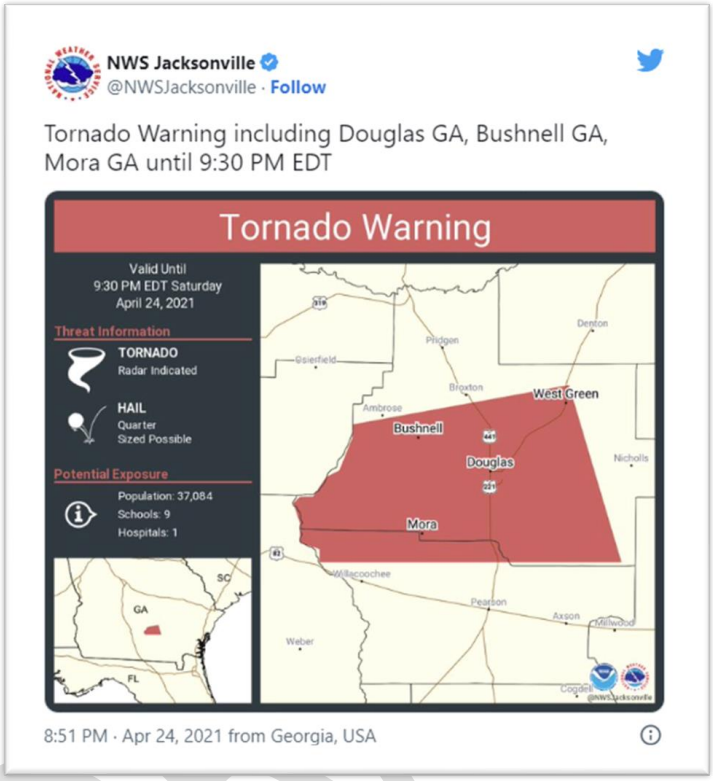
?reliminary data from the National Weather Service shows a Tornado touched down in Coffee County during storms Saturday night. (Coastal News ervice)

By Andrew Gorton

Updated: Apr. 25, 2021 at 9:48 PM EDT

SAVANNAH, Ga. (WTOC) - The National Weather Service in Jacksonville confirmed an EF-2 tornado caused damage in Coffee County, Georgia Saturday evening.

The NWS issued a Tornado Warning for Coffee County at 8:51 p.m. Saturday evening.



Three tornado events have occurred since the previous Hazard Mitigation Plan was completed. On January 22, 2017, a recent tornado was tracked across southern Coffee County, producing EF1 damage with peak winds near 110 mph. Another EF1 tornado on May 4, 201,7 struck the unincorporated community of West Green in Coffee County. Several trees with snapped trunks were observed along the tornado's path. Some damage occurred to one home and one outbuilding.

An EF3 tornado modeled to illustrate the potential impacts of tornadoes of this magnitude in the county using a hypothetical path based upon an EF3 tornado event running along the predominant direction of historical tornados (southeast to northwest), the tornado path would travel through **Douglas**. The selected widths were modeled after re-creating the Fujita-Scale guidelines based on conceptual wind speeds, path widths, and path lengths. There is no guarantee that every tornado will fit precisely into one of these categories. Table 12 of the Hazard Risks Analysis depicts tornado path widths and expected damage.

Within any given tornado path, there are degrees of damage. The most intense damage occurs within the center of the path, with decreasing damage away from the center. After the hypothetical

path is digitized on a map, the process is modeled in GIS by adding buffers (damage zones) around the tornado path. Figure 12 describes the zone analysis.

Table 12: Tornado Path Widths and Damage Curves

Enhanced Fujita Scale	Path Width (feet)	Maximum Expected Damage
EF5	2,400	100%
EF4	1,800	100%
EF3	1,200	80%
EF2	600	50%
EF1	300	10%

An EF3 tornado has four damage zones, depicted in Table 13. Major damage is estimated within 150 feet of the tornado path. The outer buffer is 900 feet from the tornado path, within which buildings will not experience any damage. The selected hypothetical tornado path is depicted in Figure 13, and the damage curve buffer zones are shown in Figure 14 of the Hazard Risks Analysis, shown below:

Table 13: EF3 Tornado Zones and Damage Curves

Zone	Buffer (feet)	Damage Curve
1	0-150	80%
2	150-300	50%
3	300-600	10%
4	600-900	0%

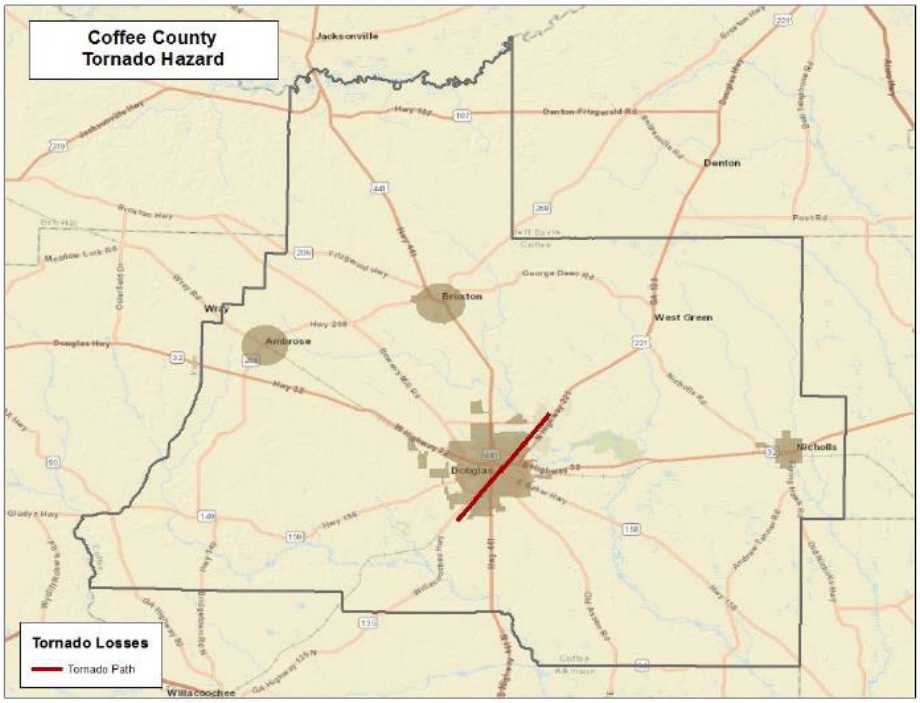


Figure 13: Hypothetical EF3 Tornado Path

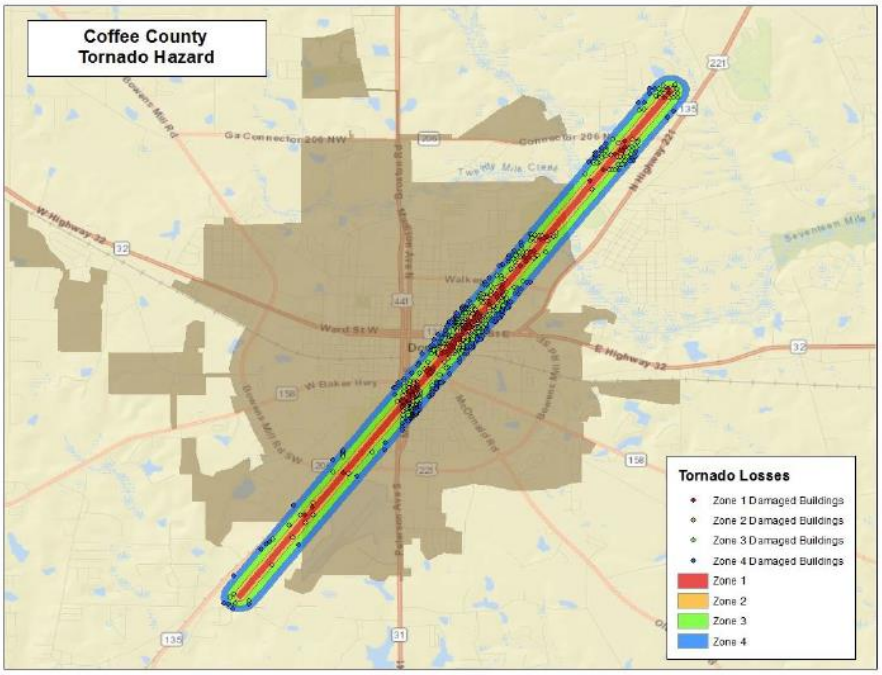


Figure 14: Modeled EF3 Tornado Damage Buffers

The analysis shows that approximately 666 buildings could be damaged, with estimated building losses of roughly $36.8 million. The results of the analysis are depicted below in Table 14:

Table 14: Estimated Building Losses by Occupancy Type

Occupancy Classification	Buildings Damaged		Building Losses
Commerical	70	$	10,522,152
Educational	3	$	1,236,291
Governmental	8	$	1,044,564
Industrial	14	$	1,522,525
Religious	12	$	930,407
Residential	559	$	21,503,160
Total	666	$	36,759,099

According to the modeling, 19 essential facilities were in the tornado's path. Should such a tornado strike occur, these 19 facilities would suffer moderate to major damage. The location of the damaged Essential Facilities is mapped in Figure 15.

Figure 15: Modeled Essential Facility Damage in Coffee County

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

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

In Worksheet 3A: Inventory of Assets (appearing in Appendix A), we estimate that all of Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls are equally vulnerable to this hazard.

An estimated 100% of the Residential property (14,253 of 14,253) in Coffee County (including the Cities of Ambrose, Broxton, Douglas, and Nicholls) could be affected by this hazard, with a total value of $1,921,393,000. Also, an estimated 100% of the community's Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, and Education properties (1,613 of 1,613) may be affected, totaling $1,625,199.000 The values are based on the recently available tax roll data for Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls provided by the Coffee County Tax Assessor's Office.

Damage to crops is not considered in any of these figures. According to the Center for Agribusiness & Economic Development's 2021 Georgia Farm Gate Value Report (Farm Gate Value | Georgia Data), the total farm gate value of agricultural production in Coffee County is $307,975,080.

According to the inventory database reports and maps, this hazard could affect all 131 Critical Facilities and Infrastructure for Coffee County (including the Cities of Ambrose, Broxton, Douglas, and Nicholls). The total value of these Critical Facilities is $905,789,637, plus a content value of $46,538,173.

E. Land Use and Development Trends

Typically, mobile/manufactured homes are most vulnerable to tornado damage. According to 2016 Census Bureau estimates, 33.8% of occupied housing units in Coffee County (including the Cities) are mobile homes (4,769 mobile homes and approximately 13,020 people, based on the average household size of 2.73 persons per household). In the City of Ambrose, 50% of occupied housing units are mobile homes (81 mobile homes and approximately 221 people). In the City of Broxton, 44.5% of occupied housing units are mobile homes (188 mobile homes and approximately 513 people). In the City of Douglas, 11.2% of occupied housing units are mobile homes (454 mobile homes and approximately 1,240 people). In the City of Nicholls, 38.9% of occupied housing units are mobile homes (133 mobile homes and approximately 363 people).

Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls have seen considerable population changes over the last few years. Both the City of Douglas and the County have seen slight gains in population. The City of Ambrose has seen considerable population growth, and the City of Broxton has seen a decline in population. The City of Nicholls's population has increased primarily due to the City's annexation of Coffee Correctional Facility, which has a capacity of approximately 3,000 inmates.

Coffee County and the Cities of Broxton, Douglas, and Nicholls have zoning regulations; Ambrose does not. All jurisdictions have mandatory building and fire codes, which are enforced by a building inspector. The county and cities participate in joint comprehensive planning and the required updates to participate in joint comprehensive planning and the required updates of the Service Delivery Strategy. No other land use or development trends related to this hazard have been identified.

Coffee County and the Cities of Broxton, Douglas, and Nicholls have zoning regulations; Ambrose does not. All jurisdictions have mandatory building and fire codes that a building inspector enforces. On October 1, 1991, the Uniform Codes Act became effective in Georgia. On July 1, 2004, this Act was revised to make the following construction codes mandatory as the Georgia State Minimum Standard Codes. Listed below are the code editions in effect as of January 1, 2021, with amendments in 2020 and 2022:

- International Building Code – 2018 Edition
- International Residential Code – 2018 Edition
- International Plumbing Code – 2018 Edition
- International Mechanical Code – 2018 Edition

- International Fuel Gas Code – 2018 Edition
- International Energy Conservation Code – 205 Edition
- International Fire Code – 2018 Edition
- International Electric Code – 2020 Edition
- International Swimming Pool and Spa Code – 2018 Edition

F. Multi-Jurisdictional Differences

Tornadoes follow a straight path regardless of natural features or political boundaries. No difference in severity is expected between Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls. However, the impact may be more severe in places with higher population density due to more people being in danger, more people needing to evacuate, more debris from damaged buildings, and other impacts associated with higher population density. In jurisdictions without building codes and inspections, structures not built to code may exist and are vulnerable to the effects of strong winds and other hazards. In jurisdictions with many mobile homes, the damage can be expected to be more severe.

G. Overall HRV Summary of Events and Their Impact

Tornadoes can cause damage anywhere, anytime, throughout Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls. They can form quickly, and residents may not need more 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 instead of more sparsely populated or unpopulated areas or if the event strikes areas with many mobile homes.

The HMPUC has developed a comprehensive range of Mitigation Goals, Objectives, and Action Steps to lessen the impacts of this hazard. These are contained in Chapter 3.

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.

H. Impacts from Future Conditions

Some people believe tornadoes are changing due to climate change and global warming. Exactly how the climate will change the pattern of tornadoes due to planet warming is still unknown, and scientists have yet to link the warming to tornadoes.

Tornadoes are different from hurricanes as they are smaller and are short-lived. Scientists have a challenging time modeling tornado simulation because of this. However, they do know that climate change affects the weather ingredients that support supercell thunderstorms, and these are the types that produce tornadoes. The ingredients are warm, moist air, an unstable atmosphere, and wind at different levels, moving in different directions at various speeds. This is known as wind shear.

When the temperature rises, the atmosphere can hold moisture, increasing instability, a vital ingredient in a supercell. Wind shear, another vital component, likely decreases when temperatures get warmer. Moisture and wind shear work against each other, making it harder to say which one has the greater impact on the formation of a tornado.

Tornado events have become more clustered. Tornado Alley tornadoes are falling and rising in Arkansas, Missouri, Illinois, Indiana, Tennessee, and Kentucky. In 2023, there have been more tornadoes than usual in Georgia. By April 7, 2023, 32 confirmed tornadoes had hit Georgia. In general, there are an average of 25-30 tornadoes throughout Georgia each year.

I. Underserved/Socially Vulnerable Population Risk

Coffee County has a large population of elderly individuals who live in assisted living facilities/nursing homes that may not receive emergency notifications through existing emergency notification systems. Homelessness does exist in Coffee County. There is also a large number of Hispanic farm workers living in dormitory-type housing within the county. The Department of Family and Children Services (DFACS) participated in the workshops. DFACS keeps close contact with this group of people and informs them of emergencies when necessary. They also have someone to translate the language. Coffee Regional Hospital was also present at the workshops and stated they work with the public during hazardous events.

A brochure explaining the Hazard Mitigation process was distributed to be available at the county and city offices, the Health Department and the Department of Family and Children Services (DFACS).

Section III. Drought

A. Identification of Hazard

The HMPUC has chosen the threat of drought as the third most likely hazard to occur and cause damage in the community based on experience, the FEMA-described methodology, and other factors. To determine the frequency of events, historical data have been examined from various sources, including the National Climatic Data Center and U.S. Drought Monitor (see Appendix F), as well as local history and personal accounts.

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 community's safety.

Crops (including trees) are usually most adversely affected by drought events and community residents whose water supplies are restricted or cut off (especially those using individual wells). Residents of unincorporated Coffee County have wells, which may dry during drought periods, thus leaving those residents without water for extended periods. The Cities of Ambrose, Broxton, Douglas, and Nicholls have municipal water systems.

The U.S. Drought Monitor (http://droughtmonitor.unl.edu), established in 1999, is a weekly map of drought conditions 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, labeled by intensity, with D1 being the least intense and D4 being the most intense. Descriptions of these categories are described 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

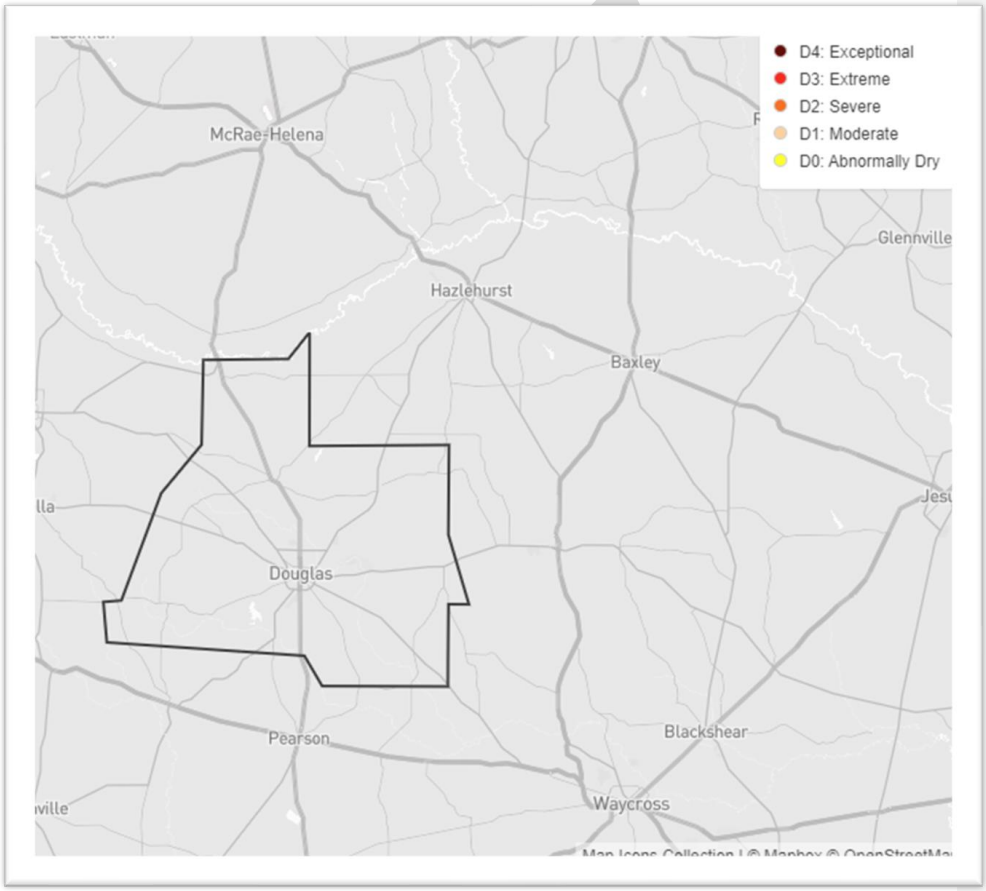
Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls are all equally vulnerable to the effects of drought.

B. Profile of Events, Frequency of Occurrences, Probability

According to U.S. Drought Monitor data (see Appendix F), there are 476 reports of Drought occurring in Coffee County (including the Cities) between 01/01/1950 and 12/31/2022. Since the previous HMP, there have been 83 reports of drought through December 31, 2022. The Historic Recurrence Interval is 0.05 years. This is a 2069.57% Historic Frequency Chance per year. The past 10-year Record Frequency Per Year is 36.1, the past 20-year frequency is 23.8, and the past 50-year frequency is 9.52 (see the Hazard Frequency Table in Appendix D). The most severe drought was in April and May 2012, with D4 conditions persisting for five consecutive weeks.

Example of Drought Condition:
As of the week of July 3, 2023, Coffee County was 100% not dry, according to the U.S. Drought Monitor (USDM). The below maps show the area:

Area	Not Dry	D0: Abnormally Dry	D1: Moderate Drought	D2: Severe Drought	D3: Extreme Drought	D4: Exceptional Drought
Coffee County	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%



Since the previous Hazard Mitigation Plan became effective, 50 drought events, all D1 and D2 events, have occurred.

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

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

In Worksheet 3A: Inventory of Assets (appearing in Appendix A), we estimate that all of Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nichol are equally vulnerable to this hazard.

An estimated 100% of the Residential property (14,253 of 14,253) in Coffee County (including the Cities of Ambrose, Broxton, Douglas, and Nicholls) could be affected by this hazard, with a total value of $1,921,393,000. Also, an estimated 100% of the community's Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, and Education properties (1,613 of 1,613) may be affected, totaling $1,625,199.000 The values are based on the recently available tax roll data for Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls provided by the Coffee County Tax Assessor's Office.

Damage to crops is not considered in any of these figures. According to the Center for Agribusiness & Economic Development's 2021 Georgia Farm Gate Value Report (Farm Gate Value | Georgia Data), the total farm gate value of agricultural production in Coffee County is $307,975,080.

According to the inventory database reports and maps, this hazard could affect all 131 Critical Facilities and Infrastructure for Coffee County (including the Cities of Ambrose, Broxton, Douglas, and Nicholls). The total value of these Critical Facilities is $905,789,637, plus a content value of $46,538,173.

E. Land Use and Development Trends

Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls have seen considerable population changes over the last few years. Both the City of Douglas and the County have seen slight population gains. The City of Ambrose has seen significant population growth, and the City of Broxton has declined. The City of Nicholls' population increased due to the City's annexation of Coffee Correctional Facility, which has a capacity of about 3,000 inmates.

Coffee County and the Cities of Broxton, Douglas, and Nicholls have zoning regulations; Ambrose does not. All jurisdictions have mandatory building and fire codes that a building inspector enforces. The county and cities participate in joint comprehensive planning and the required updates of the Service Delivery Strategy. No other land use or development trends related to this hazard have been identified.

Coffee County and the Cities of Broxton, Douglas, and Nicholls have zoning regulations; Ambrose does not. All jurisdictions have mandatory building and fire codes that aa building inspector enforces. On October 1, 1991, the Uniform Codes Act became effective in Georgia. On July 1, 2004, this Act was revised to make the following construction codes mandatory as the Georgia State Minimum Standard Codes. Listed below are the code editions in effect as of January 1, 2021, with amendments in 2020 and 2022:

- International Building Code – 2018 Edition
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- International Plumbing Code – 2018 Edition
- International Mechanical Code – 2018 Edition
- International Fuel Gas Code – 2018 Edition
- International Energy Conservation Code – 205 Edition
- International Fire Code – 2018 Edition
- International Electric Code – 2020 Edition
- International Swimming Pool and Spa Code – 2018 Edition

F. Multi-Jurisdictional Differences

Residents of unincorporated Coffee County have wells, which may dry during drought periods, leaving them without water for extended periods. The Cities of Ambrose, Broxton, Douglas, and Nicholls have municipal water systems.

No other multi-jurisdictional differences have been identified yet.

G. Overall HRV Summary of Events and Their Impact

Drought has the potential to harm people and the economy throughout Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls, 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, and 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 of this hazard. These are contained in Chapter 3.
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.

H. Impacts from Future Conditions

Climate change makes droughts more frequent and severe in some parts of the United States. South Georgia has seen an increase in rain, including in the county. In April 2023, there was 4" of precipitation, 1" wetter than the average for April since 1985.

Not every drought can be linked to climate change, but climate change will increase drought on a global scale. As weather patterns shift, warmer temperatures will cause more evaporation from bodies of water and the ground, meaning less water for crops and changes in precipitation. Droughts are variable and can occur every year or every few years, last for years or decades, and cause different levels of dryness.

Scientists warn that extreme agricultural and ecological drought events occur every 10 years but are now 1.7 times more likely than from 1850 to 1900 due to humans heavily influencing the climate. Scientists also agree that droughts will likely intensify into the 2050s and beyond. As

reported by NASA, Megadroughts (lasting 10 years or longer) are also projected to increase from their current 12% to more than 60%.
The following are small actions developed by https://yaleclimateconnections.org/ that can be taken to become defensive and strengthen resiliency to drought:

- *Become drought aware.* Keep up with current drought conditions by visiting the National Integrated Drought Information System and using the Drought Risk Atlas to explore how susceptible your region is to drought.

- *Xeriscape lawns and city green spaces*. According to National Geographic, replacing traditional lawn vegetation with native, drought-tolerant plants reduces a home's outdoor water demand by 50-70%.

- *Repair leaky indoor and outdoor faucets.* According to the American Red Cross, a seemingly small leak that drips once per second can waste 2,700 gallons of water a year.

- *Install green infrastructure.* Green streets, green roofs, and porous pavements allow whatever rain falls slowly to soak into the ground and replenish local groundwater reserves rather than be lost to storm drains.

- *Improve your home's energy efficiency.* Since water is needed to generate hydroelectric power and for cooling in other types of energy production, power grids can easily become strained during droughts. Taking care to load dishwashers and washing machines fully, using "light wash" settings, and limiting power consumption during peak times (4 p.m. to 9 p.m. local time) can help your community avoid preemptive power shutoffs or blackouts.

- *Build an emergency water supply in your pantry*. The CDC recommends storing at least one gallon of water per person daily (half a gallon for drinking and half for personal use). Visit their website to learn how to store safer drinking water.

I. Underserved/Socially Vulnerable Population Risk

There is a population of homeless people in Coffee County and its cities. There is also a large number of Hispanic farm workers living in dormitory-type housing within the county. The Department of Family and Children Services (DFACS) participated in the workshops. DFACS keeps close contact with this group of people and informs them of emergencies when necessary. They also have someone to translate the language. Coffee Regional Hospital was also present at the workshops and started work with the public during hazardous events.

Flyers explaining the Hazard Mitigation process were available at the county and city offices, the Health Department, and the Department of Family and Children Services (DFACS).

Section IV. Floods

A. Identification of Hazard

The HMPUC has chosen the flood threat as the fourth most likely hazard to occur and cause damage in the community based on experience, the FEMA-described methodology, and other factors, including local history and personal accounts. For further information, see the HAZUS Report in Appendix G.

Floods may occur anytime, in many cases without warning, and their effects can range from minor inconvenience to wholesale destruction. Floods are often caused by heavy rain 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 the ground can absorb it (especially under weather conditions that make the soil less pervious, for example, after a 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 often occur in short periods, so quickly that people are caught off-guard. They can occur because of any of the causes mentioned above but are most often due to extremely heavy rainfall from thunderstorms. The National Weather Service has more information (https://www.weather.gov/phi/FlashFloodingDefinition).

According to the National Weather Service (http://tadd.weather.gov/), more deaths occur yearly due to flooding than 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 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.

As defined by FEMA, Flood zones are described in the table below.

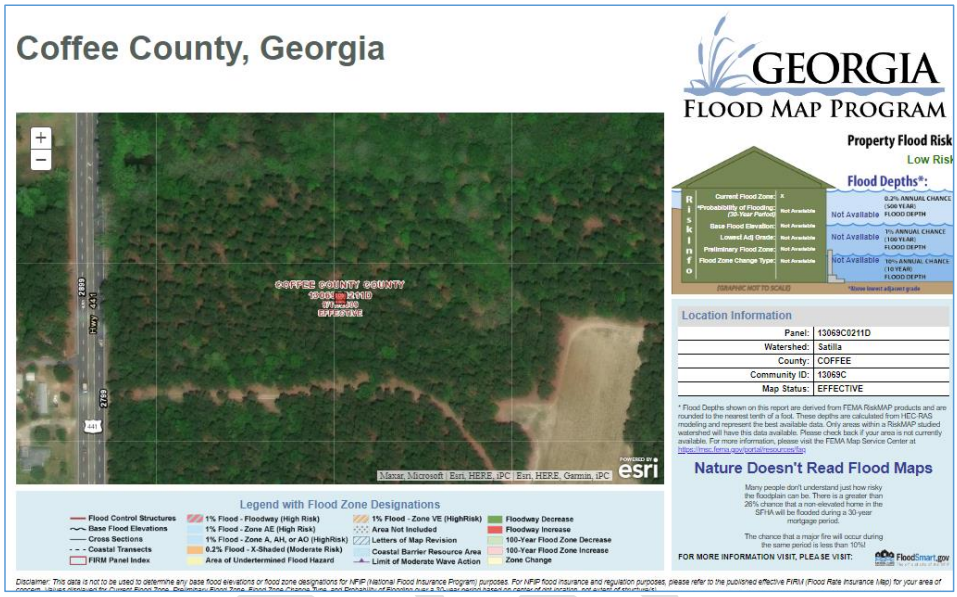
Flood Zone Designations and Descriptions

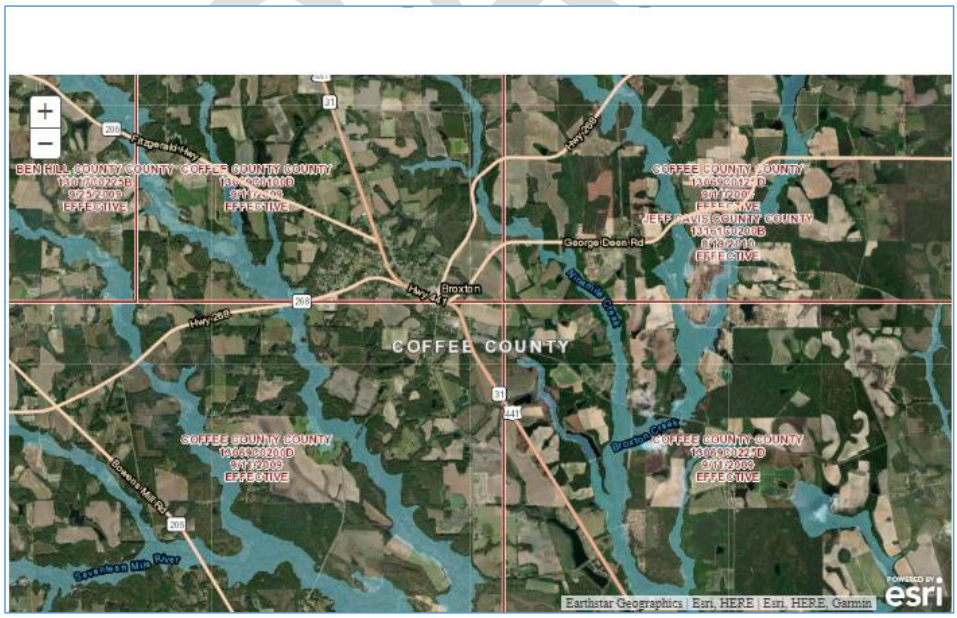
Source: FEMA (https://hazards.fema.gov/onlinelomc/ext/Help/loadInstructions)

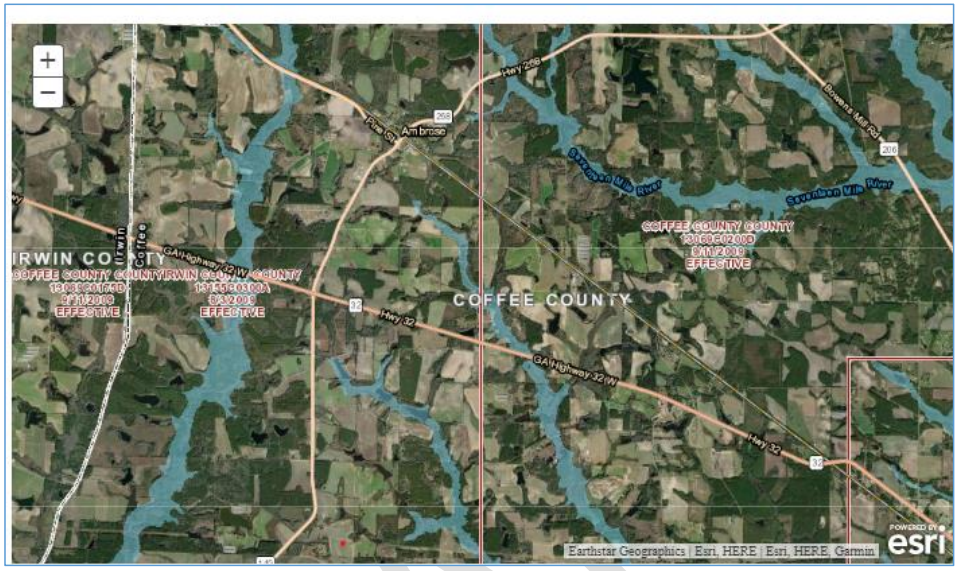
Zone Designations	Zone Descriptions
A	Areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage. Because detailed analyses are not performed for such areas, no depths or base flood elevations are shown within these zones.
AH	Areas with a 1% annual chance 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 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 have 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 have 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 have 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. They are also used to designate base floodplains of lesser hazards, such as areas protected by levees from 100-year flooding, 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. They are also used to designate base floodplains of lesser hazards, such as areas protected by levees from 100-year flooding, 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.

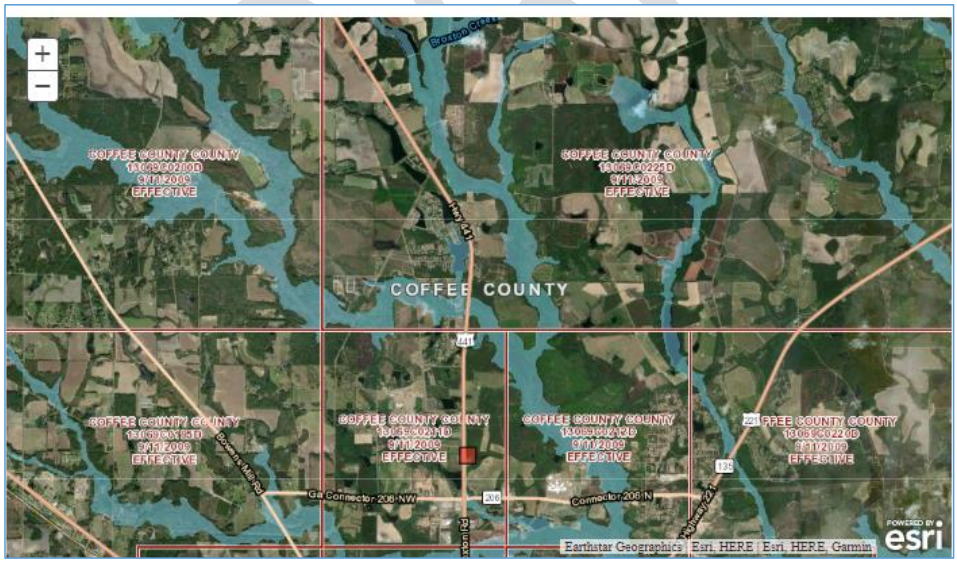
Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls are all vulnerable to the effects of flooding. Areas within flood zones are naturally more vulnerable.

The FIRM Maps for Coffee County and its cities are below:

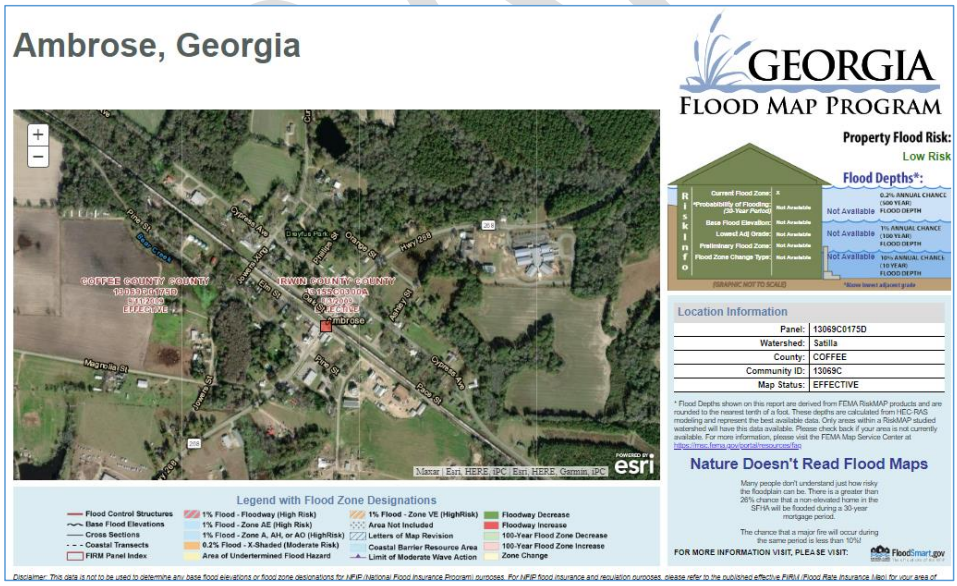


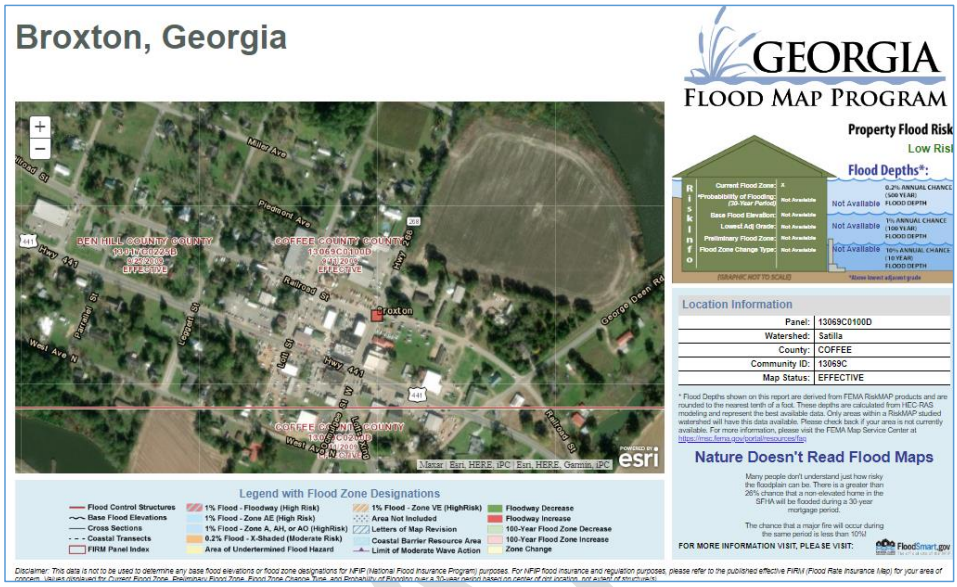



COFFEE COUNTY
Ambrose
Hwy 32
GA Highway 32 W
Hwy 206
Earthstar Geographics | Esri, HERE | Esri, HERE, Garmin
esri


COFFEE COUNTY
Hwy 441
Ga Connector 206 NW
Connector 206 N
Earthstar Geographics | Esri, HERE | Esri, HERE, Garmin
esri


COFFEE COUNTY COUNTY
13069C0215D
9/11/2009
EFFECTIVE
COFFEE COUNTY COUNTY
13069C0210D
9/11/2009
EFFECTIVE
COFFEE COUNTY COUNTY
13069C0225D
9/11/2009
EFFECTIVE
COFFEE COUNTY
Connector 206 NW
Connector 206 N
Rocky Mill Creek
Douglas
Ward St W
Ward St E
E Highway 32
W Baker Hwy
Seven Mile Creek
General Coffee State Park
Esri, HERE, Garmin
esri


Ambrose, Georgia
GEORGIA
FLOOD MAP PROGRAM
Property Flood Risk:
Low Risk
Flood Depths*:
Location Information
Panel: 13069C0175D
Watershed: Satilla
County: COFFEE
Community ID: 13069C
Map Status: EFFECTIVE
Nature Doesn't Read Flood Maps
FOR MORE INFORMATION VISIT, PLEASE VISIT:
FloodSmart.gov
Legend with Flood Zone Designations
Flood Control Structures
Base Flood Elevations
Cross Sections
Coastal Transects
FIRM Panel Index
1% Flood - Floodway (High Risk)
1% Flood - Zone AE (High Risk)
1% Flood - Zone A, AH, or AO (HighRisk)
0.2% Flood - X-Shaded (Moderate Risk)
Area of Undetermined Flood Hazard
1% Flood - Zone VE (HighRisk)
Area Not Included
Letters of Map Revision
Coastal Barrier Resource Area
Limit of Moderate Wave Action
Floodway Decrease
Floodway Increase
100-Year Flood Zone Decrease
100-Year Flood Zone Increase
Zone Change
Maxar | Esri, HERE, iPC | Esri, HERE, Garmin, iPC
esri


Broxton, Georgia
GEORGIA
FLOOD MAP PROGRAM
Property Flood Risk
Low Risk
Flood Depths*:
Location Information
Panel: 13069C0100D
Watershed: Satilla
County: COFFEE
Community ID: 13069C
Map Status: EFFECTIVE
Nature Doesn't Read Flood Maps
FOR MORE INFORMATION VISIT, PLEASE VISIT:
FloodSmart.gov
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Cross Sections
Coastal Transects
FIRM Panel Index
1% Flood - Floodway (High Risk)
1% Flood - Zone AE (High Risk)
1% Flood - Zone A, AH, or AO (HighRisk)
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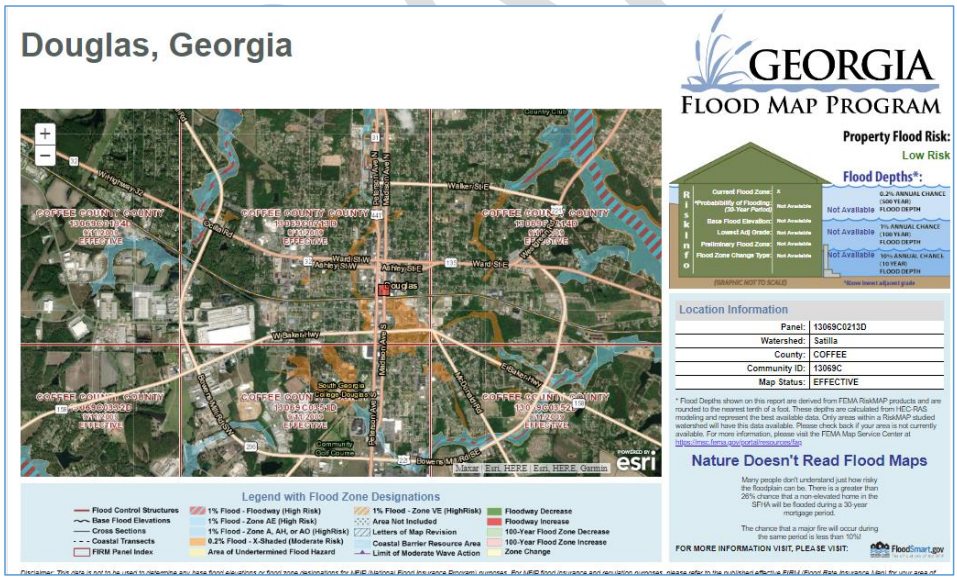
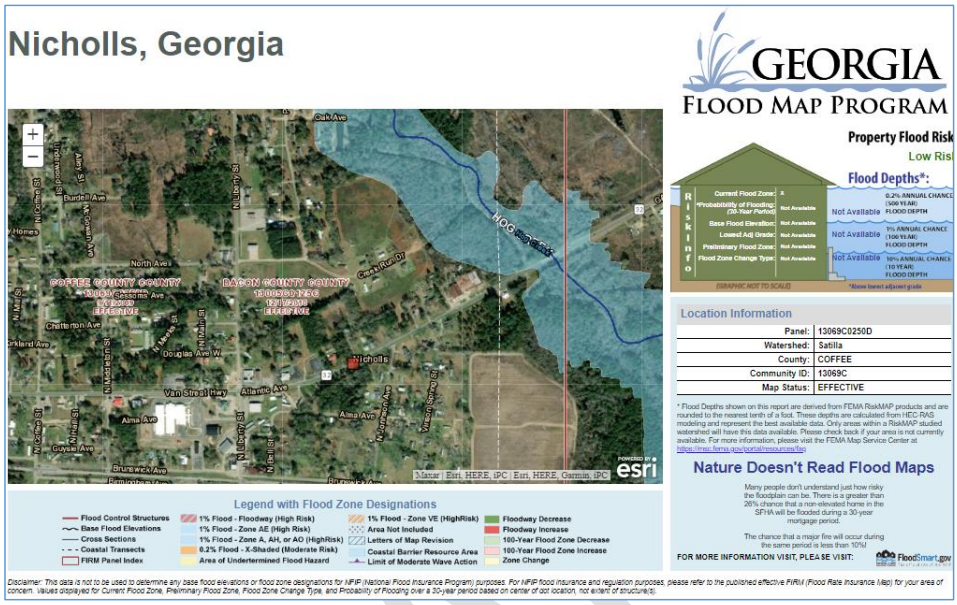
Area of Undetermined Flood Hazard
1% Flood - Zone VE (HighRisk)
Area Not Included
Letters of Map Revision
Coastal Barrier Resource Area
Limit of Moderate Wave Action
Floodway Decrease
Floodway Increase
100-Year Flood Zone Decrease
100-Year Flood Zone Increase
Zone Change

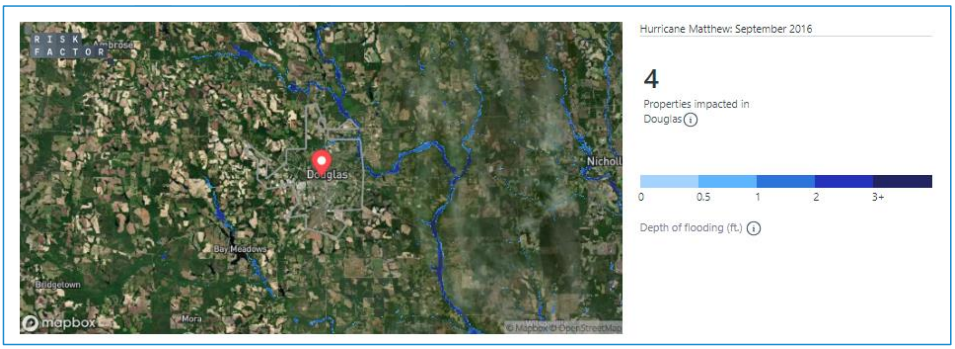

Douglas, Georgia
GEORGIA
FLOOD MAP PROGRAM
Property Flood Risk:
Low Risk
Flood Depths*:
Location Information
Panel: 13069C0213D
Watershed: Satilla
County: COFFEE
Community ID: 13069C
Map Status: EFFECTIVE
Nature Doesn't Read Flood Maps
FOR MORE INFORMATION VISIT, PLEASE VISIT:
FloodSmart.gov
Legend with Flood Zone Designations
Flood Control Structures
Base Flood Elevations
Cross Sections
Coastal Transects
FIRM Panel Index
1% Flood - Floodway (High Risk)
1% Flood - Zone AE (High Risk)
1% Flood - Zone A, AH, or AO (HighRisk)
0.2% Flood - X-Shaded (Moderate Risk)
Area of Undetermined Flood Hazard
1% Flood - Zone VE (HighRisk)
Area Not Included
Letters of Map Revision
Coastal Barrier Resource Area
Limit of Moderate Wave Action
Floodway Decrease
Floodway Increase
100-Year Flood Zone Decrease
100-Year Flood Zone Increase
Zone Change



B. Profile of Events, Frequency of Occurrences, Probability

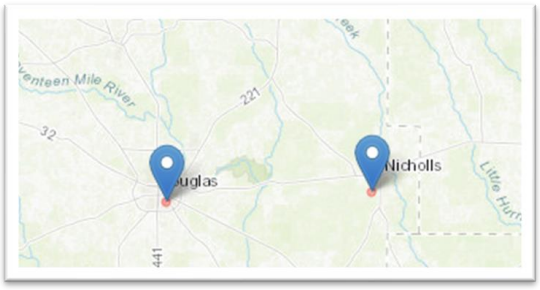
According to the NOAA Storm Events Database (see Appendix F), 12 reports of Floods occurred in Coffee County (including the Cities) between 01/01/1950 and 12/31/2022. The Historic Recurrence Interval is 6.00 years. This is a 16.67% Historic Frequency Chance per year. The past 10-year Record Frequency Per Year is 0.3, the past 20-year frequency is 0.6, and the past 50-year frequency is 0.24 (see the Hazard Frequency Table in Appendix D).

One historical flood event happened in September 2016, when four properties were impacted.

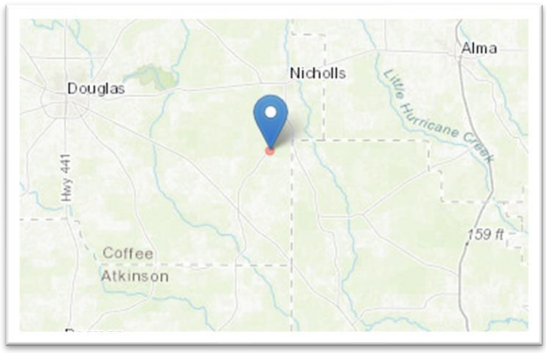


One flood event has occurred since the previous Hazard Mitigation Plan was completed. This event occurred on April 24, 2021. Severe storms across the Gulf approached SE Georgia midday with strong shear and high low-level helicity, favoring all severe weather hazards, including damaging winds, large hail, and tornadoes. In the late afternoon, more powerful storms developed and ran across south GA as the next strong upper-level trough approached, which caused another round of severe hazards, including tornadoes, damaging winds, and large hail, and at least 2 inches of standing water along Highway 32 between Douglas and Nicholls. Quarter-size hail was reported between unincorporated Wilsonville and Nicholls on Andrew Tanner Road. Trees and power lines were blown down near unincorporated Mora near Paradise Lane. An overturned vehicle was in the ditch, and the occupant could not be reached at the time of the report due to downed power lines.

Flooding



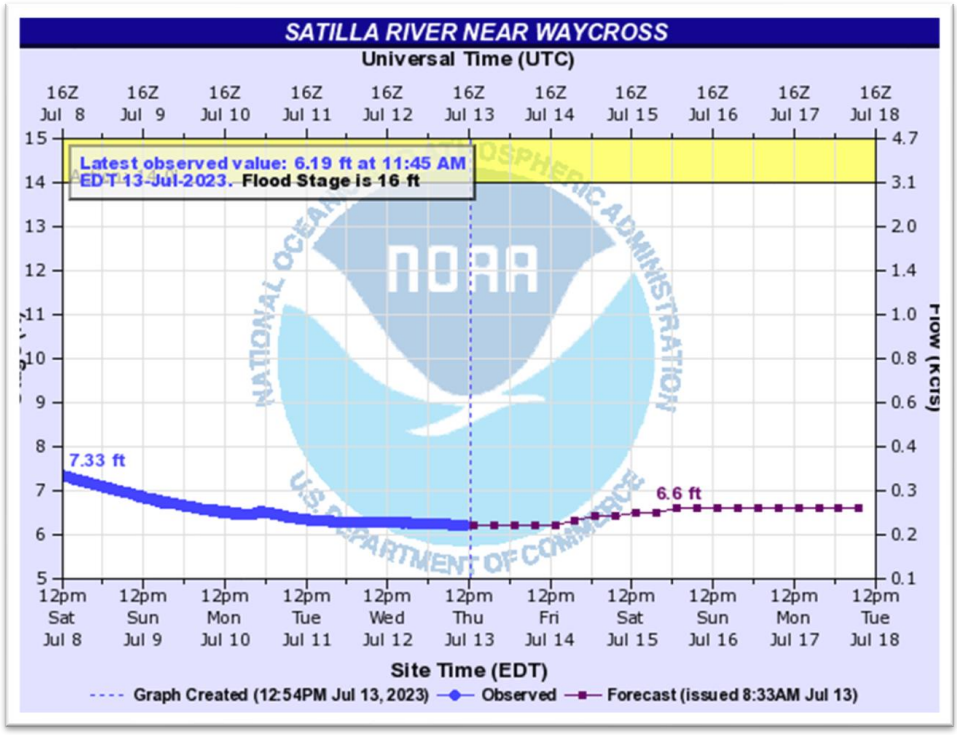
Hail

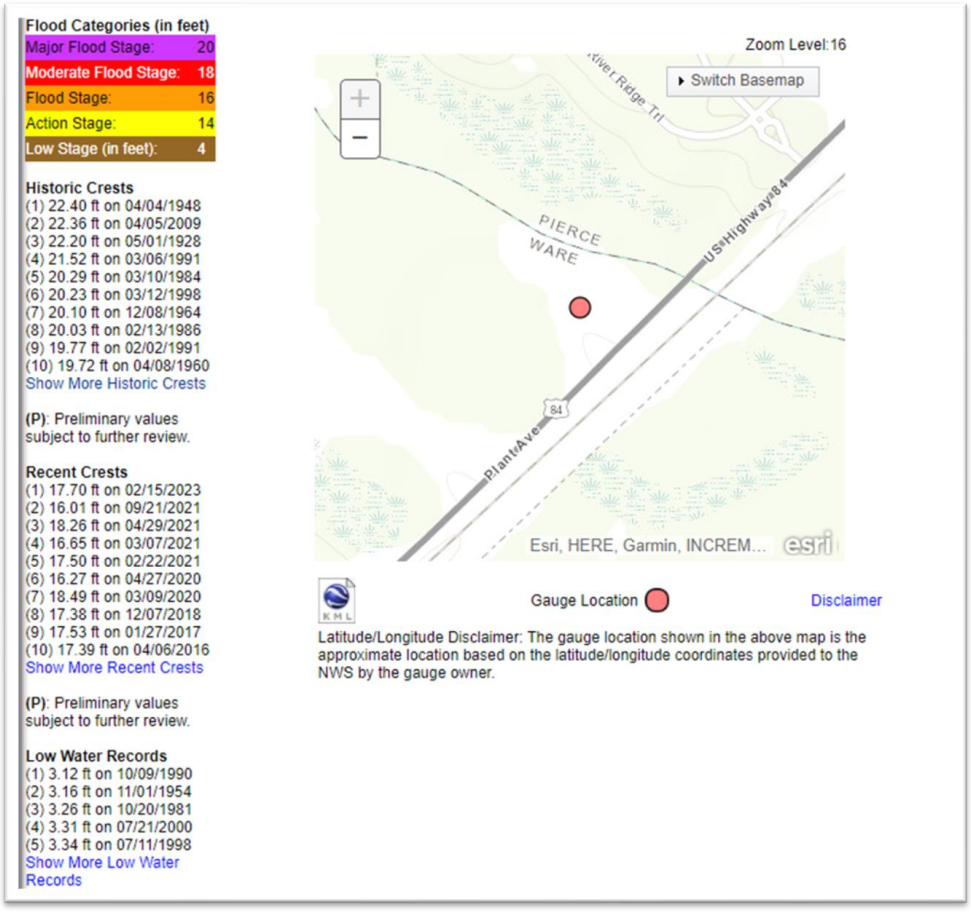


Trees and Power Lines Down

The charts below, generated on the NOAA website (*water.weather.gov*), show Flood Stages and Historic Crests for the Satilla River near Waycross, the nearest point on the Satilla River to Coffee County, Ambrose, Broxton, Douglas, and Nicholls.

The historical crests showed the highest crest of 22.40 feet in 1948.





Buildings in Coffee County are vulnerable to flooding from events equivalent to the 1% riverine flood. Table 9 summarizes the potential flood-related building damage in Coffee County by jurisdiction that might be experienced from the 1% flood. Figure 8 maps the potential loss ratios of total building exposure to losses sustained by buildings from the 1% flood by the 2010 census block. Figure 9 illustrates the relationship of building locations to the 1% flood inundation boundary.

Table 9: Coffee County Riverine 1% Building Losses

Occupancy Classification	Total Buildings	Total Buildings Damaged	Total Building Exposure	Total Losses to Buildings	Loss Ratio of Exposed to Damaged
Douglas					
Education	15	1	$ 16,186,255	$ 3,089	0.02%
Residential	3,588	41	$ 686,486,353	$ 1,612,535	0.23%
Government	43	2	$ 86,215,518	$ 187,852	0.22%
Industrial	246	5	$ 611,622,944	$ 621,358	0.10%
Commercial	652	21	$ 439,236,270	$ 905,879	0.21%
Nicholls					
Residential	327	10	$ 30,337,593	$ 255,933	0.84%
Unincorporated					
Religious	111	2	$ 55,566,936	$ 103,468	0.19%
Commercial	132	4	$ 56,014,826	$ 119,596	0.21%
Industrial	110	2	$ 171,823,344	$ 101,373	0.06%
Residential	9,814	311	$ 1,148,682,511	$ 10,279,685	0.89%
Education	13	1	$ 1,950,156	$ 4,105	0.21%
County Total					
Total	15,051	400	3,304,122,706	14,194,873	

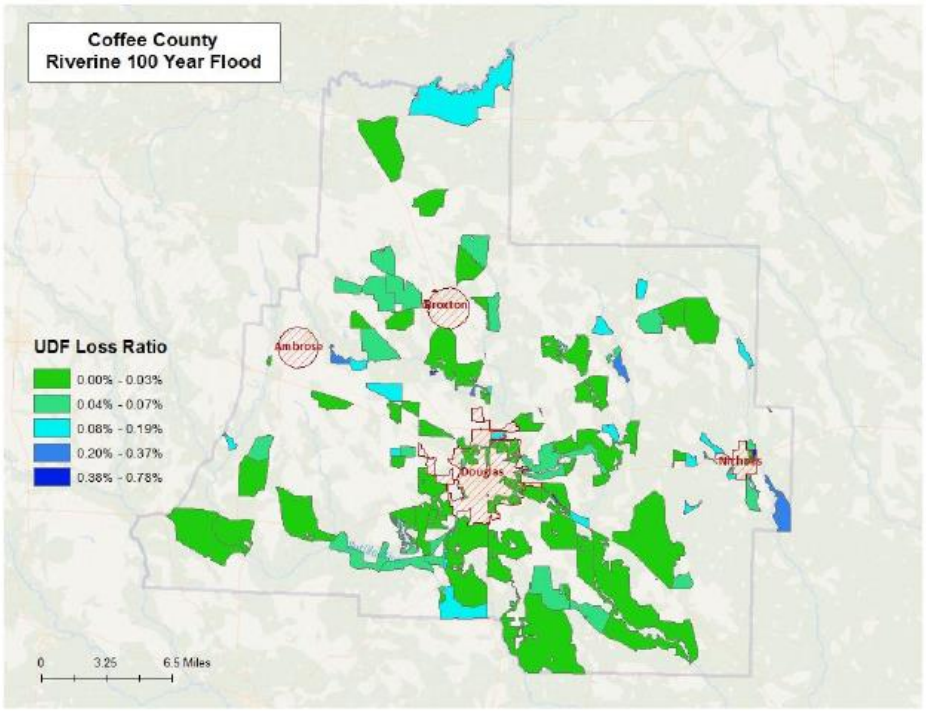


Figure 8: Potential UDF Loss Ratios from the 1% Riverine Flood

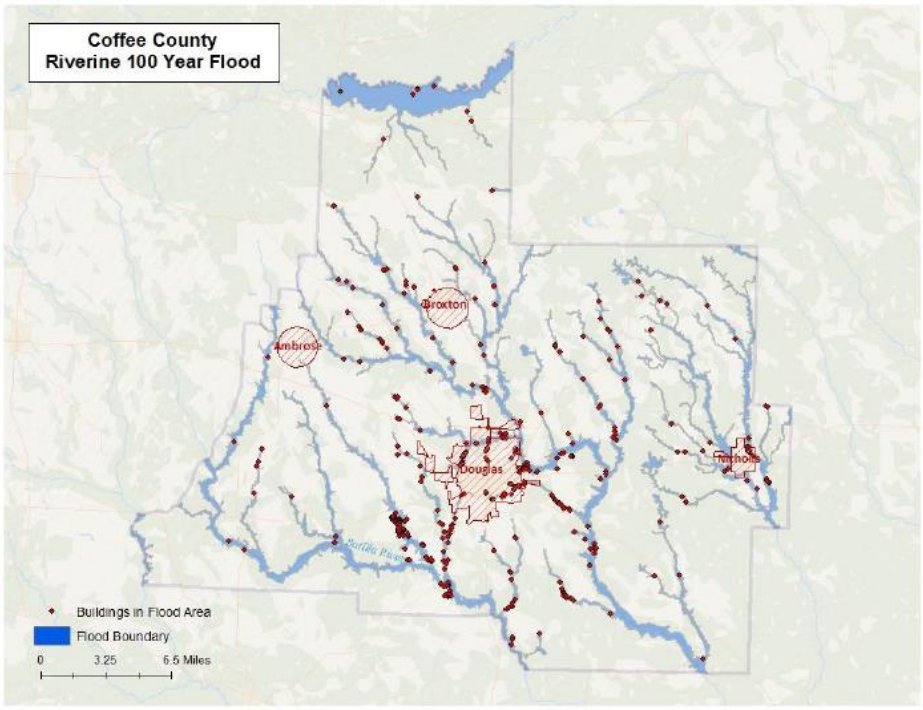


Figure 9: Damaged Buildings in 1% Riverine Flood

An essential facility may encounter many of the same impacts as other buildings within the flood boundary. These impacts can include structural failure, extensive water damage, and loss of facility functionality (e.g., a damaged police station will no longer be able to serve the community). The analysis has identified **0** Essential Facilities subject to damage in the Coffee County riverine 1% probability floodplain.

Table 10: Expected Damage to Essential Facilities in 1% Riverine Flood

Classification	Total	Moderate	Substantial	Loss of Use
Fire Station	14	0	0	0
Hospitals	1	0	0	0
Police Stations	6	0	0	0
Schools	41	0	0	0
EOCs	1	0	0	0

The model estimates that 811 households might be displaced due to the flood. Displacement includes households evacuated within or very near the inundated area. Displaced households represent 2,432 individuals, of which 1,146 may require short-term publicly provided shelter. The results are mapped in Figure 10. These numbers may be overestimated for two reasons: elevated housing not considered and parcel centroids (not aligned with actual structures).

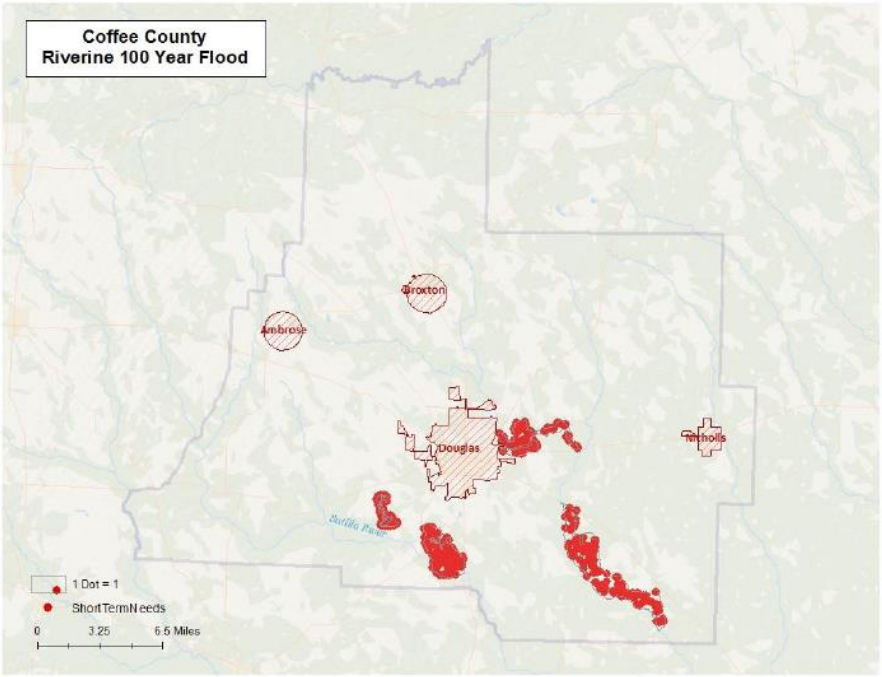


Figure 10: Estimated Flood Shelter Requirements in 1% Riverine Flood

The Hazard Risks Analysis estimates the number of debris generated by the flood. It breaks it down into three categories:

- Finishes (drywall, insulation, etc.)
- Structural (wood, brick, etc.)
- Foundations (concrete slab, concrete block, rebar, etc.)

The analysis estimates that about 6,341 tons of debris might be generated: 1) Finishes – 2,649 tons; 2) Structural – 1,327 tons; and 3) Foundations – 2,365 tons. The results are mapped in Figure 11.

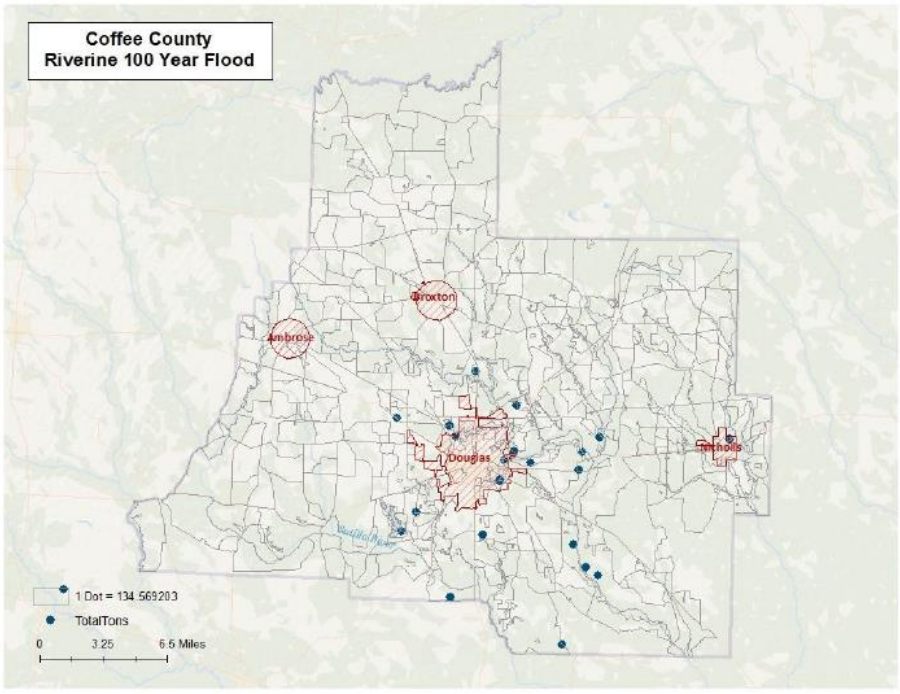


Figure 11: Flood Debris Weight (Tons) in 1% Riverine Flood

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

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

In Worksheet 3A: Inventory of Assets (appearing in Appendix A), we estimate that all of Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nichol are equally vulnerable to this hazard.

An estimated 1.96% of the Residential property (2,794 of 14,253) in Coffee County (including the Cities of Ambrose, Broxton, Douglas, and Nicholls) could be affected by this hazard, with a total value of $1,865,506,457. Also, an estimated 1.22% of the community's Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, and Education properties (197 of 1,613) may be affected, totaling $1,438,616,249 The values are based on the recently available tax roll data for Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls provided by the Coffee County Tax Assessor's Office.

Repetitive Loss Properties

Coffee County and Douglas have properties that have repetitive losses due to flood events. There have been 14 in Coffee County, and 2 in Douglas. Nine of those in Coffee County were insured and the two in Douglas were also insured. The total paid out for these losses is $462,343.51. See chart below from the Georgia Mitigations Information System:

Repetitive Loss Properties

Property Address*	City	Community	Latitude	Longitude	County	# of Losses	Total Paid*	Insured	Mitigated Pro
240 RIVERDALE DR	BROXTON	COFFEE COUNTY*	31.569206	-82.85319	Coffee	3	62142.69	NO	0
142 RIVER RUN RD	BROXTON	COFFEE COUNTY*	31.569583	-82.857608	Coffee	3	78066.94	YES	0
178 RIVERRUN RD	BROXTON	COFFEE COUNTY*	31.569301	-82.857622	Coffee	2	39783.35	NO	0
201 CLIFF DR	DOUGLAS	DOUGLAS, CITY OF	31.512255	-82.872919	Coffee	2	9044.75	YES	0
1399 BEAR CREEK RD	DOUGLAS	COFFEE COUNTY*	31.44019238...	-82.8926149...	Coffee	2	95192.5	YES	0
1875 SAND HILL CHURCH RD	DOUGLAS	COFFEE COUNTY*	31.53168489...	-82.7455361...	Coffee	3	99581.66	NO	0
178 RIVER RUN RD	BROXTON	COFFEE COUNTY*	31.56747110...	-82.8554141...	Coffee	2	78531.62	YES	0

Damage to crops is not considered in any of these figures. According to the Center for Agribusiness & Economic Development's 2021 Georgia Farm Gate Value Report (Farm Gate Value | Georgia Data), the total farm gate value of agricultural production in Coffee County is $307,975,080.

Many individuals do not have access to transportation and thus are susceptible to weather hazards. It is essential to notify these individuals through weather radios, radio stations, and other means so that they may seek shelter and/or plan for transportation to shelter facilities. Therefore, organizations prepare for pending flood hazard events.

The GMIS report lists 8 Repetitive Loss/NFIP properties in Coffee County, including the Cities. All are residential properties. Six are in unincorporated Coffee County, and one is in Douglas.

E. Land Use and Development Trends

Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls have seen considerable population changes over the last few years. Both the City of Douglas and the County have seen slight gains in population. The City of Ambrose has seen considerable population growth, and the City of Broxton has seen a decline in population. The City of Nicholls's population has increased significantly with the City's annexation of Coffee Correctional Facility, which has a capacity of approximately 3,000 inmates.

Coffee County and the Cities of Broxton, Douglas, and Nicholls have zoning regulations; Ambrose does not. All jurisdictions have mandatory building and fire codes enforced by the building inspector. The county and cities participate in joint comprehensive planning and the required updates of the Service Delivery Strategy. No other land use or development trends related to this hazard have been identified.

The City of Douglas has a Code Enforcement Officer and a Building Inspector who handle flood prevention. They are the designees who enforce the National Flood Insurance Program. They review permit applications or zoning complaints for Douglas. Before any permit is issued, permits must comply with all building and flood requirements.

Coffee County has a Code Enforcement Officer and a Building Inspector for flood prevention. This Officer/Inspector also handles this for the cities of Ambrose, Broxton, and Nicholls. The Code Enforcement Officer/Building Inspector is also the designee that enforces the National Flood Insurance Program.

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

NFIP Substantial Damage Regulations for the County and Each Jurisdiction

- ◊ The Building Inspector will prepare detailed documentation of the substantial damage determinations following a flood event or any other event that causes damage to structures in the flood hazard areas, including cost estimation and calculations. NFIP will use the following criteria:
- ◊ The Building Inspector will perform damage assessment after each hazard event; property owners will be informed of how to apply for permits for repairs and determine if the damage that has occurred qualifies as substantial damage. This documentation will be essential for official determinations, insurance claims, or assistance applications. The Inspector coordinates with the property owners and insurance adjusters on all NFIP insurance claims and Increased Cost of Compliance (ICC) coverage.
- ◊ The Building Inspector will review permit applications for buildings in the particular flood hazard area to determine if the requested work constitutes SI (substantial improvements) or SD (substantial damage) repairs and ensure all requirements are addressed.
- ◊ The Building Inspector will review cost estimates of the proposed work to ensure they are reasonable, using the current market value of the structure and its characteristics while excluding land value. The inspector will use the market value to determine if the proposed improvements meet SI requirements or use the market value before the damage to determine if repairs meet SD requirements.
- ◊ The Building Inspector will conduct inspections during construction to ensure it complies with issued permits and work with owners to correct any violations found.
- ◊ The Building Inspector shall coordinate with property owners and insurance adjusters on all NFIP flood insurance claims and Increased Cost of Compliance (ICC) coverage.

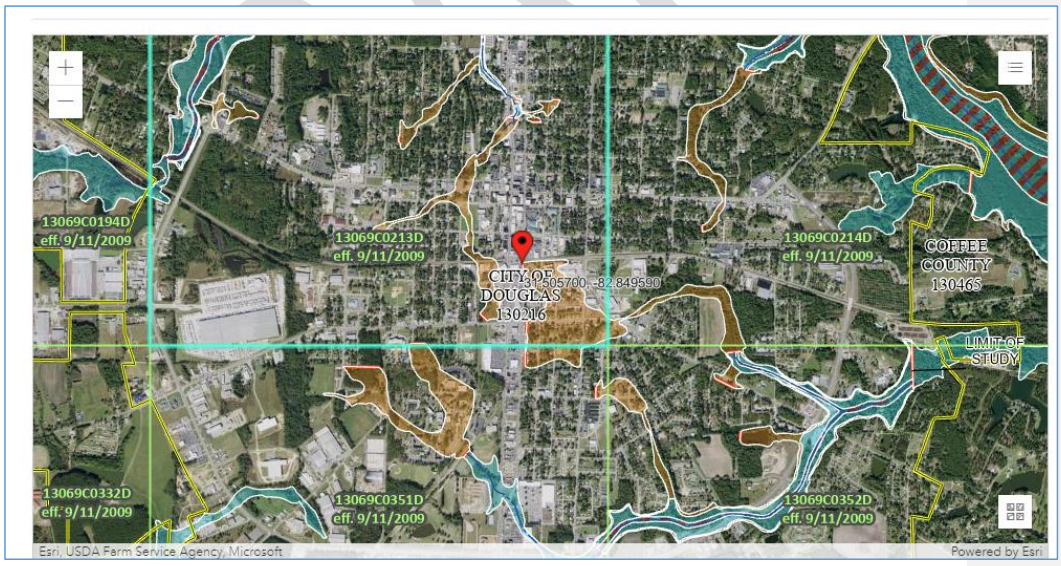
Since the previous plan was approved, there have not been any new developments, regulations, programs, or other changes in the community that would either increase or decrease the community's overall vulnerability to this hazard.

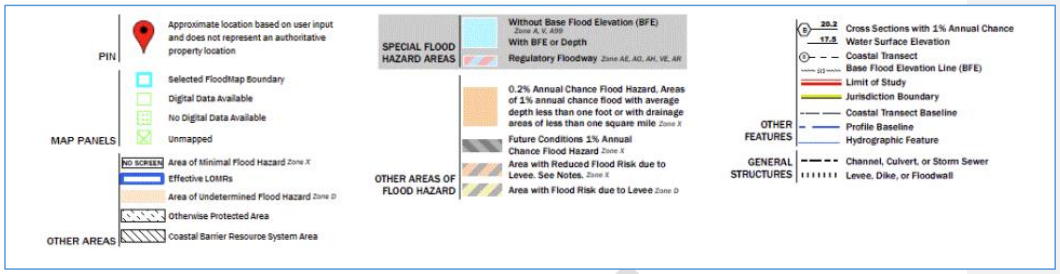
Coffee County and the cities have used various funds to mitigate potential flood damage. Recently, they have used CBDG and other funding for these projects. Coffee County has drainage projects in its Comprehensive Plan and hopes to utilize additional CDBG funding. There are other road improvement projects throughout the county and cities where CBGG's and other funding sources will be used for funding. The county and cities also maintain their storm drainage system on a regular schedule to prevent flooding issues.

The communities have documented damage assessments after storms with cost estimation and calculations. This helps to determine insurance claims or assistance applications.

F. Multi-Jurisdictional Differences

According to FEMA data, 12.0% of the total area of Coffee County (46,100 acres) is within a flood zone (11.1% in Zone A, 0.7% in Zone AE, and 0.1% in the 0.2 percent annual chance flood hazard zone). Approximately 1.1% of the City of Ambrose (22 acres) is within a flood zone. Approximately 0.5% of the City of Broxton (11.3 acres) is within a flood zone. Approximately 11.4% of the City of Douglas (1,055 acres) is within a flood zone. Approximately 12.3% of the City of Nicholls (134.5 acres) is within a flood zone.

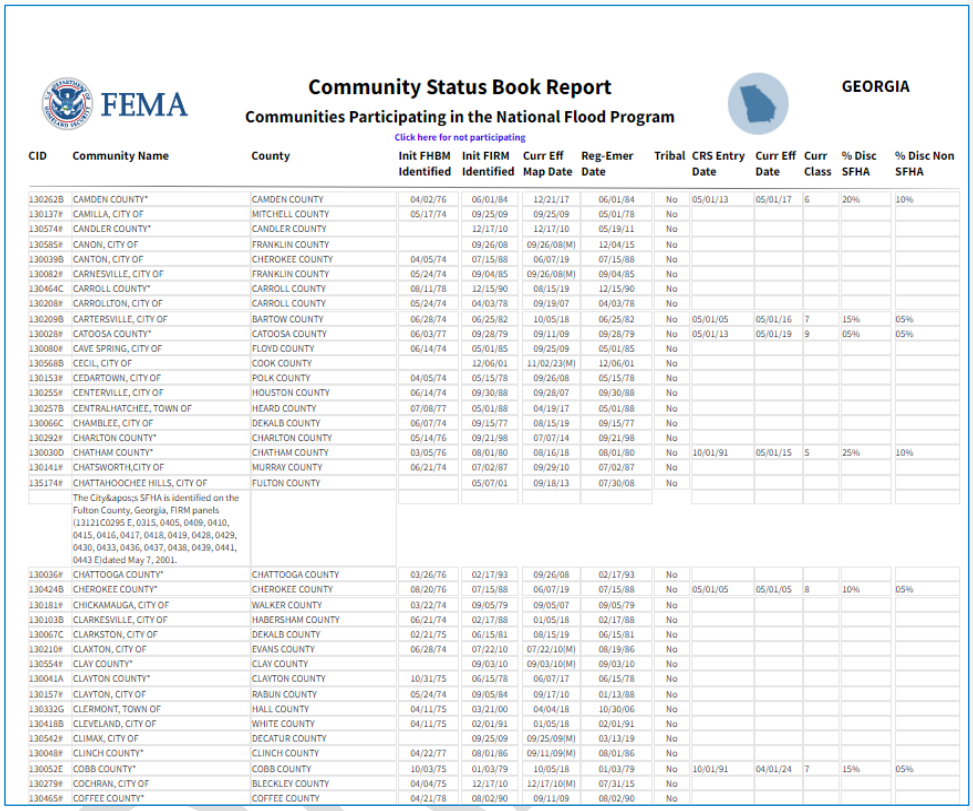




Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls are members of the National Flood Insurance Program; the Cities of Ambrose, Broxton, and Nicholls are not (source: https://www.fema.gov/cis/GA.html) due to the relatively small portion of those jurisdictions that is within a flood zone and due to decisions made at the discretion of local leaders. However, this plan calls for those Cities to join the program as soon as possible. Coffee County and the Cities of Ambrose, Broxton, and Nicholls do not participate in the Community Rating System (CRS) program. As of October 1, 2023, they were not eligible, according to FEMA (source: http://www.fema.gov/library/viewRecord.do?id=3629). As of October 1, 2023, Douglas does participate in the CRS Program.

Coffee County's Initial FIRM date was identified as 8/02/90, and the Current Effective Map Date is 9/11/90. The City of Douglas's FIRM date is 7/16/79, and the Map Effective Date is 9/11/09. Ambrose, Broxton, and Nicholls City's identified FIRM dates were 8/02/90, and the Current Effective Date is 9/11/90.

As of October 31, 2023, Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls follow NFIP requirements and intend to remain compliant by enforcing a flood ordinance that prohibits or severely limits floodplain development.



FEMA

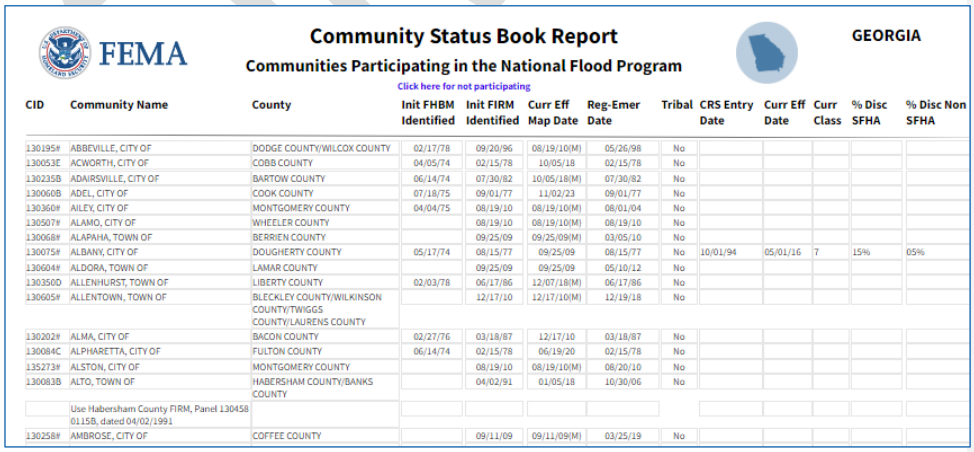
Community Status Book Report

Communities Participating in the National Flood Program

GEORGIA

Click here for not participating

CID	Community Name	County	Init FHBM Identified	Init FIRM Identified	Curr Eff Map Date	Reg-Emer Date	Tribal	CRS Entry Date	Curr Eff Date	Curr Class	% Disc SFHA	% Disc Non SFHA
130262B	CAMDEN COUNTY*	CAMDEN COUNTY	04/02/76	06/01/84	12/21/17	06/01/84	No	05/01/13	05/01/17	6	20%	10%
130137#	CAMILLA, CITY OF	MITCHELL COUNTY	05/17/74	09/25/09	09/25/09	05/01/78	No					
130574#	CANDLER COUNTY*	CANDLER COUNTY		12/17/10	12/17/10	05/19/11	No					
130585#	CANON, CITY OF	FRANKLIN COUNTY		09/26/08	09/26/08(M)	12/04/15	No					
130039B	CANTON, CITY OF	CHEROKEE COUNTY	04/05/74	07/15/88	06/07/19	07/15/88	No					
130082#	CARNESVILLE, CITY OF	FRANKLIN COUNTY	05/24/74	09/04/85	09/26/08(M)	09/04/85	No					
130464C	CARROLL COUNTY*	CARROLL COUNTY	08/11/78	12/15/90	08/15/19	12/15/90	No					
130208#	CARROLLTON, CITY OF	CARROLL COUNTY	05/24/74	04/03/78	09/19/07	04/03/78	No					
130209B	CARTERSVILLE, CITY OF	BARTOW COUNTY	06/28/74	06/25/82	10/05/18	06/25/82	No	05/01/05	05/01/16	7	15%	05%
130028#	CATOOSA COUNTY*	CATOOSA COUNTY	06/03/77	09/28/79	09/11/09	09/28/79	No	05/01/13	05/01/19	9	05%	05%
130080#	CAVE SPRING, CITY OF	FLOYD COUNTY	06/14/74	05/01/85	09/25/09	05/01/85	No					
130568B	CECIL, CITY OF	COOK COUNTY		12/06/01	11/02/23(M)	12/06/01	No					
130153#	CEDARTOWN, CITY OF	POLK COUNTY	04/05/74	05/15/78	09/26/08	05/15/78	No					
130255#	CENTERVILLE, CITY OF	HOUSTON COUNTY	06/14/74	09/30/88	09/28/07	09/30/88	No					
130257B	CENTRALHATCHEE, TOWN OF	HEARD COUNTY	07/08/77	05/01/88	04/19/17	05/01/88	No					
130066C	CHAMBLEE, CITY OF	DEKALB COUNTY	06/07/74	09/15/77	08/15/19	09/15/77	No					
130292#	CHARLTON COUNTY*	CHARLTON COUNTY	05/14/76	09/21/98	07/07/14	09/21/98	No					
130030D	CHATHAM COUNTY*	CHATHAM COUNTY	03/05/76	08/01/80	08/16/18	08/01/80	No	10/01/91	05/01/15	5	25%	10%
130141#	CHATSWORTH,CITY OF	MURRAY COUNTY	06/21/74	07/02/87	09/29/10	07/02/87	No					
135174#	CHATTAHOOCHEE HILLS, CITY OF	FULTON COUNTY		05/07/01	09/18/13	07/30/08	No					
	The City's SFHA is identified on the Fulton County, Georgia, FIRM panels (13121C0295 E, 0315, 0405, 0409, 0410, 0415, 0416, 0417, 0418, 0419, 0428, 0429, 0430, 0433, 0436, 0437, 0438, 0439, 0441, 0443 E)dated May 7, 2001.											
130036#	CHATTOOGA COUNTY*	CHATTOOGA COUNTY	03/26/76	02/17/93	09/26/08	02/17/93	No					
130424B	CHEROKEE COUNTY*	CHEROKEE COUNTY	08/20/76	07/15/88	06/07/19	07/15/88	No	05/01/05	05/01/05	8	10%	05%
130181#	CHICKAMAUGA, CITY OF	WALKER COUNTY	03/22/74	09/05/79	09/05/07	09/05/79	No					
130103B	CLARKESVILLE, CITY OF	HABERSHAM COUNTY	06/21/74	02/17/88	01/05/18	02/17/88	No					
130067C	CLARKSTON, CITY OF	DEKALB COUNTY	02/21/75	06/15/81	08/15/19	06/15/81	No					
130210#	CLAXTON, CITY OF	EVANS COUNTY	06/28/74	07/22/10	07/22/10(M)	08/19/86	No					
130554#	CLAY COUNTY*	CLAY COUNTY		09/03/10	09/03/10(M)	09/03/10	No					
130041A	CLAYTON COUNTY*	CLAYTON COUNTY	10/31/75	06/15/78	06/07/17	06/15/78	No					
130157#	CLAYTON, CITY OF	RABUN COUNTY	05/24/74	09/05/84	09/17/10	01/13/88	No					
130332G	CLERMONT, TOWN OF	HALL COUNTY	04/11/75	03/21/00	04/04/18	10/30/06	No					
130418B	CLEVELAND, CITY OF	WHITE COUNTY	04/11/75	02/01/91	01/05/18	02/01/91	No					
130542#	CLIMAX, CITY OF	DECATUR COUNTY		09/25/09	09/25/09(M)	03/13/19	No					
130048#	CLINCH COUNTY*	CLINCH COUNTY	04/22/77	08/01/86	09/11/09(M)	08/01/86	No					
130052E	COBB COUNTY*	COBB COUNTY	10/03/75	01/03/79	10/05/18	01/03/79	No	10/01/91	04/01/24	7	15%	05%
130279#	COCHRAN, CITY OF	BLECKLEY COUNTY	04/04/75	12/17/10	12/17/10(M)	07/31/15	No					
130465#	COFFEE COUNTY*	COFFEE COUNTY	04/21/78	08/02/90	09/11/09	08/02/90	No					



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Communities Participating in the National Flood Program

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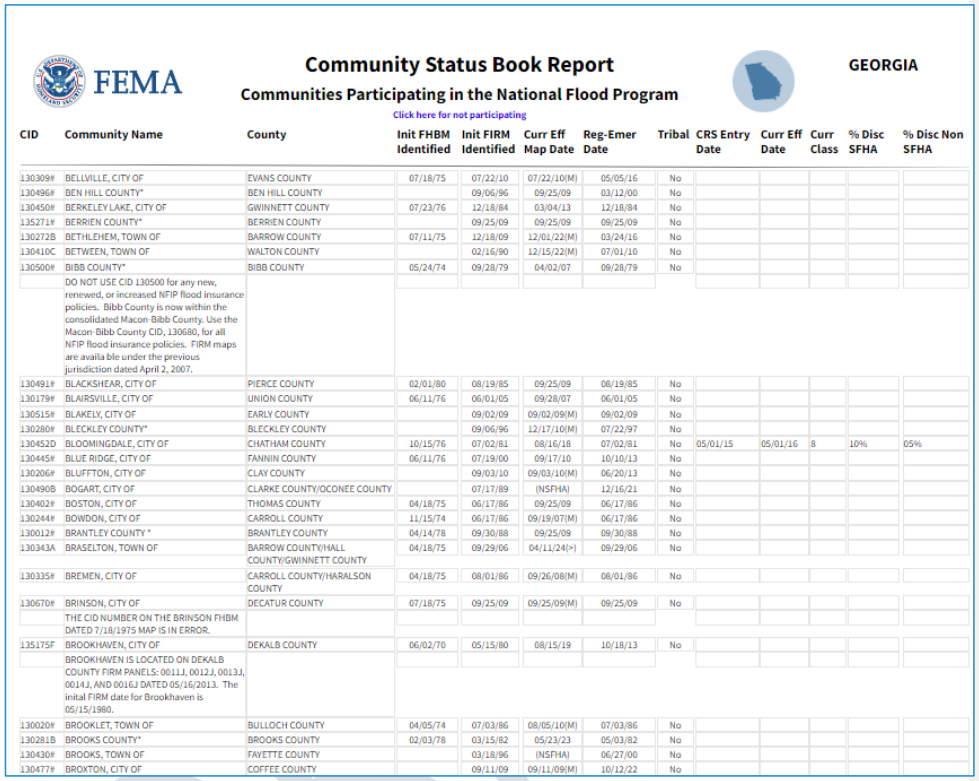
130195#	ABBEVILLE, CITY OF	DODGE COUNTY/WILCOX COUNTY	02/17/78	09/20/96	08/19/10(M)	05/26/98	No					
130053E	ACWORTH, CITY OF	COBB COUNTY	04/05/74	02/15/78	10/05/18	02/15/78	No					
130235B	ADAIRSVILLE, CITY OF	BARTOW COUNTY	06/14/74	07/30/82	10/05/18(M)	07/30/82	No					
130060B	ADEL, CITY OF	COOK COUNTY	07/18/75	09/01/77	11/02/23	09/01/77	No					
130360#	AILEY, CITY OF	MONTGOMERY COUNTY	04/04/75	08/19/10	08/19/10(M)	08/01/04	No					
130507#	ALAMO, CITY OF	WHEELER COUNTY		08/19/10	08/19/10(M)	08/19/10	No					
130068#	ALAPAHA, TOWN OF	BERRIEN COUNTY		09/25/09	09/25/09(M)	03/05/10	No					
130075#	ALBANY, CITY OF	DOUGHERTY COUNTY	05/17/74	08/15/77	09/25/09	08/15/77	No	10/01/94	05/01/16	7	15%	05%
130604#	ALDORA, TOWN OF	LAMAR COUNTY		09/25/09	09/25/09	05/10/12	No					
130350D	ALLENHURST, TOWN OF	LIBERTY COUNTY	02/03/78	06/17/86	12/07/18(M)	06/17/86	No					
130605#	ALLENTOWN, TOWN OF	BLECKLEY COUNTY/WILKINSON COUNTY/TWIGGS COUNTY/LAURENS COUNTY		12/17/10	12/17/10(M)	12/19/18	No					
130202#	ALMA, CITY OF	BACON COUNTY	02/27/76	03/18/87	12/17/10	03/18/87	No					
130084C	ALPHARETTA, CITY OF	FULTON COUNTY	06/14/74	02/15/78	06/19/20	02/15/78	No					
135273#	ALSTON, CITY OF	MONTGOMERY COUNTY		08/19/10	08/19/10(M)	08/20/10	No					
130083B	ALTO, TOWN OF	HABERSHAM COUNTY/BANKS COUNTY		04/02/91	01/05/18	10/30/06	No					
	Use Habersham County FIRM, Panel 130458 0115B, dated 04/02/1991											
130258#	AMBROSE, CITY OF	COFFEE COUNTY		09/11/09	09/11/09(M)	03/25/19	No					



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Community Status Book Report

Communities Participating in the National Flood Program

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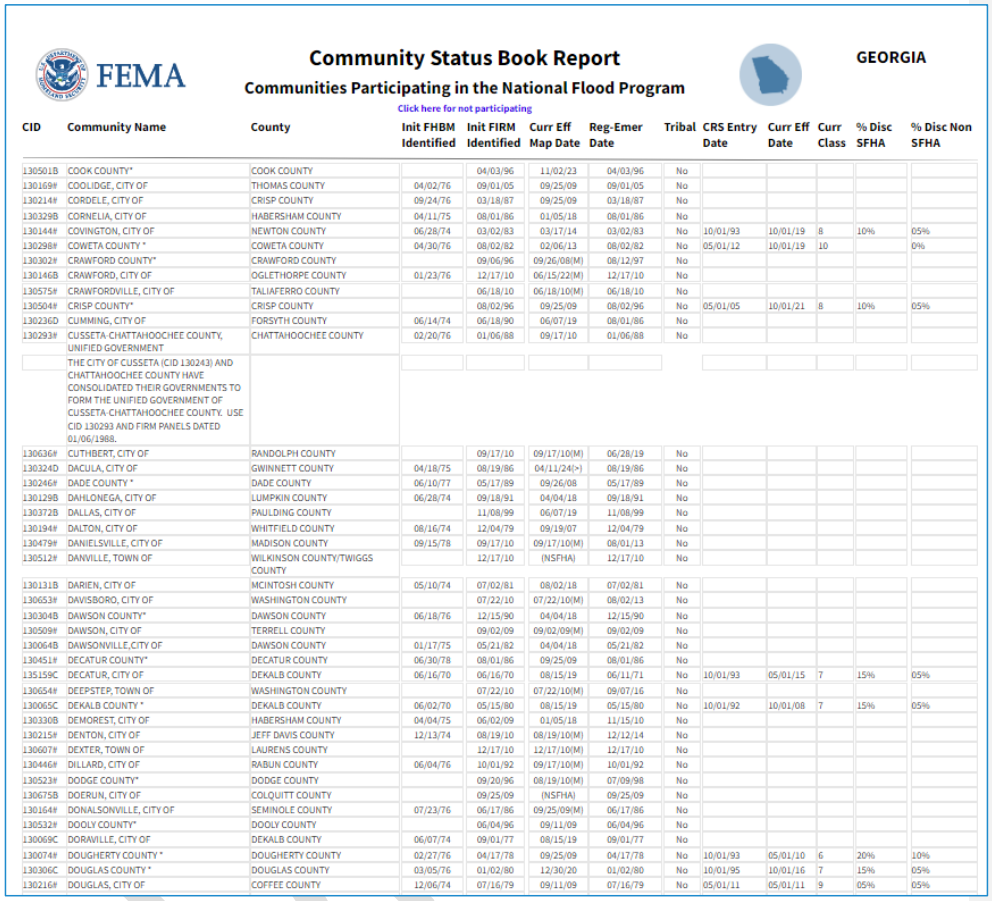
130309#	BELLVILLE, CITY OF	EVANS COUNTY	07/18/75	07/22/10	07/22/10(M)	05/05/16	No					
130496#	BEN HILL COUNTY*	BEN HILL COUNTY		09/06/96	09/25/09	03/12/00	No					
130450#	BERKELEY LAKE, CITY OF	GWINNETT COUNTY	07/23/76	12/18/84	03/04/13	12/18/84	No					
135271#	BERRIEN COUNTY*	BERRIEN COUNTY		09/25/09	09/25/09	09/25/09	No					
130272B	BETHLEHEM, TOWN OF	BARROW COUNTY	07/11/75	12/18/09	12/01/22(M)	03/24/16	No					
130410C	BETWEEN, TOWN OF	WALTON COUNTY		02/16/90	12/15/22(M)	07/01/10	No					
130500#	BIBB COUNTY*	BIBB COUNTY	05/24/74	09/28/79	04/02/07	09/28/79	No					
	DO NOT USE CID 130500 for any new, renewed, or increased NFIP flood insurance policies. Bibb County is now within the consolidated Macon-Bibb County. Use the Macon-Bibb County CID, 130680, for all NFIP flood insurance policies. FIRM maps are availa ble under the previous jurisdiction dated April 2, 2007.											
130491#	BLACKSHEAR, CITY OF	PIERCE COUNTY	02/01/80	08/19/85	09/25/09	08/19/85	No					
130179#	BLAIRSVILLE, CITY OF	UNION COUNTY	06/11/76	06/01/05	09/28/07	06/01/05	No					
130515#	BLAKELY, CITY OF	EARLY COUNTY		09/02/09	09/02/09(M)	09/02/09	No					
130280#	BLECKLEY COUNTY*	BLECKLEY COUNTY		09/06/96	12/17/10(M)	07/22/97	No					
130452D	BLOOMINGDALE, CITY OF	CHATHAM COUNTY	10/15/76	07/02/81	08/16/18	07/02/81	No	05/01/15	05/01/16	8	10%	05%
130445#	BLUE RIDGE, CITY OF	FANNIN COUNTY	06/11/76	07/19/00	09/17/10	10/10/13	No					
130206#	BLUFFTON, CITY OF	CLAY COUNTY		09/03/10	09/03/10(M)	06/20/13	No					
130490B	BOGART, CITY OF	CLARKE COUNTY/OCONEE COUNTY		07/17/89	(NSFHA)	12/16/21	No					
130402#	BOSTON, CITY OF	THOMAS COUNTY	04/18/75	06/17/86	09/25/09	06/17/86	No					
130244#	BOWDON, CITY OF	CARROLL COUNTY	11/15/74	06/17/86	09/19/07(M)	06/17/86	No					
130012#	BRANTLEY COUNTY *	BRANTLEY COUNTY	04/14/78	09/30/88	09/25/09	09/30/88	No					
130343A	BRASELTON, TOWN OF	BARROW COUNTY/HALL COUNTY/GWINNETT COUNTY	04/18/75	09/29/06	04/11/24(>)	09/29/06	No					
130335#	BREMEN, CITY OF	CARROLL COUNTY/HARALSON COUNTY	04/18/75	08/01/86	09/26/08(M)	08/01/86	No					
130670#	BRINSON, CITY OF	DECATUR COUNTY	07/18/75	09/25/09	09/25/09(M)	09/25/09	No					
	THE CID NUMBER ON THE BRINSON FHBM DATED 7/18/1975 MAP IS IN ERROR.											
135175F	BROOKHAVEN, CITY OF	DEKALB COUNTY	06/02/70	05/15/80	08/15/19	10/18/13	No					
	BROOKHAVEN IS LOCATED ON DEKALB COUNTY FIRM PANELS: 0011J, 0012J, 0013J, 0014J, AND 0016J DATED 05/16/2013. The inital FIRM date for Brookhaven is 05/15/1980.											
130020#	BROOKLET, TOWN OF	BULLOCH COUNTY	04/05/74	07/03/86	08/05/10(M)	07/03/86	No					
130281B	BROOKS COUNTY*	BROOKS COUNTY	02/03/78	03/15/82	05/23/23	05/03/82	No					
130430#	BROOKS, TOWN OF	FAYETTE COUNTY		03/18/96	(NSFHA)	06/27/00	No					
130477#	BROXTON, CITY OF	COFFEE COUNTY		09/11/09	09/11/09(M)	10/12/22	No					



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Community Status Book Report

Communities Participating in the National Flood Program

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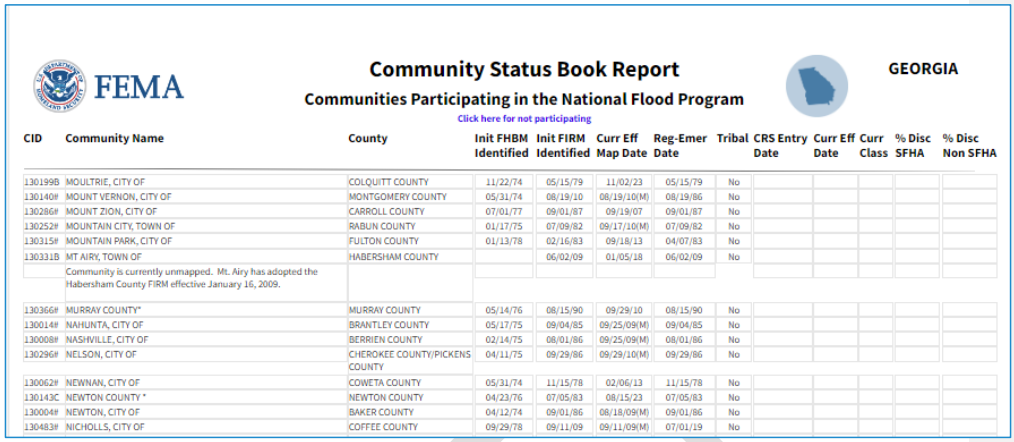
130501B	COOK COUNTY*	COOK COUNTY		04/03/96	11/02/23	04/03/96	No					
130169#	COOLIDGE, CITY OF	THOMAS COUNTY	04/02/76	09/01/05	09/25/09	09/01/05	No					
130214#	CORDELE, CITY OF	CRISP COUNTY	09/24/76	03/18/87	09/25/09	03/18/87	No					
130329B	CORNELIA, CITY OF	HABERSHAM COUNTY	04/11/75	08/01/86	01/05/18	08/01/86	No					
130144#	COVINGTON, CITY OF	NEWTON COUNTY	06/28/74	03/02/83	03/17/14	03/02/83	No	10/01/93	10/01/19	8	10%	05%
130298#	COWETA COUNTY *	COWETA COUNTY	04/30/76	08/02/82	02/06/13	08/02/82	No	05/01/12	10/01/19	10		0%
130302#	CRAWFORD COUNTY*	CRAWFORD COUNTY		09/06/96	09/26/08(M)	08/12/97	No					
130146B	CRAWFORD, CITY OF	OGLETHORPE COUNTY	01/23/76	12/17/10	06/15/22(M)	12/17/10	No					
130575#	CRAWFORDVILLE, CITY OF	TALIAFERRO COUNTY		06/18/10	06/18/10(M)	06/18/10	No					
130504#	CRISP COUNTY*	CRISP COUNTY		08/02/96	09/25/09	08/02/96	No	05/01/05	10/01/21	8	10%	05%
130236D	CUMMING, CITY OF	FORSYTH COUNTY	06/14/74	06/18/90	06/07/19	08/01/86	No					
130293#	CUSSETA-CHATTAHOOCHEE COUNTY, UNIFIED GOVERNMENT	CHATTAHOOCHEE COUNTY	02/20/76	01/06/88	09/17/10	01/06/88	No					
	THE CITY OF CUSSETA (CID 130243) AND CHATTAHOOCHEE COUNTY HAVE CONSOLIDATED THEIR GOVERNMENTS TO FORM THE UNIFIED GOVERNMENT OF CUSSETA-CHATTAHOOCHEE COUNTY. USE CID 130293 AND FIRM PANELS DATED 01/06/1988.											
130636#	CUTHBERT, CITY OF	RANDOLPH COUNTY		09/17/10	09/17/10(M)	06/28/19	No					
130324D	DACULA, CITY OF	GWINNETT COUNTY	04/18/75	08/19/86	04/11/24(>)	08/19/86	No					
130246#	DADE COUNTY *	DADE COUNTY	06/10/77	05/17/89	09/26/08	05/17/89	No					
130129B	DAHLONEGA, CITY OF	LUMPKIN COUNTY	06/28/74	09/18/91	04/04/18	09/18/91	No					
130372B	DALLAS, CITY OF	PAULDING COUNTY		11/08/99	06/07/19	11/08/99	No					
130194#	DALTON, CITY OF	WHITFIELD COUNTY	08/16/74	12/04/79	09/19/07	12/04/79	No					
130479#	DANIELSVILLE, CITY OF	MADISON COUNTY	09/15/78	09/17/10	09/17/10(M)	08/01/13	No					
130512#	DANVILLE, TOWN OF	WILKINSON COUNTY/TWIGGS COUNTY		12/17/10	(NSFHA)	12/17/10	No					
130131B	DARIEN, CITY OF	MCINTOSH COUNTY	05/10/74	07/02/81	08/02/18	07/02/81	No					
130653#	DAVISBORO, CITY OF	WASHINGTON COUNTY		07/22/10	07/22/10(M)	08/02/13	No					
130304B	DAWSON COUNTY*	DAWSON COUNTY	06/18/76	12/15/90	04/04/18	12/15/90	No					
130509#	DAWSON, CITY OF	TERRELL COUNTY		09/02/09	09/02/09(M)	09/02/09	No					
130064B	DAWSONVILLE,CITY OF	DAWSON COUNTY	01/17/75	05/21/82	04/04/18	05/21/82	No					
130451#	DECATUR COUNTY*	DECATUR COUNTY	06/30/78	08/01/86	09/25/09	08/01/86	No					
135159C	DECATUR, CITY OF	DEKALB COUNTY	06/16/70	06/16/70	08/15/19	06/11/71	No	10/01/93	05/01/15	7	15%	05%
130654#	DEEPSTEP, TOWN OF	WASHINGTON COUNTY		07/22/10	07/22/10(M)	09/07/16	No					
130065C	DEKALB COUNTY *	DEKALB COUNTY	06/02/70	05/15/80	08/15/19	05/15/80	No	10/01/92	10/01/08	7	15%	05%
130330B	DEMOREST, CITY OF	HABERSHAM COUNTY	04/04/75	06/02/09	01/05/18	11/15/10	No					
130215#	DENTON, CITY OF	JEFF DAVIS COUNTY	12/13/74	08/19/10	08/19/10(M)	12/12/14	No					
130607#	DEXTER, TOWN OF	LAURENS COUNTY		12/17/10	12/17/10(M)	12/17/10	No					
130446#	DILLARD, CITY OF	RABUN COUNTY	06/04/76	10/01/92	09/17/10(M)	10/01/92	No					
130523#	DODGE COUNTY*	DODGE COUNTY		09/20/96	08/19/10(M)	07/09/98	No					
130675B	DOERUN, CITY OF	COLQUITT COUNTY		09/25/09	(NSFHA)	09/25/09	No					
130164#	DONALSONVILLE, CITY OF	SEMINOLE COUNTY	07/23/76	06/17/86	09/25/09(M)	06/17/86	No					
130532#	DOOLY COUNTY*	DOOLY COUNTY		06/04/96	09/11/09	06/04/96	No					
130069C	DORAVILLE, CITY OF	DEKALB COUNTY	06/07/74	09/01/77	08/15/19	09/01/77	No					
130074#	DOUGHERTY COUNTY *	DOUGHERTY COUNTY	02/27/76	04/17/78	09/25/09	04/17/78	No	10/01/93	05/01/10	6	20%	10%
130306C	DOUGLAS COUNTY *	DOUGLAS COUNTY	03/05/76	01/02/80	12/30/20	01/02/80	No	10/01/95	10/01/16	7	15%	05%
130216#	DOUGLAS, CITY OF	COFFEE COUNTY	12/06/74	07/16/79	09/11/09	07/16/79	No	05/01/11	05/01/11	9	05%	05%



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130199B	MOULTRIE, CITY OF	COLQUITT COUNTY	11/22/74	05/15/79	11/02/23	05/15/79	No					
130140#	MOUNT VERNON, CITY OF	MONTGOMERY COUNTY	05/31/74	08/19/10	08/19/10(M)	08/19/86	No					
130286#	MOUNT ZION, CITY OF	CARROLL COUNTY	07/01/77	09/01/87	09/19/07	09/01/87	No					
130252#	MOUNTAIN CITY, TOWN OF	RABUN COUNTY	01/17/75	07/09/82	09/17/10(M)	07/09/82	No					
130315#	MOUNTAIN PARK, CITY OF	FULTON COUNTY	01/13/78	02/16/83	09/18/13	04/07/83	No					
130331B	MT AIRY, TOWN OF	HABERSHAM COUNTY		06/02/09	01/05/18	06/02/09	No					
	Community is currently unmapped. Mt. Airy has adopted the Habersham County FIRM effective January 16, 2009.											
130366#	MURRAY COUNTY*	MURRAY COUNTY	05/14/76	08/15/90	09/29/10	08/15/90	No					
130014#	NAHUNTA, CITY OF	BRANTLEY COUNTY	05/17/75	09/04/85	09/25/09(M)	09/04/85	No					
130008#	NASHVILLE, CITY OF	BERRIEN COUNTY	02/14/75	08/01/86	09/25/09(M)	08/01/86	No					
130296#	NELSON, CITY OF	CHEROKEE COUNTY/PICKENS COUNTY	04/11/75	09/29/86	09/29/10(M)	09/29/86	No					
130062#	NEWNAN, CITY OF	COWETA COUNTY	05/31/74	11/15/78	02/06/13	11/15/78	No					
130143C	NEWTON COUNTY *	NEWTON COUNTY	04/23/76	07/05/83	08/15/23	07/05/83	No					
130004#	NEWTON, CITY OF	BAKER COUNTY	04/12/74	09/01/86	08/18/09(M)	09/01/86	No					
130483#	NICHOLLS, CITY OF	COFFEE COUNTY	09/29/78	09/11/09	09/11/09(M)	07/01/19	No					

G. Overall HRV Summary of Events and Their Impact

Floods can cause damage anywhere, anytime, throughout Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls, especially in flood-prone areas. Floods can happen quickly, and residents may need more time to evade floodwaters. The cost of the damage and potential loss of life may be higher if the event strikes populated areas instead of more sparsely populated or unpopulated areas.

The HMPUC has developed a comprehensive range of Mitigation Goals, Objectives, and Action Steps to lessen the impacts of this hazard. These are contained in Chapter 3.

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.

H. Impacts from Future Conditions

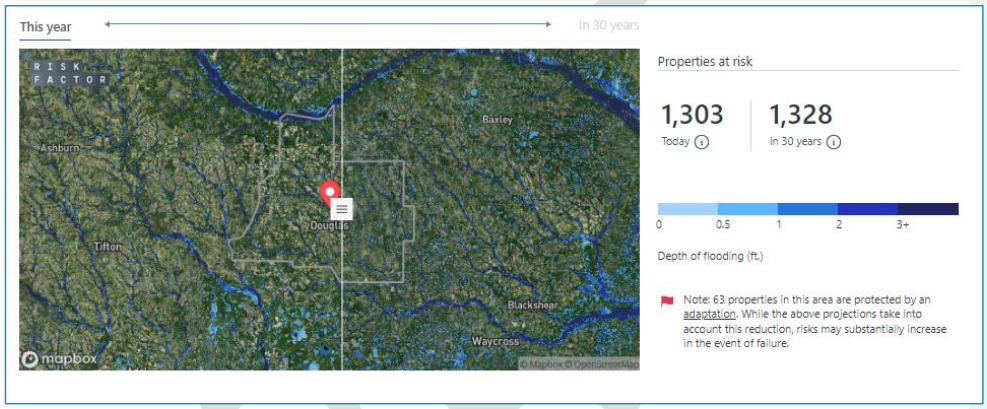
According to https://riskfactor.com/city/douglas-ga, 338 properties in Douglas have a greater than 26% chance of being severely affected by flooding over the next 30 years. This is 8% of all properties in Douglas.

Flooding damages properties and can cut off access to utilities, emergency services, and transportation. It may also impact the area's overall economic well-being. Douglas has a moderate risk of flooding over the next 30 years, likely impacting day-to-day life within the community.

Anticipating Changes in Flood Risk for Coffee County

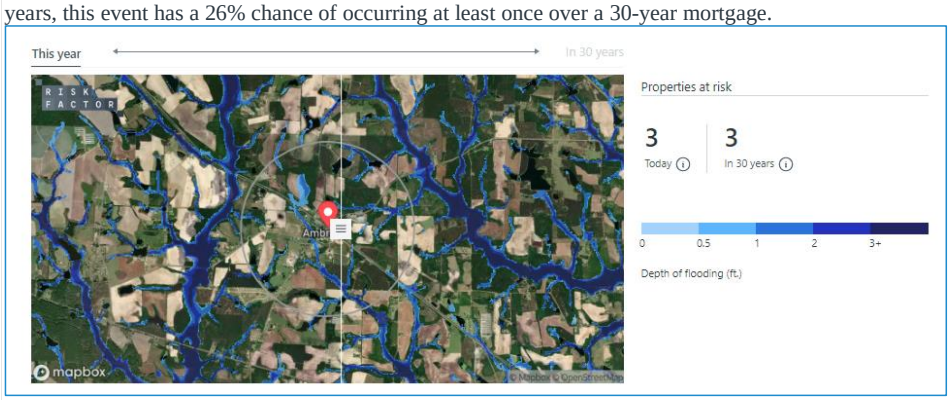
Deeper floods from major events, like hurricanes, are less likely to occur but affect more properties than shallow flood events, like heavy rains. As Coffee County feels the effects of a changing environment, events of all kinds will affect more properties **within** the community.

If a low-likelihood storm resulting in severe flooding (a 1-in-100-year flood event) occurred today, it could affect 1,303 properties in Coffee County. This type of event has a 26% chance of occurring at least once over the life of a 30-year mortgage. Thirty years from now, an event of this same likelihood would affect **1,328** properties due to a changing environment.



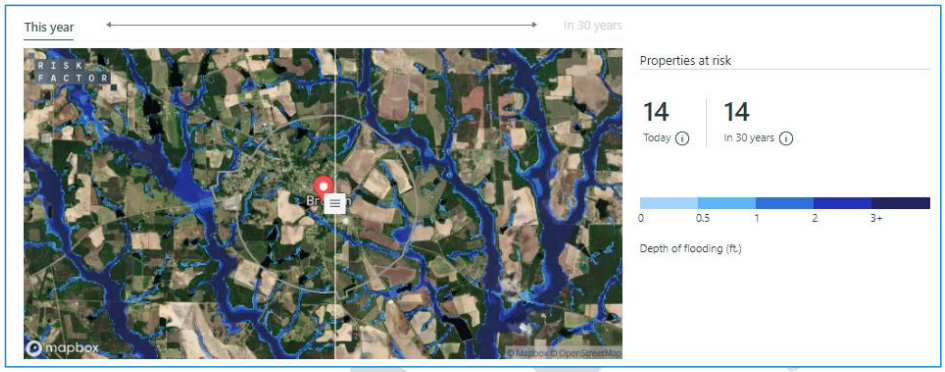
Anticipating Changes in Flood Risk for Ambrose

Deeper floods from significant events, like hurricanes, are less likely to occur but affect more properties than shallow flood events, like heavy rains. While this risk is expected to remain constant over the next 30 years, this event has a 26% chance of occurring at least once over a 30-year mortgage.



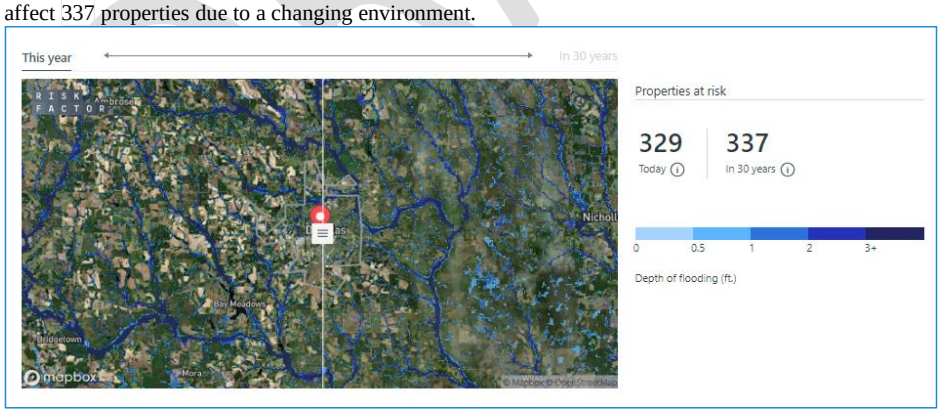
Anticipating Changes in Flood Risk for Broxton

Deeper floods from major events, like hurricanes, are less likely to occur but affect more properties than more shallow flood events, like heavy rains. While this risk is expected to remain constant over the next 30 years, this type of event has a 26% chance of occurring at least once over a 30-year mortgage.



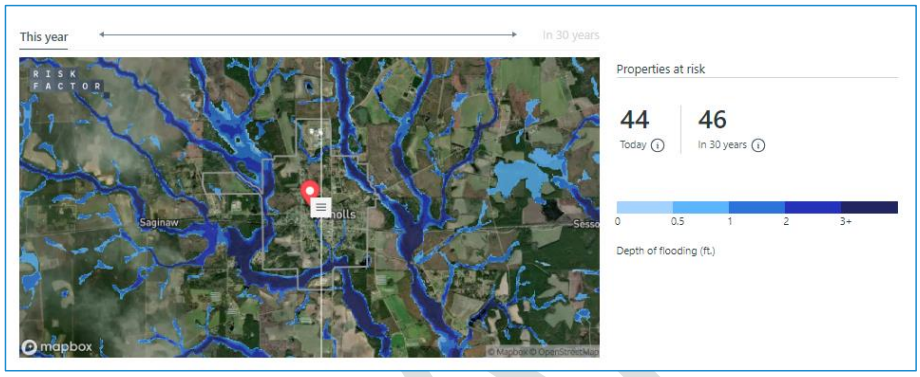
Anticipating Changes in Flood Risk for Douglas

Deeper floods from major events, like hurricanes, are less likely to occur but affect more properties than shallow flood events, like heavy rains. As Douglas feels the effects of a changing environment, however, events of all kinds will affect more properties within the community.
If a low-likelihood storm resulting in severe flooding (a 1-in-100-year flood event) occurred today, it could affect 329 properties in Douglas. This type of event has a 26% chance of occurring at least once over the life of a 30-year mortgage. Thirty years from now, an event of this same likelihood would affect 337 properties due to a changing environment.

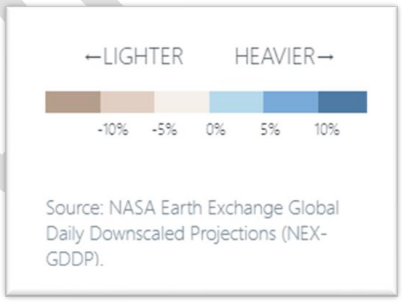


Anticipating Changes in Flood Risk for Nicholls

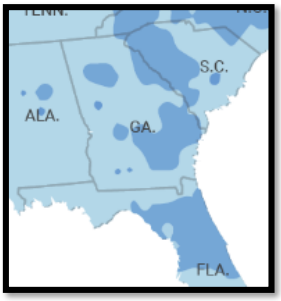
Deeper floods from major events, like hurricanes, are less likely to occur but affect more properties than shallow flood events, like heavy rains. As Nicholls feels the effects of a changing environment, events of all kinds will affect more properties within the community.
If a low-likelihood storm resulting in severe flooding (a 1-in-100-year flood event) occurred today, it could affect 44 properties in Nicholls. This type of event has a 26% chance of occurring at least once over the life of a 30-year mortgage. Thirty years from now, an event of this same likelihood would affect 46 properties due to a changing environment.



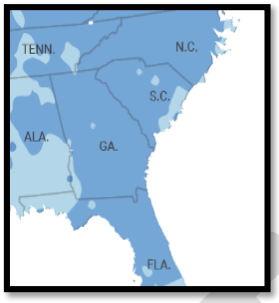
In addition to damage to properties, flooding can cut off access to utilities, emergency services, and transportation and may impact the overall economic well-being of an area. Douglas has a moderate risk of flooding over the next 30 years, likely impacting daily life changes. The environment continues to change, with higher seas, new weather patterns, and stronger storms. With the warming of the atmosphere, there will be more evaporation, with more water available from the rain. Oceans will become warmer, intensifying flooding from hurricanes and offshore storms.
Change in extreme rain events compared to the 2010 Average



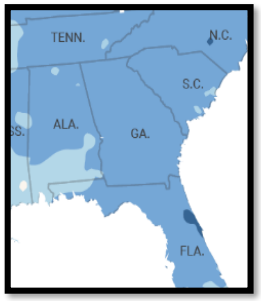
2023 Projections



In 15 Years



In 30 Years



I. Underserved/Socially Vulnerable Population Risk

The Department of Family and Children Services (DFACS) participated in the workshops. DFACS keeps close contact with this group of people and informs them of emergencies when necessary. They also have someone to translate the language. Coffee Regional Hospital was also present at the workshops and stated they work with the public during hazardous events. American Red Cross also helps during this hazard.

Flyers explaining the Hazard Mitigation process were distributed at the county and city offices, the Health Department, the library, and the Department of Family and Children Services (DFACS).

Section V. Hail

A. Identification of Hazard

The Coffee County HMPUC has chosen the threat of hail as the fifth most likely hazard to occur and cause damage in Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls based on 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) and local history and personal accounts, to determine the frequency of events.

Hail is a form of precipitation that occurs when thunderstorm updrafts carry raindrops upward into extremely cold areas of the atmosphere, where they freeze into ice balls. Hail can damage aircraft, homes, and cars, and can be deadly to livestock and people. Hail is usually pea-sized to marble-sized, but big thunderstorms can produce big hail.

Hail size is estimated by comparing it to a known object. Most hailstorms are made up of a mix of sizes, and only the largest hailstones pose severe risks to people caught in the open. The following are some standard size measurements.
(Source: http://www.nssl.noaa.gov/education/svrwx101/hail/):

Pea = 1/4-inch diameter
Marble/mothball = 1/2-inch diameter
Dime/Penny = 3/4-inch diameter
Nickel = 7/8 inch
Quarter = 1 inch — hail quarter size or larger is considered severe
Ping-Pong Ball = 1 1/2 inch
Golf Ball = 1 3/4 inches
Tennis Ball = 2 1/2 inches
Baseball = 2 3/4 inches
Teacup = 3 inches
Grapefruit = 4 inches
Softball = 4 1/2 inches

B. Profile of Events, Frequency of Occurrences, Probability

According to the NOAA Storm Events Database (see Appendix F), 37 reports of Hail occurred in Coffee County (including the Cities) between 01/01/1950 and 12/31/2022. Since 2017, there have been six reports of Hail on the NOAA Storm Events Database. The Historic Recurrence Interval is 1.95 years. This is a 51.39% Historic Frequency Chance per year. The past 10-year Record Frequency Per Year is 1.4, the past 20-year frequency is 1.9, and the past 50-year frequency is 0.74 (see the Hazard Frequency Table in Appendix D).

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

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

In Worksheet 3A: Inventory of Assets (appearing in Appendix A), we estimate that all of Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls are equally vulnerable to this hazard.

An estimated 100% of the Residential property (14,253 of 14,253) in Coffee County (including the Cities of Ambrose, Broxton, Douglas, and Nicholls) could be affected by this hazard, with a total value of $1,921,393,000. Also, an estimated 100% of the community's Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, and Education properties (1,613 of 1,613) may be affected, totaling $1,625,199.000 The values are based on the recently available tax roll data for Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls provided by the Coffee County Tax Assessor's Office.

Damage to crops is not considered in any of these figures. According to the Center for Agribusiness & Economic Development's 2021 Georgia Farm Gate Value Report (Farm Gate Value | Georgia Data), the total farm gate value of agricultural production in Coffee County is $307,975,080.

According to the inventory database reports and maps, this hazard could affect all 229 Critical Facilities and Infrastructure for Coffee County (including the Cities of Ambrose, Broxton, Douglas, and Nicholls).

E. Land Use and Development Trends

Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls have seen considerable population changes over the last few years. Both the City of Douglas and the County have seen slight gains in population. The City of Ambrose has seen considerable population growth, and the City of Broxton has seen a decline in population. The City of Nicholls's population has increased primarily due to the City's annexation of Coffee Correctional Facility, which has a capacity of approximately 3,000 inmates.

Coffee County and the Cities of Broxton, Douglas, and Nicholls have zoning regulations; Ambrose does not. All jurisdictions have mandatory building and fire codes, which are enforced by the building inspector. The county and cities participate in joint comprehensive planning and the required updates of the Service Delivery Strategy. No other land use or development trends related to this hazard have been identified.

Coffee County and the Cities of Broxton, Douglas, and Nicholls have zoning regulations; Ambrose does not. All jurisdictions have mandatory building and fire codes that aa building inspector enforces. On October 1, 1991, the Uniform Codes Act became effective in Georgia. On July 1, 2004, this Act was revised to make the following construction codes mandatory as the Georgia State Minimum Standard Codes. Listed below are the code editions in effect as of January 1, 2021, with amendments in 2020 and 2022:

- International Building Code – 2018 Edition
- International Residential Code – 2018 Edition
- International Plumbing Code – 2018 Edition
- International Mechanical Code – 2018 Edition
- International Fuel Gas Code – 2018 Edition
- International Energy Conservation Code – 205 Edition
- International Fire Code – 2018 Edition
- International Electric Code – 2020 Edition
- International Swimming Pool and Spa Code – 2018 Edition

F. Multi-Jurisdictional Differences

Hail events are usually area-wide, and no difference in severity is expected between Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls. However, the impact may be more severe in places with higher population density due to more people being in danger, more people needing to evacuate, more debris from damaged buildings, and other impacts associated with higher population density.

G. Overall HRV Summary of Events and Their Impact

Hail events can cause damage anywhere, anytime, throughout Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls, especially during thunderstorms. The cost of the damage may be higher if the event strikes populated areas sparsely populated or unpopulated areas.

The HMPUC has developed a comprehensive range of Mitigation Goals, Objectives, and Action Steps to lessen the impacts of this hazard. These are contained in Chapter 3.

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.

H. Impacts from Future Conditions

Hailstorms cause far more property damage than tornadoes, and their toll is rising fast. It is expected that climate change will only accentuate this trend. U.S. insured hail losses average $8 billion (about $25 per person in the US) to $14 billion (about $43 per person in the US) per year, or $80-$140 billion (about $430 per person in the US) per decade. (*Source: Insurance Information Institute).* This far outpaces around $14.1 billion (about $43 per person in the US) in insured property loss from tornadoes over the decade from 2010-2020.

Research hasn't found a consistent trend in hail evolution, and such trends are difficult to determine because of hail's rarity and the difficulty of measuring hail. However, they are expected to change in response to the warming climate. With the warming, it is anticipated that low-level moisture and convective instability will increase, raising the likelihood of hailstorms and the formation of larger hailstorms. Hailstorms are expected to decrease in North America, but hail severity will increase in most regions.

I. Underserved/Socially Vulnerable Population Risk

Hail is usually not a serious hazard to the population other than the homeless population. Most of the damage is done to structures and automobiles. However, there are resources within Coffee County that can assess those in need and give them proper care. Section VI. Wildfires

Flyers explaining the Hazard Mitigation process were distributed at the county and city offices, the Health Department, and the Department of Family and Children Services (DFACS).

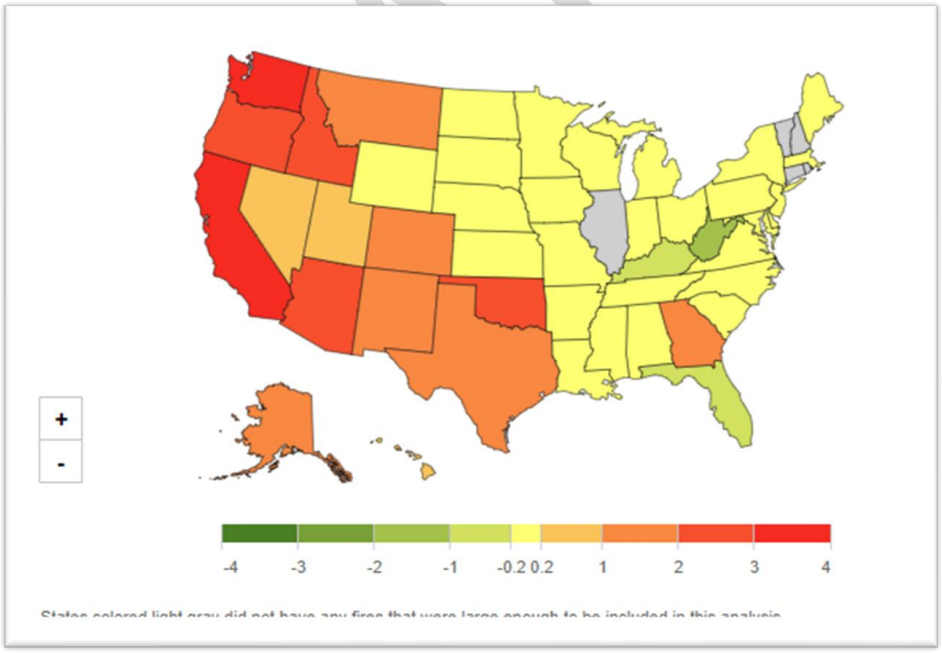
Section VI. Wildfires

A. Identification of Hazard

The HMPUC has chosen the threat of wildfire as the sixth most likely hazard to occur and cause damage in the community based on 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, to determine the frequency of events.

Much of southern Georgia is covered by forests, and fires play an essential 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 future larger, more destructive fire events. Controlled, prescribed fires lower the risk of larger fire events and benefit forest health (source: USDA, https://www.fs.usda.gov/detail/dbnf/home/?cid=stelprdb5281464).

Annual Burned Acreage by State Between 1984-2001 and 2002-2020



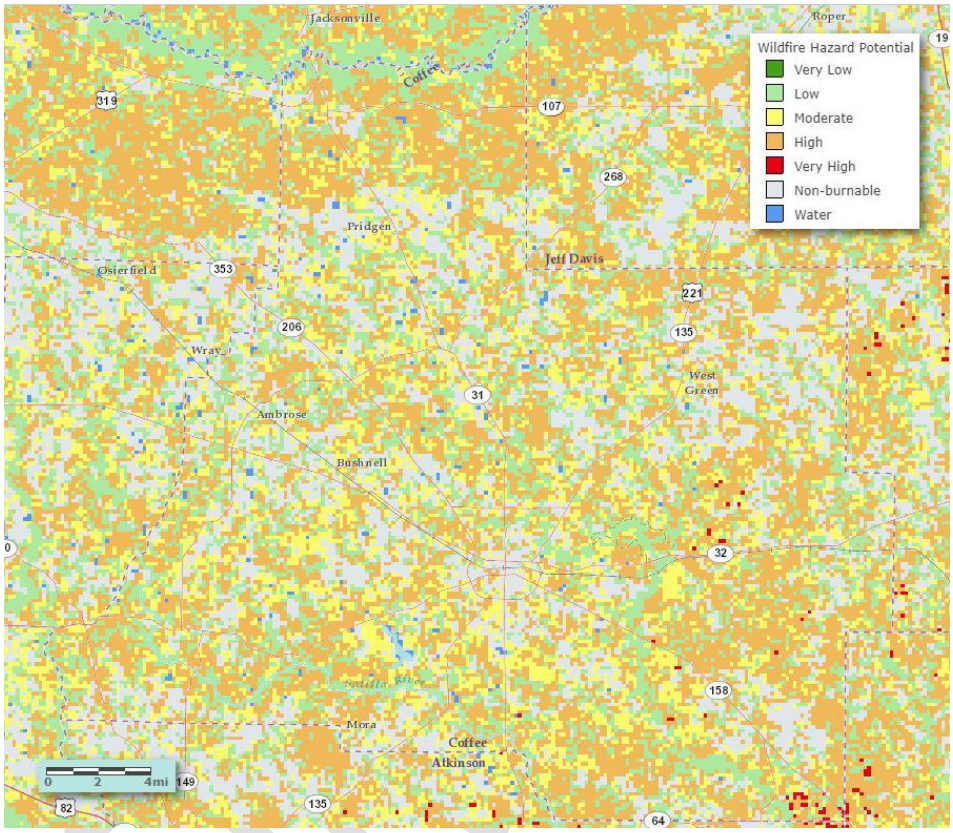
The above map shows how the number of acres burned in each state as a proportion of that state's total land area has changed over time, based on a simple comparison between the first half of the

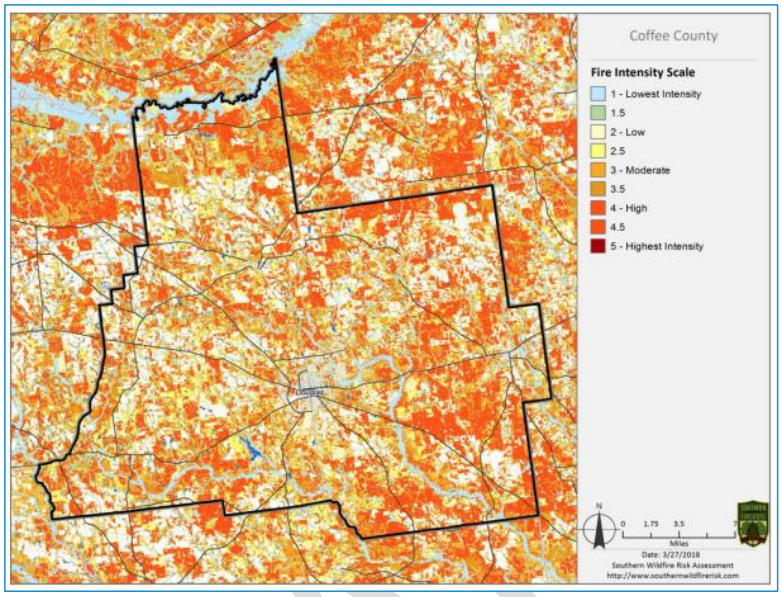
available years (1984–2001) and the second half (2002–2020). For reference, there are 640 acres (about the area of Central Park in New York City) in a square mile; therefore, a change of 6.4 acres (about the area of the Lincoln Memorial Reflecting Pool) per square mile would mean that burned area increased by 1 percent of a state's total land area. A few states did not have enough large fires to be included in this analysis. (https://www.epa.gov/)

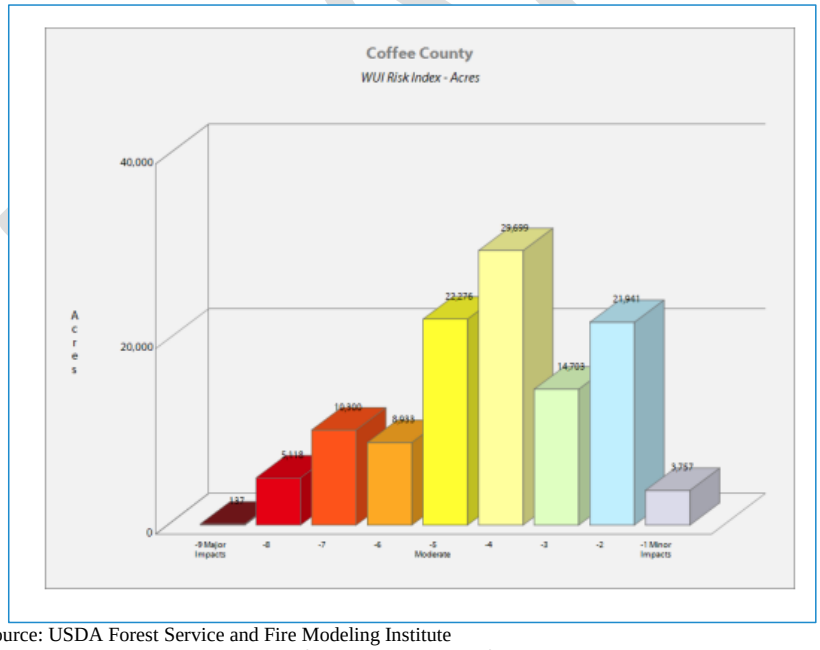
Low humidity, lack of recent precipitation (or drought conditions), wind speed, and temperature are weather conditions that favor the kindling and spread of wildfires. Combined with this, a high fuel load (i.e., the accumulation of dead vegetation) also provides for the kindling and spreading of wildfires. Much of Coffee County, including some areas near the Cities, is forested with commercial and free-growing pine trees and other trees. These trees can and do catch fire frequently in small and large fires 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 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 called a Wildland-Urban Interface area (WUI). These are the areas at significant risk for property damage due to Wildfire.

Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls 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. The map below shows that most Coffee County scores are either Low, Moderate, High, or Non-burnable.


Wildfire Hazard Potential
Very Low
Low
Moderate
High
Very High
Non-burnable
Water
Jacksonville
Roper
Coffee
Pridgen
Jeff Davis
Osierfield
Wray
Ambrose
Bushnell
West Green
Mora
Coffee
Atkinson
0 2 4mi
319
107
268
353
206
221
135
31
32
158
149
82
64
19





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), 4,854 reports of Wildfires occurred in Coffee County (including the Cities) between 01/01/1950 and 12/31/2022. The Historic Recurrence Interval is 0.01 years (about three and a half days). This is an 8,825.45% Historic Frequency Chance per year. The past 10-year Record Frequency Per Year is 95.4, the past 20-year frequency is 139, and the past 50-year frequency is 97.08 (see the Hazard Frequency Table in Appendix D).

Since the previous Hazard Mitigation Plan was completed, 244 wildfire events have occurred, with 742.94 acres (about the area of Central Park in New York City) burned from 2018-2022. The most destructive wildfire event was in April 1988, when 2,084 acres (about the area of Philadelphia Airport) burned.

Country Cabin Restaurant Fire
December 14, 2021

Douglas Christian Fellowship Church Fire
February 2, 2022

Shann Peanut Company Fire, Ambrose
June 20, 2021

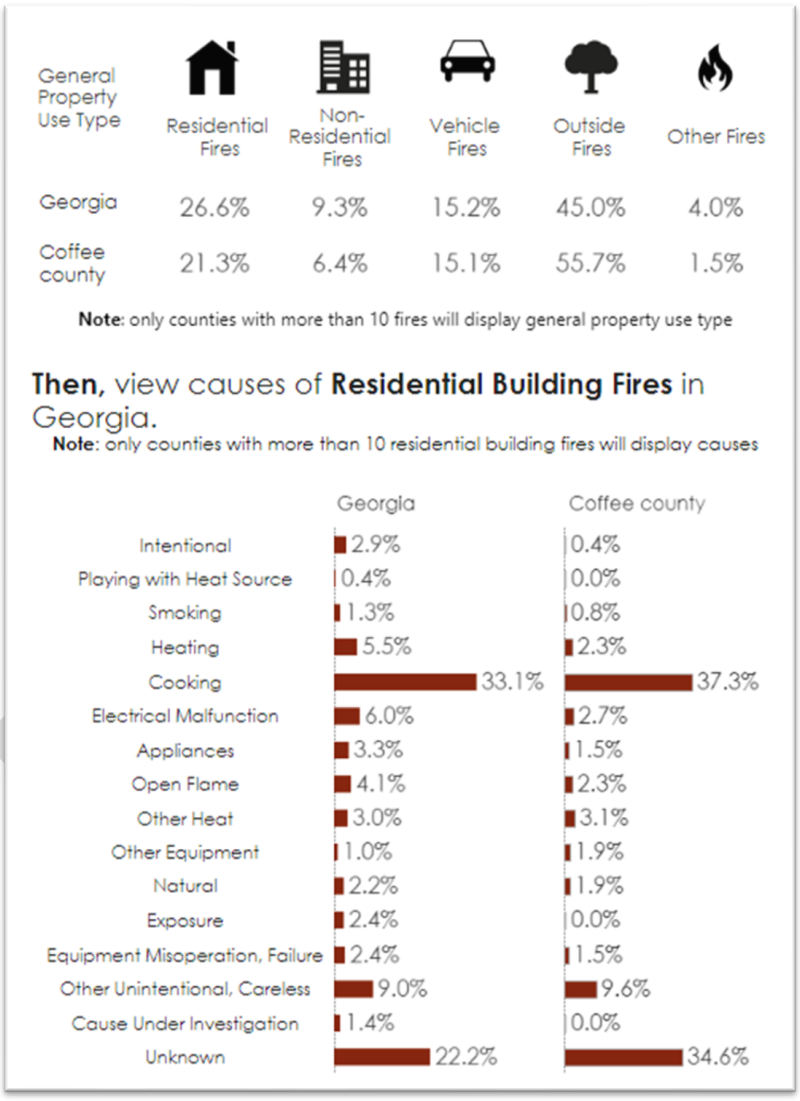
Between 2015 and 2019, Coffee County had 1,239 incidents, as reported by the State of Georgia to the National Fire Incident Reporting System (NFIRS).

General Property Use Type	Residential Fires	Non-Residential Fires	Vehicle Fires	Outside Fires	Other Fires
Georgia	26.6%	9.3%	15.2%	45.0%	4.0%
Coffee county	21.3%	6.4%	15.1%	55.7%	1.5%

Note: only counties with more than 10 fires will display general property use type

Then, view causes of **Residential Building Fires** in Georgia.

Note: only counties with more than 10 residential building fires will display causes



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

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

In Worksheet 3A: Inventory of Assets (appearing in Appendix A), we estimate that all of Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls are equally vulnerable to this hazard.

An estimated 100% of the Residential property (14,253 of 14,253) in Coffee County (including the Cities of Ambrose, Broxton, Douglas, and Nicholls) could be affected by this hazard, with a total value of $1,921,393,000. Also, an estimated 100% of the community's Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, and Education properties (1,613 of 1,613) may be affected, totaling $1,625,199.000 The values are based on the recently available tax roll data for Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls provided by the Coffee County Tax Assessor's Office.

Damage to crops is not considered in any of these figures. According to the Center for Agribusiness & Economic Development's 2021 Georgia Farm Gate Value Report (Farm Gate Value | Georgia Data), the total farm gate value of agricultural production in Coffee County is $307,975,080.

According to the inventory database reports and maps, this hazard could affect all 131 Critical Facilities and Infrastructure for Coffee County (including the Cities of Ambrose, Broxton, Douglas, and Nicholls). The total value of these Critical Facilities is $905,789,637, plus a content value of $46,538,173.

E. Land Use and Development Trends

Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls have seen considerable population changes over the last few years. Both the City of Douglas and the County have seen slight gains in population. The City of Ambrose has seen considerable population growth, and the City of Broxton has seen a decline in population. The City of Nicholls increased dramatically due to the City's annexation of Coffee Correctional Facility, which has a capacity of approximately 3,000 inmates.

Coffee County and the Cities of Broxton, Douglas, and Nicholls have zoning regulations; Ambrose does not. All jurisdictions have mandatory building and fire codes enforced by the building inspector. Cities participate in joint comprehensive planning and require updates. Service Delivery Strategy updates land use or development trends related to this hazard have been identified.

On October 1, 1991, the Uniform Codes Act became effective in Georgia. On July 1, 2004, this Act was revised to make the following construction codes mandatory as the Georgia State Minimum Standard Codes. Listed below are the code editions in effect as of January 1, 2021, with amendments in 2020 and 2022:

- International Building Code – 2018 Edition
- International Residential Code – 2018 Edition
- International Plumbing Code – 2018 Edition
- International Mechanical Code – 2018 Edition
- International Fuel Gas Code – 2018 Edition
- International Energy Conservation Code – 205 Edition
- International Fire Code – 2018 Edition
- International Electric Code – 2020 Edition
- International Swimming Pool and Spa Code – 2018 Edition

F. Multi-Jurisdictional Differences

Wildfires may happen at any place and time but are more likely in forested areas. Unincorporated Coffee County has more areas rated "High" for Wildfire Hazard Potential than the Cities, and unincorporated Coffee County is the only jurisdiction with 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 destroying homes and other buildings. In jurisdictions without building codes and inspections, structures that are not built to code may be especially vulnerable to wildfires and other hazards.

The Coffee County Fire Department has 20 fire stations, the City of Douglas Fire Department has three fire stations, and the fire departments of the Cities of Ambrose, Broxton, and Nicholls have one fire station each. Coffee County's main fire station and the three City of Douglas fire stations are staffed by paid firefighters, and volunteers staff the remaining fire stations.

The following are the ISO Classes of fire districts in Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls.

STATION NO.	NAME	ISO CLASS
1	Douglas FD	2
2	Douglas FD	2
3	Douglas FD	2
6	Coffee County Oak Park FD-Main Station	4
7**	City of Ambrose VFD / County FD 7	5 / 5
8	Pridgen VFD	5
9	Green Acres VFD	5
10**	City of Broxton VFD / County Station 10	6 / 5
11	West Green VFD	5
12**	City of Nicholls VFD / County Station 12	5 / 5
13	Baker Highway VFD	5
14	Sinkhole Road VFD	5
15	Chattertown VFD	5

16	Wilsonville VFD	5
17	Bridgetown VFD	5
18	Bear Creek VFD	5
19	Satilla/Fales VFD	5
20**	Station 20 / SW Bowens Mill Road	5
21	Station 21 / Bushnell Chapel Road	5
22	Station 22 /Broxton-West Green Road	5
23	Station 23/Highway 158 East	5
24	Station 24 /Nicholls-Westgreen Road	5
25	Station 25 /Rocky Pond Road	5

NOTE: All county-maintained stations are ISO Class 5.
** The cities of Ambrose, Broxton, Douglas, and Nicholls have their own Fire Departments but share stations with the County Fire Department.

The City of Douglas has 3 stations numbered 1-3, and the county has 20 stations numbered 6-25; the numbers of the 3 smaller cities are the same as the county numbers for those stations. The above numbers also represent the station numbers; #6 is Station 6, and #7 is Station 7.

G. Overall HRV Summary of Events and Their Impact

Wildfires can cause damage anywhere, anytime, throughout Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls. They can spread quickly, and residents may need more time to evacuate. The cost of the damage and potential loss of life may be higher if the event strikes populated areas instead of more sparsely populated or unpopulated areas.
The HMPUC has developed a comprehensive range of Mitigation Goals, Objectives, and Action Steps to lessen the impacts of this hazard. These are contained in Chapter 3.

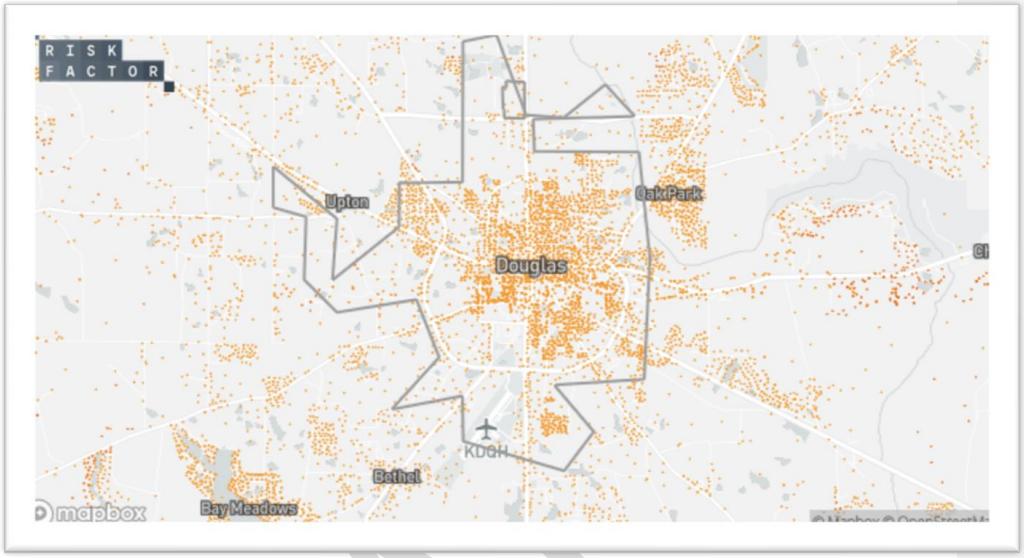
Since the previous plan was approved, there have not been any new developments, regulations, programs, or other changes in the community that would either increase or decrease the community's overall vulnerability to this hazard.

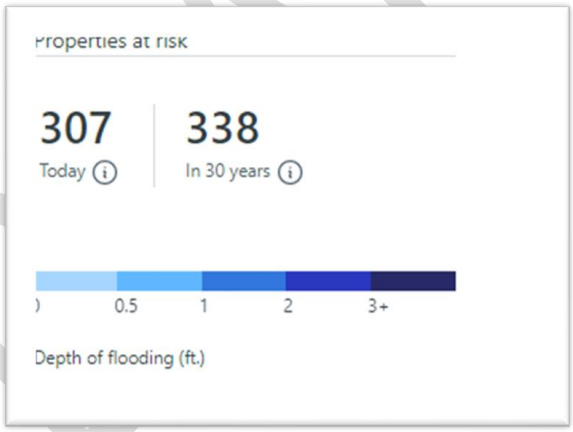
H. Impacts from Future Conditions

Five thousand one hundred fifty-three properties in Douglas have a moderate risk of being in a wildfire within the next 30 years. This represents 100% of all property located in Douglas.

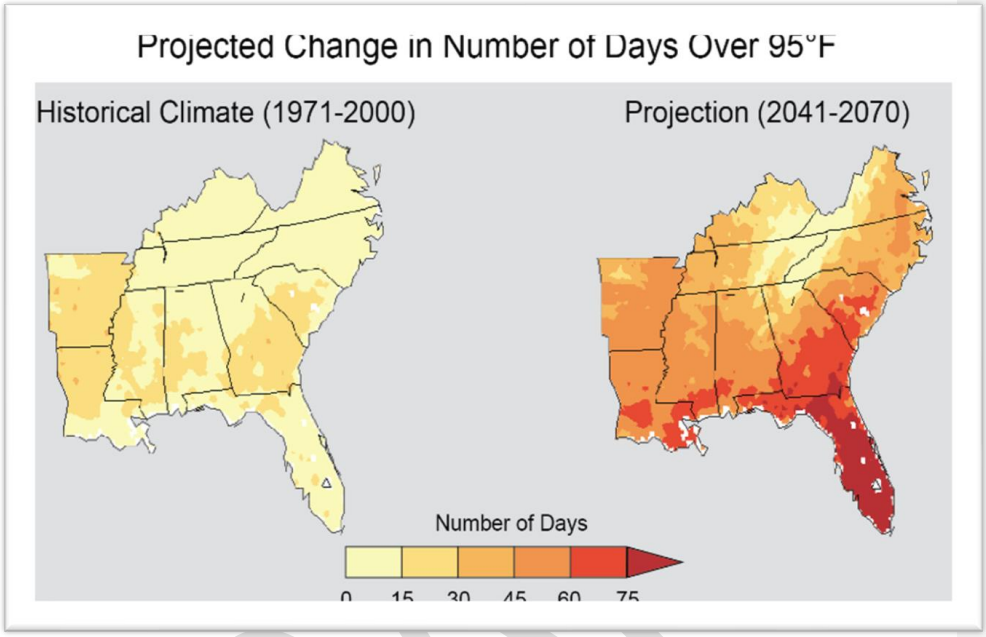
Wildfires can damage properties, cut off access to utilities and emergency services, impact evacuation routes, and affect the overall economic well-being of the area.

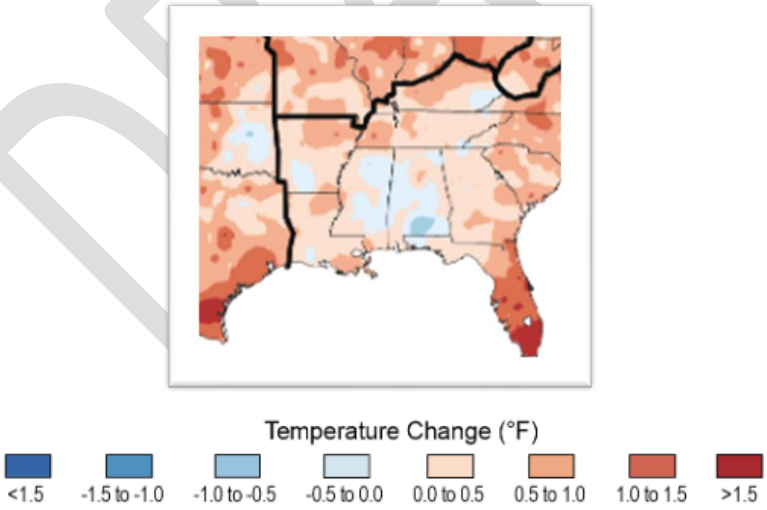
The increasing temperatures and associated frequency increase, intensity, and duration of extreme heat events will affect public health, natural and built environments, energy, agriculture, and forestry.

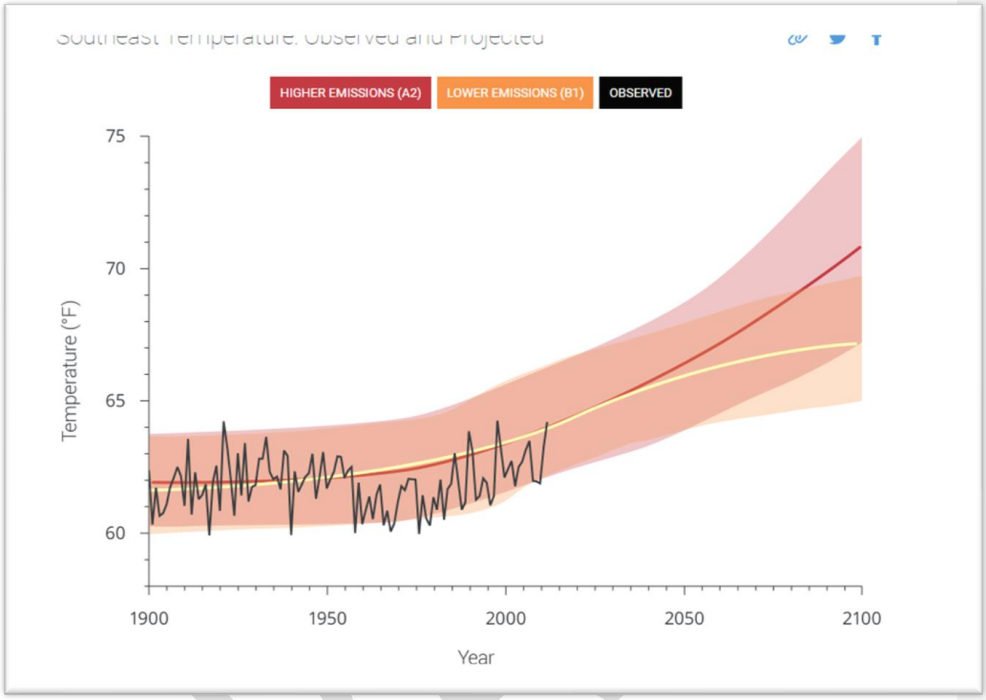




Climate change is already affecting broad swaths of the United States, including the southeastern portion. The National Climate Assessment, a US government report, details the current and future impacts of global warming. The report details how specific regions and sectors will be affected and outlines possible adaptation methods. Most of the country is getting hotter, and the maps below highlight the areas with projected temperature changes and how they can affect wildfires.


Projected Change in Number of Days Over 95°F
Historical Climate (1971-2000)
Projection (2041-2070)
Number of Days
0
15
30
45
60
75


Temperature Change (°F)
<1.5
-1.5 to -1.0
-1.0 to -0.5
-0.5 to 0.0
0.0 to 0.5
0.5 to 1.0
1.0 to 1.5
>1.5



Temperature projections compared to observed temperatures from 1901-1960 for two emissions scenarios, one assuming substantial emissions reductions (B1) and the other continued growth in emissions (A2). For each scenario, shading shows range of projections and line shows a central estimate. (Figure source: adapted from Kunkel et al. 2013[4]).

The southeastern portion of the United States warmed during the early part of the last century, cooled for a few decades, and is now warming. Temperatures across the southeastern are expected
to increase in the future. Warmer temperatures and possible drought will increase the chances of wildfires.

Coffee County has a moderate risk from wildfires and a severe risk from heat.

I. Underserved/Socially Vulnerable Population Risk

Fires can cause potential harm to the vulnerable population within Coffee County. Faulty heating equipment can start fires quickly, and brush fires can ignite with someone trying to keep warm during the colder months. The Fire Departments respond to vulnerable populations and how to react to fires and prevent them.

Flyers explaining the Hazard Mitigation process were distributed at the county and city offices, the Health Department, and the Department of Family and Children Services (DFACS).

Section VII. Hurricanes/Tropical Storms

A. Identification of Hazard

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

Hurricanes and tropical storms are tropical cyclones, the general term for all circulating weather systems over tropical water. Tropical cyclones are destructive and have the potential to cause significant 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 (about 73.94 mi)/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 a 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 (about 39.15 mi)/hr) to 63 kt (73 mph or 118 km (about 73.32 mi)/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 non-frontal 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 a 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 (about 38.53 mi)/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 damage and impacts in the United States associated with winds of the predicted intensity. The following table shows the scale broken down by winds:

SAFFIR-SIMPSON HURRICANE SCALE

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

Category	Sustained Winds	Types of Damage Due to Hurricane Winds
1	74-95 mph 64-82 kt 119-153 km/h	**Very dangerous winds will produce some damage:** Well-constructed frame homes could have damage to roof, shingles, vinyl siding and gutters. Large branches of trees will snap and shallowly rooted trees may be toppled. Extensive damage to power lines and poles likely will result in power outages that could last a few to several days.
2	96-110 mph 83-95 kt 154-177 km/h	**Extremely dangerous winds will cause extensive damage:** Well-constructed frame homes could sustain major roof and siding damage. Many shallowly rooted trees will be snapped or uprooted and block numerous roads. Near-total power loss is expected with outages that could last from several days to weeks.
3 (major)	111-129 mph 96-112 kt 178-208 km/h	**Devastating damage will occur:** Well-built framed homes may incur major damage or removal of roof decking and gable ends. Many trees will be snapped or uprooted, blocking numerous roads. Electricity and water will be unavailable for several days to weeks after the storm passes.
4 (major)	130-156 mph 113-136 kt 209-251 km/h	**Catastrophic damage will occur:** Well-built framed homes can sustain severe damage with loss of most of the roof structure and/or some exterior walls. Most trees will be snapped or uprooted and power poles downed. Fallen trees and power poles will isolate residential areas. Power outages will last weeks to possibly months. Most of the area will be uninhabitable for weeks or months.
5 (major)	157 mph or higher 137 kt or higher 252 km/h or higher	**Catastrophic damage will occur:** A high percentage of framed homes will be destroyed, with total roof failure and wall collapse. Fallen trees and power poles will isolate residential areas. Power outages will last for weeks to possibly months. Most of the area will be uninhabitable for weeks or months.

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 those dates. Whether the hurricane/tropical storm is a short-term or long-term event depends on many factors, including category, strength, speed, and impact of other weather systems, including fronts and wind patterns.

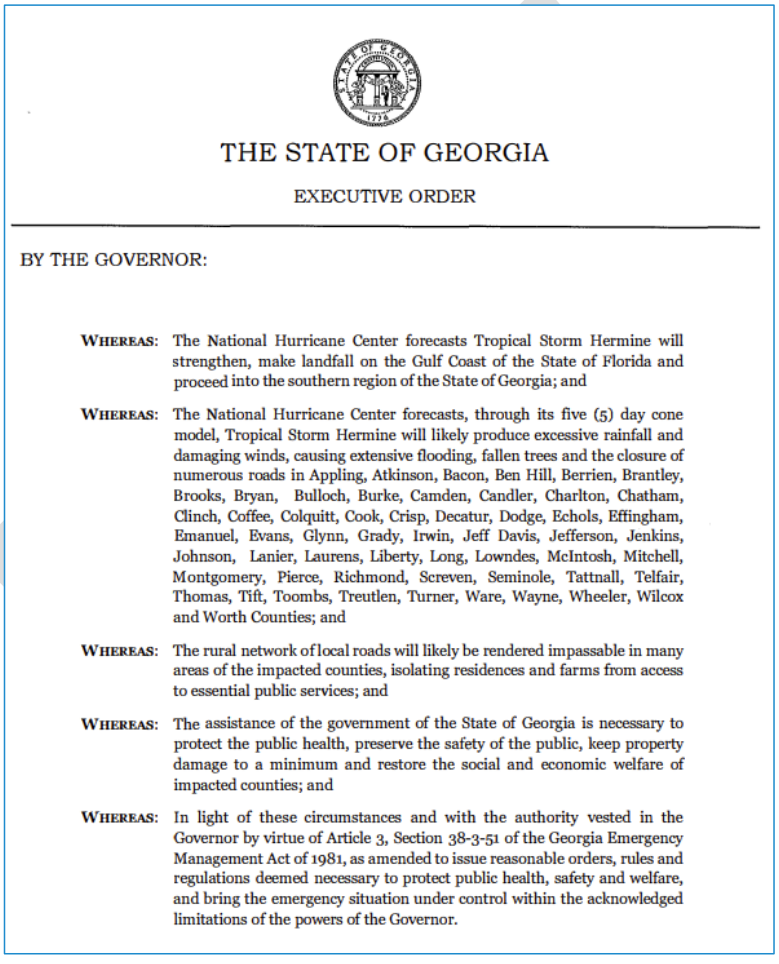
Because of their location, Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls are vulnerable to severe hurricanes/tropical storms forming in the Atlantic Ocean and the Gulf of Mexico. Also, due to location, hurricanes may degrade into tropical storms, tropical depressions, or tropical disturbances by the time they reach this area. These may or may not contain tornadoes or hail. Tropical storms, depressions, or disturbances may never reach hurricane strength after 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), five reports of Tropical Storms occurred in Coffee County (including the Cities) between 01/01/1950 and 12/31/2022. One more Tropical Storm event occurred on October 10, 2018, recorded in the NCDC database, bringing the total to five events between 01/01/1950 and 12/31/2022. The Historic Recurrence Interval is 14.40 years. This is a 6.94% Historic Frequency Chance per year. The past 10-year Record Frequency Per Year is 0.4, the past 20-year frequency is 0.25, and the past 50-year frequency is 0.01 (see the Hazard Frequency Table in Appendix D).

Coffee County is in a very low-risk hurricane zone. Since 1930, 62 hurricanes have been recorded in Coffee County. The most recent hurricane was Michael in 2018, with 50-55 mph winds. The largest hurricane to affect Coffee County was Dora in 1964.

On Sept. 1 – 2, 2016, Tropical Storm Hermine caused widespread damage. Numerous trees and power lines were blown down across the county, and about 2,000 residents were without power. The peak wind measured at the Douglas Municipal Airport was 38 mph at 6:35 a.m. on Sept. 2nd. However, according to NOAA data, wind gusts of up to 55 mph were reported at other locations. The storm's total rainfall included 4.92 inches in the unincorporated community of Pridgen.



THE STATE OF GEORGIA

EXECUTIVE ORDER

BY THE GOVERNOR:

WHEREAS: The National Hurricane Center forecasts Tropical Storm Hermine will strengthen, make landfall on the Gulf Coast of the State of Florida and proceed into the southern region of the State of Georgia; and

WHEREAS: The National Hurricane Center forecasts, through its five (5) day cone model, Tropical Storm Hermine will likely produce excessive rainfall and damaging winds, causing extensive flooding, fallen trees and the closure of numerous roads in Appling, Atkinson, Bacon, Ben Hill, Berrien, Brantley, Brooks, Bryan, Bulloch, Burke, Camden, Candler, Charlton, Chatham, Clinch, Coffee, Colquitt, Cook, Crisp, Decatur, Dodge, Echols, Effingham, Emanuel, Evans, Glynn, Grady, Irwin, Jeff Davis, Jefferson, Jenkins, Johnson, Lanier, Laurens, Liberty, Long, Lowndes, McIntosh, Mitchell, Montgomery, Pierce, Richmond, Screven, Seminole, Tattnall, Telfair, Thomas, Tift, Toombs, Treutlen, Turner, Ware, Wayne, Wheeler, Wilcox and Worth Counties; and

WHEREAS: The rural network of local roads will likely be rendered impassable in many areas of the impacted counties, isolating residences and farms from access to essential public services; and

WHEREAS: The assistance of the government of the State of Georgia is necessary to protect the public health, preserve the safety of the public, keep property damage to a minimum and restore the social and economic welfare of impacted counties; and

WHEREAS: In light of these circumstances and with the authority vested in the Governor by virtue of Article 3, Section 38-3-51 of the Georgia Emergency Management Act of 1981, as amended to issue reasonable orders, rules and regulations deemed necessary to protect public health, safety and welfare, and bring the emergency situation under control within the acknowledged limitations of the powers of the Governor.

NOW, THEREFORE, PURSUANT TO THE AUTHORITY VESTED IN ME AS GOVERNOR OF THE STATE OF GEORGIA, IT IS HEREBY

ORDERED: That a State of Emergency exists in the following counties: Appling, Atkinson, Bacon, Ben Hill, Berrien, Brantley, Brooks, Bryan, Bulloch, Burke, Camden, Candler, Charlton, Chatham, Clinch, Coffee, Colquitt, Cook, Crisp, Decatur, Dodge, Echols, Effingham, Emanuel, Evans, Glynn, Grady, Irwin, Jeff Davis, Jefferson, Jenkins, Johnson, Lanier, Laurens, Liberty, Long, Lowndes, McIntosh, Mitchell, Montgomery, Pierce, Richmond, Screven, Seminole, Tattnall, Telfair, Thomas, Tift, Toombs, Treutlen, Turner, Ware, Wayne, Wheeler, Wilcox and Worth.

IT IS FURTHER

ORDERED: That all resources of the State of Georgia be made available to assist in preparation, response and recovery activities in the above mentioned counties, and the Georgia Emergency Management and Homeland Security Agency activate the Georgia Emergency Operations Plan.

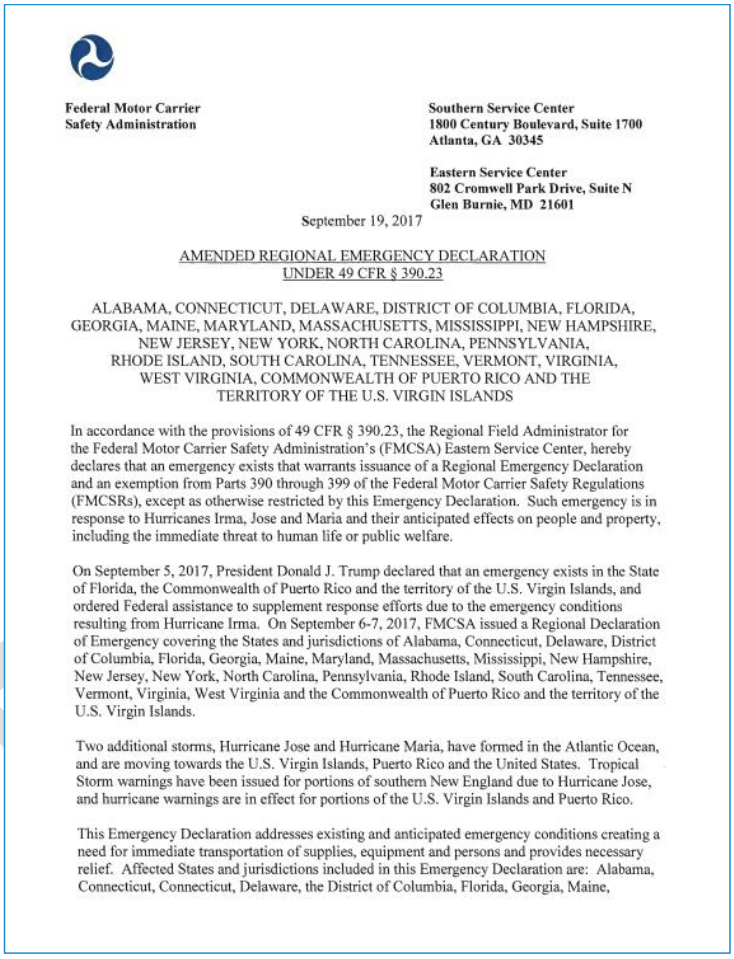
This Executive Order shall be valid for a period of three (3) days, beginning on September 1, 2016, and ending at 11:59pm on September 3, 2016.

This 1st day of September, 2016 at 12:00 ~~AM~~/PM.

Nathan Deal

GOVERNOR

On Sept. 11, 2017, Tropical Storm Irma caused widespread power outages, downed power lines, impassable roads due to fallen trees, and damage to homes and other structures. Wind speeds up to 50 mph were reported. This storm is not shown in NOAA's Storm Data.



Federal Motor Carrier Safety Administration

Southern Service Center
1800 Century Boulevard, Suite 1700
Atlanta, GA 30345

Eastern Service Center
802 Cromwell Park Drive, Suite N
Glen Burnie, MD 21601

September 19, 2017

AMENDED REGIONAL EMERGENCY DECLARATION
UNDER 49 CFR § 390.23

ALABAMA, CONNECTICUT, DELAWARE, DISTRICT OF COLUMBIA, FLORIDA, GEORGIA, MAINE, MARYLAND, MASSACHUSETTS, MISSISSIPPI, NEW HAMPSHIRE, NEW JERSEY, NEW YORK, NORTH CAROLINA, PENNSYLVANIA, RHODE ISLAND, SOUTH CAROLINA, TENNESSEE, VERMONT, VIRGINIA, WEST VIRGINIA, COMMONWEALTH OF PUERTO RICO AND THE TERRITORY OF THE U.S. VIRGIN ISLANDS

In accordance with the provisions of 49 CFR § 390.23, the Regional Field Administrator for the Federal Motor Carrier Safety Administration's (FMCSA) Eastern Service Center, hereby declares that an emergency exists that warrants issuance of a Regional Emergency Declaration and an exemption from Parts 390 through 399 of the Federal Motor Carrier Safety Regulations (FMCSRs), except as otherwise restricted by this Emergency Declaration. Such emergency is in response to Hurricanes Irma, Jose and Maria and their anticipated effects on people and property, including the immediate threat to human life or public welfare.

On September 5, 2017, President Donald J. Trump declared that an emergency exists in the State of Florida, the Commonwealth of Puerto Rico and the territory of the U.S. Virgin Islands, and ordered Federal assistance to supplement response efforts due to the emergency conditions resulting from Hurricane Irma. On September 6-7, 2017, FMCSA issued a Regional Declaration of Emergency covering the States and jurisdictions of Alabama, Connecticut, Delaware, District of Columbia, Florida, Georgia, Maine, Maryland, Massachusetts, Mississippi, New Hampshire, New Jersey, New York, North Carolina, Pennsylvania, Rhode Island, South Carolina, Tennessee, Vermont, Virginia, West Virginia and the Commonwealth of Puerto Rico and the territory of the U.S. Virgin Islands.

Two additional storms, Hurricane Jose and Hurricane Maria, have formed in the Atlantic Ocean, and are moving towards the U.S. Virgin Islands, Puerto Rico and the United States. Tropical Storm warnings have been issued for portions of southern New England due to Hurricane Jose, and hurricane warnings are in effect for portions of the U.S. Virgin Islands and Puerto Rico.

This Emergency Declaration addresses existing and anticipated emergency conditions creating a need for immediate transportation of supplies, equipment and persons and provides necessary relief. Affected States and jurisdictions included in this Emergency Declaration are: Alabama, Connecticut, Connecticut, Delaware, the District of Columbia, Florida, Georgia, Maine,

Maryland, Massachusetts, Mississippi, New Hampshire, New Jersey, New York, North Carolina, Pennsylvania, Rhode Island, South Carolina, Tennessee, Vermont, Virginia, West Virginia and the Commonwealth of Puerto Rico and the territory of the U.S. Virgin Islands.

By execution of this Emergency Declaration, motor carriers and drivers providing direct assistance to the emergency in the Affected States and jurisdictions in direct support of relief efforts related to Hurricanes Irma, Jose and/or Maria are granted emergency relief from Parts 390 through 399 of Title 49 Code of Federal Regulations except as restricted herein.

This Emergency Declaration provides for regulatory relief for commercial motor vehicle operations while providing direct assistance supporting emergency relief efforts transporting supplies and equipment into the Affected States and jurisdictions or transporting persons into or from the Affected States and jurisdictions or providing other assistance in the form of emergency services during the emergency in the Affected States and jurisdictions resulting from Hurricanes Irma, Jose and/or Maria. Direct assistance terminates when a driver or commercial motor vehicle is used in interstate commerce to transport cargo or provide services not directly supporting the emergency relief effort or when the motor carrier dispatches a driver or commercial motor vehicle to another location to begin operations in commerce. Upon termination of direct assistance to the emergency relief effort, the motor carrier and driver are subject to the requirements of 49 CFR Parts 390 through 399, except that a driver may return empty to the motor carrier's terminal or the driver's normal work reporting location without complying with Parts 390 through 399.

Nothing contained in this Emergency Declaration shall be construed as an exemption from the controlled substances and alcohol use and testing requirements (49 CFR Part 382), the commercial driver's license requirements (49 CFR Part 383), the financial responsibility (insurance) requirements (49 CFR Part 387), the hazardous materials regulations (49 CFR Parts 100-180), applicable size and weight requirements, or any other portion of the regulations not specifically authorized pursuant to 49 CFR § 390.23.

Motor carriers or drivers currently subject to an out-of-service order are not eligible for the relief granted by this declaration until they have met the applicable conditions for its rescission and the order has been rescinded by FMCSA.

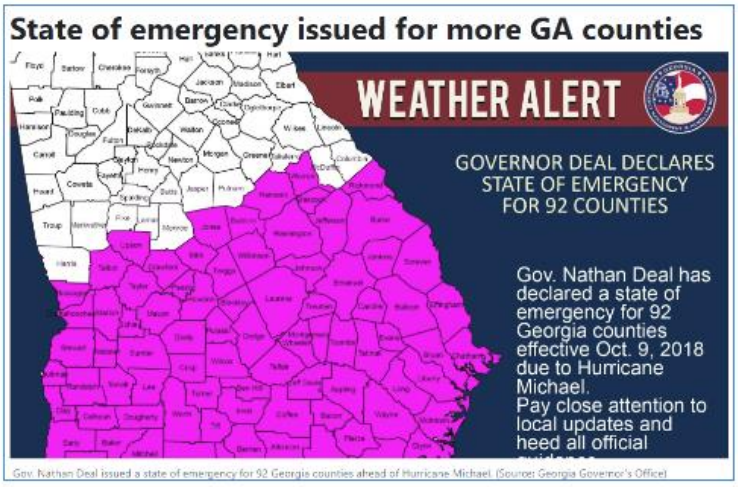
In accordance with 49 CFR § 390.23, this declaration is effective immediately and shall remain in effect for the duration of the emergency *(as defined in 49 CFR § 390.5)* or until 11:59 P.M. (ET), October 5, 2017, whichever is less.

Darrell L. Ruban, Regional Field Administrator
Federal Motor Carrier Safety Administration
Southern Service Center

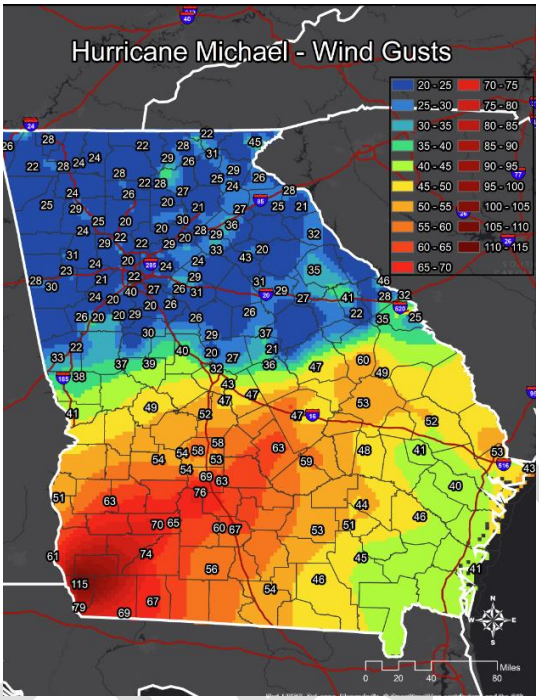
Curtis L. Thomas, Regional Field Administrator
Federal Motor Carrier Safety Administration
Eastern Service Center

Regional Declaration of Emergency **Page 2 of 2**

On October 10, 2018, Hurricane Michael caused minor wind damage, including trees blown down, power outages, damage to roofs, and a chicken house blown down in Pridgen. Over 200 residents were sheltered from mobile homes in the county.

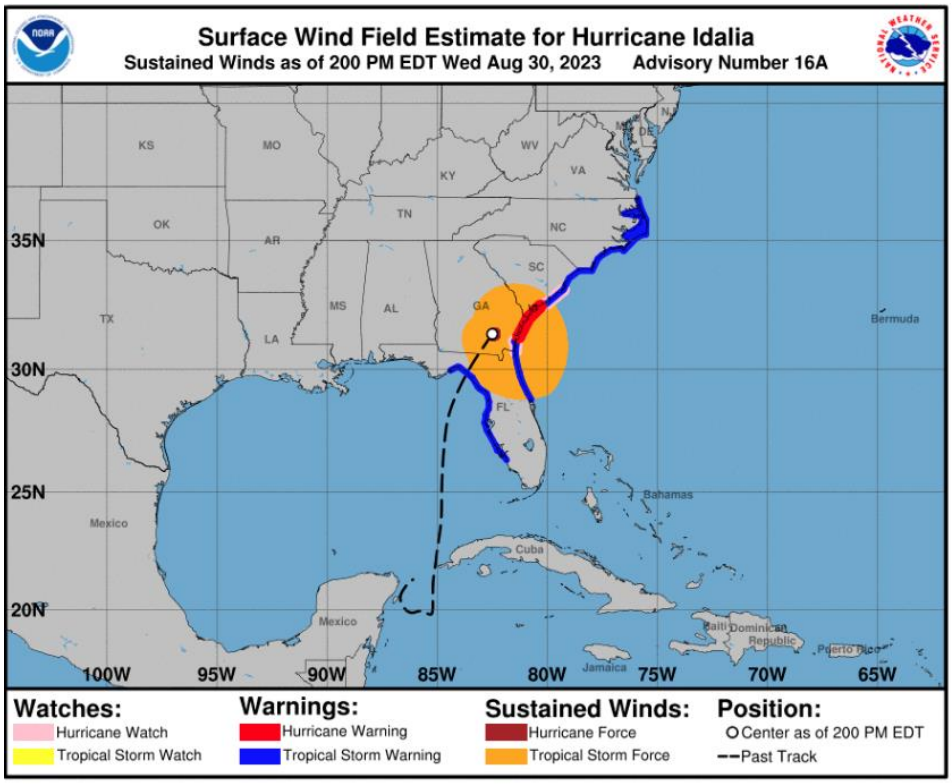


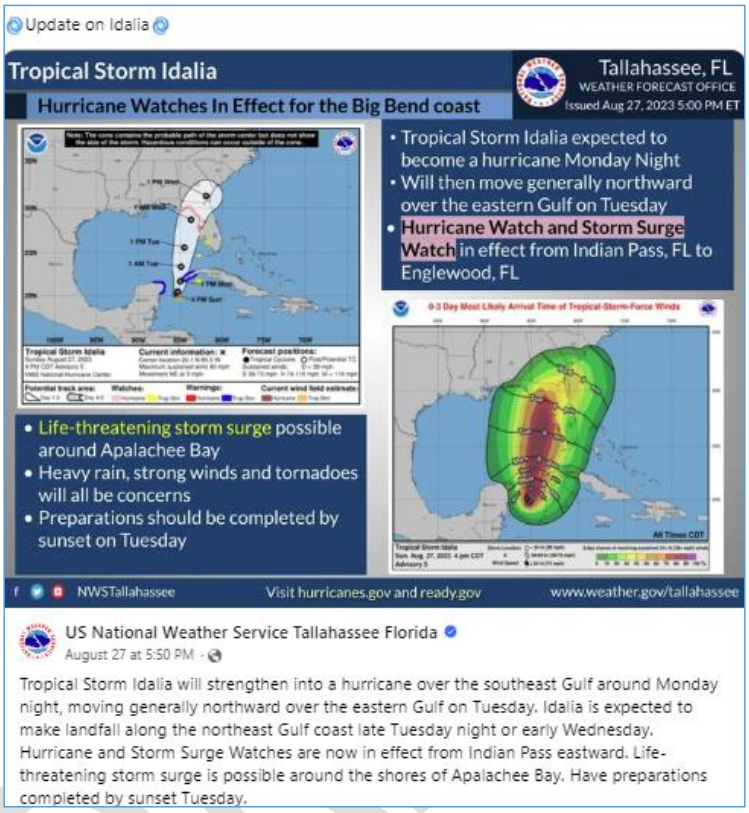
Gov. Nathan Deal issued a state of emergency for 92 Georgia counties ahead of Hurricane Michael. (Source: Georgia Governor's Office)



On August 30, 2023, Coffee County was impacted by Hurricane Idalia. It moved across South Georgia with 85 mph winds, causing downed trees and powerlines across the south, headed towards Savannah, and then running up the northern coastline. This storm is currently not shown on NOAA's Data System.

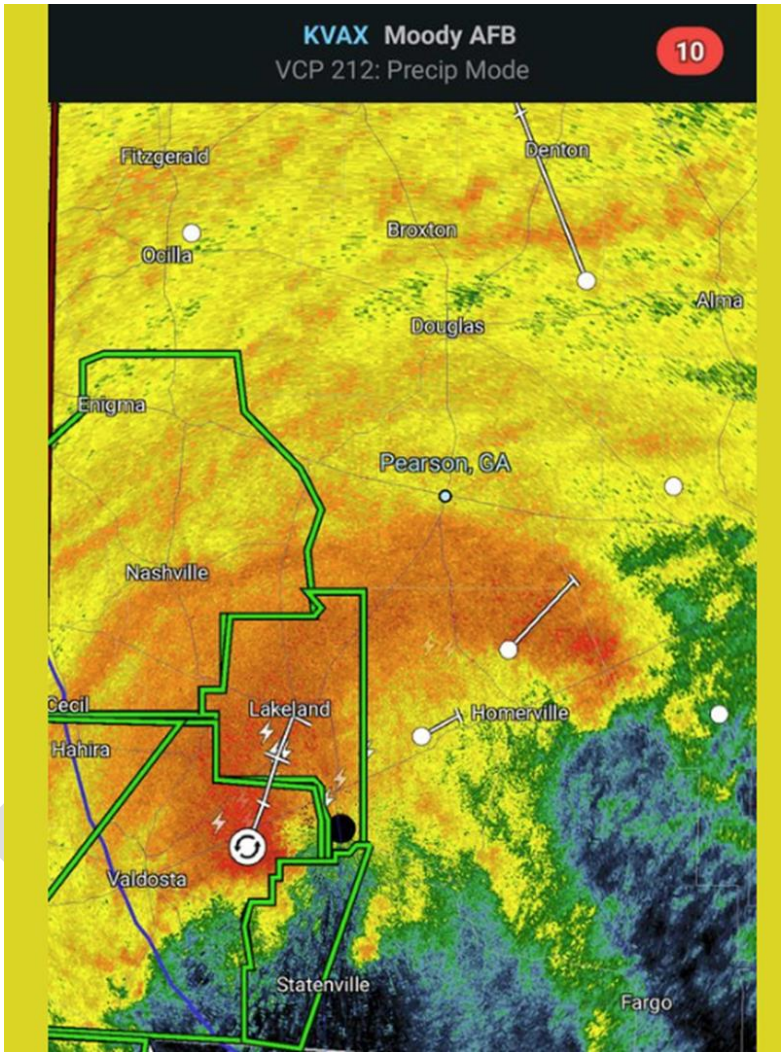

DISASTER DECLARATION
PUBLIC & INDIVIDUAL ASSISTANCE
Berrien, Brooks, Cook, Glynn and Lowndes
PUBLIC ASSISTANCE
Appling, Atkinson, Bacon, Brantley, Bulloch, Burke, Camden, Candler, Charlton, Clinch, Coffee, Colquitt, Echols, Emanuel, Jeff Davis, Jenkins, Lanier, Montgomery, Pierce, Screven, Tattnall, Thomas, Tift, Toombs, Treutlen, Ware, and Wayne
Register now!
To register for assistance or for more information, visit www.disasterassistance.gov or call 1-800-621-3362.
PUBLIC ASSISTANCE can fund debris removal and emergency work on a PUBLIC facility or infrastructure which is damaged or destroyed by a disaster.
INDIVIDUAL ASSISTANCE can fund individual and family recovery efforts after a disaster.


Surface Wind Field Estimate for Hurricane Idalia
Sustained Winds as of 200 PM EDT Wed Aug 30, 2023 Advisory Number 16A
KS
MO
KY
WV
VA
TN
NC
OK
AR
SC
MS
AL
GA
TX
LA
FL
Bermuda
Bahamas
Cuba
Mexico
Haiti
Dominican Republic
Puerto Rico
Jamaica
35N
30N
25N
20N
100W
95W
90W
85W
80W
75W
70W
65W
Watches:
Hurricane Watch
Tropical Storm Watch
Warnings:
Hurricane Warning
Tropical Storm Warning
Sustained Winds:
Hurricane Force
Tropical Storm Force
Position:
Center as of 200 PM EDT
Past Track



US National Weather Service Tallahassee Florida
August 27 at 5:50 PM ·

Tropical Storm Idalia will strengthen into a hurricane over the southeast Gulf around Monday night, moving generally northward over the eastern Gulf on Tuesday. Idalia is expected to make landfall along the northeast Gulf coast late Tuesday night or early Wednesday. Hurricane and Storm Surge Watches are now in effect from Indian Pass eastward. Life-threatening storm surge is possible around the shores of Apalachee Bay. Have preparations completed by sunset Tuesday.



The following probabilistic wind damage risk assessment modeled a Category 1 storm with maximum winds of 84 mph.

Wind losses were determined from probabilistic models run for the Category 1 storm, which equates to a 1% chance of a storm event. Figure 3 shows wind speeds for the modeled hurricane.

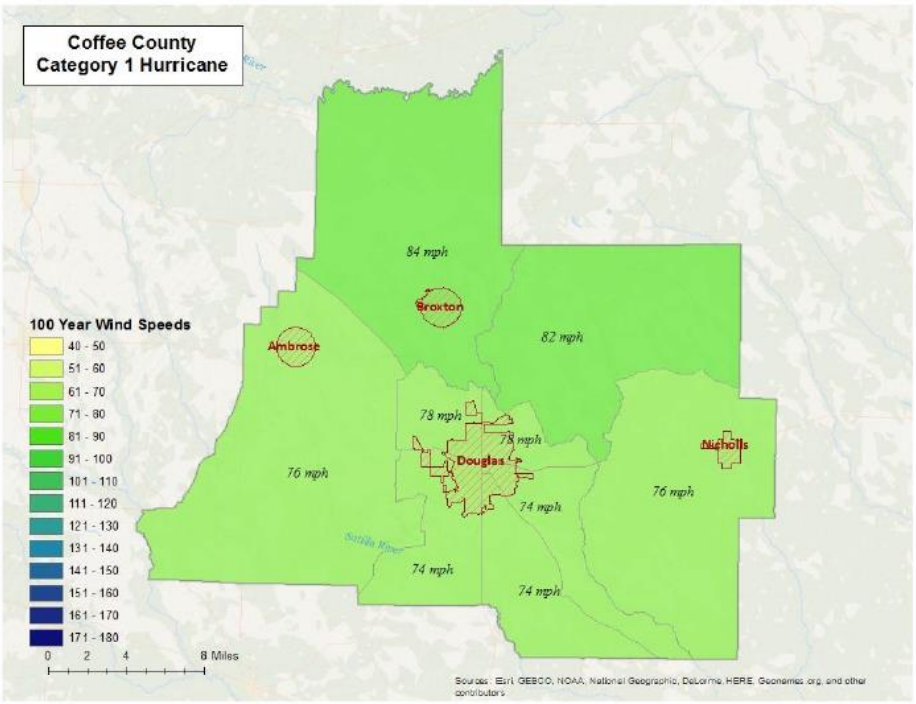


Figure 3: Wind Speeds by Storm Category

Buildings in Coffee County are vulnerable to storm events, and the cost of rebuilding may have significant consequences for the community. The following table summarizes the results of wind-related building damage in Coffee County for the Category 1 (100-Year Event) storm. The loss ratio expresses building losses as a percentage of the total building replacement cost in the county. Figure 4 illustrates the building loss ratios of the modeled Category 1 storm.

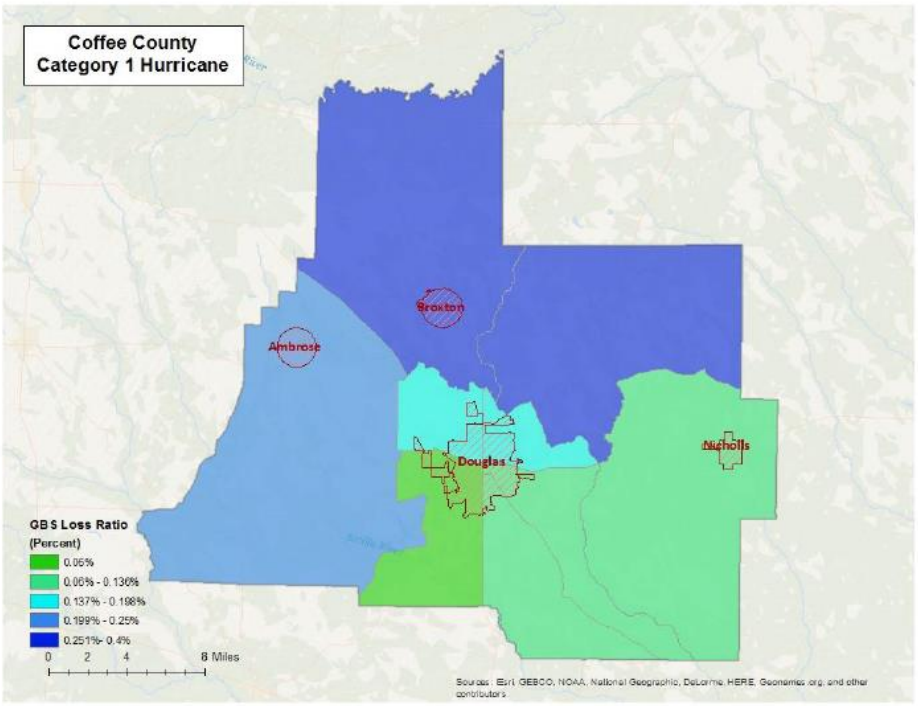


Figure 4: Hurricane Wind GBS Loss Ratios

Table 5: Hurricane Wind Building Damage

Storm Classification	Number of Damaged Buildings	Building Damages	Total Economic Loss	Loss Ratio
Category 1	154	$ 5,945,260	$ 8,451,200	0.17%

There are 63 essential facilities in Coffee County.

Classification	Number
EOC	1
Care	1
Fire	14
Police	6
School	41
Total	**63**

Table 6: Wind-Damaged Essential Facility Losses

Storm Classification	Facilities Moderately Damaged (>50%)	Facilities Completely Damaged (>50%)	Facilities with expected loss (<1day)
Category 1	0	0	63

Table 7: Displaced Households and People

Storm Classification	# of Displaced Households	# of People Needing Short-Term Shelter
Category 1	0	0

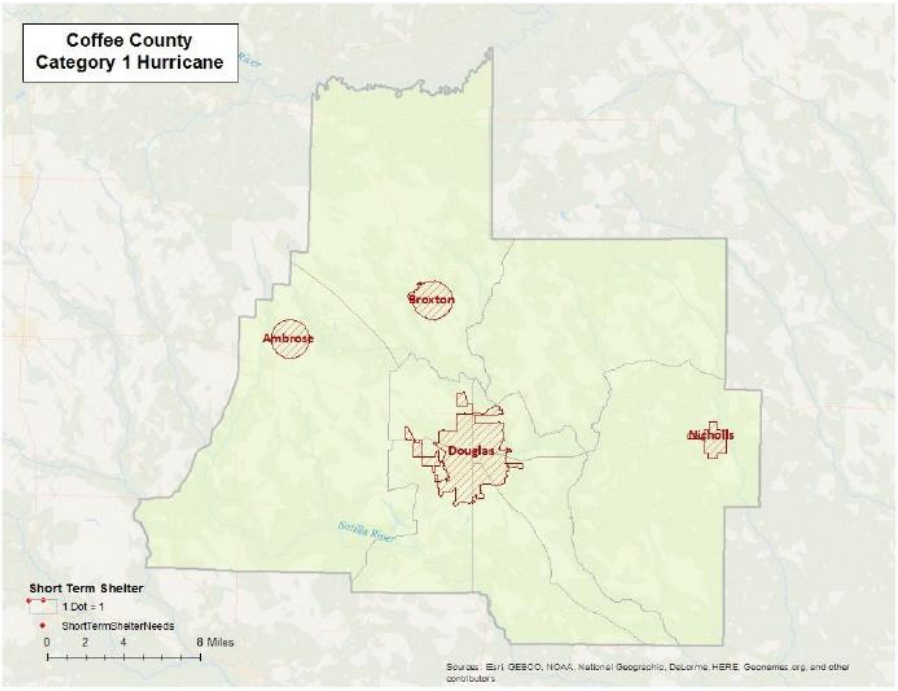


Figure 5: Hurricane Wind Shelter Requirements

Estimates of debris generated by high-velocity hurricane winds are as follows:

- Reinforced Concrete and Steel Debris
- Brick and Wood and Other Building Debris
- Tree Debris

The estimates of debris for this scenario are listed in Table 8. The amount of hurricane wind-related tree debris estimated to require pick up at the public's expense is listed in the eligible tree debris column.

Table 8: Wind-Related Debris Weight (Tons)

Storm Classification	Brick, Wood, and Other	Reinforced Concrete/Steel	Tree Debris	Other Tree Debris	Total
Category 1	570	-	5,358	95,924	101,852

Figure 6 shows the distribution of all wind-related debris from a Category 1 hurricane. Each dot represents 20 tons of debris within the census tract in which it is located. The dots are randomly distributed within each census tract and do not represent the specific location of debris sites.

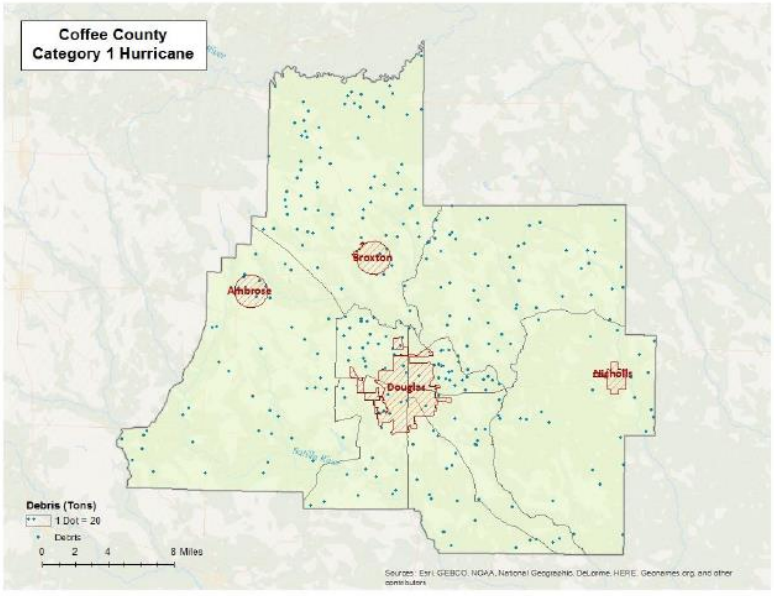


Figure 6: Wind-Related Debris Weight (Tons)

Although the complete available data was used for this analysis, 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 Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls are equally vulnerable to hurricanes and tropical storms. Coffee County has a wind hazard score 2 (91-100 mph gust). A map of the wind hazard score and critical facilities is provided in Appendix A.

An estimated 100% of the Residential property (14,253 of 14,253) in Coffee County (including the Cities of Ambrose, Broxton, Douglas, and Nicholls) could be affected by this hazard, with a total value of $1,921,393,000. Also, an estimated 100% of the community's Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, and Education properties (1,613 of 1,613) may be affected, totaling $1,625,199.000 The values are based on the recently available tax roll data for Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls provided by the Coffee County Tax Assessor's Office.

Damage to crops is not considered in any of these figures. According to the Center for Agribusiness & Economic Development's 2021 Georgia Farm Gate Value Report (Farm Gate Value | Georgia Data), the total farm gate value of agricultural production in Coffee County is $307,975,080.

According to the inventory database reports and maps, this hazard could affect all 131 Critical Facilities and Infrastructure for Coffee County (including the Cities of Ambrose, Broxton, Douglas, and Nicholls). The total value of these Critical Facilities is $905,789,637, plus a content value of $46,538,173.

E. Land Use and Development Trends

Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls have seen considerable population changes over the last few years. Both the City of Douglas and the County have seen slight population gains. The City of Ambrose has seen significant population growth, and the City of Broxton has seen a decline in population. The population of the City of Nicholls has increased significantly, mainly due to the City's annexation of the Coffee Correctional Facility, which has a capacity of approximately 3,000 inmates.
Coffee County and the Cities of Broxton, Douglas, and Nicholls have zoning regulations; Ambrose does not. All jurisdictions have mandatory building and fire codes, which are enforced by the building inspector. Cities participate in joint comprehensive planning and require Service Delivery Strategy updates. No other land use or development trends related to this hazard have been identified.

Coffee County and the Cities of Broxton, Douglas, and Nicholls have zoning regulations; Ambrose does not. All jurisdictions have mandatory building and fire codes that aa building inspector enforces. On October 1, 1991, the Uniform Codes Act became effective in Georgia. On July 1, 2004, this Act was revised to make the following construction codes mandatory as the Georgia State Minimum Standard Codes. Listed below are the code editions in effect as of January 1, 2021, with amendments in 2020 and 2022:

- International Building Code – 2018 Edition
- International Residential Code – 2018 Edition
- International Plumbing Code – 2018 Edition
- International Mechanical Code – 2018 Edition
- International Fuel Gas Code – 2018 Edition
- International Energy Conservation Code – 205 Edition
- International Fire Code – 2018 Edition
- International Electric Code – 2020 Edition
- International Swimming Pool and Spa Code – 2018 Edition

F. Multi-Jurisdictional Differences

Hurricane/tropical storm events are usually area-wide, and no difference in severity is expected between Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls. However, the impact may be more severe in places with higher population density due to more people being in danger, more people needing to be evacuated, more debris from damaged buildings, and other impacts associated with higher population density. In jurisdictions with building codes and inspections, structures built to code may be especially vulnerable to the effects of strong winds and other hazards.

Coffee County and the City of Douglas are members of the National Flood Insurance Program; the Cities of Ambrose, Broxton, and Nicholls are not (source: https://www.fema.gov/cis/GA.html), due to the relatively small portion of those jurisdictions that is within a flood zone and due to decisions made at the discretion of local leaders. However, this plan calls for those Cities to join the program as soon as possible. Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls do not participate in the Community Rating System (CRS) program. As of 2017, they were not eligible, according to FEMA (source: http://www.fema.gov/library/viewRecord.do?id=3629).

As of late 2017, Coffee County and the City of Douglas comply with NFIP requirements and intend to remain compliant by enforcing flood plain ordinances that prohibit or severely limit development in flood plains.

G. Overall HRV Summary of Events and Their Impact

Hurricanes/tropical storms can potentially cause damage anywhere, anytime, throughout Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls. 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 instead of more sparsely populated or unpopulated areas.

The Coffee County HMPUC has developed a comprehensive range of Mitigation Goals, Objectives, and Action Steps to lessen the impacts of this hazard. These are contained in Chapter 3.

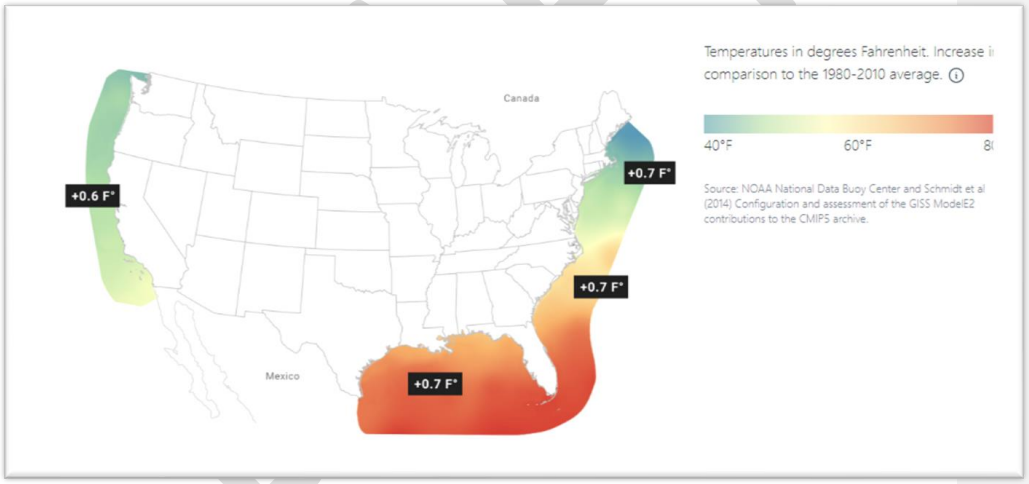
Since the previous plan was approved, there have not been any new developments, regulations, programs, or other changes in the community that would either increase or decrease the community's overall vulnerability to this hazard.

H. Impacts from Future Conditions

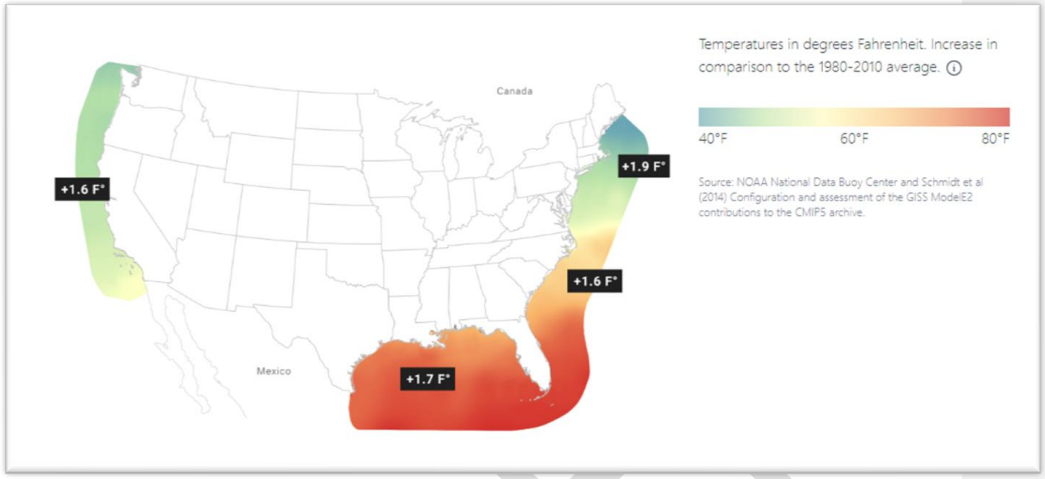
The wind speed in Coffee County due to a tropical storm or hurricane is measured by its 1-minute sustained wind speed. The higher the wind speed, the higher the storm category will be. Even though the storm category plays a role in its destructive capability, the 3-second wind gusts cause the most damage to properties and infrastructure.

The difference in wind speed will be explained below in 30 years due to the changing climate. As the environment continues to change, there will be warmer seas with new weather patterns and stronger storms. The atmosphere will be warmer, and the energy will create high-intensity winds. The warmer oceans will feed storms that develop out at sea and make their way towards land. The projections below from Risk Factor show the difference between now, 15 years, and 30 years:

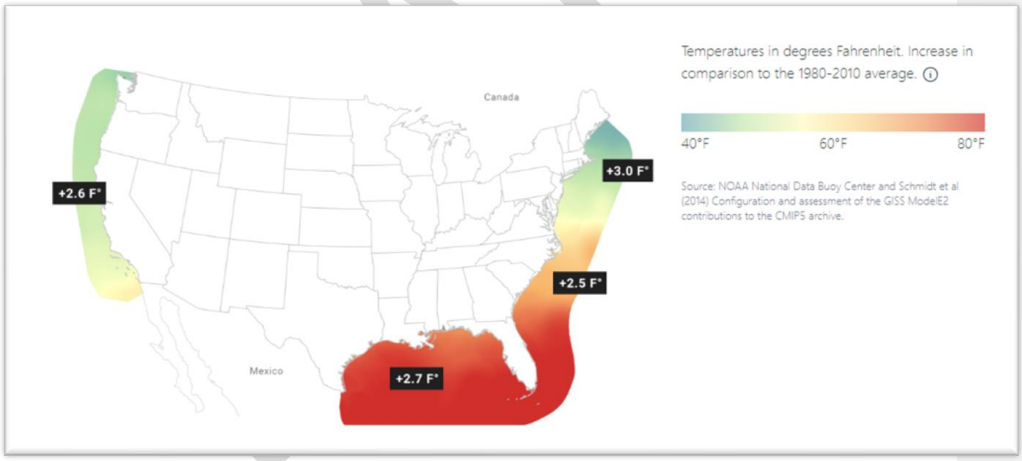
This Year



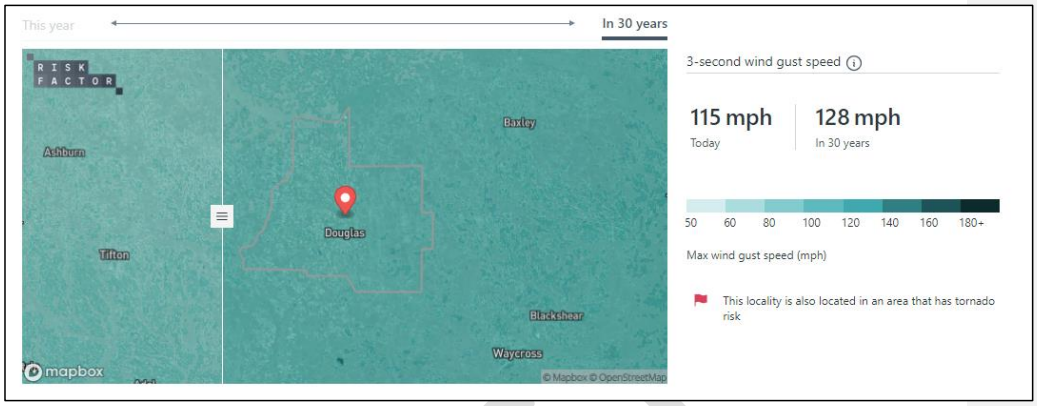
In 15 Years



In 30 Years



If an exceedingly rare windstorm (a 1-in-3,000-year storm event) occurred today, it could cause wind gusts of up to **115 mph** to reach Coffee County. A hurricane of this severity has a 1% chance of occurring at least once over the next 30 years. In 30 years, an event of this same likelihood would show increased wind gusts of up to **128 mph** due to a changing environment.



I. Underserved/Socially Vulnerable Population Risk

The workshops were attended by organizations that deal with the elderly and vulnerable in Coffee County. Plans will be implemented to assist these groups during a hazardous event. The hospital is equipped to help the vulnerable population. The Police Department works closely with people experiencing homelessness and is also available to help.

Flyers explaining the Hazard Mitigation process were distributed at the county and city offices, the Health Department, and the Department of Family and Children Services (DFACS).

Section VIII. Severe Winter Storms

A. Identification of Hazard

The Coffee County HMPUC has chosen the threat of Severe Winter Storms as the eighth most likely hazard to occur and cause damage in Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls; based on experience, the FEMA-described methodology and other factors. Historical data has been examined from various sources, including the National Climatic Data Center (see Appendix F) and local history and personal accounts, to determine the frequency of events.

Although this natural hazard did not rank high in any dataset of occurrences or damages happening in Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls, undocumented personal accounts of the HMPUC members rated this hazard as likely to occur and cause damage. Because of this region's infrequency of severe winter storms, community residents need to prepare to handle such events. Icy roads may result in a disproportionate number of automobile crashes because residents are not accustomed to driving in icy conditions. Bridges and overpasses may be more susceptible to icing over, creating an additional hazard. Being unprepared may result in loss of life or substantial damage to property and the economy.

At worst, severe winter storms will produce sleet, freezing rain, and/or 1 to 2 inches of snow, with temperatures as low as the teens (°F). Snow accumulation usually melts away within 24 hours. Possible damage may include downed tree limbs, impassable roadways, power outages, increased emergency service workloads, failed water/sewer/septic systems, crop damage, and vehicle crashes.

B. Profile of Events, Frequency of Occurrences, Probability

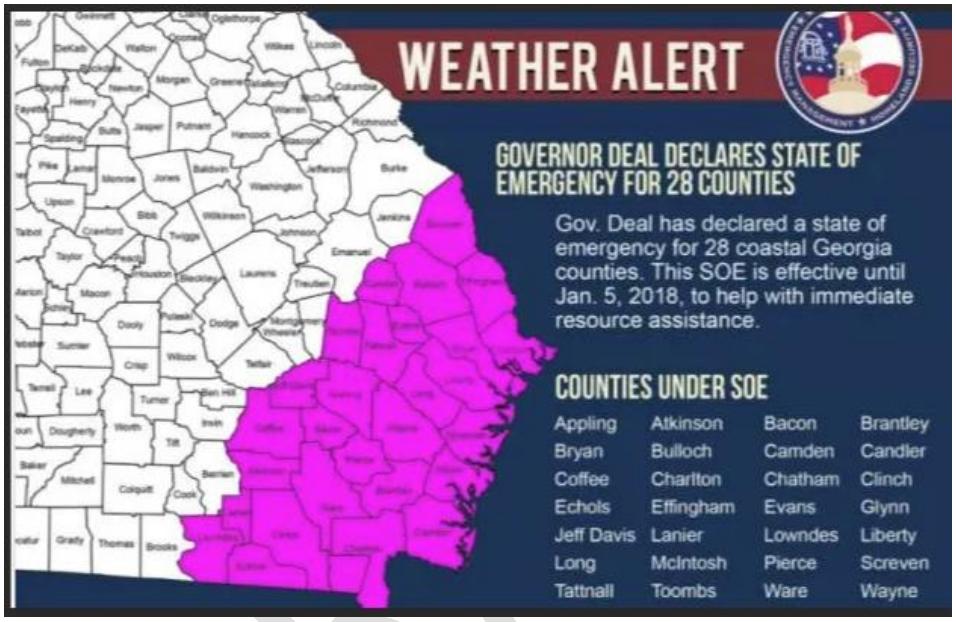
According to the NOAA Storm Events Database (see Appendix F), four reports of Severe Winter Storms occurred in Coffee County (including the Cities) between 01/01/1950 and 12/31/2022. The Historic Recurrence Interval is 18.00 years old. This is a 5.56% Historic Frequency Chance per year. The past 10-year Record Frequency Per Year is 0.2, the past 20-year frequency is 0.1, and the past 50-year frequency is 0.08 (see the Hazard Frequency Table in Appendix D).

Coffee County, Georgia, set its first snowfall record on February 13, 2010, when it received 3.2 inches of snow over 24 hours.

On January 29, 2011, an ice storm resulted in light sleet accumulations, freezing rain, and snow flurries in Douglas. The bridges were icy. Schools were closed on the 29th. One report of a car sliding off the road along U.S. Highway 441, north of Pridgen, with no injuries. Ice accumulation of up to ¼ inch was estimated.

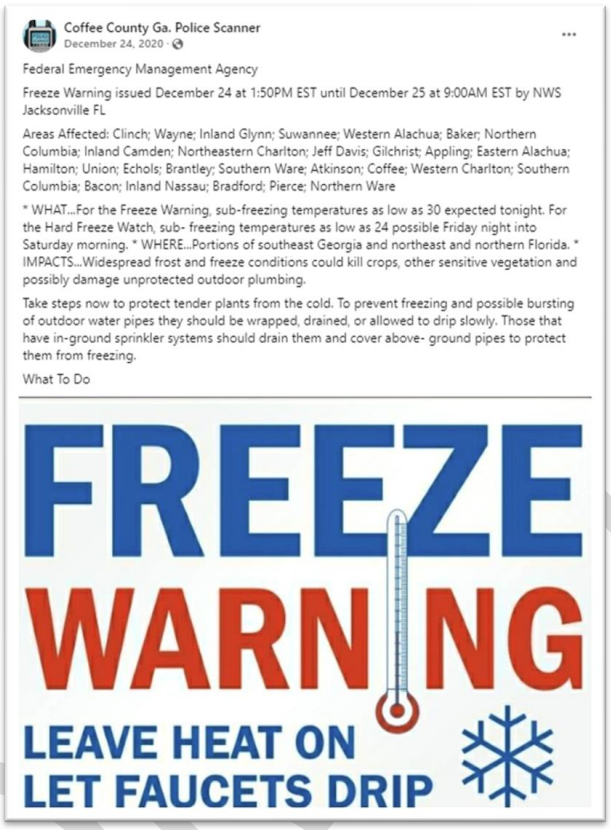
Since the previous Hazard Mitigation Plan became effective, one Severe Winter Storm event has been reported for January 3, 2018. At 6:45 am, Sleet and freezing rain was reported in Broxton. At 7:19 am, 2 inches of snow accumulated 6 miles west of Douglas along Sinkhole Road. At 8 am, the public reported snow in Douglas. At 11:20 am, the media reported 2 inches of snow

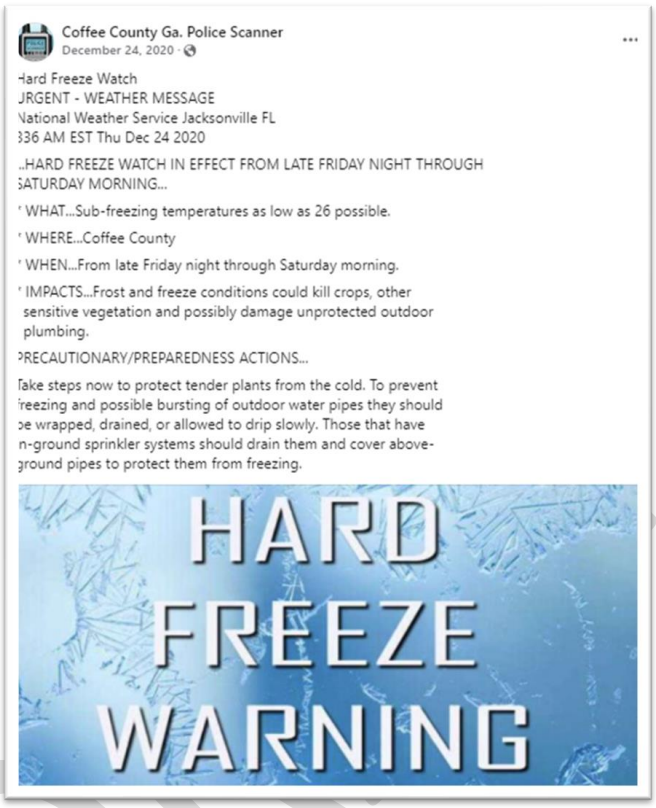
accumulated about 6 miles west of Douglas along Sinkhole Road. At 12:12, the public reported 1.5 inches of snow south of Douglas. At 12:40 pm, the media reported 3.5 inches of snow in Broxton. At 1 pm, 2.5 inches of snow was reported by the public along Highway 32 WSW of Ambrose.



Freezing Days in Coffee County, 2022

January	10
February	5
March	1
April	0
May	0
June	0
July	0
August	0
September	0
October	0
November	2
December	8


Coffee County Ga. Police Scanner
December 24, 2020 ·
Federal Emergency Management Agency
Freeze Warning issued December 24 at 1:50PM EST until December 25 at 9:00AM EST by NWS Jacksonville FL
Areas Affected: Clinch; Wayne; Inland Glynn; Suwannee; Western Alachua; Baker; Northern Columbia; Inland Camden; Northeastern Charlton; Jeff Davis; Gilchrist; Appling; Eastern Alachua; Hamilton; Union; Echols; Brantley; Southern Ware; Atkinson; Coffee; Western Charlton; Southern Columbia; Bacon; Inland Nassau; Bradford; Pierce; Northern Ware
* WHAT...For the Freeze Warning, sub-freezing temperatures as low as 30 expected tonight. For the Hard Freeze Watch, sub- freezing temperatures as low as 24 possible Friday night into Saturday morning. * WHERE...Portions of southeast Georgia and northeast and northern Florida. * IMPACTS...Widespread frost and freeze conditions could kill crops, other sensitive vegetation and possibly damage unprotected outdoor plumbing.
Take steps now to protect tender plants from the cold. To prevent freezing and possible bursting of outdoor water pipes they should be wrapped, drained, or allowed to drip slowly. Those that have in-ground sprinkler systems should drain them and cover above- ground pipes to protect them from freezing.
What To Do
FREEZE
WARNING
LEAVE HEAT ON
LET FAUCETS DRIP



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

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

In Worksheet 3A: Inventory of Assets (appearing in Appendix A), we estimate that all of Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls are equally vulnerable to this hazard.

An estimated 100% of the Residential property (14,253 of 14,253) in Coffee County (including the Cities of Ambrose, Broxton, Douglas, and Nicholls) could be affected by this hazard, with a total value of $1,921,393,000. Also, an estimated 100% of the community's Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, and Education properties (1,613 of 1,613) may be affected, totaling $1,625,199.000 The values are based on the recently available tax roll data for Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls provided by the Coffee County Tax Assessor's Office.

Damage to crops is not considered in any of these figures. According to the Center for Agribusiness & Economic Development's 2021 Georgia Farm Gate Value Report (Farm Gate Value | Georgia Data), the total farm gate value of agricultural production in Coffee County is $307,975,080.

According to the inventory database reports and maps, this hazard could affect all 229 Critical Facilities and Infrastructure for Coffee County (including the Cities of Ambrose, Broxton, Douglas, and Nicholls).

E. Land Use and Development Trends

Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls have seen considerable population changes over the last few years. Both the City of Douglas and the County have seen slight gains in population. The City of Ambrose has seen considerable population growth, and the City of Broxton has seen a decline in population. The City of Nicholls has increased dramatically, primarily due to the annexation of the Coffee Correctional Facility, which has a capacity of approximately 3,000 inmates.

Coffee County and the Cities of Broxton, Douglas, and Nicholls have zoning regulations; Ambrose does not. All jurisdictions have mandatory building and fire codes enforced by a building inspector. The county and cities participate in joint comprehensive planning and the required updates of the Service Delivery Strategy. No other land use or development trends related to this hazard have been identified.

Coffee County and the Cities of Broxton, Douglas, and Nicholls have zoning regulations; Ambrose does not. All jurisdictions have mandatory building and fire codes that aa building inspector enforces. On October 1, 1991, the Uniform Codes Act became effective in Georgia. On July 1, 2004, this Act was revised to make the following construction codes mandatory as the Georgia State Minimum Standard Codes. Listed below are the code editions in effect as of January 1, 2021, with amendments in 2020 and 2022:

- International Building Code – 2018 Edition
- International Residential Code – 2018 Edition
- International Plumbing Code – 2018 Edition
- International Mechanical Code – 2018 Edition
- International Fuel Gas Code – 2018 Edition
- International Energy Conservation Code – 205 Edition
- International Fire Code – 2018 Edition
- International Electric Code – 2020 Edition
- International Swimming Pool and Spa Code – 2018 Edition

F. Multi-Jurisdictional Differences

Severe Winter Storm events are usually area-wide, and no difference in severity is expected between Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls. In the event of icy roads, hazards would be more significant along high-traffic corridors and in densely populated areas. In a power failure, households with electricity as the only available heat source

are more vulnerable to low temperatures. Homeless people are one of the groups most vulnerable to severe winter storms. Agriculture is a significant part of the economy of unincorporated Coffee County, and many crops may be affected by severe winter weather.

G. Overall HRV Summary of Events and Their Impact

Severe winter storms can cause damage anywhere, anytime, throughout Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls. The cost of the damage may be higher in terms of vehicle crashes along high-traffic corridors and more densely populated areas and higher in crop damage in the agricultural areas of the county.

The Coffee County HMPUC recognizes severe winter storms as the eighth most likely natural hazard to occur and cause damage. To lessen their impacts on Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls, they have developed a comprehensive range of mitigation goals, objectives, and action steps contained in Chapter 3.

Since the previous plan was approved, there have not been any new developments, regulations, or programs that would either increase or decrease the community's overall vulnerability to this hazard.

H. Impacts from Future Conditions

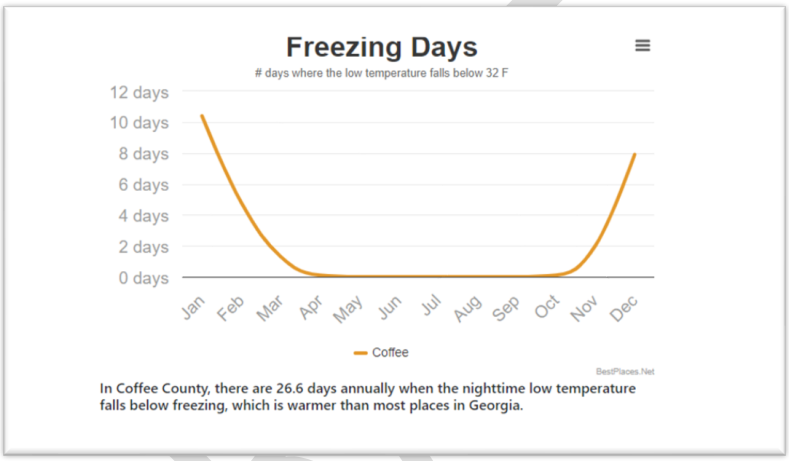
El Niño events result in above-normal precipitation and below-normal temperatures for potions of Georgia. These impacts are usually more pronounced during the winter season rather than during the summer. During an El Niño, the southern portion of Georgia is typically wetter and cooler than usual due to frequent storm tracks along the subtropical Pacific jet stream. Whereas, during a La Niña, Georgia generally is warmer than usual, and the southern portion is typically abnormally dry.

A rapidly growing warm pool in the Eastern Pacific Ocean indicates El Niño. The chance of a strong El Niño by the fall of 2023 is at 40%, with an almost 70% chance of at least a moderate El Niño and only a 10% chance of an El Niño. El Niño does not have much impact on Georgia in the summer months, but by fall, it will start to impact conditions in Georgia and surrounding areas.

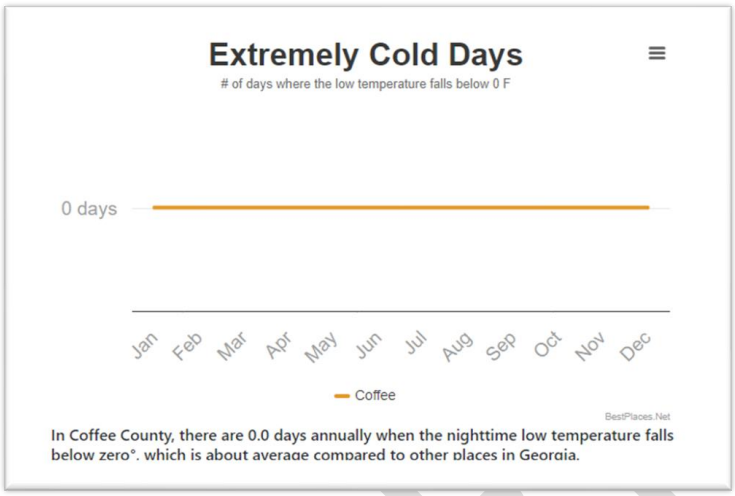
The statistics and the longest-range climate models suggest that by November, we could see typical rainy El Niño conditions occurring over southern GA and AL down into Florida and up the East Coast. Some models have wet conditions starting already in October. For farmers, you cannot count on a dry fall for harvesting. The Florida State Climatologist David Zierden says you may wish to plant varieties that mature more quickly to harvest before the wet conditions get entrenched later in the fall. If your crops are already in, you will want to oversee the weather forecasts and take advantage of any dry windows to get in the fields and take care of the harvest. This will probably not be a year where you can leave crops out in the area without taking a hit on quality and the ability to harvest late due to potentially wet weather and field conditions.

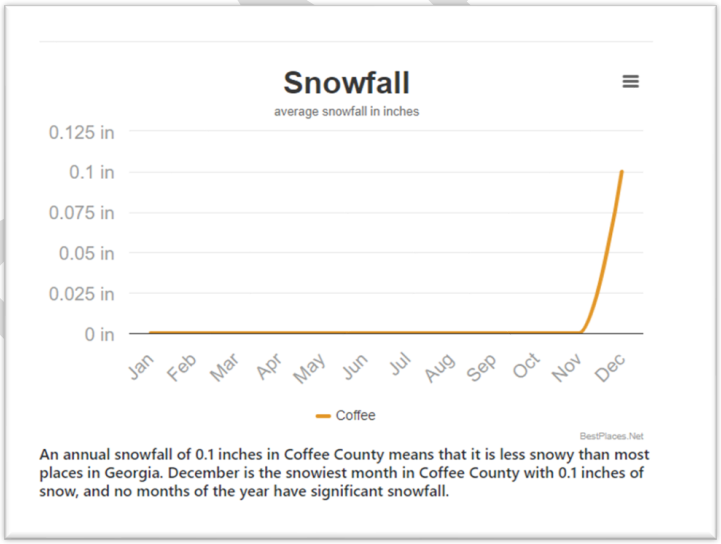
We also usually experience cooler than normal temperatures in El Niño winters. This is not necessarily because we are getting more air from the Arctic but because the cloudy conditions associated with the persistent storm track across the region hold daytime temperatures down. This means it should be easier for fruit farmers to get enough winter chill. Being in an El Niño does not tell us much about the potential for a late spring frost, although if it swings back to neutral conditions by spring, chances go up a bit.

(Source: https://newswire.caes.uga.edu/)

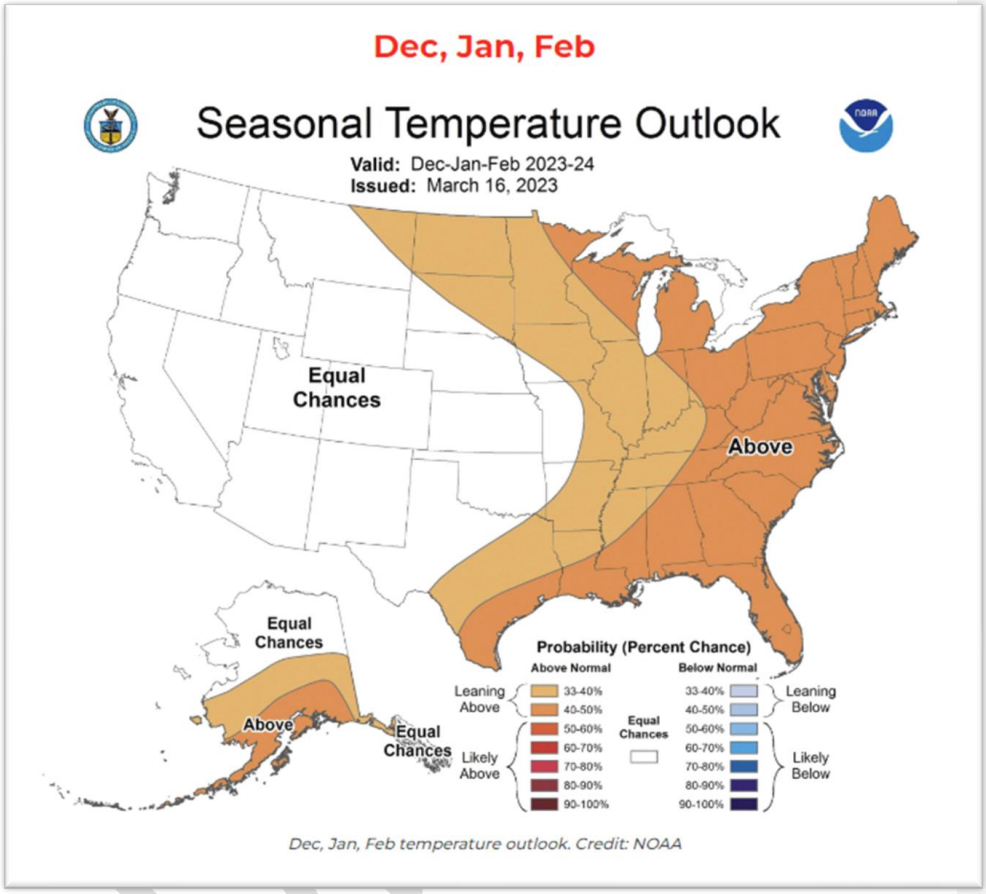


https://www.bestplaces.net/climate





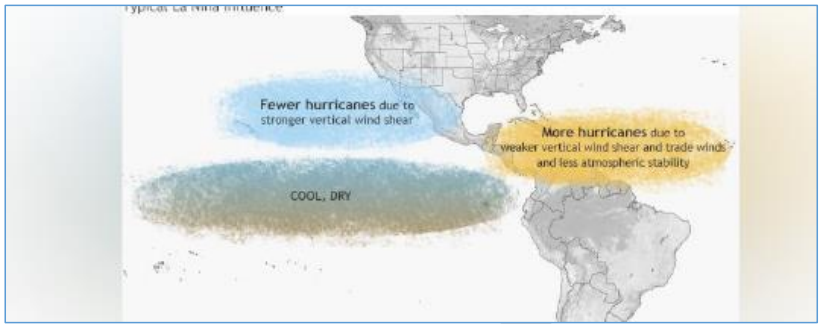
NOAA predicts the greatest odds of above-normal temperatures are for Texas and areas along the Gulf Coast and Eastern Seaboard. This region strongly supports warmer-than-normal temperatures from nearly all dynamical model guidance, statistical forecast tools, and long-term positive temperature trends. Very dry soil moisture conditions and above-normal local coastal SSTs further enhance these odds for the southern High Plains and Gulf/Atlantic coasts.



Dec, Jan, Feb temperature outlook. Credit: NOAA

Weather forecasters have stated that La Niña is coming for the 2024 Hurricane Season in the United States. This gives the climate pattern a 62% chance of developing during the summer months of June through August. La Niña could help boost the severity of the Atlantic hurricane season.

With El Niño still being in effect for a few more months, it is typical for La Niña to follow its events. While La Niña increases hurricanes in the Atlantic, the eastern and central Pacific Ocean basins hurricane numbers will decrease. Other than hurricanes, La Niña will also affect the Winter season.



La Nina tends to increase hurricane activity in the Atlantic and decrease in the Pacific.© NOAA

Florida State climatologist David Zierden stated that a possible extremely warm sea surface temperature, especially in the main hurricane development region, and the prospect of La Niña being in place are not good news for the hurricane season of 2024.

The Climate Prediction Center projects a milder and drier than average Spring across most of the United States.

I. Underserved/Socially Vulnerable Population Risk

There is a population of homeless people in Coffee County and its cities. There is also a great number of farm workers that are Hispanic and are living in dormitory-type housing within the county.

During winter, the City of Douglas Police Department offers a warming station to allow those who need to warm up to do so. The city also allows a church to use its community center at no charge to feed the homeless a week before Thanksgiving. The city has information on its website about other resources to help with food, temporary housing, and other resource needs. This information is available at Community Resource Directory | Douglas, GA- Official Website (cityofdouglasga.gov).

The Department of Family and Children Services (DFACS) participated in the workshops. DFACS keeps close contact with this group of people and informs them of emergencies when necessary. They also have someone to translate the language. Coffee Regional Hospital was also present at the workshops and stated they work with the public during hazardous events.

Brochures explaining the Hazard Mitigation process were distributed at the county and city offices, the Health Department, and the Department of Family and Children Services (DFACS).

Chapter 3:
Local Natural Hazard Mitigation Goals and Objectives

Summary of Changes:

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

Chapter 3 Section	Updates to Section
Thunderstorm/Wind	Updated Goals, Objectives, and Action Step Formatting, Numbering, and Data Field; updated or deleted prior Action Steps and Added New Action Steps (if applicable)
Tornado	Updated Goals, Objectives, and Action Step Formatting, Numbering, and Data Field; updated or deleted prior Action Steps and Added New Action Steps (if applicable)
Drought	Updated Goals, Objectives, and Action Step Formatting, Numbering, and Data Field; updated or deleted prior Action Steps and Added New Action Steps (if applicable)
Flood	Updated Goals, Objectives, and Action Step Formatting, Numbering, and Data Field; updated or deleted prior Action Steps and Added New Action Steps (if applicable)
Hail	Updated Goals, Objectives, and Action Step Formatting, Numbering, and Data Field; updated or deleted prior Action Steps and Added New Action Steps (if applicable)
Wildfire	Updated Goals, Objectives, Action Step Formatting, Numbering, and Data Fields. Updated or deleted prior Action Steps and Added New Action Steps (if applicable)
Hurricane/Tropical Storm	Updated Goals, Objectives, Action Step Formatting, Numbering, and Data Fields. Updated or deleted prior Action Steps and Added New Action Steps (if applicable)
Severe Winter Storm	Updated Goals, Objectives, Action Step Formatting, Numbering, and Data Fields. Updated or deleted prior Action Steps and Added New Action Steps (if applicable)

Table 3.1: Overview of updates to Chapter 3: Local Natural Hazards, Mitigation Goals, and Objectives

Overall Community Mitigation Goals, Policies, and Values Narrative

While Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls operate autonomously, there is a high level of cooperation in hazard mitigation and emergency planning efforts. Each local government has designated representatives to participate in the emergency management process, whether during the planning, response, or recovery phases. The local Emergency Management Agency hosts regular meetings to gather all relevant local, regional, and state partners together to develop effective plans and strengthen stakeholder relationships. 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 mitigate hazards more effectively and provide more warning and preparatory information to their citizens.

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

The Coffee County Commission gave authority for the development of this Plan because they executed the Grantee-Subgrantee Agreement for the Coffee County Hazard Mitigation Grant Program (HMGP) Planning Project and by the Cities of Ambrose, Broxton, Douglas, and Nicholls, located in Coffee County, through their participation in the planning project. The Coffee County Emergency Management Agency is authorized to oversee emergency management within Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls.

The jurisdictions have many current policies and programs related to hazard mitigation, described in detail in the following list.

POLICIES AND PROGRAMS RELATED TO HAZARD MITIGATION

Local hazard mitigation planning (County and all 4 Cities) – All jurisdictions coordinate on regular updates and implementation of the local hazard mitigation plan. The County Emergency Management Agency oversees these activities.

Comprehensive planning—The comprehensive and hazard mitigation plans are coordinated to ensure consistency in each plan's community goals and projects. The comprehensive plan provides guidance for future development, which helps to reduce vulnerability to natural hazards. For example, the comprehensive plan includes a “conservation” character area that guides development away from the community’s flood-prone areas.

Zoning—Coffee County and the Cities of Broxton, Douglas, and Nicholls have zoning regulations. This helps regulate land use development and activities and reduces the possibility of land use that might increase the community’s vulnerability to natural hazards.

All jurisdictions have mandatory building and fire codes, which are enforced by a building inspector. This helps to mitigate the community’s vulnerability to hazards such as wind damage and wildfires.

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	International Building Code – 2018 Edition International Residential Code – 2018 Edition International Plumbing Code – 2018 Edition International Mechanical Code – 2018 Edition International Fuel Gas Code – 2018 Edition International Energy Conservation Code – 205 Edition International Fire Code – 2018 Edition International Electric Code – 2020 Edition International Swimming Pool and Spa Code – 2018 Edition (with amendments)	Yes	No	No
Capital Improvements Plan	Coffee County Comprehensive Plan	Yes	No	No
Comprehensive Plan	Coffee County Comprehensive Plan	Yes	No	No
Economic Development Plan	Coffee County Comprehensive Plan	Yes	No	Yes
Emergency Response Plan	Atkinson County Local Emergency Operations Plan (LEOP)	Yes	No	Yes
Zoning Ordinances	Cities of Broxton, Douglas, Nicholls, and Coffee County Zoning Ordinance (County and Willacoochee do not currently have zoning)	Yes	No	No

All jurisdictions (within the boundaries of their budgets) can expand and improve their existing policies and programs, as evidenced by the new and current goals, objectives, and action steps included in this plan. The number of resources available to the jurisdictions to expand and improve existing programs will depend on local government budgets and state and federal funding to support hazard mitigation activities.

This chapter describes the comprehensive range of Mitigation Goals, Objectives, and Action Steps developed by the HMPUC to reduce damages and improve safety through Hazard Mitigation. These were arranged by the natural hazards in Chapter 2. There is an emphasis on emergency preparedness and infrastructure.

The HMPUC discussed and identified the comprehensive range of Mitigation Goals, Objectives, and Action Steps contained in Chapter 3 of this Plan after identifying the hazards noted in Chapter 2. All community areas were considered in developing the comprehensive range of Mitigation Goals, Objectives, and Action Steps. These were identified after weighing many factors during the planning process, including risk assessment, storm history, past damage, community resources, etc.

A comprehensive list of Mitigation Goals, Objectives, and Action Steps was compiled from the input of the HMPUC and 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 prioritizing 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 projects involved expending considerable funds to initiate the required actions. The determination of a project's cost/benefit analysis (such as the FEMA B/CA model) will be implemented at the time of application or funding request. Other projects allowed the communities to pursue project completion and grant funding. Still, others required no significant financial commitment from the communities.

Chapter 4, Sections I-III, describes the planning process for selecting the comprehensive range of Mitigation Goals, Objectives, and Action Steps. The Action Steps of the HMPUC gives the Action Steps a rating of High, Medium, or Low Priority of factors (with a primary emphasis on prioritized cost versus benefit review) identified in Chapter 4, Section I.

The chapter lists relevant, comprehensive ranges of Mitigation Goals, Objectives, and Action Steps below. Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls have chosen the Coffee County EMA Director to oversee the projects. The Coffee County EMA has been designated by Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls as the coordinating agency for implementing and administering this project.

Section I. Thunderstorms and Wind

A. Community Mitigation Goals

As previously indicated in Chapter 2, this hazard may cause substantial damage to life, property, and the economy in Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls. Thunderstorms and wind are unpredictable and can happen anywhere and at any time. Because these storms may be extremely violent and cause significant 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 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 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 relevant to this hazard. For more information, see Chapter 2, Section I.

3. Community Values, Historical, and Special Considerations:
Historic buildings exist in the community, a few of which are Critical Facilities. Historic considerations pose significant challenges in retrofitting historic buildings to make them more resilient to natural hazards. The community has four historic districts listed in the National Register of Historic Places: The Gaskin Avenue Historic District, the Downtown Douglas Historic District, the Eleventh District A & M School-South Georgia College Historic District, and the 63rd Army Air Forces Contract Pilot School.

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: Prevent or reduce damage caused by Thunderstorms and Wind in Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls.

Objective #1.1: Minimize losses to existing and future structures, especially Critical Facilities and Infrastructure, due to Thunderstorms and Winds.

Action Step #1.1.1. Increase public awareness of weather radios, shelters, and emergency procedures and use a local radio station as the emergency broadcast system station in Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls through public safety announcements, publications, and other means.	
Priority Level	High Priority
Responsible Agency	Coffee County EMA
Coordinating Organization	Coffee County EMA
Timeline	2024-2029
Approximate Cost	$25,000
Funding Source(s)	General Funds/HUD CDBG
STATUS	Ongoing

Action Step #1.1.2. Disseminate information concerning wind ratings, champion new construction built to those minimum wind standards, and promote the wind retrofitting of Critical Facilities and existing buildings in Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls.	
Priority Level	Medium Priority
Responsible Agency	Coffee County EMA/Code Enforcement
Coordinating Organization	Coffee County EMA
Timeline	2024-2029
Approximate Cost	Staff Time
Funding Source(s)	General Funds
STATUS	Ongoing

D. Special Multi-Jurisdictional Strategy and Considerations:

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

E. Local Public Information and Awareness Strategy:

The County Emergency Management Agency shall monitor and evaluate all sections of the Plan annually. 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 inform the public of these strategies' development and how citizens can best assist with and/or take advantage of these efforts.

The primary criteria for measuring plan success will be the number of Goals, Objectives, and Action Steps, or components thereof, that have been completed, resulting in the saving of lives, money, and property. For further details on plan execution, see Chapter 4.

F. Changes from the Previous Plan

The word Activity changed to Action Step.

Section II. Tornadoes

A. Community Mitigation Goals

As previously indicated in Chapter 2, this hazard may cause substantial damage to life, property, and the economy in Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls. Tornadoes are unpredictable and can happen at any place and at any time. Because these tornadoes may be extremely powerful and cause significant 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 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 relevant to this hazard. For more information, see Chapter 2, Section II.

3. Community Values, Historical and Special Considerations:
Historic buildings exist in the community, a few of which are Critical Facilities. Historic and special considerations pose significant challenges to retrofitting historic buildings to make them more resilient to natural hazards. The community has four historic districts on the National Register of Historic Places: The Gaskin Avenue Historic District, the Downtown Douglas Historic District, the Eleventh District A & M School-South Georgia College Historic District, and the 63rd Army Air Forces Contract Pilot School.

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 #2: Prevent or reduce damage caused by Tornadoes in Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls.

Objective #2.1: Minimize losses to existing and future structures, especially Critical Facilities and Infrastructure, due to Tornadoes.
Action Steps:

Action Step #2.1.1. Use a building inspection program to inspect for adequate tie-downs on manufactured housing in Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls	
Priority Level	High Priority
Responsible Agency	Coffee County/City of Ambrose/City of Broxton/City of Douglas/City of Nicholls Building & Codes Dept.
Coordinating Organization	Coffee County EMA
Timeline	2024-2029
Approximate Cost	Staff Time
Funding Source(s)	General Funds
STATUS	Ongoing

Action Step #2.1.2. Plan for pre-disaster mitigation in Tornado & other hazard seasons by preparing public service announcements and brochures soliciting business participation in distributing information in Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls.	
Priority Level	High Priority
Responsible Agency	Coffee County/City of Ambrose/City of Broxton/City of Douglas/City of Nicholls Code Enforcement
Coordinating Organization	Coffee County EMA
Timeline	2024-2029
Approximate Cost	Staff Time
Funding Source(s)	General Funds
STATUS	Ongoing

D. Special Multi-Jurisdictional Strategy and Considerations:

Most of the above strategies are intended for each local jurisdiction to carry out. In some instances, the action step may not apply to all jurisdictions; the applicable jurisdictions are noted in the table.

E. Local Public Information and Awareness Strategy:

The County Emergency Management Agency shall monitor and evaluate all sections of the Plan annually. 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 inform the public of these strategies' development and 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, resulting in savings of life, money, and property. For further details on plan execution, see Chapter 4.

F. Changes from the Previous Plan

The word Activity changed to Action Step.

Deleted Action Step #2.1.3

Action Step #2.1.3. Promote safe shelter rooms in Coffee County, Ambrose, Broxton, Douglas, and Nicholls, where Tornadoes and other disasters frequent.	
Priority Level	High Priority
Responsible Agency	Coffee County/City of Ambrose/City of Broxton/City of Douglas/City of Nicholls
Coordinating Organization	Coffee County EMA
Timeline	Ongoing After Implementation 2019-2024
Approximate Cost	Staff Time
Funding Source(s)	General Funds
STATUS	Deleted – The Red Cross determines where shelters are located.

Deleted Action Step #2.1.4

Action Step #2.1.4. Secure funding for a hazardous weather alert system (horn) in the Cities of Ambrose, Broxton, Douglas, and Nicholls and populated areas of Coffee County and reverse call-back.	
Priority Level	High Priority
Responsible Agency	Coffee County/City of Ambrose/City of Broxton/City of Douglas/City of Nicholls
Coordinating Organization	Coffee County EMA
Timeline	Ongoing After Implementation 2019-2024
Approximate Cost	$25,000
Funding Source(s)	General Funds/GEMA/FEMA
STATUS	Deleted – There are many weather apps that people use now

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Section III. Drought

A. Community Mitigation Goals

As previously indicated in Chapter 2, drought may cause substantial economic, property, and personal damage in Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls, particularly 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 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 relevant to this hazard. For more information, see Chapter 2, Section III.

3. Community Values, Historical, and Special Considerations:
Historic buildings exist in the community, a few of which are Critical Facilities. Historic and special considerations pose significant challenges to retrofitting historic buildings to make them more resilient to natural hazards. The community has four historic districts on the National Register of Historic Places: The Gaskin Avenue Historic District, the Downtown Douglas Historic District, the Eleventh District A & M School-South Georgia College Historic District, and the 63rd Army Air Forces Contract Pilot School.

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: Prevent or reduce damage caused by Drought in Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls.

Objective #3.1: Minimize losses to existing and future structures, especially Critical Facilities and Infrastructure, due to Drought.

Action Step #3.1.1. Make residents aware (through service announcements) of the Immediate Threat and Danger Program that provides wells to low-moderate-income individuals affected by Drought in Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls	
Priority Level	High Priority
Responsible Agency	GEMA
Coordinating Organization	Coffee County EMA
Timeline	2024-2029
Approximate Cost	Staff Time
Funding Source(s)	General Funds/GEMA/FEMA/Homeland Security/Red Cross
Savings/Benefit Estimate	$12,750,000.00 per occurrence
STATUS	Ongoing

Action Step #3.1.2. Replace antiquated water & sewer lines and equipment prone to failure in Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls through CDBG grant funds and other funds when available.	
Priority Level	High Priority
Responsible Agency	Coffee County/City of Ambrose/City of Broxton/ City of Douglas/City of Nicholls
Coordinating Organization	Coffee County EMA
Timeline	2024-2029
Approximate Cost	$10,000,000.00
Funding Source(s)	General Funds/HUD/CDBG
STATUS	Ongoing

Activity #3.1.6. Adopt the Groundwater Recharge Protection District Ordinance in Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls	
Priority Level	Med. Priority
Responsible Agency	Coffee County/City of Ambrose/City of Broxton/ City of Douglas/City of Nicholls
Coordinating Organization	Coffee County EMA
Timeline	2024-2029
Approximate Cost	Staff Time
Funding Source(s)	General Funds
STATUS	Ongoing

D. Special Multi-Jurisdictional Strategy and Considerations:
Most of the above strategies are intended to be carried out by each local jurisdiction. In certain instances, the action step may not apply to all jurisdictions, the applicable jurisdiction is noted in the table.

E. Local Public Information and Awareness Strategy:

The County Emergency Management Agency shall monitor and evaluate all sections of the Plan annually. 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 inform the public of these strategies' development and 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, resulting in savings of life, money, and property. For further details on plan execution, see Chapter 4.

F. Changes from the Previous Plan

The word Activity changed to Action Step.

Section IV. Floods

A. Community Mitigation Goals

As previously indicated in Chapter 2, this hazard may cause substantial damage to life, property, and the economy in Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls. 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.

Many rivers, creeks, and other waterways are present in Coffee County and are sources of flooding. The primary waterways are the Satilla River and Seventeen Mile River, their tributaries, and the Ocmulgee River, which forms the county's northernmost border. Due to these facts, the Coffee 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 Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls.

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 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 relevant to this hazard. For more information, see Chapter 2, Section IV.

3. Community Values, Historical and Special Considerations:
Historic buildings exist in the community, a few of which are Critical Facilities. Historic and special considerations pose significant challenges in retrofitting historic buildings to make them resilient to natural hazards. The community has four historic districts in the National Register of Historic Places: The Gaskin Avenue Historic District, the Downtown Douglas Historic District, the Eleventh District A & M School-South Georgia College Historic District, and the 63rd Army Air Forces Contract Pilot School.

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 #4: Prevent or reduce damage caused by Floods in Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls.

Objective #4.1: Minimize losses to existing and future structures, especially Critical Facilities and Infrastructure, due to Floods.

Action Step #4.1.1. Conduct storm-water drainage replacement, repair & cleaning, and maintain canals in Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls	
Priority Level	High Priority
Responsible Agency	Coffee County/City of Ambrose/City of Broxton/City of Douglas/City of Nicholls Public Works Dept.
Coordinating Organization	Coffee County EMA
Timeline	Ongoing After Implementation 2024-2029
Approximate Cost	$500,000 each
Funding Source(s)	General Funds/HUD CDBG/User Fees
STATUS	Ongoing

Action Step #4.1.2. Plan flood and drainage projects in Coffee County in high-risk areas and areas lacking curbs & gutters.	
Priority Level	High Priority
Responsible Agency	Coffee County Public Works Dept.
Coordinating Organization	Coffee County EMA
Timeline	Ongoing After Implementation 2024-2029
Approximate Cost	$500,000.00 each
Funding Source(s)	General Funds/GEMA/FEMA/HUD CDBG
STATUS	Ongoing – In the process

Action Step #4.1.3. Plan flood and drainage projects in the City of Ambrose in high-risk areas and areas lacking curbs & gutters.	
Priority Level	High Priority
Responsible Agency	City of Ambrose Public Works Dept.
Coordinating Organization	Coffee County EMA
Timeline	Ongoing After Implementation 2024-2029
Approximate Cost	$500,000.00 per each
Funding Source(s)	General Funds/GEMA/FEMA/HUD CDBG
STATUS	Ongoing

Action Step #4.1.4. Plan flood and drainage projects in the City of Broxton in high-risk areas and areas lacking curbs & gutters.	
Priority Level	High Priority
Responsible Agency	City of Broxton Public Works Dept.
Coordinating Organization	Coffee County EMA
Timeline	Ongoing After Implementation 2024-2029
Approximate Cost	Staff Time
Funding Source(s)	General Funds
STATUS	Ongoing

Action Step #4.1.5. Plan flood and drainage projects in the City of Douglas, especially in high-risk areas and areas lacking curbs and gutters.	
Priority Level	High Priority
Responsible Agency	City of Douglas Public Works Dept.
Coordinating Organization	Coffee County EMA
Timeline	Ongoing After Implementation 2024-2029
Approximate Cost	$500,000.00 each
Funding Source(s)	General Funds/GEMA/FEMA/HUD CDBG
STATUS	Ongoing

Action Step #4.1.6. Plan flood and drainage projects in the City of Nicholls, especially in high-risk areas and areas lacking curbs and gutters.	
Priority Level	High Priority
Responsible Agency	City of Nicholls Public Works Dept.
Coordinating Organization	Coffee County EMA
Timeline	Ongoing After Implementation 2024-2029
Approximate Cost	$500,000.00 each
Funding Source(s)	General Funds/GEMA/FEMA/HUD CDBG
STATUS	Ongoing
Action Step #4.1.7. The City of Ambrose should join the National Flood Insurance Program as soon as possible.	
Priority Level	High Priority
Responsible Agency	City of Ambrose
Coordinating Organization	Coffee County
Timeline	2024-2029
Approximate Cost	Staff Time
Funding Source(s)	General Funds
STATUS	Ongoing

Action Step #4.1.8. The City of Broxton should join the National Flood Insurance Program as soon as possible.	
Priority Level	High Priority
Responsible Agency	City of Broxton
Coordinating Organization	Coffee County EMA
Timeline	2024-2029
Approximate Cost	Staff Time
Funding Source(s)	General Funds
STATUS	Ongoing

Action Step #4.1.9. The City of Nicholls should join the National Flood Insurance Program as soon as possible.	
Priority Level	High Priority
Responsible Agency	City of Nicholls
Coordinating Organization	Coffee County EMA
Timeline	2024-2029
Approximate Cost	Staff Time
Funding Source(s)	General Funds
STATUS	Ongoing

Action Step #4.1.10. Work with FEMA to update local FIRM maps in Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls	
Priority Level	High Priority
Responsible Agency	Coffee County EMA
Coordinating Organization	Coffee County EMA
Timeline	2024-2029
Approximate Cost	Staff Time
Funding Source(s)	General Funds
STATUS	Ongoing
Action Step #4.1.11 (formerly #4.1.10). Work to alleviate evacuation & emergency access problems in various subdivisions and in other areas in Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls	
Priority Level	Medium/Low
Responsible Agency	Coffee County/City of Ambrose/ City of Broxton/City of Douglas/City of Nicholls Public Works Dept.
Coordinating Organization	Coffee County EMA
Timeline	Ongoing After Implementation 2024-2029
Approximate Cost	$500,000.00 for each project
Funding Source(s)	General Funds/GEMA/FEMA/HUD CDBG
STATUS	Mostly completed, but a small number are still ongoing.

Commented [LH1]: Separate this

Action Step #4.1.12 (formerly #4.1.14). Work to preserve wetland areas in Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls to ensure that excess water can be captured.	
Priority Level	High Priority
Responsible Agency	Coffee County/City of Ambrose/ City of Broxton/City of Douglas/City of Nicholls Planning Commission
Coordinating Organization	Coffee County EMA
Timeline	Ongoing After Implementation 2024-2029
Approximate Cost	Staff Time
Funding Source(s)	General Funds
STATUS	Ongoing

Action Step #4.1.13 (#4.1.15). After flood events or other hazardous events in Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls, attempt to analyze properties affected to determine if events have occurred in the past and attempt to mitigate or purchase, if necessary.	
Priority Level	Med Priority
Responsible Agency	Coffee County EMA
Coordinating Organization	Coffee County EMA
Timeline	Ongoing After Implementation 2024-2029
Approximate Cost	Staff time
Funding Source(s)	General Funds/GEMA/FEMA
STATUS	Ongoing

Action Step #4.1.14 (formerly #4.1.17). Work with the Bay Meadows Lake Owner's Association and the residents of the Bay Meadows subdivision to identify opportunities for dam management and flood prevention training.	
Priority Level	Med Priority
Responsible Agency	County EMA, Private
Coordinating Organization	Coffee County EMA
Timeline	Ongoing After Implementation 2024-2029
Approximate Cost	Staff Time
Funding Source(s)	General Funds
STATUS	Ongoing – There have been some discussions about upgrading water level control systems. The county does have a Groundwater Reduction Ordinance in place.

Action Step #4.1.15 (formerly #4.1.18). Establish and maintain a clear point of contact and communication between the Coffee County EMA and the Bay Meadow's Owner's Association to share information regarding flooding events, dam performance, and management techniques.	
Priority Level	Med Priority
Responsible Agency	Coffee County EMA, Private
Coordinating Organization	Coffee County EMA
Timeline	Ongoing After Implementation 2024-2029
Approximate Cost	Staff Time
Funding Source(s)	General Funds
STATUS	Ongoing

D. Special Multi-Jurisdictional Strategy and Considerations:

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

E. Local Public Information and Awareness Strategy.

The County Emergency Management Agency shall monitor and evaluate all sections of the Plan annually. 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 inform the public of these strategies' development and 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, resulting in savings of life, money, and property. For further details on plan execution, see Chapter 4.

F. Changes from the Previous Plan

The word Activity changed to Action Step
Action Step numbers corrected
Action Step #4.1.2 – STATUS Update
Action Step #4.1.15 – STATUS Update

Section V. Hail

A. Community Mitigation Goals

As previously indicated in Chapter 2, this hazard may cause substantial damage to life, property, and the economy in Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls. Hail is unpredictable and can happen anywhere and at any time. Due to the damages 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 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 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 relevant to this hazard. For more information, see Chapter 2, Section V.

3. Community Values, Historical and Special Considerations:
Historic buildings exist in the community, a few of which are Critical Facilities. Historic and special considerations pose significant challenges to retrofitting historic buildings to make them more resilient to natural hazards. The community has four historic districts in the National Register of Historic Places: The Gaskin Avenue Historic District, the Downtown Douglas Historic District, the Eleventh District A & M School-South Georgia College Historic District, and the 63rd Army Air Forces Contract Pilot School.

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 #5: Prevent or reduce damage caused by Hail in Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls.

Objective #5.1: Minimize losses to existing and future structures, especially Critical Facilities and Infrastructure, due to Hail in Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls.

Action Step #5.1.1. Install storm windows on new and existing Critical Facilities and promote their installation on new and existing private buildings; Encourage the public to include hail damage under insurance coverage and store equipment & vehicles under shelters	
Priority Level	High Priority
Responsible Agency	Coffee County/City of Ambrose/City of Broxton/City of Douglas/City of Nicholls
Coordinating Organization	Coffee County EMA
Timeline	2024-2029
Approximate Cost	$5,000.00 for each project
Funding Source(s)	General Funds
STATUS	Ongoing – New windows have been installed in the courthouse.

Action Step #5.1.2. Increase public awareness of weather radios, shelters, and emergency procedures and use a local radio station as the emergency broadcast system station in Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls through public safety announcements, publications, and other means.	
Priority Level	High Priority
Responsible Agency	Coffee County EMA
Coordinating Organization	Coffee County EMA
Timeline	2024-2029
Approximate Cost	$25,000
Funding Source(s)	General Funds/HUD CDBG
STATUS	Ongoing

D. Special Multi-Jurisdictional Strategy and Considerations:

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

E. Local Public Information and Awareness Strategy:

The County Emergency Management Agency shall monitor and evaluate all sections of the Plan annually. 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 inform the public of these strategies' development and 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, resulting in savings of life, money, and property. For further details on plan execution, see Chapter 4.

F. Changes from the Previous Plan

The word Activity changed to Action Step.
Action Step 5.1.1 STATUS Updated

Section VI. Wildfires

A. Community Mitigation Goals

As previously indicated in Chapter 2, this hazard may cause substantial damage to life, property, and the economy in Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls. Wildfires are unpredictable and can happen at any place and at any time. Due to the significant 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 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 relevant to this hazard. For more information, see Chapter 2, Section VI.

3. Community Values, Historical and Special Considerations:
Historic buildings exist in the community, a few of which are Critical Facilities. Historic and special considerations pose significant challenges to retrofitting historic buildings to make them more resilient to natural hazards. The community has four historic districts on the National Register of Historic Places: The Gaskin Avenue Historic District, the Downtown Douglas Historic District, the Eleventh District A & M School-South Georgia College Historic District, and the 63rd Army Air Forces Contract Pilot School.

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 #6: Prevent or reduce damage caused by Wildfire in Coffee County and the Cities of Ambrose, Broxton, Douglas and Nicholls.

Objective #6.1: Minimize losses to existing and future structures, especially Critical Facilities, infrastructure, and woodlands due to wildfire.

Action Step #6.1.1. Provide additional first responder training, air units, air unit chargers, Class A Pumper & Fire Knocker trucks, and other equipment to all Coffee County Volunteer Fire Departments for Wildfire use	
Priority Level	High Priority
Responsible Agency	Coffee County
Coordinating Organization	Coffee County EMA
Timeline	2024-2029
Approximate Cost	$2,000,000.00
Funding Source(s)	General Funds/GEMA/FEMA/Homeland Security
STATUS	Ongoing – Purchased air packs for the county fire department. Replaced the fire truck and added additional tankers.

Action Step #6.1.2. Provide additional first responder training, air units, air unit chargers, Class A Pumper & Fire Knocker trucks, and other equipment to the City of Douglas Fire Departments for Wildfire use	
Priority Level	High Priority
Responsible Agency	City of Douglas
Coordinating Organization	Coffee County EMA
Timeline	2024-2029
Approximate Cost	$750,000.00
Funding Source(s)	General Funds
STATUS	Ongoing – Have air unit and Class A pumper.

Action Step #6.1.3. Partner with the Georgia Forestry Service and other fire service personnel to train all Coffee County and City of Douglas Fire Departments on Wildfire strategy and tactics.	
Priority Level	High Priority
Responsible Agency	Coffee County/ City of Douglas
Coordinating Organization	Coffee County EMA
Timeline	2024-2029
Approximate Cost	Staff Time
Funding Source(s)	General Funds/GEMA/FEMA/Homeland Security
Savings/Benefit Estimate	$10,000.00 per building occurrence
STATUS	Ongoing

Action Step #6.1.4. Support & enforce GA Forestry Commission burn ordinances and bans and promote hazardous fuel reduction by prescribed burning, mechanical or chemical treatment carried out and facilitated by the GA Forestry in Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls	
Priority Level	High Priority
Responsible Agency	Coffee County/City of Ambrose/City of Broxton/ City of Douglas/City of Nicholls
Coordinating Organization	Coffee County EMA
Timeline	2024-2029
Approximate Cost	Staff Time
Funding Source(s)	General Funds
STATUS	Ongoing

Action Step #6.1.5 (formerly 6.1.7) Continue to train and equip a Hazardous Materials Team to deal with agricultural chemicals during wildfire events	
Priority Level	High Priority
Responsible Agency	Coffee County/City of Ambrose/City of Broxton/ City of Douglas/City of Nicholls
Coordinating Organization	Coffee County EMA
Timeline	2024-2029
Approximate Cost	$100,000.00
Funding Source(s)	General Funds/GEMA/FEMA/Homeland Security
STATUS	Ongoing

Action Step #6.1.6 (formerly 6.1.8) In Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls, replace the four-inch (4") (and smaller) water lines with six-inch (6") water lines and hydrants, replace old pipes and extend lines to all areas of the cities.	
Priority Level	High Priority
Responsible Agency	Coffee County/City of Ambrose/City of Broxton/City of Douglas/City of Nicholls
Coordinating Organization	Coffee County EMA
Timeline	2024-2029
Approximate Cost	$500,000.00 for each project
Funding Source(s)	General Funds
STATUS	Ongoing – Almost completed.

Action Step #6.1.7 (formerly 6.1.9). Continue encouraging agencies and private property owners to trim tree lines and create fire buffers/breaks around Critical Facilities, new and existing homes, businesses, and utilities in Coffee County and the Cities of Ambrose Broxton, Douglas, and Nicholls.	
Priority Level	High Priority
Responsible Agency	Coffee County/City of Ambrose/City of Broxton/ City of Douglas/City of Nicholls
Coordinating Organization	Coffee County EMA
Timeline	2024-2029
Approximate Cost	Staff Time
Funding Source(s)	General Funds
STATUS	Ongoing

Action Step #6.1.8 (formerly#6.1.11). Continue to work with developers and homeowners to pre-plan each building site and/or subdivision to help in pre-disaster mitigation of wildfire	
Priority Level	Medium Priority
Responsible Agency	County/City of Ambrose/City of Broxton/ City of Douglas/City of Nicholls
Coordinating Organization	County EMA
Timeline	2024-2029
Approximate Cost	Staff Time
Funding Source(s)	General Funds
STATUS	Ongoing

Action Step #6.1.9 (formerly #6.1.12): Working with the Georgia Forestry Commission and others, conduct a survey and assessment of areas and communities in the County and the Cities of Ambrose, Broxton, Douglas, and Nicholls at risk of Wildfire. Assess the level of threats, evaluate resources and tactics, and recommend improvements.	
Priority Level	Medium Priority
Responsible Agency	County/City of Ambrose/City of Broxton/ City of the Douglas/City of Nicholls.
Coordinating Organization	County EMA
Timeline	2024-2029
Approximate Cost	Staff Time
Funding Source(s)	General Funds
STATUS	Ongoing. Surveyed in the past but not recently

Objective #6.2: Obtain a FireWise Community Status by educating Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls Fire Department personnel and the public on the hazards of Wildfire and the pre-disaster mitigation thereof.

Action Step #6.2.1. Continue to maintain good public relations between the citizens of the County and the Cities of Ambrose, Broxton, Douglas, and Nicholls and The Coffee County/City Fire Departments and plan to increase levels of awareness and resources during peak hazard conditions using education sessions, community meetings, etc.	
Priority Level	Medium Priority
Responsible Agency	County/City of Ambrose/City of Broxton/ City of Douglas/City of Nicholls.
Coordinating Organization	County EMA
Timeline	024-2029
Approximate Cost	Staff Time
Funding Source(s)	General Funds
STATUS	Ongoing. This has been done in the neighborhood. Threat assessments have also been done.

Action Step #6.2.2. Partner with the Georgia Forestry Commission to educate Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls, communities, and citizens on the pre-disaster mitigation of wildfire and use & develop grade school-based programs to educate children.	
Priority Level	Medium Priority
Responsible Agency	Coffee County/City of Ambrose/City of Broxton/ City of the Douglas/City of Nicholls.
Coordinating Organization	Coffee County EMA
Timeline	Annually
Approximate Cost	Staff Time
Funding Source(s)	General Funds
STATUS	Ongoing

Action Step #6.2.3. Plan RFD meetings in Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls and hold joint mock fire drills for all fire departments.	
Priority Level	Medium Priority
Responsible Agency	Coffee County/City of Ambrose/City of Broxton/ City of Douglas/City of Nicholls.
Coordinating Organization	Coffee County EMA
Timeline	Annually
Approximate Cost	Staff Time
Funding Source(s)	General Funds
STATUS	Ongoing

Action Step #6.2.4. Encourage tree trimming and non-combustible buffer zones around buildings and homes and seek FireWise Community status.	
Priority Level	Medium Priority
Responsible Agency	Coffee County/City of Ambrose/City of Broxton/ City of Douglas/City of Nicholls.
Coordinating Organization	Coffee County EMA
Timeline	Annually
Approximate Cost	Staff Time
Funding Source(s)	General Funds
STATUS	Ongoing

D. Special Multi-Jurisdictional Strategy and Considerations:

Most of the strategies above are intended for each local jurisdiction to carry out. In certain instances, the action step may not apply to all jurisdictions. The applicable jurisdictions are noted in the table.

E. Local Public Information and Awareness Strategy:

The County Emergency Management Agency shall monitor and evaluate all sections of the Plan annually. 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 inform the public of these strategies' development and how citizens can best assist with and/or take advantage of these efforts.

The primary criterion for measuring plan success will be the number of completed Goals, Objectives, and Action Steps, or components thereof, resulting in life, money, and property savings. For further details on plan execution, see Chapter 4.

F. Changes from the Previous Plan

The word Activity changed to Action Step
Action Step numbers corrected
Action Step #6.1.1 STATUS Update
Action Step #6.1.2 STATUS Update
Action Step #6.1.8 STATUS Update
Action Step #6.1.9 STATUS Update
Action Step #6.1.10 Completed
Action Step #6.2.1 STATUS Update
Action Step #6.2.3 STATUS Update
Action Step #6.2.5 STATUS Update

Action Step #6.1.10. (formerly #6.1.17). Renovate Building & Repair Pump Motor with Well in the City of Ambrose	
Priority Level	Medium Priority
Responsible Agency	City of Ambrose
Coordinating Organization	County EMA
Timeline	Ongoing After Implementation 2019-2024
Approximate Cost	$30,000.00
Funding Source(s)	General Funds
STATUS	Completed

Section VII. 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 Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls. 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 significant 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 are included 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 relevant to this hazard. For more information, see Chapter 2, Section VII.

3. Community Values, Historical, and Special Considerations:
Historic buildings exist in the community, a few of which are Critical Facilities.
Historic and special considerations pose significant challenges to retrofitting Historic buildings to make them more resilient to natural hazards. Four historic districts in the community are listed in the National Register of Historic Places: Gaskin Avenue Historic District, the Downtown Douglas Historic District, the Eleventh District A & M School-South Georgia College Historic District, and the 63rd Army Air Forces Contract Pilot School.

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 #7: Prevent or reduce damage caused by Hurricanes/Tropical Storms in Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls.

Objective #7.1: Minimize losses to existing and future structures, especially Critical Facilities and Infrastructure, and the public due to Hurricanes/Tropical Storms.

Action Steps:

Action Step #7.1.1. If possible, design new educational facilities to the level that they could be used as public shelters for emergency purposes and test current shelters and educational facilities for safety and effectiveness in Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls.	
Priority Level	High Priority
Responsible Agency	Coffee County/City of Ambrose/Cities of Broxton/City of Douglas/City of Nicholls.
Coordinating Organization	Coffee County EMA
Timeline	2024-2029
Approximate Cost	Staff Time
Funding Source(s)	General Funds/GEMA/FEMA/Homeland Security/Red Cross
STATUS	Ongoing

Action Step #7.1.2. Work with GDOT to improve unsafe roads in Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls that could be evacuation routes.	
Priority Level	High Priority
Responsible Agency	Coffee County/City of Ambrose/City of Broxton/City of Douglas/City of Nicholls
Coordinating Organization	Coffee County EMA
Timeline	2024-2029
Approximate Cost	Staff Time
Funding Source(s)	General Funds
STATUS	Ongoing

Action Step #7.1.3. Continue to use the Comprehensive Transportation Plan in Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls.	
Priority Level	High Priority
Responsible Agency	Coffee County/City of Ambrose/City of Broxton/City of Douglas/City of Nicholls
Coordinating Organization	Coffee County EMA
Timeline	2024-2029
Approximate Cost	$250,000
Funding Source(s)	General Funds, GDOT, City of Douglas
STATUS	Ongoing

Objective #7.2: Advise the public of health & safety precautions and procedures necessary during Hurricanes/Tropical Storms and other events and on pre-disaster mitigation, in general, in Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls.

Action Step #7.2.1. Acquire and distribute literature from state agencies regarding pre-disaster mitigation and disaster health & safety issues in Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls.	
Priority Level	High Priority
Responsible Agency	Coffee County/City of Ambrose/City of Broxton/City of Douglas/City of Nicholls
Coordinating Organization	Coffee County EMA
Timeline	2024-2029
Approximate Cost	Staff Time
Funding Source(s)	General Funds
STATUS	Ongoing

Objective #7.3: Ensure reliable electrical power and communications efficiency at Critical Facilities and among agencies during Hurricanes/Tropical Storms and other events in Coffee County and the Cities of Ambrose, Broxton, Douglas and Nicholls.

Action Step #7.3.1: Purchase portable and fixed generators (including transfer switches) and trailers for use at Critical Facilities and other places where they are needed. Pre-wire Critical Facilities & gas pumps for generator use in Coffee County and the Cities of Ambrose, Broxton, Douglas and Nicholls.	
Priority Level	High Priority
Responsible Agency	Coffee County/City of Ambrose/City of Broxton/City of Douglas/City of Nicholls
Coordinating Organization	Coffee County EMA
Timeline	2024-2029
Approximate Cost	$500,000.00
Funding Source(s)	General Funds/GEMA/FEMA/Homeland Security/Red Cross
STATUS	Ongoing. Cities have grants in the process for generators and transfer switches on critical facilities.

Action Step #7.3.2: Continue to update communications equipment (radios, pagers, batteries, and chargers) with multi-channel capabilities and store it at certain Critical Facilities in Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls.	
Priority Level	High Priority
Responsible Agency	Coffee County/City of Ambrose/City of Broxton/City of Douglas/City of Nicholls
Coordinating Organization	Coffee County EMA
Timeline	2024-2029
Approximate Cost	$1,000,000.00
Funding Source(s)	General Funds/GEMA/FEMA/Homeland Security

STATUS	Ongoing. Equipment has been purchased. Public Safety and Public Works continue to purchase equipment already assigned.

D. Special Multi-Jurisdictional Strategy and Considerations:

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

E. Local Public Information and Awareness Strategy:

The County Emergency Management Agency shall monitor and evaluate all sections of the Plan annually. 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 inform the public of these strategies' development and 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, resulting in savings of life, money, and property. For further details on plan execution, see Chapter 4.

F. Changes from the Previous Plan

The word Activity changed to Action Step
Action Step # 7.3.1 STATUS Update
Action Step #7.3.2 STATUS Update

Section VIII. Severe Winter Storms

A. Community Mitigation Goals

As previously indicated in Chapter 2, severe winter storms may cause substantial economic, property, and personal damage in Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls. Severe winter storms are usually predictable ahead of time, but they can still cause substantial problems. Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls do not have the specialized equipment used during severe winter storms that most northern counties and cities possess. The HMPUC believes that due to the damage these severe winter storms 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 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 relevant to this hazard. For more information, see Chapter 2, Section VIII.

3. Community Values, Historical and Special Considerations:
Historic buildings exist in the community, a few of which are Critical Facilities. Historic and special considerations pose significant challenges to retrofitting historic buildings to make them more resilient to natural hazards. Four historic districts in the community are listed in the National Register of Historic Places: The Gaskin Avenue Historic District, the Downtown Douglas Historic District, the Eleventh District A & M School-South Georgia College Historic District, and the 63rd Army Air Forces Contract Pilot School.

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 #8: Prevent or reduce damage caused by Severe Winter Storms in Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls.

Objective #8.1: Minimize losses to existing and future structures, especially Critical Facilities and Infrastructure, due to Severe Winter Storms.

Action Step #8.1.1. Continue the policy of wrapping exposed piping with insulation and installing new insulation layers at critical facilities in Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls	
Priority Level	High Priority
Responsible Agency	Coffee County/City of Ambrose/Cities of Broxton/City of Douglas/City of Nicholls Public Works Dept.
Coordinating Organization	Coffee County EMA
Timeline	2024-2029
Approximate Cost	$3,000.00 for each project
Funding Source(s)	General Funds
STATUS	Ongoing

Action Step #8.1.2. Disseminate information to the public concerning severe winter storms, champion new construction being built to appropriate low-temperature ratings, and retrofit existing buildings in Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls.	
Priority Level	Medium Priority
Responsible Agency	Coffee County EMA
Coordinating Organization	Coffee County EMA
Timeline	2024-2029
Approximate Cost	Staff Time
Funding Source(s)	General Funds/GEMA/FEMA
STATUS	Ongoing

D. Special Multi-Jurisdictional Strategy and Considerations:

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

E. Local Public Information and Awareness Strategy:

The County Emergency Management Agency shall monitor and evaluate all sections of the Plan annually. 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 inform the public of these strategies' development and 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, resulting in savings of life, money, and property. For further details on plan execution, see Chapter 4.

F. Changes from the Previous Plan

The word Activity changed to Action Step

Chapter 4:
Executing The Plan

Summary of changes:

Revised and updated language.

Section I.
Implementation of the Action Plan

A. Administrative Actions

The Coffee County Emergency Management Agency has overseen the meetings and planning process of the HMPUC. The Southern Georgia Regional Commission contracted with the Coffee County Commission to administer and facilitate the planning process. The Coffee County Commission and the Cities of Ambrose, Broxton, Douglas, and Nicholls will adopt the Plan (on approval by GEMA and FEMA) by the resolutions in Appendix E.

B. Authority and Responsibility

The Coffee County Commission and the Cities of Ambrose, Broxton, Douglas, and Nicholls 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 Coffee County EMA Director will be responsible for this Plan and its continued usage as a planning document. The EMA Director will oversee all jurisdictions' implementation, monitoring, and updates. The respective jurisdictions will be responsible for implementing their specific mitigation activities as proposed in this plan.

C. Prioritization

1. Methodology for Prioritization

In prioritizing implementing the action steps identified in this plan, the hazards that pose the greatest threat will be given primary consideration. Local governments will consider the additional costs and time factors in prioritizing the implementation feasibility of the action steps and projects. Those activities requiring smaller amounts of money and staff time to implement will be given the 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 3 will quantify the number of persons and/or property at risk from each hazard. Combined with the criteria in Worksheet 4, local governments can 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 result is a Benefit-Cost Ratio (BCR) 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 avoiding damage, disruptions, losses, and casualties. Examples of expected benefits include avoided or reduced damages to buildings, contents, or infrastructure; avoided or reduced economic impacts of the 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 impact of the 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 included the 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 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

Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls will review this Plan. The requirements of this Hazard Mitigation Plan will be considered. They will be incorporated into Comprehensive Plans, Five-Year Short-Term Work Programs, 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 updating the County and City Comprehensive Plans, Short-Term Work Programs, and all other plans that could incorporate its requirements.

To facilitate the inclusion of this Plan, the Coffee County Commission and the Cities of Ambrose, Broxton, Douglas, and Nicholls will provide a copy to the persons and/or committees responsible for writing and updating plans.

Section II.
Evaluation and Monitoring

A. Method

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

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

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, resulting 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 Coffee County and Cities of Ambrose, Broxton, Douglas, and Nicholls residents, public involvement must be an integral part of the planning process.

Since adopting the original Coffee 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, awareness, and citizen involvement will continue over the next five years until the next required update of the Hazard Mitigation Plan. Public hearings will be conducted when specific issues dictate. All other community planning efforts (Comprehensive Plan, Regional Plan, etc.) will allow citizens 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 ensure that the following steps are taken:
The public will be directly involved in updating and reviewing the Plan. Copies of the plan will be kept on hand at appropriate agencies throughout the community.

The plan will be available on City, County, and/or Regional Commission websites. It will contain an e-mail address and phone number for the public to submit 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

Under the requirements outlined in the Disaster Mitigation Act of 2000, the community is again required to update and evaluate the plan at most five years after its adoption. At least one year before the five-year update necessary period ends, the EMA Director will begin planning a new update to this plan. This will consist of establishing a new planning committee tasked with completing the update following the same process used for this update.

The EMA Director shall submit a revised Hazard Mitigation Plan to GEMA for approval by the end of the five years after the plan update's approval. Note that the plan update process established by the planning committee is subject to change depending on subsequent regulations and/or requirements set forth by GEMA and FEMA.

Chapter 5:
Conclusion

Summary of changes:

- Revised and updated language.

Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls have suffered considerable damage from natural hazards in the past. Planning and undertaking structural and nonstructural action steps before a disaster can save lives and property. This philosophy has been the driving force behind preparing the Coffee 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 people are essential to this plan. Because of this planning process, Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls officials have better understood 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, Coffee County and the Cities of Ambrose, Broxton, Douglas, and Nicholls have a realistic perspective on the hazards to which the community is exposed. With the mitigation strategy outlined in Chapter 3 and the implementation plan included in Chapter 4, the local leaders have an "action plan" to follow when allocating resources to reduce their community's vulnerability to such hazards.

References

Coffee County Board of Tax Assessors (https://www.qpublic.net/ga/coffee/index-boa.html)

Coffee County website (http://coffeecountygov.com/)

City of Broxton website (http://www.cityofbroxton.com/)

City of Douglas website (http://www.cityofdouglas.com/)

Center for Agribusiness & Economic Development. 2015 Georgia Farm Gate Value Report. (http://caes2.caes.uga.edu/center/caed/documents/GAFGVR2015_DEC16.pdf)

Federal Emergency Management Agency (www.fema.gov)

FEMA National Flood Insurance Program Community Status Book (https://www.fema.gov/national-flood-insurance-program-community-status-book)

Georgia Data. "Agriculture." (https://georgiadata.org/agriculture.html)

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

Appendix F. Reports and Inventories

I. General Historic Reports
   I. Thunderstorm/Wind – NOAA data
   II. Tornado – NOAA data
   III. Drought – US Drought Monitor data
   IV. Flood – NOAA data
   V. Hail – NOAA data
   VI. Wildfire – Georgia Forestry Commission data
   VII. Hurricane/Tropical Storm – NOAA data
   VIII. Severe Winter Storm – NOAA data

II. Critical Facilities Inventory

Appendix G. HAZUS Report

Appendix H. Brochure