Lanier County, Georgia

Including the City of Lakeland

Hazard Mitigation Plan

2024-2029

ADOPTED
January 8, 2024

This Plan produced for the Lanier 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

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	Language updated to reflect that this was an update to the existing plan
II. Local Methodology, Plan Update Process, and Participants	Planning Committee reviewed each section and updated as necessary
III. Plan Review, Analysis, and Revision	Planning Committee reviewed each section Updates made using national, state, and local data
IV. Organization of Plan	Consistent with 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	Evaluation method revised and updated.
VIII. Community Data	Updates made using the 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 Lanier 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 March 19, 2019, and expires on March 19, 2024.

This document aims to provide an overview of the hazards that may impact Lanier County and the City of Lakeland and to outline the community's plans to mitigate the potential loss of life and damages to property and the economy that could occur with these events. Hazard Mitigation is a means to address and proactively reduce the potential damage that natural or 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 Lanier County and the City of Lakeland after they formed the Lanier 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. The City of Lakeland is the only incorporated city located in Lanier County.

The Lanier County Commission gave authority for the development of this Plan because of their execution of the Grantee-Subgrantee Agreement for the Lanier County Hazard Mitigation Grant

Program (HMGP) Planning Project and by the City of Lakeland, located within Lanier County, through their participation in the planning project.

To initiate an outreach program to neighboring communities, governments, and local and regional agencies and to authorize agencies 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 were informed of meetings through e-mails, letters, and/or telephone calls. The surrounding county EMA Directors were notified of the plan update via phone calls and invited to participate. This resulted in EMA personnel from adjacent Berrien and Clinch Counties attending the Lanier County Hazard Mitigation Plan kick-off meeting. An active meeting list was maintained for scheduling.

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

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

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

A. Overview

This Hazard Mitigation Plan Update encompasses the jurisdictions of Lanier County and the City of Lakeland, 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 (Lanier 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 4).

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

NAME	ORGANIZATION	TITLE	EMAIL
Bass, Patti	Lanier County BOC	County Clerk	board of comm@laniercountyboc.com
Byron, Melanie	Lakeland Villa	Director	melanie.byron@sgmc.org
Galardo, Tony	Lanier County EMS/EMA	Director	lanier@laniercountyboc.com
Neil Ginty	Lanier County BOC	County Manager	lanierboc@laniercountyboc.com
Gordon, Patty	Lanier Senior Center	Manager	lanierseniorctr@laniercountyboc.com
Hart, Patricia	Lanier County DHS	Director	Patricia.hart@dhs.ga.gov
Jones, Stryde	Lanier County	Sheriff	Sherrifs-jones@lanierso.com
Kyles, Cleveland	Ham Operator Club	Director	Kj4di@yahoo.com
DFACS Representative (no name)	Lanier County DFCS		hispaniccalliancega@gmail.com
Morris, Angel	City of Lakeland	Police Officer	nlyons@lekelandga.gov
Paulson, Jack	South Georgia Medical Center	SGMC EMS Director	John.paulson@sgmc.com
Pullen, Cindy	Moody Airforce Base	Liaison	Cindy.pullen@gmail.com
Quarterman, John/Gretchen	WWALS Watershed	Directors	wwalswatershed@gmail.com
Romadka, Kyle	SGMC Emergency Preparedness	Coordinator	Kyle.romadka@ggmc.org
Westberry, Diane	City of Lakeland	City Clerk	dwestberry@lakelandga.gov
Watson, Tony	Affinity Homes	Director	tony@affinitybuildingsystems.com
Yeomans, Gary	City of Lakeland	Fire Dept.	llfirehall@windstream.net
Hylton, Loretta	SGRC	Planner	lhylton@sgrc.us

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

Kick-off public hearing – April 18, 2023
First workshop – May 23, 2023
Second workshop – June 20, 2023
Third workshop – July 18, 2023
Fourth Workshop - November 8, 2023
Final public hearing – February 8, 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, during the general question and answer periods, comments (if any) were noted by the Southern Georgia Regional Commission staff and incorporated into the plan as appropriate.

Copies of the previous Plan were made available at each meeting, while relevant chapters and sections under discussion were photocopied and distributed to those in attendance for comments. Outside of the formal meetings, parts of the plan were e-mailed to 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 also available on the Southern Georgia Regional Commission website and from the local EMA and city and county government offices.

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 still relevant were included as action steps in the HMP. Land use descriptions, zoning information, and community services were updated using the Joint Comprehensive Plan for the County and City. 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). The State Hazard Mitigation Plan was consulted to ensure the HMP would be consistent with this plan. Data from the NCDC were used to create the Hazard Frequency Table and associated information regarding each hazard, which can be Chapter 2. The County and City do not have a Flood Mitigation Assistance Plan, but they do have a Flood Insurance Study.

A fourth and final workshop was held once again to invite the vulnerable population. Flyers were distributed to those attending and available at the Health Department, DFACS, County

Courthouse, and City Hall. They were also made available to the migrant workers within the county. (See Appendix H).

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 two public hearings. The "kick-off" public hearing was advertised in the local newspaper (meeting advertisements and sign-in sheets are provided in Appendix E). A second and final public hearing was held Monday, January 8, 2024, at 9:00 AM and was advertised in the local newspaper (see Appendix E). Citizens, including staff and members of the HMPUC, were present (see Appendix E). There were no substantive comments other than those complimentary of the planning process. Therefore, there was no need to consider or add public comments.

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.

Lanier County and the City of Lakeland
Hazard Mitigation Plan Update Committee
Mission Statement

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

Lanier County and the City of Lakeland
Hazard Mitigation Plan Update Committee
Vision Statement

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

The mission of Lanier County Emergency Management is to provide an integrated, comprehensive emergency management program for Lanier County. The office is responsible for the

preparedness, training, and coordination of emergency response and recovery efforts for Lanier County. The Office of Emergency Management plans for natural, manmade, or technological hazards that could adversely affect the operations of the County.

In addition, the Lanier County Emergency Management Agency is part of the Lanier County Office of Public Safety. We support the county in reducing loss of life and property, protecting the environment through collaboration, and improving our capabilities to prepare for, protect against, respond to, recover from, and mitigate all hazards. We help coordinate resources, expertise, leadership, and advocacy through a comprehensive risk-based emergency preparedness program.

Due to Lanier County and the City of Lakeland being such a close-knit the Lanier County HMPUC chose to avoid breaking into subcommittees and address issues. 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 4), among other responsibilities.

Section III. Plan Review, Analysis, and Revision

As mentioned above, the prior Hazard Mitigation Plan was used as a basis for the plan update. The Hazard Mitigation Plan Update Committee (HMPUC) reviewed all chapters and sections of the prior plan and updated them as appropriate, using national, state, and local sources. Other documents consulted included:

- The Community Wildfire Protection Plan (see Appendix C)
- The current joint Comprehensive Plan for the County and City, which includes the five-year Community Work Program
- The Local Emergency Operations Plan
- The current State of Georgia Hazard Mitigation Strategy
- The local Service Delivery Strategy
- Lanier County Flood Insurance Study
- Data from the National Climatic Data Center (NCDC).

The update committee reviewed these documents, and the relevant information was incorporated into this plan through a detailed review and analysis by SGRC staff when drafting the text of this plan. Information used included data and statistics, general community issues, needs, goals, and state, federal, and local policies and programs.

After organizing resources, an update of the risk assessment was performed. New forms, worksheets, and data (included in the Appendix) were also completed. Afterward, the Mitigation

Goals, Objectives, and Action Steps were reviewed to determine if they would remain the same or be added to, modified, or removed.

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

Section IV. Organization of the Plan

This Plan focuses on nine natural hazards the HMPUC chose that may affect and cause damage to Lanier County and the City of Lakeland. Chapter 2, Chapter 4, and Appendix A are each subdivided into Sections I through VIII; these sections reflect the 9 natural hazards chosen. The natural hazards are as follows (in order of priority):

1. Hurricanes/Tropical Storms
2. Tornadoes
3. Floods
4. Windstorms/Hailstorms/Lightning
5. Extreme Heat
6. Wildfires
7. Drought
8. Sinkholes
9. Severe Winter Storms (new for this plan update)

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, 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 4), and information on implementation, monitoring, and plan update and maintenance (see Chapter 6), as well as other FEMA-required items and materials (included in various Chapters, Sections, and Appendices).

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

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

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

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

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

The community's vulnerability to natural hazards is also summarized in the Hazard Frequency Table (see Appendix D). The Inventory of Assets and the number of people exposed to each hazard are evaluated in GEMA Worksheet 3A (see Appendix A). (Due to the lack of available complete jurisdiction-level data, it was impossible to break down these data by jurisdiction, t. Therefore, data is for all of Lanier County, including the City of Lakeland.) Critical Facilities and Critical Infrastructure are also examined using the current 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 wide ranges for each jurisdiction) is included in Chapter 4, Sections I-VII. Chapter 6, Section I describes prioritizing these Mitigation Goals, Objectives, and Action Steps through the cost/benefit analysis, STAPLEE (Social, Technical, Administrative, Political, Legal, Economic,

and Environmental), and other criteria. Also, in Chapter 6, there are sections on Implementing the Action Plan (see Section I), Evaluation, Monitoring, updating (see Section II), and Plan Update and Maintenance (see Section III).
After organizing resources, an update of the risk assessment was performed. New forms, worksheets, and (included in the Appendix) were also completed. Afterward, the Mitigation Goals, Objectives, and Action Steps were reviewed to determine if 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. See the tables at the beginning of the chapters for further information regarding which items were changed and updated.

Section VI. Multi-Jurisdictional Special Considerations

Lanier County has a total area of 185.26 square miles of land with a population density of 54.4 people per square mile (US Census data, 2010) and 15 square miles of water. 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. Lanier County contains one incorporated city, Lakeland (County seat).

A consolidated fire department serves Lanier County and the City of Lakeland. There are 7 fire stations in the unincorporated County and one (the main station) in the City of Lakeland. 100% volunteer firefighters' staff at all stations. A small portion of Lanier County on the western edge has been annexed by the City of Ray City and is served by their fire department.

The following are the ISO Classes of fire districts in Lanier County and the City of Lakeland:

Station	**ISO Class**
Station 1 - Lakeland Headquarters	Class 6
Station 2 - Stockton	Class 6X
Station 3 - Teeterville	Class 6X
Station 4 - Mud Creek	Class 6X
Station 5 - Westside	Class 6X
Station 6 - Goodhope	Class 6X
Station 7 - Eastside	Class 6X
Station 8 - Stockton Southside	Class 6X

A small portion of Lanier County has been annexed by the City of Ray City and is served by their fire department.

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. The draft plan was submitted to GEMA and FEMA for review and approval. After their approval and any recommended changes, a second and final public hearing was held on January 8, 2024, to provide a further opportunity for public comment and review. After this final public hearing, resolutions adopting the plan were signed by the local governments

on January 8, 2024. assuming the Plan Update. Copies of the public hearing advertisements and resolutions are available in Appendix E.

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

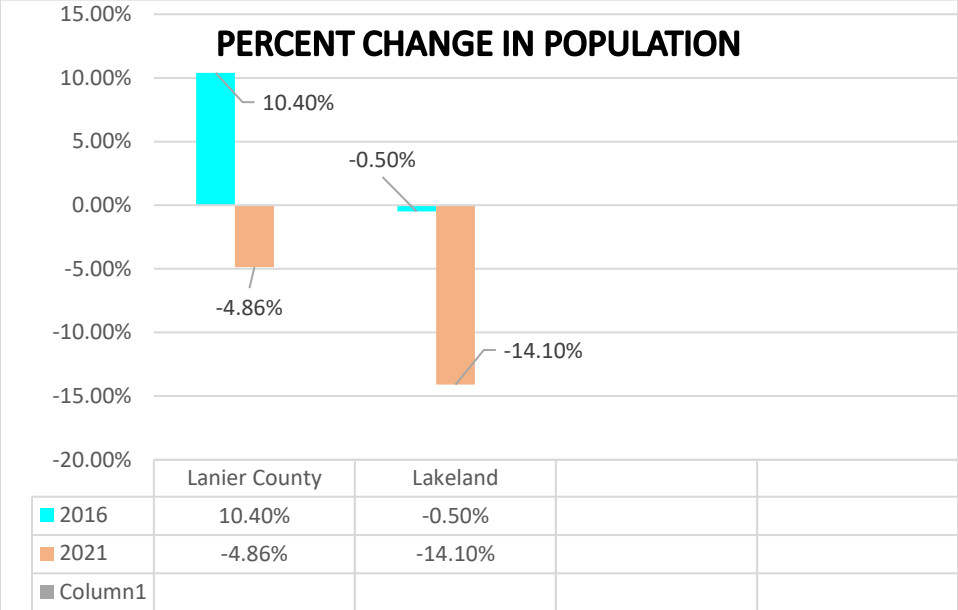
All sections of the Plan will be monitored and evaluated annually by the County Emergency Management Agency. Incremental accomplishments of Mitigation Goals, Objectives, and Action Steps will be reported to the public through appropriate means (website, social media, local newspapers, City Council meetings, County Commission meetings, etc.). The Lanier County EMA maintains an active website, lanierema.com, and Facebook and Twitter pages.

The County EMA will monitor the plan and conduct quarterly telephone interviews with local governments and area agencies to chart their plan 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. Evaluation will assess which of the goals, objectives, and action steps have been achieved; whether those goals, objectives, and action steps still address current and expected conditions; whether the nature or magnitude of risks has changed; whether existing 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 added to the online GEMA database as required. New hazards in the area (if any) will be discussed and addressed, and an assessment will be made as to whether the community needs to dictate additions to the plan materials. 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 6.

The Plan will be updated by the EMA Director and chosen representatives of all the local governments every five years, as FEMA requires. All sections of this Plan will be updated then. All jurisdictions and relevant stakeholders will review the Plan update. The Hazard Mitigation Plan's requirements will be incorporated into the Comprehensive Plans, Capital Improvement Plans, Local Emergency Operations Plans, and all other such Plans, as appropriate. This updating process will be publicly advertised, and public comments will be solicited and incorporated as necessary and proper.

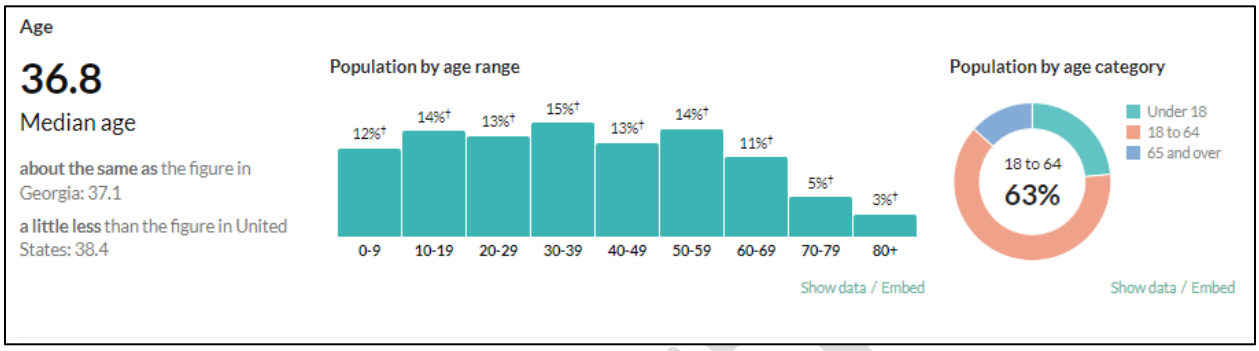
Section VIII. Community Data



Both the County and City experienced a decrease in population in 2021. According to the 2016 U.S. Census Bureau American Community Survey 5-year estimates, the population of Lanier County in 2016 was 10,382, an increase of 10.40% since 2010. Since 2016, there has been a -4.86% decrease in population in Lanier County and a -14.1% (9,877) decrease. The City of Lakeland's 2016 population was 3,348, a -0.5% decrease since 2010. Since 2016, the City of Lakeland's population has decreased by 4.1% (2,875).

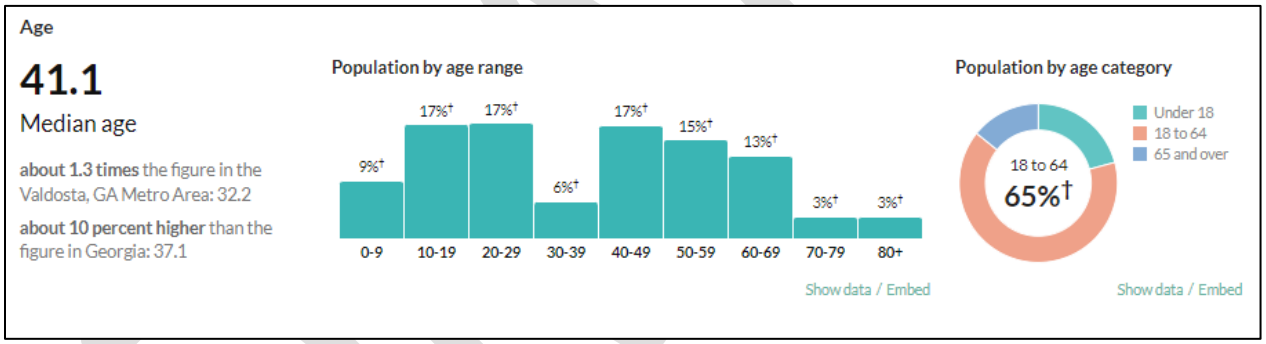
AGE DISTRIBUTION

Lanier County



According to 2021 estimates, the age distribution in Lanier County is 13.3% over 65, 55% ages 20 -59, and 26% under 20. Lanier County's population is 52% female and 48% male

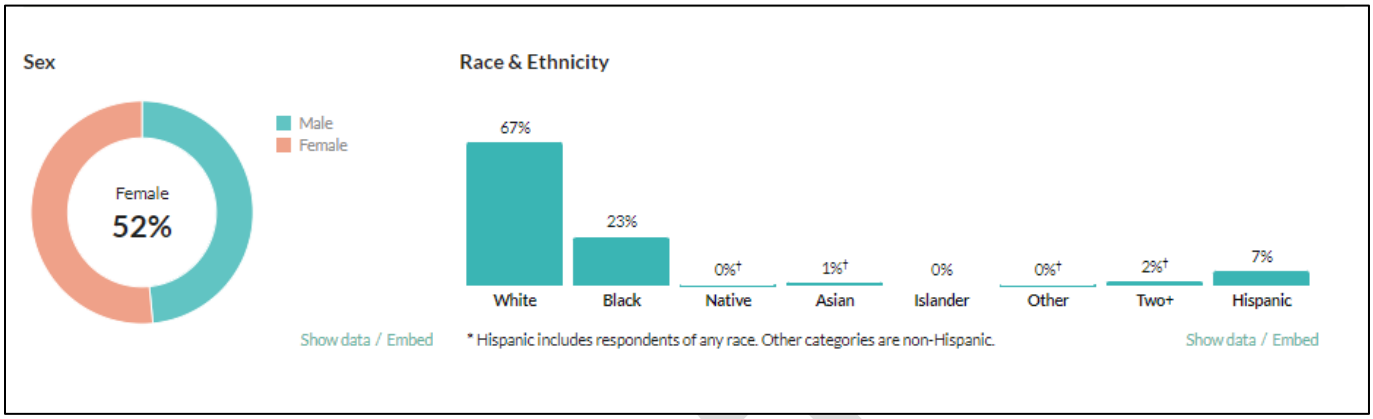
Lakeland



In the City of Lakeland, the age distribution is 14.2% over 65, 61.2% ages 20-64, and 25.57% under 20. The City of Lakeland's population is 43% female and 57% male.

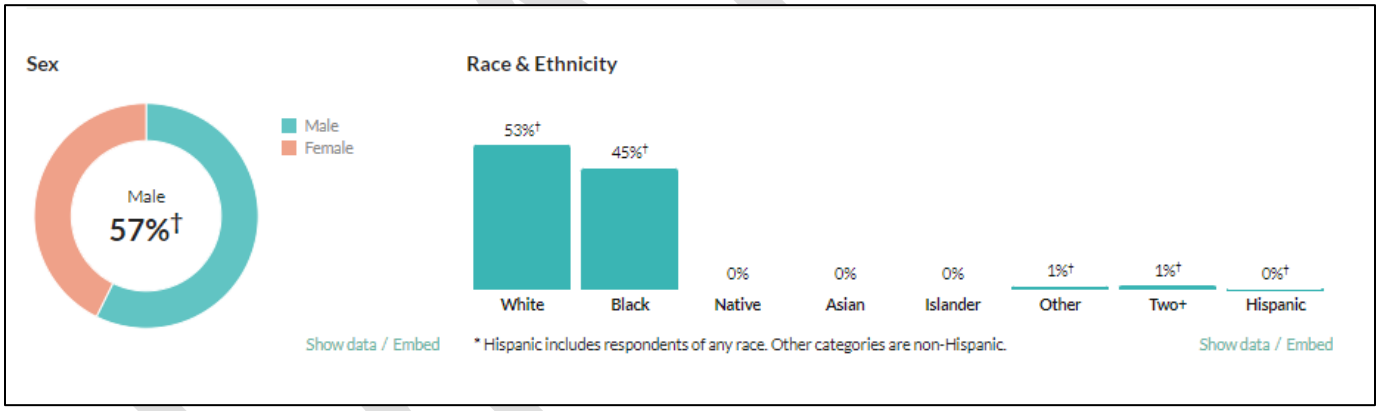
RACE

Lanier County



The population of Lanier County is 67% White/Caucasian, 23% Black/African American, 1% Asian, 2% two or more races, and 7% Hispanic. 52% are female and 48% male.

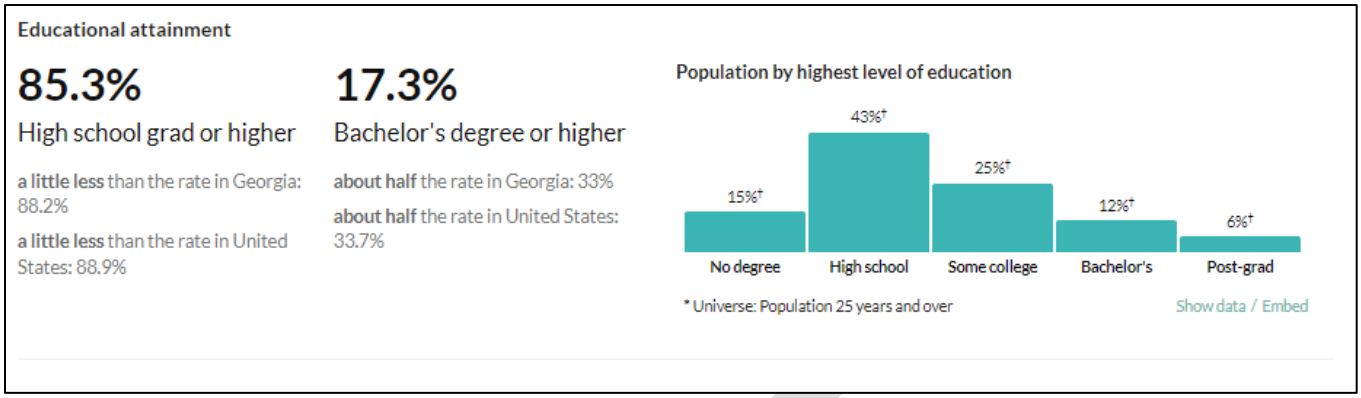
City of Lakeland



The City of Lakeland's population is 53% White, 45% Black/African American, 1% some other race, and 1% two or more races. 57% are female and 43% are male.

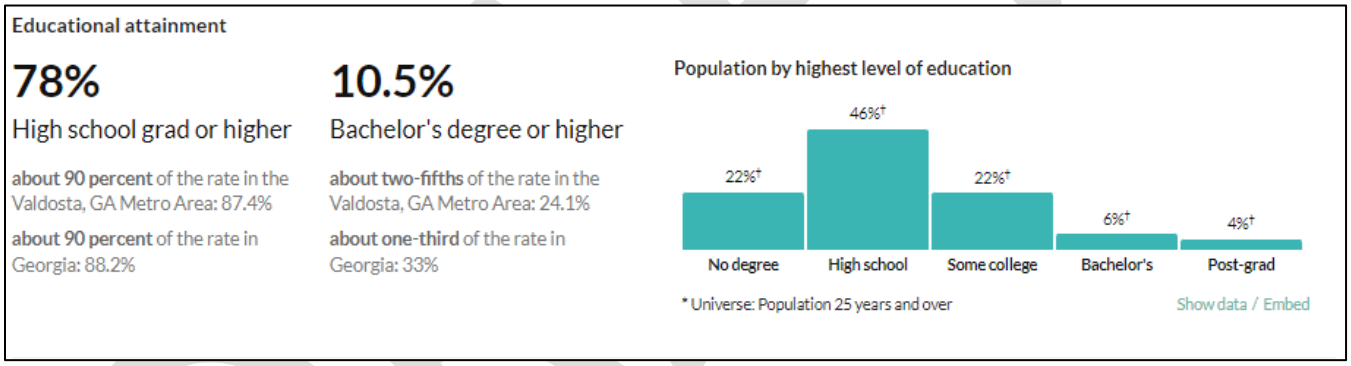
EDUCATIONAL ATTAINMENT

Lanier County



Among persons aged 25 or older in Lanier County, 15% have no high school diploma, 43% are high school graduates (includes equivalency) with no further education, 25% have an associate degree or some college, and 18% have a bachelor's or higher degree.

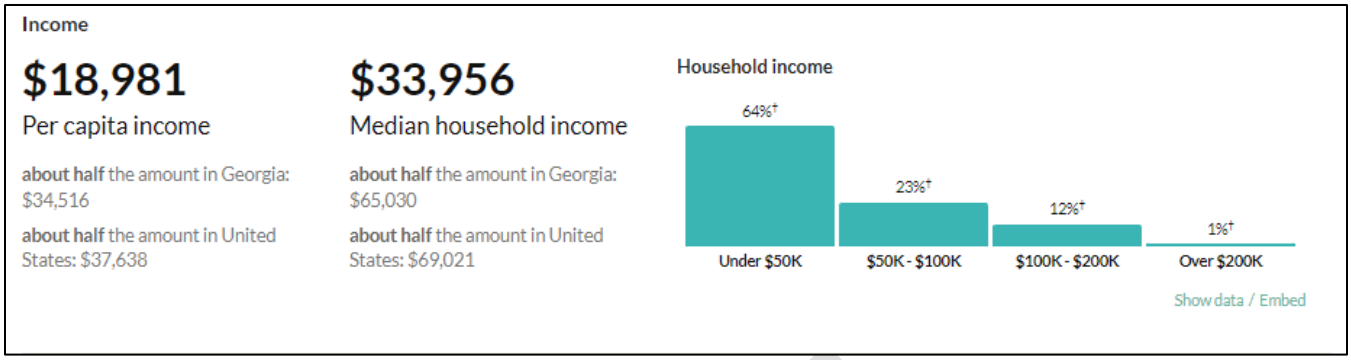
City of Lakeland



Among persons aged 25 or older in the City of Lakeland, 22% have no high school diploma, 46% are high school graduates (includes equivalency) with no further education, 22% have an associate degree or some college, and 10.2% have a bachelor's or higher degree.

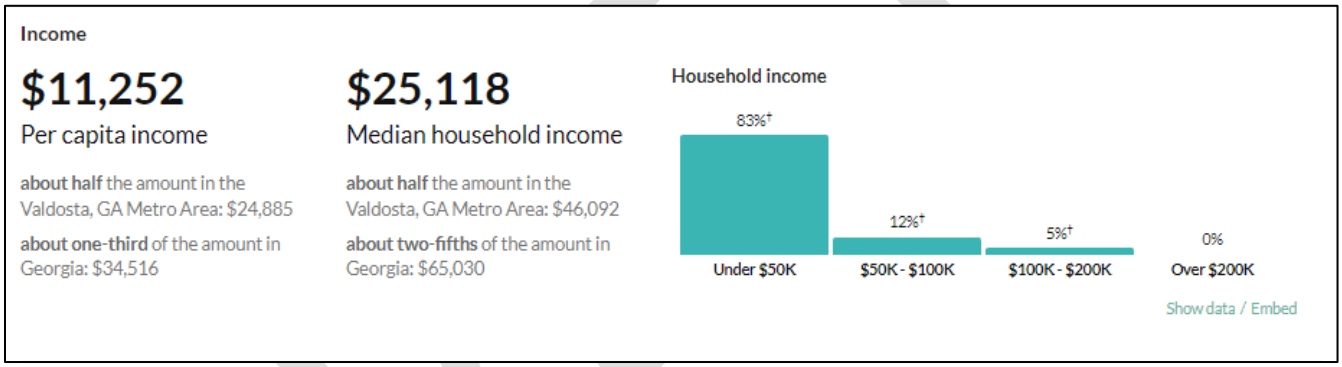
INCOME

Lanier County



As of 2021 (US Census), the median household income in Lanier County is $33,956.

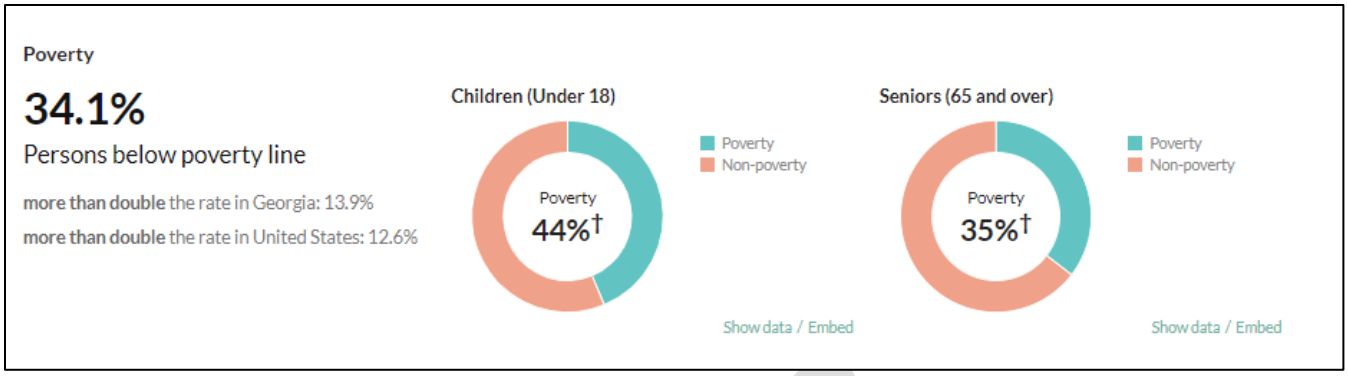
City of Lakeland



As of 2021 (US Census), the median household income in the City of Lakeland is $25,118.

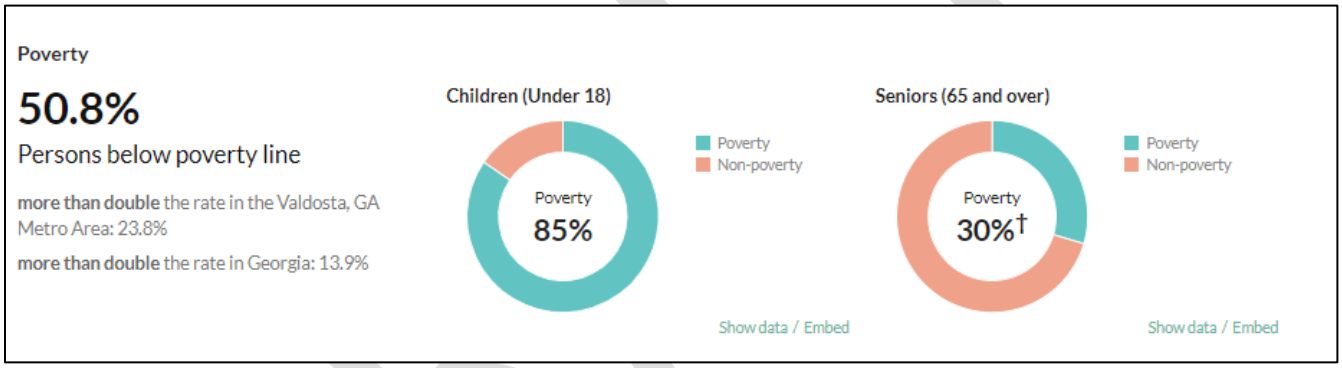
POVERTY

Lanier County



The percentage of the population living below the federal poverty level is estimated at 34.1% in Lanier County. This is more than double the rate in Georgia of 13.9%.

City of Lakeland

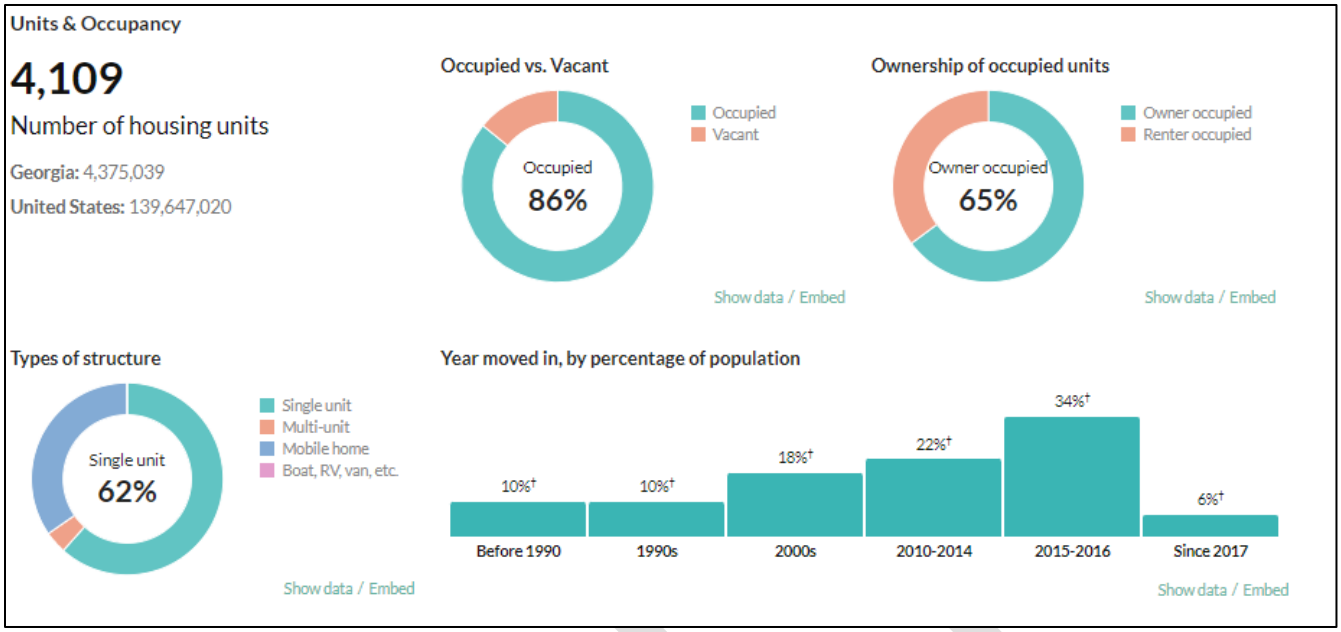


The percentage of the population living below the poverty level in Lakeland is estimated at 50.8%. This is more than double the rate in Georgia of 13.9%.

Source: U.S. Census Bureau (www.census.gov)

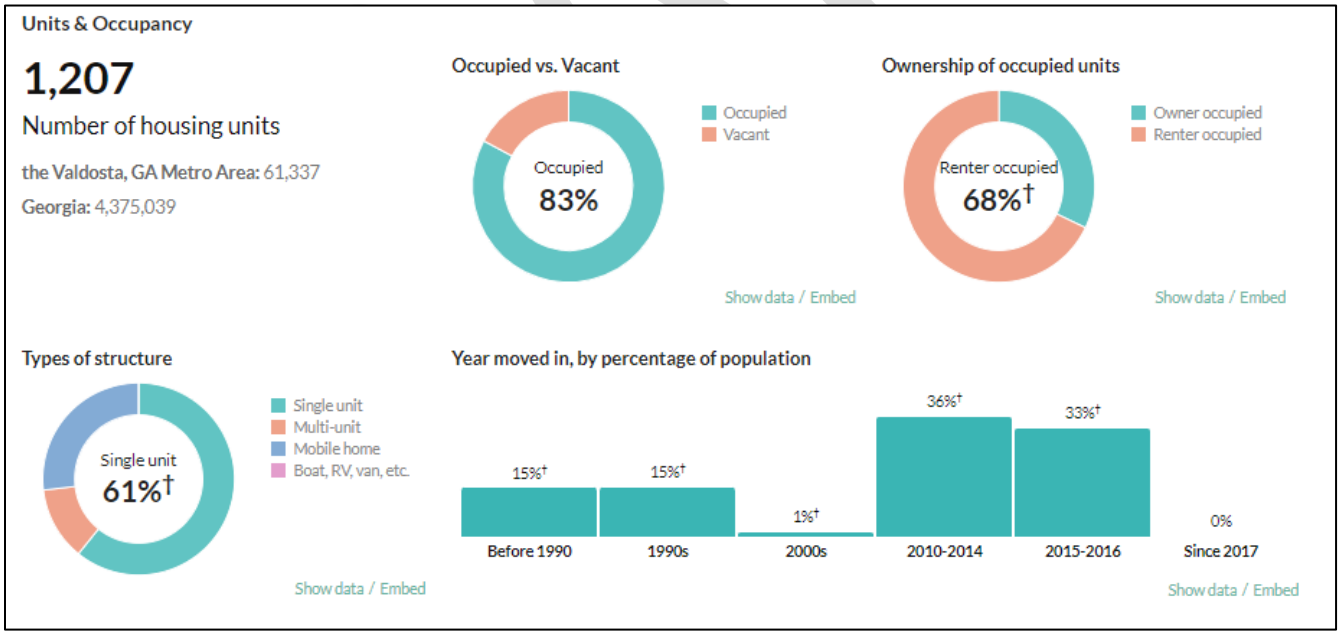
HOUSING UNITS

Lanier County



In 2021, there were 4,109 housing units in Lanier County. Occupied housing was at 86%.

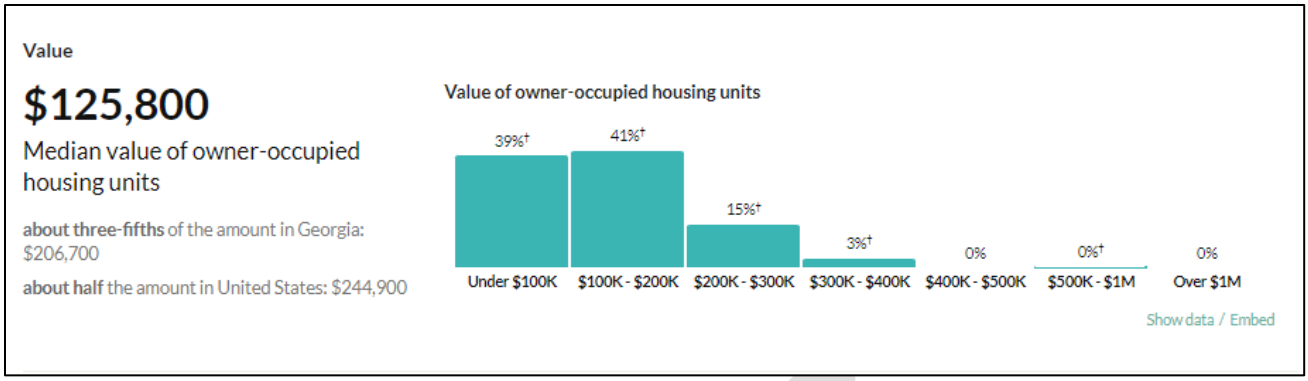
City of Lakeland



In 2021 there were 1,207 housing units in the City of Lakeland, with 83% of occupied housing.

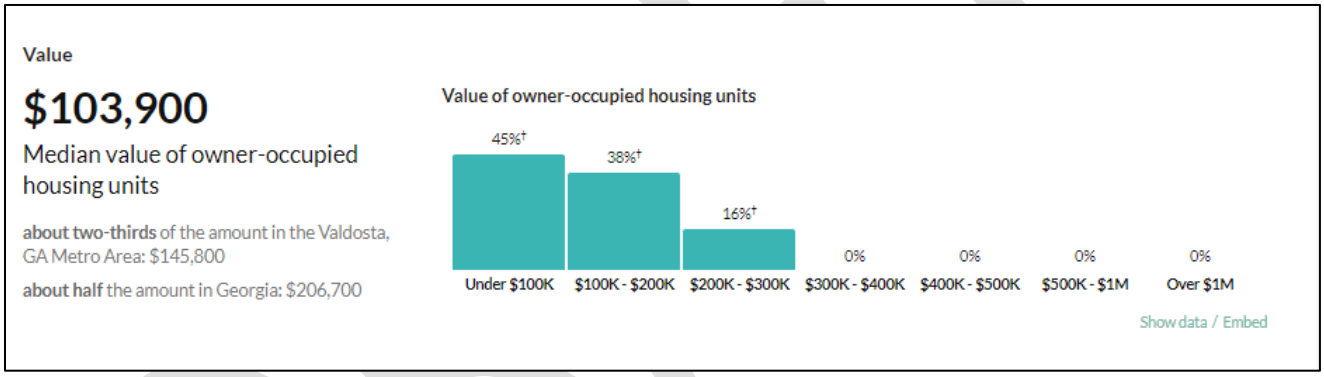
HOUSING VALUE

Lanier County



The medium value of owner-occupied housing in Lanier County was $125,800 in 2021. About three-fifths of housing in Georgia is valued at $206,700.

City of Lakeland



In 2021 the medium value of owner-occupied housing in Lakeland was $103,900, about half the amount in Georgia of $206,700.

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 seven natural hazards in the previous plan, in the same order of priority, plus two new hazards (sinkholes and severe winter storms). Table 2.1 provides a brief description of each section in this chapter and a summary of changes made.

I. Hurricanes/Tropical Storms	Updated data and information; edited for clarity
II. Tornadoes	Updated data and information; edited for clarity
III. Floods	Updated data and information; edited for clarity
IV. Windstorms/Hailstorms/Lightning	Updated data and information; edited for clarity
V. Extreme Heat	Updated data and information; edited for clarity
VI. Wildfires	Updated data and information; edited for clarity
VII. Drought	Updated data and information; edited for clarity
VIII. Sinkholes	Updated data and information; edited for clarity
IX. Severe Winter Storms	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, Earthquake, Expansive Soils, Extreme Heat, Land Slide, SLOSH (Sea, Lake, and Overland Surges from Hurricanes), Tsunami, and Volcano, were examined and determined not to be of sufficient significance in the community to warrant their inclusion in the present Hazard Mitigation Planning effort, based on history and available data.

Section I. Hurricanes/Tropical Storms

A. Identification of Hazard

The threat of hurricanes/tropical storms has been chosen by the HMPUC as the most likely hazard to occur and cause damage in the community based on experience, the FEMA-described methodology, and other factors. 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. For further information, see the HAZUS Report in Appendix G.

Hurricanes and tropical storms are both types of tropical cyclones. Tropical cyclones are the general term for all circulating weather systems over tropical water. Tropical cyclones are destructive and can 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/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.

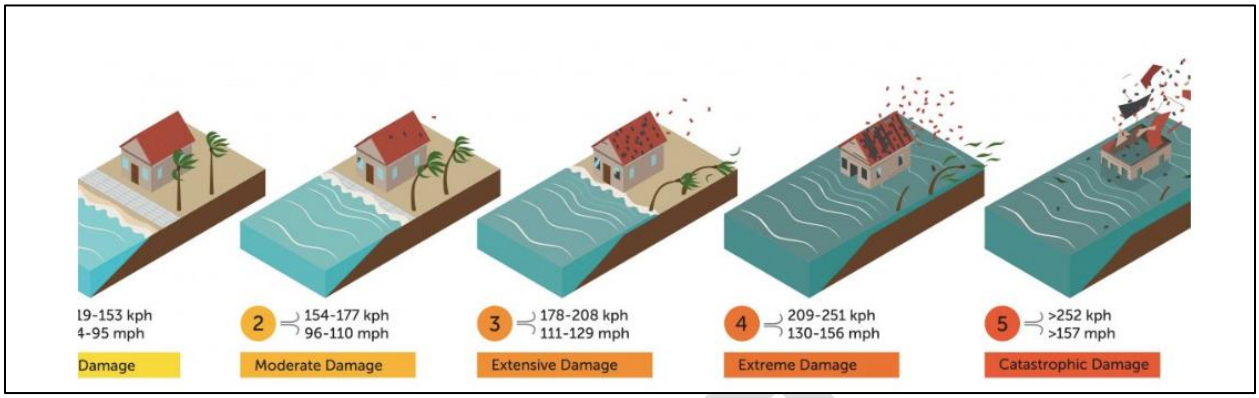
A tropical storm is defined as a tropical cyclone in which the maximum sustained surface wind speed (using the U.S. 1-minute average) ranges from 34 kt (39 mph or 63 km/hr) to 63 kt (73 mph or 118 km/hr).

A tropical disturbance is a discrete tropical weather system of apparently organized convection -- generally 100 to 300 nmi in diameter -- originating in the tropics or subtropics, having a 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/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 power. The following table shows the scale broken down by winds:

SAFFIR-SIMPSON HURRICANE SCALE



Category 1 on the Saffir-Simpson Hurricane Wind Scale, a storm needs to sustain at least **74 mph** winds, which is enough to damage roofs, siding, and gutters. Trees can be toppled (sometimes onto houses, cars, or roads) and create dangerous situations. Power is also likely to be lost in areas affected by Category 1 storms, especially where it makes landfall.

Category 2 (96 mph to 100 mph) poses similar risks, just with a larger scale of damage. Power could potentially be knocked out further across the affected area.

Category 3 (111 mph to 129 mph) and higher are all considered "major" hurricanes by the National Hurricane Center. This is where even well-built houses can sustain structural damage, and electricity can be knocked out for days or weeks.

Category 4 (130 mph to 156 mph) and **Category 5 (157 mph or higher)** can leave people isolated for days or weeks due to fallen trees and power lines blocking emergency personnel from quickly reaching affected areas. The NOAA says it's possible for areas to be left uninhabitable for months due to loss of power, destroyed or obstructed roads, and a total loss of basic services.

It's worth noting that peak 1-minute sustained wind speed – the measure by which category is determined per the Saffir-Simpson Scale – usually drops by a whole category once a storm reaches roughly a kilometer inland. If a storm lands as a Category 3 it will likely be at Category 2 speeds a half a mile or so inland.

(*Map and information provided by https://hurricanedamage.com*)

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, Lanier County and the City of Lakeland are vulnerable to severe hurricanes/tropical storms forming in the Atlantic Ocean and the Gulf of Mexico but are in a low-risk hurricane zone. 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. The effects vary depending on the hurricane/tropical storm's severity and the event's duration.

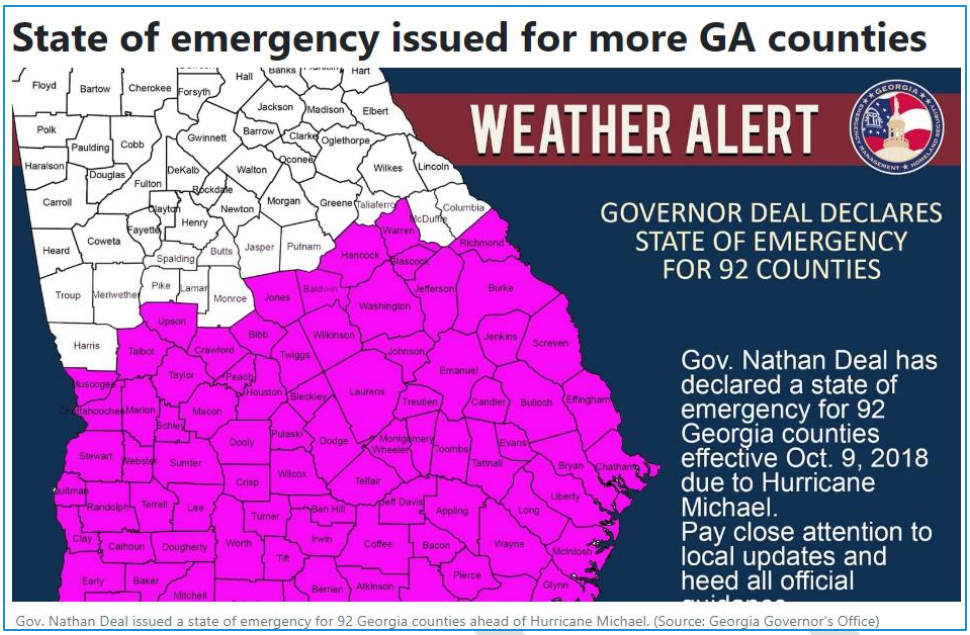
B. Profile of Events, Frequency of Occurrences, Probability

According to the NOAA Storm Events Database (Appendix F), 9 reports of hurricanes/tropical storms occurred in Lanier County (including the City of Lakeland) between 01/01/1950 and 12/31/2022. The Historic Recurrence Interval is 8.00 years. This is a 12.50% Historic Frequency Chance per year. The past 10-year Record Frequency Per Year is 0.3, the past 20-year frequency is 0.40, and the past 50-year frequency is 0.18 (see the Hazard Frequency Table in Appendix D). The largest hurricane that hit Lanier County was Hurricane Frances in 2004. The most recent hurricane to hit Lanier County was Hurricane Andrea in 2013.

On Sept. 1, 2016, Tropical Storm Hermine caused numerous trees and power lines to be blown down, especially in the pecan orchards. The total damage cost was estimated at $500,000. On Sept. 10-11, 2017, Tropical Storm Irma caused widespread damage. Lanier County reported trees and power lines down across the county, including a few large oak trees. Five trees were down on homes. The county sheltered 97 people. Total property damage was estimated at $1 million. Wind speeds were recorded at up to 55 mph. Power was out in most of the county for approximately 24 to 48 hours (about 2 days).

On October 10, 2018, the community was impacted by Hurricane Michael. In Georgia, 2,368,226 acres of forestland were impacted, with an estimated value of $762,683,909. Crop damage occurred to cotton, vegetables, pecans, poultry, peanuts, and timber. Cotton estimated damage was $300-$900 million, vegetables $480 million, pecans $560 million, poultry $25 million, peanuts $10-$20 million, and timber $1 million. Catastrophic winds resulted in damage in Florida and Georgia. There were deaths and severe injuries throughout Georgia and Florida.

The Governor of Georgia issued a State of Emergency ahead of Hurricane Michael for 92 counties, and Lanier County was included. Later, 16 more counties were added to the declaration.



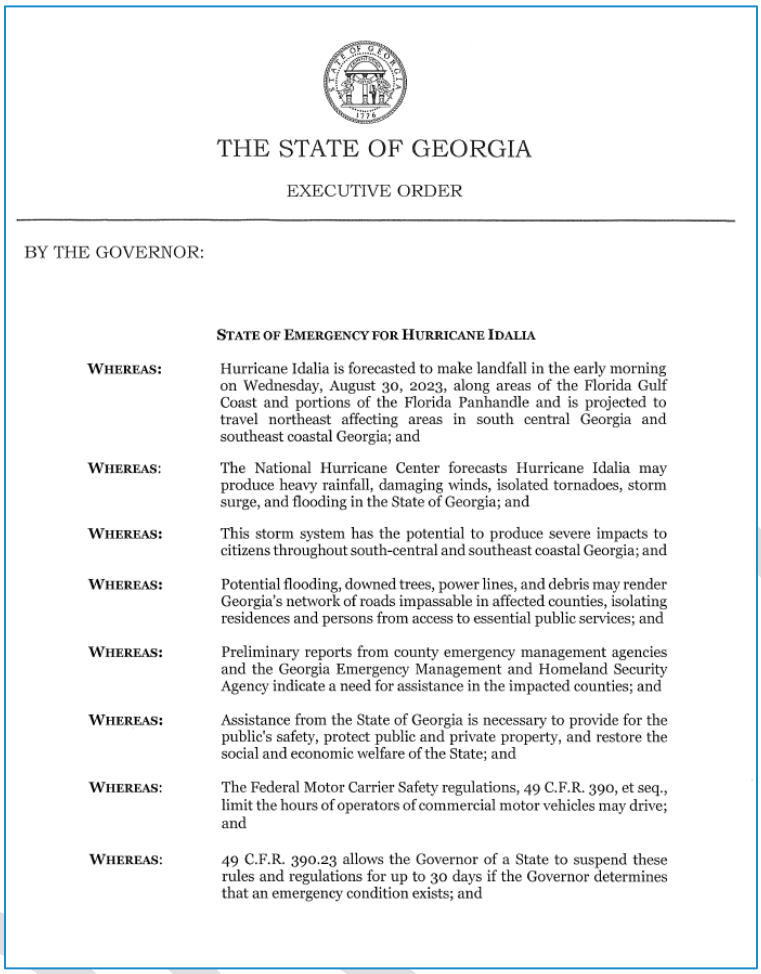
Gov. Nathan Deal issued a state of emergency for 92 Georgia counties ahead of Hurricane Michael. (Source: Georgia Governor's Office)

Since the last Hazard Mitigation Plan was adopted, NOAA reported two tropical storms that affected Lanier County. On July 7, 2021, Tropical Storm Elsa made landfall as a strong tropical storm across the southeast big bend of Florida. Impacts included several trees and power lines blown down along with coastal flooding from storm surges and flash flooding from heavy rainfall. Flash flooding and gusty winds also impacted portions of south-central Georgia.

Hurricane Idalia (currently unreported by NOAA) affected Lanier County on August 30, 2023. Trees were down across the county, especially in Lakeland. Trees were laying across power lines on several roads across 135 South and 129. Powerlines were reported down on Hwy 125 and Pine Street. A gas station/convenience store on Main Street had the roof blown off. Half of a house roof was also reported blown off. The internet service and phone lines were reported at SGMC and light flooding was reported in the emergency room. Many were without power for days. A few homes had trees to fall on them. There were no reported injuries.

Damage from Hurricane Idalia 8/29/23 photos:

On the 29th of August 2023, the Governor of Georgia issued a State of Emergency for Lanier County and other counties in Georgia., ahead of Hurricane Idalia.



THE STATE OF GEORGIA

EXECUTIVE ORDER

BY THE GOVERNOR:

STATE OF EMERGENCY FOR HURRICANE IDALIA

WHEREAS: Hurricane Idalia is forecasted to make landfall in the early morning on Wednesday, August 30, 2023, along areas of the Florida Gulf Coast and portions of the Florida Panhandle and is projected to travel northeast affecting areas in south central Georgia and southeast coastal Georgia; and

WHEREAS: The National Hurricane Center forecasts Hurricane Idalia may produce heavy rainfall, damaging winds, isolated tornadoes, storm surge, and flooding in the State of Georgia; and

WHEREAS: This storm system has the potential to produce severe impacts to citizens throughout south-central and southeast coastal Georgia; and

WHEREAS: Potential flooding, downed trees, power lines, and debris may render Georgia's network of roads impassable in affected counties, isolating residences and persons from access to essential public services; and

WHEREAS: Preliminary reports from county emergency management agencies and the Georgia Emergency Management and Homeland Security Agency indicate a need for assistance in the impacted counties; and

WHEREAS: Assistance from the State of Georgia is necessary to provide for the public's safety, protect public and private property, and restore the social and economic welfare of the State; and

WHEREAS: The Federal Motor Carrier Safety regulations, 49 C.F.R. 390, et seq., limit the hours of operators of commercial motor vehicles may drive; and

WHEREAS: 49 C.F.R. 390.23 allows the Governor of a State to suspend these rules and regulations for up to 30 days if the Governor determines that an emergency condition exists; and

WHEREAS: The Governor is vested with the emergency powers cited herein as the Chief Executive of this State; and

WHEREAS: Code Section 38-3-28 provides that "[a]ll orders, rules, and regulations promulgated by the Governor" have the force and effect of law; and

WHEREAS: As Chief Executive, the Governor is tasked with protecting the citizens of this State, including during a state of emergency; and

WHEREAS: Code Section 38-3-51(c)(1) vests the Governor with the power to enforce all laws, rules, and regulations relating to emergency management and to assume direct operational control of all civil forces and helpers in the state; and

WHEREAS: Code Section 38-3-51(c)(4) vests the Governor with the power to perform and exercise such other functions, powers, and duties as may be deemed necessary to promote and secure the safety and protection of the civilian population; and

WHEREAS: In consultation with state emergency preparedness officials, I have determined that the following actions are necessary and appropriate to protect the continued strength of Georgia's economy and provide for the health, safety, and welfare of Georgia's residents and visitors.

NOW, THEREFORE, PURSUANT TO CODE SECTIONS 38-3-28 AND 38-3-51, AND THE AUTHORITY VESTED IN ME AS GOVERNOR OF THE STATE OF GEORGIA, IT IS HEREBY

ORDERED: That a State of Emergency exists in the State of Georgia due to the potential negative impact of Hurricane Idalia.

IT IS FURTHER

ORDERED: That all resources of the state of Georgia be made available to assist in preparation, response, and recovery activities throughout the affected areas, and the Georgia Emergency Management and Homeland Security Agency shall activate the Georgia Emergency Operations Plan.

IT IS FURTHER

ORDERED: That state agencies shall coordinate all public and emergency information, activities, releases, and response efforts related to this emergency with the Georgia Emergency Management and Homeland Security Agency.

IT IS FURTHER

ORDERED: That the Georgia Department of Transportation and Georgia Department of Public Safety shall take all necessary action to ensure the expeditious movement of utility vehicles, equipment, and personnel through the State to eliminate power outages.

IT IS FURTHER

ORDERED: That state agencies shall provide sufficient personnel required for the staffing of the Georgia State Operations Center or other command, control, and coordination points as may be designated by the Director of the Georgia Emergency Management and Homeland Security Agency and shall provide such personnel, vehicles, equipment, and other resources needed to protect life and property and to ensure continuation, restoration, and recovery of essential public services.

IT IS FURTHER

ORDERED: That the Georgia Department of Defense provide up to one thousand (1000) Georgia National Guard troops to be used in preparation, response, and recovery efforts for this State of Emergency for Hurricane Idalia.

IT IS FURTHER

ORDERED: That said Georgia National Guard troops be called up to State Active Duty as necessary by the Adjutant General.

IT IS FURTHER

ORDERED: That the federal rules and regulations limiting hours that operators of commercial vehicles may drive are suspended to ensure the uninterrupted supply of goods and services necessary to respond to this State of Emergency for Hurricane Idalia, including petroleum products. This declared emergency justifies a suspension of Part 395 (driver's hours of service) of Title 49 of the Code of Federal Regulations. The suspension will remain in effect for thirty (30) days or until the emergency condition ceases to exist, whichever is less. Nothing herein will be construed as an exemption from the

Commercial Driver's License requirements in 49 C.F.R. § 383 and the financial requirements in 49 C.F.R. § 387.

IT IS FURTHER

ORDERED: That no motor carrier operating under the terms of this State of Emergency for Hurricane Idalia will require or allow an ill or fatigued driver to operate a motor vehicle. A driver who notifies a motor vehicle carrier that he or she needs immediate rest will be given at least ten (10) consecutive hours off-duty before being required to return to service.

IT IS FURTHER

ORDERED: Pursuant to Code Section 10-1-393.4, price gouging related to goods and services necessary for preparation, response, and recovery activities for this State of Emergency for Hurricane Idalia, including motor fuel, diesel fuel, and other petroleum products, would be detrimental to the social and economic welfare of the citizens of this State and is therefore prohibited.

IT IS FURTHER

ORDERED: That if one or more of the provisions contained in this Order shall be held to be invalid, in violation of the Georgia Constitution, in violation of Georgia law, or unenforceable in any respect, such invalidity, violation, or unenforceability shall not affect any other provisions of this Order, but, in such case, this Order shall be construed as if such invalid, illegal, or unenforceable provision had never been contained within the Order.

IT IS FURTHER

ORDERED: That no provision of this Order shall limit, infringe, suspend, or supplant any judicial order, judgment, or decree issued pursuant to the laws or constitution of this State or the laws or constitution of the United States, nor shall any person use any provision this Order as a defense to an action in violation of a judicial order, judgment, or decree by any court created pursuant to the laws or constitution of this State or the laws or constitution of the United States.

IT IS FURTHER

ORDERED: That this Order does not suspend operation of any state or federal law or regulation, except as specifically described herein.

IT IS FURTHER

ORDERED: The Office of the Governor may continue to issue guidance on the scope of this Order as needed through communication media, including social media, without need for further Executive Orders.

IT IS FURTHER

ORDERED: All provisions of the Order shall become effective upon signature and shall be valid for a period of ten (10) days, expiring Friday, September 8, 2023, at 11:59 P.M., unless this State of Emergency is renewed by the Governor.

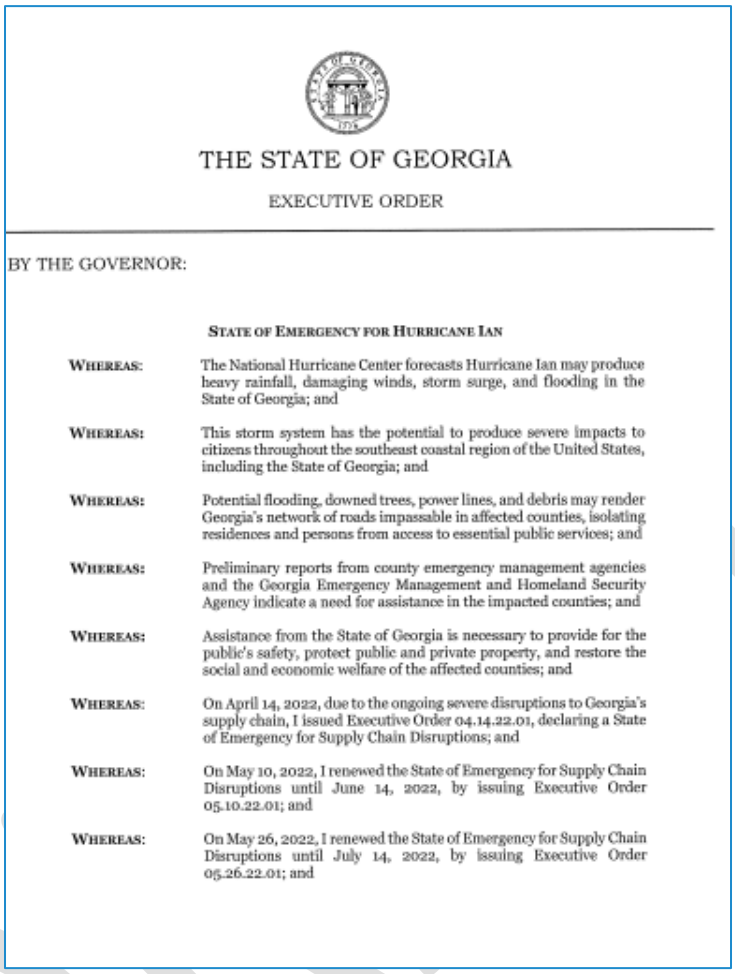
IT IS FURTHER

ORDERED: That this Order shall be effective upon signature.

This 29th day of August 2023.

GOVERNOR

State of Emergency issued ahead of Hurricane Ian.



THE STATE OF GEORGIA

EXECUTIVE ORDER

BY THE GOVERNOR:

STATE OF EMERGENCY FOR HURRICANE IAN

WHEREAS: The National Hurricane Center forecasts Hurricane Ian may produce heavy rainfall, damaging winds, storm surge, and flooding in the State of Georgia; and

WHEREAS: This storm system has the potential to produce severe impacts to citizens throughout the southeast coastal region of the United States, including the State of Georgia; and

WHEREAS: Potential flooding, downed trees, power lines, and debris may render Georgia's network of roads impassable in affected counties, isolating residences and persons from access to essential public services; and

WHEREAS: Preliminary reports from county emergency management agencies and the Georgia Emergency Management and Homeland Security Agency indicate a need for assistance in the impacted counties; and

WHEREAS: Assistance from the State of Georgia is necessary to provide for the public's safety, protect public and private property, and restore the social and economic welfare of the affected counties; and

WHEREAS: On April 14, 2022, due to the ongoing severe disruptions to Georgia's supply chain, I issued Executive Order 04.14.22.01, declaring a State of Emergency for Supply Chain Disruptions; and

WHEREAS: On May 10, 2022, I renewed the State of Emergency for Supply Chain Disruptions until June 14, 2022, by issuing Executive Order 05.10.22.01; and

WHEREAS: On May 26, 2022, I renewed the State of Emergency for Supply Chain Disruptions until July 14, 2022, by issuing Executive Order 05.26.22.01; and

WHEREAS: On July 1, 2022, I renewed the State of Emergency for Supply Chain Disruptions until August 13, 2022, by issuing Executive Order 07.01.22.01; and

WHEREAS: On August 3, 2022, I renewed the State of Emergency for Supply Chain Disruptions until September 12, 2022, by issuing Executive Order 08.03.22.01; and

WHEREAS: On September 1, 2022, I renewed the State of Emergency for Supply Chain Disruptions until October 12, 2022, by issuing Executive Order 09.01.22.01; and

WHEREAS: On September 4, 2022, due to flooding caused by heavy rainfall in parts of Northwest Georgia, I issued Executive Order 09.04.22.01, declaring a State of Emergency for Severe Flooding in Chattooga and Floyd Counties; and

WHEREAS: The State of Emergency for Severe Flooding is currently set to expire on October 4, 2022, at 11:59 P.M.; and

WHEREAS: This Order shall create a coexisting state of emergency in the State of Georgia with the State of Emergency for Supply Chain Disruptions and the State of Emergency for Severe Flooding described in the immediately preceding paragraphs; and

WHEREAS: The responses by the State to this State of Emergency for Hurricane Ian, the State of Emergency for Supply Chain Disruptions, and the State of Emergency for Severe Flooding should all proceed simultaneously, without one impeding the others; and

WHEREAS: The Governor is vested with the emergency powers cited herein as the Chief Executive of this State; and

WHEREAS: Code Section 38-3-28 provides that "[a]ll orders, rules, and regulations promulgated by the Governor" have the force and effect of law; and

WHEREAS: As Chief Executive, the Governor is tasked with protecting the citizens of this State, including during a state of emergency; and

WHEREAS: Code Section 38-3-51(c)(1) vests the Governor with the power to enforce all laws, rules, and regulations relating to emergency management and to assume direct operational control of all civil forces and helpers in the state; and

WHEREAS: Code Section 38-3-51(c)(4) vests the Governor with the power to perform and exercise such other functions, powers, and duties as

may be deemed necessary to promote and secure the safety and protection of the civilian population; and

WHEREAS: Code Section 38-3-51(d)(1) vests the Governor with the power to suspend any regulatory statute prescribing the procedures for conduct of state business, or the orders, rules, or regulations of any state agency if strict compliance with any statute, order, rule, or regulation would in any way prevent, hinder, or delay necessary action in coping with the emergency or disaster; and

WHEREAS: In consultation with state emergency preparedness officials, I have determined that the following actions are necessary and appropriate to protect the continued strength of Georgia's economy and provide for the health, safety, and welfare of Georgia's residents and visitors.

NOW, THEREFORE, PURSUANT TO CODE SECTIONS 38-3-28 AND 38-3-51, AND THE AUTHORITY VESTED IN ME AS GOVERNOR OF THE STATE OF GEORGIA, IT IS HEREBY

ORDERED: That a State of Emergency exists in the State of Georgia due to the potential negative impact of Hurricane Ian on the safety of the public and the social and economic welfare of the State.

IT IS FURTHER

ORDERED: That the State of Emergency declared by this Order shall coexist with the State of Emergency for Supply Chain Disruptions declared by Executive Order 04.14.22.01, and renewed by Executive Orders 05.10.22.01, 05.26.22.01, 07.01.22.01, 08.03.22.01, and 09.01.22.01, and the State of Emergency for Severe Flooding declared by Executive Order 09.04.22.01. The existence or termination of one shall not impinge the others.

IT IS FURTHER

ORDERED: That any orders derivative of or appurtenant to this Order addressing this State of Emergency for Hurricane Ian shall not infringe, overturn, or in any way amend any orders that have been issued for the purpose of responding to the State of Emergency for Supply Chain Disruptions declared by Executive Order 04.14.22.01, and renewed by Executive Orders 05.10.22.01, 05.26.22.01, 07.01.22.01, 08.03.22.01, and 09.01.22.01, or the State of Emergency for Severe Flooding declared by Executive Order 09.04.22.01.

IT IS FURTHER

ORDERED: That all resources of the state of Georgia be made available to assist in preparation, response, and recovery activities throughout the affected areas, and the Georgia Emergency Management and Homeland Security Agency shall activate the Georgia Emergency Operations Plan.

IT IS FURTHER

ORDERED: That state agencies shall coordinate all public and emergency information, activities, releases, and response efforts related to this emergency with the Georgia Emergency Management and Homeland Security Agency.

IT IS FURTHER

ORDERED: That the Georgia Department of Transportation and Georgia Department of Public Safety shall take all necessary action to ensure the expeditious movement of utility vehicles, equipment, and personnel through the State to eliminate power outages.

IT IS FURTHER

ORDERED: That state agencies shall provide sufficient personnel required for the staffing of the Georgia State Operations Center or other command, control, and coordination points as may be designated by the Director of the Georgia Emergency Management and Homeland Security Agency and shall provide such personnel, vehicles, equipment, and other resources needed to protect life and property and to ensure continuation, restoration, and recovery of essential public services.

IT IS FURTHER

ORDERED: That the Georgia Department of Defense provide up to five hundred (500) Georgia National Guard troops to be used in preparation, response, and recovery efforts for this State of Emergency.

IT IS FURTHER

ORDERED: That said Georgia National Guard troops be called up to State Active Duty as necessary by the Adjutant General.

IT IS FURTHER

ORDERED: Pursuant to Code Section 10-1-393.4, price gouging related to goods and services necessary for preparation, response, and recovery activities for this State of Emergency, including motor fuel, diesel fuel, and other petroleum products, would be detrimental to the social and economic welfare of the citizens of this State and is therefore prohibited.

IT IS FURTHER

ORDERED: That if one or more of the provisions contained in this Order shall be held to be invalid, in violation of the Georgia Constitution, in violation of Georgia law, or unenforceable in any respect, such invalidity, violation, or unenforceability shall not affect any other provisions of this Order, but, in such case, this Order shall be construed as if such invalid, illegal, or unenforceable provision had never been contained within the Order.

IT IS FURTHER

ORDERED: That no provision of this Order shall limit, infringe, suspend, or supplant any judicial order, judgment, or decree issued pursuant to the laws or constitution of this State or the laws or constitution of the United States, nor shall any person use any provision this Order as a defense to an action in violation of a judicial order, judgment, or decree by any court created pursuant to the laws or constitution of this State or the laws or constitution of the United States.

IT IS FURTHER

ORDERED: That this Order does not suspend operation of any state or federal law or regulation, except as specifically described herein.

IT IS FURTHER

ORDERED: The Office of the Governor may continue to issue guidance on the scope of this Order as needed through communication media, including social media, without need for further Executive Orders.

IT IS FURTHER

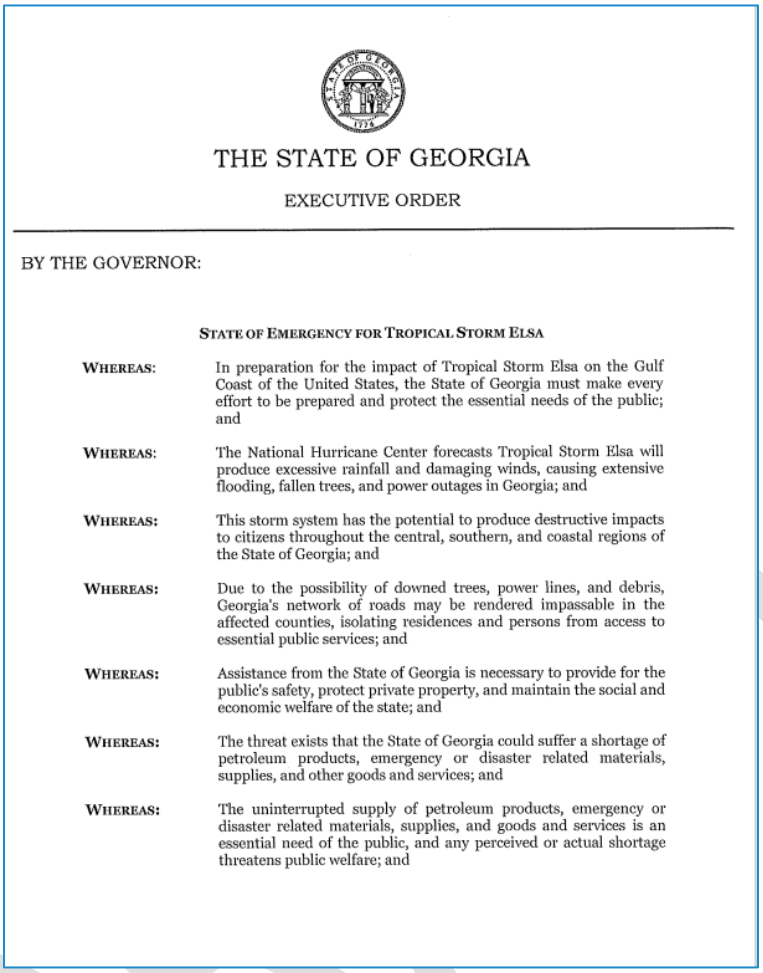
ORDERED: All provisions of the Order shall become effective on September 29, 2022, at 7:00 A.M., and shall be valid for a period of twenty-nine (29)

days, expiring Friday, October 28, 2022, at 11:59 P.M., unless this State of Emergency is renewed by the Governor.

This 27th day of September 2022.

GOVERNOR

State of Emergency for Tropical Storm Elsa



THE STATE OF GEORGIA

EXECUTIVE ORDER

BY THE GOVERNOR:

STATE OF EMERGENCY FOR TROPICAL STORM ELSA

WHEREAS: In preparation for the impact of Tropical Storm Elsa on the Gulf Coast of the United States, the State of Georgia must make every effort to be prepared and protect the essential needs of the public; and

WHEREAS: The National Hurricane Center forecasts Tropical Storm Elsa will produce excessive rainfall and damaging winds, causing extensive flooding, fallen trees, and power outages in Georgia; and

WHEREAS: This storm system has the potential to produce destructive impacts to citizens throughout the central, southern, and coastal regions of the State of Georgia; and

WHEREAS: Due to the possibility of downed trees, power lines, and debris, Georgia's network of roads may be rendered impassable in the affected counties, isolating residences and persons from access to essential public services; and

WHEREAS: Assistance from the State of Georgia is necessary to provide for the public's safety, protect private property, and maintain the social and economic welfare of the state; and

WHEREAS: The threat exists that the State of Georgia could suffer a shortage of petroleum products, emergency or disaster related materials, supplies, and other goods and services; and

WHEREAS: The uninterrupted supply of petroleum products, emergency or disaster related materials, supplies, and goods and services is an essential need of the public, and any perceived or actual shortage threatens public welfare; and

WHEREAS: The Federal Motor Carrier Safety regulation, 49 C.F.R. §§ 390, *et seq.*, prescribes limits on the hours of service for operators of commercial motor vehicles, and federal law, 23 U.S.C. § 127, sets forth certain weight limitations for vehicles on interstate highways; and

WHEREAS: 49 C.F.R. § 390.23 allows the Governor of a State to suspend these rules and regulations for commercial vehicles responding to an emergency for up to thirty (30) days, if the Governor determines that an emergency condition exists; and

WHEREAS: On June 30, 2021, I declared a State of Emergency for Continued COVID-19 Economic Recovery by issuing Executive Order 06.30.21.01; and

WHEREAS: This Order shall create a coexisting state of emergency in the State of Georgia with the State of Emergency for Continued COVID-19 Economic Recovery described in the immediately preceding paragraph; and

WHEREAS: The responses by the State to this State of Emergency for Tropical Storm Elsa and the State of Emergency for Continued COVID-19 Economic Recovery should proceed simultaneously, without one impeding the other; and

WHEREAS: Code Section 38-3-51 vests the Governor with the authority to bring emergency situations under control by issuing orders, rules, and regulations to protect the safety and welfare of the public.

NOW, THEREFORE, PURSUANT TO CODE SECTION 38-3-51, AND 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 Georgia counties due to the potential effects caused by Tropical Storm Elsa:

Appling, Atkinson, Bacon, Baker, Baldwin, Ben Hill, Berrien, Bibb, Bleckley, Brantley, Brooks, Bryan, Bulloch, Burke, Calhoun, Camden, Candler, Charlton, Chatham, Chattahoochee, Clay, Clinch, Coffee, Colquitt, Columbia, Cook, Crawford, Crisp, Decatur, Dodge, Dooly, Dougherty, Early, Echols, Effingham, Emanuel, Evans, Glascock, Glynn, Grady, Hancock, Houston, Irwin, Jeff Davis, Jefferson, Jenkins, Johnson, Jones, Lanier, Laurens, Lee, Liberty, Long, Lowndes, Macon, Marion, McDuffie, McIntosh, Miller, Mitchell, Montgomery, Muscogee, Peach, Pierce, Pulaski, Quitman, Randolph, Richmond, Schley, Screven, Seminole, Stewart, Sumter, Tattnall, Taylor, Telfair, Terrell, Thomas, Tift, Toombs, Treutlen,

Turner, Twiggs, Ware, Warren, Washington, Wayne, Webster, Wheeler, Wilcox, Wilkinson, and Worth.

IT IS FURTHER

ORDERED: That the State of Emergency declared by this Order shall coexist with the State of Emergency for Continued COVID-19 Economic Recovery declared by Executive Order 06.30.21.01. The existence or termination of one shall not impinge the other.

IT IS FURTHER

ORDERED: That any orders derivative of or appurtenant to this Order addressing this State of Emergency for Tropical Storm Elsa shall not infringe, overturn, or in any way amend any orders that have been issued for the purpose of responding to the State of Emergency for Continued COVID-19 Economic Recovery declared by Executive Order 06.30.21.01.

IT IS FURTHER

ORDERED: That during preparation, response, and recovery activities for Tropical Storm Elsa, price gouging of goods and services necessary to support these efforts would be detrimental to the social and economic welfare of the citizens of this state; and thus O.C.G.A. § 10-1-393.4, prohibiting price gouging, is in effect.

IT IS FURTHER

ORDERED: That in accordance with 49 C.F.R. § 390.23(a)(1)(i)(A), the federal rules and regulations limiting hours operators of commercial vehicles may drive are suspended to ensure that carrier crews are available as needed to provide emergency relief. This declared emergency justifies a suspension of Part 395 (driver's hours of service) of Title 49 of the Code of Federal Regulations. The suspension will remain in effect for eight (8) days from the date of this Order or until the emergency condition ceases to exist, whichever is less.

IT IS FURTHER

ORDERED: That no motor carrier operating under the terms of this emergency declaration will require or allow an ill or fatigued driver to operate a motor vehicle. A driver who notifies a motor vehicle carrier that he or she needs immediate rest will be given at least ten (10) consecutive hours off-duty before being required to return to service.

IT IS FURTHER

ORDERED: That weight, height, and length for any such vehicle traveling through the State of Georgia for the purposes of providing disaster relief and/or preparation related to this State of Emergency for Tropical Storm Elsa, which traverses roadways maintained by the state of Georgia shall not exceed the following:

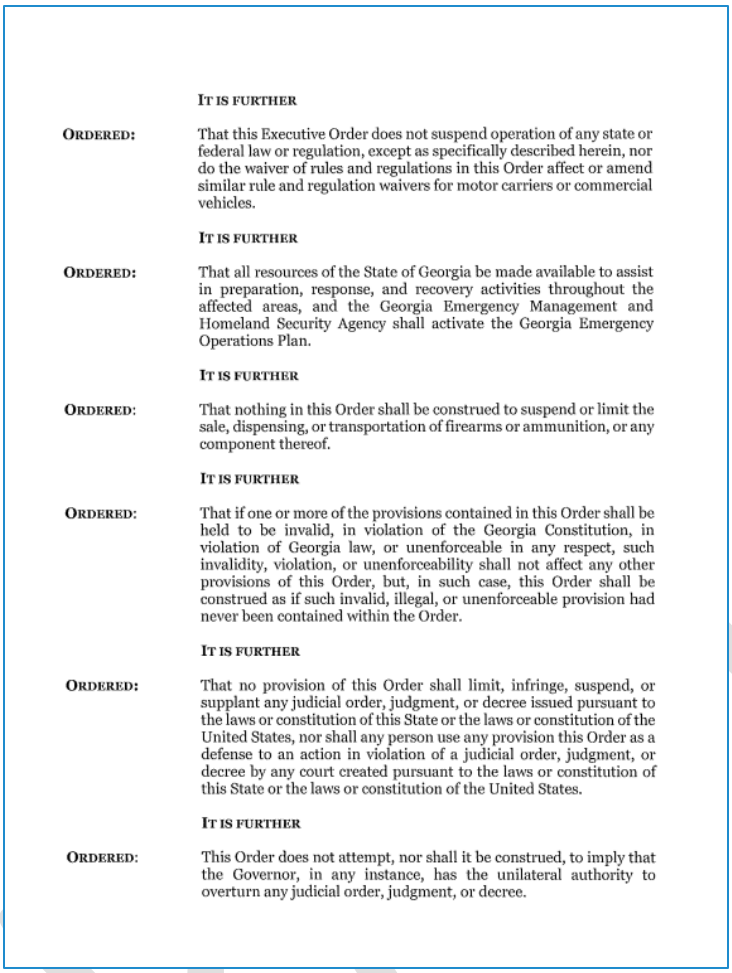
A. A maximum gross vehicle weight for vehicles equipped with five (5) weight-bearing axles, with an outer bridge span of not less than fifty-one (51) feet, shall not exceed a gross vehicle weight of ninety-five (95) thousand pounds, a maximum width of ten (10) feet, and an overall length of one hundred (100) feet. Continuous travel is authorized with the proper escorts.

B. If the width of said vehicle exceeds eight (8) feet six (6) inches and is traveling after daylight, defined as thirty (30) minutes before sunset to thirty (30) minutes after sunrise, the transporter is required to have a vehicle front and a rear escort/amber light when traveling on a two-lane roadway and a vehicle rear escort when traveling on a four-lane highway. Transporters are responsible for ensuring that they have proper oversize signs, markings, flags, and escorts as defined in the Georgia Department of Transportation Rules and Regulations.

IT IS FURTHER

ORDERED: That commercial vehicles operating outside the normal weight, height, and length restrictions under the authority of this Executive Order declaring a State of Emergency for Tropical Storm Elsa shall be issued permits by the Georgia Department of Public Safety. Said vehicles shall be subject to any special conditions the Georgia Department of Public Safety may list on applicable permits. Nothing in this Executive Order shall be construed to allow any vehicle to exceed weight limits posted for bridges and like structures, nor shall anything in this Executive Order be construed to relieve compliance with restrictions other than those specified in this Order or from any statute, rule, order, or other legal requirement not specifically waived herein.

Oversize permits may be issued by the Georgia Department of Public Safety, Motor Carrier Compliance Division, during normal business hours, Monday through Friday by calling 404-624-7700 or through the Georgia Permitting and Routing Optimization System online portal at https://gapros.dot.ga.gov/.



IT IS FURTHER

ORDERED: That this Executive Order does not suspend operation of any state or federal law or regulation, except as specifically described herein, nor do the waiver of rules and regulations in this Order affect or amend similar rule and regulation waivers for motor carriers or commercial vehicles.

IT IS FURTHER

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

IT IS FURTHER

ORDERED: That nothing in this Order shall be construed to suspend or limit the sale, dispensing, or transportation of firearms or ammunition, or any component thereof.

IT IS FURTHER

ORDERED: That if one or more of the provisions contained in this Order shall be held to be invalid, in violation of the Georgia Constitution, in violation of Georgia law, or unenforceable in any respect, such invalidity, violation, or unenforceability shall not affect any other provisions of this Order, but, in such case, this Order shall be construed as if such invalid, illegal, or unenforceable provision had never been contained within the Order.

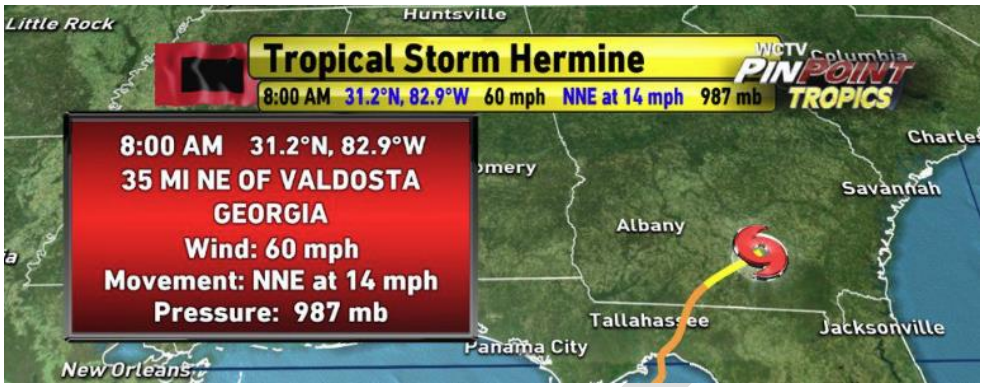
IT IS FURTHER

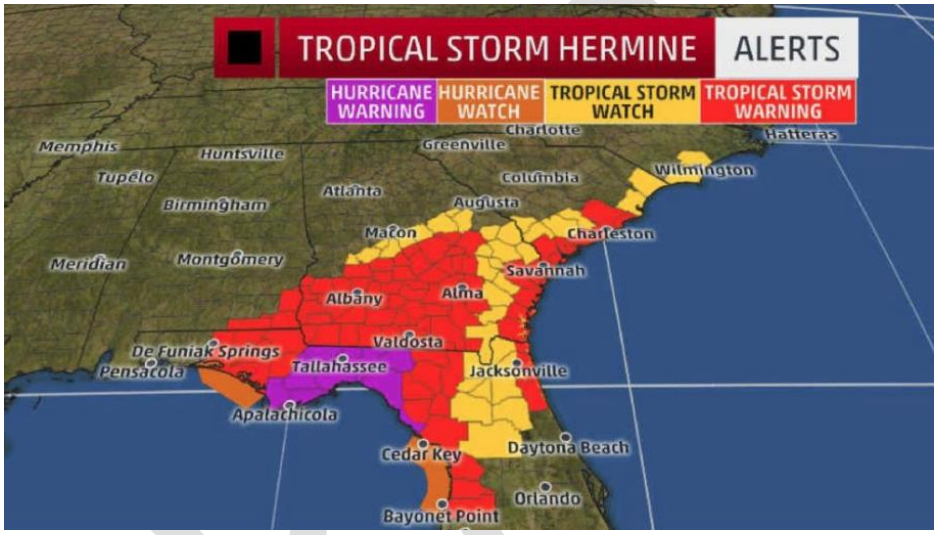
ORDERED: That no provision of this Order shall limit, infringe, suspend, or supplant any judicial order, judgment, or decree issued pursuant to the laws or constitution of this State or the laws or constitution of the United States, nor shall any person use any provision this Order as a defense to an action in violation of a judicial order, judgment, or decree by any court created pursuant to the laws or constitution of this State or the laws or constitution of the United States.

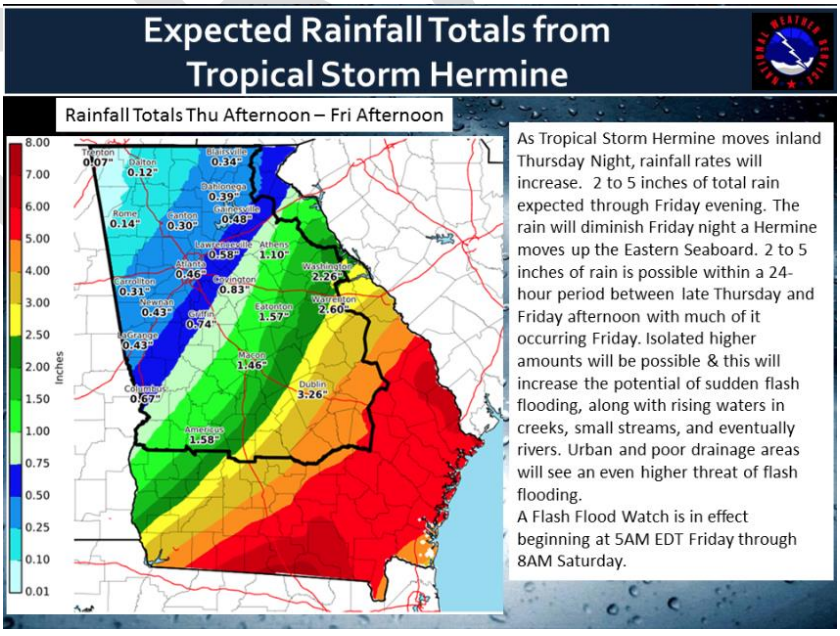
IT IS FURTHER

ORDERED: This Order does not attempt, nor shall it be construed, to imply that the Governor, in any instance, has the unilateral authority to overturn any judicial order, judgment, or decree.

Gov. Nathan Deal has declared a state of emergency ahead of Hurricane Hermine. The declaration includes 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 counties.







Tropical Storm Irma

ATLANTA - Georgia Governor Nathan Deal extended the state of emergency related to Hurricane Irma to all 159 of the state's counties early Sunday afternoon. The state's Emergency Operations Command recommended the move in advance of powerful winds, heavy rain and potential flooding expected to move into Georgia from the south starting Sunday evening.

Georgia declares state of emergency

September 12, 2018 12:22 PM in News Source: Associated Press
By: Associated Press

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Trending News

- **Former LSU Tiger Rahim Alem dead at 36, sources say**
- **Alleged drug dealer arrested, accused of selling drugs out of Main Street home**

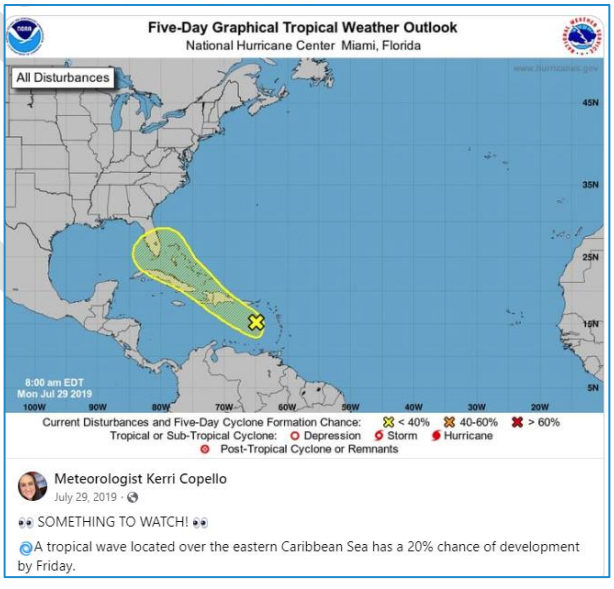
RALEIGH, N.C. (AP) - Georgia's governor has declared a state of emergency for all 159 counties as forecasters now say Hurricane Florence could take a southwest turn.

In a news release Wednesday, Gov. Nathan Deal says the state "is mobilizing all available resources to ensure public safety ahead of Hurricane Florence."

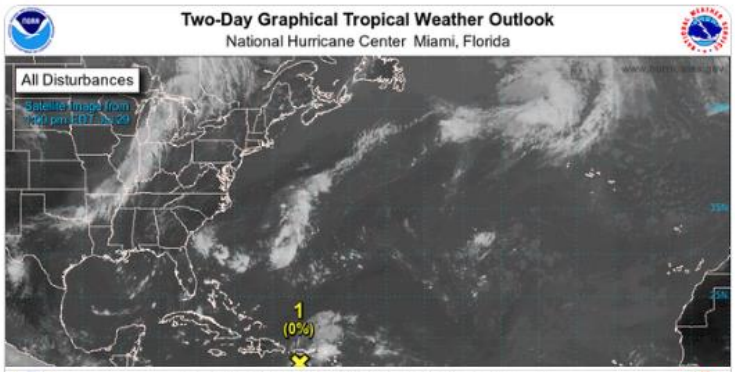
Deal's declaration Wednesday covers comes as the National Weather Service's storm forecast shows a chance that Florence's track might turn toward the southwest as it approaches the Carolinas later this week.

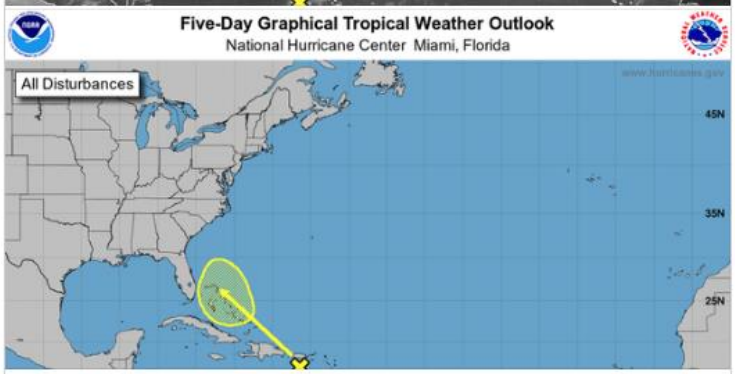
No storm watches or warnings are in effect for Georgia. But forecasters say there's an increased chance for tropical storm winds to reach Savannah.

Deal's emergency declaration cited potential "changes in the storm's trajectory" as well as an influx of evacuees coming to Georgia from the Carolinas. The order eases regulations on trucks hauling gasoline and relief supplies into Georgia.



Lanier County Emergency Management Agency
July 29, 2019 ·

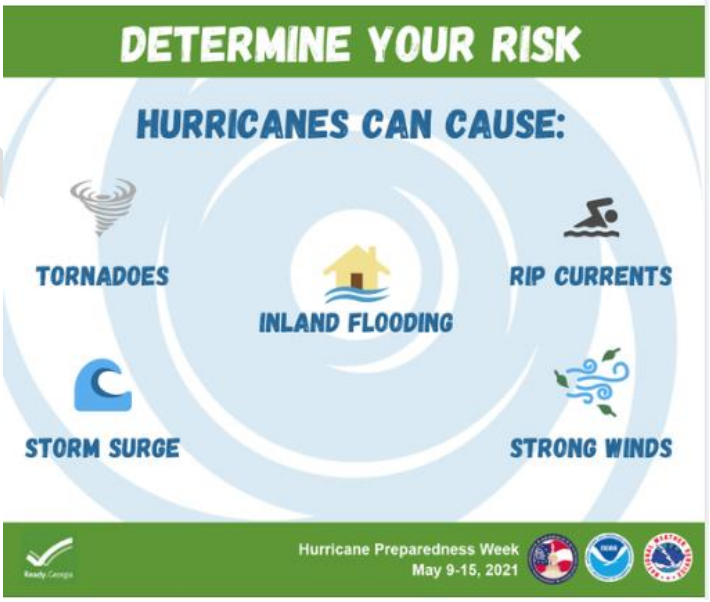




NOAA NWS National Hurricane Center
July 29, 2019 ·

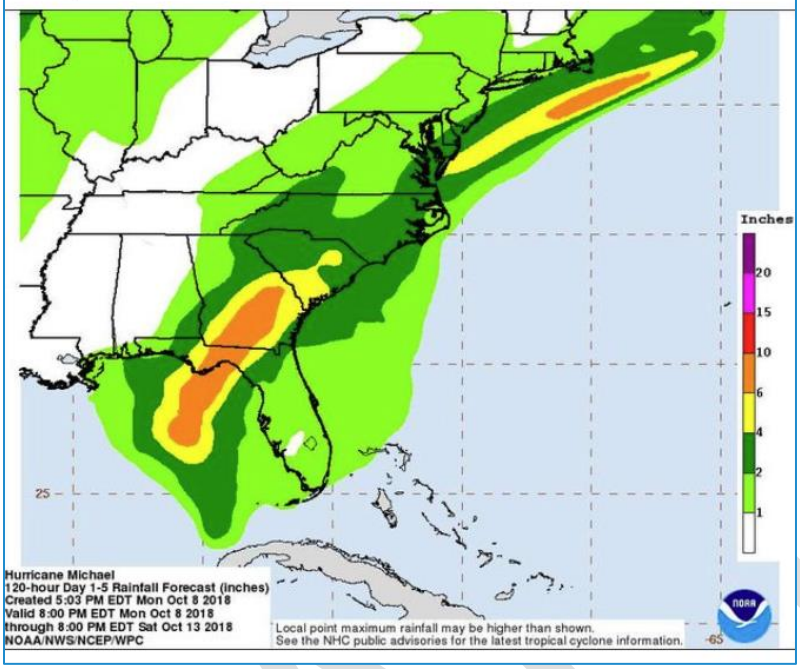
Shower activity associated with a tropical wave, located on this Monday afternoon over the eastern Caribbean Sea, has decreased since yesterday. Atmospheric conditions as well as land effects should inhibit the development of this system as it moves west-northwestward for the next several days. It has a near zero chance of becoming a tropical cyclone during the next 48 hours and a low (10 percent) chance during the next five days.

However, this disturbance could still produce an increase in cloudiness and thunderstorms over Puerto Rico, the Greater Antilles and portions of the Bahamas during the next few days.
www.hurricanes.gov



Lanier County Emergency Management Agency
October 8, 2018 ·

Oct 08, 2018



Lanier County Emergency Management Agency
October 9, 2018 ·

Oct 9, 2018 4:00 AM Update

Key Messages for Hurricane Michael

Advisory 11: 4:00 AM CDT Tue Oct 09, 2018

1. Life-threatening storm surge is likely along portions of the coasts of the Florida Panhandle, Big Bend, and Nature Coast, and a storm surge warning is in effect for these areas. Residents in these areas should follow all advice given by their local officials.

2. A hurricane warning has been issued for portions of the Florida Gulf Coast, and everyone in these areas should prepare for life-threatening winds associated with the core of Michael. Damaging winds will also extend inland across portions of the Florida Panhandle, southern Georgia, and southeast Alabama as Michael moves inland.

3. Heavy rainfall from Michael could produce life-threatening flash flooding from the Florida Panhandle and Big Bend region into portions of Georgia and South Carolina.

4. Tropical storm conditions will continue in portions of western Cuba for a few more hours.

5. Michael is expected to produce heavy rainfall and flash flooding over portions of western Cuba during the next day or so.

For more information go to hurricanes.gov

Gov. Kemp Issues State of Emergency Ahead of Hurricane Ian

Atlanta, GA – Governor Brian P. Kemp today issued a State of Emergency order for all counties in Georgia in preparation for Hurricane Ian's impact later in the week. As the storm moves through the state beginning on Friday and exiting on Sunday, heavy rainfall and damaging winds will be possible throughout Georgia. The State of Emergency will go into effect at 7:00am on Thursday, September 29, and will expire at midnight on Friday, October 28. You can read executive order 09.27.22.01 here.

THE STATE OF GEORGIA

EXECUTIVE ORDER

BY THE GOVERNOR:

STATE OF EMERGENCY FOR HURRICANE IAN

WHEREAS: The National Hurricane Center forecasts Hurricane Ian may produce heavy rainfall, damaging winds, storm surge, and flooding in the State of Georgia; and

WHEREAS: This storm system has the potential to produce severe impacts to citizens throughout the southeast coastal region of the United States, including the State of Georgia; and

WHEREAS: Potential flooding, downed trees, power lines, and debris may render Georgia's network of roads impassable in affected counties, isolating residences and persons from access to essential public services; and

WHEREAS: Preliminary reports from county emergency management agencies and the Georgia Emergency Management and Homeland Security Agency indicate a need for assistance in the impacted counties; and

WHEREAS: Assistance from the State of Georgia is necessary to provide for the public's safety, protect public and private property, and restore the social and economic welfare of the affected counties; and

WHEREAS: On April 14, 2022, due to the ongoing severe disruptions to Georgia's supply chain, I issued Executive Order 04.14.22.01, declaring a State of Emergency for Supply Chain Disruptions; and

WHEREAS: On May 10, 2022, I renewed the State of Emergency for Supply Chain Disruptions until June 14, 2022, by issuing Executive Order 05.10.22.01; and

WHEREAS: On May 26, 2022, I renewed the State of Emergency for Supply Chain Disruptions until July 14, 2022, by issuing Executive Order 05.26.22.01; and

WHEREAS: On July 1, 2022, I renewed the State of Emergency for Supply Chain Disruptions until August 13, 2022, by issuing Executive Order 07.01.22.01; and

WHEREAS: On August 3, 2022, I renewed the State of Emergency for Supply Chain Disruptions until September 12, 2022, by issuing Executive Order 08.03.22.01; and

WHEREAS: On September 1, 2022, I renewed the State of Emergency for Supply Chain Disruptions until October 12, 2022, by issuing Executive Order 09.01.22.01; and

WHEREAS: On September 4, 2022, due to flooding caused by heavy rainfall in parts of Northwest Georgia, I issued Executive Order 09.04.22.01, declaring a State of Emergency for Severe Flooding in Chattooga and Floyd Counties; and

WHEREAS: The State of Emergency for Severe Flooding is currently set to expire on October 4, 2022, at 11:59 P.M.; and

WHEREAS: This Order shall create a coexisting state of emergency in the State of Georgia with the State of Emergency for Supply Chain Disruptions and the State of Emergency for Severe Flooding described in the immediately preceding paragraphs; and

WHEREAS: The responses by the State to this State of Emergency for Hurricane Ian, the State of Emergency for Supply Chain Disruptions, and the State of Emergency for Severe Flooding should all proceed simultaneously, without one impeding the others; and

WHEREAS: The Governor is vested with the emergency powers cited herein as the Chief Executive of this State; and

WHEREAS: Code Section 38-3-28 provides that "[a]ll orders, rules, and regulations promulgated by the Governor" have the force and effect of law; and

WHEREAS: As Chief Executive, the Governor is tasked with protecting the citizens of this State, including during a state of emergency; and

WHEREAS: Code Section 38-3-51(c)(1) vests the Governor with the power to enforce all laws, rules, and regulations relating to emergency management and to assume direct operational control of all civil forces and helpers in the state; and

WHEREAS: Code Section 38-3-51(c)(4) vests the Governor with the power to perform and exercise such other functions, powers, and duties as

may be deemed necessary to promote and secure the safety and protection of the civilian population; and

WHEREAS: Code Section 38-3-51(d)(1) vests the Governor with the power to suspend any regulatory statute prescribing the procedures for conduct of state business, or the orders, rules, or regulations of any state agency if strict compliance with any statute, order, rule, or regulation would in any way prevent, hinder, or delay necessary action in coping with the emergency or disaster; and

WHEREAS: In consultation with state emergency preparedness officials, I have determined that the following actions are necessary and appropriate to protect the continued strength of Georgia's economy and provide for the health, safety, and welfare of Georgia's residents and visitors.

NOW, THEREFORE, PURSUANT TO CODE SECTIONS 38-3-28 AND 38-3-51, AND THE AUTHORITY VESTED IN ME AS GOVERNOR OF THE STATE OF GEORGIA, IT IS HEREBY

ORDERED: That a State of Emergency exists in the State of Georgia due to the potential negative impact of Hurricane Ian on the safety of the public and the social and economic welfare of the State.

IT IS FURTHER

ORDERED: That the State of Emergency declared by this Order shall coexist with the State of Emergency for Supply Chain Disruptions declared by Executive Order 04.14.22.01, and renewed by Executive Orders 05.10.22.01, 05.26.22.01, 07.01.22.01, 08.03.22.01, and 09.01.22.01, and the State of Emergency for Severe Flooding declared by Executive Order 09.04.22.01. The existence or termination of one shall not impinge the others.

IT IS FURTHER

ORDERED: That any orders derivative of or appurtenant to this Order addressing this State of Emergency for Hurricane Ian shall not infringe, overturn, or in any way amend any orders that have been issued for the purpose of responding to the State of Emergency for Supply Chain Disruptions declared by Executive Order 04.14.22.01, and renewed by Executive Orders 05.10.22.01, 05.26.22.01, 07.01.22.01, 08.03.22.01, and 09.01.22.01, or the State of Emergency for Severe Flooding declared by Executive Order 09.04.22.01.

IT IS FURTHER

ORDERED: That all resources of the state of Georgia be made available to assist in preparation, response, and recovery activities throughout the affected areas, and the Georgia Emergency Management and Homeland Security Agency shall activate the Georgia Emergency Operations Plan.

IT IS FURTHER

ORDERED: That state agencies shall coordinate all public and emergency information, activities, releases, and response efforts related to this emergency with the Georgia Emergency Management and Homeland Security Agency.

IT IS FURTHER

ORDERED: That the Georgia Department of Transportation and Georgia Department of Public Safety shall take all necessary action to ensure the expeditious movement of utility vehicles, equipment, and personnel through the State to eliminate power outages.

IT IS FURTHER

ORDERED: That state agencies shall provide sufficient personnel required for the staffing of the Georgia State Operations Center or other command, control, and coordination points as may be designated by the Director of the Georgia Emergency Management and Homeland Security Agency and shall provide such personnel, vehicles, equipment, and other resources needed to protect life and property and to ensure continuation, restoration, and recovery of essential public services.

IT IS FURTHER

ORDERED: That the Georgia Department of Defense provide up to five hundred (500) Georgia National Guard troops to be used in preparation, response, and recovery efforts for this State of Emergency.

IT IS FURTHER

ORDERED: That said Georgia National Guard troops be called up to State Active Duty as necessary by the Adjutant General.

IT IS FURTHER

ORDERED: Pursuant to Code Section 10-1-393.4, price gouging related to goods and services necessary for preparation, response, and recovery activities for this State of Emergency, including motor fuel, diesel fuel, and other petroleum products, would be detrimental to the social and economic welfare of the citizens of this State and is therefore prohibited.

IT IS FURTHER

ORDERED: That if one or more of the provisions contained in this Order shall be held to be invalid, in violation of the Georgia Constitution, in violation of Georgia law, or unenforceable in any respect, such invalidity, violation, or unenforceability shall not affect any other provisions of this Order, but, in such case, this Order shall be construed as if such invalid, illegal, or unenforceable provision had never been contained within the Order.

IT IS FURTHER

ORDERED: That no provision of this Order shall limit, infringe, suspend, or supplant any judicial order, judgment, or decree issued pursuant to the laws or constitution of this State or the laws or constitution of the United States, nor shall any person use any provision this Order as a defense to an action in violation of a judicial order, judgment, or decree by any court created pursuant to the laws or constitution of this State or the laws or constitution of the United States.

IT IS FURTHER

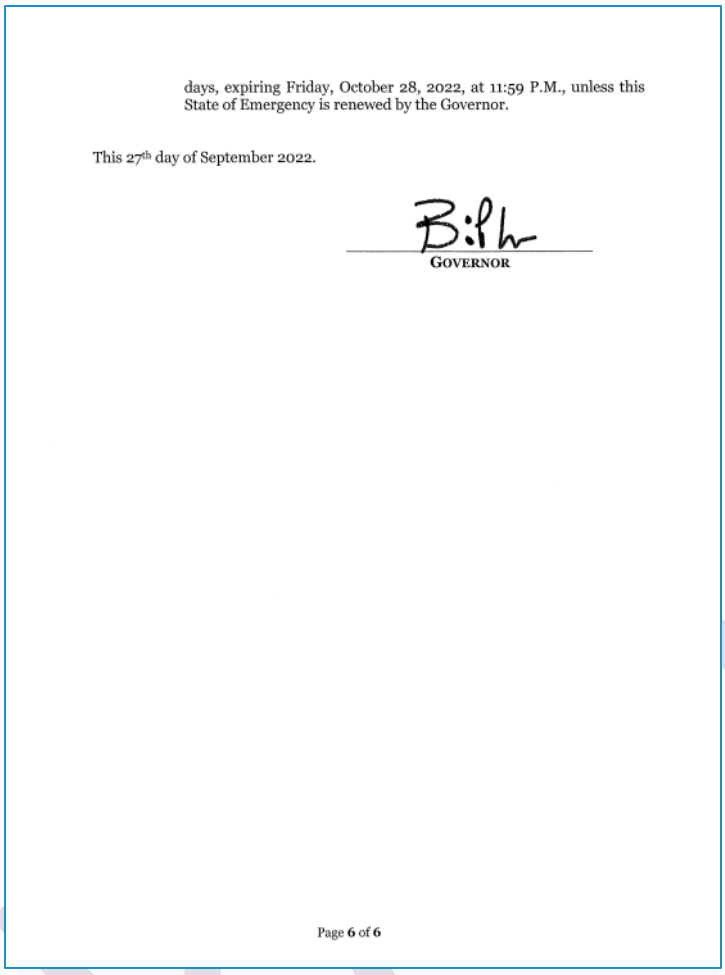
ORDERED: That this Order does not suspend operation of any state or federal law or regulation, except as specifically described herein.

IT IS FURTHER

ORDERED: The Office of the Governor may continue to issue guidance on the scope of this Order as needed through communication media, including social media, without need for further Executive Orders.

IT IS FURTHER

ORDERED: All provisions of the Order shall become effective on September 29, 2022, at 7:00 A.M., and shall be valid for a period of twenty-nine (29)



days, expiring Friday, October 28, 2022, at 11:59 P.M., unless this State of Emergency is renewed by the Governor.

This 27th day of September 2022.

GOVERNOR

Page 6 of 6

Although the most complete available data was used for this analysis, the possibility remains that other hurricane/tropical storm 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 Lanier County and the City of Lakeland are equally vulnerable to hurricanes/tropical storms. The County has a wind hazard score of 2 (91-100 mph gust). A map of the wind hazard scores, and critical facilities is provided in Appendix A. Because data broken down by jurisdiction are not consistently available, it was impossible to break down these worksheets by jurisdiction; therefore, they refer to the entire county, including the city.

An estimated 100% of the Residential property (3,944 of 3,944) in Lanier County (including the City of Lakeland) could be affected by this hazard, with a total value of $434,466,000. Also, an estimated 100% of the community's Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, and Education (324 of 324) may be affected, with a total value of $190,341,000. The values are based on the most recent available tax roll data for Lanier County and the City of Lakeland, provided by the Lanier 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 2022 Georgia Farm Gate Value Report (farmgate.caes.uga.edu/CountyAnnualReport.aspx) the total farm gate value of agricultural production in Lanier County is $47,463,433.60.

According to the inventory database reports and maps, all 62 Critical Facilities and Infrastructure for Lanier County (including the City of Lakeland) could be affected by this hazard. The total value of these Critical Facilities is $155,539,298.

E. Land Use and Development Trends

The County and City experienced rapid population growth during the 2000s, but the growth has been less rapid in the 2010s. The city has seen a slight decrease in population since 2010. A slow decline in City population has continued (from 3,366 in 2010 down to 3,250 for the Census Bureau's 2017 American Community Survey estimate), but the reason for this decline has not been identified.

Lanier County and the City of Lakeland have zoning regulations. 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 that are used in Lanier County and the City of Lakeland:

- 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 Act requires local governments that elect to enforce these codes within their jurisdictions to adopt administrative procedures and penalties to enforce any of them. Also, any applicable appendices of these codes must be adopted locally to be enforceable within a specific local jurisdiction.

The DCA Board specifically omitted the International Residential Code's plumbing, electrical, and energy requirements for One- and Two-Family Dwellings. Therefore, the plumbing requirements of the International Plumbing Code, the electrical requirements of the National Electrical Code, and the energy requirements of the International Energy Conservation Code must be used for one- and two-family dwelling construction.

No other land use or development trends related to this hazard have been identified.

F. Multi-Jurisdictional Differences

Hurricane/tropical storm events are usually area-wide, and no difference in severity is expected between Lanier County and the City of Lakeland. 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.

Lanier County and the City of Lakeland are National Flood Insurance Program members. As of January 2019, these jurisdictions comply with NFIP requirements and intend to remain in compliance by enforcing flood plain ordinances that prohibit or severely limit development in flood plains. These ordinances are enforced by the building inspector and/or code enforcement officer for Lanier County and the City of Lakeland. (Source: https://www.fema.gov/cis/GA.html) Lanier County and the City of Lakeland 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

Hurricanes/tropical storms can potentially cause damage at any place, at any time, throughout Lanier County and the City of Lakeland. 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 Lanier 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 4.

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

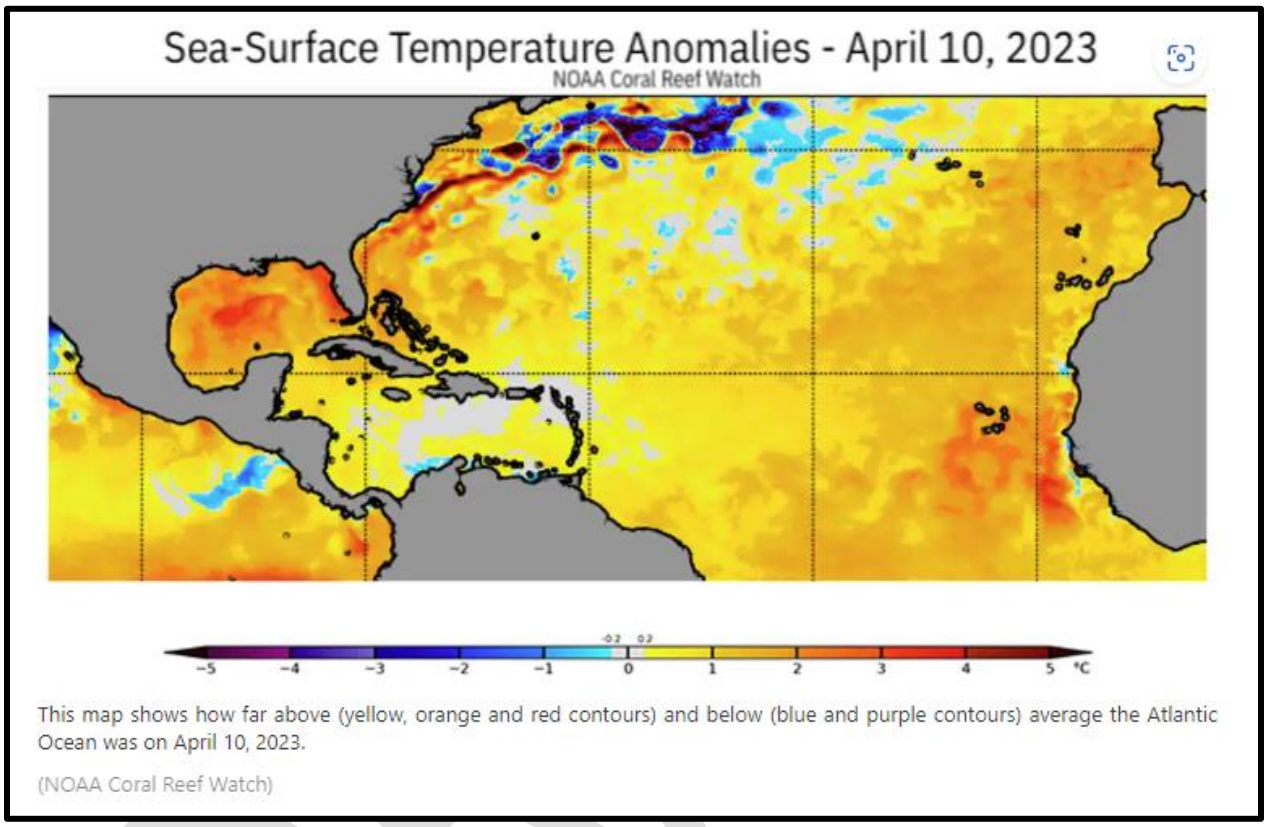
H. Impacts from Future Conditions

Hurricanes happen naturally, but climate change does make them more powerful. As waters become warmer, hurricanes can draw on more heat and water, making them more powerful and destructive. Whether there are hurricanes, the storms will become stronger.

Hurricanes can also cause flooding, ruin crops, contaminate drinking water, and spread water and vector-borne diseases.

With warmer water temperatures in the Gulf and Atlantic Oceans, there could be fewer hurricanes and more intense storms. An El Niño can tamp down the number of storms, but with the Atlantic Ocean water being very warm in most areas, storms could be enhanced in the 2023 hurricane season. As of mid-April, most forecast models suggest that an El Niño is likely to develop, possibly

as soon as Summer 2023. NOAA's Climate Prediction Center predicted a 61% chance that an El Niño will be in place by August through October. This is the heart of the Atlantic Hurricane Season and will be the strongest El Niño since 2015. They have predicted (Colorado State University and The Weather Company) 13 to 15 Hurricanes for 2023, with 2 – 3 being Category 3 or Higher.



According to the University of Georgia Weather Network (https://www.onlineathens.com*):*

Climate change is expected to cause stronger storms and produce a longer hurricane/tropical storm season. Scientists want to discover how a warming climate will exacerbate future hurricanes and tropical storms.

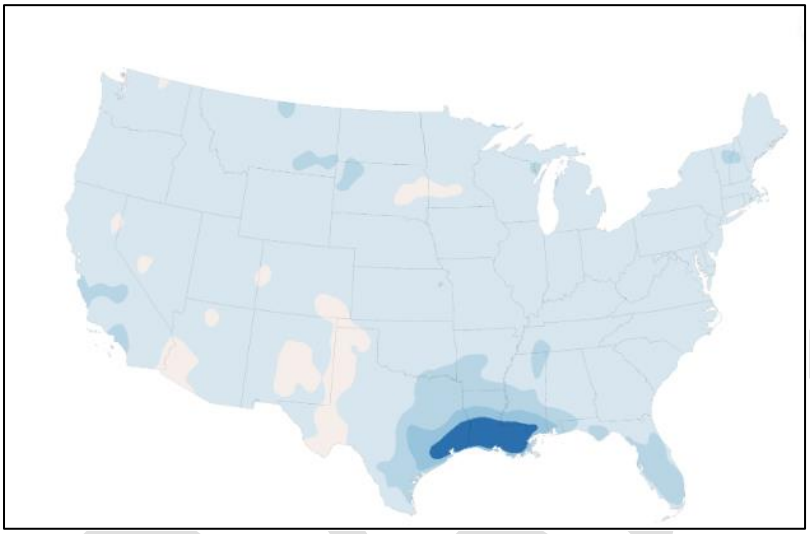
Warm waters, low pressure, and humid air make for ideal conditions for a hurricane. The Atlantic Ocean has recently seen changes with warmer water, and the average temperatures have continued to rise. Sea levels are also rising, making it easier for hurricanes to flood the coastal regions.

The number of hurricanes has not changed in recent years, but since 1980, the storms have intensified. There have been more Category 3 hurricanes than in previous years. NOAA has been conducting studies to understand the changes in the weather pattern, and their models show that there is about a 7% increase in rainfall per a 3% increase in the maximum wind speed per two degrees of warming.

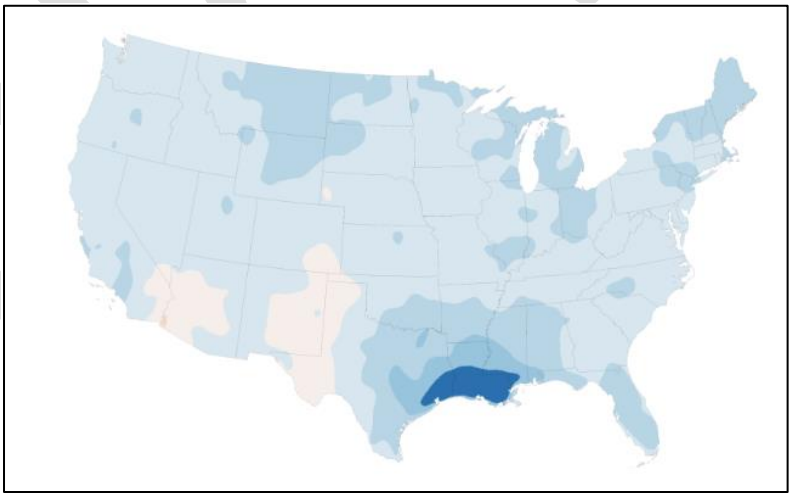
Warming may increase how intense the hurricanes become but will also change the season. With warmer summers, hurricane season might start earlier and end later in a much hotter climate. This will open a large window of the year for more intense hurricanes.
Not only will we see stronger winds blowing water onshore as storms surge, but this will also happen on top of rising sea levels.

Sea Level Rise

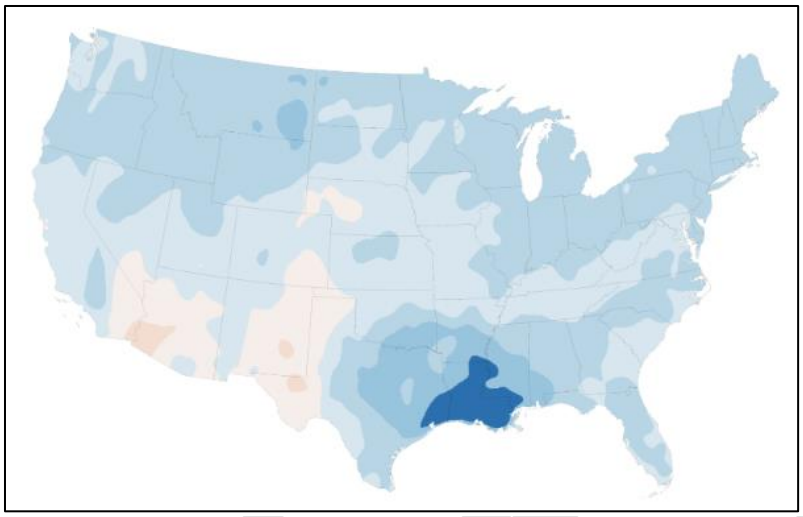
2023

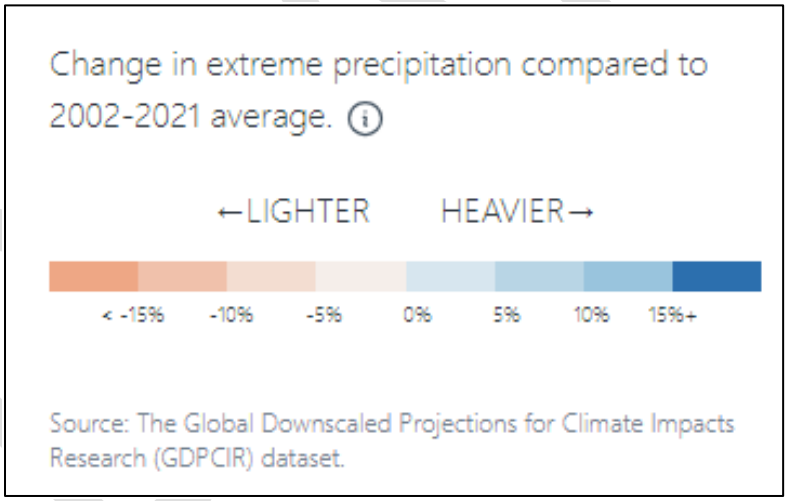


In 15 Years



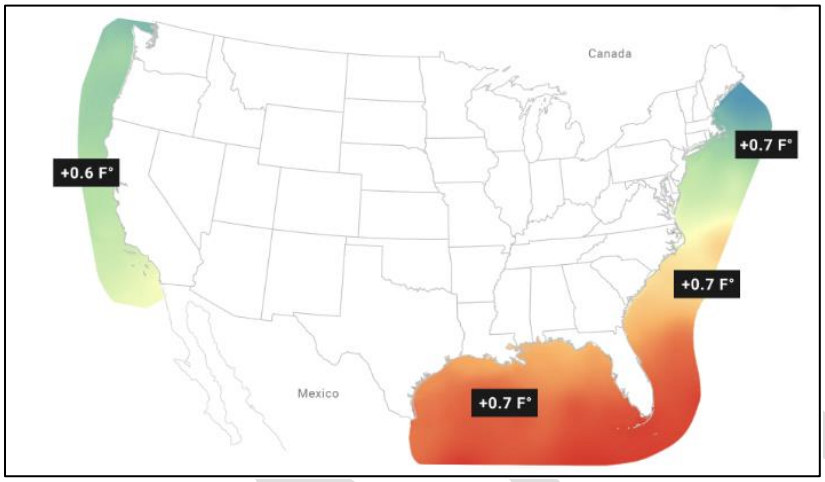
In 30 Years



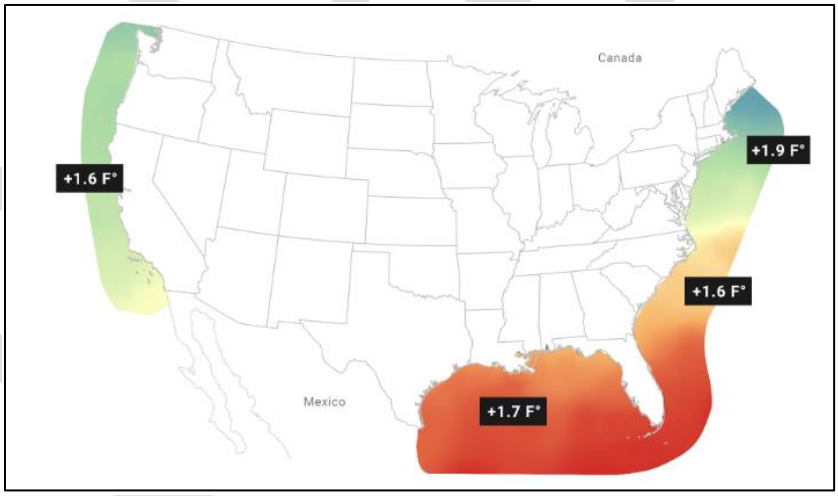

Change in extreme precipitation compared to 2002-2021 average.
←LIGHTER
HEAVIER→
< -15%
-10%
-5%
0%
5%
10%
15%+
Source: The Global Downscaled Projections for Climate Impacts Research (GDPCIR) dataset.

Sea Surface Temperatures

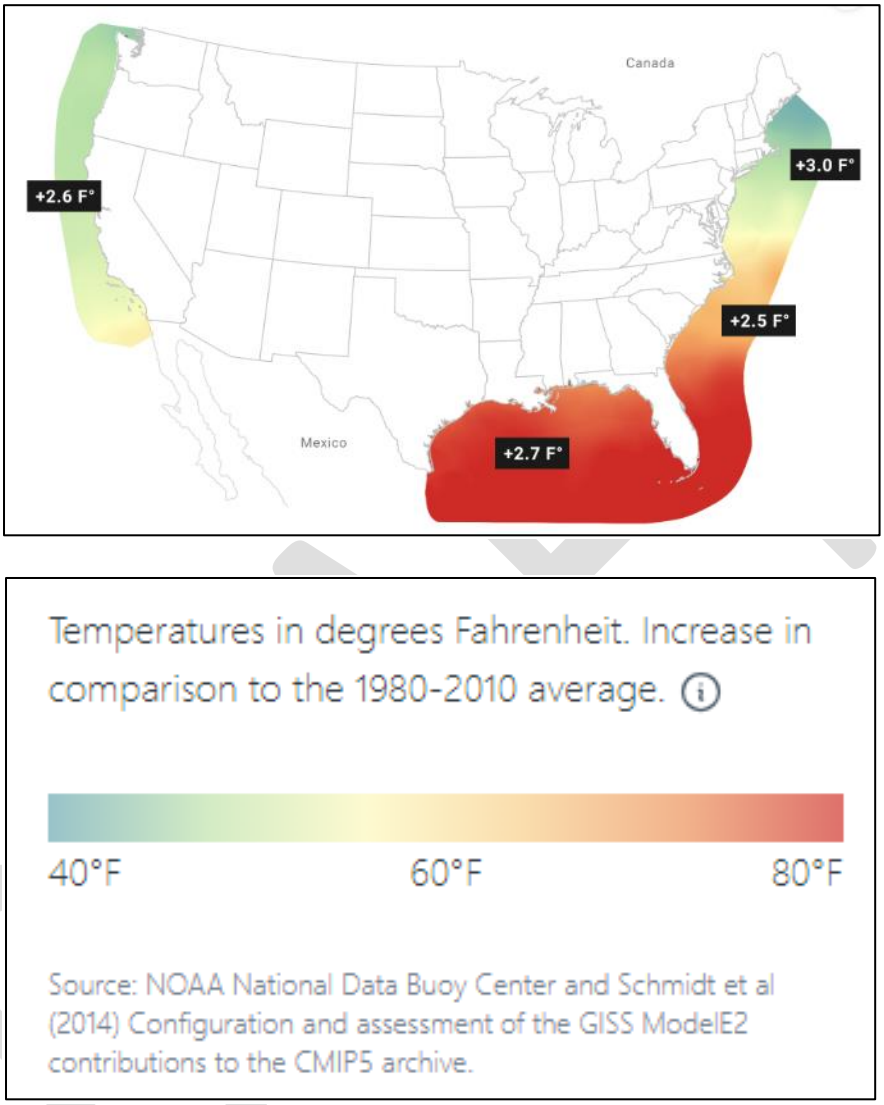
2023



In 15 Years



In 30 Years



I. Underserved/Socially Vulnerable Population Risk

Lanier 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 Lanier County. There is also a significant number of farm workers who are Hispanic and are living in dormitory-type housing within the county. The Department of Family and Children Services (DFACS) participated in one workshop. DFACS keeps in close contact with this group of people and informs them of emergencies when necessary. The Emergency Preparedness Coordinator from the Lanier County South Georgia Medical Center Campus was also at the workshops, and they inform the nursing home and assisted living facilities of any emergency.

A workshop was held once again to invite the vulnerable population. Flyers were distributed to those attending and available at the Health Department, DFACS, County Courthouse, and City Hall. They were also made available to the migrant workers within the county.

Section II. Tornadoes

A. Identification of Hazard

The threat of tornadoes has been chosen by the HMPUC as the second most likely hazard to occur and cause damage in the community, based on experience, the FEMA-described methodology, and other factors. 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. For further information, see the HAZUS Report in Appendix G.

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

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

The Enhanced Fujita Scale, implemented by the National Weather Service in 2007, 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 of the difficulty of measuring wind speeds inside a tornado, wind speeds are estimated based on the type of damage that occurs; more information is available on the NOAA website at http://www.spc.noaa.gov/faq/tornado/ef-scale.html.

ENHANCED FUJITA WIND DAMAGE SCALE
(Source: http://www.spc.noaa.gov/faq/tornado/ef-scale.html)

EF Number	3-Second Gust	Damage
EF-0	65 to 85 mph	Light damage. Some damage chimneys; branches broken off trees; shallow-rooted trees pushed over; sign boards damaged.
EF-1	86 to 110 mph	Moderate Damage. The lower limit is the beginning of hurricane wind speed; peels surface off roofs; mobile homes pushed off foundations or overturned; moving autos pushed off the roads; attached garages may be destroyed.
EF-2	111 to 135 mph	Significant Damage. Roofs torn off frame houses; mobile homes demolished; boxcars overturned; large trees snapped or uprooted; high rise windows broken and blown in; light-object missiles generated.

EF-3	136 to 165 mph	Severe Damage. Roofs and walls torn off well-constructed houses; trains overturned; most trees in forest uprooted; heavy cars lifted off the ground and thrown.
EF-4	166 to 200 mph	Devastating, damage. Well-constructed houses leveled; structures with weak foundations blown away some distance; cars thrown and large missiles generated.
EF-5	Over 200 mph	Incredible, damage. Strong frame houses lifted off foundations and carried considerable distances to disintegrate; automobile sized missiles fly through the air in excess of 100 m (109 yards); trees debarked; steel reinforced concrete structures badly damaged.

Tornadoes may occur at any time of year, although the peak "tornado season" for the Southern Plains 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 occur at any time of the day or night, but according to NOAA (http://www.nssl.noaa.gov/education/svrwx101/tornadoes/), most tornadoes occur between 4:00 and 9:00 p.m. The path and severity of a tornado cannot be determined in advance. The best defense is to heed tornado warnings and seek appropriate shelter when a tornado has been sighted in the area or when conditions conducive to a tornado are present.

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

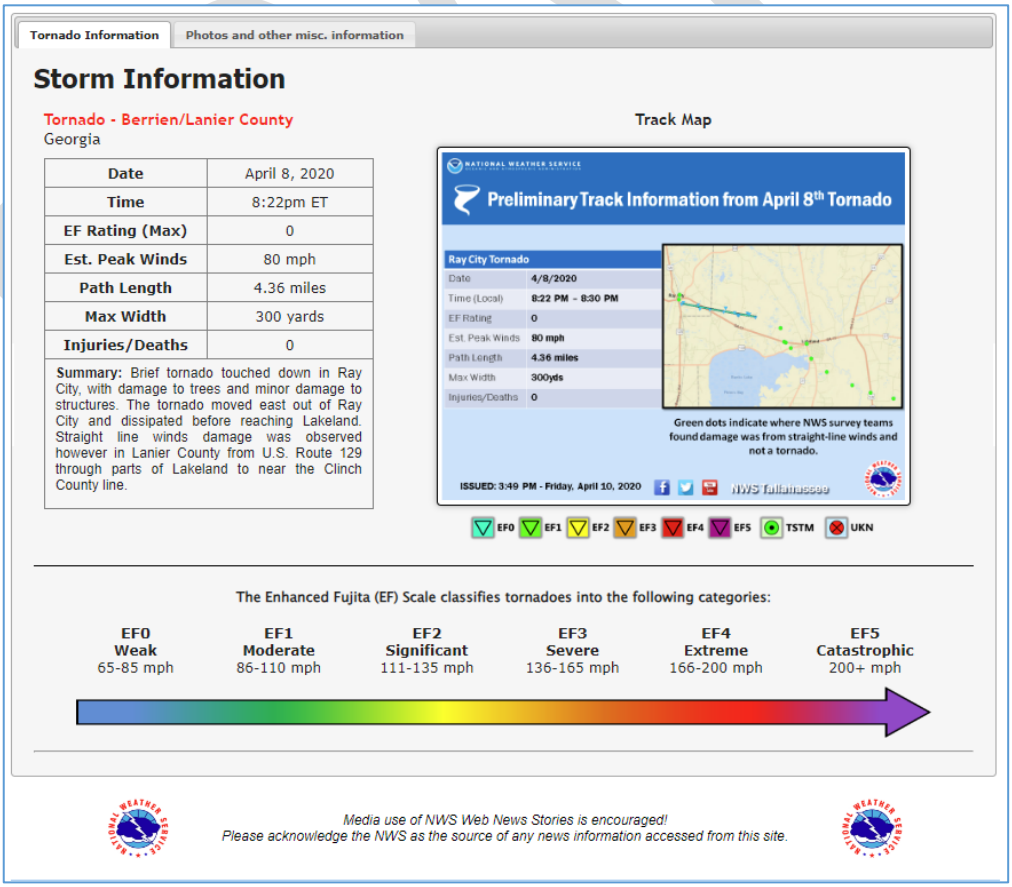
B. Profile of Events, Frequency of Occurrences, Probability

According to the NOAA Storm Events Database (see Appendix F), there are 7reports of tornadoes occurring in Lanier County (including the city) between 01/01/1950 and 12/31/2022. The Historic Recurrence Interval is 10.29 years. This is a 9.72% Historic Frequency Chance per year. The past 10-year Record Frequency Per Year is 0.3, the past 20-year frequency is 0.2, and the past 50-year frequency is 0.12 (see the Hazard Frequency Table in Appendix D).

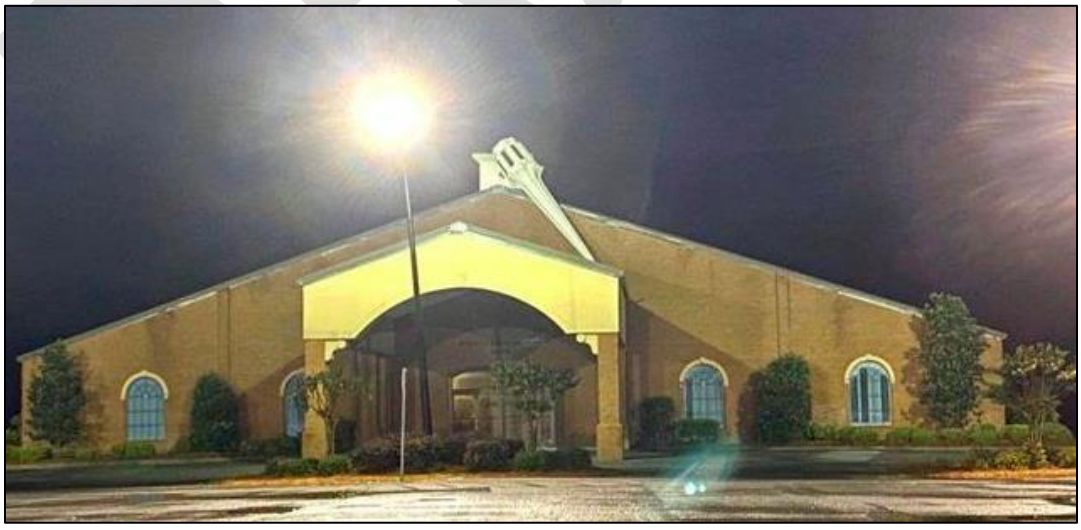
The most recent tornado on record was an EF-3 that occurred on March 3, 2012. The tornado's track was 6.32 miles long, of which approximately 6 miles were in Lanier County and half a mile was in the City of Lakeland. As the tornado approached Boyette Road, it was likely reaching maximum intensity. The radar reflectively showed a signature known as a "debris ball" and gave forecasters high confidence that a tornado was in progress despite an actual tornado being reported. The damage at the location was severe. A mobile home was destroyed, with debris scattered hundreds of yards in many directions. This site was originally unrecognizable as a mobile home to the survey team. A few trees at the location were almost totally debarked. A one-story residence also had some roof and window damage, a small grain silo was destroyed, and a large shed structure was destroyed with debris swept away from the original location. Other things were noted around this location that didn't belong there. There were many objects driven into the ground, including metal bars, gutters, branches, and other debris. Some ground scouring was

noted, and many of the shrubs were ripped out of their original spots. Large debris was lofted for hundreds of yards, including a hatch door from the missing grains silo, a chest freezer door, and a mower and propane tank. The main part of the chest freezer was found across the streets. Near the location of the large shed structure that was ripped away, an electric meter was ripped out of the ground, and additional deep gouges were found. The tornado continued to the east-northeast, cutting a clear path through some dense forest in the swampland south of Highway 122 and west of Banks Lake. Around that time, the damage path began to narrow as the tornado approached the town of Lakeland. Once in Lakeland, the tornado largely caused damage to trees and vegetation, although some structures were impacted. A mobile home was destroyed, a nearby full shipping container was rolled about 50 feet, and some debris was driven completely through metal. Near the end of the tornado's path, it impacted the hospital in Lakeland, pushing a trailer away from its original location and damaging the ambulance station. Some antennas were also snapped at the hospital, and some damage was reported to the AC units on the roof. Damage in Lanier County was estimated at around $500,000.
(Source: National Weather Service).

There have been two tornadoes reported in the community since the previous Hazard Mitigation Plan was adopted. On April 8, 2020, there was an EF0 tornado that started in Berrien County and continued into Lanier County. It moved east out of Ray City (Berrien) and dissipated before reaching Lakeland (Lanier). Straight-line winds damage was in Lanier County from U.S. Route 129 through parts of Lakeland to near the Clinch County Line. Maximum winds were estimated near 80 mph. There have been many tornado watches issued for the area.

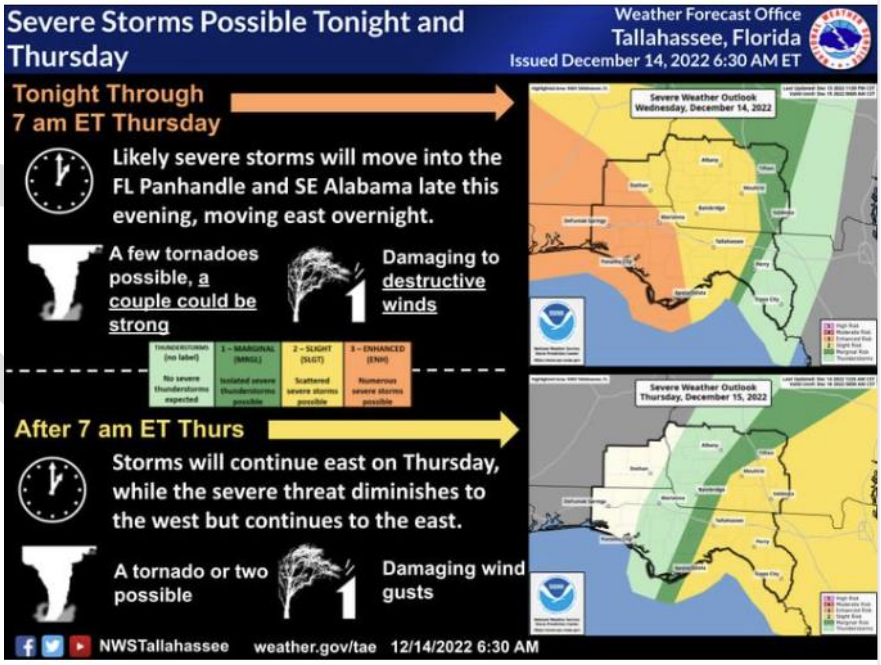


On April 23, 2020, a weak tornado touched down east of Powell Road in extreme eastern Lanier County. Minor damage was caused to trees on Powell Road and over on East Highway 122, just east of the county line. It was rated EF0, with maximum winds estimated at 88 mph.



Jan. 2, 2022

Tornado watches were in effect for most of the Big Bend and South Georgia viewing area until Sunday evening as a line of heavy rain and thunderstorms triggered tornado and severe thunderstorm warnings during the afternoon. The first watch, issued earlier Sunday afternoon, covered almost all of South Georgia and the western Big Bend and was extended by the National Weather Service until 11 P.M. A second tornado watch, valid until 10 p.m., included Lowndes, Lanier, Clinch, and Echols counties. Update (8:52 PM): The Tornado WATCH over much of the viewing area has been extended to 11 PM. A squall line continues to bring gusty winds in central Big Bend and South Georgia, with at least one report of a 40-mph gust in Tallahassee around 8:30 PM.



From the National Weather Service:

THE NATIONAL WEATHER SERVICE HAS EXTENDED TORNADO WATCH 100 TO INCLUDE THE FOLLOWING AREAS UNTIL 10 PM EDT THIS EVENING

IN GEORGIA THIS WATCH INCLUDES 9 COUNTIES

IN SOUTH CENTRAL GEORGIA

BERRIEN	BROOKS	COLQUITT
COOK	LANIER	LOWNDES
THOMAS		

IN SOUTHWEST GEORGIA

GRADY	MITCHELL

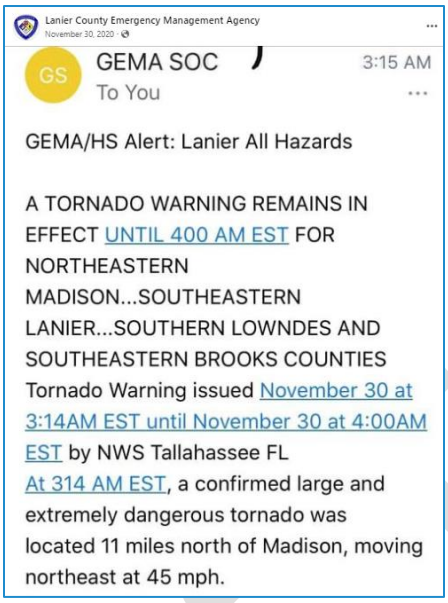
THIS INCLUDES THE CITIES OF ADEL, BANNOCKBURN, BARNEYVILLE, BEACHTON, BERRIEN CO A/P, BLUE SPRINGS, BRANCHVILLE, BROOKS CO A/P, CAIRO, CAMILLA, CAPEL, COOK CO A/P, COTTLE, COTTON, COURTHOUSE, DILLON, DIXIE, ELPINO, EMPRESS, GRADY CO A/P, GREGGS, GROOVERVILLE, LACONTE, LAKELAND, MASSEE, METCALF, MITCHELL CO A/P, MONCRIEF, MOULTRIE, MOULTRIE MUNICIPAL A/P, NANKIN, NASHVILLE, PASCO, PELHAM, PINE PARK, PINE VALLEY, QUITMAN, SPENCE AIRPORT, TEETERVILLE, THOMASVILLE, VALDOSTA, VALDOSTA REGIONAL AIRPORT, AND WEBER.

April 6, 2022

US National Weather Service Tallahassee Florida
April 13 ·

⚠ 9AM ET/8 AM CT FORECAST UPDATE ⚠
(April 13, 2023)

The tornado threat for late this morning and afternoon is increasing across SW GA where there is now an Enhanced Risk of severe weather (level 3 of 5) today. Ensure you have multiple ways to receive warnings through the day!

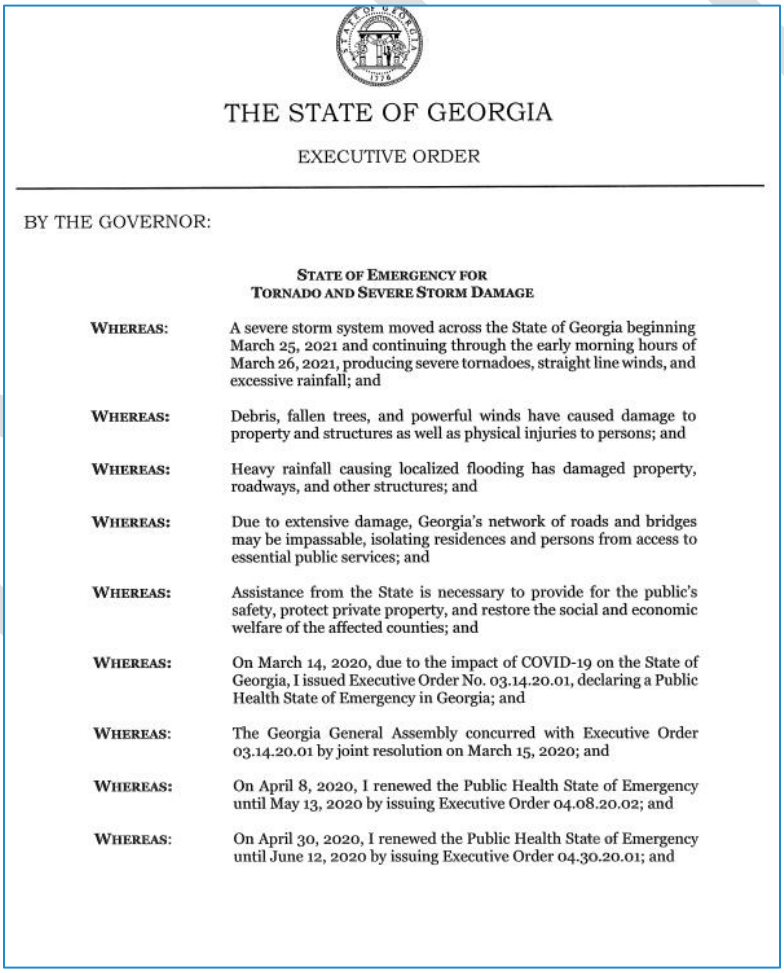


Lanier County Emergency Management Agency
November 30, 2020 ·

GS GEMA SOC 3:15 AM
To You

GEMA/HS Alert: Lanier All Hazards

A TORNADO WARNING REMAINS IN EFFECT UNTIL 400 AM EST FOR NORTHEASTERN MADISON...SOUTHEASTERN LANIER...SOUTHERN LOWNDES AND SOUTHEASTERN BROOKS COUNTIES
Tornado Warning issued November 30 at 3:14AM EST until November 30 at 4:00AM EST by NWS Tallahassee FL
At 314 AM EST, a confirmed large and extremely dangerous tornado was located 11 miles north of Madison, moving northeast at 45 mph.



THE STATE OF GEORGIA

EXECUTIVE ORDER

BY THE GOVERNOR:

STATE OF EMERGENCY FOR TORNADO AND SEVERE STORM DAMAGE

WHEREAS: A severe storm system moved across the State of Georgia beginning March 25, 2021 and continuing through the early morning hours of March 26, 2021, producing severe tornadoes, straight line winds, and excessive rainfall; and

WHEREAS: Debris, fallen trees, and powerful winds have caused damage to property and structures as well as physical injuries to persons; and

WHEREAS: Heavy rainfall causing localized flooding has damaged property, roadways, and other structures; and

WHEREAS: Due to extensive damage, Georgia's network of roads and bridges may be impassable, isolating residences and persons from access to essential public services; and

WHEREAS: Assistance from the State is necessary to provide for the public's safety, protect private property, and restore the social and economic welfare of the affected counties; and

WHEREAS: On March 14, 2020, due to the impact of COVID-19 on the State of Georgia, I issued Executive Order No. 03.14.20.01, declaring a Public Health State of Emergency in Georgia; and

WHEREAS: The Georgia General Assembly concurred with Executive Order 03.14.20.01 by joint resolution on March 15, 2020; and

WHEREAS: On April 8, 2020, I renewed the Public Health State of Emergency until May 13, 2020 by issuing Executive Order 04.08.20.02; and

WHEREAS: On April 30, 2020, I renewed the Public Health State of Emergency until June 12, 2020 by issuing Executive Order 04.30.20.01; and

WHEREAS: On May 28, 2020, I renewed the Public Health State of Emergency until July 12, 2020 by issuing Executive Order 05.28.20.01; and

WHEREAS: On June 29, 2020, I renewed the Public Health State of Emergency until August 11, 2020 by issuing Executive Order 06.29.20.01; and

WHEREAS: On July 31, 2020, I renewed the Public Health State of Emergency until September 10, 2020 by issuing Executive Order 07.31.20.01; and

WHEREAS: On August 31, 2020, I renewed the Public Health State of Emergency until October 10, 2020 by issuing Executive Order 08.31.20.01; and

WHEREAS: On September 30, 2020, I renewed the Public Health State of Emergency until November 9, 2020 by issuing Executive Order 09.30.20.01; and

WHEREAS: On October 30, 2020, I renewed the Public Health State of Emergency until December 9, 2020 by issuing Executive Order 10.30.20.01; and

WHEREAS: On November 30, 2020, I renewed the Public Health State of Emergency until January 8, 2021 by issuing Executive Order 11.30.20.01; and

WHEREAS: On December 30, 2020, I renewed the Public Health State of Emergency until February 7, 2021 by issuing Executive Order 12.30.20.01; and

WHEREAS: On January 29, 2021, I renewed the Public Health State of Emergency until March 7, 2021 by issuing Executive Order 01.29.21.01; and

WHEREAS: On February 26, 2021, I renewed the Public Health State of Emergency until April 6, 2021 by issuing Executive Order 02.26.21.01; and

WHEREAS: On July 6, 2020, due to the unlawful assemblage and violence taking place in the State of Georgia, I issued Executive Order 07.06.20.01, declaring a State of Emergency for the State of Georgia; and

WHEREAS: On July 13, 2020, I renewed the State of Emergency due to unlawful assemblage and violence taking place in the State of Georgia until July 27, 2020 by issuing Executive Order 07.13.20.01; and

WHEREAS: On July 24, 2020, I renewed the State of Emergency due to unlawful assemblage and violence taking place in the State of Georgia until August 10, 2020 by issuing Executive Order 07.24.20.01; and

WHEREAS: On August 10, 2020, I renewed the State of Emergency due to unlawful assemblage and violence taking place in the State of Georgia until August 24, 2020 by issuing Executive Order 08.10.20.01; and

WHEREAS: On August 24, 2020, I renewed the State of Emergency due to unlawful assemblage and violence taking place in the State of Georgia until September 21, 2020 by issuing Executive Order 08.24.20.01; and

WHEREAS: On September 21, 2020, I renewed the State of Emergency due to unlawful assemblage and violence taking place in the State of Georgia until October 19, 2020 by issuing Executive Order 09.21.20.01; and

WHEREAS: On October 19, 2020, I renewed the State of Emergency due to unlawful assemblage and violence taking place in the State of Georgia until November 16, 2020 by issuing Executive Order 10.19.20.01; and

WHEREAS: On November 13, 2020, I renewed the State of Emergency due to unlawful assemblage and violence taking place in the State of Georgia until December 14, 2020 by issuing Executive Order 11.13.20.02; and

WHEREAS: On December 14, 2020, I renewed the State of Emergency due to unlawful assemblage and violence taking place in the State of Georgia until January 11, 2021 by issuing Executive Order 12.14.20.01; and

WHEREAS: On January 11, 2021, I renewed the State of Emergency due to unlawful assemblage and violence taking place in the State of Georgia until February 8, 2021 by issuing Executive Order 01.11.21.01; and

WHEREAS: On February 8, 2021, I renewed the State of Emergency due to unlawful assemblage and violence taking place in the State of Georgia until March 8, 2021 by issuing Executive Order 02.08.21.01; and

WHEREAS: On March 4, 2021, I renewed the State of Emergency due to unlawful assemblage and violence taking place in the State of Georgia until April 5, 2021 by issuing Executive Order 03.04.21.01; and

WHEREAS: This Order shall create a coexisting state of emergency in the State of Georgia with the Public Health State of Emergency and the State of Emergency due to unlawful assemblage and violence taking place in the State of Georgia described in the immediately preceding paragraphs; and

WHEREAS: The responses by the State to this State of Emergency for Tornado and Severe Storm Damage, the Public Health State of Emergency, and the State of Emergency due to unlawful assemblage and violence taking place in the State of Georgia should all proceed simultaneously, without one impeding the other; and

WHEREAS: Code Section 38-3-51 vests the Governor with the authority to bring emergency situations under control by issuing orders, rules, and regulations to protect the safety and welfare of the public.

NOW, THEREFORE, PURSUANT TO CODE SECTION 38-3-51, AND THE AUTHORITY VESTED IN ME AS GOVERNOR OF THE STATE OF GEORGIA, IT IS HEREBY

ORDERED: That a State of Emergency exists in the State of Georgia due to the damage that was created by the severe storm system and tornadoes that moved through the State on March 25 and 26, 2021.

IT IS FURTHER

ORDERED: That the State of Emergency declared by this Order shall coexist with the Public Health State of Emergency declared by Executive Order 03.14.20.01 and renewed by Executive Orders 04.08.20.02, 04.30.20.01, 05.28.20.01, 06.29.20.01, 07.31.20.01, 08.31.20.01, 09.30.20.01, 10.20.30.01, 11.30.20.01, 12.30.20.01, 01.29.21.01, and 02.26.21.01, and the State of Emergency due to unlawful assemblage and violence taking place in the State of Georgia declared by Executive Order 07.06.20.01 and renewed by Executive Orders 07.13.20.01, 07.24.20.01, 08.10.20.01, 08.24.20.01, 09.21.20.01, 10.19.20.01, 11.13.20.02, 12.14.20.01, 01.11.21.01, 02.08.21.01., and 03.04.21.01. The existence or termination of one shall not impinge the others.

IT IS FURTHER

ORDERED: That any orders derivative of or appurtenant to this Order addressing this State of Emergency for Winter Weather shall not infringe, overturn, or in any way amend any orders that have been issued for the purpose of responding to the Public Health State of Emergency declared by Executive Order 03.14.20.01 and renewed by Executive Orders 04.08.20.02, 04.30.20.01, 05.28.20.01, 06.29.20.01, 07.31.20.01, 08.31.20.01, 09.30.20.01, 10.20.30.01, 11.30.20.01, 12.30.20.01, 01.29.21.01, and 02.26.21.01, or the State of Emergency due to unlawful assemblage and violence taking place in the State of Georgia declared by Executive Order 07.06.20.01 and renewed by Executive Orders 07.13.20.01, 07.24.20.01, 08.10.20.01,

08.24.20.01, 09.21.20.01, 10.19.20.01, 11.13.20.02, 12.14.20.01, 01.11.21.01, 02.08.21.01., and 03.04.21.01.

IT IS FURTHER

ORDERED: That the federal rules and regulations limiting hours that operators of commercial vehicles may drive are suspended to ensure the uninterrupted supply of petroleum products; emergency or disaster-related materials; supplies; goods and services, including removal of debris; movement of agricultural products; or other food products. This declared emergency justifies a suspension of Part 395 (driver's hours of service) of Title 49 of the Code of Federal Regulations. The suspension will remain in effect for thirty (30) days or until the emergency condition ceases to exist, whichever is less. Nothing herein will be construed as an exemption from the Commercial Driver's License requirements in 49 C.F.R. 383 and the financial requirements in 49 C.F.R. 387.

IT IS FURTHER

ORDERED: That no motor carrier operating under the terms of this State of Emergency for Tornado and Severe Storm Damage will require or allow an ill or fatigued driver to operate a motor vehicle. A driver who notifies a motor vehicle carrier that he or she needs immediate rest will be given at least ten (10) consecutive hours off-duty before being required to return to service.

IT IS FURTHER

ORDERED: That weight, height, and length for any such vehicle traveling through the State of Georgia for the purposes of providing disaster relief related to this State of Emergency for Tornado and Severe Storm Damage, which traverses roadways maintained by the State of Georgia shall not exceed the following:

A. A maximum gross vehicle weight for vehicles equipped with five (5) weight-bearing axles, with an outer bridge span of not less than fifty-one (51) feet, shall not exceed a gross vehicle weight of ninety five (95) thousand pounds, a maximum width of ten (10) feet, and an overall length of one hundred (100) feet. Continuous travel is authorized with the proper escorts.

B. If the width of said vehicle exceeds eight (8) feet six (6) inches and is traveling after daylight, defined as thirty (30) minutes before sunset to thirty (30) minutes after sunrise, the transporter is required to have a vehicle front and a rear

escort/amber light when traveling on a two-lane roadway and a vehicle rear escort when traveling on a four-lane highway. Transporters are responsible for ensuring that they have proper oversize signs, markings, flags, and escorts as defined in the Georgia Department of Transportation Rules and Regulations.

IT IS FURTHER

ORDERED: That commercial vehicles operating outside the normal weight, height, and length restrictions under the authority of this State of Emergency for Tornado and Severe Storm Damage shall be issued permits by the Georgia Department of Public Safety. Said vehicles shall be subject to any special conditions the Georgia Department of Public Safety may list on applicable permits. Nothing in this Executive Order shall be construed to allow any vehicle to exceed weight limits posted for bridges and like structures, nor shall anything in this Executive Order be construed to relieve compliance with restrictions other than those specified in this Order or from any statute, rule, order, or other legal requirement not specifically waived herein.

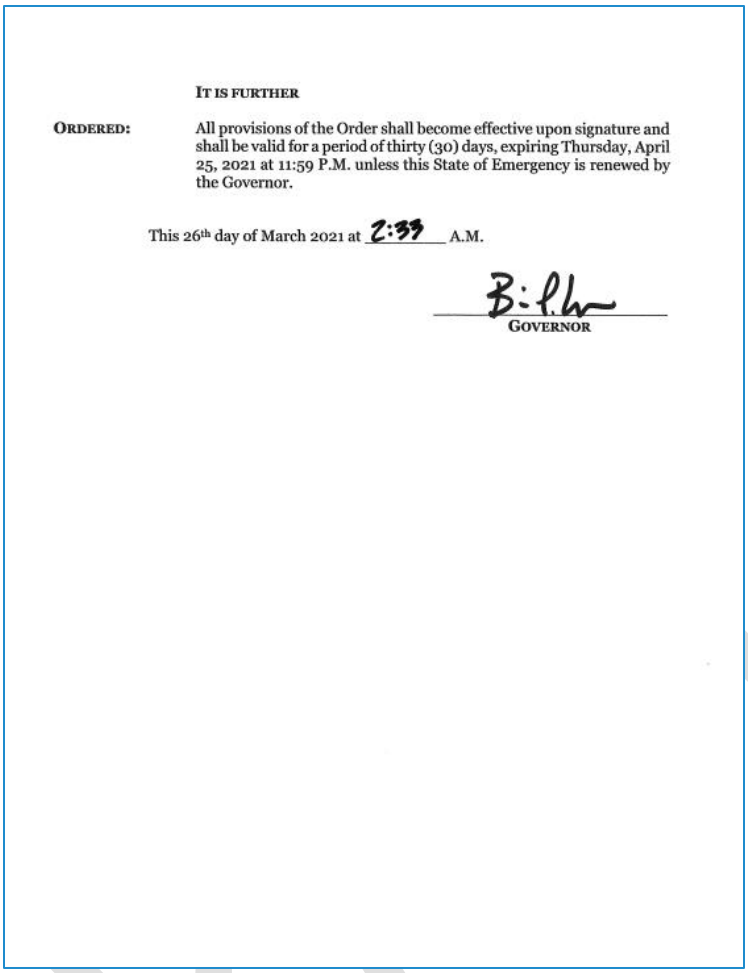
Oversize permits may be issued by the Georgia Department of Public Safety, Motor Carrier Compliance Division, during normal business hours, Monday through Friday by calling 404-624-7700 or through the Georgia Permitting and Routing Optimization System online portal at https://gapros.dot.ga.gov/.

IT IS FURTHER

ORDERED: That this Executive Order does not suspend operation of any state or federal law or regulation, except as specifically described herein, nor do the waiver of rules and regulations in this Order affect or amend similar rule and regulation waivers for motor carriers or commercial vehicles.

IT IS FURTHER

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



IT IS FURTHER

ORDERED: All provisions of the Order shall become effective upon signature and shall be valid for a period of thirty (30) days, expiring Thursday, April 25, 2021 at 11:59 P.M. unless this State of Emergency is renewed by the Governor.

This 26th day of March 2021 at 2:39 A.M.

GOVERNOR

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

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

In Worksheet 3A: Inventory of Assets (appearing in Appendix A), we estimate that all of Lanier County and the City of Lakeland are equally vulnerable to this hazard. Because data broken down by jurisdiction are not consistently available, it was not possible to break down these worksheets by jurisdiction; therefore, they refer to the entire county, including the city.

An estimated 100% of the Residential property (3,944 of 3,944) in Lanier County (including the City of Lakeland) could be affected by this hazard, with a total value of $434,466,000. Also, an estimated 100% of the Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, and Education (324 of 324) in the community may be affected, with a total value of $190,341,000. The values are based on the most recent available tax roll data for Lanier County and the City of Lakeland, provided by the Lanier 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 2022 Georgia Farm Gate Value Report

(farmgate.caes.uga.edu/CountyAnnualReport.aspx) the total farm gate value of agricultural production in Lanier County is $47,463,433.60.

According to the inventory database reports and maps, all 62 Critical Facilities and Infrastructure for Lanier County (including the City of Lakeland) could be affected by this hazard. The total value of these Critical Facilities is $155,539,298.

E. Land Use and Development Trends

Typically, mobile/manufactured homes are most vulnerable to tornado damage. According to 2016 Census Bureau estimates, 29.5% of occupied housing units in Lanier County are mobile homes (1,267 mobile homes and approximately 3,586 people based on the average household size of 2.83 persons per household in the County). In the City of Lakeland, 25.9% of occupied housing units are mobile homes (343 mobile homes and approximately 971 people).

The County and City experienced rapid population growth during the 2000s, but the growth has been less rapid in the 2010s. The city has seen a slight decrease in population since 2010.

Lanier County and the City of Lakeland have zoning regulations. 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 that are used in Lanier County and the City of Lakeland:

- 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 Act requires local governments that elect to enforce these codes within their jurisdictions to adopt administrative procedures and penalties to enforce any of them. Also, any applicable appendices of these codes must be adopted locally to be enforceable within a specific local jurisdiction.

The DCA Board specifically omitted the plumbing, electrical, and energy requirements of the International Residential Code for One- and Two-Family Dwellings. Therefore, the plumbing requirements of the International Plumbing Code, the electrical requirements of the National Electrical Code, and the energy requirements of the International Energy Conservation Code must be used for one- and two-family dwelling construction.

No other land use or development trends related to this hazard have been identified.

F. Multi-Jurisdictional Differences

Tornadoes tend to follow a straight path regardless of natural features or political boundaries, and no difference in severity is expected between Lanier County and the City of Lakeland. 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 with many mobile homes, the damage can be more severe.

G. Overall HRV Summary of Events and Their Impact

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

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

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

H. Impacts from Future Conditions

Some people believe that 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 be able to link the warming to tornadoes.

Tornadoes are different from hurricanes as they are smaller and are short-lived. Scientists have a difficult 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 different speeds. This is known as wind shear.

When the temperature rises, the atmosphere can hold moisture, increasing instability, which is a vital supercell ingredient. When temperatures continue to get warmer, wind shear, another vital ingredient, likely decreases. The moisture and wind shear work against each other and makes 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 they are 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

Lanier 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 Lanier County. There is also a great number of farm workers who are Hispanic and are living in dormitory-type housing within the county. The Department of Family and Children Services (DFACS) participated in one workshop. DFACS keeps in close contact with this group of people and informs them of emergencies when necessary. The Emergency Preparedness Coordinator from the Lanier County South Georgia Medical Center Campus was also at the workshops, and they inform the nursing home and assisted living facilities of any emergency. Lanier County also has a siren that reaches several miles to warn people of a storm.

A workshop was held once again to invite the vulnerable population. Flyers were distributed to those attending and available at the Health Department, DFACS, County. Courthouse, and City Hall. They were also made available to the migrant workers within the county.

Section III. Floods

A. Identification of Hazard

The threat of a flood has been chosen by the HMPUC as the third most likely hazard to occur and cause damage in the community, based on 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 from local history and personal accounts, to determine the frequency of events. For further information, see the HAZUS Report in Appendix G.

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

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

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

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

Flood Zone Designations and Descriptions

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

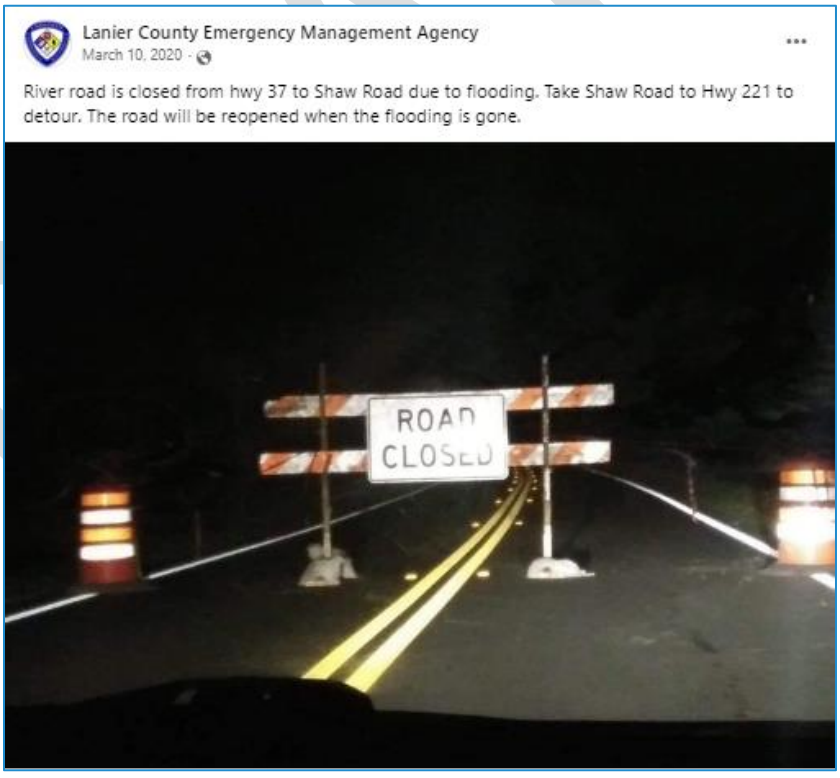
Zone Designations	Zone Descriptions
A	Areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage. Because detailed analyses are not performed for such areas, no depths or base flood elevations are shown within these zones.
AH	Areas with a 1% annual chance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

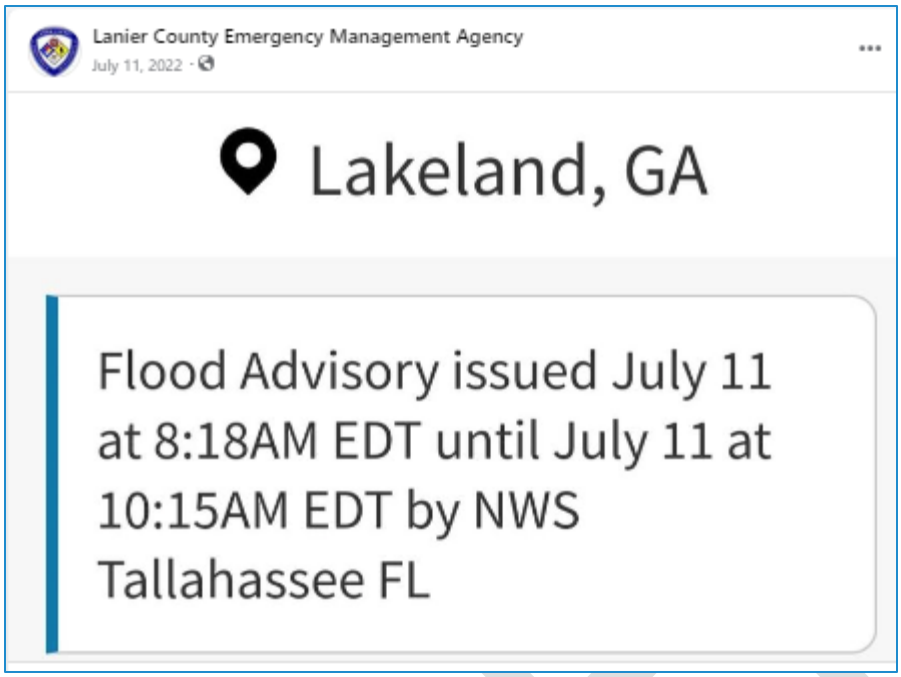
Lanier County and the City of Lakeland are all vulnerable to the effects of flooding. Areas within flood zones are naturally more vulnerable. For more information, see the maps in Appendix A.

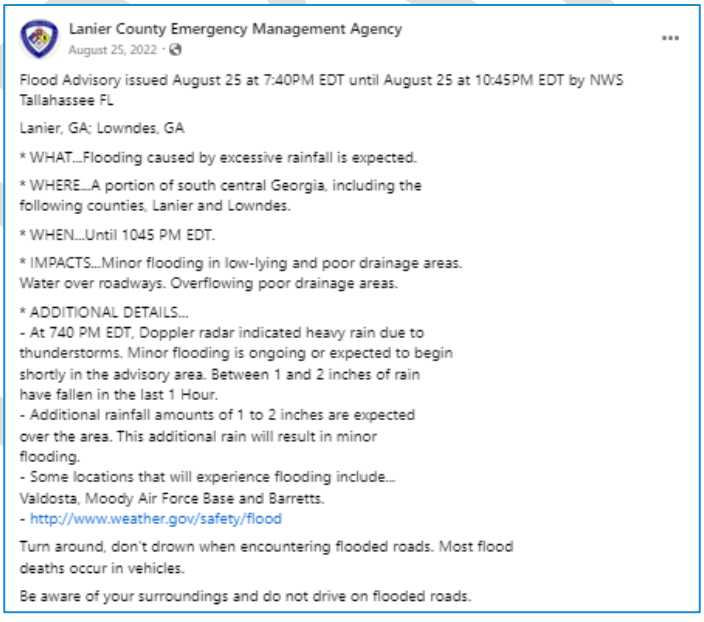
B. Profile of Events, Frequency of Occurrences, Probability

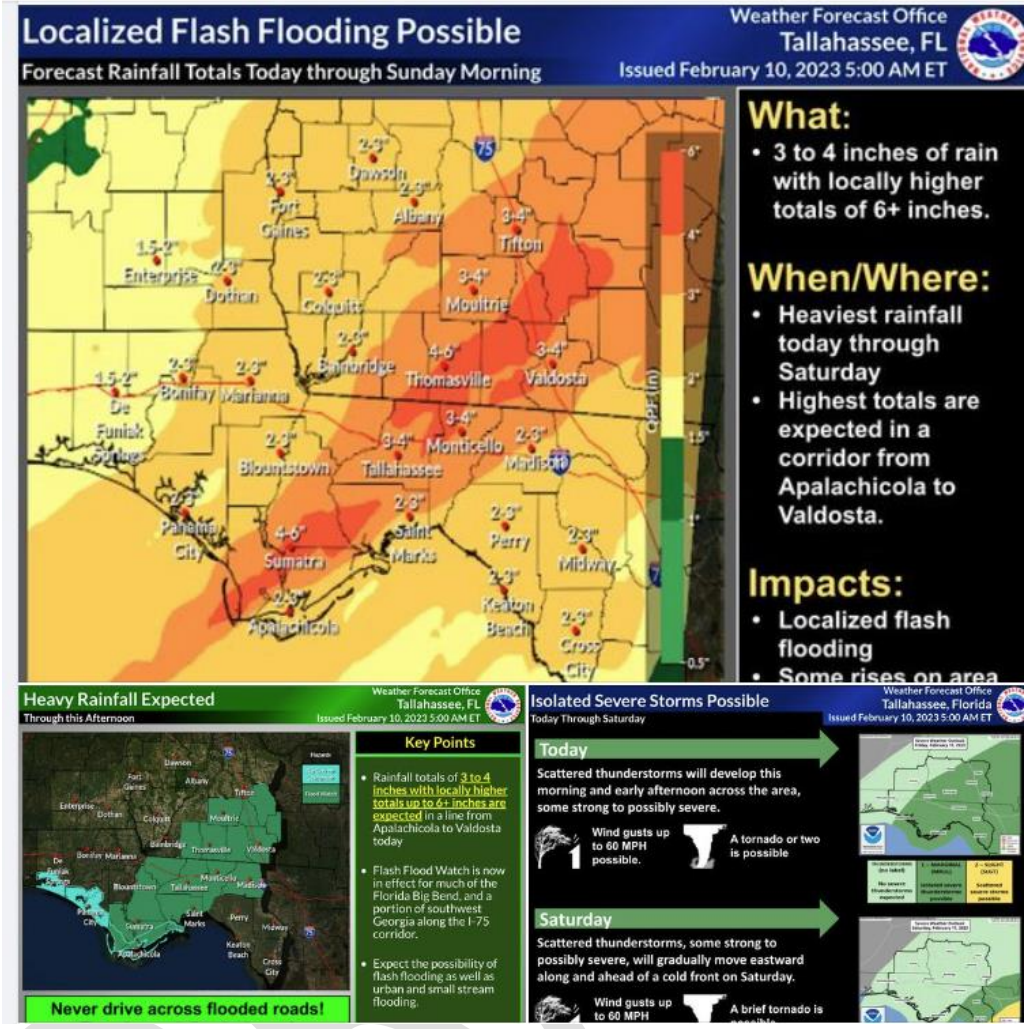
According to the NOAA Storm Events Database (see Appendix F), no reports of floods occurred in Lanier County (including the city) between 01/01/1950 and 12/31/2022. Two flood events have been reported since the previous Hazard Mitigation Plan was completed. Although the most complete available data was used for this analysis, the possibility remains that other events may have occurred in the community that went unreported or underreported.

Big Creek and Mill Creek are the two waterways in the community that could potentially cause the greatest flooding problems. Mill Creek includes the Lake Irma dam, located in a residential neighborhood near downtown Lakeland. According to the Lanier County Flood Insurance Study (available online at: http://www.georgiadfirm.com/pdf/panels/13173CV000A.pdf), the 1% annual chance flood level for Mill Creek would come up to the level of the Lake Irma dam (elevation 173 feet), and any higher flood level would overflow the dam. There are no flood protection measures in place for the Lake Irma dam. Therefore, flooding has the potential to cause significant problems in the community. Possible outcomes from a potential flood include washed-out roads, and widespread power outages, and destroyed or damaged homes and other structures.

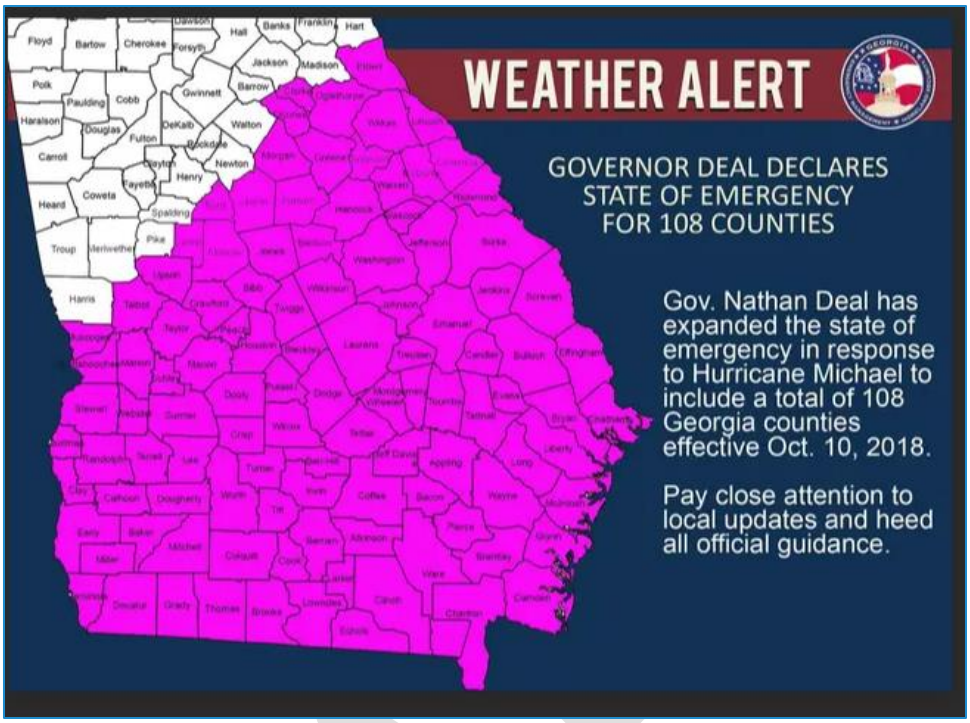



Lanier County Emergency Management Agency
July 11, 2022
Lakeland, GA
Flood Advisory issued July 11 at 8:18AM EDT until July 11 at 10:15AM EDT by NWS Tallahassee FL

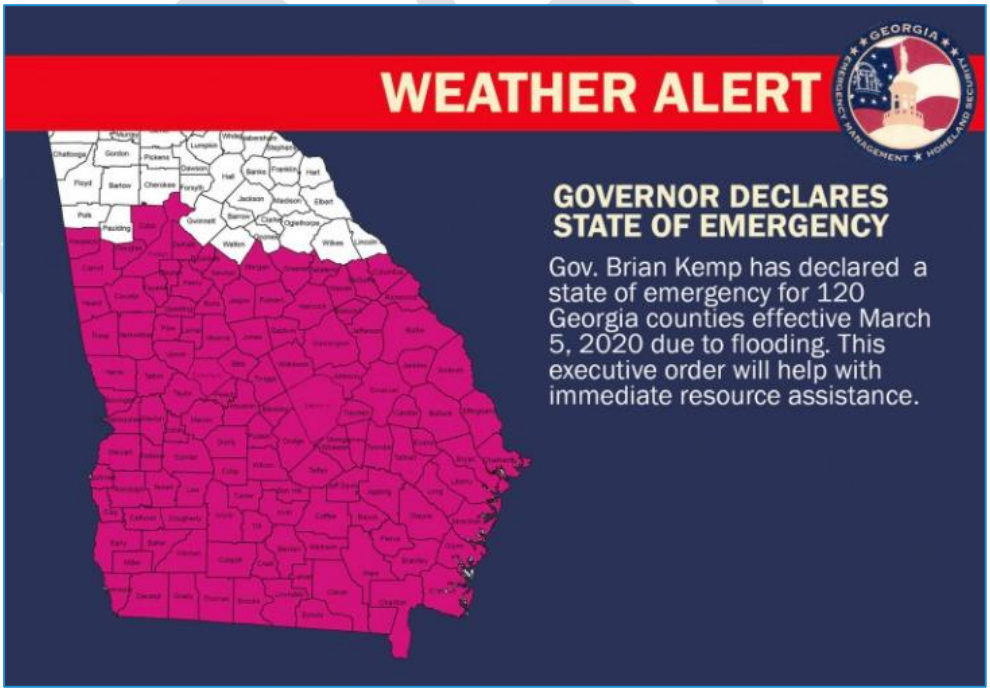

Lanier County Emergency Management Agency
August 25, 2022
Flood Advisory issued August 25 at 7:40PM EDT until August 25 at 10:45PM EDT by NWS Tallahassee FL
Lanier, GA; Lowndes, GA
* WHAT...Flooding caused by excessive rainfall is expected.
* WHERE...A portion of south central Georgia, including the following counties, Lanier and Lowndes.
* WHEN...Until 1045 PM EDT.
* IMPACTS...Minor flooding in low-lying and poor drainage areas. Water over roadways. Overflowing poor drainage areas.
* ADDITIONAL DETAILS...
- At 740 PM EDT, Doppler radar indicated heavy rain due to thunderstorms. Minor flooding is ongoing or expected to begin shortly in the advisory area. Between 1 and 2 inches of rain have fallen in the last 1 Hour.
- Additional rainfall amounts of 1 to 2 inches are expected over the area. This additional rain will result in minor flooding.
- Some locations that will experience flooding include... Valdosta, Moody Air Force Base and Barretts.
- http://www.weather.gov/safety/flood
Turn around, don't drown when encountering flooded roads. Most flood deaths occur in vehicles.
Be aware of your surroundings and do not drive on flooded roads.



On October 9, 2018, the Governor of Georgia issued a State of Emergency for 92 counties, which included Lanier County, due to heavy rains and flooding. On October 10, he added more counties, totaling 108, to that declaration.



On the 5th of March 2020 the Governor issued a State of Emergency for Lanier County and many other counties in Georgia for extensive flooding due to the recent storms with heavy rainfall.



THE STATE OF GEORGIA

EXECUTIVE ORDER

BY THE GOVERNOR:

STATE OF EMERGENCY DECLARATION

WHEREAS: In the first two months of 2020, the state of Georgia received more than eighteen inches of rain, not including recent storms which have caused extensive flooding in many Georgia counties; and

WHEREAS: The National Weather Service has issued flood watches and warnings along waterways, creeks, and tributaries in the state of Georgia; and

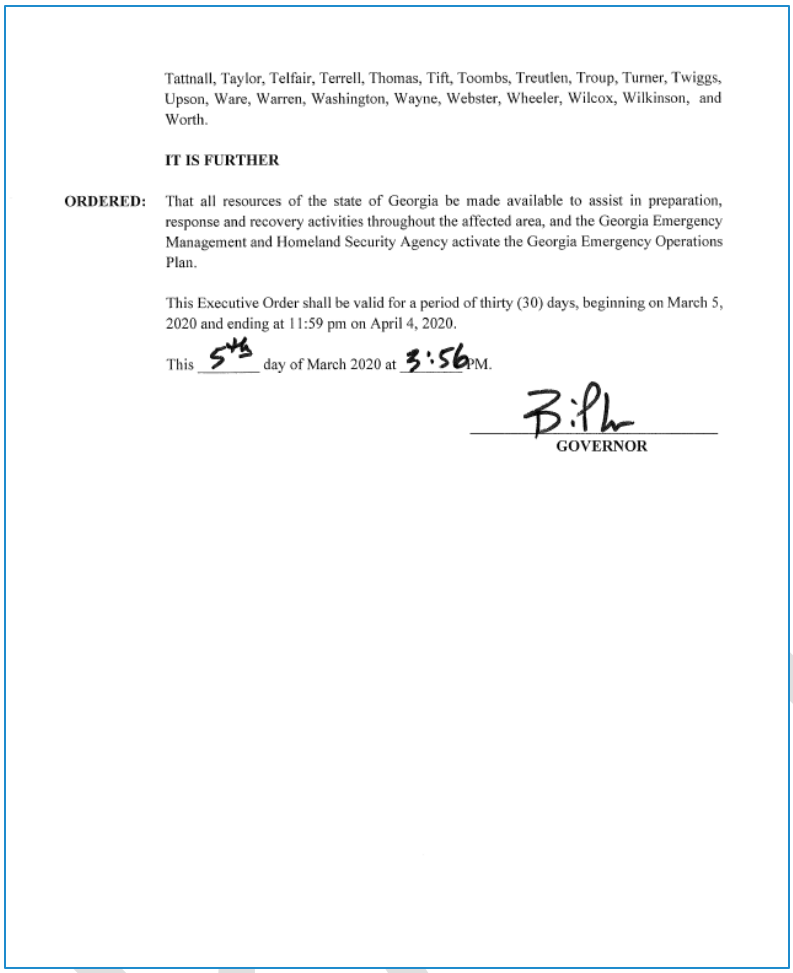
WHEREAS: Due to the extensive flooding, Georgia's network of roads and bridges may be rendered impassable in the affected counties, isolating residences and persons from access to essential public services; and

WHEREAS: Assistance from the state is necessary to provide public safety, protect private property, and restore social and economic welfare of affected counties; and

WHEREAS: Georgia law vests the Governor in O.C.G.A. § 38-3-51 with the authority to bring emergency situations under control by issuing orders, rules, and regulations to protect the safety and welfare of the public.

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 Georgia counties: Appling, Atkinson, Bacon, Baker, Baldwin, Ben Hill, Berrien, Bibb, Bleckley, Brantley, Brooks, Bryan, Bulloch, Burke, Butts, Calhoun, Camden, Candler, Carroll, Charlton, Chatham, Chattahoochee, Clay, Clayton, Clinch, Cobb, Coffee, Colquitt, Columbia, Cook, Coweta, Crawford, Crisp, Decatur, DeKalb, Dodge, Dooly, Dougherty, Douglas, Early, Echols, Effingham, Emanuel, Evans, Fayette, Fulton, Glascock, Glynn, Grady, Greene, Hancock, Haralson, Harris, Heard, Henry, Houston, Irwin, Jasper, Jeff Davis, Jefferson, Jenkins, Johnson, Jones, Lamar, Lanier, Laurens, Lee, Liberty, Long, Lowndes, Macon, Marion, McDuffie, McIntosh, Meriwether, Miller, Mitchell, Monroe, Montgomery, Morgan, Muscogee, Newton, Peach, Pierce, Pike, Pulaski, Putnam, Quitman, Randolph, Richmond, Rockdale, Schley, Screven, Seminole, Spalding, Stewart, Sumter, Talbot, Taliaferro,



Tattnall, Taylor, Telfair, Terrell, Thomas, Tift, Toombs, Treutlen, Troup, Turner, Twiggs, Upson, Ware, Warren, Washington, Wayne, Webster, Wheeler, Wilcox, Wilkinson, 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 throughout the affected area, 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 thirty (30) days, beginning on March 5, 2020 and ending at 11:59 pm on April 4, 2020.

This 5th day of March 2020 at 3:56 PM.

GOVERNOR

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

In Worksheet 3A: Inventory of Assets (appearing in Appendix A), we estimate that those parts of Lanier County and the City of Lakeland that are within flood hazard areas are vulnerable to this hazard.

An estimated 100% of the Residential property (3,944 of 3,944) in Lanier County (including the City of Lakeland) could be affected by this hazard, with a total value of $434,466,000. Also, an estimated 100% of the Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, and Education (324 of 324) in the community may be affected, with a total value of $190,341,000. The values are based on the most recent available tax roll data for Lanier County and the City of Lakeland, provided by the Lanier County Tax Assessor's Office.

An estimated 100% of the Residential property (3,944 of 3,944) in Lanier County (including the City of Lakeland) could be affected by this hazard, with a total value of $434,466,000. Also, an estimated 100% of the Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, and Education (324 of 324) in the community may be affected, with a total value of $190,341,000. The values are based on the most recent available tax roll data for Lanier County and the City of Lakeland, provided by the Lanier 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 2022 Georgia Farm Gate Value Report (farmgate.caes.uga.edu/CountyAnnualReport.aspx) the total farm gate value of agricultural production in Lanier County is $47,463,433.60.

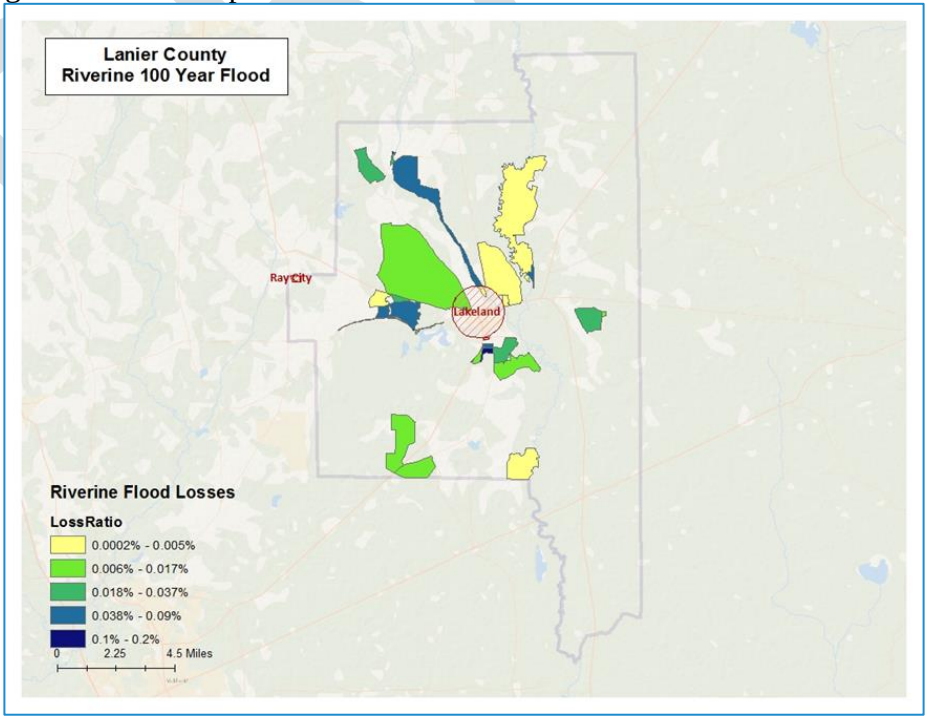
According to the inventory database reports and maps from the HAZUS Report (see Appendix G), the following table summarizes the counts and exposures, where available, by Essential Facility classification of the updated data for the county:

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

Buildings in Lanier County are vulnerable to flooding from a 1% riverine flood. Table 9 below (HAZUS) summarizes the flood-related building damage in Lanier County and Lakeland:

Occupancy Classification	Total Buildings	Total Buildings Damaged	Total Building Exposure	Total Losses to Buildings	Loss Ratio of Exposed to Damaged
Lakeland					
Residential	1,058	4	$ 122,016,408	$ 49,394	0.04%
Unincorporated					
Commercial	44	1	$ 35,831,588	$ 570	0.00%
Residential	2,997	65	$ 304,543,240	$ 1,262,140	0.41%
County Total					
Total	4,099	70	462,391,236	1,312,104	

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



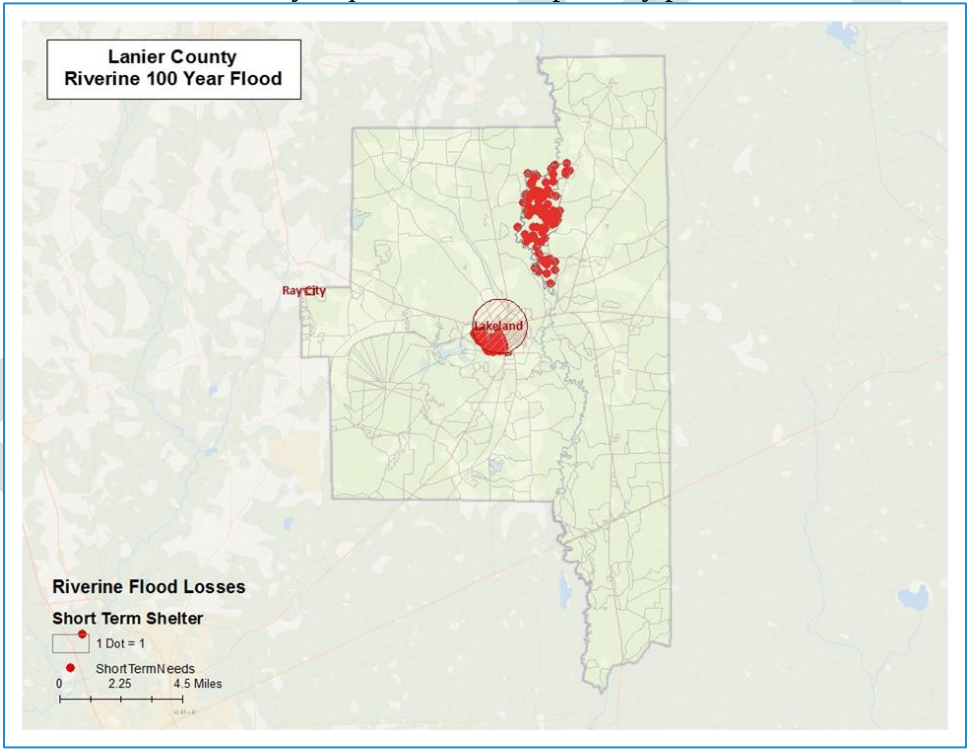
Riverine 1% Flood Essential Facility Losses:

There are 0 Essential Facilities subject to damage in the Lanier County riverine 1% probability floodplain.

Occupancy Classification	Total Buildings	Total Buildings Damaged	Total Building Exposure	Total Losses to Buildings	Loss Ratio of Exposed to Damaged
Lakeland					
Residential	1,058	4	$ 122,016,408	$ 49,394	0.04%
Unincorporated					
Commercial	44	1	$ 35,831,588	$ 570	0.00%
Residential	2,997	65	$ 304,543,240	$ 1,262,140	0.41%
County Total					
Total	4,099	70	462,391,236	1,312,104	

Riverine 1% Flood Shelter Requirements from a 1% Riverine:

The model estimates 218 households might be displaced due to the flood. Displacement includes households evacuated within or very near to the inundated area. Displaced households represent 655 individuals, of which 310 may require short term publicly provided shelter. See Figure 10:



Debris from a 1% Riverine Flood:

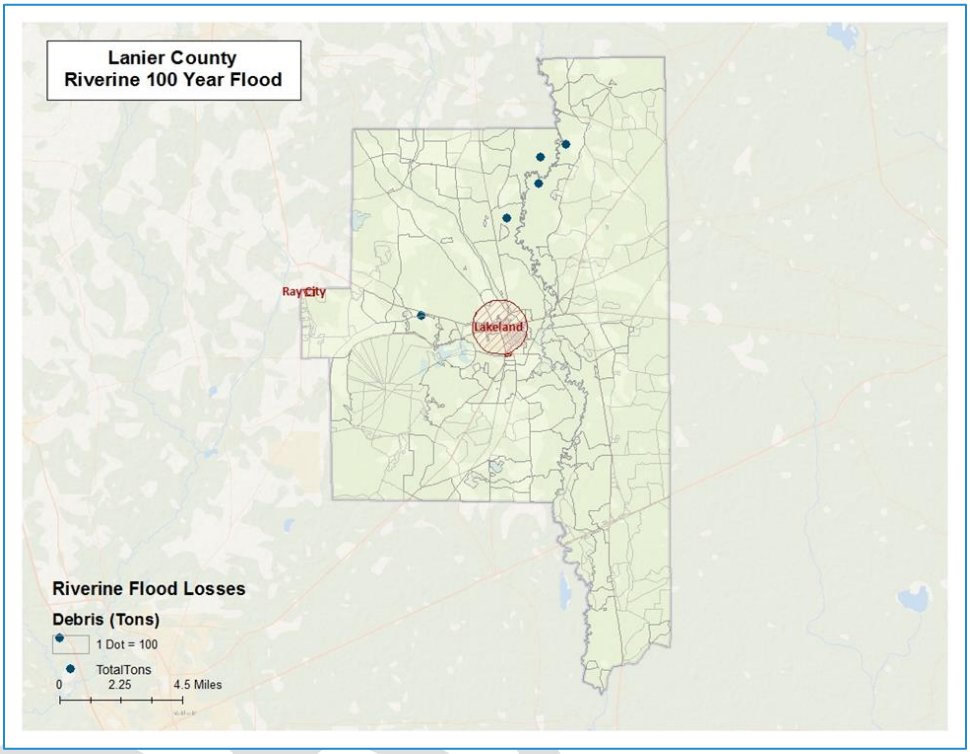
HAZUS estimates the amount of debris that the flood will generate. The model breaks debris into three general categories:

- Finishes (dry wall, insulation, etc.)
- Structural (wood, brick, etc.)

- Foundations (concrete slab, concrete block, rebar, etc.)

Different types of material handling equipment will be required for each category. Debris definitions applied in HAZUS are unique to the HAZUS model and so do not conform to other definitions used in other models or guidelines.

The analysis estimates that an approximate total of 1,030 tons of debris might be generated: 1) Finishes – 469 tons; 2) Structural - 169 tons; and 3) Foundations- 393 tons. See Figure 11 below:



The Georgia Mitigation Information System (GMIS) reports do not list any Repetitive Loss/NFIP properties in Lanier County or the City of Lakeland.

E. Land Use and Development Trends

The County and City experienced rapid population growth during the 2000s, but the growth has been less rapid in the 2010s. The city has seen a slight decrease in population since 2010.

Lanier County and the City of Lakeland have zoning regulations. 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 that are used in Lanier County and the City of Lakeland:

- 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 Act requires local governments that elect to enforce these codes within their jurisdictions to adopt administrative procedures and penalties to locally enforce any of them. Also, any applicable appendices of these codes must be adopted locally to be enforceable within a specific local jurisdiction.

The DCA Board specifically omitted the plumbing, electrical, and energy requirements of the International Residential Code for One- and Two-Family Dwellings. Therefore, the plumbing requirements of the International Plumbing Code, the electrical requirements of the National Electrical Code, and the energy requirements of the International Energy Conservation Code must be used for one- and two-family dwelling construction.

No other land use or development trends related to this hazard have been identified.

F. Multi-Jurisdictional Differences

According to FEMA data, 23.7% of the total area of Lanier County (30,376 acres) is within a flood zone, and 22.7% of the total area of the City of Lakeland (459 acres) is within a flood zone. Lanier County and the City of Lakeland are both members of the National Flood Insurance Program (source: https://www.fema.gov/cis/GA.html). As of October 2023, these jurisdictions comply with NFIP requirements and intend to remain in compliance by enforcing flood plain ordinances that prohibit or severely limit development in flood plains. Lanier County's current floodplain ordinance was adopted in 2003, and the City of Lakeland's was adopted in 2012. These ordinances are enforced by the building inspector and/or code enforcement officer for Lanier County and the City of Lakeland.

Lanier County's FIRM was identified on April 1, 1996, and Lakeland's FIRM was identified on December 16, 1988. Lanier County and Lakeland's Current Effective Map Date is December 17, 2010. (*See Appendix D FEMA Community Status Book Report*).

As of November 2023, Lanier County and the City of Lakeland participate in the Community Rating System (CRS) program. http://www.fema.gov/library/viewRecord.do?id=3629).

Lanier County and the City of Lakeland have utilized various funds, including local and CDBG funding and other monies, to mitigate potential flood damage. This includes improvements to drainage systems and storm sewer systems. Historical records and recommendations from the engineering service are reviewed and used to mitigate potential issues before they arise. Lanier County and the City of Lakeland have used CDBG funds to improve street paving and drainage

work in their communities for many years. The projects included roads, ditches, drainage, etc., continuing to control flooding.

No other land use or development trends related to this hazard have been identified.

G. Overall HRV Summary of Events and Their Impact

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

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

<u>NFIP Substantial Damage Regulations</u>

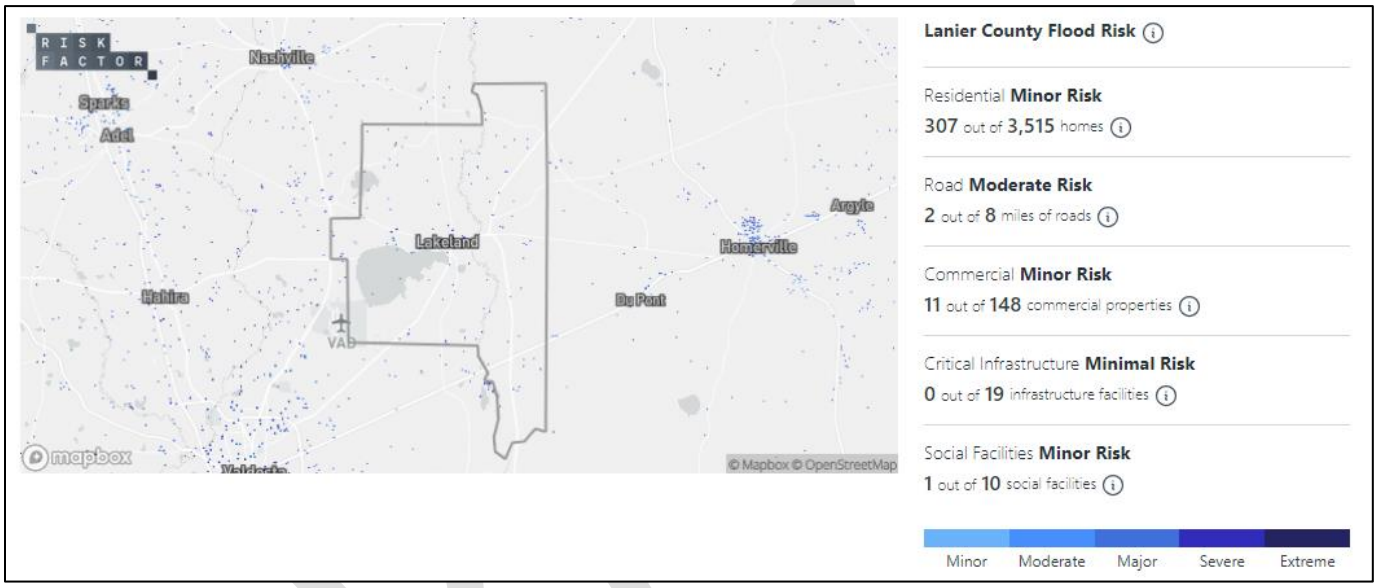
- ◊ The Building Inspector will prepare detailed documentation of the substantial damage determinations following a flood event or any other event that causes damage to structures in the flood hazard areas, including cost estimation and calculations. The following criteria will be used in accordance with NFIP:
- ◊ 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 located within the special flood hazard area to determine if the work being requested constitutes SI (substantial improvements) or SD (substantial damage) repairs, and ensuring 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. Using the market value to determine if the proposed improvements meet SI requirements or using market value to prior to 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.

H. Impacts from Future Conditions

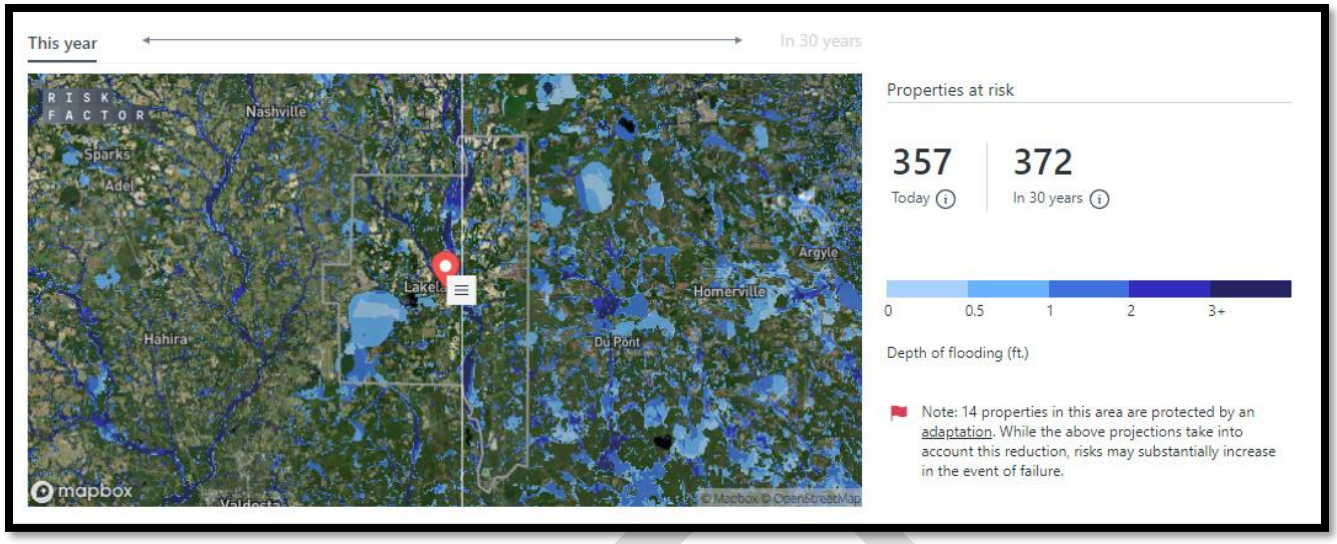
There are 364 properties in Lanier County that have a greater than 26% chance of being severely affected by flooding over the next 30 years. This is 10% of all the properties in Lanier County.

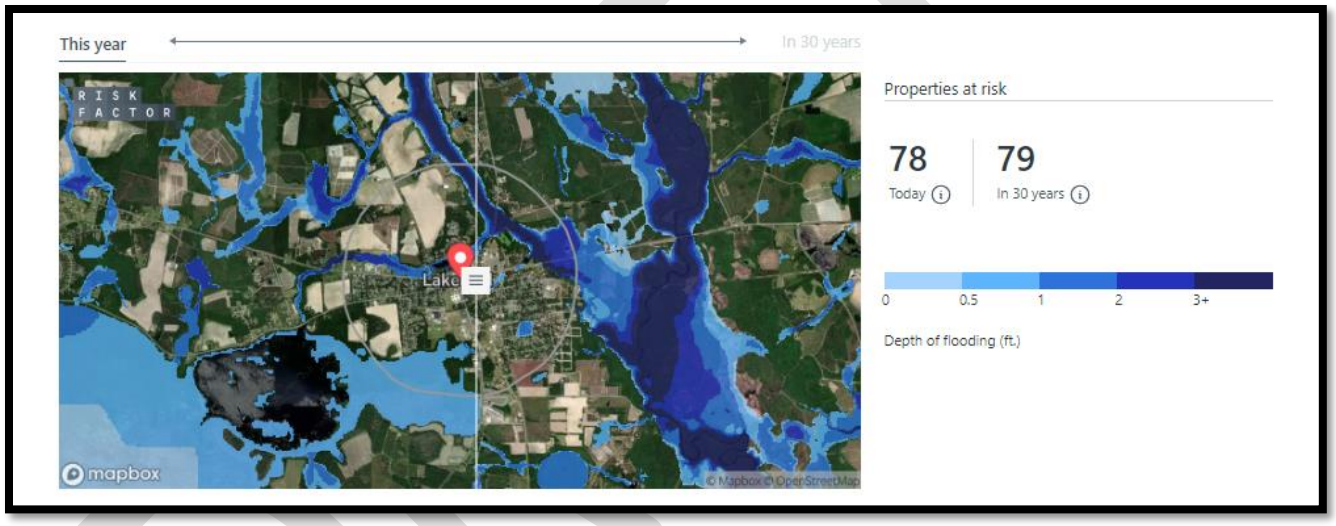
Floods also cut off access to utilities, emergency services, and transportation and can impact the area's economic well-being. Lanier County has a minor risk of flooding over the next 30 years, which means that flooding is likely to impact day-to-day life within Lanier County.



Hurricanes are less likely to occur but affect more properties than more shallow flood events like heavy rain. Over the next 30 years, this risk is expected to constantly remain and has a 26% chance of occurring at least once over the life of a 30 years.

Lanier County

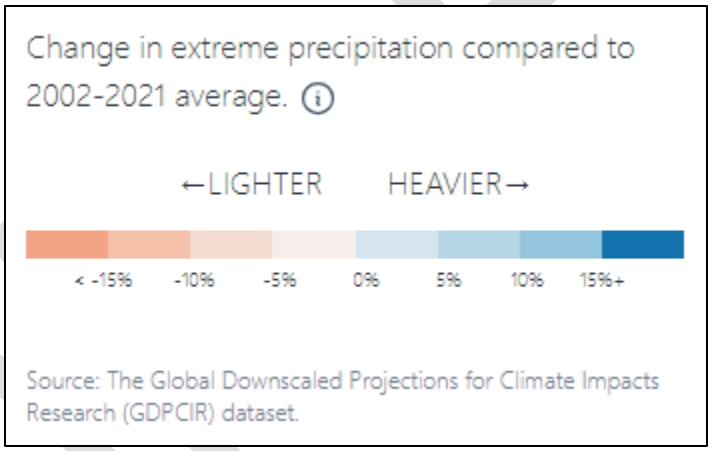




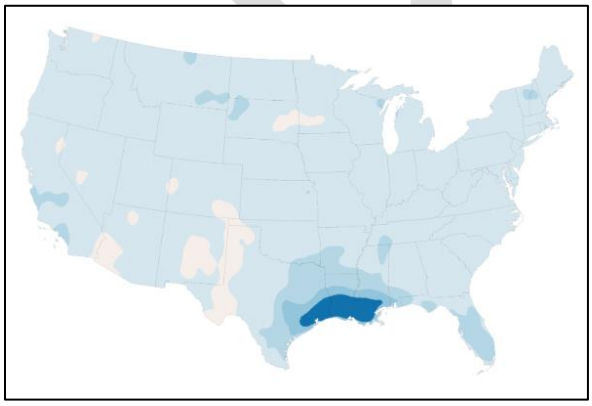
There are 364 properties that have a 26% chance of being severely affected by flooding over the next 30 years. This percentage represents 10% of all the property within the county. Lanier County has a minor risk of flooding within the next 30 years. Deeper floods from Hurricanes are less likely to occur. However, deeper floods would affect properties than shallow flood events (heavy rains).

Flood event	% chance of flooding in a given year	% chance of flooding over 30 years
100 year	1%	26%
500 year	.2%	6%

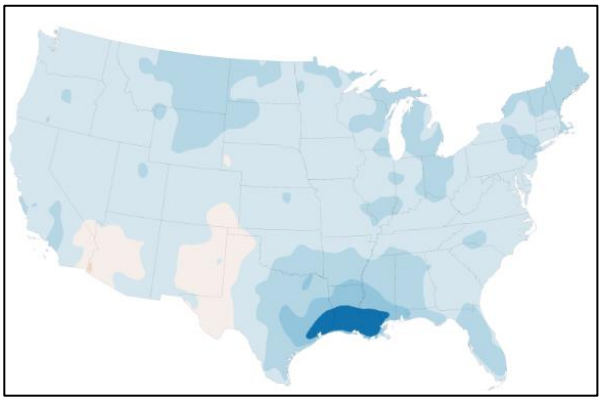
As the climate changes, sea level rises with new weather patterns, and stronger winds. When the atmosphere warms, there is more evaporation and more water with rain. This means warmer oceans, which intensify flooding from hurricanes and other offshore storms. This risk will increase the flood risks, as higher seas mean that more water is available with high tides and coastal storms causing flooding.



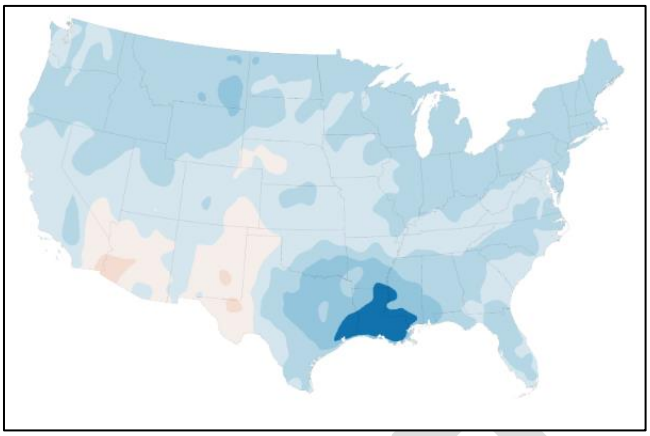
This Year



In 15 Years



In 30 Years



SEA LEVEL RISE

Rise in inches, compared to 1980-2010 average

+5 in.

Place with highest sea level rise (inches)

25.2	Grand Isle, LA
18.1	Galveston Pier 21, TX
16.5	Ocean City Inlet, MD
15.9	New Canal Station, LA
15.3	Lewisetta, VA

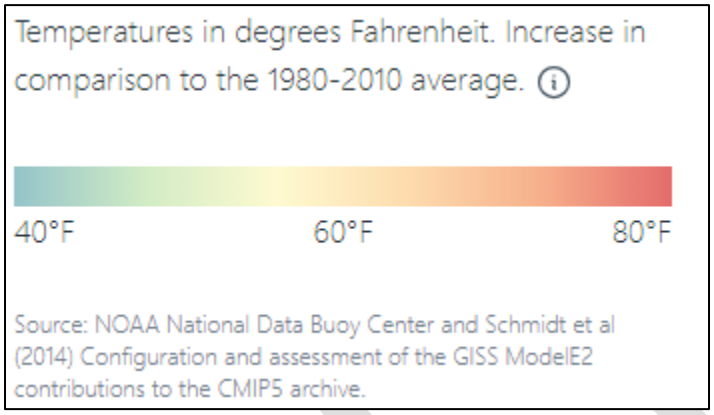
Source: Kopp et al. (2017) Evolving Understanding of Antarctic Ice-Sheet Physics and Ambiguity in Probabilistic Sea-Level Projections.

This Year

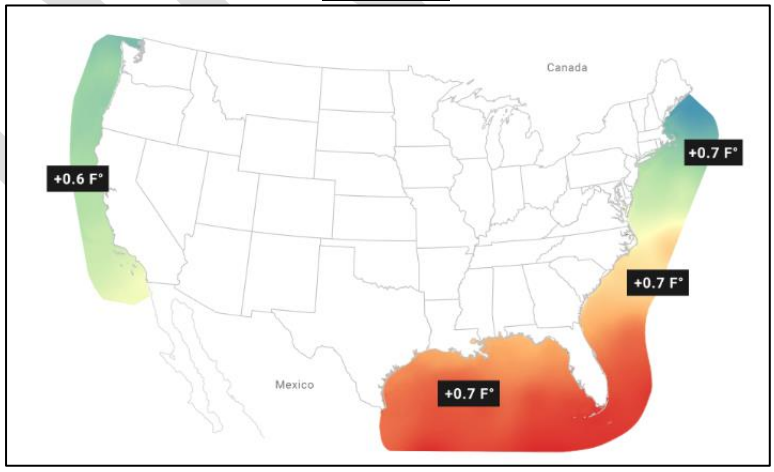
In 15 Years

In 30 Years

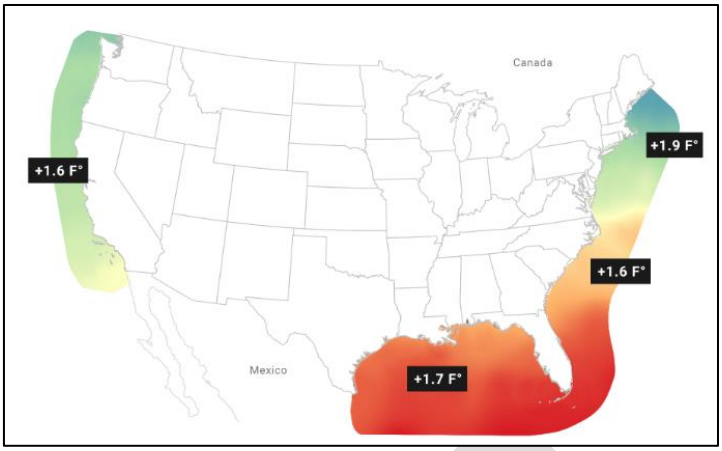
SEA SURFACE TEMPERATURES



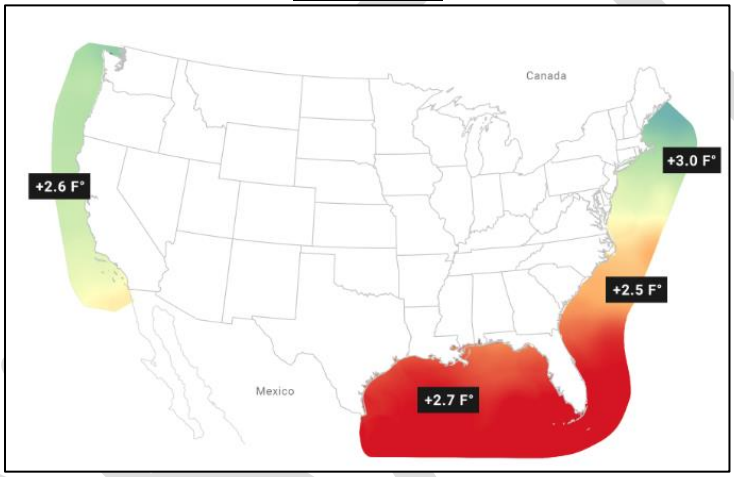
This Year



In 15 Years



In 30 Years



https://riskfactor.com

I. Underserved/Socially Vulnerable Population Risk

Lanier County has a large population of elderly individuals that live in assisted living facilities/nursing homes that may not receive emergency notifications through existing emergency notifications systems. Homelessness does exist in Lanier County. There is also a great number of farm workers that are Hispanic and are living in dormitory-type housing within the county. The Department of Family and Children Services (DFACS) participated in one workshop. DFACS keeps in close contact with this group of people and informs them of emergencies when necessary. The Emergency Preparedness Coordinator from the Lanier County South Georgia Medical Center Campus was also at the workshops, and they inform the nursing home and assisted living facilities of any emergency.

A workshop was held once again to invite the vulnerable population. Flyers were distributed to those attending and available at the Health Department, DFACS, County Courthouse, and City Hall. They were also made available to the migrant workers within the county.

Section IV. Hail/Lightning/Wind

A. Identification of Hazard

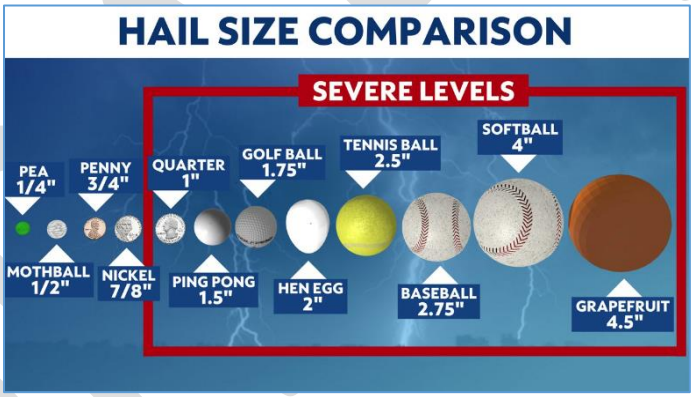
The threat of hail, lightning and wind has been chosen by the Lanier County HMPUC as the fourth most likely hazard to occur and cause damage in Lanier County and the City of Lakeland, based on experience, the FEMA-described methodology, and other factors. Historic data have been examined from various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

Hail

Hail is a form of precipitation that occurs when updrafts in thunderstorms carry raindrops upward into extremely cold areas of the atmosphere, where they freeze into balls of ice. 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 very largest hail stones pose serious risk to people caught in the open. The following are some common 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



Lightning

Lightning is a giant spark of electricity in the atmosphere or between the atmosphere and the ground. In the initial stages of development, air acts as an insulator between the positive and negative charges in the cloud and between the cloud and the ground; however, when the difference in charges becomes too great, this insulating capacity of the air breaks down and there is a rapid discharge of electricity that we know as lightning. Lightning most often strikes during thunderstorms but can strike many miles from the center of the storm or can even strike in areas not covered by a storm (this phenomenon is known as a "bolt from the blue").
According to NOAA (http://www.lightningsafety.noaa.gov/), lightning strikes the United States about 25 million times a year. Although most lightning occurs in the summer, people can be struck at any time of year. Lightning kills an average of 47 people in the United States each year, and hundreds more are severely injured.

Lightning can strike in any place at any time but, contrary to popular myth, is not attracted to metal. Tall, isolated structures with a pointy shape are most likely to be struck by lightning. When

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

Lanier County and the City of Lakeland are all equally vulnerable to the effects of lightning, hail, and wind.

Wind

Wind is the perceptible natural movement of the air, especially in the form of a current of air blowing from a particular direction. The faster this movement, the more likely there will be damage to communities and structures built by humans. On the Beaufort Scale (see chart below), "High wind" is defined as 32 – 38 mph, and "strong wind" as 47 – 54 mph. "Thunderstorm wind" is the wind that is associated with a thunderstorm. The Lanier County HMPUC has chosen the threat of wind as the second most likely hazard to occur and cause damage in Lanier County and the City of Lakeland; based on past experience, the FEMA-described methodology and other Historical data have been examined from various sources, including the National Climatic Data Center (see Appendix F), as well as from local history and personal accounts, in order to determine the frequency of events.

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

Beaufort number	Description	Wind speed	Wave height	Sea conditions	Land conditions
0	Calm	< 1 knot < 1 mph < 2 km/h < 0.5 m/s	0 ft 0 m	Sea like a mirror	Smoke rises vertically
1	Light air	1–3 knots 1–3 mph 2–5 km/h 0.5–1.5 m/s	0–1 ft 0–0.3 m	Ripples with appearance of scales are formed, without foam crests	Direction shown by smoke drift but not by wind vanes
2	Light breeze	4–6 knots 4–7 mph 6–11 km/h 1.6–3.3 m/s	1–2 ft 0.3–0.6 m	Small wavelets still short but more pronounced; crests have a glassy appearance but do not break	Wind felt on face; leaves rustle; wind vane moved by wind
3	Gentle breeze	7–10 knots 8–12 mph 12–19 km/h 3.4–5.5 m/s	2–4 ft 0.6–1.2 m	Large wavelets; crests begin to break; foam of glassy appearance; perhaps scattered white horses	Leaves and small twigs in constant motion; light flags extended
4	Moderate breeze	11–16 knots 13–18 mph 20–28 km/h 5.5–7.9 m/s	3.5–6 ft 1–2 m	Small waves becoming longer; fairly frequent white horses	Raises dust and loose paper; small branches moved

5	Fresh breeze	17–21 knots 19–24 mph 29–38 km/h 8–10.7 m/s	6–10 ft 2–3 m	Moderate waves taking a more pronounced long form; many white horses are formed; chance of some spray	Small trees in leaf begin to sway; crested wavelets form on inland waters
6	Strong breeze	22–27 knots 25–31 mph 39–49 km/h 10.8–13.8 m/s	9–13 ft 3–4 m	Large waves begin to form; the white foam crests are more extensive everywhere; probably some spray	Large branches in motion; whistling heard in telegraph wires; umbrellas used with difficulty
7	High wind, moderate gale, near gale	28–33 knots 32–38 mph 50–61 km/h 13.9–17.1 m/s	13–19 ft 4–5.5 m	Sea heaps up and white foam from breaking waves begins to be blown in streaks along the direction of the wind; spindrift begins to be seen	Whole trees in motion; inconvenience felt when walking against the wind
8	Gale, fresh gale	34–40 knots 39–46 mph 62–74 km/h 17.2–20.7 m/s	18–25 ft 5.5–7.5 m	Moderately high waves of greater length; edges of crests break into spindrift; foam is blown in well-marked streaks along the direction of the wind	Twigs break off trees; generally impedes progress
9	Strong/severe gale	41–47 knots 47–54 mph 75–88 km/h 20.8–24.4 m/s	23–32 ft 7–10 m	High waves; dense streaks of foam along the direction of the wind; sea begins to roll; spray affects visibility	Slight structural damage (chimney pots and slates removed)
10	Storm,[13] whole gale	48–55 knots 55–63 mph 89–102 km/h 24.5–28.4 m/s	29–41 ft 9–12.5 m	Very high waves with long overhanging crests; resulting foam in great patches is blown in dense white streaks along the direction of the wind; on the whole the surface of the sea takes on a white appearance; rolling of the sea becomes heavy; visibility affected	Seldom experienced inland; trees uprooted; considerable structural damage

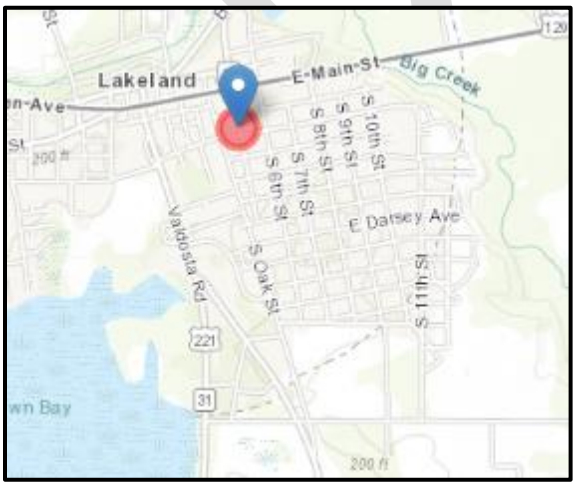
11	Violent storm	56–63 knots 64–72 mph 103–117 km/h 28.5–32.6 m/s	37–52 ft 11.5–16 m	Exceptionally high waves; small- and medium-sized ships might be for a long time lost to view behind the waves; sea is covered with long white patches of foam; everywhere the edges of the wave crests are blown into foam; visibility affected	Very rarely experienced; accompanied by widespread damage
12	Hurricane-force[13]	≥ 64 knots ≥ 73 mph ≥ 118 km/h ≥ 32.7 m/s	≥ 46 ft ≥ 14 m	The air is filled with foam and spray; sea is completely white with driving spray; visibility very seriously affected	Devastation

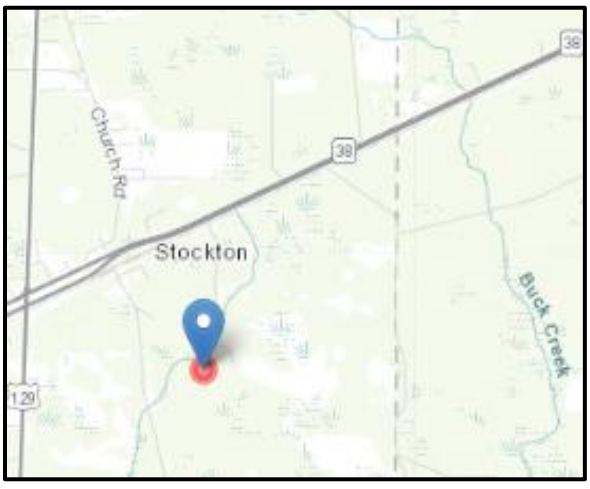
B. Profile of Events, Frequency of Occurrences, Probability

Hail

According to the NOAA Storm Events Database (see Appendix F), there are 21 reports of hailstorms that occurred in Lanier County (including the city) between 01/01/1950 and 12/31/2022. The Historic Recurrence Interval is 3.43 years. This is a 29.17% Historic Frequency Chance per year. The past 10-year Record Frequency Per Year is 0.7, the past 20-year frequency is 0.55, and the past 50-year frequency is 0.4. In some cases, more than one event occurred on the same day. In these cases, multiple events on the same day are counted as one event.

According to the best data available, since the previous Hazard Mitigation Plan became effective, 2 Hail events have been recorded. On July 22, 2018, there was a hail event recorded in Lakeland with the hail 0.88 inches in size. On April 19, 2020, a hail report was recorded with 0.88 inches in unincorporated Stockton.





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

Lightning

According to the NOAA Storm Events Database (see Appendix F), there are 2 reports of lightning occurring in Lanier County (including the city) between 01/01/1950 and 12/31/2022. The Historic Recurrence Interval is 72.00 years. This is a 2.78% Historic Frequency Chance per year. The past 10-year Record Frequency Per Year is 0.2, the past 20-year frequency is 0.01, and the past 50-year frequency is 0.04 (see the Hazard Frequency Table in Appendix D). Since the previous Hazard Mitigation Plan was completed, no lightning events have been recorded in the NOAA database. However, lightning is a regular occurrence in the community, and severe lightning strikes are known to have occurred even though they are not recorded in standard databases. Lightning strikes in the community have, in the past, caused trees to fall, caused localized power outages, and caused localized wildfires. No lightning-related fatalities are known to have occurred in Lanier County or the City of Lakeland.

In 2019, according to Earth Networks, there were 1,397 lightning strikes in Lanier County. From January 1, 2020, through December 31, 2020, there were 60,976 lightning pulses in Lanier County. https://get.earthnetworks.com/

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

Lanier County Emergency Management Agency
September 14, 2019 ·

Meteorologist Kerri Copello
September 14, 2019 ·

STRONG STORM ALERT issued for Berrien, Tift, Lanier, Cook & Lowndes County until 4:15 p.m. Saturday. A line of showers, extending from near Willacoochee, to near Du Pont, to 7 miles north of Fargo. Movement was southwest at 25 mph. Winds gusts in excess of 30 mph, brief heavy downpours, and some lightning will be possible with this activity.

Cook County Emergency Management Agency EMA Berrien County Emergency Management Agency Tift County Emergency Management Agency Lanier Emergency Management Agency EMA Lowndes

APPENDIX

This table ranks all U.S. states by total lightning pulses, including in-cloud and cloud-to-ground from highest to lowest. Total number of thunder days in each state (the total number of days in the year when lightning was detected by ENTLN) are also included. The period covered is January 1, 2020 to December 31, 2020.

COUNTY	TOTAL LIGHTNING PULSES	TOTAL THUNDER DAYS
Charlton County	389,557	113
Ware County	372,395	117
Clinch County	355,412	110
Wayne County	215,066	101
Camden County	202,613	101
Liberty County	183,815	96
Burke County	182,630	93
Brantley County	169,043	91
Fulton County	156,227	96
Bulloch County	147,587	88
Glynn County	143,585	92
Chatham County	138,034	91
Coffee County	137,445	93
McIntosh County	133,967	84
Cherokee County	132,308	91
Bryan County	131,259	98
Screven County	130,321	78
Tattnall County	129,655	92
Thomas County	129,112	100
Gwinnett County	129,087	89
Hall County	118,606	89
Berrien County	116,842	95
Appling County	116,412	93
Brooks County	116,122	98
Emanuel County	115,382	87
Floyd County	114,923	91
Long County	114,002	95
Pierce County	113,901	83
Effingham County	113,168	90
Meriwether County	111,773	82
Cobb County	110,635	83
Jefferson County	108,980	81
Lowndes County	106,664	95
Grady County	106,128	79
Decatur County	103,806	94
Worth County	102,810	90
Echols County	102,299	99
Forsyth County	101,268	82
Morgan County	99,569	81
Atkinson County	99,523	90
Monroe County	96,670	76
Colquitt County	96,277	93
Toombs County	96,261	83
Walker County	95,635	88
Laurens County	95,462	94
Washington County	95,385	97
Gilmer County	94,267	84

COUNTY	TOTAL LIGHTNING PULSES	TOTAL THUNDER DAYS
Sumter County	92,161	91
Bartow County	91,291	87
Chattooga County	91,188	77
Walton County	91,065	80
Early County	89,459	87
Stewart County	88,555	90
Dodge County	85,423	79
Greene County	85,030	75
Coweta County	84,624	80
Lee County	84,338	91
Gordon County	83,536	73
Telfair County	80,753	69
Jackson County	79,234	76
Wilkinson County	78,930	74
Randolph County	78,254	90
Lumpkin County	77,672	79
Hancock County	77,238	84
Harris County	76,679	89
Marion County	76,605	83
Elbert County	76,103	69
Newton County	75,328	74
Wilkes County	74,709	73
Carroll County	74,212	84
Mitchell County	73,987	85
Turner County	73,978	78
Murray County	73,129	80
Paulding County	72,339	81
Bacon County	72,107	83
Wilcox County	71,485	78
Fannin County	71,206	91
Richmond County	69,907	71
Dooly County	69,342	86
Union County	68,783	82
Jasper County	68,525	72
Jones County	68,425	80
Upson County	68,212	75
Baker County	67,778	80
Macon County	67,534	80
DeKalb County	67,389	86
Oglethorpe County	66,910	79
Henry County	66,693	75
Troup County	65,902	77
Columbia County	65,775	76
Talbot County	64,473	87
Seminole County	63,534	73
Irwin County	62,302	74
Lanier County	60,976	81

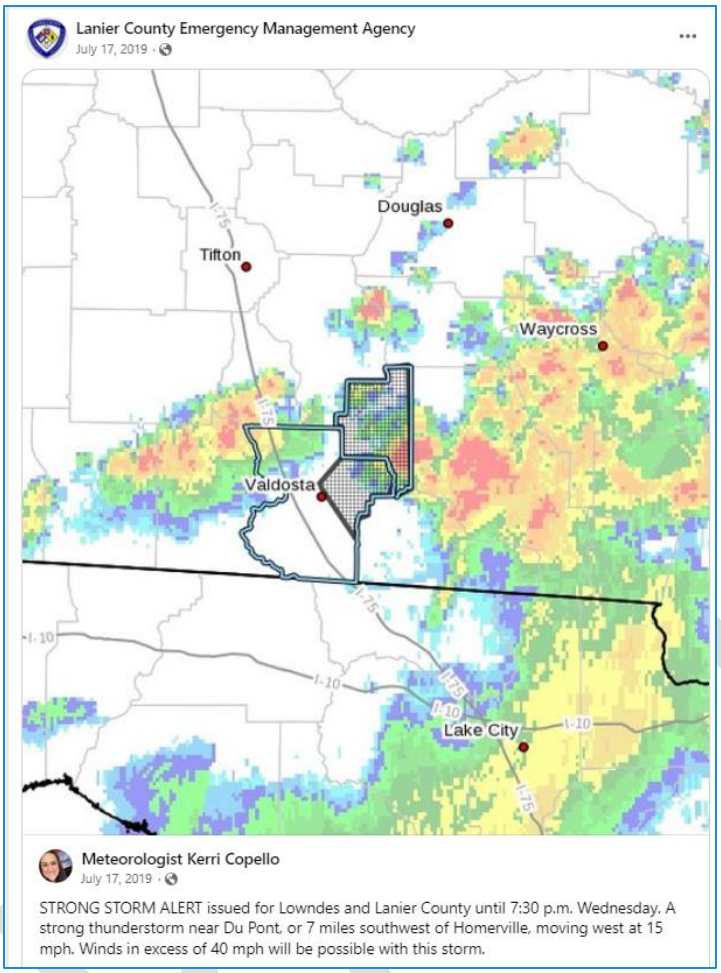
EARTH NETWORKS 2020 U.S. Lightning Report

According to EARTH NETWORKS 2020 U.S. Lightning Report, Lanier County had 60,976 lightning strikes from January 1, 2020, to December 31, 2020. This made the county #81 in the State of Georgia.

5/15/2022 7:57 PM EDT	At 757 pm edt, a severe thunderstorm was located 7 miles south of lakeland, moving northeast at 10 mph (radar indicated). Hazards include 60 mph wind gusts. Expect damage to roofs, siding, and trees. locations impacted include, lakeland, moody air force base, naylor, greenwood, barretts, hansell and stockton. hail threat, radar indicated max hail size, <. 75 in wind threat, radar indicated max wind gust, 60 mph.

Wind

According to the NOAA Storm Events Database (see Appendix F), there are 115 reports of wind events (including High Wind, Strong Wind, and Thunderstorm Wind) occurring in Lanier County (including the City of Lakeland) between 01/01/1950 and 12/31/2022. The Historic Recurrence Interval is 0.63 years (about 7 and a half months). This is a 159.72% Historic Frequency Chance per year. The past 10-year Record Frequency Per Year is 8, the past 20-year frequency is 5.5, and the past 50-year frequency is 2.06 (see the Hazard Frequency Table in Appendix D).



On September 29, 20022, the Governor of Georgia issued a State of Emergency for all of Georgia's counties for potential damaging winds, flash flooding, and isolated tornadoes.

Since the previous Hazard Mitigation Plan was completed, 43 wind events have been reported. Recent events include a storm on August 8, 2022, during which a few storms produced damaging wind gusts with impacts to trees and power lines along with heavy rain that resulted in localized flooding.

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

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

In Worksheet 3A: Inventory of Assets (appearing in Appendix A), we estimate that all of Lanier County and the City of Lakeland are equally vulnerable to all the three hazards covered in this section (hail, lightning, and wind).

An estimated 100% of the Residential property (3,944 of 3,944) in Lanier County (including the City of Lakeland) could be affected by this hazard, with a total value of $249,400,501. Also, an estimated 100% of the Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education and Utility properties (1,583 of 1,583) in the community may be affected, with a total value of $371,511,462. The values are based on the most recent available tax roll data for Lanier County and the City of Lakeland, provided by the Lanier County Tax Assessor's Office. Because data broken down by jurisdiction are not consistently available, it was not possible to break down these worksheets by jurisdiction; therefore, they refer to the entire county, including the city.

Damage to crops is not considered in any of these figures. According to the Center for Agribusiness & Economic Development's 2022 Georgia Farm Gate Value Report (farmgate.caes.uga.edu/CountyAnnualReport.aspx) the total farm gate value of agricultural production in Lanier County is $47,463,433.60.

According to the inventory database reports and maps, all 62 Critical Facilities and Infrastructure for Lanier County (including the City of Lakeland) could be affected by this hazard. The total value of these Critical Facilities is $155,539,298.

E. Land Use and Development Trends

The County and City experienced rapid population growth during the 2000s, but the growth has been less rapid in the 2010s. The city has seen a slight decrease in population since 2010.

Lanier County and the City of Lakeland have zoning regulations. The County and the City of Lakeland have mandatory building and fire codes enforced by a building inspector; the City and the County participate in joint comprehensive planning and in 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

Hail, lightning and/or wind may happen at any place at any time, and no difference in severity is expected between Lanier County and the City of Lakeland. However, the impact may be more severe in places with higher population density due to more people being in danger, and other impacts associated with higher population density. No other multi-jurisdictional differences have been identified yet.

G. Overall HRV Summary of Events and Their Impact

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

The HMPUC has developed a comprehensive range of Mitigation Goals, Objectives, and Action Steps to lessen the impacts from this hazard. These are contained in Chapter 4.
Since the previous plan was approved, there have not been any new developments, regulations, programs, or other changes in the community that would either increase or decrease the community's overall vulnerability to these hazards.

H. Impacts from Future Conditions

Hail
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 to $14 billion per year, or $80-$140 billion per decade. (*Source: Insurance Information Institute).* This far outpaces the total of around $14.1 billion 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 the rarity of hail and how to measure 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.

Lightning

The impact of lightning increases the frequency of wildfires. There are studies that project an increase in lightning due to climate change within the next century. With more thunderstorms due to warmer temperatures, more lightning will occur.

As hotter air temperatures produce more water vapor, climate scientists say more than likely, lightning activity will increase with the arming planet. Water condenses, and the clouds heat up, causing more storms.
Lightning strikes occur across the United States each year; approximately 3,000 strike people, with about 20 of those victims, on average, dying as a result. Research states that those odds may be

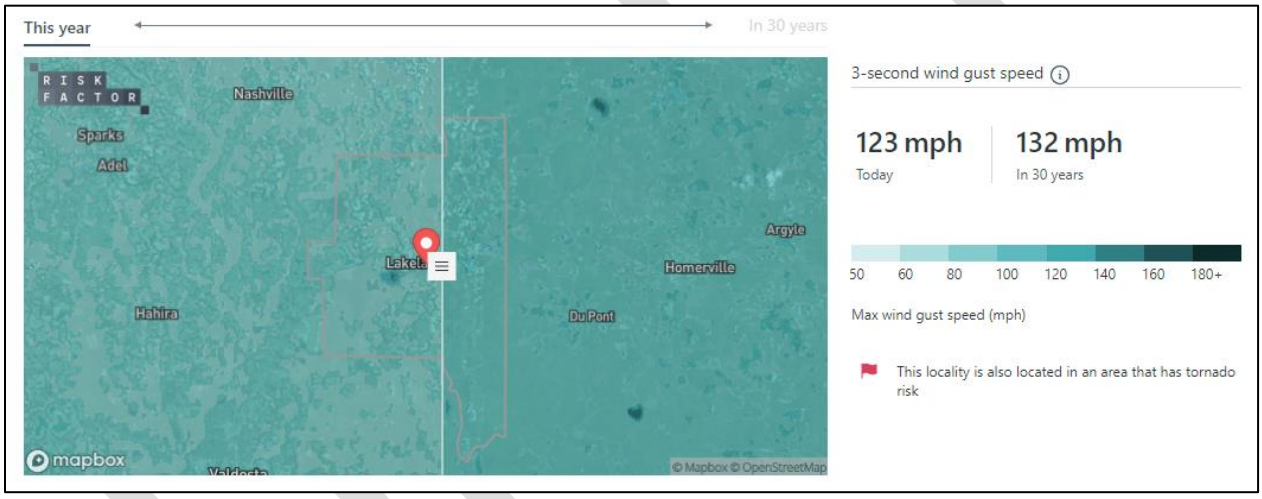
changing as global warming produces more lightning. One study (https://www.science.org) from 2014 estimated that lightning strikes could increase by 50% in the United States if warming continues.

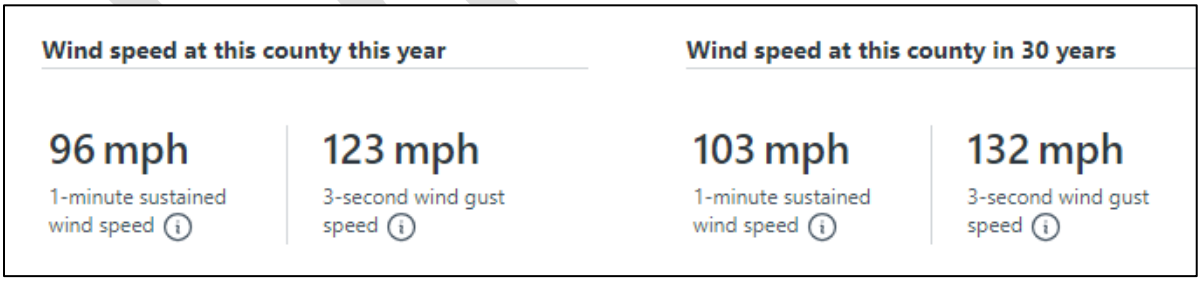
Wind

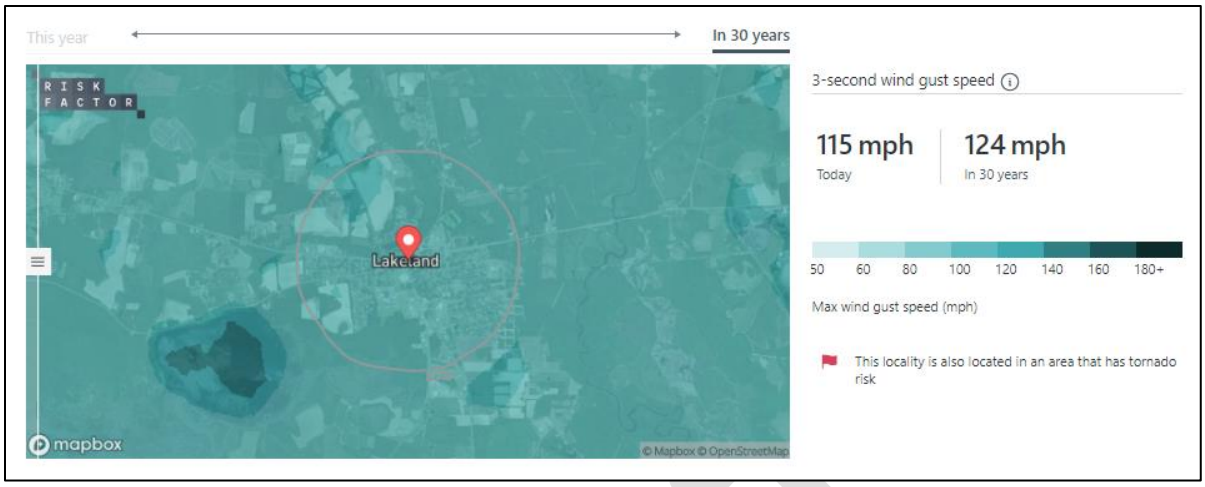
Lanier County has a Severe Wind Factor risk based on the projected likelihood and speed of a hurricane, tornado, or severe storm wind impacting it. Average maximum wind speeds in Lanier County are higher now than they were 30 years ago, and 94% of homes in Coffee County have at least some risks.

Severe wind events can knock down trees and power lines and scatter debris. This can cause harm to anyone that is outside during this event. It can also cut off access to utilities, emergency services, and transportation, causing an impact on the overall community economically.

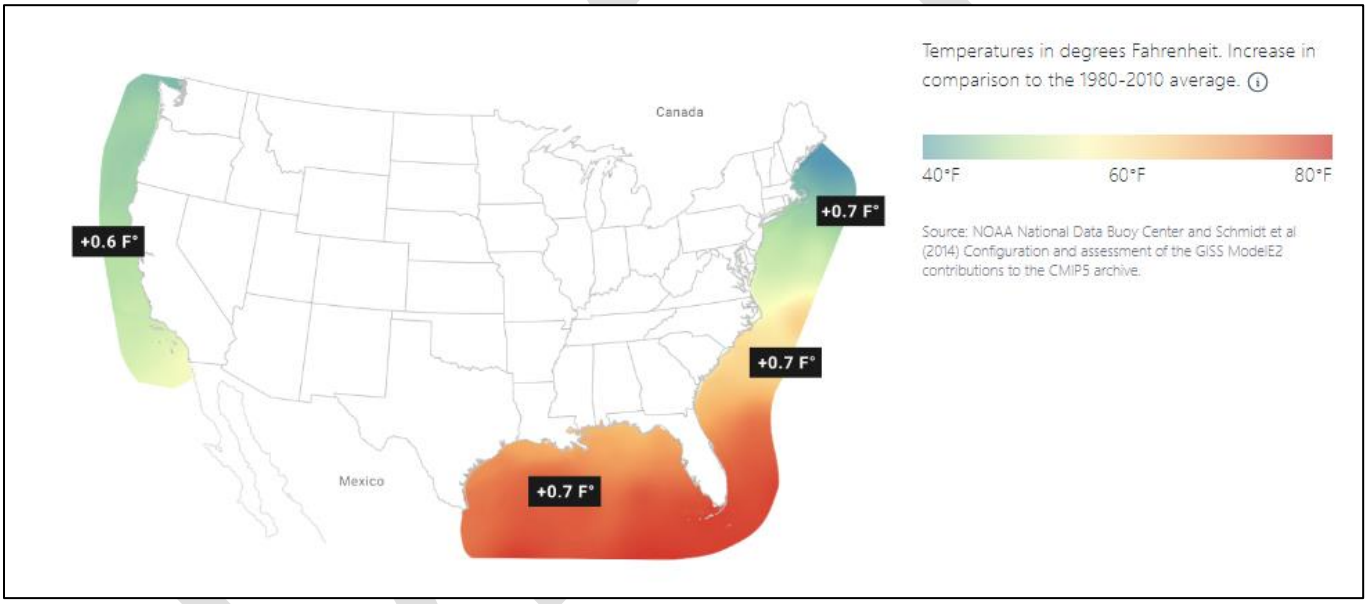
A rare windstorm (1-in-3,000-year) occurring today could cause gusts of up to 123 mph in Lanier County. A hurricane of this severity has a 1% chance of occurring at least once within the next 30 years and could show wind gusts of up to 132 mph due to the changing environment.



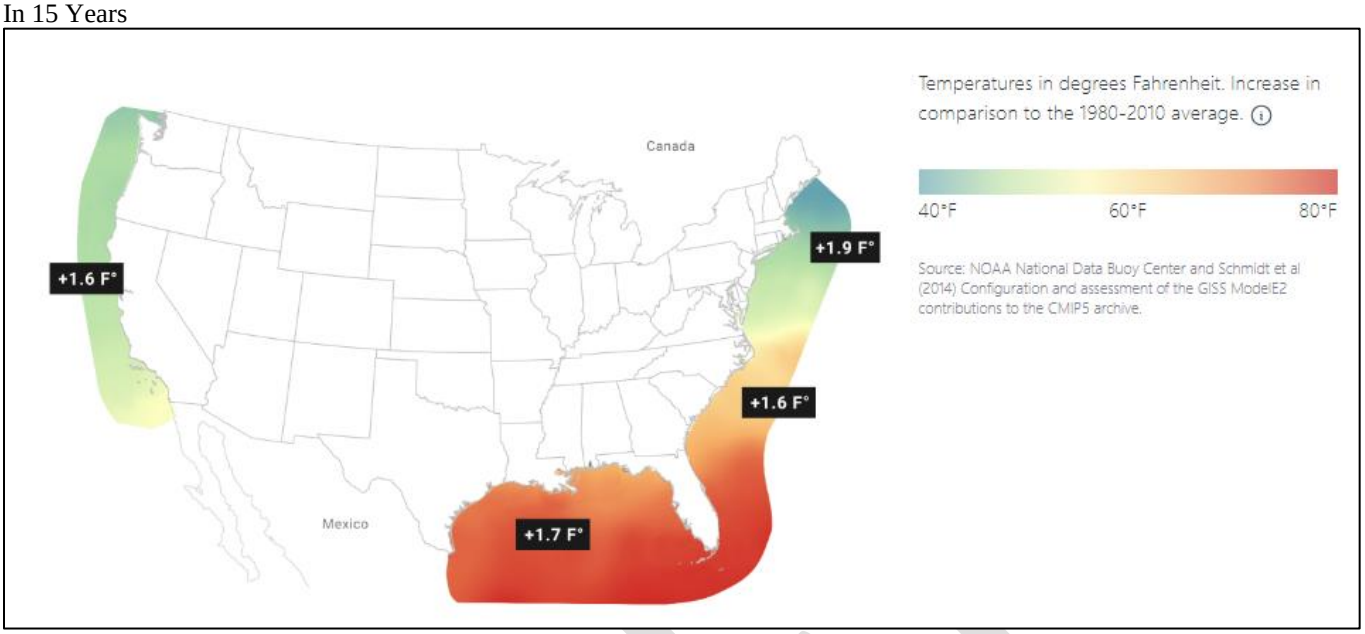



This year
In 30 years
RISK FACTOR
Lakeland
mapbox
© Mapbox © OpenStreetMap
3-second wind gust speed
115 mph
Today
124 mph
In 30 years
50 60 80 100 120 140 160 180+
Max wind gust speed (mph)
This locality is also located in an area that has tornado risk

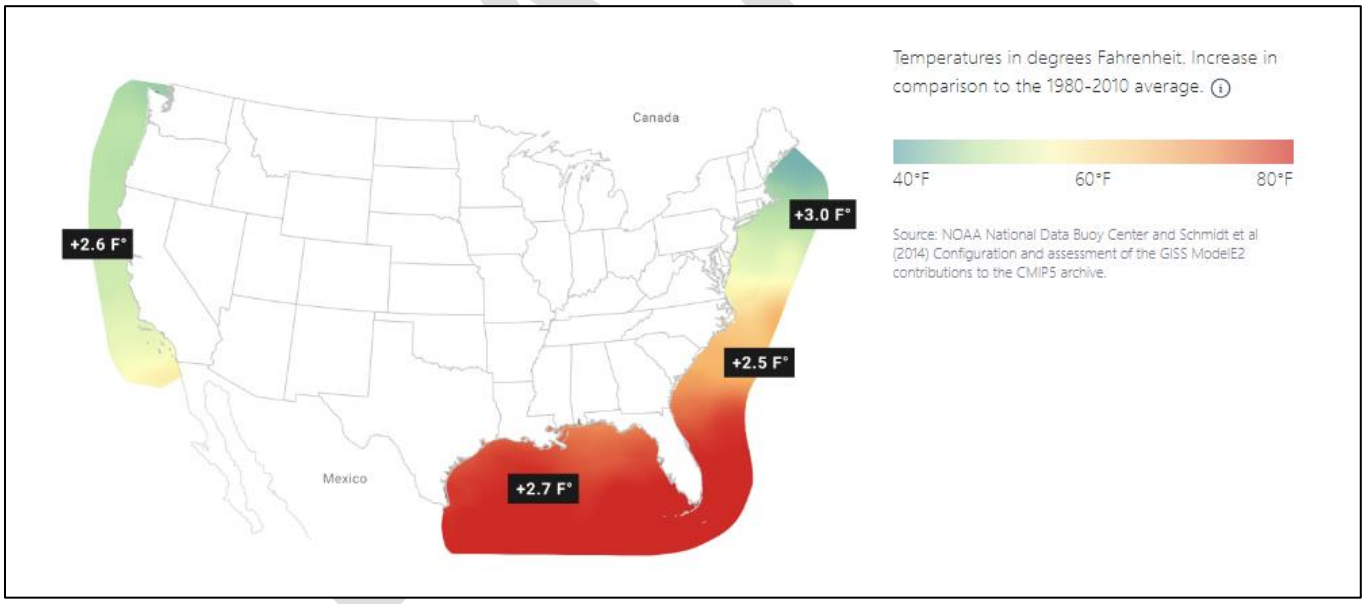
This Year


Canada
Mexico
+0.6 F°
+0.7 F°
+0.7 F°
+0.7 F°
Temperatures in degrees Fahrenheit. Increase in comparison to the 1980-2010 average.
40°F
60°F
80°F
Source: NOAA National Data Buoy Center and Schmidt et al (2014) Configuration and assessment of the GISS ModelE2 contributions to the CMIP5 archive.

In 15 Years



In 30 Years



With the changing environment comes warmer seas, new weather patterns, and much stronger storms. There is more energy when the atmosphere warms and this creates high-intensity winds.
https://riskfactor.com

I. Underserved/Socially Vulnerable Population Risk

Lanier County has a large population of elderly individuals that live in assisted living facilities/nursing homes that may not receive emergency notifications through existing emergency notifications systems. Homelessness does exist in Lanier County. There is also a great number of farm workers that are Hispanic and are living in dormitory-type housing within the county. The Department of Family and Children Services (DFACS) participated in one workshop. DFACS keeps in close contact with this group of people and informs them of emergencies when necessary. The Emergency Preparedness Coordinator from the Lanier County South Georgia Medical Center Campus was also at the workshops, and they inform the nursing homes and assisted living facilities of any emergency.

A workshop was held once again to invite the vulnerable population. Flyers were distributed to those attending and available at the Health Department, DFACS, County Courthouse, and City Hall. They were also made available to the migrant workers within the county.

Section V. Extreme Heat

A. Identification of Hazard

Temperatures that hover 10 degrees or more above the average high temperature for the region and last for several weeks are defined as extreme heat. The threat of extreme heat has been chosen by the HMPUC as the fifth most likely hazard to occur and cause damage in the community, based

on experience, the FEMA-described methodology, and other factors. 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.

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

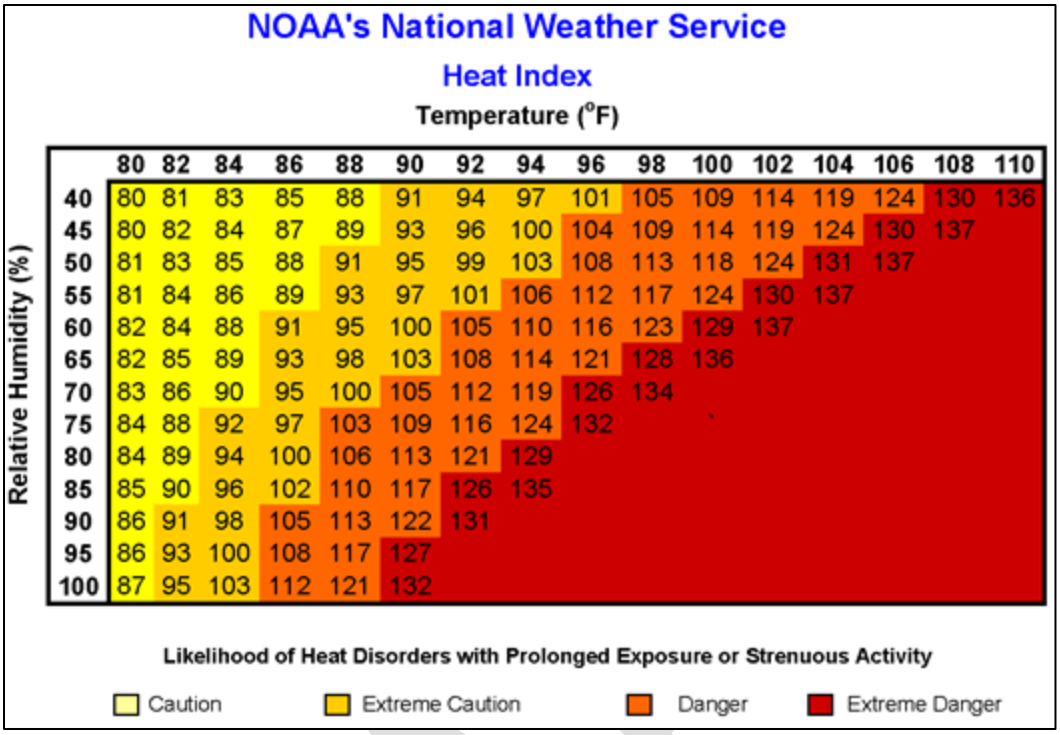
The heat index is a measure that combines the effects of heat and humidity. When heat and humidity combine to reduce the amount of evaporation of sweat from the body, outdoor exercise becomes dangerous even for those in good shape (source: National Weather Service, http://www.nws.noaa.gov/forecasts/wfo/definitions/defineHeatIndex.html).

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

Heat Index category and effects

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

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



Relative Humidity (%)	80	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110
40	80	81	83	85	88	91	94	97	101	105	109	114	119	124	130	136
45	80	82	84	87	89	93	96	100	104	109	114	119	124	130	137	
50	81	83	85	88	91	95	99	103	108	113	118	124	131	137		
55	81	84	86	89	93	97	101	106	112	117	124	130	137			
60	82	84	88	91	95	100	105	110	116	123	129	137				
65	82	85	89	93	98	103	108	114	121	128	136					
70	83	86	90	95	100	105	112	119	126	134						
75	84	88	92	97	103	109	116	124	132							
80	84	89	94	100	106	113	121	129								
85	85	90	96	102	110	117	126	135								
90	86	91	98	105	113	122	131									
95	86	93	100	108	117	127										
100	87	95	103	112	121	132										

For the National Weather Service's Tallahassee district (which includes Lanier County), an **Excessive Heat Watch** is issued when conditions are favorable for an excessive heat event in the next 24 to 72 hours (about 3 days). A Watch is used when the risk of a heat wave has increased, but its occurrence and timing are still uncertain. A Watch provides enough lead time so those who need to prepare can do so, such as city officials with excessive heat event mitigation plans. The National Weather Service office in Tallahassee will issue this product if the heat index might reach or exceed 113°F.

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

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

Lanier County and the City of Lakeland are all equally vulnerable to the effects of extreme heat.

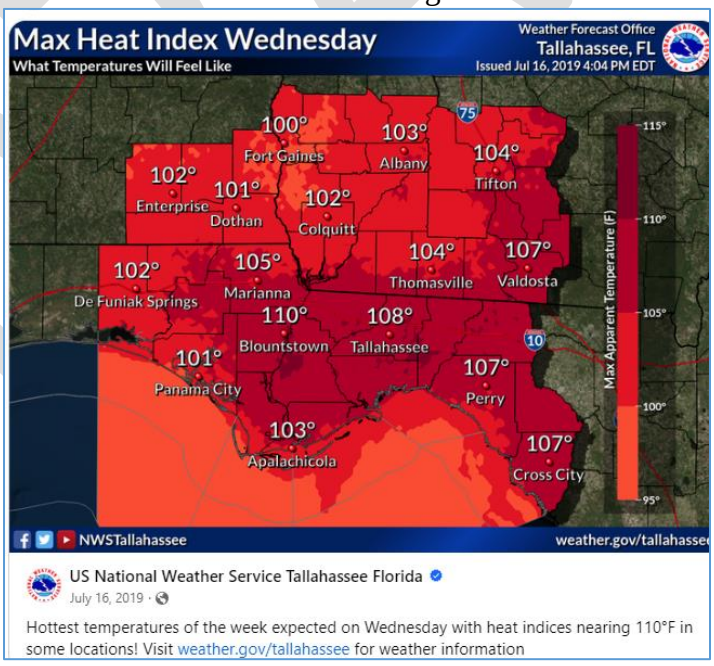
B. Profile of Events, Frequency of Occurrences, Probability

According to National Weather Service data (see Appendix F), 77 reports of extreme heat events occurred77occurring in Lanier County (including the city) between 01/01/2006 and 12/31/2022. (According to the data, no extreme heat events were on record for the community in 2016 or 2017 or through April 2018.) The Historic Recurrence Interval is 0.38 years. This is a 452.94% Historic Frequency Chance per year. The past 10-year Record Frequency Per Year is 3.1, the past 20-year frequency is 1.6, and the past 50-year frequency is 0.64 (see the Hazard Frequency Table in Appendix D). These were all Heat Advisories except for one event in 2012, which was an Excessive Heat Warning.

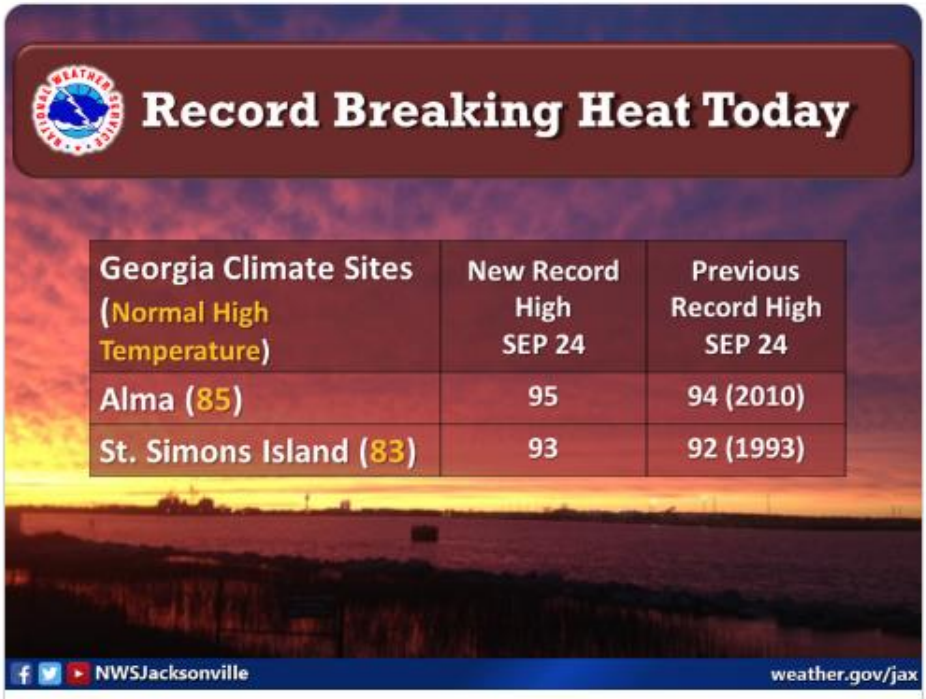
Since the previous Hazard Mitigation Plan became effective, approximately 45 extreme heat events have occurred. These were all Heat Advisories. According to Weather Channel climate data, the hottest month in the area is typically July, with an average high temperature of 92 degrees. The record max high temperature was 105 degrees in 2011, 14 degrees above the average daily high. Therefore, the area is subject to extreme heat events that bring temperatures far higher than what people are used to. Some people in the community do not have air conditioning in their residences, and the very old and very young are particularly vulnerable to extreme temperatures. 14.7 percent of the county's population in 2022 was over age 65, meaning there are substantial numbers of seniors who are potentially much more vulnerable to extreme heat events than the rest of the population. Extreme heat has the potential to cause significant injury and even death in the community.

Even though the above map has insufficient data for Lanier County, it is safe to say that their number of heat days is similar to the adjoining counties of 9-14 days per summer.

Heat Warnings



Lanier County Emergency Management Agency
September 24, 2019 ·

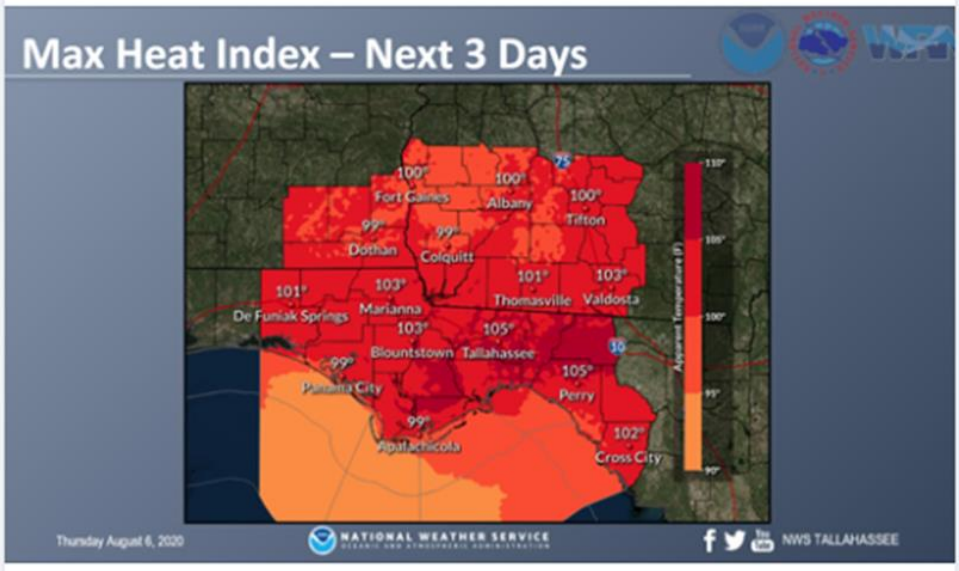


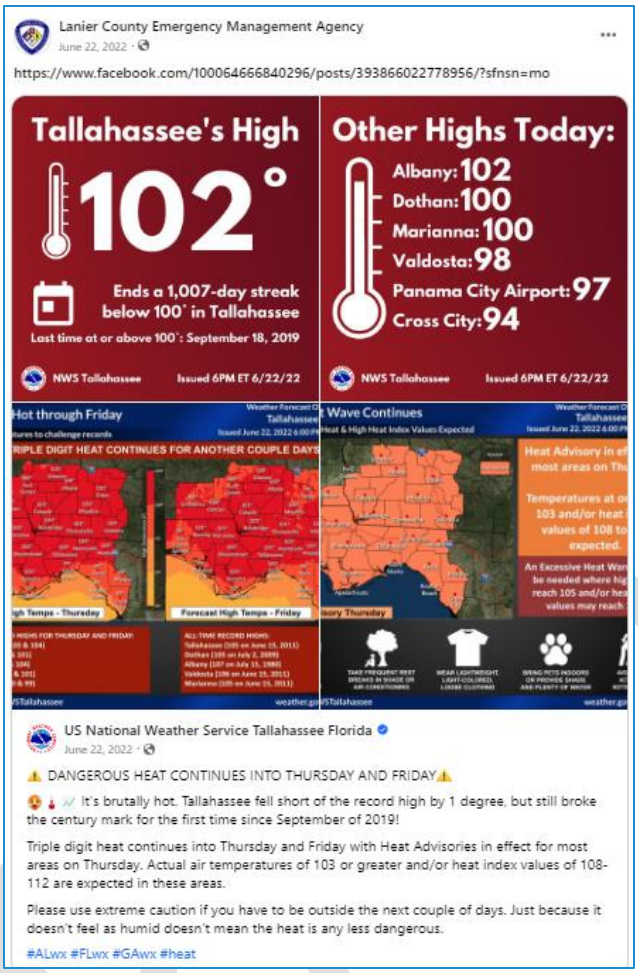
US National Weather Service Jacksonville Florida
September 24, 2019 ·

Record breaking heat today! Two of our climate sites in Georgia broke their daily high temperature record this afternoon. Jacksonville tied their daily high record of 94 degrees. Near record to record heat is expected to continue through the week.

Lanier County Emergency Management Agency
August 6, 2020 ·

Stay hydrated!





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

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

In Worksheet 3A: Inventory of Assets (appearing in Appendix A), we estimate that all of Lanier County and the City of Lakeland are equally vulnerable to this hazard.

An estimated 100% of the Residential property (3,944 of 3,944) in Lanier County (including the City of Lakeland) could be affected by this hazard, with a total value of $249,400,501. Also, an estimated 100% of the Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education, and Utility properties (1,583 of 1,583) in the community may be affected, with a total value of $371,511,462. The values are based on the most recent available tax roll data for Lanier County and the City of Lakeland, provided by the Lanier County Tax Assessor's Office. Because data broken down by jurisdiction are not consistently available, it was not possible to break down these worksheets by jurisdiction; therefore, they refer to the entire county, including the city.

Damage to crops is not considered in any of these figures. According to the Center for Agribusiness & Economic Development's 2022 Georgia Farm Gate Value Report

(farmgate.caes.uga.edu/CountyAnnualReport.aspx) the total farm gate value of agricultural production in Lanier County is $47,463,433.60.

According to the inventory database reports and maps, all 62 Critical Facilities and Infrastructure for Lanier County (including the City of Lakeland) could be affected by this hazard. The total value of these Critical Facilities is $155,539,298.

E. Land Use and Development Trends

The County and City experienced rapid population growth during the 2000s, but the growth has been less rapid in the 2010s. The city has seen a slight decrease in population since 2010.

Lanier County and the City of Lakeland have zoning regulations. The County and the City of Lakeland have mandatory building and fire codes enforced by a building inspector; the City and the County participate in joint comprehensive planning and in the required updates of the Service Delivery Strategy.

Lanier County and the City of Lakeland have zoning regulations. 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 that are used in Lanier County and the City of Lakeland:

- 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 Act requires local governments that elect to enforce these codes within their jurisdictions to adopt administrative procedures and penalties to locally enforce any of them. Also, any applicable appendices of these codes must be adopted locally to be enforceable within a specific local jurisdiction.

The DCA Board specifically omitted the plumbing, electrical, and energy requirements of the International Residential Code for One- and Two-Family Dwellings. Therefore, the plumbing requirements of the International Plumbing Code, the electrical requirements of the National Electrical Code, and the energy requirements of the International Energy Conservation Code must be used for one- and two-family dwelling construction.

F. Multi-Jurisdictional Differences

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

G. Overall HRV Summary of Events and Their Impact

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

The HMPUC has developed a comprehensive range of Mitigation Goals, Objectives, and Action Steps to lessen the impacts from this hazard. These are contained in Chapter 4.
Since the previous plan was approved, there have not been any new developments, regulations, programs, or other changes in the community that would either increase or decrease the community's overall vulnerability to this hazard.

H. Impacts from Future Conditions

Average temperatures in Georgia, have climbed nearly 2°F since the 1060's, and are expected to exceed historical records by about 12°F by the end of the century if high carbon pollution levels continue globally. 41 counties in Georgia already see an average of more than nine extreme summer days of heat per year, with 26 of those counties averaging more than two weeks' worth of extremely hot days. Climate change is fueling hotter summer days and increasing the intensity and frequency of heat wave. Heat waves raise the risk of heatstroke and other heat-related illnesses. In 2010, Georgia had a deadly year when 25 heat-related deaths were reported.

As global temperatures continue to climb, heat-related deaths are also up. Amid 2021 year's record-shattering temperature spikes, early estimates from the Centers for Disease Control and Prevention (CDC) indicate that heat deaths jumped 56% between 2018 and 2021.

There were 1,012 heat-related deaths in the U.S. in 2018, which jumped to 1,577 in 2021. In the time frame analyzed, the only year that didn't see a year-over-year increase was 2019.

Heat-related deaths (by the year)

2018	1,012
2019	911
2020	1,156
2021	1,577

Source: ValuePenguin analysis of Centers for Disease Control and Prevention (CDC) Provisional Mortality Statistics data

Older Americans face higher heat-related death rates than younger Americans. The age group most vulnerable are Americans 85 and older, where heat is a cause in 0.98 annual deaths per 100,000 residents. For Americans 5 to 14, the group with the lowest rate, that figure is 0.01 per 100,000 (27 deaths over the four years).

Heat-related deaths relative to population (by age)

Age group	Deaths	Annualized rate per 100,000 residents
Less than 1	51	0.27
1 to 4	139	0.18
5 to 14	27	0.01
15 to 24	142	0.07
25 to 34	365	0.16
35 to 44	526	0.25
45 to 54	667	0.33
55 to 64	932	0.44
65 to 74	878	0.55
75 to 84	620	0.77
85 and older	323	0.98

Source: ValuePenguin analysis of CDC Provisional Mortality Statistics data

Among races, American Indians and Alaska Natives die at a higher rate**.** For these two races, the heat-related death rate is 0.71 per 100,000 residents (about the seating capacity of the Los Angeles Memorial Coliseum) annually. That compares to 0.32 and 0.29 per 100,000, respectively, among Black and white residents.

Social, economic and health disparities likely play a role in the differences in death rates. Housing policies have pushed many low-income people and minority groups into urban neighborhoods. The concentrated development in these densely populated areas often creates an "island" of heat not seen in other areas, which increases the risk of heat-related death. The lack of access to health care also plays a role, especially among those uninsured.

Heat-related deaths relative to population (by race)

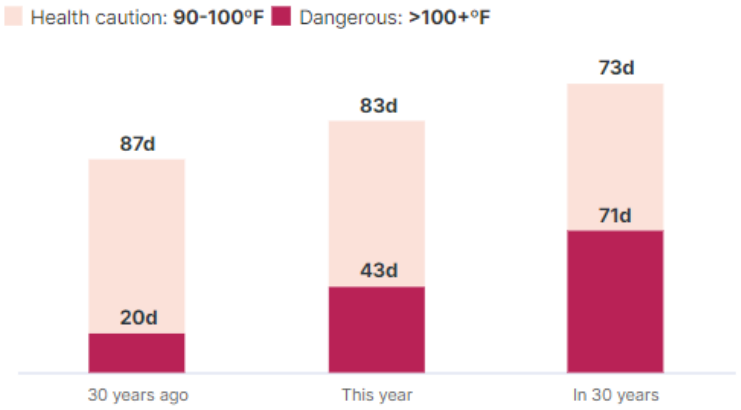
Race	Deaths	Annualized rate per 100,000 residents
American Indian or Alaska Native	151	0.71
Asian	90	0.09
Black or African American	716	0.32
White	3,636	0.29
More than one race	72	0.15

Source: ValuePenguin analysis of CDC Provisional Mortality Statistics data

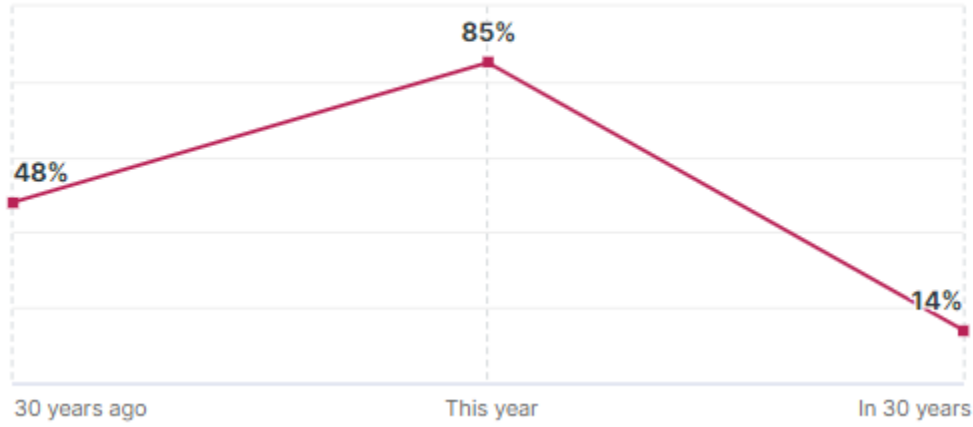
Understanding the Changing Heat Patterns in Lanier County

With increasing average temperatures, dangerously hot days and heatwaves may occur more often. Temperatures exceeding 90°F can be physically hazardous for high-risk individuals. When temperatures exceed 100°F it can be dangerous for everyone.

Number of Days per Year



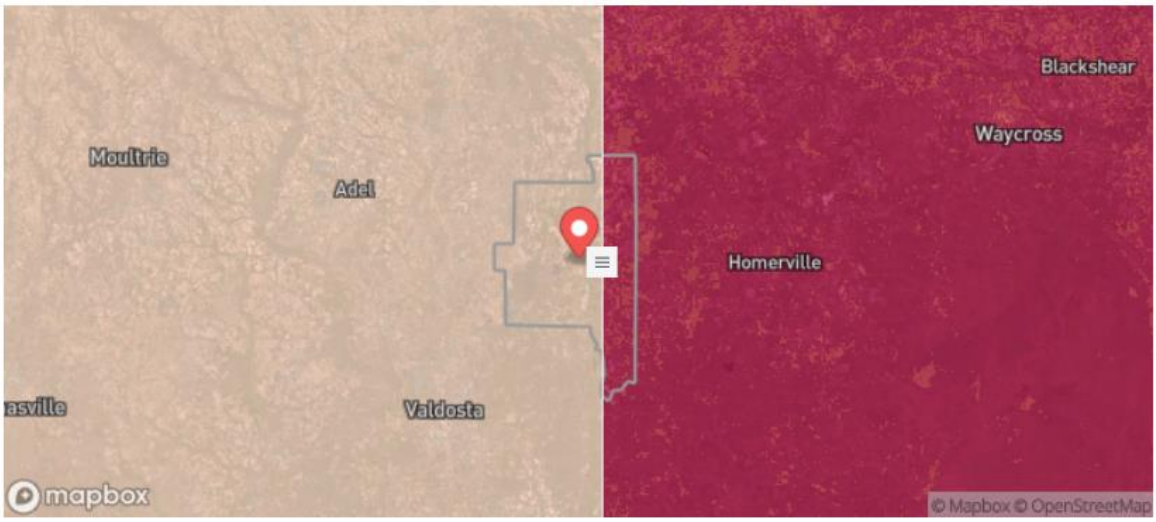
Likelihood of 3+ Day Heatwave



How many hot days will Lanier County have?

A hot day in Lanier County is considered to be any day above a "feels like" temperature of **107°F**. Lanier County is expected to experience **7 hot days** this year. Due to a changing climate, Lanier County will experience **19** days above **107°F** in 30 years.

This year → In 30 years

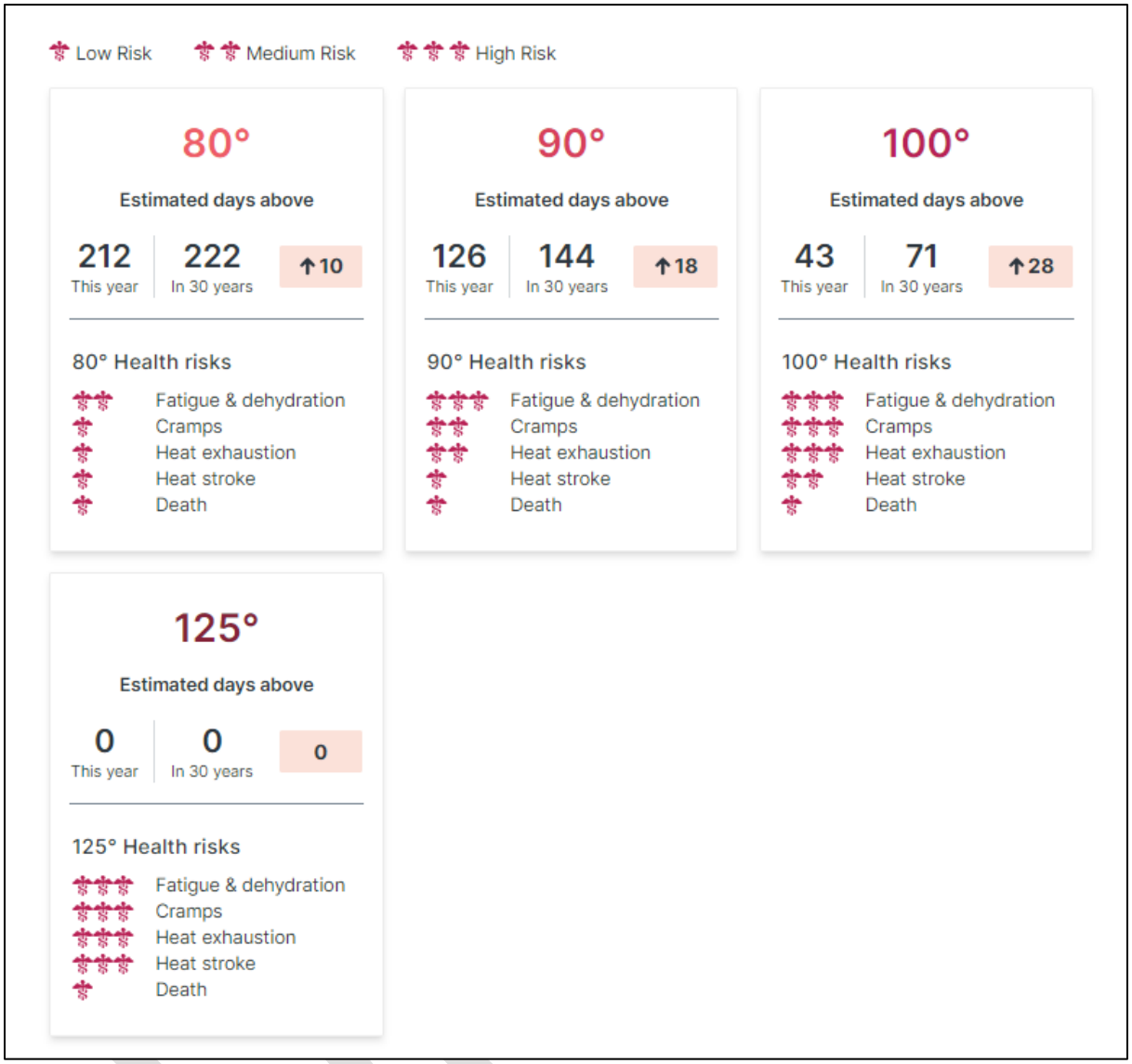


Days above 94°F "feels like" temp

< 6 | 7 | 8 | 9 | 13 | 16 | 19 | 23 | 27 | 30+

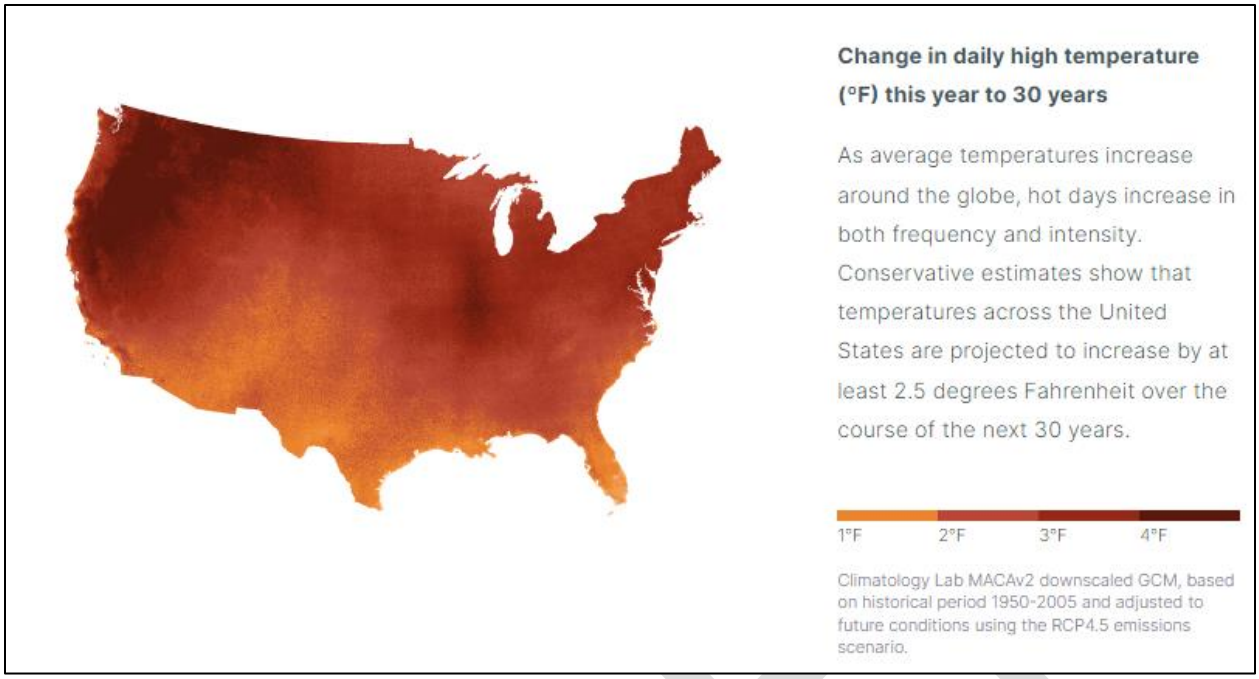
Total hot days

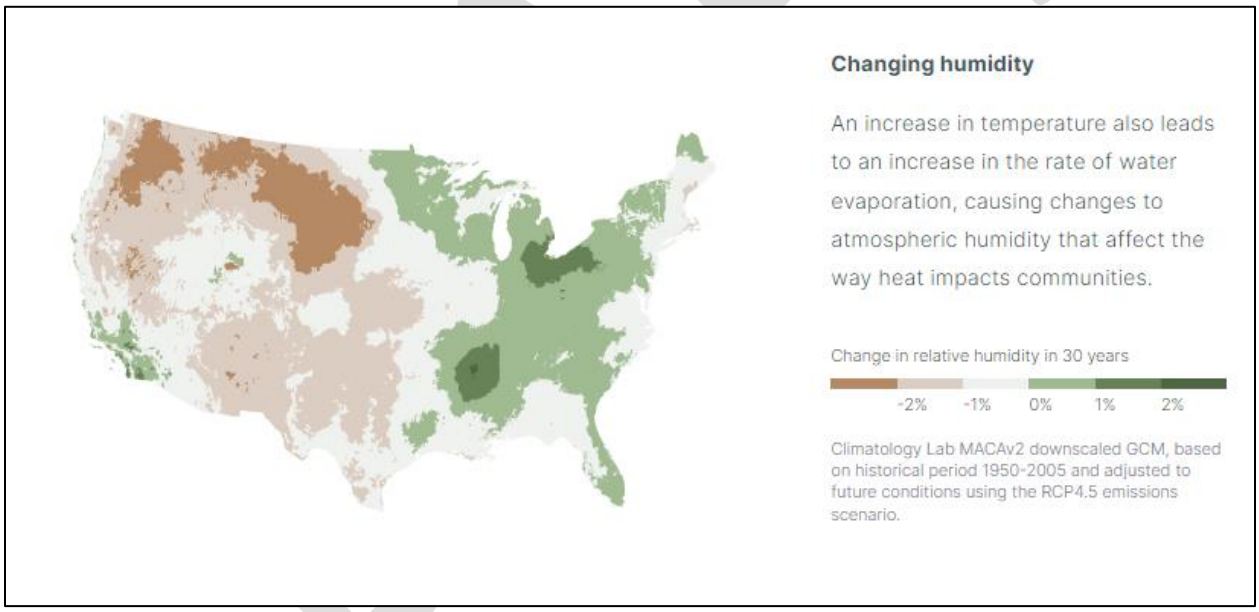
7 days	19 days
Today	In 30 years



Heat risks are changing because of the environment. A changing environment means higher average temperatures and increased humidity, which has a compounding effect on heat indexes that make risky heat events possible.

As the global temperature rises, it can be important to understand what factors contribute to heat risk.





I. Underserved/Socially Vulnerable Population Risk

Lanier County has a large population of elderly individuals that live in assisted living facilities and nursing homes that may not receive emergency notifications through existing emergency notifications systems. The homeless population also may not receive warning. However, in the past couple of years, Lanier County has installed a siren for tornado warnings. The Department of Family and Children Services Department (DFACS) Director attended the workshops, as did the hospital administrator and emergency response personnel, and these concerns were talked about and addressed. DFACS also works with the Hispanic population to keep them informed.

A workshop was held once again to invite the vulnerable population. Flyers were distributed to those attending and available at the Health Department, DFACS, County. Courthouse, and City Hall. They were also made available to the migrant workers within the county.

Section VI. Wildfires

A. Identification of Hazard

Wildfire is a large, destructive fire that spreads quickly over woodland or brush. The threat of wildfire has been chosen by the HMPUC as the sixth most likely hazard to occur and cause damage in the community, based on 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.

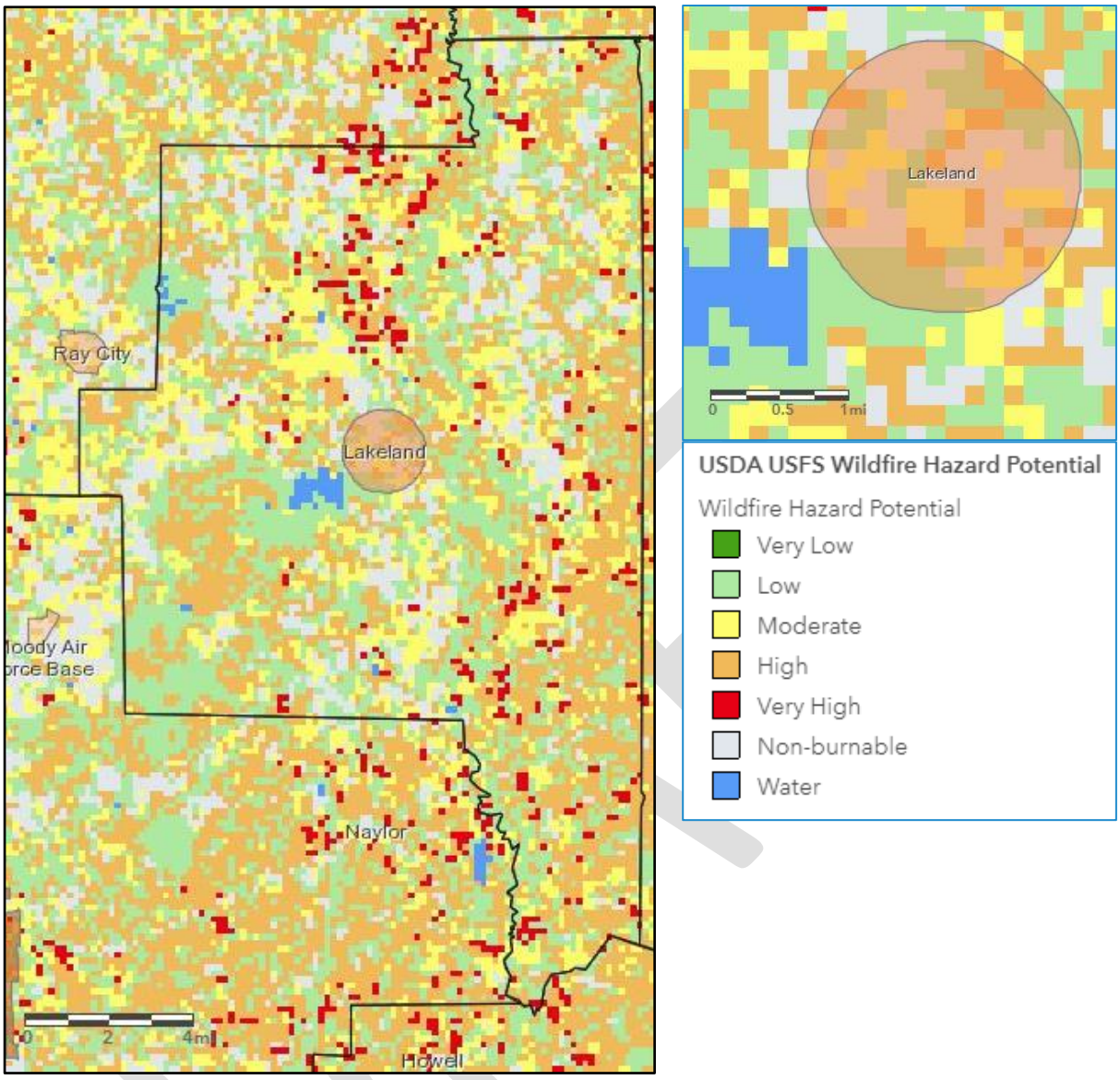
Much of southern Georgia is covered by forests, and fires play an important role in the health of forest ecosystems by breaking down organic matter into soil nutrients and helping seeds to germinate (source: NASA, https://earthobservatory.nasa.gov/Features/GlobalFire/fire_2.php). When naturally occurring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

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

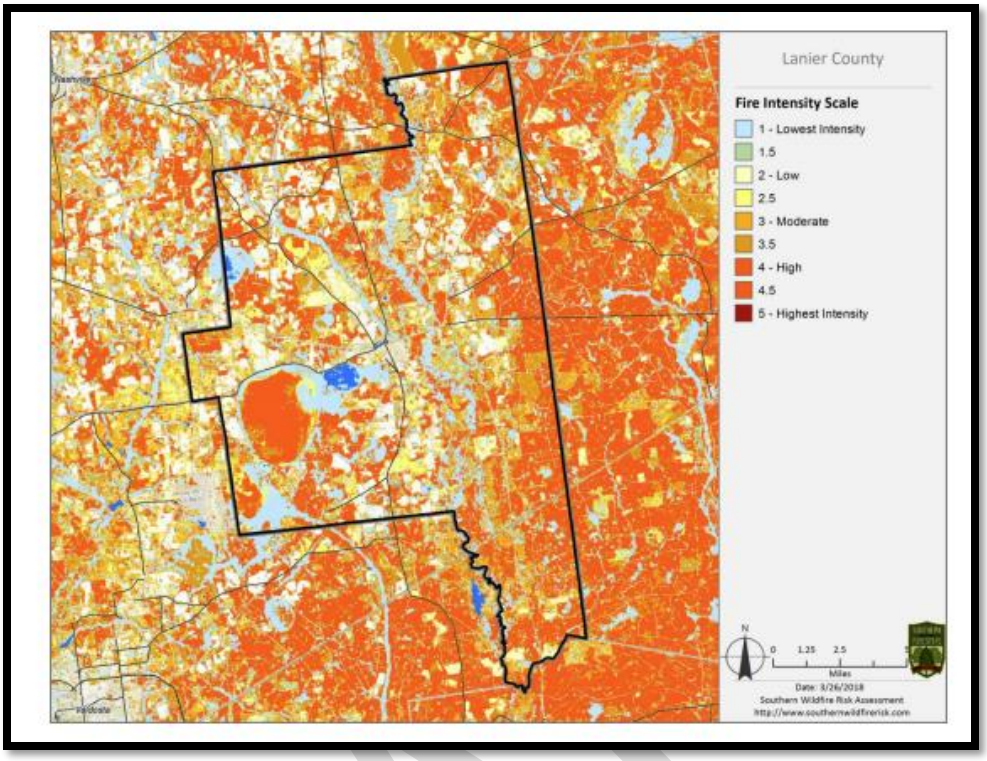
According to NASA (https://earthobservatory.nasa.gov/IOTD/view.php?id=89757), an estimated 84 percent of wildfires are caused by humans. Some common ways that people start fires include discarding cigarettes, leaving campfires unattended, and losing control of prescribed burns or crop fires. Sparks from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

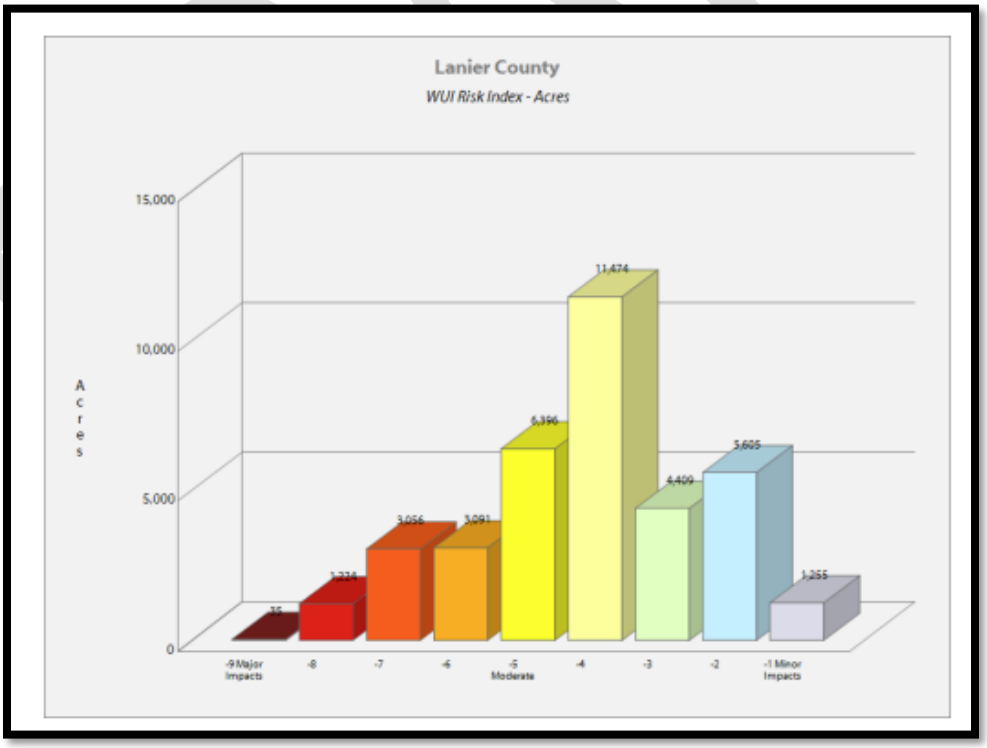
When a residential area, whether it be a single home or an entire subdivision, is adjacent to an area containing vegetative fuels, such as a forest or other wooded area, this is referred to as a Wildland-Urban Interface area (WUI). These are the areas at greatest risk for property damage due to Wildfire.

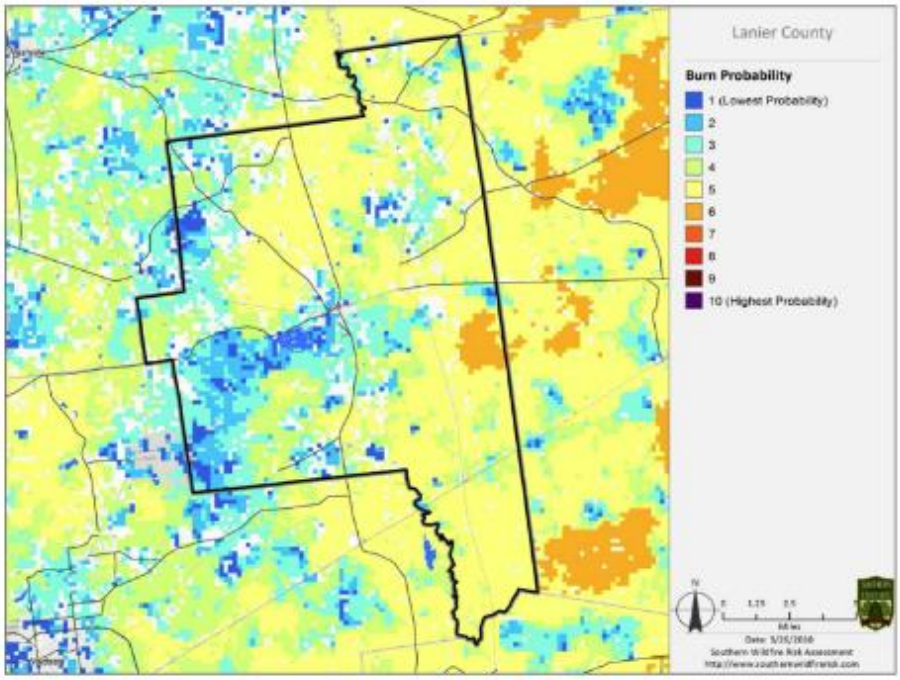
Lanier County and the City of Lakeland are all vulnerable to the effects of wildfires. The USDA Forest Service assigns areas a Wildfire Hazard Potential (WHP) score of Very Low, Low, Moderate, High, Very High, or Non-burnable. As the following map shows, Lanier County has areas will all these scores except for Very Low. The City of Lakeland has areas scored Low, Moderate, High, and Non-burnable.



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


Lanier County
Fire Intensity Scale
1 - Lowest Intensity
1.5
2 - Low
2.5
3 - Moderate
3.5
4 - High
4.5
5 - Highest Intensity
N
0 1.25 2.5
Miles
Date: 3/26/2018
Southern Wildfire Risk Assessment
http://www.southernwildfirerisk.com


Lanier County
WUI Risk Index - Acres
Acres
15,000
10,000
5,000
0
35
1,274
3,056
3,091
6,396
11,474
4,409
5,605
1,255
-9 Major Impacts
-8
-7
-6
-5 Moderate
-4
-3
-2
-1 Minor Impacts



B. Profile of Events, Frequency of Occurrences, Probability

According to Georgia Forestry Commission data (see Appendix F), there are 2,556 reports of wildfires occurring in Lanier County (including the city) between 01/01/1968 and 12/31/2022. The Historic Recurrence Interval is 0.02 years. This is a 4,970% Historic Frequency Chance per year. The past 10-year Record Frequency Per Year is 21.5, the past 20-year frequency is 37.4, and the past 50-year frequency is 49.7 (see the Hazard Frequency Table in Appendix D).

Since the previous Hazard Mitigation Plan was completed, an estimated 67 wildfire events have occurred, with 244 acres burned. According to Georgia Forestry Commission data, 2000 is the year on record in which the largest amount of land was burned by wildfires (1,983 acres). 1974 was the year with the largest number of wildfires (181). In the past, wildfires have caused damage to homes, roads, power lines, and other infrastructure, causing power outages and transportation hazards.

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

In 2017, Georgia was ranked fourth in the nation for the number of wildfires and by acres burned, with nearly 4,000 different wildfires that year. A 2016 study "estimated that human-caused climate change contributed to the burning of an additional 10.4 million acres of forest from 1984—2015 [in the US], nearly double what would have been expected without it."

Lanier County Emergency Management Agency
May 28, 2021 ·

One of Lanier County's own has lost everything in a devastating house fire. Matt Bridges has spent his life serving others. He was in the United States Marines, and a Purple Heart Recipient. He has been an active member of the Lakeland/Lanier county fire department and recently took on the roll of full time firefighter with the Valdosta Fire Department. If you have never pulled into your driveway only to see every thing you own in ashes, I can tell you from experience, it is devastating. It's not the house or even furniture that hurt the most. Loosing family photos, and keepsakes that can never be replaced is heartbreaking. Matt has a cash app account ($CombatGrunt) if you can spare anything to his family. Thank you from the bottom of my heart.

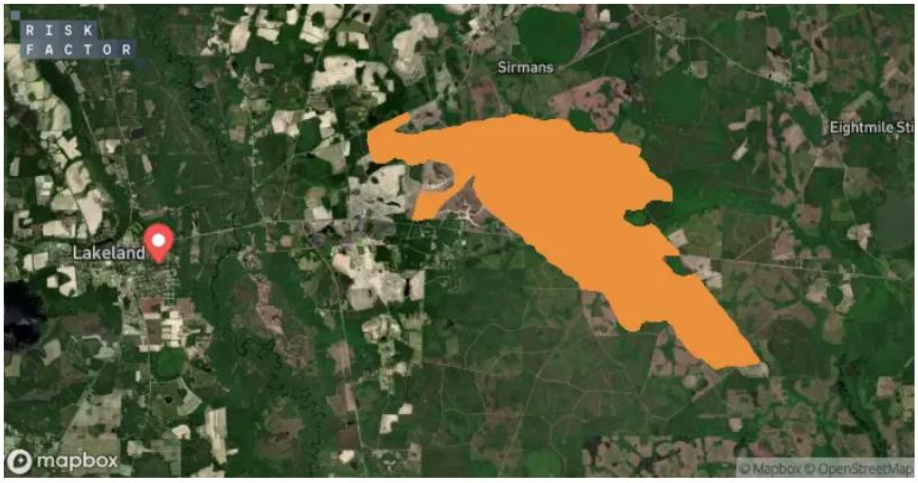
Historical Wildfire Events in Lanier County

There have been **2** wildfires recorded near **Lanier County** between 1984 and 2021.
In **April, 2000**, **4** buildings in **Lanier County** were impacted by **a wildfire**. This fire covered **21 square miles**.

Spotlight: April 2000

Properties impacted in **Lanier County:** | **2**

Square miles covered by fire: | **21** square miles



Burn area

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

In Worksheet 3A: Inventory of Assets (appearing in Appendix A), we estimate that all of Lanier County and the City of Lakeland are equally vulnerable to this hazard.

An estimated 100% of the Residential property (3,944 of 3,944) in Lanier County (including the City of Lakeland) could be affected by this hazard, with a total value of $249,400,501. Also, an estimated 100% of the Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education and Utility properties (1,583 of 1,583) in the community may be affected, with a total value of $371,511,462. The values are based on the most recent available tax roll data for Lanier County and the City of Lakeland, provided by the Lanier County Tax Assessor's Office. Because data broken down by jurisdiction are not consistently available, it was not possible to break down these worksheets by jurisdiction; therefore, they refer to the entire county, including the city.

Damage to crops is not considered in any of these figures. According to the Center for Agribusiness & Economic Development's 2022 Georgia Farm Gate Value Report (farmgate.caes.uga.edu/CountyAnnualReport.aspx) the total farm gate value of agricultural production in Lanier County is $47,463,433.60.

According to the inventory database reports and maps, all 62 Critical Facilities and Infrastructure for Lanier County (including the City of Lakeland) could be affected by this hazard. The total value of these Critical Facilities is $155,539,298.

E. Land Use and Development Trends

Since 2016, there has been a -4.86% decrease in population in Lanier County and a -14.1% (9,877) decrease. The City of Lakeland's 2016 population was 3,348, a -0.5% decrease since 2010. Since 2016, the City of Lakeland's population has decreased by 4.1% (2,875).

Lanier County and the City of Lakeland have zoning regulations. 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 that are used in Lanier County and the City of Lakeland:

- 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 Act requires local governments that elect to enforce these codes within their jurisdictions to adopt administrative procedures and penalties to locally enforce any of them. Also, any applicable appendices of these codes must be adopted locally to be enforceable within a specific local jurisdiction.

The DCA Board specifically omitted the plumbing, electrical, and energy requirements of the International Residential Code for One- and Two-Family Dwellings. Therefore, the plumbing requirements of the International Plumbing Code, the electrical requirements of the National Electrical Code, and the energy requirements of the International Energy Conservation Code must be used for one- and two-family dwelling construction.

No other land use or development trends related to this hazard have been identified.

F. Multi-Jurisdictional Differences

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

Lanier County and the City of Lakeland are served by a consolidated fire department. There are 7 fire stations in the unincorporated County and one (the main station) in the City of Lakeland. All stations are staffed by 100% volunteer firefighters. A small portion of Lanier County on the western edge has been annexed by the City of Ray City and is served by their fire department.

The following are the ISO Classes of fire districts in Lanier County and City of Lakeland:

Station	**ISO Class**
Station 1 - Lakeland Headquarters	Class 6
Station 2 - Stockton	Class 6X
Station 3 - Teeterville	Class 6X
Station 4 - Mud Creek	Class 6X
Station 5 - Westside	Class 6X
Station 6 - Goodhope	Class 6X
Station 7 - Eastside	Class 6X
Station 8 - Stockton Southside	Class 6X

A small portion of Lanier County has been annexed by the City of Ray City and is served by their fire department.

G. Overall HRV Summary of Events and Their Impact

Wildfires can cause damage anywhere, at any time, throughout Lanier County and the City of Lakeland. They can spread quickly, and residents may not have time to evacuate. The cost of the

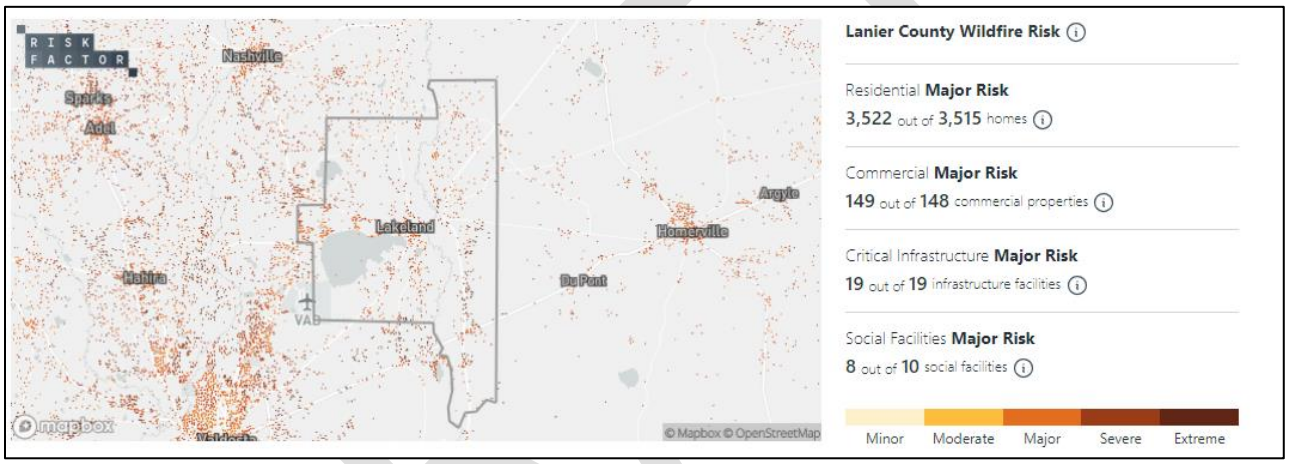
damage and potential loss of life may be higher if the event strikes populated areas as opposed to more sparsely populated or unpopulated areas.

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

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

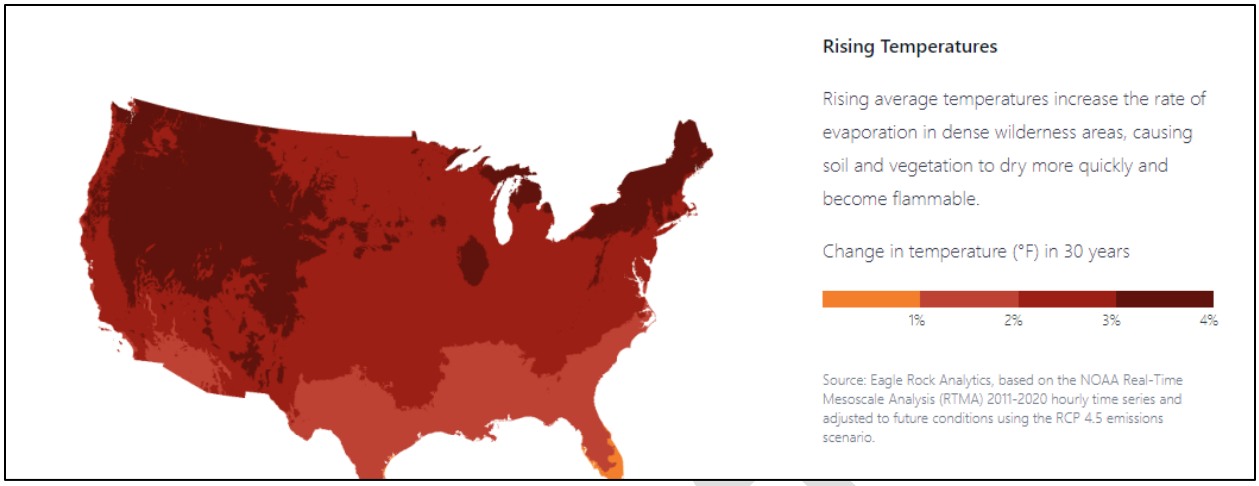
H. Impacts from Future Conditions

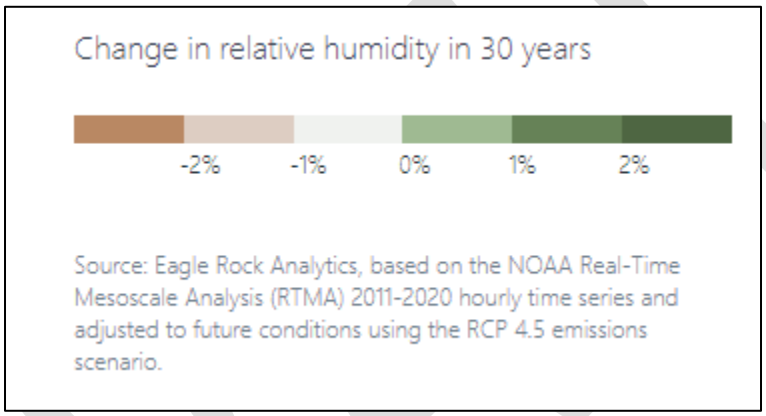
99% of the properties in Lanier County have some kind of risk of being affected by wildfire within the next 30 years. This could have an overall impact on the economic well-being of the county.

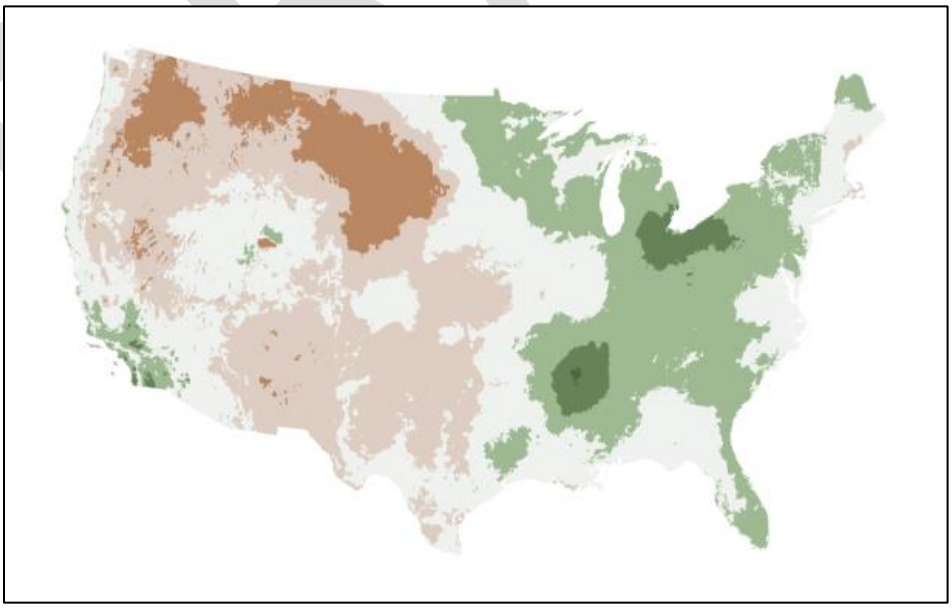


Lanier County has invested in wildfire control projects to reduce the number of fires each year. Controlled burns will need to be increased so that their risk is lowered.

Change in climate can also affect the increase of wildfires. Temperatures are rising and will continue to rise over the next 30 years. Changing precipitation will also have an effect as there may be dryer seasons, causing fires to become more frequent and severe. Lower humidity in the air will cause plants to release moisture to balance the environment, resulting in drier vegetation. Drier vegetation will be more susceptible to wildfire.







I. Underserved/Socially Vulnerable Population Risk

Lanier County has a large population of elderly individuals that live in assisted living facilities and nursing homes that may not receive emergency notifications through existing emergency notifications systems. The homeless population also may not receive warning. However, in the past couple of years, Lanier County has installed a siren for tornado warnings. The Department of Family and Children Services Department (DFACS) Director attended the workshops, as did the hospital administrator and emergency response personnel, and these concerns were talked about and addressed. DFACS also works with the Hispanic population to keep them informed.

A workshop was held once again to invite the vulnerable population. Flyers were distributed to those attending and available at the Health Department, DFACS, County Courthouse, and City Hall. They were also made available to the migrant workers within the county.

Section VII. Drought

A. Identification of Hazard

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

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

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

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

Lanier County and the City of Lakeland are all equally vulnerable to the effects of drought.

B. Profile of Events, Frequency of Occurrences, Probability

According to the NOAA Storm Events Database (see Appendix F), 26 reports of drought events occurred in Lanier County (including the city) between 01/01/1997 and 04/30/2019. The Historic Recurrence Interval is 0.85 years. This is a 118.18% Historic Frequency Chance per year. The past 10-year Record Frequency Per Year is 1.1, the past 20-year frequency is 1.25, and the past 50-year frequency is 0.52 (see the Hazard Frequency Table in Appendix D).

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

Since the previous Hazard Mitigation Plan became effective, 1 drought event has been recorded. This was on Nov. 29, 2016. This was described as D2 drought conditions (Severe Drought) spreading into Lanier County near the end of November and continuing into December of that year.

In 2007 drought cost the Georgia agricultural industry $339 million in crop losses. *(States at Risk: Georgia).*

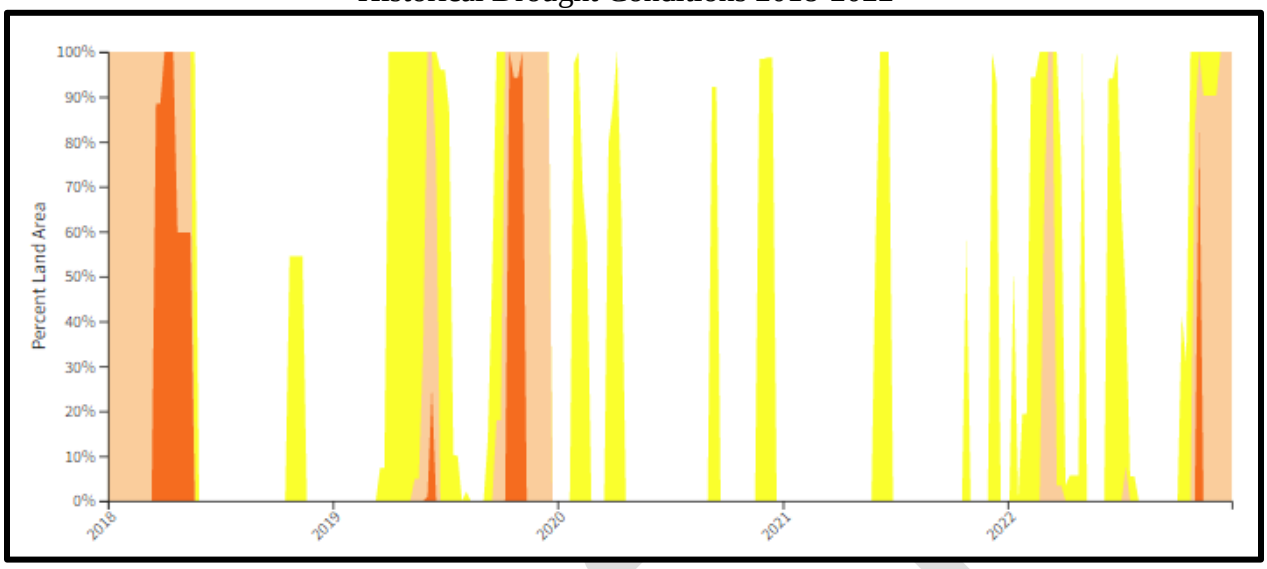
In 2012, the central and western part of the US was hit hard when 81% of the country was living in abnormally dry conditions, causing $30 billion in damages and putting the health and safety of Americans at risk. 2,245 counties were declared a natural disaster.

April 2023 was the wettest on record over the past 129 days. January through April 2023 has been the wettest year to date over the past 129 years. Therefore, Lanier County is currently not having a period of drought. However, this can change rapidly with “flash droughts.”

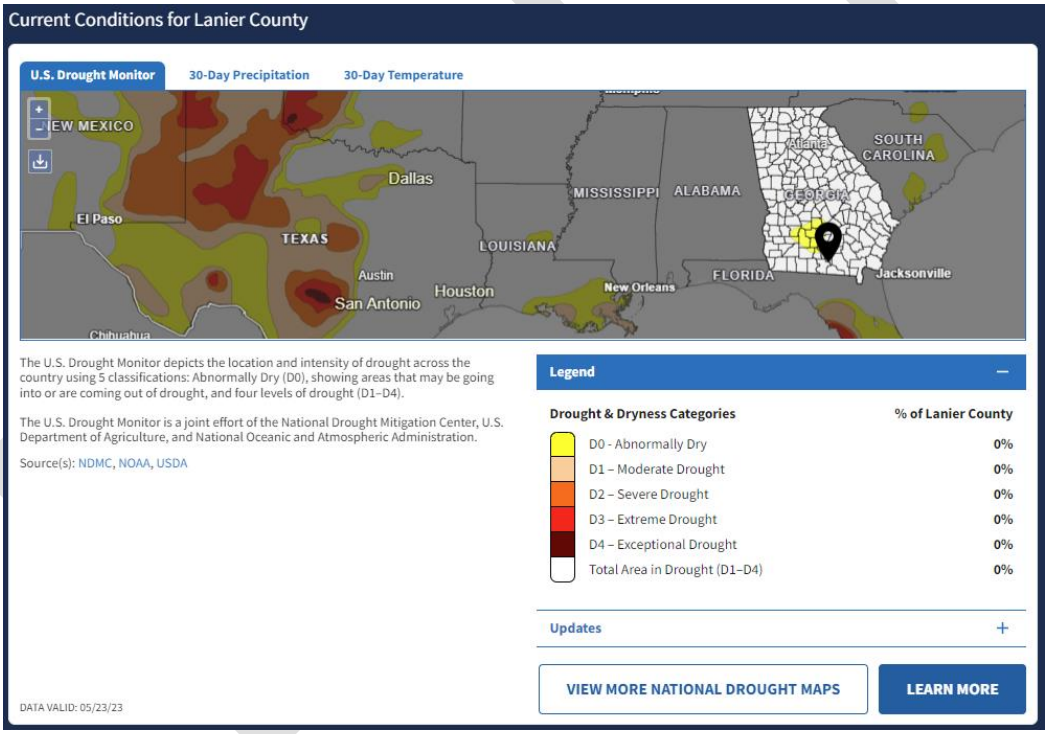
Lanier County gets an average of 51 inches of rain per year. The US average is 38 inches per year.

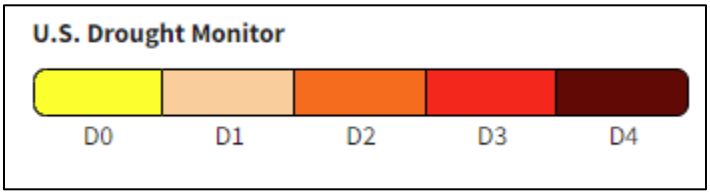
Although the most complete available data was used for this analysis, the possibility remains that other events may have occurred in the community that went unreported or underreported.

Historical Drought Conditions 2018-2022



5/25/23





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

In Worksheet 3A: Inventory of Assets (appearing in Appendix A), we estimate that all of Lanier County and the City of Lakeland are equally vulnerable to this hazard.

An estimated 100% of the Residential property (3,944 of 3,944) in Lanier County (including the City of Lakeland) could be affected by this hazard, with a total value of $249,400,501. Also, an estimated 100% of the community's Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education and Utility properties (1,583 of 1,583) may be affected, with a total value of $371,511,462. The values are based on the recently available tax roll data for Lanier County and the City of Lakeland, provided by the Lanier County Tax Assessor's Office. Because data broken down by jurisdiction are not consistently available, it was impossible to break down these worksheets by jurisdiction; therefore, they refer to the entire county, including the city.

Damage to crops is not considered in any of these figures. According to the Center for Agribusiness & Economic Development's 2022 Georgia Farm Gate Value Report (farmgate.caes.uga.edu/CountyAnnualReport.aspx) the total farm gate value of agricultural production in Lanier County is $47,463,433.60.

According to the inventory database reports and maps, all 62 Critical Facilities and Infrastructure for Lanier County (including the City of Lakeland) could be affected by this hazard. The total value of these Critical Facilities is $155,539,298.

E. Land Use and Development Trends

The County and City experienced rapid population growth during the 2000s, but the growth has been less rapid in the 2010s. The city has seen a slight decrease in population since 2010.

Lanier County and the City of Lakeland have zoning regulations. 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 that are used in Lanier County and the City of Lakeland:

- 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 Act requires local governments that elect to enforce these codes within their jurisdictions to adopt administrative procedures and penalties to locally enforce any of them. Also, any applicable

appendices of these codes must be adopted locally to be enforceable within a specific local jurisdiction.

The DCA Board specifically omitted the plumbing, electrical, and energy requirements of the International Residential Code for One- and Two-Family Dwellings. Therefore, the plumbing requirements of the International Plumbing Code, the electrical requirements of the National Electrical Code, and the energy requirements of the International Energy Conservation Code must be used for one- and two-family dwelling construction.

No other land use or development trends related to this hazard have been identified. Despite a global trend of rising temperatures (based on data available online at https://climate.nasa.gov/vital-signs/global-temperature/), there has not yet been an identifiable local trend towards more frequent drought periods in Lanier County and the City of Lakeland.

F. Multi-Jurisdictional Differences

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

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 Lanier County and the City of Lakeland, potentially at any time of the year, and most significantly in unincorporated areas not served by municipal water systems. Drought may increase the likelihood of wildfires and flooding. Water shortages can impede firefighting efforts at all levels.

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

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

H. Impacts from Future Conditions

Drought is expected to increase in Southeast Georgia due to the combinations of higher temperatures, as well as increased population, industry, and urban lane use areas, which will further affect the water resource charge and amplify the competing water demands within the region.

Drought will have an impact on the production of peanuts, pecans, peaches, and Vidalia onions in Georgia.
Most scientists agree that climate change means more droughts, and more intense droughts. The water cycle has a role in this, as crops grow depend on "normal, long-established climatic

patterns." Warmer temperatures mean more evaporation from bodies of water and the ground, less water for crops, and changes in precipitation. (http://drought.uni.edu/dm).

Nearly 40% of the world (1.3 billion people) relies on agriculture as its main source of income. When severe droughts lead to water shortages, it risks the health and well-being of animals and crops. This affects the farmers within our communities.

Crops will begin to yield less with drought, and food costs will spike, and there will become a shortage in some areas.

The climate change is making droughts more frequent and more severe in some parts of the United States. Right now, South Georgia has seen an increase in rain, and this includes Coffee County. In April 2023, there were 4 inches of precipitation, 1" wetter than the average for April since 1985.

Not every drought can be linked to climate change, but on a global scale, climate change will cause an increase in drought. As weather patterns start to shift, the warmer temperatures will cause more evaporation from bodies of water, and 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 used to occur every 10 years but now are 1.7 times more likely than they were from 1850 to 1900 due to humans heavily influencing the climate. Scientists also agree that droughts will likely become more intense into the 1050s 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.* Replacing traditional lawn vegetation with native, drought-tolerant plants reduces a home's outdoor water demand by 50-70%, according to National Geographic.

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

- *Install green infrastructure.* Green streets, green roofs, and porous pavements allow whatever rain that does fall to slowly 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 fully load dishwashers and washing machines, use "light wash" settings, and limit power consumption during peak times (4 p.m. to 9 p.m. local time) can help your community avoid preemptive power shutoffs, or worse, blackouts.

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

I. Underserved/Socially Vulnerable Population Risk

Lanier County has a large population of elderly individuals that live in assisted living facilities and nursing homes that may not receive emergency notifications through existing emergency notifications systems. The homeless population also may not receive warning. However, in the past couple of years, Lanier County has installed a siren for tornado warnings. The Department of Family and Children Services Department (DFACS) Director attended the workshops, as did the hospital administrator and emergency response personnel, and these concerns were talked about and addressed. DFACS also works with the Hispanic population to keep them informed. A workshop was held once again to invite the vulnerable population. Flyers were distributed to those attending and available at the Health Department, DFACS, County. Courthouse, and City Hall. They were also made available to the migrant workers within the county.

Section VIII. Sinkholes

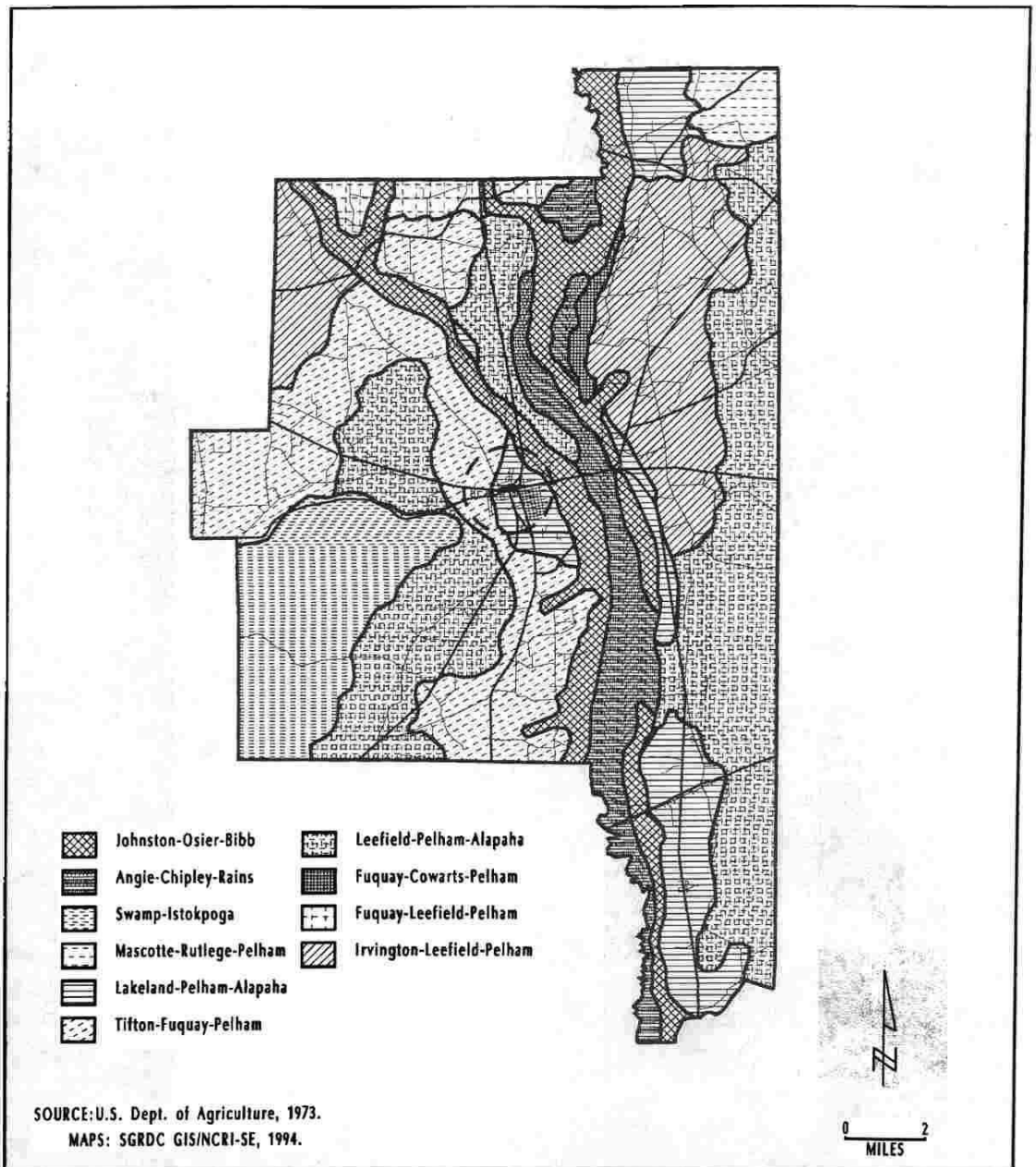
A. Identification of Hazard

The threat of sinkholes has been chosen by the HMPUC as the eighth 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 U.S. Drought Monitor (see Appendix F), as well as from local history and personal accounts, to determine the frequency of events.

Sinkholes are natural depressions in the ground caused by the collapse of the surface into a void. The void is normally attributed to the dissolving of subsurface material by the movement of water. Sinkholes occur more readily in regions with limestone subsurface. The final collapse of the ceiling over a cavern, developing a sinkhole, is normally precipitated by heavy rains.

Sinkholes are common where the rock below the land surface is limestone, carbonate rock, salt beds, or rocks that can naturally be dissolved by groundwater circulating through them. (Source: U.S. Geological Survey, https://water.usgs.gov/edu/sinkholes.html.)

The following map shows the soil types identified in Lanier County and the City of Lakeland. Most soils in the area are of the sandy, loamy, siliceous, and/or kaolinitic type.



SOURCE: U.S. Dept. of Agriculture, 1973.
MAPS: SGRDC GIS/NCRI-SE, 1994.

MAP 3-4 LANIER COUNTY
GENERALIZED SOIL ASSOCIATIONS

B. Profile of Events, Frequency of Occurrences, Probability

According to local data sources, two sinkhole events have occurred in the community between 2 04/30/2018 and 12/31/2022. The Historic Recurrence Interval is 2.00 years. This is a 50.00% Historic Frequency Chance per year. The past 10-year Record Frequency Per Year is 0.0, the past 20-year frequency is 0.1, and the past 50-year frequency is 0.04 (see the Hazard Frequency Table in Appendix D).

In the recorded history for Lanier County and the City of Lakeland, two sinkhole events have occurred. During one event, in 1986, a sinkhole opened behind the Fire Department building in Lakeland, creating what is now a 1.1-acre lake with a depth measured 26 feet. During another event, in the late 1980s, a sinkhole on US Highway 221 required road closure and road repairs. There was some damage to power lines and other roadway infrastructure, but no injuries.

Since the previous Hazard Mitigation Plan became effective, no new sinkhole events have been reported.

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

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

In Worksheet 3A: Inventory of Assets (appearing in Appendix A), we estimate that all of Lanier County and the City of Lakeland are equally vulnerable to this hazard.

An estimated 100% of the Residential property (3,944 of 3,944) in Lanier County (including the City of Lakeland) could be affected by this hazard, with a total value of $249,400,501. Also, an estimated 100% of the Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education and Utility properties (1,583 of 1,583) in the community may be affected, with a total value of $371,511,462. The values are based on the most recent available tax roll data for Lanier County and the City of Lakeland, provided by the Lanier County Tax Assessor's Office. Because data broken down by jurisdiction are not consistently available, it was not possible to break down these worksheets by jurisdiction; therefore, they refer to the entire county, including the city.

According to the inventory database reports and maps, all the Critical Facilities and Infrastructure for Lanier County (including the City of Lakeland) could be affected by this hazard.

E. Land Use and Development Trends

Since 2016, there has been a -4.86% decrease in population in Lanier County and a -14.1% (9,877) decrease. The City of Lakeland's 2016 population was 3,348, a -0.5% decrease since 2010. Since 2016, the City of Lakeland's population has decreased by 4.1% (2,875).

Lanier County and the City of Lakeland have zoning regulations. 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 that are used in Lanier County and the City of Lakeland:

- 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 Act requires local governments that elect to enforce these codes within their jurisdictions to adopt administrative procedures and penalties to locally enforce any of them. Also, any applicable appendices of these codes must be adopted locally to be enforceable within a specific local jurisdiction.

The DCA Board specifically omitted the plumbing, electrical, and energy requirements of the International Residential Code for One- and Two-Family Dwellings. Therefore, the plumbing requirements of the International Plumbing Code, the electrical requirements of the National Electrical Code, and the energy requirements of the International Energy Conservation Code must be used for one- and two-family dwelling construction.

No other land use or development trends related to this hazard have been identified. Before new construction is approved, the terrain is inspected to assess the potential for sinkhole activity. Therefore, it is considered unlikely that any new construction in the community could agitate sinkholes.

F. Multi-Jurisdictional Differences

Because the location of potential sinkhole formation cannot be predicted with any degree of certainty or accuracy, they remain an equal threat to all jurisdictions.

G. Overall HRV Summary of Events and Their Impact

Sinkholes can harm people and destroy property throughout Lanier County and the City of Lakeland, potentially anywhere at any time. 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. 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

Research has shown that there is a direct link to an increase in sinkholes due to climate change. There is a strong correlation between high temperatures and the formation of sinkholes. A study done on the Florida sinkholes found that for every 0.1C rise in global temperature, the number of sinkholes increased between 1 and 3 percent. The water table in Georgia is much like that of Florida.

With the increase in extreme weather due to climate changes, we will see more and more sinkholes. As the water table increases, so does the number of sinkholes. Dry weather can also create more sinkholes, as cracks form in soils that struggle to bind firmly. The cracks can be wedged opened and form new pathways for water, leading to a greater probability of eventual collapse.

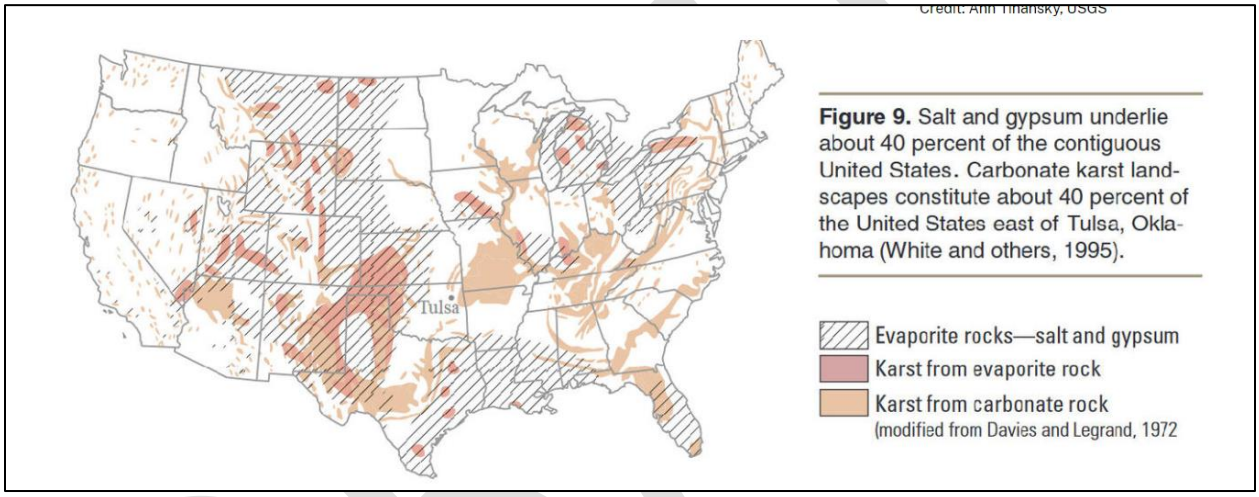
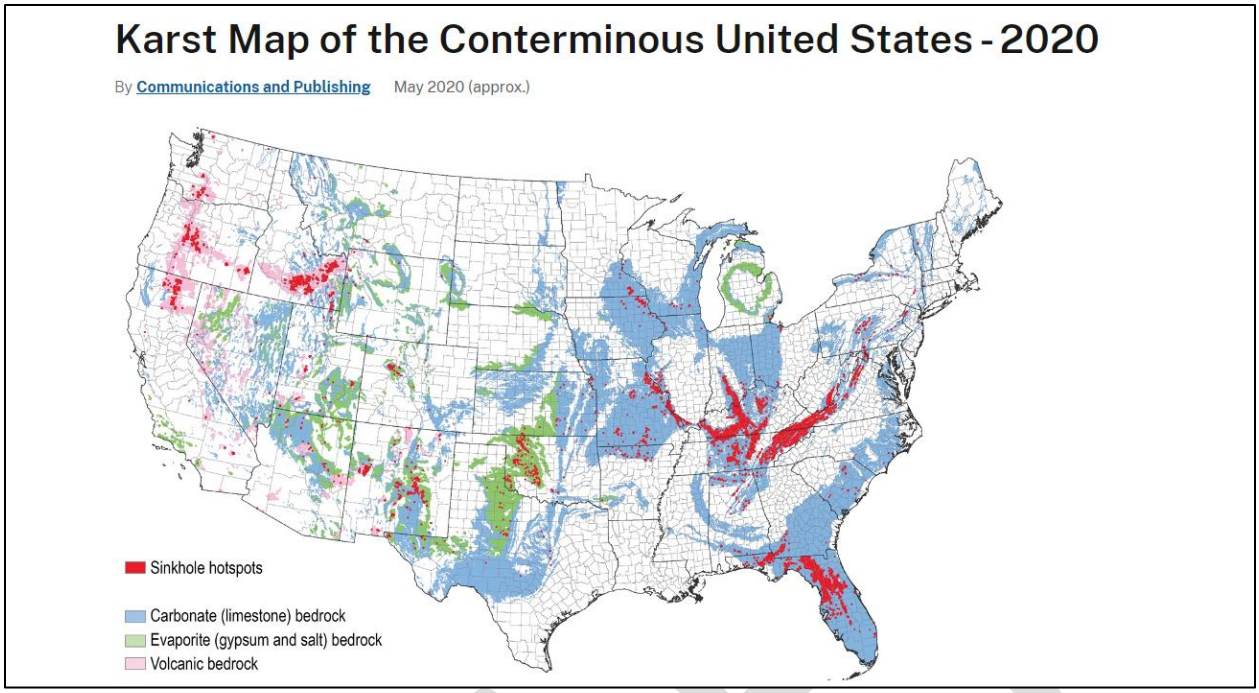


Figure 9. Salt and gypsum underlie about 40 percent of the contiguous United States. Carbonate karst landscapes constitute about 40 percent of the United States east of Tulsa, Oklahoma (White and others, 1995).

The map below shows Lanier County having sinkholes in soluble rocks (carbonates and evaporites) and insoluble volcanic rocks containing sinkholes. It also shows that the hotspots are more to the west of Georgia than Lanier County.



Karst Map of the Conterminous United States - 2020 | U.S. Geological Survey (usgs.gov)

I. Underserved/Socially Vulnerable Population Risk

Even though there haven't been many sinkholes reported, Lanier County and the cities will address this issue as the need arises. There will be public announcements and signage if a sinkhole should occur again. There usually is not much warning before one develops and it can happen anytime and anywhere within the county. A workshop was held once again to invite the vulnerable population. Flyers were distributed to those attending and available at the Health Department, DFACS, County. Courthouse, and City Hall. They were also made available to the migrant workers within the county.

Section IX. Severe Winter Storms

A. Identification of Hazard

A severe winter storm is an event in which varieties of precipitation are formed that only occur at low temperatures, such as snow or sleet, or a rainstorm where ground temperatures are low enough to allow ice to form (i.e., freezing rain). Associated outcomes may include ice on roads, snow accumulation, frost on surfaces, and cold temperatures to which residents are unaccustomed. The Lanier County HMPUC has chosen the threat of Severe Winter Storms. The threat of Severe Winter Storms has been chosen by the damage in Lanier County and the City of Lakeland, 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 from 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 Lanier County and the City of Lakeland, personal accounts of the HMPUC members rated this hazard as likely to occur and cause damage. Because of the infrequency of severe winter storms in this region, residents of the community are not well prepared 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.

Severe winter storms, at worst, 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 that may occur includes 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), there have been 3 reports of Severe Winter Storms occurring in Lanier County (including the City of Lakeland) between 01/01/1950 and 04/30/2022. The Historic Recurrence Interval is 24.00 years. This is a 4.17% Historic Frequency Chance per year. The past 10-year Record Frequency Per Year is 0.3, the past 20-year frequency is 0.15, and the past 50-year frequency is 0.06 (see the Hazard Frequency Table in Appendix D).

Since the previous Hazard Mitigation Plan was adopted, two Severe Winter Storm events have been reported. Most recently, on January 3, 2018, approximately an inch of snow fell on portions of Lanier County. This caused numerous motor vehicle crashes, impassable roads, and downed tree limbs. For this region it was the first winter storm since December 1989. The largest snowstorm in history for the Southeast U.S. coast occurred on Dec. 22-24, 1989. Up to 4 inches of snow accumulation were recorded in Lanier County, with associated power outages, car crashes, and closed roads.

Lanier County Emergency Management Agency
January 21, 2020 ·

Stay warm everyone.

Lanier County Emergency Management Agency
January 27, 2022 ·

A strong cold front will bring the coldest air of the season this weekend.

The lowest wind chills are expected Saturday morning (see graphic - Saturday Morning Wind Chills)Cold temperatures and breezy winds will keep wind chills near or below 40 on Saturday (see graphic - Saturday Afternoon Wind Chills).The lowest air temperatures are expected Sunday morning (see graphic - Sunday Morning Low Temperatures)Gale conditions are possible this weekend over the marine area with seas of 7-10 feet expected (see graphic - Gale Watch)

Overview:

Friday Night - Saturday Morning: Breezy northerly winds combined with low temperatures in the middle 20s to lower 30s could result in potentially dangerous wind chills:

10 to 20 degrees for southeast Alabama, southern Georgia, the Florida Panhandle and western Big Bend. (Wind Chill Advisories would be needed)20 to 25 degrees for the southeast Big Bend of Florida.

Saturday Afternoon: Cold high temperatures in the lower to middle 40s are expected on Saturday, but breezy winds will keep wind chills in the 30s, even during the warmest part of the day.

Saturday Night - Sunday Morning: Winds will decrease Saturday night, but this will allow air temperatures to fall farther. A hard freeze (temperatures 23 degrees or colder) is expected for some inland locations. Low temperatures are forecast to be:

Inland: lower to middle 20sImmediate coast: upper 20s to near 30.

Marine Hazards: Strong northerly winds behind the cold front will create hazardous marine conditions over the weekend. A Gale Watch is in effect for Friday night through Saturday afternoon for all marine areas.

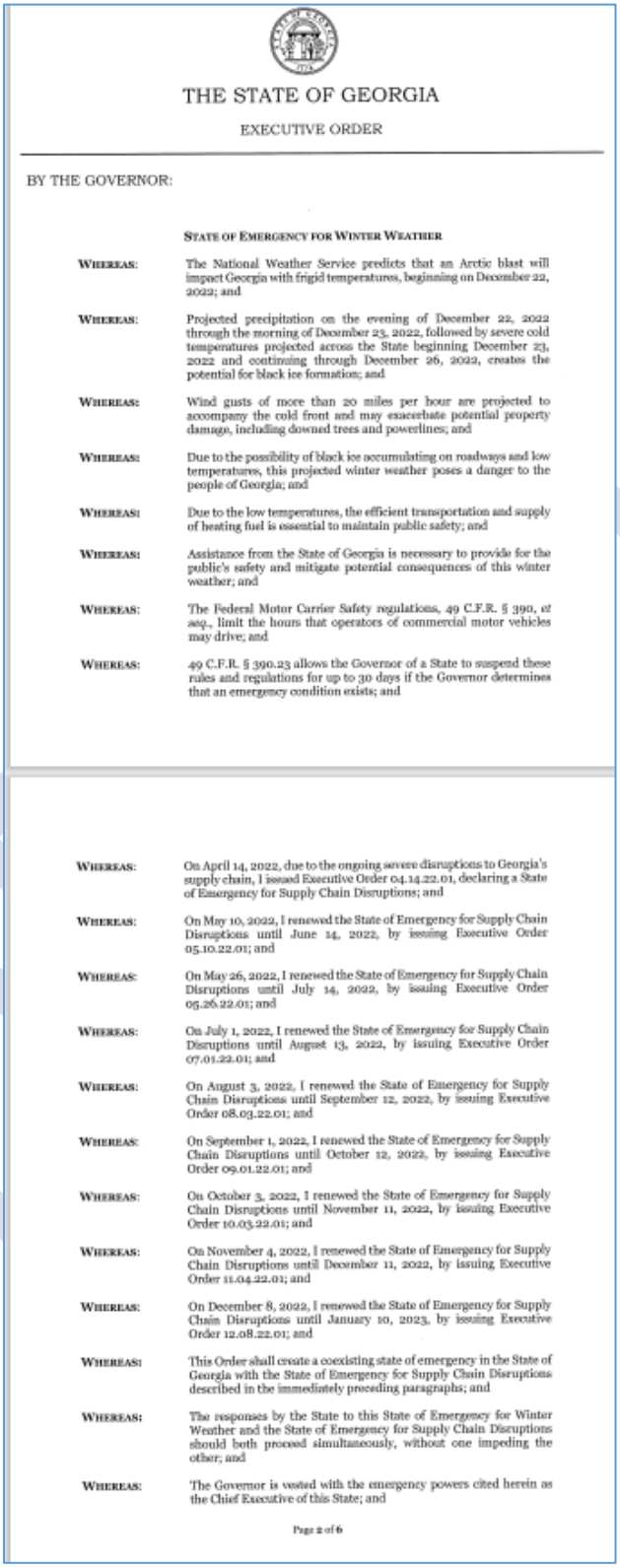
Winds: frequent gusts to gale forceSeas: 7 to 10 feet

A color-coded hour-by-hour forecast can be found by entering your location here.

Resources:

· NWS Tallahassee Webpage:

On December 21, 2022, the Governor signed a State of Emergency for Winter Weather for Georgia.



THE STATE OF GEORGIA

EXECUTIVE ORDER

BY THE GOVERNOR:

STATE OF EMERGENCY FOR WINTER WEATHER

WHEREAS: The National Weather Service predicts that an Arctic blast will impact Georgia with frigid temperatures, beginning on December 22, 2022; and

WHEREAS: Projected precipitation on the evening of December 22, 2022 through the morning of December 23, 2022, followed by severe cold temperatures projected across the State beginning December 23, 2022 and continuing through December 26, 2022, creates the potential for black ice formation; and

WHEREAS: Wind gusts of more than 20 miles per hour are projected to accompany the cold front and may exacerbate potential property damage, including downed trees and powerlines; and

WHEREAS: Due to the possibility of black ice accumulating on roadways and low temperatures, this projected winter weather poses a danger to the people of Georgia; and

WHEREAS: Due to the low temperatures, the efficient transportation and supply of heating fuel is essential to maintain public safety; and

WHEREAS: Assistance from the State of Georgia is necessary to provide for the public's safety and mitigate potential consequences of this winter weather; and

WHEREAS: The Federal Motor Carrier Safety regulations, 49 C.F.R. § 390, *et seq.*, limit the hours that operators of commercial motor vehicles may drive; and

WHEREAS: 49 C.F.R. § 390.23 allows the Governor of a State to suspend these rules and regulations for up to 30 days if the Governor determines that an emergency condition exists; and

WHEREAS: On April 14, 2022, due to the ongoing severe disruptions to Georgia's supply chain, I issued Executive Order 04.14.22.01, declaring a State of Emergency for Supply Chain Disruptions; and

WHEREAS: On May 10, 2022, I renewed the State of Emergency for Supply Chain Disruptions until June 14, 2022, by issuing Executive Order 05.10.22.01; and

WHEREAS: On May 26, 2022, I renewed the State of Emergency for Supply Chain Disruptions until July 14, 2022, by issuing Executive Order 05.26.22.01; and

WHEREAS: On July 1, 2022, I renewed the State of Emergency for Supply Chain Disruptions until August 13, 2022, by issuing Executive Order 07.01.22.01; and

WHEREAS: On August 3, 2022, I renewed the State of Emergency for Supply Chain Disruptions until September 12, 2022, by issuing Executive Order 08.03.22.01; and

WHEREAS: On September 1, 2022, I renewed the State of Emergency for Supply Chain Disruptions until October 12, 2022, by issuing Executive Order 09.01.22.01; and

WHEREAS: On October 3, 2022, I renewed the State of Emergency for Supply Chain Disruptions until November 11, 2022, by issuing Executive Order 10.03.22.01; and

WHEREAS: On November 4, 2022, I renewed the State of Emergency for Supply Chain Disruptions until December 11, 2022, by issuing Executive Order 11.04.22.01; and

WHEREAS: On December 8, 2022, I renewed the State of Emergency for Supply Chain Disruptions until January 10, 2023, by issuing Executive Order 12.08.22.01; and

WHEREAS: This Order shall create a coexisting state of emergency in the State of Georgia with the State of Emergency for Supply Chain Disruptions described in the immediately preceding paragraphs; and

WHEREAS: The responses by the State to this State of Emergency for Winter Weather and the State of Emergency for Supply Chain Disruptions should both proceed simultaneously, without one impeding the other; and

WHEREAS: The Governor is vested with the emergency powers cited herein as the Chief Executive of this State; and

Page 2 of 6

WHEREAS: As Chief Executive, the Governor is tasked with protecting the citizens of this State, including during a state of emergency; and

WHEREAS: Code Section 38-3-51 vests the Governor with the authority to bring emergency situations under control by issuing orders, rules, and regulations to protect the safety and welfare of the public; and

WHEREAS: Code Section 38-3-28 provides that "[a]ll orders, rules, and regulations promulgated by the Governor" have the force and effect of law; and

WHEREAS: In consultation with state emergency preparedness officials, I have determined that the following actions are necessary and appropriate to protect the health, safety, and welfare of Georgia's residents and visitors.

NOW, THEREFORE, PURSUANT TO CODE SECTION 38-3-51, AND THE AUTHORITY VESTED IN ME AS GOVERNOR OF THE STATE OF GEORGIA, IT IS HEREBY

ORDERED: That a State of Emergency exists in in the State of Georgia due to the potential of severe winter weather affecting the State on December 22, 2022 through December 26, 2022.

IT IS FURTHER

ORDERED: That the State of Emergency declared by this Order shall coexist with the State of Emergency for Supply Chain Disruptions declared by Executive Order 04.14.22.01 and renewed by Executive Orders 05.10.22.01, 05.26.22.01, 07.01.22.01, 08.03.22.01, 09.01.22.01, 10.03.22.01, 11.04.22.01, and 12.08.22.01. The existence or termination of one shall not impinge the other.

IT IS FURTHER

ORDERED: That any orders derivative of or appurtenant to this Order addressing this State of Emergency for Winter Weather shall not infringe, overturn, or in any way amend any orders that have been issued for the purpose of responding to the State of Emergency for Supply Chain Disruptions declared by Executive Order 04.14.22.01 and renewed by Executive Orders 05.10.22.01, 05.26.22.01, 07.01.22.01, 08.03.22.01, 09.01.22.01, 10.03.22.01, 11.04.22.01, and 12.08.22.01.

IT IS FURTHER

ORDERED: That all resources of the state of Georgia be made available to assist in preparation, response, and recovery activities throughout the

affected areas, and the Georgia Emergency Management and Homeland Security Agency shall activate the Georgia Emergency Operations Plan.

IT IS FURTHER

ORDERED: That state agencies shall coordinate all public and emergency information, activities, releases, and response efforts related to this emergency with the Georgia Emergency Management and Homeland Security Agency.

IT IS FURTHER

ORDERED: That the Georgia Department of Transportation and Georgia Department of Public Safety shall take all necessary action to ensure the expeditious movement of utility vehicles, equipment, and personnel through the State to eliminate power outages.

IT IS FURTHER

ORDERED: That state agencies shall provide sufficient personnel required for the staffing of the Georgia State Operations Center or other command, control, and coordination points as may be designated by the Director of the Georgia Emergency Management and Homeland Security Agency and shall provide such personnel, vehicles, equipment, and other resources needed to protect life and property and to ensure continuation, restoration, and recovery of essential public services.

IT IS FURTHER

ORDERED: That the federal rules and regulations limiting hours that operators of commercial vehicles may drive are suspended to ensure the uninterrupted supply of goods and services necessary to respond to this State of Emergency, including petroleum products, propane, and heating fuels. This declared emergency justifies a suspension of Part 395 (driver's hours of service) of Title 49 of the Code of Federal Regulations. The suspension will remain in effect for thirty (30) days or until the emergency condition ceases to exist, whichever is less. Nothing herein will be construed as an exemption from the Commercial Driver's License requirements in 49 C.F.R. § 383 and the financial requirements in 49 C.F.R. § 387.

IT IS FURTHER

ORDERED: That no motor carrier operating under the terms of this State of Emergency for Winter Weather will require or allow an ill or fatigued

driver to operate a motor vehicle. A driver who notifies a motor vehicle carrier that he or she needs immediate rest will be given at least ten (10) consecutive hours off-duty before being required to return to service.

IT IS FURTHER

ORDERED: Pursuant to Code Section 10-1-393.4, price gouging related to goods and services necessary to respond to this State of Emergency, including petroleum products, propane, and heating fuels, would be detrimental to the social and economic welfare of the citizens of this State and is therefore prohibited.

IT IS FURTHER

ORDERED: That if one or more of the provisions contained in this Order shall be held to be invalid, in violation of the Georgia Constitution, in violation of Georgia law, or unenforceable in any respect, such invalidity, violation, or unenforceability shall not affect any other provisions of this Order, but, in such case, this Order shall be construed as if such invalid, illegal, or unenforceable provision had never been contained within the Order.

IT IS FURTHER

ORDERED: That no provision of this Order shall limit, infringe, suspend, or supplant any judicial order, judgment, or decree issued pursuant to the laws or constitution of this State or the laws or constitution of the United States, nor shall any person use any provision this Order as a defense to an action in violation of a judicial order, judgment, or decree by any court created pursuant to the laws or constitution of this State or the laws or constitution of the United States.

IT IS FURTHER

ORDERED: The Office of the Governor may continue to issue guidance on the scope of this Order as needed through communication media, including social media, without need for further Executive Orders.

IT IS FURTHER

ORDERED: All provisions of the Order shall become effective upon signature and shall be valid for a period of six (6) days, expiring December 26, 2022, at 11:59 P.M. unless this State of Emergency is renewed by the Governor.

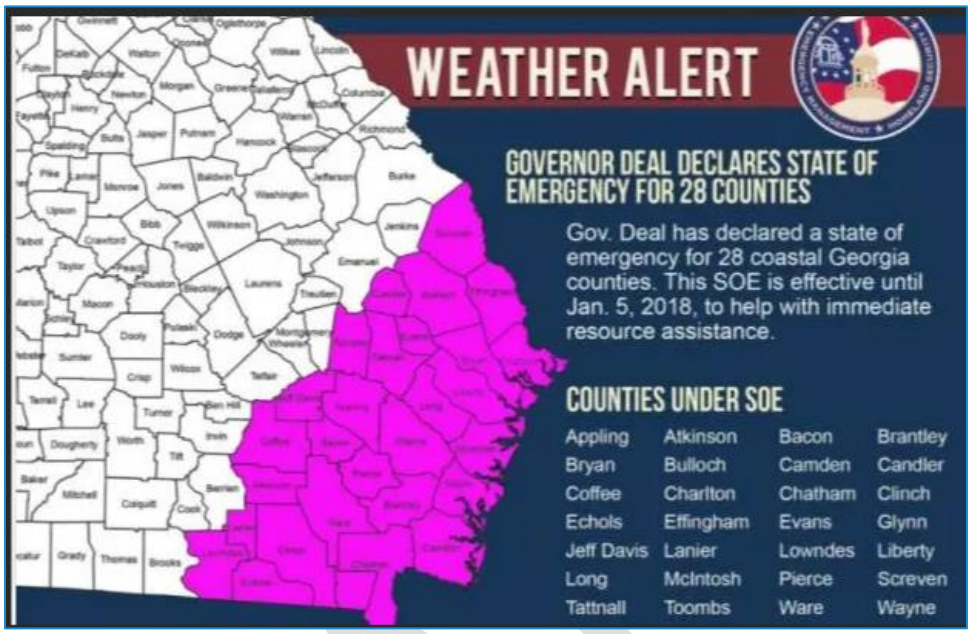
IT IS FURTHER

ORDERED: That this Order shall be effective upon signature.

This 21st day of December 2022.

GOVERNOR

On January 5, 2018, the Governor of Georgia issued a State of Emergency for 28 coastal counties, including Lanier County, for a severe winter storm.



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

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

In Worksheet 3A: Inventory of Assets (appearing in Appendix A), we estimate that all of Lanier County and the City of Lakeland are equally vulnerable to this hazard.

An estimated 100% of the Residential property (3,944 of 3,944) in Lanier County (including the City of Lakeland) could be affected by this hazard, with a total value of $249,400,501. Also, an estimated 100% of the Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education and Utility properties (1,583 of 1,583) in the community may be affected, with a total value of $371,511,462. The values are based on the most recent available tax roll data for Lanier County and the City of Lakeland, provided by the Lanier County Tax Assessor's Office. Because data broken down by jurisdiction are not consistently available, it was not possible to break down these worksheets by jurisdiction; therefore, they refer to the entire county, including the city.

Damage to crops is not considered in any of these figures. According to the Center for Agribusiness & Economic Development's 2022 Georgia Farm Gate Value Report (farmgate.caes.uga.edu/CountyAnnualReport.aspx) the total farm gate value of agricultural production in Lanier County is $47,463,433.60.

According to the inventory database reports and maps, all 62 Critical Facilities and Infrastructure for Lanier County (including the City of Lakeland) could be affected by this hazard. The total value of these Critical Facilities is $155,539,298.

E. Land Use and Development Trends

The County and City experienced rapid population growth during the 2000s, but the growth has been less rapid in the 2010s. The city has seen a slight decrease in population since 2010.

Lanier County and the City of Lakeland have zoning regulations. 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 that are used in Lanier County and the City of Lakeland:

- 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 Act requires local governments that elect to enforce these codes within their jurisdictions to adopt administrative procedures and penalties to locally enforce any of them. Also, any applicable appendices of these codes must be adopted locally to be enforceable within a specific local jurisdiction.

The DCA Board specifically omitted the International Residential Code's plumbing, electrical, and energy requirements for One- and Two-Family Dwellings. Therefore, the plumbing requirements of the International Plumbing Code, the electrical requirements of the National Electrical Code, and the energy requirements of the International Energy Conservation Code must be used for one- and two-family dwelling construction.

No other land use or development trends related to this hazard have been identified.

F. Multi-Jurisdictional Differences

Severe Winter Storm events are usually area-wide, and no difference in severity is expected between Lanier County and the City of Lakeland. In the event of icy roads, hazards would be greater along high-traffic corridors and in more densely populated areas. In the event of a power failure, households for which electricity is the only available source of heat will be 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 local economy, and many crops may be affected by

severe winter weather. Neither Lanier County nor the City of Lakeland has any snowplows. No other multi-jurisdictional differences have been identified yet.

G. Overall HRV Summary of Events and Their Impact

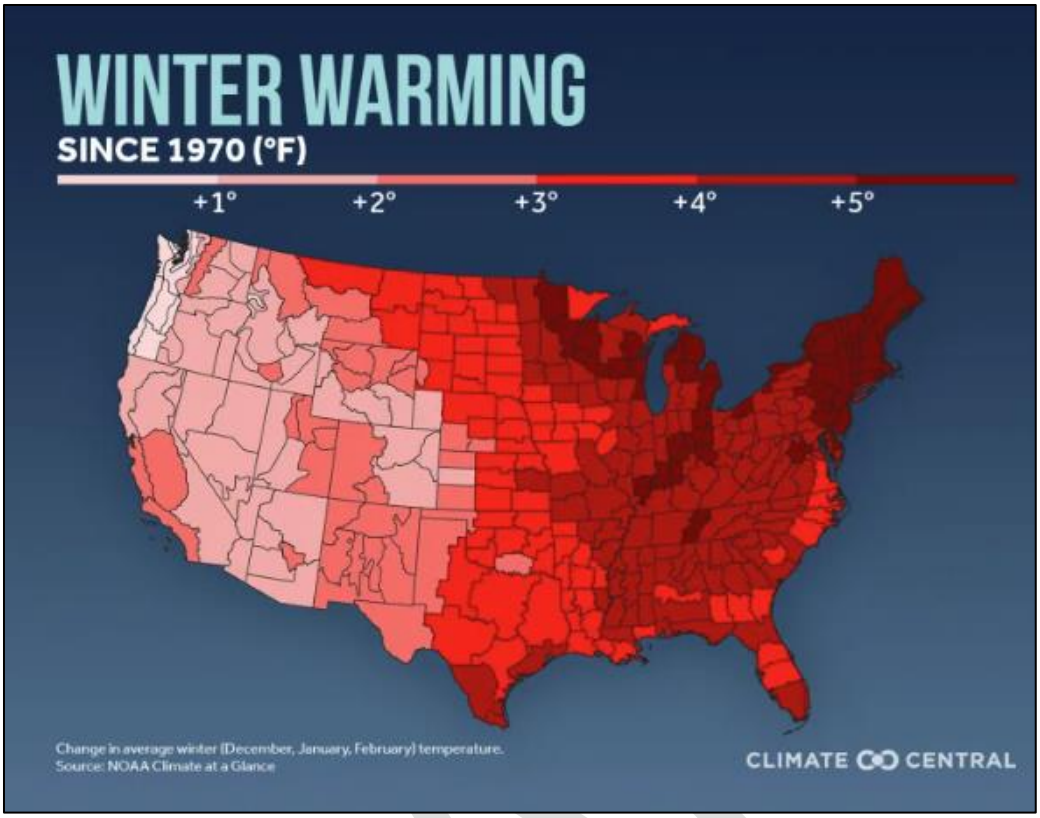
Severe winter storms have the potential to cause damage at any place, at any time during the winter months, throughout Lanier County and the City of Lakeland. The cost of the damage may be higher in terms of vehicle crashes along high-traffic corridors and in more densely populated areas, and higher in terms of crop damage in the agricultural areas of the county.

The Lanier County HMPUC recognizes severe winter storms as the ninth most likely natural hazard to occur and cause damage. They have developed a comprehensive range of Mitigation Goals, Objectives, and Action Steps to lessen severe winter storm impacts on Lanier County and the City of Lakeland. These are 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.

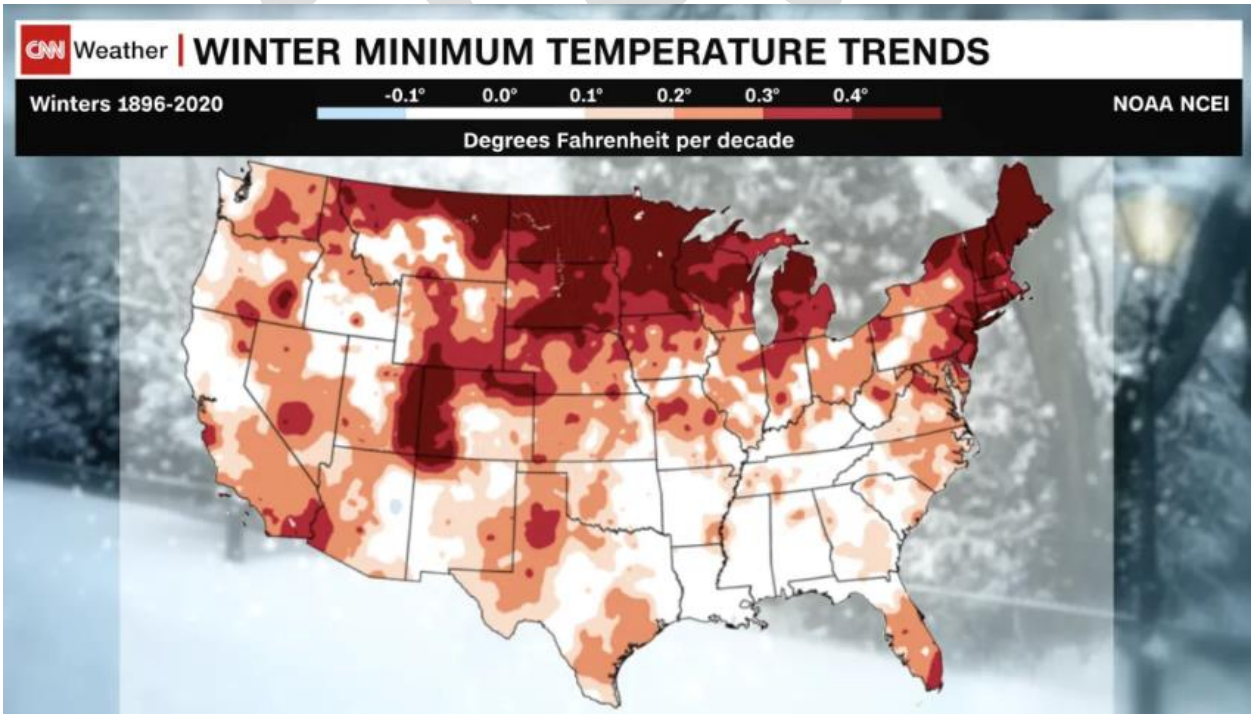
H. Impacts from Future Conditions

The winter season from December to February is the fastest warming of the three-month season for nearly 75% of the United States, according to NOAA. Temperatures have warmed in 97% of the United States since 1970.



Winter temperatures have increased by 3.8% degrees on average since 1970 within 97% of areas. Winters have warmed up by as much as 7 degrees.

Even though winter is warming, we will still have cold days in a warmer climate, but the cold will be less frequent and less extreme. In 2023, there were double the warm temperatures as cold ones and scientists believe it will continue in the future to become warmer. According to NOAA data, since the 1900s, winter's overnight temperatures have been warming by 1.78 degrees per century. That is 25% faster than the daytime highs.



I. Underserved/Socially Vulnerable Population Risk

Lanier County has a large population of elderly individuals that live in assisted living facilities/nursing homes that may not receive emergency notifications through existing emergency notifications systems. Homelessness does exist in Lanier County. There is also a great number of farm workers that are Hispanic and are living in dormitory-type housing within the county. The Department of Family and Children Services (DFACS) participated in one workshop. DFACS keeps in close contact with this group of people and informs them of emergencies when necessary. The Emergency Preparedness Coordinator from the Lanier County South Georgia Medical Center Campus was also at the workshops, and they inform the nursing home and assisted living facilities of any emergency. Lanier County also has a siren that will sound during tornado warnings.

A workshop was held once again to invite the vulnerable population. Flyers were distributed to those attending and available at the Health Department, DFACS, County. Courthouse, and City Hall. They were also made available to the migrant workers within the county.

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

Section I. Hazardous Materials Release

A. Identification of Hazard

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

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

B. Profile of Events, Frequency of Occurrences, Probability

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

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

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

Not all hazardous materials releases are transportation related. One specific type of hazardous materials release that has been a source of concern in the community is the potential for illegal methamphetamine labs to explode. In these illicit operations, meth "cooks" produce the drug by isolating ingredients from cold medicine and combining them with a variety of hazardous substances, including drain cleaner, battery acid, and antifreeze (source: https://drugabuse.com/featured/10-years-of-meth-lab-explosions/). Explosion events from these labs release corrosive chemicals and can cause those exposed to suffer burn injuries, inhalational injuries, and death (source: https://www.cdc.gov/mmwr/preview/mmwrhtml/ mm6433a4.htm). In 2014, 24 meth lab incidents (including labs, "dumpsites," and "chemical and glassware" seizures) were reported in Georgia, down from 66 in 2013 (source: https://www.dea.gov/resource-center/meth-lab-maps.shtml).

According to the USDOT Pipeline and Hazardous Materials Safety Administration's Office of Hazardous Materials Safety database (see Appendix F), there is 1 report of Hazardous Materials Release events occurring in Lanier County (including the city) between 01/01/1978 and 04/30/2018. In 1993 while unloading a cargo tank carrier the cap on the outlet pipe split and cracked while spraying the product onto asphalt. The spill was contained. The Historic Recurrence Interval is 30.00 years. This is a 3.33% Historic Frequency Chance per year. The past 10-year Record Frequency Per Year is 0.0, the past 20-year frequency is 0.05, and the past 50-year frequency is 0.02 (see the Hazard Frequency Table in Appendix D).

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

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

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

In Worksheet 3A: Inventory of Assets (appearing in Appendix A), we estimate that all of Lanier County and the City of Lakeland are equally vulnerable to this hazard.

An estimated 100% of the Residential property (3,944 of 3,944) in Lanier County (including the City of Lakeland) could be affected by this hazard, with a total value of $249,400,501. Also, an estimated 100% of the Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education and Utility properties (1,583 of 1,583) in the community may be affected, with a total value of $371,511,462. The values are based on the most recent available tax roll data for Lanier County and the City of Lakeland, provided by the Lanier 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 2022 Georgia Farm Gate Value Report (farmgate.caes.uga.edu/CountyAnnualReport.aspx) the total farm gate value of agricultural production in Lanier County is $47,463,433.60.

According to the inventory database reports and maps, all 62 Critical Facilities and Infrastructure for Lanier County (including the City of Lakeland) could be affected by this hazard. The total value of these Critical Facilities is $155,539,298.

E. Land Use and Development Trends

The County has seen a slight increase in population over the last few years, and the city has seen a slight decrease. Lanier County and the City of Lakeland have zoning regulations. Lanier County and the City of Lakeland have zoning regulations. 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 that are used in Lanier County and the City of Lakeland:

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

The Act requires local governments that elect to enforce these codes within their jurisdictions to adopt administrative procedures and penalties to locally enforce any of them. Also, any applicable appendices of these codes must be adopted locally to be enforceable within a specific local jurisdiction.

The DCA Board specifically omitted the International Residential Code's plumbing, electrical, and energy requirements for One- and Two-Family Dwellings. Therefore, the plumbing requirements of the International Plumbing Code, the electrical requirements of the National Electrical Code, and the energy requirements of the International Energy Conservation Code must be used for one- and two-family dwelling construction.

F. Multi-Jurisdictional Differences

The facilities most vulnerable to a hazardous materials release are those located within a one-mile buffer of the major highways and railways in the community. State highways carrying truck traffic pass through all the jurisdictions. US-84, a 4-lane highway, passes from east to west through the county's southern portion. US 129/SR 31/SR 125 intersect when entering Lanier County. A short-line railroad operated by Caterparrott Railnet runs through the far western portion of the County.

G. Overall HRV Summary

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

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

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

Section II. Public Health Emergency

A. Identification of Hazard

The threat of a public health emergency has been chosen by the HMPUC as the second most likely human-caused hazard to occur and cause damage in the community.

The community is vulnerable to public health emergencies that may occur naturally on their own, including but not limited to:

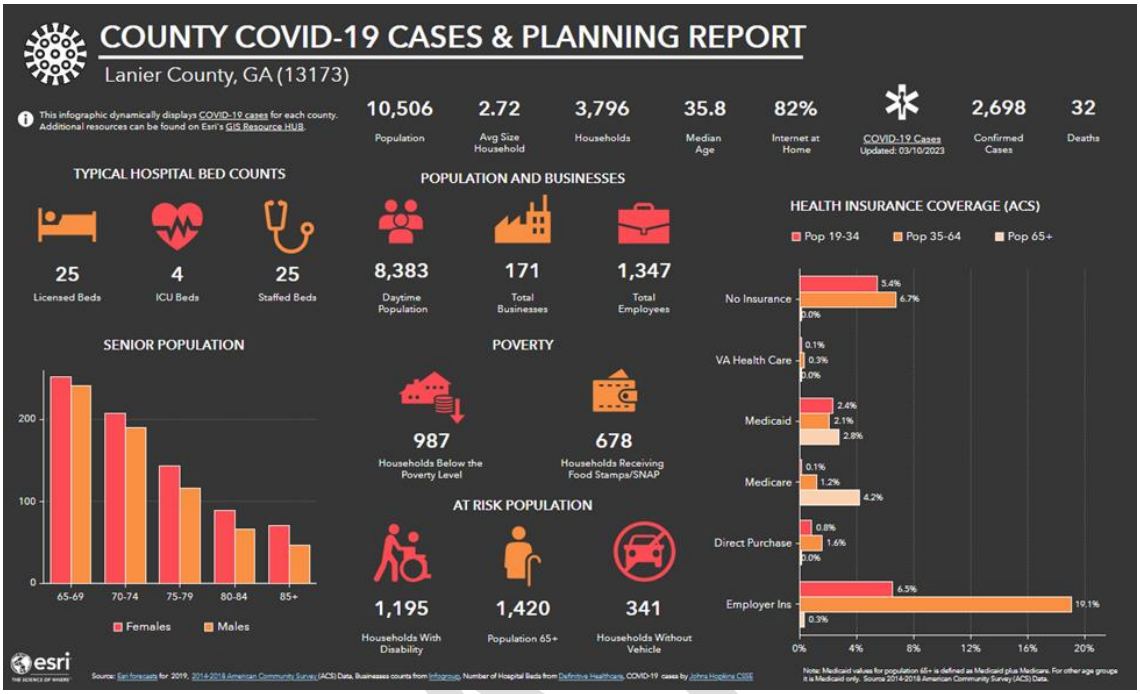
- Communicable disease outbreaks
- Pandemic influenza
- Mosquito-borne illness
- Food-borne illness

Diseases that cause a public health emergency may have a rapid onset or a slow onset. They may be highly localized or may be widespread in nature. Depending on the public health emergency, treatment may not be immediately available.

Some examples of recent public health emergencies include:

- **Zika virus** – spread mostly by the bite of an infected *Aedes* species mosquito, Zika can be passed from a pregnant woman to her fetus. Infection during pregnancy can cause certain birth defects. There is no vaccine or medicine for Zika. Local mosquito borne Zika virus transmission has been reported in the continental United States. (Source: https://www.cdc.gov/zika/about/index.html)
- **Pandemic Influenza: Pandemics happen when new (novel) influenza A viruses emerge which can infect people easily and spread from person to person in an efficient and sustained way.** Unlike seasonal flu, which happens annually, pandemic flu happens rarely (three times in the last century), but the results are much more devastating. Most people have little or no immunity to pandemic influenza because they have no previous exposure to the virus or similar viruses. Even healthy people may be at high risk for serious complications, and health care providers and hospitals may be overwhelmed. (Source: https://www.cdc.gov/flu/pandemic-resources/basics/about.html)
- **Ebola -** a rare and deadly disease caused by infection with one of the Ebola virus species, Ebola is spread through direct contact with bodily fluids. An outbreak in West Africa in 2014 is estimated to have caused over 11,000 deaths. Although only 4 cases related to this outbreak occurred in the United States, transmission could have been far more widespread were it not for close coordination between the CDC, other federal agencies, state and local health departments, and the travel industry. (Source: https://www.cdc.gov/vhf/ebola/outbreaks/2014-west-africa/qa.html).
- **COVID-19 -** an acute disease in humans caused by a coronavirus, which is characterized mainly by fever and cough and capable of progressing to severe symptoms and in some cases death, especially in older people and those with underlying health conditions. It was originally identified in China in 2019 and became pandemic in 2020.

There have been 2,698 confirmed cases of COVID-19 in Lanier County and 32 deaths.



B. Profile of Events, Frequency of Occurrences, Probability

According to the best data available, there have not been any disease outbreak events in Lanier County or the City of Lakeland in recent history. However, the entire community is equally vulnerable to this hazard and an outbreak could happen at any place at any time.

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

In Worksheet 3A: Inventory of Assets (appearing in Appendix A), we estimate that all of Lanier County and the City of Lakeland are equally vulnerable to this hazard.

An estimated 100% of the Residential property (3,944 of 3,944) in Lanier County (including the City of Lakeland) could be affected by this hazard, with a total value of $249,400,501. Also, an estimated 100% of the Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education and Utility properties (1,583 of 1,583) in the community may be affected, with a total value of $371,511,462. The values are based on the most recent available tax roll data for Lanier County and the City of Lakeland, provided by the Lanier County Tax Assessor's Office.

According to the inventory database reports and maps, all the Critical Facilities and Infrastructure for Lanier County (including the City of Lakeland) could be affected by this hazard.

E. Land Use and Development Trends

The County has seen a slight increase in population over the last few years and the city has seen a slight decrease. Lanier County and the City of Lakeland have zoning regulations. Lanier County

and the City of Lakeland have zoning regulations. 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 that are used in Lanier County and the City of Lakeland:

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The Act requires local governments that elect to enforce these codes within their jurisdictions to adopt administrative procedures and penalties to locally enforce any of them. Also, any applicable appendices of these codes must be adopted locally to be enforceable within a specific local jurisdiction.

The DCA Board specifically omitted the plumbing, electrical, and energy requirements of the International Residential Code for One- and Two-Family Dwellings. Therefore, the plumbing requirements of the International Plumbing Code, the electrical requirements of the National Electrical Code, and the energy requirements of the International Energy Conservation Code must be used for one- and two-family dwelling construction.

F. Multi-Jurisdictional Differences

The impact of a disease event will be more severe in places with higher population density due to more people being exposed and higher potential for person-to-person transmission. As such, the City of Lakeland could be more vulnerable to certain types of public health emergencies than unincorporated Lanier County. No other multi-jurisdictional differences have been identified yet.

G. Overall HRV Summary of Events and Their Impact

For most of the last century, disease outbreaks have been rare in the United States due to the presence of an advanced health care system, effective vaccination programs, and coordination between the CDC, other federal agencies, state and local health departments, and health care providers. However, the potential remains for a disease outbreak to harm people throughout Lanier County and the City of Lakeland. The HMPUC has developed a comprehensive range of Mitigation Goals, Objectives, and Action Steps to lessen the impacts from this hazard. These are contained in Chapter 5.

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

Section III. CBRNE

A. Identification of Hazard

The threat of a Chemical, Biological, Radiological, Nuclear, or Explosive (CBRNE) attack has been chosen by the HMPUC as the third most likely human-caused hazard to occur and cause damage in the community.

In pursuit of the community's goals of local preparedness, it is essential for Lanier County and the City of Lakeland to have reliable chemical, biological, radiological, nuclear, and explosives (CBRNE) countermeasures and equipment that can be used with confidence for the protection of life, health, property and commerce.

Chemical weapons have been used by terrorists in the recent past, and it is likely to happen again. Many casualties could be expected in a successful chemical attack. Chemical agents can enter the body by inhalation of chemical agents, absorption through the skin or eyes, injection into the body by flying glass or shrapnel, or ingesting food or water. A likely delivery method is in the form of gas or as an aerosol spray. (Source: http://www.disasters.org/dera/library/Heyer%20WMD.pdf)

Chemical weapons include the following categories (source: http://www.disasters.org/dera/library/Heyer%20WMD.pdf)

- **Nerve Agents**: Nerve agents attack the victim's nervous system. Most belong to the family of chemicals known as organophosphates. Many common pesticides belong to this family of chemicals.
- **Blister Agents**: Blister agents, also known as vesicants, attack the skin of the victim, resulting in blisters and skin burns. Mustard gas and Lewisite are common blister agents.
- **Blood Agents**: Blood agents damage the ability of the blood to hold and deliver oxygen. The victim suffocates. Cyanide gases and compounds are the most common types of these agents.
- **Choking Agents**: These chemicals attack the lungs causing them to fill with fluid. Chlorine gas and phosgene are typical choking agents.
- **Incapacitating Agents**: These agents usually irritate the skin, mucous membranes, eyes, nose, lips and mouth. They may cause vomiting or intolerable pain. While they may lead to serious medical situations such as seizures or heart attacks, they are not designed to kill or cause permanent harm. Used alone, the intention is to temporarily incapacitate or harass the target or force them to evacuate the area. However, incapacitating agents may be used in combination with other agents to force responders to remove their gas masks and other protective gear so that they will be exposed to lethal doses of the other agent. Examples of incapacitating agents are pepper spray, tear gas, riot control agents, and several military chemicals from different nations.

Biological weapons present a serious challenge for response planning. There is a risk that a biological attack may not be detected until days or even weeks after it happens. First responder resources, therefore, may be of little use in a bioterrorism incident unless it is detected promptly. The following are the two main types of biological weapons:

- **Pathogens:** These are disease-causing organisms, some of which can reproduce and keep spreading long after the attack. The potential for many thousands of casualties is possible, but the more likely number is much less because of the difficulty of efficiently delivering the pathogenic agents to large numbers of people.
- **Toxins:** These are poisonous substances produced by living things. Many toxins are extremely lethal and small quantities can kill very large numbers of people. In many ways a toxin attack is more like a chemical attack than a biological one. Some possible toxin weapons are ricin, botulism toxin, and aflatoxin. Again, the difficulty for the terrorist is in finding an effective way to disperse or distribute the toxin.

(Source: http://www.disasters.org/dera/library/Heyer%20WMD.pdf)

Radiological weapons are weapons that produce radiation without detonation of a nuclear device. A radiological incident can cause victims to have contamination and/or exposure. Examples of radiological weapons include:

- **Radiological Dispersal Devices (RDDs),** which cause the purposeful dissemination of radioactive material without a nuclear detonation. One type of RDD is known as a "dirty bomb," which uses a conventional explosive to produce radioactive and nonradioactive shrapnel and radioactive dust, thereby causing radiation contamination and possibly some degree of radiation exposure, as well as physical injury and burns. (Source: https://www.remm.nlm.gov/rdd.htm)
- **Radiological Exposure Devices (REDs)**, otherwise known as a Hidden Sealed Radioactive Source. These cause exposure but typically not contamination. The dose from exposure and specific effect on people depends on the source properties (isotope, activity, and amount), proximity of each person to the source, length of exposure time, and portion of the body exposed. (Source: https://www.remm.nlm.gov/red.htm)

Nuclear incidents involve a nuclear explosion (nuclear fission). A possible example is an attack from an improvised nuclear device (IND), which consists of an illicit nuclear weapon bought, stolen, or otherwise originating from a nuclear state, or a weapon fabricated by a terrorist group from illegally obtained fissile nuclear weapons material that produces a nuclear explosion. Detonation of such a weapon result in catastrophic loss of life, destruction of infrastructure, and contamination of a very large area.

(Source: https://www.remm.nlm.gov/nuclearexplosion.htm#ind)

Explosives can pack a very powerful punch and can bring down large buildings. The casualties could number in the hundreds in this type of attack. One example of this type of weapon was the fuel oil-fertilizer bomb used to attack the Murrah Federal Building in Oklahoma City.

First responders should be alert to the potential structure collapse and secondary explosive devices in the area.

Great caution should be used if the explosion seems to do little damage. A small explosive device might be used to disperse chemical, biological or even radioactive agents. Another purpose of a

small device might be to bring large numbers of first responders, who are then subjected to a larger secondary device.

Another immediate problem for responders and victims is the potential for asbestos exposure. Older buildings may contain asbestos as insulation, pipe coverings, siding or roofing, flooring, adhesives, floor or ceiling tile and wall panels. Any explosion or collapse may cause this asbestos to become airborne at hazardous levels.

(Source: http://www.disasters.org/dera/library/Heyer%20WMD.pdf)

B. Profile of Events, Frequency of Occurrences, Probability

According to the best data available, there have not been any CBRNE events in Lanier County and the City of Lakeland. However, the entire community is equally vulnerable to this hazard and an attack could happen at any place at any time.

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

In Worksheet 3A: Inventory of Assets (appearing in Appendix A), we estimate that all of Lanier County and the City of Lakeland are equally vulnerable to this hazard.

An estimated 100% of the Residential property (3,944 of 3,944) in Lanier County (including the City of Lakeland) could be affected by this hazard, with a total value of $249,400,501. Also, an estimated 100% of the Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education and Utility properties (1,583 of 1,583) in the community may be affected, with a total value of $371,511,462. The values are based on the most recent available tax roll data for Lanier County and the City of Lakeland, provided by the Lanier County Tax Assessor's Office.

According to the inventory database reports and maps, all 62 Critical Facilities and Infrastructure for Lanier County (including the City of Lakeland) could be affected by this hazard. The total value of these Critical Facilities is $155,539,298.

E. Land Use and Development Trends

The County has seen a slight increase in population over the last few years and the city has seen a slight decrease. Lanier County and the City of Lakeland have zoning regulations. Lanier County and the City of Lakeland have zoning regulations. 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 that are used in Lanier County and the City of Lakeland:

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The Act requires local governments that elect to enforce these codes within their jurisdictions to adopt administrative procedures and penalties to locally enforce any of them. Also, any applicable appendices of these codes must be adopted locally to be enforceable within a specific local jurisdiction.

The DCA Board specifically omitted the plumbing, electrical, and energy requirements of the International Residential Code for One- and Two-Family Dwellings. Therefore, the plumbing requirements of the International Plumbing Code, the electrical requirements of the National Electrical Code, and the energy requirements of the International Energy Conservation Code must be used for one- and two-family dwelling construction.

No other land use or development trends related to this hazard have been identified.

F. Multi-Jurisdictional Differences

The impact of a CBRNE event will be more severe in places with higher population density due to more people being in danger. Response times may be longer in remote areas. No other multi-jurisdictional differences have been identified yet.

G. Overall HRV Summary of Events and Their Impact

A CBRNE event has the potential to harm people throughout the County and the City of Lakeland. The HMPUC has developed a comprehensive range of Mitigation Goals, Objectives, and Action Steps to lessen the impacts from this hazard. These are contained in Chapter 4.

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

Section IV. Active Shooter

A. Identification of Hazard

As we are all aware, the risk of an active shooter is real, and it can happen in any place at any given time. Taking steps now to prepare and implement a plan can better prepare those to react quickly when every second counts. The shootings are unpredictable and can evolve quickly.

Training opportunities for law enforcement officers are offered by the Georgia Public Safety Training Center (https://www.gpstc.org/).

B. Profile of Events, Frequency of Occurrences, Probability

According to the best data available, there have not been any Active Shooter events in Lanier County and the City of Lakeland. However, the entire community is equally vulnerable to this hazard and an attack could happen at any place at any time. Mass shootings have occurred in nearby communities, such as Valdosta and Waycross (source: http://www.gunviolencearchive.org/).

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

In Worksheet 3A: Inventory of Assets (appearing in Appendix A), we estimate that all of Lanier County and the City of Lakeland are equally vulnerable to this hazard.

An estimated 100% of the Residential property (3,944 of 3,944) in Lanier County (including the City of Lakeland) could be affected by this hazard, with a total value of $249,400,501. Also, an estimated 100% of the Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education and Utility properties (1,583 of 1,583) in the community may be affected, with a total value of $371,511,462. The values are based on the most recent available tax roll data for Lanier County and the City of Lakeland, provided by the Lanier County Tax Assessor's Office.

According to the inventory database reports and maps, all 62 Critical Facilities and Infrastructure for Lanier County (including the City of Lakeland) could be affected by this hazard. The total value of these Critical Facilities is $155,539,298.

E. Land Use and Development Trends

Lanier County and the City of Lakeland have zoning regulations. Lanier County and the City of Lakeland have zoning regulations. 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 that are used in Lanier County and the City of Lakeland:

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No other land use or development trends related to this hazard have been identified.

F. Multi-Jurisdictional Differences

The impact of an Active Shooter event will be more severe in places with higher population density due to more people being in danger. Response times may be longer in remote areas. No other multi-jurisdictional differences have been identified yet.

G. Overall HRV Summary of Events and Their Impact

An Active Shooter event has the potential to harm people throughout Lanier County and the City of Lakeland. The HMPUC has developed a comprehensive range of Mitigation Goals, Objectives, and Action Steps to lessen the impacts from this hazard. These are contained in Chapter 4.

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

Section V. Dam Failure

A. Identification of Hazard

Dam failure or dam burst is a catastrophic type of structural failure characterized by the sudden, rapid, and uncontrolled release of impounded water or the likelihood of such an uncontrolled release. A Georgia Safe Dams Act Category 1 dam failure could result in probable loss of human life. Category II - Improper operation or dam failure would not be expected to result in probable loss of human life.

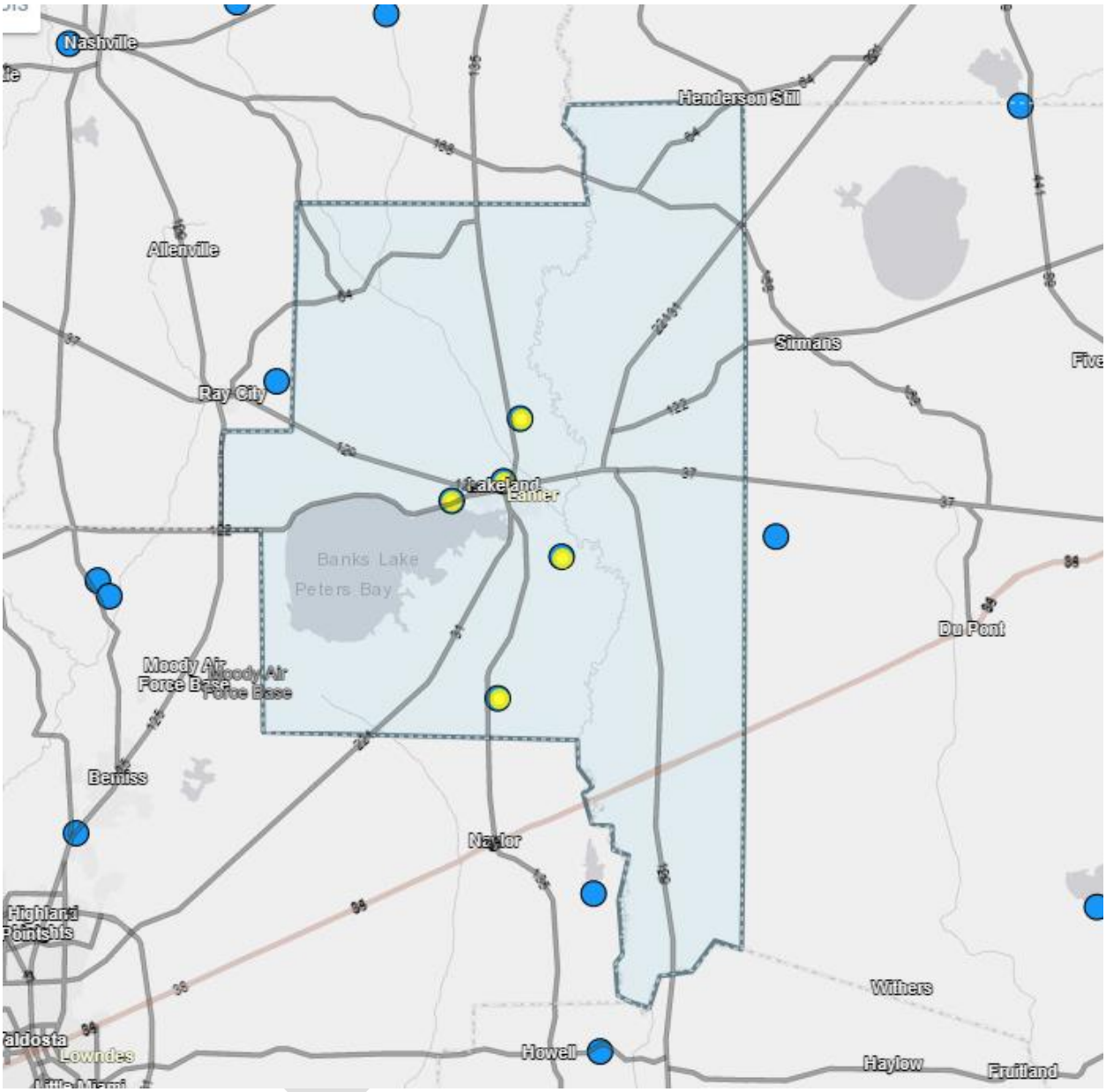
B. Profile of Events, Frequency of Occurrences, Probability

In the recorded history of Lanier County, there have been no reported failures of local dams. However, due to the presence and proximity to infrastructure and/or real property, they pose a low risk to the community in many cases. Lanier County and the City of Lakeland have no Watershed Dams that fall under the Georgia Watershed Flood Control, with 3 being privately owned, 1 (Banks Lake Dam) being owned by GDOT, and 1 (Lake Irma Dam) being owned by the City of Lakeland. The private dams' primary purpose is fire protection, stock, or small fishpond for farming irrigation purposes. Banks Lake and Lake Irma Dams are for recreational uses.

All the private dams previously fell under the inspection and regulatory control of the Georgia Safe Dams Program. According to the Georgia Safe Dams Act and Rules for Dam Safety, owners are now responsible for inspecting their dams. The recent amendments to the Rules of the Department of Natural Resources, Chapter 391-3-8-.10, established the schedule by which owners must inspect their dams, submit their completed reports to the Safe Dams Program, and have an engineer inspect them every two years. In addition to any specific inspection and maintenance program requirements included in a dam owner's permit, dam owners must also inspect their dam quarterly and provide their reports to the Safe Dams Program each year by April 30. For dams with a height of less than 50 feet, an owner may request a waiver for one round of engineer-led inspections. There are no request waivers for dams with a height of 50 feet or more. All 5 dams in Lanier County are less than 50 feet in height. Please note that one engineer-led inspection also satisfies owner inspections for the quarters between October 1 and March 31 of that year.

All these dams pose no significant risk to life or property. Since there has never been a reported Dam Failure in Lanier County, the impact in the future is low.

Dam Locations in Lanier County



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

We estimate that Lanier County and the City of Lakeland are equally vulnerable at a low risk to this hazard.

An estimated 100% of the Residential property (3,944 of 3,944) in Lanier County (including the City of Lakeland) could be affected by this hazard, with a total value of $249,400,501. Also, an estimated 100% of the Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education and Utility properties (1,583 of 1,583) in the community may be affected, with a total

value of $371,511,462. The values are based on the most recent available tax roll data for Lanier County and the City of Lakeland, provided by the Lanier 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 2022 Georgia Farm Gate Value Report (farmgate.caes.uga.edu/CountyAnnualReport.aspx) the total farm gate value of agricultural production in Lanier County is $47,463,433.60.

E. Land Use and Development Trends

Staff with the Planning Department of both jurisdictions make available all information related to potential developers. However, no specific regulations are in place in any jurisdiction regarding land use and/or development near dams.

F. Multi-Jurisdictional Differences

The City of Lakeland and unincorporated Lanier County are at low risk of damage from a Dam Failure within their communities. Some surrounding counties could also have a low impact on the city and county.

G. Overall HRV Summary of Events and Their Impact

Inspections conducted by inspectors with the Georgia Safe Dams Program show that the hazard threat to persons, structures, and other property within Lanier County, is low. Since the previous plan was completed, there have not been any changes that would either increase or decrease the community's overall vulnerability to this hazard.

Chapter 4: Local Natural Hazard Mitigation Goals and Objectives

Summary of Changes:

Table 4.1 gives a brief description of each section in this chapter and a summary of the changes made.

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

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

Overall Community Mitigation Goals, Policies, and Values Narrative

This plan, as a joint effort between Lanier County and the City of Lakeland, will serve as a comprehensive mitigation plan. The mitigation strategies, hazard identification, and other information identified in this plan will be integrated into all comprehensive Lanier County plans, as well as all municipality plans in the future. Incorporation of these strategies will occur, as necessary, throughout this planning cycle covered by this Hazard Mitigation Plan Update. Aspects of this plan will be integrated into the Lanier County Comprehensive Plan during the next planning cycle.

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

The Legal and Regulatory Capability Survey (below) describes the authorities available to the jurisdictions and/or enabling legislation at the state level affecting planning and land management tools that support local hazard mitigation planning efforts. The identified planning and land management tools are typically used by states and local jurisdictions to implement hazard mitigation activities. These authorities were reviewed by the Planning Committee prior to inclusion in this plan. Information used from these documents included data and statistics, overall community issues, needs, and goals, and information about state, federal, and local policies and programs.

Regulatory Tools/Plans	Regulatory Type: Ordinance, Resolution, Codes, Plans, Etc.	Local Authority	State Prohibited	Higher Authority
Building Codes	Adopted County/Municipal Code	Yes	No	No
Capital Improvements Plan	Lanier County and the City of Lakeland Comprehensive Plan	Yes	No	No
Comprehensive Plan	Lanier County and the City of Lakeland	Yes	No	No

	Comprehensive Plan			
Economic Development Plan	Lanier County and the City of Lakeland Comprehensive Plan	Yes	No	Yes
Emergency Response Plan	Lanier County Local Emergency Operations Plan (LEOP)	Yes	No	Yes
Zoning Ordinances	City of Lakeland Land Development Code Lanier County Land Development Code	Yes	No	No

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

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

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

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

Authority for the development of this Plan was given by the Lanier County Commission as a result of their execution of the Grantee-Subgrantee Agreement for the Lanier County Hazard Mitigation Grant Program (HMGP) Planning Project; and by the City of Lakeland, located in Lanier County,

through their participation in the planning project. The Lanier County Emergency Management Agency is authorized to oversee emergency management within Lanier County and the City of Lakeland.

The jurisdictions have many current policies and programs related to hazard mitigation, which are described in detail in the goals, objectives, and action steps contained in Chapter 4 of this Plan. All jurisdictions (within their budgets) can expand and improve their existing policies and programs, as evidenced by the new and existing goals, objectives, and action steps included in this plan. The number of resources available to the jurisdictions to expand and improve existing programs will depend on factors such as the 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 damage and improve safety through Hazard Mitigation. These were arranged by the natural hazards in Chapter 2. There is emphasis on emergency preparedness and infrastructure.

The HMPUC discussed and identified the comprehensive range of Mitigation Goals, Objectives, and Action Steps contained in Chapter 4 of this Plan after identifying the hazards noted in Chapter 2 of this Plan. All community areas were considered in developing the comprehensive range of Mitigation Goals, Objectives, and Action Steps. These were identified after the weighing of many factors discovered during the planning process, including risk assessment, storm history, past damage, community resources, and other factors.

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

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

Through this prioritization process, several projects emerged as having higher priority than others. Some of the projects involved expending considerable amounts of funds to initiate the required actions. The determination of 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 completion of the project using potential grant funding. Still, others required no significant financial commitment from the communities.

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

will be made to accomplish these actions, depending on available funding, prior to accomplishing the other listed action steps. “Medium” priority indicates those items that are important to the community but should receive funding and resources only after sufficient funding and resources have been devoted to accomplishing “High” priority action steps. “Low” priority action steps are those that, while still important to the community, will be accomplished depending on funding and resources and on the number of “High” and “Medium” priority action steps that have first been accomplished.

Relevant comprehensive ranges of Mitigation Goals, Objectives, and Action Steps are listed below throughout the chapter. The Lanier County EMA Director has been chosen by Lanier County and the City of Lakeland to oversee the projects. The Lanier County EMA was designated by Lanier County and the City of Lakeland to be the coordinating agency for implementing and administering these projects.

Action steps in this plan listed as ongoing are those not completed due to lack of funding or budgetary means.

Section I. Hurricanes/Tropical Storms

A. Community Mitigation Goals

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

B. Identification and Analysis of Comprehensive Range of Mitigation Options

1. Structural and Non-Structural Mitigation:

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

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

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

3. Community Values, Historic and Special Considerations:

Historic buildings exist in the community, a few of which are Critical Facilities. There are historic and special considerations that pose significant challenges with retrofitting historic buildings to make them more resilient to natural hazards. For example, Lanier County Auditorium and Grammar School is a historic building in the community; it was added to the National Register of Historic Places in 1986.

4. New Buildings and Infrastructure:

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

5. Existing Buildings and Infrastructure:

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

C. Mitigation Strategy and Recommendations

Goal 1: Minimize damage caused by high wind events.

Objective 1: Protect life, health and property of residents from high winds.

Action Step 1: Educate homeowners and builders on individual safe rooms.	
Responsible Department	EMA
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	Medium
Status	Ongoing

Action Step 2: Distribute programs on personal emergency preparedness, e.g., emergency survival kits.	
Responsible Department	EMA
Anticipated Cost	$1,000
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	Medium
Status	Ongoing (on-line)

Action Step 3: Contract with the American Red Cross to teach the Citizen's Disaster Course on a frequent basis.	
Responsible Department	EMA, ARC
Anticipated Cost	$2,000
Existing & Potential Funding Sources	OHS-GEMA/FEMA (Pre-Disaster Mitigation Grant, BRIC, FMA, HMA)
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	Medium
Status	Ongoing (Starting this now)

Action Step 4: Encourage businesses to develop emergency plans.	
Responsible Department	EMA, Industrial Authority
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	Medium
Status	Ongoing

Action Step 5: Increase public awareness of the NOAA weather radios, and available community safe shelters by publishing articles in the local newspaper, social media, holding town hall meetings, and providing bulletins to local churches and schools.	
Responsible Department	EMA, local media
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	High
Status	Ongoing

Action Step 6: Trim tree lines around roads, homes, utilities and businesses.	
Responsible Department	EMA, Lanier County/Lakeland Public Works, Georgia Power, Colquitt EMC, Slash Pine EMC
Anticipated Cost	$100,000
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	Medium
Status	Ongoing

Action Step 7: Increase awareness of the Hyper Reach system through social media, notices sent home with children through the schools, notices in property tax bills or utility bills, newspapers, tables at events/festivals, community gatherings, and robo-calls.	
Responsible Department	EMA, local media
Anticipated Cost	$3,000/year
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	High
Status	Ongoing (Changed from Code Red to Hyper Reach)

Action Step 8 (formerly 9): Continue to maintain partnerships with local amateur radio operators to ensure redundancy in case of communication system failure.	
Responsible Department	EMA
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	High
Status	Ongoing

Action Step 9 (formerly 10): Install redundant communication radio network (e.g., CB) for the tri-county 911 system.	
Responsible Department	EMA
Anticipated Cost	$100,000
Existing & Potential Funding Sources	Local Operating Funds, grants (Pre-Disaster Mitigation Grant, BRIC, FMA, HMA)
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2019-2024
Priority	High
Status	Ongoing

Action Step 10 (formerly 11): Conduct information outreach to inform the public of what weather and warning apps, websites, and data resources are most appropriate and accurate to use.	
Responsible Department	EMA
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local operating funds
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	High
Status	Ongoing

Action Step 11: Construct a community safe room, including kennels.	
Responsible Department	EMA
Anticipated Cost	$500,000
Existing & Potential Funding Sources	Grants/GEMA (Pre-Disaster Mitigation Grant, BRIC, FMA, HMA)
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	High
Status	New

Objective 2: Minimize damages from high winds to institutional/public buildings in Lanier County.

Action Step 1: Assess all public buildings, particularly public schools, for wind resistance	
Responsible Department	Building Inspections Office, Lanier County/Lakeland Schools/Affinity Homes
Anticipated Cost	$10,000
Existing & Potential Funding Sources	OHS-GEMA/FEMA (Pre-Disaster Mitigation Grant, BRIC, FMA, HMA)
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	High
Status	Ongoing

Action Step 2: Initiate an inspection program at critical facilities to identify construction weaknesses subject to high wind damage.	
Responsible Department	Building Inspections Office
Anticipated Cost	$10,000
Existing & Potential Funding Sources	OHS-GEMA/FEMA (Pre-Disaster Mitigation Grant, BRIC, FMA, HMA)
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	Medium
Status	Ongoing

Action Step 3: Retrofit any public structures that are deemed insufficient to resist high wind damage.	
Responsible Department	Lanier County/Lakeland Schools, Lanier County Commission, Lakeland City Council
Anticipated Cost	$500,000
Existing & Potential Funding Sources	OHS-GEMA/FEMA (Pre-Disaster Mitigation Grant, BRIC, FMA, HMA)
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	Medium
Status	Ongoing

Action Step 4: Install auxiliary portable and fixed generators (including transfer switches) for all critical facilities, shelters, water systems, and wherever else they are needed.	
Responsible Department	EMA
Anticipated Cost	$100,000 per generator
Existing & Potential Funding Sources	OHS-GEMA/FEMA (Pre-Disaster Mitigation Grant, BRIC, FMA, HMA)
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	High
Status	Ongoing (some in place)

Action Step 5: Provide NOAA weather radios (or comparable devices) to all households in Lanier County and the City of Lakeland.	
Responsible Department	EMA
Anticipated Cost	$50,000
Existing & Potential Funding Sources	Local Operating Funds, grants (Pre-Disaster Mitigation Grant, BRIC, FMA, HMA)
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	High
Status	Ongoing

D. Special Multi-Jurisdictional Strategy and Considerations:

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

E. Local Public Information and Awareness Strategy:

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

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

F. Changes from the Previous Plan

Completed Action Steps

Goal 1: Minimize damage caused by high wind events.

Objective 1: Protect life, health and property of residents from high winds.

Previous Action Step #8 was deleted – This is maintained on the board of Commissioners website.

Action Step 8: Develop and maintain the EMA website	
Responsible Department	EMA
Anticipated Cost	$1,000/year
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2019-2024
Priority	High
Status	Deleted (maintain website thru BOC)

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 Lanier County and the City of Lakeland. Tornadoes are unpredictable and can happen at any place and at any time. Because these tornadoes may be extremely powerful and cause great damage, the HMPUC believes that the comprehensive range of Mitigation Goals, Objectives, and Action Steps (contained in Section C below) should be implemented to reduce this hazard's potential impact on the community.

B. Identification and Analysis of Comprehensive Range of Mitigation Options

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

2. Existing Policies, Regulations, Ordinances and Land Use:
Chapter 2 of this plan contains information regarding existing policies, regulations, ordinances, and land use that are relevant to this hazard. For more information, see Chapter 2, Section II, Subsection E.

3. Community Values, Historic and Special Considerations:
Historic buildings exist in the community, a few of which are Critical Facilities. There are historic and special considerations that pose significant challenges with retrofitting historic buildings to make them more resilient to natural hazards. For example, Lanier County Auditorium and Grammar School is a historic building in the community; it was added to the National Register of Historic Places in 1986.

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

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

C. Mitigation Strategy and Recommendation:

Goal 2: Minimize damage caused by tornadoes.

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

Action Step 1: Educate homeowners and builders on individual safe rooms.	
Responsible Department	EMA
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	Medium
Status	Ongoing

Action Step 2: Distribute programs on personal emergency preparedness, e.g. emergency survival kits.	
Responsible Department	EMA
Anticipated Cost	$1,000
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	Medium
Status	Ongoing

Action Step 3: Contract with the American Red Cross to teach the Citizen's Disaster Course on a frequent basis.	
Responsible Department	EMA, ARC
Anticipated Cost	$2,000
Existing & Potential Funding Sources	OHS-GEMA/FEMA (Pre-Disaster Mitigation Grant, BRIC, FMA, HMA)
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	Medium
Status	Ongoing

Action Step 4: Encourage businesses to develop emergency plans.	
Responsible Department	EMA, Industrial Authority
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	Medium
Status	Ongoing

Action Step 5: Increase public awareness of the NOAA weather radios, and available community safe shelters by publishing articles in the local newspaper, social media, holding town hall meetings, and providing bulletins to local churches and schools.	
Responsible Department	EMA, local media
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	High
Status	Ongoing

Action Step 6: Trim tree lines around roads, homes, utilities, and businesses.	
Responsible Department	EMA, Lanier County/Lakeland Public Works, Georgia Power, Colquitt EMC, Slash Pine EMC
Anticipated Cost	$100,000
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	Medium
Status	Ongoing

Action Step 7: Increase awareness of the Hyper Reach system through social media, notices sent home with children through the schools, notices in property tax bills or utility bills, newspapers, tables at events/festivals, community gatherings, and robo-calls.	
Responsible Department	EMA, local media
Anticipated Cost	$3,000/year
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	High
Status	Ongoing

Action Step 8 (formerly 9): Continue to maintain partnership with local amateur radio operators in order to ensure redundancy in case of communication system failure.	
Responsible Department	EMA
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	High
Status	Ongoing

Action Step 9 (formerly 10): Install redundant communication radio network (e.g., CB) for the tri-county 911 system.	
Responsible Department	EMA
Anticipated Cost	$100,000
Existing & Potential Funding Sources	Local Operating Funds, grants (Pre-Disaster Mitigation Grant, BRIC, FMA, HMA)
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	High
Status	Ongoing

Action Step 10 (formerly 11): Conduct information outreach to inform the public of what weather and warning apps, websites, and data resources are most appropriate and accurate to use.	
Responsible Department	EMA
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local operating funds
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	High
Status	Ongoing

Objective 2: Minimize damage from tornadoes to institutional/public buildings in Lanier County.

Action Step 1: Assess all public buildings, particularly public schools, for wind resistance	
Responsible Department	Building Inspections Office, Lanier County/Lakeland Schools
Anticipated Cost	$10,000
Existing & Potential Funding Sources	OHS-GEMA/FEMA (Pre-Disaster Mitigation Grant, BRIC, FMA, HMA)
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	High
Status	Ongoing

Action Step 2: Initiate an inspection program at critical facilities to identify construction weaknesses subject to high wind damage.	
Responsible Department	Building Inspections Office
Anticipated Cost	$10,000
Existing & Potential Funding Sources	OHS-GEMA/FEMA (Pre-Disaster Mitigation Grant, BRIC, FMA, HMA)
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	Medium
Status	Ongoing

Action Step 3: Retrofit any public structures that are deemed insufficient to resist high wind damage.	
Responsible Department	Lanier County/Lakeland Schools, Lanier County Commission, Lakeland City Council
Anticipated Cost	$500,000
Existing & Potential Funding Sources	OHS-GEMA/FEMA (Pre-Disaster Mitigation Grant, BRIC, FMA, HMA)
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	Medium
Status	Ongoing

Action Step 4: Install auxiliary portable and fixed generators (including transfer switches) for all critical facilities, shelters, water systems, and wherever else they are needed.	
Responsible Department	EMA
Anticipated Cost	$100,000 per generator
Existing & Potential Funding Sources	OHS-GEMA/FEMA (Pre-Disaster Mitigation Grant, BRIC, FMA, HMA)
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	High
Status	Ongoing

Action Step 5: Provide NOAA weather radios (or comparable devices) to all households in Lanier County and the City of Lakeland.	
Responsible Department	EMA
Anticipated Cost	$50,000
Existing & Potential Funding Sources	Local Operating Funds, grants (Pre-Disaster Mitigation Grant, BRIC, FMA, HMA)
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	High
Status	Ongoing

D. Special Multi-Jurisdictional Strategy and Considerations:

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

E. Local Public Information and Awareness Strategy:

All sections of the Plan shall be monitored and evaluated annually by the County Emergency Management Agency. Incremental accomplishments of Mitigation Goals, Objectives, and Action Steps will be reported to the public through appropriate means (news media, social media, Code Red, web pages (including the EMA website, lanierema.com), City Council and County Commission meetings, etc.). By utilizing available resources, each jurisdiction will keep the public

constantly informed of the development of these strategies and of how citizens can best assist with and/or take advantage of these efforts.

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

F. Changes from the Previous Plan

Goal 2: Minimize damage caused by tornadoes.

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

Previous Action Step #7 was amended from Code Red to Hyper Reach.

Previous Action Step # 8 was deleted. Website maintained by BOC.

Action Step 8: Develop and maintain the EMA website	
Responsible Department	EMA
Anticipated Cost	$1,000/year
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2019-2024
Priority	High
Status	Deleted (website maintained on Board of Commissioners Website)

Section III. Floods

A. Community Mitigation Goals

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

The major flooding sources in Lanier County are the Alapaha River sub-basin and the Withlacoochee sub-basin of the Suwannee River, which runs south through the county. Due to

these facts, the Lanier 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 Lanier County and the City of Lakeland. Banks Lake, a National Wildlife Refuge, is also in Lanier County, but it is a shallow blackwater with no potential flooding problems.

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

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

2. Existing Policies, Regulations, Ordinances and Land Use:
Chapter 2 of this plan contains information regarding existing policies, regulations, ordinances, and land use that are relevant to this hazard. For more information, see Chapter 2, Section III, Subsection E.

3. Community Values, Historic and Special Considerations:
Historic buildings exist in the community, a few of which are Critical Facilities. pose significant challenges with retrofitting historic buildings to make them more resilient to natural hazards. For example, Lanier County Auditorium and Grammar School is a historic building in the community; it was added to the National Register of Historic Places in 1986.

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

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

C. Mitigation Strategy and Recommendations:

Goal 3: Minimize flood damage in Lanier County and the City of Lakeland.

Objective 1: Minimize losses to existing and future structures and critical facilities, due to localized flooding caused by excessive rainfall.

Action Step 1: Continue to identify areas in Lakeland and Lanier County that experience repetitive localized flooding.	
Responsible Department	EMA, Lakeland City Council, Lanier County Commission
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	High
Status	Ongoing

Action Step 2: Review data on storm events to determine where repetitive localized flooding occurs as a result of inadequate drainage infrastructure.	
Responsible Department	EMA, Lakeland City Council, Lanier County Commission
Anticipated Cost	$5,000
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	High
Status	Ongoing

Action Step 3: Identify and pursue grant opportunities to upgrade deficient drainage systems.	
Responsible Department	EMA, Lakeland City Council, Lanier County Commission
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	High
Status	Ongoing

Action Step 4: Implement infrastructure improvements for flood mitigation on Unity Church Rd, Avery, Allen, Atticua Road, and Felts, including a box culvert on Old Stockton Road, upgraded 30" sewer lines on Tyler Road, additional sewer lines on Cross Creek Road, and new sewer lines on Baskins Rd, plus other improvements as needed.	
Responsible Department	Lanier County
Anticipated Cost	$150,000
Existing & Potential Funding Sources	Local Operating Funds, Grants (Pre-Disaster Mitigation Grant, BRIC, FMA, HMA)
Jurisdiction	Lanier County
Timeframe	2024-2028
Priority	Medium
Status	Ongoing (Pascal Rd, Teeterville Rd, and Simpson Rd completed. Added Baskins Rd)

Objective 2: Protect and preserve flood-prone areas for green space use, such as community parks and recreation areas.

Action Step 1: Monitor comprehensive land use plans to ensure mapping of lands to be permanently protected.	
Responsible Department	Planning Commission
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	Medium
Status	Ongoing

Action Step 2: Monitor existing subdivision regulations to promote conservation of floodplains, wetlands, and groundwater recharge areas.	
Responsible Department	Lanier County Commission, Lakeland City Council
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	Medium
Status	Ongoing

Action Step 3: Seek funding from private foundations, individuals, federal and state grants, and local communities to leverage available green space grant funds.	
Responsible Department	Lanier County Commission, Lakeland City Council
Anticipated Cost	$300,000
Existing & Potential Funding Sources	OHS-GEMA/FEMA, State, local, private foundations, individual assistance, and Georgia DNR Grant (Pre-Disaster Mitigation Grant, BRIC, FMA, HMA)
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	Medium
Status	Ongoing – (Added Georgia DNR to funding)

Action Step 4: Educate public and private organizations on methods for preserving parks and recreation areas, such as grants, community cleanup events, conservation easements, and encouraging landowners to dedicate their land to the public.	
Responsible Department	Lanier County Commission, Lakeland City Council
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	Medium
Status	Ongoing

Action Step 5: Partner with Suwannee Riverkeepers to clean out 17 miles of the Alapaha River. This includes trash and dead trees/limbs across the river.	
Responsible Department	Lanier County EMA/Suwannee River Keepers/Volunteers
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	Medium
Status	New

Objective 3: Establish correct boundaries for flood-prone areas along the major rivers in Lanier County.

Action Step 1: Petition the National Weather Service, US Geological Survey, or other agencies to place and maintain river gauges at identified locations along the Alapaha River in Lanier County.	
Responsible Department	EMA
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds, grants (Pre-Disaster Mitigation Grant, BRIC, FMA, HMA)
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	Medium
Status	Ongoing

Action Step 2: Continue membership in the NFIP by adopting updated ordinances and FIRM maps as updates are available and continue to enforce floodplain regulations in the County.	
Responsible Department	EMA
Anticipated Cost	Staff time
Existing & Potential Funding Sources	General Funds, GEMA/FEMA Homeland Security
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	High
Status	Ongoing

D. Special Multi-Jurisdictional Strategy and Considerations:

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

E. Local Public Information and Awareness Strategy.

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

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

F. Changes from the Previous Plan

New Action Step

Goal 1, Objective 2, Action Step #5

Amended Action Step #4
Pascal Rd, Teeterville Rd, and Simpson Rd completed. Added Baskins Rd.

Section IV. Hailstorm/Lightning/Windstorm

A. Community Mitigation Goals

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

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

1. Structural and Non-Structural Mitigation:

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

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

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

3. Community Values, Historic and Special Considerations:

Historic buildings exist in the community, a few of which are Critical Facilities. There are historic and special considerations that pose significant challenges with retrofitting historic buildings to make them more resilient to natural hazards. For example, Lanier County Auditorium and Grammar School is a historic building in the community; it was added to the National Register of Historic Places in 1986.

4. New Buildings and Infrastructure:

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

5. Existing Buildings and Infrastructure:

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

C. Mitigation Strategy and Recommendations:

Goal 4: Protect Citizens of Lanier County from the threat of lightning strikes, wind, and hail.

Objective 1: Provide tools necessary for warning of lightning strikes, wind, and hail.

Action Step 1: Provide every public outdoor recreation facility and every public-school outdoor recreation facility with an automatic warning device, if feasible.	
Responsible Department	EMA, Lanier County/Lakeland Schools
Anticipated Cost	$25,000
Existing & Potential Funding Sources	OHS-GEMA/FEMA
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	Medium
Status	Ongoing

Action Step 2: Make lightning warning system information available to other entities having significant outdoor activities, such as golf courses, businesses, airport, etc.	
Responsible Department	EMA
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	High
Status	Ongoing

Action Step 3: Educate the public on the risks of lightning, wind, and hail.	
Responsible Department	EMA, Schools
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	High
Status	Ongoing

Action Step 4: Provide news media with press releases concerning lightning, wind, and hail.	
Responsible Department	EMA
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	High
Status	Ongoing

D. Special Multi-Jurisdictional Strategy and Considerations:

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

E. Local Public Information and Awareness Strategy:

All sections of the Plan shall be monitored and evaluated annually by the County Emergency Management Agency. Incremental accomplishments of Mitigation Goals, Objectives, and Action

Steps will be reported to the public through appropriate means (news media, social media, Code Red, web pages (including the EMA website, lanierema.com), City Council and County Commission meetings, etc.). By utilizing available resources, each jurisdiction will keep the public constantly informed of the development of these strategies and of how citizens can best assist with and/or take advantage of these efforts.

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

F. Changes from the Previous Plan

No changes.

Section V. Extreme Heat

A. Community Mitigation Goals

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

B. Identification and Analysis of Comprehensive Range of Mitigation Options

1. Structural and Non-Structural Mitigation:

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

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

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

3. Community Values, Historic and Special Considerations:

Historic buildings exist in the community, a few of which are Critical Facilities. There are historic and special considerations that pose significant challenges with retrofitting historic buildings to make them more resilient to natural hazards. For example, Lanier County Auditorium and Grammar School is a historic building in the community; it was added to the National Register of Historic Places in 1986.

4. New Buildings and Infrastructure:

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

5. Existing Buildings and Infrastructure:

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

C. Mitigation Strategy and Recommendation:

Goal 5: Prevent or reduce damage from Extreme Heat to the health of the citizens of Lanier County and the City of Lakeland.

Objective 1: Ensure that adequate warning systems and resources are available to minimize the impact of Extreme Heat events in the community.

Action Step 1: Identify County facilities for "comfort station" locations.	
Responsible Department	EMA, Lanier County
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	High
Status	Ongoing
Action Step 2: Continue to work with the faith-based community, the American Red Cross, and other community institutions to make "comfort station" locations and/or shelters (including animal shelter facilities) available in case of extreme heat events.	
Responsible Department	EMA, local non-governmental organizations
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	Medium
Status	Ongoing

D. Special Multi-Jurisdictional Strategy and Considerations:

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

E. Local Public Information and Awareness Strategy:

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

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

F. Changes from the Previous Plan

No changes.

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 Lanier County and the City of Lakeland. Wildfires are unpredictable and can happen at any place and at any time. Due to the great damage, it may cause, the HMPUC believes that the comprehensive range of Mitigation Goals, Objectives, and Action Steps (contained in Section C below) should be implemented to reduce this hazard's potential impact on the community.

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

1. Structural and Non-Structural Mitigation:

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

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

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

3. Community Values, Historic and Special Considerations:

Historic buildings exist in the community, a few of which are Critical Facilities. There are historic and special considerations that pose significant challenges with retrofitting historic buildings to make them more resilient to natural hazards. Lanier County Auditorium and Grammar School was added to the National Register of Historic Places in 1986.

4. New Buildings and Infrastructure:

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

5. Existing Buildings and Infrastructure:

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

C. Mitigation Strategy and Recommendation

Goal 6. Prevent damage resulting from wildfires in Lanier County, reduce the threat of wildfires, and protect the life and property of residents.

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

Action Step 1: Request the Greater Lanier County Planning Commission to consider the use of Urban/Wildland Interface in the development of its comprehensive plan.	
Responsible Department	Lanier County Commission, Lakeland City Council
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Lanier County, City of Lakeland
Timeframe	2024-2028
Priority	Medium
Status	Ongoing

Action Step 2: Implement "1-2-3" (formerly known as Firewise) program in Lanier County and the City of Lakeland.	
Responsible Department	Georgia Forestry Commission
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Georgia Forestry Commission
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	Medium
Status	Ongoing

Action Step 3: Hold a regular Community Clean-up Day to cut, prune, and mow vegetation in shared community spaces.	
Responsible Department	Residential homeowners and community stakeholders, GFC, Lanier and Lakeland Fire Departments
Anticipated Cost	$3,000
Existing & Potential Funding Sources	Community and Business donations
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	High
Status	Ongoing

Action Step 4: Allow adequate emergency vehicle access by making sure that vertical and horizontal driveway/right-of-way clearance is provided, and adequate lengths of culverts are installed.	
Responsible Department	Lanier County Fire Department
Anticipated Cost	$40,000
Existing & Potential Funding Sources	Grants/Local Operating Funds (Pre-Disaster Mitigation Grant, HMGP, BRIC, FMA, HMA)
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	Medium
Status	Ongoing

Action Step 5: Identify road improvements needed; as roads are upgraded, widen to minimum standards with at least 60-foot diameter cul-de-sacs or turn-arounds.	
Responsible Department	County Road Department, Lanier and Lakeland Fire Departments, City and County Governments
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Grants/Local Operating Funds (Pre-Disaster Mitigation Grant, HMGP, BRIC, HMA)
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	Medium
Status	Ongoing

Action Step 6: Encourage prescribed burning for private landowners and industrial timberlands particularly adjacent to residential areas.	
Responsible Department	Georgia Forestry Commission
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Grants/Local Operating Funds (Pre-Disaster Mitigation Grant, BRIC, FMA, HMA)
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	Medium
Status	Ongoing

Action Step 7: Seek grant for mowing or prescribed burning in Wildland-Urban Interface areas	
Responsible Department	Georgia Forestry Commission
Anticipated Cost	$50/acre
Existing & Potential Funding Sources	Grants/Local Operating Funds (Pre-Disaster Mitigation Grant, BRIC, FMA, HMA)
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	Medium
Status	Ongoing (changed from $35/Acre to $50)

Action Step 8: Clean/ re-harrow existing fire lines	
Responsible Department	Georgia Forestry Commission, City and County Fire Departments, County Road Department, City and County Governments
Anticipated Cost	$50/acre
Existing & Potential Funding Sources	Grants/Local Operating Funds (Pre-Disaster Mitigation Grant, BRIC, HMA)
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	Medium
Status	Ongoing (changed from $35/Acre to $50)

Action Step 9: Inspect, maintain and improve access to existing dry hydrants. Add signage along road to mark the hydrants.	
Responsible Department	Georgia Forestry Commission, City and County Fire Departments
Anticipated Cost	$5,000/year
Existing & Potential Funding Sources	Grants/Local Operating Funds (Pre-Disaster Mitigation Grant, BRIC, FMA, HMA)
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	Medium
Status	Ongoing

Action Step 10: Locate additional dry hydrants or drafting locations as needed	
Responsible Department	Georgia Forestry Commission, City and County Fire Departments, County Road Department, City and County Governments
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Grants/Local Operating Funds (Pre-Disaster Mitigation Grant (PDM), BRIC, FMA, HMA)
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	Medium
Status	Ongoing

Action Step 11: Locate and pre–clear helicopter dip sites	
Responsible Department	Georgia Forestry Commission
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Grants/Local Operating Funds (Pre-Disaster Mitigation Grant (PDM), BRIC, FMA, HMA)
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	Medium
Status	Ongoing

Action Step 12: Map locations of dry hydrants	
Responsible Department	Georgia Forestry Commission, City and County Fire Departments, County Road Department, City and County Governments
Anticipated Cost	$2,500
Existing & Potential Funding Sources	Grants/Local Operating Funds (Pre-Disaster Mitigation (PDM) Grant, BRIC, FMA, HMA)
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	Medium
Status	Ongoing

Action Step 13: Seek grants or other funding for Wildland hand tools and lightweight Wildland PPE gear	
Responsible Department	Georgia Forestry Commission, City and County Fire Departments, County Road Department, City and County Governments
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Grants/Local Operating Funds (Pre-Disaster Mitigation Grant, BRIC, FMA, HMA)
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	Medium
Status	Ongoing

Action Step 14: Investigate need for fulltime position for the county fire department	
Responsible Department	Georgia Forestry Commission, City and County Fire Departments, County Road Department, City and County Governments
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Grants/Local Operating Funds (Pre-Disaster Mitigation Grant (PDM), BRIC, FMA, HMA)
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	Medium
Status	Ongoing

Action Step 15: Ensure timely replacement of missing road signs; install "Dead End" or "No Outlet" Tags on Road Signs.	
Responsible Department	Georgia Forestry Commission, City and County Fire Departments, County Road Department, City and County Governments
Anticipated Cost	$2,500
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	Medium
Status	Ongoing

Action Step 16: Obtain Wildland Fire Suppression training for Fire Personnel	
Responsible Department	Georgia Forestry Commission, City and County Fire Departments, County Road Department, City and County Governments
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Assistance to Firefighters grant
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	Medium
Status	Ongoing

Action Step 17: Purchase 5 fire trucks/brush trucks	
Responsible Department	Fire Dept.
Anticipated Cost	$50,000 each
Existing & Potential Funding Sources	Grants/Local Operating Funds (CDBG, AFG)
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	Medium
Status	Ongoing (purchased 1 brush truck) (Deleted "new")

D. Special Multi-Jurisdictional Strategy and Considerations:

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

E. Local Public Information and Awareness Strategy:

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

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

F. Changes from the Previous Plan

No changes.

Section VII. Drought

A. Community Mitigation Goals

As indicated in Chapter 2, drought may cause substantial economic, property, and personal damage in Lanier County and the City of Lakeland, 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 contained in Section C below.

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

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

3. Community Values, Historic and Special Considerations:

Historic buildings exist in the community, a few of which are Critical Facilities. pose significant challenges with retrofitting historic buildings to make them more resilient to natural hazards. For example, Lanier County Auditorium and Grammar School is a historic building in the community; it was added to the National Register of Historic Places in 1986.

4. New Buildings and Infrastructure:

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

5. Existing Buildings and Infrastructure:

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

C. Mitigation Strategy and Recommendations

Goal 7: Protect Lanier County from the effects of drought conditions.

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

Action Step 1: Develop a tiered plan from the comprehensive study of underground water supplies serving the public and domestic water system to provide temporary water supplies for domestic consumption as needed.	
Responsible Department	EMA
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local operating funds
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	Low
Status	Ongoing

Action Step 2: Investigate effects of deep agricultural well drilling on local aquifer(s)	
Responsible Department	EMA, Health Dept.
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local operating funds
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	Low
Status	New

D. Special Multi-Jurisdictional Strategy and Considerations:

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

E. Local Public Information and Awareness Strategy:

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

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

F. Changes from the Previous Plan

No changes.

Section VIII. Sinkholes

A. Community Mitigation Goals

As previously indicated in Chapter 2, sinkholes may cause substantial economic, property, and personal damage in Lanier County and the City of Lakeland, including damage to roads and destruction of homes. The HMPUC believes that, due to the damage sinkholes can cause, a comprehensive range of Mitigation Goals, Objectives, and Action Steps (contained in Section C below) should be implemented to reduce this hazard's potential impact on the community.

B. Identification and Analysis of Comprehensive Range of Mitigation Options

1. Structural and Non-Structural Mitigation:

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

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

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

3. Community Values, Historic and Special Considerations:

Historic buildings exist in the community, a few of which are Critical Facilities. pose significant challenges with retrofitting historic buildings to make them more resilient to natural hazards. For example, Lanier County Auditorium and Grammar School is a historic building in the community; it was added to the National Register of Historic Places in 1986.

4. New Buildings and Infrastructure:

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

5. Existing Buildings and Infrastructure:

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

C. Mitigation Strategy and Recommendations

Goal 8. Protect Lanier County and the City of Lakeland from the threat of Sinkholes.

Objective 1. Minimize losses of life, property, and infrastructure from Sinkholes.

Action Step 1: Conduct ground study of areas identified as being at risk for potential sinkhole formation.	
Responsible Department	Public Works depts.
Anticipated Cost	$40,000
Existing & Potential Funding Sources	Grants, local operating funds
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	Low
Status	Ongoing

Action Step 2: Include sinkhole study information in planning phase of new developments which may be affected by potential sinkhole formation.	
Responsible Department	Public Works
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Grants, local operating funds
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	Low
Status	Ongoing

D. Special Multi-Jurisdictional Strategy and Considerations:

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

E. Local Public Information and Awareness Strategy:

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

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

F. Changes from the Previous Plan

All action steps are new. (This is a new hazard section for this plan update.)

Action Steps Considered but Ultimately Not Added

No changes.

Section IX. 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 Lanier County and the City of Lakeland. The HMPUC believes that, due to the damage these 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 contained in Section C below.

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

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

3. Community Values, Historic and Special Considerations:

Historic buildings exist in the community, a few of which are Critical Facilities. pose significant challenges with retrofitting historic buildings to make them more resilient to natural hazards. For example, Lanier County Auditorium and Grammar School is a historic building in the community; it was added to the National Register of Historic Places in 1986.

4. New Buildings and Infrastructure:

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

5. Existing Buildings and Infrastructure:

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

C. Mitigation Strategy and Recommendations

Goal 9: Prevent or reduce damage caused by Severe Winter Storms in Lanier County and the City of Lakeland.

Objective 1: Minimize losses to existing and future structures, especially Critical Facilities and Infrastructure, due to Severe Winter Storms.

Action Step 1: Wrap exposed piping with insulation and install new insulation layers at critical facilities in Lanier County and the City of Lakeland.	
Responsible Department	Public Works depts.
Anticipated Cost	$3,000 per project
Existing & Potential Funding Sources	Grants, local operating funds (HMGP, BRIC, FMA)
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	High
Status	Ongoing

Action Step 2: Disseminate information to the public concerning Severe Winter Storms, champion new construction being built to appropriate low temperature ratings and existing buildings being retrofitted Lanier County and the City of Lakeland.	
Responsible Department	EMA
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local operating funds
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	Medium
Status	Ongoing

Action Step 3: Continue to work with the faith-based community, the American Red Cross, and other community institutions to make "comfort station" locations and/or shelters (including animal shelter facilities) available in case of extreme cold and winter storm events.	
Responsible Department	EMA, local non-governmental organizations
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2019-2024
Priority	Medium
Status	New

D. Special Multi-Jurisdictional Strategy and Considerations:

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

E. Local Public Information and Awareness Strategy:

All sections of the Plan shall be monitored and evaluated annually by the County Emergency Management Agency. Incremental accomplishments of Mitigation Goals, Objectives, and Action

Steps will be reported to the public through appropriate means (news media, social media, Code Red, web pages (including the EMA website, lanierema.com), City Council and County Commission meetings, etc.). By utilizing available resources, each jurisdiction will keep the public constantly informed of the development of these strategies and of how citizens can best assist with and/or take advantage of these efforts.

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

F. Changes from the Previous Plan

All action steps are new. (This is a new hazard section for this plan update.)

Action Steps Considered but Ultimately Not Added

No changes.

Chapter 5.
Local Technological Hazard Mitigation Goals and Objectives

Overall Community Mitigation Goals, Policies, and Values Narrative

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

Goal 1: Protect the public health and safety;

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

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

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

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

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

Section I. Hazardous Materials Release

A. Community Mitigation Goals

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

B. Identification and Analysis of Comprehensive Range of Mitigation Options

1. Structural and Non-Structural Mitigation:

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

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

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

3. Community Values, Historic and Special Considerations:

Historic buildings exist in the community, a few of which are Critical Facilities. There are historic and special considerations that pose significant challenges with retrofitting historic buildings to make them more resilient to natural hazards. For example, Lanier County Auditorium and Grammar School is a historic building in the community; it was added to the National Register of Historic Places in 1986.

4. New Buildings and Infrastructure:

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

5. Existing Buildings and Infrastructure:

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

C. Mitigation Strategy and Recommendations

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

Objective 1.1: Enhance the ability of the Lanier County Emergency Management Agency to coordinate effectively and efficiently the emergency response during and after a hazardous materials release.

Action Step 1: Continue to train Hazmat responders	
Responsible Department	EMA, City & County Managers
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Lanier County and City of Lakeland
Timeframe	*2024-2028*
Priority	High
Status	Ongoing

Objective 1.2: Minimize the effect of hazardous material spills.

Action Step 2: Maintain HazMat response training	
Responsible Department	EMA, City and County Managers, Fire Departments
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	High
Status	Ongoing

Action Step 3: Seek funding to expand HazMat training to first responders (fire, police, sheriff, EMS), including training applicable to drug lab explosions	
Responsible Department	EMA, City and County Managers, Fire Departments
Anticipated Cost	Staff time
Existing & Potential Funding Sources	FEMA, GEMA, DHS and local budget
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	High
Status	Ongoing

Action Step 4: Increase public awareness and procedures to follow if a hazardous material spill event occurs by publishing articles in the local newspaper, holding town hall meetings, radio announcements and providing bulletins to local churches and schools.	
Responsible Department	EMA
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds, GEMA, FEMA
Jurisdiction	Lanier County and City of Lakeland
Timeframe	*2024-2028*
Priority	High
Status	Ongoing

Action Step 5: Train local government officials on proper response procedures for hazardous material spill events.	
Responsible Department	Local Emergency Operations Planning Committee, EMA, Fire Departments
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	High
Status	Ongoing

Action Step 6: Review and update Standard Operating Procedures (SOP) for responding to a hazardous material spill event.	
Responsible Department	Local Emergency Operations Planning Committee, EMA, Fire Departments
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	High
Status	Ongoing (Need update SOP)

Action Step 7: Provide workplace training on decontamination steps.	
Responsible Department	Local Emergency Operations Planning Committee, EMA, Fire Departments
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	High
Status	Ongoing

Action Step 8: Review annually all hazardous material transportation routes (relocate routes if necessary)	
Responsible Department	Local Emergency Operations Planning Committee, EMA, GDOT
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	Medium
Status	Ongoing

D. Special Multi-Jurisdictional Strategy and Considerations:

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

E. Local Public Information and Awareness Strategy:

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

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

F. Changes from the Previous Plan

No changes.

Section II. Public Health Emergency

A. Community Mitigation Goals

As previously indicated in Chapter 3, a disease outbreak may cause substantial damage to life, public health, and the economy in Lanier County. A disease outbreak can overwhelm community resources and first responders and may be difficult or impossible to contain. Because these events have the potential to cause great damage, injury, and loss of life, the HMPUC believes that a comprehensive range of Mitigation Goals, Objectives, and Action Steps (contained in Section C below) should be implemented to reduce this hazard's potential impact on the community.

B. Identification and Analysis of Comprehensive Range of Mitigation Options

1. Structural and Non-Structural Mitigation:

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

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

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

3. Community Values, Historic and Special Considerations:

Historic buildings exist in the community, a few of which are Critical Facilities. pose significant challenges with retrofitting historic buildings to make them more resilient to natural hazards. For example, Lanier County Auditorium and Grammar School is a historic building in the community; it was added to the National Register of Historic Places in 1986.

4. New Buildings and Infrastructure:

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

5. Existing Buildings and Infrastructure:

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

C. Mitigation Strategy and Recommendations

Goal 1: Protect the population of Lanier County and the City of Lakeland from the effects of a disease outbreak.

Objective 1: Secure external sources of funding and training to help prepare for and respond to events.

Action Step 1: Increase Immunization education, prevention and pre-planning efforts, particularly for the homeless and low-income individuals in the community, and host flu shots and other immunization clinics.	
Responsible Department	Health Department
Anticipated Cost	$100,000
Existing & Potential Funding Sources	General Funds, GEMA, FEMA, Health Department
Jurisdiction	Lanier County, City of Lakeland
Timeframe	2024-2028
Priority	High
Status	Ongoing

Action Step 2: Identify vulnerable populations (homeless, migrants, low income, etc.) and identify community groups to work with in order to reach and educate these populations effectively regarding health issues.	
Responsible Department	EMA, Health Department
Anticipated Cost	Staff time
Existing & Potential Funding Sources	General Funds, GEMA, FEMA
Jurisdiction	Lanier County, City of Lakeland
Timeframe	2024-2028
Priority	High
Status	Ongoing

Action Step 3: Develop plan to identify community locations to obtain and distribute Water, Food, Ice, Tarps, medical countermeasures, etc.	
Responsible Department	EMA
Anticipated Cost	Staff time
Existing & Potential Funding Sources	General Funds, GEMA
Jurisdiction	Lanier County, City of Lakeland
Timeframe	2024-2028
Priority	Medium
Status	Ongoing

Action Step 4: Develop Local Emergency Planning Committee	
Responsible Department	EMA
Anticipated Cost	Staff time
Existing & Potential Funding Sources	General Funds
Jurisdiction	Lanier County, City of Lakeland
Timeframe	2024-2028
Priority	Medium
Status	Ongoing

Action Step 5: Approach large businesses about working with the EMA on developing public health emergency plans.	
Responsible Department	Health Department
Anticipated Cost	Staff time
Existing & Potential Funding Sources	General Funds
Jurisdiction	Lanier County, City of Lakeland
Timeframe	2024-2028
Priority	Medium
Status	Ongoing

D. Special Multi-Jurisdictional Strategy and Considerations:

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

E. Local Public Information and Awareness Strategy:

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

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

F. Changes from the Previous Plan

Action Step # 6 was deleted. Mobile morgues will be used as needed.

Action Step 6: Acquire or construct/install a unit/facility/equipment for the cold storage of bodies in the event of a mass casualty.	
Responsible Department	EMA, Health Department, County, City
Anticipated Cost	$500,000
Existing & Potential Funding Sources	Grants, General Funds
Jurisdiction	Lanier County, City of Lakeland
Timeframe	2024-2028
Priority	High
Status	Deleted (Use mobile morgue as needed)

Section III. CBRNE

A. Community Mitigation Goals

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

B. Identification and Analysis of Comprehensive Range of Mitigation Options

1. Structural and Non-Structural Mitigation:

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

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

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

3. Community Values, Historic and Special Considerations:

Historic buildings exist in the community, a few of which are Critical Facilities. pose significant challenges with retrofitting historic buildings to make them more resilient to natural hazards. For example, Lanier County Auditorium and Grammar School is a historic building in the community; it was added to the National Register of Historic Places in 1986.

4. New Buildings and Infrastructure:

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

5. Existing Buildings and Infrastructure:

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

C. Mitigation Strategy and Recommendations

Goal 1: Protect the health and safety of residents of Lanier County and the City of Lakeland from CBRNE events.

Objective 1. Enhance the ability of the Lanier County Emergency Management Agency to coordinate effectively and efficiently the emergency response during and after a CBRNE event.

Action Step 1: Implement the "Community Emergency Response Team" (CERT) Program.	
Responsible Department	EMA, County Manager
Anticipated Cost	$5,000
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	High
Status	Ongoing

Action Step 2: Encourage businesses to develop emergency plans.	
Responsible Department	EMA
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	Medium
Status	Ongoing

Action Step 3: Increase public awareness of the Early Warning Communication/Notification System, NOAA weather radios, and available community safe shelters by publishing articles in the local newspaper, holding town hall meetings, and providing bulletins to local churches and the schools.	
Responsible Department	EMA, Media
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	High
Status	Ongoing

Action Step 4: Train local government officials on proper response procedures for CBRNE events.	
Responsible Department	EMA
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	General Funds
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	High
Status	Ongoing

Action Step 5: Investigate, implement and train in methods to relocate residents if event occurs.	
Responsible Department	EMA, Sheriff's Dept, Fire Dept., Police Dept.
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	General Funds
Jurisdiction	Lanier County, City of Lakeland
Timeframe	2024-2028
Priority	High
Status	Ongoing

Action Step 6: Review and update Standard Operating Procedures (SOP) for responding to a CBRNE event.	
Responsible Department	EMA
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	General Funds
Jurisdiction	Lanier County, City of Lakeland
Timeframe	2024-2028
Priority	High
Status	Ongoing

D. Special Multi-Jurisdictional Strategy and Considerations:

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

E. Local Public Information and Awareness Strategy:

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

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

F. Changes from the Previous Plan

No changes.

Section IV. Active Shooter

A. Community Mitigation Goals

As previously indicated in Chapter 3, an Active Shooter may cause substantial injury and loss of life in Lanier County and the City of Lakeland. Such events can occur without warning, giving the community no time to prepare or respond. The HMPUC believes that, because these events have the potential to cause great damage, injury, and loss of life, a comprehensive range of Mitigation Goals, Objectives, and Action Steps (contained in Section C below) should be implemented to reduce this hazard's potential impact on the community.

B. Identification and Analysis of Comprehensive Range of Mitigation Options

1. Structural and Non-Structural Mitigation:

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

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

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

3. Community Values, Historic and Special Considerations:

Historic buildings exist in the community, a few of which are Critical Facilities. pose significant challenges with retrofitting historic buildings to make them more resilient to natural hazards. For example, Lanier County Auditorium and Grammar School is a historic building in the community; it was added to the National Register of Historic Places in 1986.

4. New Buildings and Infrastructure:

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

5. Existing Buildings and Infrastructure:

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

C. Mitigation Strategy and Recommendations

Goal 1: Protect residents of Lanier County from shootings and gun-related injury and death.

Objective 1.1: Enhance the ability of the Lanier County Emergency Management Agency to coordinate effectively and efficiently the emergency response during and after an Active Shooter event.

Action Step 1: Ensure that all law enforcement officials have Active Shooter training.	
Responsible Department	Sheriff's Dept., Police Dept.
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	High
Status	Ongoing

Action Step 2: Ensure that all public schools in the community have an adequately trained resource officer on hand	
Responsible Department	Board of Education
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	High
Status	Ongoing

Action Step 3: Conduct a public outreach campaign to increase awareness of how to respond in an active shooter situation.	
Responsible Department	EMA
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Lanier County and City of Lakeland
Timeframe	2024-2028
Priority	High
Status	Ongoing

D. Special Multi-Jurisdictional Strategy and Considerations:

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

E. Local Public Information and Awareness Strategy:

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

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

F. Changes from the Previous Plan

No changes.

Section V. Dam Failure

A. Community Mitigation Goals

As indicated in Chapter 3, this hazard may occur in many places at unpredictable times and may cause substantial damage to life, property, and the economy in Lanier County and the City of Lakeland. Due to the great damage, it may cause, the stakeholders believe that the comprehensive range of Mitigation Goals, Objectives, and Action Steps contained in Section C below should be implemented to reduce this hazard's potential impact on the community.

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

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

2. Existing Policies, Regulations, Ordinances and Land Use:
Chapter 2 of this plan contains information regarding existing policies, regulations, ordinances, and land use that are relevant to this hazard.

3. Community Values, Historic and Special Considerations:
Historic buildings exist in the community, a few of which are Critical Facilities. pose significant challenges with retrofitting historic buildings to make them more resilient to natural hazards.

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: Minimize losses to future structures, especially critical facilities, due to Flooding caused by Dam Failure.

Objective 1.1: Ensure dams within Lanier County are adequate to withstand stress from natural hazards.

Action Step 1: Review reports of dam inspections recorded by the Georgia Safe Dams Program to ensure that dams have no potential hazard impacts to the communities.	
Responsible Department	Engineering and Building Inspections Dept.
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Annual Budget
Jurisdiction	All Local Governments
Timeframe	2023-2028
Priority	Low
Status	New

Action Step 2: Acquire or develop downstream impact studies for all high-risk dam structures in Lanier County.	
Responsible Department	Engineering Lanier County EMA
Anticipated Cost	$150,000
Existing & Potential Funding Sources	FEMA/Annual Budget
Jurisdiction	All Local Governments
Timeframe	2023-2028
Priority	Low
Status	New

Action Step 3: Provide study information to Planning Departments for inclusion in planning maps.	
Responsible Department	Engineering Lanier County EMA
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Annual Budget
Jurisdiction	All Local Governments
Timeframe	2023-2028
Priority	Low
Status	New

D. Special Multi-Jurisdictional Strategy and Considerations:

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

E. Local Public Information and Awareness Strategy:

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

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 6.

F. Changes from Previous Plan

This is a new hazard added to the plan.

Chapter 6:
Executing The Plan

Summary of changes:

- Revised and updated language.

Section I.
Implementation of the Action Plan

A. Administrative Actions

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

B. Authority and Responsibility

The Lanier County Commission and the City of Lakeland 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 Lanier County EMA Director will be responsible for this Plan and its continued usage as a planning document. The EMA Director will oversee implementation, monitoring, and updates for all jurisdictions. The respective jurisdictions will be responsible for the implementation of their specific mitigation activities as proposed in this plan.

C. Prioritization

1. Methodology for Prioritization

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

2. Use of Cost Benefit Analysis

The data provided in Worksheet 3 will be utilized to 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), which is derived from a project's total net present value of benefits divided by the total project cost estimate, which must include all documented project and maintenance costs. The benefits of mitigation projects are avoiding damage, disruptions, losses, and casualties. Examples of common benefits include avoided or

reduced damages to buildings, contents or infrastructure; avoided or reduced economic impacts of loss of function of buildings; avoided or reduced displacement costs for temporary quarters; avoided or reduced loss of public services; avoided or reduced loss of net business income; avoided or reduced economic impacts of loss of function of infrastructure; avoided or reduced road or bridge closures; avoided or reduced loss of utility services; and avoided or reduced deaths and injuries.

3. Use of Other Calculations
Additional calculations performed included the availability of potential funding sources, overall feasibility, measurable milestones, public and political support for the proposed actions, and the STAPLES criteria.

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

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

This Plan will be reviewed by Lanier County and the City of Lakeland. The requirements of this Hazard Mitigation Plan will be taken into consideration and will be incorporated into Comprehensive Plans, Five-Year Short-Term Work Program, Capital Improvement Plans, Local Emergency Operations Plans, and all other such Plans as appropriate.

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

To facilitate inclusion of this Plan, the Lanier County Commission and the City of Lakeland will provide a copy of this Plan to the persons and/or committees responsible for writing and updating plans. Both jurisdictions have the same integration process. Lanier County and the City of Lakeland work closely together and have many joint plans (for example, the Comprehensive Plan). Specifically, action items, community issues, needs, and goals from this plan will be integrated into other plans (most importantly the Comprehensive plan, which is updated every 5 years).

Section II.
Evaluation and Monitoring

A. Method

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

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

B. Criteria Used to Monitor and Evaluate the Plan

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

Section III.
Plan Update and Maintenance

A. Public Involvement

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

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

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

- The public will be directly involved in the update and review of the Plan.
- Copies of the plan will be kept on hand at appropriate agencies throughout the community.
- The plan will be available on City, County, and/or Regional Commission websites and will contain an e-mail address and phone number the public can use for submitting comments and concerns about the plan.
- A public meeting will be held annually to provide the public with a forum for expressing concerns, opinions, and ideas. The EMA will set meeting schedules and dates and use County resources to publicize and host this meeting.

B. Timeframe

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

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

Chapter 7:
Conclusion

Summary of changes:

- Revised and updated language.

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

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

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

References

Lanier County Board of Tax Assessors (http://www.qpublic.net/ga/City of Lakeland/)

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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)

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