Atkinson County, Georgia

Hazard Mitigation Plan

2024-2029

Effective 03/14/2024 – 03/14//2029

Including the Cities of Pearson and Willacoochee

This Plan produced for the Atkinson 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

SGRC SOUTHERN GEORGIA REGIONAL COMMISSION

Contents

Chapter 1: Introduction to the Planning Process

Summary of changes:

Table 1.1 gives 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	• The Planning Committee reviewed each section and updated as necessary
III. Plan Review, Analysis, and Revision	• The 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 major changes from the original plan
VII. Adoption, Implementation, Monitoring, and Evaluation	• Evaluation method revised and updated.
VIII. Community Data	• Updates made using the most recently available national, state, and local data

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

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

This document is the official plan update to the previous Atkinson County Pre-Disaster Mitigation Plan, as approved by the Georgia Emergency Management Agency (GEMA) and the Federal Emergency Management Agency (FEMA), which took effect on April 16, 2019, and expires on April 16, 2024.

This document aims to provide an overview of the hazards that may impact Atkinson County and the Cities of Pearson and Willacoochee and 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 caused by natural or man-made disasters.

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

of natural hazards and the effects of those natural hazards on their communities. The Cities of Pearson and Willacoochee are the only incorporated cities located in Atkinson County.

The Atkinson County Commission gave authority for the development of this Plan because they executed the Grantee-Subgrantee Agreement for the Atkinson County Hazard Mitigation Grant Program (HMGP) Planning Project and by the Cities of Pearson and Willacoochee, located within Atkinson County, through their participation in the planning project.

To initiate an outreach program to neighboring communities, governments, local and regional agencies, and agencies authorized to regulate development, business, and the public, two Public Hearing Notices were published in the legal organ of the local newspaper. In addition, e-mail lists of stakeholders were kept updated, and those on them were informed of meetings through e-mails, letters, and/or telephone calls. The surrounding county EMA Directors were notified of the plan update and invited to participate. Additionally, several area county Hazard Mitigation Plans were being updated at the same time, and an active meeting list was maintained for scheduling purposes.

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

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

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

A. Overview

This Hazard Mitigation Plan Update encompasses the jurisdictions of Atkinson County and the Cities of Pearson and Willacoochee, 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 (Atkinson 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 Atkinson County HMPUC were contacted by telephone or e-mail concerning their participation on the Committee. Southern Georgia Regional Commission (SGRC) staff provided technical assistance to the Atkinson County HMPUC. The Atkinson County HMPUC was comprised of representatives from Atkinson County and the Cities of Pearson and Willacoochee and included representatives from other groups and individuals, as shown below, who attended meetings and/or conducted research:

Name	Organization	Title
Marisa Johnson	Atkinson County	County Clerk
Gloria Farrell	Atkinson County Board of Commissioners	Commissioner
Nina Lott	Atkinson County Board of Commissioners	County Clerk/Finance
Bob Brown	Atkinson County Board of Education	Superintendent
Robbie Stone	Atkinson County EMA/Fire Dept.	EMA Director/Fire Chief
Tony Barnes	Atkinson County Extension Office	County Extension Coordinator
Jennifer Brown	Atkinson County Family Connection	Coordinator
Shane Busbee	Atkinson County Fire Department	Firefighter
Parker Liles	Atkinson County Board of Commissioners	Chairman
Danial Knapik	Atkinson County Sheriff's Office	Chief Deputy
David Moore	Atkinson County Sheriff's Office	Sheriff
Pat Ballard	City of Pearson	City Clerk
Robert Johnson	City of Pearson	Mayor
Peggy McCleland	City of Willacoochee	City Clerk
Thomas Whitley	Georgia Forestry Commission	Chief Ranger
Matthew Mrizek	Georgia Forestry Commission	Forester
Donna Smeltzer	Health Department	Nurse Manager
Sandra Sweat	Election Office	Election Supervisor
Sammie Newson	Willacoochee	Mayor
Buddy Willis	Atkinson County Board of Commissioners	Commissioner
Keith Harper	Atkinson County Fire Department	Firefighter
Dell Richardson	Atkinson County Tax Assessor's Office	Chief Appraiser
Jennifer Spikes	Atkinson County Tax Assessor's Office	Personal Property Appraiser

Frankie Sanchez	Willacoochee Police Dept.	Chief
Hector Peralta	Atkinson Fire/EMS	Firefighter/Paramedic
Austin Henning	Atkinson Fire Dept.	Firefighter
Mitchell Davis	Atkinson County EMS	Director
James Gore	Atkinson County Road Dept.	Road Supervisor
Tony Galardo	Lanier County EMA	Director

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

- Surrounding counties' EMAs (Coffee and Clinch Counties)

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

Kick-off public hearing – March 30, 2023
First workshop – May 2, 2023
Second workshop – June 8, 2023
Third workshop – July 20, 2023
Fourth workshop – December 14, 2023
Final public hearing – March 14, 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 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 that were still relevant were included as

action steps in the HMP. Land use descriptions, zoning information, and information about community services were updated using the current joint Comprehensive Plan for the County and Cities. Other documents used were the local Emergency Operations Plan, the previous Hazard Mitigation Plan, the State of Georgia Hazard Mitigation Plan, and information from the National Climatic Data Center (NCDC). The State Hazard mitigation plan was consulted to ensure the HMP would be consistent with this plan, and data from the NCDC were used to create the Hazard Frequency Table and associated information regarding each hazard, which can be found in Chapter 2.

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 held on March 30, 2023, and was advertised in the local newspaper (meeting advertisements and sign-in sheets are provided in Appendix E). A second and final public hearing was held on March 24, 2024, advertised in the local newspaper (see Appendix E). Citizens, including staff and members of the HMPUC, were present (see Appendix E).

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

Brochures were placed at the Health Department, DFACS, City Halls, County Government, and the City of Douglas Police Department, informing the vulnerable population of the Hazards that affect the communities within Coffee County. The brochures were written in English and Spanish. (See Appendix H).

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.

Atkinson County and the Cities of Pearson and Willacoochee
Hazard Mitigation Plan Update Committee
Mission Statement

This committee's mission is to make Atkinson County, The City of Pearson, The City of Willacoochee, its 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.

Atkinson County and the Cities of Pearson and Willacoochee
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 Atkinson County, the City of Pearson, and the City of Willacoochee.

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

The HMPUC was responsible for identifying natural hazard events and completing a profile, vulnerability assessment, potential loss estimation (see Chapter 2, Appendix A, and Appendix D), and updating the Georgia Mitigation Information System (GMIS) Critical Facilities Inventory (see Appendix F). They were also responsible for reviewing and updating the Mitigation Goals, Objectives, and Action Steps (see Chapter 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 Cities, 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
- Data from the National Climatic Data Center (NCDC)

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. The tables at the beginning of the chapters include further information regarding which items were changed and updated.

Section IV. Organization of the Plan

This Plan focuses on eight natural hazards the HMPUC chose that may affect and cause damage to Atkinson County and the Cities of Pearson and Willacoochee. Chapters 2, 4, and Appendix A are subdivided into Sections I through VIII, reflecting the eight natural hazards chosen. The natural hazards are as follows (in order of priority):

1. Thunderstorm/Wind
2. Hail
3. Wildfire
4. Flood
5. Drought
6. Hurricane/Tropical Storm
7. Tornado
8. Severe Winter Storm

Other hazards, such as Avalanches, Coastal Erosion, Coastal Storms, Dam Failure, Earthquake, Expansive Soils, Extreme Heat, Land Slide, SLOSH (Sea, Lake, and Overland Surges from Hurricanes), Tsunamis, 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.

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 adequate time 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 Atkinson County and Cities of Pearson and Willacoochee Hazard Mitigation Plan exists in one bound volume appended with various papers and documents, and a PDF document is available on the SGRC website. The planning efforts of Atkinson County and the Cities of Pearson and Willacoochee are intended to be ongoing, 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 was formulated using information obtained during the planning process. Information has been obtained from online databases, published sources, and personal accounts regarding hazards, their history in the community, and when and where they were active. This summary is provided in Chapter 2.

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

There are 43 Essential Facilities located within Atkinson County, Pearson, and Willacoochee. There are 2 EOC and Care facilities, one in Atkinson County and one in Pearson. There are 11 Fire Stations in Atkinson County, 3 in Pearson, and 2 in Willacoochee. Three Law Enforcement facilities are located within Atkinson County, two in Pearson and 1 in Willacoochee. Nine schools are in Atkinson County, six in Pearson, and 2 in Willacoochee. The total value of the 43 Essential Facilities is $78,411,000. (See Appendix G).

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. In Chapter 6, Section I, there is a description related to the prioritization of these Mitigation Goals, Objectives, and Action Steps using cost/benefit analysis, STAPLEE (Social, Technical, Administrative, Political, Legal, Economic, and Environmental), and other criteria Also in Chapter 6, there are sections on Implementing the Action Plan (see Section I), Evaluation, Monitoring, updating (see Section II), and Plan Update and Maintenance (see Section III).

Section VI. Multi-Jurisdictional Special Considerations

Atkinson County has a total area of 339.38 square miles with a population density of 24.4 people per square mile (US Census data, 2020). 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. Atkinson County contains two incorporated cities: Pearson (the county seat) and Willacoochee.

The consolidated Atkinson County Fire Department serves the County and the two Cities. The County has eight fire stations, all with an ISO Class of 05/5X. One fire station is manned by paid firefighters, and volunteer firefighters staff the others.

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 March 14, 2024, to provide a further opportunity for public comment and review. After this final public hearing, resolutions adopting the plan were passed by the local governments on March 14, 2024 (Atkinson County), _____, 2024 (City of Willacoochee), and _____, 2024 (City of Pearson), adopting 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 (TV, website, social media, local newspapers, City Council meetings, County Commission meetings, etc.).

The County EMA will monitor the plan and conduct quarterly telephone interviews with local governments and area agencies to chart the progress of their plan. Also, several informal meetings will be held throughout the year to discuss various aspects of the plan. In addition, annual evaluations of the plan will occur on or near the anniversary of the Plan's adoption date. The yearly review will assess which of the goals, objectives, and action steps have been achieved; whether those goals, objectives, and action steps still address current and expected conditions; whether the nature or magnitude of risks has changed; whether 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 discussed and added to the online GEMA database as required. New hazards in the area (if any) will be addressed and planned for, and an assessment will be made as to whether community needs dictate additions to the plan's 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 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 plan update will be reviewed, considered, and incorporated into comprehensive plans, capital improvement plans, local emergency operations plans, and all other such plans, as appropriate. This updating process will be publicly advertised, and public comments will be solicited and incorporated as necessary and proper.

Section VIII. Community Data

The 2021 population of Atkinson County is estimated at 8,269, a 1.12% decrease since 2010. The 2021 population of Pearson is estimated at 2,010, a 4.47% decrease since 2010. The 2021 population of Willacoochee is 1,446, a 3.95% increase since 2010.

According to 2021 estimates, the age distribution in Atkinson County is 13.9% over 65, 66.4% ages 20-64, and 31.7% under 20. In the City of Pearson, the age distribution is 13.9% over 65, 54.2% ages 20-64, and 31.9% under 20. In the City of Willacoochee, the age distribution is 11.9% over 65, 60.9% ages 20-64, and 27.2% under 20. Atkinson County's population is 50% female and 50% male, the City of Pearson's population is 47.3% female and 52.7% male, and the City of Willacoochee's population is 48.5% female and 51.5% male.

The population of Atkinson County is 69.1% White/Caucasian, 16.1% Black/African American, 10% some other race, 4.7% two or more races, 0% Asian, and 0% Native American. The City of Pearson's population is 44% White/Caucasian, 34.2% Black/African American, 16.5% some other race, 5.3% two or more races, 0% Asian, and 0% Native American. The City of Willacoochee's population is 79% White/Caucasian, 17.8% Black/African American, 3% some other race, 0.14% two or more races, 0% Asian, and 0% Native American.

Atkinson County's population is 26.8% Hispanic/Latino (of any race), the City of Pearson's population is 41.9% Hispanic/Latino, and the City of Willacoochee's population is 25.9% Hispanic/Latino.

Among persons aged 25 or older in Atkinson County, 43.9% have no high school diploma, 37.3% are high school graduates (includes equivalency) with no further education, 16.4% have an associate degree or some college, and 2.5% have a bachelor's or higher degree. Among persons aged 25 or older in the City of Pearson, 48.9% have no high school diploma, 49.6% are high school graduates (includes equivalency) with no further education, 1.5% have an associate degree or some college, and 0% have a bachelor's or higher degree (note the margin of error is +/-16.2). Among persons aged 25 or older in the City of Willacoochee, 4.9% have no high school diploma, 49.2% are high school graduates (includes equivalency) with no further education, 45.9% have an associate degree or some college, and 0.0% have a bachelor's or higher degree (note the margin of error is +/-45.9).

The median household income in Atkinson County is $35,741, the median household income in the City of Pearson is $29,976, and the median household income in the City of Willacoochee is $30,122.

An estimated 26.9% of Atkinson County's population, 34.4% of the City of Pearson's population, and 13.8% of the City of Willacoochee population live below the federal poverty level. In Atkinson County, 43.7% of persons under age 18 live below the poverty level; in the City of Pearson, 65.3% of persons under age 18 live below the poverty level; and in the City of Willacoochee, 15.3% of persons under age 18 live below the poverty level.

Atkinson County's estimated unemployment rate is 3.6%, the City of Pearson's unemployment rate is 2.6%, and the City of Willacoochee's unemployment rate is 9.6%. Among adults aged 16 and older, the labor force participation rate is 57.9% in Atkinson County, 63.5% in the City of Pearson, and 52.9% in the City of Willacoochee.

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

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

Summary of changes:

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

Chapter 2 Section	Updates to Section
I. Thunderstorms/Wind	Updated data and information; edited for clarity
II. Hail	Updated data and information; edited for clarity
III. Wildfires	Updated data and information; edited for clarity
IV. Floods	Updated data and information; edited for clarity
V. Drought	Updated data and information; edited for clarity
VI. Hurricanes/Tropical Storms	Updated data and information; edited for clarity
VII. Tornadoes	Updated data and information; edited for clarity
VIII. Severe Winter Storms	Updated data and information; edited for clarity

Table 2.1: Overview of updates to Chapter 2

Six of these hazards constitute an equal threat to all geographic areas of the community. The remaining two, flood and wildfire, are the only hazards for which the level of risk varies geographically within the county. Flood is limited to somewhat smaller areas, and wildfire risk levels vary (see Chapter 2 and Appendix A).

Other hazards, such as Avalanches, Coastal Erosion, Coastal Storms, Dam Failure, 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. Thunderstorms/Wind

A. Identification of Hazard

The Atkinson County HMPUC has chosen the threat of thunderstorms and wind as the most likely hazard to occur and cause damage in Atkinson County and the Cities of Pearson and Willacoochee 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.

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

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

- **Single-cell thunderstorms**, often called "popcorn" convection, are small, brief, weak storms that grow and die within an hour. They are typically driven by heat on a summer afternoon. Single-cell storms may produce brief heavy rain and lightning.
- A **multi-cell storm** is a common thunderstorm in which new updrafts form along the leading edge of rain-cooled air (the gust front). Individual cells usually last 30 to 60 minutes, while the system may last many hours. Multicell storms may produce hail, strong winds, brief tornadoes, and/or flooding.
- A **squall line** is a group of storms arranged in a line, often accompanied by "squalls" of high wind and heavy rain. Squall lines pass quickly and are less prone to produce tornadoes than supercells. They can be hundreds of miles long but are typically only 10 or 20 miles wide.
- A **supercell** is a long-lived (greater than 1 hour) and highly organized storm feeding off an updraft (a rising current of air) that is tilted and rotating. This rotating updraft - as large as 10 miles in diameter and up to 50,000 feet tall - can be present as much as 20 to 60 minutes before a tornado forms. Scientists call this rotation a mesocyclone when it is detected by Doppler radar. The tornado is a very small extension of this larger rotation. Most large and violent tornadoes come from supercells.
- **Wind** is categorized according to its strength and severity using the Beaufort Wind Scale, developed in 1805 by Sir Francis Beaufort of the U.K. Royal Navy. The Beaufort Wind Scale is shown in the table below. (Source: http://www.spc.noaa.gov/faq/tornado/beaufort.html)

Beaufort Wind Scale

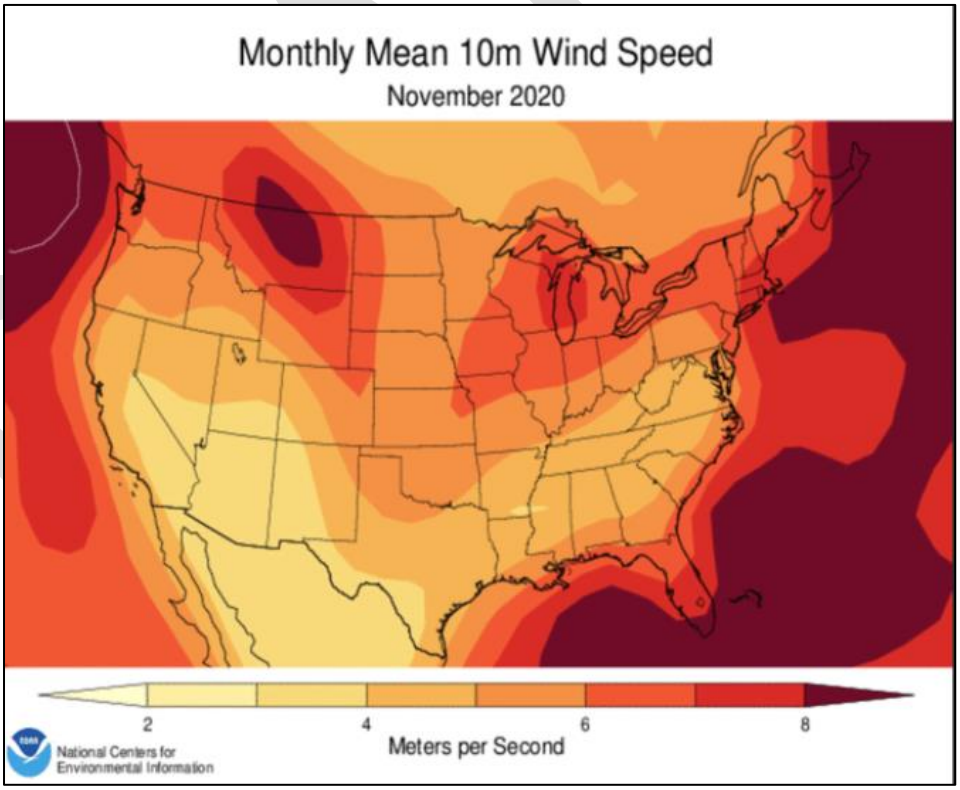
Force	Wind (Knots)	Wind (Mph)	World Meteorological Organization (WMO) Classification	Appearance of Wind Effects	
				On the Water	On Land
0	Less than 1	Less than 1	Calm	Sea surface smooth and mirror-like	Calm, smoke rises vertically
1	1-3	1-3	Light Air	Scaly ripples, no foam crests	Smoke drift indicates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

B. Profile of Events, Frequency of Occurrences, Probability

The most severe event was the hurricane, which occurred in 1949. The hurricane was recorded as a Category 4 tropical storm with 1-minute sustained wind speeds up to 132 mph and 3-second wind gusts up to 169 mph. It is unknown how many properties were impacted in Atkinson County.

According to the NOAA Storm Events Database (see Appendix F), 102 reports of Thunderstorm/Wind events occurred in Atkinson County (including the Cities) between 01/01/1950 and 3/31/2023. The Historic Recurrence Interval is 0.72 years. This is a 139.73% Historic Frequency Chance per year. The past 10-year Record Frequency Per Year is 3.2, the past 20-year frequency is 1.4, and the past 50-year frequency is 2 (see the Hazard Frequency Table in Appendix D).

Since the previous Hazard Mitigation Plan became effective, 16 Thunderstorm/Wind events have occurred. On August 8, 2018, Storm damage occurred along Ice Plant Road and Talmadge McKinnon Road. A home had some roof damage over a carport. There were numerous trees blown down, all going in the same direction. Small pea-sized hail was also reported. On August 9, 2022, a swath of thunderstorm wind damage occurred along Axon Road, where power lines and trees were blown down along with several damaged sheds.



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

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

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

An estimated 100% of the Residential property (4,401 of 4,401) in Atkinson County (including the Cities of Pearson and Willacoochee) could be affected by this hazard, with a total value of $33,347,244. Also, an estimated 100% of the community's Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education, and Utility properties (2,056 of 2,056) may be affected, totaling $88,051,083. The values are based on the most recently available tax roll data for Atkinson County and the Cities of Pearson and Willacoochee, provided by the Atkinson 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, agricultural production's total farm gate value in Atkinson County is $93,994,300.52.

E. Land Use and Development Trends

The City of Pearson has zoning regulations; Atkinson County and the City of Willacoochee do not. All jurisdictions have mandatory building and fire codes enforced by a building inspector. There is no planning commission. The County and Cities participate in joint comprehensive planning and the required updates of the Service Delivery Strategy.

See Chapter 4 for the Building Codes for Atkinson County and the Cities of Pearson and Willacoochee.

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

F. Multi-Jurisdictional Differences

Thunderstorm/Wind events are usually area-wide, and no difference in severity is expected between Atkinson County and the Cities of Pearson and Willacoochee. 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.

Atkinson County and the cities of Pearson and Willacoochee are members of the National Flood Insurance Program (source: https://www.fema.gov/cis/GA.html). Atkinson County and the Cities of Pearson and Willacoochee do not participate in the Community Rating System (CRS) program. As of 2023, they were not eligible, according to FEMA. The FIRM date for Atkinson County is August 3, 2009.

G. Overall HRV Summary of Events and Their Impact

Thunderstorms/wind events can cause damage at any place or time throughout Atkinson County and the Cities of Pearson and Willacoochee. 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 instead of more sparsely populated or unpopulated areas.

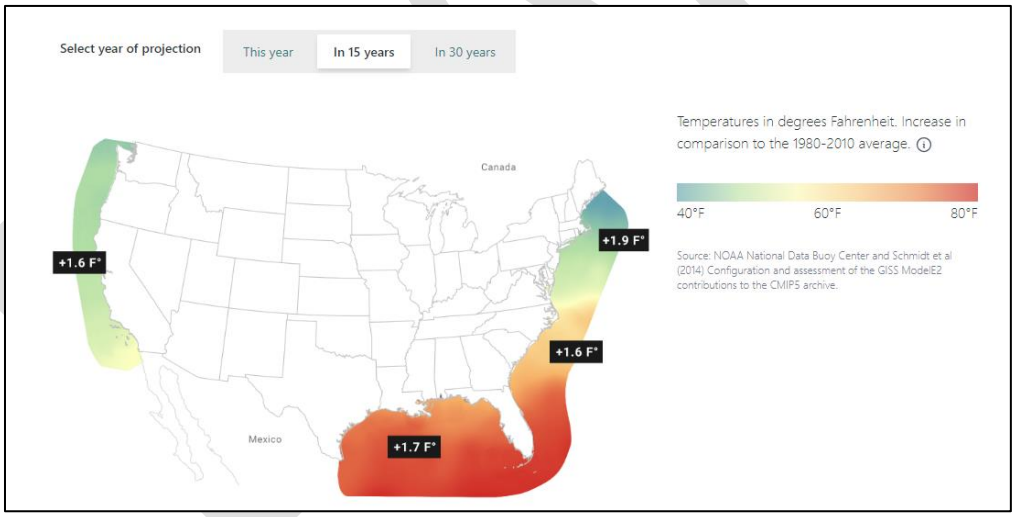
The HMPUC has developed a comprehensive range of Mitigation Goals, Objectives, and Action Steps to lessen the impacts of this hazard. These are contained in Chapter 4.

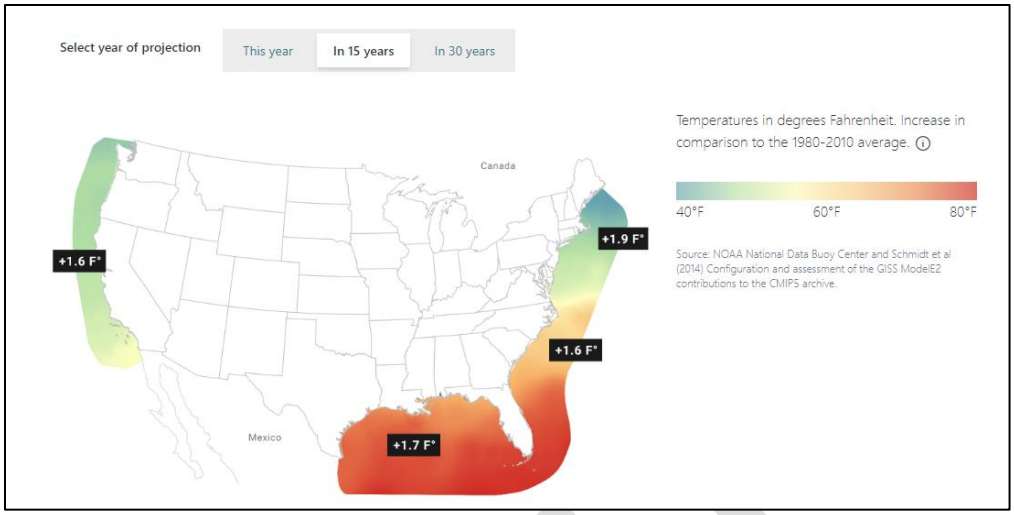
Since the previous plan was approved, there have not been any new developments, regulations, programs, or other changes in the community that would either increase or decrease the community's overall vulnerability to this hazard.

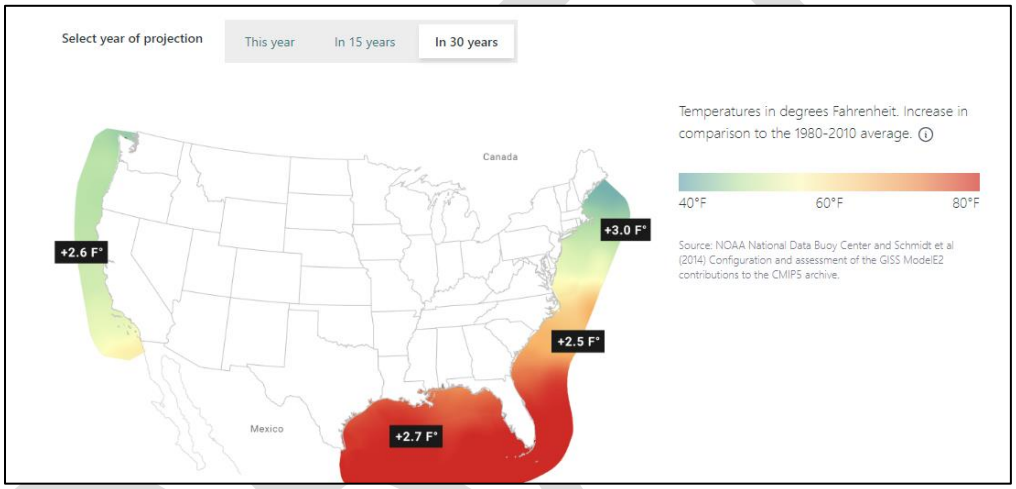
H. Impacts from Future Conditions

If a 1-in-3,000-year windstorm occurred today, it could cause gusts of up to 116 mph in Atkinson County. This type of storm has a severity of 1% chance of occurring at least once over the next 30 years. This would likely show increased wind gusts of up to 133 mph at that time due to our changing environment.

Warmer seas, new weather patterns, and stronger windstorms will occur as the environment changes. When the atmosphere warms, more energy will be available for storms to create high-intensity winds. A warmer atmosphere means warmer oceans, which will feed the storms that develop at sea and make their way inland.







I. Underserved/Socially Vulnerable Population Risk

Organizations that dealt with the elderly and the vulnerable population within Atkinson County were present at the workshops. Plans will be in place to assist these groups of people during a hazardous event. There are no nursing homes or assisted living facilities within this community. Brochures were placed at the Health Department, DFACS, City Halls, County Government, and the City of Douglas Police Department, informing the vulnerable population of the Hazards that affect the communities within Coffee County. (See Appendix H).

Section II. Hail

A. Identification of Hazard

The Atkinson County HMPUC has chosen the threat of hail as the second most likely hazard to occur and cause damage in Atkinson County and the Cities of Pearson and Willacoochee 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.

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

Hail size is estimated by comparing it to a known object. Most hailstorms are made up of a mix of sizes, and only the largest hailstones pose severe risks to people caught in the open. The following are some 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

B. Profile of Events, Frequency of Occurrences, Probability

According to the NOAA Storm Events Database (see Appendix F), 29 reports of Hail events occurred in Atkinson County (including the Cities) between 01/01/1950 and 3/31/2023. The Historic Recurrence Interval is 2.52 years. This is a 39.73% Historic Frequency Chance per year. The past 10-year Record Frequency Per Year is 0.4, the past 20-year frequency is 1.05, and the past 50-year frequency is 0.56 (see the Hazard Frequency Table in Appendix D).

Hail events have, in the past, affected all jurisdictions in the community (unincorporated Atkinson County and the Cities of Pearson and Willacoochee). NOAA has reported three hail events since the previous HMP was adopted. The latest reported was on May 3, 2022, when a pulse severe storm moved across Atkinson County, producing quarter-size hail and gusty winds.

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

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

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

An estimated 100% of the Residential property (4,401 of 4,401) in Atkinson County (including the Cities of Pearson and Willacoochee) could be affected by this hazard, with a total value of $33,347,244. Also, an estimated 100% of the community's Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education, and Utility properties (2,056 of 2,056) may be affected, totaling $88,051,083. The values are based on the most recent available tax roll data for Atkinson County and the Cities of Pearson and Willacoochee, provided by the Atkinson 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, agricultural production's total farm gate value in Atkinson County is $93,994,300.52.

E. Land Use and Development Trends

The City of Pearson has zoning regulations; Atkinson County and the City of Willacoochee do not. All jurisdictions have mandatory building and fire codes, which a building inspector enforces. There is no planning commission. The County and Cities participate in joint comprehensive planning and the required updates of the Service Delivery Strategy. No other land use or development trends related to this hazard have been identified.

See Chapter 4 for the Building Codes for Atkinson County and the Cities of Pearson and Willacoochee.

F. Multi-Jurisdictional Differences

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

G. Overall HRV Summary of Events and Their Impact

Hail events can cause damage at any place, at any time, throughout Atkinson County and the Cities of Pearson and Willacoochee, especially during thunderstorms. The cost of the damage may be higher if the event strikes populated areas instead of more sparsely populated or unpopulated areas.

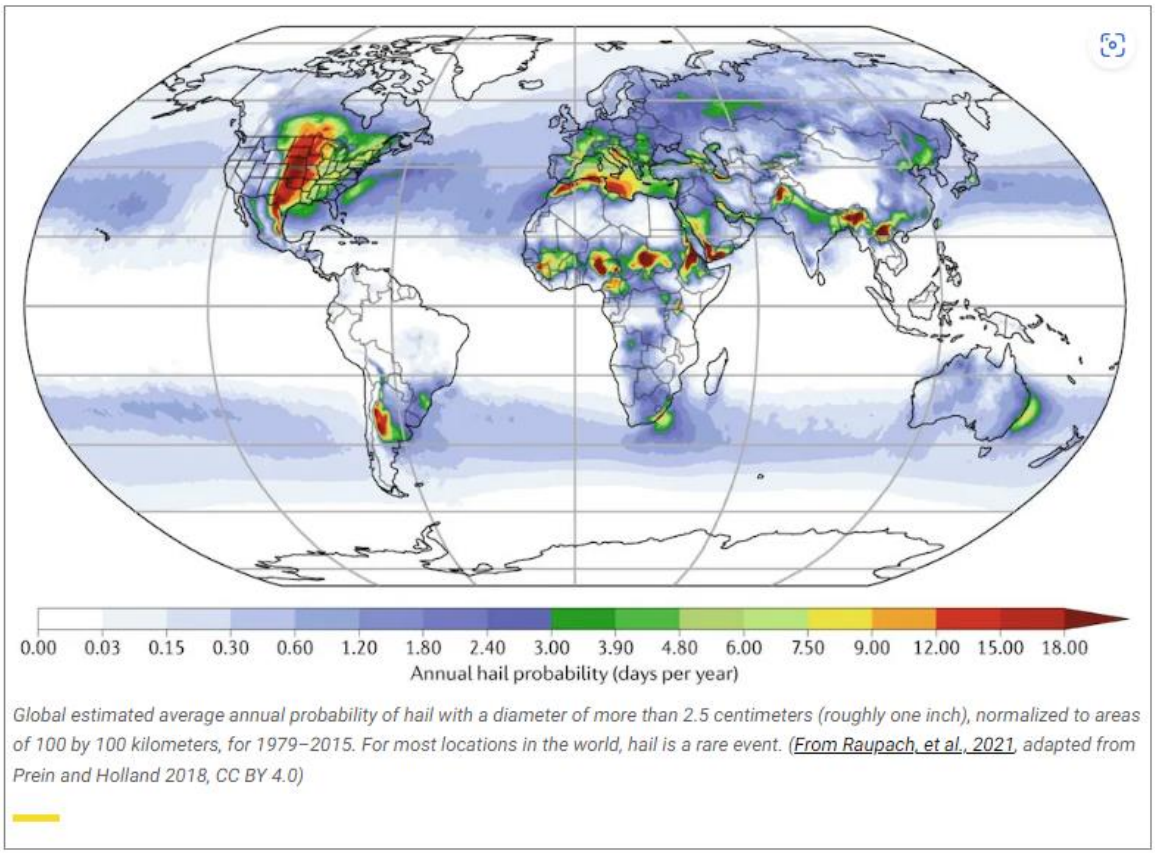
The HMPUC has developed a comprehensive range of Mitigation Goals, Objectives, and Action Steps to lessen the impacts of this hazard. These are contained in Chapter 4.

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

Hailstorms are a costly hazard, getting more expensive, with the most destructive hail being more likely. Hailstorms cause more property damage than tornadoes, with their toll rising fast. It is suggested that climate change may accentuate the trend.

Hail losses averaged from $8 billion to $14 billion annually from 2010 to 2020. This is $80-140 billion per decade (Insurance Information Institute). Climate projections indicate that the enlargement trend may continue in some hail-prone areas as the century unfolds.



Global estimated average annual probability of hail with a diameter of more than 2.5 centimeters (roughly one inch), normalized to areas of 100 by 100 kilometers, for 1979–2015. For most locations in the world, hail is a rare event. (From Raupach, et al., 2021, adapted from Prein and Holland 2018, CC BY 4.0)

In 2022, studies suggested that the United States could experience more prolonged hail seasons. Summertime is projected to have fewer hailstorms in the eastern United States but increased damaging summer hail in the central United States, where hailstorms are most frequent and costly. The cost of hailstorms will have much to do with our communities' growth. This could affect the hail damage, increasing costs. More growth in buildings will amount to more damaged structures. The future of hailstorms in a warmer climate hinges on several competing factors.

- More warm, moist air to fuel thunderstorms - More moisture is evaporating from oceans as temperatures rise, so the warm, moist air masses that fuel severe weather may become more unstable on average – a factor that would favor thunderstorm growth and large hail, all else being equal.
- A higher melting height - In a warming climate, the average melting level will tend to rise during thunderstorms. This would reduce the depth of a storm's hail-producing upper layer and give small hailstones more chance to melt as they fall to the ground through a deeper layer of air above freezing. (Larger hailstones would be less affected.)
- Changes in wind shear - Early studies examining thunderstorms and climate change hypothesized that supercell storms could be less potent on average in a warmer world. The reasons: Although instability should increase overall, a weakening jet stream is expected to lead to a general decrease in vertical wind shear (the change of winds with height that helps supercells to stay organized). There would be plenty of thunderstorms but fewer intense supercells that spit out tornadoes and huge hail.

Source: https://yaleclimateconnections.org

I. Underserved/Socially Vulnerable Population Risk

Organizations that dealt with the elderly and the vulnerable population within Atkinson County were present at the workshops. Plans will be in place to assist these groups of people during a hazardous event. There are no nursing homes or assisted living facilities within this community. Brochures were placed at the Health Department, DFACS, City Halls, County Government, and the City of Douglas Police Department, informing the vulnerable population of the Hazards that affect the communities within Coffee County. (See Appendix H).

Section III. Wildfires

A. Identification of Hazard

The threat of wildfire 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. Historical data have been examined from various sources, including the National Climatic Data Center and Georgia Forestry Commission (see Appendix F), as well as from local history and personal accounts, to determine the frequency of events.

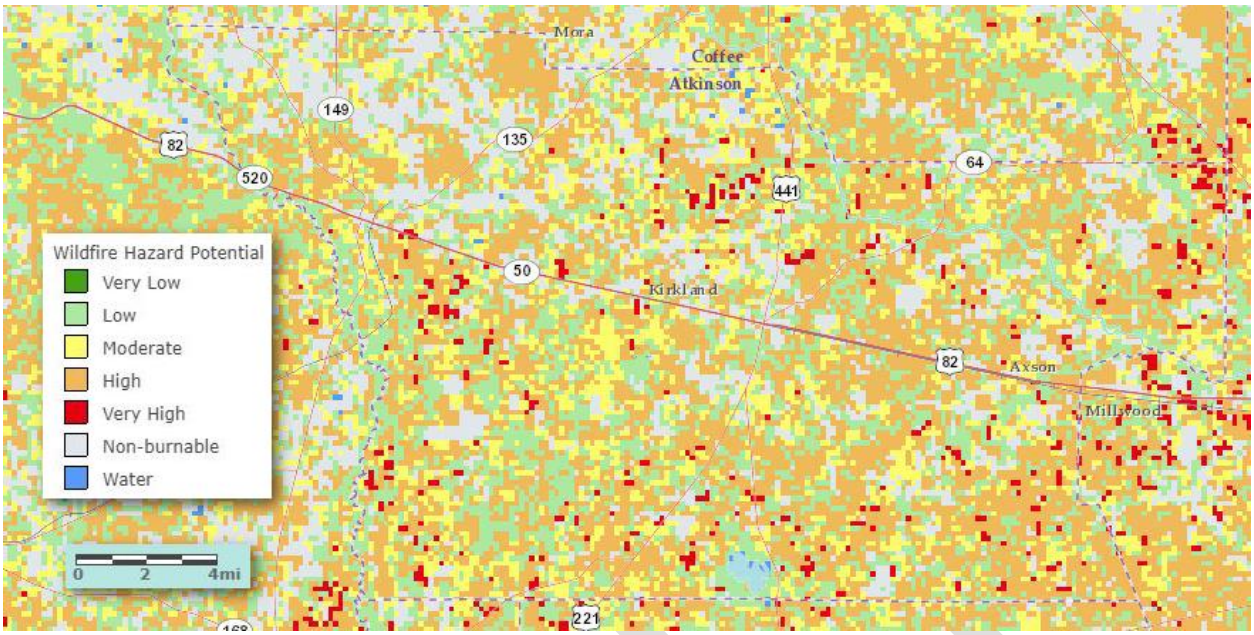
Much of southern Georgia is covered by forests, and fires play an essential role in the health of forest ecosystems by breaking down organic matter into soil nutrients and helping seeds to germinate (source: NASA, https://earthobservatory.nasa.gov/Features/GlobalFire/fire_2.php). When naturally occurring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

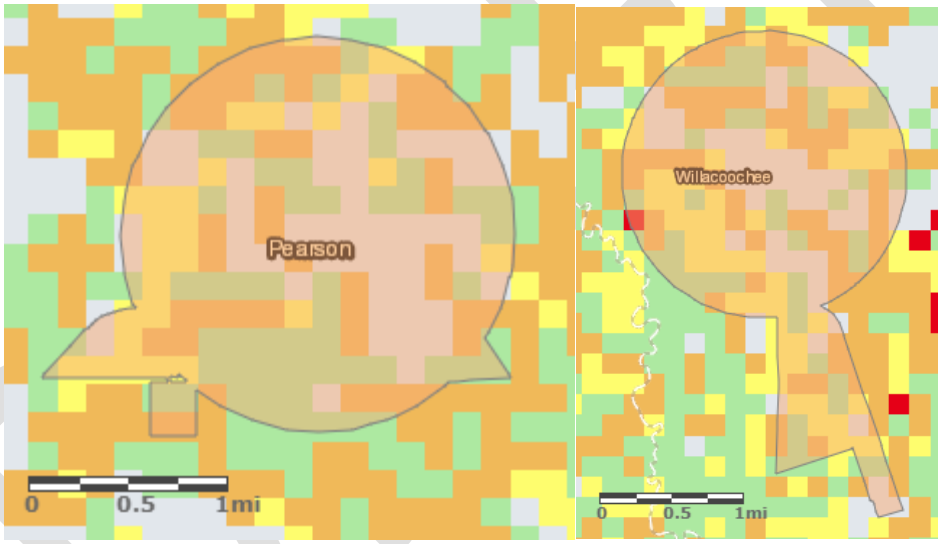
Low humidity, lack of recent precipitation (or drought conditions), wind speed, and temperature are weather conditions that favor the kindling and spread of wildfires. Combined with the above, a high fuel load (i.e., the accumulation of dead vegetation) also provides for the kindling and spread of wildfires. Much of Atkinson County, including some areas near the Cities, is forested with commercial and free-growing pine 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 to start fires include discarding cigarettes, leaving campfires unattended, and losing control of prescribed burns or crop fires. Sparks from railroads and power lines, as well as arson, also routinely cause wildfires.

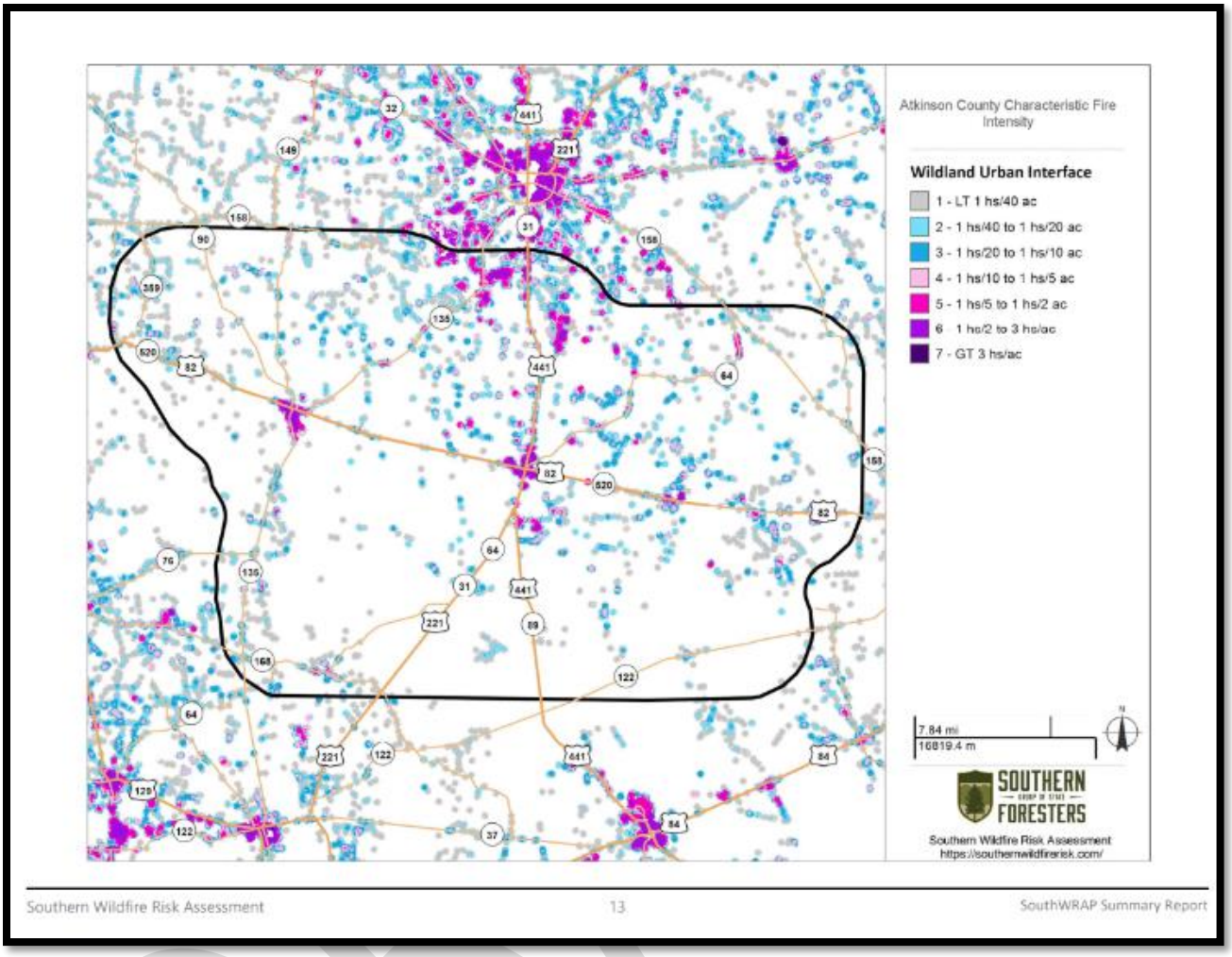
When a residential area, whether a single home or an entire subdivision, is adjacent to an area containing vegetative fuels, such as a forest or other wooded area, this is called a Wildland-Urban Interface area (WUI). These are the areas at most significant risk for property damage due to Wildfire.

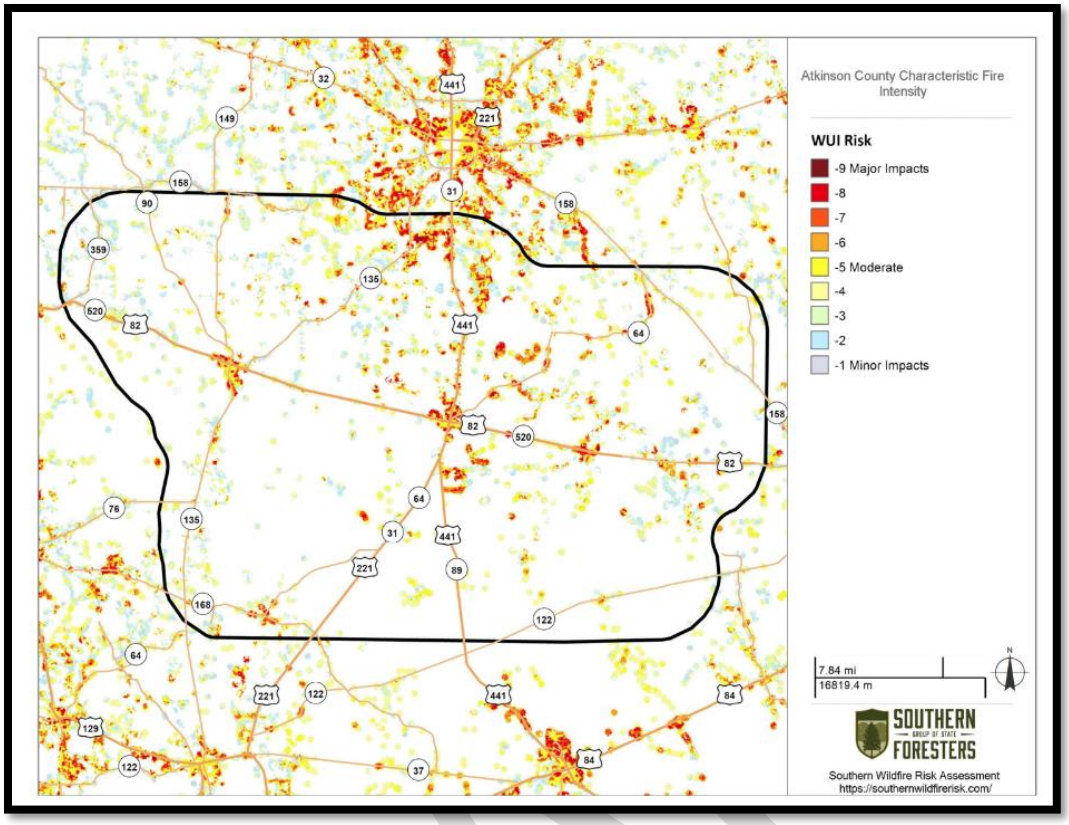
Atkinson County and the Cities of Pearson and Willacoochee are all vulnerable to the effects of wildfires. The USDA Forest Service assigns areas a Wildfire Hazard Potential (WHP) score of Very Low, Low, Moderate, High, or Very High. As the map below shows, most of Atkinson County is scored either Low, Moderate, High, or Non-burnable, with small, scattered areas rated Very High.

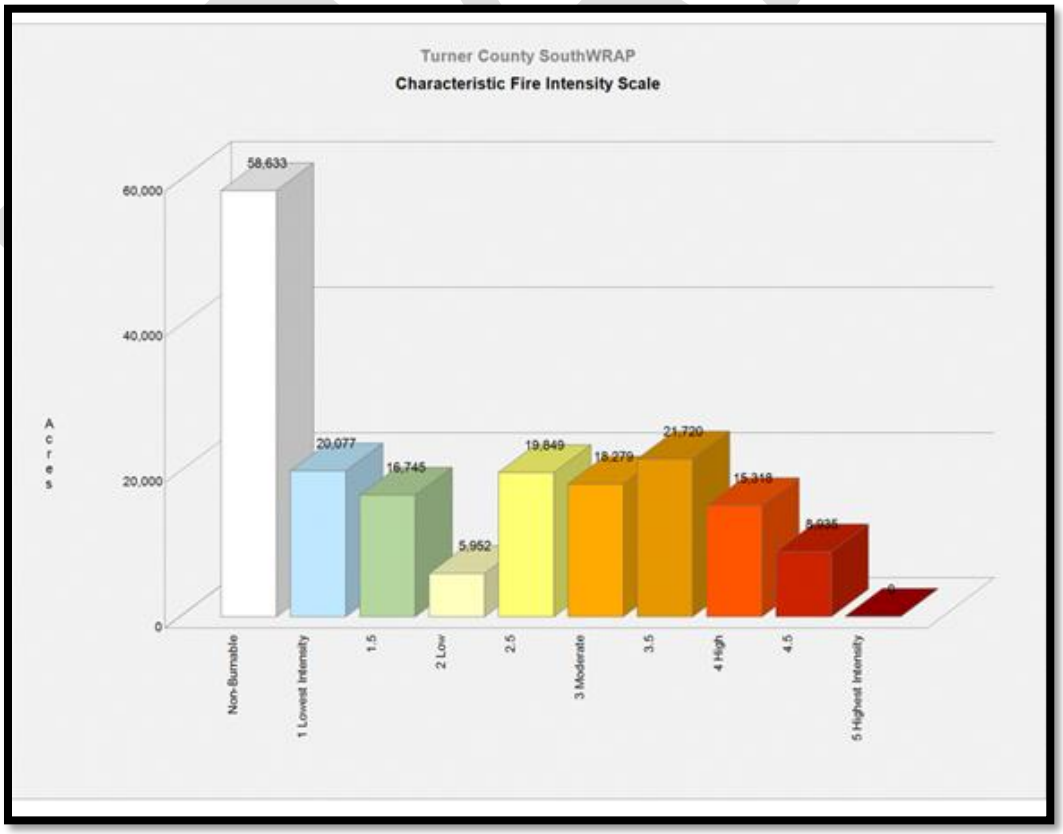




Data Source: USDA Forest Service and Fire Modeling Institute
https://www.arcgis.com/home/item.html?id=f291ac4840984de5a0cf842d8d7a0973


Atkinson County Characteristic Fire Intensity
Wildland Urban Interface
1 - LT 1 hs/40 ac
2 - 1 hs/40 to 1 hs/20 ac
3 - 1 hs/20 to 1 hs/10 ac
4 - 1 hs/10 to 1 hs/5 ac
5 - 1 hs/5 to 1 hs/2 ac
6 1 hs/2 to 3 hs/ac
7 - GT 3 hs/ac
7.84 mi
16819.4 m
SOUTHERN FORESTERS
Southern Wildfire Risk Assessment
https://southernwildfirerisk.com/
Southern Wildfire Risk Assessment
13
SouthWRAP Summary Report


Atkinson County Characteristic Fire Intensity
WUI Risk
-9 Major Impacts
-8
-7
-6
-5 Moderate
-4
-3
-2
-1 Minor Impacts
7.84 mi
16819.4 m
N
SOUTHERN FORESTERS
Southern Wildfire Risk Assessment
https://southernwildfirerisk.com/


Turner County SouthWRAP
Characteristic Fire Intensity Scale
Acres
60,000
40,000
20,000
0
58,633
20,077
16,745
5,952
19,849
18,279
21,720
15,318
8,935
0
Non-Burnable
1 Lowest Intensity
1.5
2 Low
2.5
3 Moderate
3.5
4 High
4.5
5 Highest Intensity

B. Profile of Events, Frequency of Occurrences, Probability

According to Georgia Forestry Commission fire reports, there are 2,738 reports of wildfires occurring in Atkinson County (including the Cities) between 01/01/1967 and 6/27/2023. The Historic Recurrence Interval is 0.02 years. This is a 5,476% Historic Frequency Chance per year. The past 10-year Record Frequency Per Year is 40.5, the past 20-year frequency is 100.05, and the past 50-year frequency is 54.76 (see the Hazard Frequency Table in Appendix D).

Wildfires have, in the past, severely affected all jurisdictions in the community (unincorporated Atkinson County and the Cities of Pearson and Willacoochee). For example, in May 2007, a wildfire in the Roundabout Swamp area burned 5,857 acres within Atkinson County.

Since the previous Hazard Mitigation Plan was completed, 58 wildfire events have been recorded, burning 478.88 acres. The largest was in 2018, with 15 fires burning 393.34 acres. In February 2022, 1 building was impacted by the Kirkland Pond Fire. This fire covered 2 square miles.

The Georgia Forestry Commission reported the following fires for the years 2018-2022:

YEAR	# OF FIRES	ACRES BURNED
2018	15	393.34
2019	22	119.11
2020	6	4.32
2021	2	1
2022	13	478.88

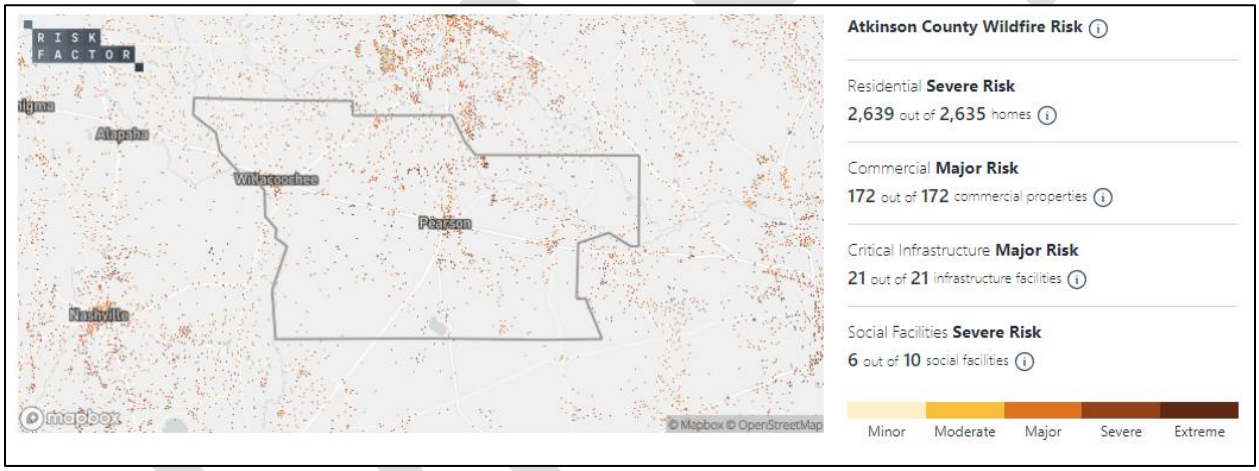
Although the most complete available data was used for this analysis, the possibility remains that other events in the community may have occurred that went unreported or underreported.

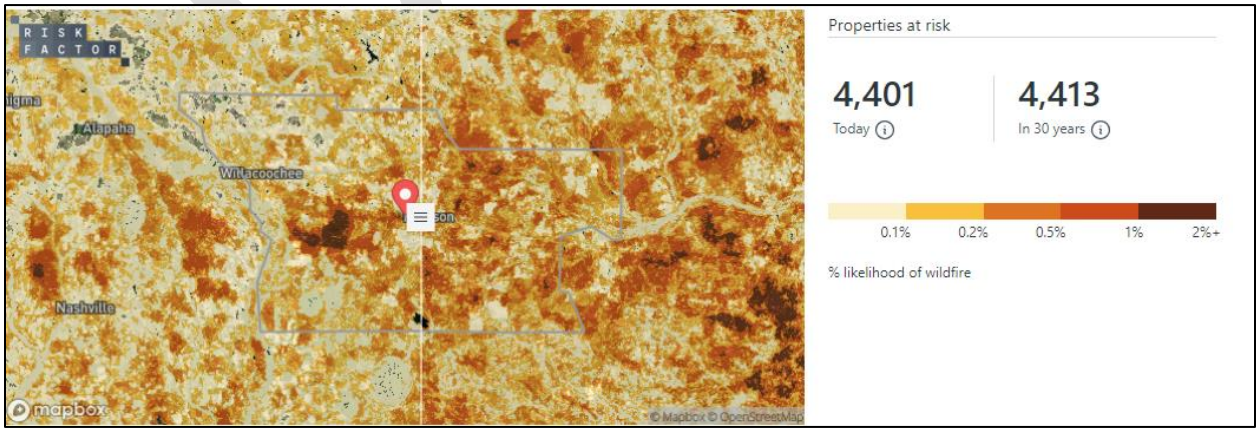
C./D. Inventory of Assets Exposed and Potential Loss

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

An estimated 100% of the Residential property (4,401 of 4,401) in Atkinson County (including the Cities of Pearson and Willacoochee) could be affected by this hazard, with a total value of $33,347,244. Also, an estimated 100% of the community's Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education, and Utility properties (2,056 of 2,056) may be affected, totaling $88,051,083. The values are based on the most recent available tax roll data for Atkinson County and the Cities of Pearson and Willacoochee, provided by the Atkinson County Tax Assessor's Office.

All the 4,401 residential properties in Atkinson County are at risk of wildfire over the next 30 years. The fires can also cut off access to utilities and emergency services, impact evacuation routes, and may impact the overall economic well-being of an area. The county has a significant risk of wildfire over the next 30 years. This risk is based on the level of risk the properties have rather than the proportion of properties with risk.





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, agricultural production's total farm gate value in Atkinson County is $93,994,300.52.

E. Land Use and Development Trends

The City of Pearson has zoning regulations; Atkinson County and the City of Willacoochee do not. All jurisdictions have mandatory building and fire codes, which a building inspector enforces. There is no planning commission. The County and Cities participate in joint comprehensive planning and the required updates of the Service Delivery Strategy. No other land use or development trends related to this hazard have been identified.

See Chapter 4 for the Building Codes for Atkinson County and the Cities of Pearson and Willacoochee.

F. Multi-Jurisdictional Differences

Wildfires may happen at any place and time but are more likely in forested areas. Unincorporated Atkinson County is the only jurisdiction with a significant portion of land rated "Very High" for Wildfire Hazard Potential. The impact of a wildfire would be more severe in places with higher population density due to more people being in danger and more potential for destroying homes and other buildings. In jurisdictions without zoning, land use incompatibilities may render certain areas more vulnerable to wildfires and other hazards.

The consolidated Atkinson County Fire Department serves the County and the two Cities. The County has eight fire stations, all with an ISO Class of 05/5X. Paid firefighters man one fire station, and volunteer firefighters staff the others.

G. Overall HRV Summary of Events and Their Impact

Wildfires can potentially cause damage at any place or time throughout Atkinson County and the Cities of Pearson and Willacoochee. 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 instead of more sparsely populated or unpopulated areas.

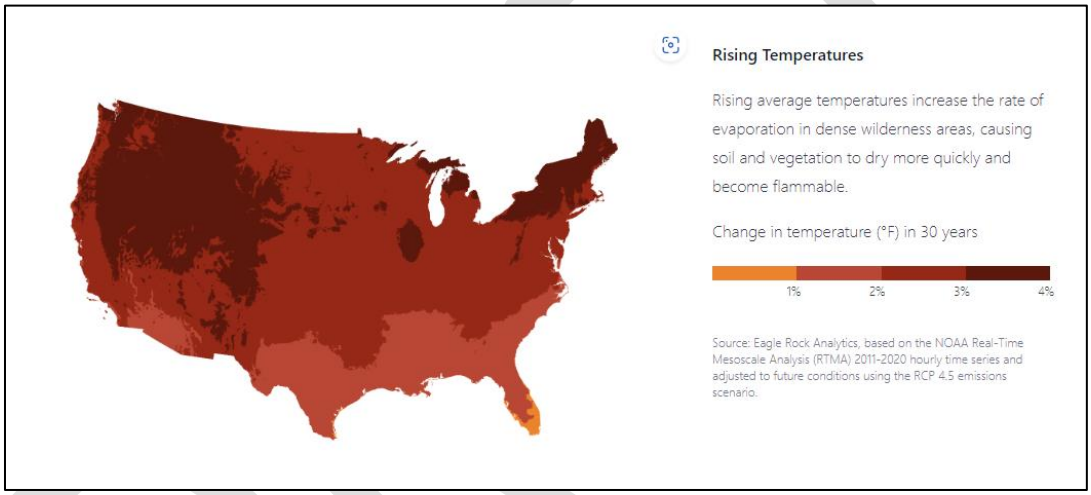
The HMPUC has developed a comprehensive range of Mitigation Goals, Objectives, and Action Steps to lessen the impacts of this hazard. These are contained in Chapter 4.

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.

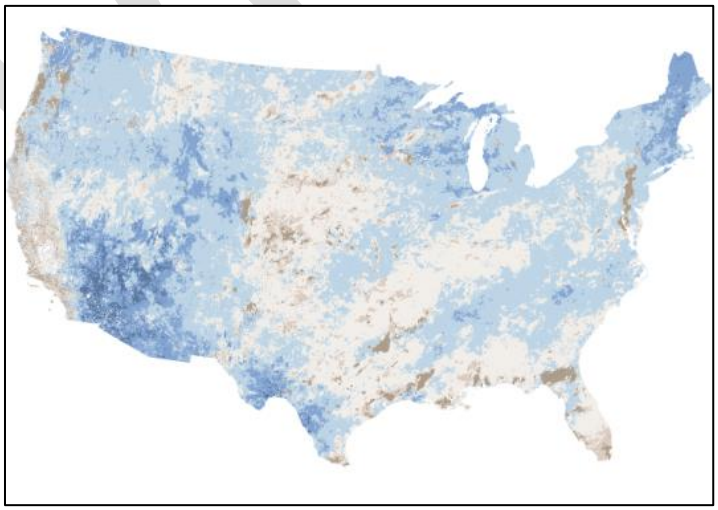
H. Impacts from Future Conditions

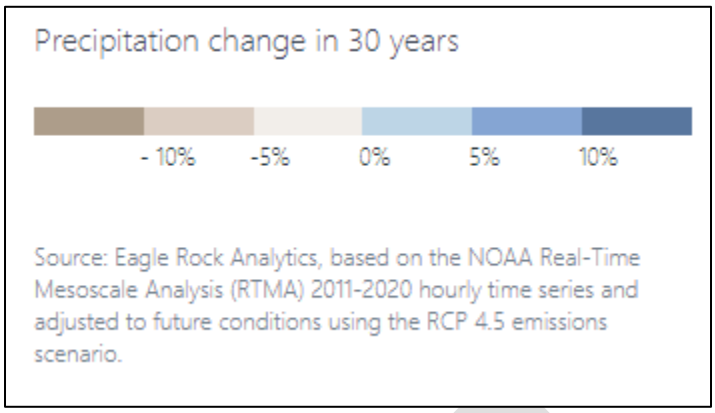
Changes in our environment are changing the risks of wildfires. Climate change is causing higher temperatures and drier conditions, creating primer conditions for wildfires to spread. Wildfires have grown more intense and destructive across much of the United States.
With the compounding issue of climate change, many regions of the United States are now experiencing prolonged periods of drought and record-high temperatures. Often, these areas have an excessive buildup of fallen leaves and underbrush. With these conditions, wildfires will continue to spread, damaging natural areas and nearby communities.

Drought also influences trees while allowing the invasive bark beetle to travel and survive in areas where they usually would not survive. Due to climate change, it has eliminated cold spells that would kill off the beetles. In the last 20 years, the beetles have killed 100,000 square miles of trees across western North America. The trees are more susceptible to wildfire, which increases the chance of the fires spreading faster and farther.

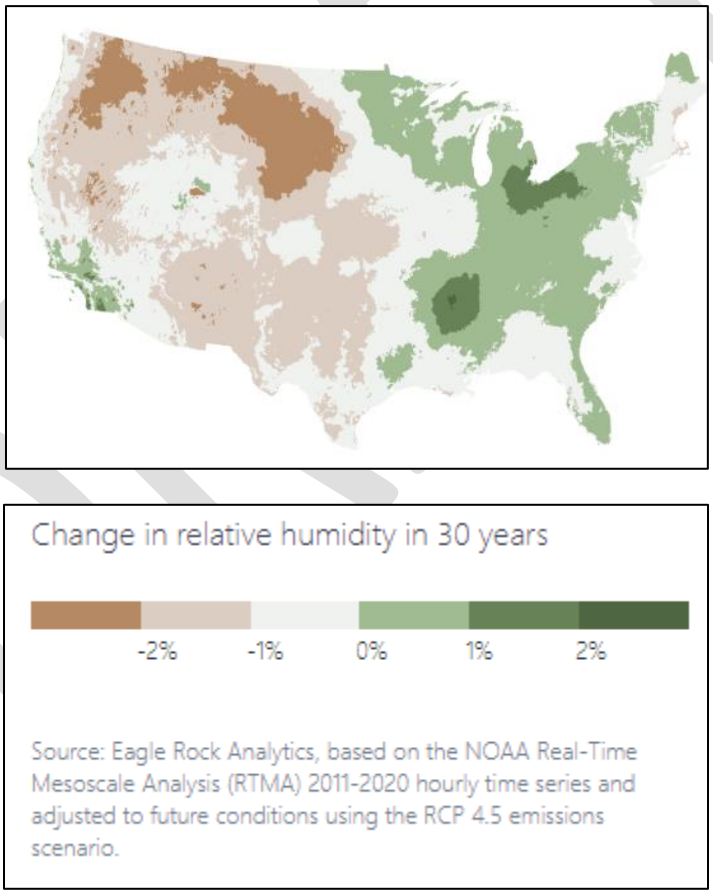


Dryer seasons are exacerbated by changing precipitation patterns. These changes cause wildfires more frequently and severely.





Humidity is decreasing in the air, and it causes plants to release moisture to balance the environment. This results in dryer vegetation that is more susceptible to wildfire.



I. Underserved/Socially Vulnerable Population Risk

Organizations that dealt with the elderly and the vulnerable population within Atkinson County were present at the workshops. Plans will be in place to assist these groups of people during a hazardous event. There are no nursing homes or assisted living facilities within this community.

Brochures were placed at the Health Department, DFACS, City Halls, County Government, and the City of Douglas Police Department, informing the vulnerable population of the Hazards that affect the communities within Coffee County. (See Appendix H).

Section IV. Floods

A. Identification of Hazard

The threat of a flood has been chosen by the HMPUC as the fourth 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.

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

Flash floods 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 yearly due to flooding than any other thunderstorm-related hazard. The Centers for Disease Control and Prevention report that over half of all flood-related drownings occur when a vehicle is driven into hazardous flood water. The highest percentage of flood-related deaths is from 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.

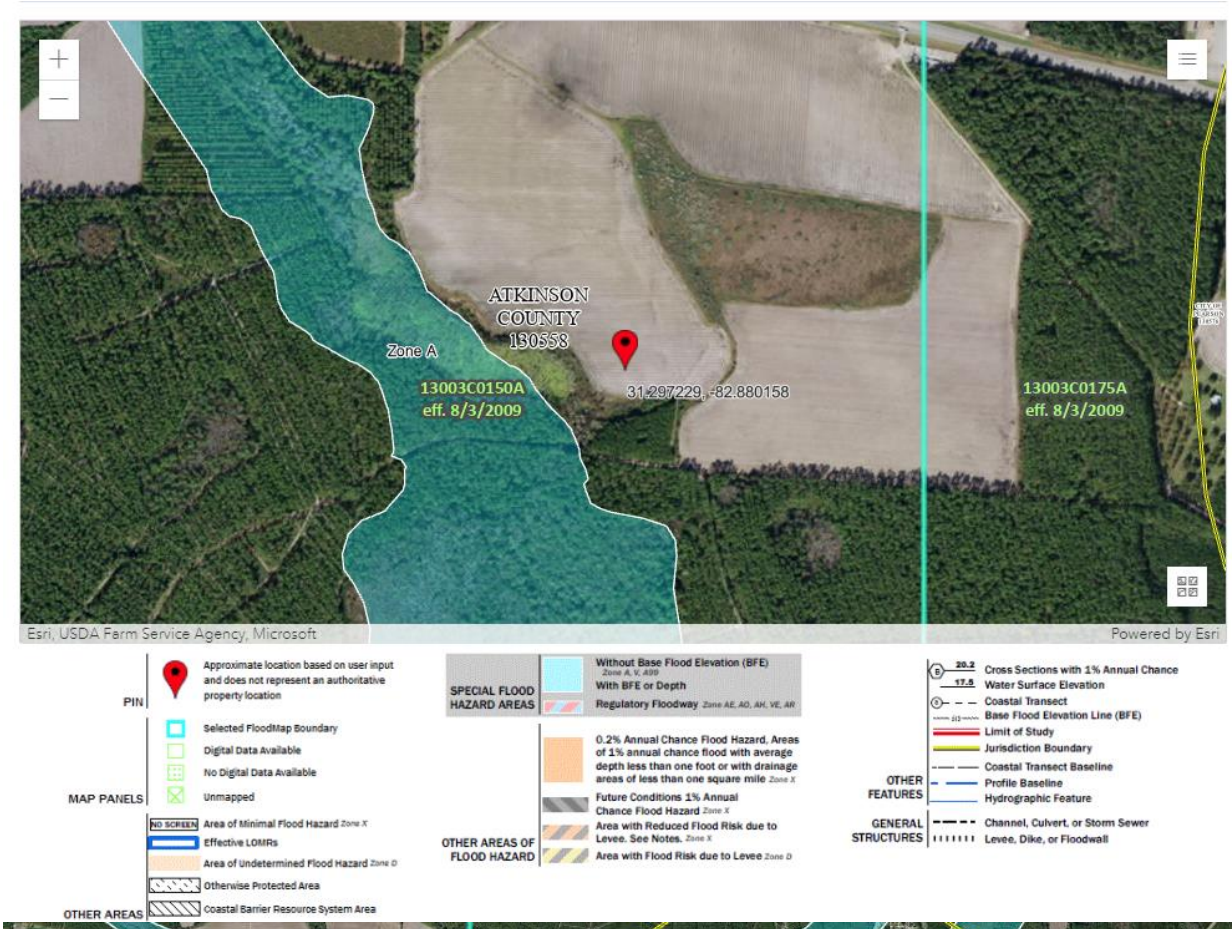
Flood zones, as defined by FEMA, are described in the table below.

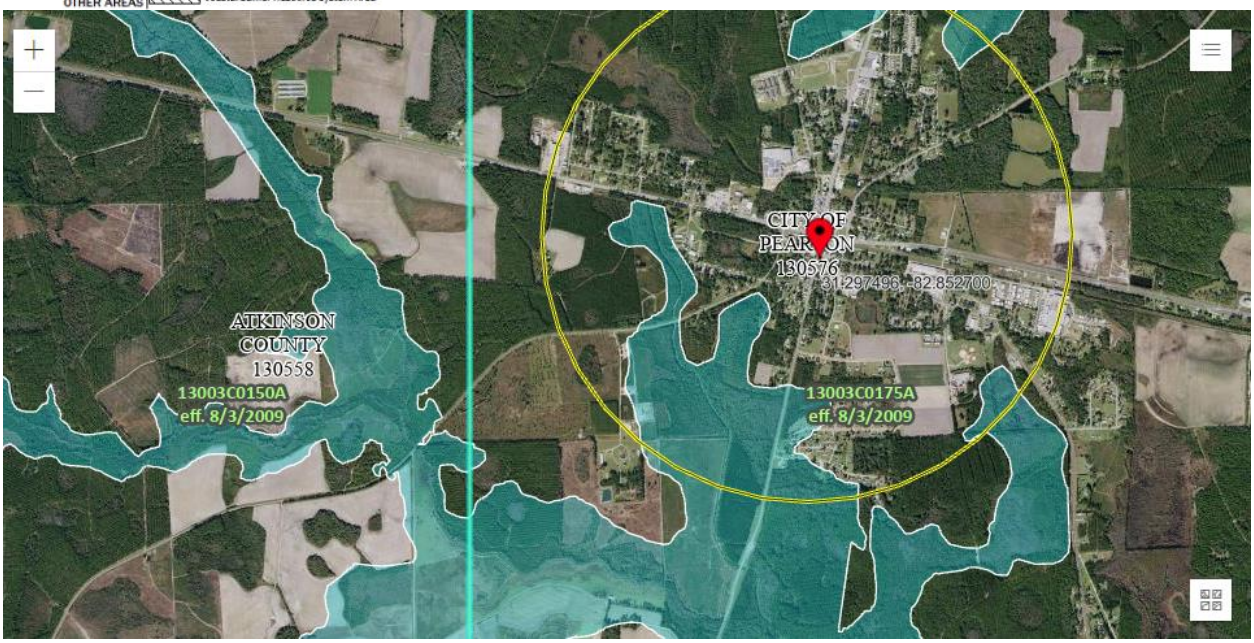
Flood Zone Designations and Descriptions

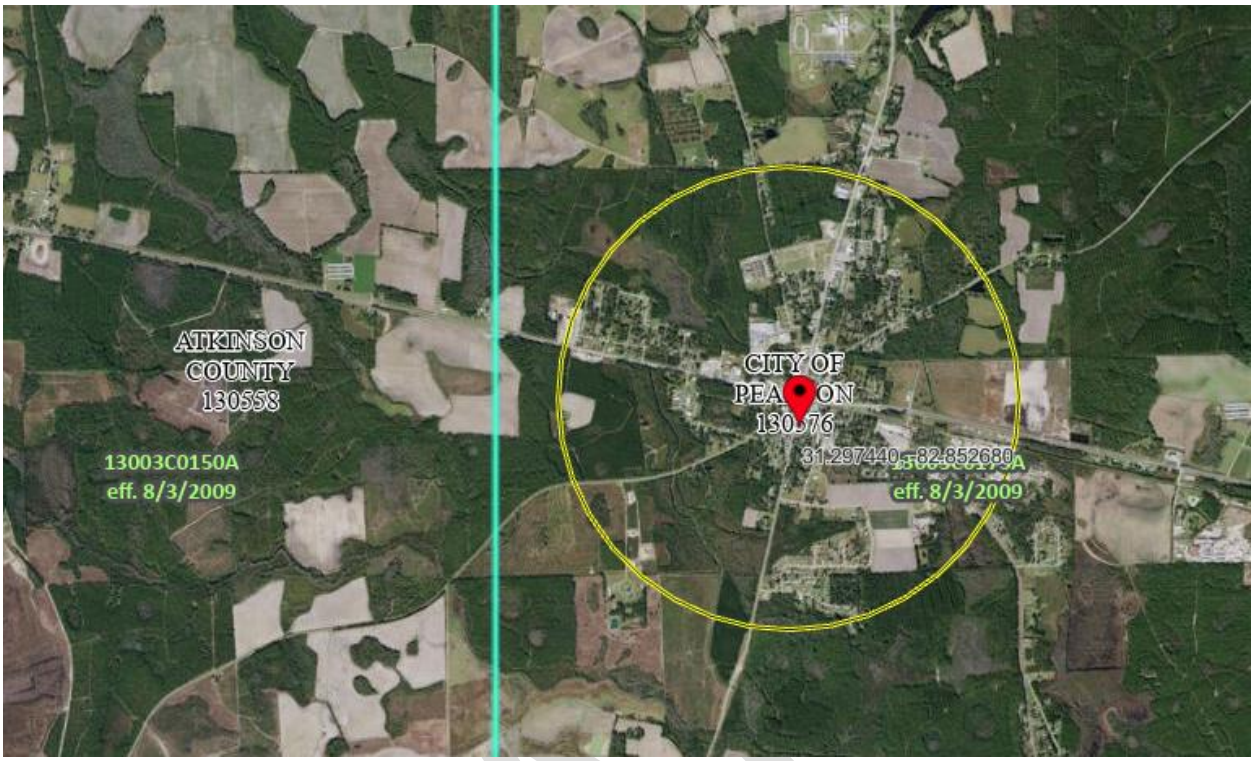
Source: FEMA (https://hazards.fema.gov/onlinelomc/ext/Help/loadInstructions)

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

The following are the FEMA Maps associated with the county and cities:






ATKINSON
COUNTY
130558
13003C0150A
eff. 8/3/2009
CITY OF
130376
eff. 8/3/2009


ATKINSON
COUNTY
130558

Atkinson County and the Cities of Pearson and Willacoochee 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), five reports of floods occurred in Atkinson County (including the Cities) between 01/01/1950 and 3/31/2023. Another three flood reports are known to the community for eight events in the historical record. The Historic Recurrence Interval is 9.13 years. This is a 10.96% Historic Frequency Chance per year. The past 10-year Record Frequency Per Year is 0.2, the past 20-year frequency is 0.1, and the past 50-year frequency is 0.16 (see the Hazard Frequency Table in Appendix D).

In the past, flooding in the community has been severe. Most of Atkinson County is in the Satilla River sub-basin of the St. Marys-Satilla River basin. The narrow western border area, parallel to the western border and running through Willacoochee, is located in the Alapaha River sub-basin of the Suwannee River basin.

Heavy rains from March 27 to April 3, 2009, caused severe flooding in southern Georgia. A series of weather systems with similar storm tracks and heavy rain swept across the region during this period. The National Weather Service (NWS) radar rainfall estimation of these storms shows 10-day rainfall totals of over 12 inches across southwestern Georgia, with maximum 10-day totals of more than 16 inches (National Weather Service, 2009c). Daily rainfall totals exceeded 6 inches, equal to a 10-percent AEP (Hershfield, 1961), at four USGS rain gages on March 28, 2009.

On April 23, 2009, Atkinson County was one of 69 counties declared a disaster area under FEMA declaration 1833 because of the flooding in 2009. Heavy rains from March 27–April 3, 2009, and

September 16–22, 2009, caused severe flooding in Georgia and resulted in hundreds of millions of dollars worth of damage to homes, businesses, infrastructure, and agricultural lands. Ten deaths were attributed to the September 2009 flooding, and thousands of persons were evacuated from flooded areas. Estimated 10-day rainfall totals of more than 12 inches fell in southern Georgia during the April–March event, and more than 20 inches fell in northern Georgia during the September event. Of the 238 USGS stream gages that record annual peak flows in Georgia, 40 stream gages have a new record peak flow for the respective periods of record. The peak flow for 2009 exceeded the 1-percent annual exceedance probability at 33 USGS stream gages, 19 of which had peak flows that exceeded the 0.2-percent annual exceedance probability. https://pubs.usgs.gov

In September 2016, flooding impacted 22 properties in Atkinson County due to Hurricane Matthew.

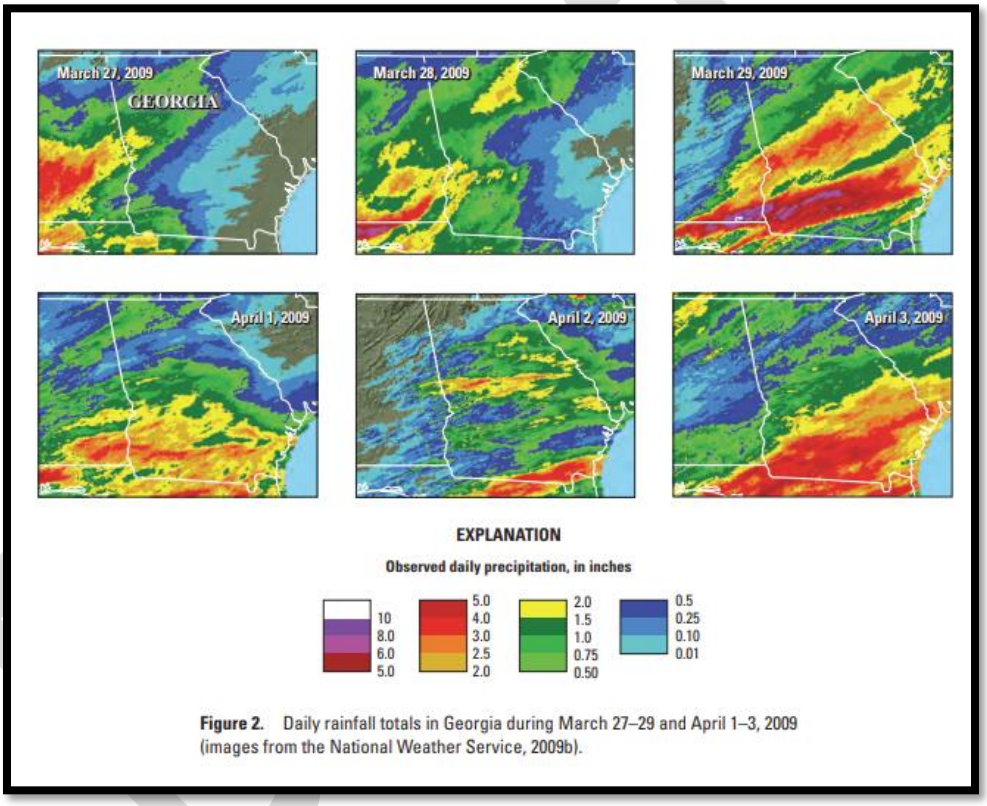
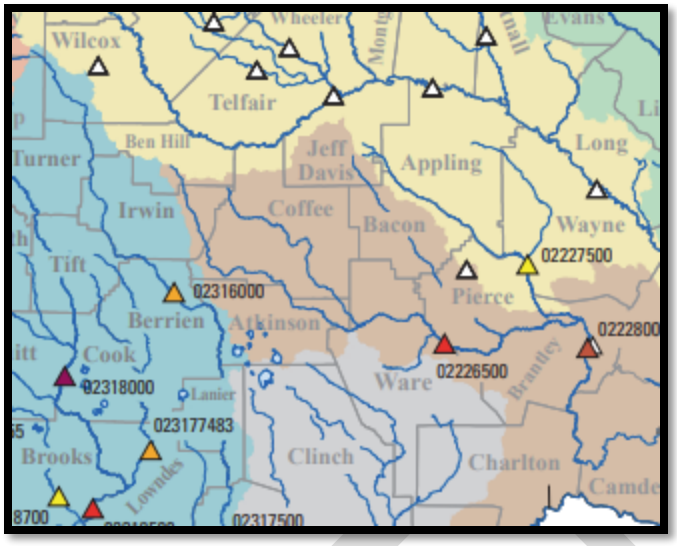
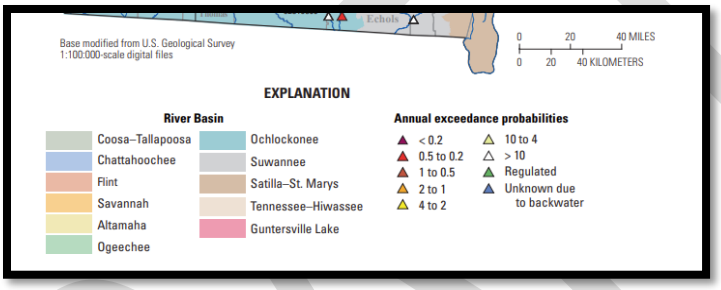
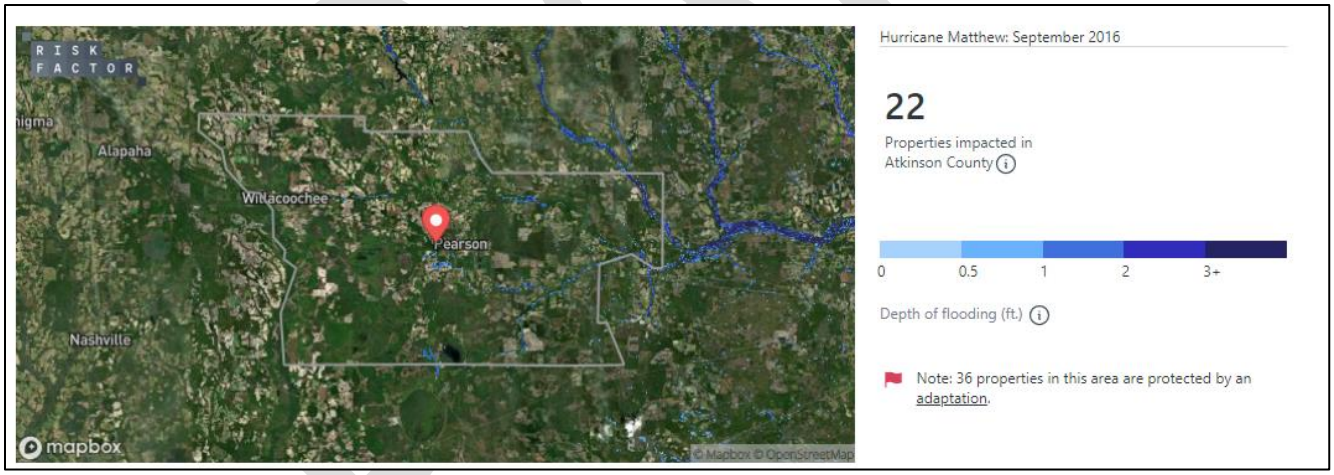


Figure 2. Daily rainfall totals in Georgia during March 27–29 and April 1–3, 2009 (images from the National Weather Service, 2009b).

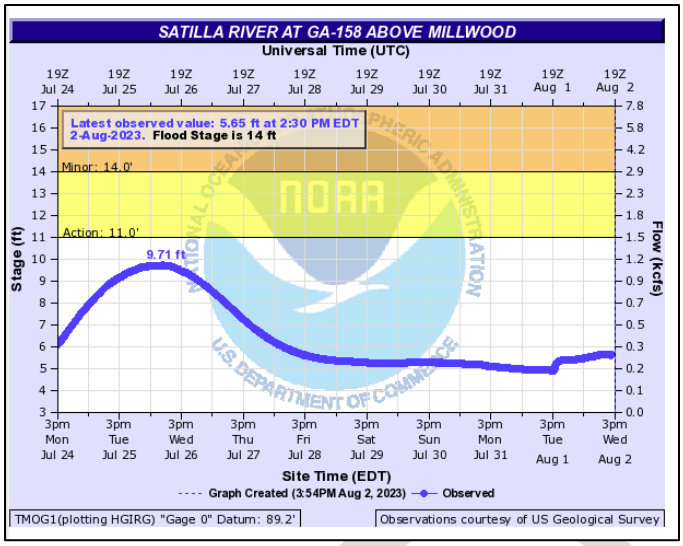






On April 25, 1928, the Satilla River's historic crest was 26.60 feet, and the low water record was on May 14, 2018, at 2.30 feet.

On April 25, 1928, the Alapaha River's historic crest was 26.60 feet, and the low water record was on May 14, 2018, at 2.30 feet.



Flood Categories (in feet)

Major Flood Stage:	19
Moderate Flood Stage:	17
Flood Stage:	14
Action Stage:	11
Low Stage (in feet):	2.5

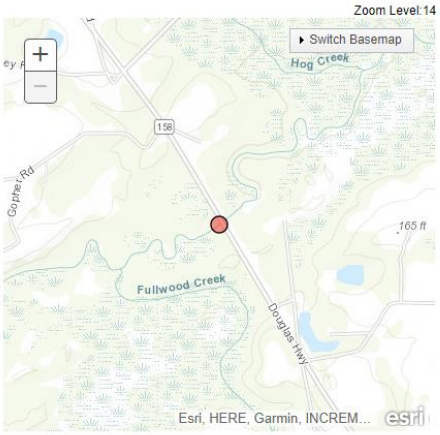
Historic Crests
(1) 26.60 ft on 04/15/1928 **(P)**
(2) 26.60 ft on 04/04/1948
(3) 19.78 ft on 02/28/2013
(4) 19.33 ft on 04/27/2021
(5) 19.00 ft on 03/08/2020
(6) 18.88 ft on 02/07/2016
(7) 17.64 ft on 02/14/2023
(8) 17.48 ft on 02/21/2021
(9) 17.43 ft on 04/22/2014
(10) 17.41 ft on 01/25/2017
Show More Historic Crests

(P): Preliminary values subject to further review.

Recent Crests
(1) 17.64 ft on 02/14/2023
(2) 15.93 ft on 10/12/2021
(3) 15.55 ft on 09/20/2021
(4) 19.33 ft on 04/27/2021
(5) 16.49 ft on 03/06/2021
(6) 17.48 ft on 02/21/2021
(7) 15.60 ft on 01/06/2021
(8) 15.44 ft on 04/25/2020
(9) 19.00 ft on 03/08/2020
(10) 14.91 ft on 03/01/2020
Show More Recent Crests

(P): Preliminary values subject to further review.

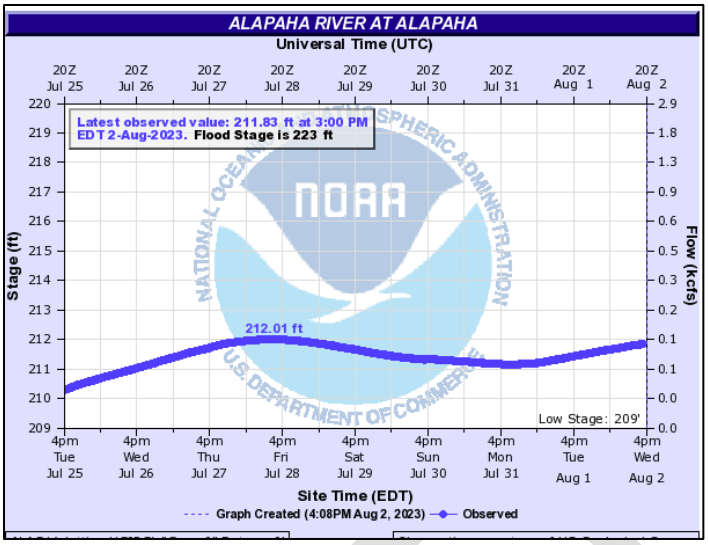
Low Water Records
(1) 2.16 ft on 09/15/2011
(2) 2.18 ft on 11/20/2016
(3) 2.20 ft on 06/04/2017
(4) 2.28 ft on 11/16/2012
(5) 2.30 ft on 05/14/2018

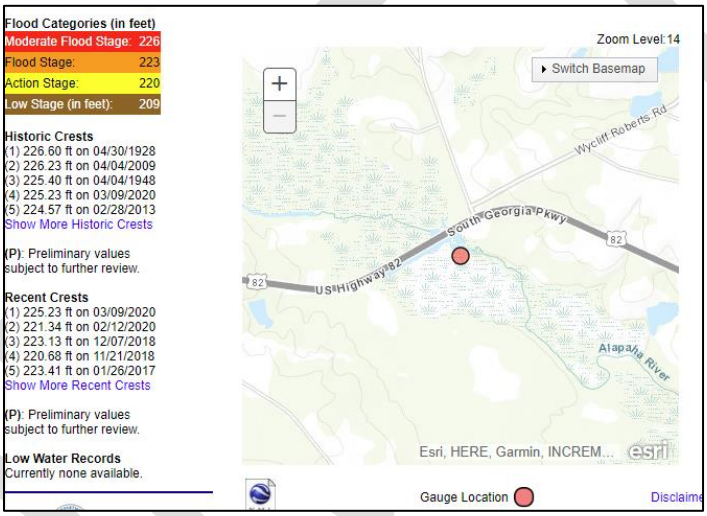


Gauge Location

Disclaimer

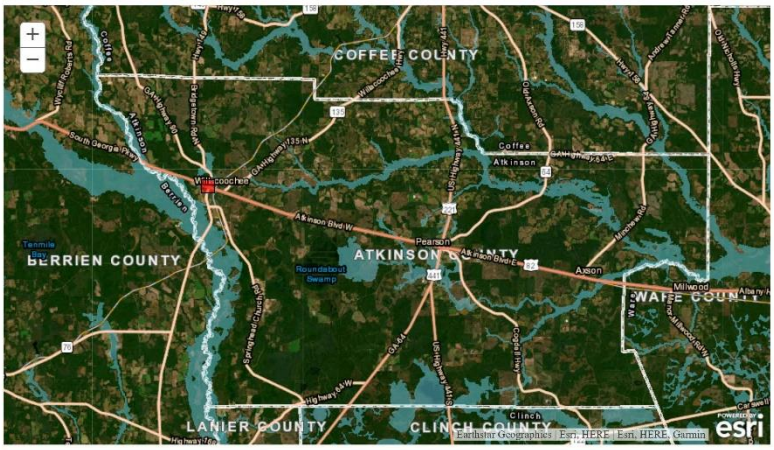
Latitude/Longitude Disclaimer: The gauge location shown in the above map is the approximate location based on the latitude/longitude coordinates provided to the NWS by the gauge owner.





Source: https://water.weather.gov

2-98 Main St W, Willacoochee, Georgia, 31650



GEORGIA FLOOD MAP PROGRAM

Property Flood Risk: Low Risk

Location Information

Panel:	13003C0125A
Watershed:	Satilla
County:	ATKINSON
Community ID:	13003C
Map Status:	EFFECTIVE

* Flood Depths shown on this report are derived from FEMA RiskMAP products and are rounded to the nearest tenth of a foot. These depths are calculated from HEC-RAS modeling and represent the best available data. Only areas within a RiskMAP studied watershed will have this data available. Please check back if your area is not currently available. For more information, please visit the FEMA Map Service Center at https://msc.fema.gov/portal/resources/faq

Nature Doesn't Read Flood Maps

Many people don't understand just how risky the floodplain can be. There is a greater than 26% chance that a non-elevated home in the SFHA will be flooded during a 30-year mortgage period.

The chance that a major fire will occur during the same period is less than 10%!

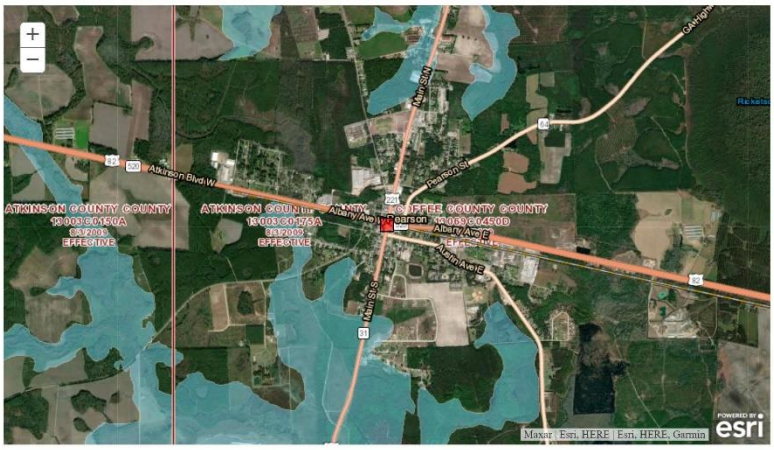
FOR MORE INFORMATION VISIT, PLEASE VISIT: FloodSmart.gov

Legend with Flood Zone Designations

- Flood Control Structures
- Base Flood Elevations
- Cross Sections
- Coastal Transects
- FIRM Panel Index
- 1% Flood - Floodway (High Risk)
- 1% Flood - Zone AE (High Risk)
- 1% Flood - Zone A, AH, or AO (HighRisk)
- 0.2% Flood - X-Shaded (Moderate Risk)
- Area of Undetermined Flood Hazard
- 1% Flood - Zone VE (HighRisk)
- Area Not Included
- Letters of Map Revision
- Coastal Barrier Resource Area
- Limit of Moderate Wave Action
- Floodway Decrease
- Floodway Increase
- 100-Year Flood Zone Decrease
- 100-Year Flood Zone Increase
- Zone Change

Disclaimer: This data is not to be used to determine any base flood elevations or flood zone designations for NFIP (National Flood Insurance Program) purposes. For NFIP flood insurance and regulation purposes, please refer to the published effective FIRM (Flood Rate Insurance Map) for your area of concern. Values displayed for Current Flood Zone, Preliminary Flood Zone, Flood Zone Change Type, and Probability of Flooding over a 30-year period based on center of dot location, not extent of structure(s).

Mile 9 Main St S, Pearson, Georgia, 31642



GEORGIA FLOOD MAP PROGRAM

Property Flood Risk: Low Risk

Location Information

Panel:	13003C0175A
Watershed:	Satilla
County:	ATKINSON
Community ID:	13003C
Map Status:	EFFECTIVE

* Flood Depths shown on this report are derived from FEMA RiskMAP products and are rounded to the nearest tenth of a foot. These depths are calculated from HEC-RAS modeling and represent the best available data. Only areas within a RiskMAP studied watershed will have this data available. Please check back if your area is not currently available. For more information, please visit the FEMA Map Service Center at https://msc.fema.gov/portal/resources/faq

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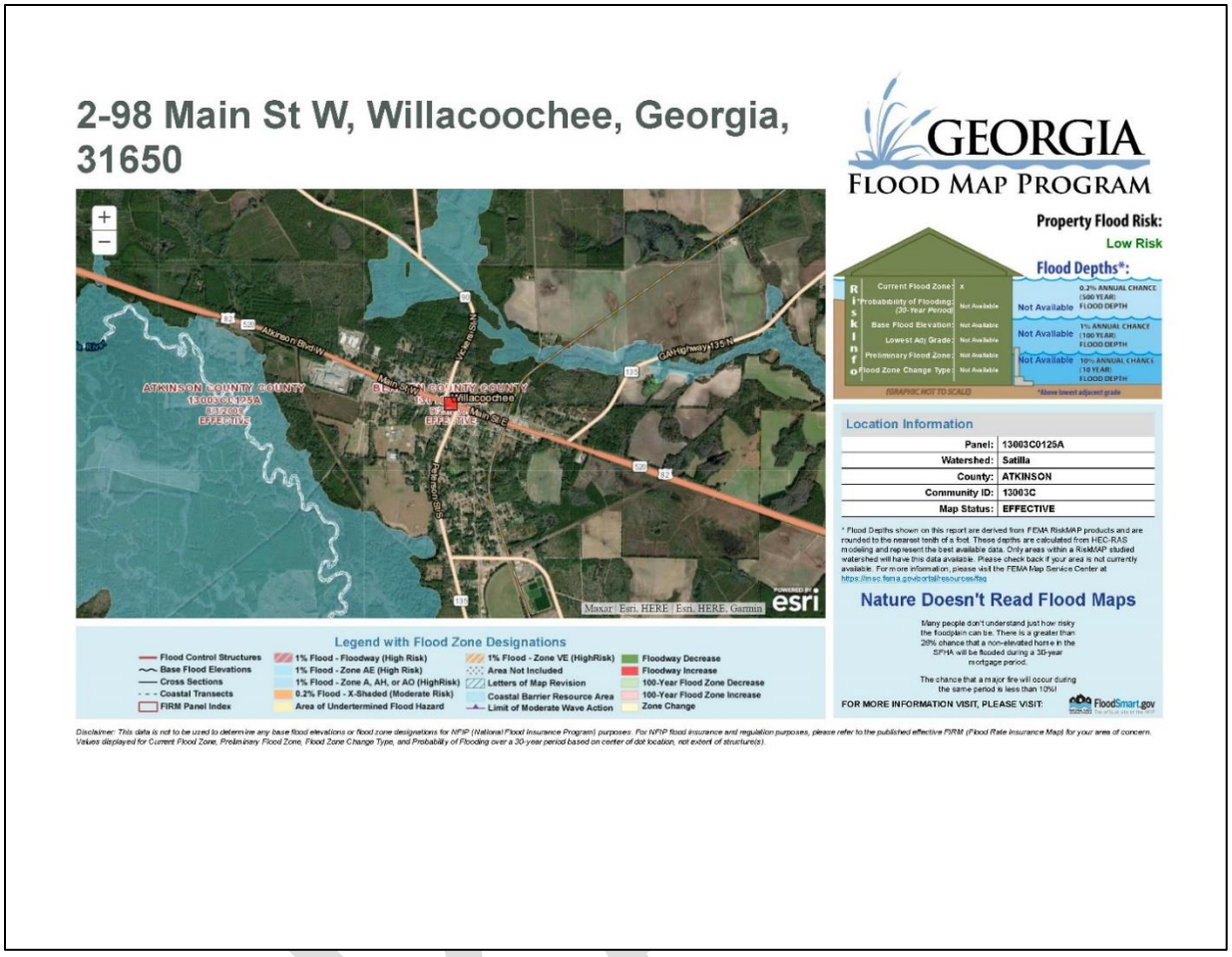
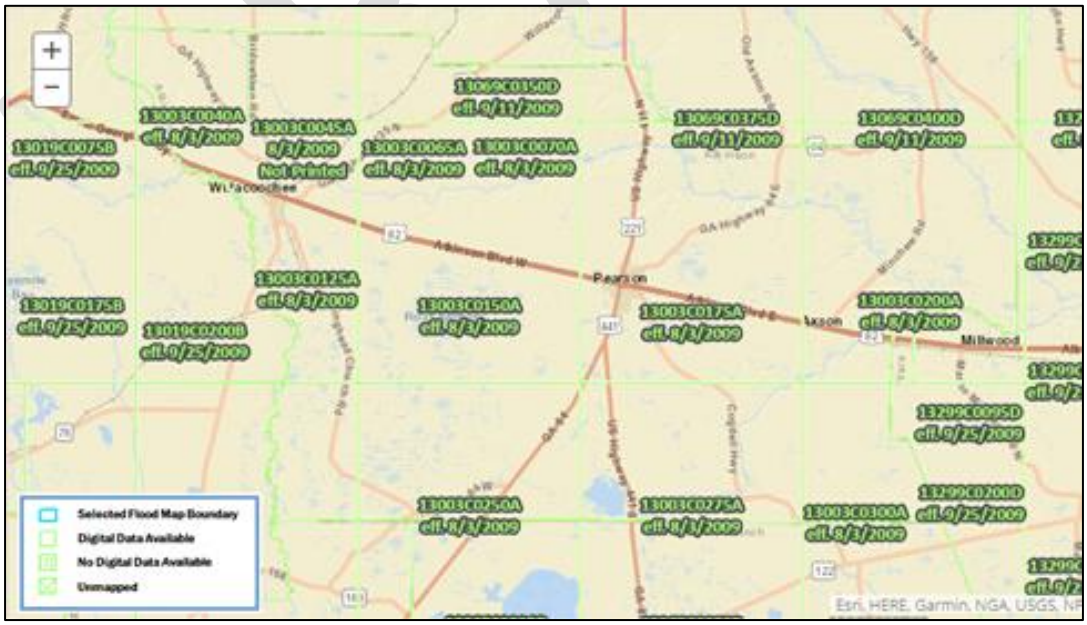




Flood Insurance Rate Maps for Atkinson County and the Cities of Pearson and Willacoochee. Data Source: FEMA website.

Two new flood 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 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 Atkinson County and the Cities of Pearson and Willacoochee are equally vulnerable to this hazard.

An estimated 3.08% of the Residential property (98 of 3,075) in Atkinson County (including the Cities of Pearson and Willacoochee) could be affected by this hazard, with a total value of $299,811,980. Also, an estimated 0.63% of the community's Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education, and Utility properties (106 of 169) may be affected, totaling $116,424,435. The values are based on the most recent available tax roll data for Atkinson County and the Cities of Pearson and Willacoochee, provided by the Atkinson 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, agricultural production's total farm gate value in Atkinson County is $93,994,300.52.

According to the inventory database reports and maps, 2 of the 85 Critical Facilities and Infrastructure for Atkinson County (including the Cities of Pearson and Willacoochee) are in flood zones and, therefore, could be affected by this hazard. The total value of these Critical Facilities is $205,703.

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.

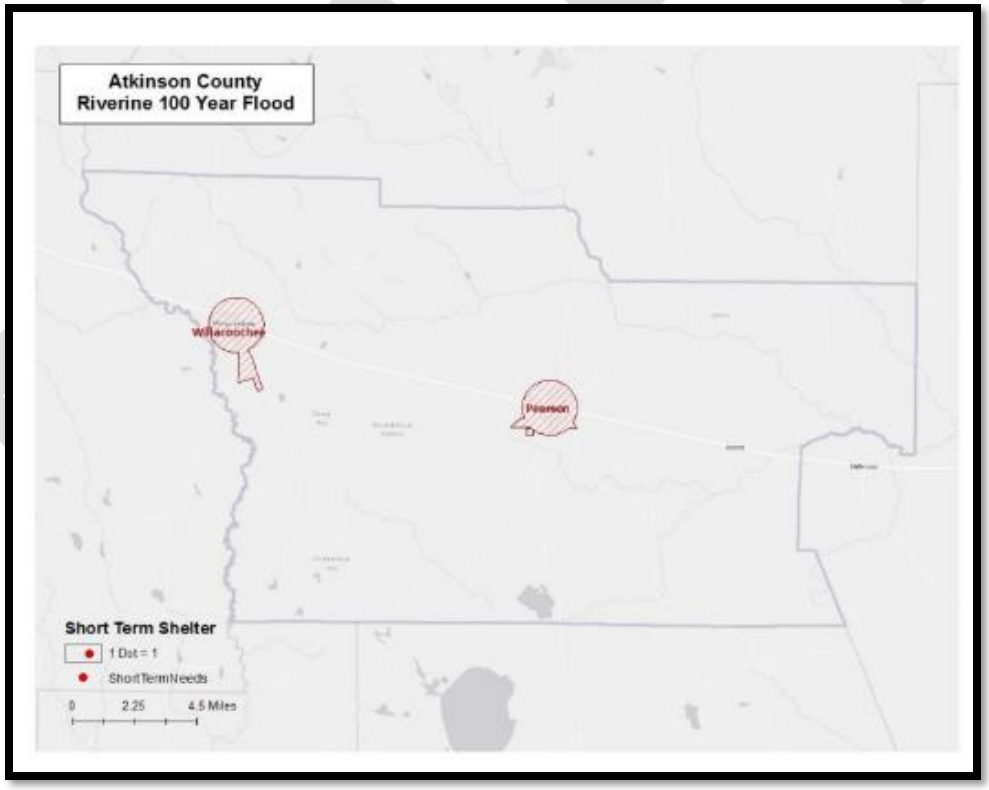
The GMIS report does not list any repetitive Losses/NFIP properties in Atkinson County or the cities of Pearson and Willacoochee.

Buildings in Atkinson County are vulnerable to flooding from events equivalent to the 1% riverine flood. Below is a summary of the potential flood-related building damage in Atkinson County by the jurisdiction that may experience loss from the 1% flood:

Occupancy Classification	Total Buildings	Total Buildings Damaged	Total Building Exposure	Total Losses to Buildings	Loss Ratio of Exposed to Damaged
			Pearson		
Residential	632	17	$ 61,945,624	$ 80,305	0.13%
Industrial	20	2	$ 76,418,055	$ 160,809	0.21%
Commercial	104	3	$ 41,548,329	$ 10,546	0.03%
			Willacoochee		
Residential	488	1	$ 45,901,883	$ 13,621	0.03%
			Unincorporated		
Commercial	27	2	$ 21,775,484	$ 60,122	0.28%
Industrial	18	1	$ 18,230,896	$ 20,453	0.11%
Residential	1,955	47	$ 191,964,473	$ 763,669	0.40%
			County Total		
Total	3,244	73	$ 457,784,744	$ 1,109,525	

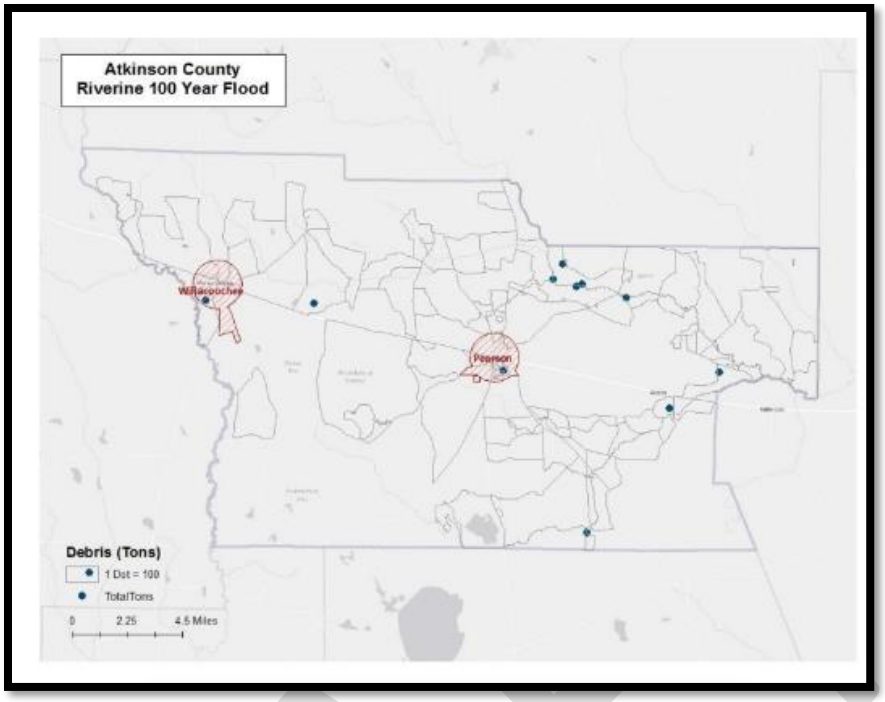
An essential facility may have the same impact as other buildings within the flood boundary. There could be structural failure and extensive water damage. However, no essential facility is subject to damage with the riverine 1% probability floodplain.

The 1% model estimates 231 households might be displaced due to the flood. Displacement includes households evacuated within or very near the inundated area. Displaced households represent 694 individuals, of whom 251 may require short-term shelter.



The number of debris, including drywall, insulation, wood, brick, concrete slab, concrete block, rebar, etc., may be up to 2,128 tons. It is broken down as follows:

- Finishes (drywall, insulation, etc.) - 710 tons
- Structural (wood, brick, etc.) - 274 tons
- Foundations (concrete slab, concrete block, etc.) - 944 tons



E. Land Use and Development Trends

The City of Pearson has zoning regulations; Atkinson County and the City of Willacoochee do not. All jurisdictions have mandatory building and fire codes, which a building inspector enforces. There is no planning commission. The County and Cities participate in joint comprehensive planning and the required updates of the Service Delivery Strategy. No other land use or development trends related to this hazard have been identified.

See Chapter 4 for the Building Codes for Atkinson County and the Cities of Pearson and Willacoochee.

See Chapter 4 for the Building Codes for Atkinson County and the Cities of Pearson and Willacoochee.

F. Multi-Jurisdictional Differences

According to FEMA data, 11.7% of the total area of Atkinson County (25,708 acres) is within a flood zone (all in Zone A). Approximately 16.8% of the City of Pearson (316 acres) is within a flood zone, and approximately 10.9% of the City of Willacoochee (265 acres) is within a flood zone.

The major waterways in the community are the Willacoochee River (which forms the western boundary of Atkinson County and passes near the City of Willacoochee), Red Bluff Creek, and the Satilla River.

Atkinson County and the cities of Pearson and Willacoochee are members of the National Flood Insurance Program (source: https://www.fema.gov/cis/GA.html). Atkinson County and the Cities

of Pearson and Willacoochee do not participate in the Community Rating System (CRS) program. As of 2023, they were not eligible, according to FEMA.

Atkinson County adopted the Flood Damage Prevention Ordinance on May 12, 2009. Atkinson County and the Cities of Pearson and Willacoochee's initial FIRM was identified on August 3, 2009. The Atkinson County and the Cities of Pearson and Willacoochee Current Effective Map Date is August 3, 2009. (*See Appendix D FEMA Community Status Book Report*).

FEMA

Community Status Book Report

Communities Participating in the National Flood Program

GEORGIA

Click here for not participating

CID	Community Name	County	Init FHBM Identified	Init FIRM Identified	Curr Eff Map Date	Reg-Emer Date	Tribal	CRS Entry Date	Curr Eff Date	Curr Class	% Disc SFHA	% Disc Non SFHA
130195#	ABBEVILLE, CITY OF	DODGE COUNTY/WILCOX COUNTY	02/17/78	09/20/96	08/19/10(M)	05/26/98	No					
130053E	ACWORTH, CITY OF	COBB COUNTY	04/05/74	02/15/78	10/05/18	02/15/78	No					
130235B	ADAIRSVILLE, CITY OF	BARTOW COUNTY	06/14/74	07/30/82	10/05/18(M)	07/30/82	No					
130060B	ADEL, CITY OF	COOK COUNTY	07/18/75	09/01/77	11/02/23	09/01/77	No					
130360#	AILEY, CITY OF	MONTGOMERY COUNTY	04/04/75	08/19/10	08/19/10(M)	08/01/04	No					
130507#	ALAMO, CITY OF	WHEELER COUNTY		08/19/10	08/19/10(M)	08/19/10	No					
130068#	ALAPAHA, TOWN OF	BERRIEN COUNTY		09/25/09	09/25/09(M)	03/05/10	No					
130075#	ALBANY, CITY OF	DOUGHERTY COUNTY	05/17/74	08/15/77	09/25/09	08/15/77	No	10/01/94	05/01/16	7	15%	05%
130604#	ALDORA, TOWN OF	LAMAR COUNTY		09/25/09	09/25/09	05/10/12	No					
130350D	ALLENHURST, TOWN OF	LIBERTY COUNTY	02/03/78	06/17/86	12/07/18(M)	06/17/86	No					
130605#	ALLENTOWN, TOWN OF	BLECKLEY COUNTY/WILKINSON COUNTY/TWIGGS COUNTY/LAURENS COUNTY		12/17/10	12/17/10(M)	12/19/18	No					
130202#	ALMA, CITY OF	BACON COUNTY	02/27/76	03/18/87	12/17/10	03/18/87	No					
130084C	ALPHARETTA, CITY OF	FULTON COUNTY	06/14/74	02/15/78	06/19/20	02/15/78	No					
135273#	ALSTON, CITY OF	MONTGOMERY COUNTY		08/19/10	08/19/10(M)	08/20/10	No					
130083B	ALTO, TOWN OF	HABERSHAM COUNTY/BANKS COUNTY		04/02/91	01/05/18	10/30/06	No					
	Use Habersham County FIRM, Panel 130458 0115B, dated 04/02/1991											
130258#	AMBROSE, CITY OF	COFFEE COUNTY		09/11/09	09/11/09(M)	03/25/19	No					
130203#	AMERICUS, CITY OF	SUMTER COUNTY	03/28/75	12/16/88	09/11/09	12/16/88	No					
130394#	ANDERSONVILLE, CITY OF	SUMTER COUNTY	04/29/77	02/09/01	09/11/09(M)	04/01/13	No					
130001#	APPLING COUNTY*	APPLING COUNTY	03/12/76	05/03/90	12/17/10	12/03/98	No					
130152B	ARAGON,CITY OF	POLK COUNTY	06/07/74	09/02/88	06/07/19	09/02/88	No					
130597#	ARCADE, CITY OF	JACKSON COUNTY	04/23/76	11/16/90	12/17/10(M)	10/18/13	No					
130049#	ARGYLE, TOWN OF	CLINCH COUNTY	08/30/74	07/03/86	09/11/09(M)	07/03/86	No					
130026#	ARLINGTON, CITY OF	EARLY COUNTY/CALHOUN COUNTY	02/21/75	06/03/86	09/02/09(M)	06/03/86	No					
130557#	ASHBURN, CITY OF	TURNER COUNTY		08/03/09	08/03/09(M)	08/03/09	No					
130040C	ATHENS-CLARKE COUNTY	CLARKE COUNTY	04/12/74	12/15/78	09/15/22	09/15/78	No					
	DOES NOT INCLUDE THE CITIES OF WINTERVILLE AND BOGART. Known as the Unified Government of Athens-Clarke County.											
130558#	ATKINSON COUNTY*	ATKINSON COUNTY		08/03/09	08/03/09(M)	08/03/09	No					

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Communities Participating in the National Flood Program

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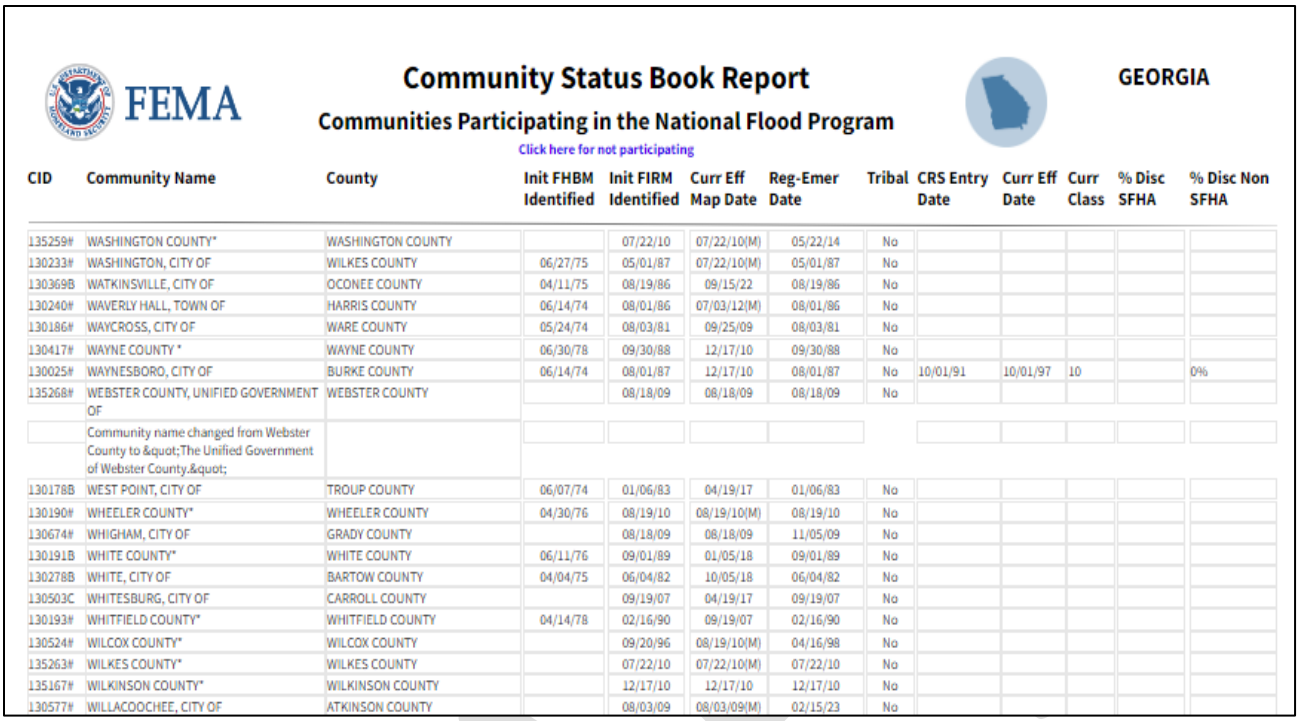
CID	Community Name	County	Init FHBM Identified	Init FIRM Identified	Curr Eff Map Date	Reg-Emer Date	Tribal	CRS Entry Date	Curr Eff Date	Curr Class	% Disc SFHA	% Disc Non SFHA
130199B	MOULTRIE, CITY OF	COLQUITT COUNTY	11/22/74	05/15/79	11/02/23	05/15/79	No					
130140#	MOUNT VERNON, CITY OF	MONTGOMERY COUNTY	05/31/74	08/19/10	08/19/10(M)	08/19/86	No					
130286#	MOUNT ZION, CITY OF	CARROLL COUNTY	07/01/77	09/01/87	09/19/07	09/01/87	No					
130252#	MOUNTAIN CITY, TOWN OF	RABUN COUNTY	01/17/75	07/09/82	09/17/10(M)	07/09/82	No					
130315#	MOUNTAIN PARK, CITY OF	FULTON COUNTY	01/13/78	02/16/83	09/18/13	04/07/83	No					
130331B	MT AIRY, TOWN OF	HABERSHAM COUNTY		06/02/09	01/05/18	06/02/09	No					
	Community is currently unmapped. Mt. Airy has adopted the Habersham County FIRM effective January 16, 2009.											
130366#	MURRAY COUNTY*	MURRAY COUNTY	05/14/76	08/15/90	09/29/10	08/15/90	No					
130014#	NAHUNTA, CITY OF	BRANTLEY COUNTY	05/17/75	09/04/85	09/25/09(M)	09/04/85	No					
130008#	NASHVILLE, CITY OF	BERRIEN COUNTY	02/14/75	08/01/86	09/25/09(M)	08/01/86	No					
130296#	NELSON, CITY OF	CHEROKEE COUNTY/PICKENS COUNTY	04/11/75	09/29/86	09/29/10(M)	09/29/86	No					
130062#	NEWNAN, CITY OF	COWETA COUNTY	05/31/74	11/15/78	02/06/13	11/15/78	No					
130143C	NEWTON COUNTY *	NEWTON COUNTY	04/23/76	07/05/83	08/15/23	07/05/83	No					
130004#	NEWTON, CITY OF	BAKER COUNTY	04/12/74	09/01/86	08/18/09(M)	09/01/86	No					
130483#	NICHOLLS, CITY OF	COFFEE COUNTY	09/29/78	09/11/09	09/11/09(M)	07/01/19	No					
130662#	NICHOLSON, CITY OF	JACKSON COUNTY	04/23/76	11/16/90	12/17/10(M)	09/06/23	No					
	Jackson County panel #s: 13157C0164C, 13157C0277C, 13157C0280C, 13157C0285C											
130101#	NORCROSS, CITY OF	GWINNETT COUNTY	05/24/74	05/01/80	03/04/13	05/01/80	No					
130346B	NORMAN PARK, CITY	COLQUITT COUNTY		09/25/09	11/02/23	04/01/20	No					
130368B	NORTH HIGH SHOALS, TOWN OF	OCONEE COUNTY	08/19/77	09/01/86	09/15/22	09/01/86	No					
130652#	NORWOOD, TOWN OF	WARREN COUNTY		07/22/10	07/22/10(M)	07/22/10	No					
130334G	OAKWOOD, CITY OF	HALL COUNTY	04/04/75	07/23/82	12/01/22	07/23/82	No					
130565#	OCILLA, CITY OF	IRWIN COUNTY		08/03/09	08/03/09(M)	08/03/09	No					
130453B	OCONEE COUNTY *	OCONEE COUNTY	01/13/78	07/17/89	09/15/22	07/17/89	No					
130415#	OCONEE, CITY OF	WASHINGTON COUNTY	06/03/77	06/03/86	07/22/10(M)	06/03/86	No					
130189#	ODUM, CITY OF	WAYNE COUNTY	01/03/75	12/17/10	12/17/10(M)	04/05/11	No					
130614#	OFFERMAN, CITY OF	PIERCE COUNTY		09/25/09	09/25/09(M)	09/25/09	No					
130370B	OGLETHORPE COUNTY*	OGLETHORPE COUNTY	05/28/76	11/01/06	06/15/22	11/01/06	No					
130133#	OGLETHORPE, CITY OF	MACON COUNTY	06/25/74	09/29/86	08/18/09	09/29/86	No					
130552#	OMEGA, CITY OF	COLQUITT COUNTY/TIFT COUNTY		08/17/98	09/29/10(M)	11/22/10	No					
130367#	OXFORD, CITY OF	NEWTON COUNTY	04/11/75	09/05/07	03/17/14	09/05/07	No					
130239#	PALMETTO, CITY OF	COWETA COUNTY/FULTON COUNTY	06/14/74	11/01/79	09/18/13	11/01/79	No					
130457#	PATTERSON, TOWN OF	PIERCE COUNTY	06/10/77	04/17/89	09/25/09(M)	10/11/90	No					
130147B	PAULDING COUNTY *	PAULDING COUNTY	03/19/76	04/02/79	06/07/19	04/02/79	No	10/01/91	10/01/96	10		0%
130373#	PEACH COUNTY *	PEACH COUNTY	02/10/78	07/03/90	09/26/08	07/03/90	No					
130078#	PEACHTREE CITY, CITY OF	FAYETTE COUNTY	05/31/74	12/01/77	09/26/08	12/01/77	No	10/01/93	10/01/03	7	15%	05%
135176C	PEACHTREE CORNERS, CITY OF	GWINNETT COUNTY		06/15/81	03/04/13	08/24/17	No	10/01/20	04/01/23	7	15%	05%
	PLEASE USE THE FOLLOWING GWINNETT COUNTY FIRM PANELS: 13135C0083F,0096F,095F,0080F DATED 09/29/2006; AND 13135C0053H,0082G,0052H,0081G,0066H,0068G,0051H,067G,0065H DATED 03/04/2013 FOR FLOOD HAZARD ZONES.											
130576#	PEARSON, CITY OF	ATKINSON COUNTY		08/03/09	08/03/09(M)	02/22/16	No					



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Community Status Book Report

Communities Participating in the National Flood Program

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CID	Community Name	County	Init FHBM Identified	Init FIRM Identified	Curr Eff Map Date	Reg-Emer Date	Tribal	CRS Entry Date	Curr Eff Date	Curr Class	% Disc SFHA	% Disc Non SFHA
135259#	WASHINGTON COUNTY*	WASHINGTON COUNTY		07/22/10	07/22/10(M)	05/22/14	No					
130233#	WASHINGTON, CITY OF	WILKES COUNTY	06/27/75	05/01/87	07/22/10(M)	05/01/87	No					
130369B	WATKINSVILLE, CITY OF	OCONEE COUNTY	04/11/75	08/19/86	09/15/22	08/19/86	No					
130240#	WAVERLY HALL, TOWN OF	HARRIS COUNTY	06/14/74	08/01/86	07/03/12(M)	08/01/86	No					
130186#	WAYCROSS, CITY OF	WARE COUNTY	05/24/74	08/03/81	09/25/09	08/03/81	No					
130417#	WAYNE COUNTY *	WAYNE COUNTY	06/30/78	09/30/88	12/17/10	09/30/88	No					
130025#	WAYNESBORO, CITY OF	BURKE COUNTY	06/14/74	08/01/87	12/17/10	08/01/87	No	10/01/91	10/01/97	10		0%
135268#	WEBSTER COUNTY, UNIFIED GOVERNMENT OF	WEBSTER COUNTY		08/18/09	08/18/09	08/18/09	No					
	Community name changed from Webster County to "The Unified Government of Webster County."											
130178B	WEST POINT, CITY OF	TROUP COUNTY	06/07/74	01/06/83	04/19/17	01/06/83	No					
130190#	WHEELER COUNTY*	WHEELER COUNTY	04/30/76	08/19/10	08/19/10(M)	08/19/10	No					
130674#	WHIGHAM, CITY OF	GRADY COUNTY		08/18/09	08/18/09	11/05/09	No					
130191B	WHITE COUNTY*	WHITE COUNTY	06/11/76	09/01/89	01/05/18	09/01/89	No					
130278B	WHITE, CITY OF	BARTOW COUNTY	04/04/75	06/04/82	10/05/18	06/04/82	No					
130503C	WHITESBURG, CITY OF	CARROLL COUNTY		09/19/07	04/19/17	09/19/07	No					
130193#	WHITFIELD COUNTY*	WHITFIELD COUNTY	04/14/78	02/16/90	09/19/07	02/16/90	No					
130524#	WILCOX COUNTY*	WILCOX COUNTY		09/20/96	08/19/10(M)	04/16/98	No					
135263#	WILKES COUNTY*	WILKES COUNTY		07/22/10	07/22/10(M)	07/22/10	No					
135167#	WILKINSON COUNTY*	WILKINSON COUNTY		12/17/10	12/17/10	12/17/10	No					
130577#	WILLACOOCHEE, CITY OF	ATKINSON COUNTY		08/03/09	08/03/09(M)	02/15/23	No					

The Atkinson County Building Inspector implements and enforces the floodplain management regulations for Atkinson County and the Cities of Pearson and Willacoochee. The Building Inspector also reviews building plans and issues permits for the county and each jurisdiction. Permits are not approved until signed off as compliant with all building codes and NFIP requirements.

After a flood event, the Building Inspector and EMA Director perform damage assessments to determine whether the damage constitutes SI (substantial improvements) or SD (substantial damage) post-disaster and ensure all requirements are addressed. The County Inspector also reviews the 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 prior to the damage to determine if repairs meet SD requirements. Field inspections are also conducted during the construction to ensure it complies with the issued permits and work with the owners to correct any violations found. All FIRMS and SFHA permits are retained and available to the public.

The County Inspector coordinates with the property owners and insurance adjusters on all NFIP insurance claims and Increased Cost of Compliance (ICC) coverage.

Documentation and Reporting: The Building Inspector will prepare detailed documentation of the damage assessment, cost estimation, and calculations. 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.

Atkinson County and the cities have utilized various funds to mitigate potential flood damage, including local and CDBG funding and other monies. 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. Atkinson County and the Cities of Pearson and Willacoochee have used CDBG funds and other grants and 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.

Atkinson County and the Cities of Adel, Cecil, Lenox, and Sparks do not participate in the Community Rating System (CRS) program. According to FEMA, they were eligible as of October 1, 2023 (source: http://www.fema.gov/library/viewRecord.do?id=3629).

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 or time throughout Atkinson County and the Cities of Pearson and Willacoochee, 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 instead of more sparsely populated or unpopulated areas.

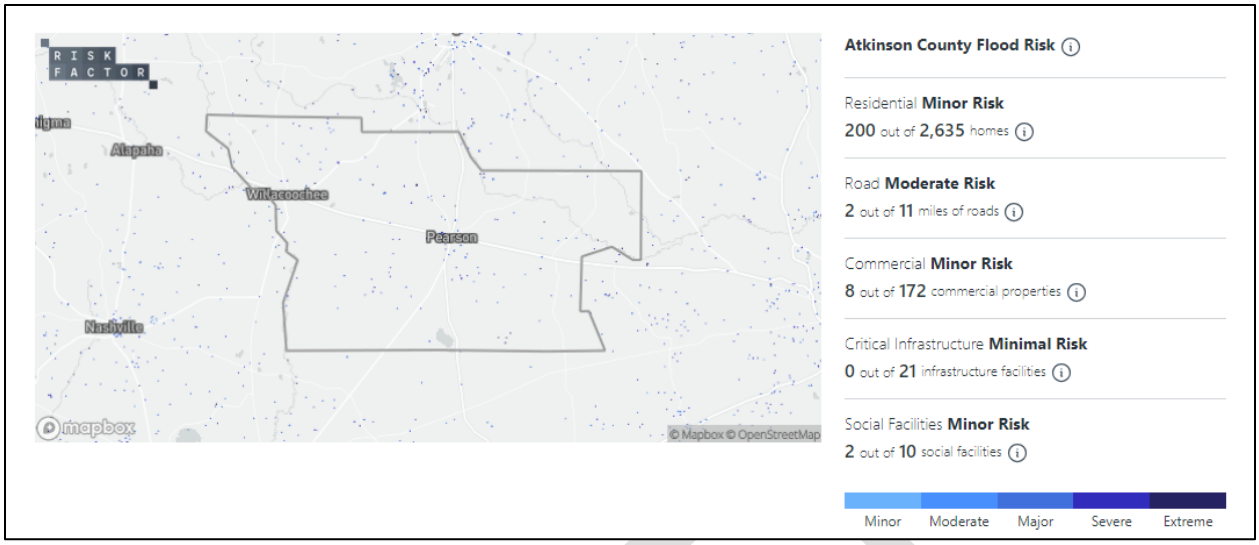
The HMPUC has developed a comprehensive range of Mitigation Goals, Objectives, and Action Steps to lessen the impacts of this hazard. These are contained in Chapter 4.

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

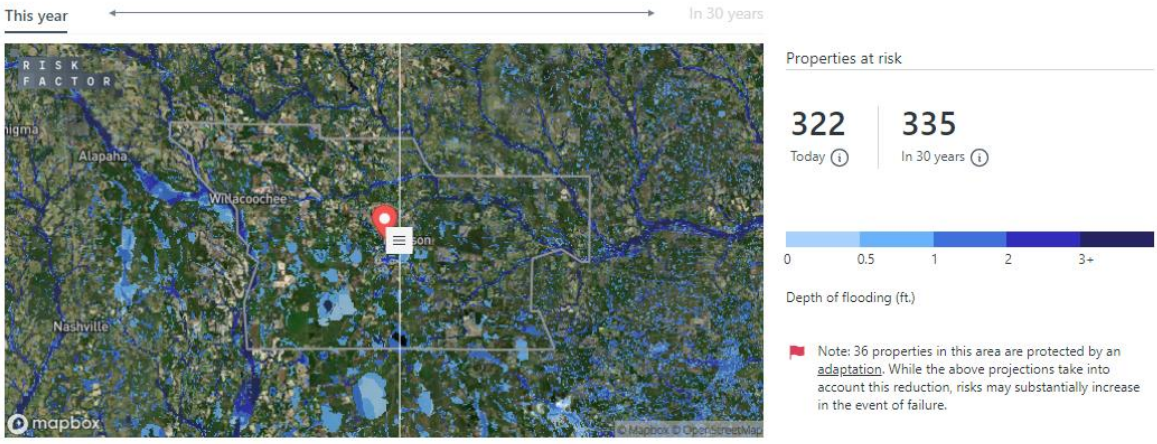
Three hundred twenty-nine properties in Atkinson County have a greater than 26% chance of being severely affected by flooding over the next 30 years. This represents 11% of all properties in the county.

In addition to damage to properties, flooding can cut off access to utilities, emergency services, and transportation and may impact the overall economic well-being of an area. Atkinson County has a minor risk of flooding over the next 30 years, which means flooding is likely to affect day-to-day life within the community.



It is anticipated that major flood events, like hurricanes, are less likely to occur but affect more properties than shallow flood events, like heavy rains. The county feels the effects of a changing environment, but events will affect more properties.

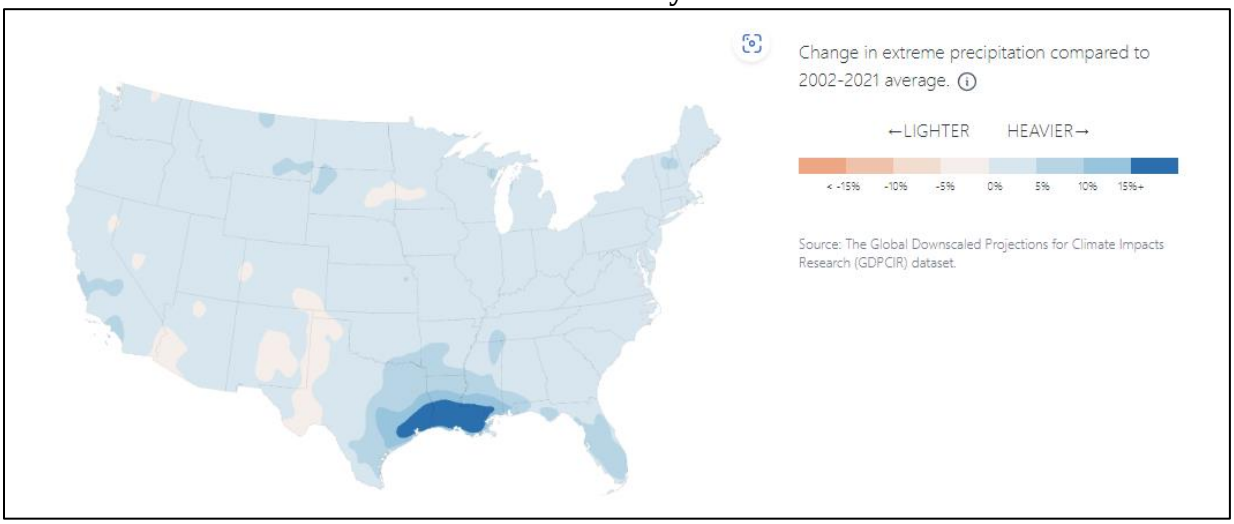
A low-likelihood storm resulting in severe flooding (as a 1-in-100-year flood event) could affect 322 properties in Atkinson County. This type of event has a 26% chance of occurring at least once over a 30-year mortgage. Due to environmental changes, an event of this type would affect 335 properties in the next 30 years.



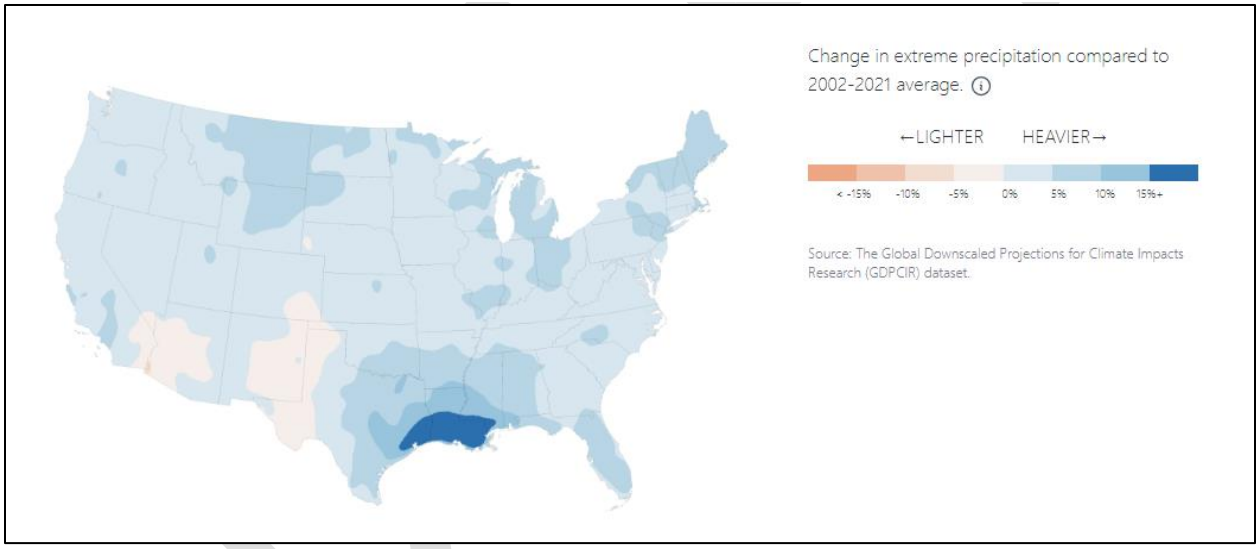
A changing environment causes higher seas, new weather patterns, and stronger storms. With the warming atmosphere, more evaporation and water will be available from rain. With a warmer atmosphere, there will be a warmer ocean, which could intensify flooding from hurricanes and offshore storms. As the sea level rises, coastal floods will increase, and more water will be available when the tides rise, and coastal storms cause more flooding.

See the expected changes in flooding expected in the next 15 years and 30 years:

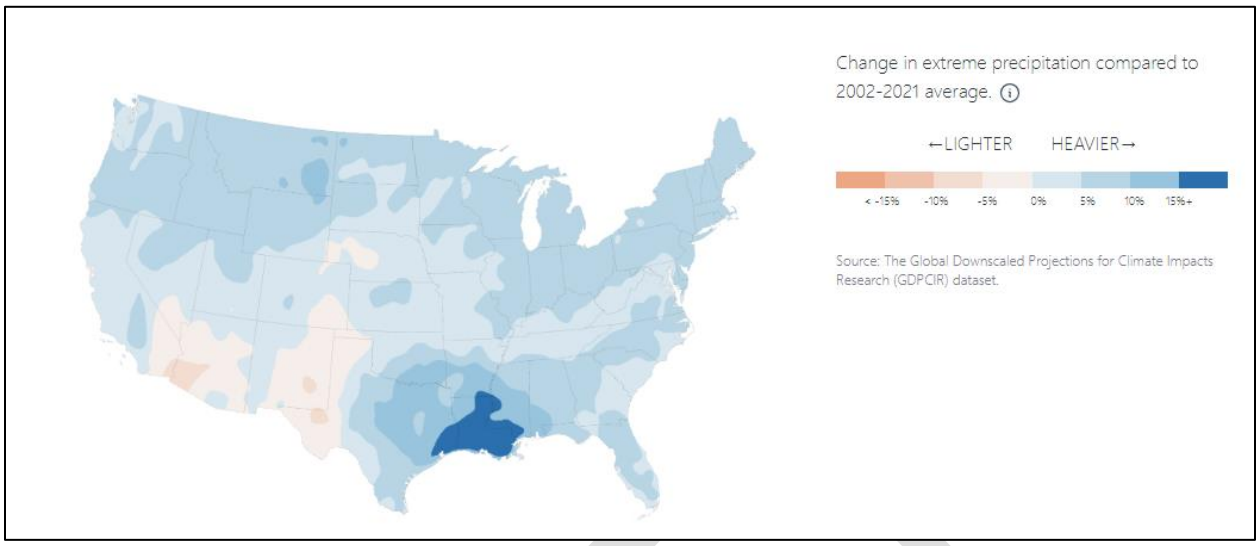
Currently



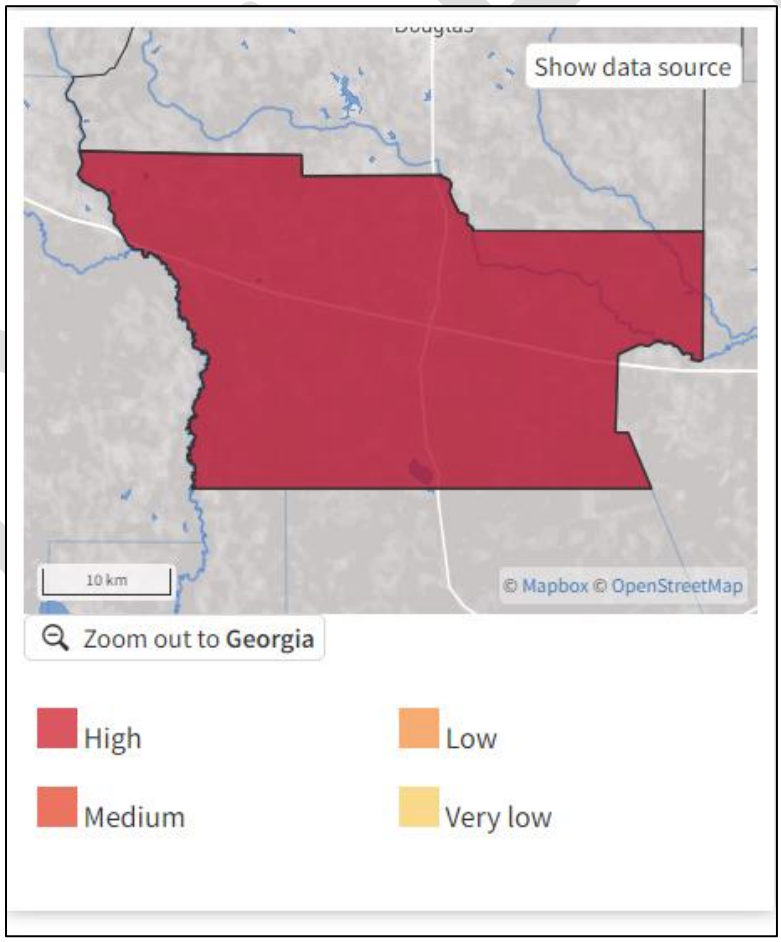
In 15 Years



In 30 Years



According to information on https://thinkhazard.org, the potential is high for life-threatening river floods to occur at least once in the next ten years.



I. Underserved/Socially Vulnerable Population Risk

Organizations that dealt with the elderly and the vulnerable population within Atkinson County were present at the workshops. Plans will be in place to assist these groups of people during a hazardous event. There are no nursing homes or assisted living facilities within this community. Brochures were placed at the Health Department, DFACS, City Halls, County Government, and the City of Douglas Police Department, informing the vulnerable population of the Hazards that affect the communities within Coffee County. (See Appendix H).

Section V. Drought

A. Identification of Hazard

The threat of drought 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 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 community's safety.

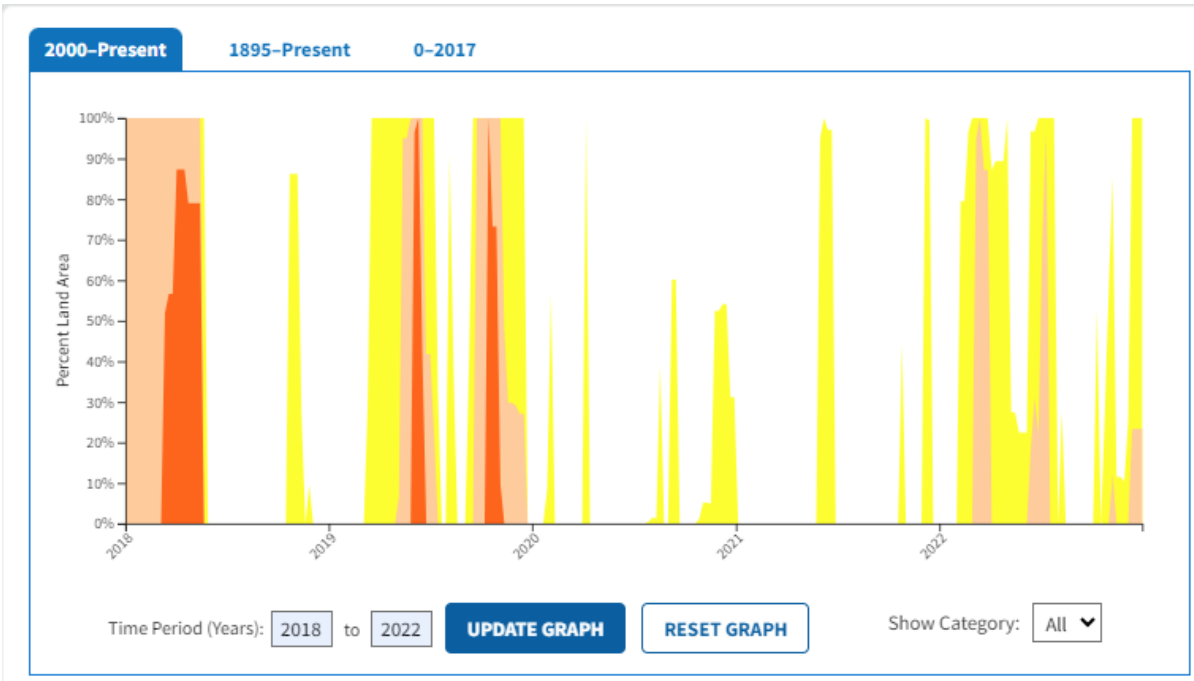
Crops (including trees) are usually most adversely affected by drought events and community residents whose water supplies are restricted or cut off (especially those using individual wells). Residents of unincorporated Atkinson County have wells, which may go dry during drought periods, thus leaving those residents without water for extended periods. The Cities of Pearson and Willacoochee have 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, labeling 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).

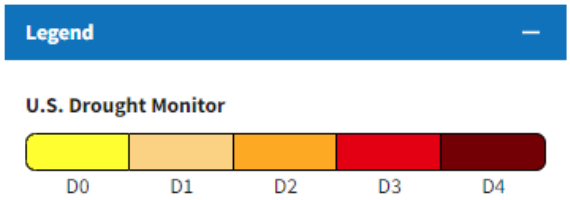
Atkinson County and the Cities of Pearson and Willacoochee are all equally vulnerable to the effects of drought.

B. Profile of Events, Frequency of Occurrences, Probability

According to U.S. Drought Monitor data (see Appendix F), there are 868 reports of drought events (D1, D2, D3, or D4) occurring in Atkinson County (including the Cities) between 01/01/2000 and 12/31/2022. The Historic Recurrence Interval is 0.02 years. This is a 4340% Historic Frequency Chance per year. The past 10-year Record Frequency Per Year is 65.4, the past 20-year frequency is 43.4, and the past 50-year frequency is 17.36 (see the Hazard Frequency Table in Appendix D).



The U.S. Drought Monitor (2000–present) depicts the location and intensity of drought across the country. Every Thursday, authors from NOAA, USDA, and the National Drought Mitigation Center produce a new map based on their assessments of the best available data and input from local observers. The map uses five categories: Abnormally Dry (D0), showing areas that may be going into or are coming out of drought, and four levels of drought (D1–D4). Learn more.



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, 390 drought events have been reported.

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

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

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

An estimated 100% of the Residential property (4,401 of 4,401) in Atkinson County (including the Cities of Pearson and Willacoochee) could be affected by this hazard, with a total value of $33,347,244. Also, an estimated 100% of the community's Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education, and Utility properties (2,056 of 2,056) may be affected, totaling $88,051,083. The values are based on the most recent available tax roll data for Atkinson County and the Cities of Pearson and Willacoochee, provided by the Atkinson 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, agricultural production's total farm gate value in Atkinson County is $93,994,300.52.

E. Land Use and Development Trends

The City of Pearson has zoning regulations; Atkinson County and the City of Willacoochee do not. All jurisdictions have mandatory building and fire codes, which a building inspector enforces. There is no planning commission. The County and Cities participate in joint comprehensive planning and the required updates of the Service Delivery Strategy. No other land use or development trends related to this hazard have been identified.

See Chapter 4 for the Building Codes for Atkinson County and the Cities of Pearson and Willacoochee.

F. Multi-Jurisdictional Differences

Residents of unincorporated Atkinson County have wells, which may go dry during drought periods, thus leaving those residents without water for extended periods. The Cities of Pearson and Willacoochee have municipal water systems.

No other multi-jurisdictional differences have been identified yet.

G. Overall HRV Summary of Events and Their Impact

Drought can harm people and the economy throughout Atkinson County and the Cities of Pearson and Willacoochee, 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 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

Drought will majorly impact the production of peanuts, pecans, peaches, and the sweet Vidalia onion, all grown in South Georgia. We saw this happen in 2007 with drought costing the Georgia agriculture industry $339 million in crop losses. Much of Georgia was affected by severe drought again in 2016. Several monitoring stations went at least 72 days without measurable rainfall. In late November 2016, 62% of Georgia had an extreme-to-exceptional drought. Trailers were hauling in water for livestock and the peanut harvest struggled. Most scientists agree that climate change means more of these types of droughts and more severe ones.

The agricultural industry depends on normal, long-established climatic patterns. However, warmer temperatures will evaporate bodies of water from the ground when the weather pattern shifts, and there will be less water for our crops. Precipitation will also change now.

Drought will also impact fish and wildlife. Rising temperatures, decreased precipitation, and changes in our food sources will continue to have extreme effects on fish and wildlife across the United States.

Water in the western United States is disappearing, and several states face severe water shortages as drought conditions worsen. With many streams drying up, there is a growing concern that this will only continue as climate change produces warmer and drier conditions, and drought development will persist with more severe conditions lasting longer.

I. Underserved/Socially Vulnerable Population Risk

Organizations that dealt with the elderly and the vulnerable population within Atkinson County were present at the workshops. Plans will be in place to assist these groups of people during a hazardous event. There are no nursing homes or assisted living facilities within this community.

Section VI. Hurricanes/Tropical Storms

A. Identification of Hazard

The threat of hurricanes/tropical storms 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. 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.[1] Tropical cyclones are destructive and have the potential to cause great damage and loss of life. They are divided into four major types: Hurricanes, Tropical Storms, Tropical Disturbances, and Tropical Depressions.

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

A tropical storm is defined as 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 intensity. The following table shows the scale broken down by winds:

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

SAFFIR-SIMPSON HURRICANE SCALE
(Source: NOAA http://www.nhc.noaa.gov/aboutgloss.shtml)

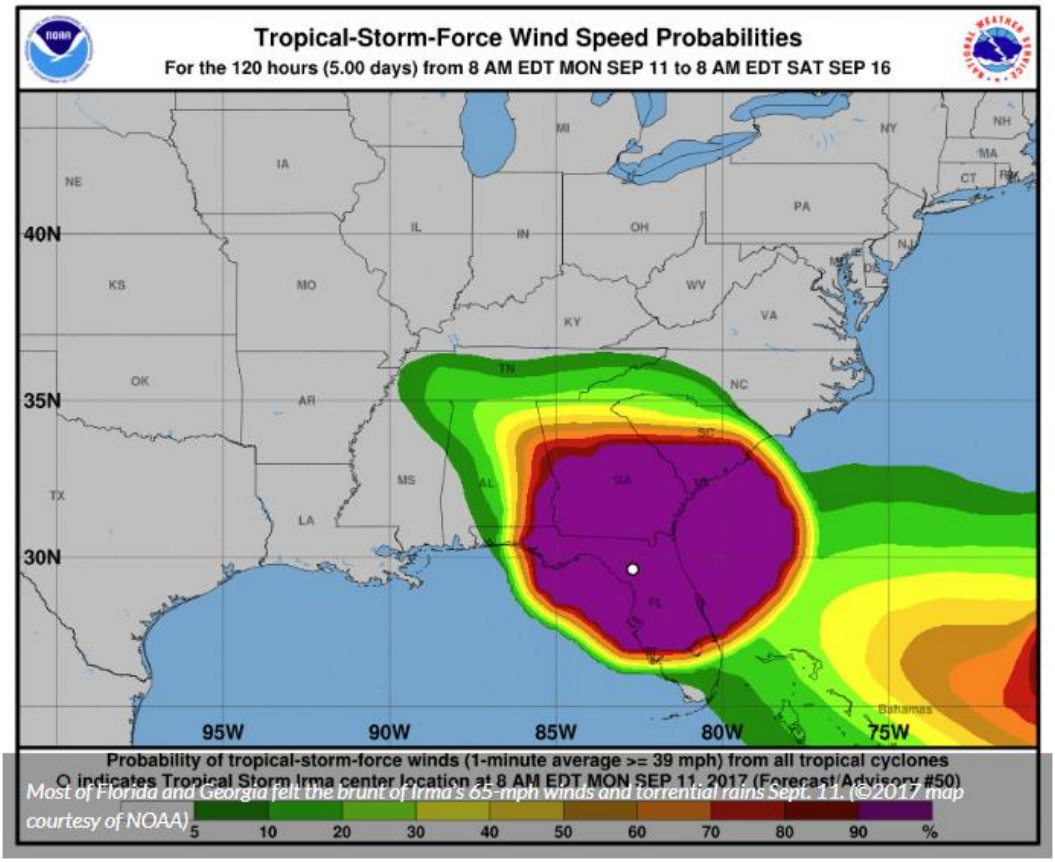
Category	Sustained Winds	Types of Damage Due to Hurricane Winds
1	74-95 mph 64-82 kt 119-153 km/h	**Very dangerous winds will produce some damage:** Well-constructed frame homes could have damage to roof, shingles, vinyl siding and gutters. Large branches of trees will snap and shallowly rooted trees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

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

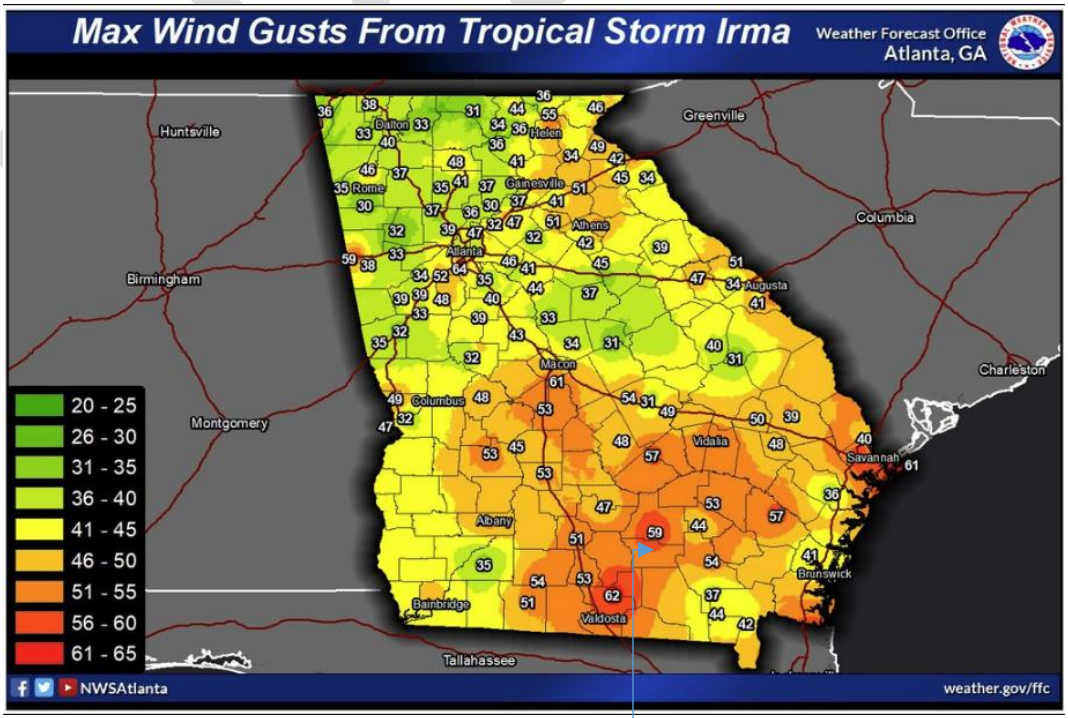
Because of their location, Atkinson County and the Cities of Pearson and Willacoochee are vulnerable to severe hurricanes/tropical storms forming in the Atlantic Ocean and the Gulf of Mexico. Also, due to location, hurricanes may degrade into tropical storms, tropical depressions, or tropical disturbances by the time they reach this area. These may or may not contain tornadoes or hail. Tropical storms, depressions, or disturbances may never reach hurricane strength before reaching the shore. The effects vary depending on the hurricane/tropical storm's severity and the event's duration.

B. Profile of Events, Frequency of Occurrences, Probability

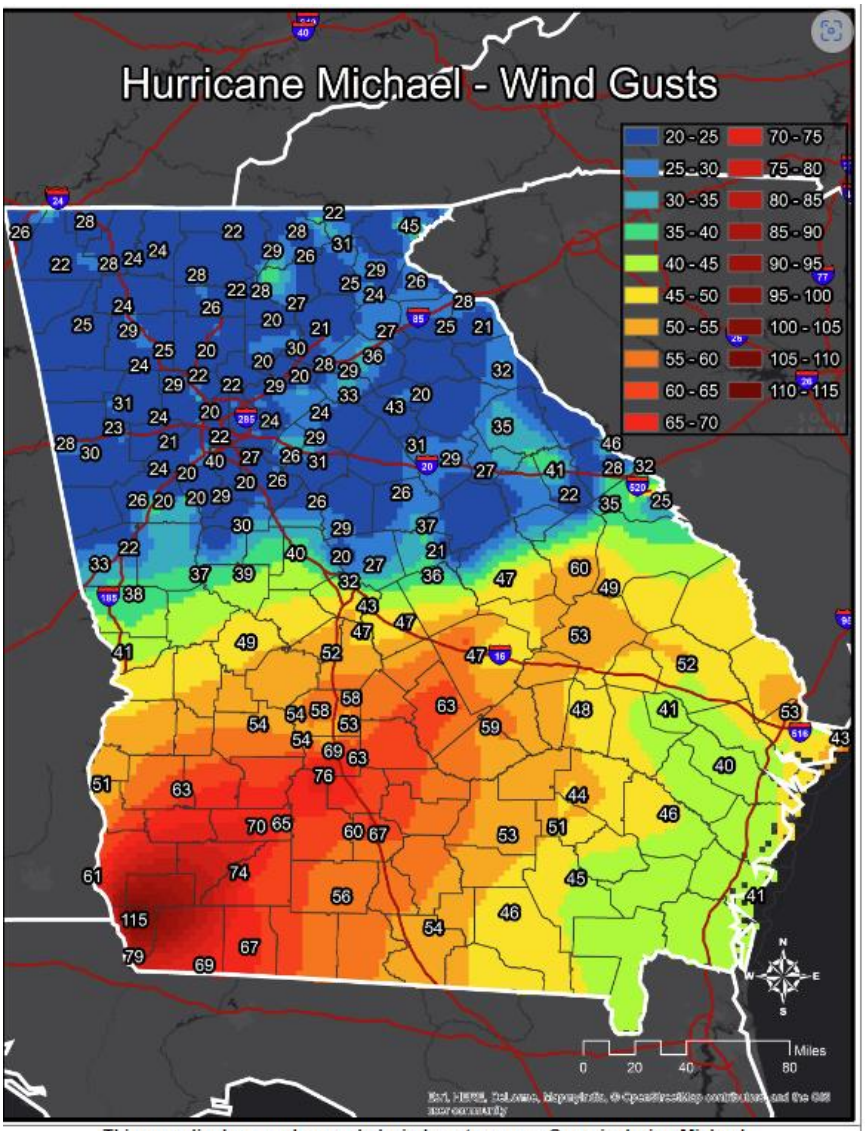
According to the NOAA Storm Events Database (see Appendix F), seven reports of Tropical Storms occurred in Atkinson County (including the Cities) between 01/01/1950 and 8/30/2023. Besides these events, there were three additional Hurricane/Tropical Storm events occurring on Sept. 11, 2017, one on October 10, 2018, one on July 7, 2021, and on August 30, 2023, which none have yet been recorded in the NCDC database, bringing the total to 7 events between 01/01/1950 and 8/30/2023. The Historic Recurrence Interval is 9.71 years. This is a 10.29% 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 0.14 (see the Hazard Frequency Table in Appendix D).



Most of Florida and Georgia felt the brunt of Irma's 65-mph winds and torrential rains Sept. 11. (©2017 map courtesy of NOAA)



Atkinson County



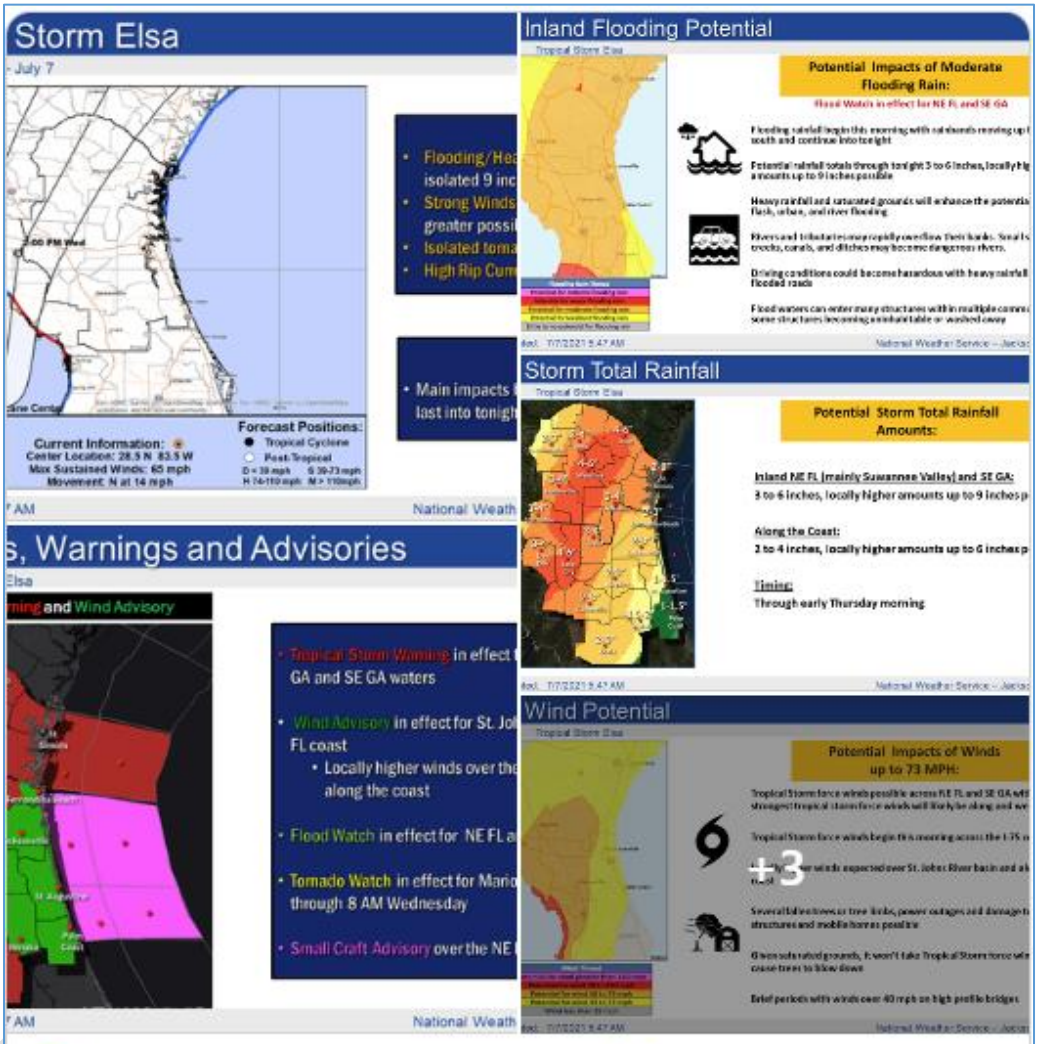
This map displays peak recorded wind gusts across Georgia during Michael.

Hurricane Michael (Tropical Storm Michael) passed through Atkinson County in October 2018, causing 45-55 mph wind gusts.

Historical records show that the most severe hurricane occurred in Atkinson County in 1949. It was recorded as a Category 4 storm with 1-minute sustained wind speeds up to 132 mph and 3-second wind gusts up to 169 mph. There are no records of how many properties were impacted.

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.

On July 7, 2021, Tropical Storm Elsa caused a State of Emergency for Atkinson County as it passed through the area, packing 45 mph winds and heavy rains.



US National Weather Service Jacksonville Florida

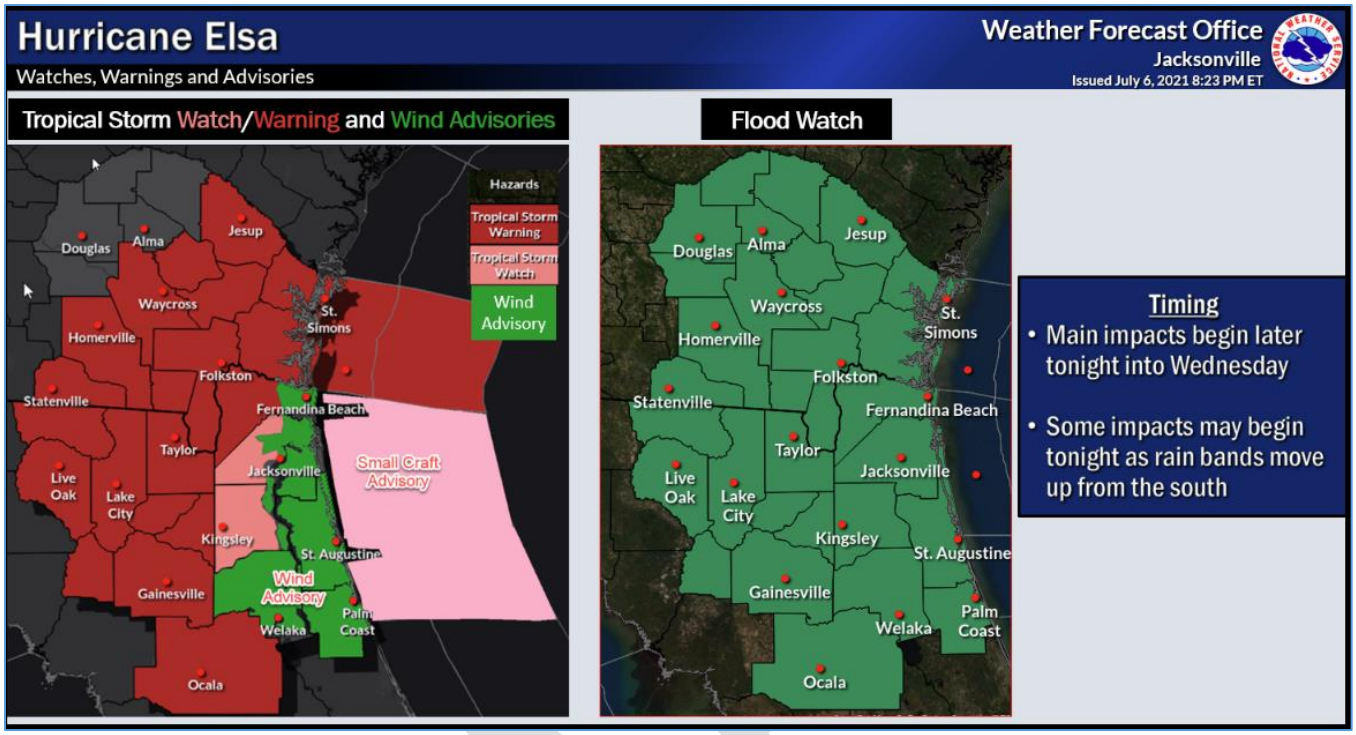
July 7, 2021 ·

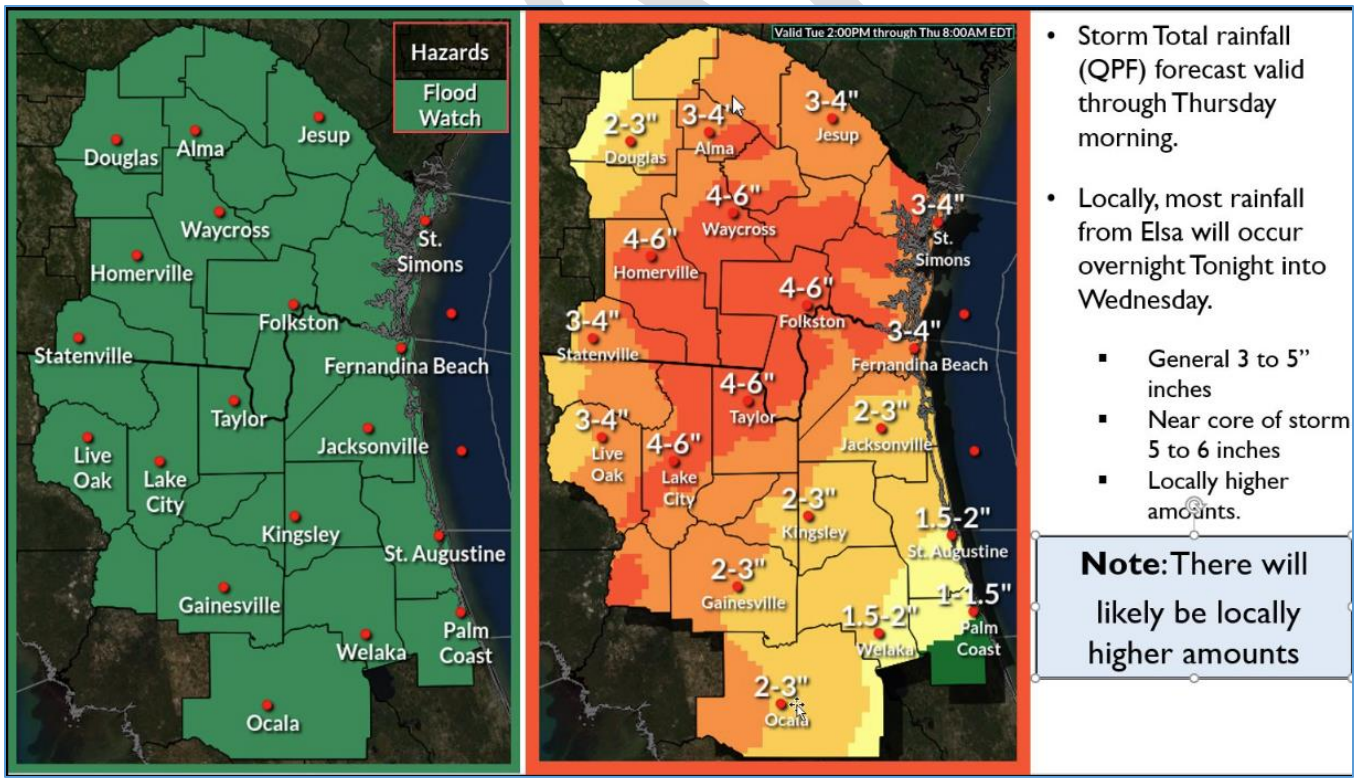
This information is outdated
07/07 5 AM TS Elsa Update:

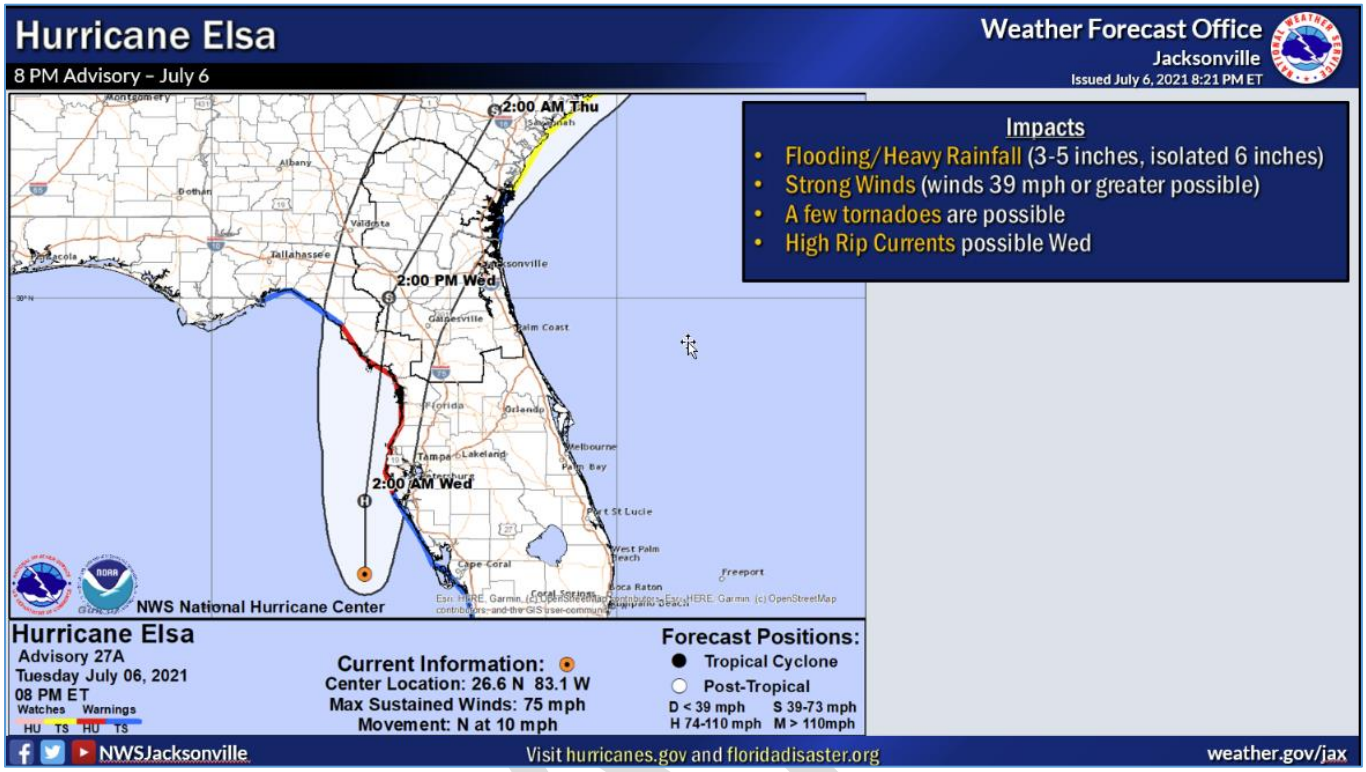
Elsa rainbands have already spread into NE FL with some potentially tornadic cells embedded. Elsa moves through area later today into tonight.

Main hazards: widespread moderate flooding potential, heavy rainfall, TS winds (best chance along and west of I-75 corridor), isolated tornadoes, high rips and rough surf.

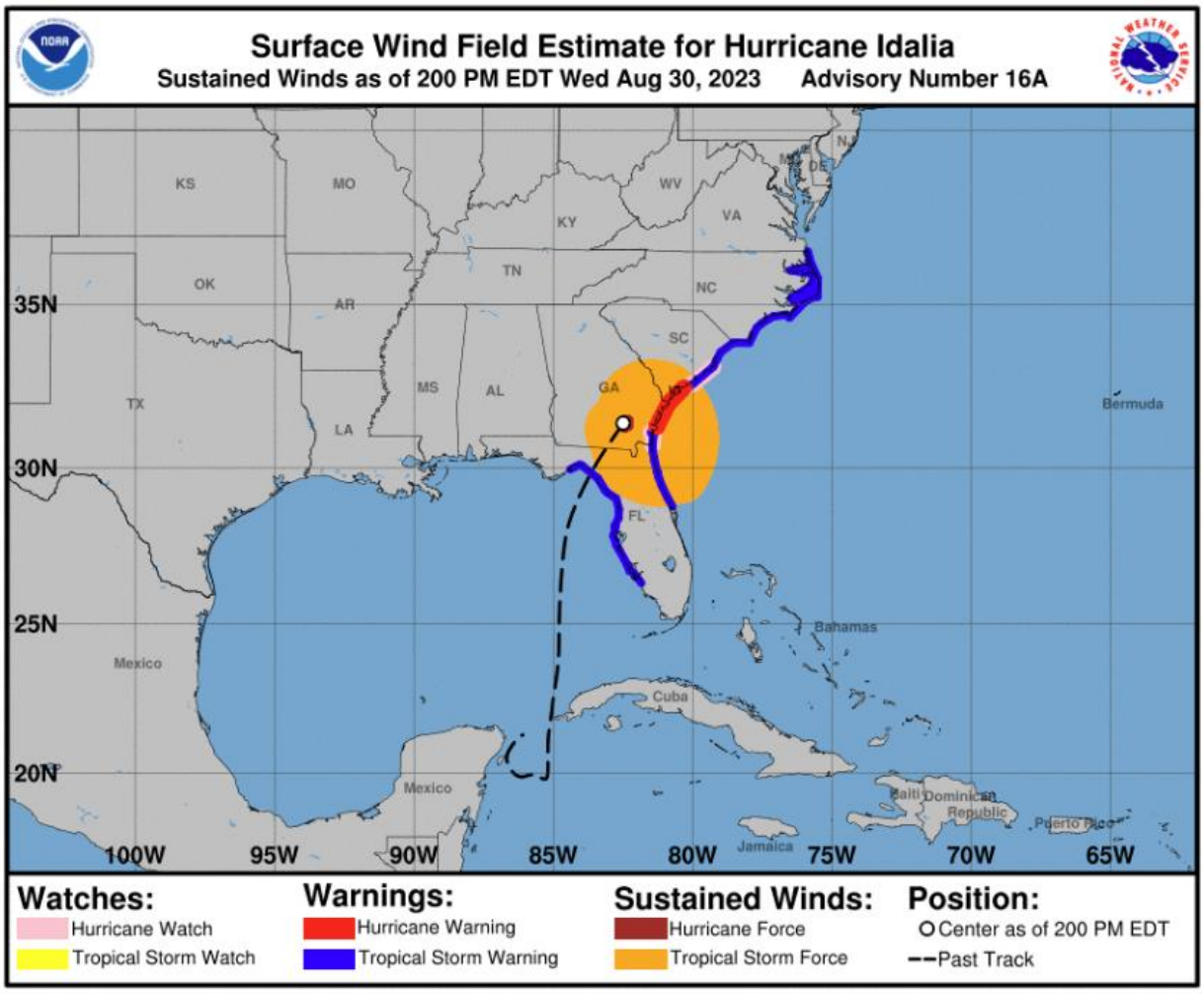
Monitor briefing: https://www.weather.gov/.../briefings/nws-jax-briefing.pdf


Hurricane Elsa
Watches, Warnings and Advisories
Weather Forecast Office
Jacksonville
Issued July 6, 2021 8:23 PM ET
Tropical Storm Watch/Warning and Wind Advisories
Hazards
Tropical Storm Warning
Tropical Storm Watch
Wind Advisory
Small Craft Advisory
Flood Watch
Douglas
Alma
Jesup
Waycross
St. Simons
Homerville
Folkston
Statenville
Fernandina Beach
Taylor
Jacksonville
Live Oak
Lake City
Kingsley
St. Augustine
Gainesville
Palm Coast
Welaka
Ocala
Timing
• Main impacts begin later tonight into Wednesday
• Some impacts may begin tonight as rain bands move up from the south


Hazards
Flood Watch
Valid Tue 2:00PM through Thu 8:00AM EDT
2-3"
3-4"
4-6"
1.5-2"
1-1.5"
• Storm Total rainfall (QPF) forecast valid through Thursday morning.
• Locally, most rainfall from Elsa will occur overnight Tonight into Wednesday.
▪ General 3 to 5" inches
▪ Near core of storm 5 to 6 inches
▪ Locally higher amounts.
Note: There will likely be locally higher amounts



Atkinson County was one of the many counties in Georgia affected by Hurricane Idalia on August 30, 2023. The county was also one of many that was declared a major disaster. There was a lot of rain with the soil being saturated. There were a lot of trees and power lines down, and residents were without power.


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

US National Weather Service Jacksonville Florida
August 30 ·

*** Please refer to the latest post for the most up to date information on Hurricane Idalia***
5 AM Major Hurricane Idalia Update Wednesday 8/30

Idalia will make landfall this morning as a Major Hurricane. Remain sheltered today as tropical storm to hurricane force winds are expected. There is also a Tornado Watch now in effect for all of NE FL & SE GA.
If a tornado warning is issued, go to your safe room:
- Lowest Floor
- Interior Room
- Away from Windows

Be sure to have multiple ways to receive warnings. Stay safe and weather aware today!

SEPTEMBER 09, 2023

Major Disaster Declared for 25 Additional Counties

(ATLANTA) – Governor Brian Kemp has announced 25 additional Georgia counties affected by Hurricane Idalia are now eligible to apply for disaster assistance. The disaster declaration now covers Appling, Atkinson, Bacon, Berrien, Brantley, Brooks, Bullock, Camden, Candler, Charlton, Clinch, Coffee, Colquitt, Echols, Emanuel, Jeff Davis, Jenkins, Lanier, Pierce, Screven, Tattnall, Thomas, Tift, Ware and Wayne Counties for Public Assistance.

Cook, Glynn and Lowndes Counties now include Categories C-G: permanent work, which is already designated for Individual Assistance, and assistance for debris removal and emergency protective measures.

Individual Assistance can fund individual and family recovery efforts, which may include grants for temporary housing and home repairs, low-cost loans to cover uninsured property losses, and other programs to help individuals and business owners recover from the effects of Hurricane Idalia.

Public Assistance is available to state and local government entities and qualified not-for-profit organizations. It will provide financial aid for debris removal and emergency work.

Disaster Declaration

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

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

An estimated 100% of the Residential property (4,401 of 4,401) in Atkinson County (including the Cities of Pearson and Willacoochee) could be affected by this hazard, with a total value of $33,347,244. Also, an estimated 100% of the community's Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education, and Utility properties (2,056 of 2,056) may be affected, totaling $88,051,083. The values are based on the most recent available tax roll data for Atkinson County and the Cities of Pearson and Willacoochee, provided by the Atkinson 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, agricultural production's total farm gate value in Atkinson County is $93,994,300.52.

A potential Category 1 Hurricane would damage 32 buildings with a total damage value of $1,076,410. This would cause an Economic Loss of $1,597,120 with an overall building ratio of 0.17. No essential facilities would be damaged, but all 25 essential facilities within Atkinson County would have an expected operation loss of less than one day. No households would be displaced, and no short-term shelter would be needed.

Approximately 52,473 tons of total debris from a Category I Hurricane would be distributed by the wind, consisting of the following:

- 125 tons of brick, wood, and other
- 1,562 tons of tree debris
- 50,786 of other natural material (tree debris)

E. Land Use and Development Trends

The City of Pearson has zoning regulations; Atkinson County and the City of Willacoochee do not. All jurisdictions have mandatory building and fire codes that a building inspector enforces. There is no planning commission. The County and Cities participate in joint comprehensive planning and the required updates of the Service Delivery Strategy. No other land use or development trends related to this hazard have been identified.

See Chapter 4 for the adopted Building Codes for Atkinson County and the Cities of Pearson and Willacoochee.

F. Multi-Jurisdictional Differences

Hurricane/tropical storm events are usually area-wide, and no difference in severity is expected between Atkinson County and the Cities of Pearson and Willacoochee. 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.

Atkinson County and the cities of Pearson and Willacoochee are members of the National Flood Insurance Program (source: https://www.fema.gov/cis/GA.html). Atkinson County and the Cities of Pearson and Willacoochee do not participate in the Community Rating System (CRS) program. As of 2023, they were not eligible, according to FEMA.

G. Overall HRV Summary of Events and Their Impact

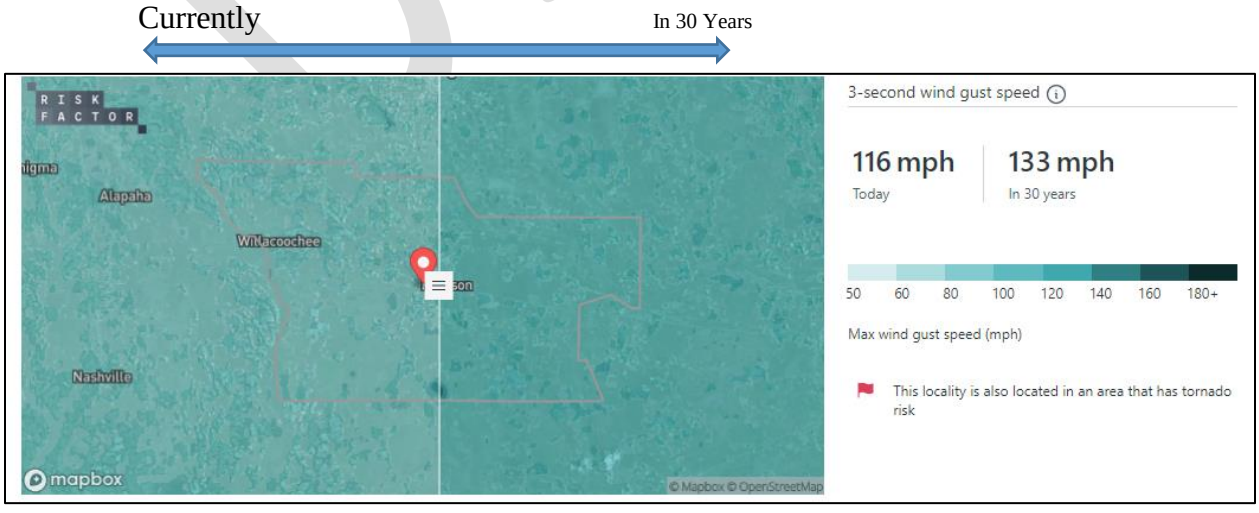
Hurricanes/tropical storms can potentially cause damage at any place or time throughout Atkinson County and the Cities of Pearson and Willacoochee. They are usually preceded by some watch or warning well in advance. The cost of the damage and potential loss of life may be higher if the path of the hurricanes/tropical storms covers populated areas instead of more sparsely populated or unpopulated areas.

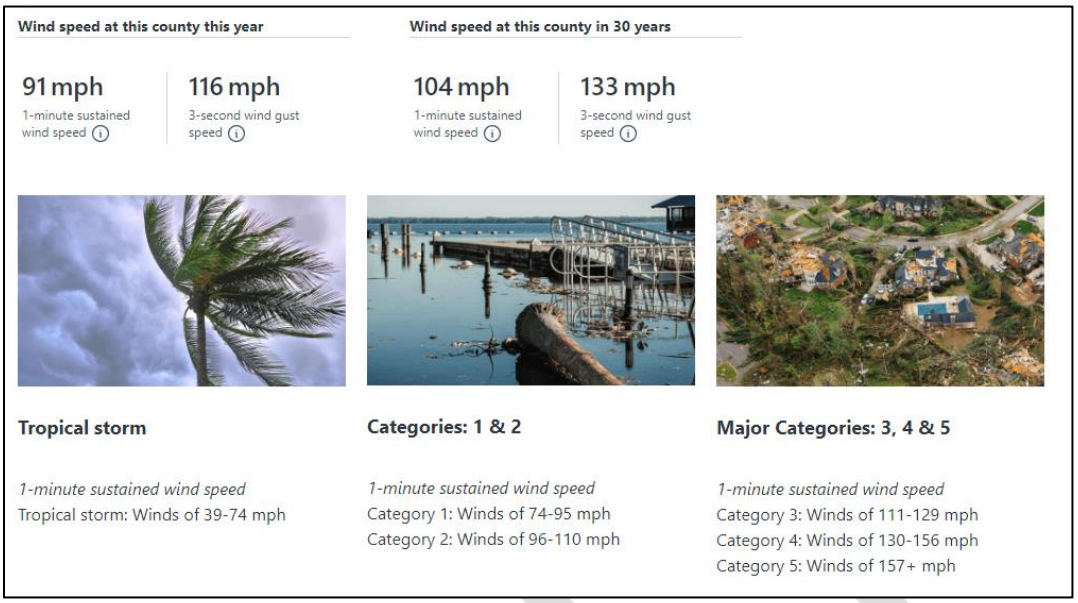
The Atkinson County HMPUC has developed a comprehensive range of Mitigation Goals, Objectives, and Action Steps to lessen the impacts of this hazard. These are contained in Chapter 4.

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

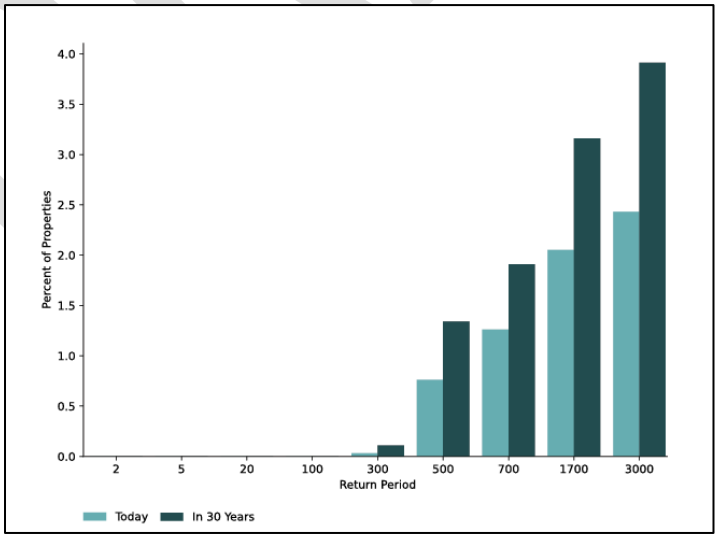
If a 1-in-3,000-year storm event with an exceedingly rare windstorm occurred, it could cause wind gusts of up to 116 mph, reaching Atkinson County. A hurricane of this severity has a 1% chance of occurring at least once in the next 30 years. An event of this type in 30 years would increase wind gusts by up to 133 mph. The changing environment also causes this.





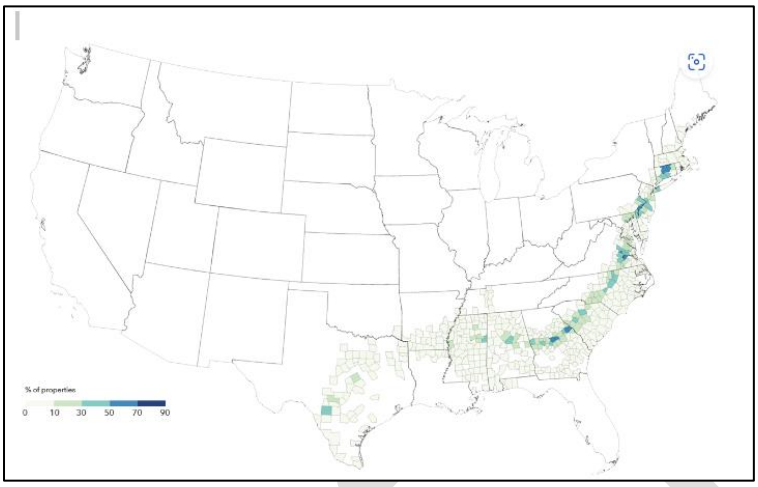
Scientific evidence indicates that tropical storms have been and will continue to intensify more rapidly than in the past, meaning there may be less time to prepare for strong hurricanes that make landfall. Rainfall rates associated with hurricanes are also likely to increase with a changing climate, as the warmer air has more capacity for water vapor and thus supports heavier downpours. Sea level rise, another consequence of climate change, also means that surge events driven by hurricanes are likely to be higher and cause greater damage when storms make landfall.

While the number of hurricanes is not expected to increase with climate change, the proportion of hurricanes that reach very high intensities and wind speeds (Categories 4-5) is increasing. This means the average intensity of storms increases, and the wind speeds are likely to increase.



Hurricanes forming in the future will likely track further northward than today. Due to climate change in the larger-scale general circulation in the atmosphere, tropical storms and hurricanes

travel farther, meaning that the storms that form in the North Atlantic and Gulf of Mexico are more likely to track northward in the future than they do today.



The likelihood of a landfalling hurricane along the US East Coast, Mid-Atlantic, and New England regions is increasing with climate change. For example, the possibility of a storm impacting New England will be larger in the future than today.

Communicating about potential damage from high-speed wind ahead of a major storm is tough. Rating systems were developed so the public would understand how to prepare for and respond to hurricanes and tornadoes.

I. Underserved/Socially Vulnerable Population Risk

Organizations that dealt with the elderly and the vulnerable population within Atkinson County were present at the workshops. Plans will be in place to assist these groups of people during a hazardous event. There are no nursing homes or assisted living facilities within this community. Brochures were placed at the Health Department, DFACS, City Halls, County Government, and the City of Douglas Police Department, informing the vulnerable population of the Hazards that affect the communities within Coffee County. (See Appendix H).

Section VII. Tornadoes

A. Identification of Hazard

The threat of tornadoes 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. 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 of water droplets, dust, and debris. Tornadoes are the most violent of all atmospheric storms.

About 1,200 tornadoes hit the U.S. yearly. A tornado watch is issued when weather conditions are favorable for tornadoes. During a tornado watch, residents are advised to watch and prepare for severe weather and stay tuned to NOAA Weather Radio to know when warnings are issued. A tornado warning is issued when a tornado has been reported by spotters or indicated by radar, and there is a severe threat to life and property to those in the path of the tornado. 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 damaged chimneys; branches broken off trees; shallow-rooted trees pushed over; sign boards damaged.
EF-1	86 to 110 mph	Moderate Damage., The lower limit is the beginning of hurricane wind speed, peels surface off roofs; mobile homes pushed off foundations or overturned; moving autos pushed off the roads; attached garages may be destroyed.
EF-2	111 to 135 mph	Significant Damage. Roofs torn off frame houses; mobile homes demolished; boxcars overturned; large trees snapped or uprooted; high rise windows broken and blown in; light-object missiles generated.
EF-3	136 to 165 mph	Severe Damage. Roofs and walls were torn off well-constructed houses; trains overturned; most trees in the forest were uprooted; heavy cars were 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, a passing front, 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.

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

B. Profile of Events, Frequency of Occurrences, Probability

According to the NOAA Storm Events Database (see Appendix F), there are 11 reports of tornadoes occurring in Atkinson County (including the Cities) between 01/01/1950 and 3/31/2023. The Historic Recurrence Interval is 6.18 years. This is a 16.18% Historic Frequency Chance per

year. The past 10-year Record Frequency Per Year is 0.4, the past 20-year frequency is 0.3, and the past 50-year frequency is 0.22 (see the Hazard Frequency Table in Appendix D).
The most severe of these was on January 22, 2017, when a tornado started in extreme northern Atkinson County and continued to track northeast at 50 mph for about 1.6 miles, producing EF1 damage to trees along Ice Plant Road. When Ice Plant Road merges into Talmadge McKinnon Road in Atkinson County, some outbuildings were demolished, and debris was blown into a pine stand, which was also heavily damaged. A residence at this intersection had extensive tree damage, including one pine tree that impaled a vehicle. Numerous agricultural structures, including silos and elevated irrigation systems, were lifted and carried across pastures along Talmadge McKinnon Road northward toward the Coffee County Line.

One tornado event has occurred since the previous Hazard Mitigation Plan was completed. On Sunday, December 2, 2018, a severe thunderstorm developed over South Georgia during the early afternoon hours, causing a brief QLCS tornado that formed in Atkinson County, 6 miles southeast of Willacoochee and 8 miles west of Pearson, just south of Highway 82. There was minor EF-0 damage to trees, and then it was briefly reformed just north and west of Pearson, causing minor damage to a home.

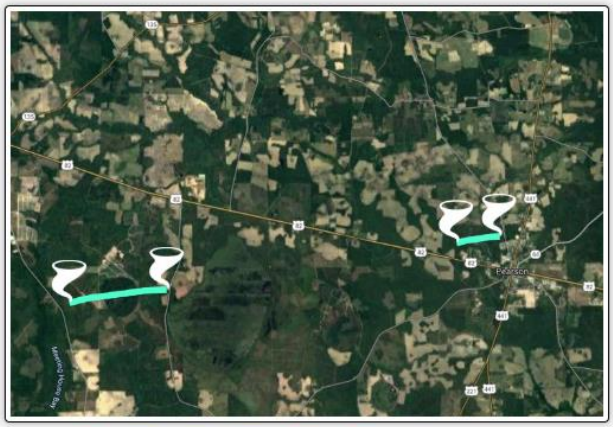
Tornado - LOCATION
COUNTY NAME

Date	December 2, 2018
Time (Local)	2:11 PM - 2:16 PM
EF Rating	0
Est. Peak Winds	65 -75 mph
Path Length	Estimated 2 miles
Max Width	50 yards
Injuries/Deaths	0

Summary:

In the early afternoon hours of Sunday December 2, 2018 a strengthening line of thunderstorms moved northeast into Atkinson and produced 2 brief QLCS tornados. The first tornado caused damage to trees south of Highway 82 between County Road 38 and Lazy Nine Road. The second brief tornado caused minor property damage just north of Highway 82 near Pearson. Both tornadoes had damage consistent with an EF-0 rating.

Track Map



EF0 EF1 EF2 EF3 EF4 EF5 TSTM UKN

Downloadable KMZ File

The Enhanced Fujita (EF) Scale classifies tornadoes into the following categories:

EF0	EF1	EF2	EF3	EF4	EF5
Weak	**Moderate**	**Significant**	**Severe**	**Extreme**	**Catastrophic**
65-85 mph	86-110 mph	111-135 mph	136-165 mph	166-200 mph	200+ mph

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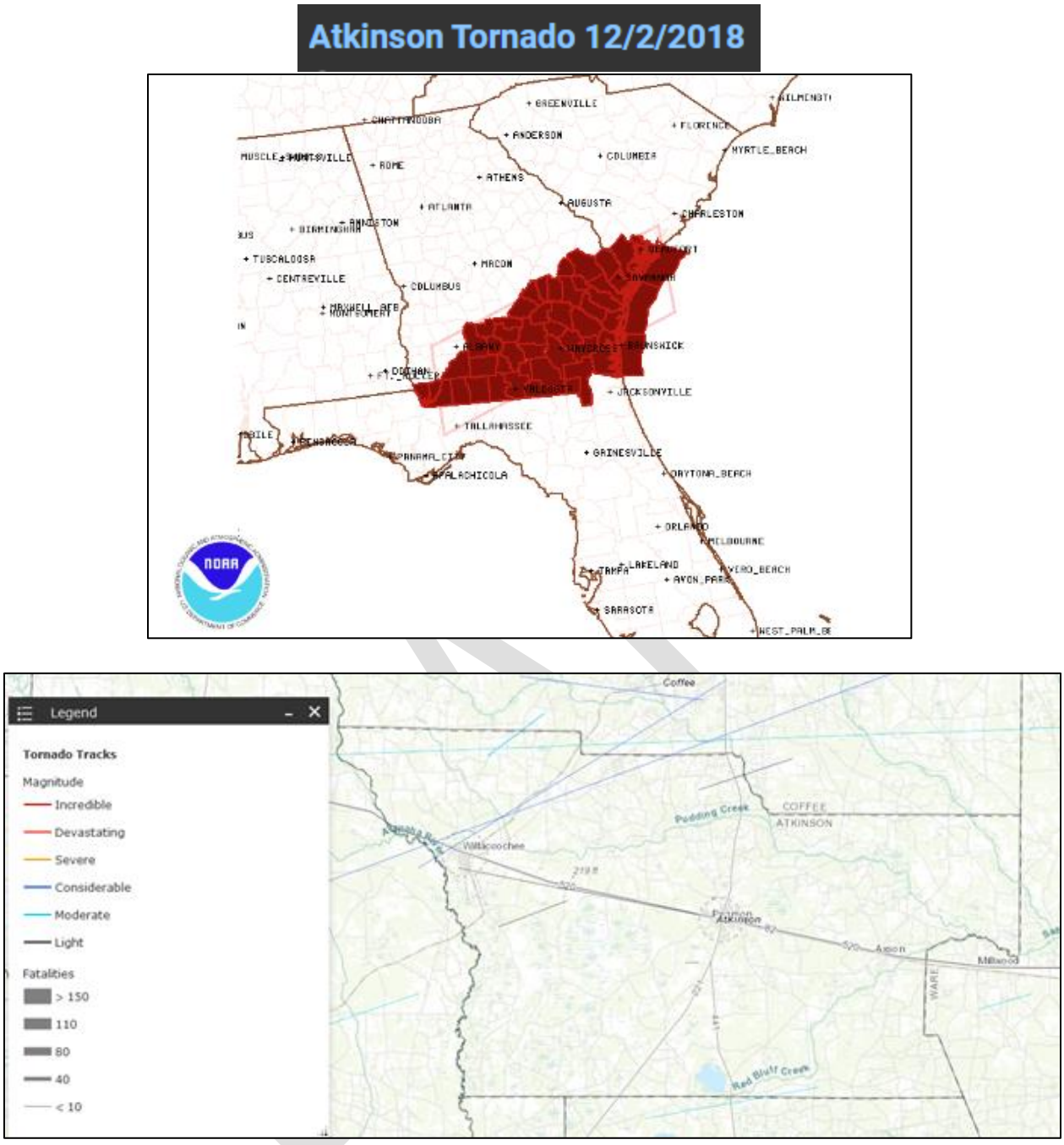


Source: NOAA data via ArcGIS

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

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

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

An estimated 100% of the Residential property (4,401 of 4,401) in Atkinson County (including the Cities of Pearson and Willacoochee) could be affected by this hazard, with a total value of $33,347,244. Also, an estimated 100% of the community's Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education, and Utility properties (2,056 of 2,056) may be affected, totaling $88,051,083. The values are based on the most recent available tax roll data for Atkinson County and the Cities of Pearson and Willacoochee, provided by the Atkinson County Tax Assessor's Office.

Damages from an EF-1-5 Hypothetical tornado with a 300-to-2,400-feet path would have the following damage with the path going through Atkinson County:

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

This analysis estimated that 208 buildings could be damaged, with an estimated building loss of approximately $14.5 million. No essential facilities were within 900 feet of the modeled tornado path. According to the model, one essential building was in the path, and this facility would suffer minor damage. (See Appendix G).

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, agricultural production's total farm gate value in Atkinson County is $93,994,300.52.

E. Land Use and Development Trends

Typically, mobile/manufactured homes are most vulnerable to tornado damage. According to 2021 Census Bureau estimates, 45% of occupied housing units in Atkinson County (including the Cities) are mobile homes or other housing types (1,336). In the City of Pearson, 33.7% of occupied housing units are mobile homes (or other housing types). In the City of Willacoochee, 48.9% of occupied housing units are mobile homes (or other housing types).

The City of Pearson has zoning regulations; Atkinson County and the City of Willacoochee do not. All jurisdictions have mandatory building and fire codes enforced by a building inspector. There is no planning commission. The County and Cities participate in joint comprehensive planning and the required updates of the Service Delivery Strategy. No other land use or development trends related to this hazard have been identified.

See Chapter 4 for the Building Codes for Atkinson County and the Cities of Pearson and Willacoochee.

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 Atkinson County and the Cities of Pearson and Willacoochee. However, the impact may be more severe in places with higher population density due to more people being in danger, more people needing to evacuate, more debris from damaged buildings, and other impacts associated with higher population density. In jurisdictions without building codes and inspections, structures not built to code may be vulnerable to strong winds and other hazards. In jurisdictions with many mobile homes, the damage can be more severe.

G. Overall HRV Summary of Events and Their Impact

Tornadoes can potentially cause damage at any place or time throughout Atkinson County and the Cities of Pearson and Willacoochee. 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 instead of 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 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

Georgia surpassed the historical data of an average of 30 tornadoes annually in mid-February 2023. Georgia was ranked last year by the National Oceanic and Atmosphere Administration as the top ten states for tornadic activity, with 56 twisters ripping through.

It is noted that climate change is part of some recent shifts in the location and timing of a tornado threat. Each tornado is localized, making it difficult for scientists to link them directly to climate trends. However, the tornado alley has shifted eastward. Tornado activity hit unprecedented lows across large parts of Oklahoma and Kansas from 2020 into 2021.

At least one study suggests that variability in peak-season behavior will increase, in line with recent trends. A major new study published in 2023, focusing on 15-year blocks within the 21st century, found that rotating supercell storms may become more frequent overall while becoming increasingly frequent in late winter and early spring and less frequent from midsummer toward early autumn. The study also reinforced the eastward shifts.

Scientists agree that the climate is changing, and humans are responsible. Burning fossil fuels, such as coal, oil, and gas, releases huge amounts of carbon dioxide (CO2) into the atmosphere every year, leading to a rise in global temperatures, known as global warming. Global warming is just one symptom of the larger problem of climate change.

Climate change has also caused an increase in extreme weather events. "Extreme weather events" is a catchphrase for different weather patterns. Scientists can say with certainty that a warming planet will lead to more droughts in some areas and heavier rainfall in others. Tornadoes are much more complicated for climatologists to predict, and predicting the frequency and power of tornadoes is challenging for scientists.

It comes down to two ingredients in the atmosphere in the environment for a storm to form. The two are the energy in the form of warm, moist, unstable air and the wind shear. Wind shear will cause warm rising air in a supercell to rotate, organizing the storm and allowing it to produce funnel clouds. Although climate change increases the energy in the atmosphere, it is also expected to reduce wind shear.

I. Underserved/Socially Vulnerable Population Risk

Organizations that dealt with the elderly and the vulnerable population within Atkinson County were present at the workshops. Plans will be in place to assist these groups of people during a hazardous event. There are no nursing homes or assisted living facilities within this community. Brochures were placed at the Health Department, DFACS, City Halls, County Government, and the City of Douglas Police Department, informing the vulnerable population of the Hazards that affect the communities within Coffee County. (See Appendix H).

Section VIII. Severe Winter Storms

A. Identification of Hazard

The Atkinson County HMPUC has chosen the threat of Severe Winter Storms as the eighth most likely hazard to occur and cause damage in Atkinson County and the Cities of Pearson and Willacoochee, 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.

Although this natural hazard did not rank high in any dataset of occurrences or damages happening in Atkinson County and the Cities of Pearson and Willacoochee, undocumented personal accounts of the Atkinson County 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 Atkinson County and the Cities of Pearson and Willacoochee are unprepared 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.

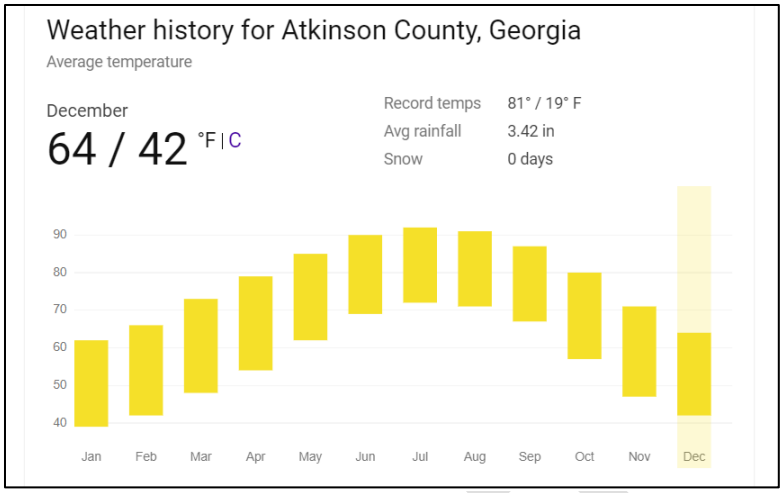
Severe winter storms, at worst, will produce sleet, freezing rain, and/or 1 to 2 inches of snow, with temperatures as low as the teens (°F). Snow accumulation usually melts away within 24 hours. Possible damage may include downed tree limbs, impassable roadways, power outages, increased emergency service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

B. Profile of Events, Frequency of Occurrences, Probability

According to the NOAA Storm Events Database (see Appendix F), 1 Severe Winter Storm event was reported in Atkinson County (including the Cities) between 01/01/1950 and 3/31/2023. The Historic Recurrence Interval is 73 years. This is a 2.94% Historic Frequency Chance per year. The past 10-year Record Frequency Per Year is 0.2, the past 20-year frequency is 0.1, and the past 50-year frequency is 0.04 (see the Hazard Frequency Table in Appendix D).

On Feb. 12, 2010, a winter storm caused snow to fall with approximately 2 inches of accumulation, with some icy roadways. The community was also affected by sleet and freezing rain in the winter of 1993, known as the "Storm of the Century."

During the Winter of 2023, South Georgia saw more warm days than usual, and a late freeze caused farmers to lose 95% of their peaches.



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

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

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

An estimated 100% of the Residential property (4,401 of 4,401) in Atkinson County (including the Cities of Pearson and Willacoochee) could be affected by this hazard, with a total value of $33,347,244. Also, an estimated 100% of the community's Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education, and Utility properties (2,056 of 2,056) may be affected, totaling $88,051,083. The values are based on the most recent available tax roll data for Atkinson County and the Cities of Pearson and Willacoochee, provided by the Atkinson 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, agricultural production's total farm gate value in Atkinson County is $93,994,300.52.

E. Land Use and Development Trends

The City of Pearson has zoning regulations; Atkinson County and the City of Willacoochee do not. All jurisdictions have mandatory building and fire codes that a building inspector enforces. There is no planning commission. The County and Cities participate in joint comprehensive planning and the required updates of the Service Delivery Strategy. No other land use or development trends related to this hazard have been identified.

See Chapter 4 for the adopted Building Codes for Atkinson County and the Cities of Pearson and Willacoochee.

F. Multi-Jurisdictional Differences

Severe Winter Storm events are usually area-wide, and no difference in severity is expected between Atkinson County and the Cities of Pearson and Willacoochee. Icy road hazards would be greater along high-traffic corridors and densely populated areas. In the event of a power failure, households for which electricity is the only available heat source 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 economy of unincorporated Atkinson County, and many crops may be affected by severe winter weather.

G. Overall HRV Summary of Events and Their Impact

Severe winter storms can potentially cause damage at any place, at any time during the winter months throughout Atkinson County and the Cities of Pearson and Willacoochee. The cost of the damage may be higher in terms of vehicle crashes along high-traffic corridors and more densely populated areas and higher in crop damage in the agricultural areas of the county.

The Atkinson County HMPUC recognizes severe winter storms as the eighth 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 Atkinson County and the Cities of Pearson and Willacoochee. These are contained in Chapter 4.

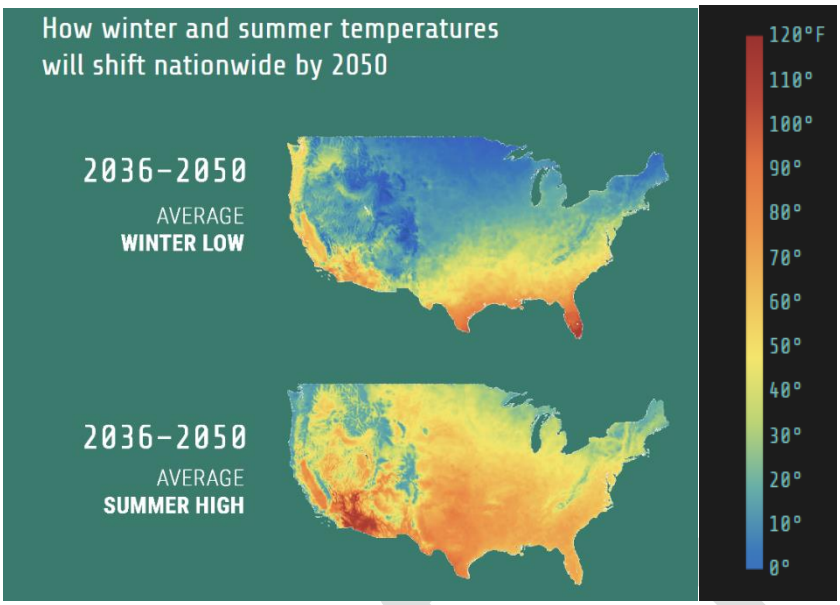
Since the previous plan was approved, there have not been any new developments, regulations, or programs that would either increase or decrease the community's overall vulnerability to this hazard.

H. Impacts from Future Conditions

Overall, Winters are warming up, and in many regions, winters are warming faster than any other season. Climate Central has reported that winters across the contiguous US have warmed by an average of nearly 3 degrees Fahrenheit over the last half-century. Even though Winters are becoming warmer, the southern portion of Georgia can still see some very frigid weather.

Climate change has caused a weather phenomenon unrelated to global warming. Research indicates that as average global temperatures rise and the Arctic continues to warm, the jet stream slows down and grows increasingly wavy. This allows bone-chilling cold Artic air in the winter, typically held in a stable place by the once-stronger jet stream. This will cause the Arctic air to spill farther south than usual and linger over areas that aren't accustomed to it for long periods.

For now, even as winters have been getting shorter and warmer, many places should expect to see bouts of very cold weather sometimes.



I. Underserved/Socially Vulnerable Population Risk

Organizations that dealt with the elderly and the vulnerable population within Atkinson County were present at the workshops. Plans will be in place to assist these groups of people during a hazardous event. There are no nursing homes or assisted living facilities within this community. There is an action item for a warming shelter for the colder months. This would allow someone without adequate heat to stay warm during the colder days. Brochures were placed at the Health Department, DFACS, City Halls, County Government, and the City of Douglas Police Department, informing the vulnerable population of the Hazards that affect the communities within Coffee County. (See Appendix H).

Chapter 3:
Local Human-Caused Hazard, Risk, and Vulnerability (HRV) Summary

Section I. Cyberattacks

A. Identification of Hazard

The HMPUC has chosen the threat of a cyberattack as the 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 Atkinson County and the Cities of Pearson and Willacoochee to have reliable countermeasures and equipment that can be used confidently to protect life, health, property, commerce, and infrastructure.

A cyberattack is any offensive maneuver employed by nation-states, individuals, groups, or organizations that targets computer information systems, infrastructures, computer networks, and personal computer devices by various means of malicious acts, usually originating from an anonymous source that either steals, alters, or destroys a specified target by hacking into a susceptible system.

The power grid is vulnerable to a potential cyberattack in Atkinson County and the Cities of Pearson and Willacoochee. Among the infrastructures that a cyberattack could potentially target, the power grid is the community's top priority for countermeasures to lessen or eliminate the damage that could occur from such an attack. By shutting the power grid down, cyberattacks could cause mass hysteria and confusion, damage to the local economy, strain on local resources, and potential injury or death.

Other potentially vulnerable infrastructure includes the computer systems of the local governments and local businesses and the personal computers of residents of the community. Personal computers may be subject to "ransomware" attacks, in which cyberattacks encrypt all data on the computer and demand money for its return. Personal computers may also be subject to hacking that leads to identity theft, theft of financial information, "phishing" (in which attackers obtain sensitive information by posing as a trustworthy entity), and other scams.

B. Profile of Events, Frequency of Occurrences, Probability

According to the best data available, there have not been any cyberattacks in Atkinson County and the Cities of Pearson and Willacoochee. However, the entire community is equally vulnerable to this hazard, and an attack could happen at any place and 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 Atkinson County and the Cities of Pearson and Willacoochee are equally vulnerable to this hazard.

An estimated 100% of the Residential property (4,401 of 4,401) in Atkinson County (including the Cities of Pearson and Willacoochee) could be affected by this hazard, with a total value of $33,347,244. Also, an estimated 100% of the community's Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education, and Utility properties (2,056 of 2,056) may be affected, totaling $88,051,083. The values are based on the most recent available tax roll data for Atkinson County and the Cities of Pearson and Willacoochee, provided by the Atkinson 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, agricultural production's total farm gate value in Atkinson County is $93,994,300.52.

E. Land Use and Development Trends

The City of Pearson has zoning regulations; Atkinson County and the City of Willacoochee do not. All jurisdictions have mandatory building and fire codes, which a building inspector enforces. There is no planning commission. The County and Cities participate in joint comprehensive planning and the required updates of the Service Delivery Strategy. No other land use or development trends related to this hazard have been identified.

See Chapter 4 for the adopted Building Codes for Atkinson County and the Cities of Pearson and Willacoochee.

F. Multi-Jurisdictional Differences

The entire community is believed to be equally vulnerable to a potential cyberattack. No multi-jurisdictional differences have been identified yet.

G. Overall HRV Summary of Events and Their Impact

A cyberattack can harm people and infrastructure throughout Atkinson County and the Cities of Pearson and Willacoochee. 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 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 II. Civil Unrest

A. Identification of Hazard

The HMPUC has chosen the threat of civil unrest as the second most likely human-caused hazard to occur and cause damage in the community. In pursuit of the community's goals of local preparedness, Atkinson County and the Cities of Pearson and Willacoochee need reliable countermeasures and equipment that can be used confidently to protect life, health, property, and commerce.

Civil unrest is unrest caused by a group of people. This includes any public disturbance involving acts of violence. Civil unrest may lead to damage or destruction of property and may cause injury or death. Civil unrest may arise directly from illegal activities, such as sit-ins and riots, or from initially legal activities, such as permitted parades and demonstrations.

During potential force encounters, de-escalation techniques may stabilize the situation and reduce the immediacy of the threat so that more time, options, and resources can be called upon to resolve the situation without the use of force or with a reduction in the force necessary (source: International Association of Chiefs of Police, *National Consensus Policy and Discussion Paper on Use of Force*; http://www.theiacp.org/Portals/0/documents/pdfs/National_Consensus_Policy_On_Use_Of_Force.pdf).

B. Profile of Events, Frequency of Occurrences, Probability

According to the best data available, there have not been any civil unrest events in Atkinson County and the Cities of Pearson and Willacoochee. However, the entire community is vulnerable to this hazard (especially in more densely populated areas), and civil unrest could occur anytime. Civil unrest events are difficult to predict and may happen quickly, giving law enforcement little or no time to respond. In small communities, law enforcement and first responders may lack the resources to respond adequately to a large-scale civil unrest event.

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

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

An estimated 100% of the Residential property (4,401 of 4,401) in Atkinson County (including the Cities of Pearson and Willacoochee) could be affected by this hazard, with a total value of $33,347,244. Also, an estimated 100% of the community's Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education, and Utility properties (2,056 of 2,056) may be affected, totaling $88,051,083. The values are based on the most recent available tax roll data for Atkinson County and the Cities of Pearson and Willacoochee, provided by the Atkinson 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, agricultural production's total farm gate value in Atkinson County is $93,994,300.52.

E. Land Use and Development Trends

The City of Pearson has zoning regulations; Atkinson County and the City of Willacoochee do not. All jurisdictions have mandatory building and fire codes, which a building inspector enforces. There is no planning commission. The County and Cities participate in joint comprehensive planning and the required updates of the Service Delivery Strategy. No other land use or development trends related to this hazard have been identified.

See Chapter 4 for the building codes for Atkinson County, Pearson, and Willacoochee.

F. Multi-Jurisdictional Differences

Although civil unrest has been known to occur in both rural and urban areas, it is predicted that due to the concentration of the population, such events are more likely to occur in more densely populated areas. Therefore, the Cities of Pearson and Willacoochee are expected to be more vulnerable to civil unrest than unincorporated Atkinson County.

The Atkinson County Sheriff's Office serves Atkinson County. The Pearson Police Department serves the City of Pearson, and the Willacoochee Police Department serves the City of Willacoochee.

G. Overall HRV Summary

Many of the community could be vulnerable to a civil unrest event. Preparation for such an event requires specific training for first responders and law enforcement and coordination among agencies to ensure a swift response and containment of such an event. Therefore, a key priority should be to train responders and law enforcement to fulfill their responsibilities and conduct periodic exercises to be sure the response plan is realistic, and that responders are ready to carry it out. Training law enforcement officers in de-escalation techniques may reduce potential injuries, loss of life, and property damage.

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. Public Health Emergency

A. Identification of Hazard

A Public Health Emergency impacts the health of a significant portion of the population. Public Health Emergencies can occur at any time without warning. Examples of Public Health Emergencies arising from natural causes include disease outbreaks (including pandemics and food-borne illnesses) and poisoning from naturally occurring environmental factors. Public Health Emergencies may happen by themselves or may occur secondary to other natural hazards, for example, when flooding leads to contamination of drinking water supplies. Public Health Emergencies may also be man-made (for example, chemical spills, radiation incidents, and bioterrorism).

The National Disaster Medical System Federal Partners Memorandum of Agreement defines a Public Health Emergency as "an emergency need for health care [medical] services to respond to a disaster, a significant outbreak of infectious disease, bioterrorist attack or other significant or catastrophic events. For purposes of NDMS activation, a Public Health Emergency may include but is not limited to Public Health Emergencies declared by the Secretary of HHS [Health and Human Services] under 42 U.S.C. 247d or a declaration of a major disaster or emergency under the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act), 42 U.S.C. 5121-5206).

Source: "Public Health Emergency-United States"
A Public Health Emergency from the Perspective of the U.S. National Disaster Medical System (NDMS)". 2007-04-10.
NATIONAL DISASTER MEDICAL SYSTEM MEMORANDUM OF AGREEMENT AMONG THE DEPARTMENTS OF HOMELAND SECURITY, HEALTH AND HUMAN SERVICES, VETERANS AFFAIRS, AND DEFENSE" (PDF). 2005-09-26.

B. Profile of Public Health Emergency Events, Frequency of Occurrences, Probability:

Many identified natural hazards in Atkinson County and the cities of Pearson and Willacoochee can lead to secondary Public Health Emergencies. These include but are not limited to:

- Large numbers of injuries requiring treatment after an extreme weather event
- Contamination of drinking water, food supplies, and/or living spaces due to flooding
- Health effects resulting from extreme heat/cold events
- Health effects resulting from people being displaced/homeless due to a natural hazard event
- Contamination of drinking water and/or soil resulting from industrial activity

Atkinson County and the cities of Pearson and Willacoochee are also vulnerable to Public Health Emergencies that may occur naturally on their own, including but not limited to:

- Infectious disease outbreaks
- Pandemic influenza
- Mosquito-borne illness

- Food-borne illness

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

Some examples of recent Public Health Emergencies include:

Opioid Crisis

Every day, more than 90 Americans die after overdosing on opioids.[1] The misuse of and addiction to opioids—including prescription pain relievers, heroin, and synthetic opioids such as fentanyl—is a severe national crisis that affects public health and social and economic welfare. The Centers for Disease Control and Prevention estimates that the total "economic burden" of prescription opioid misuse in the United States is $78.5 billion annually, including healthcare, lost productivity, addiction treatment, and criminal justice involvement.[2]

In the late 1990s, pharmaceutical companies reassured the medical community that patients would not become addicted to prescription opioid pain relievers, and healthcare providers began to prescribe them at greater rates. This subsequently led to widespread diversion and misuse of these medications before it became clear that they could be highly addictive.[3,4] Opioid overdose rates began to increase. In 2015, more than 33,000 Americans died from an opioid overdose, including prescription opioids, heroin, and illicitly manufactured fentanyl, a powerful synthetic opioid.[1] That same year, an estimated 2 million people in the United States suffered from substance use disorders related to prescription opioid pain relievers, and 591,000 suffered from a heroin use disorder (not mutually exclusive).[5] Here is what we know about the opioid crisis:

- Roughly 21 to 29 percent of patients prescribed opioids for chronic pain misuse them.[6]
- Between 8 and 12 percent develop an opioid use disorder.[7–9]
- An estimated 4 to 6 percent who misuse prescription opioids transition to heroin.[7–9]
- About 80 percent of people who use heroin first misused prescription opioids.[7]

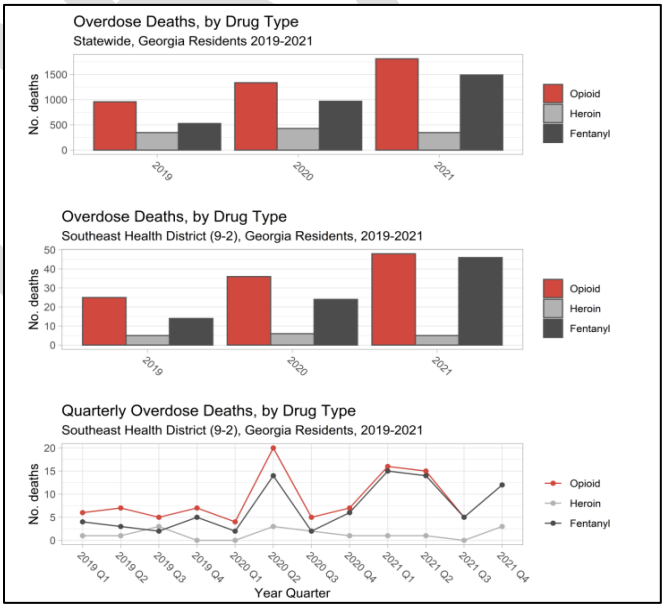
This issue has become a public health crisis with devastating consequences, including increased opioid misuse and related overdoses and the rising incidence of neonatal abstinence syndrome due to opioid use and abuse during pregnancy. In addition, the increase in injection drug use has also contributed to the spread of infectious diseases, including HIV and hepatitis C. As seen throughout the history of medicine, science can be an essential part of the solution to resolving such a public health crisis.

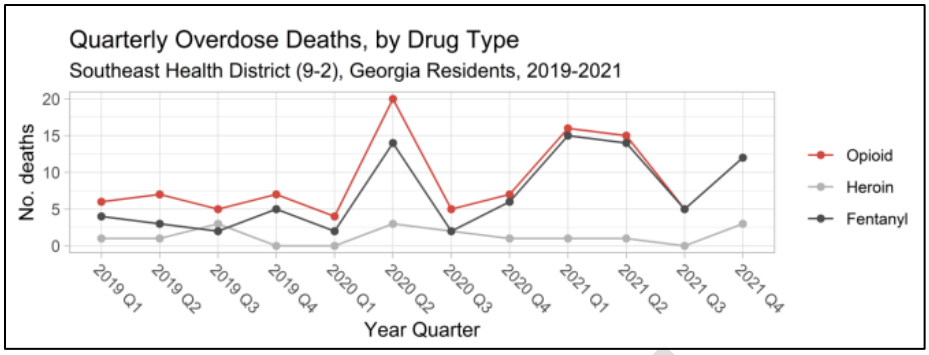
Atkinson County is within the Southeast Georgia Health District. The 2021 Georgia Southeast Health District Opioid-involved Overdose Deaths were recorded as follows:

Sex	No. Deaths	District rate (per 100,000)	State rate (per 100,000)
Male	31	16.4	23.0
Female	17	9.2	10.9
Missing	0	--	--
TOTAL	48	12.8	16.8

Race	No. Deaths	District rate (per 100,000)	State rate (per 100,000)
White	40	14.9	20.7
African American	8	8.8	12.1
Other	0	--	5.6
Missing	0	--	0.0
TOTAL	48	12.8	16.8

Age	No. Deaths	District rate (per 100,000)	State rate (per 100,000)
<1 year	0	--	--
1 - 4 years	0	--	1.0
5 -14 years	0	--	--
15-24 years	3	--	10.6
25-34 years	15	30.3	34.9
35-44 years	15	32.8	35.7
45-54 years	10	22.3	24.1
55-64 years	4	--	15.7
65-74 years	1	--	6.1
75-84 years	0	--	1.3
85+ years	0	--	--
TOTAL	48	12.8	17.0





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H1N1

2009 H1N1 was first detected in the United States in April 2009. This virus was a unique combination of influenza virus genes never previously identified in either animals or people. In addition, the virus genes were a combination of genes most closely related to North American swine-lineage H1N1 and Eurasian lineage swine-origin H1N1 influenza viruses. Because of this, initial reports referred to the virus as a swine-origin influenza virus. However, investigations of initial human cases did not identify exposures to pigs, and it quickly became apparent that this new virus was circulating among humans and not among U.S. pig herds.

Infection with this new influenza A virus (then referred to as 'swine-origin influenza A virus) was first detected in a 10-year-old patient in California on April 15, 2009, who was tested for influenza as part of a clinical study. Laboratory testing at CDC confirmed that this virus was new to humans. Two days later, CDC laboratory testing confirmed the second infection with this virus in another patient, an 8-year-old living in California, about 130 miles away from the first patient tested as part of an influenza surveillance project. There was no known connection between the two patients. The CDC's laboratory analysis determined that the viruses obtained from these two patients were very similar and different from any other influenza viruses previously seen in humans or animals. Testing showed that these two viruses were resistant to the antiviral drugs amantadine and rimantadine but susceptible to oseltamivir and zanamivir. CDC immediately investigated the situation in coordination with California's state and local animal and human health officials.

The cases of 2009 H1N1 flu in California occurred in the context of sporadic reports of human infection with North American lineage swine influenza viruses in the United States, most often associated with close contact with infected pigs. (From December 2005 – to January 2009, 12 cases of human infection with swine influenza were reported; five of these 12 cases occurred in patients who had direct exposure to pigs, six patients said being near pigs, and the source of infection in one case was unknown). The human-to-human spread of swine influenza viruses had been rarely documented and was not known to result in widespread community outbreaks. In mid-April of 2009, however, detecting two patients infected with swine-origin flu viruses 130 miles apart raised concern that a novel swine-origin influenza virus had made its way into the human population and spread among people.

CDC worked closely with state and local animal and human health officials on epidemiological investigations by tracing contacts of both patients to determine the source of their infection and examining whether there was any link between the patients and pigs. Surveillance was also enhanced to detect more cases of human illness with this virus. Based on the geographic location of the first cases, lack of contact between these cases and swine, and data collected through contact tracing and laboratory testing, CDC epidemiologists suspected that human-to-human transmission of this virus had taken place. In an article entitled Swine Influenza A (H1N1) Infection in Two Children --- Southern California, March-April 2009, published on April 21, 2009, in the Morbidity and Mortality Weekly Report (MMWR), the CDC described the cases and requested that state public health laboratories send to CDC all influenza A specimens that could not be subtyped. That same day, CDC responded to medical reporters' media inquiries related to the MMWR. Within a day, three additional samples of this new virus were identified in San Diego County and Imperial County California hospitals and sent to CDC for further testing. CDC laboratory testing confirmed that these samples also were positive for the virus that would come to be called "2009 H1N1."

On April 23, 2009, samples submitted by Texas revealed two additional cases of human infections with 2009 H1N1, transforming the investigation into a multistate outbreak and response. At the same time, the CDC was testing 14 samples from Mexico, some of which had been collected from patients who were ill before the first 2 U.S. (California) patients. The results of seven samples were positive for 2009 H1N1, and similar findings were reported for specimens submitted by Mexico to Canada. Thus, it became clear that cases were occurring in multiple countries, and the human-to-human spread of the virus appeared to be ongoing. That same day, the CDC held the first formal full press briefing to inform the media and guide the public and healthcare response to

the rapidly evolving situation. CDC held nearly 60 press briefings during the 2009 H1N1 response.

On April 24, 2009, the CDC uploaded complete gene sequences of the 2009 H1N1 virus to a publicly accessible international influenza database, which enabled scientists around the world to use the sequences for public health research and comparison against influenza viruses collected elsewhere and an updated report on the outbreak was published online in the MMWR.

On Saturday, April 25, 2009, under the rules of the International Health Regulations, the Director-General of WHO declared the 2009 H1N1 outbreak a Public Health Emergency of International Concern. It recommended that countries intensify surveillance for unusual outbreaks of influenza-like illness and severe pneumonia. Also, on April 25, 2009, New York City officials reported an investigation into a cluster of influenza-like diseases in a high school. In addition, CDC testing confirmed two cases of 2009 H1N1 influenza infection in Kansas and another in Ohio shortly after.

On April 26, 2009, the United States Government determined that a public health emergency existed nationwide; CDC's Strategic National Stockpile (SNS) began releasing 25% of the supplies in the stockpile that could be used to protect and treat influenza. This included 11 million antiviral drugs and personal protective equipment regimens, including over 39 million respiratory protection devices (masks and respirators), gowns, gloves, and face shields, to states (allocations were based on each state's population).

On April 27, the WHO Director-General raised the level of influenza pandemic alert from phase 3 to phase 4, based primarily on epidemiological data demonstrating human-to-human transmission and the ability of the virus to cause community-level outbreaks. In addition, based on reports of widespread influenza-like illness and many severe illnesses and deaths in Mexico, the CDC issued a travel health warning recommending that United States travelers postpone all non-essential travel to Mexico. Finally, as in past influenza seasons, the CDC urged the public, especially those at the highest risk of influenza-related complications, to protect themselves by taking antiviral drugs early in their illness when recommended by their doctor. The CDC also advised that everyone take preventive actions every day, like covering coughs and sneezes and staying home from work and school when ill, to help reduce the spread of illness.

On April 29, 2009, WHO raised the influenza pandemic alert from phase 4 to phase 5, signaling that a pandemic was imminent. It requested that all countries immediately activate their pandemic preparedness plans and be on high alert for unusual outbreaks of influenza-like illness and severe pneumonia. The U.S. Government was already implementing its pandemic response plan. CDC continued to post and update guidance for states, clinicians, laboratories, schools, partners, and the public on topics ranging from the non-pharmaceutical measures communities could take to limit the spread of disease to how to evaluate a patient for possible infection with 2009 H1N1 influenza, to how to care for children who might be sick with 2009 H1N1 influenza.

On April 30, 2009, CDC issued an MMWR Dispatch describing the initial outbreak of 2009 H1N1 influenza in Mexico. Findings in Mexico indicated that transmission in Mexico involved person-to-person spread with multiple generations of transmission. CDC also issued an MMWR Dispatch on the outbreak of 2009 H1N1 influenza infection in a high school in New York City, which was,

at the time, the largest reported cluster of 2009 H1N1 cases in the United States. The Dispatch suggested that the high school-age students had respiratory and fever symptoms similar to those caused by the seasonal flu. In addition, about half had diarrhea, which is more than expected with seasonal flu. As the details of the outbreak unfolded, the Federal response continued in high gear. Also, on April 30, 2009, HHS announced that the Federal government would purchase an additional 13 million treatment courses of antiviral drugs to help fight influenza. The other treatment courses would be added to the SNS.

As the outbreak spread, the CDC began receiving reports of school closures and implementing community-level social distancing measures to slow the disease's spread. School administrators and public health officials followed their pandemic plans and did everything they could to slow the spread of the illness. (Social distancing measures are meant to increase the distance between people. Measures include staying home when ill unless seeking medical care, avoiding large gatherings, telecommuting, and implementing school closures).

Since the 2018 HMP was adopted, the 2018-2019 influenza season was a moderate severity season with two waves of influenza A activity of similar magnitude during the season: A (H1N1) pdm09 predominated from October 2018 to mid0February 2019, and A (H3N2) activity increased from mid-February through mid-May.

Flu activity in the United States during the 2019–2020 season increased in November and was consistently high through January and February. The season was characterized by two consecutive waves of activity: influenza B viruses and A (H1N1) pdm09 viruses.

More than 19 million flu cases have been diagnosed in the United States in the 2020-2021 season.

After a dip in the first few weeks of 2020, flu activity again picked up, with no signs that the season peaked. The widespread was reported in every state except Hawaii. The CDC estimated that the flu has led to 180,000 hospitalizations this season. Sixty-eight children had died.

Flu season had an odd start, with an unprecedented early surge in the B strain of the virus. Flu B generally hits younger people harder. But increasingly, flu A strain — H1N1 — cases have been diagnosed.

ENTEROVIRUS D68

In 2014, the United States experienced a nationwide outbreak of EV-D68 associated with severe respiratory illness. From mid-August 2014 to January 15, 2015, CDC or state public health laboratories confirmed that 1,153 people in 49 states and the District of Columbia had respiratory illnesses caused by EV-D68. Almost all confirmed cases were among children, many of whom had asthma or a history of wheezing. Additionally, there were likely millions of mild EV-D68 infections for which people did not seek medical treatment and/or get tested.

CDC received 2,600 specimens for enterovirus lab testing during 2014, substantially more than usual—about 36% of those tested positive for EV-D68. About 33% tested positive for an enterovirus or rhinovirus other than EV-D68. EV-D68 was detected in specimens from 14 patients

who died and had samples submitted for testing. State and local officials have the authority to determine and release information about the cause of these deaths.

Enteroviruses are ever-present in the community. A mix of enteroviruses circulates annually; different types can be expected in other years. However, outbreaks of EV-D68 were detected from August through November in 2014, 2016, and 2018. Each year, cases are expected to be seen, but the number of cases identified in the U.S. varies yearly. As in previous years, CDC will continue to work with states to test specimens for enteroviruses to determine virus type, support the identification and investigation of outbreaks, and monitor seasonal activity. In the United States, you are more likely to get infected with this virus in the summer and fall, but you can get infected year-round. His virus was detected in the US in the late summer of 2016 and 2018 and, to a lesser degree, in 2020.

Infants, children, and teenagers are most likely to get infected with enteroviruses and become ill. They do not yet have immunity (protection) from previous exposures to these viruses. We believe this is also true for EV-D68. Adults can get infected with enteroviruses, but they are more likely to have mild or no symptoms. This was subsequently detected in the US in the late summer of

Children with asthma may have a higher risk of severe respiratory illness caused by EV-D68 infection.

MERS

Middle East Respiratory Syndrome (MERS) is an illness caused by a virus (more specifically, a coronavirus (http://www.cdc.gov/coronavirus/index.html)) called the Middle East Respiratory Syndrome Coronavirus (MERS-CoV). MERS affects the respiratory system (lungs and breathing tubes). Most MERS patients develop a severe acute respiratory illness with fever, cough, and shortness of breath. About 3-4 out of every ten patients reported with MERS have died.

Health officials first reported the disease in Saudi Arabia in September 2012. Through retrospective investigations, health officials later identified that the first known cases of MERS occurred in Jordan in April 2012. So far, all subjects of MERS have been linked through travel to or residence in countries in and near the Arabian Peninsula. The largest known outbreak of MERS outside the Arabian Peninsula occurred in the Republic of Korea in 2015. The outbreak was associated with a traveler returning from the Arabian Peninsula.

MERS represents a very low risk to the general population in the United States. Only two U.S. patients have tested positive for MERS-CoV infection, both in May 2014, while more than 1,300 have tested negative. The CDC continues to monitor MERS closely.

MERS-CoV has spread from ill people to others through close contact, such as caring for or living with an infected person. MERS can affect anyone. MERS patients ranged from younger than 1 to 99 years old.

CDC monitors the MERS situation globally closely and works with partners to better understand the risks of this virus, including the source, how it spreads, and how infections might be prevented.

CDC recognizes the potential for MERS-CoV to spread further and cause more cases globally. We have provided information for travelers and are working with health departments, hospitals, and other partners to prepare for this. For example, in May 2014, the CDC confirmed two unlinked imported cases of MERS in the United States – one to Indiana, the other to Florida. Both cases were among healthcare providers who lived and worked in Saudi Arabia. Both traveled to the U.S. from Saudi Arabia, where they are believed to have been infected. Both were hospitalized in the U.S. and later discharged after fully recovering.

From 2012 through May 31, 2019, the Middle East respiratory syndrome coronavirus (MERS-CoV) has infected 2,442 persons and killed 842 worldwide. MERS-CoV is circulating in dromedary camels in Africa, the Middle East, and southern Asia; however, most cases of human infection have been reported in the Arabian Peninsula. Large hospital outbreaks in 2014 and 2015 motivated affected countries to invest substantially in prevention and control activities.

Of the 2,254 laboratory-confirmed cases reported to the World Health Organization from 2012 through October 1, 2018, 1,087 were classified as human-to-human transmission cases and 1,167 as community-acquired cases. During this same period, clusters/outbreaks were reported yearly (2–255 cases).

Affected countries are reducing the global threat of MERS by addressing knowledge gaps about transmission, enhancing surveillance, and strengthening the ability to detect cases early and contain outbreaks through improved infection prevention and control measures in hospitals. Critical for preventing the international spread and sustained transmission have been improved prevention and control measures in hospitals, restriction of camel movement in affected areas, stronger and more comprehensive investigations of cases and clusters, and improved communication.

CDC and other public health partners continue to monitor the MERS situation closely. The CDC recognizes the potential for MERS-CoV to spread further and cause more cases in the United States and globally. In preparation for this, The CDC has done the following:

- Continued to collaborate with international partners on epidemiologic and laboratory studies to understand MERS better
- Improved the way they collect data about MERS cases
- Increased lab testing capacity in states to detect cases
- Developed guidance and tools for health departments to conduct public health investigations when MERS cases are suspected or confirmed
- Provided recommendations for healthcare infection control and other measures to prevent disease spread
- Guided flight crews, Emergency Medical Service (EMS) units at airports, and U.S. Customs and Border Protection (CPB) officers about reporting ill travelers to CDC
- Disseminated up-to-date information to the public, international travelers, and public health partners
- Used Advanced Molecular Detection (AMD) methods to sequence the complete virus genome on specimens from the two U.S. MERS cases to help evaluate and further

describe the characteristics of MERS-CoV.

EBOLA VIRUS DISEASE

Ebola, previously known as Ebola hemorrhagic fever, is a rare and deadly disease caused by infection with one Ebola virus species. Ebola can cause disease in humans and nonhuman primates (monkeys, gorillas, and chimpanzees).

Ebola viruses are found in several African countries. Ebola was first discovered in 1976 near the Ebola River in the Democratic Republic of the Congo. Since then, outbreaks have appeared sporadically in Africa.

The natural reservoir host of the Ebola virus remains unknown. However, based on evidence and the nature of similar viruses, researchers believe that the virus is animal-borne and that bats are the most likely reservoir. In addition, four of the five virus strains occur in an animal host native to Africa.

People get Ebola through direct contact (through broken skin or mucous membranes in, for example, the eyes, nose, or mouth) with:

- Blood or body fluids (including but not limited to urine, saliva, sweat, feces, vomit, breast milk, and semen) of a person who is sick with or has died from Ebola;
- Objects (like needles and syringes) that have been contaminated with body fluids from a a person who is sick with Ebola or the body of a person who has died from Ebola,
- Infected fruit bats or primates (apes and monkeys) and
- Possibly from contact with semen from a man who has recovered from Ebola (for example, by having oral, vaginal, or anal sex)

Ebola Virus Disease has no cure or vaccine. However, due. Due to the high mortality rate and highly infectious nature of the virus, planning efforts in the United States have been focused on controlling exposure for potentially exposed travelers from the countries where the outbreaks have been rampant. In addition, because the timeframe between a person contracting the disease and exhibiting symptoms can be up to 21 days, combined with the ease of international travel, prevention, and planning have become a focal point in public health preparedness.

Four laboratory-confirmed cases (commonly known as "Ebola") occurred in the United States in 2014. Eleven patients were reported, including these four cases, and seven were medically evacuated from other countries. The first was reported in September 2014. People contracted the disease outside the US and traveled into the country as regular airline passengers or medical evacuees; two died of those nine. Two people contracted Ebola in the United States. Both were nurses who treated an Ebola patient; both recovered.

On September 30, 2014, the Centers for Disease Control and Prevention (CDC) announced that Thomas Eric Duncan, a reportedly 42-year-old (later corrected by CDC reports as a 45-year-old Liberian national visiting the United States from Liberia, had been diagnosed with Ebola in Dallas, Texas. Duncan, who had been visiting family in Dallas, was treated at Texas

Health Presbyterian Hospital Dallas. By October 4, Duncan's condition had deteriorated from "serious but stable" to "critical." On October 8, Duncan died of Ebola. The other three cases diagnosed in the United States as of October 2014 were two nurses who treated Eric Duncan and a doctor who had returned from Guinea. All three were treated and survived. Ebola case numbers dropped a year later, and countries were declared Ebola-free.

Cases reported in Uganda (formerly ZAIRE) Democratic Republic of the Congo since 2014 are as follows:

YEAR	CASES REPORTED	DEATHS	PERCENTAGE
2017	8	4	50%
2020	130	55	42.3%
2021	11	9	82%
2022	164	55	34%

ZIKA

Zika virus disease (Zika) is caused by the Zika virus that spreads to people primarily through the bite of an infected *Aedes* species mosquito. The most common symptoms of Zika are fever, rash, joint pain, and conjunctivitis (red eyes). The illness is usually mild, with symptoms lasting several days to a week after being bitten by an infected mosquito. People typically don't get sick enough to go to the hospital and rarely die of Zika. For this reason, many people might not realize they have been infected. Once a person has been infected, they are likely to be protected from future infections.

Zika virus can be spread from a pregnant woman to her fetus and has been linked to a severe congenital disability of the brain called microcephaly in babies of mothers who had Zika virus while pregnant. CDC recommends special precautions for pregnant women. Pregnant women should consider delaying travel to areas with Zika.

Zika virus was first discovered in 1947 and is named after the Zika forest in Uganda. In 1952, the first human cases of Zika were detected, and since then, outbreaks of Zika have been reported in tropical Africa, Southeast Asia, and the Pacific Islands. Thus, Zika outbreaks have probably occurred in many locations. Before 2007, at least 14 cases of Zika had been documented, although other cases were likely to have happened and were not reported. Because the symptoms of Zika are similar to those of many other diseases, many cases may not have been recognized.

In May 2015, the Pan American Health Organization (PAHO) alerted Brazil's first confirmed Zika virus infection. On Feb 1, 2016, the World Health Organization (WHO) declared the Zika virus a public health emergency of international concern (PHEIC). Local transmission has been reported in many other countries and territories. The Zika virus likely will continue to spread to new areas. As an arboviral disease, the Zika virus is nationally notifiable.

There is currently no transmission of the ZIKA virus in the United States. The last cases transmitted by mosquitoes were in Florida in 2016-2017. Since 2017, no confirmed cases have been reported from United States territories.

Zika virus disease cases* reported to ArboNET — United States, 2015-2021

Year	US States Locally acquired**	US States Travel-associated†	US Territories Locally acquired	US Territories Travel-associated
2015	0	62	9	1
2016	224	4,944	36,367	145
2017	7	445	665	1
2018	0	74	147	1
2019	0	28	73	1
2020	0	4	57††	0
2021	0	2	32††	0

*Includes confirmed and probable disease cases
**Locally acquired cases reported from Florida and Texas in 2016 and 2017
†Includes cases acquired through other routes (e.g., sexual and laboratory transmission)
††In 2020 and 2021, all locally acquired cases of Zika in the U.S. territories were diagnosed by antibody testing. Since antibodies against Zika virus can persist for years after infection, serology cannot distinguish between a recent or past infection. Additionally, Zika and dengue virus antibodies cross-react, making it difficult to diagnose which virus is the cause of the current illness. Since 2019, there have been no confirmed Zika virus disease cases reported from U.S. territories.

Atkinson County (including the Cities of Pearson and Willacoochee):

According to National Climatic Data Center (NCDC) information (see Appendix F), there are zero (0) reports of Public Health Emergency events occurring in Atkinson County (including the Cities of Pearson and Willacoochee) between 01/01/1950 and 12/31/2016.

Atkinson (including the Cities of Pearson and Willacoochee) has estimated 14 public health emergency events in 195 years with the best available information. The Historic Recurrence Interval is 13.93 years. The Historic Frequency Chance is 7.18% per year. The past 10-year Record Frequency Per Year is 0.5, the one-time 20-year frequency is 0.25, and the 50-year frequency is 0.1.

COVID-19

COVID-19 is an infectious disease caused by the novel coronavirus. This disease and virus were unknown to the country before the outbreak began in Wuhan, China, in December 2019. However, in 2020, about 1.8% of the population died from COVID-19. There are several potential strains of COVID-19, with the Delta variant arriving in the United States in 2021 and the Omicron variant in December 2021, with several variants. Variants of concern now are Omicron - B.1.1.529, BA.1, BA.1.1, BA.2, BA.3, BA.4, and BA.5. The three most common lineages of Omicron currently are BA.2, BA.4, and BA.5.

Comparison of the 2009 H1N1 to COVID-19

The chart below will show the comparison of the 2009 H1N1 to COVID-19, 2020-to the present time:

	2009 H1N1 Influenza	COVID-19
Year started – year ended	2009–2010	2020–present
Worldwide deaths	about 284,000 in the first 12 months	about 2,000,000 in the first 12 months
Virus	2009 H1N1 influenza virus	SARS-CoV-2 coronavirus
Transmission	respiratory droplets and aerosols, contact with contaminated surfaces, asymptomatic spread	respiratory droplets and aerosols, contact with contaminated surfaces, asymptomatic spread
Contagiousness	less contagious than COVID-19, contagious from 1 day before symptoms begin until 5 to 7 days after becoming sick	more contagious than 2009 H1N1 influenza, contagious from 2 days before symptoms begin until 10 days after testing positive
Symptoms	fever and chills, fatigue, cough, body aches and pains, headache, sore throat, runny or stuffy nose, digestive symptoms like diarrhea and vomiting	similar symptoms to 2009 H1N1 influenza, but also includes loss of smell and taste
Symptom onset	sudden after 1 to 4 days	gradual after 2 to 14 days
Age group most impacted	people younger than 30	adults over age 30
Illness severity	94–98 percent mild	80 percent mild, 20 percent severe or critical
Risk factors	being 65 years or older, being younger than 5 years old, being pregnant, having certain underlying health conditions	being 65 years or older, being pregnant, having certain underlying health conditions
Complications	pneumonia, worsening of underlying health conditions, secondary bacterial infections, respiratory failure, inflammation of tissues of the heart, brain, or muscles, injury to the kidneys or liver, acute respiratory distress syndrome (ARDS), sepsis	same complications as 2009 H1N1 influenza, but also includes: long-haul COVID-19, blood clots, multisystem inflammatory syndrome in children (MIS-C)
Treatments	supportive care, FDA-approved antiviral medications like oseltamivir (Tamiflu)	supportive care, FDA-approved antiviral remdesivir (Veklury), various treatments under Emergency Use Authorization
Vaccines	several vaccines developed	several vaccines developed

The H1N1influenza and COVID-19 can be transmitted in similar ways. These include Respiratory droplets and aerosols, tiny droplets made when a person infected with the virus talks, sneezes, or coughs. You can contract the virus if you inhale these droplets or aerosol particles. Also, Contaminated objects containing the virus can land on things like countertops and doorknobs, and when someone touches these things and then touches their mouth, nose, or eyes, they can contract this virus.

It is also possible for someone to pass both H1N1 and COVID-19 when they don't have any symptoms. This is known as asymptomatic transmission.

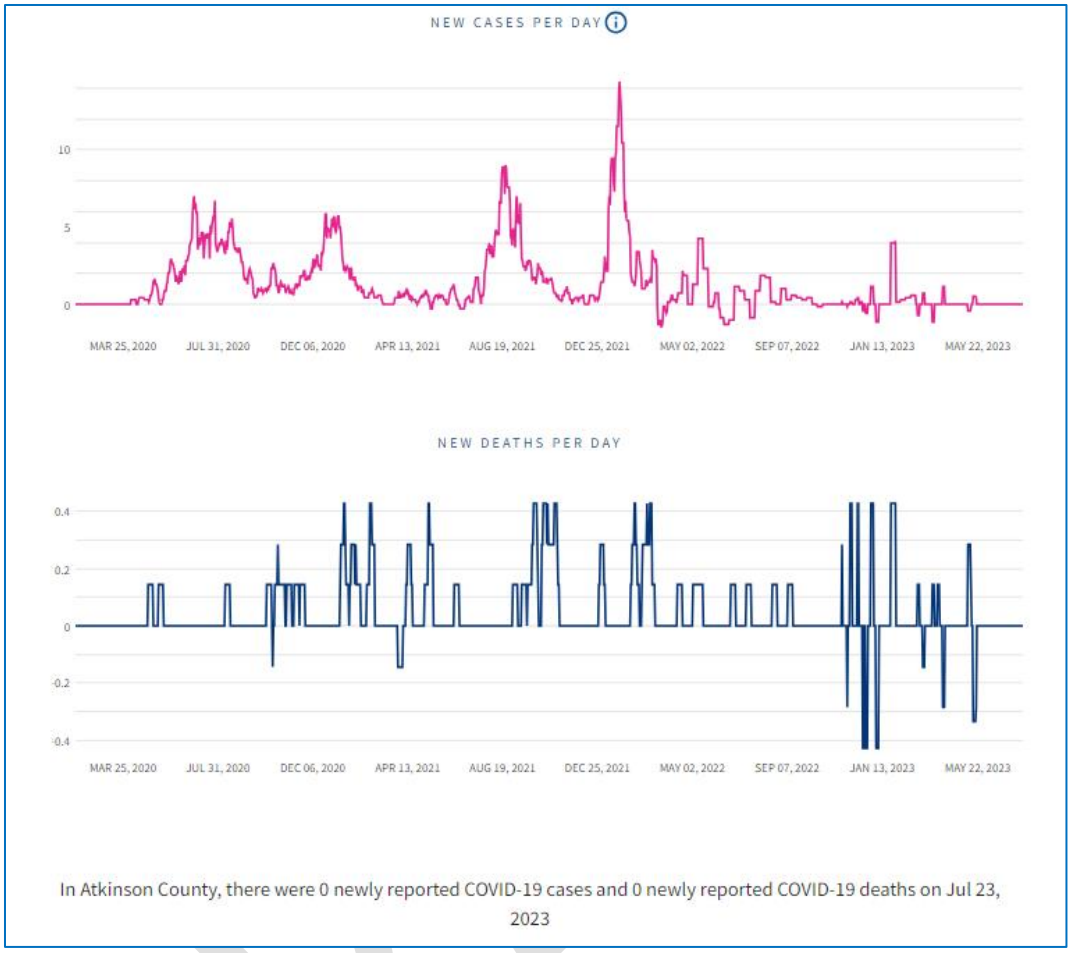
Adults aged 65 and over, pregnant people and those with certain types of underlying health conditions have a significant risk of both viruses. Underlying health risks are chronic lung diseases (such as asthma), chronic obstructive pulmonary disorder (COPD), and cystic fibrosis. Development disorders like Down Syndrome, diabetes, heart disease (including heart failure or coronary artery disease), kidney disease, liver disease, neurological conditions (such as stroke and dementia), sickle cell disease, and weakened immune systems due to cancer treatments, HIV/AIDS, or immunosuppressive drugs are also considered underlying conditions.

Additional high risk to H1N1 are children under five and people under 19 who receive long-term aspirin therapy. Other high-risk groups for COVID-19 are those with hypertension, overweight or obesity, smoking, and substance use disorders.

The difference between the two viruses is that influenza viruses are part of a viral family, Orthomyxoviridae, and comprise eight separate strands of RNA. In 2009, this influenza jumped from pigs to humans, and it was known as the Swine Flu. COVID-19 is caused by a coronavirus from the viral family known as Coronaviridae, and its genetic material consists of a single strand of RNA. This virus that causes COVID-19 is called SARS-CoV-2.

The research estimated that about 284,000 deaths occurred worldwide in the 2012 study of the 2009 H1N1. Since the end of the pandemic, the CDC estimated that an additional 75,000 deaths occurred in the United States due to this influenza.

COVID-19 causes significantly more deaths worldwide. It's estimated that approximately 2,000,000 deaths occurred in the first 12 months of this pandemic. At the time of the 2012 study, almost 3,000,000 deaths had occurred worldwide, with over 500,000 deaths in the United States. The community level of COVID-19 in Atkinson County is low**.** According to the most recent update from the CDC, the community level of COVID-19 in Atkinson County is low based on cases and hospitalizations. The number of hospitalized COVID patients has fallen in the Atkinson County area. Deaths have remained at about the same level. Recent data on the test positivity rate in Atkinson County was not available. Since the pandemic began, 2,449 cases have been reported. Since the beginning of the pandemic, at least 1 in 141 residents have died of Covid-19, a total of 58 reported deaths**.**



usafacts.org

C.D. Inventory of Assets Exposed and Potential Loses to Public Health Emergency:

Facilities that serve large volumes of people could be vehicles for transmitting infectious diseases, as in an influenza pandemic: schools, colleges, large employment centers, and large retail locations such as malls.

Public Health Emergencies involving food-borne illness are typically relatively localized because the disease affects those with an emergency. On the other hand, a publicly transmitted disease through water can affect the entire population of a city in cases where that city's water supply is concerned. In rural areas where drinking water is obtained from wells, the effects of such an emergency may be more localized.

COVID-19 and its variants still pose more risks of illness than any other health issue in Atkinson County and its cities.

Damage from Public Health Emergencies is equally likely to occur in any county area, so all assets are exposed equally to potential Public Health Emergency damage to some degree. The possible loss from a Public Health Emergency depends entirely on the scope and severity of the emergency and the capacity of emergency management agencies and healthcare facilities to respond. Public

Health Emergencies may be small and highly localized or affect an entire community, resulting in many fatalities. Due to the wide variety of possible Public Health Emergencies, it is impossible to make a precise generalized estimate of the potential loss.

E. Land Use and Development Trends Related to Public Health Emergency:

Various land use and development regulations protect Atkinson County's public health, such as animal control ordinances, plumbing codes, solid waste management regulations, and zoning regulations that minimize incompatible land uses. All such laws contribute to reducing the likelihood of a public health emergency.

See Chapter 4 for the building codes for Atkinson County, Pearson, and Willacoochee.

F. Multi-Jurisdictional Public Health Emergency Differences:

Jurisdictional differences in vulnerability to Public Health Emergencies depend on the nature and severity of the emergency and the mitigation measures in place. For example, communities not covered by any active mosquito control program may be more vulnerable to outbreaks of mosquito-borne illness. The county and its cities are susceptible to public health emergencies exacerbated by higher population density.

G. General Overall HRV Summary of Public Health Emergency Events and Their Impact on the Community:

The population of Atkinson County and the Cities of Pearson and Willacoochee are conceivably at risk from a Public Health Emergency. The level of risk depends on the emergency type and severity and the measures in place to control and respond to it. Some types of Public Health Emergencies are impossible to predict and occur swiftly, leaving little or no time to respond. Others are more gradual in their onset, and mitigation measures can be implemented beforehand.

(Data Sources: American Community Survey 5-year estimates, Health & Human Services, John Hopkins University healthline.com, and the CDC)

Section IV. Hazardous Materials Release

A. Identification of Hazard

Hazardous materials are substances or materials the Secretary of Transportation has determined that 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 rapidly with little or no warning in the form of explosions, fires, and immediate health impacts. Slower effects can include long-term environmental damage and long-term health problems.

B. Profile of Events, Frequency of Occurrences, Probability

Hazardous material spills are common, where hazardous materials are fabricated, processed, and stored. Transportation of hazardous materials by truck causes the most significant number of hazardous materials events. Many products containing hazardous chemicals are routinely used and stored in homes. These products are shipped daily on highways, railroads, waterways, and 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 classifies 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 vast area covered by the transportation network upon which such materials may be transported.

There are known hazardous material incidents between 2008 and 2017, but no reports on the USDOT Pipeline and Hazardous Materials Safety Administration's Office of Hazardous Materials Safety database exist.

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

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

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

An estimated 100% of the Residential property (4,401 of 4,401) in Atkinson County (including the Cities of Pearson and Willacoochee) could be affected by this hazard, with a total value of $33,347,244. Also, an estimated 100% of the community's Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education, and Utility properties (2,056 of 2,056) may be affected, totaling $88,051,083. The values are based on the most recent available tax roll data for Atkinson County and the Cities of Pearson and Willacoochee, provided by the Atkinson County Tax Assessor's Office.

Damage to crops is not considered in these figures. According to the Center for Agribusiness & Economic Development's 2022 Georgia Farm Gate Value Report, agricultural production's total farm gate value in Atkinson County is $93,994,300.52.

E. Land Use and Development Trends

Residential land use in Atkinson County is widely dispersed, except in Pearson and Willacoochee, where relatively higher residential density exists. Hwy 82 and 122/441 pass through the County, Pearson, and Willacoochee, and CSX rail lines pass through all jurisdictions. These areas could be vulnerable should a hazardous materials event occur.

The City of Pearson is the only community with zoning regulations and mandatory building and fire codes enforced by a building inspector. All Cities and the County participate in joint comprehensive planning and the required updates of the Service Delivery Strategy.

See Chapter 4 for the building codes for Atkinson County, Pearson, and Willacoochee.

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

F. Multi-Jurisdictional Differences

The facilities most vulnerable to hazardous materials release are within a one-mile buffer of the major highways (especially Hwy 82 and 122/441) and railways in the community.

G. Overall HRV Summary

Many in the community could be vulnerable to the release of hazardous materials. 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 the potential loss of life and property. Therefore, a key priority should be to train responders to fulfill their responsibilities and conduct periodic tests to be sure the response plan is realistic. 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. Due to the county's location on or near several major transportation routes, the potential exists for a dangerous, catastrophic material release event due to a transportation accident.

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

Chapter 4: Local Natural Hazard Mitigation Goals and Objectives

Summary of Changes:

Table 4.1 gives a brief description of each section in this chapter and a summary of the changes made.

Chapter 4 Section	Updates to Section
Thunderstorm/Wind	Updated Goals, Objectives, and Action Step Formatting, Numbering, and Data Fields; updated or Deleted Prior Action Steps and Added New Action Steps (if applicable)
Hail	Updated Goals, Objectives, and Action Step Formatting, Numbering, and Data Fields; updated or Deleted Prior Action Steps and Added New Action Steps (if applicable)
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)
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)
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)
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)
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)
Severe Winter 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)

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

Overall Community Mitigation Goals, Policies, and Values Narrative

As a joint effort between Atkinson County and all municipalities therein, this plan will serve as a comprehensive mitigation plan. The mitigation strategies, hazard identification, and other information identified in this plan will be integrated into all Atkinson County and 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 Atkinson County Comprehensive Plan during the next planning cycle.

Identified hazards and mitigation strategies of the previous Atkinson 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. Atkinson County will integrate mitigation strategies identified in this plan into the Atkinson County Comprehensive Plan, Community Wildfire Protection Plan, Continuity of Operations Plan (when applicable), and other plans. Strategies identified in the previous plan were applied to grant applications, building and zoning requirements, and development planning considerations for Atkinson County and all municipalities therein. Many of these strategies will be applied using previously identified policies and ordinances. All jurisdictions have the authority to adopt locally binding ordinances and policies to enhance the mitigation strategies in their jurisdiction.

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

Regulatory Tools/Plans	Regulatory Type: Ordinance, Resolution, Codes, Plans, Etc.	Local Authority	State Prohibited	Higher Authority
Building Codes	• 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	Yes	No	No

	• International Energy Conservation Code – 205 Edition • International Fire Code – 2018 Edition • International Electric Code – 2020 Edition • International Swimming Pool and Spa Code – 2018 Edition (with amendments)			
Capital Improvements Plan	Atkinson County Comprehensive Plan	Yes	No	No
Comprehensive Plan	Atkinson County Comprehensive Plan	Yes	No	No
Economic Development Plan	Atkinson County Comprehensive Plan	Yes	No	Yes
Emergency Response Plan	Atkinson County Local Emergency Operations Plan (LEOP)	Yes	No	Yes
Zoning Ordinances	City of Pearson Zoning Ordinance (County and Willacoochee do not currently have zoning)	Yes	No	No

The City of Pearson 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.

The City of Willacoochee 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 Atkinson County Hazard

Mitigation Planning Committee to be the most effective and appropriate method to implement local hazard mitigation actions currently.

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

It is strongly encouraged that the vulnerable population be considered when developing plans and including them in the meetings. The Department of Family and Children Services, Family Connections, and the Atkinson County Health Department should be included in these meetings to address the vulnerable population.

Overall, the priorities for each local community 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.

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

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 current goals, objectives, and action steps included in this plan. The number of resources available to the jurisdictions to expand and improve existing programs will depend on local government budgets and state and federal funding to support hazard mitigation activities.

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

The HMPUC discussed and identified the comprehensive range of mitigation goals, objectives, and action steps contained in Chapter 4 of this plan after identifying the hazards noted in Chapter 2. All community areas were considered in developing the comprehensive range of Mitigation Goals, Objectives, and Action Steps. These were identified after weighing many factors discovered

during the planning process, including risk assessment, storm history, past damage, community resources, etc.

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

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

Through this prioritization process, several projects emerged as having higher priority than others. Some 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 project completion using potential grant funding. Still, others required no significant financial commitment from the communities.

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

Relevant, comprehensive ranges of Mitigation Goals, Objectives, and Action Steps are listed below throughout the chapter. The Atkinson County EMA Director has been chosen by Atkinson County and the Cities of Pearson and Willacoochee to oversee the projects. The Atkinson County EMA has been designated by Atkinson County and the Cities of Pearson and Willacoochee as the coordinating agency for implementing and administrating these projects.

Section I. Thunderstorms/Wind

A. Community Mitigation Goals

As previously indicated in Chapter 2, this hazard may cause substantial damage to life, property, and the economy in Atkinson County and the Cities of Pearson and Willacoochee. Thunderstorms 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 I.

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. A small number of properties in Atkinson County and the Cities of Pearson and Willacoochee are listed in the National Register of Historic Places, including McCranie's Turpentine Still.

4. New Buildings and Infrastructure:

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

5. Existing Buildings and Infrastructure:

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

C. Mitigation Strategy and Recommendations:

Goal #1: Prevent or reduce damage caused by Thunderstorms and Winds in Atkinson County, the City of Pearson, and the City of Willacoochee.

Objective #1: Minimize losses to existing and future structures, especially Critical Facilities and Infrastructure, due to Thunderstorms and Winds.

Action Step #1: Disseminate information to the public concerning wind ratings, champion new construction being built to those minimum wind standards, and champion the wind retrofitting of Critical Facilities and existing buildings in Atkinson County, the City of Pearson, and the City of Willacoochee.	
Responsible Department	Atkinson County EMA, Atkinson County/City of Pearson/City of Willacoochee Building Inspection Dept.
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	General Funds
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
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 local jurisdiction. In some instances where the action step may not apply to all jurisdictions, the applicable jurisdictions are noted in the table.

E. Local Public Information and Awareness Strategy:

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

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

F. Changes from the Previous Plan

<u>Updated Action Step:</u>

Goal 1

Objective 1

- Action Step #1: updated timeframe and renumbered from #2 to #1.

Section II. Hail

A. Community Mitigation Goals

As previously indicated in Chapter 2, this hazard may cause substantial damage to life, property, and the economy in Atkinson County and the Cities of Pearson and Willacoochee. Hail is unpredictable and can happen at any place and at any time. Due to the 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 Comprehensive Range of Mitigation Options

1. Structural and Non-Structural Mitigation:

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

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

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

3. Community Values, Historic and Special Considerations:

Historic buildings exist in the community, a few of which are Critical Facilities. Historic and special considerations that pose significant challenges with retrofitting historic buildings to make them more resilient to natural hazards. A small number of properties in Atkinson County and the Cities of Pearson and Willacoochee are listed in the National Register of Historic Places, including McCranie's Turpentine Still.

4. New Buildings and Infrastructure:

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

5. Existing Buildings and Infrastructure:

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

C. Mitigation Strategy and Recommendations

Goal #1: Prevent or reduce damage caused by Hail in Atkinson County, the City of Pearson, and the City of Willacoochee.

Objective #1: Minimize losses to existing and future structures, especially Critical Facilities and Infrastructure, due to Hail in Atkinson County, the City of Pearson, and the City of Willacoochee.

Action Step #1: Encourage the public to include hail damage under insurance coverage and store equipment & vehicles under shelters in Atkinson County, the City of Pearson, and the City of Willacoochee.	
Responsible Department	Atkinson County EMA, Atkinson County/City of Pearson/City of Willacoochee Building, Public Works & Maintenance Depts.
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	General Funds
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
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 local jurisdiction. In some instances where the action step may not apply to all jurisdictions, the applicable jurisdictions are noted in the table.

E. Local Public Information and Awareness Strategy:

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

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

Updated Action Step:

Goal 1

Objective 1

- Action Step #1: updated timeframe and renumbered from #2 to #1.

Section III. Wildfires

A. Community Mitigation Goals

As previously indicated in Chapter 2, this hazard may cause substantial damage to life, property, and the economy in Atkinson County and the Cities of Pearson and Willacoochee. 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 III.

3. Community Values, Historic and Special Considerations: Historic and special considerations that pose significant challenges with retrofitting historic buildings to make them more resilient to natural hazards. A small number of properties in Atkinson County and the Cities of Pearson and Willacoochee are listed in the National Register of Historic Places, including McCranie's Turpentine Still.

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 #1: Prevent or reduce damage caused by wildfires in Atkinson County, the City of Pearson, and the City of Willacoochee.

Objective #1: Minimize losses to existing and future structures, especially Critical Facilities and Infrastructure, and woodlands due to wildfire.

Action Step #1: Provide Class A Pumper & Fire Knocker trucks, PPEs, a cooling/rehab unit, turbo drafts, thermal imaging cameras, and other equipment to all Fire Departments for wildfire use.	
Responsible Department	Atkinson County EMA, Atkinson County Fire Dept.
Anticipated Cost	$1,500,000.00
Existing & Potential Funding Sources	General Funds, DOHS-GEMA/FEMA
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
Priority	High
Status	Ongoing

Action Step #2: Plan to acquire property for new Fire Stations and/or additions to those existing stations.	
Responsible Department	Atkinson County Fire Dept.
Anticipated Cost	$1,000,000.00
Existing & Potential Funding Sources	General Funds
Jurisdiction	Atkinson County
Timeframe	2024-2029
Priority	High
Status	Ongoing

Action Step #3: In the City of Pearson and the City of Willacoochee, replace the four-inch (4") (and smaller) water lines with six-inch (6") water lines and hydrants.	
Responsible Department	Atkinson County Fire Dept.
Anticipated Cost	$500,000.00 each project
Existing & Potential Funding Sources	General Funds, DOHS-GEMA/FEMA, GA DCA CDBG, GEFA
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
Priority	High
Status	Ongoing

Action Step #4: Provide Firefighter 1 Training and Firefighter 2 Training to All Firefighters.	
Responsible Department	Atkinson County EMA, Atkinson County Fire Dept.
Anticipated Cost	$100,000.00
Existing & Potential Funding Sources	General Funds, DOHS-GEMA/FEMA, AFG
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
Priority	High
Status	Ongoing

Action Step #5: Construct a new fire department building.	
Responsible Department	Atkinson County Fire Dept.
Anticipated Cost	$500,000.00
Existing & Potential Funding Sources	General Funds, Grants
Jurisdiction	City of Pearson
Timeframe	2024-2029
Priority	High
Status	New

Objective #2: Obtain a FireWise Community Status by educating the Atkinson County, City of Pearson, and City of Willacoochee Fire Department personnel and the public on the hazards of Wildfire and the pre-disaster mitigation thereof.

Action Step #1: Maintain good public relations between the citizens of Atkinson County, the City of Pearson, the City of Willacoochee, and the County/City Fire Departments and plan to increase levels of awareness and resources during peak hazard conditions using education sessions, community meetings, prevention resources, etc.	
Responsible Department	Atkinson County EMA, Atkinson County Fire Dept.
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	General Funds, DOHS-GEMA/FEMA
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
Priority	Medium
Status	Ongoing

Action Step #2: Partner with the Georgia Forestry Commission to educate Atkinson County, the City of Pearson, and the City of Willacoochee communities and citizens on the pre-disaster mitigation of wildfire and use & develop grade school-based programs to educate children.	
Responsible Department	Atkinson County EMA
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	General Funds
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
Priority	Medium
Status	Ongoing

Action Step #3: Plan Rural Fire Department (RFD) meetings and hold joint mock fire drills for the Fire Department.	
Responsible Department	Atkinson County EMA, Atkinson County Fire Dept.
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	General Funds
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
Priority	Medium
Status	Ongoing

Objective #3: Implement priorities, projects, and recommendations in the GA Forestry Commission's "Community Wildfire Protection Plan".

Action Step #1: Create a minimum of 30 feet of defensible space around all governmental structures and recommend to homeowners & community stakeholders that they create the same space through the trimming of shrubs and vines, overhanging limbs, replacement of flammable plants with less flammable varieties and remove vegetation around chimneys.	
Responsible Department	Atkinson County EMA, Atkinson County Fire Dept., Atkinson County/City of Pearson/City of Willacoochee Public Works Depts.
Anticipated Cost	$45.00 an acre
Existing & Potential Funding Sources	General Funds, DOHS-FEMA/GEMA, USFS
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
Priority	High
Status	Ongoing

Action Step #2: Reduce structural ignitability by cleaning flammable vegetative materials from roofs and gutters, store firewood appropriately, install skirting around raised structures, store water hoses for easy access, and replace pine straw and mulch around plantings with less flammable landscaping materials around all governmental structures and recommend same to homeowners and community stakeholders.	
Responsible Department	Atkinson County EMA, Atkinson County Fire Dept., Atkinson County/City of Pearson/City of Willacoochee Public Works Depts.
Anticipated Cost	$45.00 an acre
Existing & Potential Funding Sources	General Funds, DOHS-FEMA/GEMA, USFS
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
Priority	High
Status	Ongoing

Action Step #3: Initiate Community Clean Up Day and cut, prune, and mow vegetation in shared community spaces.	
Responsible Department	Atkinson County EMA, Atkinson County Fire Dept., Atkinson County/City of Pearson/City of Willacoochee Public Works Depts.
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	General Funds
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
Priority	High
Action Step #**4*:*** Ensure Driveway Access/Right-Of-Way Clearance by maintaining vertical and horizontal clearance for emergency equipment and seeing that adequate lengths of culverts are installed to allow emergency vehicle access. Add address markers to each residential driveway.	

Responsible Department	Atkinson County/City of Pearson/City of Willacoochee Road Depts., Building Inspection Depts. & Public Works Depts.
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	General Funds
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
Priority	High
Status	Ongoing

Action Step #5: Ensure Road Access by identifying needed road improvements, and as roads are upgraded, widen to minimum standards with at least 50-foot diameter cul-de-sacs or turnarounds.	
Responsible Department	Atkinson County/City of Pearson/City of Willacoochee Road Depts., Building Inspection Depts. & Public Works Depts.
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	General Funds
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
Priority	High
Status	Ongoing

Action Step #4: Ensure Driveway Access/Right-Of-Way Clearance by maintaining vertical and horizontal clearance for emergency equipment and seeing that adequate lengths of culverts are installed to allow emergency vehicle access. Add address markers to each residential driveway.	
Responsible Department	Atkinson County/City of Pearson/City of Willacoochee Road Depts., Building Inspection Depts. & Public Works Depts.
Anticipated Cost	Staff Time and $1 million
Existing & Potential Funding Sources	General Funds
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
Priority	High
Status	Ongoing

Action Step #6: Education regarding burn permit requirements and use education opportunities from the GA Forestry Commission; Continue to make information available in Spanish.	
Responsible Department	Atkinson County/City of Pearson/City of Willacoochee Building Inspection Depts. & Public Works Depts.
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	General Funds
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
Priority	High
Status	Ongoing

Action Step #7: On adjacent Wildland Urban Interface (WUI) Lands, reduce hazardous fuels by encouraging prescribed burning for private landowners and industrial timberlands, particularly adjacent to residential areas. Seek a grant for mowing or prescribed burning in WUI areas.	
Responsible Department	Atkinson County/City of Pearson/City of Willacoochee Building Inspection Depts., Public Works Depts., Fire Dept.
Anticipated Cost	$45.00 an acre
Existing & Potential Funding Sources	General Funds, DOHS-GEMA/FEMA, USFS
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
Priority	High
Status	Ongoing

Action Step #8: Pursue wildland fuel reduction by reducing hazardous fuels and making training available for prescribed burning techniques and liability issues.	
Responsible Department	Atkinson County/City of Pearson/City of Willacoochee Building Inspection Depts., Public Works Depts., Fire Dept.
Anticipated Cost	$45.00 an acre
Existing & Potential Funding Sources	General Funds, DOHS-FEMA/GEMA, USFS
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
Priority	High
Status	Ongoing

Action Step #9: Improve existing fire lines by reducing hazardous fuels by cleaning and re-harrowing existing lines.	
Responsible Department	Atkinson County/City of Pearson/City of Willacoochee Building Inspection Depts., Public Works Depts., Fire Dept.
Anticipated Cost	$45.00 an acre
Existing & Potential Funding Sources	General Funds, DOHS-FEMA/GEMA, USFS
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
Priority	High
Status	Ongoing

Action Step #10: Ensure all personnel are trained in Wildfire Suppression.	
Responsible Department	Atkinson County EMA, Fire Dept.
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	General Funds, GA Forestry
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
Priority	High
Status	Ongoing

Action Step #11: Conduct a "How to Have a Firewise Home" Workshop for Atkinson County Residents.	
Responsible Department	Atkinson County EMA, Fire Dept.
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	General Funds, GA Forestry
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
Priority	High
Status	Ongoing

Action Step #12: Conduct a "Firewise" Workshop for Atkinson County Community Leaders.	
Responsible Department	Atkinson County EMA, Fire Dept.
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	General Funds, GA Forestry
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
Priority	High
Status	Ongoing

Action Step #13: Conduct a Spring Clean-up Event Every Spring.	
Responsible Department	Atkinson County EMA, Fire Dept.
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	General Funds, GA Forestry
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
Priority	High
Status	Ongoing

Action Step #14: Develop and distribute Firewise informational packets to code enforcement, realtors & insurance agents.	
Responsible Department	Atkinson County EMA, Fire Dept.
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	General Funds, GA Forestry
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
Priority	High
Status	Ongoing

Action Step #15: Create and Exhibit a Wildfire Protection Display at Local Events and Hold Open Houses at Fire Stations to Develop Community Support and Understanding of Local Fire Departments and Current Issues.	
Responsible Department	Atkinson County EMA, Fire Dept.
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	General Funds, GA Forestry
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
Priority	High
Status	Ongoing

Action Step #16: Invite the Local News Media to Community "Firewise" Functions for News Coverage and Regularly Submit Press Releases Documenting Wildfire Risk Improvements.	
Responsible Department	Atkinson County EMA, Fire Dept.
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	General Funds, GA Forestry
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
Priority	High
Status	Ongoing

Action Step #17: Create an Atkinson County WUI Fire Council to Accurately Assess Community Wildfire Protection Plan Progress and Effectiveness and Implement Programs & Projects.	
Responsible Department	Atkinson County EMA, Fire Dept.
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	General Funds, GA Forestry
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
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 local jurisdiction. In some instances where the action step may not apply to all jurisdictions, the applicable jurisdictions are noted in the table.

E. Local Public Information and Awareness Strategy:

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

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

F. Changes from the Previous Plan

<u>Updated Action Steps:</u>

Goal 1

Objective 1

- Renumbered all action steps Action Steps following Action Step #1
- Updated timeframes for all Action Steps
- Clarified wording on Objective 1; Action Steps: 1 and 3

Goal 1

Objective 2

- Renumbered all action steps. Action Steps
- Updated timeframes for all Action Steps
- Clarified wording on Objective 2; Action Steps: 1 and 3

Goal 1

Objective 3

- Clarified wording on Action Steps: 1, 4, 6, 7
- Adjusted cost estimates on Action Steps: 1, 2, 4, 7, 8, and 9

Section IV. Floods

A. Community Mitigation Goals

As previously indicated in Chapter 2, this hazard may cause substantial damage to life, property, and the economy in Atkinson County and the Cities of Pearson and Willacoochee. 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 waterways in the community are the Willacoochee River (which forms the western boundary of Atkinson County and passes near the City of Willacoochee), Red Bluff Creek, and the Satilla River. Due to these facts, the Atkinson 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 Atkinson County and the Cities of Pearson and Willacoochee.

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.

3. Community Values, Historic and Special Considerations:

Historic buildings exist in the community, a few of which are Critical Facilities. Historic and special considerations that pose significant challenges with retrofitting historic buildings to make them more resilient to natural hazards. A small number of properties in Atkinson County and the Cities of Pearson and Willacoochee are listed in the National Register of Historic Places, including McCranie's Turpentine Still.

4. New Buildings and Infrastructure:

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

5. Existing Buildings and Infrastructure:

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

C. Mitigation Strategy and Recommendations:

Goal #1: Prevent or reduce damage caused by Floods in Atkinson County, the City of Pearson, and the City of Willacoochee.

Objective #1: Minimize losses to existing and future structures, especially Critical Facilities and Infrastructure, due to Floods.

Action Step #1: Conduct storm-water drainage replacement, repair & cleaning, and maintain canals in Atkinson County, the City of Pearson, and the City of Willacoochee.	
Responsible Department	Atkinson County/City of Pearson/City of Willacoochee Public Works Depts.
Anticipated Cost	$1 million for each project
Existing & Potential Funding Sources	General Funds, GA DCA CDBG
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
Priority	High
Status	Ongoing

Action Step #2: Plan flood and drainage projects in Atkinson County in the Jimmy Grantham area, New Harmony Grove to Old Douglas Highway, Bent Pine Road off U.S. #441 to Coffee County Line, in high-risk areas and areas lacking curb & gutter.	
Responsible Department	Atkinson County Public Works Depts.
Anticipated Cost	$1 million for each project
Existing & Potential Funding Sources	General Funds, GA DCA CDBG, GDOT
Jurisdiction	Atkinson County
Timeframe	2024-2029
Priority	High
Status	Ongoing

Action Step #3: Plan flood and drainage projects in the City of Pearson behind Cady Bag, on Austin Avenue from Water Tower to four lanes, on U.S. #441 north of SR #82, in high-risk areas and areas lacking curb & and gutter.	
Responsible Department	City of Pearson Public Works Depts.
Anticipated Cost	$1 million for each project
Existing & Potential Funding Sources	General Funds, GA DCA CDBG, GDOT
Jurisdiction	City of Pearson
Timeframe	2024-2029
Priority	High
Status	Ongoing

Action Step #4: Plan flood and drainage projects in the City of Willacoochee in high-risk areas and areas lacking curb & gutter.	
Responsible Department	City of Willacoochee Public Works Depts.
Anticipated Cost	$1 million for each project
Existing & Potential Funding Sources	General Funds, GA DCA CDBG, GDOT
Jurisdiction	City of Willacoochee
Timeframe	2024-2029
Priority	High
Status	Ongoing

Action Step #5: Work to preserve wetland areas in Atkinson County, the City of Pearson, and the City of Willacoochee to ensure that excess water can be captured.	
Responsible Department	Atkinson County/City of Pearson/City of Willacoochee Building Inspection Depts., Atkinson County EMA
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	General Funds
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
Priority	Medium
Status	Ongoing

Action Step #6: After flood events or other hazard events in Atkinson County, the City of Pearson and the City of Willacoochee attempt to analyze properties affected to determine if events have occurred in the past and attempt to mitigate or purchase, if necessary.	
Responsible Department	Atkinson County/City of Pearson/City of Willacoochee Public Works Depts., Atkinson County EMA
Anticipated Cost	$500,000
Existing & Potential Funding Sources	General Funds, DOHS-GEMA/FEMA
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
Priority	Medium
Status	Ongoing

Action Step #7 – *Completed (see Subsection F).*

Action Step #8: Work towards a database to record the depth of flooding to determine the extent of potential damage.	
Responsible Department	Atkinson County EMA
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	General Funds, DOHS-GEMA/FEMA
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
Priority	High
Status	Ongoing

NEW Action Step #9: Add "Turn Around Don't Drown" signs in English and Spanish.	
Responsible Department	Atkinson County EMA
Anticipated Cost	$50,000
Existing & Potential Funding Sources	General Funds, DOHS-GEMA/FEMA
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
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 local jurisdiction. In some instances where the action step may not apply to all jurisdictions, the applicable jurisdictions are noted in the table.

E. Local Public Information and Awareness Strategy.

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

The major criteria to measure plan success will be the number of Goals, Objectives, and Action Steps, or components thereof, 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

Objective 1

- Action Step #7: The City of Willacoochee will join the National Flood Insurance Program as soon as possible.

Updated Action Steps:

Goal 1

Objective 1

- Renumbered all Action Steps
- Updated timeframes for all Action Steps
- Adjusted cost estimates on Action Steps: 1, 2, 3, 4, 6, and 7

New Action Steps:

Goal 1

Objective 1

- Action Step #9: Add "Turn Around Don't Drown" signs in English and Spanish.

Section V. Drought

A. Community Mitigation Goals

As previously indicated in Chapter 2, drought may cause substantial economic, property, and personal damage in Atkinson County and the Cities of Pearson and Willacoochee, particularly in 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 the 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 V.

3. Community Values, Historic and Special Considerations:

Historic buildings exist in the community, a few of which are Critical Facilities. Historic and special considerations that pose significant challenges with retrofitting historic buildings to make them more resilient to natural hazards. A small number of properties in Atkinson County and the Cities of Pearson and Willacoochee are listed in the National Register of Historic Places, including McCranie's Turpentine Still.

4. New Buildings and Infrastructure:

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

5. Existing Buildings and Infrastructure:

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

C. Mitigation Strategy and Recommendations

Goal #1: Prevent or reduce damage caused by Drought in Atkinson County, the City of Pearson, and the City of Willacoochee.

Objective #1: Minimize losses to existing and future structures, especially Critical Facilities and Infrastructure, due to Drought.

Action Step #1: Replace antiquated water & sewer lines and equipment prone to failure in the City of Pearson and the City of Willacoochee through CDBG grant funds and other funds when available.	
Responsible Department	City of Pearson/City of Willacoochee Public Works Depts.
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	General Funds, GA DCA CDBG
Jurisdiction	City of Pearson, City of Willacoochee
Timeframe	2024-2029
Priority	High
Status	Ongoing

Action Step #2: Work with the County Extension Agent to distribute literature related to drought best management practices in Atkinson County, the City of Pearson, and the City of Willacoochee.	
Responsible Department	Atkinson County/City of Pearson/City of Willacoochee Public Works Depts.
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	General Funds
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
Priority	High
Status	Ongoing

Action Step #3: Promote awareness of using surface water and surface artesian flow to irrigate well systems in Atkinson County, the City of Pearson, and the City of Willacoochee.	
Responsible Department	Atkinson County/City of Pearson/City of Willacoochee Building Inspection Depts., Atkinson County EMA
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	General Funds
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
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 local jurisdiction. In some instances where the action step may not apply to all jurisdictions, the applicable jurisdictions are noted in the table.

E. Local Public Information and Awareness Strategy:

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

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

F. Changes from the Previous Plan

<u>Updated Action Steps:</u>

Goal 1

Objective 1

- Renumbered all Action Steps
- Updated timeframes for all Action Steps
- Adjusted wording on Action Steps: 2 and 3

Section VI. 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 Atkinson County and the Cities of Pearson and Willacoochee. 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 VI.

3. Community Values, Historic and Special Considerations:

Historic buildings exist in the community, a few of which are Critical Facilities. Historic and special considerations that pose significant challenges with retrofitting historic buildings to make them more resilient to natural hazards. A small number of properties in Atkinson County and the Cities of Pearson and Willacoochee are listed in the National Register of Historic Places, including McCranie's Turpentine Still.

4. New Buildings and Infrastructure:

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

5. Existing Buildings and Infrastructure:

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

C. Mitigation Strategy and Recommendations

Goal #1: Prevent or reduce damage caused by Hurricanes/Tropical Storms in Atkinson County, the City of Pearson, and the City of Willacoochee.

Objective #1: Minimize losses to existing and future structures, especially Critical Facilities and Infrastructure and the public, due to Hurricanes/Tropical Storms.

Action Step #1: Continue to support C.E.R.Ts (Community Emergency Response Teams) in Atkinson County and the Cities of Pearson and Willacoochee.	
Responsible Department	Atkinson County EMA
Anticipated Cost	$100,000
Existing & Potential Funding Sources	General Funds
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
Priority	High
Status	Ongoing

Action Step #2: Work with GDOT to improve unsafe roads in Atkinson County, the City of Pearson, and the City of Willacoochee that are already, or could be, evacuation routes.	
Responsible Department	Atkinson County/City of Pearson/City of Willacoochee Road Depts., Atkinson County EMA
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	General Funds, GDOT, TIA
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
Priority	High
Status	Ongoing

Action Step #3: Apply for a Red Cross storage trailer and construct a storage building for storage of emergency materials needed for shelters, etc., relocate materials from Brunswick, and secure additional cots and materials, medications, and dehydrated foods for shelters.	
Responsible Department	Atkinson County EMA, Atkinson County Commission, City of Pearson City Council, City of Willacoochee City Council
Anticipated Cost	$1 million
Existing & Potential Funding Sources	General Funds, DOHS-GEMA/FEMA, Red Cross
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
Priority	Medium
Status	Ongoing

Action Step #4: Order a new Ambulance in order to serve the county in emergency situations.	
Responsible Department	Atkinson County EMS
Anticipated Cost	$300,000.00
Existing & Potential Funding Sources	General Funds, grants
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
Priority	High
Status	Ongoing

Action Step #5: Replace one police patrol car in the City of Pearson, City of Willacoochee, and Atkinson County.	
Responsible Department	City of Willacoochee City Council
Anticipated Cost	$240,000.00
Existing & Potential Funding Sources	General Funds
Jurisdiction	City of Willacoochee
Timeframe	2024-2029
Priority	High
Status	Ongoing

Objective #2: Advise the public of health and safety precautions and procedures necessary during Hurricanes/Tropical Storms and other events and on pre-disaster mitigation, in general, in Atkinson County, the City of Pearson, and the City of Willacoochee.

Action Step #1: Acquire and distribute literature from state agencies regarding disaster health & safety issues in Atkinson County, the City of Pearson, and the City of Willacoochee.	
Responsible Department	Atkinson County EMA
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	General Funds
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
Priority	High
Status	Ongoing

Action Step #2: Distribute information concerning pre-disaster mitigation to area news markets by speaking at schools and civic clubs in Atkinson County, the City of Pearson, and the City of Willacoochee.	
Responsible Department	Atkinson County EMA
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	General Funds
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
Priority	High
Status	Ongoing

Objective #3: Ensure reliable electrical power and communications efficiency at Critical Facilities and among agencies during Hurricanes/Tropical Storms and other events in Atkinson County, the City of Pearson, and the City of Willacoochee.

Action Step #1: Obtain mobile and fixed generators (including transfer switches) to provide backup power where needed and pre-wire Critical Facilities & gas pumps for generator use in Atkinson County, the City of Pearson, and the City of Willacoochee.	
Responsible Department	Atkinson County EMA
Anticipated Cost	$1 million
Existing & Potential Funding Sources	General Funds, DOHS-GEMA/FEMA, Red Cross
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
Priority	High
Status	Ongoing

Action Step #2: Continue to install GPS location systems in Emergency Vehicles.	
Responsible Department	Atkinson County EMA/Sheriff/FD/EMS, City of Pearson/City of Willacoochee PD/FD
Anticipated Cost	$1,000.00 each
Existing & Potential Funding Sources	General Funds, DOHS-GEMA/FEMA
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
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 local jurisdiction. In some instances where the action step may not apply to all jurisdictions, the applicable jurisdictions are noted in the table.

E. Local Public Information and Awareness Strategy:

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

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

F. Changes from the Previous Plan

<u>Updated Action Steps:</u>

Goal 1

Objective 1

- Renumbered all Action Steps
- Updated timeframes for all Action Steps

- Adjusted wording on Action Steps: 1, 2, 3, 4, and 5
- Adjusted cost estimates on Action Steps: 1, 3, 4, and 5

Updated Action Steps:

Goal 1

Objective 2

- Updated timeframes for all Action Steps

Updated Action Steps:

Goal 1

Objective 3

- Updated timeframes for all Action Steps
- Adjusted wording on Action Step: 2
- Adjusted cost estimates on Action Steps: 1 and 2

Section VII. Tornadoes

A. Community Mitigation Goals

As previously indicated in Chapter 2, this hazard may cause substantial damage to life, property, and the economy in Atkinson County and the Cities of Pearson and Willacoochee. 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 VII.

3. Community Values, Historic and Special Considerations:

Historic buildings exist in the community, a few of which are Critical Facilities. Historic and special considerations that pose significant challenges with retrofitting historic buildings to make them more resilient to natural hazards. A small number of properties in Atkinson County and the Cities of Pearson and Willacoochee are listed in the National Register of Historic Places, including McCranie's Turpentine Still.

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 #1: Prevent or reduce damage caused by Tornadoes in Atkinson County, the City of Pearson, and the City of Willacoochee.

Objective #1: Minimize losses to existing and future structures, especially Critical Facilities and Infrastructure, due to Tornadoes.

Action Step #1: Continue to use the building inspection program to inspect for adequate tie-downs on manufactured housing in Atkinson County, the City of Pearson, and the City of Willacoochee.	
Responsible Department	Atkinson County/City of Pearson/City of Willacoochee Building Inspection Dept.
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	General Funds
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
Priority	High
Status	Ongoing

Action Step #2: Plan for pre-disaster mitigation in Tornado & other hazard seasons by preparing public service announcements and brochures and soliciting business participation in distributing information.	
Responsible Department	Atkinson County EMA
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	General Funds
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
Priority	High
Status	Ongoing

Action Step #3: Construct and promote safe shelter rooms in Atkinson County, the City of Pearson, and the City of Willacoochee, where Tornadoes and other disasters frequent.	
Responsible Department	Atkinson County EMA, Atkinson County/City of Pearson/City of Willacoochee Building Inspection Depts.
Anticipated Cost	$5 million and Staff Time
Existing & Potential Funding Sources	General Funds
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
Priority	High
Status	Ongoing

Action Step #4 – *Completed (see Subsection F).*

Action Step #5: Purchase local weather stations and radios for real-time weather situations for all responders, citizens, businesses, stakeholders, and public buildings. Disseminate information to the public on the importance of having and using weather stations and radios.	
Responsible Department	Atkinson County EMA, Atkinson County/City of Pearson/City of Willacoochee Building Inspection Depts.
Anticipated Cost	$40,000 and Staff Time
Existing & Potential Funding Sources	General Funds
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
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 local jurisdiction. In some instances where the action step may not apply to all jurisdictions, the applicable jurisdictions are noted in the table.

E. Local Public Information and Awareness Strategy:

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

The major criteria to measure plan success will be the number of completed Goals, Objectives, and Action Steps, or components thereof, 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

Objective 1

- Develop a grid pattern/address-based system to physically notify and check on high-risk residents both before and after natural disaster events in the City of Pearson, the City of Willacoochee, and populated areas of Atkinson County.

Updated Action Steps:

Goal 1

Objective 1

- Updated timeframes for all Action Steps
- Adjusted wording on Action Steps: 1 and 3
- Adjusted cost estimates on Action Step: 3

New Action Step:

Goal 1

Objective 1

- Action Step #5: Purchase local weather stations and radios for real-time weather situations for all responders, citizens, businesses, stakeholders, and public buildings. Disseminate information to the public on the importance of having and using weather stations and radios.

Section VIII. Severe Winter Storms

A. Community Mitigation Goals

As indicated in Chapter 2, severe winter storms may cause substantial economic, property, and personal damage in Atkinson County and the Cities of Pearson and Willacoochee. Severe winter storms are usually predictable ahead of time, but they can still cause substantial problems. Atkinson County and the Cities of Pearson and Willacoochee do not have the specialized equipment used during severe winter storms that most northern counties and cities possess. The HMPUC believes that, due to the damage these severe winter storms can cause, a comprehensive range of Mitigation Goals, Objectives, and Action Steps (contained in Section C below) should be implemented to reduce this hazard's potential impact on the community.

B. Identification and Analysis of Comprehensive Range of Mitigation Options

1. Structural and Non-Structural Mitigation:

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

3. Community Values, Historic and Special Considerations:

Historic buildings exist in the community, a few of which are Critical Facilities. Historic and special considerations that pose significant challenges with retrofitting historic buildings to make them more resilient to natural hazards. A small number of properties in Atkinson County and the Cities of Pearson and Willacoochee are listed in the National Register of Historic Places, including McCranie's Turpentine Still.

4. New Buildings and Infrastructure:

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

5. Existing Buildings and Infrastructure:

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

C. Mitigation Strategy and Recommendations

Goal #1: Prevent or reduce damage caused by Severe Winter Storms in Atkinson County, the City of Pearson, and the City of Willacoochee.

Objective #1: Minimize losses to existing and future structures, especially Critical Facilities and Infrastructure, due to Severe Winter Storms.

Action Step #1: Continue the policy of wrapping exposed piping with insulation and installing new insulation layers at critical facilities in Atkinson County, the City of Pearson, and the City of Willacoochee.	
Responsible Department	Atkinson County/City of Pearson/City of Willacoochee Public Works Depts.
Anticipated Cost	$10,000.00
Existing & Potential Funding Sources	General Funds
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
Priority	High
Status	Ongoing

Action Step #2: Maintain temperatures above 32 degrees to prevent freezing in government-owned occupied and unoccupied structures in Atkinson County, the City of Pearson, and the City of Willacoochee.	
Responsible Department	Atkinson County/City of Pearson/City of Willacoochee Public Works Depts.
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	General Funds
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
Priority	High
Status	Ongoing

Action Step #3: Disseminate information to the public concerning Severe Winter Storms, champion new construction being built to appropriate low-temperature ratings, and existing buildings being retrofitted in Atkinson County, the City of Pearson, and the City of Willacoochee.	
Responsible Department	Atkinson County EMA, Atkinson County/City of Pearson/City of Willacoochee Building Inspection Depts.
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	General Funds
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
Priority	High
Status	Ongoing

Action Step #4: Construct a warming shelter for all residents of Atkinson County.	
Responsible Department	Atkinson County EMA, Atkinson County/City of Pearson/City of Willacoochee Building Inspection Depts.
Anticipated Cost	$1 million
Existing & Potential Funding Sources	General Funds, grants
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
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 local jurisdiction. In some instances where the action step may not apply to all jurisdictions, the applicable jurisdictions are noted in the table.

E. Local Public Information and Awareness Strategy:

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

The major criteria to measure plan success will be the number of Goals, Objectives, and Action Steps, or components thereof, 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

Updated Action Steps:

Goal 1

Objective 1

- Updated timeframes for all Action Steps
- Adjusted cost estimates on Action Step: 1

New Action Steps:

Goal 1

Objective 1

- Action Step #4: Construct a warming shelter for all residents of Atkinson County.

Chapter 5.
Local Human-Caused Hazard Mitigation Goals and Objectives

Overall Community Mitigation Goals, Policies, and Values Narrative

The Atkinson County Hazard Mitigation Plan's purpose is to assess the area's vulnerability to natural hazards and identify those action steps that may need to be undertaken to reduce the potential loss of life and property from identified hazards that originate from human activity. 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 can be developed to protect the community from the identified hazards. Using the findings from the Risk Assessment as a guide, the HMPUC has set 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 respond promptly and effectively to hazardous events.

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

This section is a new part of this plan update; the previous plan did not contain a section on human-caused hazards.

Section I. Cyberattacks

A. Community Mitigation Goals

As previously indicated in Chapter 3, a cyberattack may cause substantial damage to life, health, property, and the economy in Atkinson County and the Cities of Pearson and Willacoochee. Such events can occur without warning, take various forms, and target multiple organizations, individuals, or infrastructure. The HMPUC believes that because these events can cause great harm to the community, 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 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. Historic and special considerations that pose significant challenges with retrofitting historic buildings to make them more resilient to natural hazards. Several properties in Atkinson County and the Cities of Pearson and Willacoochee are listed in the National Register of Historic Places, including McCranie's Turpentine Still.

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 residents and infrastructure of Atkinson County from the possible effects of cyberattacks.

Objective 1: Enhance the resilience of the local power grid in the face of a cyberattack.

Action Step #1: Coordinate with companies providing power in the community to ensure that the power grid is current and that the latest and best measures are taken for resilience against cyberattacks.	
Responsible Department	EMA, Power Companies
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
Priority	High
Status	Ongoing

Objective 2: Increase awareness among the community's residents of the danger of internet scams, phishing, hacking, ransomware, and other computer-related crimes.

Action Step #1: Distribute literature and information via print and social media to raise awareness of the danger of internet scams, phishing, hacking, ransomware, and other computer-related crimes.	
Responsible Department	EMA, Sheriff's Department, Police Departments
Anticipated Cost	$1,000/yr.
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
Priority	High
Status	Ongoing

Objective 3: Improve the resistance of local governments and agencies in the face of a cyberattack.

Action Step #1: Ensure that the computer systems of the local governments and public safety organizations are up to date and equipped with the latest and best antivirus software and other security measures.	
Responsible Department	Atkinson County, City of Pearson, City of Willacoochee, EMA, Sheriff's Department, Police Departments
Anticipated Cost	$5,000
Existing & Potential Funding Sources	Local Operating Funds
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
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 local jurisdiction. In some instances where the action step may not apply to all jurisdictions, the applicable jurisdictions are noted in the table.

E. Local Public Information and Awareness Strategy:

All sections of the Plan shall be monitored and evaluated annually by the County Emergency Management Agency. Incremental accomplishments of Mitigation Goals, Objectives, and Action

Steps will be reported to the public through appropriate means (news media, social media, web pages, City Council and County Commission meetings, etc.). By utilizing available resources, each jurisdiction will keep the public constantly informed of the development of these strategies and how citizens can best assist with and/or take advantage of these efforts.

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

F. Changes from the Previous Plan

<u>Updated Action Steps:</u>
Goal 1
Objectives 1-3

- Updated timeframes for all Action Steps
- Adjusted cost estimate on Objective 3: Action Step1

Section II. Civil Unrest

A. Community Mitigation Goals

As previously indicated in Chapter 3, a civil unrest event may cause substantial damage to life, property, and the economy in Atkinson County and the Cities of Pearson and Willacoochee. Such events can occur with little or no warning, giving the community no time to prepare and overwhelming public safety resources. The HMPUC believes that because these events can 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 II.

3. Community Values, Historic and Special Considerations:

Historic buildings exist in the community, a few of which are Critical Facilities. Historic and special considerations that pose significant challenges with retrofitting historic buildings to make them more resilient to natural hazards. A small number of properties in Atkinson County and the Cities of Pearson and Willacoochee are listed in the National Register of Historic Places, including McCranie's Turpentine Still.

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 residents, businesses, and infrastructure of Atkinson County from the possible effects of civil unrest.

Objective 1: Enhance the capacity of the Atkinson County Emergency Management Agency, public safety, and first responders to respond effectively and efficiently to a civil unrest event.

Action Step #1 – *Completed (see Subsection F).*

Action Step #2: Purchase new police cars every two years	
Responsible Department	Sheriff's Department, Police Departments
Anticipated Cost	$50,000 per car
Existing & Potential Funding Sources	Grants
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
Priority	High
Status	Ongoing

Action Step #3: Implement a training plan for Sheriff/Fire/EMS	
Responsible Department	Sheriff's Department, Police Departments, EMA, EMS, Fire Department
Anticipated Cost	Staff time
Existing & Potential Funding Sources	Local operating funds
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
Priority	High
Status	Ongoing

Action Step #4: Purchase new EMS/Fire vehicles and ambulances	
Responsible Department	Sheriff's Department, Police Departments, EMA, EMS, Fire Department
Anticipated Cost	$350,000 every two years
Existing & Potential Funding Sources	Local operating funds, grants
Jurisdiction	Atkinson County, City of Pearson, City of Willacoochee
Timeframe	2024-2029
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 local jurisdiction. In some instances where the action step may not apply to all jurisdictions, the applicable jurisdictions are noted in the table.

E. Local Public Information and Awareness Strategy:

All sections of the Plan shall be monitored and evaluated annually by the County Emergency Management Agency. Incremental accomplishments of Mitigation Goals, Objectives, and Action Steps will be reported to the public through appropriate means (news media, social media, web pages, City Council and County Commission meetings, etc.). By utilizing available resources, each

jurisdiction will keep the public constantly informed of the development of these strategies and how citizens can best assist with and/or take advantage of these efforts.

The major criteria to measure plan success will be the number of Goals, Objectives, and Action Steps, or components thereof, 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 Step:
Goal 1
Objective 1
Action Step #1: Design and build a new jail.

Updated Action Steps:
Goal 1
Objective 1

- Updated timeframes for all Action Steps
- Adjusted cost estimate on Action Step: 2

New Action Steps:
Goal 1
Objective 1
Action Step #4: Purchase new EMS/Fire vehicles and ambulances

Section III Public Health Emergency

A. Community Mitigation Goals:

As previously indicated in Chapter 3 Section I, a Public Health Emergency may cause substantial damage to life, health, and the economy in Charlton County and the Cities of Folkston and Homeland. Public health emergencies are unpredictable and could happen at any place and time in Charlton County or the cities of Folkston and Homeland. The Charlton County HMPUC believes that, since Public Health Emergencies can cause such damage, a comprehensive range of Mitigation Goals, Objectives, and Action Steps (contained in Section C below) should be implemented to reduce the impact of Public Health Emergencies on Charlton County, the City of Folkston and the City of Homeland.

B. Identification and Analysis of Comprehensive Range of Mitigation Options

The Charlton County HMPUC has identified a comprehensive range of Mitigation Goals, Objectives, and Action Steps (Section C below) to reduce or eliminate the damage caused by Public Health Emergencies in Charlton County, the City of Folkston, and the City of Homeland. These include non-structural solutions that the Committee has considered.

1. **Structural and Non-Structural Mitigation:**
   The comprehensive range of Mitigation Goals, Objectives, and Action Steps (in Section C below) includes non-structural mitigation solutions that the Charlton County HMPUC has considered.

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, Historical and Special Considerations:**
   Charlton County, Folkston, and the City of Homeland have no historical or special considerations that pose significant challenges regarding the potential Hazard Mitigation Drought Planning Activities involving historic buildings. The comprehensive range of Mitigation Goals, Objectives, and Action Steps for this hazard are outlined below in Section C.

4. **New Buildings and Infrastructure:**
   The public health emergency risk is mainly Charlton County's residents, not buildings and infrastructure. Therefore, the mitigation strategy and recommendations include action steps designed to protect the health and safety of the public rather than new buildings and infrastructure.

5. **Existing Buildings and Infrastructure:**
   The public health emergency risk is mainly Charlton County's residents, not buildings and infrastructure. Therefore, the mitigation strategy and recommendations include action steps designed to protect the health and safety of the public rather than existing buildings and infrastructure.

C. Mitigation Strategy and Recommendations

Goal #1: Protect the population of Charlton County from the effects of Public Health Emergencies.

Objective #1: Prepare ways to reduce public exposure to potential or active Public Health Emergencies.

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, CVID-19 shots, and other immunization clinics.	
Responsible Department	Atkinson County Health Department
Anticipated Cost	$100,000
Existing & Potential Funding Sources	Local Operating Funds, GEMA. FEMA, Health Department
Jurisdiction	Unincorporated Atkinson County & Cities of Pearson and Willacoochee
Timeframe	2024-2029
Priority	High
Status	New

Action Step #2: Identify vulnerable populations (homeless, migrants, low-income, etc.) and identify community groups to work with to reach and educate these populations regarding health issues.	
Responsible Department	Atkinson County Health Department
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds, GEMA. FEMA, Health Department
Jurisdiction	Unincorporated Atkinson County & Cities of Pearson and Willacoochee
Timeframe	2024-2029
Priority	High
Status	New

Action Step #3: Develop a plan to identify community locations to obtain and distribute medical countermeasures, safe drinking water, food, ice, tarps, etc.	
Responsible Department	Atkinson County Health Department
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds, GEMA. FEMA, Health Department
Jurisdiction	Unincorporated Atkinson County and the Cities of Pearson and Willacoochee
Timeframe	2024-2029
Priority	High

Status	New

Action Step #4: Approach large businesses about working with EMA on developing public health emergency plans.	
Responsible Department	Atkinson County EMA & Health Department
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	Local Operating Funds, GEMA. FEMA, Health Department
Jurisdiction	Unincorporated Atkinson County & and the Cities of Pearson and Willacoochee
Timeframe	2024-2029
Priority	High
Status	New

Objective #2 (New): To prepare all key personnel to help build preparedness for threats and hazards during Public Health Emergencies and other events and on hazard mitigation in general within Charlton County, the City of Folkston, and the City of Homeland.

Action Step #1 (New Action Step): Conduct "tabletop" exercises to help build preparedness for threats and hazards by providing a low-risk, cost-effective environment to test and validate plans, policies, and capabilities and to identify resource requirements, capability gaps, strengths, areas for improvement, and potential best practices.	
Responsible Department	Atkinson County EMA, GEMA
Anticipated Cost	Staff Time
Existing & Potential Funding Sources	GEMA
Jurisdiction	Unincorporated Atkinson County & Cities of Pearson and Willacoochee
Timeframe	2024-2029
Priority	High
Status	New

D. Special Multi-Jurisdictional Strategy and Considerations:

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

E. Local Public Information and Awareness Strategy:

The Charlton County EMA shall monitor and evaluate all plan sections annually. In addition, incremental accomplishments of Mitigation Goals, Objectives, and Action Steps will be reported to the public through appropriate means (TV, Web Site, Local Newspaper, City Council Meetings, County Commission Meetings, social media, etc.). By utilizing available resources, each

jurisdiction will keep the public constantly informed of the development of these strategies and how citizens can best assist with and/or take advantage of these efforts.

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

F. Action Steps:

Goal 1, Objective 1

Action Step #1: UNCHANGED/CONTINUE.

Action Step #2: UNCHANGED/CONTINUE.

Action Step #3: UNCHANGED/CONTINUE.

Action Step #4: UNCHANGED/CONTINUE, communities' regular budgets EE Criteria were completed for each Action Step. In addition, please see the worksheets contained in Appendix D.

Chapter 6:
Executing The Plan

Summary of changes:

- Revised and updated language.

Section I.
Implementation of the Action Plan

A. Administrative Actions

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

B. Authority and Responsibility

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

C. Prioritization

1. Methodology for Prioritization

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

2. Use of Cost Benefit Analysis

The data provided in Worksheet 3 will quantify the number of persons and/or property at risk from each hazard. Combined with the criteria in Worksheet 4, local governments can

assess the potential value of at-risk properties and the resulting benefits from the proposed action steps.

In prioritizing projects, the local governments will also utilize cost-benefit analysis (CBA) to evaluate the feasibility of a significant project. CBA is a well-established method for quantitatively comparing the benefits and costs of mitigation projects. The result is a Benefit-Cost Ratio (BCR) derived from a project's total net present value of benefits divided by the total project cost estimate, which must include all documented project and maintenance costs. The benefits of mitigation projects are avoiding damage, disruptions, losses, and casualties. Examples of expected benefits include avoided or reduced damages to buildings, contents, or infrastructure; avoided or reduced economic impacts of 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 included the availability of potential funding sources, overall feasibility, measurable milestones, public and political support for the proposed actions, and the STAPLEE criteria.

4. Use of Other Review Structure

In addition to the cost-benefit analysis, other factors that may affect the prioritization of projects include the availability of special tax, grant, and/or loan funds, 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

Atkinson County and the Cities of Pearson and Willacoochee will review this Plan. The requirements of this Hazard Mitigation Plan will be considered. They will be incorporated into Comprehensive Plans, Five-Year Community Work Programs, Capital Improvement Plans, Local Emergency Operations Plans, and all other such Plans as appropriate.

Once this plan is approved, it will be used by the consultants and planning committees responsible for the update process for the County and City Comprehensive Plans, Community Work Programs, and all other plans that could incorporate the requirements of this plan.
To facilitate the inclusion of this Plan, the Atkinson County Commission and the Cities of Pearson and Willacoochee will provide a copy to the persons and/or committees responsible for writing and updating plans.

Section II.
Evaluation and Monitoring

A. Method

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

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

B. Criteria Used to Monitor and Evaluate the Plan

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

Section III.
Plan Update and Maintenance

A. Public Involvement

Because the Hazard Mitigation Plan is intended to help ensure a safe and livable environment for all Atkinson County and the Cities of Pearson and Willacoochee residents, public involvement must be an integral part of the planning process.

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

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

- The public will be directly involved in 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 to submit comments and concerns about the plan.
- A public meeting will be held annually to provide the public with a forum for expressing concerns, opinions, and ideas. The EMA will set meeting schedules and dates and use County resources to publicize and host this meeting.

B. Timeframe

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

The EMA Director shall submit a revised Hazard Mitigation Plan to GEMA for approval no later than the five-year conclusion after approval of the plan update. Note that the plan update process established by the planning committee is subject to change depending on subsequent regulations and/or requirements set forth by GEMA and FEMA.

Chapter 7:
Conclusion

Summary of changes:

- Revised and updated language.

Atkinson County and the Cities of Pearson and Willacoochee have suffered considerable damage from natural hazards. Planning and undertaking structural and nonstructural action steps before a disaster can save lives and property. This philosophy has been the driving force behind preparing the Atkinson 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 essential to this plan. Because of this planning process, Atkinson County and Cities of Pearson and Willacoochee officials have better understood the hazards affecting the community.

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

References

Atkinson County website (http://www.atkinsoncounty.org/)

City of Pearson website (http://www.pearsongeorgia.us/)

City of Willacoochee website (http://www.willacoochee.com/http://www.cityofquitmanga.com/)

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

Federal Emergency Management Agency (www.fema.gov)

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

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

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

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

Georgia Forestry Commission (www.gatrees.org)

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

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

Southern Georgia Regional Commission (www.sgrc.us)

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

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

United States Census Bureau (www.census.gov)

Appendices

Appendix A. Hazard Identification, Risk, and Vulnerability (HRV)

Section I. GEMA Worksheet 3A

I. Thunderstorms/Wind
II. Hail
III. Wildfires
IV. Floods
V. Drought
VI. Hurricanes/Tropical Storms
VII. Tornadoes
VIII. Severe Winter Storms

Section II. GMIS Critical Facilities Maps

1. Critical Facilities and Hazard Potential for Hazards Affecting the Entire Community
2. Critical Facilities and Wind Zones
3. Critical Facilities and Wildfire Hazard Areas (GMIS data)
4. Critical Facilities and Flood Zones

Section III. Other Maps

Hurricane MEOW maps
Tornado track map
FEMA flood maps
UNL Drought Monitor Map

Appendix B. Growth and Development Trends

Census Demographic Summary
Atkinson County Tax Digest
City of Pearson Tax Digest
City of Willacoochee Tax Digest

Appendix C. Other Planning Documents

Comprehensive Plan Short-Term Work Program
Community Wildfire Protection Plan

Appendix D. Worksheets Used in the Planning Process

Hazard Frequency Table
GEMA Worksheet #1
GEMA Worksheet #2
GEMA Worksheet #4 (for each objective)

Appendix E. Copies of Required Planning Documentation

I. Public Notices
II. Sign-in Sheets
III. Adoption Resolutions

Appendix F. Reports and Inventories

I. General Historic Reports
   I. Thunderstorms/Wind (NOAA data)
   II. Hail (NOAA data)

III. Wildfires (GFC data)
IV. Floods (NOAA data)
V. Drought (U.S. Drought Monitor data)
VI. Hurricanes/Tropical Storms (NOAA data)
VII. Tornadoes (NOAA data)
VIII. Severe Winter Storms (NOAA data)

II. Critical Facilities Inventory

Appendix G. HAZUS Report

Appendix H. Brochure for Vulnerable Population