

Atkinson County, Georgia



Hazard Mitigation Plan 2024-2029

Effective X/XX/2024 – XX/XX/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
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Chapter 1: Introduction to the Planning Process

Summary of changes:

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

CHAPTER 1 Section	Updates to Section
I. Purpose, Need, Authority, and Statement of Problem	<ul style="list-style-type: none"> • Language updated to reflect that this was an update to the existing plan
II. Local Methodology, Plan Update Process, and Participants	<ul style="list-style-type: none"> • Planning Committee reviewed each section and updated as necessary
III. Plan Review, Analysis, and Revision	<ul style="list-style-type: none"> • Planning Committee reviewed each section • Updates made using national, state, and local data
IV. Organization of Plan	<ul style="list-style-type: none"> • Consistent with original plan
V. Local Hazard, Risk and Vulnerability (HRV) Summary, Local Mitigation Goals, and Objectives	<ul style="list-style-type: none"> • Updates made using national, state, and local data
VI. Multi-Jurisdictional Special Considerations	<ul style="list-style-type: none"> • No major changes from original plan
VII. Adoption, Implementation, Monitoring, and Evaluation	<ul style="list-style-type: none"> • Evaluation method revised and updated.
VIII. Community Data	<ul style="list-style-type: none"> • Updates made using most recent available national, state, and local data

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

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

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

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

This Plan is a direct result of research and a planning and public involvement process undertaken by the local government officials and citizens of 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 to their communities. The Cities of Pearson and Willacoochee are the only incorporated cities located in Atkinson County.

Authority for the development of this Plan was given by the Atkinson County Commission 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 within Atkinson County, through their participation in the planning project.

To initiate an outreach program to neighboring communities, governments, local and regional agencies, and to agencies authorized to regulate development, business, and the public, two Public Hearing Notices were published in the legal organ of the local newspaper. In addition, e-mail lists of stakeholders were kept updated and those on them were informed of meetings through e-mails, letters, and/or telephone calls. The surrounding county EMA Directors were notified of the plan update and invited to participate in the process. 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 the formation of 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, and a year-long planning effort was undertaken, the final product of which was a Plan Update containing updated Mitigation Goals, Objectives, and Action Steps to reduce or eliminate the potential for loss of life and damage to property and the economy caused by natural disasters (see Chapter 4).

Potential members of the Atkinson County HMPUC were contacted by telephone or by 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	Fire fighter
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 McClelland	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	Fire fighter
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	Fire fighter/Paramedic
Austin Henning	Atkinson Fire Dept.	Fire fighter
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 -
- Final public hearing – _____, 2023

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

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

Copies of the previous Plan were made available at each meeting, while relevant chapters and sections under discussion were photocopied and distributed to those in attendance for comments. Outside of the formal meetings, parts of the plan were e-mailed to certain individuals who were unable to attend the meetings, and their comments were sought. Copies of the previous Plan and the draft Plan Update document were also available on the Southern Georgia Regional Commission website and from the local EMA office 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, information about zoning, 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. **The County and Cities do not have a Flood Mitigation Assistance Plan or a Flood Insurance Study.**

B. Public Comment and Participation

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

The public was invited to attend and comment during two public hearings. The “kick-off” public hearing was 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 _____, 2023, and was advertised in the local newspaper (see Appendix E). Citizens, including staff and members of the HMPUC, were present (see Appendix E). **There were no comments. Therefore, there was no need to consider or add public comments.**

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

C. Mission and Vision Statements

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

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 relating to local infrastructure and agencies, emergency planning, hazard planning, and the operations of major departments and emergency services. Through their efforts, this Plan was developed.

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

Section III. Plan Review, Analysis, and Revision

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

- The Community Wildfire Protection Plan (see Appendix C)
- The current joint Comprehensive Plan for the County and 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 were to remain the same or be added to, modified, or removed.

All chapters of this Plan have been updated to reflect the new material. Of note, 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 chosen by the HMPUC that may affect and cause damage to Atkinson County and the Cities of Pearson and Willacoochee. Chapter 2, Chapter 4, and Appendix A are each subdivided into Sections I through VIII; these sections reflect the 8 natural hazards that were 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 Avalanche, Coastal Erosion, Coastal Storm, 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 past history and available data.

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

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

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

This Plan was prepared for:
Atkinson County Board of Commissioners
P.O. Box 518
Pearson, GA 31642
Telephone: (229) 422-3391
E-mail: ema@atkinson-ga.org

This Plan was prepared by:
Southern Georgia Regional Commission
1937 Carlton Adams Dr.

Valdosta, Georgia 31601
Voice: (229) 333-5277 Fax: (229) 333-5312
lhylton@sgrc.us

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

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

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

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

There are 43 Essential Facilities located within Atkinson County, Pearson and Willacoochee. There are 2 EOC facilities and 2 Care facilities, one of each located in Atkinson County and in Pearson. There are 11 Fire Stations located 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 located within 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 comprehensive 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, certain services, including emergency services,

may have large distances to cover when responding to an event, which may negatively influence emergency response times and strain resources. 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. There are 8 fire stations in the County, all with an ISO Class of 05/5X. One fire station is manned by paid firefighters, and the others are staffed by volunteer firefighters.

Section VII. Adoption, Implementation, Monitoring, and Evaluation

After all plan development workshops were concluded, the draft plan was submitted to all local governments for their review. The draft plan was then submitted to GEMA and FEMA for their review and approval. After their approval, and any recommended changes, a second and final public hearing was held on _____, 2023 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 _____, 2023 (Atkinson County), _____, 2023 (City of Willacoochee), and _____, 2023 (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 to do so.

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

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

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

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

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

Section VIII. Community Data

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 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 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 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 unemployment rate is 9.6%. Among adults aged 16 and older, the rate of labor force participation 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 that were included in the previous plan, in the same order of priority. Table 2.1 provides a brief description of each section in this chapter and a summary of changes that have been made.

Chapter 2 Section	Updates to Section
I. 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 Avalanche, Coastal Erosion, Coastal Storm, 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 past history and available data.

Section I. Thunderstorms/Wind

A. Identification of Hazard

The threat of thunderstorms and wind has been chosen by the Atkinson County HMPUC 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. Historic data have been examined from various sources, including the National Climatic Data Center (see Appendix F), as well as from local history and personal accounts, in order to determine the frequency of events.

Thunderstorms are one of the most common weather products of our atmosphere 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. Wind speeds in a thunderstorm can exceed 100 mph and can 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.

Thunderstorms are defined by NOAA 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 or so. They are typically driven by heating on a summer afternoon. Single-cell storms may produce brief heavy rain and lightning.
- A **multi-cell storm** is a common type of 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 as a whole may last for 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 tend to 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

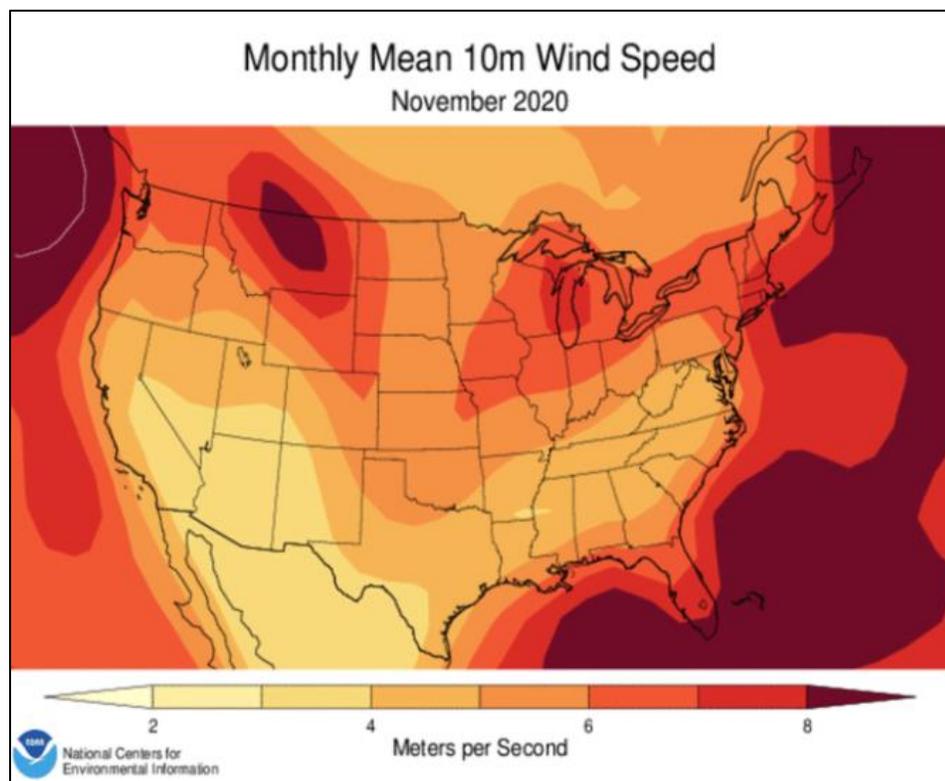
Force	Wind (Knots)	Wind (Mph)	World Meteorological Organization (WMO) Classification	Appearance of Wind Effects	
				On the Water	On Land
0	Less than 1	Less than 1	Calm	Sea surface smooth and mirror-like	Calm, smoke rises vertically
1	1-3	1-3	Light Air	Scaly ripples, no foam crests	Smoke drift indicates 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, 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-min 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), there are 102 reports of Thunderstorm/Wind events occurring 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 size 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 may have occurred in the community that went unreported or underreported.

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

In Worksheet 3A: Inventory of Assets (appearing in Appendix A), we estimate that all of 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 Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education, and Utility properties (2,056 of 2,056) in the community may be affected, with a total value of \$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 taken into account in any of these figures. According to the Center for Agribusiness & Economic Development's 2022 Georgia Farm Gate Value Report, the total farm gate value of agricultural production 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 are enforced by a building inspector. There is no planning commission. The County and Cities participate in joint comprehensive planning and in the required updates of the Service Delivery Strategy.

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

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

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

The Act also made the following optional codes available for local government adoption and enforcement. Local governments choosing to enforce any of the below optional codes must adopt

the code(s) they wish to enforce, as well as administrative procedures and penalties. Some of the communities have chosen to adopt the following:

- International Property Maintenance Code - 2018 Edition
- International Existing Building Code - 2018 Edition
- National Green Building Standard - 2008 Edition
- Disaster Resilient Building Code IBC Appendix - 2020 Edition
- Disaster Resilient Building Code IRC Appendix - 2020 Edition

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

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

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.

G. Overall HRV Summary of Events and Their Impact

Thunderstorm/wind events can cause damage at any place, at any time, throughout Atkinson County and the Cities of Pearson and Willacoochee, especially during thunderstorms. Where lightning strikes cannot be predicted, and residents may not have time to seek shelter. The cost of the damage and potential loss of life may be higher if the event strikes populated areas as opposed to more sparsely populated or unpopulated areas.

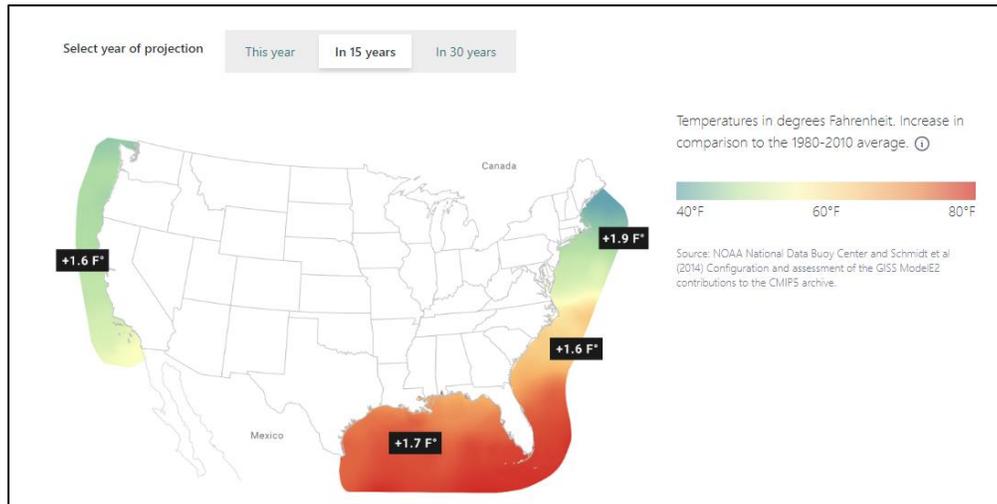
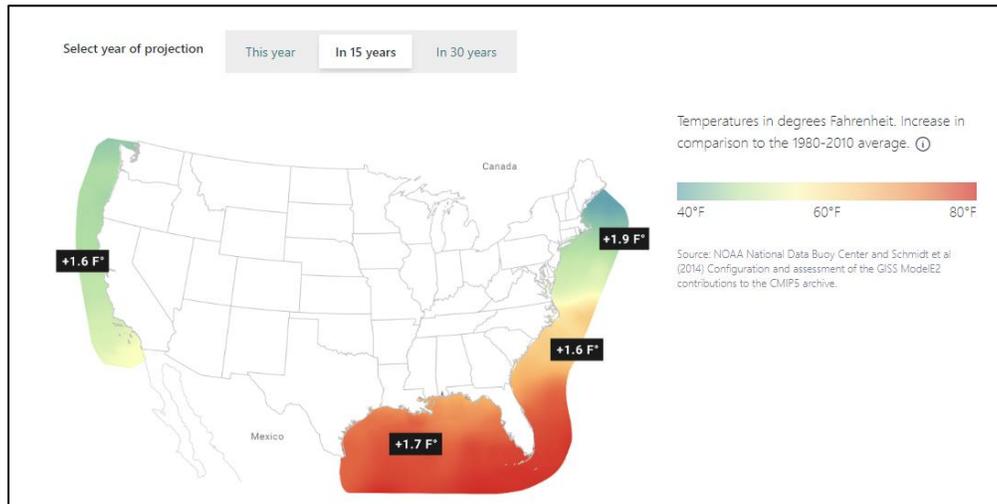
The HMPUC has developed a comprehensive range of Mitigation Goals, Objectives, and Action Steps to lessen the impacts from this hazard. These are contained in Chapter 4.

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

H. Impacts from Future Conditions

If a 1-in-3,000-year windstorm event 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. At that time, this likelihood would show increased wind gusts of up to 133 mph, due to our changing environment.

As the environment is changing, warmer seas, new weather patterns, and stronger windstorms will occur. 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 were present at the workshops that deal with the elderly and the vulnerable population within Atkinson County. 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 II. Hail

A. Identification of Hazard

The threat of hail has been chosen by the Atkinson County HMPUC 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. Historic data have been examined from various sources, including the National Climatic Data Center (see Appendix F), as well as from local history and personal accounts, in order to determine the frequency of events.

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

Hail size is estimated by comparing it to a known object. Most hailstorms are made up of a mix of sizes, and only the very largest hail stones pose serious risk to people caught in the open. The following are some common size measurements.

(Source: <http://www.nssl.noaa.gov/education/svrwx101/hail/>):

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

B. Profile of Events, Frequency of Occurrences, Probability

According to the NOAA Storm Events Database (see Appendix F), there are 29 reports of Hail events occurring 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). There have been three hail events reported by NOAA, 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 may have occurred in the community that went unreported or underreported.

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

In Worksheet 3A: Inventory of Assets (appearing in Appendix A), we estimate that all of 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 Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education, and Utility properties (2,056 of 2,056) in the community may be affected, with a total value of \$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 taken into account in any of these figures. According to the Center for Agribusiness & Economic Development's 2022 Georgia Farm Gate Value Report, the total farm gate value of agricultural production 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 are enforced by a building inspector. There is no planning commission. The County and Cities participate in joint comprehensive planning and in the required updates of the Service Delivery Strategy. No other land use or development trends that relate to this hazard have been identified at this time.

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

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

The Act requires local governments that elect to enforce these codes within their jurisdictions to adopt administrative procedures and penalties in order to locally enforce any of these mandatory

codes. Also, any applicable appendices of these codes must be adopted locally in order to be enforceable within a specific local jurisdiction.

The Act also made the following optional codes available for local government adoption and enforcement. Local governments choosing to enforce any of the below optional codes must adopt the code(s) they wish to enforce, as well as administrative procedures and penalties. Some of the communities have chosen to adopt the following:

- International Property Maintenance Code - 2018 Edition
- International Existing Building Code - 2018 Edition
- National Green Building Standard - 2008 Edition
- Disaster Resilient Building Code IBC Appendix - 2020 Edition
- Disaster Resilient Building Code IRC Appendix - 2020 Edition

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

F. Multi-Jurisdictional Differences

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 as opposed to more sparsely populated or unpopulated areas.

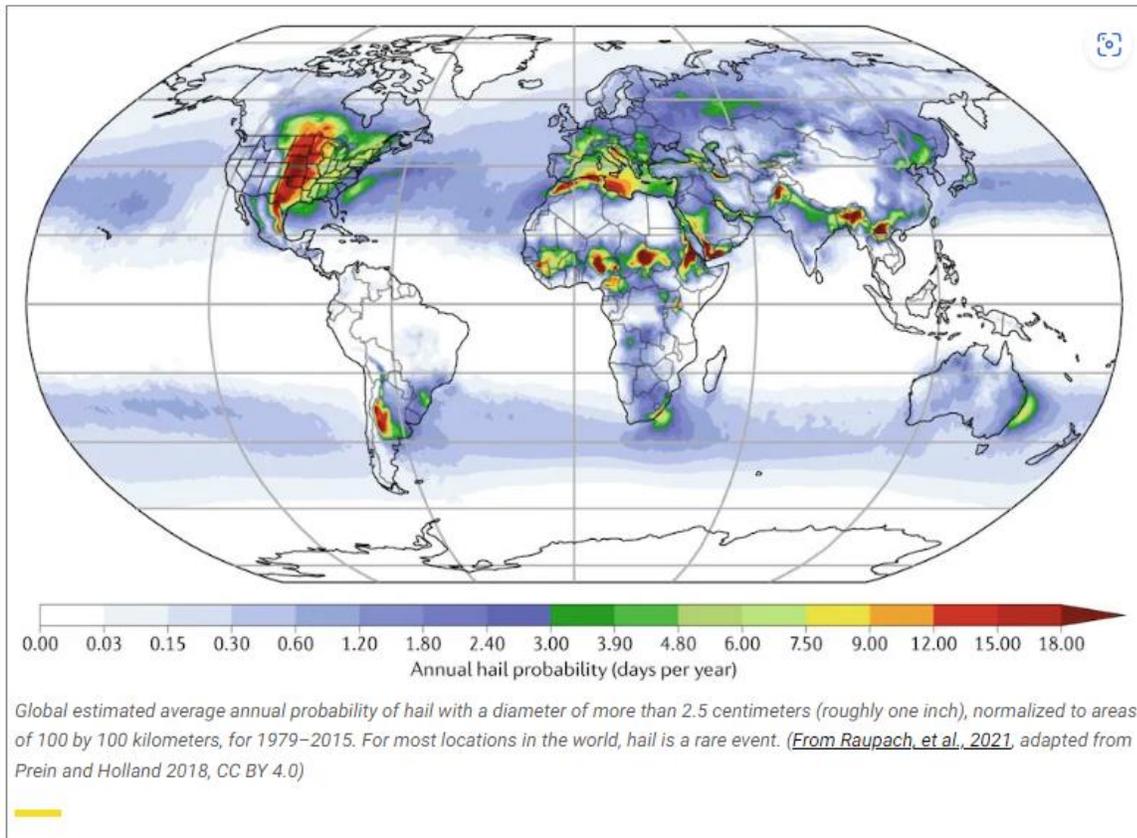
The HMPUC has developed a comprehensive range of Mitigation Goals, Objectives, and Action Steps to lessen the impacts from this hazard. These are contained in Chapter 4.

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

H. Impacts from Future Conditions

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 now averaged from \$8 billion to \$14 billion per year 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.



In 2022, studies suggested that the United States could experience more prolonged hail seasons. Summertime is projected for 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 a lot to do with growth within our communities. This could affect the hail damage, increasing costs. More growth with building will amount to more structures being damaged

The future of hailstorms in a warmer climate hinge 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. Not only would this reduce the depth of a storm's hail-producing upper layer, but it would give small hailstones more of a chance to melt as they fall to the ground through a deeper layer of air that's 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). The result would be plenty of thunderstorms, but fewer of the intense supercells that spit out tornadoes and huge hail.

Source: <https://yaleclimateconnections.org>

I. Underserved/Socially Vulnerable Population Risk

Organizations were present at the workshops that deal with the elderly and the vulnerable population within Atkinson County. 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 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. Historic data have been examined from various sources, including the National Climatic Data Center and Georgia Forestry Commission (see Appendix F), as well as from local history and personal accounts, to determine the frequency of events.

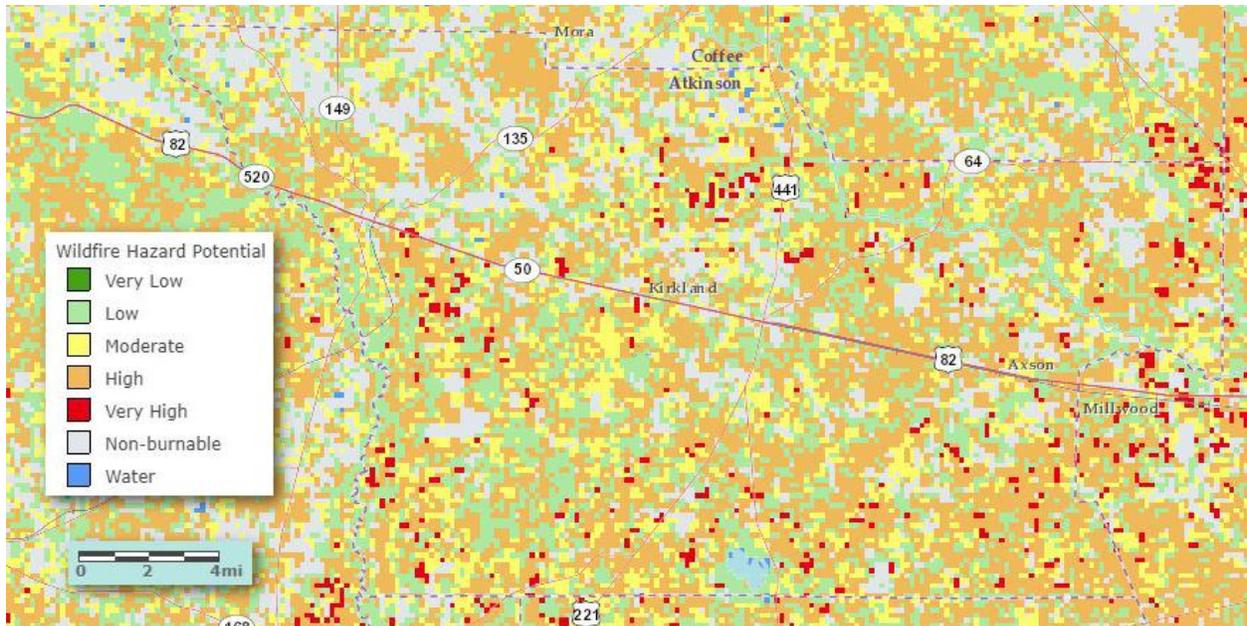
Much of southern Georgia is covered by forests, and fires play an important role in the health of forest ecosystems by breaking down organic matter into soil nutrients and helping seeds to germinate (source: NASA, https://earthobservatory.nasa.gov/Features/GlobalFire/fire_2.php). When naturally occurring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

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

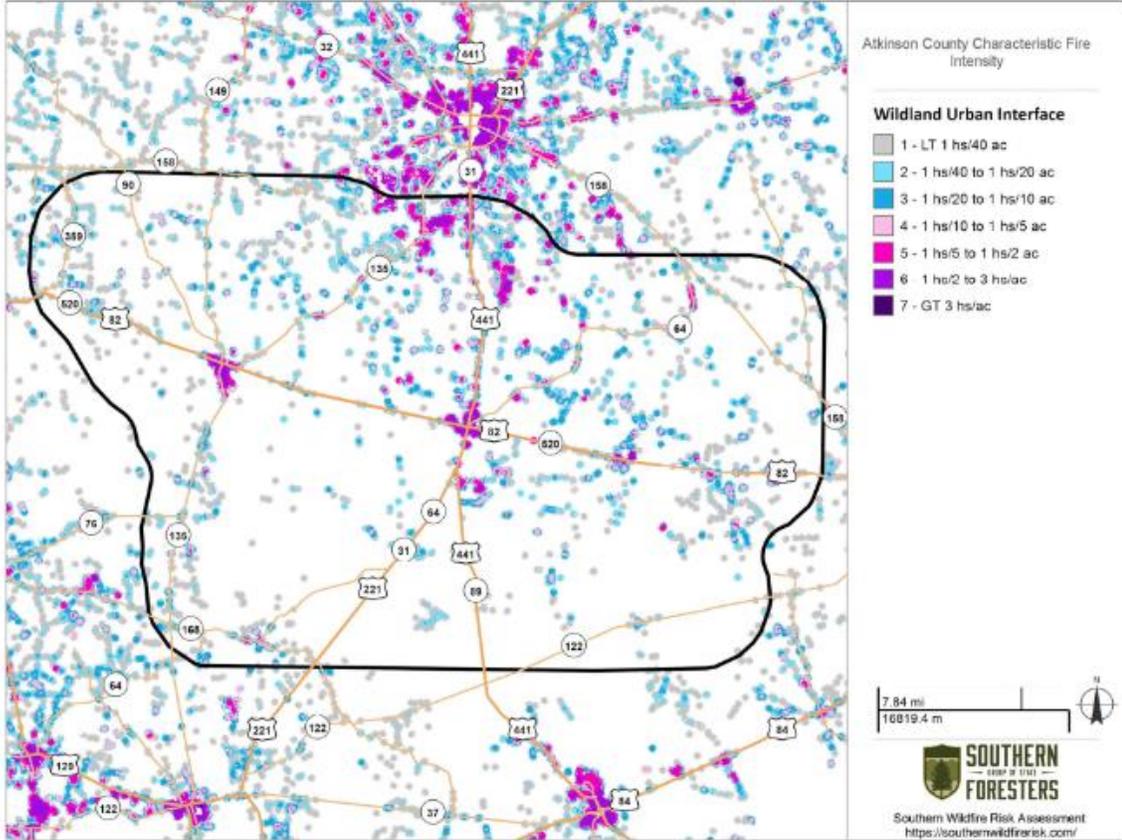
According to NASA (<https://earthobservatory.nasa.gov/IOTD/view.php?id=89757>), an estimated 84 percent of wildfires are caused by humans. Some common ways that people start fires include discarding cigarettes, leaving campfires unattended, and losing control of prescribed burns or crop fires. Sparks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

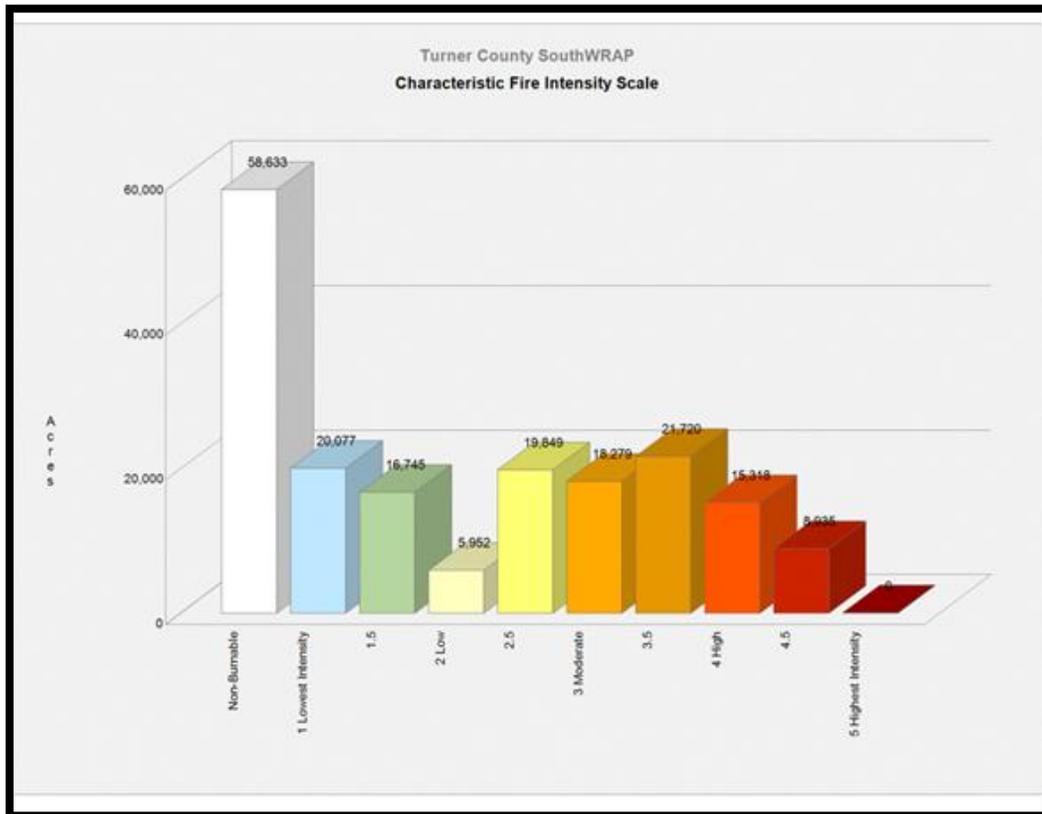
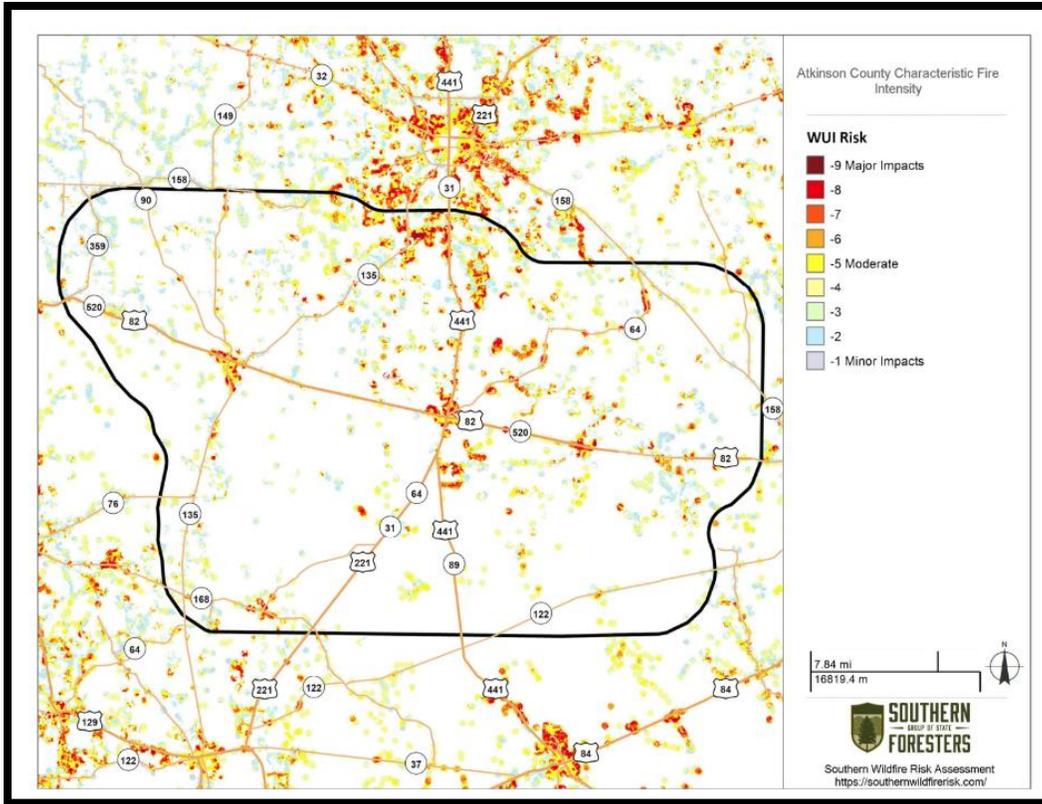
When a residential area, whether it be a single home or an entire subdivision, is adjacent to an area containing vegetative fuels, such as a forest or other wooded area, this is referred to as a Wildland-Urban Interface area (WUI). These are the areas at greatest risk for property damage due to Wildfire.

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 that are rated Very High.



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



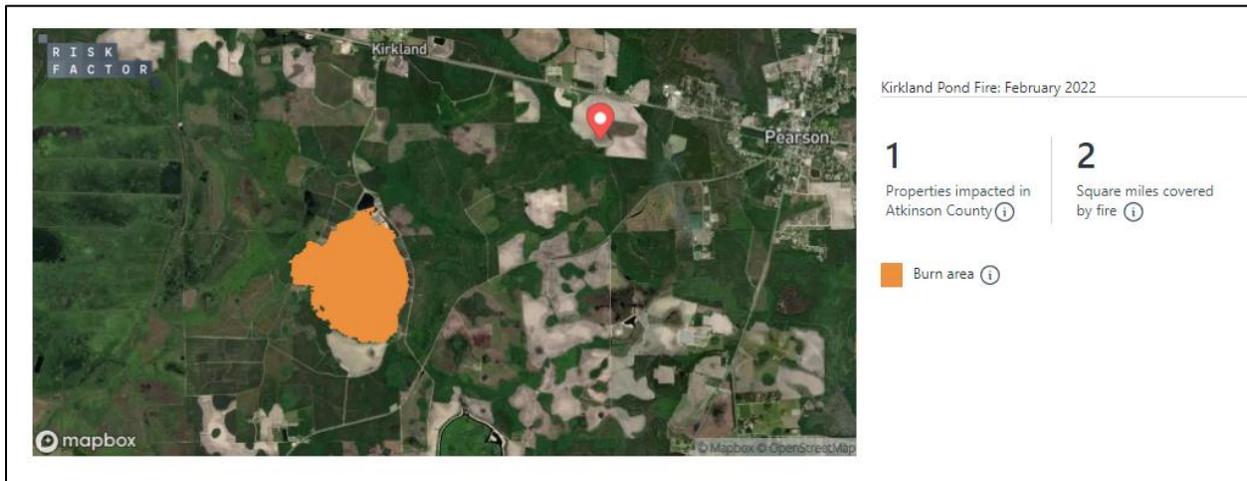


B. Profile of Events, Frequency of Occurrences, Probability

According to Georgia Forestry Commission 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 4,978.18% Historic Frequency Chance per year. The past 10-year Record Frequency Per Year is 21.1, the past 20-year frequency is 31.85, and the past 50-year frequency is 48.48 (see the Hazard Frequency Table in Appendix D).

Wildfires have, in 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 a total of 478.88 acres. The largest was in 2018, with 15 fires burning a total of 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 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

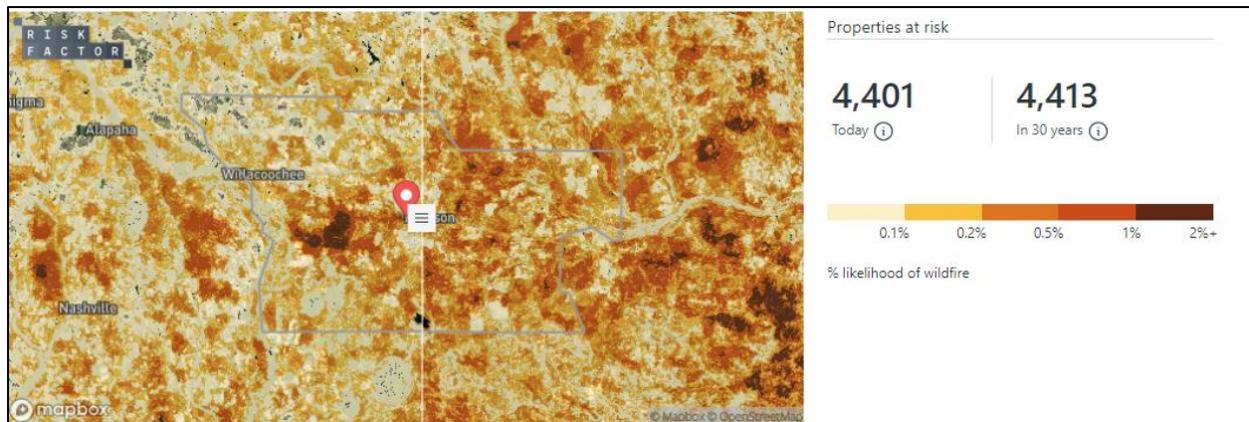
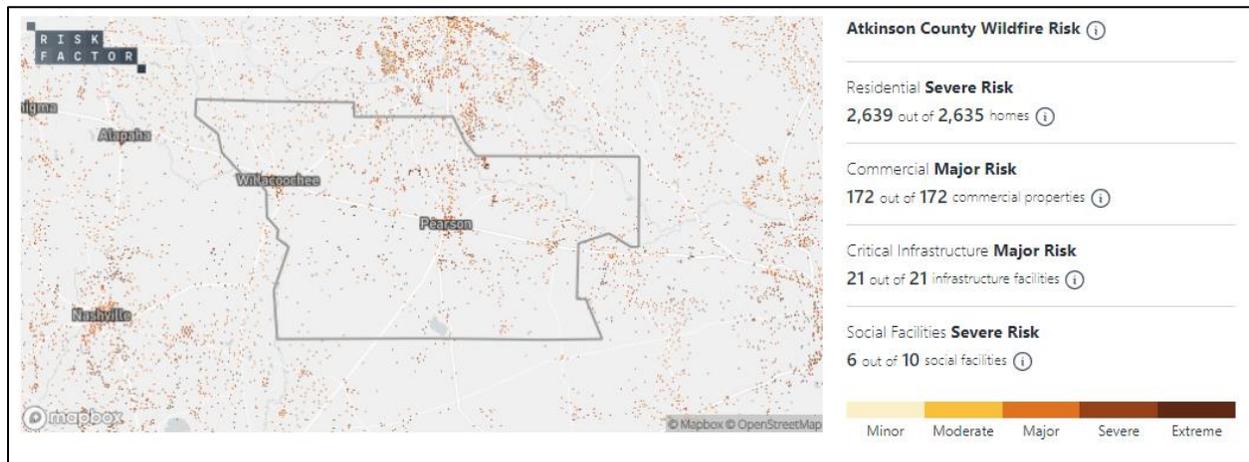
Although the most complete available data was used for this analysis, the possibility remains that other events may have occurred in the community that went unreported or underreported.

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

In Worksheet 3A: Inventory of Assets (appearing in Appendix A), we estimate that all of 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 Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education, and Utility properties (2,056 of 2,056) in the community may be affected, with a total value of \$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 of the 4,401 residential properties in Atkinson County have some risk of being affected by 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 major 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 taken into account in any of these figures. According to the Center for Agribusiness & Economic Development's 2022 Georgia Farm Gate Value Report, the total farm gate value of agricultural production 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 are enforced by a building inspector. There is no planning commission. The County and Cities participate in joint comprehensive planning and in the required updates of the Service Delivery Strategy. No other land use or development trends that relate to this hazard have been identified at this time.

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

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

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

The Act also made the following optional codes available for local government adoption and enforcement. Local governments choosing to enforce any of the below optional codes must adopt the code(s) they wish to enforce, as well as administrative procedures and penalties. Some of the communities have chosen to adopt the following:

- International Property Maintenance Code - 2018 Edition
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- Disaster Resilient Building Code IRC Appendix - 2020 Edition

The DCA Board specifically omitted the plumbing, electrical, and energy requirements of the International Residential Code for One- and Two-Family Dwellings. Therefore, the plumbing

requirements of the International Plumbing Code, the electrical requirements of the National Electrical Code, and the energy requirements of the International Energy Conservation Code must be used for one- and two-family dwelling construction.

F. Multi-Jurisdictional Differences

Wildfires may happen at any place at any time but are more likely in forested areas. Unincorporated Atkinson County is the only jurisdiction that has any 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 destruction of homes and other buildings. In jurisdictions without zoning, land use incompatibilities may exist that render certain areas more vulnerable to the effects of wildfires and other hazards.

The consolidated Atkinson County Fire Department serves the County and the two Cities. There are 8 fire stations in the County, all with an ISO Class of 05/5X. One fire station is manned by paid firefighters, and the others are staffed by volunteer firefighters.

G. Overall HRV Summary of Events and Their Impact

Wildfires have the potential to cause damage at any place, at any 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 as opposed to more sparsely populated or unpopulated areas.

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

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

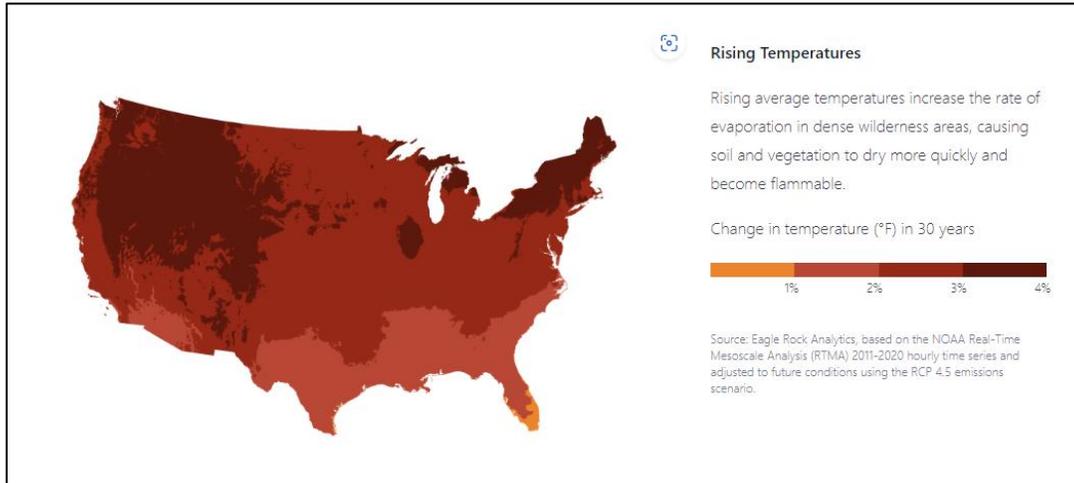
H. Impacts from Future Conditions

Changes in our environment are changing the risks of wildfires. Climate change is causing higher temperatures and drier conditions, and this creates primer conditions for wildfires to spread. Wildfires have grown more intense and destructive across much of the United States.

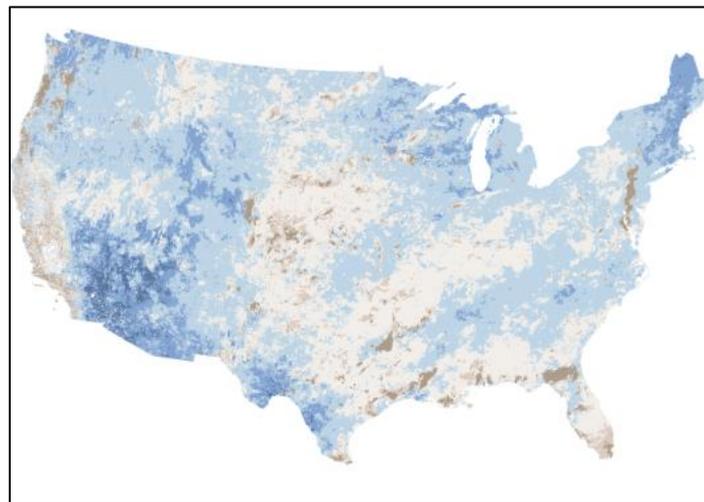
The compounding issue of climate change many regions of the United States are now experiencing prolonged periods of drought and record high temperatures. Often these areas are having excessive buildup of fallen leaves and underbrush. With these conditions, wildfires will continue to spread, damaging natural areas and nearby communities.

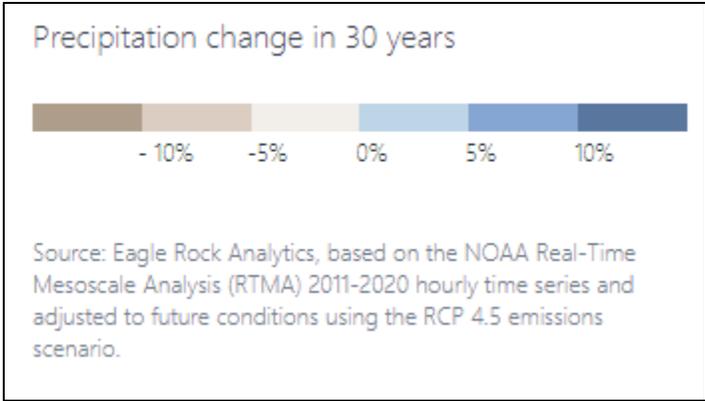
Drought also influences trees while allowing the invasive bark beetle to travel and survive in areas that they normally would not survive in. Due to climate changing, it has eliminated cold spells that would kill off the beetles. In the last 20 years, the beetles have killed 100,000 square miles of

trees across western North America. The trees are more susceptible to wildfire, which increases the chance of the fires spreading faster and farther.

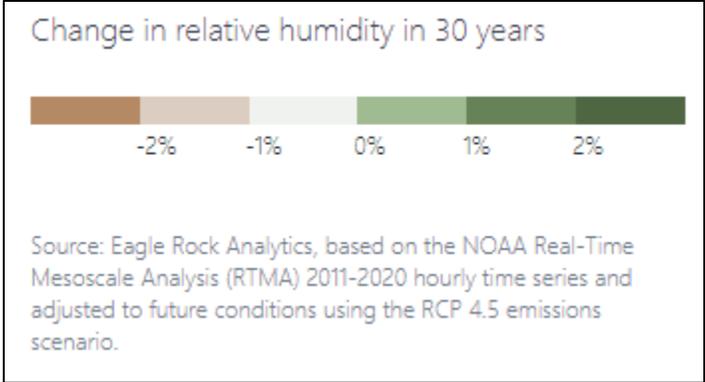
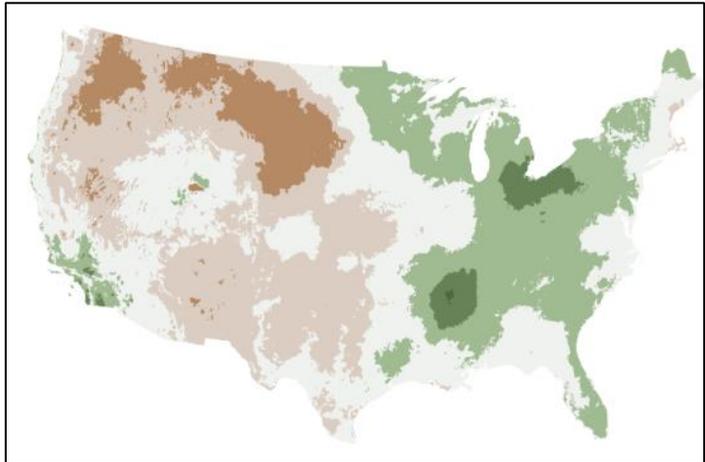


Dryer seasons are exacerbated by changing precipitation patterns. These changes cause wildfires more frequently and severely.





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 were present at the workshops that deal with the elderly and the vulnerable population within Atkinson County. 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 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. Historic data have been examined from various sources, including the National Climatic Data Center (see Appendix F), as well as from local history and personal accounts, in order to determine the frequency of events. For further information, see the HAZUS Report in Appendix G.

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

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

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

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

Flood Zone Designations and Descriptions

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

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

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

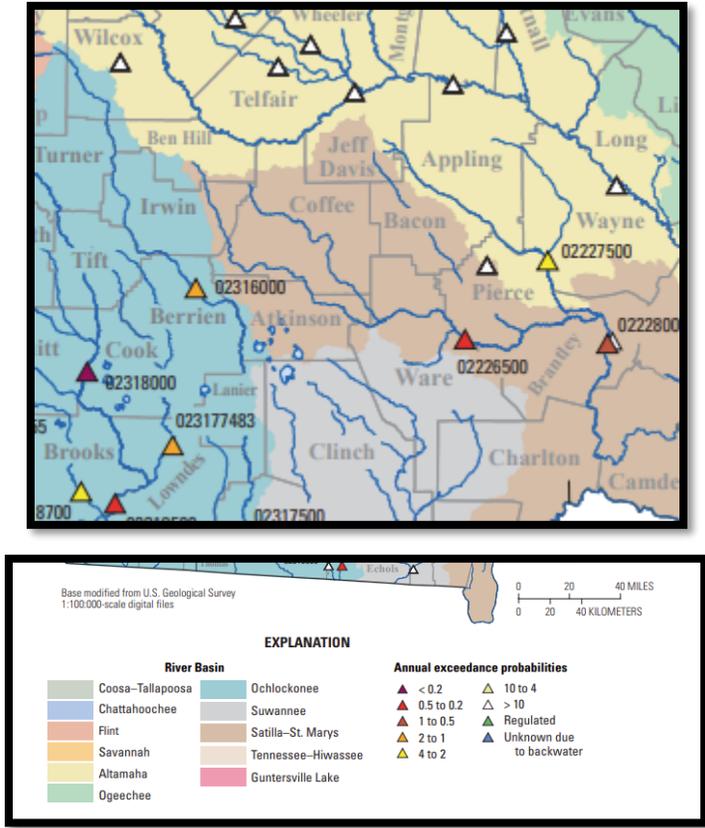
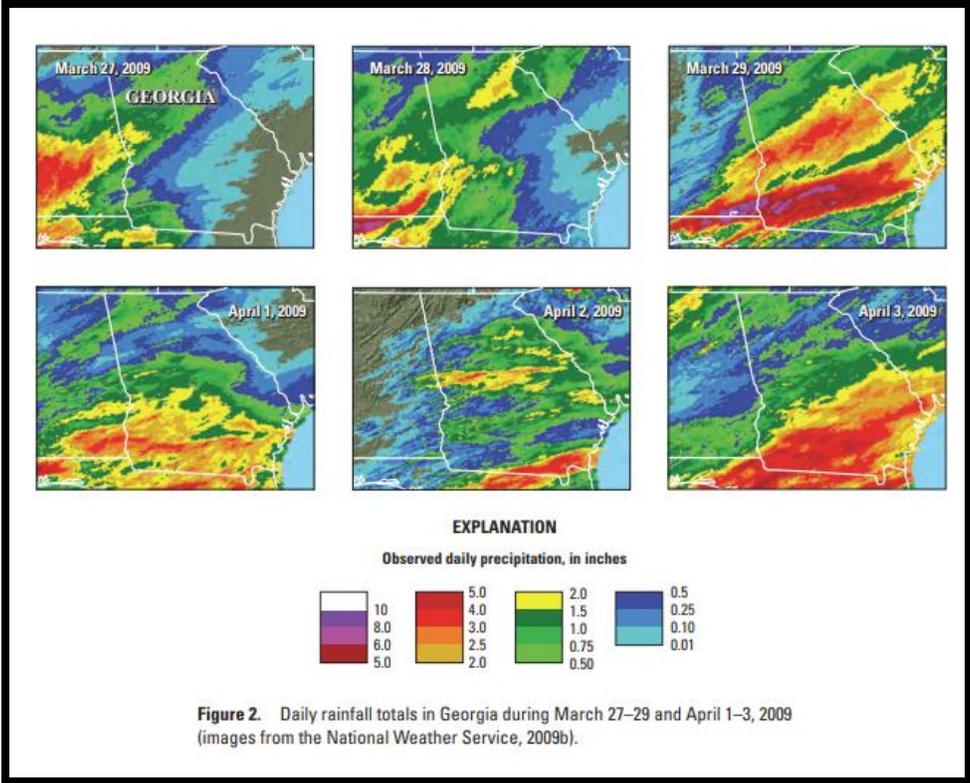
According to the NOAA Storm Events Database (see Appendix F), there are 5 reports of floods occurring in Atkinson County (including the Cities) between 01/01/1950 and 3/31/2023. Another 3 reports of floods are known to the community, for a total of 8 events in the historic record. The Historic Recurrence 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).

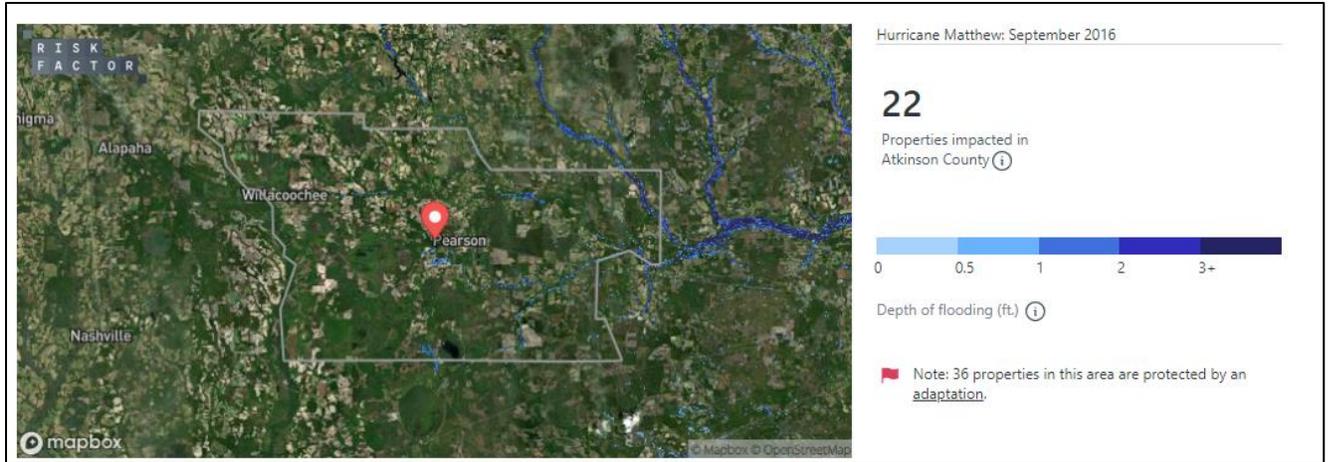
In the past, flooding in the community has been severe. The vast majority of Atkinson County is in the Satilla River sub-basin of the St. Marys-Satilla River basin. The entire narrow western border area, in a parallel line to the western border and running through Willacoochee, is located in the Alapaha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

Heavy rains during March 27–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 more than 16 inches (National Weather Service, 2009c). Daily rainfall totals exceeded 6 inches, which is 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 that was declared as 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 parts of southern Georgia during the April–March event, and more than 20 inches fell in parts of 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>

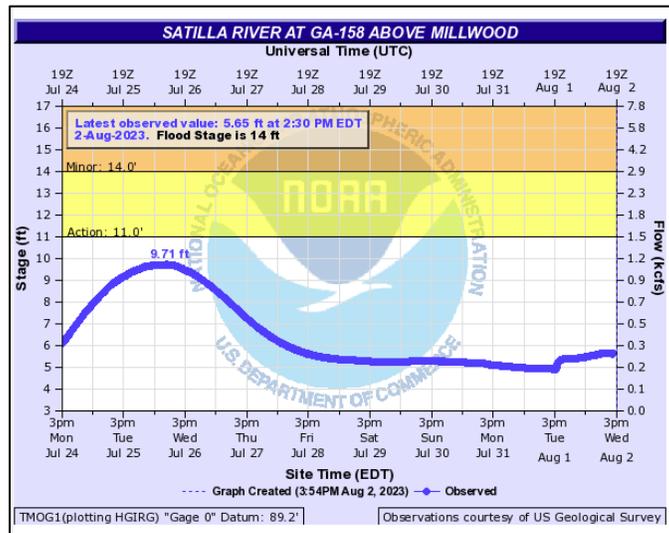
In September 2016, flooding impacted 22 properties in Atkinson County, due to Hurricane Matthew.

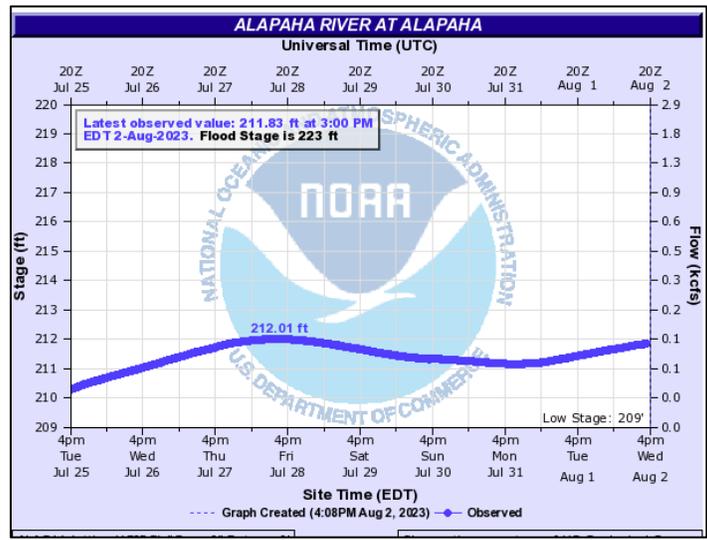
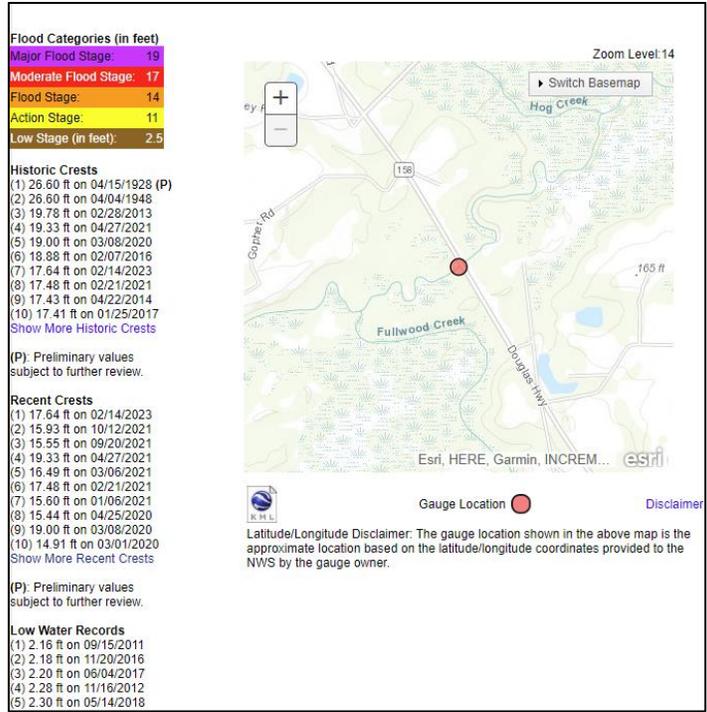


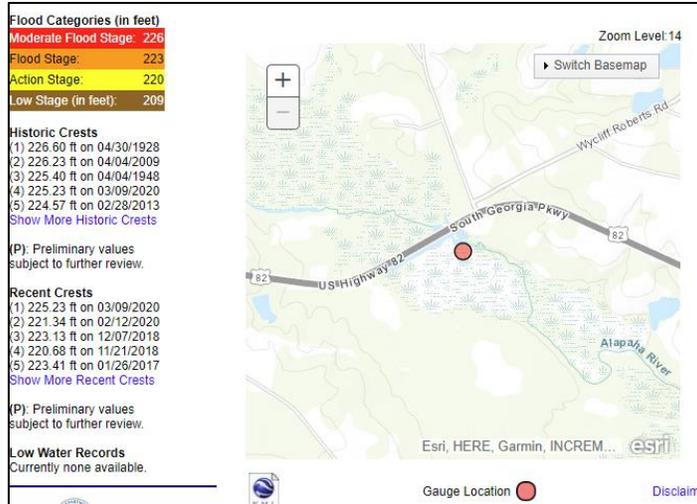


The historic crest of the Satilla River, on April 25, 1928, was 26.60 feet and the low water record was on May 14, 2018, at 2.30 feet.

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







Source: <https://water.weather.gov>

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

GEORGIA FLOOD MAP PROGRAM



Property Flood Risk:
Low Risk

Flood Depths*:

R	Current Flood Zone	x	0.2% ANNUAL CHANCE 100 YEAR FLOOD DEPTH
f	Probability of Flooding (30-Year Period)	Not Available	Not Available
s	Base Flood Elevation	Not Available	1% ANNUAL CHANCE 100 YEAR FLOOD DEPTH
k	Lowest Adj. Grade	Not Available	1% ANNUAL CHANCE 100 YEAR FLOOD DEPTH
f	Preliminary Flood Zone	Not Available	1% ANNUAL CHANCE 100 YEAR FLOOD DEPTH
o	Flood Zone Change Type	Not Available	1% ANNUAL CHANCE 100 YEAR FLOOD DEPTH

*Base flood adjusted grade

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/openlayers/arcgis>

Nature Doesn't Read Flood Maps

Many people don't understand just how risky the floodplain can be. There is a greater than 25% 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%!

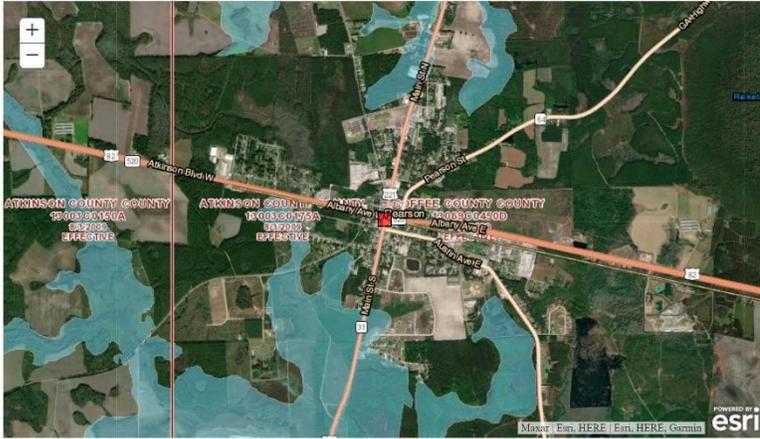
FOR MORE INFORMATION VISIT, PLEASE VISIT: [floodsmart.gov](https://www.floodsmart.gov)

Legend with Flood Zone Designations

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



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 Risk 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 structures.

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://mcs.fema.gov/dcm/hec-ras/depth>

Nature Doesn't Read Flood Maps

Many people don't understand just how risky the floodplain can be. There is a greater than 20% chance that a non-elevated home in the SFHMA 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:

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



Property Flood Risk:
Low Risk

Flood Depths*:

Current Flood Zone	x	0.2% ANNUAL CHANCE (50-YEAR) FLOOD DEPTH
Probability of Flooding (30-Year Period)	Not Available	Not Available
Base Flood Elevation	Not Available	1% ANNUAL CHANCE (100-YEAR) FLOOD DEPTH
Lowest Adj. Grade	Not Available	Not Available
Preliminary Flood Zone	Not Available	1% ANNUAL CHANCE (10-YEAR) FLOOD DEPTH
Flood Zone Change Type	Not Available	1% ANNUAL CHANCE (10-YEAR) FLOOD DEPTH

*Base flood adjacent grade

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/digital-resources/fis>

Nature Doesn't Read Flood Maps

Many people don't understand just how risky the floodplain can be. There is a greater than 20% chance that a non-leaked horse in the ZIP4 will be flooded during a 30-year mortgage period.

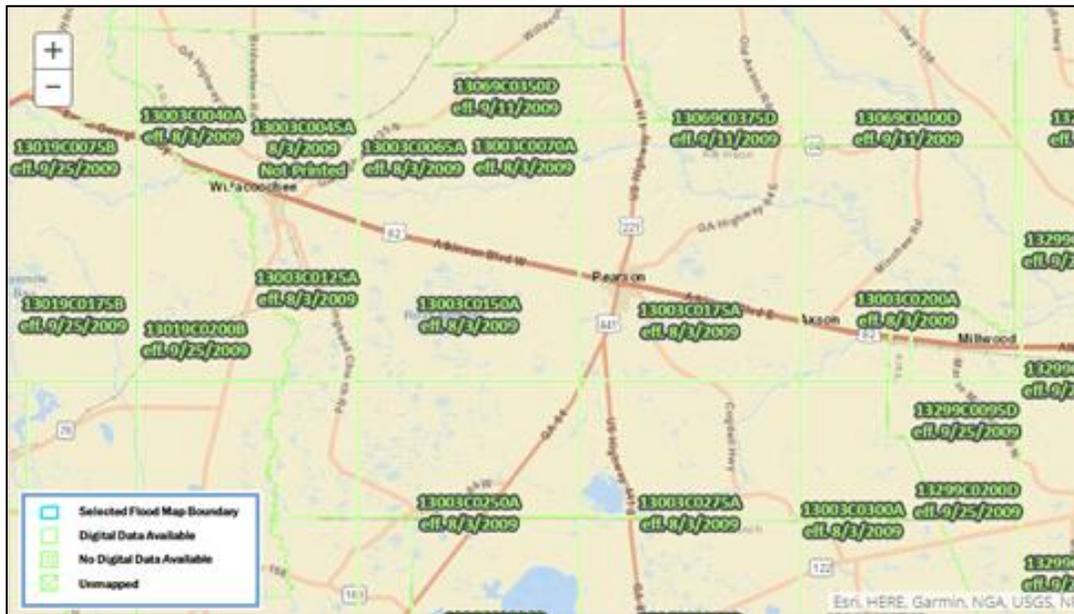
The chance that a major fire will occur during the same period is less than 10%!

FOR MORE INFORMATION VISIT, PLEASE VISIT: www.floodsmart.gov

Legend with Flood Zone Designations

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



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

Since the previous Hazard Mitigation Plan was completed, 2 new flood events have been recorded.

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

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

In Worksheet 3A: Inventory of Assets (appearing in Appendix A), we estimate that all of 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 Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education, and Utility properties (2,056 of 2,056) in the community may be affected, with a total value of \$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 taken into account in any of these figures. According to the Center for Agribusiness & Economic Development's 2022 Georgia Farm Gate Value Report, the total farm gate value of agricultural production in Atkinson County is \$93,994,300.52.

According to the inventory database reports and maps, 4 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 \$200,000.

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

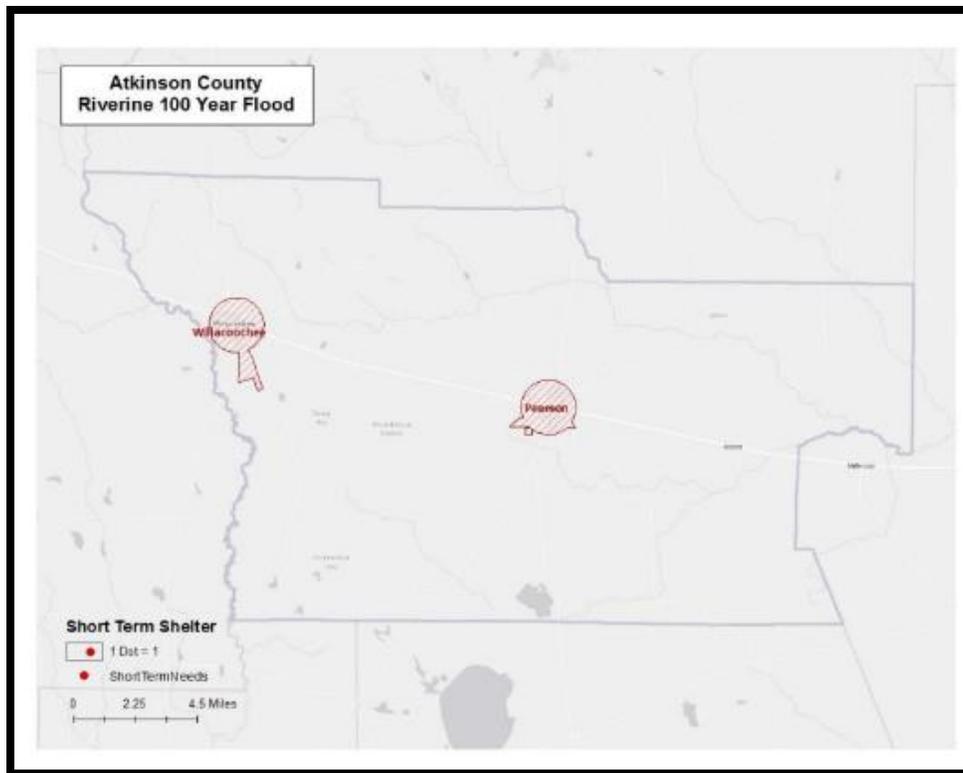
The GMIS report does not list any Repetitive Loss/NFIP properties in Atkinson County or the Cities of Pearson and Willacoochee.

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 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.

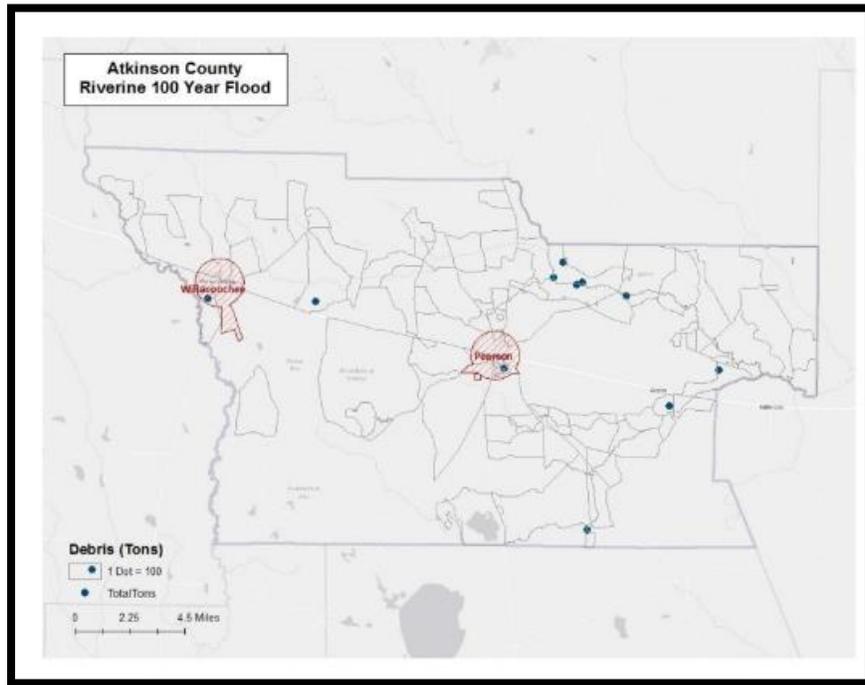
The 1% model estimates 231 households might be displaced due to the flood. Displacement includes households evacuated within or very near to the inundated area. Displaced households represent 694 individuals, of which 251 may require short term shelter.



The number of debris, including dry wall, insulation, wood, brick, concrete slab, concrete block, rebar, etc., may be as much as an approximate total of 2,128 tons. It is broken down as follows:

- Finishes (dry wall, 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 are enforced by a building inspector. There is no planning commission. The County and Cities participate in joint comprehensive planning and in the required updates of the Service Delivery Strategy. No other land use or development trends that relate to this hazard have been identified at this time.

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

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

The Act requires local governments that elect to enforce these codes within their jurisdictions to adopt administrative procedures and penalties in order to locally enforce any of these mandatory

codes. Also, any applicable appendices of these codes must be adopted locally in order to be enforceable within a specific local jurisdiction.

The Act also made the following optional codes available for local government adoption and enforcement. Local governments choosing to enforce any of the below optional codes must adopt the code(s) they wish to enforce, as well as administrative procedures and penalties. Some of the communities have chosen to adopt the following:

- International Property Maintenance Code - 2018 Edition
- International Existing Building Code - 2018 Edition
- National Green Building Standard - 2008 Edition
- Disaster Resilient Building Code IBC Appendix - 2020 Edition
- Disaster Resilient Building Code IRC Appendix - 2020 Edition

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

F. Multi-Jurisdictional Differences

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 to 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 and the Cities of Pearson and Willacoochee do not participate in the Community Rating System (CRS) program. As of 2017, they were not eligible, according to FEMA (source: <http://www.fema.gov/library/viewRecord.do?id=3629>).

G. Overall HRV Summary of Events and Their Impact

Floods have the potential to cause damage at any place, at any time, throughout Atkinson County and the Cities of Pearson and Willacoochee, and especially in flood-prone areas. Floods can happen quickly, and residents may not have time to evade floodwaters. The cost of the damage

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

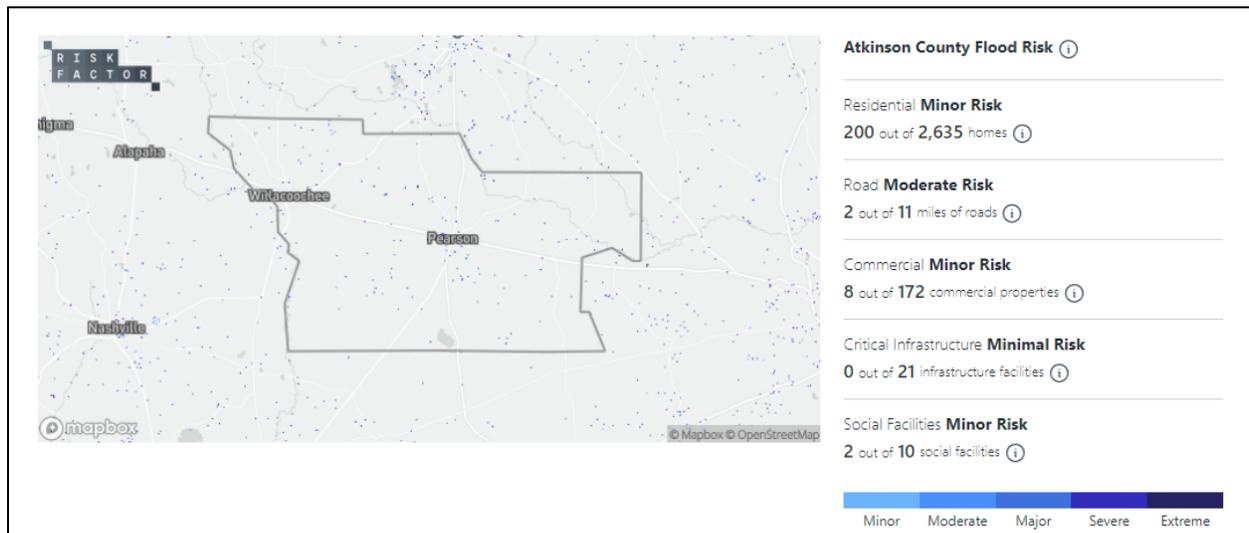
The HMPUC has developed a comprehensive range of Mitigation Goals, Objectives, and Action Steps to lessen the impacts from this hazard. These are contained in Chapter 4.

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

H. Impacts from Future Conditions

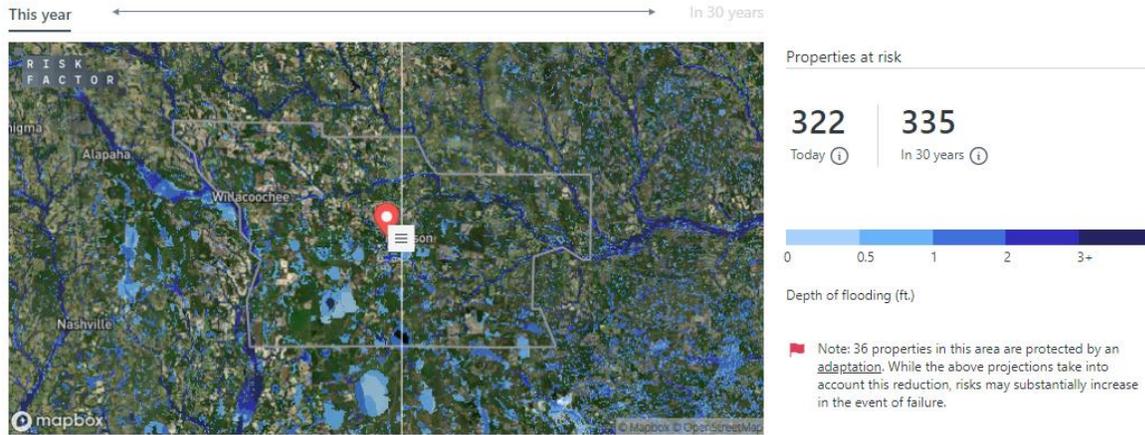
There are 329 properties in Atkinson County that have a greater than 26% chance of being severely affected by flooding over the next 30 years. This represents 11% of all properties in the county.

In addition to damage to properties, flooding can also cut off access to utilities, emergency services, 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 impact the day-to-day life within the community.



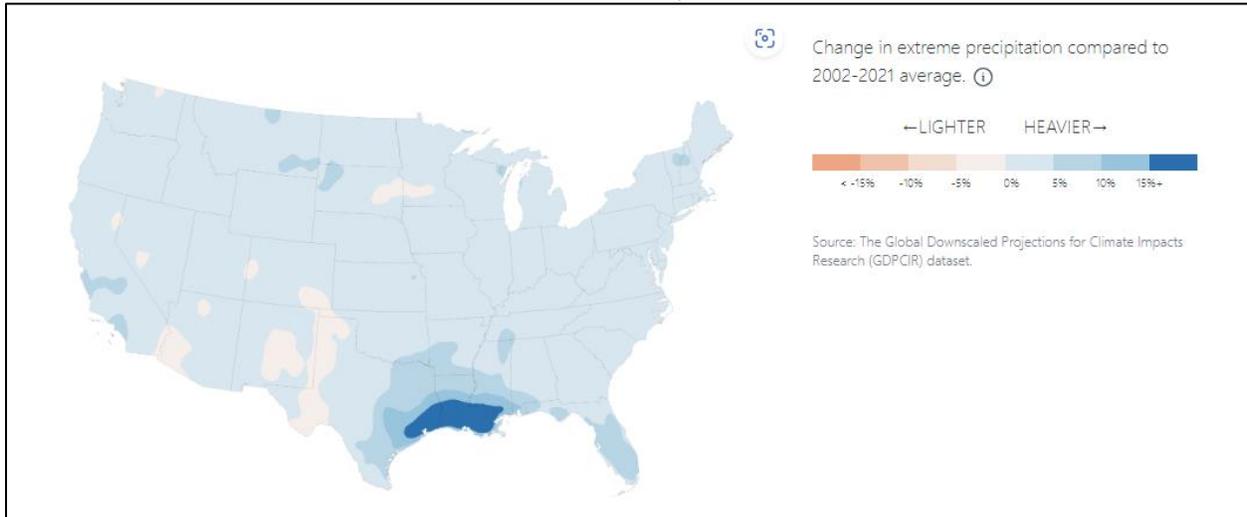
It is anticipated that major flood events, like hurricanes, are less likely to occur, but affect more properties than more shallow flood events, like heavy rains. The county feels the effects of a changing environment, but events of all kinds will affect more properties within the county. A

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. An event of this type would affect 335 properties in the next 30 years, due to environmental changes.

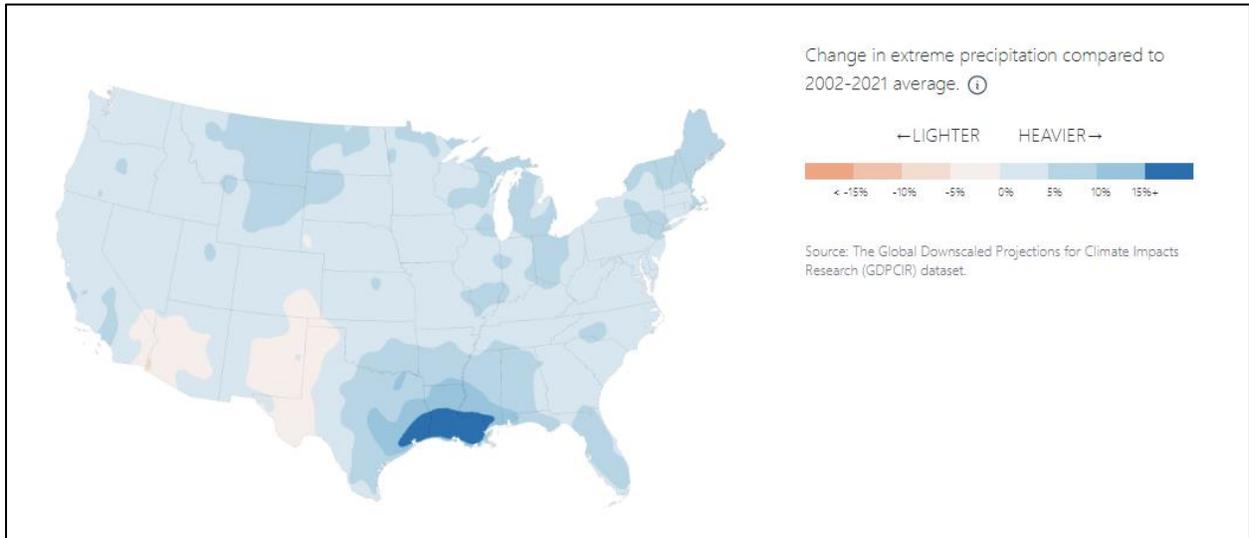


A changing environment causes higher seas, new weather patterns, and stronger storms. With the warming atmosphere, there will be more evaporation and water available from rain. With a warmer atmosphere, there will be a warmer ocean, which could intensify flooding from hurricanes and offshore storms. 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:

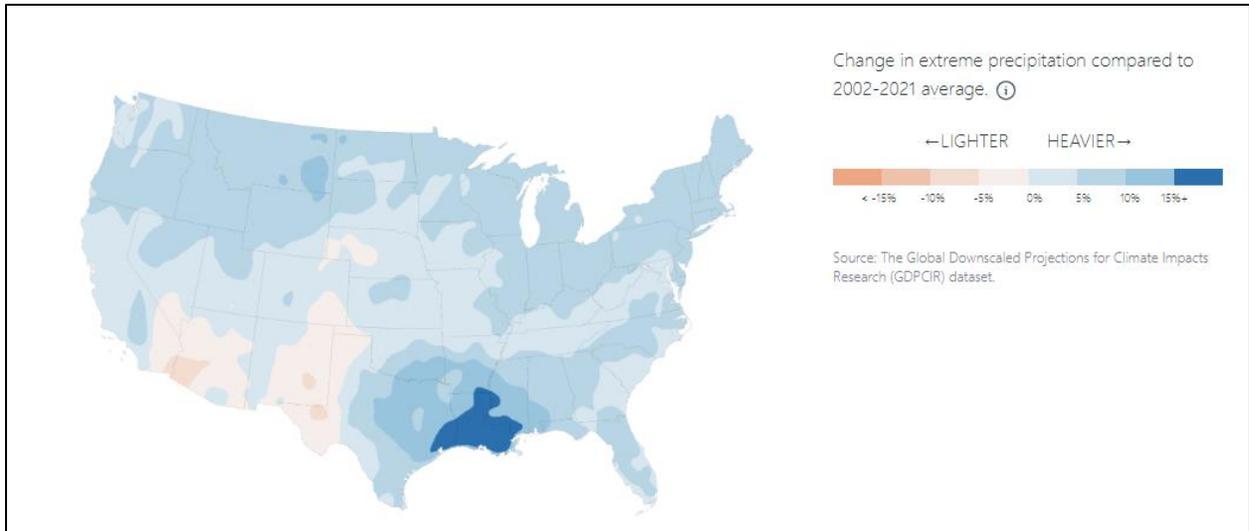
Currently



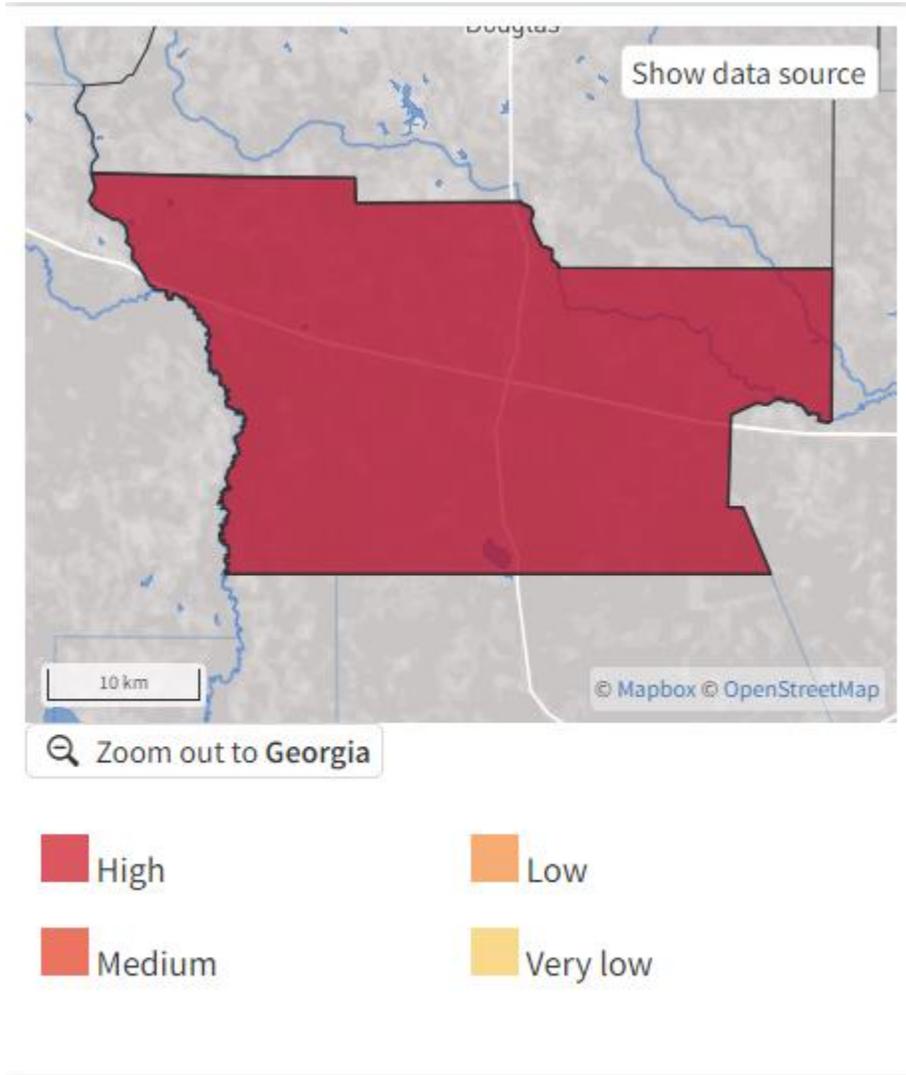
In 15 Years



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 were present at the workshops that dealt with the elderly and the vulnerable population within Atkinson County. 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 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 safety of the community.

Crops (including trees) are usually most adversely affected by drought events, along with community residents whose water supplies are restricted or cut off (especially those using individual wells). Residents of unincorporated Atkinson County have wells, which may go dry during drought periods, thus leaving those residents without water for extended periods of time. 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, labelling droughts by intensity, with D1 being the least intense and D4 being the most intense. Descriptions of these categories are provided in the table below (source: <http://droughtmonitor.unl.edu/AboutUs/ClassificationScheme.aspx>).

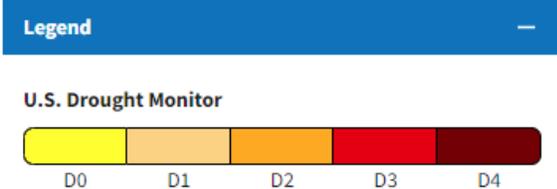
Atkinson County and the Cities of Pearson and Willacoochee are all equally vulnerable to the effects of drought.

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 0.03 years. This is a 3,282.61% Historic Frequency Chance per year. The past 10-year Record Frequency Per Year is 18.1, the past 20-year frequency is 29, and the past 50-year frequency is 15.1 (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	<p>Going into drought:</p> <ul style="list-style-type: none"> short-term dryness slowing planting, growth of crops or pastures <p>Coming out of drought:</p> <ul style="list-style-type: none"> some lingering water deficits pastures or crops not fully recovered
D1	Moderate Drought	<ul style="list-style-type: none"> Some damage to crops, pastures Streams, reservoirs, or wells low, some water shortages developing or imminent Voluntary water-use restrictions requested
D2	Severe Drought	<ul style="list-style-type: none"> Crop or pasture losses likely Water shortages common Water restrictions imposed
D3	Extreme Drought	<ul style="list-style-type: none"> Major crop/pasture losses Widespread water shortages or restrictions
D4	Exceptional Drought	<ul style="list-style-type: none"> 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 may have occurred in the community that went unreported or underreported.

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

In Worksheet 3A: Inventory of Assets (appearing in Appendix A), we estimate that all of 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 Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education, and Utility properties (2,056 of 2,056) in the community may be affected, with a total value of \$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 taken into account in any of these figures. According to the Center for Agribusiness & Economic Development's 2022 Georgia Farm Gate Value Report, the total farm gate value of agricultural production 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 are enforced by a building inspector. There is no planning commission. The County and Cities participate in joint comprehensive planning and in the required updates of the Service Delivery Strategy. No other land use or development trends that relate to this hazard have been identified at this time.

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

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

The Act requires local governments that elect to enforce these codes within their jurisdictions to adopt administrative procedures and penalties in order to locally enforce any of these mandatory

codes. Also, any applicable appendices of these codes must be adopted locally in order to be enforceable within a specific local jurisdiction.

The Act also made the following optional codes available for local government adoption and enforcement. Local governments choosing to enforce any of the below optional codes must adopt the code(s) they wish to enforce, as well as administrative procedures and penalties. Some of the communities have chosen to adopt the following:

- International Property Maintenance Code - 2018 Edition
- International Existing Building Code - 2018 Edition
- National Green Building Standard - 2008 Edition
- Disaster Resilient Building Code IBC Appendix - 2020 Edition
- Disaster Resilient Building Code IRC Appendix - 2020 Edition

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

F. Multi-Jurisdictional Differences

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

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

G. Overall HRV Summary of Events and Their Impact

Drought has the potential to harm people and the economy throughout 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 from this hazard. These are contained in Chapter 4.

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

H. Impacts from Future Conditions

Drought will have a major impact on the production of peanuts, pecans, peaches, and the sweet Vidalia onion, all of which are 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 drought events and more severe ones, at that.

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

Drought also will have an impact on 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.

Already, water in the western United States is disappearing, and several states are facing severe water shortage as drought conditions continue to get worse. 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 be persistent with more severe conditions lasting longer.

USGS
science for a changing world

IT'S ALL LINKED TO CLIMATE CHANGE

The Many Types of Drought

Climate change interacts with droughts in many ways. Some regions are experiencing warmer, drier conditions than they have in the past, leading to less rainfall (*meteorological drought*) or snowpack (*snow drought*). Over time, this can cause water sources like lakes, streams, and underground aquifers to dry up (*hydrological drought*). This, in turn, can lead to water shortages in human communities (*socioeconomic drought*) and agricultural systems (*agricultural drought*). It can also damage plant and animal communities in the region (*ecological drought*).

Meteorological
Snow
Hydrological
Socioeconomic
Agricultural
Ecological

"DROUGHT"

U.S. Department of the Interior
U.S. Geological Survey

IMAGES
Background: Drought on Lake Mead, USGS
Meteorological - Sunny, Pixabay.com
Snow - Shirelet and Cracked, Share D'Neel, USGS
Hydrological - Tracking Drought, USGS
Socioeconomic - Gray Faucet, Luis Quintero, Pexels.com
Agricultural - Pica Grains, Diereen LI, Pexels.com
Ecological - Homa on the Range, Katie Williams, USGS
Drought - Santiago Manuel De la Cruz, Pexels.com

I. Underserved/Socially Vulnerable Population Risk

Organizations were present at the workshops that deal with the elderly and the vulnerable population within Atkinson County. 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), as well as from local history and personal accounts, in order to determine the frequency of events. For further information, see the HAZUS Report in Appendix G.

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

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

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

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

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

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

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

SAFFIR-SIMPSON HURRICANE SCALE

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

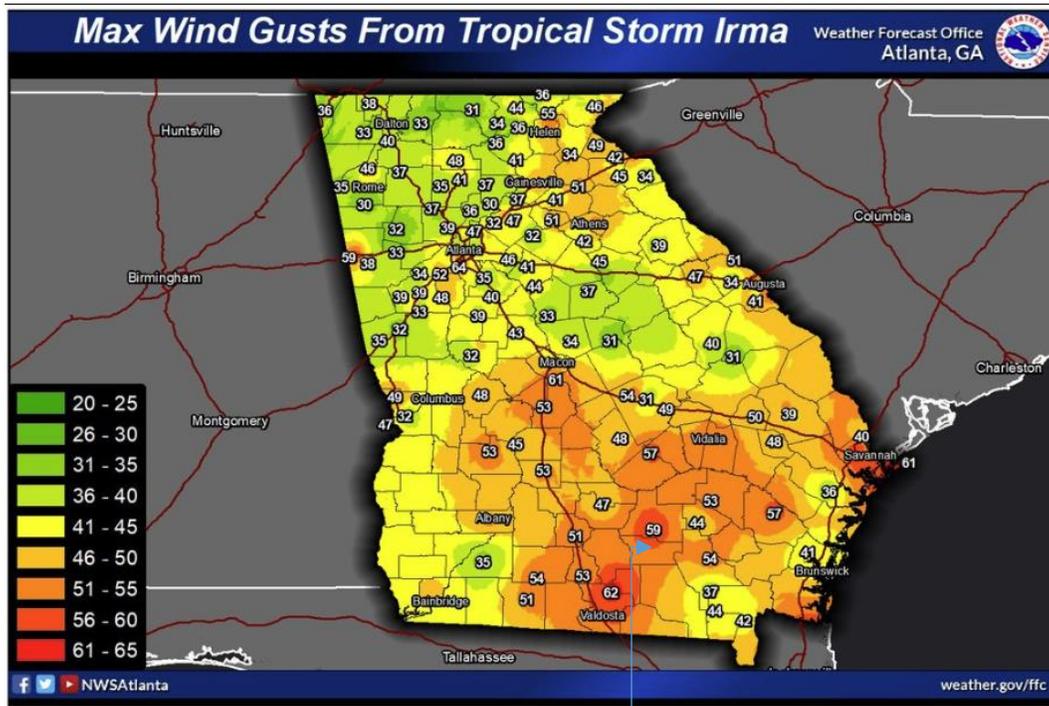
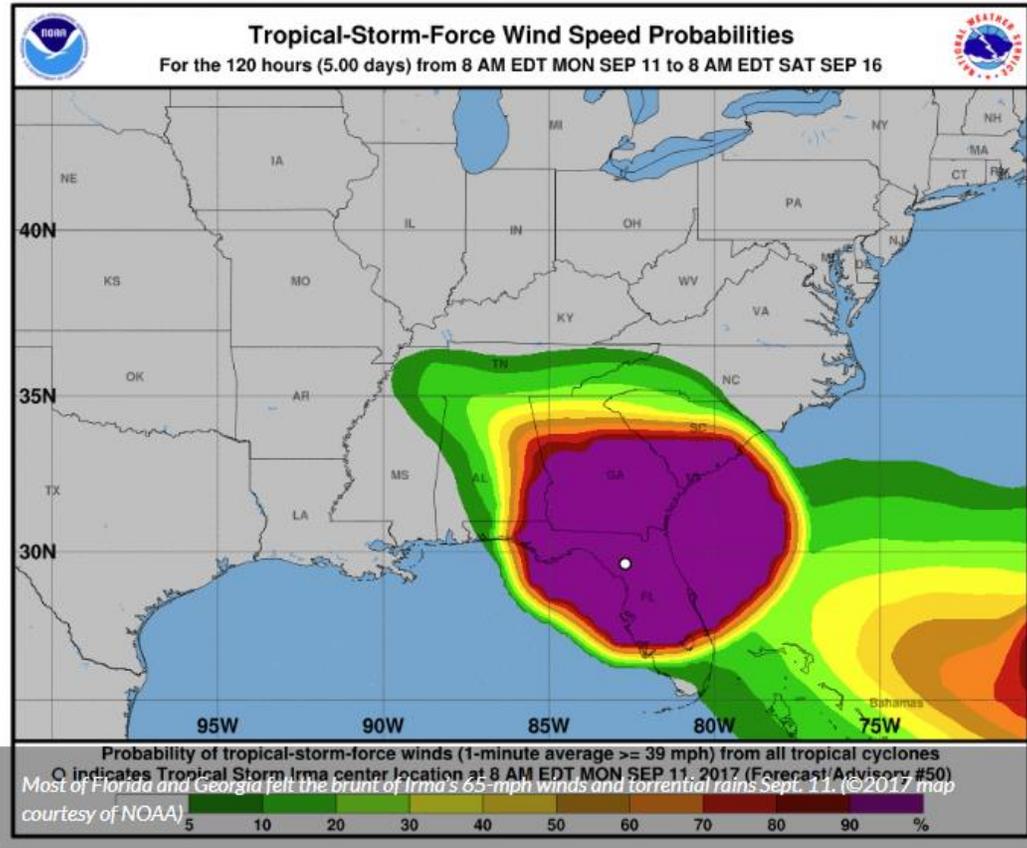
Category	Sustained Winds	Types of Damage Due to Hurricane Winds
1	74-95 mph 64-82 kt 119-153 km/h	Very dangerous winds will produce some damage: Well-constructed frame homes could have damage to roof, shingles, vinyl siding and gutters. Large branches of trees will snap and shallowly rooted trees may 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.

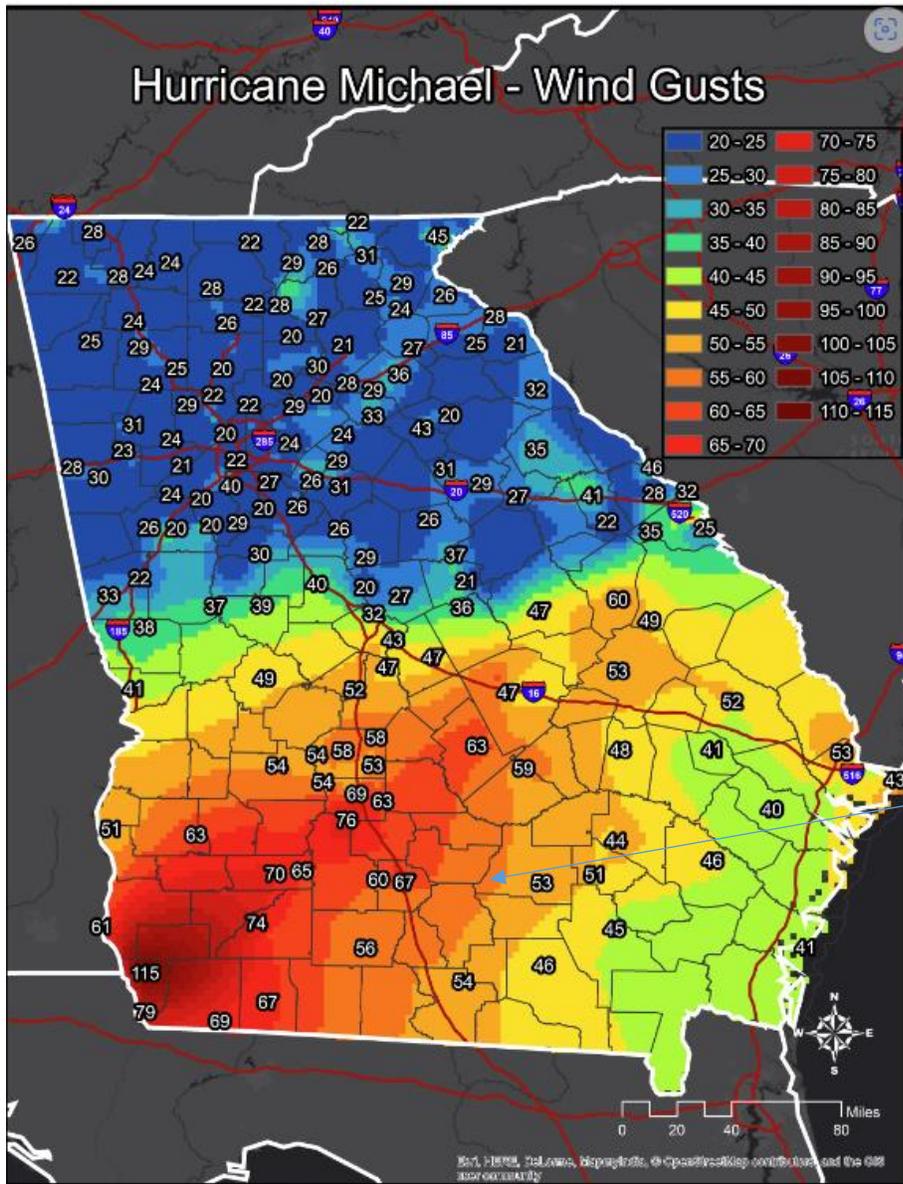
The official Atlantic hurricane season (which includes Gulf Coast and East Coast hurricanes) is June 1 through November 30, but hurricanes and tropical storms may also occur outside of those dates. Whether the hurricane/tropical storm is a short-term event, or a long-term event depends on many factors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

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

B. Profile of Events, Frequency of Occurrences, Probability

According to the NOAA Storm Events Database, (see Appendix F), there are 7 reports of Tropical Storms occurring 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 18.25 years. This is a 5.48% Historic Frequency Chance per year. The past 10-year Record Frequency Per Year is 21.1, the past 20-year frequency is 0.2, and the past 50-year frequency is 0.08 (see the Hazard Frequency Table in Appendix D).





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.

Other 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 gust 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 may have occurred in the community that went unreported or underreported.

Tropical Storm Elsa

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

Storm Elsa
July 7

Inland Flooding Potential
Tropical Storm Elsa
Potential Impacts of Moderate Flooding Rain:
Flood Watch in effect for NE FL and SE GA
Flooding rainfall begins this evening with rainbands moving up the coast and continue into tonight
Potential rainfall totals through tonight 5 to 6 inches, locally higher amounts up to 9 inches possible
Heavy rainfall and saturated grounds will enhance the potential for flash, urban, and river flooding
Flooding and debris in storm drains will pose flow down their banks. Small rocks, curbs, and ditches may become dangerous rivers.
Driving conditions could become hazardous with heavy rainfall and flooded roads
Flood waters can enter many structures with in multiple corners, some structures becoming uninhabitable or washed away

Storm Total Rainfall
Tropical Storm Elsa
Potential Storm Total Rainfall Amounts:
Inland NE FL (mainly Suwannee Valley) and SE GA:
3 to 6 inches, locally higher amounts up to 9 inches possible
Along the Coast:
2 to 4 inches, locally higher amounts up to 6 inches possible
Timing:
Through early Thursday morning

Wind Potential
Tropical Storm Elsa
Potential Impacts of Winds up to 73 MPH:
Tropical Storm force winds possible across NE FL and SE GA with strongest tropical storm force winds will likely be along and west of I-75 corridor
Tropical Storm force winds begin this morning across the I-75 corridor with the heaviest winds expected over St. Johns River basin and along the coast
Several buildings, trees, power outages and damage to structures and mobile homes possible
Downside saturated grounds, it won't take Tropical Storm force winds to cause trees to blow down
Brief periods with winds over 40 mph on high profile bridges

Warnings and Advisories
Elsa
Tropical Storm Warning and Wind Advisory
Tropical Storm Warning in effect for NE FL and SE GA waters
Wind Advisory in effect for St. Johns River basin and along the coast
Locally higher winds over the coast
Flood Watch in effect for NE FL and SE GA
Tornado Watch in effect for Marion County through 8 AM Wednesday
Small Craft Advisory over the NE FL coast

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

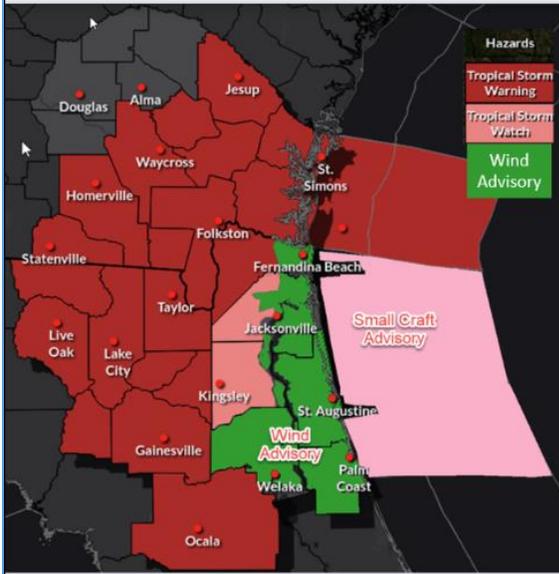
Weather Forecast Office

Jacksonville

Issued July 6, 2021 8:23 PM ET



Tropical Storm Watch/Warning and Wind Advisories

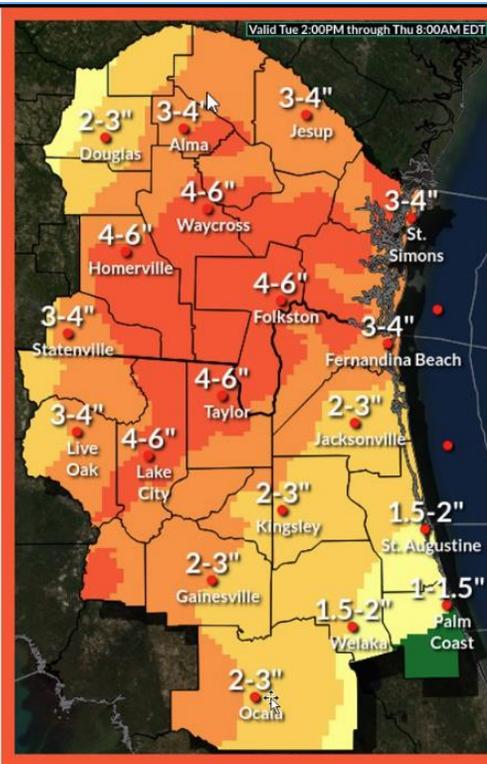


Flood Watch



Timing

- Main impacts begin later tonight into Wednesday
- Some impacts may begin tonight as rain bands move up from the south



- 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

Hurricane Elsa

8 PM Advisory - July 6

Weather Forecast Office
Jacksonville

Issued July 6, 2021 8:21 PM ET



- ### Impacts
- **Flooding/Heavy Rainfall** (3-5 inches, isolated 6 inches)
 - **Strong Winds** (winds 39 mph or greater possible)
 - **A few tornadoes** are possible
 - **High Rip Currents** possible Wed



NWS National Hurricane Center

Hurricane Elsa

Advisory 27A
Tuesday July 06, 2021

08 PM ET

Watches Warnings

HU TS HU TS

Current Information: ●
Center Location: 26.6 N 83.1 W
Max Sustained Winds: 75 mph
Movement: N at 10 mph

Forecast Positions:

● Tropical Cyclone
○ Post-Tropical
D < 39 mph S 39-73 mph
H 74-110 mph M > 110mph

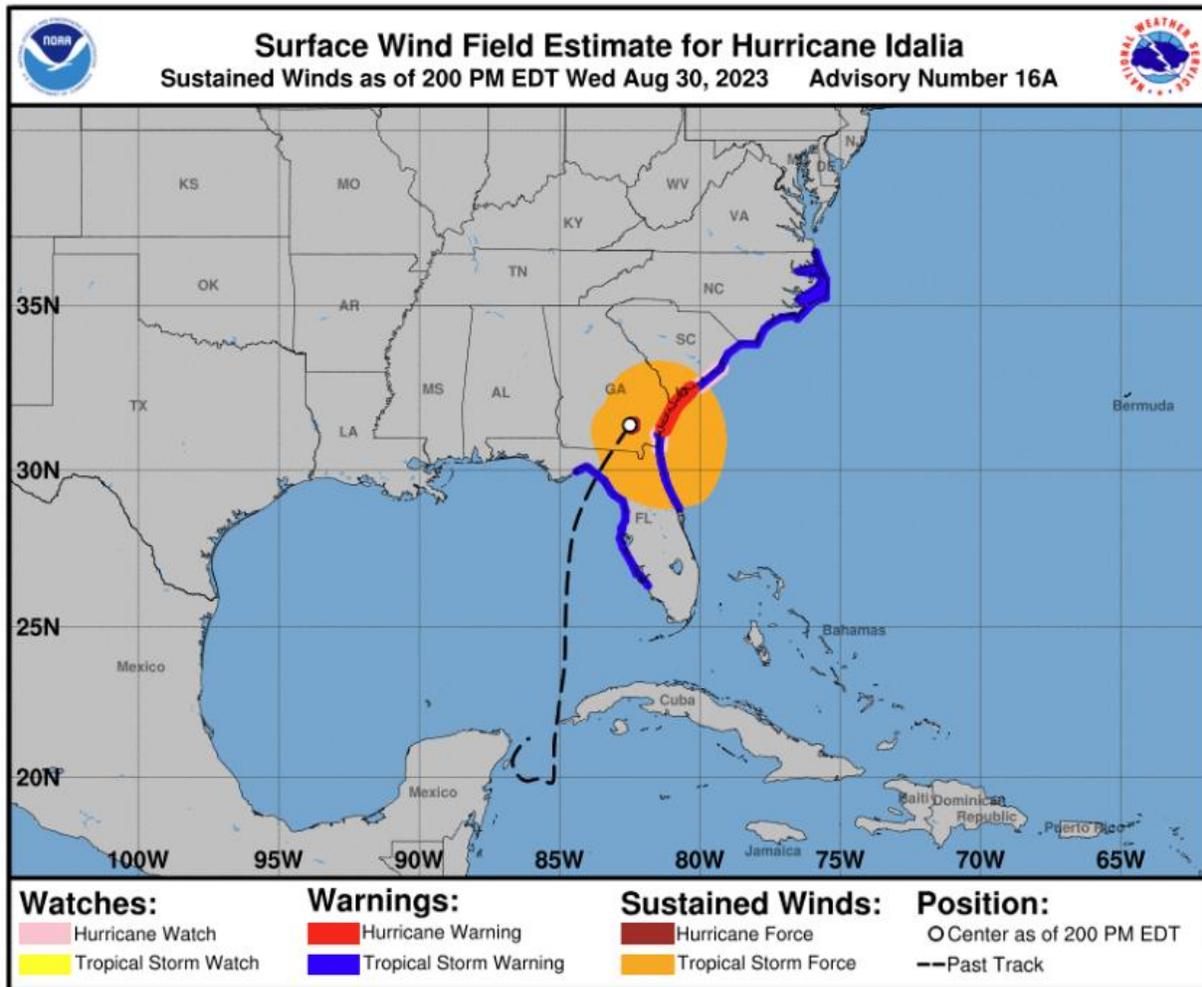
[f](#) [t](#) [v](#) NWSJacksonville

Visit hurricanes.gov and floridadisaster.org

weather.gov/jax

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.

Hurricane Idalia



Major Hurricane Idalia

5 AM Advisory Wednesday

Jacksonville, FL
Weather Forecast Office
Issued August 30, 2023 5:56 AM EDT

Note: The cone contains the probable path of the storm center but does not show the size of the storm. Hazardous conditions can occur outside of the cone.



Idalia August 30, 2023 Category 15 National Hurricane Center	Current information: x Center location: 29.1 N 84.1 W Maximum sustained wind: 130 mph Movement: NNE at 18 mph	Forecast positions: ● Tropical Cyclone ○ Post-Potential TC Sustained winds: 0 < 39 mph 5:39-7:3 mph N 74-110 mph M > 110 mph
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Track area: Watches: Warnings: Current wind field estimate:

NE FL & SE GA Key Points

- Idalia is now a major hurricane, making landfall near the Big Bend this morning. It is the time to hunker down and anticipate tropical storm to hurricane force winds.
- Tornado Watch in effect for all of NE FL & SE GA until 3 PM.

Potential Hazards

- Flooding Rainfall
- Coastal Flooding
Deadly Rip Currents
- Tropical Storm / Hurricane Winds
- Several Tornadoes

Review your hurricane emergency plan and ensure your hurricane kit is stocked.

Jacksonville
Visit hurricanes.gov and floridadisaster.org
weather

Tornado Watch

Valid Until
1:00 PM EDT Wednesday
August 30, 2023

Threat Information

- TORNADOES**
A few Tornadoes (rare)
- HAIL**
Isolated hail up to half inch size possible
- WIND**
Isolated gusts up to 30 mph possible

Potential Exposure

Population: 11,846,527
Schools: 2,476
Hospitals: 176

Tornado Warning

A thunderstorm capable of producing a tornado is imminent.

Take shelter now!
Go to a basement or interior room. Stay informed of forecast updates.

Take action.

weather.gov/safety/thunderstorms

Tornado Watch

Conditions are favorable for development of thunderstorms capable of producing tornadoes.

Stay informed in case a warning is issued, and know where to take shelter.

Be prepared

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!

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 Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education and Utility properties (2,056 of 2,056) in the community may be affected, with a total value of \$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, the total farm gate value of agricultural production 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 1 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 which are enforced by a building inspector. There is no planning commission. The County and Cities participate in joint comprehensive planning and in the required updates of the Service Delivery Strategy. No other land use or development trends that relate to this hazard have been identified at this time.

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

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

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

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

The Act also made the following optional codes available for local government adoption and enforcement. Local governments choosing to enforce any of the below optional codes must adopt the code(s) they wish to enforce, as well as administrative procedures and penalties. Some of the communities have chosen to adopt the following:

- International Property Maintenance Code - 2018 Edition
- International Existing Building Code - 2018 Edition
- National Green Building Standard - 2008 Edition
- Disaster Resilient Building Code IBC Appendix - 2020 Edition
- Disaster Resilient Building Code IRC Appendix - 2020 Edition

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

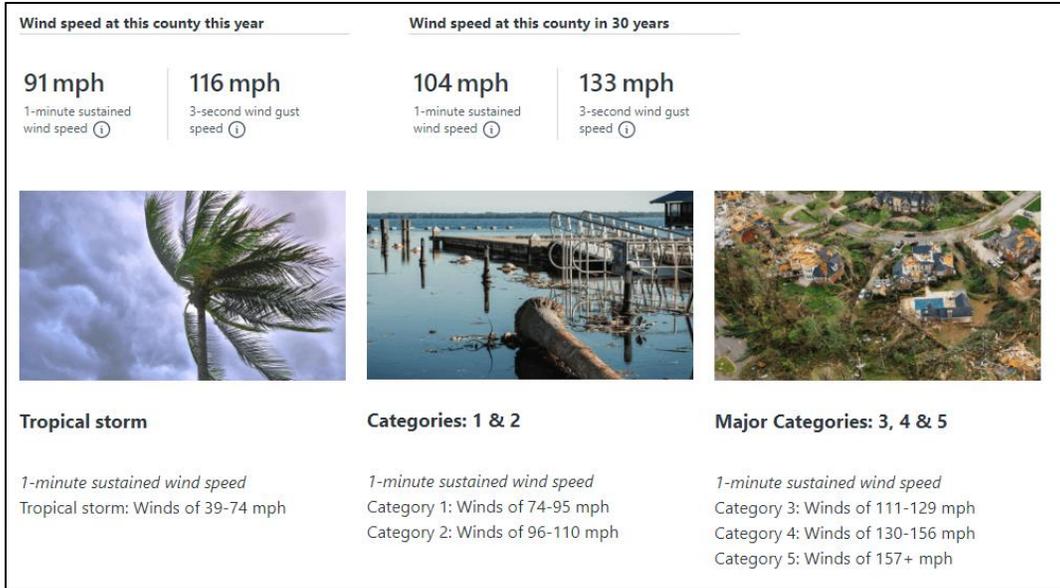
F. Multi-Jurisdictional Differences

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.

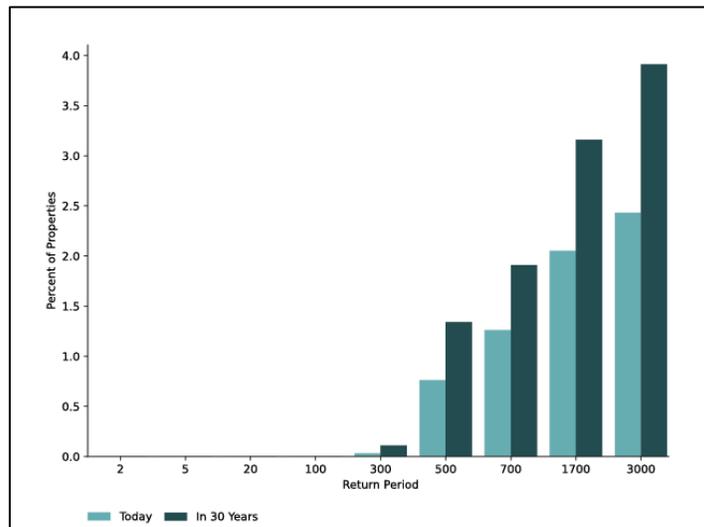
G. Overall HRV Summary of Events and Their Impact

Hurricanes/tropical storms have the potential to cause damage at any place, at any 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



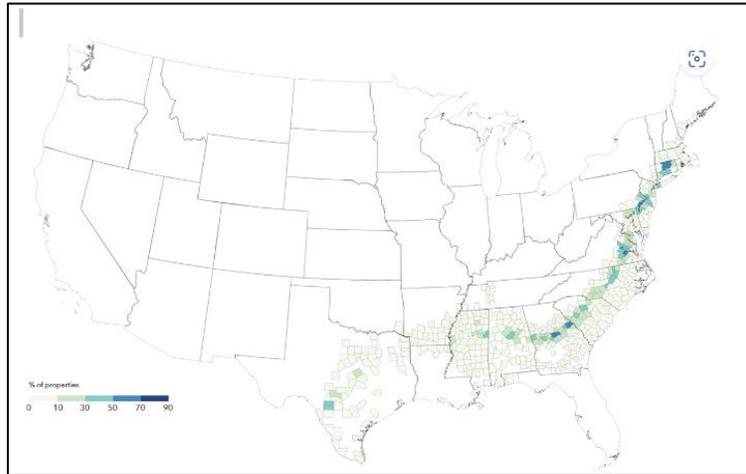
Scientific evidence indicates that tropical storms have been and will continue to intensify more rapidly than in the past, meaning that there may be less time to prepare for strong hurricanes that make landfall. Rainfall rates associated with hurricanes are also likely to increase with a changing climate, 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 total 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 becoming greater. This means that the average intensity of storms is increasing, and the wind speeds that are likely to be experienced are increasing.



Hurricanes forming in the future are more likely to track further northward than they are today. Due to climate change in the larger-scale general circulation in the atmosphere, the tropical

storms and hurricanes that form to 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. The chances of a storm impacting New England, for example, will be larger in the future than it is today.

It is very difficult to communicate about potential damage from high-speed wind, ahead of a major storm. 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 were present at the workshops that dealt with the elderly and the vulnerable population within Atkinson County. 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 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. Historic data have been examined from various sources, including the National Climatic Data Center (see Appendix F), as well as from local history and personal accounts, in order to determine the frequency of events. For further information, see the HAZUS Report in Appendix G.

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

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

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

ENHANCED FUJITA WIND DAMAGE SCALE

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

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

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

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

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 6.64 years. This is a 15.07% Historic Frequency Chance per year. The past 10-year Record Frequency Per Year is 0.4, the past 20-year frequency is 0.25, and the past 50-year frequency is 0.22 (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 along Ice Plant Road to trees. At the point where 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.

Since the previous Hazard Mitigation Plan was completed, one tornado event has occurred. 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

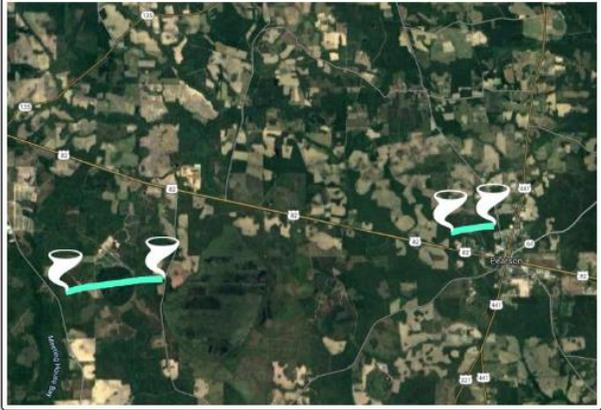
damage to trees and then reformed just north and west of Pearson, briefly, causing minor damage to a home.

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



Downloadable KMZ File

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

EF0 Weak 65-85 mph	EF1 Moderate 86-110 mph	EF2 Significant 111-135 mph	EF3 Severe 136-165 mph	EF4 Extreme 166-200 mph	EF5 Catastrophic 200+ mph
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Atkinson Tornado 12/2/2018



Source: NOAA data via ArcGIS

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

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

In Worksheet 3A: Inventory of Assets (appearing in Appendix A), we estimate that all of 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 Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education and Utility properties (2,056 of 2,056) in the community may be affected, with a total value of \$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-foot 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 located within 900 feet of the modeled tornado path. There was 1 essential building located in the path, according to the model and this facility would suffer minor damage. (See Appendix G).

Damage to crops is not taken into account in any of these figures. According to the Center for Agribusiness & Economic Development’s 2022 Georgia Farm Gate Value Report, the total farm gate value of agricultural production 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 types of housing (1,336). In the City of Pearson, 33.7% of occupied housing units are mobile homes (or other types of housing). In the City of Willacoochee, 48.9% of occupied housing units are mobile homes (or other type of housing).

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 are enforced by a building inspector. There is no planning commission. The County and Cities participate in joint comprehensive planning and in the required updates of the Service Delivery Strategy. No other land use or development trends that relate to this hazard have been identified at this time.

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

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

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

The Act also made the following optional codes available for local government adoption and enforcement. Local governments choosing to enforce any of the below optional codes must adopt the code(s) they wish to enforce, as well as administrative procedures and penalties. Some of the communities have chosen to adopt the following:

- International Property Maintenance Code - 2018 Edition
- International Existing Building Code - 2018 Edition
- National Green Building Standard - 2008 Edition
- Disaster Resilient Building Code IBC Appendix - 2020 Edition
- Disaster Resilient Building Code IRC Appendix - 2020 Edition

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

F. Multi-Jurisdictional Differences

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 may exist that are not built to code and therefore may be especially vulnerable to the effects of strong winds and other hazards. In jurisdictions with a large number of mobile homes, the damage can be expected to be more severe.

G. Overall HRV Summary of Events and Their Impact

Tornadoes have the potential to cause damage at any place, at any time, throughout 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 as opposed to more sparsely populated or unpopulated areas, or if the event strikes areas with a large number of mobile homes.

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

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

H. Impacts from Future Conditions

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

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, and it makes 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. And 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. The burning of fossil fuels, such as coal, oil, and gas, releases huge amounts of carbon dioxide (CO₂) into the atmosphere every year, which is leading to a rise in global temperatures, known as global warming. Global warming is just one symptom of the larger problem of climate change.

The change in climate 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 other areas. Tornadoes are much harder for climatologists to predict and predicting the frequency and power of tornadoes is a challenge 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 start rotating and this condition will organize the storm and

allow 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 were present at the workshops that deal with the elderly and the vulnerable population within Atkinson County. 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 VIII. Severe Winter Storms

A. Identification of Hazard

The threat of Severe Winter Storms has been chosen by the Atkinson County HMPUC 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. Historic data have been examined from various sources, including the National Climatic Data Center (see Appendix F), as well as from local history and personal accounts, in order to determine the frequency of events.

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 not well prepared to handle such events. Icy roads may result in a disproportionate number of automobile crashes because residents are not accustomed to driving in icy conditions. Bridges and overpasses may be more susceptible to icing over, creating an additional hazard. Being unprepared may result in loss of life or substantial damage to property and the economy.

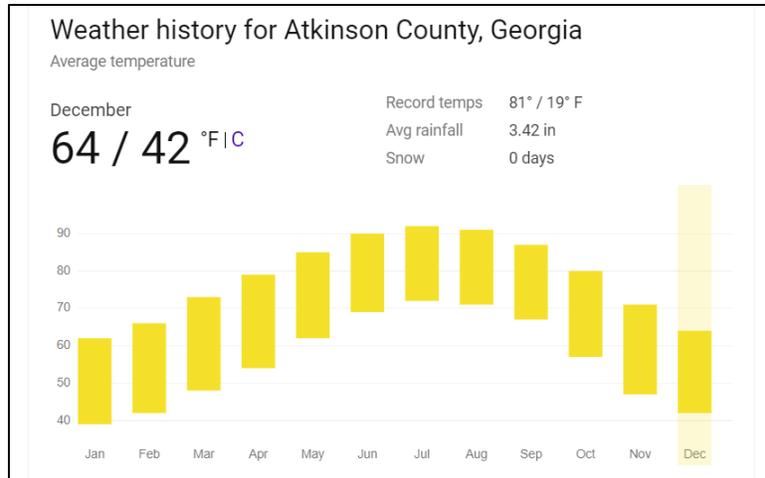
Severe winter storms, at worst, will produce sleet, freezing rain, and/or 1 to 2 inches of snow, with temperatures as low as the teens (°F). Snow accumulation usually melts away within 24 hours. Possible damage that may occur includes downed tree limbs, impassable roadways, power outages, increased emergency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

B. Profile of Events, Frequency of Occurrences, Probability

According to the NOAA Storm Events Database (see Appendix F), there has been 1 Severe Winter Storm event 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 1.37% Historic Frequency Chance per year. The past 10-year Record Frequency Per Year is 0, the past 20-year frequency is 0.05, and the past 50-year frequency is 0.02 (see the Hazard Frequency Table in Appendix D).

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, which was known as the “Storm of the Century.”

During the Winter of 2023, South Georgia saw more warm days than usual, and then a late freeze happened that caused farmers to lose 95% of their peaches. (Get date and data from Georgia Trend Magazine)



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

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

In Worksheet 3A: Inventory of Assets (appearing in Appendix A), we estimate that all of 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 Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education, and Utility properties (2,056 of 2,056) in the community may be affected, with a total value of \$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 taken into account in any of these figures. According to the Center for Agribusiness & Economic Development’s 2022 Georgia Farm Gate Value Report, the total farm gate value of agricultural production 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 are enforced by a building inspector. There is no planning commission. The County and Cities participate in joint comprehensive planning and in the required updates of the Service Delivery Strategy. No other land use or development trends that relate to this hazard have been identified at this time.

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

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

The Act also made the following optional codes available for local government adoption and enforcement. Local governments choosing to enforce any of the below optional codes must adopt the code(s) they wish to enforce, as well as administrative procedures and penalties. Some of the communities have chosen to adopt the following:

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

F. Multi-Jurisdictional Differences

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. In the event of icy roads, hazards would be greater along high-traffic corridors and in more densely populated areas. In the event of a power failure, households for which electricity is the only available source of heat will be more vulnerable to low temperatures. Homeless people are one of the groups that are most vulnerable to the effects of 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 have the potential to 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 in more densely populated areas, and higher in terms of 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.

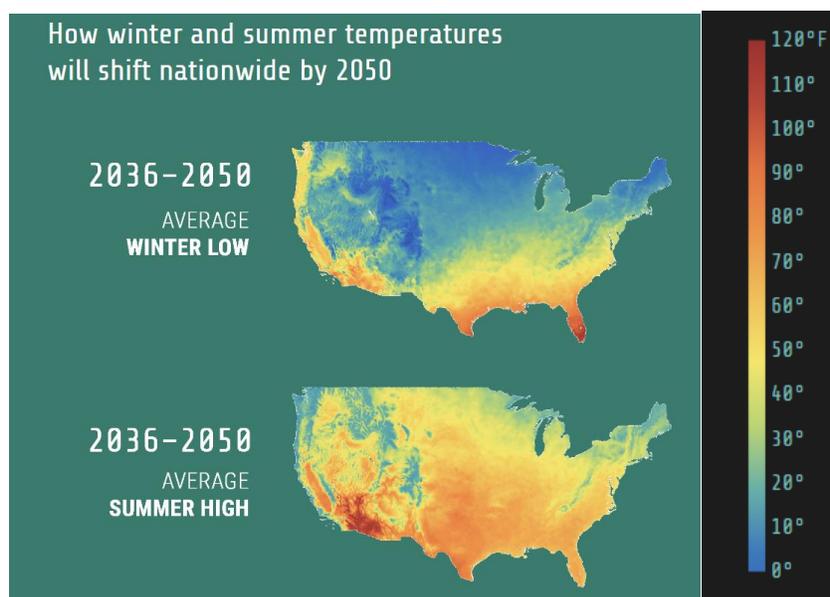
Since the previous plan was approved, there have not been any new developments, regulations, or programs that would either increase or decrease the community’s overall vulnerability to this hazard.

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 actually caused a weather phenomenon that has little to do with global warming. Research indicates that as average global temperatures rise and the Arctic continues to warm, the jet stream is slowing down and growing increasingly wavy. This is allowing bone-chilling cold Arctic air in the winter months that are typically held in a fairly 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 period of time.

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



I. Underserved/Socially Vulnerable Population Risk

Organizations were present at the workshops that dealt with the elderly and the vulnerable population within Atkinson County. 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.

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

Section I. Cyberattacks

A. Identification of Hazard

The threat of a cyberattack has been chosen by the HMPUC 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 with confidence for the protection of life, health, property, commerce, and infrastructure.

A cyberattack is any type of offensive maneuver employed by nation-states, individuals, groups, or organizations that targets computer information systems, infrastructures, computer networks, and/or 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.

In Atkinson County and the Cities of Pearson and Willacoochee, the power grid is vulnerable to a potential cyberattack. Among the infrastructure 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, as well as 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 at any time.

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

In Worksheet 3A: Inventory of Assets (appearing in Appendix A), we estimate that all of 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 Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education, and Utility properties (2,056 of 2,056) in the community may be affected, with a total value of \$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, the total farm gate value of agricultural production 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 are enforced by a building inspector. There is no planning commission. The County and Cities participate in joint comprehensive planning and in the required updates of the Service Delivery Strategy. No other land use or development trends that relate to this hazard have been identified at this time.

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

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

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

The Act also made the following optional codes available for local government adoption and enforcement. Local governments choosing to enforce any of the below optional codes must adopt the code(s) they wish to enforce, as well as administrative procedures and penalties. Some of the communities have chosen to adopt the following:

- International Property Maintenance Code - 2018 Edition
- International Existing Building Code - 2018 Edition
- National Green Building Standard - 2008 Edition
- Disaster Resilient Building Code IBC Appendix - 2020 Edition
- Disaster Resilient Building Code IRC Appendix - 2020 Edition

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

F. Multi-Jurisdictional Differences

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

G. Overall HRV Summary of Events and Their Impact

A cyberattack has the potential to 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 from this hazard. These are contained in Chapter 5.

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

Section II. Civil Unrest

A. Identification of Hazard

The threat of civil unrest has been chosen by the HMPUC 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, it is essential for Atkinson County and the Cities of Pearson and Willacoochee to have reliable countermeasures and equipment that can be used with confidence for the protection of 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 may arise from activities that were initially legal, 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 potentially occur at any time. Civil unrest events are difficult to predict and may occur 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

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E. Land Use and Development Trends

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Electrical Code, and the energy requirements of the International Energy Conservation Code must be used for one- and two-family dwelling construction.

F. Multi-Jurisdictional Differences

Although civil unrest has been known to occur in both rural and urban areas, it is predicted that due to the concentration of 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 a civil unrest event than unincorporated Atkinson County.

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

G. Overall HRV Summary

A significant portion 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 responders are ready to carry it out. Training of law enforcement officers in de-escalation techniques may reduce potential injuries, loss of life, and damage to property.

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 is an event that 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 nature of the public health emergency, treatment may or 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

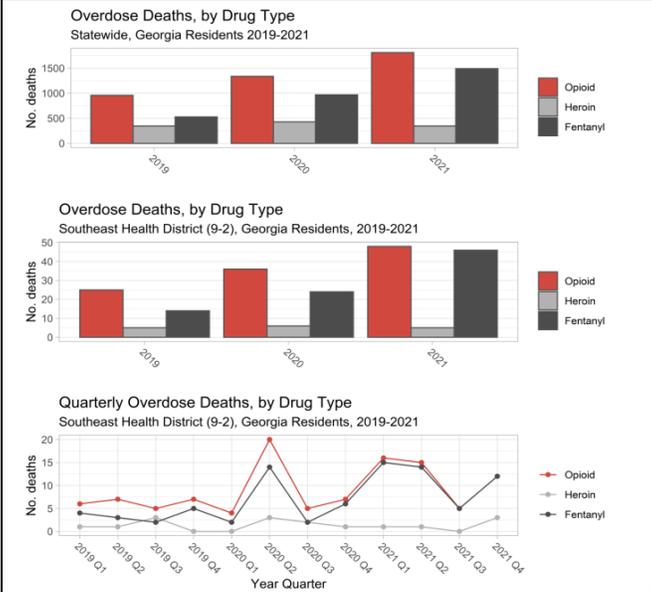
This issue has become a public health crisis with devastating consequences, including increased opioid misuse and related overdoses and the rising incidence of [neonatal abstinence syndrome](#) due to opioid use and abuse during pregnancy. In addition, the increase in injection drug use has also contributed 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.

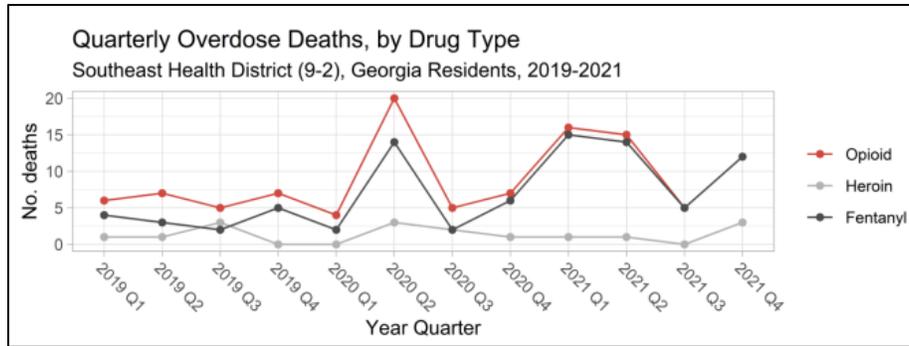
Atkinson County is within the Southeast Georgia Health District. The 2021 Georgia Southeast Health District Opioid-involved Overdose Deaths were recorded as follows:

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 began an immediate investigation into 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). Human-to-human spread of swine influenza viruses had been rarely documented and had not been 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 \(MMWR\)](#), 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 media inquiries related to the MMWR from medical reporters. 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, 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. Seven samples' results 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 CDC held the first formal

full press briefing to inform the media and guide the public and health care response to the rapidly evolving situation. CDC held nearly 60 press briefings during the 2009 H1N1 response.

On April 24, 2009, 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](#)²⁴ and 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, CDC issued a travel health warning recommending that United States travelers postpone all non-essential travel to Mexico. Finally, as in past influenza seasons, CDC urged the public and especially those people at the highest risk of influenza-related complications, to protect themselves by taking antiviral drugs early in their illness when recommended by their doctor; CDC also advised that everyone take every day preventive actions 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](#)²⁵, signaling that a pandemic was imminent, and 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](#)⁴. The other treatment courses would be added to the SNS.

As the outbreak spread, 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 mid-February 2019, and A (H3N2) activity increased from mid-February through mid-May.

Flu activity in the United States during the 2019–2020 season began to increase in November and was consistently high through January and February. The season was characterized by two consecutive waves of activity, beginning with influenza B viruses and followed by 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, cases of the flu A strain — H1N1 — 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 1,153 people in 49 states and the District of Columbia with respiratory illnesses caused by EV-D68. Almost all of the 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, and different types of enteroviruses 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. This virus was detected in the US in the late summer of 2016, 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 \(http://www.cdc.gov/coronavirus/index.html\)](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 patients in the U.S. have ever 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 in age 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, 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, Middle East respiratory syndrome coronavirus (MERS-CoV) has infected 2,442 persons and killed 842 worldwide. MERS-CoV is currently 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 substantially invest 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 the remaining 1,167 as community-acquired cases. During this same period, clusters/outbreaks were reported each year (range 2–255 cases).

Affected countries are reducing the global threat of MERS by addressing knowledge gaps with regard to 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 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
- Provided guidance for 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 general 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 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 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. A year later, Ebola case numbers dropped, 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 there have been no confirmed cases 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 one-time 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 coming 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 H1N1 influenza and COVID-19 can be transmitted in similar ways. These include Respiratory droplets and aerosols. Tiny droplets that are made when a person infected with the virus talks, sneezes, or coughs. If you inhale these droplets or aerosol particles, you can contract the virus. 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 the age of 5, and people under the age of 19 who receive long-term aspirin therapy. Additional high-risk groups for COVID-19 are those with hypertension, overweight or obesity, smoking, and substance use disorders.

Differences between the two viruses is influenza viruses are part of a viral family Orthomyxoviridae and are made up of 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-Co-V-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** based on cases and hospitalizations, according to the most recent update from the C.D.C. 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 beginning of the pandemic, a total of 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.



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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 Public 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 illnesses than any other health issues in Atkinson County and its cities.

Damage from Public Health Emergencies is equally likely to occur in any area of the county, so all assets are exposed equally to potential Public Health Emergency damage to some degree. The potential loss from a Public Health Emergency depends entirely on the scope and severity of the emergency and the capacity of emergency management agencies and health care facilities to respond. Public Health Emergencies may be small and highly localized or affect an entire community and result 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.

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

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

The Act requires local governments that elect to enforce these codes within their jurisdictions to adopt administrative procedures and penalties in order to locally enforce any of these mandatory

codes. Also, any applicable appendices of these codes must be adopted locally in order to be enforceable within a specific local jurisdiction.

The Act also made the following optional codes available for local government adoption and enforcement. Local governments choosing to enforce any of the below optional codes must adopt the code(s) they wish to enforce, as well as administrative procedures and penalties. Some of the communities have chosen to adopt the following:

- International Property Maintenance Code - 2018 Edition
- International Existing Building Code - 2018 Edition
- National Green Building Standard - 2008 Edition
- Disaster Resilient Building Code IBC Appendix - 2020 Edition
- Disaster Resilient Building Code IRC Appendix - 2020 Edition

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

F. Multi-Jurisdictional 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 entire county, and its cities, are susceptible to public health emergencies exacerbated by higher population density exists.

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

The entire 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 ahead of time.

(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 advance warning in the form of explosions, fires, and immediate health impacts. Slower effects can include long-term environmental damage and long-term health problems.

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 is the cause of 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 there are no reports on the website of the USDOT Pipeline and Hazardous Materials Safety Administration's Office of Hazardous Materials Safety database.

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

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

In Worksheet 3A: Inventory of Assets (appearing in Appendix A), we estimate that all of 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 Commercial, Industrial, Agricultural, Religious/Non-Profit, Government, Education, and Utility properties (2,056 of 2,056) in the community may be affected, with a total value of \$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 taken into account in any of these figures. According to the Center for Agribusiness & Economic Development's 2022 Georgia Farm Gate Value Report, the total farm gate value of agricultural production 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 the Cities of 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 that has 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.

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

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

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

The Act also made the following optional codes available for local government adoption and enforcement. Local governments choosing to enforce any of the below optional codes must adopt the code(s) they wish to enforce, as well as administrative procedures and penalties. Some of the communities have chosen to adopt the following:

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

F. Multi-Jurisdictional Differences

The facilities most vulnerable to hazardous materials release are located 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 of the community could be vulnerable to a hazardous materials release. Preparation for such an event requires specific training for first responders and coordination among agencies to ensure a swift response and containment of hazardous materials to minimize 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 catastrophic hazardous material release event due to a transportation accident.

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

Chapter 4: Local Natural Hazard Mitigation Goals and Objectives

Summary of Changes:

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

Chapter 4 Section	Updates to Section
I. 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)
II. 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)
III. 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)
IV. 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)
V. 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)
VI. 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)
VII. 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)
VIII. 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

This plan, as a joint effort between Atkinson County and all municipalities therein, will serve as a comprehensive mitigation plan. The mitigation strategies, hazard identification, and other information identified in this plan will be integrated into all comprehensive Atkinson County plans, as well as all municipality plans in the future. Incorporation of these strategies will occur, as necessary, throughout this planning cycle covered by this Hazard Mitigation Plan Update. Aspects of this plan will be integrated into the 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 future. 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	County/Municipal Code	Yes	No	No
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 exhibited when it comes to hazard mitigation and emergency planning efforts. Each local government has designated representatives to participate in the emergency management process, whether it be during planning, response, or recovery phases. The local Emergency Management Agency hosts regular meetings to gather all of the relevant local, regional and state partners together to develop effective plans and strengthen relationships among all of the stakeholders. Working together, the jurisdictions have been able to access resources available through several state and federal sources that have been instrumental in improving the technical capabilities of these communities to more effectively mitigate hazards and provide more accurate warning and preparatory information to their citizens.

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

Authority for the development of this Plan was given by the Atkinson County Commission 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 the boundaries of their budgets) have the ability to expand and improve their existing policies and programs as evidenced by the new and existing goals, objectives, and action steps included in this plan. The number of resources available to the jurisdictions for

expansion and improvement of existing programs will depend on factors such as the local government budgets and the availability of state and federal funding to support hazard mitigation activities.

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

The HMPUC discussed and identified the comprehensive range of Mitigation Goals, Objectives, and Action Steps contained in Chapter 4 of this Plan after identifying the hazards noted in Chapter 2 of this Plan. All areas of the community were considered in the development of the comprehensive range of Mitigation Goals, Objectives, and Action Steps. These were identified after the weighing of many factors discovered during the planning process, including risk assessment, storm history, past damage, community resources, and other factors.

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

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

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

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

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 to be the coordinating agency for implementation and administration of 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. There are historic and special considerations that pose significant challenges with regard to the retrofitting of historic buildings in order to make them more resilient to natural hazards. 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 and 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 of the local jurisdictions. In certain cases, where the action step may not apply to all jurisdictions, the applicable jurisdictions are noted in the table.

E. Local Public Information and Awareness Strategy:

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

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

F. Changes from the Previous Plan

Updated Action Step:

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. There are historic and special considerations that pose significant challenges with regard to the retrofitting of historic buildings in order to make them more resilient to natural hazards. 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 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 of the local jurisdictions. In certain cases, where the action step may not apply to all jurisdictions, the applicable jurisdictions are noted in the table.

E. Local Public Information and Awareness Strategy:

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

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

F. Changes from the Previous Plan

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 buildings exist in the community, a few of which are Critical Facilities. There are historic and special considerations that pose significant challenges with regard to the retrofitting of historic buildings in order to make them more resilient to natural hazards. 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 Wildfire 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 new 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 provide education to 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 contained in 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 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
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 #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 turn arounds.

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 #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 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 through reduction of hazardous fuels and make 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 through the cleaning and re-harrowing of 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 that 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 “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 “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 of the local jurisdictions. In certain cases, where the action step may not apply to all jurisdictions, the applicable jurisdictions are noted in the table.

E. Local Public Information and Awareness Strategy:

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

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

F. Changes from the Previous Plan

Updated Action Steps:

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 to 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. There are historic and special considerations that pose significant challenges with regard to the retrofitting of historic buildings in order to make them more resilient to natural hazards. 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 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 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 in areas lacking curb & gutter.	
Responsible Department	Atkinson County Public Works Depts.
Anticipated Cost	\$1 million 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 in areas lacking curb & gutter.	
Responsible Department	City of Pearson Public Works Depts.
Anticipated Cost	\$1 million 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 in areas lacking curb & gutter.	
Responsible Department	City of Willacoochee Public Works Depts.
Anticipated Cost	\$1 million 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 assure 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 perform analysis on properties effected 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 database to record depth of flooding to determine 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 of the local jurisdictions. In certain cases, where the action step may not apply to all jurisdictions, the applicable jurisdictions are noted in the table.

E. Local Public Information and Awareness Strategy.

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

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

F. Changes from the Previous Plan

Completed Action Steps

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 the form of crop damage. Its effects can be long-term, with the damage increasing as time goes by. In addition, drought conditions can contribute to wildfires in the community. The HMPUC believes that, due to the damage drought can cause, a comprehensive range of Mitigation Goals, Objectives, and Action Steps (contained in Section C below) should be implemented to reduce this hazard's potential impact on the community.

B. Identification and Analysis of Comprehensive Range of Mitigation Options

1. Structural and Non-Structural Mitigation:

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

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

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

3. Community Values, Historic and Special Considerations:

Historic buildings exist in the community, a few of which are Critical Facilities. There are historic and special considerations that pose significant challenges with regard to the retrofitting of historic buildings in order to make them more resilient to natural hazards. 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 usage of surface water and surface artesian flow for irrigation of 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 of the local jurisdictions. In certain cases, where the action step may not apply to all jurisdictions, the applicable jurisdictions are noted in the table.

E. Local Public Information and Awareness Strategy:

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

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

F. Changes from the Previous Plan

Updated Action Steps:

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. There are historic and special considerations that pose significant challenges with regard to the retrofitting of historic buildings in order to make them more resilient to natural hazards. 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 already are, 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, 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 d 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 and 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 back-up 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 of the local jurisdictions. In certain cases, where the action step may not apply to all jurisdictions, the applicable jurisdictions are noted in the table.

E. Local Public Information and Awareness Strategy:

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

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

F. Changes from the Previous Plan

Updated Action Steps:

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. There are historic and special considerations that pose significant challenges with regard to the retrofitting of historic buildings in order to make them more resilient to natural hazards. 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 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, brochures and solicit 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 areas of Atkinson County, the City of Pearson and the Cities 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 of the local jurisdictions. In certain cases, where the action step may not apply to all jurisdictions, the applicable jurisdictions are noted in the table.

E. Local Public Information and Awareness Strategy:

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

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

F. Changes from the Previous Plan

Completed Action Steps

Goal 1

Objective 1

- Develop 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 in 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 previously 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 have the potential to 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. There are historic and special considerations that pose significant challenges with regard to the retrofitting of historic buildings in order to make them more resilient to natural hazards. 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 of the local jurisdictions. In certain cases, where the action step may not apply to all jurisdictions, the applicable jurisdictions are noted in the table.

E. Local Public Information and Awareness Strategy:

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

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

F. Changes from the Previous Plan

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

Goal 1: Protect the public health and safety;

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

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

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

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

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 with little or no warning, may take many various forms, and may target a variety of organizations, individuals, or infrastructure. The HMPUC believes that, because these events have the potential to 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 that are relevant to this hazard. For more information, see Chapter 3, Section I.

3. Community Values, Historic and Special Considerations:

Historic buildings exist in the community, a few of which are Critical Facilities. There are historic and special considerations that pose significant challenges with regard to the retrofitting of historic buildings in order to make them more resilient to natural hazards. 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 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 up to date and 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 of the local jurisdictions. In certain cases, where the action step may not apply to all jurisdictions, the applicable jurisdictions are noted in the table.

E. Local Public Information and Awareness Strategy:

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

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

F. Changes from the Previous Plan

Updated Action Steps:

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 have the potential to cause great damage, injury, and loss of life, a comprehensive range of Mitigation Goals, Objectives, and Action Steps (contained in Section C below) should be implemented to reduce this hazard's potential impact on the community.

B. Identification and Analysis of Comprehensive Range of Mitigation Options

1. Structural and Non-Structural Mitigation:

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

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

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

3. Community Values, Historic and Special Considerations:

Historic buildings exist in the community, a few of which are Critical Facilities. There are historic and special considerations that pose significant challenges with regard to the retrofitting of historic buildings in order to make them more resilient to natural hazards. 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 of the local jurisdictions. In certain cases, where the action step may not apply to all jurisdictions, the applicable jurisdictions are noted in the table.

E. Local Public Information and Awareness Strategy:

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

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

F. Changes from the Previous Plan

Completed Action 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 at any 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 (contained in 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 historic and 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, COVID-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 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 & 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 savings of life, money, and property. 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.

Note: Worksheet #4-STAPLEE Criteria was 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 meetings and planning process of the HMPUC have been overseen by the Atkinson County Emergency Management Agency. 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 contained 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 implementation, monitoring, and updates for all jurisdictions. The respective jurisdictions will be responsible for the implementation of their specific mitigation activities as proposed in this plan.

C. Prioritization

1. Methodology for Prioritization

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

2. Use of Cost Benefit Analysis

The data provided in Worksheet 3 will be utilized to quantify the number of persons and/or property at risk from each hazard. Combined with the criteria in Worksheet 4, this will

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

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

3. Use of Other Calculations

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

4. Use of Other Review Structure

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

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

This Plan will be reviewed by Atkinson County and the Cities of Pearson and Willacoochee. The requirements of this Hazard Mitigation Plan will be taken into consideration and will be incorporated into Comprehensive Plans, Five-Year Community Work Program, Capital Improvement Plans, Local Emergency Operations Plans, and all other such Plans as appropriate.

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

To facilitate inclusion of this Plan, the Atkinson County Commission and the Cities of Pearson and Willacoochee will provide a copy of this Plan 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 be charged with ensuring that 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 the various local governments and area agencies in order to chart their plan progress.
- The EMA Director will hold formal public meetings at least once a year to monitor the progress of the plan implementation and allow the public a forum for expressing concerns, opinions, and ideas.
- Throughout the year, a series of informal meetings will be held in which various aspects of the plan, including monitoring and evaluation, are discussed.

B. Criteria Used to Monitor and Evaluate the Plan

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

Section III. **Plan Update and Maintenance**

A. Public Involvement

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

Since adoption of 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 and awareness and citizen involvement will continue over the next five years until the next required update of the Hazard Mitigation Plan. When specific issues dictate, public hearings will be conducted, and all other community planning efforts (Comprehensive Plan, Regional Plan, etc.) will afford citizens the opportunity to participate in and comment on the need to incorporate hazard mitigation initiatives.

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

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

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

B. Timeframe

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

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

Chapter 7: **Conclusion**

Summary of changes:

- Revised and updated language.

Atkinson County and the Cities of Pearson and Willacoochee have suffered considerable damage in the past from natural hazards. Planning and undertaking structural and nonstructural action steps before a disaster occurs can save lives and property. This philosophy has been the driving force behind the preparation of the 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 important parts of this plan. Because of this planning process, Atkinson County and Cities of Pearson and Willacoochee officials have gained a better understanding of the hazards affecting the community.

As a result of the planning process described in Chapter 1 and the hazard, risk, and vulnerability assessment in Chapter 2, 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)

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