



BULLOCH COUNTY

GEORGIA



Multi-Jurisdictional

HAZARD MITIGATION PLAN

2026



PREVENTION



PROTECTION



MITIGATION



RESPONSE



RECOVERY

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SECTION 1 INTRODUCTION TO HAZARD MITIGATION

1.1 OVERVIEW

This section has been reorganized and revised from the previous version. Below is a brief summary of the changes that have been made to the Introduction to Hazard Mitigation:

Table 1-1. 2026 Section 1 Updates

Section	Section Title	Updates to Section
1.1	Overview	Updated introductory language describing the purpose of hazard mitigation planning and the five-year update cycle.
1.2	Purpose of the Plan	Clarified the purpose of the Hazard Mitigation Plan and its relationship to FEMA Hazard Mitigation Assistance program eligibility.
1.3	Authority	Updated references to FEMA regulations and state mitigation planning guidance governing the plan.
1.4	Statement of the Problem	Updated explanation of disaster vulnerability and the importance of mitigation planning for Bulloch County and participating municipalities.
1.5	Plan Organization	Updated explanation of the structure of the HMP and organization of the chapters. Added list of revisions made to the plan due to changes in priorities.
1.6	Planning Process	Updated timeline and documentation of meetings and coordination conducted during the 2025–2026 update process.
1.7	Plan Participation	Updated list of participating jurisdictions and agencies involved in the update process.
1.8	Public & Stakeholder Involvement	Incorporated description of how the public was invited to participate in the update process and the outreach efforts employed to achieve the public's participation. Included details about involving stakeholders in the process, as well.
1.9	Hazard, Risk, & Vulnerability Overview	Updated overview summary reflecting revised hazard analysis and vulnerability findings.
1.10	Mitigation Goals Setting	Updated mitigation goals to reflect current hazards and community priorities.
1.11	Multi-Jurisdictional Considerations	Expanded description of coordination among Bulloch County and the municipalities of Statesboro, Brooklet, Portal, and Register.
1.12	Incorporation of Existing Plans, Studies, & Resources	Updated with new plan, study, and resource incorporations.
1.13	Adoption, Implementation, Monitoring, & Evaluation	Updated description of how the plan will be maintained and monitored during the next five-year cycle. Updated adoption language and procedures for participating jurisdictions.



1.2 PURPOSE OF THE PLAN

The purpose of this plan is to fulfill Bulloch County's hazard mitigation plan update requirements and facilitate implementation of hazard mitigation management activities through an action strategy. The Federal Emergency Management Agency (FEMA) defines hazard mitigation as any sustained action taken to reduce long-term risk to human life and property from natural hazards. An effective plan will improve the county's ability to deal with disasters and will document valuable local knowledge on the most efficient and effective ways to reduce losses. Keeping a plan dynamic lessens the impact of a disaster before it happens and will provide the following benefits to the county:

- Reduced public and private damage costs.
- Reduced social, emotional, and economic disruption.
- Continuity for businesses located within the county.
- Better access to funding sources for mitigation projects.
- Improved ability to implement post-disaster recovery projects.
- Improved Public Awareness.

Mitigation is the ongoing effort to lessen negative effects from natural disasters on people and property. The Federal Emergency Management Agency has designated mitigation as the cornerstone of effective emergency management. Bulloch County Public Safety/Emergency Management Agency ([BCEMA](#)) also believes that the best response to natural disaster is to prevent or diminish its impact before it occurs. Mitigation begins with local communities assessing their risks and repetitive problems and making a plan for creating solutions to these problems wherever possible and reducing the vulnerability of its citizens and property to these inherent hazard risks. There are a variety of mitigation measures. They are organized under six general strategies:

- Structural control projects: e.g., wind design speed, levees, and bridge improvements
- Property protection: e.g., [Building Codes](#), relocation out of harm's way, retrofitting buildings, insurance, buffer zones
- Preventive: e.g., zoning, building codes, dynamic county plans, and Storm Readiness
- Emergency services: e.g., warning, sandbagging, and evacuation assistance
- Natural resource protection: e.g., [Greenway Project Master Plan](#) and wetlands protection, urban [forestry programs](#)
- Public information: e.g., outreach projects, technical assistance to property owners

Through the application of mitigation technologies and practices, we can lessen the negative impact on county and municipal citizens from natural disasters. Mitigation measures can help reduce disaster losses and suffering so that there is less demand for money and resources in the aftermath. The end result of successful mitigation is a reduction in the cost of natural disaster response and recovery to each individual Bulloch County taxpayer; and also in the losses suffered by each homeowner and business owner in the event of a natural disaster.



1.3 AUTHORITY

To reduce the nation's natural disaster losses, the U.S. Congress passed the Disaster Mitigation Act of 2000 (DMA 2000) as an amendment to the Robert T. Stafford Act of 1974. The purpose of DMA 2000 was to invoke new and revitalized approaches to hazard mitigation planning. Section 322 of DMA 2000 emphasizes the need for state and local government entities to closely coordinate mitigation planning activities. It also makes the development, maintenance, and updating of a hazard mitigation plan a specific eligibility requirement for any local government applying for federal mitigation grant funds. These funds include the Hazard Mitigation Grant Program (HMGP), the Flood Mitigation Assistance (FMA) Program, and various iterations of Pre-Disaster Mitigation programs, all of which are administered by the Federal Emergency Management Agency (FEMA) and authorized by Section 203 of the Stafford Act through the Pre-Disaster Mitigation program (PDM). Communities with an adopted and federally approved hazard mitigation plan thereby become qualified to receive available mitigation funds before and after the next disaster strikes.

The Georgia Emergency Management Act of 1981 authorizes local emergency management agencies to conduct emergency management activities for the county. The Bulloch County Emergency Management Agency was authorized to develop and implement a plan for mitigation actions by Local Government Resolution for Emergency Management executed by the Bulloch County Commission and local municipalities.

This plan update was prepared in coordination with FEMA Region IV and the Georgia Emergency Management Agency (GEMA) to ensure that it meets all applicable federal and state planning requirements. A Local Mitigation Plan Review Tool, found in Appendix C, provides a summary of FEMA's current minimum standards of acceptability and notes the location within this plan where each planning requirement is met.

This plan was developed in a joint and cooperative manner by members of a Hazard Mitigation Planning Committee (HMPC) which included representatives of county, city, and town departments, federal and state agencies, citizens, and other stakeholders. This plan will ensure that Bulloch County and its incorporated municipalities remain eligible for federal disaster assistance including the Federal Emergency Management Agency (FEMA) Hazard Mitigation Grant Program (HMGP), the Flood Mitigation Assistance Program (FMA) program, and other Pre-Disaster Mitigation grant programs that may become available.

This plan has been prepared in compliance with Section 322 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act or the Act), 42 U.S.C. 5165, enacted under Section 104 of the Disaster Mitigation Act of 2000, (DMA 2000) Public Law 106-390 of October 30, 2000, as implemented at CFR 201.6 and 201.7 dated October 2007.

This document comprises a Multi-Jurisdictional Pre-Disaster Hazard Mitigation Plan for Bulloch County. Just like the 2020 plan, this planning area includes all of Bulloch County's incorporated municipalities and unincorporated areas. All participating jurisdictions are listed below:

- Bulloch County
- City of Brooklet
- Town of Portal



- Town of Register
- City of Statesboro

The above participating jurisdictions have adopted this plan in accordance with standard local procedures to meet federal plan adoption requirements. Copies of adoption resolutions are provided in Appendix J Plan Adoption Resolutions.

Failure to meet the new criteria will render state and local governments ineligible for Stafford Assistance and thus forfeit some types of emergency assistance and other funding streams.

1.4 STATEMENT OF THE PROBLEM

Each year in the United States, natural and human-caused hazards take the lives of hundreds of people and injure thousands more. Nationwide, taxpayers pay billions of dollars annually to help communities, organizations, businesses, and individuals recover from disasters. These monies only partially reflect the true cost of disasters because additional expenses incurred by insurance companies and non-governmental organizations are not reimbursed by tax dollars. Many natural disasters are predictable and through hazard mitigation, much of the cost of repairing damage caused by these events can be reduced or even eliminated.

Bulloch County previously developed a Pre-Disaster Multi-Jurisdictional Hazard Mitigation Plan in 2020 and has remained committed to hazard mitigation and the associated planning process, which enables regular review of the changing exposure, vulnerability, and risk in the planning area.

The focus of this plan update is on those hazards deemed “high” or “moderate” priority for the planning area, as determined through the risk and vulnerability assessments. Low priority hazards will continue to be evaluated but may not be prioritized for mitigation in the action plan.

Bulloch County and its participating jurisdictions followed the planning process prescribed by the Federal Emergency Management Agency (FEMA), and this plan was developed under the guidance of a Steering Committee. The Steering Committee led a risk assessment that identified and profiled hazards that pose a risk to the planning area, assessed the planning area’s vulnerability to these hazards, and examined the capabilities in place to mitigate them. The hazards profiled in this plan include:

- Dam Failure
- Drought
- Flood (Flash Flood & Heavy Rain)
- Severe Weather (Thunderstorm Wind, Lightning, Hail, & Extreme Heat)
- Severe Winter Weather (Winter Storm, Ice Storm, & Extreme Cold)
- Tornado
- Tropical Cyclone (Hurricane, Tropical Storm, & High Wind)
- Wildfire
- Cyberattack



- Hazardous Materials Incident
- Hostile Event
- Pandemic/Communicable Disease

1.5 PLAN ORGANIZATION

The Bulloch County Hazard Mitigation Plan 2026 Update is organized in a fashion to assist local government officials, county residents, public and private sector organizations, and any other interested parties in participating in, and planning for natural hazards. The Hazard Mitigation Plan Update contains a community profile, sections on natural hazards that typically occur within the county, and a section identifying specific mitigation goals, and associated courses of action. Finally, a framework for plan implementation and maintenance is presented. These were evaluated with current datasets, condensed, and revised to reflect seven current existing natural hazards identifiable in Bulloch County and its municipalities.

The plan describes those hazards that are considered to have the highest probability of occurrence in relation to their historical background, vulnerability, potential loss, and frequency of occurrence. The plan update also identifies and prioritizes hazard mitigation opportunities in each vulnerable area based on input from Plan Update Committee Members, data from the original plan, numerous government agencies, local businesses, and Bulloch County citizenry both in meetings and direct discussions. For other jurisdictional representation, see Planning Process Documentation in Appendix D.

The public was able to view the draft plan on the county website and was asked for their comments and suggestions. They were also encouraged to attend future plan updates for continuity of mitigation projects going forward.

Each destructive force was analyzed for spatial occurrences and frequency, and changes were made to an action plan wherever members deemed relevant, instead of the prior format of addressing each of the seven hazards individually, and the redundancies that resulted from that approach. Proudly, many of the changes were the deletion of completed action steps.

The 2026 HMP Update is organized into the following sections:

- Section 1: Introduction to Hazard Mitigation
- Section 2: Community Profile
- Section 3: Hazard Identification & Risk Assessment
- Section 4: Mitigation Strategy
- Section 5: Capability Assessment
- Section 6: Plan Implementation & Maintenance
- Annex A: City of Brooklet
- Annex B: Town of Portal
- Annex C: Town of Register



- Annex D: City of Statesboro
- Appendix A: Glossary of Terms
- Appendix B: References & General Resources
- Appendix C: Local Mitigation Plan Review Tool
- Appendix D: Planning Process Documentation
- Appendix E: Mitigation Alternatives
- Appendix F: GEMA-HS 3A Worksheets
- Appendix G: GMIS Essential Facilities
- Appendix H: GMIS & Hazus Reports
- Appendix I: Southern Wildfire Risk Assessment Report
- Appendix J: Plan Adoption Resolutions
- Appendix K: State of Georgia Approval
- Appendix L: FEMA Approval Letter

1.5.1 Revisions Due to Changes in Priorities

Each section of Bulloch County's 2021 Hazard Mitigation Plan has been revised in some manner to reflect changes in priorities. Therefore, a summary of those changes will be listed in the first section of each chapter. Significant additions/modifications to this plan are included in the list below:

- Several new sections were added to the Introduction, including 1.7, 1.8, and 1.12. Existing sections were revised heavily to provide additional details and meet FEMA requirements.
- The original hazard classifications of Water Hazards, Wind Hazards, and Wildfire Hazard were removed, and all hazards were listed separately instead.
- Ice Storm was removed as a standalone hazard and incorporated into Severe Winter Weather, which was added as a new hazard.
- High Winds/Thunderstorm Winds was removed as a standalone hazard and incorporated into Tropical Cyclone and Severe Weather, respectively.
- Dam Failure was added as a new hazard to address nearby HHPDs and the multiple past occurrences of local private lake and pond dams.
- Lightning, Hail, and Extreme Heat were added and/or addressed more explicitly within the Severe Weather hazard.
- Winter Storm and Extreme Cold were added and/or addressed more explicitly within the Severe Winter Weather hazard.
- Cyberattack, Hazardous Materials Incident, Hostile Event, and Pandemic/Communicable Disease were added as new technological or human-caused hazards.
- Section 5 Capability Assessment was added as a new chapter.



The plan describes those hazards that are considered to have the highest probability of occurrence in relation to their historical background, vulnerability, potential loss, and frequency of occurrence. The plan update also identifies and prioritizes hazard mitigation opportunities in each vulnerable area based on input from Steering Committee Members, data from the original plan, numerous government agencies, local businesses, and Bulloch County residents, both in meetings and direct discussions. For other jurisdictional and stakeholder representation, see Jurisdictional Annexes A–D and Planning Process Documentation in Appendix D.

The public was able to view the draft plan on the county website and was asked for their comments and suggestions. They were also encouraged to attend future plan updates for continuity of mitigation projects going forward.

Each destructive force was analyzed for spatial occurrences and frequency, and changes were made to an action plan wherever members deemed relevant, instead of the prior format of addressing each of the hazards individually, and the redundancies that resulted from that approach. Many of the changes were the removal of completed action steps.

1.6 PLANNING PROCESS

The planning process for preparing the Bulloch County Multi-Jurisdictional Pre-Disaster Hazard Mitigation Plan was conducted between October 2025 and March 2026 and was based on DMA planning requirements and FEMA’s associated guidance. This guidance is structured around a four-phase process:

- 1. Planning Process;
- 2. Risk Assessment;
- 3. Mitigation Strategy; and
- 4. Plan Maintenance.

Into this process, the planning consultant integrated a more detailed 10-step planning process used for FEMA’s Community Rating System (CRS) and Flood Mitigation Assistance programs. Thus, the modified 10-step process used for this plan meets the requirements of six major programs: FEMA’s HMGP; FMA; PDM; Community Rating System; Severe Repetitive Loss Program; and new flood control projects authorized by the U.S. Army Corps of Engineers.

The table below shows how the 10-step CRS planning process aligns with the four phases of hazard mitigation planning pursuant to the Disaster Mitigation Act of 2000.

Table 1-2. Mitigation Planning and CRS 10-Step Process Reference Table

DMA Process	CRS Process
Phase I – Planning Process	
§201.6(c)(1)	Step 1. Organize to Prepare the Plan
§201.6(b)(1)	Step 2. Involve the Public
§201.6(b)(2) & (3)	Step 3. Coordinate
Phase II – Risk Assessment	
§201.6(c)(2)(i)	Step 4. Assess the Hazard
§201.6(c)(2)(ii) & (iii)	Step 5. Assess the Problem
Phase III – Mitigation Strategy	



DMA Process	CRS Process
§201.6(c)(3)(i)	Step 6. Set Goals
§201.6(c)(3)(ii)	Step 7. Review Possible Activities
§201.6(c)(3)(iii)	Step 8. Draft an Action Plan
Phase IV – Plan Maintenance	
§201.6(c)(5)	Step 9. Adopt the Plan
§201.6(c)(4)	Step 10. Implement, Evaluate and Revise the Plan

1.6.1 Phase I—Planning Process

Planning Step 1: Organize to Prepare the Plan

With the county's commitment to participate in the DMA planning process, community officials worked to establish the framework and organization for development of the plan. An initial meeting was held with key community representatives to discuss the organizational aspects of the plan development process. The Bulloch County Emergency Management Agency Director led the county's effort to reorganize and coordinate for the plan update. Consultants from AG Witt, LLC assisted the county through the planning process and preparation of the plan document.

Planning Step 2: Involve the Public

Public involvement and associated outreach efforts in the development of the plan was sought using various methods.

Planning Step 3: Coordinate

The Steering Committee formed for development of the 2020 Plan was reconvened for this plan update. Stakeholder coordination was incorporated into the formation of the Committee and was sought through additional outreach methods.

Coordination with Other Community Planning Efforts and Hazard Mitigation Activities

In addition to stakeholder involvement, coordination with other community planning efforts was also seen as paramount to the success of this plan. Mitigation planning involves identifying existing policies, tools, and actions that will reduce a community's risk and vulnerability to hazards. Bulloch County and its participating jurisdictions use a variety of planning mechanisms, such as Comprehensive Plans, subdivision regulations, building codes, and ordinances to guide growth and development. Integrating existing planning efforts, mitigation policies, and action strategies into this plan establishes a credible and comprehensive plan that ties into and supports other community programs. The development of this plan incorporated information from existing plans, studies, reports, and initiatives as well as other relevant data from neighboring communities and other jurisdictions.

These and other documents were reviewed and considered, as appropriate, during the collection of data to support the planning process and plan development, including the hazard identification, vulnerability assessment, and capability assessment. Data from these sources was incorporated into the risk assessment and hazard vulnerability in Section 3 of the plan as appropriate. The data was also used in determining the capability of each jurisdiction to implement certain mitigation strategies. The Capability Assessment can be found in Section 5. All sources, data, and information used is included in Appendix B: References & General Resources.



1.6.2 Phase II—Risk Assessment

Planning Steps 4 and 5: Identify/Assess the Hazard and Assess the Problem

The Steering Committee completed a comprehensive effort to identify, document, and profile all hazards that have, or could have, an impact on the planning area. Geographic information systems (GIS) were used to display, analyze, and quantify hazards and vulnerabilities. A draft of the risk and vulnerability assessment was made available on the plan website for the Committee, stakeholders, and the public to review and comment. A more detailed description of the risk assessment process and the results are provided in Section 2 Hazard Identification & Risk Assessment.

The Committee also conducted a capability assessment to review and document the planning area's current capabilities to mitigate risk from vulnerability to hazards. By collecting information about existing government programs, policies, regulations, ordinances, and emergency plans, the Committee could assess those activities and measures already in place that contribute to mitigating some of the risks and vulnerabilities identified. This information can be found in Section 5 Capability Assessment.

1.6.3 Phase III—Mitigation Strategy

Planning Steps 6 and 7: Set Goals and Review Possible Activities

The contractor facilitated brainstorming and discussion sessions with the Steering Committee that described the purpose and process of updating planning goals and objectives, a comprehensive range of mitigation alternatives, and a method of selecting and defending recommended mitigation actions using a series of selection criteria. This information is included in Section 4 Mitigation Strategy.

Planning Step 8: Draft an Action Plan

A complete first draft of the plan was prepared based on input from the Committee regarding the draft risk assessment and the goals and activities identified in Planning Steps 6 and 7. This draft was shared for Committee, stakeholder, and public review and comment via the county website. **[public comments were received.** HMPC and stakeholder comments, which were focused primarily on the hazard identification and risk assessment and the mitigation action plans, were integrated into the final draft for the Georgia Emergency Management Agency (GEMA) and FEMA Region IV to review and approve, contingent upon final adoption by the county and its participating jurisdictions.

1.6.4 Phase IV—Plan Maintenance

Planning Step 9: Adopt the Plan

To secure buy-in and officially implement the plan, the plan was reviewed and adopted by all participating jurisdictions. Resolutions are provided in Appendix J.

Planning Step 10: Implement, Evaluate, and Revise the Plan

Implementation and maintenance of the plan is critical to the overall success of hazard mitigation planning. Up to this point in the planning process, the Steering Committee's efforts have been directed at researching data, coordinating input from participating entities, and developing appropriate mitigation actions. Section 6: Plan Implementation and Maintenance provides an overview of the overall strategy for plan implementation and maintenance and outlines the method and schedule for monitoring, updating, and



evaluating the plan. Section 6 also discusses incorporating the plan into existing planning mechanisms and how to continue public involvement.

1.7 PLAN PARTICIPATION

This plan covers Bulloch County, Georgia and the city of Brooklet, town of Portal, town of Register, and city of Statesboro. Each of these jurisdictions participated in the update of this plan.

As with the previous plan, this Hazard Mitigation Plan was developed under the guidance of a Steering Committee. The Committee's representatives included representatives of county, city, and town departments; local, regional, and state agencies; citizens; and other stakeholders.

To reconvene the planning committee, a letter was sent via email to all county, city, and town Steering Committee contacts from the previous planning effort. Where staffing changed, emails were sent to appropriate staff from each jurisdiction. Each community was asked to designate a primary and secondary contact for the Committee. Communities were also asked to identify local stakeholder representatives to participate in the Committee alongside the county, city, and town officials in order to improve the integration of stakeholder input into the plan. A full list of Steering Committee members can be reviewed in the table below.

Table 1-3. Steering Committee Members

Member Name	Title	Agency/Department
Alexis Knox	Risk Reduction Specialist	GEMA/HS
Ashley Bragg	Hazard Mitigation Planning Specialist	GEMA/HS
Ben Lienhard	Captain	Bulloch County Sheriff's Office
Ben Tapley	Fire Chief	Bulloch County Fire Department
Benjy Thompson	Chief Executive Officer	Development Authority of Bulloch County
Brad Deal	Director	Statesboro Public Works & Engineering
Brian Hendrix	Director	EMS
Bronson Bragdon	Director of Marketing & Communications	Excelsior EMC
Candice Bodkin	Associate Professor	Georgia Southern University
Carter Crawford	City Manager	City of Brooklet
Cathy Dixon	Chair Commissioner	Statesboro Planning Commission
Chad Reinbold	President	Bags of Faith
Charles Penny	City Manager	City of Statesboro
Charles Wilson	Superintendent	Bulloch County School District
Chris Yaughn	Director	Fostering Bulloch, 7 th Mile Ranch
Christopher Eldridge	County Manager	Bulloch County
Corey Kemp	Director	Bulloch County Emergency Management Agency
Dadrian Cosby	Director	Bulloch County Recreation
Dink Butler	Director	Bulloch County Public Works



Member Name	Title	Agency/Department
Erick Riner	Director	Georgia Southern University Emergency Management
Frank Davis	President	Bulloch VOAD
James Pope	Director	Bulloch County Planning & Development
Jenny Maddi	Director of Risk Management	East Georgia Regional Medical Center
Jennifer Davis	President/CEO	Statesboro-Bulloch Chamber of Commerce
Jeremy Wilburn	Business Development	Statesboro-Bulloch Chamber of Commerce
Joel Hanner	Area Manager	Georgia Power
Johnny Alamia	Safety Coordinator	City of Brooklet
Jonathan Smith	Pastor	Pittman Park United Methodist Church
Justin Abercrombie	Pastor	Southbridge
Justin Williams	Director	Statesboro Planning & Development
Kelly Barnard	Director	Bulloch County 911
Mike Arrieta	City Clerk	Town of Portal
Mindy Kirkland	Captain EMS	Bulloch County EMS
Mitch Johnson	Road Maintenance Director	Bulloch County Public Works
Monica Gann	Senior Planner	City of Statesboro
Monifa Johnson	Executive Director	Statesboro Housing Authority
Neil Casey	Chief Deputy	Bulloch County Sheriff's Office
Noel Brown	Sheriff	Bulloch County Sheriff's Office
Peggy Brown	Permanent Supportive Housing Program Case Manager	Union Mission
Randy Tillman	Director	Bulloch County Public Safety
Ron Nelson	Interim County Engineer	Bulloch County Engineering
Ryan Heins	Executive Director	Bulloch Strong
Sterling Starling	Building Official	Bulloch County
Tammy Mascarello	Director of Radiology	East Georgia Regional Medical Center
Todd Mashburn	School Safety Director	Bulloch County School District

1.8 PUBLIC & STAKEHOLDER INVOLVEMENT

An important component of any mitigation planning process is public participation. Individual citizen and community-based input provide the entire planning team with a greater understanding of local concerns and increases the likelihood of successfully implementing mitigation actions by developing community “buy-in” from those directly affected by the decisions of public officials. As citizens become more involved in decisions that affect their safety, they are more likely to gain a greater appreciation of the hazards present in their community and take the steps necessary to reduce their impact. Public awareness is a key component of any community's overall mitigation strategy aimed at making a home, neighborhood, school, business, or entire planning area safer from the potential effects of hazards.



Public involvement in the development of the plan was sought using various methods including open public meetings, a public participation survey, and by making copies of draft plan documents available for public review online.

All public meetings were advertised on the Bulloch County website, which was shared on local community websites, and via social media outlets like Facebook and X (formerly known as Twitter). Copies of meeting announcements are provided in Appendix D. The public meetings held during the planning process are summarized in Appendix D, as well.

1.8.1 Outreach Efforts

The Steering Committee agreed to employ a variety of public outreach methods including established public information mechanisms and resources within the community. See Appendix D for specific details on public outreach efforts employed during the preparation of this plan.

Public involvement activities for this plan update included press releases, social media outreach, a public survey, and the collection of public and stakeholder comments on the draft plan.

A public outreach survey was made available on October 28, 2025, and remained open for response until November 28, 2025. The public survey requested public input that provided insight into geographic location, living conditions, personal emergency preparedness, hazard concerns, and the identification of personal and public mitigation activities to lessen the risk and impact of future hazard events. In total, 77 survey responses were received. Detailed results are provided in Appendix D.

The following is a list of high-level summary results and analysis derived from survey responses:

- 77 people participated in the public survey
- 68 live in the county; 38 have lived in the county for 21 or more years
- 65 own their home
- Over half of the respondents identified the following as their top hazard concerns:
 - Heavy rain
 - High wind
 - Lightning
 - Severe winter storm/ice storm
 - Thunderstorm wind
 - Tornado
 - Tropical cyclone
- 12 believe that preparedness activities cost too much, but most have conducted some personal mitigation activities, including:
 - 67 have installed and maintain smoke detectors in their homes
 - 41 have cleared debris and vegetation from around their homes



- 30 have installed and maintained carbon monoxide detectors in their homes
- 21 respondents provided feedback on mitigation actions the county could consider in the planning process.

Public survey results were presented to the Steering Committee during Meeting #2, which included discussion on updating mitigation strategies to address concerns and vulnerabilities provided by the community.

1.8.2 Involving Stakeholders

In addition to representatives of each participating jurisdiction, the Steering Committee included a variety of stakeholders. Input from additional stakeholders, including neighboring communities, was solicited through direct email invitations to the open public meetings and distribution of the public survey. However, if any additional stakeholders representing other agencies and organizations participated through the public survey, that information is unknown due to the anonymous nature of the survey. Documentation of outreach to stakeholders is provided in Appendix D.

The following local organizations and businesses participated in the update of Bulloch County's Hazard Mitigation Plan:

- Bags of Faith
- Bulloch County School District
- Bulloch Strong
- Bulloch VOAD
- Development Authority of Bulloch County
- East Georgia Regional Medical Center
- Excelsior EMC
- Fostering Bulloch, 7th Mile Ranch
- Georgia Power
- Georgia Southern University
- Pittman Park United Methodist Church
- Southbridge
- Statesboro-Bulloch Chamber of Commerce
- Statesboro Housing Authority
- Union Mission

1.9 HAZARD, RISK, & VULNERABILITY OVERVIEW

The hazards addressed in this plan were chosen by the Steering Committee based on the previous plan, the current Georgia State Mitigation Strategy, and consideration of hazard frequency and potential severity of damage. Wherever possible, probability of future occurrences was based on historical occurrence data.

The conclusions drawn from each individual hazard profile and vulnerability assessment were used to prioritize all potential hazards to Bulloch County using the Priority Risk Index (PRI). This method provides a standardized numeric value to each hazard for comparability. A higher PRI value indicates a hazard poses a higher risk to the community. The PRI is a weighted sum of values assigned across five categories: probability, impact, spatial extent, warning time, and duration. Each hazard is assigned a value between 1 and 4 for each category based on a defined set of criteria. Details on these values can be found in Section 3.3.6 Priority Risk Index. Section 3.16 Hazard Risk Summary summarizes the PRI results for the hazards addressed in this plan.



1.10 MITIGATION GOALS SETTING

The Bulloch County Hazard Mitigation Plan Update Committee used the results of the Hazard, Risk and Vulnerability assessment to identify and prioritize appropriate mitigation goals and actions. The Steering Committee identified mitigation strategies they felt would benefit the community and deleted those which had been implemented in the interim.

Development of these strategies began in a formal Committee meeting, along with data and input from GEMA and GFC. Past occurrences of disasters and historical trend data aided committee members in assigning priorities.

After ensuring that all interested persons had been given ample opportunity to contribute to strategy development, mitigation action steps were next reviewed for priority status by committee members.

1.11 MULTI-JURISDICTIONAL CONSIDERATIONS

The city of Brooklet, town of Portal, town of Register, city of Statesboro, and Bulloch County were active participants in the plan update process. To satisfy multi-jurisdictional participation requirements, each participating jurisdiction was required to perform the following tasks:

- Designate representatives for the Steering Committee to participate in mitigation planning meetings;
- Report on the status of existing mitigation projects; and
- Develop their local Mitigation Action Plan.

In developing the Bulloch County Mitigation Action Plan, the county invited representatives of special interest groups to incorporate mitigation actions that will reduce the effects of hazards on vulnerable segments of the county's population. Foreseeable factors include early warning specifically directed to those groups to facilitate preparations for evacuation, identification of transportation system elements adapted to their needs, and preparation of shelters/reception areas for special needs. Stakeholders were also invited to participate in this process and have developed their own mitigation actions, such as protection and backup power generation for non-county-owned critical facilities.

As a basis for each jurisdiction creating their own Mitigation Action Plan, jurisdiction-specific information was developed on current conditions, assets and exposure, risk and vulnerability, and capability. Current conditions information is provided in Section 2 Community Profile, which has a countywide summary of geographic and demographic data. More specific data, along with asset and exposure data, is presented for each jurisdiction in Annexes A-D. The risk assessment also provides jurisdictional specific vulnerability data, such as repetitive loss counts for flood. At the end of each hazard profile for natural hazards, a hazard summary table provides a Priority Risk Index (PRI) rating by jurisdiction to note any variations in risk across the planning area. Where applicable, jurisdictional annexes also include more detailed hazard mapping and data.

The following jurisdictional specific considerations were identified in the 2026 plan and remain relevant to this planning effort:

- Mitigation goals and action steps identified in this plan for wind and fire damage are applicable to all municipalities and the county areas, unless specifically noted otherwise.



- In floods especially, action items with an emphasis on higher spatial frequency of occurrence and extent were adapted for those areas (e.g., Portal has no flood areas, and Brooklet built a replacement City Hall/Police HQ at a higher elevation location).

1.12 INCORPORATION OF EXISTING PLANS, STUDIES, & RESOURCES

Requirement §201.6(b)(3), State Requirement Element F3

Existing Plans

- Smart Bulloch 2045: Bulloch County Joint Comprehensive Plan
- 2020 Bulloch County Pre-Disaster Hazard Mitigation Plan
- 2024 State of Georgia Hazard Mitigation Plan
- Bulloch County Local Emergency Operations Plan
- Bulloch County Floodplain Management Plan
- Bulloch County Community Assessment 2009-2029
- 2018 Bulloch County Community Wildfire Protection Plan
- 2024 City of Statesboro Comprehensive Plan

Studies

- 2025 Hazard Risk Analyses (Hazus Report)
- 2022 United States Department of Agriculture Ag Census
- 2020 United States Census and 2023/2024 Census Estimates
- 2010 Bulloch County Flood Insurance Study
- 2025 Southern Group of State Foresters Wildfire Risk Assessment
- 2021 U.S. Army Corps of Engineers South Atlantic Coastal Study

Resources

- National Climactic Data Center
- National Weather Service
- Bulloch County Tax Assessor's Data
- Bulloch County Website
- Georgia Mitigation Information System Database
- Colorado State University (Hurricane mapping)
- United States Geological Survey
- FEMA Flood Insurance Rate Maps



- National Flood Insurance Program
- United States Coast Guard National Response Center Data
- Georgia Department of Transportation
- Georgia Safe Dams Program
- Southern Group of State Foresters Wildfire Risk Assessment
- Environmental Working Group (crop insurance and agricultural losses)
- American Society of Civil Engineers
- Georgia Coastal Hazards Portal
- National Drought Mitigation Center
- NOAA, National Centers for Environmental Information, Storm Events Database
- U.S. Army Corps of Engineers, National Inventory of Dams
- U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration.
- University of Nebraska-Lincoln, U.S. Drought Monitor
- VAISALA, National Lightning Detection Network

1.12.1 Application of Existing Plans & Studies

Table 1-4. Existing Plan Incorporation into HMP

Existing Planning Mechanism	Reviewed Yes/No?	Incorporation into 2026 HMP
2020 Bulloch County Pre-Disaster Hazard Mitigation Plan	Yes	Baseline for the 2026 Plan; updated mitigation strategies; updated hazards; updated Bulloch County information
2024 State of Georgia Hazard Mitigation Plan	Yes	Hazard descriptions; potential hazards; mapping mechanisms; potential mitigation strategies that could be adopted on a local level
Bulloch County Local Emergency Operations Plan (LEOP)	Yes	Identification of current resources; identification of current capabilities
2022 USDA Census of Agriculture	Yes	Agricultural data regarding potential losses for drought and wildfire
2020 United States Census and 2023/24 Census Estimates	Yes	To update Bulloch County's profile information
2010 Bulloch County Flood Insurance Study	Yes	Identify potential flood prone areas; prioritization of flood-related mitigation strategies



Existing Planning Mechanism	Reviewed Yes/No?	Incorporation into 2026 HMP
Smart Bulloch 2045: Bulloch County Joint Comprehensive Plan	Yes	To identify future development trends; identify mitigation strategies to curb trends in a direction that considers the hazards of the area
2025 Southern Wildfire Risk Assessment Summary Report	Yes	Summary of wildfire risk and hazard in the county
2025 Bulloch County Hazus Report	Yes	Hazard Analysis

1.13 ADOPTION, IMPLEMENTATION, MONITORING, & EVALUATION

To implement the Bulloch County Hazard Mitigation Plan Update, the Committee has chosen an Implementation Team comprised of the EMA Director, the County Commission Chair, and the Mayor or Counsel of each municipality to assign tasks appropriately and ensure the ongoing operation of the Plan Update through branches of city and county government as was advised in the original plan of 2006.

Bulloch County currently utilizes comprehensive land use planning and building codes to guide and control development within the county. These existing mechanisms will have hazard mitigation strategies integrated into their guidance. Local authorities responsible for the Local Emergency Operations Plan (LEOP) and other county and city of Statesboro plans, as applicable to multi-jurisdictional plans, will utilize guidance from this Hazard Mitigation Plan Update.

Mitigation action items also include strong educational outreach strategies (newspaper, school presentations, social media presences, etc.) that were identified by the plan update committee and are to be implemented throughout.

The Bulloch County Hazard Mitigation Plan Update Steering Committee has developed a method to ensure that regular review and update of the Hazard Mitigation Plan occur. The Emergency Management Agency Director will assemble a committee when deemed necessary (e.g., when other involved plans are updated) and after any severe hazard event. Committee members will be responsible for monitoring and evaluating the progress of the mitigation strategies in the Plan. The committee will review each goal and action step to determine relevance to changing situations in the county, as well as changes in state and federal policy, and to ensure that goals are addressing current and expected conditions. The committee will also review the risk assessment portion of the Plan Update to determine if this information should be modified.

Bulloch County is dedicated to involving the public directly in the continual reshaping and updating of the Hazard Mitigation Plan. A dynamic website, X, and Facebook presence is now being utilized to extend that reach.

Copies of the Plan/Plan Update will be available at the Bulloch County Public Library and at the local EMA office. The existence and location of these copies will be publicized in the local newspaper. All comments and questions will be directed to the local Public Safety/EMA office for follow-up. The public County Commission meeting to evaluate the Plan Update will provide the citizenry with a forum for which they can express concerns, opinions, or ideas about the Plan Update as seen on the Bulloch County website.



It is the intent of the Bulloch County Board of Commissioners to submit this plan update to Georgia Emergency Management Agency (GEMA) and Federal Emergency Management Agency (FEMA) Region IV for approval. Upon FEMA approval, this plan will be adopted by Bulloch County and all participating jurisdictions by passing a resolution. The purpose of formally adopting this plan is to secure buy-in from all participating jurisdictions, raise awareness of the plan, and formalize the plan's implementation.



SECTION 2 COMMUNITY PROFILE

2.1 OVERVIEW

This section has been reorganized and revised from the previous version. Below is a brief summary of the changes that have been made to the Community Profile:

Table 2-1. 2026 Section 2 Updates

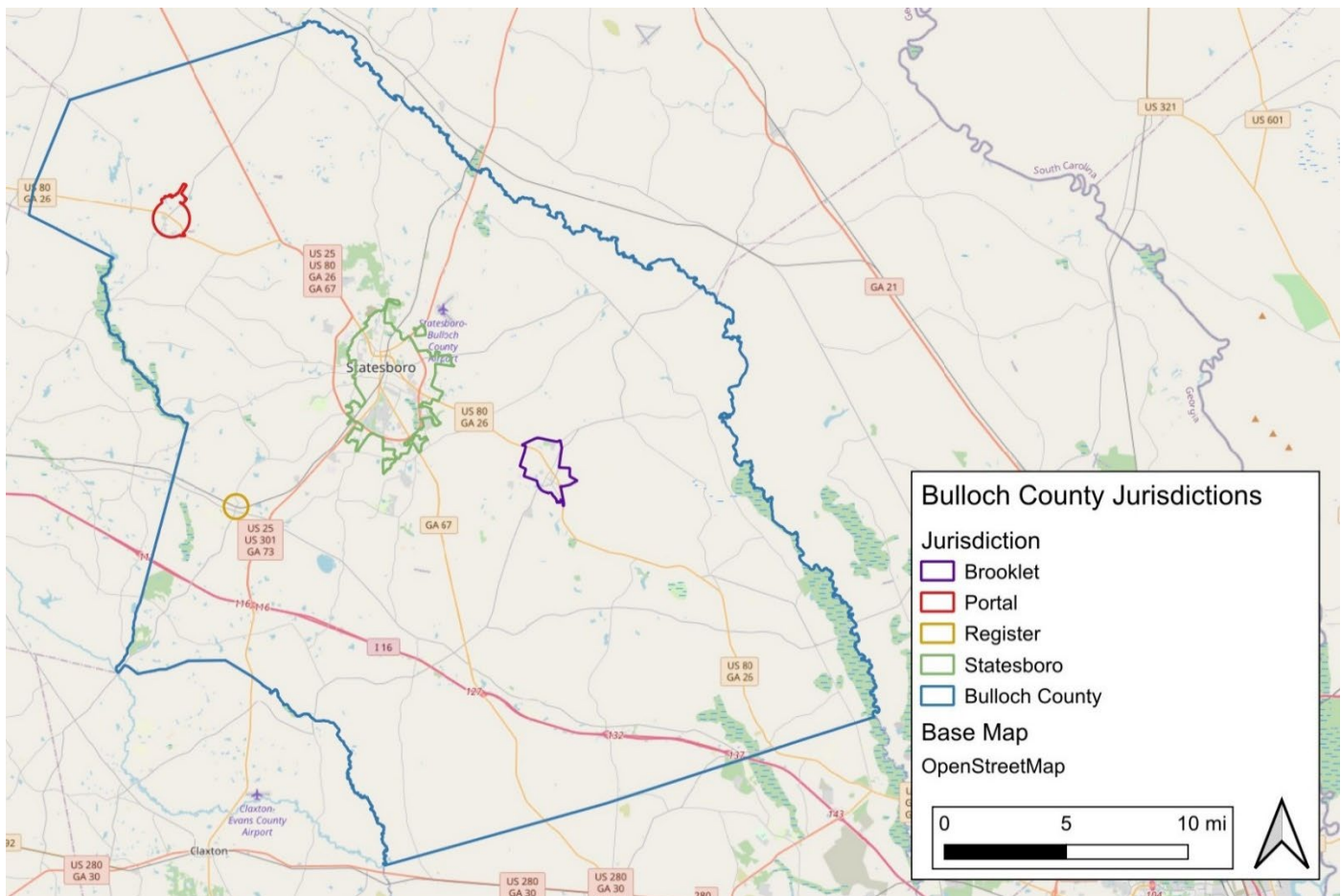
Section	Section Title	Updates to Section
2.1	Overview	Updated general description of Bulloch County and participating municipalities.
2.2	Geography & Climate	Updated description of the county's physical geography and regional climate conditions affecting hazard exposure.
2.3	History	Expanded the historical narrative including early settlement of Bulloch County.
2.4	Natural Resources	Added updated discussion of natural resources in Bulloch County including forestry, agriculture, and groundwater resources.
2.5	Populations & Demographics	Updated demographic data using more recent Census and American Community Survey estimates.
2.6	Housing	Updated housing statistics for Bulloch County, including number of housing units, median home value, and median rent.
2.7	Economy	Updated economic conditions, employment sectors, and regional economic influences including education and public services.
2.8	Education	Updated information on educational institutions including Bulloch County Schools, Georgia Southern University, and Ogeechee Technical College.
2.9	Land Use & Development Trends	Updated land use patterns and development trends including growth around Statesboro and major transportation corridors.
2.10	Essential Facilities	Referred to a comprehensive list of essential facilities in Bulloch County, which can be found in Appendix G.

Bulloch County is located in the U.S. state of Georgia in the southeast portion of the county. The county seat and largest city is Statesboro. Statesboro and the surrounding areas are a part of the Savannah-Hinesville-Statesboro combined statistical area in Georgia. The towns of Brooklet, Portal, and Register are participating jurisdictions in the HMP, as well. Bulloch County was created on February 8, 1796 by Gregory Dylan Presson from colonial-era St. Phillip's parish. The current population stands at 85,454 (2024 estimates), and the total land area is 675.96 square miles.¹ A map of Bulloch County and its jurisdictional boundaries can be seen below.

¹ <https://www.census.gov/quickfacts/fact/table/bullochcountygeorgia,US/PST045225>. Retrieved February 16, 2026.



Figure 2-1. Countywide Map, Bulloch County



2.2 GEOGRAPHY & CLIMATE

Bulloch County is located in the Coastal Plain in southeastern Georgia approximately 50 miles inland from the Atlantic Ocean along the 30° 2' north latitude. It is the state's seventh largest county in terms of land area, covering 675.96 square miles or about 432,614 acres (about half the area of Rhode Island). Water coverage in the county totals 12.68 square miles.

There are five drainage basins in Bulloch County: the Ogeechee River along the eastern boundary; Mill Creek in the northeast portion of the county; Black Creek to the south, the largest drainage area; Lotts Creek on the western border, and Ten Mile Creek, which drains the remainder of the western section of the county. The numerous tributaries that feed these major creeks and river fit into a capillary-like drainage pattern.

Bulloch County also has over 1,000 ponds larger than two acres in size. Cypress Lake, the largest pond, covers approximately 600 acres (about the area of Central Park in New York City).

The county's topography is flat to gently rolling with several swamps and wetlands, as well as the ponds. There are no major escarpments, bluffs, or significant hills; therefore, views and vistas are limited to areas where the cover has been removed to provide farming areas. Elevations range from 40 feet above sea



level along the Ogeechee River and Black Creek near the Bryan County line to more than 300 feet at several points in the northern part of the county near the Jenkins County line. Brooklet is 155 feet above sea level, while Register's elevation is about 195 feet, Portal's is 295 feet, and Statesboro sits at 253 feet.

According to the Köppen climate classification system, Bulloch County is classified as subtype Cfa (Humid Subtropical Climate) characterized by relatively high summer temperatures, mild winters, and evenly distributed precipitation throughout the year. According to NOAA/NCEI NOWData, the average annual temperature is 66°F. The average summer high is 92°F in July, and the average winter low is 37°F in January. Annual average rainfall is 44 inches, with a zero average of snow. Most of the rain occurs in the summer months, and there has been a cyclic series of drought followed by excessive rainfall in recent years.²

2.3 HISTORY

Located in southeast Georgia, Bulloch County was officially created on February 8, 1796, as Georgia's 21st county. Prior to its formal establishment, the area was part of Georgia's expanding colonial and post-Revolutionary frontier. The land had long been utilized by Native American tribes, including the Creek (Muscogee), who relied on the region's rivers, forests, and fertile soils for hunting, fishing, and agriculture. Following the American Revolution, the State of Georgia encouraged westward settlement through land grants and headright systems, attracting settlers from the coastal plains and the Carolinas into the interior.

When Bulloch County was formed, it encompassed approximately 1,200 square miles of land and water. Over time, portions of the original county were used to create Jenkins, Evans, and Candler Counties, reducing its size to the present-day total of approximately 689 square miles (676 square miles of land and 13 square miles of water). The county seat, Statesboro, was founded on December 19, 1803, as Statesborough and later renamed Statesboro in 1866.

At the time of its founding, Bulloch County consisted largely of pine forests, sandy soils, and expansive rural landscapes. The Ogeechee River and Canoochee River form natural boundaries along portions of the county's eastern and western edges, providing water access and fertile bottomlands that supported agricultural development. Early settlers—many of whom were planters, timber harvesters, and distillers—converted Native American paths into wagon roads and cleared forests to establish farms and plantations. Cotton, tobacco, naval stores, and timber became primary economic drivers during the 19th century.

By the late 1800s and early 1900s, Bulloch County had developed into a regional agricultural and commercial center. The arrival of railroads significantly improved access to coastal and inland markets, strengthening Statesboro's role as a trade hub. By 1910, the county supported a growing retail sector and service infrastructure that catered to farmers and surrounding rural communities.

In 1906, local leaders raised approximately \$125,000 to secure the location of a state-sponsored agricultural and mechanical school in Statesboro. That institution evolved into Georgia Southern College and is now Georgia Southern University, which continues to serve as a major economic, educational, and cultural anchor for the county.

² <https://www.weather.gov/wrh/Climate?wfo=chs>. Retrieved February 16, 2026.



2.4 NATURAL RESOURCES

Bulloch County's natural resources are defined by its extensive forestlands, agricultural soils, and river systems. The county is bordered in part by the Ogeechee River to the east and the Canoochee River to the west, both of which contribute to productive floodplains, wetlands, and wildlife habitat. Numerous creeks, streams, and groundwater resources support agricultural irrigation, livestock operations, and residential water supply. Forest resources—primarily pine plantations and mixed hardwood stands—play a significant role in the local economy through timber production and related industries, while also providing environmental benefits, such as stormwater absorption, erosion control, and carbon sequestration.

Agricultural lands remain a dominant land use within the county, supporting row crops, pastureland, and specialty farming operations. 87% of Bulloch County's land is agriculturally developed or forestry land. Per the USDA's Census of Agriculture County Summary Highlights (2022), Bulloch County has 495 farms totaling 195,261 acres with an average product market value of \$241,173.³ Sandy soils common to the region are well-suited for certain crops but can also be vulnerable to erosion and drought conditions. Wetlands and riparian corridors provide important ecological functions, including flood storage, water filtration, and habitat for native species. As development expands, the protection and management of these natural resources remain important for maintaining water quality, reducing flood risk, supporting economic stability, and enhancing long-term community resilience.

Groundwater is another critical natural resource in Bulloch County, with the Floridan aquifer serving as the primary groundwater source for private wells, agricultural use, and select municipal supply. The county does not currently rely on surface water sources, making aquifer withdrawals especially important for local water needs. The Floridan aquifer lies beneath the county and is part of a larger regional system that also underlies neighboring coastal areas.

In 2024, the Georgia Environmental Protection Division (GA EPD) issued groundwater use permits allowing Bulloch and Bryan Counties to withdraw a combined total of up to approximately 7 million gallons per day from four wells located in southeastern Bulloch County. These wells are intended to supply water for regional industrial development, including the Interstate 16 Industrial Mega-Site and associated facilities. To address potential effects on existing private and agricultural wells that draw from the Floridan aquifer, the Bryan-Bulloch Groundwater Sustainability Program (GSP) was created. The joint program provides technical assistance, mitigation measures, and outreach to residents whose wells may be impacted by changing groundwater levels due to these permitted withdrawals.⁴

2.5 POPULATION & DEMOGRAPHICS

In 2024, Bulloch County had a population of 85,454.⁵ This is an increase of 5.4% from the population taken during the 2020 Census, which was 81,099. According to the 2024 American Community Survey, Bulloch County ranks 32nd in total population among all 159 of Georgia's counties.⁶ From decennial census to

³

https://www.nass.usda.gov/Publications/AgCensus/2022/Full_Report/Volume_1_Chapter_2_County_Level/Georgia/st13_2_001_001.pdf. Retrieved December 1, 2025.

⁴ https://bullochcounty.net/groundwater-sustainability-program/?utm_source=chatgpt.com. Retrieved February 16, 2026.

⁵ <https://www.census.gov/quickfacts/fact/table/bullochcountygeorgia,US/PST045225>. Retrieved February 16, 2026.

⁶ https://www.georgia-demographics.com/counties_by_population. Retrieved February 16, 2026.



decennial census, the population in Bulloch County has been steadily trending up since its inception in 1796, with the exception of several periods of decline from 1860-1870 and throughout 1910-1960.

The population trends for Bulloch County and the jurisdictions of Brooklet, Portal, Register, and Statesboro are shown in the table below.

Table 2-2. Population Trends, Bulloch County

Jurisdiction	2010	2020	Percent Change 2010-2020
Bulloch County	70,217	81,099	15.5%
Brooklet	1,395	1,704	22.2%
Portal	638	638	0%
Register	175	157	-10.3%
Statesboro	28,422	33,438	17.6%

Source: U.S. Census Bureau, 2010, 2020

Between 2010 and 2020, the county as a whole increased in population by 15.5%. The jurisdictions of Brooklet and Statesboro increased in population, as well, while the town of Register declined significantly, and the town of Portal remained the same.

Of the total population in the county, 51.6% (42,667) are female. 20% (16,550) of the total population are under 18 years of age. 4% of residents were foreign born. 61.5% (50,809) of county residents are listed as white alone. The county's racial and ethnic distribution is listed in the table below. Only the six most common ethnicities in the county are included, and some members of the population may identify as more than one race, which results in a total percentage of more than 100%.

Table 2-3. Racial and Ethnic Distribution, Bulloch County

Race	Percent of Population
White	55,638
Black or African American	25,797
American Indian and Alaska Native	1,517
Asian	1,938
Native Hawaiian and Other Pacific Islander	469
Hispanic or Latino	3,823

Source: American Community Survey 5-Year Estimates, 2024

As of 2025, there are approximately 10,600 seniors living in Bulloch County, which is about 12% of the total population. Approximately 243 live in some type of nursing facility. There are four certified facilities with an average moderate rating. Approximately 13,000 residents rely on federal assistance, which includes SNAP, Medicaid, housing support, SSI, and WIC. Approximately 13,000 adults in Bulloch County have a disability. Disability rates increase with age, which would result in 35-40% of the population requiring additional support during emergencies. Approximately 1,500 children under 18 have disabilities and may also require additional support during emergencies. Approximately 55% of the county is urban, and 45% is rural.



2.6 HOUSING

According to the U.S. Census QuickFacts and American Community Survey 2024 Population Estimates, Bulloch County has a total of 35,416 housing units, 9.4% of which are vacant. An estimated 41.1% of occupied housing units were built since the year 2000. Of the total occupied housing units (30,856), 60.6% (18,693) were single-unit structures, 25.5% (7,856) were multi-unit structures, and 14% (4,307) were mobile homes or another type of unit. The median value of a home is \$222,500, which is lower than the median home value of \$303,300 for the state of Georgia. This is also a 51.3% increase in the median home value in Bulloch County from 2020. Bulloch County has a homeownership rate of 53.1%, which is lower than the national average of 65.2%. Additional housing statistics for Bulloch County can be seen in the table below.

Table 2-4. Housing Statistics, Bulloch County

Housing Category	Value
Total housing units	35,416
Owner-occupied rate (percent)	53.1%
Median home value	\$222,500
Median gross rent	\$995
Total households	30,856
Persons per household	2.48
With telephone service (percent)	99.3%
No vehicles available (percent)	5.6%

Source: American Community Survey 5-Year Estimates, 2024; U.S. Census Bureau, 2020

2.7 ECONOMY

Bulloch County's economy is driven by a mix of higher education, manufacturing, and public services, with strong growth linked to regional infrastructure and industry expansion. The educational services, health care, and social services (10,040 people); retail trade (4,520 people); and arts, entertainment, and recreation, and accommodation and food service (4,398 people) industries currently hold the highest number of employees of any other industry in the county. The most common occupations, regardless of industry, are management, business, science, and arts (13,722 people); sales and office (7,174 people); and service (6,691 people).

Bulloch County has a relatively diversified economy through the production of both goods and services. The service producing sector is influenced by the presence of major educational institutions, a regional private hospital with support clinics, and state and local government. Georgia Southern University has a substantial impact on the economy with an estimated \$1 billion generated for the region and over 10,000 jobs created above its direct employment base of over 1,800 workers. The manufacturing and industrial sectors have grown over recent years, as well, as major companies like Walmart, Briggs and Stratton, and Viracon have moved into the industrial corridor in the county. This corridor also includes the Hyundai Motor Group Metaplant in neighboring Bryan County for the production of electric vehicles. Three major part suppliers for Hyundai recently opened manufacturing facilities in Bulloch County, which include Joon



Georgia, Ecoplastic, and Hanon Systems. Other economic development assets include the Statesboro-Bulloch County Airport, recreation and tourism, and agriculture.⁷

The adjusted unemployment rate is 3.4% for Bulloch County as of December 2025 compared to the state of Georgia unemployment rate of 3.6% and the United States unemployment rate of 4.4% for the same period.⁸

The median household income in 2024 in Bulloch County was \$58,810. An estimated 79.2% of households received earnings, and 19.2% received retirement income. 26.1% of households received Social Security income. In December 2024, 1,626 people in the county received Supplemental Security Income (SSI).⁹ These income sources are not mutually exclusive; that is, some households received income from more than one source.

The following table lists additional statistics about Bulloch County's economy, as reported by the American Community Survey 2024 5-Year Estimates.

Table 2-5. Economy Statistics, Bulloch County

Economic Category	Value
Per capita income	\$31,259
Civilian labor force	40,575
Private wage and salary workers	27,683
Federal, state, or local government workers	7,433
Self-employed	2,071
Median household income	\$58,810
Poverty rate (percent)	21.5%

Source: American Community Survey 5-Year Estimates, 2024; U.S. Census Bureau, 2020

2.8 EDUCATION

Total school enrollment from kindergarten to 12th grade in Bulloch County was 10,457 students as of October 2025. Nursery school and preschool enrollment was 470. Bulloch County School District is the only school district in Bulloch County and the 38th largest school district in Georgia. The district has 15 schools and three learning programs. There are nine elementary schools, three middle schools, two high schools, and one combined middle and high school serving grades 6 through 12. Each school in the district is listed in the table below along with its location, grades served, and total enrollment.¹⁰

Table 2-6. Public Schools in Bulloch County

School Name	Location	Grades Served	2025 Enrollment
Brooklet Elementary School	Brooklet, GA	PK-5	795
Julia P. Bryant Elementary School	Statesboro, GA	PK-5	683
Langston Chapel Elementary School	Statesboro, GA	PK-5	599

⁷ <https://bullochcounty.net/wp-content/uploads/2024/04/Draft-Smart-Bulloch-2045-A-Joint-Comprehensive-Plan-for-a-Better-Tomorrow.pdf>. Retrieved February 17, 2026.

⁸ <https://fred.stlouisfed.org/series/GABULL1URN>. Retrieved February 17, 2026.

⁹ https://www.ssa.gov/policy/docs/statcomps/ssi_sc/2024/ga.pdf. Retrieved February 18, 2026.

¹⁰ <https://www.bulloch.k12.ga.us/news-feed-data/accountability-data>. Retrieved February 18, 2026.



School Name	Location	Grades Served	2025 Enrollment
Langston Chapel Middle School	Statesboro, GA	6-8	771
Mattie Lively Elementary School	Statesboro, GA	PK-5	602
Mill Creek Elementary School	Statesboro, GA	PK-5	615
Nevils Elementary School	Statesboro	PK-5	534
Portal Elementary School	Portal	PK-5	432
Portal Middle/High School	Portal	6-12	519
Sallie Zetterower Elementary School	Statesboro	PK-5	680
Southeast Bulloch High School	Brooklet	PK, 9-12	1,121
Southeast Bulloch Middle School	Brooklet	6-8	893
Statesboro High School	Statesboro	PK, 9-12	1,717
Stilson Elementary School	Brooklet	PK-5	437
William James Middle School	Statesboro	6-8	529

Source: Bulloch County Schools, 2025

About 50% of students are minorities in Bulloch County, and approximately 53.6% are economically disadvantaged. 202 students in the Bulloch County School District have disabilities as of October 2025.

There are also three private schools in Bulloch County. Trinity Christian School is a Presbyterian school located in Statesboro that enrolls approximately 182 students in grades PK-12. Bulloch Academy is an independent private school located in Statesboro that enrolls approximately 766 students in grades PK-12. Bible Baptist Christian Academy is a Baptist school located in Statesboro that enrolls approximately 127 students in grades PK-12.¹¹

Bulloch County has two colleges: Georgia Southern University and Ogeechee Technical College. College and graduate school enrollment for residents in the county was 16,526 in 2024. Approximately 32% of adults 25 and older have a bachelor's degree or higher and 29% have some college or an associate's degree. Georgia Southern University is a public research university founded in 1906 in Statesboro and is the fifth largest university institution in Georgia. The university offers 150 programs with 29,633 students currently enrolled across three campuses and online. Ogeechee Technical College is a public technical college in unincorporated Bulloch County with over 3,200 students in approximately 120 programs of study. East Georgia State College previously had a campus location in Statesboro but has since been consolidated into Georgia State University.

2.9 LAND USE & DEVELOPMENT TRENDS

Bulloch County continues to experience steady population and economic growth, reinforcing its role as a regional trade, service, education, and employment center in southeast Georgia. As of July 2024, the county's population increased by approximately 1.3 percent, making it the 32nd most populous county in Georgia and the third most populous in the region. Growth is driven by the continued expansion of Statesboro as the county seat and economic hub, its proximity to Interstate 16 and the Savannah metropolitan area, the presence and growth of Georgia Southern University, expanding healthcare and public services, and increasing industrial recruitment along key transportation corridors.

¹¹ <https://www.niche.com/k12/search/best-private-schools/c/bulloch-county-ga/>. Retrieved February 18, 2026.



Understanding existing land use is essential to developing successful implementation strategies for future land use in Bulloch County. Seven land use classifications were used in the Smart Bulloch 2045 Joint Comprehensive Plan to identify how land is currently divided in Bulloch County and the jurisdictions of Brooklet, Portal, and Register:

Table 2-7. Existing Land Use, Bulloch County

Classification	Dist. %	Acres
Agriculture & Forestry	86.61%	382,196
Parks, Recreation, Conservation	0.29%	1,280
Residential	7.91%	34,887
Commercial	0.57%	2,509
Industrial	0.28%	1,224
Public-Institutional	0.71%	3,125
Transportation, Communications, Utilities	3.64%	16,042
Total	100.00%	441,263

Source: Smart Bulloch 2045 Joint Comprehensive Plan, 2024

Development Patterns and Growth Areas

Consistent with the Smart Bulloch 2045 Joint Comprehensive Plan and the City of Statesboro Comprehensive Plan Update (2024), development is expected to remain concentrated in and around Statesboro, particularly:

- Along the Highway 67 corridor south to Interstate 16
- Along major corridors including Highway 301, Highway 80, and Highway 46
- Near Veteran’s Memorial Parkway and the city’s perimeter road system
- In proximity to Georgia Southern University

The widening of Highway 67 (to four lanes with turn and deceleration lanes, completed in 2021) and infrastructure improvements along South Main Street (“The Blue Mile”) were implemented to accommodate projected growth and improve connectivity between downtown Statesboro and Georgia Southern University. The development of perimeter roadways around Statesboro has further supported outward residential and commercial expansion.

Residential growth is anticipated to continue in suburban areas surrounding Statesboro and extend beyond current municipal limits along primary transportation corridors, particularly where public utilities are available or planned. Corridor commercial and light industrial uses are expected to cluster near Interstate 16 interchanges and along major state routes.

Rural and Municipal Development

Outside of Statesboro, growth is projected to be more moderate. The municipalities of Brooklet, Portal, and Register are expected to accommodate limited residential infill and small-scale commercial development while maintaining their small-town character. Much of the unincorporated county remains designated for



rural and agricultural uses, and strict adherence to zoning and subdivision regulations is intended to slow the rapid conversion of agricultural lands into residential subdivisions.

The joint comprehensive plan emphasizes preserving farmland, forestry operations, and environmentally sensitive areas while directing higher-density development toward existing service areas. Managing utility extensions and roadway improvements is recognized as a key strategy for influencing development patterns.

Industrial Expansion and Workforce Development

Bulloch County has experienced increased industrial interest, particularly along the I-16 corridor and in designated industrial areas. Infrastructure investments and regional economic partnerships have strengthened workforce opportunities and positioned the county as a growing employment center. Industrial development, coupled with public service and institutional expansion, is contributing to increased demand for housing, transportation improvements, and public safety services.

Infrastructure Investment and Hazard Mitigation

Bulloch County has directed more than half of its budget allocations toward emergency services, public safety, and transportation infrastructure, reflecting both growth demands and resilience priorities. The Smart Bulloch 2045 Plan and the Statesboro Comprehensive Plan both emphasize that coordinated land use management is critical to hazard mitigation.

Key mitigation-related land use strategies include:

- Directing growth away from flood-prone and environmentally sensitive areas
- Aligning development intensity with available water, sewer, and transportation infrastructure
- Strengthening subdivision controls and zoning enforcement
- Coordinating planning efforts among the county and municipalities
- Prioritizing infrastructure improvements that enhance evacuation, emergency response, and post-disaster recovery

As development continues, particularly in corridor areas and suburban residential zones, proactive planning will be essential to reduce exposure to flooding, severe weather, and other natural hazards. Careful implementation of comprehensive plan goals, zoning regulations, and infrastructure investments will help ensure that growth strengthens the county's economic base while minimizing long-term vulnerability and supporting faster recovery following disaster events.

2.10 ESSENTIAL FACILITIES

A comprehensive list of Bulloch County's essential facilities is included in Appendix G. The Annexes contain a list of essential facilities for each jurisdiction, as well.



SECTION 3 HAZARD IDENTIFICATION & RISK ASSESSMENT

3.1 OVERVIEW

This section has been reorganized and revised from the previous version. Below is a brief summary of the changes that have been made to the Hazard Identification and Risk Assessment:

Table 3-1. 2026 Section 3 Updates

Section	Section Title	Updates to Section
3.1	Overview	Updated description of the hazard identification and risk assessment process.
3.2	Hazard Identification	Updated list of hazards affecting the county and expanded discussion of natural and technological hazards.
3.3	Risk Assessment Methodology & Assumptions	Updated methodology used to evaluate hazard probability, magnitude, and vulnerability.
3.4	Dam Failure	Updated discussion of dam locations, potential hazards, and state dam safety oversight.
3.5	Drought	Updated drought monitoring information including drought indices and recent drought conditions.
3.6	Flood	Updated FEMA flood data, floodplain mapping references, and recent flood events affecting the county.
3.7	Severe Weather	Updated information on hail, lightning, and damaging winds including updated frequency and impacts. Expanded discussion of extreme heat risks and impacts on vulnerable populations.
3.8	Severe Winter Weather	Updated winter weather history and potential impacts on transportation and infrastructure.
3.9	Tornado	Updated tornado occurrence data using recent NOAA and Storm Prediction Center records.
3.10	Tropical Cyclone	Updated historical storm data and probability analysis for tropical systems affecting southeast Georgia.
3.11	Wildfire	Updated wildfire occurrence data and references to the Bulloch County Community Wildfire Protection Plan.
3.12	Cyberattack	Expanded discussion of cyber threats affecting government operations and infrastructure.
3.13	Hazardous Materials Incident	Updated transportation and industrial risk factors related to hazardous materials.
3.14	Hostile Event	Updated discussion of intentional threats to public facilities and infrastructure.
3.15	Pandemic/ Communicable Disease	Expanded discussion of pandemic risks, incorporating lessons learned from COVID-19.
3.16	Hazard Risk Summary	Added new Priority Risk Index and assigned scores based on the degree of risk associated with each hazard.



As defined by FEMA, risk is a combination of hazard, vulnerability, and exposure. It is also the potential impact a hazard may have on people, property, services, and infrastructure, along with the likelihood that the event will cause damage or disruption. The goal of hazard mitigation is to reduce these future impacts, including property loss, economic disruption, and the demand for public and private recovery funds. Effective mitigation decision-making depends on a sound, data-driven understanding of risk. This plan conducts a comprehensive risk assessment for the entire county, including unincorporated areas and all participating jurisdictions. These jurisdictions include Bulloch County, GA and the city of Statesboro, town of Brooklet, town of Portal, and town of Register.

The risk assessment identifies and profiles the natural hazards relevant to the county, assesses exposure of people and assets, and evaluates vulnerability to potential damages. This process includes examining past hazard events, evaluating the probability of future occurrences, compiling asset inventories, estimating potential losses, and incorporating additional analyses where appropriate. The methodology follows FEMA's Understanding Your Risks—Identifying Hazards and Estimating Losses (FEMA 386-2, 2002), which outlines a four-step process: identify hazards, profile hazard events, inventory assets, and estimate losses. This framework provides the foundation for developing and prioritizing mitigation strategies aimed at reducing long-term risk.

3.2 HAZARD IDENTIFICATION

The first step in developing a hazard assessment is to identify the hazards that have a reasonable risk of occurring in Bulloch County and its participating jurisdictions. Proper identification allows for appropriate and well-planned action in order to mitigate the extent and impact of a hazard event. It also helps facilitate emergency response and recovery operations. Further, while not all disaster contingencies can be planned for, applying an all-hazards approach to the mitigation process does yield greater awareness and better preparedness for unforeseen hazard events overall.

The following hazards that have been detailed in this plan include:

- Dam Failure
- Drought
- Flood (Flash Flood & Heavy Rain)
- Severe Weather (Thunderstorm Wind, Lightning, Hail, and Extreme Heat)
- Severe Winter Weather (Winter Storm, Ice Storm, and Extreme Cold)
- Tornado
- Tropical Cyclone (Hurricane, Tropical Storm, and High Wind)
- Wildfire
- Cyberattack
- Hazardous Materials Incident
- Hostile Event
- Pandemic/Communicable Disease



Note: Hazardous materials are not included in the Georgia Hazard Mitigation Strategy Standard and Enhanced Plan. The State of Georgia does not include any man-made hazards as the intent of its plan is to mitigate against only natural hazards.

Several of the hazards identified by the Committee members were consolidated into expanded hazard descriptions. Several others were added as new hazards for this plan update. These are all documented below:

- The original hazard classifications of Water Hazards, Wind Hazards, and Wildfire Hazard were removed, and all hazards were listed separately instead.
- Ice Storm was removed as a standalone hazard and incorporated into Severe Winter Weather, which was added as a new hazard.
- High Winds/Thunderstorm Winds was removed as a standalone hazard and incorporated into Tropical Cyclone and Severe Weather, respectively.
- Dam Failure was added as a new hazard to address nearby HHPDs and the multiple past occurrences of local private lake and pond dams.
- Lightning, Hail, and Extreme Heat were added and/or addressed more explicitly within the Severe Weather hazard.
- Winter Storm and Extreme Cold were added and/or addressed more explicitly within the Severe Winter Weather hazard.
- Cyberattack, Hazardous Materials Incident, Hostile Event, and Pandemic/Communicable Disease were added as new technological or human-caused hazards.

A key resource for identifying hazard risk in Bulloch County was the National Oceanic and Atmospheric Administration's National Center for Environmental Information (NCEI), which has been tracking various types of weather events since 1950. Their Storm Events Database contains an archive by county of destructive storm or weather data and information, which includes intense and damaging local events. NCEI receives storm data from the National Weather Service (NWS), which compiles their information from a variety of sources, including but not limited to county, state, and federal emergency management officials; local law enforcement officials; SkyWarn spotters; NWS damage surveys; newspaper clipping services; the insurance industry; and the general public, among others. Reports can include multiple events within one episode. Records for Bulloch County include reporting from all jurisdictions within the county. The purpose of including all records is to reflect that incidents occurring in one jurisdiction may also impact another. For the purpose of summarizing incident impacts in this plan, countywide events (such as tropical cyclones) that occurred on the same date have been combined into one entry.

The HMP Committee also researched past events that resulted in a federal and/or state emergency or disaster declaration for Bulloch County in order to identify significant hazards. Federal and/or state disaster declarations may be granted when the Governor certifies that the combined local, county, and state resources are insufficient and that the situation is beyond their recovery capabilities. When the local government's capacity has been surpassed, a state disaster declaration may be issued, allowing for the provision of state assistance. If the disaster is so severe that both the local and state government capacities are exceeded, a federal emergency or disaster declaration may be issued allowing for the provision of federal assistance.



Records of designated counties for FEMA major disaster declarations started in 1964; however, for the purposes of this plan update, a period of 25 years will be analyzed. Since 2001, Bulloch County has been designated in nine major disaster declarations, as detailed in the table below.

Table 3-2. Presidential Disaster Declarations, Bulloch County

Designation	Incident Period	Incident Type	Assistance Type
DR-4165	02/10/2014 – 02/14/2014	Georgia Severe Winter Storm	PA
DR-4284	10/04/2016 – 10/15/2016	Hurricane Matthew	IA & PA Cat A-G
DR-4297	01/21/2017 – 01/22/2017	Georgia Severe Storms, Tornados, and Straight-line Winds	PA
DR-4338	09/07/2017 – 09/20/2017	Hurricane Irma	PA Cat A-G
DR-4400	10/09/2018 – 10/23/2018	Hurricane Michael	PA Cat A-G
DR-4501	01/20/2020 – 05/11/2023	Covid-19 Pandemic	IA & PA Cat B
DR-4738	08/30/2023 – 09/07/2023	Hurricane Idalia	PA Cat A-G
DR-4821	08/04/2024 – 08/20/2024	Tropical Storm Debby	IA & PA Cat A-G
DR-4430	09/24/2024 – 10/30/2024	Hurricane Helene	IA & PA Cat A-G

Source: FEMA, 2026

3.3 RISK ASSESSMENT METHODOLOGY & ASSUMPTIONS

The Disaster Mitigation Act of 2000 requires that the HMPC evaluate the risks associated with each of the hazards identified in the planning process. Each hazard was evaluated to determine its probability of future occurrence and potential impact. A vulnerability assessment was conducted for each hazard using either quantitative or qualitative methods, depending on the available data, to determine its potential to cause significant human and/or monetary losses. A priority risk analysis was also completed for each hazard.

Each hazard is profiled in the following format:

3.3.1 Hazard Description

This section describes the general characteristics of the specified hazard.

3.3.2 Location & Extent

This section contains information about the location and geographic area(s) within the planning area that are affected by the hazard, along with the extent (strength and magnitude) of the specific hazard.

Methodology: To assess the extent of each hazard identified in the plan, available historical data, scientific resources, and local knowledge were reviewed to estimate the potential severity and geographic scope of future hazard events. Extent was measured using well-established, standardized indicators where possible. When quantitative methods were unavailable, qualitative descriptions based on past events and experiences were used. The full range of each hazard's potential strength and magnitude was identified.

Additionally, some hazards do not have defined hazard boundaries and pose equal risk throughout the county. For hazards with identified boundaries, boundary data and/or maps are provided.

3.3.3 Historical Occurrences

This section contains a history of previous hazard events for the profiled hazard.



Methodology: Most of the historical data used in the risk assessment originates from the National Oceanic and Atmospheric Administration/National Centers for Environmental Information (NOAA/NCEI). In most instances, the hazard affects a large geographic area, and thus the hazard data is reported at the county level. This is the best available data for these hazards. The calculations for **Previous Occurrences** and the **Probability of Future Events** are based on county-level data.

Probability of Future Events

This section of the plan describes the likelihood, or probability, of the identified hazard actually occurring within the planning area. If discrete quantitative data is available, a finite probability will be listed. See the table below for additional information related to the probability of future events.

Table 3-3. Probability Categories

Category	Range (Per Year)
Unlikely	Less than 1%
Possible	1%–10%
Likely	10%–70%
Highly Likely	70%–100%

3.3.4 Vulnerability & Impact

This section describes the potential impacts of the hazard for each participating jurisdiction and provides an overall summary of each jurisdiction’s vulnerability to the hazard through structures, systems, populations, and community assets that are susceptible to damage and loss from the hazard.

If applicable to the profiled hazard, Hazus models may be included in this section of the plan. Hazus is a GIS (mapping) tool that allows analysts to create a fictional scenario for the planning area using specific details to show what could happen if that scenario were to occur. This type of mapping is helpful to fill in gaps where there is a lack of historical data. It also allows jurisdictions to visualize which facilities and populations would potentially be affected by the profiled hazard(s).

People

This section identifies populations within the county that may be at increased risk to the hazard.

Property

When appropriate, this section details the critical facilities and infrastructure relative to the hazard and any property losses that may occur or have occurred as a result of the hazard.

Environment

This section describes the effect the profiled hazard may have on the County’s environment and ecosystems.

Land Use & Development Trends

This section provides a general description of land use and development trends within the participating jurisdictions and any recent changes to development since the last plan update.



Multi-Jurisdictional Concerns

Each jurisdiction's risk, where it varies from the risks facing the entire planning area, is discussed in this section.

Repetitive Loss Structures

If applicable to the profiled hazard, a description of the location types, along with estimates for the number of repetitive loss properties, will be provided in this section.

3.3.5 Priority Risk Index

The conclusions drawn from the hazard profiling and vulnerability assessment process can be used to prioritize all potential hazards to the Bulloch County planning area. The Priority Risk Index (PRI) was applied for this purpose because it provides a standardized numerical value so that hazards can be compared against one another (the higher the PRI value, the greater the hazard risk). PRI values are obtained by assigning varying degrees of risk to five categories for each hazard (probability, impact, spatial extent, warning time, and duration). Each degree of risk was assigned a value (1 to 4) and a weighting factor as summarized in the table below.

Table 3-4. Priority Risk Index

RISK ASSESSMENT CATEGORY	LEVEL	DEGREE OF RISK CRITERIA	INDEX	WEIGHT
PROBABILITY What is the likelihood of a hazard event occurring in a given year?	UNLIKELY	LESS THAN 1% ANNUAL PROBABILITY	1	30%
	POSSIBLE	BETWEEN 1 & 10% ANNUAL PROBABILITY	2	
	LIKELY	BETWEEN 10 & 100% ANNUAL PROBABILITY	3	
	HIGHLY LIKELY	100% ANNUAL PROBABILITY	4	
IMPACT In terms of injuries, damage, or death, would you anticipate impacts to be minor, limited, critical, or catastrophic when a significant hazard event occurs?	MINOR	VERY FEW INJURIES, IF ANY. ONLY MINOR PROPERTY DAMAGE & MINIMAL DISRUPTION ON QUALITY OF LIFE. TEMPORARY SHUTDOWN OF CRITICAL FACILITIES.	1	30%
	LIMITED	MINOR INJURIES ONLY. MORE THAN 10% OF PROPERTY IN AFFECTED AREA DAMAGED OR DESTROYED. COMPLETE SHUTDOWN OF CRITICAL FACILITIES FOR > 1 DAY	2	
	CRITICAL	MULTIPLE DEATHS/INJURIES POSSIBLE. MORE THAN 25% OF PROPERTY IN AFFECTED AREA DAMAGED OR DESTROYED. COMPLETE SHUTDOWN OF CRITICAL FACILITIES FOR > 1 WEEK.	3	
	CATASTROPHIC	HIGH NUMBER OF DEATHS/INJURIES POSSIBLE. MORE THAN 50% OF PROPERTY IN AFFECTED AREA DAMAGED OR DESTROYED. COMPLETE SHUTDOWN OF CRITICAL FACILITIES > 30 DAYS.	4	
SPATIAL EXTENT How large of an area could be impacted by a hazard event? Are impacts localized or regional?	NEGLECTIBLE	LESS THAN 1% OF AREA AFFECTED	1	20%
	SMALL	BETWEEN 1 & 10% OF AREA AFFECTED	2	
	MODERATE	BETWEEN 10 & 50% OF AREA AFFECTED	3	
	LARGE	BETWEEN 50 & 100% OF AREA AFFECTED	4	
WARNING TIME	MORE THAN 24 HRS	SELF DEFINED	1	10%



RISK ASSESSMENT CATEGORY	LEVEL	DEGREE OF RISK CRITERIA	INDEX	WEIGHT
Is there usually some lead time associated with the hazard event? Have warning measures been implemented?	12 TO 24 HRS	SELF DEFINED	2	
	6 TO 12 HRS	SELF DEFINED	3	
	LESS THAN 6 HRS	SELF DEFINED	4	
DURATION How long does the hazard event usually last?	LESS THAN 6 HRS	SELF DEFINED	1	10%
	LESS THAN 24 HRS	SELF DEFINED	2	
	LESS THAN 1 WEEK	SELF DEFINED	3	
	MORE THAN 1 WEEK	SELF DEFINED	4	

The sum of all five risk assessment categories equals the final PRI value, demonstrated in the equation below (the highest possible PRI value is 4.0).

$$\text{PRI} = [(\text{PROBABILITY} \times .30) + (\text{IMPACT} \times .30) + (\text{SPATIAL EXTENT} \times .20) + (\text{WARNING TIME} \times .10) + (\text{DURATION} \times .10)]$$

The purpose of the PRI is to categorize and prioritize all potential hazards for the Bulloch County planning area as high, moderate, or low risk. The summary hazard classifications generated through the use of the PRI allow for the prioritization of those high and moderate hazard risks for mitigation planning purposes. Mitigation actions are not developed for hazards identified as low risk through this process.

Additionally, Steering Committee members were polled during the second planning meeting on February 4, 2026 to provide input into these scores. The polling was conducted through Mentimeter, which is an interactive presentation and audience engagement tool that lets people participate in polls, surveys, quizzes, etc., using their personal devices. Committee members were asked to score each hazard individually based on the above PRI criteria. The results were used to inform the PRI scoring for the risk assessment.

PRI ratings by category for the planning area as a whole are provided throughout each hazard profile. Ratings specific to each jurisdiction are provided at the end of each hazard profile. The results of the risk assessment and overall PRI scoring are provided in Section 3.16 Hazard Risk Summary.



3.4 DAM FAILURE

3.4.1 Hazard Description

A dam is a barrier constructed across a watercourse that stores, controls, or diverts water. Dams are usually constructed of earth, rock, concrete, or mine tailings. The water impounded behind a dam is referred to as the reservoir and is measured in acre-feet. One acre-foot is the volume of water that covers one acre of land to a depth of one foot. Dams can benefit farmland, provide recreation areas, generate electrical power, and help control erosion and flooding issues. A dam failure is the collapse or breach of a dam that causes downstream flooding. Dam failures may be caused by natural events, manmade events, or a combination. Due to the lack of advance warning, failures resulting from natural events, such as earthquakes or landslides, may be particularly severe. Prolonged rainfall and subsequent flooding are the most common causes of dam failure.

Dam failures usually occur when the spillway capacity is inadequate and water overtops the dam or when internal erosion in dam foundation occurs (also known as piping). If internal erosion or overtopping causes a full structural breach, a high-velocity, debris-laden wall of water is released and rushes downstream, damaging or destroying anything in its path. Overtopping is the primary cause of earthen dam failure in the United States.

Dam failures can also result from any one or a combination of the following:

- Prolonged periods of rainfall and flooding;
- Inadequate spillway capacity, resulting in excess overtopping flows;
- Internal erosion caused by embankment or foundation leakage or piping;
- Improper maintenance, including failure to remove trees, repair internal seepage problems, replace lost material from the cross-section of the dam and abutments, or maintain gates, valves, and other operational components;
- Improper design, including the use of improper construction materials and construction practices;
- Negligent operation, including the failure to remove or open gates or valves during high flow periods;
- Failure of upstream dams on the same waterway; or
- High winds, which can cause significant wave action and result in substantial erosion.

Water released by a failed dam generates tremendous energy and can cause a flood that is catastrophic to life and property. Dam failures are generally catastrophic if the structure is breached or significantly damaged. A catastrophic dam failure could challenge local response capabilities and require evacuations to save lives. Impacts to life safety will depend on the warning time and the resources available to notify and evacuate the public. Major casualties and loss of life could result, as well as water quality and health issues. Potentially catastrophic effects to roads, bridges, and homes are also of major concern. Associated water quality and health concerns could also be issues. Factors that influence the potential severity of a full or partial dam failure are the amount of water impounded; the density, type, and value of development and infrastructure located downstream; and the speed of failure.



Dam failure can occur with little warning. Intense storms may produce a flood in a few hours or even minutes for upstream locations. Flash floods occur within six hours of the beginning of heavy rainfall, and dam failure may occur within hours of the first signs of breaching. Other failures and breaches can take much longer to occur, from days to weeks, as a result of debris jams or the accumulation of melting snow.

Dam failures are of particular concern because the failure of a large dam has the potential to cause more death and destruction than the failure of any other manmade structure. This is because of the destructive power of the flood wave that would be released by the sudden collapse of a large dam. Dams are innately hazardous structures. Failure or poor operation can result in the release of the reservoir contents—this can include water, mine wastes, or agricultural refuse—causing negative impacts upstream or downstream or at locations far from the dam. Negative impacts of primary concern are loss of human life, property damage, lifeline disruption, and environmental damage.

3.4.2 Location & Extent

The Georgia Safe Dams Program, an entity of the Georgia Department of Natural Resources' Environmental Protection Division, provides an inventory of all the dams in the state.

The table below provides details for all 61 dams listed in the state inventory as of June 2025 that are located within Bulloch County.¹²

Table 3-5. Bulloch County Dams

Dam Name	NID ID	Owner Name	Height (ft.)	Max Storage (acre-feet)	Classification	TBS
Cypress Lake Dam	GA00064	Cypress Lake, Inc.	13	1028	II	N
Oglesby Pond Dam	GA00066	Jeffrey and Melanie Reddick	16	1196	II	N
Bird Pond Dam	GA00225	N/A	9	697	II	N
Waters Irrigation Pond Dam	GA00325	L.A. Waters	10	112	II	N
J P Johnson Pond Dam	GA00897	Anderson, Ms.; Johnson, J P	11	126.9	II	N
Fred Blitch Road Pond Dam	GA00898	Blitch, Fred G. Jr. & ETAL	9.8	112.1	II	N
Kennedy Pond Dam	GA00910	N/A	11.8	105.4	II	N
Bowen Mill Pond Dam	GA01250	G. B. Bowen Estate	10	549	II	N
Sheppard Pond Dam	GA03067	Sheppard, William	15	330	II	N
Anderson Pond Dam	GA03068	Smith, Kelly	15	750	II	N
Quattlebaum Pond Dam	GA03069	Quattlebaum, Florence	9	289	II	N
W. D. Brannen Lake Dam	GA03070	Brannen, W. D., Mrs.	9	151	II	N
Rufis Akins Pond Dam	GA03071	Rufis Akins	7	100	II	N
Akins Pond Dam	GA03072	Akins, Edwin E.	9	123	II	N

¹² <https://epd.georgia.gov/watershed-protection-branch/safe-dams-program>. Accessed December 4, 2025.



Dam Name	NID ID	Owner Name	Height (ft.)	Max Storage (acre-feet)	Classification	TBS
Brook Instruments Company Pond Dam	GA03073	Manack Todd, Mr.	11	182	II	N
Kicklighter Pond Dam	GA03074	Price, Howard	12	134	II	N
Billy Tillman Lake Dam # 1	GA03075	Tillman, Billy	11	138	II	N
T.K. Rushing Pond Dam	GA03076	Rushing, Theron Jack; Ardelia, Sara Mrs.; Seymore, Betty Jean	9	152	II	N
Delmus Rushing Lake Dam	GA03077	Rushing, Delmas, Jr. Mr.	11	118	II	N
Hendrix Pond Dam	GA03078	Anderson- Hendrix Family Partnership	11	104	II	N
Nessmith Pond Dam	GA03079	N/A	10	120	II	N
Rozier Pond Dam	GA03080	Rozier, F. C.	11	818	II	N
Lester Pond Dam	GA03081	Earl Lester Estate	13	144	II	N
Mallard Pond Dam	GA03128	Thelma M. Kilpatrick & Bobby M Mallard	21	116	II	N
Riggs Pond Dam (North)	GA03129	Riggs, Arthur James	8	113	II	N
Big Pond Dam	GA03285	Lee, J. G.	13	132	II	N
Lower DeLoach Pond Dam	GA03286	H. M. Deloach Estate	16	165	II	N
Trapnell Pond Dam	GA03287	Lurie Trapnell Estate	10	271	II	N
McDonald Pond Dam	GA03288	Anderson, Hazel, Ms.; Barrs, Dot Ms.; Hodges, Sandra Ms.	10	140	II	N
Marsh Hunting Preserve Lake	GA03290	Marsh, Wendel	20	281	II	N
Sheppard Lake Dam	GA03291	Shepphard, W. H.	14	428	II	N
Brannen Lake Dam # 1	GA03293	Brannen, Aulbert	19	358	II	N
Hodges Pond Dam	GA03295	Hodges, Raymond G.	12	206	II	N
D H Smith Pond Dam	GA03296	Smith, D. H.	8	192	II	N
Durden Pond Dam	GA03297	Toole, Virginia, Ms.	24	119	II	N
East Oglesby Pond Dam	GA03298	Smith, Roy, L., Iii	12	179	II	N
Parrish Lake Dam	GA03299	Parrish, Lula S.	13	135	II	N
Denver Lanier Pond Dam	GA03300	Lanier, Denver	17	168	II	N
Fields Pond Dam	GA03301	Fields, C. J.	12	121	II	N
Branch Creek Farm LLLP Pond Dam	GA03303	Stainback, Susan, Ms.	13	104	II	N
Holland Pond Dam # 2	GA03304	Lee William, Mr.	12	184	II	N



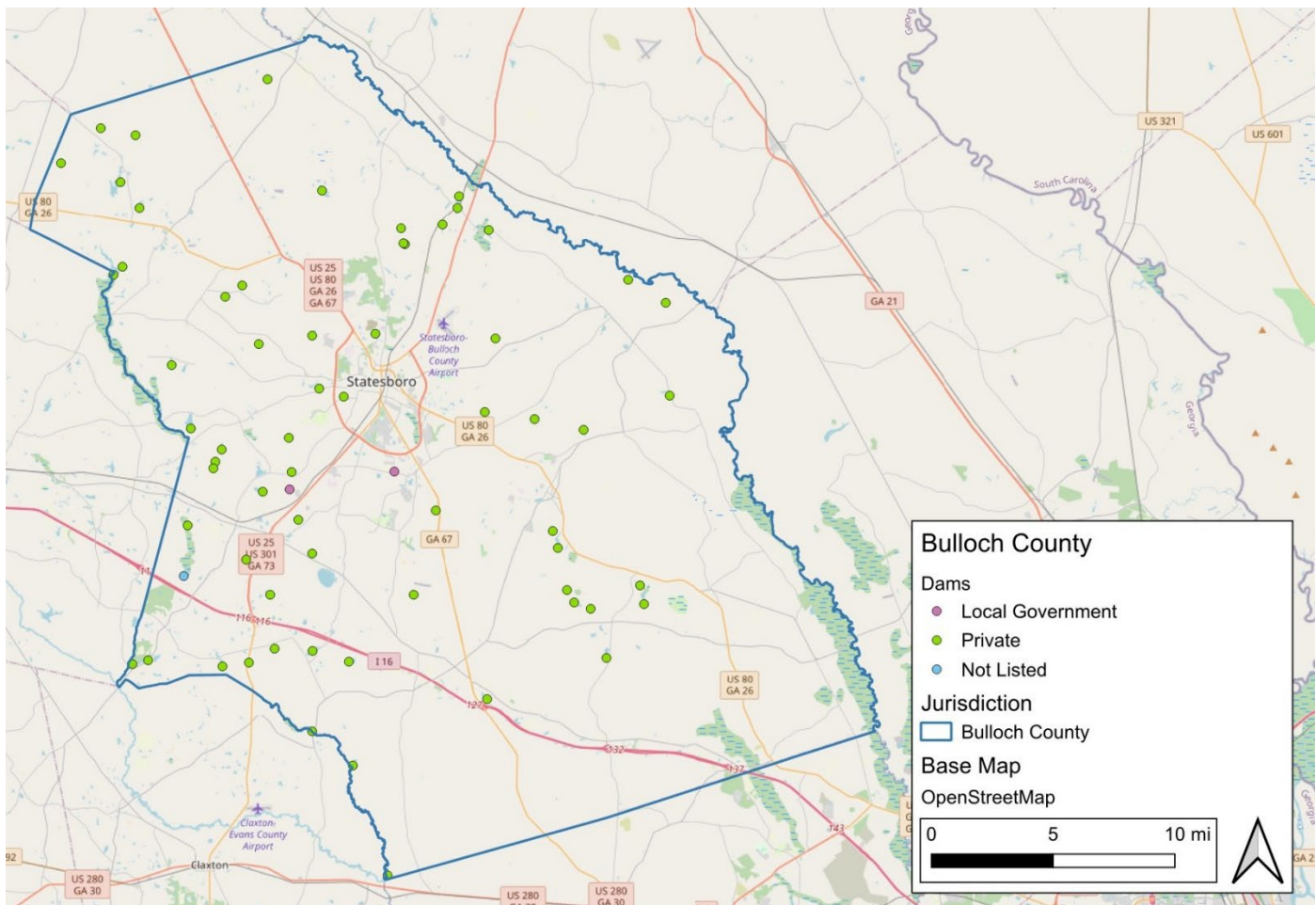
Dam Name	NID ID	Owner Name	Height (ft.)	Max Storage (acre-feet)	Classification	TBS
Akins Lake Dam	GA03306	Akins, Edwin P. and Mrs. Don Suddeth	11	143	II	N
Atwood Mill Pond Dam	GA03307	The Akerman Farm LLLP	12	1064	II	N
Nevils Pond Dam	GA03308	Nevil, Mary, Jane	11	156	II	N
Durrence Pond Dam	GA03309	The Durances Estate	10	234	II	N
W H Smith Lake Dam	GA03310	Smith, W. H. & Healy Lugenia S.	16	351	II	N
Smith Lake Dam	GA03311	Smith, W. R., Mr.	10	174	II	N
Hood Pond Dam	GA03313	Hood, James E.	8	126	II	N
Kendrick Lake Dam	GA03353	Kendrick, John M	12	664	II	N
Riggs Lake Dam (South)	GA03999	Development Authority of Bulloch County	18	169	II	N
Holloway Lake Dam # 2	GA04000	Holloway, Jr. Strickland	8	220	II	N
McElveen Lake Dam	GA04001	Holloway, Jr. Strickland	12	1008	II	N
Brannen Lake Dam # 2	GA04003	Brannon, I. A.	15	1125	II	N
Howard Lake Dam	GA04004	Howard, Jean , Mrs.	14	195	II	N
Billy Tillman Lake Dam # 2	GA04005	Tillman, Billy	18	200	II	N
Tillman Pond Dam	GA04006	Neal, Ozzie Mr.	10	217	II	N
Clifton Irrigation Pond Dam	GA06082	Remer Clifton	17	157	II	N
Connell Farm Pond Dam	GA06083	Amous M Connell	12	117	II	N
Cromley Farms Lake Dam	GA06084	Cromley Farms	11	237	II	N
Beulah Joe Pond Dam	GA06168	Grace Hester	14	225	II	N
Barrett Street Dam	GA07130	Cypress Lake, Inc.	18	110	II	N

Source: Georgia Safe Dams Program Dam Inventory, June 2025

The following map depicts the locations of dams in Bulloch County, including government-owned and privately owned dams.



Table 3-6. Dam Locations in Bulloch County



The National Inventory of Dams ranks dams as high, significant, or low. The NID lists 67 dams in Bulloch County, which are all rated as Low or Undetermined. Bulloch County has zero dams that are classified as Significant or High. For planning reference, the closest high hazard potential dams (HHPDs) to Bulloch County are provided in the table below, although none of these dams pose any actual risk to Bulloch County due to distance/location.

Table 3-7. Nearest High Hazard Dams

Dam Name	NID Hazard Rating	Location	Distance to Bulloch County
Banks Lake Dam	High	Metter, GA	8.3 miles
Hulsey Pond Dam	High	Metter, GA	9.4 miles
Lake Marian Dam	High	Louisville, GA	47 miles

Each state has definitions and methods to determine the hazard potential of a dam. In Georgia, dams are recognized by the state if they are 25 feet or more in height or impound 100 acre-feet or more. The height of a dam is measured from the highest point on the crest of the dam to the lowest point on the downstream



toe, and the storage capacity is the volume impounded at the elevation of the highest point on the crest of the dam. A dam is regulated only if it is deemed that its failure would result in loss of human life.

Georgia Safe Dams Program engineers determine the "hazard potential" of a dam based on the consequences of failure, meaning the probable damage in terms of loss of human life that would occur if the structure failed. Dams are assigned one of two categories based on their hazard potential:

- Category II (Low Hazard) includes dams located where failure will not cause loss of human life. Situations constituting probable loss of life are situations that involve frequently occupied structures or facilities, including, but not limited to, residences, commercial and manufacturing facilities, schools, and churches.
- Category I (High Hazard) includes dams located where failure will likely cause loss of human life.

Category I dams are then further classified by their size with corresponding minimum spillway design requirements expressed in terms of probable maximum precipitation (PMP), as follows:

- Small: 25% PMP
- Medium: 33.3% PMP
- Large: 50% PMP
- Very Large: 100% PMP

Category I dams are assessed bi-annually by Georgia Environmental Protection Division staff and quarterly by their owners to ensure safety and compliance with regulations. Category II dams are reevaluated every five years for any hazard potential. The Safe Dams Program notes that there is a significant backlog in work, which means many Category II and proposed dams throughout the state need further study. Given the lack of high hazard dams in the planning area, potential impact is considered limited. It is possible that dams in the planning area present greater risk since they were last evaluated due to downstream development and increased exposure, but without a reevaluation of these dams it is difficult to draw any conclusions. Most risk of dam failure in Bulloch County lies within dams on private properties where maintenance practices and current conditions may be unknown.

3.4.3 Historical Occurrences

On July 13, 2013, a dam holding back an irrigation lake failed and released a powerful wave of water. The irrigation lake held approximately 80 acres of water 24 feet deep. The spill took down large trees and sent debris across Highway 17 in Screven County near Old Ogeechee Road, just north of the Ogeechee River. The road and railroad tracks between the lake and river were damaged. The Ogeechee River forms the border between Bulloch and Screven Counties, and the breach occurred roughly 13 miles from the City of Statesboro. Bulloch County assisted in the response efforts.¹³

Two dam failures occurred northeast of Statesboro on August 19, 2013 when numerous showers and thunderstorms developed across the region, releasing heavy rain and causing flash flooding. One of the dams broke along Buck Creek Road, and 22 homes were impacted in the Statesboro area.

¹³ <https://www.statesboroherald.com/local/dams-collapse-washes-out-road-empties-pond/>. Accessed December 4, 2025.



Kennedy Pond Dam broke in early August 2018 just outside of the Town of Register, damaging Kennedy Pond Road. Heavy downpours in the span of less than an hour caused flooding in another pond, which also broke through the dam and flooded nearby roads, including Seaborn Vickery Road.¹⁴

In August 2024, Tropical Storm Debby swept through Bulloch County with unprecedented rain and flooding. Five lake or pond dams burst due to the excessive rain and contributed to flooding. Akins Pond Dam overtopped and sent waves of water into residences nearby and downstream in the Highway 24 area. Oglesby Pond Dam was also breached, sending water to Lake Collins and Cypress Lake, which is between Statesboro and Register. Additional dam flooding occurred in the Lotts Creek drainage area, from north to south in western Bulloch County. Both dams on Simmons Pond breached, causing water to pour into Highway 46 and threaten the Highway 46 bridge that spans Reed Branch. Other smaller dams broke that were not reported publicly.¹⁵

Probability of Future Events

There are several low hazard dams within Bulloch County that could impact the County, but a significant flooding hazard from future dam failure is unlikely. However, regular monitoring is still necessary to prevent these events from occurring. With heavy rain events becoming more frequent and intense, conditions conducive to dam failure may occur more frequently, as well.

3.4.4 Vulnerability & Impact

No data was available on dam inundation areas in order to estimate potential losses that could result from dam failure. Therefore, this vulnerability assessment provides a qualitative assessment of the potential impacts of dam failure.

The following table summarizes the potential negative consequences of dam failure.

Table 3-8. Consequence Analysis, Dam Failure

Category	Consequences
Public	Localized impact expected to be severe for inundation area and moderate to light for other adversely affected areas.
Responders	Localized impact expected to limit damage to personnel in the inundation area at the time of the incident.
Continuity of Operations (including Continued Delivery of Services)	Damage to facilities/personnel in the area of the incident may require temporary relocation of some operations. Localized disruption of roads and/or utilities may postpone delivery of some services. Regulatory waivers may be needed locally. Fulfillment of some contracts may be difficult. Impact may reduce deliveries.
Property, Facilities, and Infrastructure	Localized impact to facilities and infrastructure in the inundation area of the incident. Some severe damage possible.
Environment	Localized impact expected to be severe for inundation area and moderate to light for other adversely affected areas. Consequences include erosion, water quality degradation, wildlife displacement or destruction, and habitat destruction.
Economic Condition of the Jurisdiction	Local economy and finances adversely affected, possibly for an extended period of time, depending on damage and length of investigation.

¹⁴ <https://www.wtoc.com/story/38801546/dam-break-washes-out-portion-of-seaborn-vickery-road-in-bulloch-co/>. Accessed December 2, 2025.

¹⁵ <https://www.statesboroherald.com/local/debby-leaves-bulloch-with-burst-lake-dams-flooded-homes-100-damaged-roads/>. Retrieved December 4, 2025.



Category	Consequences
Public Confidence in the Jurisdiction's Governance	Localized impact expected to primarily adversely affect only the dam owner and local entities.

People

A person's immediate vulnerability to a dam failure is directly associated with the person's distance downstream of the dam as well as proximity to the stream carrying the floodwater from the failure. For dams that have an Emergency Action Plan (EAP), the vulnerability of loss of life for persons in their homes or on their property may be mitigated by following the EAP evacuation procedures; however, the displaced persons may still incur sheltering costs. For persons located on the river (e.g., for recreation), the vulnerability of loss of life is significant.

People are also vulnerable to the loss of use of a reservoir upstream of a dam following failure. Several uses are minor, such as aesthetics or recreational use. However, some reservoirs serve as drinking water supplies, and their loss could disrupt the drinking water supply and present a public health problem.

There are no high hazard dams in or immediately upstream of the planning area, therefore loss of life would not be expected even in the unlikely event of a failure.

Property

Given the current dam inventory and historic data, a dam breach is unlikely in the future. However, regular monitoring can help mitigate or prevent failures if appropriate actions are taken when it is determined a failure may be likely.

Vulnerability of the built environment includes damage to the dam itself and any manmade feature located within the inundation area caused by the dam failure. A detailed assessment of exposure to dam failure could not be completed because no data was available on dam inundation areas.

Downstream of a dam, vulnerability includes potential damage to homes, personal property, commercial buildings and property, and government owned buildings and property; destruction of bridge or culvert crossings; weakening of bridge supports through scour; and damage or destruction of public or private infrastructure that crosses the stream, such as water and sewer lines, gas lines, and power lines. Water dependent structures on a reservoir upstream of the dam, such as docks/piers, floating structures, or water intake structures, may be damaged by the rapid reduction in water level during the failure.

Environment

Aquatic species within the reservoir may be displaced or destroyed by a dam failure. The velocity of the flood wave will likely damage or destroy riparian and instream vegetation and negatively affect wetland function. The flood wave will likely cause erosion within and adjacent to the stream. Deposition of eroded deposits may choke instream habitat or disrupt riparian areas. Sediments within the reservoir bottom and any low oxygen water from within the reservoir may be dispersed, potentially causing fish kills or releasing heavy metals found in the reservoir sediment layers.



Land Use & Development Trends

As land improvements, rezoning, and development occur downstream of a Category II dam, the overall exposure to dam failure may result in a need to increase the rating of that dam to Category I, which would require more stringent maintenance and reporting criteria. However, given that Category II dams are only inspected every five years and that there is a delay between development occurring and a Category change being made, it is possible that some Category I dams are currently unrecognized as such and that actual exposure to high hazard dam failure has increased. Changes in development could continue this trend. In both cases, risk is greater during the period where exposure has increased, but additional reporting and maintenance criteria have not been enacted. Communication between Bulloch County, local dam owners, and the Georgia Safe Dams Program is vital to understanding the current conditions of dams in the county so critical maintenance concerns do not go unnoticed. It is also important to maintain and regularly update EAPs and for the county to remain aware of these updates.

Multi-Jurisdictional Concerns

Dam failure presents multi-jurisdictional concerns in Bulloch County primarily due to the presence of privately owned dams located along shared waterways that flow through multiple communities. While there are no high-hazard dams in the county, failure of low-hazard private dams could cause localized flooding affecting areas of Statesboro, as well as the municipalities of Brooklet, Portal, and Register, depending on downstream drainage patterns and proximity to affected watercourses. Potential impacts may include damage to roads, utilities, agricultural lands, and nearby structures. Effective mitigation and response require coordination among private dam owners, Bulloch County, nearby upstream and downstream jurisdictions, and the Georgia Environmental Protection Division to support dam maintenance, monitoring, and timely communication during emergency situations.

Repetitive Loss Structures

A FEMA Repetitive Loss (RL) property is a property for which two or more flood insurance claims of more than \$1,000 have been paid by the NFIP within any 10-year period since 1978. A FEMA Severe Repetitive Loss (SRL) property is an NFIP-insured home that has experienced a high frequency or high severity of flooding. It is flagged when the property has either received at least four flood claims over \$5,000 with at least two of the claims occurring within a 10-year span, or at least two claims that exceed the building's market value. An analysis of repetitive loss was completed to examine repetitive losses within the planning area.

There are eight NFIP RL properties in Bulloch County; seven are in Statesboro and one is in Brooklet. Statesboro has the only (one) SRL property in the county. All RL and SRL properties in the county are residential dwellings. NFIP repetitive loss structures reflect areas of recurring flood risk and may overlap with downstream areas affected by privately owned dams. While these structures are not directly associated with dam failure events, they help identify locations that could experience increased impacts if a dam were to fail.

3.4.5 Priority Risk Index

The following table summarizes dam failure hazard risk by jurisdiction. Warning time and duration are inherent to the hazard and remain constant across jurisdictions. Spatial extent of any dam failure will be



negligible relative to the planning area. There are no high hazard potential dams in the county, so all jurisdictions were assigned a probability rating of unlikely and an impact rating of minor.

Table 3-9. Dam Failure Risk Ranking Summary

Jurisdiction	Probability	Impact	Spatial Extent	Warning Time	Duration	Score	Priority
Bulloch County	2	3	2	4	3	2.6	H
Brooklet	2	3	2	4	3	2.6	H
Portal	2	3	2	4	3	2.6	H
Register	2	3	2	4	3	2.6	H
Statesboro	2	3	2	4	3	2.6	H



3.5 DROUGHT

3.5.1 Hazard Description

Drought is defined as an abnormally dry period lasting months or years when an area has a deficiency of water and precipitation in its surface and/or underground water supply. It is, however, a normal, seasonal, and recurrent feature of climate that occurs in virtually all climate zones—typically in late spring through early fall. The duration of drought varies widely. There are cases when drought develops relatively quickly and lasts a very short period of time, exacerbated by extreme heat and/or wind, and there are other cases when drought spans multiple years or even decades. The hydrological imbalance can be grouped into the following non-exclusive categories:

- **Agricultural:** When the amount of moisture in the soil no longer meets the needs of previously grown crops;
- **Hydrological:** When surface and subsurface water levels are significantly below their normal levels;
- **Meteorological:** When there is a significant departure from the normal levels of precipitation; and
- **Socio-Economic:** When the water deficiency begins to significantly affect the population.

When below average or little to no rain falls, soil can dry out, and plants can die. If unusually dry weather persists and water supply problems develop, this time period is defined as a drought. Human activity, such as over-farming, excessive irrigation, deforestation, and poor erosion controls, can exacerbate a drought's effects. It can take weeks or months before the effects of below average precipitation on bodies of water are observed. Depending upon the region, droughts can happen more quickly, noticed sooner, or have their effects naturally mitigated. The more humid and wet an area is, the faster the effects will be realized. A naturally dry region, which typically relies more on subsurface water, will take more time to actualize its effects.

Unlike some hazard events such as floods, drought has neither a clearly defined onset, nor spatial restriction within Bulloch County. It can, however, be a contributing factor for wildfire (which is addressed in Section 3.11).

3.5.2 Location & Extent

Droughts are regularly monitored by multiple federal agencies using a number of different indices. Among them are the U.S. Drought Monitor, the Palmer Drought Index, and the Standardized Precipitation Index, as next described.

The U.S. Drought Monitor provides a summary of drought conditions across the U.S. and Puerto Rico. Often described as a blend of art and science, the map is updated weekly by combining a variety of data-based drought indices and indicators, along with local expert input, into a single composite drought indicator.



The Palmer Drought Severity Index (PDSI), devised in 1965, was the first drought indicator to assess moisture status comprehensively.¹⁶ It uses temperature and precipitation data to circulate water supply and demand; incorporates soil moisture; and is considered most effective for unirrigated cropland. It primarily reflects long-term drought and has been used extensively to initiate drought relief.

Table 3-10. Palmer Drought Severity Index

Palmer Drought Severity Index	
Extremely Wet	4.0 or more
Very Wet	3.0 to 3.99
Moderately Wet	2.0 to 2.99
Slightly Wet	1.0 to 1.99
Incipient Wet Spell	0.5 to 0.99
Near Normal	0.49 to -0.49
Incipient Dry Spell	-0.5 to -0.99
Mild Drought	-1.0 to -1.99
Moderate Drought	-2.0 to -2.99
Severe Drought	-3.0 to -3.99
Extreme Drought	-4.0 or less

Source: NOAA, 2026

The Standardized Precipitation Index (SPI)¹⁷ is a way of measuring drought that is different from the Palmer Drought Severity Index (PDSI). Like the PDSI, this index is negative for drought and positive for wet conditions. However, the SPI is a probability index that considers only precipitation, while PDSI indices are water balance indices that consider water supply (precipitation), demand (evapotranspiration), and loss (runoff).

Table 3-11. Standardized Precipitation Index

Standardized Precipitation Index	
Extremely Wet	2.0+
Very Wet	1.5 to 1.99
Moderately Wet	1.0 to 1.49
Near Normal	-.99 to .99
Moderately Dry	-1.0 to -1.49
Severely Dry	-1.5 to -1.99
Extremely Dry	-2 and less

Source: NOAA, 2026

Drought is a persistent problem across the country. In October 2024, drought in the continental U.S. spiked to the highest it has been since 2000, with 62.8% of the continental U.S. in drought. Most recently (August 2025), the U.S. Drought Monitor reported that 29.9% of the continental U.S. was in drought. Due to the increasing persistence of drought, there is technically no longer a “fire season” for the State of California, as it has become a tinderbox for drought-related wildfires year-round. Other states across the country are,

¹⁶ https://www.cpc.ncep.noaa.gov/products/analysis_monitoring/cdus/palmer_drought/wpdanote.shtml. Retrieved November 15, 2025.

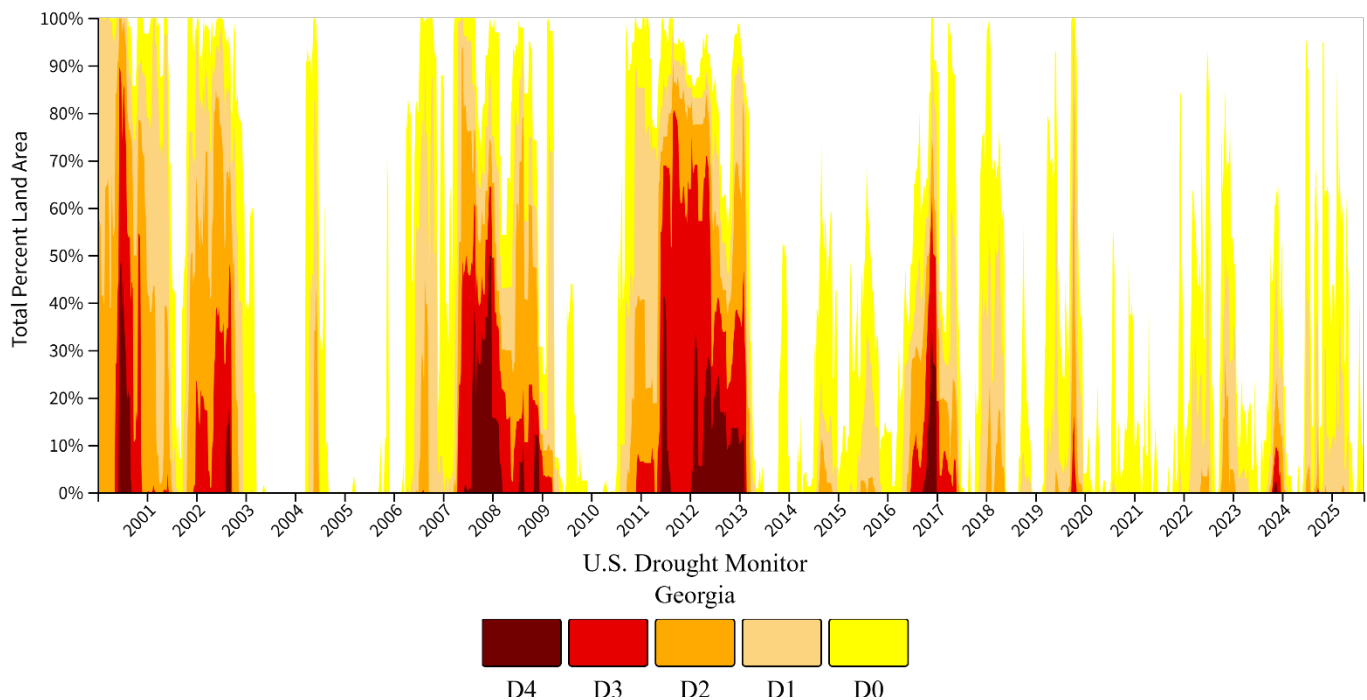
¹⁷ https://www.weather.gov/hfo/spi_info. Retrieved November 15, 2025.



unfortunately, falling suit. Georgia's fire season currently runs from February through May during the dry and windy months.

The State of Georgia has experienced numerous bouts of dry weather for several years. Per the U.S. Drought Monitor, since 2000, the longest duration of drought in Georgia lasted 161 weeks beginning on April 11, 2006 and ending on May 5, 2009. This period of drought was followed by another extensive round of drought from August 2010 to April 2013. The most intense period of drought occurred the week of December 25, 2007, when 49.86% of Georgia land was affected by exceptional drought and 83.37% of Georgia land was affected by any level of drought. Each period of drought since 2000 is marked in the chart below for the State of Georgia. See Historical Occurrences for Bulloch County's periods of drought.

Figure 3-1. Drought History 2001-2025, Georgia



Source: U.S. Drought Monitor, 2025

As of November 21, 2025, and according to U.S. Drought Monitor, 8.3% of the State of Georgia is abnormally dry and 81.5% of the state is in a drought. Currently, 100% of Bulloch County is in a state of drought, with 63.02% of the county experiencing moderate drought and 36.98% experiencing severe drought. Due to the nature of drought, all jurisdictions within Bulloch County are expected to be impacted equally, although some variations certainly occur.¹⁸

3.5.3 Historical Occurrences

During the date range from January 1, 2001 to the present, there have been several occurrences of drought in Bulloch County. Each period of drought in the last 10 years has been short and minimal, and no drought declaration has been made for Bulloch County in that time. As of November 2025, 63.02% of

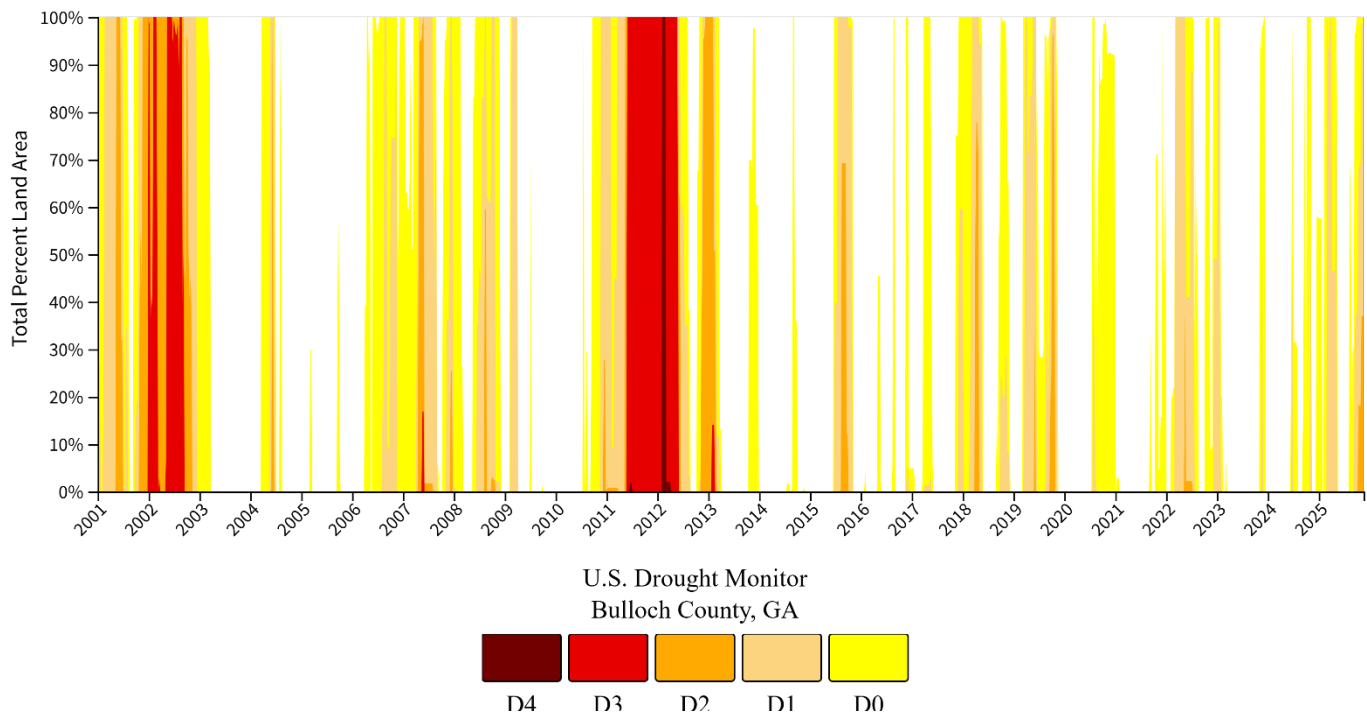
¹⁸ <https://www.drought.gov/states/georgia>. Retrieved November 18, 2025.



Bulloch County is experiencing moderate drought and 36.98% is experiencing severe drought. The last significant drought in the planning area occurred from 2010 to 2012, and another extensive drought is likely to occur again in the future. The list below identifies drought periods lasting more than two weeks in Bulloch County since 2001, which are also depicted in the graph below.

- January 2001 – July 2001
- October 2001 – December 2002
- May 2004 – June 2004
- August 2006 – November 2006
- April 2007 – September 2007
- November 2007 – December 2007
- June 2008 – October 2008
- February 2009 – March 2009
- November 2010 – August 2012
- October 2012 – March 2013
- July 2015 – October 2015
- December 2017 – December 2017
- February 2018 – May 2018
- October 2018 – November 2018
- March 2019 – June 2019
- September 2019 – November 2019
- March 2022 – July 2022
- December 2022 – January 2023
- March 2025 – April 2025
- September 2025 – Present

Figure 3-2. Drought History 2001-2025, Bulloch County



Source: U.S. Drought Monitor, 2001-2025

Data for drought events from the NOAA/NCEI Storm Events Database was pulled for the Plan update, but no drought events were recorded in the database for any time period after 2002. However, NOAA/NCEI



recorded 15 drought events in Bulloch County from January 1, 2001 to December 31, 2002, which are listed in the table below for reference.

Figure 3-3. Drought Events, Bulloch County

Location	Date	Event Type	Injuries/ Deaths	Property Damage	Crop Damage
Bulloch (Zone)	04/01/2001	Drought	0/0	0.00K	0.00K
Bulloch (Zone)	05/01/2001	Drought	0/0	0.00K	0.00K
Bulloch (Zone)	06/01/2001	Drought	0/0	0.00K	0.00K
Bulloch (Zone)	10/01/2001	Drought	0/0	0.00K	0.00K
Bulloch (Zone)	11/01/2001	Drought	0/0	0.00K	0.00K
Bulloch (Zone)	12/01/2001	Drought	0/0	0.00K	0.00K
Bulloch (Zone)	01/01/2002	Drought	0/0	0.00K	0.00K
Bulloch (Zone)	02/01/2002	Drought	0/0	0.00K	0.00K
Bulloch (Zone)	03/01/2002	Drought	0/0	0.00K	0.00K
Bulloch (Zone)	04/01/2002	Drought	0/0	0.00K	0.00K
Bulloch (Zone)	05/01/2002	Drought	0/0	0.00K	0.00K
Bulloch (Zone)	06/01/2002	Drought	0/0	0.00K	0.00K
Bulloch (Zone)	07/01/2002	Drought	0/0	0.00K	0.00K
Bulloch (Zone)	08/01/2002	Drought	0/0	0.00K	0.00K
Bulloch (Zone)	09/01/2002	Drought	0/0	0.00K	0.00K
Total – 15 Drought Events			0/0	0.00K	0.00K

Source: NOAA/NCEI Storm Events Database, 2001-2002

In early 2000, severe drought conditions occurred after many continuous months of very dry weather. Moderate to severe drought conditions also existed in all of Bulloch County for 15 straight months: October 2001 through December 2002. According to NOAA/NCEI, the effects of these drought conditions were bothersome, but not costly, as no significant property or crop damage was reported.

Bulloch County's most recent severe drought occurred from May 2011 to June 2012, with a short period of extreme drought in February 2012.

Probability of Future Events, Drought

Due to lack of available tabular data after 2002, the 15 drought events recorded by the NOAA/NCEI from 2001 to 2002 are not included in probability calculations for Bulloch County. However, estimations can be made using historical drought time periods from the U.S. Drought Monitor. Given its 25-year history, which includes 20 recorded periods of drought, Bulloch County and its participating jurisdictions can expect a drought event with an 80% probability per year or 0.8 events per year. Thus, the probability of drought for Bulloch County and its participating jurisdictions (based upon Table 3-2. Probability Categories) is considered **highly likely**. Historically, Bulloch County has experienced a significant, multi-year drought every 10-15 years and is likely to experience another one in the near future.

Note: Bulloch County and its participating jurisdictions can expect a drought event with an 80% probability each year. This number was derived by dividing the number of recorded events by the year range used. Calculating future probability is not the only predictor of future occurrences. The qualitative chance of a drought impacting the planning area is highly likely.



3.5.4 Vulnerability & Impact

Periods of drought can have significant environmental, agricultural, health, economic, and social consequences. The effects vary depending upon vulnerability and regional characteristics. Droughts can also reduce water quality through a decreased ability for natural rivers and streams to dilute pollutants and increase contamination. The most common effects are diminished crop yield, increased erosion, dust storms, ecosystem damage, reduced electricity production due to reduced flow through hydroelectric dams, shortage of water for industrial production, and increased risk of wildland fires.

From 2001 to 2025, there is no Bulloch County death, injury, property damage, or crop damage history data to estimate potential losses that could result from future droughts; therefore, vulnerability to drought is assessed qualitatively.

The table below summarizes the potential negative consequences of drought.

Table 3-12. Consequence Analysis, Drought

Category	Consequences
Public	Can cause anxiety or depression about economic losses, conflicts over water shortages, reduced incomes, fewer recreational activities, higher incidents of heat stroke, and fatality.
Responders	Impacts to responders are unlikely. Exceptional drought conditions may impact the amount of water available for firefighting operations.
Continuity of Operations (including Continued Delivery of Services)	Drought would have minimal impacts on continuity of operations due to the relatively long warning time that would allow for plans to be made to maintain continuity of operations.
Property, Facilities, and Infrastructure	Drought has the potential to affect water supply for residential, commercial, institutional, industrial, and government-owned areas. Drought can reduce water supply in wells and reservoirs. Utilities may be forced to increase rates.
Environment	Environmental impacts include strain on local plant and wildlife; damage to wet ecosystems, and increased probability of erosion and wildfire.
Economic Condition of the Jurisdiction	Farmers may face crop losses or increased livestock costs. Businesses that depend on farming may experience secondary impacts. Extreme drought has the potential to impact local businesses in landscaping, recreation and tourism, and public utilities.
Public Confidence in the Jurisdiction's Governance	When drought conditions persist with no relief, local or State governments must often institute water restrictions, which may impact public confidence.

People

Drought can affect people's physical and mental health. For those economically dependent on a reliable water supply, drought may cause anxiety or depression about economic losses, reduced incomes, and other employment impacts. Conflicts may arise over water shortages. People may be forced to pay more for water, food, and utilities affected by increased water costs. Drought may cause health problems due to poor water quality from lower water levels. If accompanied by extreme heat, drought can also result in higher incidents of heat stroke and even loss of life.

Property

Drought is unlikely to cause damages to the built environment. However, in areas with shrinking and expansive soils, drought may lead to structural damages. Drought may cause severe property loss for the



agricultural industry in terms of crop and livestock losses. The USDA's Risk Management Agency (RMA) maintains a database of all paid crop insurance claims. As of September 23, 2025, Bulloch County has had \$10,000,000.01 to \$25,000,000 in crop indemnities for the year 2024, which is among the highest in the state.¹⁹ According to NCEI data, there has been no property or crop damage in Bulloch County in the past 25 years. However, the Environmental Working Group (EWG), which provides data on crop insurance and agricultural losses, reported \$52,988,851 in crop insurance indemnities due to drought in Bulloch County from 1995-2024.²⁰ Per the USDA's Census of Agriculture County Summary Highlights (2022), Bulloch County has 495 farms totaling 195,261 acres with an average product market value of \$241,173.²¹

Environment

Drought can affect local wildlife by shrinking food supplies and damaging habitats. Sometimes this damage is only temporary, and other times it is irreversible. Wildlife may face increased disease rates due to limited access to food and water. Increased stress on endangered species could cause extinction. Drought may also increase likelihood of wind and water erosion of soils.

Another concern during a drought is that contaminants, such as pesticides and fertilizers, may be washed into waterways during heavy rain and flooding. Given the economic importance of water access in Bulloch County, any increase in contaminants in rivers could adversely affect the planning area.

Drought conditions can also provide a substantial increase in wildfire risk. When plants and trees die from a lack of precipitation, or even increased insect infestations, and diseases—which are associated with drought—they increase wildfire fuel loads. Long periods of drought can result in more intense wildfires, which bring additional consequences.

Land Use & Development Trends

Nearly 87% of Bulloch County is considered Agricultural-Forestry. In a county with considerable rural acreage, natural water sources from rainfall totals affect the many residential and commercial property wells and are vital to efficient firefighting on the more isolated properties. The county population and number of new structures continue to grow.

Bulloch County, the city of Statesboro, and the towns of Brooklet, Portal, and Register do not, at this time, have land use or development trends limited to drought. The vulnerability for these jurisdictions has not changed with regard to water availability, and the codes for retention ponds are enforced, which lowers the communities' risk of drought losses.

As the Highway 67 widening has occurred, the county can expect to see future growth at or near Highway 67 between the Statesboro southern city limits and south to Interstate 16.

¹⁹ <https://www.rma.usda.gov/tools-reports/crop-indemnity-maps/crop-indemnity-maps-crop-year-2024>. Retrieved December 1, 2025.

²⁰ https://farm.ewg.org/cropinsurance.php?fips=13031&summpage=IN_REGPAGE. Retrieved December 1, 2025.

²¹

https://www.nass.usda.gov/Publications/AgCensus/2022/Full_Report/Volume_1_Chapter_2_County_Level/Georgia/st13_2_001_001.pdf. Retrieved December 1, 2025.



Multi-Jurisdictional Concerns

All of Bulloch County could potentially be affected by drought conditions, particularly the agriculture, livestock, and forestry communities and the inherent threat of wildfire. As a result, any mitigation steps taken related to drought should be undertaken on a countywide basis and include the city of Statesboro and towns of Brooklet, Portal, and Register. The communities of Statesboro, Brooklet, Portal, Register, and some adjacent areas of the county are serviced by pressurized water systems with hydrants available.

Streams studied (Little Lotts Creek, Lotts Creek, Lower Black Creek, Mill Creek, and all tributaries of these Creeks), assist in providing some relief in times of drought, especially for the city of Statesboro and areas of unincorporated Bulloch County.

Repetitive Loss Structures

Not applicable.

3.5.5 Priority Risk Index

The following table summarizes drought hazard risk by jurisdiction. Drought risk is uniform across the planning area. Warning time, duration, and spatial extent are inherent to the hazard and remain constant across jurisdictions. The majority of damages that result from drought are to crops and other agriculture-related activities as well as water-dependent industries; therefore, the magnitude of the impacts is typically greater in unincorporated areas. In more heavily developed areas, the magnitude of drought is less severe, with lawns and local gardens affected and potential impacts on local water supplies during severe, prolonged drought.

Table 3-13. Drought Risk Ranking Summary

Jurisdiction	Probability	Impact	Spatial Extent	Warning Time	Duration	Score	Priority
Bulloch County	3	2	4	1	4	2.8	H
Brooklet	3	2	4	1	4	2.8	H
Portal	3	2	4	1	4	2.8	H
Register	3	2	4	1	4	2.8	H
Statesboro	3	2	4	1	4	2.8	H



3.6 FLOOD (FLASH FLOOD & HEAVY RAIN)

3.6.1 Hazard Description

Flash Flood: Flooding is defined by the rising and overflowing of water onto normally dry land. As defined by FEMA, a flood is a general and temporary condition of partial or complete inundation of two or more acres of normally dry land area or of two or more properties. Flooding can result from an overflow of inland waters or an unusual accumulation or runoff of surface waters from any source.

Inland flooding, also known as “urban flooding” or “flash flooding,” can be caused by intense, short-term rain or by moderate rainfall over several days which can overwhelm existing drainage infrastructure. Riverine, or fluvial, flooding occurs when excessive rainfall over an extended period of time causes a river to exceed its capacity.

Flooding is the most frequent and costly of all-natural hazards in the United States. The National Weather Service estimates the last several decades have seen an average of 125 flood-related deaths per year. Approximately 75 percent of presidentially declared disasters result from flood-related natural hazard events. Taken as a whole, more frequent, localized flooding problems that do not meet federal disaster declaration thresholds ultimately cause the majority of damages across the United States.

Heavy Rain: Heavy rain refers to intense or sustained rainfall over a short period of time that can lead to hazardous conditions, such as ponding, reduced visibility, and increased runoff. Heavy rain events can occur during thunderstorms, tropical systems, or prolonged periods of unsettled weather and may produce significant impacts even when widespread flooding does not occur. Heavy rain may also contribute to soil saturation, erosion, and stress on infrastructure, increasing the likelihood of secondary hazards such as flooding, dam stress, and roadway failures.

Heavy rainfall is the primary cause of flooding in Bulloch County and can result from thunderstorms, tropical systems, or prolonged wet weather. Intense or repeated rain events can overwhelm drainage systems, cause creeks and rivers to rise rapidly, and lead to roadway flooding, property damage, and localized erosion. Flooding from heavy rain may occur even outside mapped floodplains, particularly in low-lying areas, areas with poor drainage, and locations experiencing increased development or impervious surfaces.

3.6.2 Location & Extent

In Georgia, flooding is greatly dependent upon precipitation amounts and is highly variable within the state. Georgia’s climate is primarily affected by latitude, proximity to the Atlantic Ocean and Gulf of Mexico, and topography. Certain seasons are more prone to flooding based on the likelihood of excessive precipitation. Typically, the wet seasons are winter, early spring, and midsummer, and the drier seasons are fall and late spring. However, this varies across the state with the northern portion receiving maximum precipitation amounts during the winter as a result of frontal systems, whereas central and coastal Georgia receive maximums in the mid-to-late summer as a result of tropical cyclones and convective thunderstorm activity.

The NFIP utilizes the 100-year flood as a basis for floodplain management. The Flood Insurance Study (FIS) defines the probability of flooding as flood events of a magnitude which are expected to be equaled or exceeded once on the average during any 100-year period (recurrence intervals). Considered another way,



properties in a 100-year flood zone have a 1% probability of flooding during any given year. Mortgage lenders require that owners of properties with federally-backed mortgages located within SFHAs purchase and maintain flood insurance policies on their properties. Consequently, newer and recently purchased properties in the community are typically insured against flooding.

Regulated floodplains are illustrated on inundation maps called Flood Insurance Rate Maps (FIRMs). It is the official map for a community on which FEMA has delineated both the Special Flood Hazard Areas (SFHAs) and the risk premium zones applicable to the community. SFHAs represent the areas subject to inundation by the 100-year flood event. Structures located within the SFHA have a 26-percent chance of flooding during the life of a standard 30-year mortgage. Flood prone areas were identified within Bulloch County using the FIRM dated August 5, 2010. The table below summarizes the flood insurance zones identified by the Digital FIRM (DFIRM).

Table 3-14. Mapped Flood Insurance Zones within Bulloch County

Zone	Description
VE	Also known as the coastal high hazard areas. They are areas subject to high velocity water including waves; they are defined by the 1% annual chance (base) flood limits (also known as the 100-year flood) and wave effects 3 feet or greater. The hazard zone is mapped with base flood elevations (BFEs) that reflect the combined influence of stillwater flood elevations, primary frontal dunes, and wave effects 3 feet or greater.
AE	AE Zones, also within the 100-year flood limits, are defined with BFEs that reflect the combined influence of stillwater flood elevations and wave effects less than 3 feet. The AE Zone generally extends from the landward VE zone limit to the limits of the 100-year flood from coastal sources, or until it reaches the confluence with riverine flood sources. The AE Zones also depict the SFHA due to riverine flood sources, but instead of being subdivided into separate zones of differing BFEs with possible wave effects added, they represent the flood profile determined by hydrologic and hydraulic investigations and have no wave effects. The Coastal AE Zone is differentiated from the AE Zone by the Limit of Moderate Wave Action (LiMWA) and includes areas susceptible to wave action between 1.5 to 3 feet.
AH	Areas subject to inundation by 1%-annual-chance shallow flooding (usually areas of ponding) where average depths are between one and three feet. Base Flood Elevations (BFEs) derived from detailed hydraulic analyses are shown in this zone.
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.
A99	Areas subject to inundation by the 1%-annual-chance flood event, but which will ultimately be protected upon completion of an under-construction federal flood protection system. These are areas of special flood hazard where enough progress has been made on the construction of a protection system, such as dikes, dams, and levees, to consider it complete for insurance rating purposes. Zone A99 may only be used when the flood protection system has reached specified statutory progress toward completion. No Base Flood Elevations (BFEs) or depths are shown. Mandatory flood insurance purchase requirements and floodplain management standards apply.
0.2% Annual Chance (shaded Zone X)	Moderate risk areas within the 0.2%-annual-chance floodplain, areas of 1%-annual-chance flooding where average depths are less than 1 foot, areas of 1%-annual-chance flooding where the contributing drainage area is less than 1 square mile, and areas protected from the 1%-annual-chance flood by a levee. No BFEs or base flood depths are shown within these zones. (Zone X (shaded) is used on new and revised maps in place of Zone B.)



The next figure illustrates the most current SFHAs for Bulloch County. Figure 3-5 shows the 100-year floodplain, and Figure 3-6 shows the 500-year floodplain. Maps for each participating jurisdiction are provided in the jurisdictional annexes.



Figure 3-5. 100-Year Flood Zone, Bulloch County

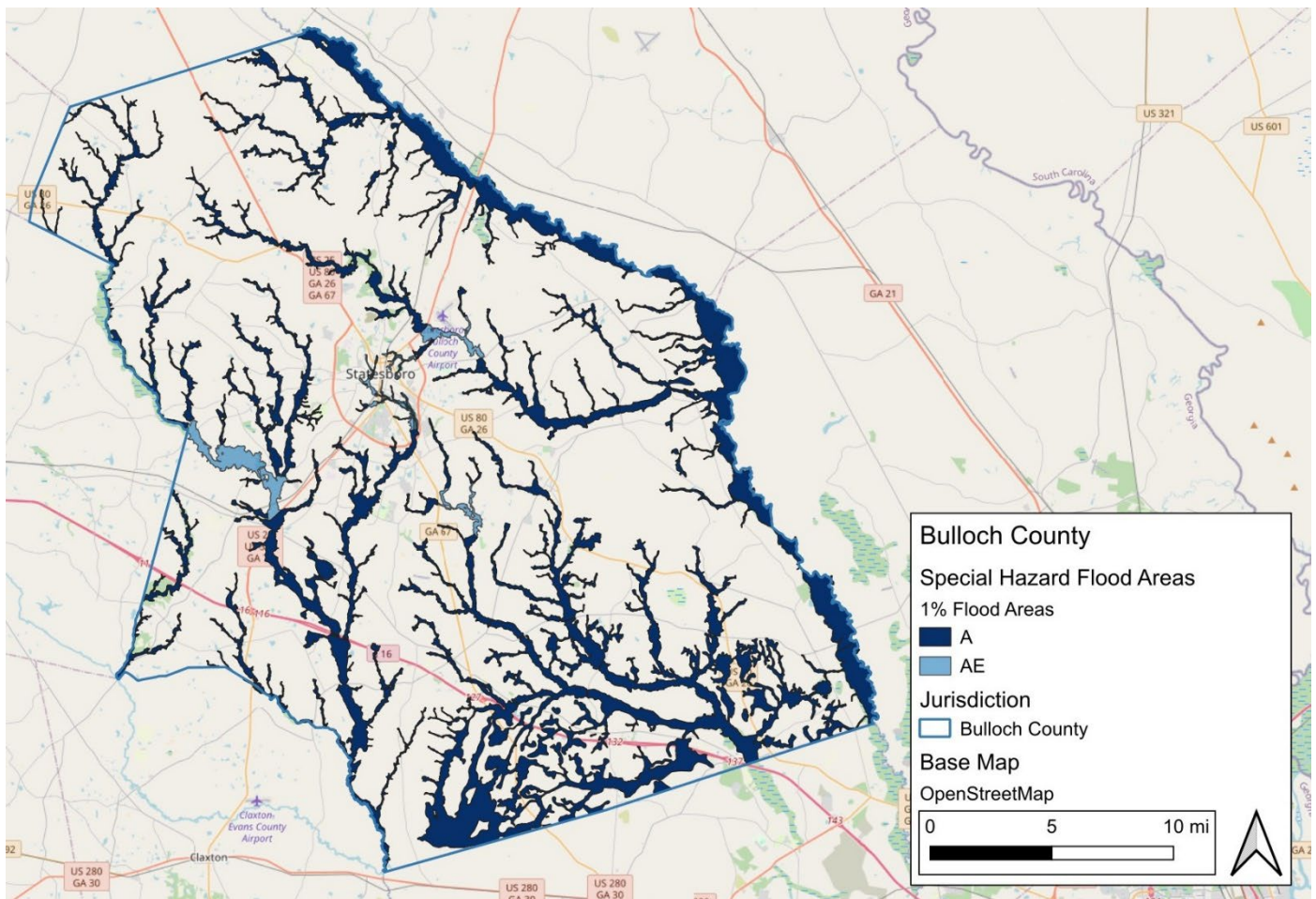
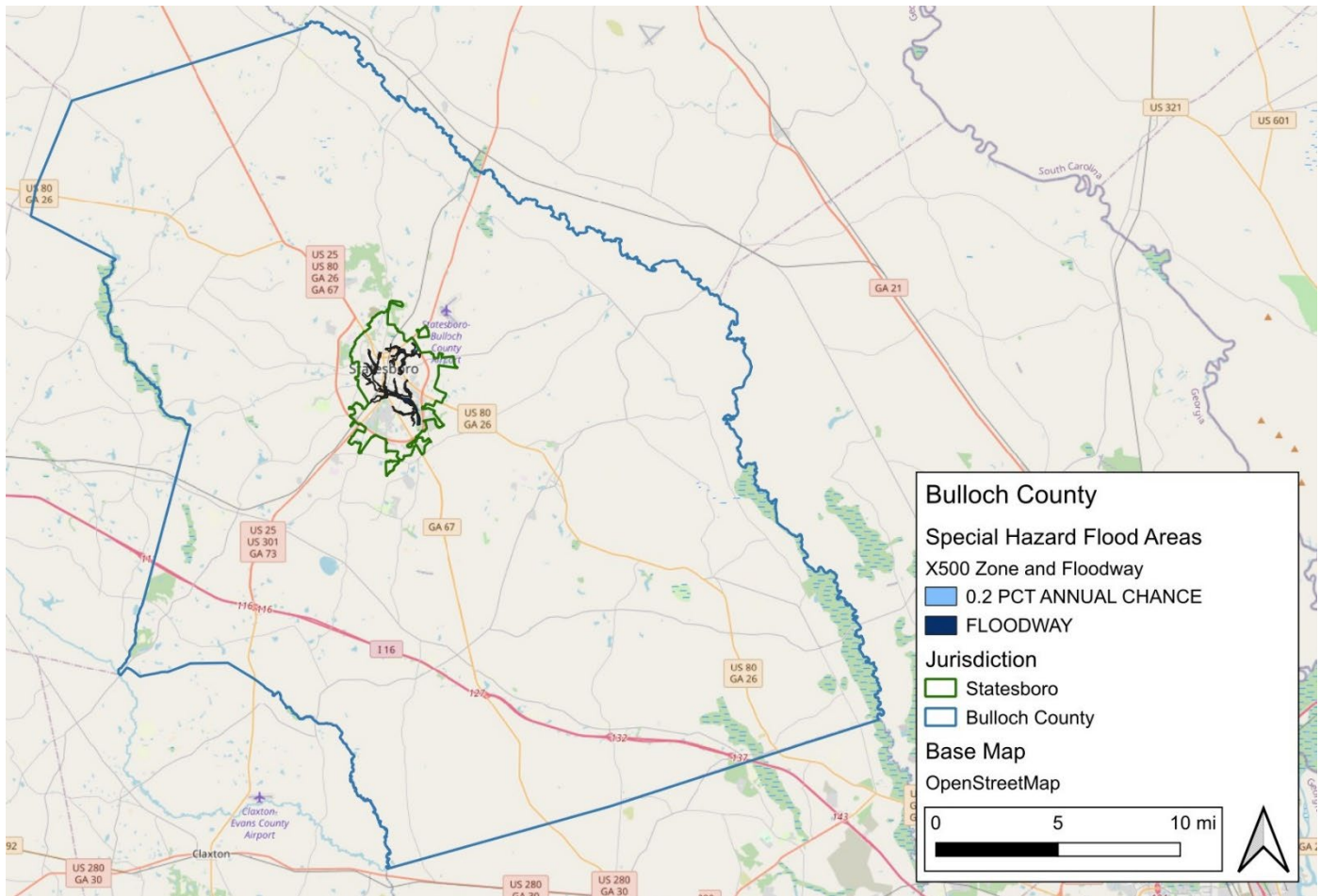




Figure 3-6. 500-Year Flood Zone, Bulloch County



The following table shows the number of facilities, homes, and mobile homes located within each different flood zone in Bulloch County.

Table 3-15. Structures in Flood Zones, Bulloch County

Flood Zone	Facilities	Homes	Mobile Homes
AE	3	287	19
A	1	547	222
1% Floodway (Statesboro only)	1	16	N/A
X500	4	212	N/A

The flood insurance rate zones are depicted in the maps below, which were developed by FEMA for Bulloch County, effective August 5, 2010.

[illegible]

[illegible]

[illegible]

[illegible]

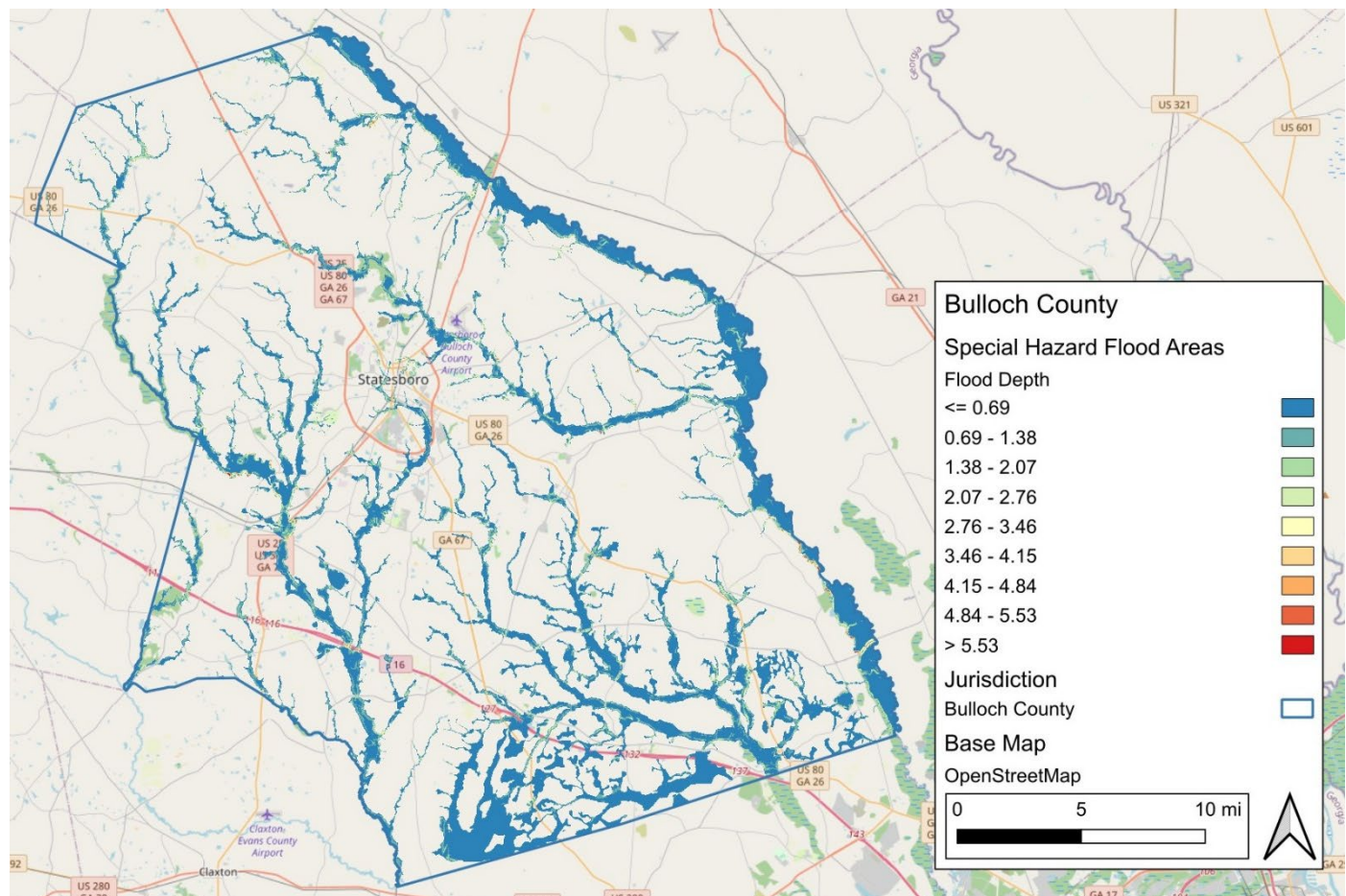


Most flooding issues in Bulloch County occur in the eastern portion of the county and are attributable to the Ogeechee River rising over the banks when heavy rainfall occurs in the central portion of Georgia. Problems occur in the unincorporated area along the numerous unpaved roads. This flooding occurs, on average, every three years. Problems include road erosion, dam failures, and culvert damage, as well as power outages from uprooted trees. The undermining of the roads from the uncommon amount of water has historically contributed to an immeasurable amount of weakening of the county paved roads.

Flood extent can be defined by the amount of land in the floodplain and the potential magnitude of flooding as measured by flood height and velocity.

The following figure shows the depth of flooding predicted from a 1% annual chance flood.

Figure 3-11. Countywide Flood Depth, Bulloch County



3.6.3 Historical Occurrences

The following table details the historical occurrences of flooding and heavy rain identified from 2001 through 2025 by the NOAA/NCEI Storm Events database. Where multiple instances of flooding or heavy rain were reported across different locations on the same date, these events are combined so as to indicate the number of days of flooding/rain. It should be noted that only those historical occurrences listed in the NCEI database are shown here and that other unrecorded or unreported events may have occurred within the planning area during this timeframe.

**Table 3-16. NCEI Records of Flooding, 2001-2025**

Type	Event Count	Deaths/Injuries	Reported Property Damage	Reported Crop Damage
Flash Flood	14	0/0	\$162,500	\$0
Flood	1	0/0	\$0	\$0
Heavy Rain	1	0/0	\$0	\$0
Total	16	0/0	\$162,500	\$0

Source: NOAA/NCEI Storm Events Database, 2001-2025

The table below provides a summary of this historical information by location. In some cases, multiple locations were reported as experiencing flooding/heavy rain within the same day. It is important to note that many of the events attributed to the county are countywide or include incorporated areas. Similarly, though some events have a starting location identified, the event may have covered a larger area including multiple jurisdictions. Still, this list provides an indication of areas that may be particularly flood prone.

Table 3-17. Summary of Historical Flood Occurrences by Location, 2001-2025

Location	Event Count	Deaths/Injuries	Property Damage
Brooklet	1	0/0	\$0
Portal	0	0/0	\$0
Register	2	0/0	\$0
Statesboro	7	0/0	\$152,500
Unincorporated Bulloch County	12	0/0	\$10,000
Total	22	0/0	\$162,500

Source: NOAA/NCEI Storm Events Database, 2001-2025

The following event narratives are provided in the NOAA/NCEI Storm Events Database and illustrate the impacts of flood events on the county. Only significant events in terms of scope and damage are included.

December 14, 2009, Unincorporated Bulloch County, Flash Flood—A slow moving warm front shifted north through portions of southeast Georgia during the late evening and early night hours. As this occurred, a series of 500 millibar shortwaves shifted through the southeast. Precipitable water values around 1.5 inches in combination with shortwave and frontal forcing led to several west to east training thunderstorms that produced heavy rainfall and flash flooding over the area. Broadcast media reported that parts of Pope Road near Highway 119 were flooded and impassable. Adjacent land areas were also extensively flooded.

August 6, 2013, Unincorporated Bulloch County, Flash Flood—Scattered thunderstorms developed across Southeast Georgia during afternoon heating. These thunderstorms were nearly stationary and produced locally excessive rainfall. Reported flooding at the Georgia Villas near Georgia Southern University, relayed by broadcast media. There is an estimated two to three feet of standing water and partially submerged vehicles.

August 19, 2013, Statesboro, Flash Flood—A nearly stationary front remained draped across Southeast Georgia through the day. Numerous showers and thunderstorms developed across the region and became nearly stationary across the Statesboro area. The heavy rainfall produced flash flooding as well as two dam failures. Bulloch County 911 dispatch relayed numerous reports of road closures in or near the Statesboro city limits. Approximately 20 to 25 water rescues were reported due to flooding in the first floor of an apartment complex and homes along Johnson Street and West Site Road as well as Hodges Circle. Two



dam failures were also reported northeast of Statesboro. One of the dams was along Buck Creek Road. Twenty-two homes were also impacted in the Statesboro area.

August 10, 2014, Statesboro, Flash Flood—A very moist atmosphere within the vicinity of a stationary front supported excessive rainfall amounts and flash flooding as multi-cell thunderstorms merged over the area. The Bulloch County 911 Call Center reported several roads closed and automobiles stalled due to flooding. Flooding also caused water damage to a house on Johnson Street. Roads closed included Fair and Gentilly, Forest, Proctor, Ellis, Johnson, Chandler, Herty, and Highway 67. Several rescues were needed for vehicles stalled in water halfway up car doors. Parking lots were flooded in Georgia Southern Campus with water as deep as 2.5 feet.

May 29, 2016, Unincorporated Bulloch County, Flash Flood—Bonnie first developed as a Tropical Depression in the western Atlantic just north of the Bahamas on May 27th. The system then tracked in a general northwestward direction and strengthened into a Tropical Storm. Bonnie made landfall as a Tropical Depression in the morning on May 29th on the Isle of Palms in Charleston County. The main impact from Bonnie was torrential rainfall across portions of southeast South Carolina and southeast Georgia. Storm total rainfall amounts of 6 to 10 inches occurred in many areas and resulted in flash flooding. Bulloch County dispatch reported that an overflowing pond closed Hagan Mill Pond Road, Alex Knight Road, and Pless Clifton Road. A social media report showed that a portion of McElveen Road was washed out. A trained spotter reported that a pond overflowed and flooded Blue Jay Road near where it intersects with Highway 17. The road was closed and impassable for approximately 30 minutes.

October 8, 2016, Unincorporated Bulloch County, Flash Flood—Matthew first developed into a Tropical Storm about 35 miles southeast of St. Lucia on September 28 before quickly strengthening into a powerful hurricane as it tracked westward across the Caribbean Sea. Across southeast Georgia and southeast South Carolina, the main impacts from Matthew included heavy rain, wind damage in the form of scattered to widespread trees and power lines blown down and storm surge, specifically along coastal locations from Tybee Island, GA north to Edisto Beach, SC. Storm total rainfall amounts generally ranged from 4.5 to 7 inches across western areas of Southeast Georgia and extreme western locations of Southeast South Carolina to 8 to 17 inches closer to the coast, highest in coastal counties of Southeast Georgia and the lower Southeast South Carolina coast. A peak storm total rainfall of 17.49 inches was recorded at Hunter Army Airfield in Georgia while a peak storm total rainfall of 16.90 inches was recorded near Edisto Island, SC. Daily record rainfall totals were also set on October 7th and October 8th at the Savannah International Airport (KSAV), 4.36 inches and 3.84 inches, at the Charleston International Airport (KCHS), 4.7 inches and 5.77 inches and in downtown Charleston (KCXM), 4.36 inches and 3.84 inches respectively. Heavy rains also led to several instances of flash flooding with damage to roads and homes and helped produce long duration flooding along the Edisto River, Ashley River and Santee River. Wind damage produced numerous to widespread power outages and damage to homes and other structures throughout the area, most significantly at locations near the coast where 60 mph to 100 mph wind gusts occurred with rainbands surrounding the passing eye wall. On October 8th, a maximum sustained wind of 75 mph and peak wind gust of 96 mph was recorded at the Tybee Island South sensor (XTYE) in Georgia while a maximum sustained wind of 67 mph was recorded at the Beaufort (XBUF) sensor in South Carolina and peak wind gust of 87 mph was recorded at the Hilton Head Airport (KHXD) sensor in South Carolina. Three deaths and 1 injury occurred from trees falling on homes or cars in Southeast Georgia. The media relayed an



image on social media that showed a mobile home and surrounding buildings inundated with water from heavy rains associated with Hurricane Matthew in the 8300 block of Sinkhole Road.

August 30, 2023, Statesboro, Flash Flood—Idalia first developed into a tropical depression across the western Caribbean Sea near the Yucatan Peninsula on August 26th before slowly gaining strength and becoming a tropical storm on August 27th. Idalia continued to track north-northeast after landfall, eventually turning northeast and weakening to a strong tropical storm while traversing southeast Georgia and southeast South Carolina late morning through evening hours on August 30th. Minimum surface pressures of 985.4 mb at Hinesville, GA (KLHW), 984.6 mb at Charleston City, SC (CHLS1) and 983.3 mb at the Savannah Entrance Light across nearshore coastal waters were recorded as Idalia tracked across the local area. Across southeast Georgia and southeast South Carolina, the main impacts associated with Idalia included tropical storm force winds, heavy rain, storm surge and tornadoes. Tropical storm force winds gusts up to 40 to 69 mph (highest near coastal areas) aided with heavy rains led to numerous trees and power lines down across southeast Georgia and southeast South Carolina. On August 30th, a maximum sustained wind of 44 knots and peak wind gust of 60 knots was recorded at the Tybee Island South sensor (XTYE) in southeast Georgia while a maximum sustained wind of 41 knots was recorded at the Folly South End (XFSE) sensor and a peak wind gust of 58 knots was recorded at the Beaufort (XBUF) sensor in southeast South Carolina. Additionally, a maximum sustained wind of 49 knots and a peak wind gust of 60 knots was recorded at the Savannah Entrance Light (XSEL) across nearshore coastal waters. An emergency manager reported numerous dirt roads washed out across the northern portions of Bulloch County due to heavy rainfall associated with Tropical Storm Idalia. Flooding waters also came near to entering homes along Northlake and Westlake Drives. Numerous paved roads were also flooded with water flowing across them. Daily rainfall amounts between 6 to 8.43 inches were recorded by the time of flash flooding starting across the area.

August 7, 2024, Statesboro and Unincorporated Bulloch County, Flood—Debby first developed into a tropical storm about 100 miles west-southwest of Key West, Florida late afternoon on August 3rd, then gradually strengthened to a strong tropical storm while tracking north across the eastern Gulf of Mexico on August 4th. Debby then reached hurricane force strength late on August 4th about 100 miles west-northwest of Tampa, before continuing a north-northeast track across the eastern Gulf of Mexico and eventually making landfall near the Big Bend area of Florida as a Category 1 Hurricane during the morning of August 5th. Debby continued inland and weakened to a tropical storm while tracking northeast across northern Florida later on August 5th, then continued a gradual weakening trend while tracking across Southeast Georgia as a tropical storm (45 mph) before slowly emerging off the Southeast Coast at tropical storm strength (40 mph) near Tybee Island, Georgia on August 6th. A minimum surface pressure of 996.7 mb was recorded at Tybee South (XTYE) on Tybee Island, Georgia as Debby emerged back across Atlantic waters. Across Southeast Georgia, the main impacts associated with Debby included flash flooding due to widespread heavy rainfall and scattered tree damage associated with near tropical storm force winds. Prolonged heavy rainfall across Southeast Georgia brought widespread flash flooding on August 5th and 6th, additional areas of flash flooding on August 7th and 8th, along with considerable and prolonged flooding of creeks, streams and main stem rivers for several days thereafter. Numerous homes and roads were flooded, leading to rescues and/or evacuations. The Bulloch County 911 Call Center reported several homes near Mill Creek being evacuated due to flooding. Several roads were also flooded across the county. A social media video showed floodwater 2 to 3 feet deep entering several structures along the lake, including homes and boat houses.



November 7, 2024, Statesboro and Unincorporated Bulloch County, Flash Flood—The combination of an impressive tropical airmass (precipitable water values of 2.00-2.50 inches) and deep forcing for ascent produced a large area of very heavy rainfall across southeast Georgia. Rain began in the evening hour and continued through the morning with periods of intense rainfall within thunderstorms. Rainfall totals from the event ranged as high as 8-12 inches, with the greatest amounts impacting interior southeast Georgia including Tattnall, Candler, Evans, Bulloch, Screven, and Jenkins counties. The intense rainfall produced widespread minor flooding in these areas, with the most impactful flooding occurring in Bulloch County where a few instances of flash flooding were reported. Bulloch County dispatch reported flood waters entering a home on Turkey Trail due to heavy rainfall.

Probability of Future Events

By definition of the 100-year flood event, SFHAs are defined as those areas that will be inundated by the flood event having a 1% chance of being equaled or exceeded in any given year. Properties located in these areas have a 26% chance of flooding over the life of a 30-year mortgage.

The 500-year flood area is defined as those areas that will be inundated by the flood event having a 0.2% chance of being equaled or exceeded in any given year; it is not the flood that will occur once every 500 years.

While exposure to flood hazards vary across jurisdictions, all jurisdictions have at least some area of land in FEMA flood hazard areas. There is always risk of localized and stormwater flooding, especially due to heavy rain. In the 25-year period between 2001-2025, there were 16 flood-related events recorded by NCEI, which equates to 0.64 annualized events. Therefore, the probability of flash flooding is considered **likely** for all jurisdictions.

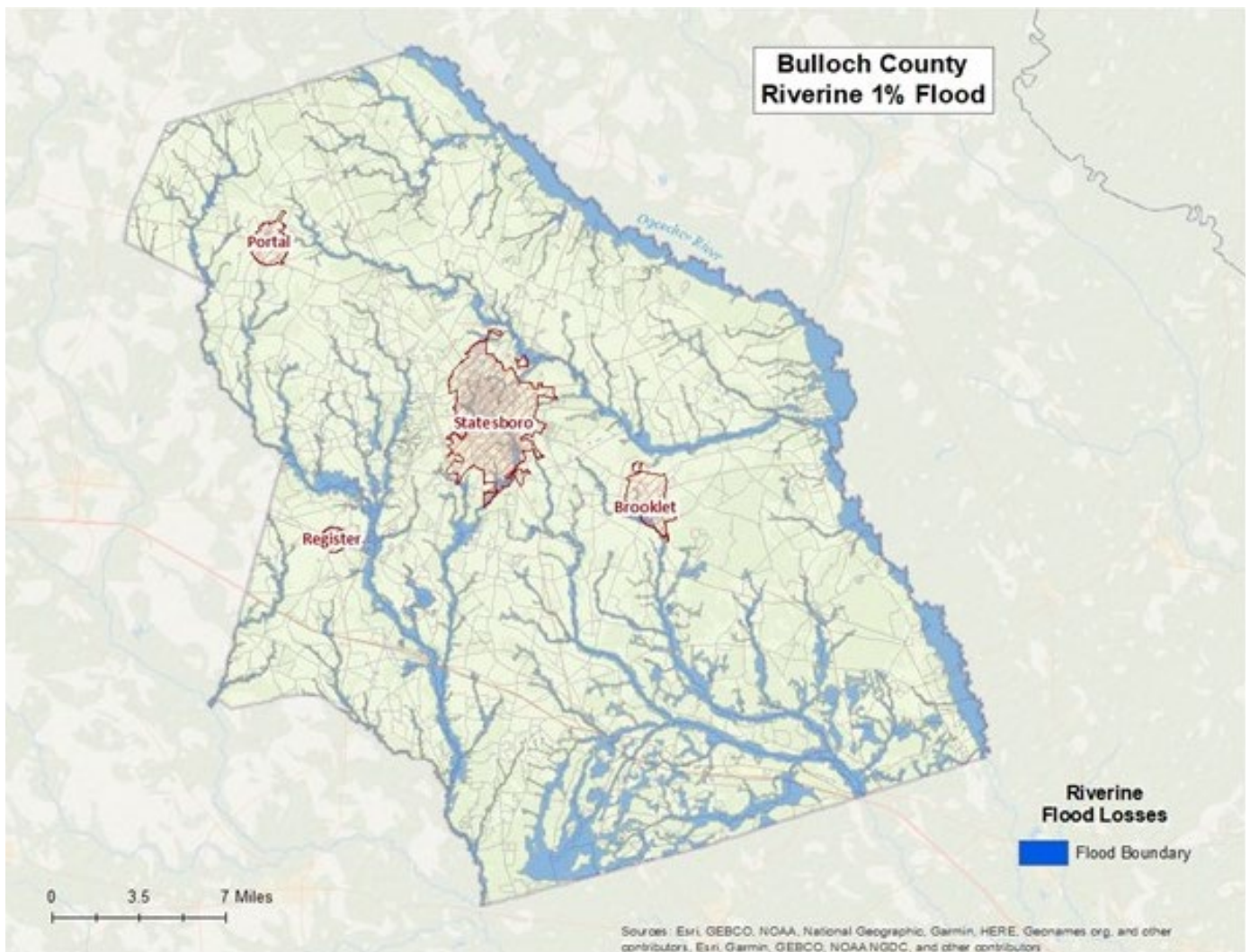
Note: Bulloch County and its participating jurisdictions can expect a flash flood event with a 64% probability each year. This number was derived by dividing the number of recorded events by the year range used. Calculating future probability is not the only predictor of future occurrences. The qualitative chance of a flood impacting the planning area is likely.

3.6.4 Vulnerability & Impact

GMIS performed a flood loss analysis in Hazus by leveraging 2025 parcel data provided by Bulloch County. The flood assessment is based on the 1% annual chance event that includes a riverine assessment. Riverine losses were determined from the 1% flood boundaries downloaded from the FEMA Flood Map Service Center in June 2025. The flood boundaries were overlaid with the USGS 10 meter DEM using the Hazus-MH Enhanced Quick Look tool to generate riverine depth grids. The riverine flood depth grid was then imported into Hazus to calculate the riverine flood loss estimates. The following figure illustrates the riverine boundaries associated with the 1% annual chance.



Figure 3-12. Riverine 1% Flood Inundation, Bulloch County



Source: Hazus Riverine Flood Risk Analysis, 2025

The following table summarizes the potential detrimental consequences of flash flood and/or heavy rain.

Table 3-18. Consequence Analysis, Flash Flood

Category	Consequences
Public	Localized impact is expected to be severe for incident areas and moderate to light for other adversely affected areas.
Responders	First responders are at risk when attempting to rescue people from their homes. They are subject to the same health hazards as the public. Flood waters may prevent access to areas in need of response, or the flood may prevent access to the critical facilities themselves which may prolong response time. Damage to personnel will generally be localized to those in the flood areas at the time of the incident and is expected to be limited.
Continuity of Operations (including Continued Delivery of Services)	Floods can severely disrupt normal operations, especially when there is a loss of power. Damage to facilities in the affected area may require temporary relocation of



Category	Consequences
	some operations. Localized disruption of roads, facilities, and/or utilities caused by incident may postpone delivery of some services.
Property, Facilities, and Infrastructure	Buildings and infrastructure, including transportation and utility infrastructure, may be damaged or destroyed. Impacts are expected to be localized to the area of the incident. Severe damage is possible.
Environment	Chemicals and other hazardous substances may contaminate local water bodies. Wildlife and livestock deaths are possible. The localized impact is expected to be severe for incident areas and moderate to light for other areas affected by the flood.
Economic Condition of the Jurisdiction	Local economy and finances will be adversely affected, possibly for an extended period of time. During floods (especially flash floods), roads, bridges, farms, houses and automobiles are destroyed. Additionally, the local government must deploy firemen, police and other emergency response personnel and equipment to help the affected area. It may take years for the affected communities to be rebuilt and business to return to normal.
Public Confidence in the Jurisdiction's Governance	Ability to respond and recover may be questioned and challenged if planning, response, and recovery are not timely and effective.

People

Certain health hazards are common to flood events. While such problems are often not reported, three general types of health hazards accompany floods. The first comes from the water itself. Floodwaters carry anything that was on the ground that the upstream runoff picked up, including dirt, oil, animal waste, and lawn, farm, and industrial chemicals. Pastures and areas where farm animals are kept or where their wastes are stored can contribute polluted waters to the receiving streams.

Debris also poses a risk both during and after a flood. During a flood, debris carried by floodwaters can cause physical injury from impact. During the recovery process, people may often need to clear debris out of their properties but may encounter dangers such as sharp materials or rusty nails that pose a risk of tetanus. People must be aware of these dangers prior to a flood so that they understand the risks and take necessary precautions before, during, and after a flood.

Floodwaters also saturate the ground, which leads to infiltration into sanitary sewer lines. When wastewater treatment plants are flooded, there is nowhere for the sewage to flow. Infiltration and lack of treatment can lead to overloaded sewer lines that can back up into low-lying areas and homes. Even when it is diluted by flood waters, raw sewage can be a breeding ground for bacteria such as *E. coli* and other disease-causing agents.

The second type of health problem arises after most of the water has gone. Stagnant pools can become breeding grounds for mosquitoes, and wet areas of a building that have not been properly cleaned breed mold and mildew. A building that is not thoroughly cleaned becomes a health hazard, especially for small children and the elderly.

Another health hazard occurs when heating ducts in a forced air system are not properly cleaned after inundation. When the furnace or air conditioner is turned on, the sediments left in the ducts are circulated throughout the building and breathed in by the occupants. If the municipal water system loses pressure, a boil order may be issued to protect people and animals from contaminated water.

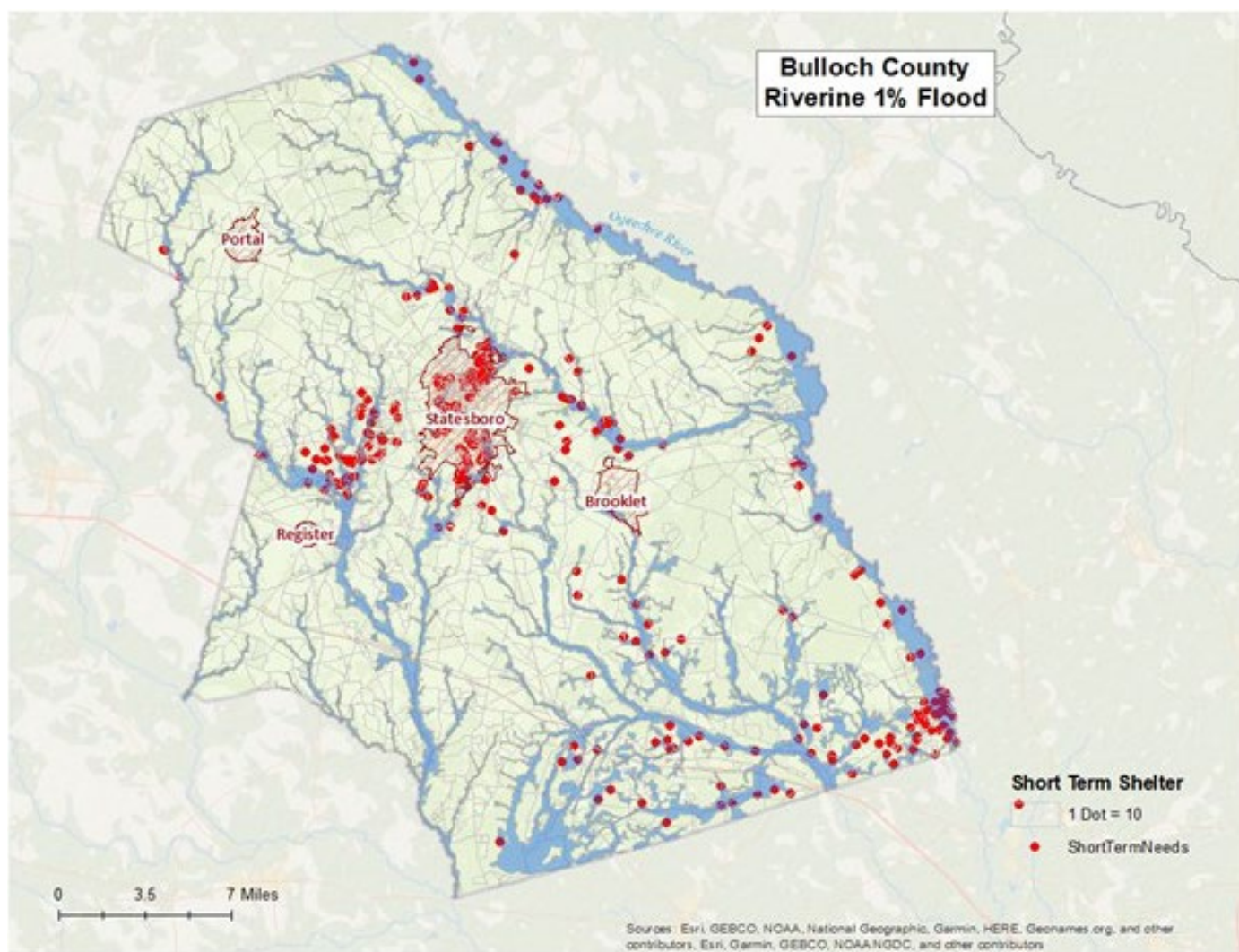


The third problem is the long-term psychological impact of having been through a flood and seeing one's home damaged and personal belongings destroyed. The cost and labor needed to repair a flood-damaged home puts a severe strain on people, especially the unprepared and uninsured. There is also a long-term problem for those who know that their homes can be flooded again. The resulting stress on floodplain residents takes its toll in the form of aggravated physical and mental health problems.

Floods can also result in fatalities. Individuals face high risk when driving through flooded streets. However, NCEI does not contain any records of deaths in Bulloch County caused by flood or heavy rain events.

Hazus estimates the number of households that are expected to be displaced from their homes due to riverine flooding and the associated potential evacuation. The model estimates 2,122 households might be displaced due to the flood. Displacement includes households evacuated within or very near to the inundated area. Displaced households represent 6,366 individuals, of which 3,748 may require short term publicly provided shelter. The results are mapped in the figure below.

Figure 3-13. Riverine 1% Estimated Flood Shelter Requirements, Bulloch County



Source: Hazus Riverine Flood Risk Analysis, 2025



Property

Residential, commercial, and public buildings, as well as critical infrastructure such as transportation, water, energy, and communication systems, may be damaged or destroyed by flood waters. The Environmental Working Group (EWG), which provides data on crop insurance and agricultural losses, reported \$18,637,427 in crop insurance indemnities due to flood and excess moisture/precipitation/rain in Bulloch County from 1995-2024.²²

Buildings in Bulloch County are vulnerable to flooding from events equivalent to the 1% riverine flood. The economic and social impacts from a flood of this magnitude can be significant. The table below provides a summary of the potential flood-related building damage in Bulloch County by jurisdiction that might be experienced from the 1% flood. The map below illustrates the relationship of building locations to the 1% flood inundation boundary.

Table 3-19. Riverine 1% Building Losses, Bulloch County

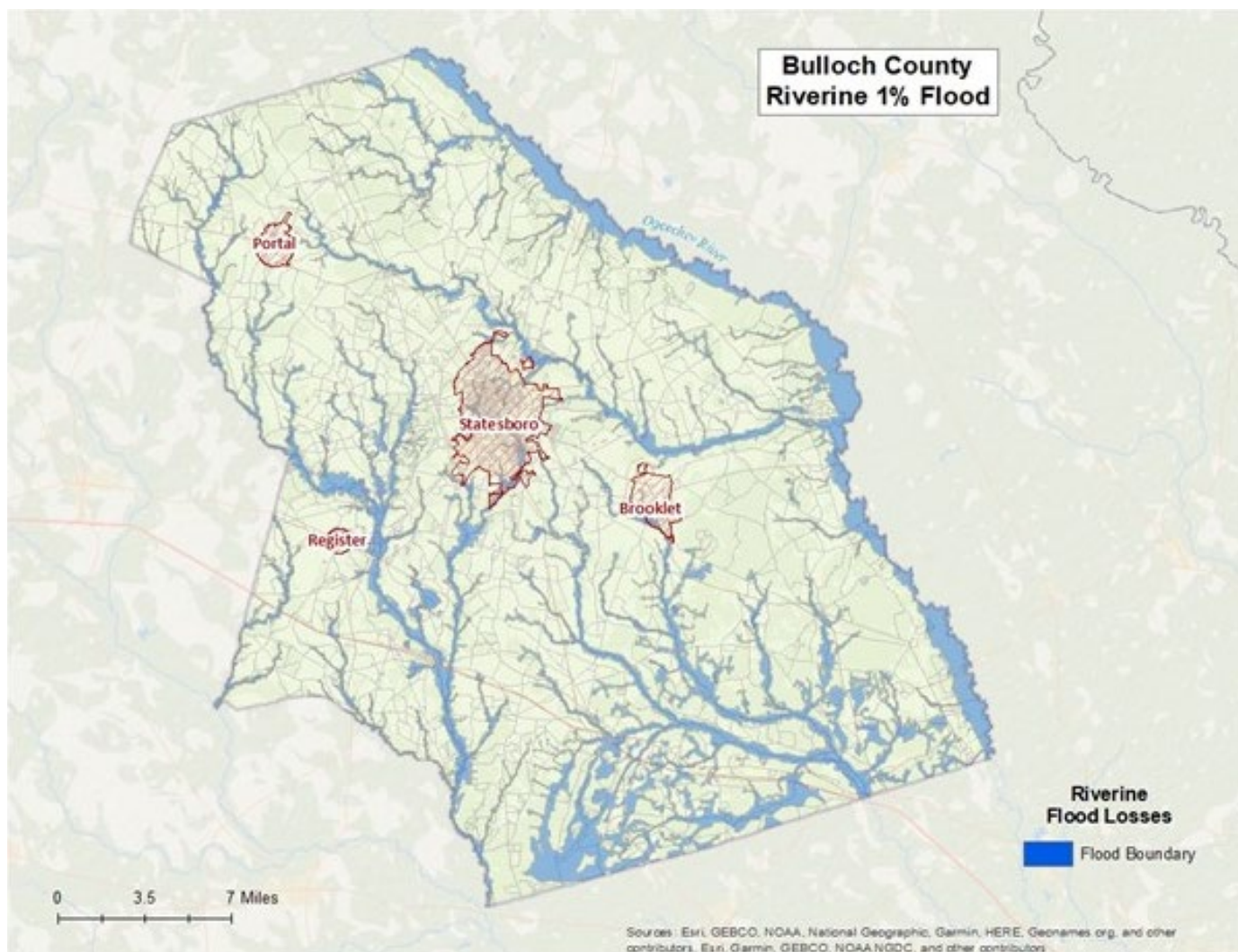
Occupancy Classification	Total Buildings	Total Buildings Damaged	Total Building Exposure	Total Losses to Buildings	Loss Ratio of Exposed to Damaged
Brooklet					
Residential	746	10	\$109,557,191	\$473,668	0.43%
Register					
Commercial	11	1	\$854,825	\$24,568	2.87%
Statesboro					
Industrial	181	16	\$30,664,433	\$124,830	0.41%
Religious	7	3	\$916,931	\$24,319	2.65%
Residential	6,872	225	\$1,317,375,169	\$6,537,627	0.50%
Commercial	1,049	44	\$625,261,988	\$542,075	0.09%
Unincorporated					
Commercial	365	7	\$115,586,634	\$124,202	0.11%
Industrial	222	4	\$850,585,489	\$325,490	0.04%
Residential	20,231	1,178	\$2,698,960,338	\$33,457,168	1.24%
County Total					
Total	29,684	1,488	\$5,749,762,997	\$41,633,947	--

Source: Hazus Riverine Flood Risk Analysis, 2025

²² https://farm.ewg.org/cropinsurance.php?fips=13031&summpage=IN_REGPAGE. Retrieved December 10, 2025.



Figure 3-14. Damaged Buildings in 1% Riverine Flood, Bulloch County



Source: Hazus Riverine Flood Risk Analysis, 2025

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

Environment

During a flood or heavy rain event, chemicals and other hazardous substances may end up contaminating local water bodies. Flooding kills animals and in general disrupts the ecosystem. Snakes and insects may also make their way to the flooded areas.

Floods and heavy rain can also cause significant erosion, which can alter streambanks and deposit sediment, changing the flow of streams and rivers and potentially reducing the drainage capacity of those waterbodies.



Hazus estimates the amount of debris that will be generated by the flood, which could greatly impact the county's environment and ecosystem. The model breaks debris into three general categories:

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

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

The analysis estimates that an approximate total of 17,445 tons of debris might be generated:

- Finishes: 8,215 tons
- Structural: 3,595 tons
- Foundations: 5,634 tons

Land Use & Development Trends

Changes in development can impact vulnerability by increasing flood risk. The Hazard Mitigation Planning Committee noted that new development results in an increase in impervious surface and elevation changes outside of the SFHA, which has increased stormwater runoff, altered drainage patterns, and exacerbated flooding. For example, new development can be built in areas prone to flooding, and that development can also cause changes to the floodplain and flood flows that cause existing properties to become exposed to flood. Properly elevating new development, limiting fill, requiring compensatory storage, and other development restrictions can mitigate the impacts of new development on flood risk.

Bulloch County, the city of Statesboro, and the town of Brooklet participate in the National Flood Insurance Program (NFIP). Portal does not have identified flood areas, and Register was newly sanctioned on 8/5/2011 and is addressing the feasibility of participation in the NFIP. There are specific local ordinances prohibiting development in flood-prone areas, and construction must adhere to the Georgia State Minimum Standard Codes (Uniform Codes Act) and the International Building Code. The county oversees building permits, subsequent inspections, and code enforcement to maintain the integrity of the new growth within the county. The minimum standards established by these codes do provide reasonable protection to persons and property within structures that comply with the regulations for most natural hazards.

Codes and ordinances in the county demanded provisions for rainwater before a zoning change for proposed new construction is issued.

Multi-Jurisdictional Concerns

Fortunately, per BCEMA, there have been few incidences of flooding in the planning area. A thorough search of local periodicals and discussions with the county does not provide localized information on inland flooding for each municipality within Bulloch County. Most information on this hazard is based on county-wide data.



Less than 42% of Bulloch County could potentially be affected by flood conditions, particularly as concerns a hurricane or storm event. Statesboro has approximately 20% of its land area exposed to flood events; Brooklet has approximately 8%; Portal has no flood areas; and the town of Register has about 18% of its land area exposed to flood events. Other than some road closures and trees uprooting from saturated ground due to flood, Statesboro and the towns of Brooklet and Register will rarely suffer any flood damages. The town of Portal is not considered vulnerable.

The city of Statesboro first adopted a Flood Plain Damage Prevention Ordinance in 1987. This ordinance regulates the development in the proximity of the floodplain. The city of Statesboro's Floodplain Management Damage Prevention Ordinance can be viewed in its entirety at <http://www.municode.com> under Chapter 46 – Flood Damage Prevention Ordinance.

While the Brooklet Police Department has a small body of water to the west of it, the area south of the facility is of a lower elevation and the excess rainfall travels to a nearby greenspace.

Repetitive Loss Structures

A FEMA Repetitive Loss (RL) property is a property for which two or more flood insurance claims of more than \$1,000 have been paid by the NFIP within any 10-year period since 1978. A FEMA Severe Repetitive Loss (SRL) property is an NFIP-insured home that has experienced a high frequency or high severity of flooding. It is flagged when the property has either received at least four flood claims over \$5,000 with at least two of the claims occurring within a 10-year span, or at least two claims that exceed the building's market value. An analysis of repetitive loss was completed to examine repetitive losses within the planning area.

There are eight NFIP RL properties in Bulloch County; seven are in Statesboro and one is in Brooklet. Statesboro has the only (one) SRL property in the county. All RL and SRL properties in the county are residential dwellings. NFIP repetitive loss structures reflect areas of recurring flood risk. While these structures are not directly associated with flood events, they help identify locations that could experience increased impacts in the event of a flood.

3.6.5 Priority Risk Index

The following table summarizes flood hazard risk. Flood risk due to heavy rain, riverine flooding, flash flooding, and stormwater flooding exists across most of the county. All participating jurisdictions except Portal have at least some area in SFHA and are thus exposed to a moderate to high risk of flooding; given that other sources of flooding and other levels of flooding may occur beyond these areas, the spatial extent was considered small to moderate for all jurisdictions. Impact ratings were based upon Hazus loss estimates.

Table 3-20. Flash Flood Risk Ranking Summary

Jurisdiction	Probability	Impact	Spatial Extent	Warning Time	Duration	Score	Priority
Bulloch County	3	2	3	3	3	2.7	H
Brooklet	2	2	2	3	3	2.2	M
Portal	1	1	2	3	3	1.6	L
Register	3	2	3	3	3	2.7	H
Statesboro	3	2	3	3	3	2.7	H



3.7 SEVERE WEATHER (THUNDERSTORM WIND, LIGHTNING, HAIL, & EXTREME HEAT)

3.7.1 Hazard Description

Thunderstorm Wind: Thunderstorms result from the rapid upward movement of warm, moist air and can occur inside warm, moist air masses and at fronts. As the air moves upward, it cools, condenses, and forms cumulonimbus clouds that can reach heights of greater than 35,000 ft. As the rising air reaches its dew point, water droplets and ice form and begin falling the long distance through the clouds towards Earth's surface. As the droplets fall, they collide with other droplets and become larger. The falling droplets create a downdraft of air that spreads out at Earth's surface and causes strong winds associated with thunderstorms.

There are four ways in which thunderstorms can organize: single cell, multi-cell cluster, multi-cell lines (squall lines), and supercells. Even though supercell thunderstorms are most frequently associated with severe weather phenomena, thunderstorms most frequently organize into clusters or lines. Warm, humid conditions are favorable for the development of thunderstorms. The average single cell thunderstorm is approximately 15 miles in diameter and lasts less than 30 minutes at a single location. However, thunderstorms, especially when organized into clusters or lines, can travel intact for distances exceeding 600 miles.

Thunderstorms are responsible for the development and formation of many severe weather phenomena, posing great hazards to the population and landscape. Damage that results from thunderstorms is mainly inflicted by lightning, downburst winds, large hailstones, and flash flooding caused by heavy precipitation. Stronger thunderstorms are capable of producing tornadoes and waterspouts. While conditions for thunderstorm conditions may be anticipated within a few hours, severe conditions are difficult to predict. Regardless of severity, storms generally pass within a few hours.

Lightning: Lightning is a sudden electrical discharge released from the atmosphere that follows a course from cloud to ground, cloud to cloud, or cloud to surrounding air, with light illuminating its path. Lightning's unpredictable nature causes it to be one of the most feared weather elements.

All thunderstorms produce lightning, which often strikes outside of the area where it is raining and is known to fall more than 10 miles away from the rainfall area. When lightning strikes, electricity shoots through the air and causes vibrations, creating the sound of thunder. A bolt of lightning can reach temperatures approaching 50,000 degrees Fahrenheit. Nationwide, lightning kills 75 to 100 people each year. Lightning strikes can also start building fires and wildland fires, and damage electrical systems and equipment.

The watch/warning time for a given storm is usually a few hours. There is no warning time for any given lightning strike. Lightning strikes are instantaneous. Storms that cause lightning usually pass within a few hours.

Hail: According to the National Oceanic and Atmospheric Administration (NOAA), hail is precipitation that is formed when updrafts in thunderstorms carry raindrops upward into extremely cold areas of the atmosphere causing them to freeze. The raindrops form into small frozen droplets and then continue to grow as they come into contact with super-cooled water, which will freeze on contact with the frozen rain



droplet. This frozen rain droplet can continue to grow and form hail. As long as the updraft forces can support or suspend the weight of the hailstone, hail can continue to grow.

At the time when the updraft can no longer support the hailstone, it will fall down to the earth. For example, a ¼" diameter or pea sized hail requires updrafts of 24 mph, while a 2 ¾" diameter or baseball sized hail requires an updraft of 81 mph. The largest hailstone recorded in the United States was found in Vivian, South Dakota on July 23, 2010; it measured eight inches in diameter, almost the size of a soccer ball. While soccer-ball-sized hail is the exception, even small pea sized hail can do damage.

Hailstorms in Georgia cause damage to property, crops, and the environment and kill and injure livestock. According to NOAA, hail damage in the United States totaled over \$1 billion. Crops are most vulnerable to hail. Even relatively small hail can shred plants to ribbons in a matter of minutes. Vehicles, roofs of buildings and homes, and landscaping are the other things most commonly damaged by hail. Hail has been known to cause injury to humans; occasionally, these injuries can be fatal.

The onset of thunderstorms with hail is generally rapid. However, advancements in meteorological forecasting allow for some warning. Storms usually pass in a few hours.

Extreme Heat: Per FEMA, in most of the United States "extreme heat" is defined as a period of two to three days or longer of high heat relative to regional norms with temperatures usually above 90 degrees. In extreme heat, evaporation is slowed and the body must work extra hard to maintain a normal temperature, which can lead to death from heatstroke. Extreme heat often results in the highest annual number of deaths among all weather-related disasters. Per Ready.gov:²³

- Extreme heat can occur quickly and without warning
- Older adults, children, and people with certain illnesses and chronic conditions are at greater risk from extreme heat
- Humidity increases the feeling of heat as measured by heat index

3.7.2 Location & Extent

Thunderstorm wind, lightning, hail, and extreme heat events do not have a defined vulnerability zone. The scope of lightning and hail is generally confined to the footprint of its associated thunderstorm. The entirety of Bulloch County shares equal risk to the threat of severe weather and extreme heat.

One of the first scales to estimate wind speeds and the effects was created by Britain's Admiral Sir Francis Beaufort (1774-1857). He developed the scale in 1805 to help sailors estimate the winds via visual observations. The scale starts with 0 and goes to a force of 12. The Beaufort scale is still used today to estimate wind strengths, including during thunderstorms.²⁴

²³ <https://www.ready.gov/heat>. Retrieved January 31, 2026.

²⁴ <https://www.weather.gov/mfl/beaufort>. Retrieved January 31, 2026.



Figure 3-15. Beaufort Scale, Thunderstorm

Beaufort number	Wind Speed (mph)	Seaman's term		Effects on Land
0	Under 1	Calm		Calm; smoke rises vertically.
1	1-3	Light Air		Smoke drift indicates wind direction; vanes do not move.
2	4-7	Light Breeze		Wind felt on face; leaves rustle; vanes begin to move.
3	8-12	Gentle Breeze		Leaves, small twigs in constant motion; light flags extended.
4	13-18	Moderate Breeze		Dust, leaves and loose paper raised up; small branches move.
5	19-24	Fresh Breeze		Small trees begin to sway.
6	25-31	Strong Breeze		Large branches of trees in motion; whistling heard in wires.
7	32-38	Moderate Gale		Whole trees in motion; resistance felt in walking against the wind.
8	39-46	Fresh Gale		Twigs and small branches broken off trees.
9	47-54	Strong Gale		Slight structural damage occurs; slate blown from roofs.
10	55-63	Whole Gale		Seldom experienced on land; trees broken; structural damage occurs.
11	64-72	Storm		Very rarely experienced on land; usually with widespread damage.
12	73 or higher	Hurricane Force		Violence and destruction.

Source: NOAA National Weather Service, 2025

Given the ever-present risk of severe weather, Bulloch County is likely to experience numerous adverse impacts including damage to utilities, residential and commercial buildings/property, and agricultural losses. There is also a risk of fire due to lightning strikes. According to the Vaisala U.S. National Lightning Detection Network, from 2015-2019, the State of Georgia averaged approximately 6,200,040 lightning flashes per year, ranking the state in 14th place for total lightning count densities.²⁵ In 2024 specifically, Georgia ranked ninth in the U.S. with 7,479,998 lightning strikes.²⁶

Lightning is commonly measured using the Lightning Activity Level (LAL), which is a scale that describes the frequency of lightning strikes in a specific area.²⁷ This scale can be seen below.

Table 3-21. Lightning Activity Levels

LAL	Description
LAL 1	No thunderstorms

²⁵ https://www.weather.gov/media/safety/lightning/15-19lightning_density_state.pdf. Retrieved November 20, 2025.

²⁶ <https://indd.adobe.com/view/97f5506f-f312-493b-a9d2-d6f3bd06408a>. Retrieved November 20, 2025.

²⁷ <https://www.weather.gov/media/rnk/fire/LAL.pdf>. Retrieved November 20, 2025.



LAL	Description
LAL 2	Isolated thunderstorms: Light rain will occasionally reach the ground. Lightning is very infrequent, 1 to 5 cloud-to-ground strikes in a 5-minute period.
LAL 3	Widely scattered thunderstorms: Light to moderate rain will reach the ground. Lightning is infrequent, 6 to 10 cloud-to-ground strikes in a 5-minute period.
LAL 4	Scattered thunderstorms: Moderate rain is commonly produced. Lightning is frequent, 11 to 15 cloud-to-ground strikes in a 5-minute period.
LAL 5	Numerous thunderstorms: Rainfall is moderate to heavy. Lightning is frequent and intense, greater than 15 cloud-to-ground strikes in a 5-minute period.

There have also been reports of hail measuring up to 2.75 inches in diameter in Georgia. Hailstones of this size can destroy roofs, break windows, damage vehicles, kill livestock, and injure people, resulting in significant financial and personal losses.

The TORRO Hailstorm Intensity Scale measures and categorizes hailstorms and extends from H0 (hard hail, no damage) to H10 (super hailstorm, extensive structural damage, risk of severe/fatal injuries), with its increments of intensity or damage potential related to hail size (distribution and maximum), texture, numbers, fall speed, speed of storm translation, and strength of the accompanying wind.²⁸ The scale could be modified depending on factors such as building materials and types (e.g., whether roofing tiles are predominantly slate, shingle, or concrete). See the scale in the table below.

Table 3-22. TORRO Hailstorm Intensity Scale

Scale	Intensity Category	Diameter (Inches)	Approximate Size	Typical Damage Impacts
H0	Hard Hail	0 - 0.33	Pea	No damage
H1	Potentially Damaging	0.33 - 0.60	Marble/Mothball	Slight general damage to plants, crops
H2	Potentially Damaging	0.60 - 0.80	Dime/Grape	Significant damage to fruit, crops, vegetation
H3	Severe	0.80 - 1.20	Nickel to Quarter	Severe damage to fruit and crops, damage to glass and plastic structures, paint and wood scored
H4	Severe	1.20 - 1.60	Half Dollar	Widespread glass damage, vehicle bodywork damage
H5	Destructive	1.60 - 2.00	Silver Dollar to Golf Ball	Wholesale destruction of glass, damage to tiled roofs, significant risk of injuries
H6	Destructive	2.00 - 2.40	Egg	Bodywork of grounded aircraft dented, brick walls pitted

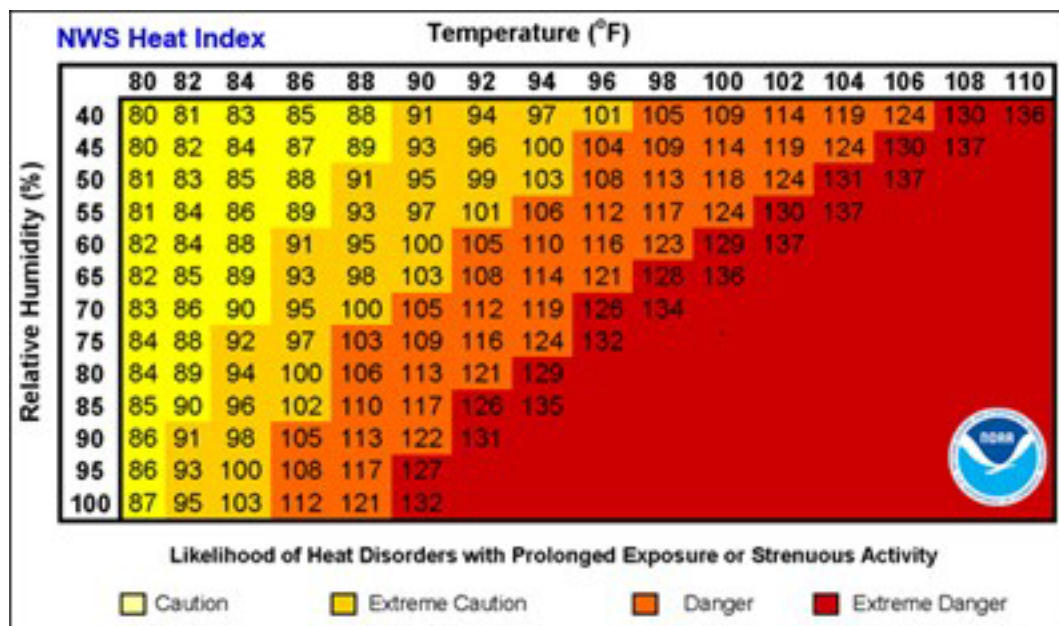
²⁸ <https://www.torro.org.uk/research/hail/hscale>. Retrieved November 20, 2025.



Scale	Intensity Category	Diameter (Inches)	Approximate Size	Typical Damage Impacts
H7	Very Destructive	2.40 - 3.00	Tennis Ball	Severe roof damage, risk of serious injuries
H8	Very Destructive	3.00 - 3.50	Baseball to Orange	(Severest recorded in the British Isles) Severe damage to aircraft bodywork
H9	Super Hailstorms	3.50 - 4.00	Grapefruit	Extensive structural damage. Risk of severe or even fatal injuries to persons caught in the open
H10	Super Hailstorms	4.00 +	Softball and up	Extensive structural damage. Risk of severe or even fatal injuries to persons caught in the open

Ambient air temperature is one component of heat conditions, with relative humidity being the other. The relationship of these factors creates what is known as the apparent temperature. The Heat Index Chart in the following figure uses both of these factors to produce a guide for the apparent temperature or relative intensity of heat conditions.²⁹

Figure 3-16. Heat Index Chart



Source: NWS, 2026

Note: Exposure to direct sun can increase Heat Index values by as much as 15°F. The shaded zone above 105°F corresponds to a heat index that may cause increasingly severe heat disorders with continued exposure and/or physical activity.

²⁹ <https://www.weather.gov/safety/heat-tools>. Accessed January 31, 2026.



The National Weather Service has a system in place to initiate alert procedures (advisories or warnings) when the Heat Index is expected to have a significant impact on public safety. The expected severity of the heat determines whether advisories or warnings are issued. The National Weather Service Forecast Office in Raleigh sets the following criteria for heat advisory and excessive heat warning:

- **Heat Advisory:** Heat Index of 105°F to 109°F for 3 hours or more. Can also be issued for lower values 100°F to 104°F for heat lasting several consecutive days.
- **Excessive Heat Watch:** Potential for heat index values of 110°F or hotter within 24 to 48 hours. Also issued during prolonged heat waves when the heat index is near 110°F.
- **Excessive Heat Warning:** Heat Index of 110°F or greater for any duration.

While most severe weather events are limited in terms of their impact, duration, and spatial extent, the hazard remains one of the most common in the state and for Bulloch County.

3.7.3 Historical Occurrences

Severe weather is a common occurrence across the U.S., including the State of Georgia. According to SHELDUS/NCEI data referenced in the Georgia Hazard Mitigation Strategy Standard and Enhanced Plan (effective March 2024 to March 2029), an average of 488 severe weather events occurred across the state between 1952 and 2022. These events in total caused 1,162 injuries, 200 fatalities, and more than \$1.7 billion in damages. Over the period from 2002 to 2022, the historic occurrence jumped to 942 severe weather events per year, which equates to a significant chance of a severe weather occurrence in any given year.

Averaging 20-30 days annually for severe weather, all of Bulloch County is at risk. The number of severe weather events recorded by NOAA/NCEI varies by jurisdiction.

Thunderstorm Wind: The NOAA/NCEI Storm Events Database does not have a specific classification for thunderstorms. In order to paint a picture of historical occurrences for this event type, heavy rain, high wind, strong wind, and thunderstorm wind events were compiled for Bulloch County from January 1, 2001 to October 31, 2025. NOAA/NCEI reports 171 days with thunderstorm events in Bulloch County (330 events total). The breakdown per jurisdiction is as follows: Statesboro (61), Brooklet (21), Portal (16), and Register (14). All other events were for various unincorporated communities and Fort Stewart. Note that thunderstorm events occurring on the same day were combined into a single entry when they were part of the same storm system.

The following provides more specific details on significant thunderstorm wind events included in the NOAA/NCEI database:

July 23, 2003, Unincorporated Bulloch County, Thunderstorm Wind—Thunderstorm winds blew down trees across Lake View Road and knocked down numerous trees and destroyed 2 barns.

July 29, 2005, Register and Brooklet, Thunderstorm Wind—Numerous trees knocked down along half mile section of road near Route 46. Shingles blown off roof of house, top of tree snapped off.

August 8, 2006, Statesboro, Thunderstorm Wind—Tree down on a house in the Landing Subdivision.



May 5, 2007, Unincorporated Bulloch County, Thunderstorm Wind—A large thunderstorm began in Atlanta's area and moved east into the western county warning area. County dispatch reported widespread trees and power lines down across the northwest portion of the county. One tree fell on a house. A trained storm spotter reported tops of large pine trees were broken off.

June 11, 2007, Register and Unincorporated Bulloch County, Thunderstorm Wind—A hot and humid airmass in combination with a strong upper level low digging southward from the Appalachians allowed numerous showers and thunderstorms to develop across the area. A billboard sign was snapped in half and many trees were reported down at the intersection of State Route 301 and Interstate 16. A hotel door was also detached by the winds. Siding from the undershirt of a trailer was torn off 2 miles south of the intersection of State Route 301 and Interstate 16. Several trees were reported down, including on Highway 301 south of Interstate 95. A tree fell on a home in Register.

August 11, 2007, Unincorporated Bulloch County, Thunderstorm Wind—Numerous outflow boundaries in combination with the sea breeze and the retreat of strong upper level ridging allowed numerous showers and thunderstorms to develop in a highly unstable environment. Trees and powerlines were reported down across Bulloch County.

May 11, 2008, Unincorporated Bulloch County, Thunderstorm Wind—A warm front lifted northward through southern South Carolina and southeast Georgia during the morning, with a strong cold front then sweeping through the area during the evening. This resulted in several rounds of severe weather across the region. The Bulloch County Warning Point reported numerous trees down along Route 67 from near Interstate 16 to near the Bryan and Bulloch county line and southeast of Denmark, GA.

June 12, 2009, Statesboro and Brooklet, Thunderstorm Wind—A developing trough of low pressure in the lee of the Appalachians in combination with the sea breeze and the approach of a strong upper level disturbance, resulted in scattered convection across southern South Carolina and southeast Georgia. Bulloch county dispatch reported numerous trees and at least one power line down around Statesboro, Georgia. Broadcast Media relayed a report of trees down and several roofs of homes damaged in the town of Brooklet, Georgia.

May 3, 2010, Unincorporated Bulloch County, Thunderstorm Wind—The combination of a cold front approaching from the west and the sea breeze pushing inland from the Atlantic, resulted in scattered thunderstorms across portions of southeast Georgia. The public reported 2 mobile homes shifted slightly off their foundations near the intersection of Motes Road and Old Portal Road. Surrounding buildings also received dents from hail. The damage occurred 5 miles north of Portal, Georgia. The public reported ten 60 foot tall pine trees were snapped 20 feet from the top. All of the damaged trees were laying in the same direction. A tin roof measuring 10 feet in width was also blown off a small storage barn. The damage occurred 6 miles north of Portal Georgia.

May 16, 2010, Register, Thunderstorm Wind—A trough of low pressure over southern South Carolina and southeast Georgia in combination with the inland moving Atlantic Sea Breeze, resulted in scattered thunderstorms across the area. A Bulloch county official reported grain bins damaged, a roof blown off a home and multiple trees down in Register, Georgia. A trained weather spotter reported numerous large pine trees down along Akens Pond Road from Middleground Road to Sean Vickery Road 2 miles northeast of Hopeulikit, Georgia. The public reported 3 trees down at their residence in Middleground, Georgia.



May 23, 2010, Unincorporated Bulloch County, Thunderstorm Wind—An upper level disturbance in combination with the sea breeze in an unstable environment resulted in numerous thunderstorms developing across southern South Carolina and southeast Georgia. Bulloch county Emergency Management reported numerous trees downed by straight line winds, one of which fell on a home resulting in a moderate amount of roof damage. Winds also destroyed a storage shed. The damage occurred on R.T. Myers Road and T.R. Smith Road, 2 miles east of Bay, Georgia.

April 5, 2011, Portal and Statesboro, Thunderstorm Wind—A strong cold front moved through southeast Georgia, resulting in a round of strong to severe thunderstorms. Law enforcement reported a destroyed mobile home on Pecan Grove Road. An emergency manager reported that four structures received damage with multiple trees down near the intersection of Pecan Grove Road and CL Woods Road. One church had steeple and porch damage. One mobile home was rolled over and destroyed. One tree fell on another home. One house had a front porch collapse. All damage was due to straight line winds. Law enforcement reported trees down near the intersection of Highway 24 and Clito Road. A 52 knot gust was reported at the Statesboro Municipal Airport.

September 25, 2011, Unincorporated Bulloch County, Thunderstorm Wind—The right rear quadrant of an upper level jet along with several weak shortwaves shifted along the southern periphery of a large surface low over the Ohio Valley. Several strong thunderstorms developed as these dynamic features encountered deep tropical moisture during peak heating hours over southeast Georgia and southern South Carolina. The public reported the tops sheared off of large and very tall pine trees, in Middleground, Georgia. Law Enforcement reported a large tree down on a house off of Lakeview Road, 2 miles east-southeast of Middleground, Georgia. The house sustained sufficient damage to result in the occupants being sheltered by the Red Cross. Law Enforcement reported numerous large trees and power lines down, 2 miles south-southwest of Dover, Georgia.

March 18, 2013, Statesboro, Thunderstorm Wind—A line of thunderstorms ahead of an approaching cold front started developing and intensifying in the mid to late afternoon hours across northern Georgia and Alabama. There were also discrete supercells developing ahead of the main line during peak heating. The line approached the western part of the forecast area around 9 pm as the line was beginning to interact and consolidate with the discrete cells out ahead of it. The line swept across the entire forecast area with numerous reports of wind damage and a smaller collection of large hail. The near storm environment was marked by impressive mid levels with 500-700 mb lapse rates less than -7 C/km and LI's as low as -3 to -4 C. The presence of an elevated mixed layer resulted in DCAPE values in the 800-1000 J/kg range. The upstream convective line was forced by strong ambient shear (on the order of 50-60 kts in the 0-6 km layer) with adequate surface based instability (CAPE in the 500-750 J/kg range). The supercell elements upstream yielded a tornado threat which subsequently diminished into the forecast area with less instability present and a convective mode favoring linear segments. The Storm Prediction Center hoisted a Severe Thunderstorm Watch around 7:30 pm for all of southeast Georgia and the portion of South Carolina that bordered the Savannah river. The line not only maintained its strength but intensified with base velocities upwards of 70 knots at times as it entered the area. The Bulloch County 911 Call Center reported a tree down on Country Club Road near the Iron Gate Subdivision, near the intersection of Pleasant Hill Road and Old Moore Road, and near the intersection of Rocky Ford Road and Highway 25. The Bulloch County 911 Call Center reported a tree fell on a house on the 100 block of South Roundtree Street.



April 5, 2017, Statesboro and Unincorporated Bulloch County, Thunderstorm Wind—Moderately unstable conditions and a highly sheared environment developed ahead of a strong cold front sweeping through the Southeast United States. As this occurred, a squall line of severe thunderstorms tracked over the region and produced large hail and damaging straight-line winds. The Bulloch County 911 Center reported trees down on Garfield Street, Red Fern Lane near Statesboro, W.C. Hodges Road, the intersection of Maria Sorrell Road and Bell Road, the intersection of Harville Road and Jim Waters Road, and one leaning power pole.

June 14, 2023, Portal, Statesboro, and Unincorporated Bulloch County, Thunderstorm Wind—A strong mid-level shortwave rounding the base of a parent low centered across the Great Lakes region encountered an environment displaying a warm and moist airmass, leading to thunderstorm development across the Southeast United States. Thunderstorms congealed into clusters with bowing segments, eventually sweeping through the region within an environment displaying unusually strong mid-level flow, moderate to high levels of instability, strong downdraft convective available potential energy (DCAPE) and low-level backing winds supporting high levels of 0-3 KM storm relative helicity. Severe thunderstorms developed as a result, producing straight-line wind damage and a few tornadoes across southeast Georgia during late afternoon into early evening hours. A Bulloch County emergency manager reported a tree down near the intersection of Rocky Ford Road and Two Chop Road; power lines down along the 400 Block of Johnson Street; power lines down on North Main Street at Debbie Drive; power lines down along Highway 67 at the Garden District; a tree down near the intersection of Clito Road and Magnolia Church Road; multiple trees snapped off about 6 to 7 feet above the ground along Brooklet-Leefield Road; power lines down on Stilson-Leefield Road at Holloway Road; multiple trees down on South Old River Road at Shuman Road; power lines down on North Main Street at Debbie Drive; a tree down at 462 E C Hunnicutt Road. A 911 call center reported a tree down near the intersection of South College Street and West Jones Avenue, a tree down near the intersection of Highway 301 and Randy Lowery Road, and a tree down along Highway 67 near Stambuk Lane. An emergency manager also reported a tree down on Buelah Lane at Emmet Grove Road. A Bulloch County emergency manager reported power lines down on North Main Street at Debbie Drive.

March 16, 2025, Statesboro, Thunderstorm Wind—A band of strong showers and thunderstorms developed in advance of an approaching cold front. These showers and thunderstorms moved across southeast Georgia and produced damaging wind gusts and hail. An amateur radio operator reported power lines down near the intersection of Clito Road and 5 Chop Road. There was a power outage in this area, impacting about 1,200 homes.

Lightning: There are five reported lightning events in Bulloch County from the Storm Events Database. To better describe the effect of each event, including deaths/injuries and property damage, all reported lightning events are listed below.

Table 3-23. Lightning Events, Bulloch County

Location	Date	Injuries/Deaths	Property Damage	Description
Nevils	07/24/2006	0/0	N/A	Lightning strike caused fire at Lawrence Baptist Church on Jones Road



Location	Date	Injuries/Deaths	Property Damage	Description
Hubert	06/05/2008	0/0	\$500	Lightning struck a tree and knocked it down
Register	05/16/2010	0/0	\$10,000	Lightning struck a clubhouse on Mike Brannen Road causing a fire
Statesboro Municipal Airport	06/18/2010	0/0	\$20,000	Lightning strike caused a house fire
Collegeboro	08/21/2013	1/0	\$0	An athlete was indirectly affected by lightning during an outdoor practice; extent of injuries unknown

Source: NOAA/NCEI Storm Events Database, 2001-2025

Hail: Bulloch County reported 58 hail events from January 1, 2001 to October 31, 2025, according to NOAA/NCEI. Specifically, Statesboro (5), Brooklet (5), Portal (6), Register (2) were affected by 18 of the 58 events recorded in this time period. All other events were for various unincorporated communities. No injuries or deaths were reported from these hail events. The hailstones from these events range in size from 0.75 inches to 2.75 inches. \$25,000 in total property damage occurred due to these hail events, although additional damage likely occurred that went unreported. Note that hail events occurring on the same day were counted as a single entry when they were part of the same storm system. If multiple locations recorded hail on the same day, these entries were also combined (though all locations are noted).

The following provides more specific details on severe hail events included in the NOAA/NCEI database:

June 2, 2008, Unincorporated Bulloch County, Hail—Numerous mesoscale boundaries in combination with the sea breeze and a southward moving cold front in a highly unstable environment, resulted in scattered severe thunderstorms across southeast Georgia. Baseball size hail was reported in Ivanhoe, Georgia and four miles north of Stilson, Georgia. A trained weather spotter reported quarter to half dollar size hail in Olney, Georgia.

August 5, 2009, Unincorporated Bulloch County, Hail—The combination of a trough of low pressure and the inland propagating sea breeze, resulted in the development of numerous thunderstorms across southeast Georgia. The public reported penny to tennis ball size hail on John D. Lanier Road, 5 miles west-northwest of Portal, Georgia.

May 3, 2010, Unincorporated Bulloch County, Hail—The combination of a cold front approaching from the west and the sea breeze pushing inland from the Atlantic, resulted in scattered thunderstorms across portions of southeast Georgia. The public reported golf ball size hail lasting 10 minutes near the intersection of Rocky Ford Road and Old River Road, 2 miles south-southwest of Rocky Ford, Georgia.

September 25, 2011, Unincorporated Bulloch County, Hail—The right rear quadrant of an upper level jet along with several weak shortwaves shifted along the southern periphery of a large surface low over the Ohio Valley. Several strong thunderstorms developed as these dynamic features encountered deep tropical moisture during peak heating hours over southeast Georgia and southern South Carolina. Law Enforcement reported considerable hail damage across the northern portion of Bulloch County, which was estimated to total \$25,000. The hail was reportedly golf ball size.



April 9, 2019, Unincorporated Bulloch County, Hail—Deep moisture and forcing associated with an upper level trough of low pressure, weak surface low pressure approaching from the west and an upper level jet spanning across the Southeast, led to thunderstorms capable of producing hail. Broadcast media relayed a report of golf ball size hail.

Extreme Heat: According to the National Oceanic and Atmospheric Administration (NOAA), 2019 was Georgia’s hottest year of record; that record stretches back 124 years to 1895. 2016 and 2017 are tied as the second hottest years.

NCEI records three incidents of heat or excessive heat for Bulloch County between 2001 and 2025, detailed in the table below. There was no recorded property or crop damage. However, two fatalities occurred due to extreme heat on July 31, 2022. All three incidents occurred between July and August and impacted the entire county.

Table 3-24. Extreme Heat Events, Bulloch County

Location	Date	Injuries/Deaths	Property Damage	Description
Bulloch County	07/27/2005	0/0	N/A	Extreme heat combined with high humidity brought temperatures of up to 120°F across Georgia
Bulloch County	08/01/2006	0/0	N/A	Intense heat wave brought temperatures of 105-115°F across the region
Bulloch County	07/31/2022	0/2	N/A	The Statesboro-Bulloch County Airport observed max heat index values in the upper 90s with excessive humidity. A couple, both 85 years old, died in a mobile home due to heat near Brooklet.

Source: NOAA/NCEI Storm Events Database, 2001-2025

According to NOWData from NOAA, the record high temperature in the city of Brooklet, Georgia is 109°F in July 1980. Brooklet is the only jurisdiction in the county with recorded NOAA data. July is historically the hottest month of the year in Bulloch County, with an average daily temperature of 82°F in Brooklet. Bulloch County had 121 days with natural temperatures over 90°F in 2010. Between 2001 and 2026, there have been 2,052 days with natural temperatures over 90°F. The following table provides annual data.

Table 3-25. Number of Days Over 90°F, 2001-2026

Year	Total Days	Year	Total Days
2001	80	2014	79
2002	107	2015	70
2003	58	2016	90
2004	74	2017	76
2005	81	2018	92
2006	88	2019	110
2007	89	2020	53
2008	75	2021	68



Year	Total Days	Year	Total Days
2009	84	2022	93
2010	121	2023	82
2011	111	2024	96
2012	52	2025	77
2013	46	2026	N/A
Total		2,052	

Source: NOAA/NCEI NOWData, 2001-2026

Probability of Future Events

Bulloch County and its participating jurisdictions can each expect a thunderstorm event with 100% probability per year, or 6.76 events per year, as indicated in the table below. This number is based on historical events. A hail event is expected with 100% probability per year at 2.32 events per year. A significant lightning event is expected with 20% probability per year at 0.2 events per year. An extreme heat event is expected with 100% probability at an average of 82.08 events per year. As such, and according to Table 3-2. Probability Categories, the likelihood of each separate event—i.e., hail, lightning, thunderstorm wind, and extreme heat—occurring is **highly likely**, **likely**, **highly likely**, and **highly likely** respectively. However, for a combined likelihood of a severe weather event, it is **highly likely** for the entire planning area.

Table 3-26. Probability of Future Events, Severe Weather

Event Year	Event Count			
	Hail	Lightning	Thunderstorm	Extreme Heat
2001	1	0	3	80
2002	2	0	6	107
2003	1	0	6	58
2004	0	0	5	74
2005	1	0	7	81
2006	5	1	3	88
2007	6	0	15	89
2008	5	1	8	75
2009	4	0	7	84
2010	2	2	11	121
2011	7	0	14	111
2012	4	0	7	52
2013	0	1	5	46
2014	1	0	9	79
2015	3	0	12	70
2016	2	0	7	90
2017	2	0	5	76
2018	1	0	4	92
2019	5	0	8	110
2020	1	0	2	53
2021	0	0	0	68
2022	2	0	9	93
2023	0	0	7	82



Event Year	Event Count			
	Hail	Lightning	Thunderstorm	Extreme Heat
2024	1	0	3	96
2025	2	0	6	77
Total Recorded Events =	58	5	169	2,052
Total Years =	25	25	25	25
Yearly Probability =	100% (2.32/yr)	20% (0.2/yr)	100% (6.76/yr)	100% (82.08/yr)

Note: Bulloch County and its participating jurisdictions can expect a thunderstorm event with a 100% probability each year. This number was derived by dividing the number of recorded events by the year range used. Calculating future probability is not the only predictor of future occurrences. The qualitative chance of a thunderstorm impacting the planning area is **highly likely**.

3.7.4 Vulnerability & Impact

The table below summarizes the potential negative consequences of severe weather.

Table 3-27. Consequence Analysis, Severe Weather (Thunderstorm Wind, Lightning, Hail, Extreme Heat)

Category	Consequences
Public	Injuries; fatalities
Responders	Injuries; fatalities; potential impacts to response capabilities due to storm impacts
Continuity of Operations (including Continued Delivery of Services)	Potential impacts to continuity of operations due to storm impacts; delays in providing services
Property, Facilities, and Infrastructure	Possibility of structure fire ignition; potential for disruptions in power and communications infrastructure; destruction and/or damage to any exposed property, especially windows, cars and siding; mobile homes see increased risk
Environment	Potential fire ignition from lightning; hail damage to wildlife and foliage
Economic Condition of the Jurisdiction	Lightning damage contingent on target; can severely impact/destroy critical infrastructure and other economic drivers
Public Confidence in the Jurisdiction's Governance	Public confidence is not generally affected by severe weather events.

People

People and populations exposed to the elements are most vulnerable to severe weather. A common hazard associated with wind events is falling trees and branches. The risk of being struck by lightning is greater in open areas, at higher elevations, and on the water.

Lightning can also cause cascading hazards, including power loss. Loss of power could critically impact those relying on energy to service, including those that need powered medical devices. Additionally, the ignition of fires is always a concern with lightning strikes.

The availability of sheltered locations, such as basements, buildings constructed using hail-resistant materials and methods, and public storm shelters, all reduce the exposure of the population. Residents



living in mobile homes are more vulnerable to high wind and hail events due to the lack of shelter locations and the vulnerability of the housing unit to damages. Individuals who work or play outdoors may also face increased risk.

During extreme heat conditions, the human body has difficulties cooling through the normal method of the evaporation of perspiration. Health risks rise when a person is overexposed to heat. Those at greatest risk for heat-related illness include people 65 years of age and older, young children, people with chronic health problems such as heart disease, people who are obese, people who are socially isolated, and people who are on certain medications, such as tranquilizers, antidepressants, sleeping pills, or drugs for Parkinson's disease. However, even young and healthy individuals are susceptible if they participate in strenuous physical activities during hot weather or are not acclimated to hot weather.

Since 2001, the NCEI records zero fatalities and one injury attributed directly or indirectly to lightning in Bulloch County. NCEI records zero injuries attributed to wind events in Bulloch County. There are no injuries or fatalities attributed to hail. NCEI records two fatalities and zero injuries attributed to extreme heat in Bulloch County.

Property

Thunderstorm Wind: Bulloch County and its participating jurisdictions have recorded 169 thunderstorm wind events since 2001; of these events, the range of magnitude was between 40 and 65 miles per hour with an average of 50 miles per hour. Based on the Beaufort Scale (as shown in Figure 3-4), Bulloch County and its participating jurisdictions can expect 6.76 thunderstorm wind events per year ranging from Beaufort Scale 8 "Fresh Gale" to Beaufort Scale 12 "Hurricane Force." According to NOAA/NCEI, thunderstorm wind has caused \$587,600 in recorded property damage since 2001. The Environmental Working Group (EWG), which provides data on crop insurance and agricultural losses, reported \$582,785 in crop insurance indemnities due to wind/excess wind in Bulloch County from 1995-2024.

Thunderstorm wind can cause widespread property damage ranging from minor to severe. Strong straight-line winds may down trees, utility poles, and power lines, leading to roof damage, broken windows, damaged siding, and impacts to vehicles. Manufactured homes, older structures, and buildings with weakened roofs or attachments are especially vulnerable. Wind-driven debris can further damage residential, commercial, and public facilities, while power outages and blocked roadways can increase repair costs and prolong recovery efforts.

Lightning: Since 2001, Bulloch County and its jurisdictions have recorded five significant lightning events. The entire planning area is vulnerable to lightning strikes with a future probability of 20% per year. According to NOAA/NCEI, lightning has caused \$30,500 in recorded property damage since 2001.

Property damage caused by lightning usually occurs in one of two ways—either by direct damages through fires ignited by lightning, or by secondary impacts due to power surge or loss. According to data collected on lightning strikes in Bulloch County, the vast majority of recorded property damage was due to structure fires.

Hail: Bulloch County and its participating jurisdictions have recorded 58 hail events since 2001, of which the range of magnitude was between 0.75 and 2.75 inches in diameter. Based on the hailstorm average and future probability, Bulloch County and its participating jurisdictions can expect approximately two hail events per year ranging from "potentially damaging" to "destructive." According to NOAA/NCEI, hail has



caused \$25,000 in recorded property damage since 2001. The EWG reported \$896,507 in crop insurance indemnities due to hail in Bulloch County from 1995-2024.

General damages to property from hail are direct, including destroyed windows, dented cars, and building, roof, and siding damage in areas exposed to hail. Hail damage can total a vehicle. The level of damage is commensurate with both a material's ability to withstand hail impacts and the size of the hailstones that are falling. Construction practices and building codes can help maximize structural resistance to damage. Large amounts of hail may need to be physically cleared from roadways and sidewalks, depending on accumulation. Hail can cause other cascading impacts, including power loss.

It should be noted that property damage due to hail is usually insured loss, with damages covered under most major comprehensive insurance plans. Because of this, hail losses are notoriously underreported by the NCEI. While NCEI data is still used to form a baseline of incident occurrence and general losses, it is important to note that national average hail claim losses, according to State Farm Insurance 2021 reports, homeowner's claims averaged \$12,000 and vehicle claims averaged \$5,000.³⁰

Extreme Heat: Bulloch County and its participating jurisdictions have recorded 2,052 extreme heat days since 2001 (natural temperatures above 90°F). Based on NOAA/NCEI data and future probability, Bulloch County and its participating jurisdictions can expect an average of about 82 days of extreme heat each year. According to NOAA/NCEI, extreme heat has caused \$0 in recorded damage since 2001 due to extreme heat. However, the EWG reported \$7,174,448 in crop insurance indemnities due to heat in Bulloch County from 1995-2024.

Extreme heat is unlikely to cause significant damage to the built environment. However, road surfaces can be damaged as asphalt softens, and concrete sections may buckle under expansion caused by heat. Train rails may also distort or buckle under the stress of heat induced expansion. Power transmission lines may sag from expansion and if contact is made with vegetation the line may short out causing power outages. Additional power demand for cooling also increases power line temperature adding to heat impacts.

Environment

The main environmental impact from wind is damage to trees or crops. Wind can cause other environmental impacts including the distribution of trash and debris, soil erosion, and spreading of pollutive elements. Wind events can also bring down power lines, which could cause a fire and result in even greater environmental impacts. Lightning may also result in the ignition of wildfires. This is part of a natural process, however, and the environment will return to its original state in time.

Hail can cause extensive damage to the natural environment, pelting animals, trees, and vegetation with hailstones. Melting hail can also increase both river and flash flood risk.

Extreme heat can be a byproduct of drought and vice versa, which can wreak havoc on ecosystems and the agricultural industry.

³⁰ <https://newsroom.statefarm.com/oh-hail-we-go-again/>. Retrieved February 4, 2026.



Land Use & Development Trends

Impervious surface areas can exacerbate heat conditions through the urban heat island effect, whereby the concentration of structures, infrastructure, and human activity traps and stores heat resulting in localized “heat islands.” Impervious surface area has increased slightly in Bulloch County since the last plan update.

For thunderstorm wind, lightning, and hail, aside from an overall increase in exposure due to development throughout the planning area, there have been no significant changes in development in the planning area that could affect vulnerability to severe weather in Bulloch County.

Multi-Jurisdictional Concerns

Most aspects of severe weather risk do not vary substantially by jurisdiction; however, mobile home units are more vulnerable to wind damage. 14% of the housing stock in Bulloch County is comprised of mobile home units, which total approximately 4,307 units. Individuals living in mobile homes may therefore face more severe impacts from wind.

Repetitive Loss Structures

Not applicable.

3.7.5 Priority Risk Index

The following table summarizes severe weather hazard risk by jurisdiction. Most aspects of severe weather risk do not vary substantially by jurisdiction. Thunderstorms, lightning, hail, and extreme heat may strike anywhere in the county. Where priority ratings vary between thunderstorm, lightning, hail, and extreme heat for impact and spatial extent, these scores represent an average rating with greater weight given to thunderstorm wind and extreme heat because they occur much more frequently.

Table 3-28. Severe Weather Risk Ranking Summary

Jurisdiction	Probability	Impact	Spatial Extent	Warning Time	Duration	Score	Priority
Bulloch County	4	3	3	4	1	3.2	H
Brooklet	4	3	3	4	1	3.2	H
Portal	4	3	3	4	1	3.2	H
Register	4	3	3	4	1	3.2	H
Statesboro	4	3	3	4	1	3.2	H



3.8 SEVERE WINTER WEATHER (WINTER STORM, ICE STORM, & EXTREME COLD)

3.8.1 Hazard Description

Winter Storm: A winter storm can range from moderate snowfall over a period of a few hours to blizzard conditions with blinding wind-driven snow that lasts for several days. Events may include snow, sleet, freezing rain, or a mix of these wintry forms of precipitation. Some winter storms might be large enough to affect several states, while others might affect only localized areas. Occasionally, heavy snow might also cause significant property damage, such as roof collapses on older buildings.

All winter storm events have the potential to present dangerous conditions to the affected area. Larger snowfalls pose a greater risk, reducing visibility due to blowing snow and making driving conditions treacherous. A heavy snow event is defined by the National Weather Service as an accumulation of four or more inches in 12 hours or less. A blizzard is the most severe form of winter storm. It combines low temperatures, heavy snow, and winds of 35 miles per hour or more, which reduces visibility to a quarter mile or less for at least three hours. Winter storms are often accompanied by sleet, freezing rain, or an ice storm. Such freeze events are particularly hazardous as they create treacherous surfaces.

Ice Storm: Ice storms are defined as storms with significant amounts of freezing rain and are a result of cold air damming (CAD). CAD is a shallow, surface-based layer of relatively cold, stably-stratified air entrenched against the eastern slopes of the Appalachian Mountains. With warmer air above, falling precipitation in the form of snow melts, then becomes either super-cooled (liquid below the melting point of water) or re-freezes. In the former case, super-cooled droplets can freeze on impact (freezing rain), while in the latter case, the re-frozen water particles are ice pellets (or sleet). Sleet is defined as partially frozen raindrops or refrozen snowflakes that form into small ice pellets before reaching the ground. They typically bounce when they hit the ground and do not stick to the surface. However, it does accumulate like snow, posing similar problems and has the potential to accumulate into a layer of ice on surfaces. Freezing rain, conversely, usually sticks to the ground, creating a sheet of ice on the roadways and other surfaces.

Extreme Cold: Extreme cold is a term that must be defined relative to what is considered normal in a given locale. Extreme cold events are a concern, especially during the winter months, and can vary in intensity based on geographical location and local climate. Very cold temperatures become a particular hazard when accompanied by winds of 10 mph or greater. As with extreme heat, extreme cold is of greatest concern when the condition persists for an extended period of time.

All of the winter storm elements—snow, low temperatures, sleet, ice, etc.—have the potential to cause significant hazard to a community. Even small accumulations can down power lines and tree limbs and create hazardous driving conditions and disrupt communication and power for days.

Advancements in meteorology and forecasting usually allow for mostly accurate forecasting a few days in advance of an impending storm. Most storms have a duration of a few hours; however, impacts can last a few days after the initial incident until cleanup is completed.



3.8.2 Location & Extent

Severe winter weather is usually a countywide or regional hazard, impacting most or the entire county at the same time. The risk of severe winter weather occurring is uniform across Bulloch County.

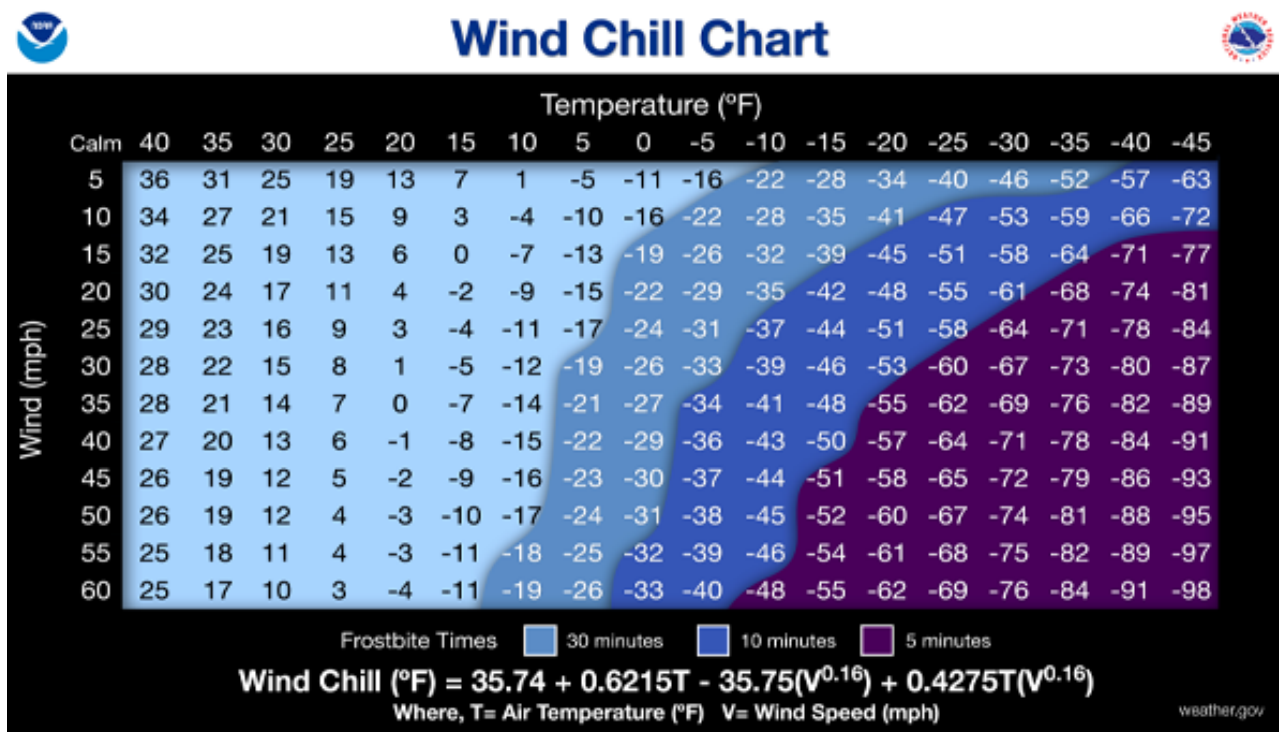
The National Oceanic and Atmospheric Administration (NOAA) uses the Regional Snowfall Index (RSI), shown in the table below for the Bulloch County region, to assess the societal impact of winter storms in the six easternmost regions in the United States. The index makes use of population and regional differences to assess the impact of snowfall. For example, areas which receive very little snowfall on average may be more adversely affected than other regions, resulting in higher severity. The county may experience any level on the RSI scale. It is possible that more severe events and impacts could be felt in the future.

Table 3-29. Regional Snowfall Index (RSI) Values

Category	RSI Value	Description
1	1-3	Notable
2	3-6	Significant
3	6-10	Major
4	10-18	Crippling
5	18+	Extreme

Source: NOAA

Severe winter weather often involves a mix of hazardous weather conditions. The magnitude of an event can be defined based on the severity of each of the involved factors, including precipitation type, precipitation accumulation amounts, temperature, and wind. The NWS Wind Chill Temperature Index, shown in the figure below, provides a formula for calculating the dangers of winter winds and freezing temperatures.



Source: NOAA National Weather Service, 2025

The most significant recorded snow depths over the last 20 years took place recently in January 2025, with recorded depths of up to four inches in the county.³¹

The entirety of Georgia is susceptible to winter storm and freeze events. Some ice and winter storms may be large enough to affect several states, while others might affect limited, localized areas. The degree of exposure typically depends on the normal expected severity of local winter weather. Bulloch County is accustomed to smaller scale severe winter weather conditions and often receives winter weather during the winter months. Given the atmospheric nature of the hazard, the entire county has uniform exposure to a winter storm and extreme cold events.

3.8.3 Historical Occurrences

To get a full picture of the range of impacts of severe winter weather, data for the following weather types as defined by the National Weather Service (NWS) and tracked by NCEI were collected:

- **Blizzard:** A winter storm which produces the following conditions for 3 consecutive hours or longer: (1) sustained winds or frequent gusts 30 knots (35 mph) or greater, and (2) falling and/or blowing snow reducing visibility frequently to less than 1/4 mile.
- **Cold/Wind Chill:** Period of low temperatures or wind chill temperatures reaching or exceeding locally/regionally defined advisory conditions of 0°F to -14°F with wind speeds 10 mph (9 kt) or greater.

³¹ <https://www.griceconnect.com/weather-alert/statesborobulloch-waking-to-winter-wonderland-and-icy-roadways-10111794>. Retrieved February 5, 2026.



- **Extreme Cold/Wind Chill:** A period of extremely low temperatures or wind chill temperatures reaching or exceeding locally/regionally defined warning criteria, defined as wind chill -15°F or lower with wind speeds 10 mph (9 kt) or greater.
- **Frost/Freeze:** A surface air temperature of 32°F or lower, or the formation of ice crystals on the ground or other surfaces, for a period of time long enough to cause human or economic impact, during the locally defined growing season.
- **Heavy Snow:** Snow accumulation meeting or exceeding 12 and/or 24-hour warning criteria of 3 and 4 inches, respectively.
- **Ice Storm:** Ice accretion meeting or exceeding locally/regionally defined warning criteria of ¼ inch or greater resulting in significant, widespread power outages, tree damage, and dangerous travel. Issued only in those rare instances where just heavy freezing rain is expected and there will be no "mixed bag" precipitation meaning no snow, sleet, or rain.
- **Sleet:** Sleet accumulations meeting or exceeding locally/regionally defined warning criteria of ½ inch or more.
- **Winter Storm:** A winter weather event that has more than one significant hazard and meets or exceeds locally/regionally defined 12- and/or 24-hour warning criteria for at least one of the precipitation elements. Defined by NWS Raleigh Forecast Office as snow accumulations 3 inches or greater in 12 hours (4 inches or more in 24 hours); Freezing rain accumulations ¼ inch (6 mm) or greater; Sleet accumulations ½ inch (13 mm) or more. Issued when there is at least a 60% forecast confidence of any one of the three criteria being met.
- **Winter Weather:** A winter precipitation event that causes a death, injury, or a significant impact to commerce or transportation, but does not meet locally/regionally defined warning criteria.

According to the NOAA/NCEI Storm Events Database, there was one frost/freeze event, two heavy snow events, four ice storm events, one winter weather event, and one winter storm event from January 1, 2001 to July 31, 2025. No extreme cold days were recorded in the database. As reported in NOAA/NCEI, severe winter weather did not cause any fatalities, injuries, property damage, or crop damage, though these types of impacts may not have been reported and are possible in future events. Severe winter weather related events in Bulloch County are recorded in the following table. Note that severe winter weather events occurring on the same day were combined into a single entry when they were part of the same storm system.

Table 3-30. Recorded Severe Winter Weather Events, Bulloch County, 2001-2025

Location	Date	Event Type	Fatalities	Injuries	Property Damage	Crop Damage
Bulloch (Zone)	01/02/2002	Ice Storm	0	0	\$0	\$0
Bulloch (Zone)	04/08/2007	Frost/freeze	0	0	\$0	\$0
Bulloch (Zone)	02/12/2010	Heavy Snow	0	0	\$0	\$0
Bulloch (Zone)	01/10/2011	Ice Storm	0	0	\$97,000	\$0
Bulloch (Zone)	01/28/2014	Ice Storm	0	0	\$0	\$0
Bulloch (Zone)	02/12/2014	Ice Storm	0	0	\$0	\$0
Bulloch (Zone)	01/03/2018	Heavy Snow	0	0	\$0	\$0
Bulloch (Zone)	01/22/2022	Winter Weather	0	0	\$0	\$0
Bulloch (Zone)	01/21/2025	Winter Storm	0	0	\$0	\$0



Source: NOAA/NCEI Storm Events Database, 2001-2025

The following provides more specific details on severe winter weather events included in the NOAA/NCEI database:

January 1, 2002, Bulloch County, Ice Storm—A winter storm moved across the southeastern states on January 2 and January 3 producing light snow and sleet before changing to mostly freezing rain. Ice accumulation was generally 1/4 to 1/2 inch. There were tens of thousands of homes and businesses without power during the heart of the storm with numerous auto accidents.

April 8, 2007, Bulloch County, Frost/Freeze—A late season cold snap produced widespread frost and freezing temperatures across much of Georgia. Overall damage to the state was at least a 100-million-dollar loss due to damaged fruit and vegetable plants. Temperatures dipped down into the 20s most areas which produced widespread damage to crops and fruit trees. Total monetary losses unknown but significant.

February 12, 2010, Bulloch County, Heavy Snow—A strong storm system tracked across northern Florida and then northeastward off the Georgia and South Carolina coast. Precipitation initially fell in the form of rain but quickly changed over to snow in the late afternoon and evening hours as winds shifted to the north and allowed colder air to wrap back into the region. Heavy snow accumulated across much of southeast Georgia. A trained weather spotter reported 1.9 inches of snow accumulation 3 miles southwest of Statesboro, Georgia.

January 10, 2011, Bulloch County, Ice Storm—An area of low pressure developed in the northeast Gulf of Mexico and tracked eastward across the northern Florida peninsula, then northeastward off the southeast Georgia and southern South Carolina coast. Meanwhile, a shallow cold airmass remained in place in the lee of the Appalachians by high pressure north of the area, allowing a continued supply of cold and dry air at the surface. The warm temperatures well above ground level and freezing or sub-freezing temperatures at ground level, resulted in freezing rain and ice accumulation across much of southern South Carolina and southeast Georgia. Law Enforcement reported power lines down along Highway 301, trees down on Zettwell Road, and sporadic power outages across Bulloch County. Law Enforcement relayed a report from the Bulloch county Fire Department of trees and power lines continuing to be knocked down by ice accumulation across the county. The Bulloch County Emergency Manager reported storm total ice accumulation of 0.25 to 0.50 inches, highest across the northern portion of the county. Widespread tree damage was also reported, with downed trees having to be removed from over 40 roadways across the county. Law Enforcement reported power lines down along Black Creek Church Road, 4 miles south of Brooklet, Georgia.

January 28, 2014, Bulloch County, Ice Storm—A strong but shallow arctic cold front pushed through the region early in the day on 1/28/14. By that evening, a strong cold air damming regime prevailed as northerly surface winds pushed temperatures to around freezing across nearly all of southeast Georgia. Above the shallow freezing layer, a prominent elevated warm layer developed which resulted in the predominant precipitation type being freezing rain for the event. Strong synoptic forcing produced widespread precipitation through the event. Storm total ice accumulations ranged up to one half of an inch especially inland away from the coast. There were even a few isolated one-inch amounts reported. Total snow and sleet accumulations were less than an inch. The unusually high amounts of ice accretion caused widespread major travel impacts with several bridges being closed due to ice. Furthermore, temperatures



remained near or below freezing at many locations through 1/31/14, which slowed the melting of ice and prolonged travel impacts. A trained spotter reported one quarter of an inch of ice accumulation in the Rocky Ford area.

February 12, 2014, Bulloch County, Ice Storm—An area of low pressure tracked from the Gulf of Mexico to off the southeast coast, producing widespread precipitation across southeast Georgia. A wedge of high pressure provided shallow, cold air, supporting the development of freezing rain at many locations away from the immediate coast. Across many inland areas, a major ice storm occurred with one to three quarters of an inch of ice accumulation and even a few one-inch accumulation amounts reported. Widespread trees, large tree limbs, and power lines were reported down due to ice. Many trees were down and blocking area roadways. Widespread, long duration power outages also occurred especially across inland areas of Jenkins, Bulloch, and Screven counties. Storm total ice accumulations across Bulloch County ranged from one quarter of an inch up to one half of an inch. Numerous trees, large tree limbs, and power lines were down due to ice. Power outages were common around all areas in Bulloch County.

January 3, 2018, Bulloch County, Heavy Snow—A developing surface low pressure system offshore and an amplifying upper-level trough approaching from the west combined with unusually cold air to produce widespread significant winter precipitation across southeast Georgia. Most of the precipitation fell as snow, with amounts ranging from a few tenths of an inch up to 6 inches. The event began as rain for many areas before changing over to snow, with a period of freezing rain along the coast where up to a quarter of an inch of ice accumulation occurred. The official storm total snowfall for the day at the Savannah-Hilton Head International Airport was 1.2 inches which ranks as the 7th highest one day snowfall on record, dating back to 1871. The event caused significant disruption to travel, with many businesses and schools closed the day of the event as well as the following day. Black ice was also an issue following the event, as well as several days of frigid wind chills. Storm total snowfall amounts ranged from around a few tenths of an inch in the north end of the county near the Jenkins County line, to as much as 3 to 4 inches around Statesboro and Nevils. Numerous reports were received via social media.

January 22, 2022, Bulloch County, Winter Weather—With a cold front positioned offshore, upper-level forcing helped produce light precipitation across southeast Georgia in the early morning hours. The low-level air mass was cold and below freezing with warm air observed aloft, leading to reports of light freezing rain and sleet. Light freezing drizzle occurred in portions of Bulloch County. A public report of freezing drizzle at Georgia Southern University was received via the mPING program.

January 21, 2025, Bulloch County, Winter Storm—A prolonged period of widespread precipitation fell across southeast Georgia in the presence of an arctic airmass, beginning in the early evening hours and continuing after sunrise the following morning. The setup resulted in a rare winter storm across the region, with all of southeast Georgia being impacted by significant accumulations of snow and sleet. Temperatures remained cold for several days following the end of the winter weather, so impacts continued for an extended period of time. Hazardous travel conditions persisted for several days as well, causing significant disruptions across the region. A rare winter storm produced significant accumulations of snow and sleet across Bulloch County. Storm total snow/sleet accumulations generally ranged from 3.0-4.0 inches across the county. Reports from specific locations include 4.0 inches near Hopefulikit, 4.0 inches around Statesboro, and 3.8 inches near Brooklet.



Extreme Cold: According to the National Oceanic and Atmospheric Administration (NOAA), the 2009-2010 winter season was Georgia's coldest winter since 2001. The winters of 1962-1963 and 1966-1967 were also historically cold winters. The coldest temperature on record in Georgia was -17°F in 1940.

According to NOWData from NOAA, the record low temperature in the city of Brooklet, Georgia is 1°F in January 1985. Brooklet is the only jurisdiction in the county with recorded NOAA data. January is historically the coldest month of the year in Bulloch County, with an average daily temperature of 49.5°F in Brooklet. Bulloch County had 68 days with natural temperatures below 32°F in 2010. Between 2001 and 2026, there have been 723 days with natural temperatures below 32°F. The following table provides annual data.

Table 3-31. Number of Days Below 32°F, 2001-2026

Year	Total Days	Year	Total Days
2001	33	2014	31
2002	43	2015	21
2003	35	2016	26
2004	33	2017	18
2005	22	2018	29
2006	23	2019	17
2007	24	2020	19
2008	33	2021	18
2009	31	2022	27
2010	68	2023	14
2011	26	2024	24
2012	25	2025	35
2013	32	2026	16
Total		723	

Source: NOAA/NCEI NOWData, 2001-2026

Probability of Future Events

NCEI records six severe winter weather related events during the 26-year period from 1999 through January 2025, which equates to a 23 percent annualized probability in any given year.

Bulloch County and its participating jurisdictions can expect a severe winter weather event with 36% probability per year, or 0.36 events per year, as indicated in the table below. This number is based on historical events. The likelihood of a severe winter weather event happening in the planning area is **likely**.

Table 3-32. Probability of Future Events, Severe Winter Weather

Probability of Future Events, Severe Winter Weather	
Total Recorded Events	9
Total Years	25
Yearly Probability	36% / 0.36 events

Note: Bulloch County and its participating jurisdictions can expect a hazardous material event with a 36% probability each year. This number was derived by dividing the number of recorded events by the year



range used. Calculating future probability is not the only predictor of future occurrences. The qualitative chance of a severe winter weather event impacting the planning area is likely.

3.8.4 Vulnerability & Impact

Severe winter weather, including snow, ice, freezing rain, sleet, and periods of extreme cold, poses a recurring hazard in Georgia, particularly during the winter months. Although these events occur less frequently than in northern states, Georgia remains vulnerable due to limited winter weather infrastructure, infrequent public exposure, and a lack of widespread preparedness for prolonged cold conditions. Ice storms present the greatest concern, as freezing rain can accumulate quickly on roadways, trees, and power lines, leading to hazardous travel conditions, widespread power outages, and damage to utility infrastructure. Winter weather events often disrupt transportation networks, delay emergency response, and increase the risk of vehicle accidents. Extreme cold also presents public health risks, including hypothermia and frostbite, particularly for vulnerable populations such as the elderly, low-income households, and individuals without reliable heating. Additionally, winter storms can cause economic impacts through business closures, school disruptions, and interruptions to essential services. Due to these vulnerabilities, effective preparedness measures, public communication, and infrastructure resilience are critical to reducing the impacts of severe winter weather in Georgia.

The table below summarizes the potential consequences of severe winter weather.

Table 3-33. Consequence Analysis, Severe Winter Weather

Category	Consequences
Public	Localized impact expected to be severe for affected areas and moderate to light for other less affected areas.
Responders	Adverse impact expected to be severe for unprotected personnel and moderate to light for trained, equipped, and protected personnel.
Continuity of Operations (including Continued Delivery of Services)	Localized disruption of roads and/or utilities caused by incident may postpone delivery of some services.
Property, Facilities, and Infrastructure	Localized impact to facilities and infrastructure in the areas of the incident. Power lines and roads most adversely affected.
Environment	Environmental damage to trees, bushes, etc.
Economic Condition of the Jurisdiction	Local economy and finances may be adversely affected, depending on damage.
Public Confidence in the Jurisdiction's Governance	Ability to respond and recover may be questioned and challenged if planning, response, and recovery not timely and effective.

People

The National Weather Service notes that the leading cause of death during winter storms is from automobile or other transportation accidents due to poor visibility and/or slippery roads. About 70% of ice- and snow-related deaths occur in automobiles; another estimated 25% are people caught out in the storm. Additionally, exhaustion and heart attacks caused by overexertion may result from winter storms as residents unaccustomed to hard labor endeavor to shovel driveways and sidewalks, free vehicles from snow, and perform other strenuous and relatively unusual tasks.



Power outages during very cold winter storm conditions can also create dangerous situations. Elderly people account for the largest percentage of hypothermia victims. In addition, if the power is out for an extended period, residents tend to seek alternative means to heat their homes. Danger arises from carbon monoxide released from improperly ventilated heating sources such as space or kerosene heaters, furnaces, and blocked chimneys. House fires also occur more frequently in the winter due to lack of proper safety precautions when using an alternative heating source. About 20% of cold-temperature exposure related deaths occur inside the home.

Property

\$97,000 in property damage was reported in association with a severe ice storm event recorded by the NOAA/NCEI on January 10, 2011 in Bulloch County, largely due to downed trees and power lines. This is the only property damage recorded in the Storm Events Database, although additional damage has almost certainly occurred in the past. However, the Environmental Working Group (EWG), which provides data on crop insurance and agricultural losses, reported \$2,378,924 in crop insurance indemnities due to cold wet weather, freeze, frost, and cold winter in Bulloch County from 1995-2024.³²

Environment

Winter storm events may include ice or snow accumulation on trees which can cause large limbs, or even whole trees, to snap and fall. Additionally, the cold weather associated with winter storms can cause water to freeze, impacting plants and wildlife.

Land Use & Development Trends

Aside from an overall increase in exposure due to development throughout the planning area, there have been no significant changes in development in the planning area that could affect vulnerability to severe winter weather in Bulloch County.

Multi-Jurisdictional Concerns

Severe winter weather risk does not vary substantially by jurisdiction because these events are typically regional in nature.

Repetitive Loss Structures

Not applicable.

3.8.5 Priority Risk Index

The following table summarizes severe winter weather hazard risk by jurisdiction. Most aspects of severe winter weather risk do not vary substantially by jurisdiction and may occur anywhere in the county.

Table 3-34. Severe Winter Weather Risk Ranking Summary

Jurisdiction	Probability	Impact	Spatial Extent	Warning Time	Duration	Score	Priority
Bulloch County	3	3	4	1	3	3	H
Brooklet	3	3	4	1	3	3	H
Portal	3	3	4	1	3	3	H

³² https://farm.ewg.org/cropinsurance.php?fips=13031&summpage=IN_REGPAGE. Retrieved February 5, 2026.
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Jurisdiction	Probability	Impact	Spatial Extent	Warning Time	Duration	Score	Priority
Register	3	3	4	1	3	3	H
Statesboro	3	3	4	1	3	3	H



3.9 TORNADO

3.9.1 Hazard Description

A tornado is a violent, dangerous, rotating column of air that is in contact with both the surface of the earth and a cumulonimbus cloud or, in rare cases, the base of a cumulus cloud. Often referred to as a twister or a cyclone, they can strike anywhere and with little warning. Tornadoes come in many shapes and sizes but are typically in the form of a visible condensation funnel, whose narrow end touches the earth and is often encircled by a cloud of debris and dust. Tornadoes are usually born in “supercell” thunderstorms and present certain physical signs that include a dark, greenish sky, large hail, and a powerful train-like roar.

Tornadoes have the potential to produce winds in excess of 200 mph and can be very expansive—some in the Great Plains have exceeded two miles in width. According to the NWS, the widest tornado ever recorded in the U.S. was 2.6 miles wide, and it occurred on May 31, 2013, in El Reno, Oklahoma. Sadly, it claimed the lives of eight people, all of whom were in vehicles, and left a path of destruction (\$40-\$50 million in damage). The costliest tornado on record hit Joplin, Missouri, on May 22, 2011, resulting in \$2.8 billion in damage. It killed 158 people and injured more than a thousand others.

As evidenced by past events, tornadoes can cause all kinds of damage to buildings, infrastructure, and property. Tornadoes have been known to lift and move objects weighing more than three tons, toss homes more than 300 feet from their foundations, and siphon millions of tons of water. However, less spectacular damage is much more common.

Tornadoes can also generate a tremendous amount of flying debris. If wind speeds are high enough, airborne debris can be hurled at buildings with enough force to penetrate windows, roofs, and walls. Most tornado-related injuries or deaths are caused by flying debris.

Violent tornadoes comprise only about two percent of all tornadoes, but they cause 70 percent of all tornado deaths and may last an hour or more. While tornado forecasters cannot provide the same kind of warning that hurricane watchers can, they can do enough to help save lives. Today the average warning time for a tornado alert is 13 minutes.

3.9.2 Location & Extent

Tornadoes are nature’s most violent storms, and they are Georgia’s number one weather-related killer. They can strike anywhere in Bulloch County and its participating jurisdictions, placing the entire planning area at risk.

Until 2007 the Fujita Tornado Scale ranked the severity of tornadoes. The Fujita scale assigned a numerical F value, F0 through F5, based on the wind speeds and estimated damage. Since 2007 the U.S. switched over to the Enhanced Fujita Scale.³³ The altered scale adjusted the wind speed values per F level and introduced a rubric for estimating damage. An EF0 tornado could lightly damage structures to the extent they would become unsafe to use until repaired. An EF1 or larger tornado could destroy the entire neighborhood, town, or city or damage any number of structures to the point where they would be unusable for at least a year.

³³ <https://www.spc.noaa.gov/efscale/>. Retrieved September 30, 2025.



Table 3-35. Enhanced Fujita Scale

EF Scale	Class	Windspeed (mph)	Windspeed (km/h)	Description
EF0	Weak	65–85	105–137	Gale
EF1	Weak	86–110	138–177	Weak
EF2	Strong	111–135	178–217	Strong
EF3	Strong	136–165	218–266	Severe
EF4	Violent	166–200	267–322	Devastating
EF5	Violent	> 200	> 322	Incredible

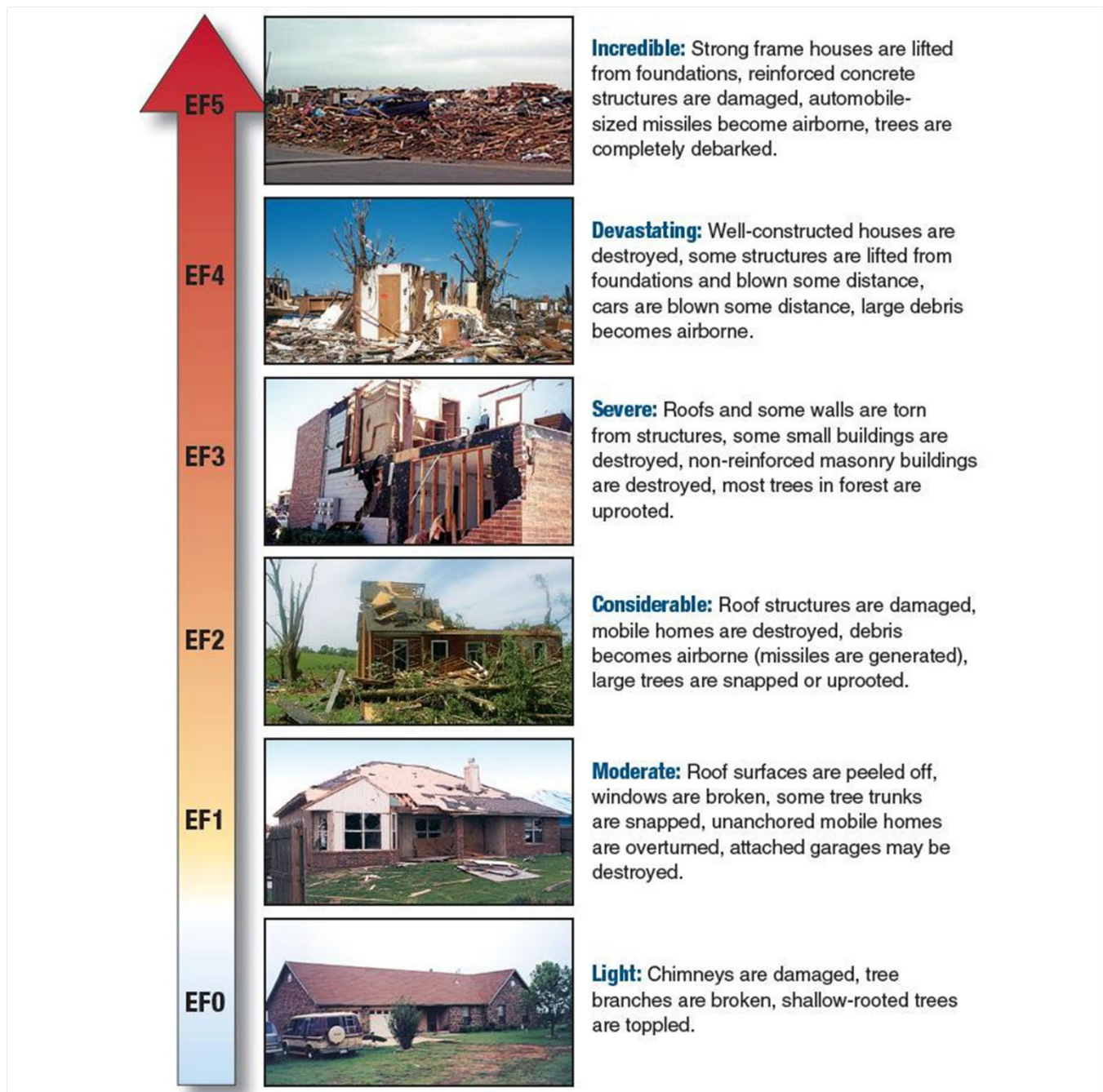
Source: NOAA, 2025

Therefore, the county should expect to experience tornadoes measuring at least EF0 to EF1 on the Enhanced Fujita (EF) Scale but also be prepared for a rare EF3 or worse.

According to the National Hurricane Center (NHC), Hurricane Ivan (2004) produced 127 tornadoes (25 in Georgia), and Hurricane Frances (2004) produced 106 tornadoes (eight in Georgia). Even though Hurricane Katrina (2005) made landfall 280 miles away from Georgia, it spawned 20 tornadoes in the state, the highest recorded number in history for the month of August. The NWS issued 12 tornado warnings in Georgia during Hurricane Michael (2018), according to its Twitter feed, but, thankfully, no tornado-related injuries or deaths were reported. Per the NHC, about 10% of the tropical cyclone-related fatalities are caused by tornadoes.

Clearly, tornadoes are a real threat to Bulloch County and its participating jurisdictions. This includes the county's entire population (now estimated at 82,683) and all critical facilities, buildings (commercial and residential), and infrastructure. While all assets are considered at risk from this hazard, a particular tornado would only cause damages along its specific track. Historically, most tornadoes have crossed through the central part of the county, which is the highest population center. The destruction ranged from minor to catastrophic depending on the intensity, size, and duration of the twister. Structures made of light materials, such as mobile homes, are most susceptible to damage. The following illustration describes the level of damage associated with each tornado category of the EF scale.

Figure 3-17. Enhanced Fujita Scale, Damage Depiction



3.9.3 Historical Occurrences

According to NOAA's Storm Prediction Center, Bulloch County experienced nine tornado incidents between 2001 and 2025, causing seven injuries, \$415,000 in property damage, and no fatalities or crop damage. However, this damage estimate may be under-reported, as damage was reported in the narratives of many events but was not recorded in terms of a monetary value. It is likely that there have been several tornadoes that occurred but went unreported. The following table shows historical tornadoes in Bulloch County during this time period.



Table 3-36. Tornado Events, Bulloch County

Location	Date	Magnitude	Injuries/Deaths	Property Damage	Crop Damage
Clito	07/01/2003	F2	0/0	\$0	\$0
Blitch	07/01/2003	F1	0/0	\$0	\$0
Register	09/06/2004	F0	0/0	\$0	\$0
Statesboro, Portal	09/27/2004	F0	0/0	\$0	\$0
Denmark	05/11/2008	EF1	0/0	\$125,000	\$0
Aaron	03/26/2011	EF0	0/0	\$40,000	\$0
Aaron	03/26/2011	EF1	0/0	\$250,000	\$0
Stilson	02/09/2017	EF2	7/0	\$0	\$0
Leefield	06/14/2023	EF0	0/0	\$0	\$0

Source: NOAA/NCEI Storm Events Database, 2001-2025

The following provides more specific details on significant tornado events included in the NOAA/NCEI database:

July 1, 2003, Unincorporated Bulloch County, Tornado—Much of WFO Charleston's CWA was impacted by the remnants of Tropical Storm Bill as it tracked to the northeast across the extreme northern section of Georgia. The mini outbreak of tornadoes started around 8 p.m. on the night of July 1st and did not stop until after 1:15 a.m. on the morning of July 2nd. Fortunately, there were no deaths with the tornadoes. Screven County was hardest hit with three separate tornadoes and three areas of wind damage. A tornado knocked down trees and damaged mobile homes.

September 6, 2004, Register, Tornado—Hurricane Frances made land fall over the Florida Panhandle and continued to track in a generally northward direction into Georgia, before turning more to the northeast. This track placed the Charleston County Warning Area in the favorable right side of the remnants of Frances which produced numerous tornadoes and areas of straight-line wind damage over southeast Georgia and south coastal South Carolina. Several Georgia counties also experienced flash flooding as there were isolated rainfall amounts of 5 to 8 inches over a 24 to 36 hour period. This was on top of already saturated ground from heavy rains during the month of August. The South Carolina counties experienced more nuisance type flooding as the rainfall amounts were not as high as what occurred in southeast Georgia. A weak tornado knocked down trees in Bulloch County before moving into Candler County.

September 27, 2004, Statesboro and Portal, Tornado—A weak tornado knocked trees and large limbs down.

May 11, 2008, Unincorporated Bulloch County, Tornado—A warm front lifted northward through southern South Carolina and southeast Georgia during the morning, with a strong cold front then sweeping through the area during the evening. This resulted in several rounds of severe weather across the region. A confirmed EF-1 tornado touched down just to the east of Nevils, Georgia along Nesmith Proctor Road where a cluster of trees were snapped and blown down. The tornado then moved rapidly east and crossed Interstate 16 near mile marker 125 where extensive tree damage occurred. The tornado then moved across Highway 67 near Old Rocker Road where it partially destroyed the roof of a mobile home and damaged nearby trees. Finally, the tornado crossed Old Happy Road and moved through the Old Happy Farm where it completely destroyed a mobile home, several irrigation systems, and a large storage shed before dissipating.



The total path length was approximately 2.25 miles, and the maximum sustained winds were estimated between 105 and 110 mph. Although considerable damage occurred with the tornado, there were no injuries.

March 26, 2011, Unincorporated Bulloch County, Tornado—A stationary frontal boundary in combination with modest instability, resulted in the development of scattered strong to severe thunderstorms across southeast Georgia. A National Weather Service storm survey confirmed an EF0 tornado with a path length of 0.6 miles and a maximum path width of 100 yards. Two mobile homes had siding and under-siding damaged along with some minor shingle damage. The tornado also snapped and uprooted dozens of trees.

March 26, 2011, Unincorporated Bulloch County, Tornado—A stationary frontal boundary in combination with modest instability, resulted in the development of scattered strong to severe thunderstorms across southeast Georgia. A National Weather Service storm survey confirmed an EF1 tornado with a path length of 3.1 miles and a maximum path width of 0.25 miles. One mobile home was completely destroyed and thrown 30 yards from its foundation by the tornado. Several outbuildings, sheds, and carports were damaged or destroyed, and hundreds of trees were snapped or uprooted.

February 9, 2017, Unincorporated Bulloch County, Tornado—Strongly forced, organized convection ahead of a vigorous upper trough and associated cold front advanced into a marginally unstable environment featuring strong winds and wind shear. A single, persistent supercell within the environment tracked across Candler and Bulloch Counties before producing a tornado in eastern Bulloch and western Effingham Counties. A National Weather Service storm survey team confirmed a tornado that tracked from southeastern Bulloch County to southwest Effingham County in Georgia on 02/09/2017. The tornado tracked east-southeast approximately 9 miles southeast of Brooklet, GA to Pineora, GA.

The tornado began near Stillson Leefield Road, in Bulloch County, GA. Most of the damage within the first few miles of the event was due to many snapped and uprooted trees.

The most significant damage occurred near the center of the path, in an area just west of South Old River Road to near Terrell Road, in Bulloch County, GA. There were several mobile homes along this portion of the path that were either completely destroyed or severely damaged. The extent of damage to the mobile homes was the reason for the high end EF2 rating with estimated maximum wind speeds up to 130 mph. Two mobile homes just north of Little Hagan Road were completely destroyed, being flipped and tossed 30 to 40 feet from their foundations. One of the mobile homes in this area was not occupied, but the other one had five people inside, plus pets. All five were injured, one seriously, with broken bones in their neck. Two pets in the same mobile home survived, but one died from its injuries. There was also a car pushed 20 to 30 feet and a large metal trucking container, weighing approximately 9,000 pounds, pushed about 50 feet.

Continuing about 200 yards southeast along the path, a single-family home sustained moderate damage, mainly from projectiles and debris hitting it from the mobile homes upstream. A large carport/overhang was completely torn from the home, which then fell on and damaged 3 cars. A large hole was punched through the north wall of the home from debris hitting the window and pushing into the home. Otherwise, some minor shingle damage was observed, with 20-30% of the shingles missing.



Another 200 yards southeast of this home was another mobile home that was severely damaged. It was lifted and rolled 30 to 40 feet off its foundation, crushing 2 cars before coming to rest on the edge of a bluff. There were 2 people severely injured in this home with one pet injured.

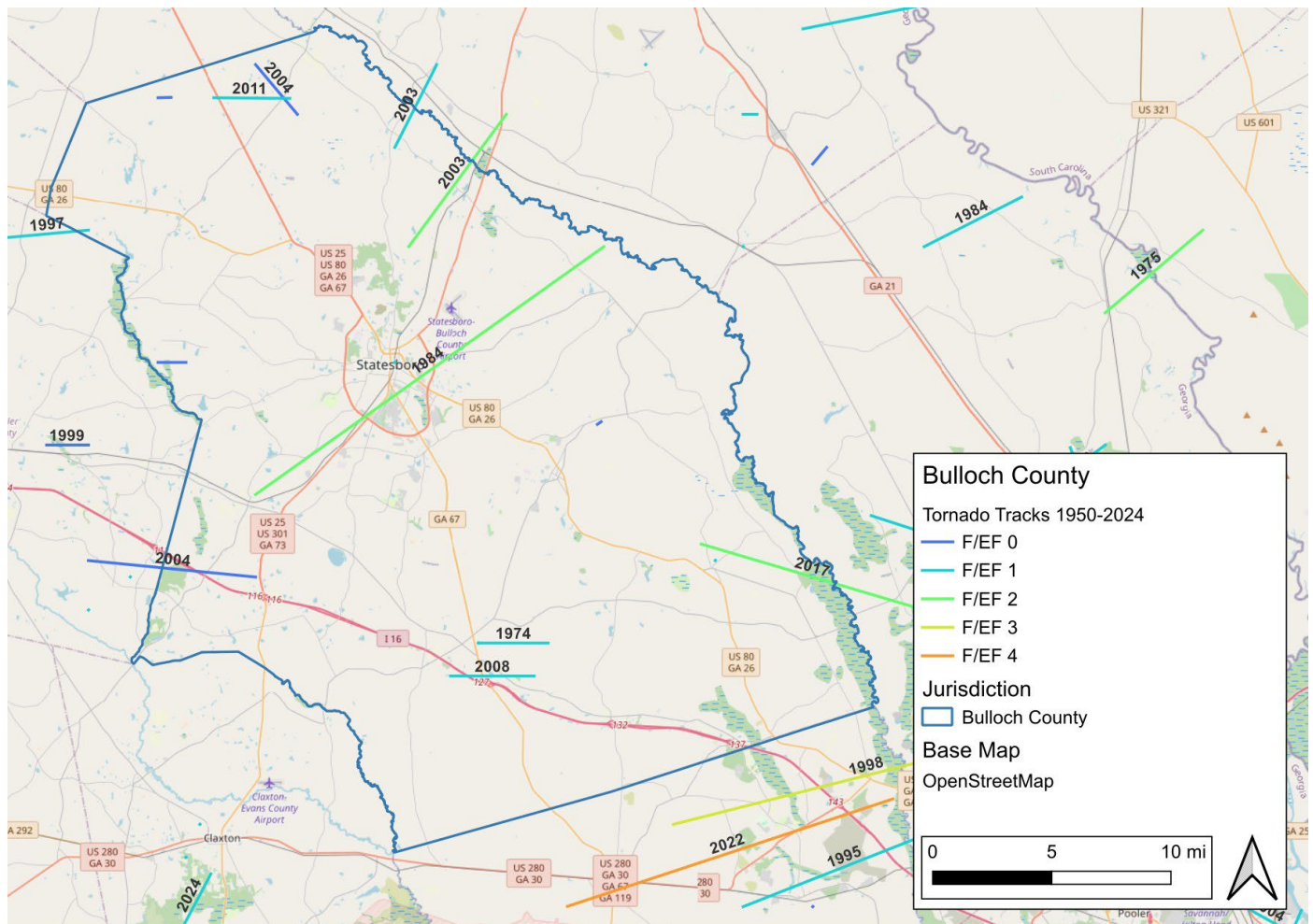
The tornado then continued across the Ogeechee River into Effingham County.

June 14, 2023, Unincorporated Bulloch County, Tornado—A strong mid-level shortwave rounding the base of a parent low centered across the Great Lakes region encountered an environment displaying a warm and moist airmass, leading to thunderstorm development across the Southeast United States. Thunderstorms congealed into clusters with bowing segments, eventually sweeping through the region within an environment displaying unusually strong mid-level flow, moderate to high levels of instability, strong downdraft convective available potential energy (DCAPE), and low-level backing winds supporting high levels of 0-3 KM storm relative helicity. Severe thunderstorms developed as a result, producing straight-line wind damage and a few tornadoes across southeast Georgia during late afternoon into early evening hours. A National Weather Service Storm Survey Team confirmed an EF-0 tornado with an estimated maximum wind speed of 80 mph northeast of Brooklet, Georgia in Bulloch County occurring from 608 PM to 609 PM. The brief tornado started just south of the Brooklet-Leefield Road and Clito Road intersection in a farm field along a thin line of trees where several hardwood trees were uprooted. The tornado then traveled across the field to a pine plantation where it uprooted and snapped nearly a third of the pine trees. A drone flight confirmed a distinctive convergent pattern in the trees. The tornado then quickly lifted once it entered back into the adjacent farm field.

Several of Bulloch County's most significant past tornadoes are mapped in the figure below along with jurisdictional boundaries.



Figure 3-18. Historical Tornado Tracks, Bulloch County



Probability of Future Events

Probability of future occurrence was calculated based on past occurrences and was assumed to be uniform across the county. Bulloch County and its participating jurisdictions can expect a tornado with a probability of 36% per year, or 0.36 tornadoes per year. The probability of a tornado happening in the planning area is likely.

Table 3-37. Probability of Future Events, Tornado

Probability of Future Events, Tornado	
Total Recorded Events	9
Total Years	25
Yearly Probability	36% / 0.36 events

Note: Bulloch County and its participating jurisdictions can expect a tornado event with a 36% probability each year. This number was derived by dividing the number of recorded events by the year range used.

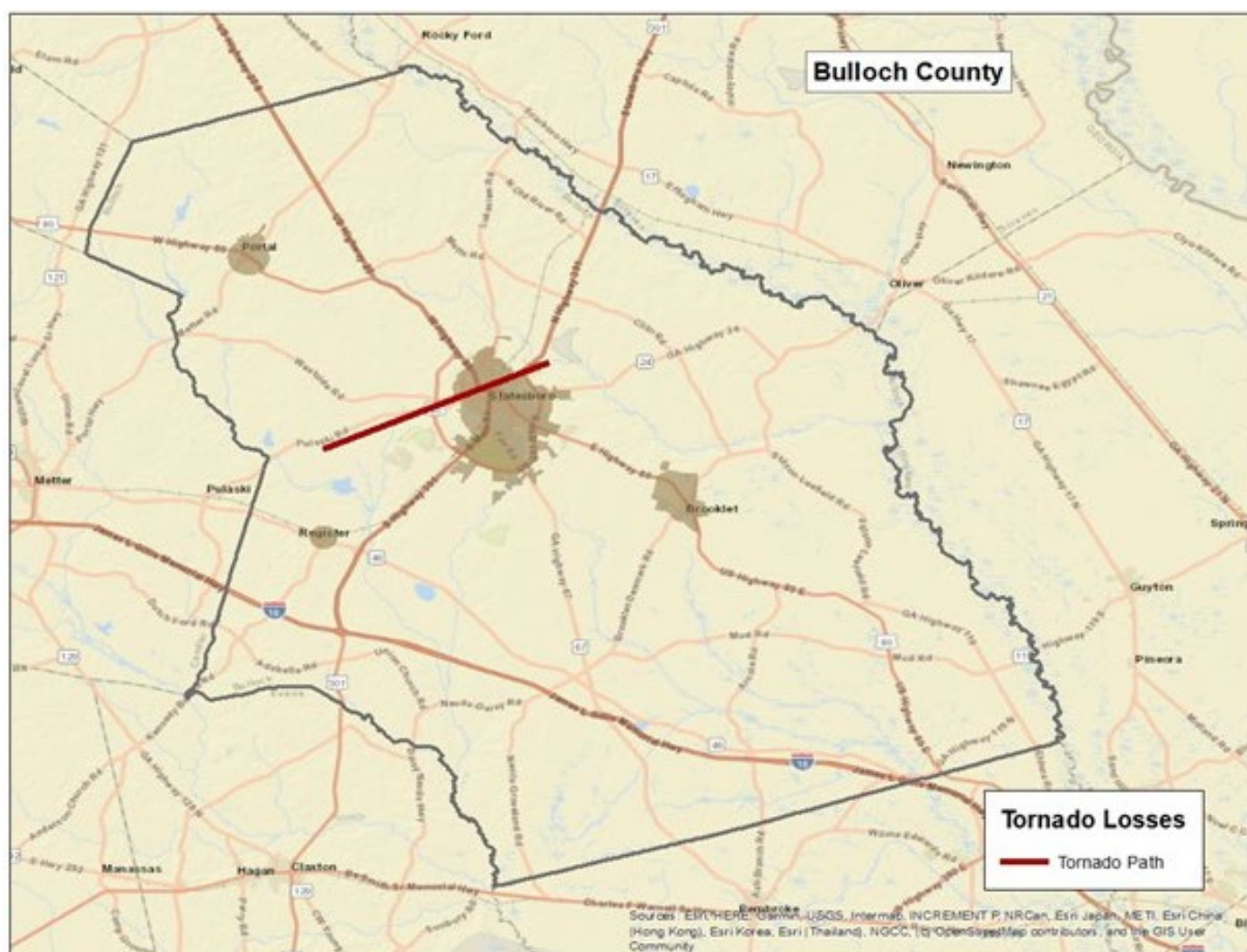


Calculating future probability is not the only predictor of future occurrences. The qualitative chance of a tornado impacting the planning area is likely.

3.9.4 Vulnerability & Impact

The 2025 Hazus Risk Assessment Analysis provided insight into a hypothetical EF-3 tornado scenario that crosses through parts of Statesboro and a portion of the unincorporated county, as seen in the map below. Bulloch County has never experienced an F3/EF3 tornado. The selected widths were modeled after a recreation of the Fujita-Scale guidelines based on conceptual wind speeds, path widths, and path lengths. There is no guarantee that every tornado will fit exactly into one of these categories. The table following the map depicts tornado path widths and expected damage. The Hazus analysis is available in Appendix H for studies and future reference if probabilistic tornadic strength increases in the region.

Figure 3-19. Hypothetical EF3 Tornado Path in Bulloch County



Source: Hazus Tornado Risk Analysis, 2025



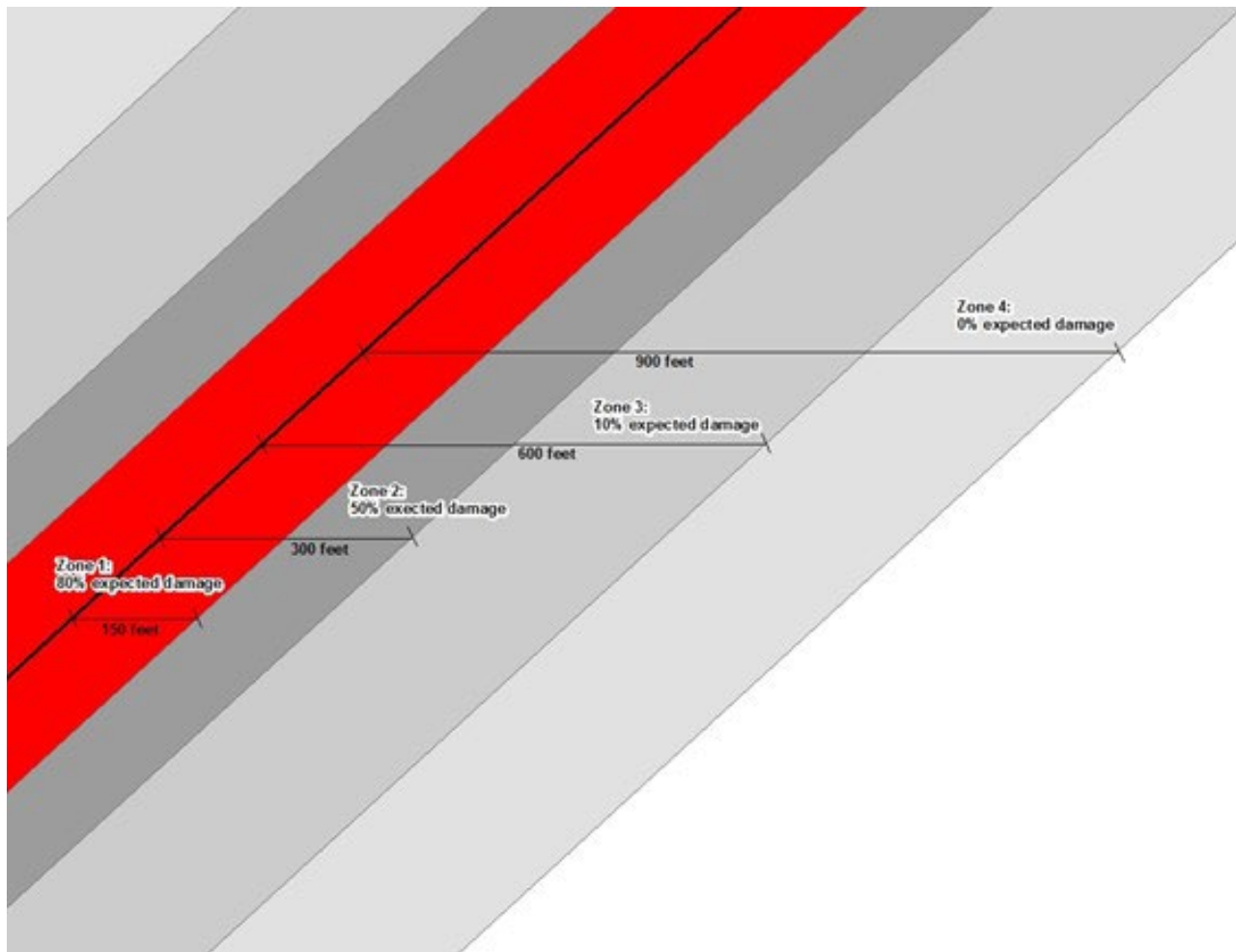
Table 3-38. Tornado Path Widths and Damage Curves

Enhanced Fujita Scale	Path Width (feet)	Maximum Expected Damage
EF5	2,400	100%
EF4	1,800	100%
EF3	1,200	80%
EF2	600	50%
EF1	300	10%
EF0	300	0%

Source: Hazus Tornado Risk Analysis, 2025

Within any given tornado path there are degrees of damage. The most intense damage occurs within the center of the damage path, with decreasing amounts of damage away from the center. After the hypothetical path is digitized on a map, the process is modeled in GIS by adding buffers (damage zones) around the tornado path. The following figure describes the zone analysis.

Figure 3-20. EF Scale Tornado Zones



Source: Hazus Tornado Risk Analysis, 2025



Major damage is estimated within 150 feet of the tornado path. The outer buffer is 900 feet from the tornado path, within which buildings will not experience any damage.

The following table summarizes the potential negative consequences of tornado.

Table 3-39. Consequence Analysis, Tornado

Category	Consequences
Public	Injuries; fatalities
Responders	Injuries; fatalities; potential impacts to response capabilities due to storm impacts
Continuity of Operations (including Continued Delivery of Services)	Potential impacts to continuity of operations due to storm impacts; delays in providing services
Property, Facilities, and Infrastructure	The weakest tornadoes, EF0, can cause minor roof damage, while strong tornadoes can destroy frame buildings and even badly damage steel reinforced concrete structures. Buildings are vulnerable to direct impact from tornadoes and also from wind borne debris. Mobile homes are particularly susceptible to damage during tornadoes.
Environment	Hazardous materials releases, litter, debris.
Economic Condition of the Jurisdiction	Contingent on tornado's path; can severely impact/destroy critical infrastructure and other economic drivers.
Public Confidence in the Jurisdiction's Governance	Public confidence in the jurisdiction's governance may be influenced by severe tornado events if response and recovery are not timely and effective.

People

People and populations exposed to the elements are most vulnerable to tornadoes. The availability of sheltered locations, such as basements, buildings constructed using tornado-resistant materials and methods, and public storm shelters, all reduce the exposure of the population. Mobile homes and their occupants have a disproportionate risk to tornado damage. According to the 2024 American Community Survey (ACS) 5-Year Estimates, 4,307 occupied housing units (14%) in Bulloch County are classified as "mobile homes or other types of housing." Using the 2024 ACS persons per household estimate of 2.48, the population at risk due to their housing type was estimated at 10,681 residents. Individuals who work and play outdoors may also face increased risk.

Since 2001, the NOAA/NCEI database records no fatalities and seven injuries attributed to tornadoes in Bulloch County.

Property

Since tornadoes threaten the entire planning area equally, all municipal structures are considered exposed and vulnerable. The most recent Hazus analysis done by the Coastal Regional Commission (2025) estimated that approximately 850 buildings could be damaged, with estimated building losses of \$27 million. The building losses are an estimate of building replacement costs multiplied by the percentages of damage. The overlay was performed against parcels provided by Bulloch County that were joined with Assessor records showing estimated property replacement costs. The Assessor records often do not distinguish parcels by occupancy class if the parcels are not taxable and thus the number of buildings and replacement costs may be underestimated. The results of the analysis are depicted in the table below.



Table 3-40. Estimated Building Losses by Occupancy Type

Occupancy Classification	Buildings Damaged	Building Losses
Commercial	107	\$5,081,906
Industrial	38	\$705,504
Residential	705	\$21,413,640
Total	850	\$27,201,050

Source: Hazus Tornado Risk Analysis, 2025

General damages to property are both direct (what the tornado physically destroys) and indirect, which focuses on additional costs, damages, and losses attributed to secondary hazards spawned by the tornado or due to the damages caused by the tornado. Depending on the size of the tornado and its path, a tornado is capable of damaging and eventually destroying almost anything. Construction practices and building codes can help maximize the resistance of the structures to damage.

Secondary impacts of tornado damage often result from damage to infrastructure. Downed power and communications transmission lines, coupled with disruptions to transportation, create difficulties in reporting and responding to emergencies. These indirect impacts of a tornado put tremendous strain on a community. In the immediate aftermath, the focus is on emergency services and the restoration of essential services and utilities.

Since 2001, damaging tornadoes in the county are directly responsible for \$415,000 worth of damage to property according to NOAA/NCEI data. This equates to an annualized loss of \$16,600.

According to the most recent Hazus analysis for Bulloch County, there were six essential facilities located in the tornado path—one emergency operations center, two schools, and three police stations. The table below outlines the specific facility and the amount of damage under the scenario.

Table 3-41. Estimated Essential Facility Damaged

Facility	Amount of Damage
Julia P. Bryant Elementary School	Major Damage
Bulloch County Correctional Institution	Major Damage
Bulloch County Sheriff's Office	Major Damage
Bulloch County EMA	Major Damage
Bulloch Academy	Minor Damage
Bulloch County Correctional Institution	Minor Damage

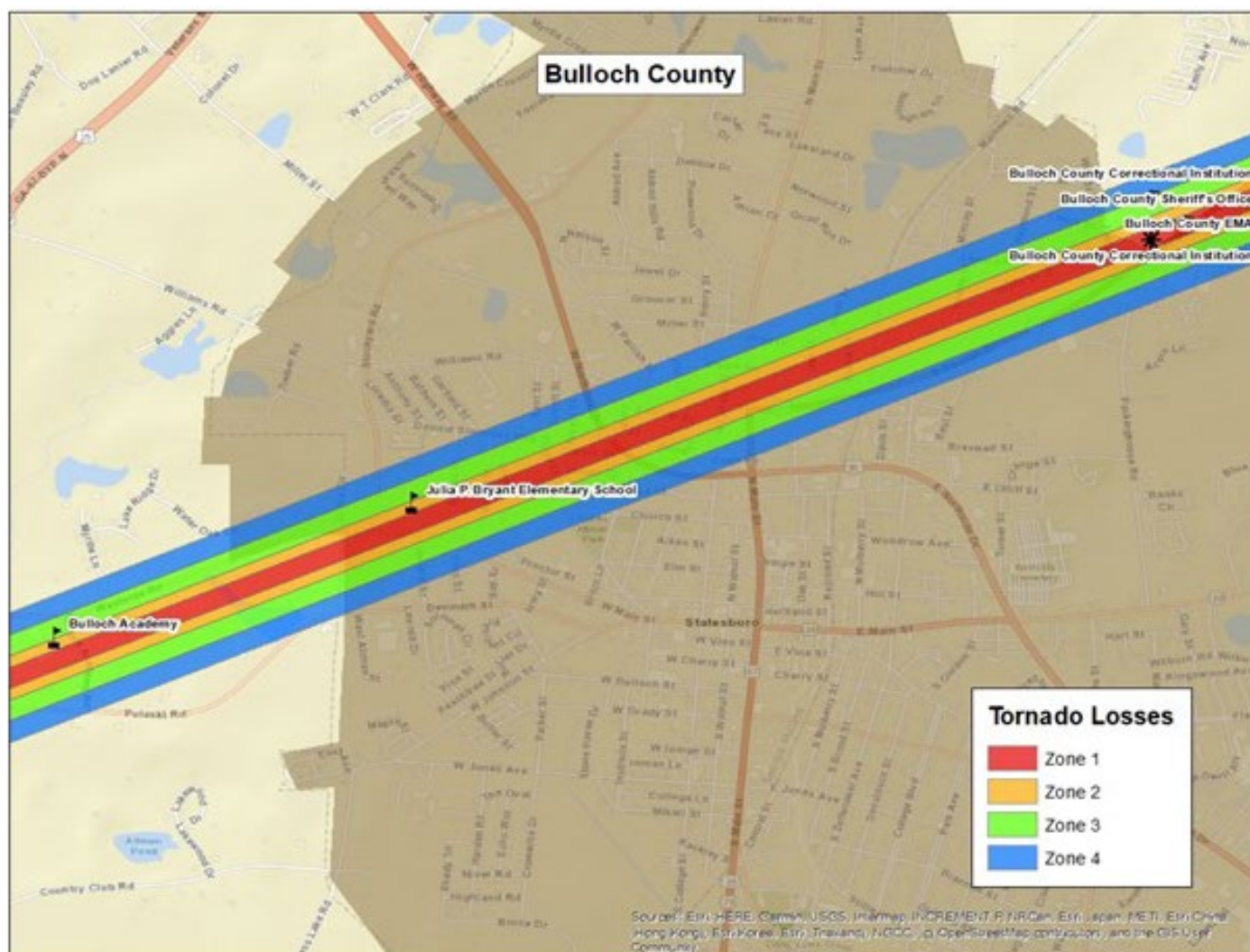
Source: Hazus Tornado Risk Analysis, 2025

According to the Georgia Department of Education, Julia P. Bryant Elementary School's enrollment was approximately 738 students and Bulloch Academy's enrollment was approximately 599 students as of March 2025. Depending on the time of day, a tornado strike as depicted in this scenario could result in significant injury and loss of life. In addition, arrangements would have to be made for the continued education of the students in another location.

The location of the damaged Essential Facility is mapped in the figure below.



Figure 3-21. Modeled Essential Facility Damage in Bulloch County



Source: Hazus Tornado Risk Analysis, 2025

Environment

Tornadoes can cause massive damage to the natural environment, uprooting trees and other debris within the tornado's path. This is part of a natural process, however, and not of concern with the possible exception of hazardous materials releases or pollution/litter/debris spread by tornado winds.

Land Use & Development Trends

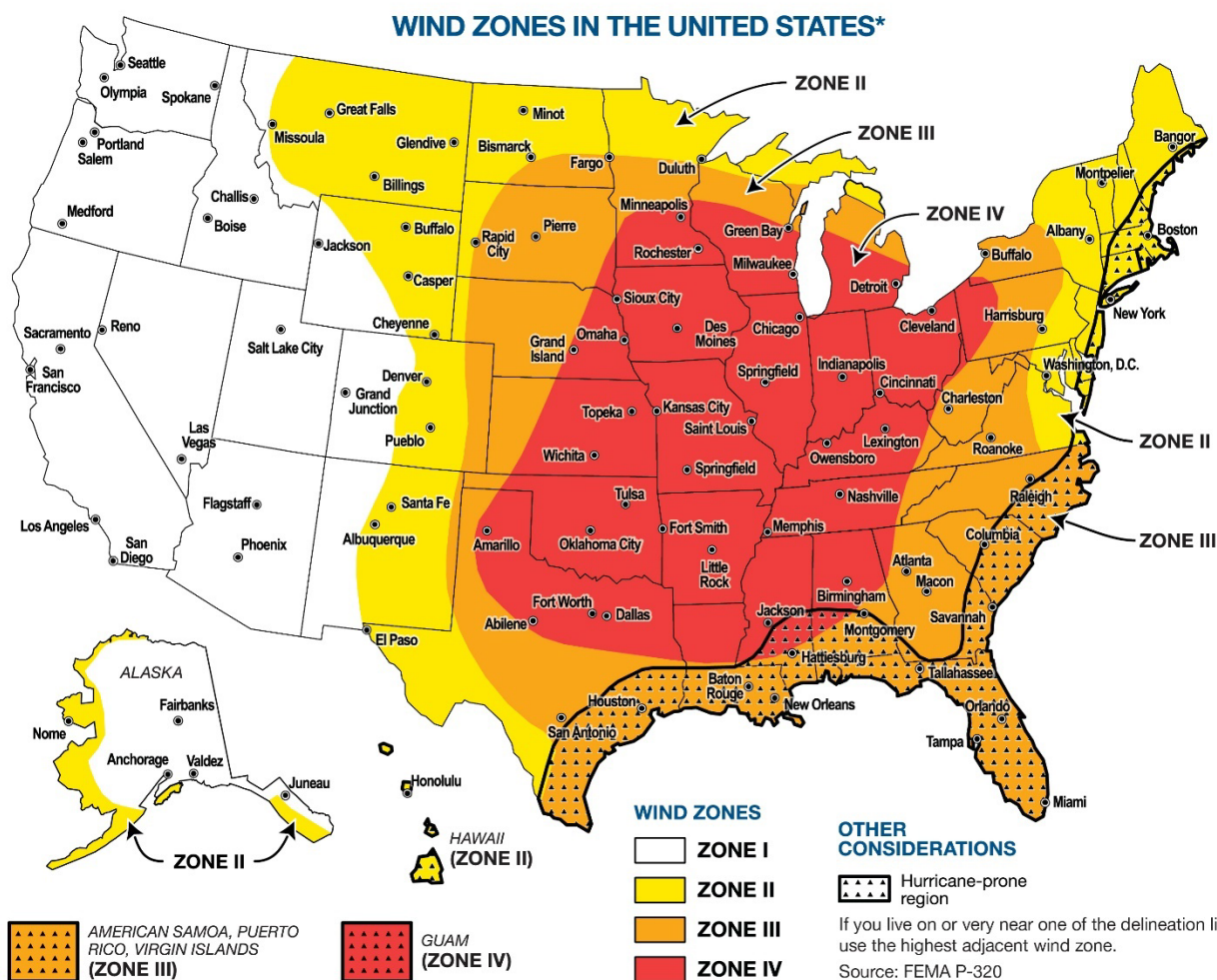
Aside from an overall increase in exposure due to development throughout the planning area, there have been no significant changes in development in the planning area that would affect vulnerability to tornado in Bulloch County.

Bulloch County is located in Wind Zone III (as seen on the map below), which is associated with 200 mph wind speeds. Existing building codes do not require structures to meet or exceed design wind speeds of 200 miles per hour. As a result, any mitigation steps taken related to tornadoes should consider retrofitting



and should be undertaken on a countywide basis and include the city of Statesboro and towns of Brooklet, Portal, and Register.

Figure 3-22. Wind Zones in the United States



Source: FEMA, 2010

Multi-Jurisdictional Concerns

Tornadoes can occur anywhere in the county. Tornadoes typically impact a small area, but damage may be extensive. Tornado locations are completely random, meaning risk to tornado isn't increased in one area of the county versus another. All of Bulloch County is uniformly exposed to this hazard.

In Statesboro, the Georgia Southern University campus has begun wind retrofit projects (modifications to the elements of a building to reduce or eliminate the risk of future wind damage and to protect inhabitants).

Repetitive Loss Structures

Not applicable.



3.9.5 Priority Risk Index

The following table summarizes tornado hazard risk by jurisdiction. Tornado hazard risk does not vary substantially by jurisdiction.

Table 3-42. Tornado Risk Ranking Summary

Jurisdiction	Probability	Impact	Spatial Extent	Warning Time	Duration	Score	Priority
Bulloch County	3	2	2	4	1	2.4	M
Brooklet	3	2	2	4	1	2.4	M
Portal	3	2	2	4	1	2.4	M
Register	3	2	2	4	1	2.4	M
Statesboro	3	2	2	4	1	2.4	M



3.10 TROPICAL CYCLONE (HURRICANE, TROPICAL STORM, & HIGH WIND)

3.10.1 Hazard Description

Hurricanes and tropical storms are classified as cyclones and defined as any closed circulation developing around a low-pressure center in which the winds rotate counter-clockwise in the Northern Hemisphere (or clockwise in the Southern Hemisphere) and whose diameter averages 10 to 30 miles across. A tropical cyclone refers to any such circulation that develops over tropical waters. Tropical cyclones act as a “safety-valve,” limiting the continued build-up of heat and energy in tropical regions by maintaining the atmospheric heat and moisture balance between the tropics and the pole-ward latitudes. The primary damaging forces associated with these storms are high-level sustained winds, heavy precipitation, and tornadoes.

The key energy source for a tropical cyclone is the release of latent heat from the condensation of warm water. Their formation requires a low-pressure disturbance, warm sea surface temperature, rotational force from the spinning of the earth, and the absence of wind shear in the lowest 50,000 feet of the atmosphere. The majority of hurricanes and tropical storms form in the Atlantic Ocean, Caribbean Sea, and Gulf of Mexico during the official Atlantic hurricane season, which encompasses the months of June through November. The peak of the Atlantic hurricane season is in early to mid-September and the average number of storms that reach hurricane intensity per year in the Atlantic basin is about six.

While hurricanes pose the greatest threat to life and property, tropical storms and depressions also can be devastating. A tropical disturbance can grow to a more intense stage through an increase in sustained wind speeds. The progression of a tropical disturbance is described below.

- **Tropical Depression:** A tropical cyclone with maximum sustained winds of 38 mph (33 knots) or less.
- **Tropical Storm:** A tropical cyclone with maximum sustained winds of 39 to 73 mph (34 to 63 knots).
- **Hurricane:** A tropical cyclone with maximum sustained winds of 74 mph (64 knots) or higher. In the western North Pacific, hurricanes are called typhoons; similar storms in the Indian Ocean and South Pacific Ocean are called cyclones.
- **Major Hurricane:** A tropical cyclone with maximum sustained winds of 111 mph (96 knots) or higher, corresponding to a Category 3, 4, or 5 on the Saffir-Simpson Hurricane Wind Scale.

As an incipient hurricane develops, barometric pressure (measured in millibars or inches) at its center falls and winds increase. If the atmospheric and oceanic conditions are favorable, it can intensify into a tropical depression. When maximum sustained winds reach or exceed 39 miles per hour, the system is designated a tropical storm, given a name, and is monitored by the National Hurricane Center in Miami, Florida. When sustained winds reach or exceed 74 miles per hour the storm is deemed a hurricane. Hurricanes are given a classification based on the Saffir-Simpson Scale; this scale is reproduced in the table in the *Location & Extent* section below.

Damage during hurricanes may also result from inland flooding from associated heavy rainfall.

Similar to hurricanes, nor'easters are ocean storms capable of causing substantial damage to coastal areas in the Eastern United States due to their strong winds and heavy surf. Nor'easters are named for the



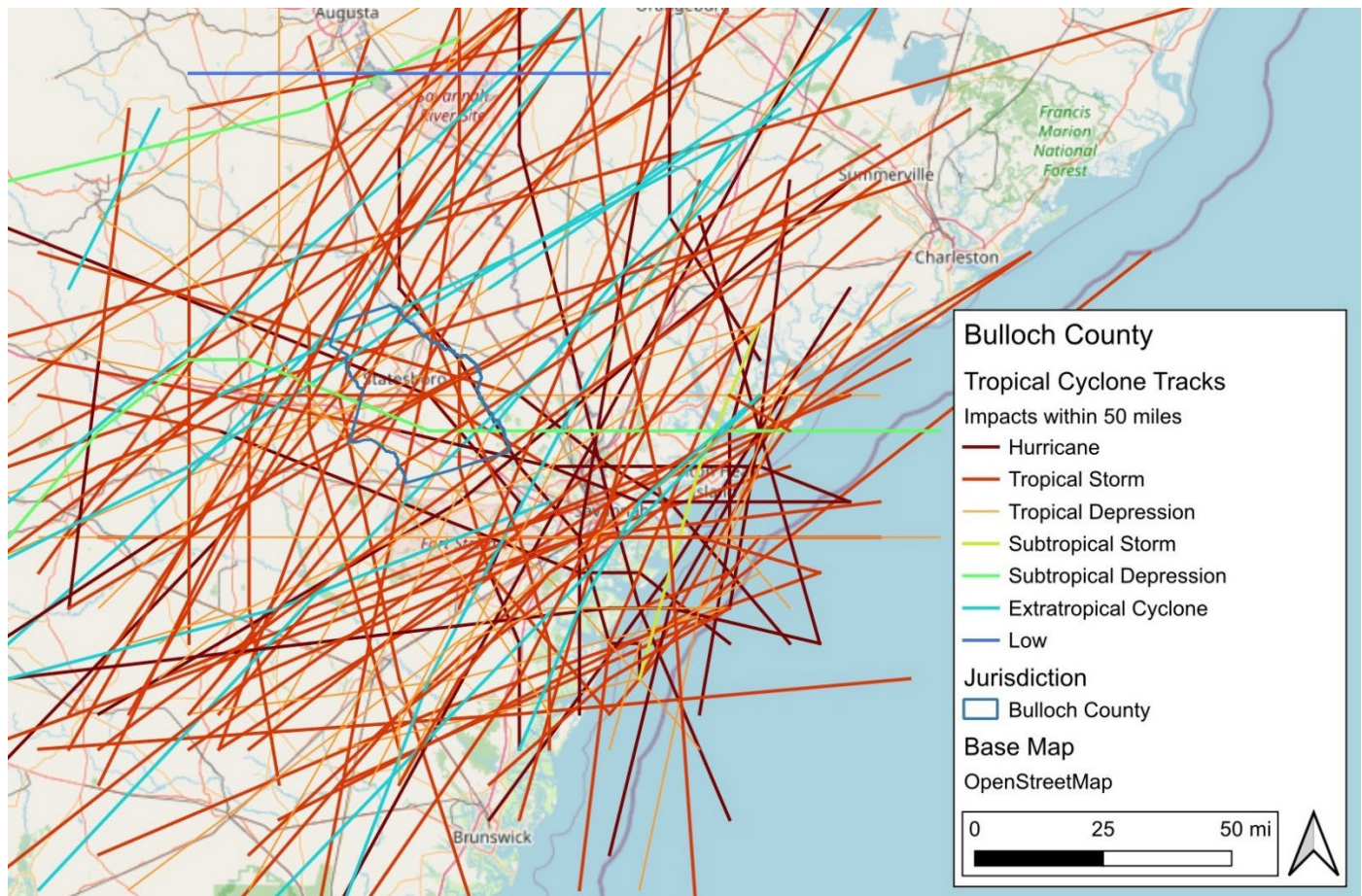
winds that blow in from the northeast and drive the storm up the East Coast along the Gulf Stream. They are caused by the interaction of the jet stream with horizontal temperature gradients and generally occur during the fall and winter months when moisture and cold air are plentiful.

Nor'easters are known for dumping heavy amounts of rain and snow, producing hurricane-force winds, and creating high surf that causes severe beach erosion and coastal flooding. There are two main components to a nor'easter: (1) a Gulf Stream low-pressure system (counter-clockwise winds) generated off the southeastern U.S. coast, gathering warm air and moisture from the Atlantic, and pulled up the East Coast by strong northeasterly winds at the leading edge of the storm; and (2) an Arctic high-pressure system (clockwise winds) which meets the low-pressure system with cold, arctic air blowing down from Canada. When the two systems collide, the moisture and cold air produce a mix of precipitation and can produce dangerously high winds and heavy seas. As the low-pressure system deepens, the intensity of the winds and waves increases and can cause serious damage to coastal areas and areas just inland of the coast as the storm moves northeast.

3.10.2 Location & Extent

Hurricanes, tropical storms, and high wind can occur anywhere within the Bulloch County planning area. While coastal areas are most vulnerable to hurricanes, their wind and rain impacts can be inland. The following figure depicts past tropical cyclone tracks within 50 miles of Bulloch County, showing the geographical range and frequency with which tropical cyclones can impact Bulloch County.

Figure 3-23. Countywide Tropical Cyclone within 50 Miles, Bulloch County



One of the first scales to estimate wind speeds and the effects was created by Britain's Admiral Sir Francis Beaufort (1774-1857). He developed the scale in 1805 to help sailors estimate the winds via visual observations. The scale starts with 0 and goes to a force of 12. The Beaufort scale is still used today to estimate wind strengths, including during tropical cyclones.³⁴

³⁴ <https://www.weather.gov/mfl/beaufort>. Retrieved December 17, 2025.



Figure 3-24. Beaufort Scale, Tropical Cyclone

Beaufort number	Wind Speed (mph)	Seaman's term		Effects on Land
0	Under 1	Calm		Calm; smoke rises vertically.
1	1-3	Light Air		Smoke drift indicates wind direction; vanes do not move.
2	4-7	Light Breeze		Wind felt on face; leaves rustle; vanes begin to move.
3	8-12	Gentle Breeze		Leaves, small twigs in constant motion; light flags extended.
4	13-18	Moderate Breeze		Dust, leaves and loose paper raised up; small branches move.
5	19-24	Fresh Breeze		Small trees begin to sway.
6	25-31	Strong Breeze		Large branches of trees in motion; whistling heard in wires.
7	32-38	Moderate Gale		Whole trees in motion; resistance felt in walking against the wind.
8	39-46	Fresh Gale		Twigs and small branches broken off trees.
9	47-54	Strong Gale		Slight structural damage occurs; slate blown from roofs.
10	55-63	Whole Gale		Seldom experienced on land; trees broken; structural damage occurs.
11	64-72	Storm		Very rarely experienced on land; usually with widespread damage.
12	73 or higher	Hurricane Force		Violence and destruction.

Source: NOAA National Weather Service, 2026

As an incipient hurricane develops, barometric pressure (measured in millibars or inches) at its center falls and winds increase. If the atmospheric and oceanic conditions are favorable, it can intensify into a tropical depression. When maximum sustained winds reach or exceed 39 miles per hour, the system is designated a tropical storm, given a name, and is closely monitored by the National Hurricane Center in Miami, Florida. When sustained winds reach or exceed 74 miles per hour the storm is deemed a hurricane. Hurricane intensity is further classified by the Saffir-Simpson Scale, which rates hurricane intensity on a scale of 1 to 5, with 5 being the most intense.

**Table 3-43. Saffir-Simpson Scale**

Category	Maximum Sustained Wind Speed (MPH)	Types of Damage
1	74–95	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	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	111–129	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	130–156	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	157+	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.

Source: National Hurricane Center, 2026

The Saffir-Simpson Scale categorizes hurricane intensity linearly based upon maximum sustained winds and barometric pressure, which are combined to estimate potential damage. Categories 3, 4, and 5 are classified as “major” hurricanes and, while hurricanes within this range comprise only 20% of total tropical cyclone landfalls, they account for over 70% of the damage in the United States. The following table describes the damage that could be expected for each category of hurricane. Damage during hurricanes may also result from spawned tornadoes, storm surge, and inland flooding associated with heavy rainfall that usually accompanies these storms.



Table 3-44. Hurricane Damage Classifications

Storm Category	Damage Level	Description of Damages	Photo Example
1	MINIMAL	No real damage to building structures. Damage primarily to unanchored mobile homes, shrubbery, and trees. Also, some coastal flooding and minor pier damage.	
2	MODERATE	Some roofing material, door, and window damage. Considerable damage to vegetation, mobile homes, etc. Flooding damages piers and small craft in unprotected moorings may break their moorings.	
3	EXTENSIVE	Some structural damage to small residences and utility buildings, with a minor amount of curtainwall failures. Mobile homes are destroyed. Flooding near the coast destroys smaller structures, with larger structures damaged by floating debris. Terrain may be flooded well inland.	
4	EXTREME	More extensive curtainwall failures with some complete roof structure failure on small residences. Major erosion of beach areas. Terrain may be flooded well inland.	
5	CATASTROPHIC	Complete roof failure on many residences and industrial buildings. Some complete building failures with small utility buildings blown over or away. Flooding causes major damage to lower floors of all structures near the shoreline. Massive evacuation of residential areas may be required.	

Source: National Hurricane Center; Federal Emergency Management Agency

The Saffir-Simpson scale provides a measure of extent of a hurricane. The county is susceptible to the full force of every category of hurricane.

3.10.3 Historical Occurrences

The National Hurricane Center (NHC) has accumulated records of the tropical cyclones that have affected the State of Georgia since 1851. The NWS and NOAA's Atlantic Oceanographic and Meteorological Laboratory (AOML) also have records of tropical cyclone activity affecting the Georgia Coast. The table below presents the total number of hurricanes, by intensity, that have affected any portion of Georgia from 1851 through the present.

Table 3-45. Hurricanes by Intensity, State of Georgia

Hurricane Intensity	Number of Hurricanes
Category 1	20
Category 2	6
Category 3	2
Category 4	1
Category 5	0

Source: NOAA/National Hurricane Center



The following table details the more notable events in Georgia's tropical cyclone history over the last 45 years. The table does not include all events affecting the state, but it highlights those that had a substantial impact. Damage values are given in historic dollars.

Table 3-46. 45-Year Cyclone History, Notable Events, Georgia

Year	Hurricane	Area Affected	Comments
1959	Gracie	Coastal Georgia	\$5M in damages
1964*	Dora*	Coastal Georgia	FEMA DR177; \$8M in damages
1979	David	Coastal Georgia	2 deaths
1990*	Klaus/Marco	Central Georgia	FEMA DR880; \$6M in damages
1994*	Alberto	Statewide	FEMA DR1033; extreme flooding in Flint and Ocmulgee Rivers; >\$400M in damages
1995*	Opal	Western Georgia	FEMA DR1071; widespread wind damages
2004*	Frances, Ivan, and Jeanne	Statewide	FEMA DR1554 and DR1560; wind and rain damage in 107 counties
2005*	Dennis	Statewide	Wind and rain damage; flooding
2016*	Matthew	Coastal Georgia	FEMA DR4284; wind, rain, and coastal flooding in 20 Southeast Georgia counties; \$175M in damages
2017*	Irma	Statewide	FEMA DR4338; wind, rain and coastal flooding affecting all 159 Georgia counties; 1.5M people without power; 5 fatalities; estimated \$150M in uninsured damages
2018*	Michael	Southwest, Central and East Georgia	FEMA DR4400; wind and rain in Southwest and Central Georgia; 3 fatalities; \$350M in uninsured losses; \$2.3-\$2.8B in agricultural and timber losses
2019	Dorian	Coastal Georgia	EM 3482; emergency declaration only due to evacuations and other preparedness efforts related to the approaching hurricane and potential impacts
2020*	Zeta	Northwest and Northeast Georgia	FEMA 4579; wind/rain in Northwest and Northeast Georgia; sustained power outages throughout North Georgia; >1 million without power; 3 fatalities; \$21 million in estimated damages to public infrastructure
2023	Idalia	South and Southeast Georgia	FEMA 4738; wind/rain in South and Southeast Georgia; sustained power outages; >200,000 without power; 1 fatality, 8 injuries; estimated >\$41 million in public infrastructure damages
2024*	Helene	South Central Georgia	Wind/rain in South Central Georgia, especially along I-75 corridor; widespread power outages, structural damage, and severe tree damage; 37 fatalities; estimated \$6.46 billion in damage to Georgia's agriculture and forestry industries

Source: NOAA/SHELDUS, *FEMA Presidential Disaster Declarations



It should be noted that the hazard event risk analyses consider the recurrence interval of the hazards. Because the historical record of tropical cyclonic events is limited and subject to seasonality, a true recurrence interval is unknown and changes yearly (as demonstrated by NWS forecasting). However, using various sources for Georgia’s tropical cyclone history (NOAA, SHELDUS), one can estimate that over a 200-year period, around 36 tropical cyclones affected the state (not necessarily a direct hit). This translates to about an 18% chance of a tropical cyclone affecting Georgia per year or approximately one storm every 5.5 years.

Specific to Bulloch County, the following table presents all of the tropical storms, cyclones, and high wind events listed in the Storm Events Database that have made landfall in Bulloch County from 2001 through the present, for a total of 13 events. These storms have been classified under “High Wind,” “Hurricane,” “Strong Wind,” “Tropical Depression,” and “Tropical Storm” in the database. Note that events occurring on the same day were combined into a single entry when they were part of the same storm system.

Table 3-47. Tropical Cyclone Events, Bulloch County

Location	Date	Storm Type	Storm Name	Injuries/Deaths	Property Damage
Bulloch County	09/06/2004	High Wind	Frances	0/0	N/A
Bulloch County	09/27/2004	Tropical Storm	Jeanne	0/0	N/A
Bulloch County	02/27/2005	High Wind	N/A	0/0	N/A
Bulloch County	11/21/2005	High Wind	N/A	0/0	N/A
Bulloch County	06/12/2006	Tropical Storm	Alberto	0/0	N/A
Bulloch County	03/08/2008	High Wind	N/A	1/0	\$9,000
Bulloch County	05/29/2012	Tropical Depression	Beryl	0/0	\$1,500
Bulloch County	10/08/2016	Tropical Storm	Matthew	2/2	N/A
Bulloch County	09/11/2017	Tropical Depression	Irma	0/0	\$900,000
Bulloch County	09/29/2022	Tropical Depression	Ian	0/0	N/A
Bulloch County	04/30/2023	Strong Wind	N/A	0/0	N/A
Bulloch County	01/09/2024	Strong Wind	N/A	0/0	N/A
Bulloch County	09/26/2024	Tropical Storm	Helene	0/0	N/A

Source: NOAA/NCEI Storm Events Database, 2001-2025

Details pertaining to some of the events listed above are explained in the NOAA/NCEI narratives below:

September 27, 2004, Bulloch County, Tropical Storm—Tropical Storm Jeanne tracked well inland across Georgia but the strongest winds at the time were along the coast. The maximum wind gust associated with the storm was 44 mph at the Savannah airport. Non-tornadic damage in southeast Georgia was limited to isolated trees and limbs down on power lines.

February 27, 2005, Bulloch County, High Wind—A deep low pressure system moved along the southeast coast during the overnight hours on the 27th into the 28th. As heavy rainfall exited the area, strong pressure rises brought winds aloft to the surface. Numerous trees and power lines were knocked down across Southeast Georgia, some which were blocking highways.

November 21, 2005, Bulloch County, High Wind—High winds between departing low pressure and high pressure building into the area caused wind damage across Southeast Georgia. Numerous trees and power lines were knocked down in and around Ellabell, Pembroke, Darien, Isle of Hope, Statesboro,



Wilmington Island, Hinesville, Savannah, Tybee Island, and Ludowici. Some of the trees and power lines fell across roads.

June 12, 2006, Bulloch County, Tropical Storm—Tropical Storm Alberto formed off the western tip of Cuba and moved north into the northeast Gulf of Mexico June 12th. Alberto made landfall in the Florida Big Bend on the 13th and the moved north into Southern Georgia. Tropical storm force winds affected the Georgia coast the afternoon and evening on the 13th into the morning of the 14th. Winds were as strong as 40 mph in many locations mainly near the coast. Rainfall totaled 3 to 5 inches across portions of southeast Georgia mainly along the Interstate 95 corridor with isolated rain totals near 7 inches. Rainbands produced 2 tornadoes including an F1 tornado in Savannah. Storm affects to the coast were minimal.

March 3, 2008, Bulloch County, High Wind—A rapidly strengthening area of low pressure tracked just to the northwest of the region early in the morning, dragging a strong cold front through southern South Carolina and southeast Georgia. Very strong winds resulted from rapid pressure rises behind the cold front as a strong area of high pressure began to build in behind the departing system. Several power outages and numerous trees were reported down across the county. A tree fell on a car injuring the occupant in Brooklet, Georgia.

May 29, 2012, Bulloch County, Tropical Depression—Beryl developed as a Subtropical Storm over the Atlantic Ocean well east of the North Coastal Georgia area. The cyclone eventually became a Tropical Storm and slowly moved to the southwest and finally made landfall along the northeast Florida coast. The system then weakened to a Tropical Depression and meandered about before slowly moving back to the northeast across coastal portions of Georgia and South Carolina. The system produced tropical storm force winds, rip currents, and areas of heavy rainfall across the region. Multiple trees reported down on Burkhalter Road and Westside Road.

October 8, 2016, Bulloch County, Tropical Storm—Matthew developed as a tropical storm just east of the Lesser Antilles on September 28th. It became a hurricane north of Venezuela and Colombia on September 29th before undergoing explosive intensification, eventually reaching Category 5 intensity on October 1st with a peak of 165-mph winds. Hurricane Matthew made landfall as a Category 4 over Haiti, then Cuba and the Bahamas before paralleling the coast of the southeastern United States into South Carolina. Matthew tracked parallel to the northern half of the Southeast Georgia coast as a Category 2 hurricane with 110-mph winds. Total rainfall was approximately 4.5-7 inches across western areas of Southeast Georgia and 8-17 inches closer to the coast. Storm surge went as high as 6-8 feet in some parts of the Georgia coast. A state of emergency was declared in Georgia and several other states. Over 250,000 customers were left without power in Georgia and many roads with blocked and impassable in the Brunswick and St. Simons Island areas. Three fatalities occurred in the state, including two in Bulloch County. A large tree fell on a house off of Gentilly Street during Hurricane Matthew. The home owner indicated that the home was severely damaged. An emergency manager reported a tree fell on a vehicle on Burkhalter Road during Hurricane Matthew, resulting in 1 fatality. An emergency manager reported 1 fatality during Hurricane Matthew due to a tree falling on a home near the intersection of Clay Road and Macedonia Road. A report via social media indicated the area around Interstate 16 and Nevils Grove Land Road had 16 large trees down during Hurricane Matthew. Power outages were also reported around the area.

September 11, 2017, Bulloch County, Tropical Depression—Irma first developed into a tropical storm on August 30th about 420 miles west of the Cabo Verde Islands and within 24 hours strengthened into a



hurricane. Irma continued to intensify and became a major hurricane over the eastern Atlantic on September 1st. Irma's 185 mph maximum sustained winds are tied for the second strongest maximum winds of all time in an Atlantic hurricane. Furthermore, Irma maintained Category 5 status for 3 consecutive days, which is the longest on record for an Atlantic hurricane.

Irma officially made landfall at Marco Island, FL at 3:35 pm September 10 as a Category 3 hurricane. Following landfall, Irma tracked to the north-northwest and eventually the northwest as it progressed up the western side of the Florida peninsula. Irma steadily weakened during this time and was downgraded to a tropical storm near the big bend of Florida at 8:00 am on September 11th. Through the rest of September 11th, Irma tracked to the northwest into southern Georgia and widespread impacts occurred across the Southeast. Despite the fact that the center of Irma tracked well to the west of the southeast Georgia and southeast South Carolina region, it still caused significant impacts due to heavy rainfall, strong winds, tornadoes, and storm surge. Feeder bands around Irma continuously moved onshore on September 11th and produced very heavy rainfall rates with rainfall totals generally ranging from 3 to 9 inches. This widespread heavy rain resulted in several reports of flash flooding with water entering homes and businesses. Wind damage produced numerous power outages across the region with some damage to structures and numerous downed trees.

Bulloch County Emergency Management reported multiple trees down across the county due to strong winds associated with Hurricane Irma. As many as 35 roads were blocked by fallen trees and at least 3 trees fell on residential structures near Statesboro. Approximately 10,000 power outages were reported across the county. The AWOS site near Statesboro (KTBR) measured a peak wind gust of 39 mph during the event. \$900,000 worth of reported damage occurred in Bulloch County.

September 29, 2022, Bulloch County, Tropical Depression—Tropical Depression Nine developed in the eastern Caribbean in the morning of Friday, September 23rd. The system steadily strengthened as it tracked to the northeast and became Hurricane Ian in the morning of Monday, September 26th. After making landfall and moving across western Cuba, Ian emerged into the eastern Gulf of Mexico and strengthened into a major hurricane. Ian then made landfall along the southwest Florida coast on Wednesday, September 28th and tracked northeastward across the Florida peninsula. Ian moved into the far western Atlantic as a tropical storm but quickly strengthened back to a hurricane. Ian then made landfall as a category 1 hurricane near Georgetown, SC at 2:05 pm on Friday, September 30th. Overall, Ian brought minor impacts to southeast Georgia, primarily in the form of gusty winds that produced minor wind damage mainly to trees. Bulloch County dispatch reported several trees were blown down across the county early in the morning on 9/30.

September 26, 2024, Bulloch County, Tropical Storm—Helene first developed into a tropical storm in the northwest Caribbean Sea in the late morning of September 24 and strengthened into a hurricane near the Yucatan peninsula about 24 hours later. Helene continued to strengthen and became a major hurricane as it moved to the north-northeast across the eastern Gulf of Mexico. Helene made landfall in the Big Bend region of Florida in the late evening hours of September 26 as a category 4 hurricane. Once inland, Helene moved quickly northward through the state of Georgia and produced widespread significant impacts across multiple states.

The very large wind field associated with Helene produced widespread tropical storm force winds across southeast Georgia during the evening and overnight hours of September 26-27. While the peak observed



wind gust was 79 mph at the Reidsville Municipal Airport (KRVJ), widespread power outages caused nearly all automated observation sites to stop reporting, so it is quite likely that the strongest winds that occurred were not recorded by any observation platforms. Post-storm analysis suggests that Helene likely produced a large swath of 80+ mph wind gusts across interior southeast Georgia. Regardless, wind impacts due to Helene were significant including widespread tree damage and power outages with several counties reporting near 100 percent power outages. There was even 1 fatality associated with the wind damage as a tree fell on a camper, killing the occupant in Liberty County.

Heavy rainfall occurred across much of southeast Georgia, with the highest rainfall amounts concentrated across Chatham County where 3-6 inches of rain were recorded. Elsewhere, rainfall amounts were mostly in the 2-4 inch range and no significant flooding or flash flooding was observed.

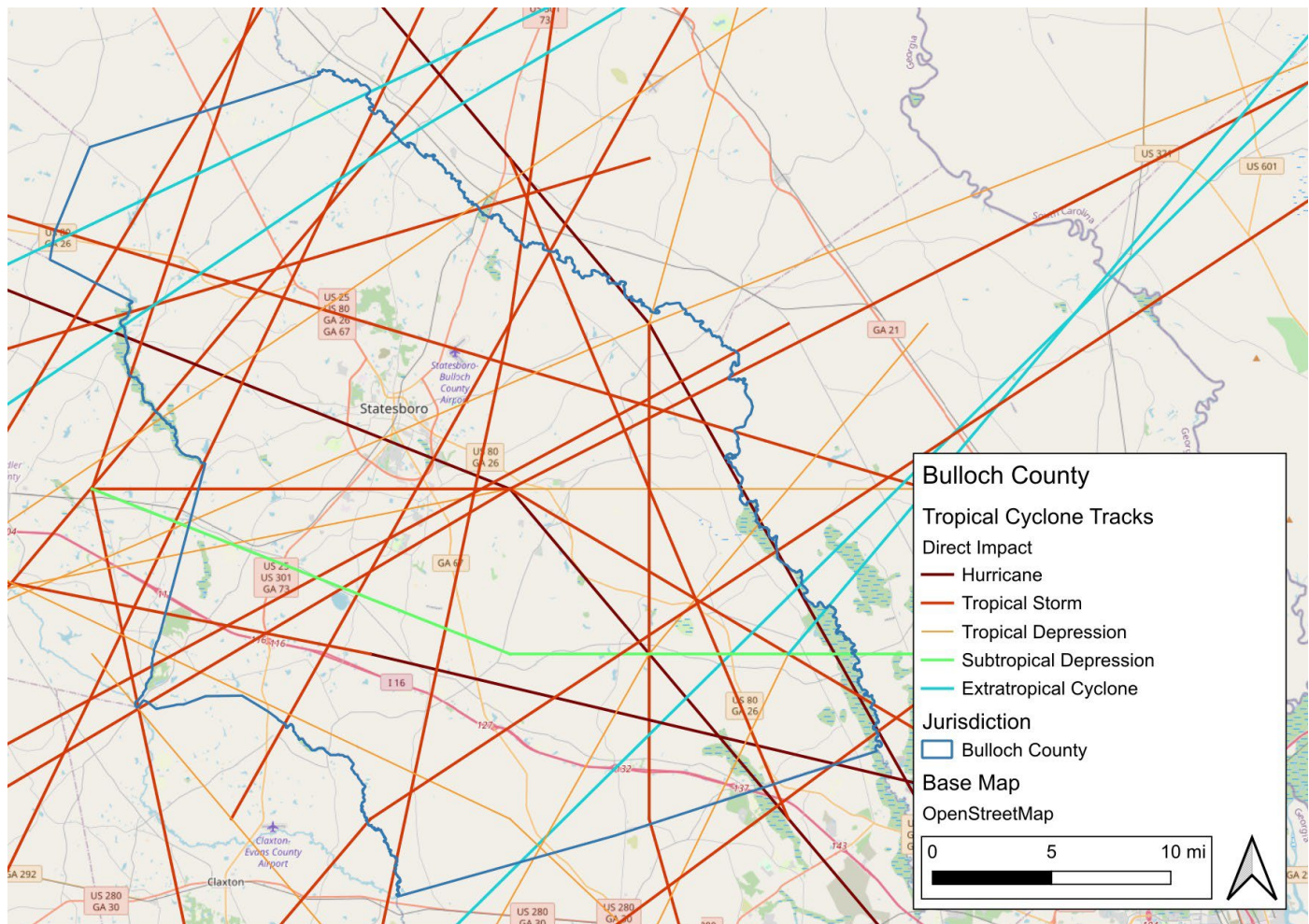
Helene did produce modest storm surge along the southeast Georgia coast, resulting in a peak observed tide level of 2.34 ft MHHW (9.84 ft MLLW) at the Fort Pulaski National Ocean Service (NOS) tide gage.

Strong winds associated with Helene produced widespread tree damage and power outages. Bulloch County Emergency Management reported over 130 homes were impacted by the storm, with 2 destroyed and 21 suffering major damage. Local broadcast media reported that a pecan tree farm near Odum sustained major damage with most of the trees uprooted. Also, Georgia Power Company reported that in Bulloch County 19,153 out of a total of 22,553 customers lost power during the event.

The following map depicts the tracks of past tropical cyclones that have directly impacted and moved through Bulloch County.



Figure 3-25. Countywide Tropical Cyclone Direct Impact, Bulloch County



Probability of Future Events

Bulloch County and its participating jurisdictions can expect a tropical cyclone or high wind event with a 28% probability per year, or 0.28 events per year. The probability of a tropical cyclone or high wind event happening in the planning area is **likely**.

Table 3-48. Probability of Future Events, Tropical Cyclone/High Wind

Probability of Future Events, Tropical Cyclone/High Wind	
Total Recorded Events	13
Total Years	25
Yearly Probability	52% / 0.52 events

Source: NOAA/NCEI Storm Events Database, 2001-2025

Note: Bulloch County and its participating jurisdictions can expect a hurricane wind event with a 52% probability each year. This number was derived by dividing the number of recorded events by the year range used. Calculating future probability is not the only predictor of future occurrences. The qualitative chance of a tropical storm/cyclone impacting the planning area is likely.



3.10.4 Vulnerability & Impact

Bulloch County and its participating jurisdictions have recorded 13 tropical cyclone and/or high wind events over the past 25 years. This equates to 0.52 tropical cyclones or high wind events per year. Communities closer to the coast are more susceptible to cyclone events as they are located closest to where hurricane wind will originate. Hurricane wind will be a secondary disaster from a hurricane landing ashore. The wind impacts will potentially be felt across the county, therefore, making the entire county vulnerable to a hurricane wind event.

Property at risk to hurricanes was estimated using general building stock information and 2020 Census data in Hazus. Hazus developed a probabilistic wind damage risk assessment and modeled a Category One storm with maximum winds of 94 mph. The vulnerability data displayed below is only for wind-related damages. Hurricanes may also cause substantial damages from heavy rains and subsequent flooding, which is addressed in Section 3.6 Flood.

The following table summarizes the potential negative consequences of hurricanes, tropical storms, and high wind events.

Table 3-49. Consequence Analysis, Tropical Cyclone

Category	Consequences
Public	Impacts include injury or death, loss of property, outbreak of diseases, mental trauma and loss of livelihoods. Power outages and flooding are likely to displace people from their homes. Water can become polluted such that if consumed, diseases and infection can be easily spread. Residential, commercial, and public buildings, as well as critical infrastructure such as transportation, water, energy, and communication systems may be damaged or destroyed, resulting in cascading impacts on the public.
Responders	Localized impact expected to limit damage to personnel in the inundation area at the time of the incident. Responders may also be residential victims of hazard impacts, which could limit their ability to work or respond to calls to duty.
Continuity of Operations (including Continued Delivery of Services)	Damage to facilities/personnel from flooding or wind may require temporary relocation of some operations. Operations may be interrupted by power outages. Disruption of roads and/or utilities may postpone delivery of some services. Regulatory waivers may be needed locally. Fulfillment of some contracts may be difficult. Impact may reduce deliveries.
Property, Facilities, and Infrastructure	Structural damage to buildings may occur; loss of glass windows and doors by high winds and debris; loss of roof coverings, partial wall collapses, and other damages requiring significant repairs are possible in a major (category 3 to 5) hurricane. Flooding from storm surge may also negatively impact facilities and infrastructure.
Environment	Hurricanes can devastate wooded ecosystems and remove all the foliage from forest canopies, and they can change habitats so drastically that the indigenous animal populations suffer as a result. Specific foods can be taken away as high winds will often strip fruits, seeds and berries from bushes and trees. Secondary impacts may occur; for example, high winds and debris may result in damage to an above-ground fuel tank, resulting in a significant chemical spill. Saltwater intrusion and flash flooding from hurricane-related storm surge and rain may also cause erosion, damage to vegetation, and relocation of wildlife.
Economic Condition of the Jurisdiction	Local economy and finances adversely affected, possibly for an extended period of time, depending on damages. Intangible impacts also likely, including business interruption and additional living expenses.



Category	Consequences
Public Confidence in the Jurisdiction's Governance	Likely to impact public confidence due to possibility of major event requiring substantial response and long-term recovery effort.

People

The very young, the elderly, and the disabled are especially vulnerable to harm from hurricanes. For those who are unable to evacuate for medical reasons, there should be provision to take care of special-needs patients and those in hospitals and nursing homes. Many of these patients are either oxygen-dependent, insulin-dependent, or in need of intensive medical care. There is a need to provide ongoing treatment for these vulnerable citizens, either in the County or by air evacuation to upland hospitals. The stress from disasters such as a hurricane can result in immediate and long-term physical and emotional health problems among victims.

Hazus estimates the number of households evacuated from buildings with severe damage from high velocity winds as well as the number of people who will require short-term sheltering. The results are listed in the table below.

Table 3-50. Displaced Households and People

Classification	# of Displaced Households	# of People Needing Short-Term Shelter
Category One	16	5

Source: Hazus Hurricane Risk Analysis, 2025

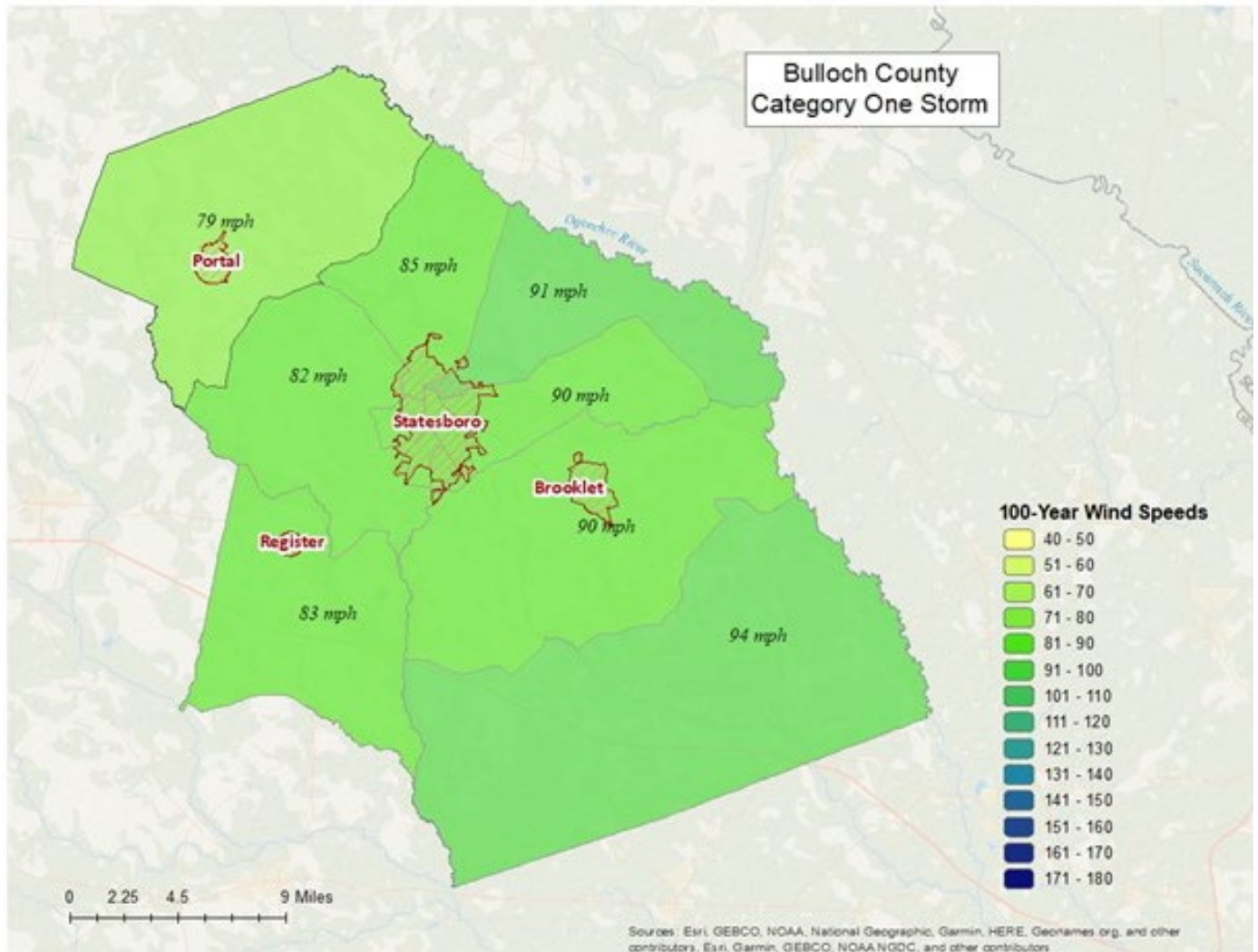
Property

Hurricanes can cause catastrophic damage to coastlines and several hundred miles inland. Hurricanes can produce winds exceeding 157 mph as well as tornadoes and microbursts. Additionally, hurricanes often bring intense rainfall that can result in flash flooding. Floods and flying debris from the excessive winds are often the deadly and most destructive results of hurricanes.

According to the most recent Hazus report for Bulloch County, wind losses were determined from probabilistic models run for the Category One storm which equates to the 1% chance storm event. The following figure shows wind speeds for the modeled Category One storm.



Figure 3-26. Wind Speeds by Storm Category



Source: Hazus Hurricane Risk Analysis, 2025

Buildings in Bulloch County are vulnerable to storm events, and the cost to rebuild may have significant consequences to the community. The following table shows a summary of the results of wind-related building damage in Bulloch County for the Category One (100 Year Event) storm. The loss ratio expresses building losses as a percentage of total building replacement cost in the county.

Table 3-51. Hurricane Wind Building Damage

Classification	Number of Buildings Damaged	Total Building Damage	Total Economic Loss	Loss Ratio
Category One	1,594	\$28,215,210	\$40,841,520	0.48%

Source: Hazus Hurricane Risk Analysis, 2025

Given equal vulnerability to hurricane winds across all of Bulloch County, all critical facilities are considered to be at risk. Certain buildings may perform better than others based on their age and construction, among other factors. The potential loss of functionality may have significant consequences to the community.



Hazus identified the essential facilities that may be moderately or severely damaged by winds. There were 88 essential facilities identified in Bulloch County that had expected loss of use of less than one day. Zero facilities were moderately or completely damaged. The types of essential facilities considered are listed in the table below.

Table 3-52. Bulloch County Number of Essential Facilities

Classification	Number
Care Facilities	3
EOCs	1
Fire Stations	16
Police Stations	7
Schools	61

Source: Hazus Hurricane Risk Analysis, 2025

Environment

Aquatic species within lakes or rivers may either be displaced or destroyed. The velocity of the flood wave will likely destroy riparian and instream vegetation and destroy wetland function. The flood wave will likely cause erosion within and adjacent to streams and the coast. Deposition of eroded deposits may choke instream habitat or disrupt riparian areas.

Debris can be extremely detrimental to the county’s environment, as well. Hazus estimates the amount of debris that will be generated by high velocity hurricane winds and quantifies it into three broad categories to determine the material handling equipment needed:

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

Different material handling equipment is required for each category of debris. The estimates of debris for this scenario are listed in the table below. The amount of hurricane wind related tree debris that is estimated to require pick-up at the public’s expense is listed in the eligible tree debris column.

Table 3-53. Wind-Related Debris Weight (Tons)

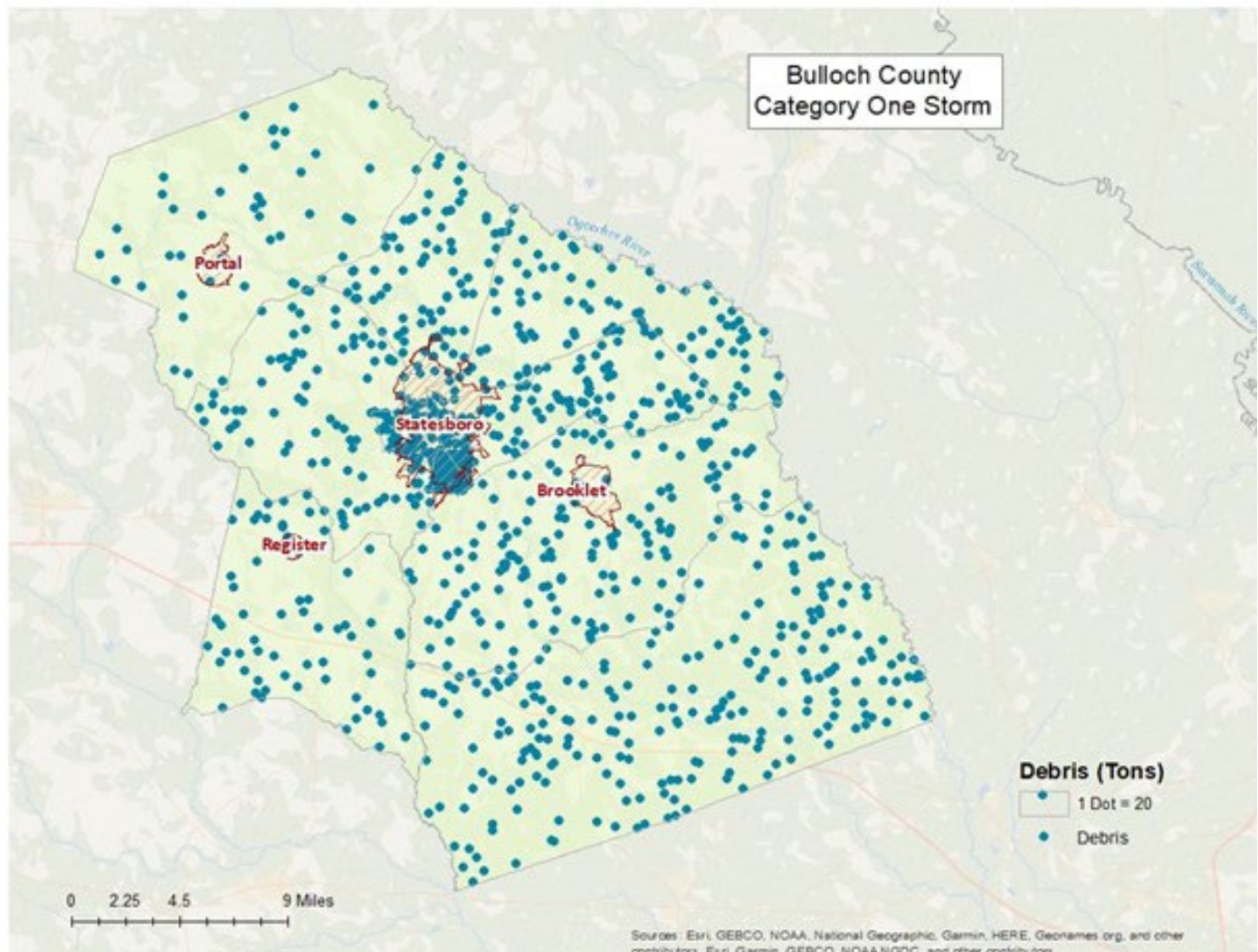
Classification	Brick, Wood, and Other	Reinforced Concrete and Steel	Eligible Tree Debris	Other Tree Debris	Total
Category One	6,404	1	13,506	209,219	229,130

Source: Hazus Hurricane Risk Analysis, 2025

The following figure shows the distribution of all wind related debris resulting from a Category One storm. Each dot represents 20 tons of debris within the census tract in which it is located. The dots are randomly distributed within each census tract and therefore do not represent the specific location of debris sites.

n

Figure 3-27. Wind-Related Debris Weight (Tons)h



Source: Hazus Hurricane Risk Analysis, 2025

Land Use & Development Trends

Aside from an overall increase in exposure due to development throughout the planning area, there have been no significant changes in development in the planning area that could affect vulnerability to tropical storms in Bulloch County.

The largest concerns during a hurricane event are the reparations after flooding caused by heavy rainfall, and more frequently the damage from high winds. The likelihood of storm surge as far inland as Bulloch County is almost non-existent.

The Georgia Department of Transportation allocated \$1,193,000 to the city of Statesboro for infrastructure improvements to South Main Street (Tillman Road to Brannen Street) known locally as The Blue Mile and are accommodations made specifically for this growth. The creek and canal are currently being improved for prior history of water accumulation in that area.



Multi-Jurisdictional Concerns

Hurricanes and tropical storms can occur anywhere within the Bulloch County planning area. While coastal areas are most vulnerable to hurricanes, their wind and rain impacts can be inland. As a result, any mitigation steps taken related to hurricanes should be undertaken on a countywide basis and include its municipalities as all jurisdictions within Bulloch County have seen population growth.

Repetitive Loss Structures

Not applicable.

3.10.5 Priority Risk Index

The following table summarizes tropical cyclone hazard risk by jurisdiction. While hurricanes have the possibility of being catastrophic across all jurisdictions, certain areas may have higher vulnerability. Impacts may be greater in more highly developed areas with greater amounts of impervious surface and higher exposure in terms of both property and population density. Areas with more mobile homes are also more vulnerable to damage, while areas with higher property values have greater overall financial exposure and potential for damages. Despite these differences, all jurisdictions have the possibility for catastrophic impacts.

Table 3-54. Tropical Cyclone Risk Ranking Summary

Jurisdiction	Probability	Impact	Spatial Extent	Warning Time	Duration	Score	Priority
Bulloch County	3	3	4	1	3	3	H
Brooklet	3	3	4	1	3	3	H
Portal	3	3	4	1	3	3	H
Register	3	3	4	1	3	3	H
Statesboro	3	3	4	1	3	3	H



3.11 WILDFIRE

3.11.1 Hazard Description

A wildfire is an uncontained fire that spreads through the environment. Wildfires have the ability to consume large areas, including infrastructure, property, and resources. When massive fires develop near populated areas, evacuations possibly ensue. Not only do the flames impact the environment, but the massive volumes of smoke spread by certain atmospheric conditions also impact the health of downwind populations. There are three general types of fire spread that are recognized.

- **Ground fires:** Burn organic matter in the soil beneath surface litter and are sustained by glowing combustion.
- **Surface fires:** Spread with a flaming front and burn leaf litter, fallen branches, and other fuels located at ground level.
- **Crown fires:** Burn through the top layer of foliage on a tree, known as the canopy or crown fires. Crown fires, the most intense type of fire and often the most difficult to contain, need strong winds, steep slopes, and a heavy fuel load to continue burning.

Generally, wildfires are started by humans, either through arson or carelessness, or by lightning strikes. Fire intensity is controlled by both short-term weather conditions and longer-term vegetation conditions. During intense fires, understory vegetation, such as leaves, small branches, and other organic materials that accumulate on the ground, can become additional fuel for the fire. The most explosive conditions occur when dry, gusty winds blow across dry vegetation.

Weather plays a major role in the birth, growth, and death of a wildfire. The National Weather Service Fire Weather Program emerged in response to a need for weather support for large and dangerous wildfires. This service is provided to federal and state land management agencies for the prevention, suppression, and management of forest and rangeland fires.

Weather conditions favorable to wildfire include drought, which increases flammability of surface fuels, and winds, which aid a wildfire's progress. The combination of wind, temperature, and humidity affects how fast wildland fires can spread. Rapid response can contain wildfires and limit their threat to property.

With more people making their homes in wooded settings near forests and remote mountain sites, the threat of wildfire is steadily on the rise. This is because the demographic change is expanding the size of the area where structures and other human development meet or intermingle with undeveloped wildland, otherwise known as the wildland-urban interface (WUI). The WUI creates an environment in which fire can move readily between structure and vegetation fuels, often resulting in massive fires, or conflagrations, which may lead to widespread evacuations.

A wildfire risk assessment can determine the level of risk of a particular location. The "boundary" WUI is characterized by areas of development where homes, especially new subdivisions, press against public and private wildlands, such as private or commercial forest land, or public forests or parks. There is a clearly defined boundary between the suburban fringe and the rural countryside. WUI areas deemed as "intermix" are places where improved property and/or structures are scattered and interspersed in wildland areas. These may be isolated rural homes or an area that is just starting to transition from rural to urban



land use. “Island” WUI areas, also called occluded interface, are plots of undeveloped wildland, such as remnant forests and parks, within predominately urban or suburban locales.

Wildfires are also notorious for producing secondary hazards long after the original fire is extinguished. Such hazards include flash flooding, debris flow, and landslides, which all result from fire consuming the vegetation that provides precipitation interception and infiltration as well as slope stability.

Fire services can mitigate wildfires by regularly engaging in preventative burns and proactive land use measures. Homeowners and business owners can also do their part by taking precautionary efforts, such as following local fire-related ordinances; removing leaves, limbs, and other debris from property; and creating a defensible space around structures. Among those emphasizing the need for such preemptive actions is Firewise USA, a national recognition program that provides instructional resources to inform people how to adapt to living with the risk of wildfire.

3.11.2 Location & Extent

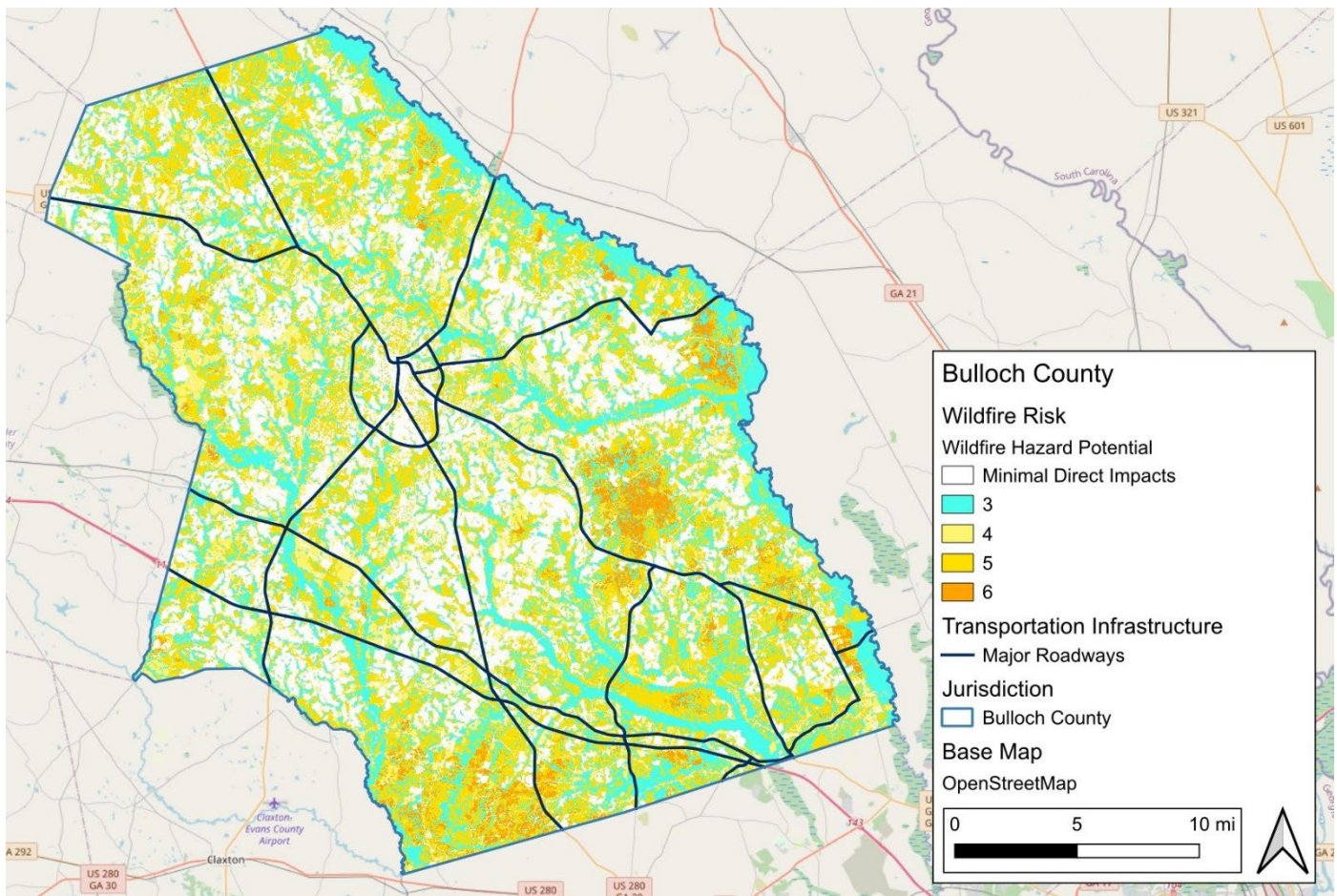
As mentioned in the Georgia Hazard Mitigation Strategy Standard and Enhanced Plan, effective March 4, 2024 through March 3, 2029, all of Georgia is prone to wildfire, especially during drier seasons (which vary across the state). This is primarily due to the presence of abundant and quick-burning wildland fuels including coniferous, deciduous, and mixed forests; shrub-land; grasslands/herbaceous; and woody and emergent wetlands. Over 70% of Bulloch County’s land is heavily forested, and its WUI continues to expand, particularly in the southeast section of the county closest to Savannah.³⁵

Of equal concern, Bulloch County often experiences wildfire-conducive weather conditions, such as extended drought, low relative humidity, and high winds. Such conditions in certain combinations make some communities more vulnerable to wildfire damage than others. Applying a “set of conditions” method is perhaps the best way for Bulloch County and its participating jurisdictions to define WUI areas when planning for wildfire prevention, mitigation, and protection activities. Bulloch County’s wildfire hazard potential can be seen in the map below. Communities along the coast are most at risk for wildfire.

³⁵ <https://gatrees.org/wp-content/uploads/2019/11/Bulloch-County-CWPP-Revised-2018.pdf>. Retrieved January 1, 2026.



Figure 3-28. Wildfire Hazard Potential, Bulloch County



The Southern Wildfire Risk Assessment Summary Report, last conducted in 2025 by Bulloch County, displays housing unit density measured in housing units per square kilometer and reflects 2020 estimates of housing unit counts from the U.S. Census Bureau, combined with building footprint data from Onegeo and USA Structures—both reflecting 2022 conditions.

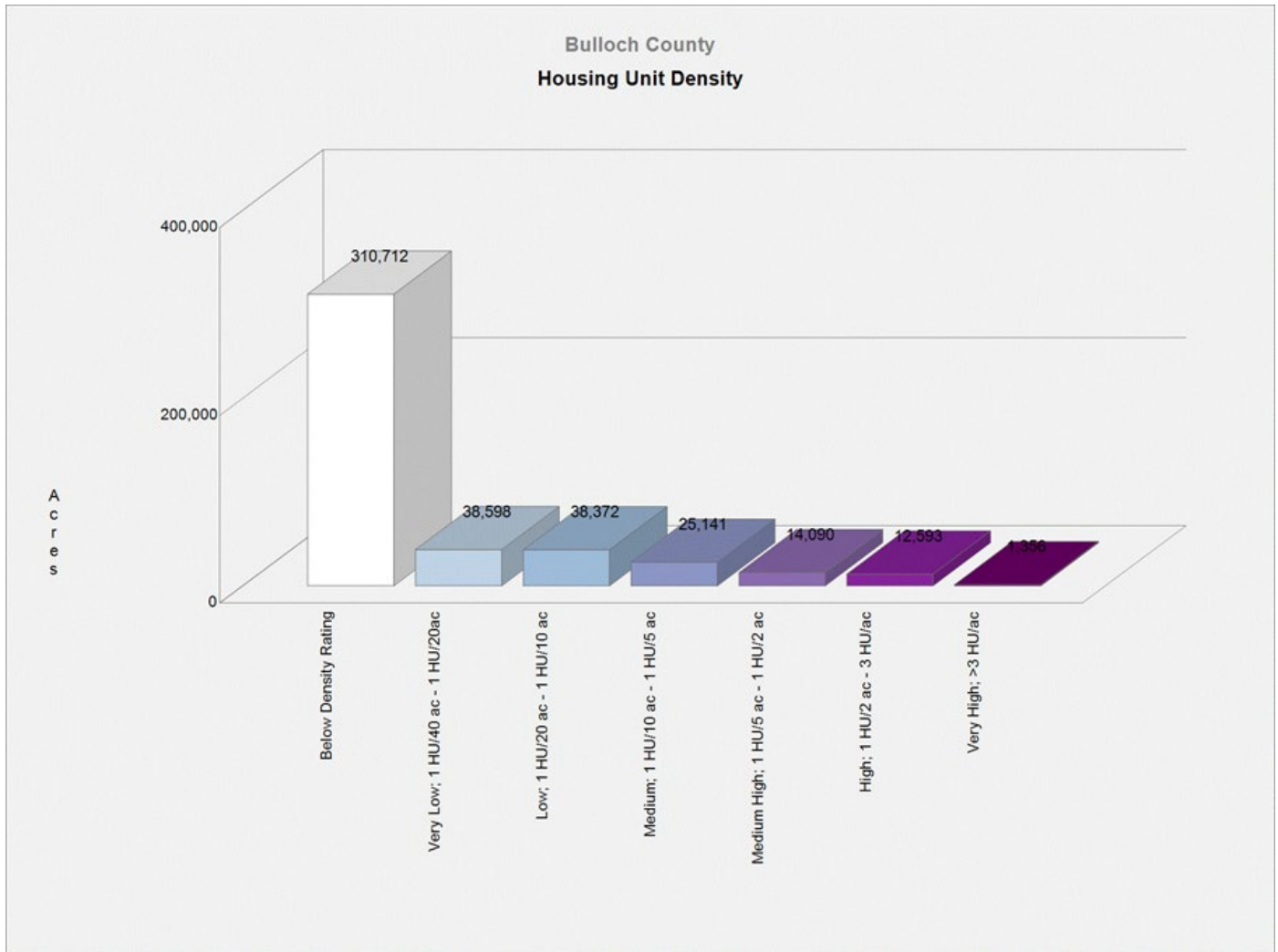
Figure 3-29. Housing Unit Density Categories, Bulloch County

	Housing Unit Density Category	Acres	Percent
	Below Density Rating	310,712	70 %
	Very Low; 1 HU/40 ac - 1 HU/20ac	38,598	9 %
	Low; 1 HU/20 ac - 1 HU/10 ac	38,372	9 %
	Medium; 1 HU/10 ac - 1 HU/5 ac	25,141	6 %
	Medium High; 1 HU/5 ac - 1 HU/2 ac	14,090	3 %
	High; 1 HU/2 ac - 3 HU/ac	12,593	3 %
	Very High; >3 HU/ac	1,356	0 %
	Total	440,862	100 %



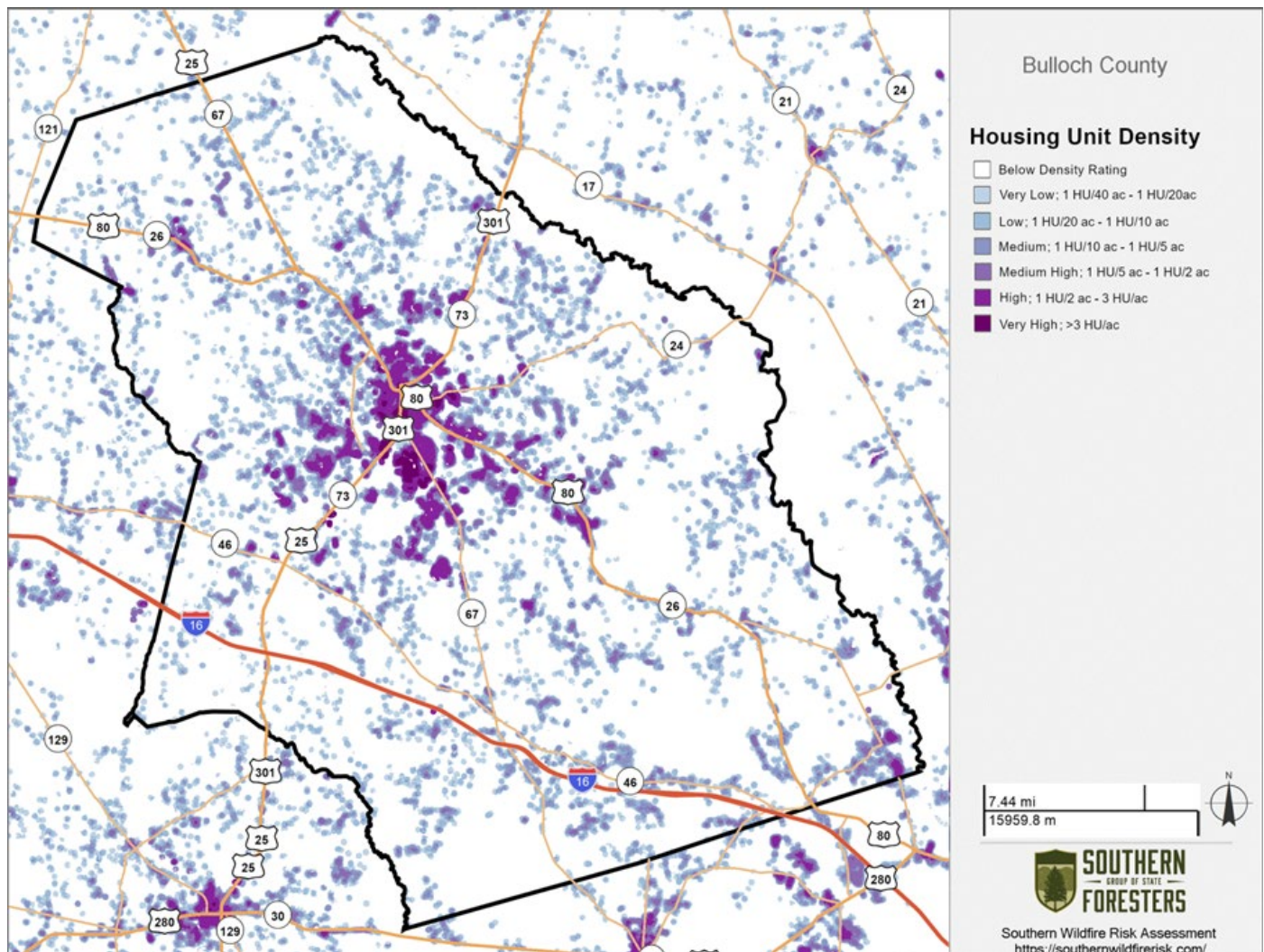
Source: Southern Wildfire Risk Assessment Summary Report, 2025; Pyrologix, 2023

Figure 3-30. Housing Unit Density, Bulloch County



Source: Southern Wildfire Risk Assessment Summary Report, 2025; Pyrologix, 2023

Figure 3-31. Housing Unit Density Map, Bulloch County



Source: Southern Wildfire Risk Assessment Summary Report, 2025; Pyrologix, 2023

The Functional WUI represents a classification of the land near buildings into zones that generally describe wildfire exposure to structures and risk mitigation activities appropriate for each. Buildings used in producing Functional WUI are defined as greater than 40 square meters.

- **Primary Exposure:** The Primary Exposure zone identifies where structures are immediately nearby (within 75m of) burnable land cover. Reducing fire intensity and ember production in this zone would reduce the exposure of nearby buildings to heat and embers. Buildings in this zone also require hardening of the structure to resist ignition.
- **Secondary Exposure:** The Secondary Exposure zone identifies land where structures are within 1500 m of burnable land cover, meaning homes in this zone could be impacted by lofted embers or by home-to-home spread even though they are not immediately located with vegetation types classified as burnable. Structures in this zone would benefit from the hardening of the structure to resist ignition from embers and nearby structures, but defensible space is usually not required due to the heavily developed nature of the zone.



- **Sources of Ember Load to Buildings:** These are areas of burnable land cover that produces embers capable of reaching nearby buildings. Ember production is a function of fire type and intensity, and ember travel is a function of wind speed and direction. Fuel treatment in this zone is a priority for reducing ember load to the nearby buildings.
- **Wildfire Transmission Zone:** The Wildfire Transmission Zone is the unpopulated land within about 2.4 km of a group of structures. Fires that originate within or spread to the Wildfire Transmission Zone have an immediate threat of reaching the nearby structures; fuel treatments that slow fire spread in this zone can reduce risk to these structures.
- **Low-to-No Exposure:** The Low-to-No Exposure zone identifies where structures beyond 1500m from a large (500 ha) contiguous blocks of burnable land cover. Flames—even from home-to-home spread—and embers have a relatively low likelihood of reaching structures in this zone, but smoke and evacuations could still impact this area.
- **Water:** Classified as Non-burnable Water (NB8) in the Surface Fuel Map.

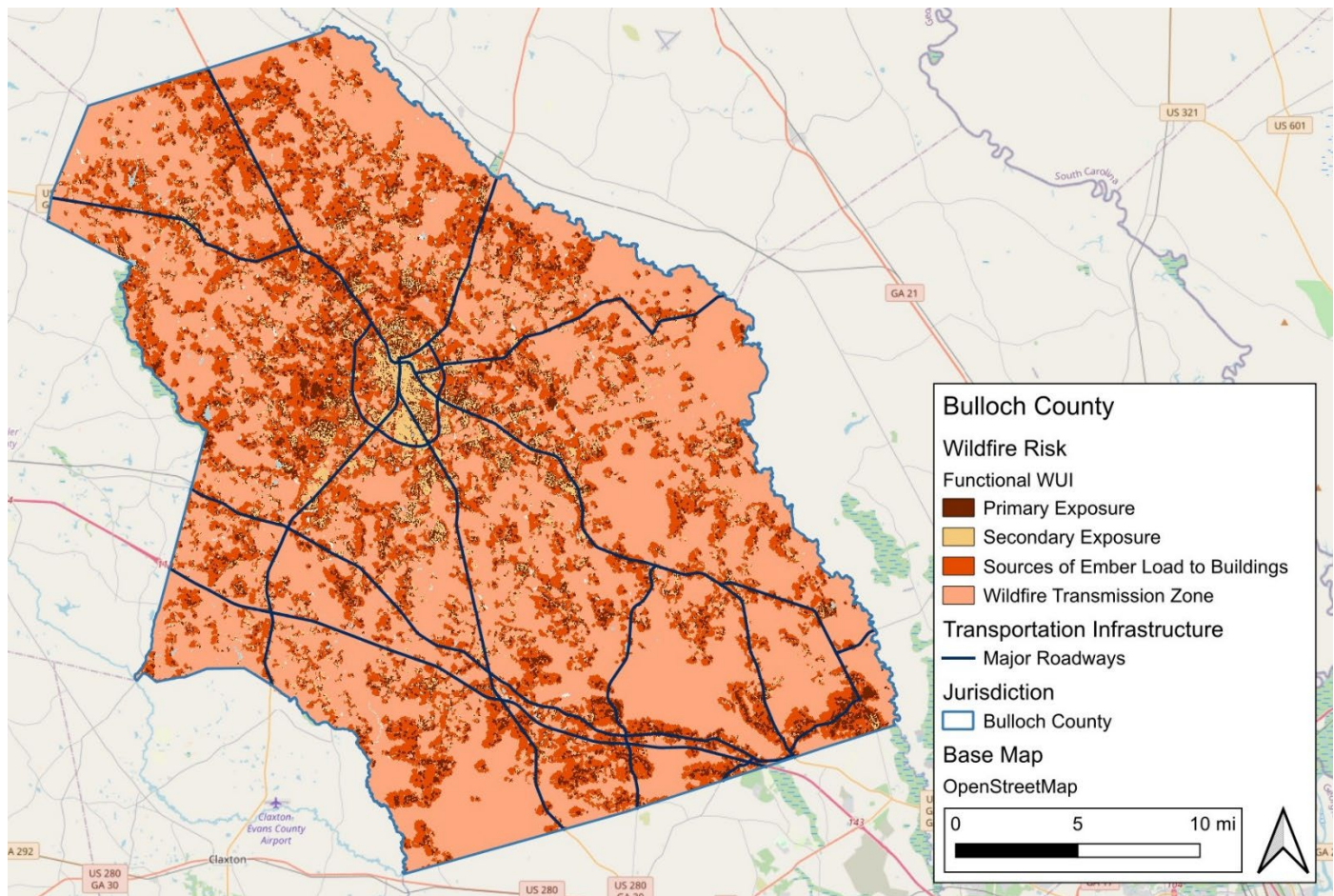
Figure 3-32. Functional WUI Categories, Bulloch County

	Functional Wildland Urban Interface Category	Acres	Percent
	Primary Exposure	39,805	9 %
	Secondary Exposure	21,035	5 %
	Sources of Ember Load to Buildings	260,890	59 %
	Wildfire Transmission Zone	114,689	26 %
	Low to No Exposure	0	0 %
	Water	4,443	1 %
	Total	440,862	100 %

Source: Southern Wildfire Risk Assessment Summary Report, 2025; Pyrologix, 2023



Figure 3-33. Functional WUI Map, Bulloch County



Per the Georgia Forestry Commission, debris-burning is Georgia's number one cause of wildfire. In fact, it accounts for over 50 percent of all wildfires in the state. Debris-burning is categorized into different types: yard leaf piles, agricultural, forestry site preparation, construction land clearing, and escaped prescribed burning. A major cause of debris-burn wildfires is when citizens or visitors burn in a location not permitted with weather that will only increase the fire. By not obtaining a permit and burning with improper weather conditions, visitors or citizens would not know the proper areas or time of the year to burn material. The Commission has a wildfire prevention initiative to reach debris-burners and educate them on proper debris-burning techniques.

The Characteristic Fire Intensity Scale within the Southern Wildfire Risk Assessment Summary Report identifies areas where significant fuel hazards and associated dangerous fire behavior potential exist based on fuel and a weighted average of five percentile weather categories.



Table 3-55. Characteristic Fire Scale Classification, Bulloch County

Classification	Description
Class 1, Very Low	Very small, discontinuous flames, usually less than 1 foot in length; very low rate of spread; no spotting. Fires are typically easy to suppress by firefighters with basic training and non-specialized equipment.
Class 2, Low	Small flames, usually less than two feet long; small amount of very short-range spotting possible. Fires are easy to suppress by trained firefighters with protective equipment and specialized tools.
Class 3, Moderate	Flames up to 9 feet in length; short-range spotting is possible. Trained firefighters will find these fires difficult to suppress without support from aircraft or engines, but dozer and plows are generally effective. Increasing potential for harm or damage to life and property.
Class 4, High	Large flames, up to 40 feet in length; short-range spotting common; medium range spotting possible. Direct attack by trained firefighters, engines, and dozers is generally ineffective, indirect attack may be effective. Significant potential for harm or damage to life and property.
Class 5, Very High	Flames exceeding 200 feet in length; expect extreme fire behavior.

Source: Southern Wildfire Risk Assessment Summary Report, 2025; Pyrologix, 2023

The fire intensity scale map is derived at a 30-meter resolution. This scale of data was chosen to be consistent with the accuracy of the primary surface fuels dataset used in the assessment. While not appropriate for site specific analysis, it is appropriate for regional, county, or local planning efforts. Below is the Characteristic Fire Intensity Scale along with acreage for the planning area:

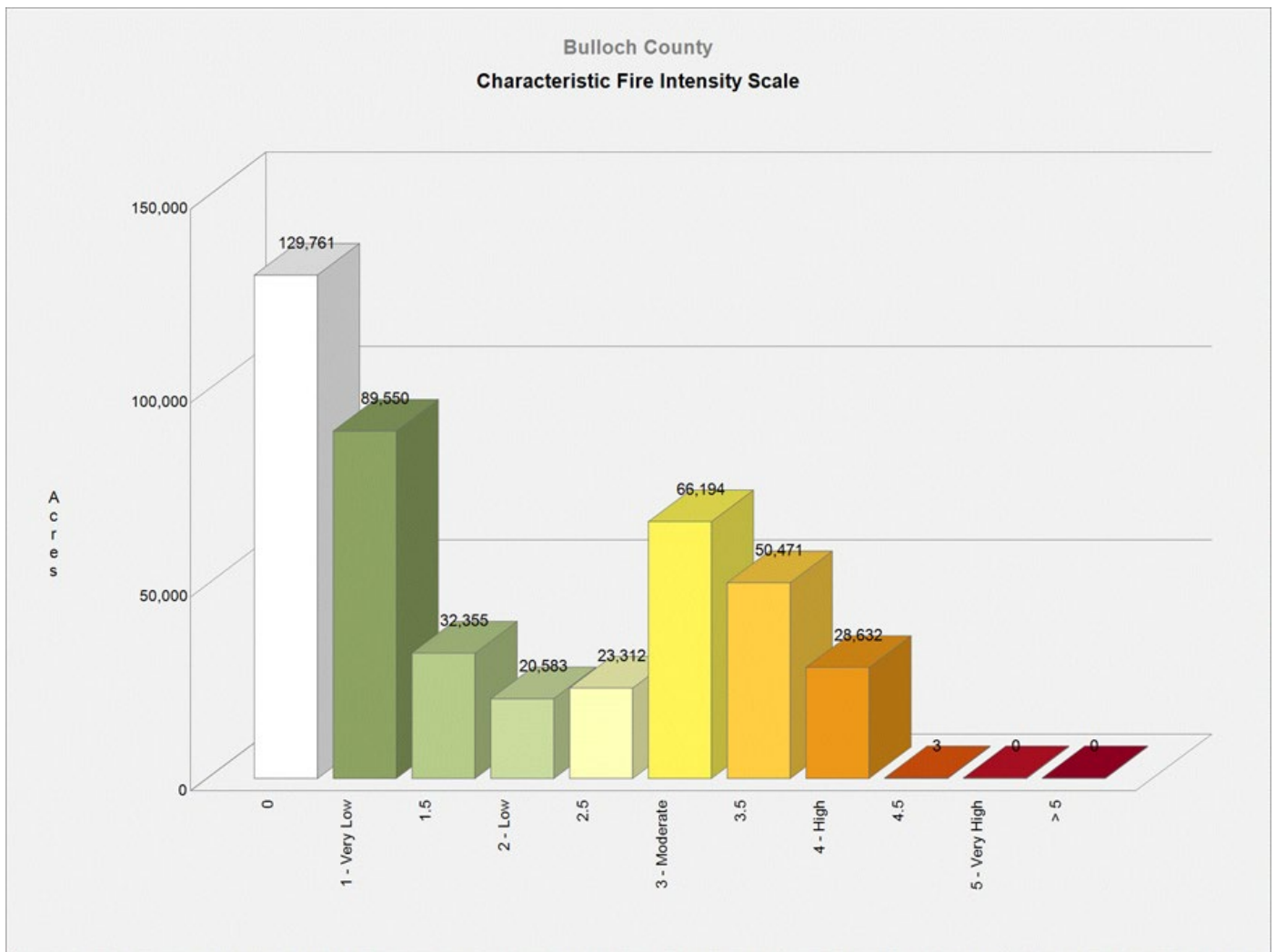
Figure 3-34. Characteristic Fire Intensity Scale Categories, Bulloch County

	Characteristic Fire Intensity Scale Category	Acres	Percent
	0	129,761	29 %
	1 - Very Low	89,550	20 %
	1.5	32,355	7 %
	2 - Low	20,583	5 %
	2.5	23,312	5 %
	3 - Moderate	66,194	15 %
	3.5	50,471	11 %
	4 - High	28,632	6 %
	4.5	3	0 %
	5 - Very High	0	0 %
	> 5	0	0 %
	Total	440,862	100 %

Source: Southern Wildfire Risk Assessment Summary Report, 2025; Pyrologix, 2023



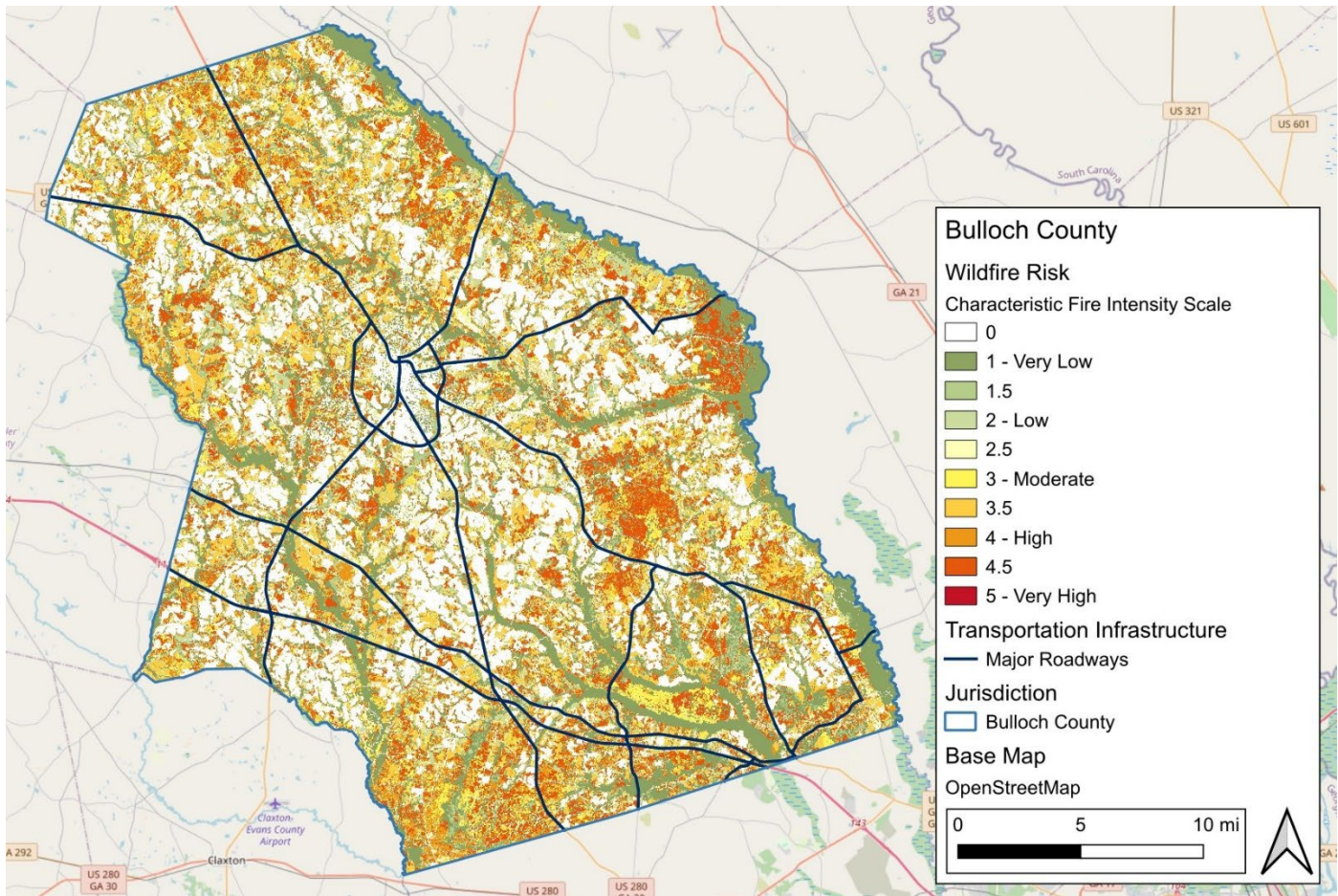
Figure 3-35. Characteristic Fire Intensity Scale, Bulloch County



Source: *Southern Wildfire Risk Assessment Summary Report, 2025; Pyrologix, 2023*



Figure 3-36. Characteristic Fire Intensity Scale Map, Bulloch County



Another method for classifying wildfires is the Burn Severity Index (BSI), which is a measure used to assess the ecological impact of a wildfire on vegetation and soil. It reflects how intensely an area burned and how much the fire altered the landscape, including changes to plant cover, soil color, and organic matter. BSI is often derived from satellite imagery or field surveys and helps determine the potential for erosion, vegetation recovery, and post-fire management needs.

Table 3-56. Burn Severity Index

Rank	Burn Severity	Description	Characteristics
0	Unburned	Fire extinguished before reaching microsite.	• Leaf litter from previous years intact and uncharred • No evidence of char around base of trees and shrubs • Pre-burn seedlings and herbaceous vegetation present



Rank	Burn Severity	Description	Characteristics
1	Low Severity Burn	Surface fire which consumes litter yet has little effect on trees and understory vegetation.	• Burned with partially consumed litter present • Evidence of low flame heights around base of trees and shrubs (<0.5 m) • No significant decreases in overstory & understory basal area, diversity or species richness from pre-burn assessments • Usually burning below 80° C
2	Medium-Low Severity Burn	No significant differences in overstory density and basal area, & no significant differences in species richness. However, understory density, basal area, and species richness declined.	• No litter present and 100% of the area covered by duff • Flame lengths <2m • Understory mortality present, little or no overstory mortality
3	Medium-High Severity Burn	Flames that were slightly taller than those of medium-low intensity fires, but these fires had occasional hot spots that killed large trees with significant reduction in the understory.	• Soil exposure on 1-50% of the area • Flame lengths <6m • High understory mortality with some overstory trees affected
4	High Severity Burn	Crown fires, usually a stand replacing burn with relatively high overstory mortality.	• Soil exposure >50% • Flame lengths >6m • Higher overstory mortality >20% • Usually burning above 800° C

Source: Southern Appalachian Forest Coalition

The National Interagency Coordination Center (NICC), the focal point for coordinating mobilization of resources for wildland fire and other incidents throughout the United States, reported that 11,896 acres burned in Georgia in 2024. Additionally, the Insurance Information Institute ranked Georgia as number five on its “Top Ten States for Wildfires Ranked by Number of Fires and by Number of Acres Burned” in 2023. Georgia is listed behind California, Texas, North Carolina, and Florida respectively, with 2,386 fires reported in the state.

Bulloch County experiences a variety of wildfire conditions found in the Keetch-Byram Drought Index (KBDI), which is described in the following table.³⁶ Information available during the risk assessment showed that Bulloch County is experiencing moderate to severe drought as of November 2025. For this period, the KBDI is in the 400-600 range.

³⁶ <https://www.drought.gov/data-maps-tools/keetch-byram-drought-index>. Retrieved January 2, 2026.



Table 3-57. Keetch-Byram Drought Index Fire Danger Rating System

KBDI	Description
0-200	Soil and fuel moisture are high. Most fuels will not readily ignite or burn. However, with sufficient sunlight and wind, cured grasses, and some light surface fuels will burn in spots and patches.
200-400	Fires more readily burn and will carry across an area with no gaps. Heavier fuels will still not readily ignite and burn. Also, expect smoldering and the resulting smoke to carry into and possibly through the night.
400-600	Fire intensity begins to significantly increase. Fires will readily burn in all directions exposing mineral soils in some locations. Larger fuels may burn or smolder for several days creating possible smoke and control problems.
600-800	Fires will burn to mineral soil. Stumps will burn to the end of underground roots and spotting will be a major problem. Fires will burn through the night and heavier fuels will actively burn and contribute to fire intensity.

3.11.3 Historical Occurrences

According to the National Interagency Fire Center (NIFC), Georgia had a total of 2,492 fires in 2024, burning a total of 11,896 acres. Two of these fires were started by lightning, and the remaining were human-caused.³⁷

The Georgia Forestry Commission maintains monthly records of acreage burned and number of fires burned that are accessible to the public under the Georgia Open Records Law. The Commission also updated the Community Wildfire Protection Plan for Bulloch County in July 2018. The purpose of this plan is to assess wildfire risks in the county and plan to mitigate such risks as funding becomes available.

According to the 2018 Community Wildfire Protection Plan, over the prior 56 years, the county averaged 106 reported wildland fires per year, burning 526 acres on average per year. Over the previous 20 years, the county averaged 79 fires per year, burning 451 acres annually. While there has been a decrease in numbers and acres in recent years, there has been about a 30% increase in the average size as the wildland fuel loads have increased with the diminished use of prescribed burning. Over the 10-year period between 2008-2017, the leading causes of these fires were debris burning (48%), machine use (12%), and incendiary/arson (9%).

The following table summarizes past occurrences of wildfire in Bulloch County for 2008-2017 as provided by the Georgia Forestry Commission in July 2018. More recent data was not available during the plan update process. The data is from GFC records only and may not include data on fires burned within jurisdictional limits that did not require GFC assistance to suppress. Actual number of fires and acreage burned may be higher than what is reported here.

Table 3-58. Records for Wildfire in Bulloch County, 2008-2017

Year	Number of Fires	Acreage Burned
2008	38	244.23
2009	55	307.34
2010	23	248.89
2011	133	512.30

³⁷ <https://www.nifc.gov/fire-information/statistics>. Accessed January 2, 2026.



Year	Number of Fires	Acreage Burned
2012	80	411.34
2013	61	254.38
2014	41	92.85
2015	29	155.65
2016	17	100.52
2017	70	273.11
Total	547	2,600.61

Source: Georgia Forestry Commission, 2018

The region experienced prolonged periods of severe drought in 2002 and 2011-2012. These periods of drought may explain some of the annual variation in fires and acreage burned.

While Bulloch County is clearly at a high risk of wildfire, NOAA/NCEI has recorded zero wildfire events in the Storm Events Database. Many wildfires occur in the state of Georgia and Bulloch County without being formally recorded by NOAA/NCEI, NIFC, or other agencies.

Probability of Future Events

Burn probability is the likelihood of wildfire burning a specific location within a set time frame, commonly represented as the chance of burning during one calendar year or wildfire season. Burn probability can be expressed as a fraction (e.g., 0.005) or odds (e.g., 1-in-200) and is based on fire behavior modeling across thousands of simulations of possible fire seasons. Burn probability for Bulloch County received a ranking matrix of 1-12, with 1 being the lowest probability and 12 being the highest. In each simulation, factors contributing to the probability of a fire occurring, including weather and ignition likelihood are varied based on patterns derived from observations in recent decades. Burn probability is not predictive and does not reflect any forecast weather or fire danger conditions. It also does not calculate fire intensity. The burn probability for Bulloch County is presented below.

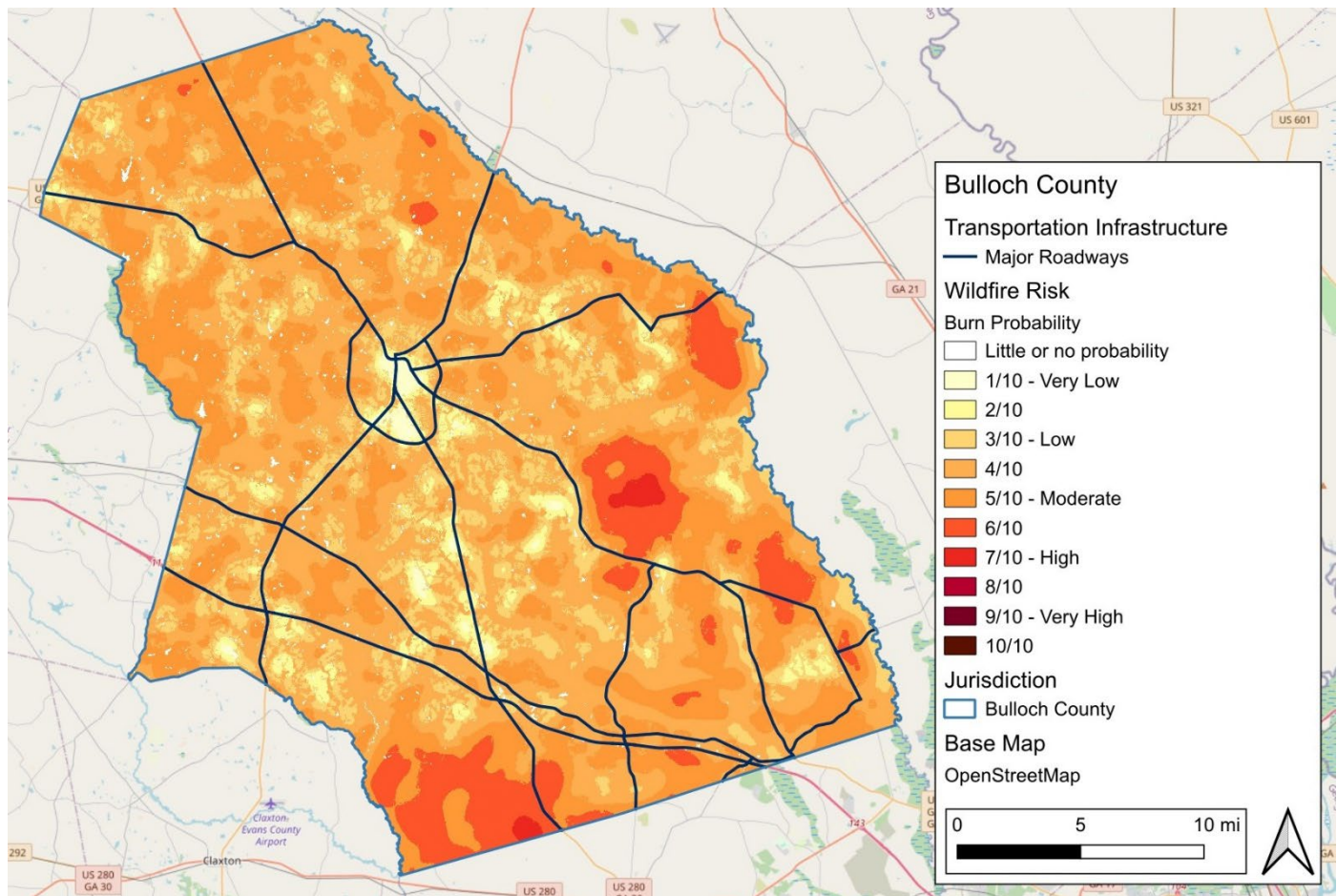
Figure 3-37. Burn Probability Categories, Bulloch County

	Burn Probability Category	Burn Probability - Percent	Burn Probability - Odds	Acres	Percent
	Little to no probability	0	0	4,443	1 %
	1/10 - Very Low	< 0.01 %	> 0 to 1-in-10,000	2,852	1 %
	2/10	< 0.1 %	< 1-in-1,000	14,018	3 %
	3/10 - Low			65,020	15 %
	4/10			189,442	43 %
	5/10 - Moderate	< 1.0 %	< 1-in-100	132,264	30 %
	6/10			30,918	7 %
	7/10 - High			1,906	0 %
	8/10	~ 1-2 %	~ 1-in-100 to 1-in-50	0	0 %
	9/10 - Very High	~ 2-5 %	~ 1-in-50 to 1-in-20	0	0 %
	10/10	~ 5-10 %	~ 1-in-20 to 1-in-10	0	0 %
	Total			440,862	100 %

Source: Southern Wildfire Risk Assessment Summary Report, 2025; Pyrologix, 2023



Figure 3-38. Burn Probability Map, Bulloch County



88% percent of Bulloch County has a burn probability ranking between 3 and 5. Only 7% of the county has a ranking of 6, which is the highest probability in Bulloch County. The areas of higher burn probability are located in the southwestern corner of the county, the most-eastern tip, and along US-80 just south of Brooklet. The north and northwestern portions of the county have a burn probability of 1 to 5. The probability of wildfire across the county is considered likely, defined as between a 10% and 100% annual chance of occurrence. The communities containing a higher burn probability, as noted, have a comparatively higher probability of occurrence.

For Bulloch County, the rare incidence of wildland fires every year, and the probability of the planning area experiencing a wildland fire is categorically determined to be **possible**. However, based on the CWPP developed by the Georgia Forestry Commission, and the type of wildlands that exist within the planning area, the hazard is determined to be **highly likely**.

3.11.4 Vulnerability & Impact

The Southern Wildfire Risk Assessment Report provides additional details on wildfire risk in Bulloch County. It is available in Appendix I of this plan.

The following table summarizes the potential detrimental consequences of wildfire.



Table 3-59. Consequence Analysis, Wildfire

Category	Consequences
Public	In addition to the potential for fatalities, wildfire and the resulting diminished air quality pose health risks. Exposure to wildfire smoke can cause serious health problems within a community, including asthma attacks and pneumonia, and can worsen chronic heart and lung diseases. Vulnerable populations include children, the elderly, people with respiratory problems or with heart disease. Even healthy citizens may experience minor symptoms, such as sore throats and itchy eyes.
Responders	Public and firefighter safety is the first priority in all wildland fire management activities. Wildfires are a real threat to the health and safety of the emergency services. Most firefighters in rural areas are 'retained'. This means that they are part-time and can be called away from their normal work to attend to fires.
Continuity of Operations (including Continued Delivery of Services)	Wildfire events can result in a loss of power which may impact operations. Downed trees, power lines and damaged road conditions may prevent access to critical facilities and/or emergency equipment.
Property, Facilities, and Infrastructure	Wildfires frequently damage community infrastructure, including roadways, communication networks and facilities, power lines, and water distribution systems. Restoring basic services is critical and a top priority. Efforts to restore roadways include the costs of maintenance and damage assessment teams, field data collection, and replacement or repair costs. Direct impacts to municipal water supply may occur through contamination of ash and debris during the fire, destruction of aboveground distribution lines, and soil erosion or debris deposits into waterways after the fire. Utilities and communications repairs are also necessary for equipment damaged by a fire. This includes power lines, transformers, cell phone towers, and phone lines.
Environment	Wildfires cause damage to the natural environment, killing vegetation and animals. The risk of floods and debris flows increases after wildfires due to the exposure of bare ground and the loss of vegetation. In addition, the secondary effects of wildfires, including erosion, landslides, introduction of invasive species, and changes in water quality, are often more disastrous than the fire itself.
Economic Condition of the Jurisdiction	Wildfires can have significant short-term and long-term effects on the local economy. Wildfires, and extreme fire danger, may reduce recreation and tourism in and near the fires. If aesthetics are impaired, local property values can decline. Extensive fire damage to trees can significantly alter the timber supply, both through a short-term surplus from timber salvage and a longer-term decline while the trees regrow. Water supplies can be degraded by post-fire erosion and stream sedimentation.
Public Confidence in the Jurisdiction's Governance	Wildfire events may cause issues with public confidence because they have very visible impacts on the community. Public confidence in the jurisdiction's governance may be influenced by actions taken pre-disaster to mitigate and prepare for impacts, including the amount of public education provided; efforts to provide warning to residents; response actions; and speed and effectiveness of recovery.

People

Wildfire can cause fatalities and human health hazards. The greatest vulnerability of a jurisdiction's population is the inability to properly evacuate in an emergency situation. The population can be caught off guard due to slow or improper warning systems, erratic weather conditions, etc., and become trapped in a growing wildfire. Ensuring procedures are in place for rapid warning and evacuation are essential to reducing vulnerability.

No injury or death has occurred in Bulloch County or its participating jurisdictions as a direct result of wildfire.



Property

Wildfire can cause direct property losses, including damage to buildings, vehicles, landscaped areas, agricultural lands, and livestock. Construction practices and building codes can increase fire resistance and fire safety of structures. Techniques for reducing vulnerability to wildfire include using street design to ensure accessibility to fire trucks, incorporating fire resistant materials in building construction, and using landscaping practices to reduce flammability and the ability for fire to spread.

The SWRA provides a wildfire exposure risk score by acreage. The data shows a rating of the potential impact of wildfire on homes, people, and property. This index ranges from 1 to 10, where lower values are least exposed. Communities with a large amount of wooded brush and grassy areas are at highest risk of wildfires. Additionally, areas that have experienced prolonged droughts, or are excessively dry, are also at a higher risk of wildfires. The following table summarizes the number of acres in each score category and a percentage of the county. This table represents potential risks in the event of a wildfire may differ. The next figure shows the areas of structure exposure. The greatest risk is along US-80 south of Brooklet and in the southwestern portion of the county.

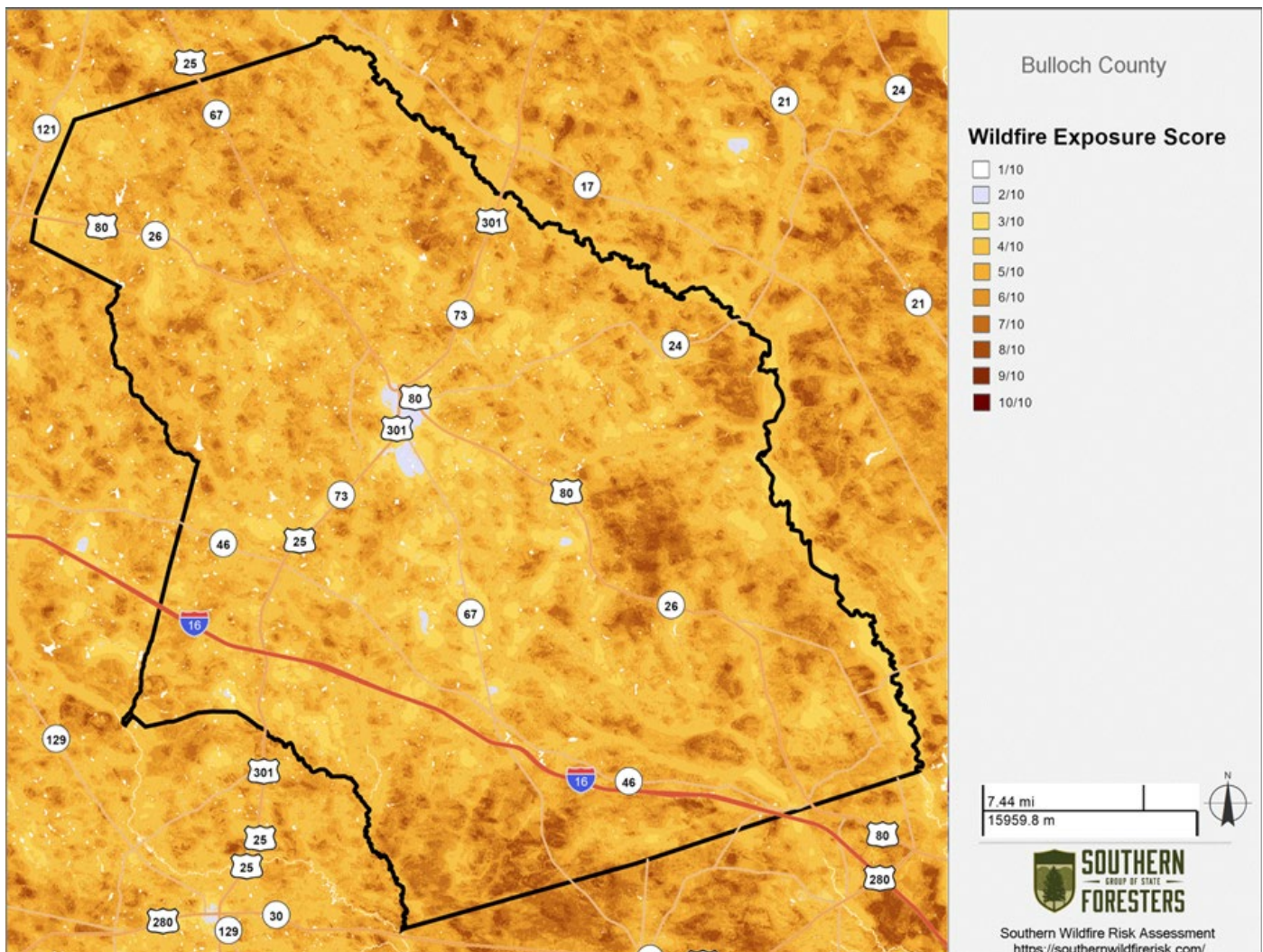
Figure 3-39. Wildfire Exposure Score Categories, Bulloch County

	Wildfire Exposure Score Category	Acres	Percent
	1/10	4,443	1 %
	2/10	3,614	1 %
	3/10	31,294	7 %
	4/10	173,360	39 %
	5/10	121,855	28 %
	6/10	76,526	17 %
	7/10	26,554	6 %
	8/10	3,217	1 %
	9/10	0	0 %
	10/10	0	0 %
	Total	440,862	100 %

Source: Southern Wildfire Risk Assessment Summary Report, 2025; Pyrologix, 2023



Figure 3-40. Wildfire Exposure Score Map, Bulloch County



Source: Southern Wildfire Risk Assessment Summary Report, 2025; Pyrologix, 2023

Environment

Wildfires have the potential to destroy forest and forage resources and damage natural habitats. Wildfire can also damage agricultural crops on private land. Wildfire is part of a natural process, however, and the environment will return to its original state in time.

Land Use & Development Trends

Wildfire can result in residential and commercial property loss, impacts to industry (e.g., commercially grown timber trees), costs of extensive firefighting operations, health hazards (e.g., smoke inhalation), and displaced residents requiring temporary shelter. As the county experiences an increase in population, new development will occur more frequently and further encroach on forest and wildland areas. The wildfires that cause the greatest impact to loss of life and property are those located in the WUI.



The duration of a wildfire within the WUI depends on weather conditions, how dry it is, the availability of fuel to spread, and the capabilities of responders to contain and extinguish the fire.

Continued expansion of Bulloch County's WUI will create a number of public safety challenges for local fire services: (1) the water supply in the immediate areas may be inadequate for fire suppression; (2) if the development is in an outlying area, there may be a longer response time for emergency services; (3) in a wildfire emergency, the access road(s) may need to simultaneously support evacuation of residents and the arrival of emergency vehicles; and (4) when wildland fire disasters strike, many structures may be involved simultaneously, quickly exceeding the capability of local fire services. Further, firefighters in the WUI may encounter hazards other than fire itself, such as hazardous materials, utility lines, and poor access.

Fortunately, Bulloch County will have an opportunity to significantly influence the wildland fire safety of new developments. It is important that new development be planned and constructed to provide for public safety in the event of a wildland fire emergency. It is equally important for the citizens of Bulloch County to work together to minimize the risk.

Multi-Jurisdictional Concerns

Most of the wildfire danger is located in the unincorporated areas, but as lightning can cause a wildfire in any location, any mitigation steps taken related to wildfire should be undertaken on a countywide basis and include the unincorporated areas, the city of Statesboro, and towns of Brooklet, Portal, and Register.

The city of Statesboro is well covered with skilled firefighters and first responders. Brooklet has a high water table and can keep most fire consequences to a minimum. Portal and Register could suffer harsh losses to their homes, businesses, and farm acreage, as would some urban unincorporated areas of Bulloch County.

Bulloch County is protected by organized fire departments within the city of Statesboro, along with 13 well-spaced volunteer fire stations and sub-stations under the jurisdiction of the Bulloch County Fire Department. The Georgia Forestry Commission maintains a county protection unit located just north of Statesboro on Highway 301 to also respond to wildfires throughout the county.

There are pressurized water systems with hydrants available servicing the city of Statesboro, towns of Brooklet, Portal, and Register, and some adjacent areas. Given the WUI as depicted in the previous maps, Bulloch County and its participating jurisdictions have a theoretical exposure to wildfires. It is impossible to strategically estimate the severity of a wildfire as the quickly changing factors, including drought conditions and wind speed, have a great influence on the wildfire's conditions. The entire planning area could experience a wildfire ranging anywhere from 0 to 4 on the Burn Severity Index. 92% of Bulloch County and the city of Statesboro and towns of Brooklet, Portal, and Register have a very low to low burn potential based on the map below. The following table below depicts Bulloch County's damage potential, which is greatest near the southern border.

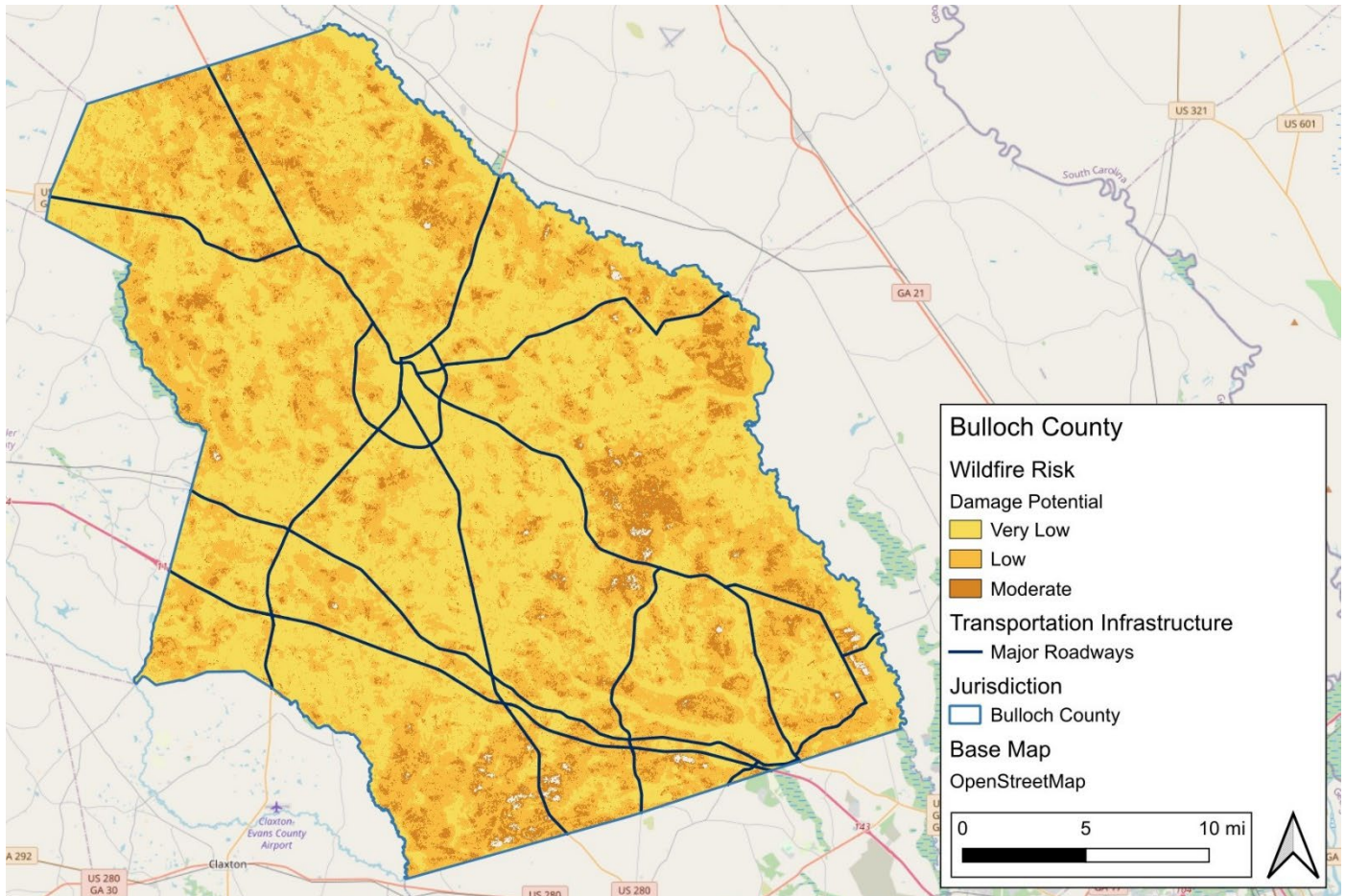


Figure 3-41. Damage Potential Categories, Bulloch County

	Damage Potential Category	Acres	Percent
	Little to None	0	0 %
	Very Low	227,318	52 %
	Low	176,973	40 %
	Moderate	34,924	8 %
	High	1,646	0 %
	Very High	0	0 %
	Total	440,862	100 %

Source: Southern Wildfire Risk Assessment Summary Report, 2025; Pyrologix, 2023

Figure 3-42. Damage Potential Map, Bulloch County



Repetitive Loss Structures

Not applicable.



3.11.5 Priority Risk Index

The following table summarizes wildfire hazard risk by jurisdiction. Wildfire warning time and duration do not vary by jurisdiction. Spatial extent ratings were estimated based on the proportion of area within the WUI. Impact ratings were based on fire intensity data from SWRA. Probability ratings were determined based on burn probability data from SWRA.

Table 3-60. Wildfire Risk Ranking Summary

Jurisdiction	Probability	Impact	Spatial Extent	Warning Time	Duration	Score	Priority
Bulloch County	2	2	2	4	2	2.2	M
Brooklet	3	2	2	4	2	2.5	H
Portal	2	2	2	4	2	2.2	M
Register	2	2	2	4	2	2.2	M
Statesboro	2	2	2	4	2	2.2	M



3.12 CYBERATTACK

3.12.1 Hazard Description

Advancements in technology have increased the productivity of our nation and made daily operations and markets reliant on cyber systems. As a result, the United States has become, and will increasingly continue to be, vulnerable to non-traditional attacks including cyberattacks on information and operations.

Cyberspace is the nervous system for all critical infrastructures and is composed of hundreds of thousands of interconnected computers, servers, routers, switches, and fiber optic cables that allow our critical infrastructures to work. Studies performed by the Government Accounting Office and the Computer Security Institute found that the number of cybersecurity threats to both public and private sectors are on the rise.

Cyberattack is an electronic attack using one computer system against another in order to intimidate people or disrupt other systems. Cyberattacks include ransomware, malware, phishing, data breaches, and intrusions targeting information technology (IT) and operational technology (OT) systems. Impacts range from data loss and service disruption to safety risks where OT is involved (e.g., water, energy, transportation). Federal partners (CISA, FBI, EPA, NSA) warn that critical-infrastructure sectors especially water/wastewater, healthcare, transportation, education, and local government face persistent threats that can degrade essential services.

Cyberattacks can be divided into two main categories: attacks against data and attacks against physical infrastructure. Because our society is so dependent on technology, a large-scale cyberattack could overwhelm government and/or private-sector resources quickly, as well as threaten lives, property, the economy, and national security.

All governments, businesses, and citizens that conduct business utilizing computers face these threats. Cybersecurity and critical infrastructure protection are among the most important national security issues facing our country today. The Georgia Cyber Crime Center (G3C) was created through a cooperative effort by the Office of the Governor, the Georgia Bureau of Investigation, the Georgia Technology Authority, and Augusta University to provide specialized investigative assistance on cyber-related crime. G3C helps local and state law enforcement agencies across Georgia solve sophisticated crimes involving cyber-related criminal activity, including computer and network intrusion.

Generally, no warning is given for cyberattack. Duration is dependent on the type and complexity of attack, the target, the consequences, and the time to safely restore services.

3.12.2 Location & Extent

Cyber disruptions are not central to one geographic area; they can occur anywhere across Bulloch County where technological systems exist or are utilized. A breach can originate at one computer and affect any other computer in the world. Depending on the attack vector and parameters, a cyberattack could impact all of Bulloch County and its associated municipal jurisdictions. Targets include individual computers, networks, organizations, business sectors, or governments. Key local exposure points include:

- Urban government & services in Statesboro (administrative IT, public safety CAD/RMS, finance, permitting).



- Healthcare systems serving the region (hospitals, clinics), where downtime directly affects patient care.
- Education systems (Bullock County School District), with large user populations, legacy systems, and peak-season targeting.
- Water and wastewater utilities whose OT systems (BCWSA) can be targeted; compromise can affect water quality/pressure and wastewater operations.
- Transportation infrastructure—mission-critical to local jobs and national supply chains; four major highways run through the heart of Bullock County; Port of Savannah is located just 40 minutes away.
- Private sectors (small/midsize businesses, tourism/hospitality, manufacturers) reliant on e-commerce and cloud services.

The extent of a cybersecurity breach is dependent on various factors. These factors include the system that is attacked, protective measures put in place, training of the people involved, warning time, and the firewalls that exist to protect different levels of the system. Severity is best described by service downtime, data loss, and extent of OT disruption:

- IT-only incidents (e.g., ransomware on office networks) can halt revenue, billing, permitting, and records for days to weeks; recovery costs can be in the millions.
- OT-adjacent or OT incidents can force shutdowns of fuel, water, or transport systems—creating cascading supply effects.
- Healthcare incidents can delay care and trigger HIPAA breaches, legal exposure, and diversion of patients.
- K-12 incidents frequently result in multi-day school disruptions and large-scale data exposure, with nationally rising frequency and downtime.

3.12.3 Historical Occurrences

Cyberattacks have increased nationwide in recent years, particularly targeting the energy sector. Cyberattacks have also increased in the banking and finance sectors. Hackers have attacked company computers, distracting employees and interfering with Internet Security Providers (ISP) to divert resources, take proprietary information, and steal PII. Small devices can wreak havoc and disrupt systems. Some USBs have been manufactured with viruses or may become infected and spread viruses to multiple computers. Firewalls, access via signatures, and anti-virus are becoming antiquated security methods.

Other jurisdictions have been impacted by ransomware attacks in recent years. The city of Atlanta was hit by a major ransomware attack in 2018, recovery from which wound up costing a reported \$2.6 million, significantly more than the \$52,000 ransom demand. A similar attack against the city of Baltimore in 2019 affected the city government's email, voicemail, property tax portal, water bill and parking ticket payment systems, and delayed more than 1,000 pending home sales. In March 2019, Orange County, North Carolina was attacked with a ransomware virus, causing slowdowns and service problems at key public offices such as the Register of Deeds, the sheriff's office, and county libraries. The attack impacted a variety of county services, including disrupting the county's capability to process real estate closings, issue marriage licenses, process fees or permits, process housing vouchers, and verify tax bills.



In Bulloch County, there has been at least one local cyberattack in the past 15 years. Two other notable cyberattacks occurred in other locations but directly or indirectly affected Bulloch County and are also included below. Additional events may exist in nonpublic reports.

- **Community Health Systems cyberattack, August 2014:** 4.5 million people were affected by breached security at Community Health Systems, which owns a network of hospitals, including five in Georgia. East Georgia Regional Medical Center, located in Statesboro, was one of the hospitals impacted by the cyberattack. The breach involved a foreign hacker group gaining access to personal patient information, including names, addresses, birthdates, phone numbers, and social security numbers.³⁸
- **Colonial Pipeline ransomware cyberattack, May 2021:** A ransomware cyberattack took down computerized equipment managing Colonial Pipeline's billing system and other systems. Colonial Pipeline, based in Houston, Texas, supplies gasoline and jet fuel to large portions of the Southeastern United States, including Georgia. Due to the attack, operations at the pipeline and gas stations across multiple states were disrupted, and gas prices in Georgia and other states increased substantially. Bulloch County was affected by rising fuel prices and panic buying, and some gas stations ran out of fuel before the shutdown was resolved. After paying a \$4.4 million ransom and repairing/recovering all systems, Colonial Pipeline resumed operations within a week.³⁹
- **Ogeechee DA's Office cyberattack, June 2025:** The Ogeechee Judicial Circuit District Attorney's Office, which serves Bulloch, Effingham, and Screven Counties, was the target of a cyberattack on the morning of June 11, 2025. The attack was intercepted in real time by Georgia Technologies (who provides 24/7 IT support to the DA's Office) before any significant data could be compromised. Out of an abundance of caution for investigation, system recovery, and remediation, offices closed for one week. However, operations were able to continue without further disruption after the brief closure.⁴⁰

Probability of Future Events

While specific data on the number of occurrences is not known, the probability of future cyberattacks is **likely**. Based on available data and recorded events over a 15-year period, Bulloch County jurisdictional entities and businesses could expect to either indirectly or directly experience a cyberattack every five years; this consideration should be used for annualized probability only.

3.12.4 Vulnerability & Impact

Cyberattacks can have a wide range of impacts, ranging from minimal to significant, depending on if the county or its jurisdictions are the main target for the attack or if they are one of many targets. Some of these attacks may be malicious and can result in catastrophic damage to the nervous system of a

³⁸ <https://www.statesboroherald.com/local/patients-offered-free-protection-after-hacker-attack/>. Retrieved January 6, 2026.

³⁹ https://en.wikipedia.org/wiki/Colonial_Pipeline_ransomware_attack. Retrieved January 6, 2026.

⁴⁰ https://www.griceconnect.com/local-news/geechee-judicial-circuit-district-attorneys-office-targeted-in-cyber-attack-operations-limited-10793672?utm_source=Villager&utm_campaign=Content&utm_medium=Facebook_Graph&fbclid=IwY2xjawPKCf9leHRuA2FlbQlXMQBzcnRjBmFwcF9pZBAyMjlwMzkxNzg4MjAwODkyAAEebUyQ4OD7-MIK_mxBrTfldT_jlcGdORwUzUpPZ3zmy0pMK2tBB7GNnJkKdSo_aem_UyxgkfDu5ZP-xjCHbnTH3g. Retrieved January 6, 2026.



community's cyber infrastructure. Back-up systems, redundancy, heightened awareness, integrity restoration, and recovery will provide means to adequately manage the consequence of an attack.

Any entity dependent on IT/OT—local government, first responders, utilities, port/logistics, healthcare, K-12 and higher education, and SMEs in tourism/manufacturing—is vulnerable to cyberattacks. Vulnerability is elevated where (1) legacy/unsupported systems are present, (2) multi-factor authentication (MFA) is absent, (3) staffing and training are limited, and (4) incident response/backups are immature.

The table below summarizes the potential detrimental consequences of cyberattack.

Table 3-61. Consequence Analysis, Cyberattack

Category	Consequences
Public	Medically fragile residents relying on hospital/clinic services (care delays). Households dependent on uninterrupted water/wastewater and fuel distribution (public health, economic activity). Students/families during school outages (learning loss, childcare disruption). Small businesses and logistics operators dependent on continuous port/trucking systems (cash-flow shocks).
Responders	Responder operations may be impacted by failures in operating systems such as radios, internet services, medical tracking/reporting systems, and SCADA systems.
Continuity of Operations (including Continued Delivery of Services)	Payroll, finance, tax/revenue, 911/CAD interfaces, records, courts, records access, diagnostics, and scheduling services may be delayed or inaccessible.
Property, Facilities, and Infrastructure	Gate systems, building access systems, terminal operations, trucking appointment systems, train scheduling systems, and airport operating systems could be impacted.
Environment	Environmental consequences could arise from failures to control hazardous materials, radiological materials, biologicals, sewer systems and other elements that can become environmental threats if not properly managed and controlled.
Economic Condition of the Jurisdiction	Cyberattacks can impact government, business, and personal financial security. If daily operations are interrupted, the economy will be impacted.
Public Confidence in the Jurisdiction's Governance	Loss of public confidence is likely as an attack impacts personal data, finances, or ability to do business; additional loss of confidence and trust may result if response and recovery are not swift and effective

People

People are vulnerable to cyberattacks through the loss of personal information, exposure to fraud, and disruption of essential services such as healthcare, education, and utilities. These incidents can cause financial hardship, delays in critical care, and learning or work interruptions, with impacts falling hardest on those with limited digital literacy, economic resources, or access to recovery support.

Cyberattacks can also inflict huge amounts of economic damage in many different ways. Cyberattacks targeting financial institutions (banks, stock markets, etc.) can directly impact the overall economy while other attacks may target individual businesses.

Property

Property is vulnerable when business operations, financial systems, and facility management technologies are disrupted. Attacks can force closures, damage records, and compromise building systems such as security, utilities, or point-of-sale networks, leading to revenue loss and costly recovery. Prolonged



downtime or data loss may also reduce property values, increase vacancies, and create long-term economic instability for owners and tenants.

Environment

The environment is vulnerable when critical infrastructure systems that manage water, wastewater, energy, or industrial processes are targeted. A successful attack could disrupt treatment operations, release pollutants, or cause hazardous materials incidents, leading to contamination of air, soil, or waterways. Such impacts not only threaten ecosystems but also create long-term public health and safety risks.

Land Use & Development Trends

Land use and development trends in Bulloch County influence the county's exposure and vulnerability to cyberattacks by increasing reliance on digital systems and expanding the overall cyber "attack surface." Continued population growth and residential, commercial, and infrastructure development require greater use of information technology for planning, permitting, utilities, public safety, and service delivery. As these systems expand and become more interconnected, the number of potential entry points for cyber threats increases. Growth can also place strain on staffing and resources, making it more difficult to maintain consistent cybersecurity practices across all departments. Without corresponding investment in secure IT infrastructure, policies, and training, ongoing development trends may increase the county's susceptibility to cyber incidents and service disruptions.

Multi-Jurisdictional Concerns

Bulloch County's cyber risk environment includes multiple jurisdictions—such as the city of Statesboro, towns of Brooklet, Portal, and Register, school systems, and regional judicial offices—that operate interconnected information systems and share data with the county. These linked networks mean a successful cyberattack on one jurisdiction could affect others, potentially disrupting essential services, public safety communications, utilities, and critical records across the region. Differences in IT resources, staffing, and cybersecurity capabilities among jurisdictions can further increase vulnerability, as smaller agencies may lack the tools or expertise to respond quickly to threats, namely those in Brooklet, Portal, and Register. Collaborative planning, shared cybersecurity protocols, and coordinated incident response among county and local jurisdictions are essential to reduce collective risk and improve resilience against cyber incidents.

Repetitive Loss Structures

Not applicable.

3.12.5 Priority Risk Index

The following table summarizes cyberattack risk by jurisdiction. Given the nature of cyberattack and the widespread impacts, risk and vulnerability are considered equal for all jurisdictions.

Table 3-62. Cyberattack Risk Ranking Summary

Jurisdiction	Probability	Impact	Spatial Extent	Warning Time	Duration	Score	Priority
Bulloch County	2	2	2	4	4	2.4	M
Brooklet	1	2	2	4	4	2.1	M
Portal	1	2	2	4	4	2.1	M



Jurisdiction	Probability	Impact	Spatial Extent	Warning Time	Duration	Score	Priority
Register	1	2	2	4	4	2.1	M
Statesboro	2	3	2	4	4	2.7	H



3.13 HAZARDOUS MATERIALS INCIDENT

3.13.1 Hazard Description

A hazardous substance is any substance that may cause harm to persons, property, or the environment when released to soil, water, or air. Chemicals are manufactured and used in increasing types and quantities. Each year over 1,000 new synthetic chemicals are introduced and as many as 500,000 products pose physical or health hazards and can be defined as “hazardous chemicals.” The U.S. Department of Transportation (DOT) categorizes hazardous substances into nine major hazard classes. A hazard class is a group of materials that share a common major hazardous property, i.e., radioactivity, flammability, etc. These hazard classes include:

- Class 1—Explosives
- Class 2—Compressed Gases
- Class 3—Flammable Liquids
- Class 4—Flammable Solids; Spontaneously Combustible Materials; Dangers When Wet Materials/Water-Reactive Substances
- Class 5—Oxidizing Substances and Organic Peroxides
- Class 6—Toxic Substances and Infectious Substances
- Class 7—Radioactive Materials
- Class 8—Corrosives
- Class 9—Miscellaneous Hazardous Materials/Products, Substances, or Organisms

Hazardous materials are so widely used, transported, and stored, often in large quantities, that a spill or other event could happen nearly anywhere in the U.S. The effects may involve a local site or many square miles. Health problems may be immediate, such as corrosive effects on skin and lungs, or be gradual, such as the development of cancer from a carcinogen. Damage to property could range from immediate destruction by explosion to permanent contamination by a persistent hazardous material. Accidents involving the transportation of hazardous materials could be just as catastrophic as those associated with stored chemicals, possibly more so, since the location of a transportation accident is not predictable.

Certain incidents involving hazardous materials, whether in transit, stored, in use, or produced, are reported to the federally established National Response Center (NRC). Staffed 24 hours a day by U.S. Coast Guard officers and marine science technicians, the NRC is the designated federal point of contact for reporting all oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the U.S. and its territories. Reports to the NRC activate the National Contingency Plan and the federal government's response capabilities. The NRC maintains reports of all releases and spills in a national database. In 2024, it logged 22,966 incidents nationwide.

Eight of the most common hazardous materials that first responders, HazMat teams, and perhaps the NRC's On-Scene Coordinator are likely to encounter in the event of an industrial accident or transportation-related incident are: carbon dioxide, chlorine, fireworks, gasoline, argon, sulfuric acid, propylene, and liquified petroleum gas (LPG). The “List of Lists: Consolidated List of Chemicals Subject to the Emergency



Planning and Community Right-To-Know Act (EPCRA), Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and Section 112(r) of the Clean Air Act” is available from the U.S. Environmental Protection Agency (EPA).

Fixed Hazardous Materials Incident

A fixed hazardous materials incident is the release of chemical substances or mixtures during production or handling at a fixed facility. Hazardous materials releases can be accidental or intentional.

Fixed facilities with hazardous materials can include industrial, commercial, and federal facilities. The Emergency Planning and Community Right-to-Know Act (EPCRA) created several methods for tracking facilities with hazardous materials. Section 313 of the EPCRA created the Toxics Release Inventory (TRI). The TRI tracks toxic chemical releases and pollution prevention activities reported by industrial and federal facilities. TRI data is made publicly available by the U.S. Environmental Protection Agency (EPA). Section 312 of the EPCRA mandated additional reporting of hazard materials by businesses and organizations with quantities of hazardous materials over a certain threshold. Tier II reports must be submitted annually, and help local fire departments, Local Emergency Planning Committees (LEPC), and State Emergency Response Commissions (SERCs) plan for and respond to chemical emergencies. Tier II facility reports are identified and mapped as part of the county’s Emergency Operations Plans. Figure 3-43 provides the locations of Tier I and Tier II facilities in Bulloch County.

Transportation Hazardous Materials Incident

A transportation hazardous materials incident is the accidental release of chemical substances or mixtures during transport. Transportation hazardous materials incidents in Bulloch County can occur during railroad, highway, pipeline, or air transport. Railroad and highway accidents involving hazardous materials pose great potential for public exposures. Both nearby populations and motorists can be impacted and become exposed by accidents and releases. Trains carry larger quantities and mixed quantities of hazardous materials, which can have a greater impact on populations and the environment. Trucks carry hazardous materials on busy streets and highways, often in close proximity to residences and essential facilities. Pipelines can pose a risk if structural failure occurs. If airplanes carrying hazardous cargo crash, or otherwise leak contaminated cargo, populations and the environment in the impacted area can become exposed. Figure 3-44 shows the location of railroads and major roadways that transport hazardous materials in Bulloch County.

Pipeline Incident

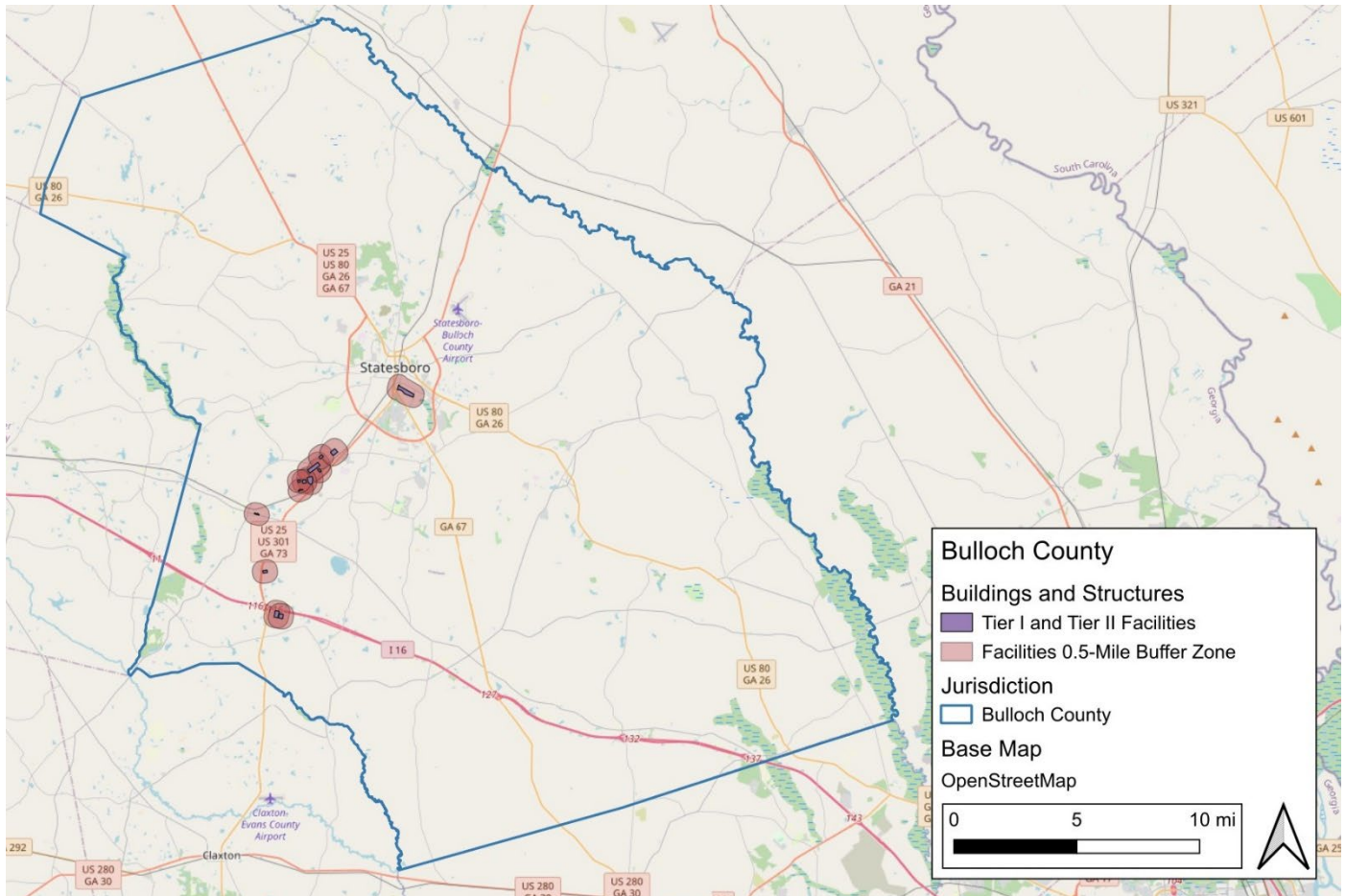
A pipeline transportation incident occurs when a break in a pipeline creates the potential for an explosion or leak of a dangerous substance (oil, gas, etc.) possibly requiring evacuation. An underground pipeline incident can be caused by environmental disruption, accidental damage, or sabotage. Incidents can range from a small, slow leak to a large rupture where an explosion is possible. Inspection and maintenance of the pipeline system along with marked gas line locations and an early warning and response procedure can lessen the risk to those near the pipelines. The U.S. Department of Transportation (USDOT) Pipeline and Hazardous Materials Safety Administration (PHMSA) maintains an inventory of the location of all gas transmission and hazardous liquid pipelines as well as liquid natural gas plants and hazardous liquid breakout tanks. According to the National Pipeline Mapping System, Bulloch County does not have any mapped gas pipelines.



3.13.2 Location & Extent

The locations of Tier I and Tier II facilities in Bulloch County are depicted in the map below along with a half mile buffer zone around each facility to show the potential danger zone should a hazardous material incident occur.

Figure 3-43. Tier I and Tier II Facilities with Buffer, Bulloch County



According to 2023 Toxics Release Inventory (TRI) data (2014-2023), of the nation's 30,054 toxics-releasing facilities, 994 are located in the state of Georgia. In fact, the state ranks number 22 out of 56 states/territories based on total releases per square mile. Of those 994 facilities reporting toxic release information in Georgia, five are located in Bulloch County. There are four in Statesboro and one in Brooklet. The following quick facts for Bulloch County (2023) are provided by the TRI.

Table 3-63. TRI Facilities, Bulloch County

Facilities	Liberty County, GA	United States
Number of TRI Facilities	5	21,797
Total Production-Related Waste Managed	5.7 million lbs.	35 billion lbs.



Facilities	Liberty County, GA	United States
Total On-site and Off-site Disposal or Other Releases:	1.3 million lbs.	3.4 billion lbs.
Total On-site:	1.1 million lbs.	2.9 billion lbs.
Air:	834,742 lbs.	521.3 million lbs.
Water:	49 lbs.	186.2 million lbs.
Land:	303,577 lbs.	2.3 billion lbs.
Total Off-Site:	154,957 lbs.	397.4 million lbs.

Source: EPA Toxics Release Inventory, 2025

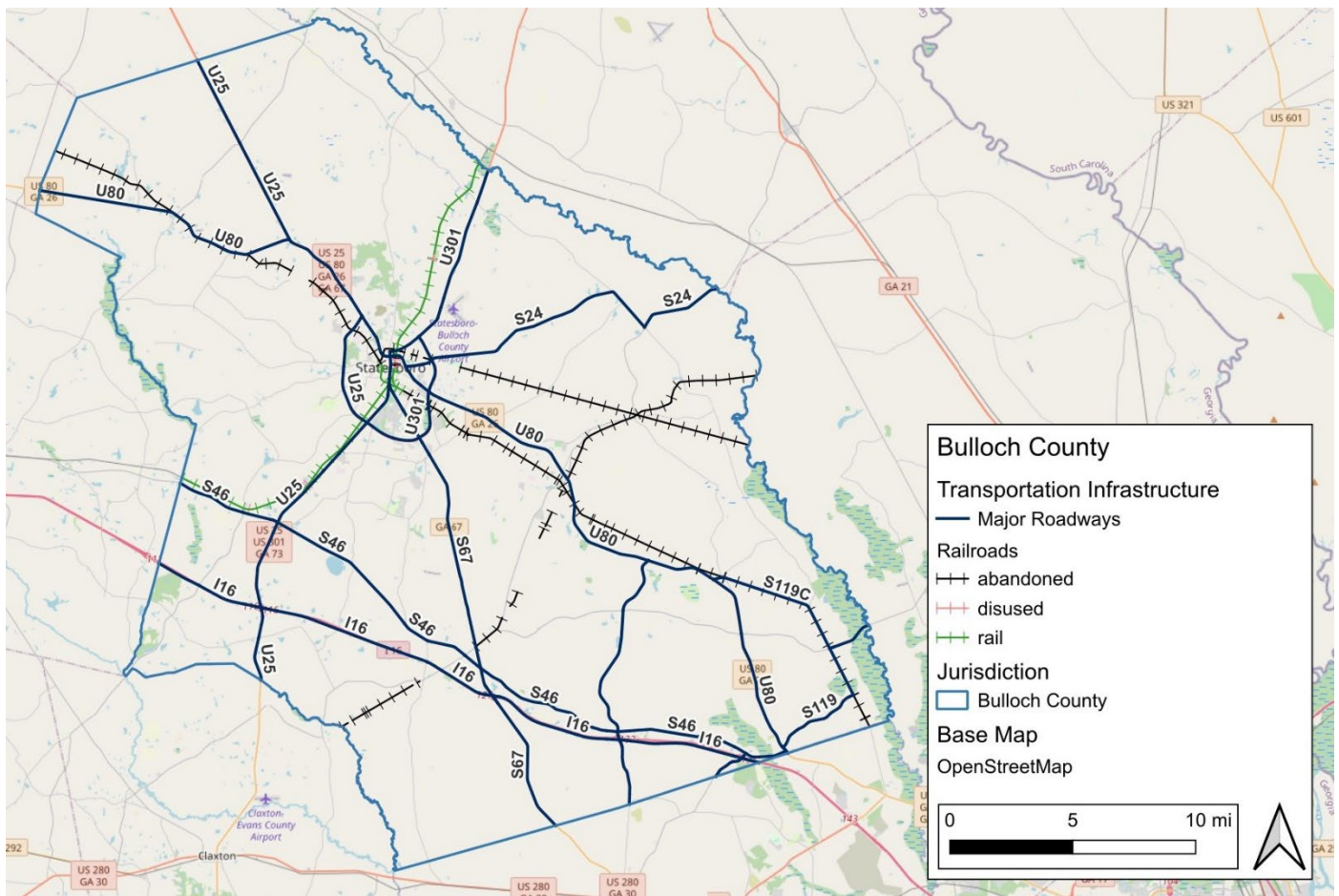
Regarding the transport of hazardous materials, there are many avenues for doing so across Bulloch County. Four major highways run through Bulloch County: I-16, US 301, US 80 and US 25. U.S. interstate I-95 is less than 40 minutes away, and I-75 is 90 minutes away, all via major highway routes. Statesboro-Bulloch's highway infrastructure allows for easy access to many other parts of the state and country.⁴¹

Railroads do not report hazmat cargo documents to a central government agency in advance of a shipment. Instead, they must maintain electronic and physical documentation and provide it to the appropriate parties including their own crews and emergency responders before and during transport. The Pipeline and Hazardous Materials Safety Administration (PHMSA) and the Federal Railroad Administration (FRA) oversee and enforce these requirements. Following is a base map showing county boundaries and the major transportation routes and railroads in Bulloch County with an additional map showing half mile buffer zones for major roadways and active railroads. When a half mile buffer zone is added around each route and railroad, the number of homes, mobile homes, and facilities within those buffers can be calculated. In Bulloch County, there are 8,437 homes, 2,074 mobile homes, and 124 facilities located within half a mile of major roads, and 2,566 homes, 469 mobile homes, and 46 facilities located within half a mile of railroads. These are the structures that may be at risk should a hazardous material incident occur on one of these major roads or railroads.

⁴¹ <https://advantagebulloch.com/regional-data/transportation/>. Retrieved January 10, 2026.



Figure 3-44. Transportation Infrastructure, Bulloch County





Both the Drug Enforcement Administration (DEA) and Bureau of Alcohol, Tobacco, Firearms, and Explosives (ATF) maintain comprehensive records (now accessible for public view) of the homes and locations of known and closed methamphetamine labs either flagged for mitigation, demolition, or other remediation strategies.

The magnitude of a hazardous materials incident can be defined by the material type, the amount released, and the location of the release. The U.S. Department of Transportation Pipeline and Hazardous Materials



Safety Administration (PHMSA), which records hazardous material incidents across the country, defines a “serious incident” as a hazardous materials incident that involves:

- a fatality or major injury caused by the release of a hazardous material,
- the evacuation of 25 or more persons as a result of release of a hazardous material or exposure to fire,
- a release or exposure to fire which results in the closure of a major transportation artery,
- the alteration of an aircraft flight plan or operation,
- the release of radioactive materials from Type B packaging,
- the release of over 11.9 galls or 88.2 pounds of a severe marine pollutant, or
- the release of a bulk quantity (over 199 gallons or 882 pounds) of a hazardous material.

Prior to 2002, however, a hazardous materials “serious incident” was defined as follows:

- a fatality or major injury due to a hazardous material
- closure of a major transportation artery or facility or evacuation of six or more persons due to the presence of hazardous material, or
- a vehicle accident or derailment resulting in the release of a hazardous material.

3.13.3 Historical Occurrences

The PHMSA publishes yearly incident summary reports and 10-year incident summary reports of all reported releases of hazardous materials during transportation, including highways, railways, waterways, and air. As of August 15, 2025, 885 incidents have been recorded in Georgia in 2025 (866 highway, 14 air, and 5 railway). The number of incidents per year in Georgia since 2016 (the earliest year currently available) is shown in the table below.

Table 3-64. PHMSA Yearly Incidents, Georgia

Incident Year	Incident Count
2016	684
2017	671
2018	688
2019	897
2020	671
2021	808
2022	1,024
2023	916
2024	974
2025	885

Source: PHMSA, 2016-2025

Given the presence of five TRI facilities in Bulloch County (four in Statesboro and one in Brooklet) and the continuous storage, production, use, and transportation of hazardous materials across its main



thoroughfares, all of Bulloch County is at risk of a HazMat incident. All five TRI facilities are listed in the table below along with their respective releases in 2022, which is the most recent reporting year.⁴²

Table 3-65. TRI Facilities Summary, Bulloch County

Facility Name	Location	Industry Sector	Hazardous Material(s) Released	Amount Released (lb)
Briggs & Stratton LLC	Statesboro	Machinery	Copper and copper compounds, lead and lead compounds	2,503
Great Dane Trailers	Statesboro	Transportation Equipment	Diisocyanates	27
Claude Howard Lumber Co. Inc.	Statesboro	Wood Products	Lead and lead compounds	15
Building Materials Manufacturing LLC	Statesboro	Plastics & Rubber	Diisocyanates	7
M-D Building Products Inc.	Brooklet	Plastics & Rubber	Di(2-ethylhexyl) phthalate, diisocyanates	1,697

Source: EPA Toxics Release Inventory, 2022

The National Response Center (NRC) maintains HazMat data from 1990 to present day. For the purposes of this plan, incidents recorded from January 1, 2000 to August 2025 in Bulloch County are included in the table below. The NRC reports all accidents with the potential for a hazardous material release even if one did not occur.⁴³

Table 3-66. NRC Incident Report, 2001-2025

Date	Location	Type of Incident	Incident Cause	Hazardous Material	Description
05/14/2000	Brooklet	Fixed	Equipment Failure	Hydraulic fluid	Material spilled out of hydraulic system on an edger due to leaks in the system
01/27/2003	Bryan	Fixed	Natural Phenomenon	Transformer oil	Pole-mounted transformer failed due to cold weather causing a half pint of transformer oil to release onto ground
10/28/2003	US 25 rail bypass	Railroad non-release	Operator Error	None	Car approached crossing that was under repair and failed to stop, striking the oncoming train
08/01/2005	Statesboro	Fixed	Equipment Failure	Mercury	Mercury material released from a mercury contactor switch due to equipment failure
07/01/2008	Statesboro	Fixed	Unknown	Mercury	Mercury reported on ground to local fire department

⁴² <https://www.epa.gov/toxics-release-inventory-tri-program>. Retrieved January 10, 2026.

⁴³ <https://nrc.uscg.mil/>. Retrieved January 10, 2026.



Date	Location	Type of Incident	Incident Cause	Hazardous Material	Description
09/23/2009	Statesboro	Fixed	Other	Emulsified asphalt	Parking lot was primed for paving with emulsified asphalt. A rainstorm washed some sheen off the parking lot surface.
02/03/2010	Statesboro	Fixed	Unknown	Ammonia	Release in ammonia control room due to unknown reasons
06/26/2010	Statesboro	Storage Tank	Equipment Failure	Unknown	Spill of materials while pumping materials into the storage tank. 5000-6000 gallons were spilled.
09/01/2010	Statesboro	Mobile	Transport Accident	Diesel fuel	Rear-end collision between two tractor trailer trucks resulted in diesel fuel spill from one truck
07/23/2011	Hwy 80 btwn Statesboro & Brooklet	Mobile	Other	Unknown	Biker on Hwy 80 was sprayed with a chemical from a special mobile farm machine used to disperse unknown chemicals onto the field
01/20/2013	Statesboro	Mobile	Unknown	Diesel fuel	Accident between tanker truck and two passenger vehicles spilled diesel from tanker onto ground
02/13/2013	Brooklet	Mobile	Transport Accident	Diesel fuel	Discharge of 200 gallons of diesel fuel from a tractor trailer truck due to single vehicle accident
06/27/2013	Statesboro	Mobile	Dumping	Lube oil	An individual dumped waste lube oil onto the ground and covered it with dirt. An auto shop appears to be run at the residence.
03/02/2014	Hopeulikit	Mobile	Transport Accident	Diesel fuel	Wrecker company that was towing a tanker truck with 7800 gallons of diesel fuel onboard overturned with the truck on the side of the road alongside Mill Creek.
05/12/2014	Statesboro	Mobile	Other	Motor oil, diesel fuel	Discharge of motor oil and diesel fuel from a truck tractor due to single vehicle accident
06/20/2021	Statesboro	Fixed	Natural Phenomenon	Non-PCB transformer oil	Release of non-PCB transformer oil from a pole-mounted transformer into the



Date	Location	Type of Incident	Incident Cause	Hazardous Material	Description
					ground and into a storm drain due to weather
02/08/2021	Statesboro	Fixed	Dumping	Wood dust	An individual has been releasing wood dust into air for two years due to not cleaning out bagger. The dust covers everything in the area and affects people's health.
02/11/2023	Statesboro	Mobile	Unknown	Hydraulic fluid	Timbering company released unknown amount of hydraulic oil on property while clearing five acres of land. Six 5-gallon empty buckets of hydraulic oil were left on the property, and a 10ft-by-15ft area is saturated with oil.
02/14/2024	Pembroke	Mobile	Other	Diesel fuel	Road debris caused a punctured saddle tank on a tractor trailer truck, which resulted in a discharge of 175 gallons of diesel fuel onto the ground and into Zulks Bay
02/15/2024	Brooklet	Storage Tank	Other	Gasoline	Someone ran over a 5-gallon container of gasoline, causing it to release onto the ground
02/19/2024	Statesboro	Fixed	Unknown	Diesel fuel, unknown oil	Unknown amount of diesel fuel and other unknown oil discharged onto fence
04/19/2024	Statesboro	Fixed	Unknown	Sewage	A farm released unknown amount of raw sewage onto land and into ditches
08/06/2024	Statesboro	Fixed	Other	E-Coli	A well that supplies drinking water to 15-20 homes at Cypress Lake tested positive for E-Coli.

Source: National Response Center, 2000-2025

Probability of Future Events

By using the National Response Center's data to determine future event probability, Bulloch County and its participating jurisdictions can expect a hazardous material incident with a 92% probability per year, or 0.92 events per year. The likelihood of a hazardous material event happening in the planning area is **highly likely**.



Table 3-67. Probability of Future Events, Hazardous Materials Incident

Probability of Future Events, Hazardous Materials	
Total Recorded Events	23
Total Years	25
Yearly Probability	92% / 0.92 events

Source: National Response Center, 2000-2025

Note: Bulloch County and its participating jurisdictions can expect a hazardous material event with a 100% probability each year. This number was derived by dividing the number of recorded events by the year range used. Calculating future probability is not the only predictor of future occurrences. The qualitative chance of a hazardous material event impacting the planning area is highly likely.

3.13.4 Vulnerability & Impact

Hazardous materials that are processed correctly and transported safely are not impactful to the community in a negative way. However, hazardous materials could have a large impact if there were to be a chemical release or explosion involving chemicals. HazMat incidents pose significant risk to humans, animals, and the environment in Bulloch County. Depending on the type of hazardous material(s) and the size of the area impacted, the losses could be minor, major, or significant.

The table below summarizes the potential detrimental consequences of hazardous materials incidents.

Table 3-68. Consequence Analysis, Hazardous Materials Incident

Category	Consequences
Public	Contact with hazardous materials could cause serious illness or death. Those living and working closest to hazardous materials sites face the greatest risk of exposure. Exposure may also occur through contamination of food or water supplies.
Responders	Responders face similar risks as the general public but a heightened potential for exposure to hazardous materials.
Continuity of Operations (including Continued Delivery of Services)	A hazardous materials incident may cause temporary road closures or other localized impacts but is unlikely to affect continuity of operations.
Property, Facilities, and Infrastructure	Some hazardous materials are flammable, explosive, and/or corrosive, which could result in structural damages to property. Impacts would be highly localized.
Environment	Consequences depend on the type of material released. Possible ecological impacts include loss of wildlife, loss of habitat, and degradation of air and/or water quality.
Economic Condition of the Jurisdiction	Clean up, remediation, and/or litigation costs may apply. Long-term economic damage is unlikely.
Public Confidence in the Jurisdiction's Governance	A hazardous materials incident may affect public confidence if the environmental or health impacts are enduring.

People

Hazardous materials incidents can cause injuries, hospitalizations, and even fatalities to people nearby. People living near hazardous facilities and along transportation routes may be at a higher risk of exposure, particularly those living or working downstream and downwind from such facilities. For example, a toxic



spill or release of an airborne chemical near a populated area can lead to significant evacuations and have a high potential for loss of life. Individuals working with or transporting hazardous materials are also at heightened risk.

In addition to the immediate health impacts of releases, a handful of studies have found long term health impacts, such as increased incidence of certain cancers and birth defects among people living near certain chemical facilities. However, there has not been sufficient research done on the subject to allow detailed analysis.

The primary economic impact of hazardous material incidents results from lost business, delayed deliveries, property damage, and potential contamination. Large and publicized hazardous material-related events can deter tourists and could potentially discourage residents and businesses. Economic effects from major transportation corridor closures can be significant.

Property

The impact of a fixed hazardous facility, such as a chemical processing facility is typically localized to the property where the incident occurs. The impact of a small spill (e.g., liquid spill) may also be limited to the extent of the spill and remediated if needed. While cleanup costs from major spills can be significant, they do not typically cause significant long-term impacts to property.

Impacts of hazardous material incidents on critical facilities are most often limited to the area or facility where they occurred, such as at a transit station, airport, fire station, hospital, or railroad. However, they can cause long-term traffic delays and road closures resulting in major delays in the movement of goods and services. These impacts can spread beyond the planning area to affect neighboring counties or vice-versa. While cleanup costs from major spills can be significant, they do not typically cause significant long-term impacts to critical facilities, but there is a chance they may be impacted.

Environment

Hazardous material incidents may affect a small area at a regulated facility or cover a large area outside such a facility. Widespread effects occur when hazards contaminate the groundwater and eventually the municipal water supply, or they migrate to a major waterway or aquifer. Impacts on wildlife and natural resources can also be significant. Airborne hazardous materials can be carried by the wind for five miles or more, creating a risk of contamination to the environment and health risks to animals.

Land Use & Development Trends

Bulloch County and the surrounding areas are rich in agriculture and forestry. Development that encroaches on these areas may put agricultural and forestry land at risk for increased hazardous releases.

If and when a HazMat incident occurs in Bulloch County, there is a chance it will not only involve dirt or surface material, but also flowing water in ditches, rivers, or small streams. Therefore, special attention to the location of new or expanding industries/facilities is warranted. Such efforts will help minimize the potential for water contamination and help preserve the local environment.



Multi-Jurisdictional Concerns

The jurisdictions of Statesboro and Brooklet house the TRI facilities in the county and, therefore, would be more vulnerable if a hazardous material incident were to occur at one of these manufacturing plants. However, the whole county is vulnerable due to the transportation of these chemicals.

Repetitive Loss Structures

Not applicable.

3.13.5 Priority Risk Index

The following table summarizes hazardous materials risk by jurisdiction. Warning time and duration do not vary by jurisdiction. Spatial extent and impact ratings were estimated based on the number of Tier II facilities, railroads, and/or pipelines in the jurisdiction. Probability ratings were determined based on available data on hazardous materials incidents with significant impacts in each jurisdiction.

Table 3-69. Hazardous Materials Incident Risk Ranking Summary

Jurisdiction	Probability	Impact	Spatial Extent	Warning Time	Duration	Score	Priority
Bulloch County	4	3	2	4	3	3.2	H
Brooklet	4	3	2	4	3	3.2	H
Portal	3	2	2	4	3	2.6	H
Register	3	1	2	4	3	2.3	M
Statesboro	4	3	2	4	3	3.2	H



3.14 HOSTILE EVENT

3.14.1 Hazard Description

There is no universal globally agreed-upon definition of hostile events. In a broad sense, hostile groups or individuals use violence and threats to intimidate or coerce, especially against civilians, in the pursuit of political aims. Terrorism, as part of the broader hostile event category, is defined in the United States by the Code of Federal Regulations as “the unlawful use of force or violence against persons or property to intimidate or coerce a government, civilian population, or any segment thereof, in furtherance of political or social objectives.”

For this analysis, this hazard encompasses the following sub-hazards: enemy attack, biological terrorism, chemical terrorism, conventional terrorism, radiological terrorism, and public disorder (cyberattack is addressed separately in Section 3.13). These hazards can occur anywhere and demonstrate unlawful force, violence, and/or threat against persons or property causing intentional harm for purposes of intimidation, coercion, or ransom in violation of the criminal laws of the United States. These actions may cause massive destruction and/or extensive casualties. The threat of hostile events, both international and domestic, is ever present, and an attack can occur when least expected.

Enemy attack is an incident that could cause massive destruction and extensive casualties throughout the world. Some areas could experience direct weapons’ effects: blast and heat; others could experience indirect weapons’ effect. International political and military activities of other nations are closely monitored by the federal government, and the State of Georgia would be notified of any escalating military threats.

The use of biological agents against persons or property in violation of the criminal laws of the United States for purposes of intimidation, coercion, or ransom can be described as biological terrorism. Liquid or solid contaminants can be dispersed using sprayers/aerosol generators or by point of line sources, such as munitions, covert deposits, and moving sprayers. Biological agents vary in the amount of time they pose a threat. They can be a threat for hours to years depending upon the agent and the conditions in which it exists.

Chemical terrorism involves the use or threat of chemical agents against persons or property in violation of the criminal laws of the United States for purposes of intimidation, coercion, or ransom. Effects of chemical contaminants are similar to biological agents.

Use of conventional weapons and explosives against persons or property in violation of the criminal laws of the United States for purposes of intimidations, coercion, or ransom is conventional terrorism. Hazard effects are instantaneous; additional secondary devices may be used, lengthening the time duration of the hazard until the attack site is determined to be clear. The extent of damage is determined by the type and quantity of explosives. Effects are generally static other than cascading consequences and incremental structural failures. Conventional terrorism can also include tactical assault or sniping from remote locations.

Radiological terrorism is the use of radiological materials against persons or property in violation of the criminal laws of the United States for purposes of intimidation, coercion, or ransom. Radioactive contaminants can be dispersed using sprayers/aerosol generators, or by point of line sources such as munitions, covert deposits, and moving sprayers or by the detonation of a nuclear device underground, at the surface, in the air, or at high altitude.



Mass demonstrations, or direct conflict by large groups of citizens, as in riots and non-peaceful strikes, are examples of public disorder. These are assembling of people together in a manner to substantially interfere with public peace to constitute a threat, and with use of unlawful force or violence against another person, or causing property damage or attempting to interfere with, disrupting, or destroying the government, political subdivision, or group of people. Labor strikes and work stoppages are not considered in this hazard unless they escalate into a threat to the community. Vandalism is usually initiated by a small number of individuals and limited to a small target or institution. Most events are within the capacity of local law enforcement.

The Southern Poverty Law Center (SPLC) reports 41 active hate groups in Georgia, shown in the table below. The SPLC defines a hate group as any group with “beliefs or practices that attack or malign an entire class of people—particularly when the characteristics being maligned are immutable.” It is important to note that inclusion on the SPLC list is not meant to imply that a group advocates or engages in violence or other criminal activity.

Table 3-70. Active Hate Groups in Georgia

Group	Type	Location
The United Nuwaubians Worldwide/All Eyes on Egypt	Black Nationalist	Athens
Great Millstone	Black Nationalist	Atlanta
House of Israel	Black Nationalist	Atlanta
Israel United in Christ	Black Nationalist	Atlanta
Israelite School of Universal Practical Knowledge	Black Nationalist	Atlanta
Luxor Couture	Black Nationalist	Atlanta
Nation of Islam	Black Nationalist	Atlanta
New Black Panther Party	Black Nationalist	Atlanta
New Black Panther Party for Self Defense	Black Nationalist	Atlanta
Sicarii 1715	Black Nationalist	Atlanta
Proud Boys	General Hate	Atlanta
Affirmative Right	White Nationalist	Atlanta
Identity Evropa	White Nationalist	Atlanta
Occidental Quarterly/Charles Martel Society	White Nationalist	Atlanta
Nation of Islam	Black Nationalist	Augusta
Nationalist Liberty Union	General Hate	Augusta
Covenant People's Ministry	Christian Identity	Brooks
Nation of Islam	Black Nationalist	Brunswick
League of the South	Neo-Confederate	Cartersville
International Keystone Knights of the Ku Klux Klan	Ku Klux Klan	Cedartown
United Northern and Southern Knights of the Ku Klux Klan	Ku Klux Klan	Ellijay
Proud Boys	General Hate	Gainesville
Wildman's Civil War Surplus and Herb Shop	Neo-Confederate	Kennesaw
The United Nuwaubians Worldwide/All Eyes on Egypt	Black Nationalist	Lithonia
All Eyes on Egypt Bookstore	Black Nationalist	Macon
Dustin Inman Society, The	Anti-Immigrant	Marietta
Sunshine on Government (SONG) Alliance	Anti-Muslim	Newton
American Vision	Anti-LGBT	Powder Springs



Group	Type	Location
League of the South	Neo-Confederate	Powder Springs
Israel United in Christ	Black Nationalist	Savannah
Israelites Saints of Christ	Black Nationalist	Savannah
Identity Evropa	White Nationalist	Savannah
Asatru Folk Assembly	General Hate	Statewide
American White Knights of the Ku Klux Klan	Ku Klux Klan	Statewide
Identity Dixie	Neo-Confederate	Statewide
Atomwaffen Division	Neo-Nazi	Statewide
Traditionalist Worker Party	Neo-Nazi	Statewide
Blood and Honour Social Club	Racist Skinhead	Statewide
Confederate Hammerskins	Racist Skinhead	Statewide
Crew 38	Racist Skinhead	Statewide
Patriot Front	White Nationalist	Statewide

Source: Southern Poverty Law Center, 2024

Generally, no warning is given for specific acts of terrorism. Duration is dependent on the mission, magnitude, time and need to control, and criminal investigation time of a hostile event.

3.14.2 Location & Extent

A hostile event could occur at any location in the county but are more likely to target highly populated areas, critical infrastructure, or symbolic locations. Any of the critical facilities identified by the HMPC could be targeted. During planning efforts, the HMPC identified the following facilities with potentially elevated risk of terror threat:

- East Georgia Regional Medical Center
- Statesboro Wastewater Treatment Plant
- Federal Courthouse
- Bulloch County Courthouse
- Bulloch County Correctional Institution
- Bulloch County City Hall
- Willingway Hospital
- County Emergency Operations Center
- County and Municipal Police/Sheriff's Offices
- Paulson Stadium
- Statesboro Municipal Airport
- Hill Convocation Center

The extent of a hostile event is tied to many factors, including the attack vector, location, time of day, and other circumstances; for this reason, it is difficult to assess a single definition or conclusion of the extent of



“terrorism.” As a general rule, terrorism incidents are targeted to where they can do the most damage and have the maximum impact possible, though this impact is tempered by the weapon used in the attack itself.

3.14.3 Historical Occurrences

There have been no major terror events in Bulloch County; however, threats of terrorist activity occur often, though no devices have been found. There is still, however, some possibility that one could occur in the future given the incidents that have occurred in the United States in the past and the facilities and locations in the county that could be potential targets. Below are a few recent threats or disturbances that developed in Bulloch County.

January 19, 2022, bomb threat, Statesboro High School—Statesboro High School was placed on lockdown after a note indicating a bomb had been concealed inside the school was found in a classroom. Officers and K9 units from Chatham County and Bulloch County conducted a thorough search of the school and found no suspicious devices. The note was tracked to a 14-year-old male student, who was arrested and charged with terroristic threats and disrupting a public school.⁴⁴

July 24, 2023, bomb threat, Savannah, GA—A 17-year-old male made threats on TikTok that he was going to “blow up a train station in Savannah, GA at 5:00 pm.” He was found in his home in Bulloch County and subsequently arrested after admitting to making the threat. No evidence of a bomb was found.⁴⁵

Early 2025, bomb threat, Briggs and Stratton manufacturing plant—An employee at Briggs and Stratton manufacturing plant in Statesboro was arrested after making terroristic threats and acts at the plant. No devices were found, but several additional threats had also been reported during the months of January through May 2025. No other suspects had been identified as of May 2025.⁴⁶

Probability of Future Events

While difficult to estimate when a deliberate act like terrorism may occur, it can be inferred that the probability of a terrorist attack in any one area in the county is very low at any given time. When identified, credible threats may increase the probability of an incident; these threats are generally tracked by law enforcement.

3.14.4 Vulnerability & Impact

An official hostile event assessment with hypothetical scenarios has not been conducted for Bulloch County, but the possible and likely impacts are outlined in the section below. The following table summarizes the potential detrimental consequences of a hostile event.

Table 3-71. Consequence Analysis, Hostile Event

Category	Consequences
Public	Illness, injury, or fatality are possible; these impacts would be highly localized to the attack. Widespread stress and psychological suffering may occur.

⁴⁴ <https://www.wjcl.com/article/statesboro-high-school-lockdown/38816572>. Retrieved January 13, 2026.

⁴⁵ <https://www.griceconnect.com/local-news/bulloch-deputies-arrest-man-for-terroristic-threats-via-social-media-7320723>. Retrieved January 13, 2026.

⁴⁶ <https://www.wtoc.com/2025/05/02/three-bomb-threats-plant-bulloch-county-leaves-one-employee-arrested/>. Retrieved January 13, 2026.



Category	Consequences
Responders	Responders face increased risks during an effort to stop an attack or rescue others while an attack is underway.
Continuity of Operations (including Continued Delivery of Services)	Critical infrastructure may be targeted by an attack; therefore, continuity of operations may be affected. Long-term issues may arise if transportation or utility infrastructure is severely damaged.
Property, Facilities, and Infrastructure	Impacts depend of the type of attack. Buildings and infrastructure could be unaffected or completely destroyed.
Environment	Water and food supply could be contaminated by a biological or chemical attack. Remediation could be required.
Economic Condition of the Jurisdiction	The local economy could be disrupted, depending on the location and scale of an attack.
Public Confidence in the Jurisdiction's Governance	Loss of public confidence likely should an attack be carried out; additional loss of confidence and trust may result if response and recovery are not swift and effective

People

People can suffer death, illness, or injury as a result of a terrorist attack. Symptoms of illness from a biological or chemical attack may go undetected for days or even weeks. Local healthcare workers may observe a pattern of unusual illness or early warning monitoring systems may detect airborne pathogens. People will face increased risk if a biological or chemical agent is released indoors, as this may result in exposure to a higher concentration of pathogens, whereas agents that are released outdoors would disperse in the direction of the wind. Physical harm from a weapons attack or explosive device is not dependent on location, but risk is greater in areas where higher numbers of people may gather. People could also be affected by an attack on food and water supply. In addition to impacts on physical health, any terrorist attack could cause significant stress and anxiety.

Property

The potential for damage to property is highly dependent on the type of attack. Buildings and infrastructure may be damaged by an explosive device or by contamination from a biological or chemical attack. Impacts are generally highly localized to the target of the attack.

To put the above scenarios into perspective, the HMPC identified several locations and events that could be targeted by similar attacks:

- East Georgia Regional Medical Center
- Statesboro Wastewater Treatment Plant
- Federal Courthouse
- Bulloch County Courthouse
- Bulloch County Correctional Institution
- Bulloch County City Hall
- Willingway Hospital
- County Emergency Operations Center



- County and Municipal Police/Sheriff's Offices
- Paulson Stadium
- Statesboro Municipal Airport
- Hill Convocation Center

Environment

Environmental impacts are also dependent on the type of attack. Impacts could be negligible or could require major clean-up and remediation.

Land Use & Development Trends

Land use and development patterns can influence the exposure and vulnerability of a community to hostile events. In Bulloch County, growth has primarily occurred in residential subdivisions, commercial corridors, educational campuses, and industrial facilities, particularly within and around incorporated areas. These higher-occupancy and publicly accessible locations may increase the potential consequences of hostile acts, such as threats, targeted violence, or public disorder, even though no major terrorist incidents have occurred locally. Ongoing development emphasizes the importance of integrating crime prevention, site design, and coordination with public safety agencies to reduce risk and enhance community resilience.

Multi-Jurisdictional Concerns

In Bulloch County, incidents such as threats, targeted violence, or public disorder may affect multiple jurisdictions simultaneously, particularly when they involve schools, transportation corridors, industrial facilities, or large public gatherings. Effective mitigation and response rely on coordinated planning, information sharing, and mutual aid among county and municipal governments, law enforcement agencies, school systems, emergency management, and state and federal partners.

Repetitive Loss Structures

Not applicable.

3.14.5 Priority Risk Index

The following table summarizes hostile events risk by jurisdiction. Given the nature of hostile events and the understanding that they can occur anytime and anywhere, risk and vulnerability are considered equal for all jurisdictions.

Table 3-72. Hostile Event Risk Ranking Summary

Jurisdiction	Probability	Impact	Spatial Extent	Warning Time	Duration	Score	Priority
Bulloch County	1	2	2	4	2	1.9	L
Brooklet	1	2	2	4	2	1.9	L
Portal	1	2	2	4	2	1.9	L
Register	1	2	2	4	2	1.9	L
Statesboro	1	2	2	4	2	1.9	L



3.15 PANDEMIC/COMMUNICABLE DISEASE

3.15.1 Hazard Description

A disease is a pathological condition of a part, organ, or system of a living organism resulting from various causes, such as infection or exposure to toxins, and characterized by an identifiable group of signs or symptoms. The major concern is an epidemic or pandemic, when a prevalent disease affects a disproportionately large number of individuals in a population, community, region, country, or the world at the same time.

Of great concern are infectious diseases caused by the entry and growth of microorganisms in humans. Infectious diseases are diseases caused by a pathogen that enters the body, triggering development of an infection. Such pathogens may include bacteria, viruses, fungi, prions, or protozoans. Infectious diseases can have a range of causes and are often contagious or communicable, meaning they can be passed from person-to-person. They can be transmitted through numerous modes, including direct contact (person-to-person, animal-to-person, or mother-to-unborn child), insect bites, food and water contamination, or inhalation. Many infectious diseases can make the body vulnerable to secondary infections, which are caused by other organisms taking advantage of an already weakened immune system.

According to the Global Health Council, over 9.5 million people die each year from infectious diseases. Although progress has been made to control or eradicate many infectious diseases, humans remain vulnerable to many new emerging organisms, such as the Coronavirus Disease 2019 (COVID-19), a novel coronavirus discovered in 2019. In addition, previously recognized pathogens can evolve to become resistant to available antibiotics and other treatments. For example, malaria, tuberculosis, and bacterial pneumonias are appearing in new forms that are resistant to drug treatments. The spread of infectious diseases also increases with population growth and the ease of travel.

3.15.2 Location & Extent

All of Bulloch County is susceptible to infectious diseases. Segments of the population at highest risk for contracting an illness from a pathogen are the very young, the elderly, or individuals who currently experience respiratory or immune deficiencies. These segments of the population are present throughout the region. In addition, because of the communicable nature of these diseases, tourism centers or areas of high population density are considered more at risk. As a result, the population in and around tourist destinations may have an increased potential for exposure and spread of infectious diseases.

3.15.3 Historical Occurrences

The following historical events summarize significant pandemics, epidemics, and disease outbreaks that have occurred in the United States, including impacts in Bulloch County.

Pandemics/Epidemics

1873 Cholera Epidemic in the United States

The 1873 cholera epidemic was part of the broader fourth cholera pandemic, which spread through parts of North America from 1863 to 1875, carried largely by contaminated water and the movement of people along river and rail routes. In 1873, cholera first appeared in port cities like New Orleans and then spread inland along transportation networks, leading to outbreaks in several Southern and Midwestern cities, such



as Memphis, Nashville, Huntsville, and Birmingham, where hundreds of residents died and people fled affected areas due to fear and lack of sanitation infrastructure. There is no documented evidence that the 1873 cholera epidemic directly affected Bulloch County.

Pandemic Influenza

A flu pandemic has little or nothing in common with the annual flu season. A pandemic flu would be a new strain and a much more serious and contagious flu virus. Humans would have no natural resistance to a new strain of influenza. There is a vaccine for seasonal flu, but there is no vaccine available at this time for a pandemic flu.

If a new, highly contagious strain of influenza begins to infect humans, it would likely cause widespread illness and death within a matter of months and could last up to two years. The Centers for Disease Control and Prevention (CDC) predict that as much as 25% to 30% of the U.S. population could be sick, hospitalized, and potentially die as a result of severe illness.

The following outbreaks of various flu strains have been the most significant in history:

- **Spanish Flu 1918–1920:** The first cases of Spanish Flu in Georgia were reported in Fulton County at Camp Gordon near Atlanta in September 1918. Within a few weeks, the disease was raging across the state in nearly every county. The number of deaths in the state is estimated to be in excess of 30,000, but the number of deaths in Bulloch County is unknown. It is estimated that 675,000 Americans died during the epidemic, and that 20 to 40 million died worldwide.
- **Asian Flu 1957–1958:** First identified in China, this virus caused roughly 70,000 deaths in the United States during the 1957–58 seasons. Because this strain has not circulated in humans since 1968, no one under 30 years old has immunity to this strain.
- **Hong Kong Flu 1968–1969:** The Hong Kong Flu was first detected in Hong Kong in early 1968 and spread to the United States later that year. The Hong Kong Flu killed about 34,000 people in the United States and one million people worldwide.
- **Swine Flu 2009–2010:** Novel influenza A (H1N1) was a new flu virus of swine origin that was first detected in April 2009. The virus infected people and spread from person to person, sparking a growing outbreak of illness in the United States and worldwide. Estimates place the number of suspected cases throughout the world between 700 million and 1.4 billion. At least 12,469 deaths occurred in the United States, with 81 deaths in Georgia. It's thought that novel influenza A (H1N1) flu spreads in the same way that regular seasonal influenza viruses spread—mainly through the coughs and sneezes of people who are sick with the virus. By November 2009, about three billion doses of the swine flu vaccine were produced and administered in over 16 countries. The vaccine's overall effectiveness was estimated at 56%.

1948 Poliomyelitis Epidemic

The 1948 polio epidemic marked a resurgence of poliomyelitis in the United States after several years of lower case counts; nationwide outbreaks occurred each summer, with tens of thousands of infections reported in the late 1940s and early 1950s before a vaccine became available. Polio is a highly contagious viral disease that can cause paralysis or death, especially in children, and outbreaks during this period led families and communities to avoid crowded places like pools and theaters as they tried to reduce spread. Prior to vaccination efforts starting in the mid-1950s, epidemics were widespread across the country, spurring increased public health attention and fundraising through organizations like the March of Dimes.



No specific historical records could be found that document a polio outbreak in Bulloch County during the 1948 epidemic. Local history sources generally note that polio, like other major diseases, affected populations broadly in the United States, but county-level incidence for that year is not detailed in accessible historical summaries.

COVID-19 Pandemic

COVID-19 is a severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) that causes respiratory illness in humans and can be spread from person to person through respiratory droplets. These droplets are released when someone infected with the disease sneezes, coughs, or talks. Infectious droplets can land in the mouths or noses of people who are nearby or possibly be inhaled into the lungs. COVID-19 was declared a public health emergency nationwide on January 21, 2020. The pandemic began in Wuhan, China in December 2019 and quickly spread around China and the world, lasting well into 2022 and even 2023 in some parts of the world. As of January 2026, more than 778 million cases and over 7 million deaths have been confirmed worldwide. North America has had the highest number of cases with over 103 million. These statistics make the COVID-19 pandemic one of the deadliest pandemics in history.

As of January 2026, Bulloch County has had approximately 11,500 confirmed positive cases of COVID-19 and 283 COVID-related deaths, although data is limited after July 2023.⁴⁷ The county saw the largest spike in cases in January 2022. There have been nearly 2.5 million cases throughout the state of Georgia with approximately 36,488 deaths.⁴⁸ However, since the end of the declared public health emergency in the U.S. and the increased prevalence of at-home testing kits, current COVID-19 data is incomplete and unreliable. Georgia no longer actively monitors cases in the state.

There is no current cure or specific antiviral treatment for COVID-19. However, the first vaccine for COVID-19 was released on December 21, 2020. Since then, more than 11.8 billion doses of the vaccine have been administered in over 197 countries.

Norovirus

Norovirus is a very contagious virus that causes vomiting, diarrhea, nausea, and stomach pain. Norovirus is often called the “stomach flu.” However, the norovirus is not related to or caused by the influenza virus. The norovirus spreads very easily through direct contact with someone with the norovirus, by eating food or drinking liquids that are contaminated with the virus, or by touching surfaces that have been contaminated and then touching the mouth. Washing hands thoroughly and cleaning and disinfecting surfaces regularly can help prevent the spread of the norovirus.

Most recently, Georgia has experienced a confirmed outbreak of norovirus during the 2025/2026 winter season, although it’s unclear exactly where these outbreaks occurred.⁴⁹

⁴⁷ <https://usafacts.org/answers/how-did-covid-19-affect-people-in-the-us/county/bulloch-county-ga/?noindex=true>. Accessed January 16, 2026.

⁴⁸ <https://ga-covid19.ondemand.sas.com/>. Accessed January 16, 2026.

⁴⁹ <https://www.ledger-enquirer.com/news/state/georgia/article313399484.html>. Accessed January 16, 2026.



Vector-borne Diseases

In addition to pandemic-level communicable diseases, Bulloch County experiences ongoing exposure to vector-borne illnesses such as West Nile virus and tickborne diseases, which are influenced by environmental conditions, land use patterns, and seasonal climate trends.

West Nile Virus

West Nile virus (WNV) is transmitted to people, birds, and other animals by the bite of an infected mosquito. This virus can cause serious illness in people of any age but especially in people over the age of 50 or those with other underlying medical conditions. The best form of protection is by avoiding mosquito bites.

WNV does not occur in northern states when it is too cool for mosquitoes to survive. In southern states with warmer climates and mosquitoes present year-round, the risk of infection may still be present in the winter months.

Surveillance of WNV in Georgia began in 2001 when it was first detected. 590 human cases of WNV have been confirmed in the state since 1999. In Bulloch County, there have been four reported cases of WNV in humans since 1999. One case was reported in 2024.

Tickborne Diseases

Ticks are arachnids that feed on the blood of animals and/or humans. They are most known for their potential to transmit disease to humans and other animals. American dog ticks, lone star ticks, brown dog ticks, and blacklegged ticks are the most common ticks encountered in Georgia. In Georgia, tickborne illnesses are most often transmitted between early spring and late fall since ticks are most active during warm months. However, tickborne diseases have been reported year-round in Georgia. Tickborne diseases in Georgia include Spotted Fever Rickettsiosis, Lyme Disease, Ehrlichiosis, and Anaplasmosis. The blacklegged tick is the only human-attaching tick capable of transmitting Lyme disease in Georgia.⁵⁰

Probability of Future Events

The probability and magnitude of an infectious disease occurrence is difficult to evaluate due to the wide variation in disease characteristics, such as rate of spread, morbidity and mortality, detection and response time, and the availability of vaccines and other forms of prevention. A review of the historical record indicates that disease-related disasters do occur in humans with some regularity and varying degrees of severity; however, there is growing concern about emerging infectious diseases. Infectious diseases pose a significant risk to Bulloch County; however, the probability of a major infectious disease outbreak with the potential of reaching the scale of an epidemic is not nearly as common. Based on recent history, an infectious disease outbreak occurs in any given part of the United States about every five to 10 years, while a pandemic occurs every 50 to 100 years.

3.15.4 Vulnerability & Impact

The table below summarizes the potential detrimental consequences of infectious diseases.

⁵⁰ <https://dph.georgia.gov/epidemiology/zvbd/tbd>. Accessed January 16, 2026.



Table 3-73. Consequence Analysis, Pandemic/Communicable Disease

Category	Consequences
Public	Widespread disease can result in increased illness, hospitalization, and mortality. Psychological stress and disruptions to education, childcare, and social support systems compound impacts. Vulnerable populations with language, cultural, or economic barriers may struggle to access timely information or medical resources.
Responders	Emergency responders and healthcare workers are at an increased risk of exposure to communicable disease.
Continuity of Operations (including Continued Delivery of Services)	Workforce absenteeism during outbreaks can hinder continuity of essential services, including healthcare, emergency response, education, utilities, and critical supply chains.
Property, Facilities, and Infrastructure	Hospitals, clinics, and long-term care centers may face overwhelming demand, leading to capacity shortages, equipment strain, and the need for rapid facility adaptation. Supply chains for medical equipment, pharmaceuticals, and protective gear can be disrupted, delaying response capacity. Airports, ports, and public transit may experience decreased usage due to restrictions or fear of transmission, while freight systems may see bottlenecks if workforce capacity is reduced.
Environment	Communicable diseases may reduce safe access to shared community spaces such as parks, schools, and recreational facilities, limiting social cohesion and economic activity.
Economic Condition of the Jurisdiction	Prolonged outbreaks disrupt business operations, supply chains, and retail environments. Commercial properties may experience closures or reduced capacity due to workforce shortages or public health restrictions.
Public Confidence in the Jurisdiction's Governance	A communicable disease outbreak may affect public confidence if the environmental or health impacts are enduring, or if people are forced to act in ways that oppose their belief systems, ability to move freely, or feel inconvenienced.

People

Populations are vulnerable to communicable diseases due to factors such as high-density living environments (e.g., nursing homes, correctional facilities, shelters), workplace proximity, and frequent public interaction. Vulnerable groups include the elderly, children, individuals with chronic conditions, immunocompromised populations, healthcare workers, and those with limited access to healthcare. Families experiencing job loss or medical bills from disease impacts may face housing insecurity, foreclosures, or evictions, increasing community vulnerability.

Property

Healthcare facilities, emergency shelters, and congregate housing face increased strain, requiring rapid adaptation (e.g., isolation spaces, infection control upgrades).

Environment

Increased demand on sanitation systems (medical waste, household waste from quarantined households) can strain local environmental services. Inadequate disposal could lead to secondary public health hazards. Some communicable diseases involve zoonotic transmission (from animals to humans). Outbreaks may require wildlife management, animal culling, or stricter agricultural and food safety controls, impacting local ecosystems and agriculture.



Land Use & Development Trends

Bulloch County's long-range land use and development policies, as outlined in the Smart Bulloch 2045 plan, reflect significant population growth, diversified land uses, and coordinated expansion of infrastructure that can influence public health dynamics. The plan anticipates continued residential, commercial, and industrial development guided by updated future land use maps and character areas designed to concentrate growth and manage services efficiently, including utilities like water and sewer that can support higher-density areas. This growing and more connected built environment, particularly around planning nodes and along major corridors, may increase interactions among residents and influence the potential spread of communicable diseases if not paired with appropriate public health strategies, preventive infrastructure, and community design considerations that support health and resilience.

Multi-Jurisdictional Concerns

Communicable disease preparedness and response in Bulloch County involve multi-jurisdictional coordination among county and municipal governments, public health agencies, healthcare providers, school systems, and regional and state partners. Population movement across jurisdictional boundaries for work, education, healthcare, and commerce—particularly within Statesboro and surrounding communities—can contribute to the spread of infectious diseases and require coordinated mitigation strategies. Reducing the impact of disease outbreaks depends on agencies sharing information, communicating clearly, and working together on prevention and response.

Repetitive Loss Structures

Not applicable.

3.15.5 Priority Risk Index

The following table summarizes communicable disease risk by jurisdiction. Given the nature of communicable disease and the general interconnectivity of people across Bulloch County, risk and vulnerability are considered equal for all jurisdictions.

Table 3-74. Pandemic/Communicable Disease Risk Ranking Summary

Jurisdiction	Probability	Impact	Spatial Extent	Warning Time	Duration	Score	Priority
Bulloch County	1	3	3	1	4	2.3	M
Brooklet	1	3	3	1	4	2.3	M
Portal	1	3	3	1	4	2.3	M
Register	1	3	3	1	4	2.3	M
Statesboro	1	3	3	1	4	2.3	M



3.16 HAZARD RISK SUMMARY

As discussed in 3.3.6 Priority Risk Index, the Priority Risk Index was used to rate each hazard on a set of risk criteria and determine an overall standardized score for each hazard. Steering Committee members were also polled during the second planning meeting to provide input into these scores. The conclusions drawn from this process are summarized below on the county level.

The following table summarizes the degree of risk assigned to each identified hazard using the PRI method.

Table 3-75. Summary of PRI Results

Hazard	Probability	Impact	Spatial Extent	Warning Time	Duration	PRI Score
Cyberattack	Possible	Limited	Small	Less than 6 hrs.	More than 1 week	2.4
Dam Failure	Possible	Critical	Small	Less than 6 hrs.	Less than 1 week	2.6
Drought	Likely	Limited	Large	More than 24 hrs.	More than 1 week	2.8
Flash Flood	Likely	Limited	Moderate	6 to 12 hrs.	Less than 1 week	2.7
Hazardous Materials Incident	Highly Likely	Critical	Small	Less than 6 hrs.	Less than 1 week	3.2
Hostile Event	Unlikely	Limited	Small	Less than 6 hrs.	Less than 24 hrs.	1.9
Pandemic/Communicable Disease	Unlikely	Critical	Moderate	More than 24 hrs.	More than 1 week	2.3
Severe Weather	Highly Likely	Critical	Moderate	Less than 6 hrs.	Less than 6 hrs.	3.2
Severe Winter Weather	Likely	Critical	Large	More than 24 hrs.	Less than 1 week	3.0
Tornado	Likely	Limited	Small	Less than 6 hrs.	Less than 6 hrs.	2.4
Tropical Cyclone	Likely	Critical	Large	More than 24 hrs.	Less than 1 week	3.0
Wildfire	Possible	Limited	Small	Less than 6 hrs.	Less than 24 hrs.	2.2

The results from the PRI have been classified into three categories based on the assigned risk value which are summarized in the table below:

- **High Risk:** Widespread potential impact. This ranking carries a high threat to the general population and/or built environment. The potential for damage is widespread.
- **Moderate Risk:** Moderate potential impact. This ranking carries a moderate threat level to the general population and/or built environment. Here the potential damage is more isolated and less costly than a more widespread disaster.
- **Low Risk:** Minimal potential impact. The occurrence and potential cost of damage to life and property is minimal. This is not a priority hazard.

Table 3-76. Summary of Hazard Risk Classification

Risk Ranking	Hazard
High Risk	Dam Failure Drought



Risk Ranking	Hazard
(> 2.4)	Flash Flood Hazardous Materials Incident Severe Weather Severe Winter Weather Tropical Cyclone
Moderate Risk (2.0 - 2.4)	Cyberattack Pandemic/Communicable Disease Tornado Wildfire
Low Risk (< 2.0)	Hostile Event



SECTION 4 MITIGATION STRATEGY

4.1 OVERVIEW

This section describes the mitigation strategy process and mitigation action plan for the Bulloch County Hazard Mitigation Plan. It describes how the county met Step 6: Set Goals, Step 7: Review Possible Activities, and Step 8: Draft an Action Plan from the 10-step planning process.

This section has been reorganized and revised from the previous version. Below is a brief summary of the changes that have been made to the Mitigation Strategy:

Table 4-1. 2026 Section 4 Updates

Section	Section Title	Updates to Section
4.1	Overview	Included which steps from the 10-step planning process were met through the mitigation strategies.
4.2	Mitigation Goals	Updated goals to reflect new risk assessment findings.
4.3	Mitigation Action Identification & Prioritization	Past mitigation actions and mitigation categories were reviewed, and the prioritization process was identified.
4.4	Mitigation Action Plans	Updated the countywide mitigation action plans, including new actions decided upon by the Steering Committee.
4.5	Completed/Removed Mitigation Actions	Added a table that lists past mitigation actions that have either been completed or removed since the 2020 plan update.

4.2 MITIGATION GOALS

Section 3 documents the hazards and associated risks that threaten Bulloch County, including the vulnerability of structures, infrastructure, and critical facilities. Based on this understanding of risks, the Steering Committee must identify mitigation actions to reduce exposure, vulnerability, and overall risk. The intent of goal setting is to guide the review of possible mitigation actions. This plan needs to make sure that recommended actions are consistent with what is appropriate for the county. Mitigation goals should reflect community priorities and should be consistent with other plans in the county.

- Goals are general guidelines that explain what is to be achieved. They are usually broad-based, long-term policy type statements that represent global visions. Goals help define the benefits that the plan is trying to achieve.
- Objectives are short term aims which, when combined, form a strategy or course of action to meet a goal. Objectives provide more specific criteria for achieving goals.

Goals were developed that would focus mitigation efforts on reducing personal, material, and productivity losses from the type of hazard events detailed in this plan. The goals and action steps developed by the Bulloch County Hazard Mitigation Steering Committee and subsequent Plan Update Committees are contained herein.



One key consideration in evaluating these goals was to ensure that the goals of the Hazard Mitigation Plan align with other community planning efforts such as comprehensive and land use plans. These documents are important guides for future growth within the community.

Minor changes were proposed to the previous goals in an effort to clarify their wording and intent. The updates were validated by the Committee. The Committee then reviewed, discussed, and revised the objectives to further guide the creation of mitigation actions. The 2026 goals and objectives approved by the Committee are presented below.

Goal 1 (Overarching): To create a safer, less vulnerable community with a greater sustainability when coping with hazards and disasters and their aftermath.

Goal 2 (Water Hazards): Reduce flood damage, (and damages secondary to hurricanes and dam breaches) to citizens and existing and future structures, especially critical facilities, within Bulloch County. To reduce economic losses incurred due to destroyed crops, businesses closing to implement repairs/replacements, school closures, and to sustain sanitary conditions while removing flood waters.

Goal 3 (Drought Hazards): Reduce economic losses (e.g., crops or cattle) to assets from drought events in Bulloch County.

Goal 4 (Wind Hazards): Avoid or diminish damage caused by high winds from hurricanes, tornadoes, severe winter storms, windstorms, and coastal storms in Bulloch County. Strengthen critical facilities and large or vulnerable population centers in that effort.

Goal 5 (Wildfire Hazards): Reduce damage caused by wildfire in Bulloch County through education, implementing safety measures, availability of firefighting training and assistance, safeguarding assets, and plentiful water resources.

4.3 MITIGATION ACTION IDENTIFICATION & PRIORITIZATION METHODOLOGY

4.3.1 Identification Process

To identify and select mitigation projects, the Steering Committee targeted those hazards considered high and moderate priorities for the planning area, based on the analysis provided in Section 3 Hazard Identification & Risk Assessment. The following hazards were determined based on the Priority Risk Index scores to be high and moderate priority hazards (Hostile Event was determined to be low):

- Dam Failure
- Drought
- Flood (Flash Flood & Heavy Rain)
- Severe Weather (Thunderstorm Wind, Lightning, Hail, and Extreme Heat)
- Severe Winter Weather (Winter Storm, Ice Storm, and Extreme Cold)
- Tornado
- Tropical Cyclone (Hurricane, Tropical Storm, and High Wind)



- Wildfire
- Cyberattack
- Hazardous Materials Incident
- Pandemic/Communicable Disease

The term “All” is utilized in the “Hazards Addressed” column of Table 4-3 below (and in Annexes A-D) where all of the above hazards apply to a specific mitigation action. Otherwise, specific hazards are listed in that column.

Once it was determined which hazards warranted the development of specific mitigation actions, the Steering Committee analyzed viable mitigation options that supported the identified goals and objectives. The Committee organized actions based on the following list of mitigation categories, which are utilized as part of the CRS planning process but are also applicable to multi-hazard mitigation.

- Prevention
- Property Protection
- Natural Resource Protection
- Emergency Services
- Structural Projects
- Public Information and Outreach

More details on the range of mitigation alternatives considered by the Steering Committee are provided in Appendix E.

The Committee was also provided with the FEMA publication *Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards* (January 2013) and geographically relevant examples of potential mitigation actions for each of the above categories. The Committee was instructed to consider both future and existing buildings in evaluating possible mitigation actions. The Committee also reviewed existing actions in the 2020 plan and considered which incomplete actions would be continued in this action plan.

4.3.2 Prioritization Process

In the process of identifying continuing and new mitigation actions, the Steering Committee was provided with a set of criteria to assist in deciding why one action might be more important, more effective, or more likely to be implemented than another. Committee members were asked to rate each action with an approach modified from the FEMA STAPLEE criteria. The considerations for action prioritization were as follows:

- **Socially Acceptable:** Is the action acceptable to the community? Does it have a greater impact on a certain segment of the population? Are the benefits fair?
- **Technically Feasible:** Is the action technically feasible? Is it a long-term solution to the problem? Does it capitalize on existing planning mechanisms for implementation?



- **Administrative Resources:** Are there adequate staffing, funding, and other capabilities to implement the project? Is there adequate additional capability to ensure ongoing maintenance?
- **Politically Supported:** Will there be adequate political and public support for the project? Does the project have a local champion to support implementation?
- **Legally Allowable:** Does the community have the legal authority to implement the action?
- **Economically Sound:** Can the action be funded locally? Will the action need to be funded by an outside entity, and has that funding been secured? How much will the project cost? Can the benefits be quantified, and do they outweigh the costs?
- **Environmentally Sound:** Does the action comply with environmental regulations? Does the action meet the community's environmental goals? Does the action impact land, water, endangered species, or other natural assets?

In accordance with the DMA requirements, an emphasis was placed on the importance of a benefit-cost analysis in determining action priority, as reflected in the prioritization criteria above. For each action, the Steering Committee considered the benefit-cost analysis in terms of:

- Ability of the action to address the problem
- Contribution of the action to save life or property
- Available technical and administrative resources for implementation
- Availability of funding and perceived cost-effectiveness

The consideration of these criteria helped to prioritize and refine mitigation actions but did not constitute a full benefit-cost analysis. The cost-effectiveness of any mitigation alternative will be considered in greater detail through performing benefit-cost project analyses when seeking FEMA mitigation grant funding for eligible actions associated with this plan.

The prioritization ranking, simplified as High, Moderate, or Low, for each mitigation action considered by the Steering Committee is provided in the Mitigation Action Plans below. These priority rankings are relative and assigned by each jurisdiction's representatives on the Committee but can be generally defined as follows:

- **High:** Project can be implemented quickly and/or easily, provides the best return on investment, and/or addresses a high-priority hazard or significant vulnerability.
- **Moderate:** Project provides a good benefit-cost ration but requires some additional support to implement.
- **Low:** Project requires significant administrative or financial support to implement, is a long-range pursuit, has a low benefit-cost ratio, and/or does not address a high-priority hazard.

Changes in priorities are reflected in the priority rankings of the mitigation actions and in the actions that have been deleted from the mitigation plan (detailed in Section 4.5). Priorities for mitigation were impacted by findings in the updated risk assessment, changes in local capability, and changes in resources available for mitigation.



4.4 MITIGATION ACTION PLANS

Countywide mitigation actions are provided in this section below. In this plan, “countywide” refers to the participating jurisdictions of:

- Bulloch County
- City of Brooklet
- Town of Portal
- Town of Register
- City of Statesboro

Mitigation action plans for each participating jurisdiction are duplicated for reference in the Jurisdictional Annexes to the HMP. The plans are organized as follows:

- Annex A, Section 2.4: City of Brooklet
- Annex B, Section 3.4: Town of Portal
- Annex C, Section 4.4: Town of Register
- Annex D, Section 5.4: City of Statesboro

*Note: Actions for Bulloch County cover the unincorporated areas of the county, as well.

Each countywide mitigation action recommended for implementation is listed in Tables 4-3 through 4-7 along with detail on the hazards addressed, the goal and objective addressed, the priority rating, the lead agency responsible for implementation, potential funding sources for the action, a projected implementation timeline, and the 2026 status and comments on the status for actions that were carried forward from the 2020 plan. Potential funding sources are generally abbreviated in the mitigation action tables and are defined in Table 4-2 below. Removed and completed actions are listed separately Section 4.5, Table 4-8.

Table 4-2. Potential Mitigation Funding Sources

Name/Acronym	Description
AFG	Assistance to Firefighters Grants
DCA	Georgia Department of Community Affairs
DHS	Department of Homeland Security Grants
DOT	Department of Transportation
EPA	Environmental Protection Agency
FMA	Flood Mitigation Assistance
EMPG	Emergency Management Performance Grants
HMGP	Hazard Mitigation Grant Program
Local Budgets	General income funds appropriated to specific departments and/or projects
PDM	Pre-Disaster Mitigation
State Grants	State originated and/or administered grants
USDA	US Department of Agriculture
USFA	US Fire Administration


Table 4-3. Mitigation Actions – Goal 1 (Overarching)

Goal 1: Create a safer, less vulnerable community with a greater sustainability when coping with hazards and disasters and their aftermath.										
Strategy #	Participating Jurisdiction(s)	Lead and Supporting Department/ Agency	Hazards Addressed	Potential Funding Source	Estimated Cost	Completion Timeframe	2020 Status	2026 Status	Priority	Mitigation Categories
1.1	DESCRIPTION: Continue to develop and distribute emergency management presentations, brochures, pamphlets, public service announcements and utilize other relevant information streams such as our Facebook, Twitter, & Instagram presence, for civic organizations, business, and the public concerning Code Red, Project Impact, Weather Radio, & Community Safe Shelter programs.									
	Bullock County City of Statesboro Town of Brooklet Town of Portal Town of Register	Bullock County Public Safety/EMA	All hazards	Local budgets, PDM, HMGP, EMPG	\$10,000	Ongoing	Ongoing	Ongoing	Med	Public Information and Outreach
1.2	DESCRIPTION: Continue to develop, coordinate, and conduct emergency management training/exercise events.									
	Bullock County City of Statesboro	Bullock County Public Safety/EMA	All hazards	Local budgets, DHS, PDM, HMGP, EMPG	\$5,000	Ongoing as new staffing dictates	Ongoing	Ongoing	High	Emergency Services
1.3	DESCRIPTION: Enforce existing ordinances aimed at protecting life and property from natural and human-caused hazard damages									
	Bullock County City of Statesboro Town of Brooklet Town of Portal Town of Register	Bullock County Planning and Zoning	All hazards	Local budgets	\$10,000	Ongoing as new growth permit requests are evaluated	Ongoing	Revised to include human-caused hazards	High	Property Protection
1.4	DESCRIPTION: Provide current First Responder Training (CERT) for Bullock County citizens on a regular basis in addition to the Citizen Corp. – Already in place in Statesboro									
	Bullock County Town of Brooklet Town of Portal Town of Register	Bullock County Public Safety/EMA	All hazards	Local budgets, PDM, EMPG, DHS, USFA	\$15,000	Ongoing as needed	Ongoing	Ongoing	High	Emergency Services
1.5	DESCRIPTION: Review, update and add any necessary floodplain, zoning, and building regulations									
	Bullock County City of Statesboro Town of Brooklet	Bullock County Comm. & City Councils	All hazards	Local budgets	\$15,000	Annually as Federal and State	Ongoing as needed	Ongoing as needed	High	Property Protection


Goal 1: Create a safer, less vulnerable community with a greater sustainability when coping with hazards and disasters and their aftermath.

Strategy #	Participating Jurisdiction(s)	Lead and Supporting Department/ Agency	Hazards Addressed	Potential Funding Source	Estimated Cost	Completion Timeframe	2020 Status	2026 Status	Priority	Mitigation Categories
	Town of Portal Town of Register					changes/updates occur				
1.6	DESCRIPTION: Increase public awareness of safety procedures, and other disaster plans by publishing articles in the local newspaper, holding public meetings & providing bulletins to churches & the schools.									
	Bulloch County City of Statesboro Town of Brooklet Town of Portal Town of Register	Bulloch County Public Safety	All hazards	Local budgets	\$10,000	Ongoing	Ongoing	Ongoing	High	Public Information and Outreach
1.7	DESCRIPTION: Increase public awareness of all the assistance that the local Emergency Management/Public Safety Agency provides for its citizens, & act as the liaison for local, state (GEMA) and federal (FEMA) authorities									
	Bulloch County City of Statesboro Town of Brooklet Town of Portal Town of Register	Bulloch County EMA	All hazards	Local budgets	\$5,000	Ongoing	Ongoing	Ongoing	High	Public Information and Outreach
1.8	DESCRIPTION: Update and coordinate all Emergency Management Plans on a regular basis.									
	Bulloch County City of Statesboro Town of Brooklet Town of Portal Town of Register	Bulloch County Public Safety	All hazards	Local budgets, PDM, HMGP, EMPG	\$30,000	Annual, Ongoing	Ongoing	Ongoing	High	Emergency Services
1.9	DESCRIPTION: Create an SOP for evacuation of threat areas utilizing several software programs, & the NWS resources for specific events with regard to hazardous materials spatial data.									
	Bulloch County City of Statesboro Town of Brooklet Town of Portal Town of Register	Bulloch Public Safety and EMA, fire departments	Hazardous Materials	Local budgets, PDM, HMGP, EMPG, State Grants	\$5,000	2028	Deferred due to staffing limitations	Carry forward	High	Property Protection, Emergency Services
1.10	DESCRIPTION: Evaluate building codes & standards for resiliency for wind, water, and fire, and update local ordinances as required by law and/or deemed appropriate by local legislators.									
	Bulloch County City of Statesboro Town of Brooklet Town of Portal	Bulloch County & all City Planning Depts.	All hazards	Local budgets	\$2,500	2027	Ongoing, Annual	Ongoing, Annual	Low	Prevention, Property Protection



Goal 1: Create a safer, less vulnerable community with a greater sustainability when coping with hazards and disasters and their aftermath.

Strategy #	Participating Jurisdiction(s)	Lead and Supporting Department/ Agency	Hazards Addressed	Potential Funding Source	Estimated Cost	Completion Timeframe	2020 Status	2026 Status	Priority	Mitigation Categories
	Town of Register									
1.11	DESCRIPTION: Augment the EMA staff with an Emergency Management Specialist to implement programs, plans, acquire grant funding, and advise & coordinate EMA current activates and new initiatives in response to the consistent population growth within Bulloch County.									
	Bulloch County	Bulloch Public Safety and EMA	All hazards	Local budgets, EMPG	\$30,000	2028	Deferred due to lack of funding	Carry forward	Med	Emergency Services
1.12	DESCRIPTION: Install permanent generators, or portable generator connections as appropriate) at all critical facilities.									
	Bulloch County City of Statesboro Town of Brooklet Town of Portal Town of Register	Bulloch Public Safety and EMA	All hazards	PDM, HMGP, EMPG	\$1.5M	2030	N/A	New	High	Structural Projects
1.13	DESCRIPTION: Retrofit county subdivision water systems with generator backup power.									
	Bulloch County	Bulloch County Public Works	All hazards	Local budgets, PDM, HMGP	\$500,000	2028	N/A	New	Med	Structural Projects
1.14	DESCRIPTION: Coordinate timely and scheduled emergency notifications and communication through unity of messaging through official sources.									
	Bulloch County City of Statesboro Town of Brooklet Town of Portal Town of Register	County and city managers/administrators	All hazards	Local budgets	\$5,000	2027	N/A	New	High	Public Information and Outreach



Table 4-4. Mitigation Actions – Goal 2 (Water Hazards)

Goal 2: Reduce flood damage, (& damages secondary to hurricanes and dam breaches) to citizens and existing & future structures, especially critical facilities, within Bulloch County. And to reduce economic losses incurred due to destroyed crops, businesses closing to implement repairs/replacements, school closures, and to sustain sanitary conditions while removing flood waters.										
Strategy #	Participating Jurisdiction(s)	Lead and Supporting Department/ Agency	Hazards Addressed	Potential Funding Source	Estimated Cost	Completion Timeframe	2020 Status	2026 Status	Priority	Mitigation Categories
2.1	DESCRIPTION: Assess storm water runoff & watershed plans and evaluate efficiency of present culverts & drainage ditches.									
	Bulloch County City of Statesboro Town of Brooklet Town of Portal Town of Register	Bulloch County & City Public Works Depts.	Flood	Local budgets, DCA, FMA, HMGP	\$3,500	2029	Deferred due to lack of funding	Carry forward	High	Prevention, Property Protection. Natural Resource Protection
2.2	DESCRIPTION: Explore interest of property owners in areas repetitively experiencing losses due to flood waters to accept elevation, acquisition, or relocation grants.									
	Bulloch County City of Statesboro	City and County Planning	Flood	Local budgets, FMA, HMGP, PDM	\$10,000	2027	Deferred due to lack of funding	Revised for 2026 to identify interest	Med	Public Information and Outreach
2.3	DESCRIPTION: Seek funding to acquire, relocate, or elevate flood prone structures. For acquisition and relocation, convert the land to low impact uses such as recreational areas.									
	Bulloch County City of Statesboro Town of Brooklet Town of Register	City and County Planning and Zoning	Flood	Local budgets, FMA, HMGP, PDM	\$1M	2028	Deferred due to lack of funding	Revised for 2026 to include relocation and elevation	Med	Structural Projects
2.4	DESCRIPTION: Regulate building in the Special Hazard Flood Areas (SFHA) & eliminate permits for building critical facilities in high-risk flood zones.									
	Bulloch County City of Statesboro Town of Brooklet Town of Register	City and County Planning	Flood	Local budgets	\$10,000	Ongoing	Ongoing	Revised to address SFHA specifically	Med	Prevention
2.5	DESCRIPTION: Seek funding to improve municipal stormwater infrastructure and sewer systems to minimize inflow and infiltration caused by flood events.									



Goal 2: Reduce flood damage, (& damages secondary to hurricanes and dam breaches) to citizens and existing & future structures, especially critical facilities, within Bulloch County. And to reduce economic losses incurred due to destroyed crops, businesses closing to implement repairs/replacements, school closures, and to sustain sanitary conditions while removing flood waters.

Strategy #	Participating Jurisdiction(s)	Lead and Supporting Department/ Agency	Hazards Addressed	Potential Funding Source	Estimated Cost	Completion Timeframe	2020 Status	2026 Status	Priority	Mitigation Categories
	City of Statesboro	City of Statesboro Water/Sewer	Flood	Local budgets, HMGP	\$2M	2029	Deferred due to lack of funding	Revised to include stormwater system improvements	Low	Structural Projects
2.6	DESCRIPTION: Explore ordinances that require paving & drainage improvements as part of the permitting process for large developments on unpaved roads.									
	Bulloch County City of Statesboro Town of Brooklet Town of Portal Town of Register	City and County Planning	Dam Failure, Flood, Severe Weather, Severe Winter Weather, Tornado, Tropical Cyclone	Local budgets	\$7,500	2028	Deferred due to lack of funding	Revised to address the need through local ordinance	High	Natural Resource Protection, Structural Projects, Prevention
2.7	DESCRIPTION: Explore grants to conduct a cost study on paving roads vs. maintaining unpaved roads.									
	Bulloch County City of Statesboro Town of Brooklet Town of Portal Town of Register	Bulloch County Public Works	Dam Failure, Flood, Severe Weather, Severe Winter Weather, Tornado, Tropical Cyclone	Local budgets, HMGP, PDM, DOT	\$30,000	2028	Deferred due to lack of funding	Revised to explore grants	High	Structural Projects
2.8	DESCRIPTION: Educate property owners/prospective property owners on risks associated with residing in areas of recurrent flooding									
	Bulloch County City of Statesboro Town of Brooklet Town of Register	Bulloch County Planning and Zoning	Flood	Local budgets, HMGP, PDM	\$5,000	Ongoing	Ongoing	Ongoing	High	Public Information and Outreach
2.9	DESCRIPTION: Seek funding to pave, protect, or improve existing dirt roads in flood prone areas									



Goal 2: Reduce flood damage, (& damages secondary to hurricanes and dam breaches) to citizens and existing & future structures, especially critical facilities, within Bulloch County. And to reduce economic losses incurred due to destroyed crops, businesses closing to implement repairs/replacements, school closures, and to sustain sanitary conditions while removing flood waters.

Strategy #	Participating Jurisdiction(s)	Lead and Supporting Department/ Agency	Hazards Addressed	Potential Funding Source	Estimated Cost	Completion Timeframe	2020 Status	2026 Status	Priority	Mitigation Categories
	Bulloch County City of Statesboro Town of Brooklet Town of Register	Bulloch County Public Works	Flood	Local budgets, HMGP, PDM, FMA	\$1M	2030	Deferred due to lack of funding	Revised to include paving or protection	High	Structural Projects, Prevention
2.10	DESCRIPTION: Evaluate increasing the sizes of retention basins & runoff canals as necessary									
	Bulloch County City of Statesboro	Bulloch County Public Works	Flood, Drought, Dam Failure	Local budgets, HMGP, PDM, FMA	\$15,000	2029	Blue Mile improvements are in progress	Carry forward	Low	Natural Resource Protection, Structural Projects, Prevention, Property Protection
2.11	DESCRIPTION: Conduct NFIP Community workshops to provide information, & incentives for property owners to acquire flood insurance									
	Bulloch County City of Statesboro Town of Brooklet Town of Register	City and County Building, Planning, and Zoning Depts.	Flood	Local budgets, HMGP, PDM, FMA	\$5,000	2027	Deferred due to staffing limitations	Carry forward	Med	Public Information and Outreach
2.12	DESCRIPTION: Use outreach programs to advise homeowners of risks to safety from excess water hazards, including mitigation techniques & assistance programs.									
	Bulloch County City of Statesboro Town of Brooklet Town of Register	Fire Depts., County Extension, & Building & Zoning Depts.	Dam Failure, Flood, Severe Weather, Severe Winter Weather, Tropical Cyclone	Local budgets, HMGP, PDM, FMA	\$5,000	2027	Deferred due to staffing limitations	Carry forward	Med	Public Information and Outreach
2.13	DESCRIPTION: Improve culverts on dirt roads and highways to reduce road flooding and erosion.									
	Bulloch County City of Statesboro Town of Brooklet	Bulloch County and city public	Dam Failure, Flood	Local budgets,	\$1M	2031	N/A	New	Med	Structural Projects



Goal 2: Reduce flood damage, (& damages secondary to hurricanes and dam breaches) to citizens and existing & future structures, especially critical facilities, within Bulloch County. And to reduce economic losses incurred due to destroyed crops, businesses closing to implement repairs/replacements, school closures, and to sustain sanitary conditions while removing flood waters.

Strategy #	Participating Jurisdiction(s)	Lead and Supporting Department/ Agency	Hazards Addressed	Potential Funding Source	Estimated Cost	Completion Timeframe	2020 Status	2026 Status	Priority	Mitigation Categories
	Town of Portal Town of Register	works departments		HMGP, PDM, FMA						
2.14	DESCRIPTION: Clear fallen trees from publicly managed creek beds. Encourage property owners to do the same.									
	Bulloch County City of Statesboro Town of Brooklet Town of Portal Town of Register	Bulloch County Public Works	Dam Failure, Flood, Severe Weather, Severe Winter Weather, Tornado, Tropical Cyclone	Local budgets, HMGP	\$100,000	2029	N/A	New	Med	Natural Resource Protection
2.15	DESCRIPTION: Research the cost, effort, feasibility, and return on investment to actively participate in the NFIP.									
	Town of Register	Town Clerk, Town Council	Flood	Local budgets, FMA, HMGP	\$15,000	2028	N/A	New	High	Structural Projects, Prevention, Property Protection

Table 4-5. Mitigation Actions – Goal 3 (Drought Hazards)

Goal 3: Reduce economic losses (e.g. crops or cattle) to assets from drought events in Bulloch County.										
Strategy #	Participating Jurisdiction(s)	Lead and Supporting Department/ Agency	Hazards Addressed	Potential Funding Source	Estimated Cost	Completion Timeframe	2020 Status	2026 Status	Priority	Mitigation Categories
3.1	DESCRIPTION: Seek input from, and cooperation with, DOA / Extension Service and agriculture industry to enact water conservation procedures with regard to drought.									
	Bulloch County City of Statesboro Town of Brooklet	Bulloch County EMA	Drought	Local budgets	\$2,000	2028	Deferred due to	Carry forward	Med	Natural Resource Protection


Goal 3: Reduce economic losses (e.g. crops or cattle) to assets from drought events in Bulloch County.

Strategy #	Participating Jurisdiction(s)	Lead and Supporting Department/ Agency	Hazards Addressed	Potential Funding Source	Estimated Cost	Completion Timeframe	2020 Status	2026 Status	Priority	Mitigation Categories
	Town of Portal Town of Register						staffing limitations			
3.2	DESCRIPTION: Install smart water monitoring systems that use telemetry and automated monitoring to detect leaks and track water consumption trends									
	Bulloch County City of Statesboro	Bulloch County Public Works	Drought	EPA, HMGP, state grants	\$2M	2031	N/A	New	Low	Natural Resource Protection
3.3	DESCRIPTION: Research and develop farm water storage programs that assist farmers with construction of ponds, cisterns, and rainwater harvesting systems.									
	Bulloch County	Bulloch County EMA	Dam Failure, Drought	Local budgets, state grants	\$500,000	2030	N/A	New	Med	Natural Resource Protection
3.4	DESCRIPTION: Expand agricultural drought education through the DOA extension office to provide drought planning and water conservation training.									
	Bulloch County	Bulloch County EMA	Drought	Local budgets, state grants	\$50,000	2028	N/A	New	High	Public Information and Outreach

Table 4-6. Mitigation Actions – Goal 4 (Wind Hazards)
Goal 4: Avoid or diminish damage caused by high winds from hurricanes, tornadoes, severe winter storms, windstorms and coastal storms in Bulloch County. Strengthen critical facilities and large or vulnerable population centers in that effort.

Strategy #	Participating Jurisdiction(s)	Lead and Supporting Department/ Agency	Hazards Addressed	Potential Funding Source	Estimated Cost	Completion Timeframe	2020 Status	2026 Status	Priority	Mitigation Categories
4.1	DESCRIPTION: Continue to inform the BC Citizens in tornado and high wind awareness, the use of storm shutters and window film, & discourage loose objects outside from becoming projectiles.									
	Bulloch County City of Statesboro Town of Brooklet Town of Portal Town of Register	Bulloch County Public Safety and EMA	Severe Weather, Severe Winter Weather, Tornado, Tropical Cyclone	Local budgets	\$3,500	Ongoing	Ongoing, This is disseminate d regularly through tornado drills,	Ongoing	Med	Public Information and Outreach



Goal 4: Avoid or diminish damage caused by high winds from hurricanes, tornadoes, severe winter storms, windstorms and coastal storms in Bulloch County. Strengthen critical facilities and large or vulnerable population centers in that effort.

Strategy #	Participating Jurisdiction(s)	Lead and Supporting Department/ Agency	Hazards Addressed	Potential Funding Source	Estimated Cost	Completion Timeframe	2020 Status	2026 Status	Priority	Mitigation Categories
							Facebook and other social media sites			
4.2	DESCRIPTION: Work with BOE to ensure that all new educational facilities are designed to also serve as approved public shelters for emergency purposes.									
	Bulloch County City of Statesboro Town of Brooklet Town of Portal	Bulloch County Board of Education, GEMA School Safety	Severe Weather, Severe Winter Weather, Tornado, Tropical Cyclone Wildfire	Local budgets, EMPG, PDM	\$3,000	Ongoing	Ongoing as new schools apply for permits	Ongoing as new schools apply for permits	High	Structural Projects
4.3	DESCRIPTION: Seek funding for wind retrofitting of critical facilities.									
	Bulloch County City of Statesboro Town of Brooklet Town of Portal Town of Register	Bulloch County Public Safety	Severe Weather, Severe Winter Weather, Tornado, Tropical Cyclone	HMGP, PDM, EMPG	\$500,000	2029	deferred due to lack of funding	Carry forward	Low	Structural Projects
4.4	DESCRIPTION: Review feasibility of making a subdivision requirement for underground utility line placement.									
	Bulloch County	Bulloch County Planning and Zoning	Severe Weather, Severe Winter Weather, Tornado, Tropical Cyclone Wildfire	Local budgets	\$4,500	2028	deferred due to lack of funding	Carry forward	Low	Prevention, Structural Projects
4.5	DESCRIPTION: Encourage and seek funding for the construction & use of safe rooms in homes, shelter areas, manufactured home parks, fairgrounds, shopping mall, and other vulnerable public structures.									
	Bulloch County City of Statesboro Town of Brooklet Town of Portal Town of Register	Bulloch County Public Safety and EMA	Severe Weather, Tornado, Tropical Cyclone	Local budgets	\$750,000	2030	deferred due to lack of funding	Carry forward	Low	Structural Projects
4.6	DESCRIPTION: Include safe room/building requirements in zoning ordinance for manufactured home parks to reduce injuries affecting park residents.									



Goal 4: Avoid or diminish damage caused by high winds from hurricanes, tornadoes, severe winter storms, windstorms and coastal storms in Bulloch County. Strengthen critical facilities and large or vulnerable population centers in that effort.

Strategy #	Participating Jurisdiction(s)	Lead and Supporting Department/ Agency	Hazards Addressed	Potential Funding Source	Estimated Cost	Completion Timeframe	2020 Status	2026 Status	Priority	Mitigation Categories
	Bulloch County City of Statesboro Town of Brooklet Town of Portal Town of Register	Bulloch County Public Safety and EMA	Severe Weather, Tornado, Tropical Cyclone	Local budgets	\$20,000	2028	N/A	New	High	Structural Projects
4.7	DESCRIPTION: Initiate a fine system for industries that do not report Tier II hazards									
	Bulloch County City of Statesboro	Bulloch County Planning and Zoning	Hazardous Materials	Local budgets	\$5,000	2027	N/A	New	Med	Emergency Services
4.8	DESCRIPTION: Evaluate and develop a backup power or pre-wiring requirement for gas stations on hurricane evacuation routes									
	Bulloch County	Bulloch County Planning and Zoning	Tropical Cyclone, Wildfire	Local budgets	\$10,000	2030	N/A	New	Low	Structural Projects

Table 4-7. Mitigation Actions – Goal 5 (Wildfire Hazards)

Goal 5: Reduce damage caused by wildfire in Bulloch County through education, implementing safety measures, availability of firefighting training and assistance, safeguarding assets, and plentiful water resources.

Strategy #	Participating Jurisdiction(s)	Lead and Supporting Department/ Agency	Hazards Addressed	Potential Funding Source	Estimated Cost	Completion Timeframe	2020 Status	2026 Status	Priority	Mitigation Categories
5.1	DESCRIPTION: Publicize social media posts/articles about “Fire Awareness Week”, and “Daily Fire Safety Tips” for local churches and the schools.									
	Bulloch County City of Statesboro Town of Brooklet Town of Portal Town of Register	Bulloch County Public Safety and EMA	Wildfire	Local budgets, state grants	\$1,000	Ongoing	Ongoing	Ongoing	Med	Public Information and Outreach
5.2	DESCRIPTION: Educate landowners on the benefits of creating and maintaining fire breaks.									



Goal 5: Reduce damage caused by wildfire in Bulloch County through education, implementing safety measures, availability of firefighting training and assistance, safeguarding assets, and plentiful water resources.

Strategy #	Participating Jurisdiction(s)	Lead and Supporting Department/ Agency	Hazards Addressed	Potential Funding Source	Estimated Cost	Completion Timeframe	2020 Status	2026 Status	Priority	Mitigation Categories
	Bulloch County City of Statesboro Town of Brooklet Town of Portal Town of Register	Bulloch County Public Safety and EMA	Wildfire	Local budgets, state grants, PDM, HMGP	\$4,000	Ongoing	Ongoing	Ongoing	Low	Public Information and Outreach
5.3	DESCRIPTION: Educate residents about providing (& maintaining) defensible space (30 ft minimum setbacks) between buildings and flammable brush and/or forested land.									
	Bulloch County City of Statesboro Town of Brooklet Town of Portal Town of Register	Bulloch County Public Safety and EMA	Wildfire	Local budgets, state grants, PDM, HMGP	\$5,000	Ongoing	Ongoing	Ongoing	Med	Public Information and Outreach
5.4	DESCRIPTION: Seek state and federal grants to improve older fire equipment.									
	Bulloch County City of Statesboro Town of Brooklet Town of Portal Town of Register	Bulloch County Public Safety and EMA, Fire Departments	Wildfire	State grants, AFG, USFA, USDA,	\$3,000	Ongoing	Ongoing	Ongoing	High	Emergency Services
5.5	DESCRIPTION: Keep current with wildland fire training at the local FD level.									
	Bulloch County City of Statesboro Town of Brooklet Town of Portal Town of Register	All fire departments	Wildfire	Local budgets, state grants	\$20,000	Ongoing	Ongoing	Ongoing	High	Emergency Services
5.6	DESCRIPTION: Explore the Firewise Community initiative – interactive workshop engaging developers, planners, EMS, & Government Officials about Firewise concepts within the county.									
	Bulloch County City of Statesboro Town of Brooklet Town of Portal Town of Register	Bulloch County Public Safety and EMA	Wildfire	Local budgets, USFA	\$3,000	Ongoing	Ongoing	Ongoing	Med	Public Information and Outreach
5.7	DESCRIPTION: Strictly follow GFC guidelines for controlled burns & permits, publish any changes to keep the citizens informed concerning the guidelines.									



Goal 5: Reduce damage caused by wildfire in Bulloch County through education, implementing safety measures, availability of firefighting training and assistance, safeguarding assets, and plentiful water resources.

Strategy #	Participating Jurisdiction(s)	Lead and Supporting Department/ Agency	Hazards Addressed	Potential Funding Source	Estimated Cost	Completion Timeframe	2020 Status	2026 Status	Priority	Mitigation Categories
	Bulloch County City of Statesboro Town of Brooklet Town of Portal Town of Register	Bulloch County Public Safety and EMA, fire departments	Wildfire	Local budgets	\$5,000	Ongoing	Ongoing	Ongoing	Med	Property Protection
5.8	DESCRIPTION: Seek funding to purchase brush trucks, Class A pumpers, etc.									
	Bulloch County City of Statesboro Town of Brooklet Town of Portal Town of Register	Fire departments	Wildfire	Local budgets, USFA, AFG, USDA	\$2M	Ongoing	Ongoing	Ongoing	Med	Emergency Services
5.11	DESCRIPTION: Increase public awareness of wildfire dangers by periodically publishing informative articles, and continue to maintain an EMA/Public Safety presence on social media such as Facebook, Instagram, & Twitter.									
	Bulloch County City of Statesboro Town of Brooklet Town of Portal Town of Register	Bulloch County Public Safety and EMA	Wildfire	Local budgets	\$2,500	Ongoing	Ongoing	Ongoing	Low	Public Information and Outreach
5.12	DESCRIPTION: Educate the landowners concerning specific wildfire mitigation steps which apply to and can benefit them.									
	Bulloch County City of Statesboro Town of Brooklet Town of Portal Town of Register	Bulloch County Public Safety and EMA	Wildfire	Local budgets	\$2,500	Ongoing	Ongoing	Ongoing	Med	Public Information and Outreach
5.13	DESCRIPTION: Seek funding to keep all firefighters current with tactical training and equipment.									
	Bulloch County City of Statesboro Town of Brooklet Town of Portal Town of Register	Fire departments	Hazardous Materials, Wildfire, Hostile Event, Pandemic/Comm unicable Disease	Local budgets, AFG, USFA, USDA	\$1,000	Ongoing	Ongoing with staff and volunteer changes	Ongoing with staff and volunteer changes	Med	Emergency Services
5.14	DESCRIPTION: Enforce codes and ordinances to provide driveway access, increased visibility of house numbers, required Class A roofing materials, and skirting around raised structures.									



Goal 5: Reduce damage caused by wildfire in Bulloch County through education, implementing safety measures, availability of firefighting training and assistance, safeguarding assets, and plentiful water resources.

Strategy #	Participating Jurisdiction(s)	Lead and Supporting Department/ Agency	Hazards Addressed	Potential Funding Source	Estimated Cost	Completion Timeframe	2020 Status	2026 Status	Priority	Mitigation Categories
	Bulloch County City of Statesboro Town of Brooklet Town of Portal Town of Register	County and city planning departments	Wildfire	Local budgets	\$15,000	Ongoing	Ongoing with growth	Ongoing with growth	Med	Emergency Services
5.15	DESCRIPTION: Promote preservation of open space or wildland-urban boundary zones to separate developed areas from high-hazard areas.									
	Bulloch County City of Statesboro Town of Brooklet Town of Portal Town of Register	County and city zoning departments	Wildfire	Local budgets	\$8,000	Ongoing	Ongoing with growth	Ongoing with growth	High	Natural Resource Protection

4.5 COMPLETED/REMOVED MITIGATION ACTIONS

Table 4-8. Completed/Removed Mitigation Actions

Strategy #	Participating Jurisdiction(s)	Lead and Supporting Department/ Agency	Hazards Addressed	Potential Funding Source	Estimated Cost	Completion Timeframe	2020 Status	2026 Status	Priority	Mitigation Categories
5.9	DESCRIPTION: Explore an ordinance which would enact fines for people throwing lighted cigarettes out of moving vehicles.									
	Bulloch County City of Statesboro Town of Brooklet Town of Portal Town of Register	Bulloch County Public Safety and EMA	Wildfire	Local budgets	\$2,500	N/A	Deferred	Removed. Not feasible	Low	Natural Resource Protection, Property Protection
5.10	DESCRIPTION: Continue to create, monitor, & maintain GFC firebreaks around forested areas and structures.									
	Bulloch County City of Statesboro Town of Brooklet	Fire departments	Wildfire	Local budgets	\$20,000	N/A	Deferred	Removed. Responsibility of GFC	Low	Property Protection



Strategy #	Participating Jurisdiction(s)	Lead and Supporting Department/ Agency	Hazards Addressed	Potential Funding Source	Estimated Cost	Completion Timeframe	2020 Status	2026 Status	Priority	Mitigation Categories
	Town of Portal Town of Register									



SECTION 5 CAPABILITY ASSESSMENT

5.1 OVERVIEW

The purpose of conducting a capability assessment is to determine the ability of a local jurisdiction to implement a comprehensive mitigation strategy, and to identify potential opportunities for establishing or enhancing specific mitigation policies, programs, or projects. As in any planning process, it is important to try to establish which goals, objectives, and actions are feasible, based on an understanding of the organizational capacity of those agencies or departments tasked with their implementation. A capability assessment helps to determine which mitigation actions are practical and likely to be implemented over time given a local government's planning and regulatory framework, level of administrative and technical support, amount of fiscal resources, and current political climate.

The capability assessment completed for the Bulloch County planning area serves as a critical planning step toward developing an effective mitigation strategy. Coupled with the risk assessment, the capability assessment helps identify and target effective goals, objectives, and mitigation actions that are realistically achievable under given local conditions.

To facilitate the inventory and analysis of local government capabilities within the planning area, a detailed Local Capability Self-Assessment worksheet was distributed to members of the Steering Committee after the first planning committee meeting. The survey questionnaire requested information on a variety of "capability indicators," such as existing local plans, policies, programs, or ordinances that contribute to and/or hinder the region's ability to implement hazard mitigation actions. Other indicators included information related to the region's fiscal, administrative, and technical capabilities, such as access to local budgetary and personnel resources for mitigation purposes, and existing education and outreach programs that can be used to promote mitigation. Communities were also asked to comment on the current political climate with respect to hazard mitigation, an important consideration for any local planning or decision-making process.

At a minimum, the survey results provide an extensive and consolidated inventory of existing local plans, ordinances, programs, and resources in place or under development. With this information, inferences can be made about the overall effect on hazard loss reduction in each community.

This section has been reorganized and revised from the previous version. Below is a brief summary of the changes that have been made to the Capability Assessment:

Table 5-1. 2026 Section 5 Updates

Section	Section Title	Updates to Section
5.1	Overview	The purpose of the capability assessment was more clearly defined.
5.2	Findings	Updated to reflect 2026 capabilities and NFIP information. A new CRS table was incorporated to show the current class and percentage discount for each participating jurisdiction. Bulloch County's other capabilities were highlighted, as well.
5.3	Conclusions	Affirmed each jurisdiction's ability to implement hazard mitigation efforts.



5.2 FINDINGS

The findings of the capability assessment are summarized in this plan to provide insight into the relevant capacity of Bulloch County and its incorporated municipalities to implement hazard mitigation activities. Information is based upon input provided by community representatives on the Steering Committee through a local capability self-assessment as well as research conducted by the planning consultant.

5.2.1 Planning & Regulatory Capability

Planning and regulatory capability is based on the implementation of plans, ordinances, and programs that demonstrate a local jurisdiction's commitment to guiding and managing growth, development, and redevelopment in a responsible manner, while maintaining the general welfare of the community. It includes emergency response and mitigation planning, comprehensive land use planning, and transportation planning. Regulatory capability also includes the enforcement of zoning or subdivision ordinances and building codes that regulate how land is developed and structures are built, as well as protecting environmental, historic, and cultural resources in the community. Although some conflicts can arise, these planning initiatives generally present significant opportunities to integrate hazard mitigation principles and practices into the local decision-making process.

This assessment is designed to provide a general overview of the key planning and regulatory tools or programs in place or under development for the Bulloch County planning area, along with their potential effect on loss reduction. This information will help identify opportunities to address gaps, weaknesses, or conflicts with other initiatives and integrate the implementation of this plan with existing planning mechanisms where appropriate.

The table below provides a summary of the relevant local plans, ordinances, and programs already in place or under development for the Bulloch County planning area. A checkmark (✓) indicates that the given item is currently in place and being implemented. An asterisk (*) indicates that the given item is currently being developed for future implementation. A plus sign (+) indicates that a jurisdiction is covered for that item under a county-implemented version. Each of these local plans, ordinances, and programs should be considered available mechanisms for incorporating the requirements of the Hazard Mitigation Plan.

Table 5-2. Relevant Plans, Ordinances, and Programs

Jurisdiction	Hazard Mitigation Plan	Comprehensive Land Use Plan	Floodplain Management Plan	Open Space Management Plan	Stormwater Management Plan	Emergency Operations Plan	SARA Title III Plan	Radiological Emergency Plan	Continuity of Operations Plan	Evacuation Plan	Disaster Recovery Plan	Capital Improvements Plan	Economic Development Plan	Historic Preservation Plan	Transportation Plan	Flood Damage Prevention Ordinance	Zoning Ordinance	Subdivision Ordinance	Site Plan Review Requirements	Unified Development Ordinance	Post-Disaster Recovery Ordinance	Building Code	Fire Code	Community Wildfire Protection Plan	National Flood Insurance Program	Community Rating System
Bulloch County	✓	✓				*	*	*	✓		✓	✓		*	✓	✓	✓	✓	✓		✓	✓	✓	*	✓	



City of Brooklet	+	✓								+	✓					*	✓	*			*			✓	
Town of Portal	+	✓								+															
Town of Register	+	✓								+															
City of Statesboro	+	✓				✓	✓	*	✓	+	✓	*		✓	✓	✓	✓		✓	*	✓	✓		✓	

Emergency Management

Hazard mitigation is widely recognized as one of the four primary phases of emergency management, as is shown in the figure below. Mitigation is interconnected with all other phases and is an essential component of effective preparedness, response, and recovery. Opportunities to reduce potential losses through mitigation practices are most often implemented before a disaster event, such as through the elevation of flood-prone structures or by regular enforcement of policies that regulate development. However, mitigation opportunities can also be identified during immediate preparedness or response activities, such as installing storm shutters in advance of a hurricane. Furthermore, incorporating mitigation during the long-term recovery and redevelopment process following a disaster event is what enables a community to become more resilient.

Figure 5-1. The Four Phases of Emergency Management



Planning for each phase is a critical part of a comprehensive emergency management program and a key to the successful implementation of hazard mitigation actions.

Hazard Mitigation Plan

A hazard mitigation plan is a community’s blueprint for how it intends to reduce the impact of natural, and in some cases human-caused, hazards on people and the built environment. The essential elements of a hazard mitigation plan include a risk assessment, capability assessment, and mitigation strategy.

All participating jurisdictions in this regional planning effort are active participants in the 2026 plan.



Disaster Recovery Plan

A disaster recovery plan serves to guide the physical, social, environmental, and economic recovery and reconstruction process following a disaster event. In many instances, hazard mitigation principles and practices are incorporated into local disaster recovery plans with the intent of capitalizing on opportunities to break the cycle of repetitive disaster losses. Disaster recovery plans can also lead to the preparation of disaster redevelopment policies and ordinances to be enacted following a hazard event. Based on the 2026 capability findings and current Steering Committee input, all jurisdictions are participating in a countywide disaster recovery plan, which is being updated by the county in 2026.

Emergency Operations Plan

An emergency operations plan outlines the responsibilities of different departments and how resources will be deployed during and following an emergency or disaster. After the 2026 update, all jurisdictions will have an emergency operations plan or will be covered under the county's plan.

Continuity of Operations Plan

A continuity of operations plan establishes a chain of command, line of succession, and plans for backup or alternate emergency facilities in case of an extreme emergency or disaster event. Per the 2026 capability findings, Bulloch County is updating their continuity of operations plan in 2026. All jurisdictions have a continuity of operations plan or will be covered under the county's plan.

General Planning

The implementation of hazard mitigation activities often involves agencies and individuals beyond the emergency management profession. Stakeholders may include local planners, public works officials, economic development specialists, and others. In many instances, concurrent local planning efforts will help to achieve or complement hazard mitigation goals, even though they may not be designed as such.

Comprehensive/General Plan

A comprehensive land use plan, or general plan, establishes the overall vision for what a community wants to be and serves as a guide for future governmental decision making. Typically, a comprehensive plan contains sections on demographic conditions, land use, transportation elements, and community facilities. Given the broad nature of the plan and its regulatory standing in many communities, the integration of hazard mitigation measures into the comprehensive plan can enhance the likelihood of achieving risk reduction goals, objectives, and actions. All jurisdictions have a comprehensive or general plan.

Capital Improvements Plan

A Capital Improvements Plan (CIP) guides the scheduling of spending on public improvements. A CIP can serve as an important mechanism for guiding future development away from identified hazard areas. Limiting public spending in hazardous areas is one of the most effective long-term mitigation actions available to local governments. The majority of the participating jurisdictions have or are developing a CIP. However, for those without a CIP, this may be a gap to address in support of future mitigation efforts.

Historic Preservation Plan



A historic preservation plan is intended to preserve historic structures or districts within a community. An often-overlooked aspect of the historic preservation plan is the assessment of buildings and sites located in areas subject to natural hazards, and the identification of ways to reduce future damages. This may involve retrofitting or relocation techniques that account for the need to protect buildings that do not meet current building standards or are within a historic district that cannot easily be relocated out of harm's way. The county has a historic preservation plan, but it is 30 years old and needs to be updated. Individual jurisdictions can benefit from developing their own plan or coordinating with the county to be part of theirs.

Zoning Ordinance

Zoning represents the primary means by which land use is controlled by local governments. As part of a community's police power, zoning is used to protect the public health, safety, and welfare of those in a given jurisdiction that maintains zoning authority. A zoning ordinance is the mechanism through which zoning is typically implemented. Since zoning regulations enable municipal governments to limit the type and density of development, a zoning ordinance can serve as a powerful tool when applied in identified hazard areas. Bulloch County and the city of Statesboro have a zoning ordinance, and the city of Brooklet is in the process of developing a zoning ordinance.

Subdivision Ordinance

A subdivision ordinance is intended to regulate the development of residential, commercial, industrial, or other uses, including associated public infrastructure, as land is subdivided into buildable lots for sale or future development. Subdivision design that accounts for natural hazards can dramatically reduce the exposure of future development. Most of the jurisdictions have a subdivision ordinance, including Bulloch County.

Building Codes, Permitting, and Inspections

Building codes regulate construction standards. In many communities, permits and inspections are required for new construction. Decisions regarding the adoption of building codes (that account for hazard risk), the type of permitting process required both before and after a disaster, and the enforcement of inspection protocols all affect the level of hazard risk faced by a community. All of the jurisdictions have a building code or are covered under the county's ordinance. Bulloch County currently adheres to the 2018 IBC (with Georgia Amendments 2020) and the 2018 IRC (with Georgia Amendments 2020). See the webpage in the attached footnote for a complete list of other building codes in use.⁵¹

The adoption and enforcement of building codes by local jurisdictions is routinely assessed through the Building Code Effectiveness Grading Schedule (BCEGS) program, developed by the Insurance Services Office, Inc. (ISO). The results of BCEGS assessments are routinely provided to ISO's member private insurance companies, which in turn may offer ratings credits for new buildings constructed in communities with strong BCEGS classifications. The expectation is that communities with well-enforced, up-to-date codes should experience fewer disaster-related losses, and as a result should have lower insurance rates.

⁵¹ <https://bullochcounty.net/permitting/>. Retrieved May 12, 2026.



Floodplain Management

Flooding represents the greatest natural hazard facing the nation, yet the tools available to reduce the impacts associated with flooding are among the most developed when compared to other hazard-specific mitigation techniques. In addition to approaches that cut across hazards, such as education, outreach, and the training of local officials, the National Flood Insurance Program (NFIP) contains specific regulatory measures that enable government officials to determine where and how growth occurs relative to flood hazards. Participation in the NFIP is voluntary for local governments; however, program participation is strongly encouraged by FEMA as a first step for implementing and sustaining an effective hazard mitigation program.

In order for a county or municipality to participate in the NFIP, they must adopt a local flood damage prevention ordinance that requires jurisdictions to follow established minimum building standards in the floodplain. These standards require that all new buildings and substantial improvements to existing buildings be protected from damage by a 100-year flood event, and that new development in the floodplain not exacerbate existing flood problems or increase damage to other properties.

In the event of flooding that causes damage to structures in the flood hazard areas, Bulloch County will activate their floodplain management plans, addressing substantial damage and substantial improvements. The county will be guided by the list of properties that sustained damage during the event. Bulloch County's response team inspects these properties and the surrounding properties 3-5 days after the water recedes. Inspectors collect damage information and photographs during inspections of affected properties, while also distributing repair and permitting information to SFHA property owners. Teams remain in close contact with property owners, insurance adjusters, and repair companies to ensure continued SI/SD compliance.

A key service provided by the NFIP is the mapping of identified flood hazard areas. Once completed, the Flood Insurance Rate Maps (FIRMs) are used to assess flood hazard risk, regulate construction practices, and set flood insurance rates. FIRMs are an important source of information to educate residents, government officials, and the private sector about the likelihood of flooding in their community.

The table below provides NFIP policy and claim information for Bulloch County, Brooklet, and Statesboro. Portal does not have identified flood areas within its boundaries and is therefore not participating in the NFIP. Register was sanctioned on 8/5/2011 and is researching the feasibility of participation in the NFIP. This activity is included as Mitigation Action Item 2.15 in Section 4 Mitigation Strategy.

Bulloch County, Brooklet, and Statesboro participate in the NFIP and will continue to comply with all required provisions of the program. Floodplain management is managed through zoning ordinances, building code restrictions, and the county building inspection program. The jurisdictions will coordinate with NCEM and FEMA to develop maps and regulations related to Special Flood Hazard Areas within their jurisdictional boundaries and, through a consistent monitoring process, will design and improve their floodplain management program in a way that reduces the risk of flooding to people and property.



Table 5-3. NFIP Policy and Claim Information

Jurisdiction	Date Joined NFIP	Current Effective Map Date	NFIP Policies in Force	Insurance in Force	Written Premium in Force	Closed Losses	Total Payments
Bulloch County	05/02/91	08/05/10	293	\$74,332,800	\$300,047	129	\$4,059,578
City of Brooklet	07/03/86	08/05/10	13	\$4,086,000	\$7,425	3	\$45,039
Town of Portal	--	08/05/10	--	--	--	--	--
Town of Register	--	08/05/10	--	--	--	--	--
City of Statesboro	05/15/80	08/05/10	181	\$53,124,000	\$132,792	44	\$532,309
TOTAL			487	\$131,542,800	\$440,264	176	\$4,636,926

Source: FEMA NFIP Policy Statistics, HUDEX Report (07/31/2025)

Community Rating System

An additional indicator of floodplain management capability is active participation in the Community Rating System (CRS). The CRS is an incentive-based program that encourages communities to undertake defined flood mitigation activities that go beyond the minimum requirements of the NFIP. Each of the CRS mitigation activities is assigned a point value. As a community earns points and reaches identified thresholds, they can apply for an improved CRS class. Class ratings, which range from 10 to 1 and increase on 500-point increments, are tied to flood insurance premium reductions. Every class improvement earns an additional 5 percent discount for NFIP policyholders, with a starting discount of 5 percent for Class 9 communities and a maximum possible discount of 45 percent for Class 1 communities.

Community participation in the CRS is voluntary. Any community that is in full compliance with the rules and regulations of the NFIP may apply to FEMA for a CRS classification better than class 10. The CRS application process has been greatly simplified over the past several years, based on community comments intended to make the CRS more user friendly, and extensive technical assistance available for communities who request it. None of Bulloch County's jurisdictions, including Bulloch County itself, currently participate in the CRS program, but they may choose to pursue participation in the future.

Floodplain Management Plan

A floodplain management plan (or a flood mitigation plan) provides a framework for action regarding corrective and preventative measures to reduce flood-related impacts. Bulloch County does not currently have a floodplain management plan, nor do any of the jurisdictions.

Open Space Management Plan

An open space management plan is designed to preserve, protect, and restore largely undeveloped lands in their natural state, and to expand or connect areas in the public domain such as parks, greenways, and other outdoor recreation areas. In many instances open space management practices are consistent with the goals of reducing hazard losses, such as the preservation of wetlands or other flood-prone areas in their natural state in perpetuity. None of Bulloch County's jurisdictions currently have an open space plan or are developing one.

Stormwater Management Plan



A stormwater management plan is designed to address flooding associated with stormwater runoff. The stormwater management plan is typically focused on design and construction measures that are intended to reduce the impact of more frequently occurring minor urban flooding. None of Bulloch County's jurisdictions currently have a stormwater management plan or are developing one.

5.2.2 Administrative & Technical Capability

The ability of a local government to develop and implement mitigation projects, policies, and programs is directly tied to its ability to direct staff time and resources for that purpose. Administrative capability can be evaluated by determining how mitigation-related activities are assigned to local departments and if there are adequate personnel resources to complete these activities. The degree of intergovernmental coordination among departments will also affect administrative capability for the implementation and success of proposed mitigation activities.

Technical capability can generally be evaluated by assessing the level of knowledge and technical expertise of local government employees, such as personnel skilled in using geographic information systems (GIS) to analyze and assess community hazard vulnerability. The Local Capability Self-Assessment was used to capture information on administrative and technical capability through the identification of available staff and personnel resources.

The following table provides a summary of the Local Capability Self-Assessment results for the region regarding relevant staff and personnel resources. A checkmark (✓) indicates the presence of a staff member(s) in that jurisdiction with the specified knowledge or skill. An asterisk (*) indicates that the given capability is being developed for future implementation. A plus sign (+) indicates that a jurisdiction is covered for that capability under the county.

Table 5-4. Relevant Staff/Personnel Resources

Jurisdiction	Planners with knowledge of land development and land management practices	Engineers or professionals trained in construction practices related to buildings and/or infrastructure	Planners or engineers with an understanding of natural and/or human-caused hazards	Building Official	Emergency manager	Floodplain manager/coordinator	Land surveyors	Scientist familiar with the hazards of the community	Staff with education or expertise to assess the community vulnerability to hazards	Personnel skilled in Geographic Information Systems (GIS) and/or HAZUS	Resource development staff or grant writers	Maintenance programs to reduce risk	Warning systems/services	Mutual Aid Agreements
Bulloch County	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓
City of Brooklet				✓	+	✓				*		*	*	✓
Town of Portal				+	+	✓							*	✓
Town of Register				+	+	✓							*	✓
City of Statesboro	✓	✓	✓	✓	✓	✓			✓			✓	✓	✓

Source: Local Capability Assessment Survey



5.2.3 Fiscal Capability

The ability of a local government to implement mitigation actions is often dependent on the amount of money available. This may take the form of outside grant funding awards or locally based revenue and financing. The costs associated with mitigation policy and project implementation vary widely. In some cases, policies are tied primarily to staff time or administrative costs associated with the creation and monitoring of a given program. In other cases, direct expenses are linked to an actual project, such as the acquisition of flood-prone houses, which can require a substantial commitment from local, state, and federal funding sources.

Many participating jurisdictions have access to capital improvement programing, community development block grants, special purpose taxes, or fees. Additionally, general obligation, revenue, or special tax bonds may be available. Jurisdictions with limited fiscal capability should seek opportunities to hire grant writers or resource development staff, create local funding sources such as stormwater utility fees, or seek alternate funding sources.

5.2.4 Education & Outreach Capability

This type of local capability refers to education and outreach programs and methods already in place that could be used to implement mitigation activities and communicate hazard-related information.

All jurisdictions have ongoing public education or information programs. These could include but are not limited to responsible water use, fire safety, household preparedness, and environmental education. Additionally, some jurisdictions have school programs, StormReady certification, and local groups or non-profit organizations that focus on environmental protection or emergency preparedness.

5.2.5 Mitigation Capability

This type of local capability refers to ongoing property mitigation and efforts to acquire and implement mitigation projects with federal funding by the communities in this plan.

All participating jurisdictions apply for mitigation grant funding but only a few jurisdictions perform reconstruction projects, perform building elevations, or perform acquisitions.

5.2.6 Political Capability

One of the most difficult capabilities to evaluate involves the political will of a jurisdiction to enact meaningful policies and projects designed to reduce the impact of future hazard events. Hazard mitigation may not be a local priority or it may conflict with or impede other goals of the community, such as growth and economic development. Therefore, the local political climate must be considered in designing mitigation strategies, as it could be the most difficult hurdle to overcome in accomplishing their adoption and implementation.

Participating jurisdictions indicated that political leaders are willing to implement mitigation measures. However, fiscal limitations were noted as a limitation for garnering political support.



5.3 CONCLUSIONS

As previously discussed, one of the reasons for conducting a capability assessment is to examine local capabilities to detect any existing gaps or weaknesses within ongoing government activities that could hinder proposed mitigation activities and possibly exacerbate community hazard vulnerability. These gaps or weaknesses have been identified. The participating jurisdictions used the capability assessment as part of the basis for the mitigation actions where each jurisdiction addresses their ability to expand on and improve their existing capabilities.

All of the jurisdictions are capable of implementing hazard mitigation efforts to varying degrees. Participating communities may refer to this assessment to identify gaps and opportunities for improvement in order to increase local capability to implement mitigation projects.

The conclusions of the Risk Assessment and Capability Assessment serve as the foundation for the development of a meaningful hazard mitigation strategy. During the process of identifying specific mitigation actions to pursue, the Steering Committee considered not only each jurisdiction's level of hazard risk, but also their existing capability to minimize or eliminate that risk.



SECTION 6 PLAN IMPLEMENTATION & MAINTENANCE

6.1 OVERVIEW

Implementation and maintenance of the plan is critical to the overall success of hazard mitigation planning. This is Planning Step 10 of the 10-step planning process. This section provides an overview of the overall strategy for plan implementation and maintenance and outlines the method and schedule for monitoring, updating, and evaluating the plan. The section also discusses incorporating the plan into existing planning mechanisms and how to address continued public involvement.

This section has been reorganized and revised from the previous version. Below is a brief summary of the changes that have been made to the Plan Implementation & Maintenance:

Table 6-1. 2026 Section 6 Updates

Section	Section Title	Updates to Section
6.1	Overview	Included which steps from the 10-step planning process were met through the implementation process.
6.2	Adoption	Included which steps from the 10-step planning process were met through the adoption process.
6.3	Implementation	Minor revisions were made to refine the implementation process and intent.
6.4	Monitoring & Maintenance	Added comprehensive list of the monitoring and maintenance process. Identified how the HMP will be incorporated into existing planning mechanisms and how the public will continue their involvement.

6.2 ADOPTION

The purpose of formally adopting this plan is to secure buy-in from all participating jurisdictions, raise awareness of the plan, and formalize the plan's implementation. The adoption of this plan completes Planning Step 9 of the 10-step planning process: Adopt the Plan, in accordance with the requirements of DMA 2000. Each participating jurisdiction will adopt the Hazard Mitigation Plan by ordinance or resolution. Copies of adopted ordinance or resolution are provided on the following pages along with a copy of the FEMA plan approval letter.

6.3 IMPLEMENTATION

Once adopted, the plan must be implemented to be effective. While this plan contains many worthwhile actions, each participating jurisdiction will need to decide which action(s) to undertake first. The priority assigned to the actions in the planning process and funding availability will affect that decision. Low or no-cost actions are often the easiest way to demonstrate progress toward successful plan implementation.

An important implementation mechanism that is highly effective and low-cost is incorporating the Hazard Mitigation Plan recommendations and their underlying principles into other plans and mechanisms, such as the jurisdictions' comprehensive plan, recovery plan, floodplain management plan, and/or historic preservation plan. The participating jurisdictions already implement policies and programs to reduce losses to life and property from hazards. This plan builds upon the momentum developed through previous



planning efforts and recommends implementing actions, where possible, through these other program mechanisms.

Mitigation is most successful when it is incorporated into the day-to-day functions and priorities of government. Implementation will be accomplished by adhering to the schedules identified for each action and through constant, pervasive, and energetic efforts to network and highlight the multi-objective, win-win benefits to each program and the community. This effort is achieved through the routine actions of identifying and engaging champions, monitoring agendas, attending meetings, and promoting a safe, sustainable community. Additional mitigation strategies could include consistent and ongoing enforcement of existing policies and vigilant review of programs for coordination and multi-objective opportunities.

Simultaneous to these efforts, it is important to maintain a constant monitoring of funding opportunities that can be leveraged to implement some of the costlier recommended actions. This will include creating and maintaining a bank of ideas on how to meet local match or participation requirements. When funding does become available, the county and participating jurisdictions will be positioned to capitalize on the opportunity. Funding opportunities to be monitored include special pre- and post-disaster funds, state and federal earmarked funds, benefit assessments, and other grant programs, including those that can serve or support multi-objective applications.

6.3.1 Responsibility for Implementation of Goals and Activities

The Georgia Emergency Management Act of 1981 authorizes local emergency management agencies such as the Bulloch County Emergency Management Agency to conduct emergency management activities for the county. The Bulloch County Board of Commissioners has authorized the submission of this plan to both GEMA and FEMA for their respective approvals.

Each jurisdiction participating in this plan (Bulloch County, Brooklet, Portal, Register, and Statesboro) is responsible for plan implementation within their jurisdiction. Elected officials, officials appointed to head county, city, and town departments, and community staff are charged with leading implementation of various activities in the plan. During the annual reviews as described later in this section, an assessment of progress on each of the goals and activities in the plan will be determined and noted. At that time, recommendations will be made to modify timeframes for completion of activities, funding resources, and responsible entities. On an annual basis, the priority standing of various activities may also be changed. Some activities that are found not to be doable may be deleted from the plan entirely and activities addressing problems unforeseen during plan development may be added.

6.3.2 Role of Steering Committee in Implementation, Monitoring, & Maintenance

With adoption of this plan, each jurisdiction, in coordination with Bulloch County EMA, will be responsible for the plan implementation and maintenance. As such, each jurisdiction agrees to continue its relationship with the Steering Committee and:

- Act as a forum for mitigation issues;
- Disseminate mitigation ideas and activities to all participants;
- Pursue the implementation of high-priority, low/no-cost recommended actions;



- Ensure mitigation remains a consideration for community decision makers;
- Maintain a vigilant monitoring of multi-objective cost-share opportunities to help the community implement the plan's recommended actions for which no current funding exists;
- Monitor and assist in implementation and update of this plan;
- Report on plan progress and recommended revisions to the local governing body; and
- Inform and solicit input from the public.

The Steering Committee's primary duty moving forward is to see the plan successfully carried out and report to each local governing body, Bulloch County EMA, GEMA, and the public on the status of plan implementation and mitigation opportunities. Other duties include reviewing and promoting mitigation proposals, considering stakeholder concerns about mitigation, passing concerns on to appropriate entities, and posting relevant information on local websites (and others as appropriate).

6.4 MONITORING & MAINTENANCE

Plan maintenance implies an ongoing effort to monitor and evaluate plan implementation and to update the plan as progress, roadblocks, or changing circumstances are recognized.

6.4.1 Maintenance Schedule

Bulloch County EMA is responsible for initiating plan reviews. In order to monitor progress and update the mitigation strategies identified in the action plan, the Steering Committee will revisit this plan annually and following a hazard event. Bulloch County EMA will submit a five-year written update to GEMA and FEMA Region IV, unless disaster or other circumstances (e.g., changing regulations) require a change to this schedule. With this plan update anticipated to be fully approved and adopted in 2026, the next plan update for Bulloch County will occur in 2031.

6.4.2 Maintenance Evaluation Process

Evaluation of progress can be achieved by monitoring changes in vulnerabilities identified in the plan. Changes in vulnerability can be identified by noting:

- Decreased vulnerability as a result of implementing recommended actions;
- Increased vulnerability as a result of failed or ineffective mitigation actions; and/or
- Increased vulnerability as a result of new development (and/or further annexation).

Updates to this plan will:

- Consider changes in vulnerability due to action implementation;
- Document success stories where mitigation efforts have proven effective;
- Document areas where mitigation actions were not effective;
- Document any new hazards that may arise or were previously overlooked;
- Incorporate new data or studies on hazards and risks;



- Incorporate new capabilities or changes in capabilities;
- Incorporate growth and development-related changes to infrastructure inventories; and
- Incorporate new action recommendations or changes in action prioritization.

To best evaluate any changes in vulnerability as a result of plan implementation, Bulloch County EMA will review this plan annually and reach out to the municipalities bi-annually to determine changes in their implementation progress and results from implementation. Bulloch County will regularly review the status of implementation of action items in the plan. Monitoring activities will consist of:

- Soliciting and reviewing reports every other year from participating municipalities and the county regarding status of implementation of action items from the plan.
- Tracking progress of sources of improved or revised data for use in subsequent plan updates no less frequently than biennially.
- Preparing a report of the status of implementation of action items from the plan and the availability of improved or revised data.

At the jurisdictional level, a representative from the responsible office identified in each mitigation action will be responsible for tracking and reporting on an annual basis to the jurisdictional lead on action status and providing input on whether the action as implemented meets the defined objectives and is likely to be successful in reducing vulnerabilities. If the action does not meet identified objectives, the jurisdictional lead will determine what additional measures may be implemented, and an assigned individual will be responsible for defining action scope, implementing the action, monitoring success of the action, and documenting any required modifications for the plan. An annual mitigation action status report should be prepared indicating if projects have been:

- Scoped and/or documented for FEMA or other grant applications;
- Submitted for FEMA or other funding programs;
- Approved or denied for FEMA or other funding;
- Documented for funding by other means (e.g., municipal capital improvement plans);
- Under construction or in-progress; or
- Completed, and if so, whether hazard conditions have occurred such that avoided losses can be documented.

Changes will be made to the plan during the update process to accommodate for actions that have failed or are not considered feasible after a review of their consistency with established criteria, time frame, community priorities, and/or funding resources. Actions that were not ranked high but were identified as potential mitigation activities will be reviewed, as well, during the monitoring and update of this plan to determine feasibility of future implementation. Updating of the plan will be by written changes and submissions, as is appropriate and necessary, and as approved by local governing bodies. In keeping with the five-year update process, the Steering Committee or similar committee will convene public meetings to solicit public input on the plan and its routine maintenance and the final product will be adopted by local governing bodies.



6.4.3 Maintenance Criteria

The criteria recommended in 44 CFR 201 and 206 will be utilized in reviewing and updating the plan during annual reviews in preparation for the five-year update. More specifically, annual reviews will monitor changes to the following information:

- Community growth or change in the year.
- The number of substantially damaged or substantially improved structures by flood zone.
- The renovations to public infrastructure, including water, sewer, drainage, roads, bridges, gas lines, and buildings.
- Natural hazard occurrences that required activation of the Emergency Operations Center (EOC) and whether the event resulted in a presidential disaster declaration.
- Natural hazard occurrences that were not of a magnitude to warrant activation of the EOC or a federal disaster declaration but were severe enough to cause damage in the community or closure of businesses, schools, or public services.
- The dates of hazard events descriptions.
- Documented damages due to the event.
- Closures of places of employment or schools and the number of days closed.
- Road or bridge closures due to the hazard and the length of time closed.
- Assessment of the number of private and public buildings damaged and whether the damage was minor, substantial, major, or if buildings were destroyed. The assessment will include residences, mobile homes, commercial structures, industrial structures, and public buildings, such as schools and public safety buildings.
- Review of any changes in federal, state, and local policies to determine the impact of these policies on the community and how and if the policy changes can or should be incorporated into the Hazard Mitigation Plan. Review of the status of implementation of projects (mitigation strategies) including projects completed will be noted. Projects behind schedule will include a reason for delay of implementation.

6.4.4 Incorporation into Existing Planning Mechanisms

Another important implementation mechanism that is highly effective and low-cost is incorporation of the goals, objectives, and recommendations of this plan into other plans and policies. Where possible, all plan participants will use existing plans and/or programs to implement hazard mitigation actions, and conversely integrate mitigation strategies into new and existing local planning mechanisms as plans are developed and updated through policy directives, ordinances, and planning team priorities. As previously stated, mitigation is most successful when it is incorporated into the day-to-day functions and priorities of government and development. The 2026 plan was made available to county, municipal, and area planning organizations, including the Bulloch County Planning Commission to serve as a foundation for planning and mitigation efforts. Most notably, the 2020 plan was reviewed and referenced during the development of the Smart Bulloch Joint Comprehensive Plan 2045. This plan update will be presented to the agencies, writers, consultants and/or committees responsible for comprehensive and land use planning, capital



improvements planning, emergency operations planning, and other related documents for their use in integrating this plan into future planning, preparedness, and mitigation efforts.

This plan update builds upon the momentum developed through previous and related planning efforts and mitigation programs and recommends implementing actions, where possible, through these other program mechanisms, such as comprehensive plans, floodplain management ordinances, emergency operations plans, and building codes and other ordinances. Those Committee members involved in these other planning mechanisms will be responsible for integrating the findings and recommendations of this plan with these other plans, programs, etc., as appropriate. As described in Section 6.3 Implementation, incorporation into existing planning mechanisms will be done through the routine actions of:

- Monitoring other planning/program agendas;
- Attending other planning/program meetings;
- Participating in other planning processes; and
- Monitoring community budget meetings for other community program opportunities.

The successful implementation of this mitigation strategy will require constant and vigilant review of existing plans and programs for coordination and multi-objective opportunities that promote a safe, sustainable community. Efforts should continuously be made to monitor the progress of mitigation actions implemented through other planning mechanisms and, where appropriate, their priority actions should be incorporated into updates of this Hazard Mitigation Plan.

6.4.5 Continued Public Involvement

Continued public involvement is imperative to the overall success of the plan's implementation. The annual review process provides an opportunity to solicit participation from new and existing stakeholders, publicize success stories from the plan implementation, and seek additional public comment. The plan maintenance and update process will include continued public and stakeholder involvement and input through invitation to designated committee meetings, web postings, press releases to local media, and gathering of public comment, similar to the process used in the development of this plan.

When the Steering Committee reconvenes for the five-year update, they will coordinate with all stakeholders participating in the planning process—including those that joined the Committee since the planning process began—to update and revise the plan. In reconvening, the Committee will be responsible for coordinating the activities necessary to involve the greater public, including disseminating information through a variety of media channels detailing the plan update process. As part of this effort, public meetings will be held and public comments will be solicited on the plan update draft.